This document was too large to scan as a single document; therefore, it has been divided into smaller sections.

Section 1 of 3

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WRAP LOW LEVEL WASTE (LLW) GLOVEBOX ACCEPTANCE TEST REPORT

KJ Leist

Waste Management Federal Services of Hanford, Richland, WA 99352
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Abstract: The primary focus of the glovebox acceptance test was to examine control system interlocks, display menus, alarms, and operator messages. Limited mechanical testing involving the drum ports and hoists, drum lifter, compacted drum lifter, drum tipper, transfer car, conveyors, ladder/delidder device and the supercompactor were also conducted.

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PROJECT W-026, WRAP I HNF-SD-W026-ATR-032 LLW GLOVEBOX ATR, Rev. 0
ACCEPTANCE TEST REPORT (13031A-85) - LLW ACCEPTANCE TEST

ACCEPTANCE TEST REPORT

WRAP MODULE I
LLW GLOVE BOX ACCEPTANCE TEST PROCEDURE
13031A-85

ABSTRACT:

On June 28, 1997, the Low Level Waste (LLW) glovebox was tested using glovebox acceptance test procedure 13031A-85.

The primary focus of the glovebox acceptance test was to examine control system interlocks, display menus, alarms, and operator messages. Limited mechanical testing involving the drum ports, hoists, drum lifter, compacted drum lifter, drum tipper, transfer car, conveyors, ladder/delidder device and the supercompactor were also conducted.

As of November 24, 1997, 2 of the 131 test exceptions that affect the LLW glovebox remain open. These items will be tracked and closed via the WRAP Master Test Exception Database.

As part of Test Exception resolution/closure the responsible individual closing the Test Exception performs a retest of the affected item(s) to ensure the identified deficiency is corrected, and, or to test items not previously available to support testing. Test Exceptions are provided as appendices to this report.

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ACCEPTANCE TEST REPORT (13031A-85) - LLW ACCEPTANCE TEST

INTRODUCTION

On June 28, 1997, the Low Level Waste (LLW) glovebox was tested using acceptance test procedure 13031A-85. Mr. Robert L. Warmenhoven served as test director\witness, Mr. Kendrick Leist acted as test operator\test witness, and Michael Lane served acted as test operator\test witness and provided miscellaneous software support.

The primary focus of the glovebox acceptance test was to examine glovebox control system interlocks, Operator Interface Unit (OIU) menus, alarms, and messages. Basic drum port and lift table control sequences were demonstrated. Drum processing from the entry port to loading out compacted drums at the exit port was performed in the automatic mode utilizing 140 # drums a 500 # drum and 1000 # drum were processed, with the exception of compacting the 1000 # drum. OIU menus, messages, and alarm sequences were examined, with few exceptions noted. Barcode testing was bypassed, due to the lack of installed equipment as well as the switch from basic reliance on fixed bar code readers to the enhanced use of portable bar code readers. Bar code testing was completed during performance of the LLW OTP.

Mechanical and control deficiencies were documented as Test Exceptions during performance of this Acceptance Test. These items are attached as Appendix A to this report.

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ACCEPTANCE TEST REPORT (13031A-85) - LLW ACCEPTANCE TEST

DESCRIPTION OF TEST, TEST METHOD AND TEST EQUIPMENT

Testing was conducted on the LLW Glovebox using acceptance test procedure 13031A-85. This test procedure is designed to meet Project W-026 Specification Section 13031 and Specification Section 13462 test requirements.

A list of the items to be tested and the equipment required to support testing is provided. One of the primary items used to support testing is a notebook computer configured with WinLogic 5 by Rockwell Software, Rev. 3.04, Serial Number WL5-15707-C. This software allows control system ladder logic and glovebox switch and sensor activation to be continuously monitored during testing.

A checkout sheet is provided to review and verify glovebox sensor and switch operation prior to testing. A setup section is provided to list the initial actions and conditions required prior to initiating testing. Included in this section is an overview of test methods and conventions. Due to prior, informal checkout of the glovebox equipment, the checkout sheet was not utilized.

The body of the test procedure is divided into "test cases". Each test case is designed to test a single feature or set of features, such as an alarm or an alarm/interlock combination, which are specification requirements. Each test case is written in step-wise fashion with blocks provided to allow the test witness to indicate "pass" or "fail" status for each test step. A "test exception" should be generated for each step that fails.

TEST DEVIATIONS/CHANGES

Numerous test procedure clerical errors were noted during testing. Each clerical error was noted in the body of the test procedure and was corrected via line through, record change, initial and date by the individual making the change.

Significant Changes to the ATP are identified below, along with a brief description of the reason for making the change.

1. SU - Step 13, 14, 16, 17 - Delete steps. Bar Code not tested on ATP, will be verified during OTP performance.

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TEST DEVIATIONS/CHANGES continued

2. SU - Step 36 - Delete this step. The timer settings will be revised during ATP, OTP, and Cold Run testing. It makes more sense to print out the software configuration with timer settings after all testing and Test Exception resolution is complete.
3. TC-3 Step 5, 6, 7, 10, 11 Delete steps. Bar Code not tested on ATP, will be verified during OTP performance.
4. TC-4 Added step 13a - Must simulate Drum Pin Bar Code for drum at lift table logic.
5. TC-4 Step 59 - Step out of sequence - "PORT OPEN" message not displayed until hoist reaches E/E port.
6. TC-4 Step 71 - Delete step. 07-FEV-700F deleted from design (vacuum isolation valve).
7. TC-6 Step 50, 51 - Delete steps. Procedural error, steps not required.
8. TC-8 Step 83 through 86 - Delete steps. Drum grab open logic only looks at ZS-720B, therefore forcing ZS-720A has no affect on drum grab open message.
9. TC-8 Step 153 through 172 - Delete steps. These steps test delid fixture crimp head, this device has been deleted from design.
10. TC-9 Step 32, 33 - Steps are out of sequence, change step order. Add step 32a - Extend table to tip position. Step missing.
11. TC-9 Step 60 through 74 - Delete steps. Enable/Disable X-Ray deleted from design. X-Ray machine is hardwire interlocked with X-Ray door limit switch. Verified that X-Ray machine turns off when door opened and can not start X-Ray machine if door is open.

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TEST DEVIATIONS/CHANGES continued

12. TC-9 Step 141 through 145 - Delete steps. Delid fixture modifications removed multiple stop positions from fixture and resulted in 180 degree rotation with two stop points.
13. TC-9 Step 148 through 163 - Delete steps. Crimp head deleted from delid fixture.
14. TC-9 Step 184, 185 - Delete steps. Vacuum Isolation valve deleted from delid fixture.
15. TC-9 Step 198 - Delete step. Transfer car decelerate function is not applicable in maintenance mode.
16. TC-10 Step 7a - Add new step. Added step to mate D&S drum to port 105. Step missed on ATP.
17. TC-10 Step 48 - Delete step. Duplicate of step 47, step not required.
18. TC-11 Step 10a - Add new step. Place LLW sorting box in Auto. Step required, missed on ATP.
19. TC-11 Step 15, 16 - Delete step. Bar Code not tested on ATP, will be verified during OTP performance.
20. TC-11 Step 20 - Delete step. AGV height of lift table is not part of drum present logic.
21. TC-11 Step 43a - Add new step. Set N43:011 to 1 to simulate Bar Code verified. Step required to allow drum entry.
22. TC-11 Step 46a - Add new step. Open LT203A Conveyor local 480v disconnect to remove power to conveyor. Step required to test Conveyor Forward Failed alarm.
23. TC-11 Step 48a - Add new step. Close LT203A Conveyor local 480v disconnect to restore power to conveyor. Step required to recover from new step 46a.

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TEST DEVIATIONS/CHANGES continued

24. TC-11 Step 50, 53 - Delete step. Breaking the beam of sensor 09-ZS-241F, LT203A Drum Under Port sensor causes LT203A to raise regardless of whether the beam remains broken or not. This is per design.

25. TC-12 Step 21,22,23,23a,28,29,30,30a,35,36,37,37a,42,43,44, 44a,49,50,51,51a Testing of Transfer Car alarms. Sequence of steps out of order and need step to reinitiate sequence.

26. TC-13 Step 84 through 88 - Sequence of steps out of order.

27. TC-13 Step 89 through 92, 94, 95 - Delete steps. Steps for Drum Tipper Failed to Raise alarm are not per design.

28. TC-14 - Lid/Delid Fixture redesigned. This section replaced in its entirety. Section replaced with page 1 through 7 attached to ATP.

29. TC-15 - Lid/Delid Fixture redesigned. This section replaced in its entirety. Section replaced with page 1 through 11 attached to ATP.

30. TC-16 - Lid/Delid Fixture redesigned. This section replaced in its entirety. Section replaced with page 1 through 2 attached to ATP.

31. TC-17 - Lid/Delid Fixture redesigned. This section replaced in its entirety. Section replaced with page 1 through 5 attached to ATP.

32. TC-18 - Lid/Delid Fixture redesigned. This section replaced in its entirety. Section replaced with page 1 through 7 attached to ATP.

33. TC-19 Step 25, 28, 29, 30, 32, 33 - Delete steps. Drum tipper grab vertical condition is not a valid interlock for drum tipper lowered condition.

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TEST DEVIATIONS/CHANGES continued

34. TC-20 Step 8a, 12a, 23a - Add new steps. Press "LOWER WITH GRAB CLOSED" button. New steps required to reinitiate sequence.

35. TC-20 Step 25, 28, 29, 30, 32, 33 - Delete steps. Drum tipper vertical is not valid interlock to drum tipper raise sequence.

36. TC-21 Step 16a, 16b, 16c, 16d - Add new steps to verify packet x-ray extend sequence. Steps missing from ATP.

37. TC-21 Step 27a - Add new step. Press "CLOSE X-RAY DOOR", verify message "PACKET X-RAY DOOR CLOSING". Step missing from ATP.

38. TC-21 Step 35 through 43 - Delete steps. X-ray "ENABLE/DISABLE" is a hardwired interlock, not a PCS interface. See TE#131

39. TC-21 Step 49, 50 - Delete steps. Bar Code not tested on ATP, will be verified during OTP performance.

40. TC-21 Step 47a, 47b, 47c - Add new steps. Added new steps to verify open x-ray door and verify extend packet tray. Steps missing from ATP.

41. TC-21 Steps 52a, 52b, 52c, 52d - Add new steps. Added new steps to verify retract x-ray packet tray sequence. Steps missing from ATP.

42. TC-22 Steps 1, 11, 12, 13, 17, 18 - Delete steps. Bar Code not tested on ATP will be verified during OTP performance.

43. TC-23 Step 50, 51 - Delete steps. Lift table does not stop lowering. See TE#85.

44. TC-24 Step 34a - Add new step. Press "EXTEND TABLE" button. Step missing from ATP.

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TEST DEVIATIONS/CHANGES continued

45. TC-24 Step 45, 48, 49, 51, 52 - Delete steps. Drum tipper vertical is not a valid interlock for extend sorting table sequence.

46. TC-24 Step 73 - Delete step. Sorting table lock pins extend at beginning of extend to tip position, not when sorting table reaches tip position.

47. TC-24 Step 83 through 86 - Sequence of steps out of order.

48. TC-25 Step 40, 43, 44, 46, 47 - Delete steps. Drum tipper vertical is not a valid interlock for sorting table raise sequence.

49. TC-26 - Delete this test case, duplicate of TC-20.

50. TC-50 Step 4a - Add new step. Start Aux. HPU. Step missing from ATP.

51. TC-27 Step 25 - Delete step. Drum tipper vertical is not a valid interlock for Open Grab and Park sequence.

52. TC-28 - Delete test case 28. Crimper was deleted from delid fixture, this test case tests crimper.

53. TC-30 Step 35 - Delete step. Step not required, Diagnostic is current OIU screen, not Alarm screen. Test step error.

54. TC-31 Step 37, 38, 39 - Delete steps. Vacuum isolation valve no longer part of E/E port design.

55. TC-31 Step 77, 78 - Delete steps. Close Vents is not a valid function associated with E/E port maintenance menu.

56. TC-31 Step 104 through 109 - Delete steps. Duplicate of steps 98 through 103.

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TEST DEVIATIONS/CHANGES continued

57. TC-32 Step 2, 6, 7, 8 - Delete steps. Bar Code not tested on ATP, will be verified during OTP performance.
58. TC-32 Step 4, 10, 15, 19, 77 - Delete steps. Drum present logic not based on AGV height.
59. TC-33 Step 27 - Delete steps. Vacuum isolation valve no longer part of E/E port design.
60. TC-33 Step 40 - Delete step. Port Fail to Open alarm does not clear until port open switch ZS0760 is activated, not ZS761B.
61. TC-33 Step 64 - Delete steps. Vacuum isolation valve no longer part of E/E port design.
62. TC-42 Step 3 - Delete step. Video recording of E-stop testing deleted as test requirement. See TE#88.
63. TC-42 Step 35 - Delete step. Video recording of E-stop testing deleted as test requirement. See TE#88.
64. TC-43 Step 43 through 54, 217 through 220, 256 through 259 - Delete steps. Crimper deleted from delid fixture.
65. TC-43 Step 43 through 54 - Delete steps. Crimper deleted from delid fixture.
66. TC-43 Step 3, 202 - Delete step. Video recording of E-stop testing deleted as test requirement. See TE#88.
67. TC-43 Step 143 through 154 - Delete steps. Crimper deleted from delid fixture.
68. TC-36 Step 14 - Delete step. Compacted drum lifter pendent close button deleted from design.
69. TC-36 Step 26a, 26b, 65a - Add new steps. Added steps to reflect new function on Trolley menu, "STORE PUCK".

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TEST DEVIATIONS/CHANGES continued

70. TC-23 Step 69 - Delete step. Drum at end of lift table added to AGV task list for transfer to the LLW RWM GLOVE BOX will be verified on Cold Run.

71. TC-30 Step 12 - Delete step. Test step error, previous step causes alarm which overrides sequence message.

72. TC-37 Step 26 through 33 - Delete steps. Bar Code not tested on ATP, will be verified during OTP performance.

73. TC-39 Step 10A - Add new steps. Added step to reflect new function on Trolley menu, "PICK UP PUCK".

74. TC-39 Step 47 through 52 - Delete steps. Bar Code not tested on ATP, will be verified during OTP performance

75. TC-39 Step 68a, 68b - Add new steps. Added step to reflect new function on Trolley menu, "PICK UP PUCK".

76. TC-41 Step 24 - Delete step. Vacuum isolation valve no longer part of E/E port design.

77. TC-40 Step 37a - Add new step. Added step to reflect new function on Trolley menu, "STORE PUCK".

78. TC-41 Step 28 through 30 - Test procedure error, PS768 not previously forced. To correct, PS768 (register I:32\06) forced activated. "Port 106 Pressure Seal Lost" alarm is generated.

79. TC-41 Step 31 - By design Lift Table lowers to drum centering height as soon as switch ZS761B is activated during close sequence, not ZS761A as defined on ATP. Operation and code verified on all E/E ports that lift table does not lower to centering height until this switch is made.

80. TC-41 Step 91 - Delete step. Test procedure error. Lift table already at lowered height.

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TEST DEVIATIONS/CHANGES continued

81. TC-44 Step 24, 25, 52, 53, 75, 96, 97 - Activation of E-Stop HS-105A/B or 315 when compacted drum lifter is opening results in closure of drum lifter and no further movement possible. This is per design. Test specified that drum lifter continue opening. Test step error, works per design.

82. TC-47 - Test case not performed, intent of test case met during performance of ATP test cases 33, 34, 36, 37, 39, 41. Justification: During performance of ATP test cases 33, 34, 36, 37, 39, 41, the following weighted drums were processed through the LLW Exit GLOVE BOX: (2) - Approximately 140 pound drums
(1) - Approximately 500 pound drum The actual, uncalibrated LLW Exit GLOVE BOX Drum Lifter (DH-07-104) scale readings for these weights were 64, 67.82, and 221 kilograms respectively.

A drum was loaded out from each position, compact receipt, storage position #1, and storage position #2.

The LLW ATP was initially drafted, for obvious safety reasons, with the intent that these test steps be performed using empty pucks. In actual fact, weighted drums were used to reduce the amount of testing required, to account for both, interlock and alarm testing as well as some portion of the weighted drum test processing (i.e., processing two 140 pound and one 500 pound drum) through the GLOVE BOX (e.g., test case 47).

83. TC-45 Step 47 and 48 - Steps out of order, reverse step order.

84. TC-45 Step 48a - Add new step. Verify message 'DRUM PICKUP IN PROGRESS'. Missing step.

85. TC-45 Step 62 through 66 - Delete steps. Steps not required due to the fact that transfer car already located at entry position.

86. TC-46 Step 26 through 29 - Delete steps. Steps not required due to the fact that transfer car already located at entry position.

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TEST DEVIATIONS/CHANGES continued

87. TC-46 Step 31 - Move transfer car to delid/tipper position is valid for drum without liner. Drums that have a liner must be sent to relid position first, bag removed and then send transfer car to delid/tipper position.

88. TC-46 Step 36a - Add new step. Start Aux. HPU. Step missing from ATP.

89. TC-46 Step 42, 43 - Delete steps. Drum liners will be removed manually at the relid position, not at the delid/tipper position using the manipulator.

90. TC-46 Step 51 through 96 - Step revised to reflect lid/delid fixture modifications.

91. TC-46 Step 153a - Add new step. Verify/Open X-Ray Door. X-Ray door must be open to raise sorting table.

92. TC-46 Step 168 through 173 - Delete steps. Drum tipper is already lowered.

93. TC-46 Step 174a - Add new step. Go to Saw menu, press "MOVE TO DELID POSITION" then start Relid sequence. Step required due to changes in lid/delid fixture.

94. TC-46 Step 175a - Add new step. Verify message "DRUM RELID SEQUENCE IN PROGRESS" displayed. Verify message "DRUM RELID COMPLETE" displayed. Press "MOVE TO PARK POSITION", verify message "FIXTURE MOVING TO PARK POSITION" displayed. Verify fixture moves to park position. Return to Main menu. Step required due to changes in lid/delid fixture.

95. TC-46 Step 187a - Add new step. Relid Drum. Step required due to changes in lid/delid fixture.

96. TC-46 Step 188 through 207 - Delete steps. Crimp device deleted from lid/delid fixture.

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TEST DEVIATIONS/CHANGES continued

97. TC-27 Step 25 - Delete step. Drum Tipper Vertical switch functions only when tipper is fully raised.

98. TC-33 Step 40 - Delete step. "Port DO-07-106 Failed to Open" alarm does not clear until port open switch ZS0760 is activated, not ZS761B.

99. TC-36 Step 14 - Delete step. Compacted drum lifter control button for Close has been deleted from design. Lifter is closed unless Open button is pressed and lifter will not open unless drum lifter weigh scale indicates less than 5 kg.

100. TC-41 Step 27 - Delete step. All E/E ports standardized. HVAC seal does not deflate until after port door is lowered closed and is locked.

101. TC-41 Step 30 - Delete step, test step error. PS-768 was not previously forced. To correct PS-768 (I/O I:32\06) forced not activated. "Port (106) HVAC Press Seal Lost" alarm is promptly generated. HVAC seal remains inflated.

102. TC-41 Step 31 - Delete step. Lift table does not depend on ZS761A as an interlock prior to moving centering height. Logic looks at ZS761B.

103. TC-46 Step 42 and 43 - Delete steps. Drums in PVC bag, bag is not removed by manipulator.

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TEST RESULTS

A total of 114 Test Exceptions were identified during performance of the LLW Acceptance Test. Additionally another 17 Test Exceptions that affect the LLW glove box were identified during performance of LLW RWM, TRU and TRU RWM Acceptance Testing.

Of the 131 identified Test Exceptions that affect LLW, 98 have been retested and closed. There are 33 Test Exceptions that remain open. The open Test Exceptions that affect LLW glove box are listed below with a brief description of the deficiency, recommended corrective action, status and required completion for closure.

TE #005 Entry/Exit port lid in position sensor activation is not repeatable. Port 101 and 106 this ATR. Corrective action: E/E port lid in position sensors changed from inductive to capacitive type sensor. Work complete, sensor adjustment and lift table reprogramming need to be performed. This work on hold until E/E port vacuum cup modification is complete.

This TE must be closed prior to Hot Operation.

TE #030 Generic issue that applies to all Entry/Exit ports. Entry/Exit port locking cylinder sensors are positioned so that sensors indicate full retraction even though the cylinders may be only partially retracted. In automatic mode this could result in equipment damage. No positive feedback of lockbolt position. Port 101 and 106 this ATR.

Corrective action: Replace single retro reflective sensor with 2 separate limit switches to sense both open and close position. Work in progress, complete installation and perform retest.

This TE must be closed prior to Hot Operation.

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TEST RESULTS continued

TE #036 BTP, E/E port and one trip ports - E-Stop does not stop port from raising or lowering.

Corrective action: Replace 2 position control valve with 3 position, pressurized center valve and make associated software changes for BTP, E/E port and one trip port raise/lower control valves.

Work complete on E/E port and one trip ports. BTP's on hold until software can be modified, replacement valves are on hand and will be replaced when software is modified.

This TE does not have to be closed until after Hot Operation. Does not affect operation of the BTP.

TE #37 Generic issue that applies to all lift tables. Lift table lowers with no control request for movement. Cause unknown.

Corrective action: Troubleshoot and develop action plan based on findings. Lift table may be operated in maintenance mode only with serial communication loop disabled. Auto control of lift table(s) is not possible until this issue is resolved. E/E ports would also have to be operated in maintenance mode. POP revisions must be implemented to allow glove box operation in this manner. This is a temporary fix only.

Long term solution will be based on results of troubleshooting and recommendations from Vendor/COG Engineer.

This TE must be resolved prior to Hot Operation.

TE #83 LLW Entry GLOVE BOX contamination probe (instrumentation) has not been tested.

Corrective action: Test GB101 contamination instrumentation and certify for use.

This TE must be closed prior to Hot Operation.

WASTE MANAGEMENT HANFORD COMPANY

PROJECT W-026, WRAP I

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ACCEPTANCE TEST REPORT (13031A-85) - LLW ACCEPTANCE TEST

TEST RESULTS continued

TE #105 E/E Port - inadequate sealing surface between outer vacuum seal and drum lid results in excessive cycling vacuum generator, loss of vacuum on lid, unable to establish adequate vacuum to allow auto sequence to continue and frequent alarms. Corrective action: Remove inner vacuum seal and replace with vacuum cups similar design on one trip ports. Modification in progress, need to complete and perform required retest.

This TE must be closed prior to Hot Operation.

TE #106 Generic TE that documents the fact that control logic timer settings have not been optimized. Corrective action: All timers are functional with initial settings documented. Optimization of timers is dependent on actual operating experience to achieve desired results. Optimize control logic timer settings during plant start up.

This TE can not be closed until the plant is operational.

TE #137 Generic TE that documents latched control bits on maintenance mode functions. Corrective action: Eliminate latched control bits from maintenance mode functions, such that there is no unexpected equipment movement when switching from automatic to maintenance mode and back.

This TE must be closed prior to Hot Operation.

TE #141 LLW sorting glove box, sorting table lock bolt (tip position) locked position switch ZS729A/B are not repeatable. The switches are not correct for the application.

Corrective action: Replace sorting table lock bolt cylinders with FESTO cylinder that includes a cylinder mounted magnetic switch to detect cylinder position. Material on hand, complete modification and perform retest.

This TE must be closed prior to Hot Operation

WASTE MANAGEMENT HANFORD COMPANY

PROJECT W-026, WRAP I

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ACCEPTANCE TEST REPORT (13031A-85) - LLW ACCEPTANCE TEST

TEST RESULTS continued

TE #147 LLW sorting GB lid/delid fixture translate motion is erratic.

Corrective action: Inspect V-Rail alignment, wheel guides, etc. and shim/rework as required. WP 97-0502

This TE must be closed prior to Hot Operation.

TE #150 Drum tipper grab arm hydraulic supply (close) pressure bleeds off shortly after hydraulic control valve goes to center (deenergized) position resulting in a "Drum Tipper Loss of Pressure" alarm.

Corrective action: Add hydraulic accumulator on close supply line. Accumulator added, needs to be retested.

This TE must be closed prior to Hot Operation.

TE #0157 GB102 V-Rails for sorting table/lidder do not line up with wheels on south side of sorting table.

Corrective action: Inspect V-Rail alignment, wheel guides, etc. and shim/rework as required. WP 97-0502

This TE must be closed prior to Hot Operation.

TE #0160 End of travel limit switches on drum tipper raised and lowered are inadequate. Current sensor is a retro reflective sensor located on exterior of GB looking through a window at a reflector located on drum tipper device. If reflector gets dirty (window too), or something obstructs the light path of the sensor the drum tipper will not stop raising/lowering until either the clutch trips, or damage occurs to the drum tipper device.

Corrective action: Replace raise/lower sensors with limit switches that activate off of physical location. Work in progress, complete installation of switches and retest.

This TE must be closed prior to Hot Operation.

WASTE MANAGEMENT HANFORD COMPANY

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ACCEPTANCE TEST REPORT (13031A-85) - LLW ACCEPTANCE TEST

TEST RESULTS continued

TE #180 Generic TE that documents inconsistencies in implementation of Automatic to Maintenance mode transition. Corrective action: Make all Automatic and Maintenance mode transitions consistent for all glove boxes. Work complete for LLW , needs to be retested to close.

This TE must be closed prior to Hot Operation.

TE #199 Generic TE documenting inconsistencies between TRU line and LLW line lift table control logic.

Corrective action: Revise LLW line lift table control logic to be consistent with TRU line lift table control logic. Work complete on LLW lift table control logic, needs to be retested to close TE.

This TE must be closed prior to Hot Operation.

TE #214 Hoist CR-07-101C is to slow.

Corrective action: Reprogram hoist to optimize speed.

This TE does not have to be closed until after hot operation. Does not impact equipment operation and can be implemented outside of GB. Operator enhancement only.

TE #220 Lid/delid device - rusted clamp band does not come off drum after delid saw cuts through clamp band, additionally clamp bands fall to floor and no means of removing are provided.

Corrective action: Add clamp band retention and removal device to lid/delid fixture. Design issued, equipment ordered. Complete installation and retest.

This TE must be closed prior to Hot Operation.

TE #223 Super compactor drops approximately 1 inch per hour. Corrective action: Investigate and coordinate with vendor (INET) to determine cause. After determining cause develop corrective action. Short term resolution may be to address in OP's.

This TE must be resolved prior to Hot Operation.

WASTE MANAGEMENT HANFORD COMPANY

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ACCEPTANCE TEST REPORT (13031A-85) - LLW ACCEPTANCE TEST

TEST RESULTS continued

TE #224 While tipping sorting table to transfer waste material back into 55 gallon drum, waste overshoots drum falling on GB floor and damages instrument tubing to transfer car hard stops.

Corrective action: Design for waste deflector issued, installation in progress. Complete installation of waste chute on lid/delid fixture and retest. Protective covering installed over instrument tubing completed.

This TE must be closed prior to Hot Operation.

TE #229 Auxiliary hydraulic power unit 107-HPU-07-301 trips off line on high temperature after approximately 1 to 2 hours of run time. This HPU does not include a cooler as part of its design, but provisions were included to add a cooler at a later date if required. This issue affects equipment availability only.

Corrective action: Add hydraulic oil cooler to Auxiliary HPU.

This TE does not have to be resolved until after Hot Operation. All changes are on exterior of GB.

TE #242 During transfer of drum from transfer car to compactor entry conveyor, the transfer complete signal was not sent by the compactor.

Corrective action: Identified problem with transfer car control logic, implemented change to CNR102 ladder logic. Work complete, needs to be retested.

This TE must be closed prior to Hot Operation.

TE #245 Operation of TC-07-101 not inhibited by activation of E-Stops in Maintenance mode.

Corrective action: Add E-Stop logic for TC-07-101 to ladder logic. Software changes implemented, need to retest.

This TE must be closed prior to Hot Operation.

WASTE MANAGEMENT HANFORD COMPANY

PROJECT W-026, WRAP I

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ACCEPTANCE TEST REPORT (13031A-85) - LLW ACCEPTANCE TEST

TEST RESULTS continued

TE #246 Local E-Stop HS-07-102C not configured, or wired as an input to CNR102.

Corrective action: Configure IAC 102 spare input from HS-07-102C (Input XS315s) to CNR102. Configure ladder logic to use XS315s as part of E-Stop logic. Work complete, need to retest.

This TE must be closed prior to Hot Operation.

TE #248 On dumping drum contents to sorting table, the waste piles up at one point and will not empty out completely. When upright, the bottom of the drum runs into the waste.

Corrective action: Adjust manipulator cable reel so that manipulator can move close enough to pull items out of drum. On WP-97-0502. Complete work and retest.

This TE must be closed prior to Hot Operation.

TE #329 Drum tipper grab arms do not fully open every time. Open switch is on non regulated arm, regulated arm does not move until regulated arm is full travel; regulated arm will not move unless open switch disabled.

Corrective action: Add switch to regulated arm and wire in series with existing switch for grab open, such that both switches must be activated to give PCS grab open signal. Work complete, needs to be retested.

This TE must be closed prior to Hot Operation.

TE #345 Delid fixture saw is only good for approximately 20 cuts before teeth break.

Corrective action: Investigate for alternative parts (saw blade). Does not affect operation, affects reliability/run time only.

This TE does not have to be closed until after Hot Operation.

WASTE MANAGEMENT HANFORD COMPANY

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ACCEPTANCE TEST REPORT (13031A-85) - LLW ACCEPTANCE TEST

TEST RESULTS continued

TE #362 Ladder logic comments don't match code. E-Stop contacts mislabeled.

Corrective action: Fix ladder logic symbols, descriptions, and rung comments.

This TE does not have to closed until after Hot Operations. Does not affect GB operation.

TE #369 When the compactor GLOVE BOX is pressed and the compactor is busy, the transfer command is still active. This can become dangerous, as the compactor may be busy for maintenance, etc..

Corrective action: Add time out timer to ladder logic to disable transfer command time delay. Work complete, need to retest.

This TE must be closed prior to Hot Operation.

TE #370 Both fixed, and portable barcode readers lockup due to RB module faults.

Corrective action: Interim fix is to add code to CNR 103 ladder logic to reset RB module after a fault. Investigate RB module fault trips and develop action plan after identifying cause.

Implement interim fix prior to Hot Operations. Investigation to be ongoing.

TE #370 No method for determining successful bar code read when using fixed wand scanners, other than local readers.

Corrective action: 1. Make puck bar code pin readable by operator.
2. Require operator to visually verify puck at location matches pin displayed on OIU. Change to Operating Procedure.
3. Remove reader NT-316.

Item #1 and #3 complete, item #2 to be completed prior to Hot Operation.

WASTE MANAGEMENT HANFORD COMPANY

PROJECT W-026, WRAP I

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ACCEPTANCE TEST REPORT (13031A-85) - LLW ACCEPTANCE TEST

TEST RESULTS continued

TE #717 Audible alarm for loss of port door seal not verified. Spec. 13462 specified that GB101 transfer port door seal low pressure condition provides an audible alarm in the control room. This alarm has been removed from current RTAP audible alarms.

Corrective action: Resolve requirement for audible RTAP alarm for GB101 transfer port door seal low pressure condition.

This TE must be closed prior to Hot Operation.

TE #721 Maintenance mode and some auto mode interlocks not verified because they are not explicitly defined in 13462.

Corrective action: Review\test all auto and maintenance mode interlocks on LLW sorting glove box.

This TE must be closed prior to Hot Operation.

When the above listed Test Exceptions are closed the signed off original Test Exception will be incorporated into this ATR by initiation of an ECN.

A list of test exceptions and the signed, completed test exception documents are provided as appendices to this report.

WASTE MANAGEMENT HANFORD COMPANY

PROJECT W-026, WRAP I

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ACCEPTANCE TEST REPORT (13031A-85) - LLW ACCEPTANCE TEST

CONCLUSION AND RECOMMENDATIONS

TEST EXCEPTION RESOLUTION

Resolve open Test Exceptions as identified in Test Results section of this ATR.

WASTE MANAGEMENT HANFORD COMPANY

PROJECT W-026, WRAP I

HNF-SD-W026-ATR-032 LLW GLOVEBOX ATR, Rev. 0

ACCEPTANCE TEST REPORT (13031A-85) - LLW ACCEPTANCE TEST

Appendix A

LLW GLOVE BOX Test Exception Sign-Off Sheets

The 133 original test exception sign-off sheets are attached as hardcopy printouts.

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 5

ATP_YN : Y

DESIGN

Test : 13027A-87.09

Step : 74

Equipment Tag #: DO-203, LT-201D

Exception :

Revision : 0

Date:

Specification Section : 13027A

Test Witness/Author : Leist

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

Lift Table did not raise after seal inflates and lid in position sensor activated, centering guides also extended cause not known.

Exception Disposition :

? Problem sourced w/ Lid in Position Sensor. Notify DOE of condition and replace Lid in Position sensor.

Exception Status :

9-2-97 - KJ Leist to fine tune sensors for all Entry/Exit Ports.

1/5/98 LID IN POSITION SENSOR REPLACED

Exception Closed By :

KJ Leist

Date : 1/28/98

APPROVAL OF RESOLUTION

Contractor Representative:

(Only as needed)

LD R W

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:

(Only as needed)

Date: _____

FDNW Representative:

N/D

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 8

ATP_YN : Y

Test : 13027A-87.07, A.85

Step : 45,50

Equipment Tag #: DO-201,LT201F

Exception :

Revision : 0

Date:

Specification Section : 13027A

Test Witness/Author : Leist

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

THIS TEST EXCEPTION APPLIES TO ALL BAGLESS TRANSFER PORTS; DO-07-105, -201, -305, -308, -401: Last expected output requires that when the door is open, the lift table weight does not fall below the setpoint. It does, as expected, as the downpressure of the door is relieved.

Exception Disposition :

This is normal.

Exception Status :

CLOSED

Exception Closed By : Leist

9/17/97

Date : 5/7/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

WMH Representative:

Additional Approval:
(Only as needed)

FDNW Representative:

Date: _____

Date: 2-2-98

Date: _____

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 9

ATP_YN : Y

DESIGN

Test : 13027A-87.07

Step : 33

Equipment Tag #: DO-201, LT-201F

Exception :

Revision : 0

Date:

Specification Section : 13027A

Test Witness/Author : Leist

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Schaeffer

Exception Description :

In maintenance mode, the drum will run off the end of the conveyor.

Exception Disposition :

Procedure Issue. A bar should be added to provide safety. Notify DOE of condition and request funds for change.

Exception Status :

Add note to operating procedure.

Exception Closed By :

Date : 11/19/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 30

ATP_YN : Y

DESIGN

Test : 13027A-87.21

Step : ALL

Equipment Tag #: DO-201

Exception :

Revision :

Date:

Specification Section : 13027A

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

NOTIFY DOE AND REQUEST FUNDS FOR FIX:

THIS EXCEPTION APPLIES TO ALL ENTRY/EXIT PORTS: Entry/Exit port Locking cylinder sensors are positioned so that the sensors indicate full retraction even though the cylinders may be only partially retracted. It is likely that the locking cylinders, at some time in the future, will not fully retract causing the port door to impact the locking cylinders. This may cause equipment damage.

Exception Disposition :

Options:

1. Replace existing locking cylinder with FESTO cylinder similar to lid detach cylinder. Use in-line cylinder sensors similar to 07-ZS-900B to sense full cylinder extension and retraction.
2. Use existing cylinders and be prepared for damage incident.

Exception Status :

9-2-97 KJ Leist and MP Lane to write CR to change out to cylinder with 2 sensors per cylinder. Need to determine change required and order parts.

Need design package.

WP-97-501 Item #24.

WP-97-504 Item #22.

WP-97-505 Item #22.

1/5/97 Microswitches added to ports (Dunlap) Closed

Exception Closed By :

K. Leist

Date :

1/5/98

APPROVAL OF RESOLUTION

Contractor Representative:

(Only as needed)

WMH Representative:

Date:

2-2-98

Additional Approval:

(Only as needed)

Date:

FDNW Representative:

n/a

Date:

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 36

ATP_YN : Y

DESIGN

Test :

Exception :

Step :

Equipment Tag #:

Revision :

Date:

Specification Section :

Test Witness/Author : Leist

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

This exception applies to all Entry/Exit Ports, Bagless Transfer ports. E-Stop doesn't stop port from lowering or raising.

Exception Disposition :

1/28/98 PORT currently operates and E-stop operates consistently with Port manufacturer. ^{integration} ~~into~~ T.E. change is an upgrade to be pursued at a later date

Exception Status :

9-2-97 KJ Leist to initiate change request. Need to order parts.

4/5/97. Parts received but not installed. Change over would require substantial software change and would probably require detaching Subcoast controller with PCS. Issue deferred to post demonstration.

Exception Closed By :

KJ Leist

Date : 1/28/98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

v/p
W R W O

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:
(Only as needed)

_____ Date: _____

FDNW Representative:

v/p

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 37

ATP_YN : Y

HW

Exception :

Test : 13027B-88.20

Revision :

Step : 15

Equipment Tag #: LT-09-201A

Date:

Specification Section : 13027B

Test Witness/Author : Leist

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Schaeffer

Exception Description :

The Lift Table lowered by itself during E-Stop testing. No E-Stop activities on the 401B had been done this time. Cause not believed to be software. Previous similar incidents have been recollected for this Lift Table.

Exception Disposition :

8-17-97 - MPL - Mr. Jordal indicates that he will start a work package to have wiring wrung out for lift table LT-09-201A.

Exception Status :

9-2-97 Electricians find no wiring problems. MP Lane to review code for extraneous block move. Electricians to provide additional support as needed.

9-18-97 Can operate in maint. not auto - MPL working.

9-25-97 Revise POPs. 12-1-97 - Interim fix - disable RS-232 communications loop. work package 643 to determine long term fix.

Exception Closed By :

Michael P. J. J.

Date : 1-5-98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

[Signature]

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

N/A

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 39

ATP_YN : Y DESIGN
Test : 13027B-88.11
Step : 3 Equipment Tag #: DO-07-107,.....

Exception :
Revision :
Date:

Specification Section : 13027B
Test Witness/Author : Leist
Test Operator:

Responsible Company: WMH
Responsible Subcontractor :
Responsible Individual: Leist

Exception Description :

Cannot test cell when Sample Transfer Port container is in the locked and unlocked positions.

Exception Disposition :

Add permanent marks to port assembly with verbage locked, unlocked which line up with container pins.

Exception Status :

Exception Closed By : ghad

Date : 11/19/97

APPROVAL OF RESOLUTION

Contractor Representative: W/A Date: _____
(Only as needed)

WMH Representative: John R. W. O. Date: 2-2-98

Additional Approval: _____ Date: _____
(Only as needed)

FDNW Representative: W/A Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 43

ATP_YN : Y

SETUP

Test : 13027B-88.09

Step : 43

Equipment Tag #: LT-201A, All Lift Tables

Exception :

Revision :

Date:

Specification Section : 13027B

Test Witness/Author : Leist

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

Lift Tables use absolute positioning as a stop. If the lift tables are not rehomed EVERY CYCLE, a risk is present that the lift table will deadhead against the bottom of the port.

Exception Disposition :

Potential fix is to have LT rehome on the "UP" command.

Exception Status :

7-2-97- MPA command issued, lift table automatically entered absolute position mode each time turned on. 9-3-97 MP Lane to verify MPA command included for all lift tables for all appropriate command sequences.

9-18-97 2 OIC to be programmed.

11-19-97 - MPA command exists in all lift table #40
(startup) sequences

Exception Closed By :

Michael P. Jones

Date : 11-19-97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

LEIST

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

NA

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 54

ATP_YN : Y

Test : 13027B-88

Step : Equipment Tag #:

Exception :

Revision :

Date:

Specification Section : 13027B

Test Witness/Author : Leist

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

Manipulator Tool Air Supply is sourced upstream of the glovebox air valves, i.e. the OIU cannot turn off the air.

Exception Disposition :

Exception Status :

9-3-97 101 glovebox fixed. Parts present. Ken Leist to ensure remainder of gloveboxes fixed.

9-18-97 Done. WR to check.

WP 97-0322

Exception Closed By :

Date : 11/19/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

WMH Representative:

Additional Approval:
(Only as needed)

Date: _____

Date: 2-2-98

Date: _____

FDNW Representative:

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 79

ATP_YN : y

Test : 13031A-85

Step : Setup 26

Equipment Tag #: 104-CNR-12-102

Exception : 1

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

6-29-97 MPL - Could not locate PP-09-102 to control CNR 102 power.

Exception Disposition :

Locate power supply for LCU 102.

Exception Status :

7-1-97- MPL LCU 102, 103 fed directly from UPS-11-101, circuits 16 and 18 respectively. This exception is therefore closed.

Exception Closed By : Lane

Date : 7/1/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 80

ATP_YN : y

Test : 13031A-85

Step : Setup 41

Equipment Tag #: DH-07-103

Exception : 2

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

6-29-97 MPL - Lid/Delid fixture C-Clip crimper not functional at start of test.

Exception Disposition :

Fix and test.

Exception Status :

9-3-97 Design change replaces crimper with hand-held unit. Closed.

Exception Closed By : Leist

KP 9/17/97

Date : 9/3/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

WMH Representative:

Additional Approval:
(Only as needed)

Date: _____

Date: *2-2-98*

Date: _____

FDNW Representative:

SL

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 81

ATP_YN : y

Test : 13031A-85

Step : 05.4,12,13,14 Equipment Tag #: CR-07-101A

Exception : 3

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Vvarmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Weidert

Exception Description :

Exception Disposition :

Revise software specification section 13462 to reflect modified hardware.

Only PCS SDD to be maintained
See 32620 - 12W - 97 - 203

Exception Status :

9-3-97 JR Weidert to determine best course of action to update plant documentation to reflect actual as-built condition of process area software.

Exception Closed By :

[Signature]

Date : 11-17-97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

[Signature]

Date: _____

WMH Representative:

Date: 11-17-97

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

[Signature]

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 82

ATP_YN : y

Exception : 4

Test : 13031A-85

Revision :

Step : 05,4,12,13,14 Equipment Tag #: CR-07-101A

Date:

Specification Section : 13031

Test Witness/Author : Vvarmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Schaeffer

Exception Description :

THIS APPLIES TO TC 5, STEPS 4,12,13,14,21,22,25

6-29-97 MPL - Modification R110 changes caused drum lifter operation to change. Grab can open and close repeatedly when drum lifter is not fully raised.

Exception Disposition :

Glovebox cognizant engineer to determine correct operation required. Software to be modified to meet required operation.

Exception Status :

9-3-97 Modify operating procedure so that operator ensures that drum is securely held, lifter arms beneath clamp band, before fully raising drum.

Exception Closed By :

K. J. [Signature]

Date : 9/17/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

[Signature]

Date: _____

WMH Representative:

[Signature]

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

[Signature]

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 83

ATP_YN : Y

Exception : 5

Test : 13031A-85

Revision :

Step : 05.58

Equipment Tag #: 12-RIA-534

Date:

Specification Section : 13031

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Hackworth

Exception Description :

6-29-97 MPL - Swab counting is not possible due to lack of trained technician.

Exception Disposition :

Verify that LLW Entry Glovebox swab counter works correctly.

Exception Status :

Verify that LLW Entry Glovebox swab counter works correctly.

- 12-RIA-534 and 12-RIA-533 work correctly. This item is closed 1/26/98

Exception Closed By :

Date : 1/26/98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

Date: _____

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WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: **84**

ATP_YN : Y

Test : 13031A-85

Step : 05.74

Equipment Tag #: CR-07-101A

Exception : 6

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

6-29-97 MPL - After "Trolley Failed to Reach Transfer Port" alarm is cleared and Trolley has been moved to the transfer port position in maintenance mode, automatic mode is resumed, but "Trolley Moving to Transfer Port..." remains displayed.

Exception Disposition :

Fix messaging. When hoist trolley arrives at selected position, the message indicating that the hoist trolley is at that position should be displayed.

Exception Status :

6-30-97 Duplicate of #103. 103 has more detail. This exception is therefore closed, refer to #103.

Exception Closed By : Lane

Michael P. Lane

Date : 6/30/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

N/A
John R. W...

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

N/A

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 85

ATP_YN : Y

Exception : 7

Test : 13031A-85

Revision :

Step : 06.64,65

Equipment Tag #: LT-09-202A

Date:

Specification Section : 13031

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

6-29-97 MPL - "Lift Table (202A) Failed to Lower" alarm causes lift table to stop. On ports 202, 203, this alarm did not send stop command and automatically cleared itself when the lift table reached AGV height.

Exception Disposition :

Determine proper alarm operation for all failed to raise/lower alarms, implement uniformly for all lift tables and retest alarms.

Exception Status :

7-1-97 MPL - Removed lift table stop command due to failed to raise / lower alarm for lift tables 202A, 203A, and 202C. All LLW and LLW RWM lift tables are now consistent. Mike Schneider to apply to TRU line. 9-3-97 Ken Leist indicates acceptable. Closed.

Exception Closed By : Leist

9/17/97

Date : 9/3/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

N/A

Date: _____

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WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 86

ATP_YN : Y

Exception : 8

Test : 13031A-85

Revision :

Step : 06.99 Equipment Tag #: OIU-12-103A

Date:

Specification Section : 13031

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

8-29-97 MPL - "DRUM PICKUP IN PROGRESS" message is not initially displayed because N31:3/10 bit is already activated. This is due to previous activation of the "PICKUP DRUM" button without the requisite AGV pickup of a drum.

Exception Disposition :

Reset bit and retest.

Exception Status :

8-29-97 MPL - N31:3/10 bit reset to not activated (0). "PICKUP DRUM" button pressed and message is sent.

Exception Closed By : Lane

Michael R. Jones

Date : 6/29/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

WMH Representative:

Additional Approval:
(Only as needed)

FDNW Representative:

Date: _____

Date: 2-2-98

Date: _____

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 87

ATP_YN : Y

Exception : 9

Test : 13031A-85

Revision :

Step : 07.25,26

Equipment Tag #: DO-07-102

Date:

Specification Section : 13031

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

6-29-97 MPL - As per K.J. Leist direction, interlock added to prevent port opening if drum transfer car is not at entry position.

Exception Disposition :

6-29-97 MPL - Modify test so that both pendant control enabled / transfer car present and port open/ transfer car present interlocks are both tested.

Exception Status :

6-29-97 MPL - Test modified to examine both interlocks. Port will not open without transfer car present. Pendant is not enabled unless transfer car is present. Transfer car not present / present OIU indicator verified to indicate correct status of transfer car. This exception is therefore closed.

Exception Closed By : Lane Michael Rose

Date : 7/1/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative: u/p

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 88

ATP_YN : Y

Test : 13031A-85

Step : 42.3

Equipment Tag #: ALL

Exception : 10

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

THIS APPLIES TO ALL STEPS CALLING FOR VIDEO RECORDING:
6-29-97 MPL - Step #3 requires video recording. As per draft LLW ATP test review comments from Mr. Thackaberry, this step is not required. Although intended to be deleted from issued test procedure, these steps remain.

Exception Disposition :

THIS APPLIES TO ALL STEPS CALLING FOR VIDEO RECORDING:
6-29-97 MPL - Redline remove procedure step from LLW ATP test procedure.

Exception Status :

6-29-97 MPL - All instances redline removed as procedure performed.

Exception Closed By : Lane

Michael Dixon

Date : 6/29/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

W/A
John R. Wood

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

W/A

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 89

ATP_YN : Y

Test : 13031A-85

Step : ALL Equipment Tag #: OIU-12-103A

Exception : 11

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

6-29-97 MPL - Repeatedly, when in alarms screen, OIU locks up and cannot return to main screen. Note that N40:9/0 "In Alarm Screen" status bit is unlatched, even though alarms screen is displayed.

Exception Disposition :

6-29-97 MPL - On rung 40:5 added XIO N40:9/0 "In alarms screen" so that panel display output O:61 is not updated when in the alarm screen.

Exception Status :

6-29-97 MPL - Alarm screen lockups no longer noted.

Exception Closed By : Lane

Michael Adams

Date : 6/29/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

n/a
J. R. White

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

n/a

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 90

ATP_YN : Y

Test : 13031A-85

Step : 01.5

Equipment Tag #: LT-09-202A

Exception : 12

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

6-29-97 MPL - Repeatedly, when switching from maintenance to automatic mode, lift table cycles up to lid in position point and down to AGV height. Emergency stop code added to restart lift tables after emergency stop is activated is causing lift table cycling.

Exception Disposition :

6-29-97 MPL - AFI bad code. Mike Schneider to design, test fix. MPL to add to existing code and verify fix.

Exception Status :

7-1-97- MPL AFI removed from rungs, condition no longer noted. This exception is therefore closed.

Exception Closed By : Lane

Michael Lane

Date : 6/29/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

[Signature]

Date: _____

WMH Representative:

[Signature]

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

[Signature]

Date: _____

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WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 91

ATP_YN : Y

Test : 13031A-85

Step : 01.7

Equipment Tag #: DO-07-101

Exception : 13

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

6-29-97 MPL - "Port Failed to Close and Lock" alarm generated because N40:2/4 bit was not latched. This alarm should only be triggered during port closing sequence.

Exception Disposition :

6-29-97 MPL - Mike Schneider to design, test fix. MPL to add to existing code and verify fix.

Exception Status :

7-1-97 - Added XIO "System in Maintenance Mode" N40:1/12 bit to N40:2/4 OTU rung (40:54) to prevent status bit becoming unlatched while in maintenance mode. Alarm not noted again when initializing system. This exception is therefore closed.

Exception Closed By : Lane

Michael R. Lane

Date : 7/1/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

[Signature]

Date: _____

WMH Representative:

[Signature]

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

[Signature]

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 92

ATP_YN : Y

Test : 13031A-85

Step : 01.7 Equipment Tag #: DO-07-101

Exception : 14

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

6-29-97 MPL - Sequence Failed message not noted for "Port Failed to Close and Lock" alarm. This is because after alarm is generated, system is initialized. The one shot "SYSTEM INITIALIZED" message overrides the "SEQUENCE FAILED" alarm message. This does not provide a consistent alarm message for operators.

Exception Disposition :

6-29-97 MPL - Mike Schneider to design, test fix. MPL to add to existing code and verify fix.

Exception Status :

7-1-97- MPL - Removed ONS for alarm pilot light activation / pilot light deactivated rungs for LLW RWM, LLW ENTRY, LLW SORT, and LLW EXIT gloveboxes. Mike Schneider to apply to TRU line. 9-3-97 Complete. Closed.

Exception Closed By : Lane

Date : 9/3/97

APPROVAL OF RESOLUTIONContractor Representative:
(Only as needed)

WMH Representative:

Additional Approval:
(Only as needed)

FDNW Representative:

Date: _____

Date: 2-2-98

Date: _____

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 93

ATP_YN : Y

Test : 13031A-85

Step : 01.120

Equipment Tag #: OIU-12-103A

Exception : 15

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

6-29-97 MPL - "SYSTEM INITIALIZED" displayed even after system initialized conditions are not present. This may provide false indication of a system initialized even though initialized conditions no longer exist.

Exception Disposition :

6-29-97 MPL - Suggest:
Display SYSTEM INITIALIZED if initialized. Display SYSTEM NOT INITIALIZED if not initialized. Remove menu lockout. Add initialization interlocks as appropriate to each automatic sequence; e.g., so that port will not open or close unless initialization interlocks met.

Exception Status :

9-3-97 Original design retained. System initialized only counts immediately after switch from maint. mode to auto. Use diagnostics screens to review actual equipment status.

Exception Closed By : Lane *Michael P. Lee*

Date : 9/3/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

WMH Representative:

Additional Approval:
(Only as needed)

FDNW Representative:

Date: _____

Date: *2-2-98*

Date: _____

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 94

ATP_YN : Y

Test : 13031A-85

Step : 02.07

Equipment Tag #: OIU-12-103A

Exception : 16

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

8-29-97 MPL - Press "CHANGE PASSWORD". "ENTER OLD PASSWORD" displayed. Press "ENTER". "ENTER ACCESS CODE" displayed instead of "ENTER NEW PASSWORD". On LLW RWM, TRU RWM, same sequence results in "ENTER NEW PASSWORD" being displayed.

Exception Disposition :

8-29-97 MPL - Make OIU maintenance access menu respond identically to other OIUS. Mike Schneider to design, test fix. MPL to add to existing code and verify fix.

Exception Status :

7-1-97 - Bitwise message control instead of word-wise causes error. OIU display modified, re-downloaded, retested satisfactory. This exception is therefore closed.

Exception Closed By : Lane

Date : 7/1/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

Date: 8-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 95

ATP_YN : Y

Test : 13031A-85

Step : 01.ALL

Equipment Tag #: OIU-12-103A

Exception : 17

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

THIS APPLIES TO ALL OIU DIAGNOSTICS MENUS

6-29-97 MPL - Negative conditions which are displayed in black text, red background, are difficult to read.

Exception Disposition :

6-29-97 MPL - Change text color to white for improved contrast. Test fix for all OIUs.

Exception Status :

7-1-97 MPL - Applied to all glovebox diagnostics screens. This exception is therefore closed.

Exception Closed By : Lane

[Signature]

Date : 7/1/97

APPROVAL OF RESOLUTION

Contractor Representative:

(Only as needed)

[Signature]

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:

(Only as needed)

Date: _____

FDNW Representative:

[Signature]

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 96

ATP_YN : Y

Exception : 18

Test : 13031A-85

Revision :

Step : 02.62,64

Equipment Tag #: OIU-12-103A

Date:

Specification Section : 13031

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

THIS APPLIES TO ALL MAINTENANCE MENUS

6-29-97 MPL - Lid detach extend/retract - Detach extend indicator flashes on only when button is pressed. Detach retract indicator remains on after being pressed.

Exception Disposition :

6-29-97 MPL - Make lid detach/extend buttons act identically for every OIU maintenance menu. Mike Schneider to design, test fix. MPL to add to existing code and verify fix.

Exception Status :

7-1-97- This is due to different coding between port 101 and other entry/exit ports. Port 101 close sequence modified to more closely match LLW RWM entry/exit ports. Tested; lid detach extends for ~10 seconds during port close sequence. Maint. mode operation identical to LLW RWM glovebox. This exception is therefore closed.

Exception Closed By : Lane

Michael P. Doe

Date : 7/1/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

John R. Ward

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

N/A

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #:

97

ATP_YN : Y

Exception : 19

Test : 13031A-85

Revision :

Step : 02.75

Equipment Tag #: DO-07-102

Date:

Specification Section : 13031

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

6-30-97 MPL - Both seal inflated/deflated indicators simultaneously active.

Exception Disposition :

6-29-97 MPL - XIO PSL700 added to rung 71:25 so that deflated indicator not active when pressure sufficient to trigger PSL700 is present.

Exception Status :

6-30-97 - MPL This exception is therefore closed.

Exception Closed By : Lane

Michael R. Jones

Date : 6/30/97

APPROVAL OF RESOLUTION

Contractor Representative: _____

(Only as needed)

Date: _____

WMH Representative: _____

Date: 2-2-98

Additional Approval: _____

(Only as needed)

Date: _____

FDNW Representative: _____

n/a

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 98

ATP_YN : Y

Exception : 20

Test : 13031A-85

Revision :

Step : 03.09

Equipment Tag #: OIU-12-103A

Date:

Specification Section : 13031

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

6-30-97 MPL - Can access Overpack Drum Entry Menu after system initialized, but before drum bar code pin has been verified correct.

Exception Disposition :

6-30-97 MPL - Added NEQ 1:61 <> 2 on rung 40:5 to prevent accessing overpack menu until after correct drum pin has been read.

Exception Status :

6-30-97 - MPL This exception is therefore closed.

Exception Closed By : Lane

Michael P. Jones

Date : 6/30/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

[Signature]

Date: _____

WMH Representative:

[Signature]

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

[Signature]

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #:

99

ATP_YN : Y

Exception : 21

Test : 13031A-85

Revision :

Step : 03.09

Equipment Tag #: 12-NE/NT-313

Date:

Specification Section : 13031

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

6-30-97 MPL - Barcode drum pins are either verified or user must cancel sequence. But it appears that drum pin check has been implemented at the Entry Glovebox such that if drum pin mismatch is detected, PCS appears to take mismatch ID as inner drum id.

Exception Disposition :

6-29-97 MPL - Mike Schneider to design, test fix. MPL to add to existing code and verify fix.

Exception Status :

7-1-97- False concern. Mismatch occurs during 5.4.1 message comparison. Overpack drum pin must match PCS drum pin tracking table or drum pin mismatch will occur. This exception is therefore closed.

Exception Closed By : Lane

Date : 7/1/97

APPROVAL OF RESOLUTIONContractor Representative:
(Only as needed)

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 100

ATP_YN : Y

Exception : 22

Test : 13031A-85

Revision :

Step : 03.09

Equipment Tag #: 12-NE/NT-313

Date:

Specification Section : 13031

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

6-30-97 MPL - Barcode drum pin is displayed only if inner drum present. Drum pin does not appear to be erased from display after drum leaves. No drum ID is displayed for overpack drum.

Exception Disposition :

6-29-97 MPL - Mike Schneider to design, test fix. MPL to add to existing code and verify fix.

Exception Status :

9-5-97 - Works as per design. Closed.

Exception Closed By : Lane

Michael R. Jones

Date : 8/5/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

v/a
SE R W

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

v/a

Date: _____

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4:01:20 PM, 9/16/97

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 101

ATP_YN : Y

Exception : 23

Test : 13031A-85

Revision :

Step : 04.14

Equipment Tag #: LT-09-202A

Date:

Specification Section : 13031

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

6-30-97 MPL - Drum Entry Sequence is not interlocked separate from Drum Exit Sequence. Operator can accidentally press both and cause lift table entry sequence to screw up.

Exception Disposition :

6-30-97 MPL - Temporary N31:13/9 XIO added to rung 40.41 to prevent exit during entry sequence. N40:6/5 XIO added to rung 31:236 to prevent entry during exit.

Mike Schneider to design, test fix. MPL to add to existing code and verify fix.

Exception Status :

7-1-97- Temporary fix tested satisfactory. This exception is therefore closed.

Exception Closed By : Lane

Date : 7/1/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 102

ATP_YN : Y

Exception : 24

Test : 13031A-85

Revision :

Step : 03.43

Equipment Tag #: LT-09-202A

Date:

Specification Section : 13031

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

6-30-97 MPL - When conveyor forward alarm generated, conveyor stops, lift table does not raise. After drum under port sensor activated, pressing "Start Entry Sequence" restarts sequence and lift table rises.

Exception Disposition :

6-30-97 MPL - Programming does not match test, but does not conflict with 13462. Mike Schneider to examine similar sequences and ensure that all operate identically.

Exception Status :

9-3-97 Mike Schneider indicates all lift tables consistent. Closed.

Exception Closed By : Lane

Michael P. Doe

Date : 9/3/97

APPROVAL OF RESOLUTION

Contractor Representative:

(Only as needed)

John R. W...

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:

(Only as needed)

Date: _____

FDNW Representative:

"f"

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 103

ATP_YN : Y

Test : 13031A-85

Step : 03.43

Equipment Tag #: CR-07-101A

Exception : 25

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

6-30-97 MPL - Even though hoist trolley has automatically moved to the entry port position, the OIU menu still displays "TROLLEY AT TRANSFER PORT".

Exception Disposition :

6-30-97 MPL - Modify code to ensure that 1) When the hoist trolley is moving to a position, a "Trolley moving to (Position)..." message is displayed. 2) When the hoist trolley reaches a position, a "Trolley at (Position)" message is displayed.

Exception Status :

6-30-97 Duplicate of #84 - #84 closed out. 7-1-97- Messaging added, tested satisfactory. This exception is therefore closed.

Exception Closed By : Lane

Michael P. Grae

Date : 7/1/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

n/a
John R. Ward

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

n/a

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 104

ATP_YN : Y

Exception : 26

Test : 13031A-85

Revision :

Step : 07.51

Equipment Tag #: DH-07-101

Date:

Specification Section : 13031

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

6-30-97 MPL - 13462 indicates that drum lifter should be enabled if Transfer Car is not at entry position. Yet enabled status is latched. Transfer car may arrive at entry position and leave, yet drum lifter will remain enabled.

Exception Disposition :

6-30-97 MPL - Mike Schneider to design, test fix. MPL to add to existing code and verify fix.

Exception Status :

7-1-97 - Code modified. Tested satisfactory. This exception is therefore closed.

Exception Closed By : Lane

Michael P Jones

Date : 7/1/97

APPROVAL OF RESOLUTION

Contractor Representative:

(Only as needed)

John R. Ward

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:

(Only as needed)

Date: _____

FDNW Representative:

W/A

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 105

ATP_YN : Y

Exception : 27

Test : 13031A-85

Revision :

Step : 07.51

Equipment Tag #: DM-07-101

Date:

Specification Section : 13031

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

6-30-97 MPL - During drum entry sequence, system established adequate vacuum sensor PS/03 does not activate, sequence stops.

Exception Disposition :

6-30-97 MPL - Sensor setpoint adjusted downward. Glovebox cognizant engineer to determine cause of vacuum leak, fix, and re-calibrate vacuum sensor.

Exception Status :

9-3-97 In progress. Ken Leist to order parts (suction cups), modify brackets.

Closed.

Exception Closed By :

Kyle

Date :

1/5/98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

WR

Date: _____

WMH Representative:

Date: *2-2-98*

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative: _____

u

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 106

ATP_YN : Y

Exception : 28

Test : 13031A-85

Revision :

Step : ALL

Equipment Tag #: ALL

Date:

Specification Section : 13031

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

6-30-97 MPL - Numerous timers in ladder logic program. Few are optimized at this time. Need sufficiently long time period so that if momentary hiccup (as applicable), alarm does not sound. Need sufficiently short time period so that if error condition occurs, alarm is generated soon after condition occurs.

Exception Disposition :

6-30-97 MPL - Mike Schneider to work with Dave Schermerhorn to create EXCEL (or equivalent) list of timers and then operate gloveboxes to determine optimum timer settings. Optimal timer settings to be recorded and applied to each glovebox.

Exception Status :

9-3-97 Excel spreadsheet created. Timer settings to be optimized during startup / use RTAP alarm log.

12-1-97 Closed by MPL. This is not a test exception. All alarms verified to work during ATP/OTP testing. Post-startup clean up / optimization as needed.

Exception Closed By :

Michael Lane

Date : 12-1-97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

[Signature]

Date: _____

WMH Representative:

[Signature]

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

[Signature]

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 110

ATP_YN : Y

Exception : 29

Test : 13031A-85

Revision :

Step : N/A

Equipment Tag #: GB-07-101

Date:

Specification Section : 13031

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

7-2-97 MPL - Overhead cc camera is not centered over port 101; only partial view of port is provided.

Exception Disposition :

7-2-97 MPL Realign camera to provide full view of port.

Exception Status :

9/17

Exception Closed By :

Kj 11/17/97

Date :

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

N/A

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 111

ATP_YN : Y

Test : 13031A-85

Step : N/A

Equipment Tag #: LT-09-202A

Exception : 30

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

THIS APPLIES TO ALL LIFT TABLES SERVICING ENTRY/EXIT PORTS:

7-2-97 MPL - Centering clamps have been slowed down and extend after drum has reached port.

Exception Disposition :

7-2-97 MPL - Add time delay between centering device extend and lift table movement to lid in position height.

Exception Status :

7-2-97 MPL - Timer added, retested satisfactory for 202A. Need to add to all other lift tables supporting entry/exit ports and retest. 8-5-97 - Added for all Entry/Exit Ports. Closed.

Exception Closed By : Lane

M. J. P. Lee

Date : 8/5/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

[Signature]

Date: _____

WMH Representative:

[Signature]

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

[Signature]

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 112

ATP_YN : Y

Exception : 31

Test : 13031A-85

Revision :

Step : N/A

Equipment Tag #: GB-07-101

Date:

Specification Section : 13031

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

REFERENCE EXCEPTION #2

7-2-97 MPL - When vacuum created prior to drum reaching lid in position height, lid is "sucked" off drum.

Exception Disposition :

7-2-97 MPL - Modify open sequence so that vacuum is generated only after lid in position height is obtained.

Exception Status :7-2-97 MPL - Added to port 101. Need to apply to all other entry/exit ports. 8-5-97 - Added for all other ports.
Retested satisfactory. Closed.

Exception Closed By : Lane

Marked P. Joe

Date : 8/5/97

APPROVAL OF RESOLUTION

Contractor Representative:

(Only as needed)

W R W

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:

(Only as needed)

Date: _____

FDNW Representative:

W R W

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 113

ATP_YN : Y

Exception : 32

Test : 13031A-85

Revision :

Step : N/A

Equipment Tag #: GB-07-101

Date:

Specification Section : 13031

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

7-2-97 MPL - No feedback is provided after operator presses "DRUM ID VERIFIED".

Exception Disposition :

7-2-97 MPL - Provide illuminated pushbutton after operator presses "DRUM ID VERIFIED".

Exception Status :

7-2-97 MPL - Ladder logic, OIU button modified, retested satisfactory. After "DRUM ID VERIFIED" has been pressed, pushbutton is illuminated if PCS accepts drum pin status, otherwise pushbutton remains not illuminated. This exception is therefore closed.

Exception Closed By : Lane

M. Lane

Date : 7/2/97

APPROVAL OF RESOLUTION

Contractor Representative:

(Only as needed)

W. R. W.

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:

(Only as needed)

Date: _____

FDNW Representative:

W. R. W.

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 114

ATP_YN : Y

Test : 13031A-85

Step : 42.43

Equipment Tag #: DO-07-101

Exception : 33

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

7-2-97 MPL - This also applies to steps 42.43,44,48,49,50: When port door rotating closed and E-stop pressed, port slows but does not completely stop. This appears to be an air leak problem.

Exception Disposition :

7-2-97 Fix air leak and retest.

Exception Status :

9-3-97 KJ Leist indicates fixed. Closed.

*Door stop is not immediate. Slow stop appears as leak
of 9/17/97*

Exception Closed By : Leist

KJ 9/17/97

Date : 9/3/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

[Signature]

Date: _____

WMH Representative:

Date: 2.2.98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

[Signature]

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 115

ATP_YN : Y

Test : 13031A-85

Step : 42.51-53

Equipment Tag #: CR-07-101A

Exception : 34

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

7-2-97 MPL - In maintenance mode, hoist slows but does not completely stop when e-stop pressed.

Exception Disposition :

7-2-97 MPL - Review code, modify as needed, and retest.

Exception Status :

7-2-97 MPL - Code modified - removed XIO Maint. Mode N40:1/12 interlock for hoist e-stop activation. Retested satisfactory. This exception is therefore closed.

Exception Closed By : Lane

Date : 7/2/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

[Signature]

Date: _____

WMH Representative:

[Signature]

Date: 7-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

[Signature]

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 129

ATP_YN : Y

Test : 13031A.85

Step : 02.69

Equipment Tag #: FEV375A

Exception : 35

Revision :

Date:

Specification Section : 13462

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

7-7-97 MPL - LLW Entry Glovebox air shutoff valve does not consistently close.

Exception Disposition :

7-7-97 MPL - Review valve installation, operation. Fix as needed.

Exception Status :

7-7-97 MPL - Valve repeatedly cycled and closure problem not noted again. 9-3-97 -Open valve, inspect, replace as needed, retest.

Exception Closed By :

K. Leist

Date : 11/17/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

W. R. V. P.

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

W. R. V. P.

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 130

ATP_YN : Y

Test : 13031A.85

Step : 02.69 Equipment Tag #: DO-07-102

Exception : 36

Revision :

Date:

Specification Section : 13462

Test Witness/Author : Vvarmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Weidert

Exception Description :

7-7-97 MPL - DO-07-102 port translation open/ closed cylinder leaks air.

Exception Disposition :

7-7-97 MPL - Review cylinder installation, operation. Clean or fix as needed.

Exception Status :

7-7-97 - MPL - Cylinder cleaning tool obtained. Large amount of residue /grease /dirt found on cylinder, removed. Leak greatly decreased, but remains. 9-3-97 - Issue remains over air leaks and air leaks in gloveboxes.

Exception Closed By :

Date : 6/17/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

WMH Representative:

Additional Approval:
(Only as needed)

FDNW Representative:

Date: _____

Date: 2-2-98

Date: _____

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 131

ATP_YN : y

Test : 13031A.85

Step : N/A

Equipment Tag #: ND-07-101,-301

Exception : 37

Revision :

Date:

Specification Section : 13462

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Humphrys

Exception Description :

7-7-97-MPL - Interface between packet X-ray and PCS is not installed as per 13462 sequence description. There is no interface currently installed to allow PCS to enable or disable packet X-ray operation, or to disable the PCS OIU "X-Ray Menu" choices based on the Packet X-ray status.

Exception Disposition :

7-7-97-MPL - Packet X-ray cognizant engineer to review interface requirements for packet x-ray operation and determine proper course of action.

Exception Status :

CLOSED 9-3-97

Exception Closed By :

Humphrys

Date : 9/3/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 133

ATP_YN : Y

Test : 13031A.85

Step : ALL

Equipment Tag #: DO-07-101,105,202,203,301

Exception : 39

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

7-22-97 MPL - THIS APPLIES TO ALL ENTRY/EXIT PORTS:
Ports operate similarly but code is vastly different.

Exception Disposition :

7-22-97 MPL - Make code uniform and informally retest on ports previously tested. Remainder of ports untested to be covered by ATP.

Exception Status :

8-5-97 - Completed. Closed.

Exception Closed By :

Lane

Michael Agnew

Date : 8/5/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

WMH Representative:

Additional Approval:
(Only as needed)

FDNW Representative:

Date: _____

Date: 2-2-98

Date: _____

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 134

ATP_YN : Y

Test : 13031A.85.32

Step : 102

Equipment Tag #: LT-09-202C

Exception : 40

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

7-22-97 MPL - After "Drum Under Port" switch activation removed, roller conveyors restart.

Exception Disposition :

7-22-97 MPL - Make code uniform for all Entry/Exit Port Lift Tables.

Exception Status :

9-3-97 Complete. Closed.

Exception Closed By : Lane

Michael Phee

Date : 9/3/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

WMH Representative:

Additional Approval:
(Only as needed)

FDNW Representative:

Date: _____

Date: 2-2-98

Date: _____

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 135

ATP_YN : Y

Test : 13031A.85

Step : ALL Equipment Tag #: DO-07-101,106,202,203,301

Exception : 41

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

7-22-97 MPL - LLW Entry - Lid detach pressure insufficient to release lid form port. Lid detach extend modified from stop when port locked to extend until drum is at centering height.

Exception Disposition :

7-22-97 MPL - Ken Leist to review.

Exception Status :

9-3-97 - KJ Leist indicates acceptable. Closed.

Exception Closed By : Lane Michael P. Leist

Date : 9/3/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Michael P. Leist

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

N/A

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 136

ATP_YN : Y

Test : 13031A.85.08

Step : 106

Equipment Tag #: RT-07-101

Exception : 42

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

7-22-97 MPL - THIS APPLIES TO ALL SORTING GLOVEBOXES: Relid position for Lidded/Delidder no longer exists due to mechanical changes.

Exception Disposition :

7-22-97 MPL - Change all related OIU references from "Relid" to "Park".

Exception Status :

9-3-97 Complete. Closed.

Exception Closed By : Lane

Mitchel P. Doe

Date : 9/3/97

APPROVAL OF RESOLUTION

Contractor Representative:

(Only as needed)

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:

(Only as needed)

Date: _____

FDNW Representative:

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 137

ATP_YN : Y

Test : 13031A.85.08

Step : 143

Equipment Tag #: RT-07-101

Exception : 43

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

7-22-97 MPL - THIS APPLIES TO ALL ITEMS WITH LATCHED MAINTENANCE MODE CONTROL BITS: Saw turned on in maintenance mode, switch to auto, and saw turns off. Return to maint. mode, saw immediately restarts.

Exception Disposition :

7-22-97 MPL - This is a serious deficiency. Review all items to eliminate unexpected movement when switching from auto to maint. and back.

Exception Status :

9-3-97 MP Lane to review code. 1-5-98 - All known instances removed from LLW code, reviewed & retested during ATP. Closed for LLW globex.

Exception Closed By :

Mixed Lane

Date : 1-5-98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

[Signature]

Date: _____

WMH Representative:

[Signature]

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

[Signature]

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 138

ATP_YN : Y

Test : 13031A.85.09

Step : ALL

Equipment Tag #: ST-07-101

Exception : 44

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

7-22-97 MPL - Sorting Table locked is not a initialization condition.

Exception Disposition :

7-22-97 MPL - Add status and interlock.

Exception Status :

9-3-97 - Complete, retested satisfactory as part of ATP. Closed.

Exception Closed By : Lane

Michael R. Rose

Date : 9/3/97

APPROVAL OF RESOLUTION

Contractor Representative:

(Only as needed)

W. R. Wood

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:

(Only as needed)

Date: _____

FDNW Representative:

W. R. Wood

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 139

ATP_YN : Y

Test : 13031A.85.09

Step : ALL Equipment Tag #: ST-07-101

Exception : 45

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

7-22-97 MPL - Sorting Table extend and retract motion is erratic.

Exception Disposition :

7-22-97 MPL - Glovebox Cognizant engineer to review.

Exception Status :

9-3-97 - Closed per KJ Leist.

Exception Closed By : Leist

Date : 9/3/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

WMH Representative:

Additional Approval:
(Only as needed)

FDNW Representative:

Date: _____

Date: 2-2-98

Date: _____

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 140

ATP_YN : Y

Test : 13031A.85.09

Step : ALL

Equipment Tag #: ALL

Exception : 46

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

7-22-97 MPL - Maintenance mode control: If emergency stop pressed, pressing maintenance menu buttons, in certain cases, latch control bits, but items don't move. When e-stop released, items move.

Exception Disposition :

7-22-97 MPL - Add e-stop contact to maint. mode control bit latch rungs for all items with latched control bits.

Exception Status :

0-3-97 Work complete. Closed.

Exception Closed By : Lane

Michael Polue

Date : 9/3/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

WMH Representative:

Additional Approval:
(Only as needed)

FDNW Representative:

Date: _____

Date: 2-2-98

Date: _____

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 141

ATP_YN : Y

Test : 13031A.85.09

Step : 33

Equipment Tag #: ST-07-101

Exception : 47

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

7-22-97 MPL - Sorting Table- When moved to tip position, locked position switch ZS729A is "bouncing" due to table bracket pushing on locking pin.

Exception Disposition :

7-22-97 MPL - Remove excess material from bracket on sorting table. Grind.

Exception Status :

9-3-97 Need to install on-site parts. *1/2" Sensors and new cylinders installed. Checked out OK*

Exception Closed By :

Rendahl

Date : 1/5/98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

20 R W O

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

W F

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: **142**

ATP_YN : Y

Test : 13031A.85.09

Step : 47

Equipment Tag #: ST-07-101

Exception : 48

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

7-22-97 MPL - Sorting Table- Manipulator tool rack - inside rack positioned in operator blind spot - appears to conflict with manipulator arms.

Exception Disposition :

7-22-97 MPL - Glovebox cognizant engineer to review and disposition.

Extra tool rack not necessary.

Exception Status :

9-3-97 Need to shorten, relocate brackets.

Exception Closed By :

Richard J. [Signature]

Date : 11/24/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

[Signature]

Date: _____

WMH Representative:

[Signature]

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

[Signature]

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 143

ATP_YN : Y

Exception : 49

Test : 13031A.85.09

Revision :

Step : 50 Equipment Tag #: ST-07-101

Date:

Specification Section : 13031

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

7-22-97 MPL - Sorting Table- No maintenance mode interlock between tray and door. Door is opened and tray shoots out.

Exception Disposition :

7-22-97 MPL - Add interlocks and retest.

Exception Status :

7-22-97 MPL - Interlocks added and retested satisfactory. Need to add to TRU sorting glovebox. 9-3-97 Retest on TRU Line. 9-16-97 MPL Interlocks present for TRU line. Closed.

Exception Closed By : Lane *Michele P. Lane*

Date : 9/16/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 144

ATP_YN : Y

Exception : 50

Test : 13031A.85.09

Revision :

Step : 107

Equipment Tag #: DH-07-103

Date:

Specification Section : 13031

Test Witness/Author : Wvarmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Jasen

Exception Description :

7-22-97 MPL - A very loud screeching noise is noted when tipper is lowered.

Exception Disposition :

7-22-97 MPL - Glovebox cognizant engineer to review and disposition.

Exception Status :

9-3-97 Bill Jasen to formally submit change request to DOE to fix screeching noise, tipper grab arms installed upside down.

9-18-97 Was this formally transmitted?

10-2-97

Closed per direction of WMH Senior Management DOE to be notified upon failure of tipper. Informal notice previously provided.

Exception Closed By:

Date: 10-2-97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

N/A

Date: _____

WMH Representative:

[Signature]

Date: 10-2-97

Additional Approval:
(Only as needed)

N/A

Date: _____

FDNW Representative:

N/A

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 145

ATP_YN : Y

Exception : 51

Test : 13031A.85.09

Revision :

Step : 107

Equipment Tag #: DH-07-103

Date:

Specification Section : 13031

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

7-22-97 MPL - No indicator present on maint. menu for tipper at vertical.

Exception Disposition :

7-22-97 MPL - Add indicator and test.

Exception Status :

7-22-97 - MPL - Indicator added and tested satisfactory. Add to TRU line. 9-3-97 Indicator added. Closed.

Exception Closed By : Lane Michael P. Jan

Date : 9/3/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

[Signature]

Date: _____

WMH Representative:

[Signature]

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

[Signature]

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 146

ATP_YN : Y

Exception : 52

Test : 13031A.85.09

Revision :

Step : 107

Equipment Tag #: DH-07-103

Date:

Specification Section : 13031

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Warmenhoven

Exception Description :

7-22-97 MPL - If tipper rotated clockwise, "coily cord" will obscure tipper raised switch and remain obscured after return to vertical. When lowering, coily cord catches on rail.

Exception Disposition :

7-22-97 MPL - Restrain coily cord similar to glovebox 302 tipper and verify fixed.

Exception Status :

9-3-97 R Warmenhoven indicates work complete. Closed.

Exception Closed By : Warmenhoven *KP* 9/17/97

Date : 9/3/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 147

ATP_YN : Y

Test : 13031A.85.09

Step : 126

Equipment Tag #: RT-07-101

Exception : 53

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

7-22-97 MPL - Lid / Delid translate motion is erratic.

Exception Disposition :

7-22-97 MPL - Glovebox cognizant engineer to review and disposition.

Exception Status :

9-3-97 KJ Leist to review.

1/28/98 LLW Sarty Table, Liddle Rails Shimmed to straight
± level ± 1/16". Travel appears OK.

Exception Closed By :

Kj Leist

Date : 1/28/98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

[Signature]

Date: _____

WMH Representative:

[Signature]

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

[Signature]

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 148

ATP_YN : Y

Exception : 54

Test : 13031A.85.10

Revision :

Step : ALL Equipment Tag #: CR-07-101C

Date:

Specification Section : 13031

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Warmenhoven

Exception Description :

7-22-97 MPL - When hoist is at port position (initialization position) bagless port will hit cake stand gripper device when port opens and closes. At tray loadout position, hoist interferes with manipulator 101.

Exception Disposition :

7-22-97 MPL - 1) Relocate hoist 101C tray loadout position flag to location between tray loadout and port positions. Use this location as park. (To be performed by Warmenhoven/Schneider).

2) Add procedure changes and operator aid as appropriate to address interference between hoist and manipulator. Glovebox cognizant engineer to review and disposition.

Exception Status :

Exception Closed By :

Date : 11/17/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 149

ATP_YN : Y

Test : 13031A.85.11

Step : 140 Equipment Tag #: ST-07-101

Exception : 55

Revision :

Date :

Specification Section : 13031

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

7-22-97 MPL - Cakestand cannot be lowered directly onto glovebox floor due to manipulator tool rack interference.

Exception Disposition :

7-22-97 MPL - Lowered tool racks to ~ 6 inches to allow cakestand to lower such that all components can be reached via gloveport and cakestand can be lowered to floor by pushing suspended stand ~ 3 inches.

Exception Status :

9-3-97 Duplicate of #142. Closed.

Exception Closed By : Leist

9/17/97

Date : 9/3/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

[Signature]

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

[Signature]

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 150

ATP_YN : Y

Test : 13031A.85.11

Step : 140

Equipment Tag #: ST-07-101

Exception : 56

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

7-22-97 MPL - When lower and close grab sequence is completed, a drum tipper loss of pressure alarm is generated when the pressure switch drops out. Current field conditions are as follows: When hydraulic control valve shuttles to center position, pressure is lost in the close supply line resulting in alarm.

Exception Disposition :

7-22-97 MPL - 1) One option would be after closed and pressure contacts received 2) One option would be to review mechanical components for suitability and consider addition of hydraulic accumulator on close supply line. This affects glovebox 102, 301, and 302.

Cognizant engineer to review and disposition.

Exception Status :

9-3-97 KJ Leist to review and disposition.

11/17/97 Accumulators added. Need to change test
1/23/98 Accumulator tested OK. Pressure maintained and holds Pressure Switch
on

Exception Closed By :

K. Leist

Date : 1/28/98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

W. R. W.

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative: _____

W. R. W.

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 151

ATP_YN : Y

Test : 13031A.85.09

Step : 41 Equipment Tag #: ST-07-101

Exception : 57

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

7-22-97 MPL - Interference noted between sorting table and closed x-ray door when table raise is attempted.

Exception Disposition :

7-22-97 MPL - Add interlock in both auto and maint. modes - x-ray door must be opened before sorting table can raise. Modify x-ray automatic sequence to separate door opening/closing from tray extending/retracting to allow door open / tray retracted condition.

Exception Status :

7-22-97 MPL - Changes made, retested satisfactory. Closed.

Exception Closed By : Lane

Date : 7/22/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 152

ATP_YN : Y

Test : 13031A.85.19

Step : 15

Equipment Tag #: EM-07-101

Exception : 58

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Vvarmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

7-22-97 MPL - THIS AFFECTS HOIST 101C, TIPPER, DELIDDER, AND SORTING TABLE AS WELL:
Manipulator must be in west park position (#1) to safely raise or lower tipper or to translate Delidder. To raise sorting table or to move hoist to loadout position, the manipulator must be in position #2. To translate sorting table, both manipulator arms must be fully raised.

Exception Disposition :

7-22-97 MPL - Modify control software to provide interlocks that match operational description provided above.

Exception Status :

9-3-97 Work complete. Retested satisfactory. Acceptable to KJ Leist. Closed.

Exception Closed By : Leist

KJ 9/11/97

Date : 9/3/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

[Signature]

Date: _____

WMH Representative:

[Signature]

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

[Signature]

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: **153**

ATP_YN : Y

Exception : 1

Test : 13021A.85.02

Revision :

Step : 30,31 Equipment Tag #: DO-07-101

Date:

Specification Section : 13031

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

7-22-97 MPL - Lid detach extend/retract operator feedback different from GB101 and GB105.

Exception Disposition :

7-22-97 MPL - Make the same, reload OIU and retest.

Exception Status :

9-3-97 Work complete. Retested satisfactory. Closed.

Exception Closed By : Warmenhoven *WJ* 9/17/97

Date : 9/3/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 154

ATP_YN : Y

Test : 13021A.86.02

Step : multiple

Equipment Tag #: DO-07-302

Exception : 2

Revision :

Date:

Specification Section : 13021

Test Witness/Author : Wvarmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

7-22-97 MPL - Spinchter port seal GB301 pressure bleeds down or ??? PSL800 and PSL801 setpoints set incorrectly.

Exception Disposition :

7-22-97 MPL - Glovebox cognizant engineer to review and disposition.

Exception Status :

9-3-97 Switches wired backwards, wiring fixed. Spinchter seal still leaks. Modify software for ports 102, 302 to attempt re-inflation after leak noted. *Current design acceptable. JHart 11/19/97*

Exception Closed By :

Date : 11/19/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

WMH Representative:

Additional Approval:
(Only as needed)

FDNW Representative:

Date: _____

Date: 2-2-98

Date: _____

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 155

ATP_YN : Y

Exception : 59

Test : 13031A.85.25

Revision :

Step : 105

Equipment Tag #: ST-07-101

Date:

Specification Section : 13021

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

7-22-97 MPL - Sorting table lowered until no further movement noted by table, yet switches don't activate until after cylinders completely retracted, several seconds later.

Exception Disposition :

7-22-97 MPL - Add indicator or message when table is fully lowered.

Exception Status :

9-3-97 Indicator added. Retested Successfully. Acceptable to KJ Leist. Closed.

Exception Closed By : Leist

Kp 9/17/97

Date : 9/3/97

APPROVAL OF RESOLUTION

Contractor Representative:

(Only as needed)

W A
John R. W...

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:

(Only as needed)

Date: _____

FDNW Representative:

W A

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: **156**

ATP_YN : Y

Exception : 60

Test : 13031A.85.26

Revision :

Step : 1

Equipment Tag #: DH-07-103

Date:

Specification Section : 13021

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

7-22-97 MPL - Interlocks for tipper sequences - code now examines initial interlocks then ignores the interlocks after sequence has started. Yet tipper lower is separately initiated via lower tipper button - interlock status could change after sequence initiated.

Exception Disposition :

7-22-97 MPL - 1) Modify tipper interlocks to be examined during entire sequence with exception of tipper raised and tipper vertical which are examined at start of sequence as appropriate. 2) Make open grab and park sequence identical to all other automatic tipper sequences. Operator must press "raise" button in order to raise tipper.

Exception Status :

7-22-97 MPL - Changes made, retested satisfactory. 9-3-97 MP Lane to add to TRU line tipper code, retest.

Exception Closed By :

MP Lane LWW Line Only

Date : 11-18-97

APPROVAL OF RESOLUTION

Contractor Representative:

(Only as needed)

[Signature]

Date: _____

WMH Representative:

[Signature]

Date: 2-2-98

Additional Approval:

(Only as needed)

Date: _____

FDNW Representative:

[Signature]

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 157

ATP_YN : Y

Test : 13031A.85.26

Step : 1

Equipment Tag #: ST-07-101

Exception : 60

Revision :

Date:

Specification Section : 13021 13031

Test Witness/Author : Vvarmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

7-22-97 MPL - GB102 V rails for sorting table / ladder do not line up with wheels on south side of sorting table.

Exception Disposition :

7-22-97 MPL - Glovebox cognizant engineer to review and disposition.

Exception Status :

9-3-97 KJ Leist to review and disposition. 1/28/98 rails skimmed. Straightness is now 43" $\pm$ 1/16 along 4th length of glovebox.

Exception Closed By :

K. Leist

Date : 1/28/98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

[Signature]

Date: _____

WMH Representative:

[Signature]

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

[Signature]

Date: _____

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WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: **158**

ATP_YN : Y

Exception : 61

Test : 13031A.85.44

Revision :

Step : 1

Equipment Tag #: LT-09-202C

Date:

Specification Section : 13021

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Jordal/Lane

Exception Description :

7-22-97 MPL - THIS APPLIES TO ALL LIFT TABLES: Local emergency stops do not 100% reliably stop lift tables from raising or lowering.

Exception Disposition :

7-22-97 MPL - SII personnel to determine fix. If reliable, easily maintained fix not available, PCS software E-stop deactivation of lift tables will be removed as it was not part of original design and is already covered via rope switches.

Exception Status :

11-19-97 - Lift table stop removed, as per design.
closed

Exception Closed By :

me

Date : 11-19-97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

W R W O

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

W R W O

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 159

ATP_YN : Y

Test : 13031A.85.44

Step : 1 Equipment Tag #: DH-07-103

Exception : 62

Revision :

Date:

Specification Section : 13021

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

7-22-97 MPL - THIS APPLIES TO DH-07-103, DH-07-303, and DRUM TRANSFER DEVICE: Clutch tripped switch will oscillate, bounce.

Exception Disposition :

7-22-97 MPL - SII personnel to determine fix so that equipment will properly shut down when clutch is tripped.

Exception Status :

9-3-97 MP Lane to review code, latch-in alarm. 11-18-97 Added, closed.

Exception Closed By : mace

Date : 11-18-97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

WMH Representative:

Additional Approval:
(Only as needed)

FDNW Representative:

Date: _____

Date: 2-2-98

Date: _____

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 160

ATP_YN : Y

Test : 13031A.85

Step : 1

Equipment Tag #: DH-103,303,DO-301

Exception : 63

Revision :

Date:

Specification Section : 13021

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: ~~Warmerhoven~~

LEIST

Exception Description :

7-22-97 MPL - THIS APPLIES TO DH-07-103, DH-07-303, and DRUM TRANSFER DEVICE: End of travel limit switches are inadequate. If switch light path to reflector is interrupted or if switch fails, device will continue to raise or lower and could cause equipment damage or personal injury.

Exception Disposition :

7-22-97 MPL - Replace inductive sensors with safety switches that both 1) Provide PCS indication of end of travel and 2) Cut out motor circuit.

Exception Status :

9-3-97 Robert Warmerhoven assigned to review, fix.

1/28/98 Limit switches installed and tested OK - Switches are in series with inductive switches.

Exception Closed By :

K. Head

Date : 1/28/98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

[Signature]

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

[Signature]

Date: _____

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WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: **180**

ATP_YN : Y

SW

Exception : 99

Test : ALL ATP

Revision :

Step : ALL

Equipment Tag #: GB-07-101,...

Date:

Specification Section : 13462

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor : BDM

Responsible Individual: Lane

Exception Description :

THIS AFFECTS ALL GLOVEBOX MAINTENANCE MODE OPERATIONS:

Auto to Maintenance transitions are not standardized for all glovebox operations. In certain cases, switching to maint. mode kills auto sequence, in other cases it does not. In certain cases, messages are sent while in maintenance mode or when e-stop activated, in other cases they are not. In certain cases, alarms are generated in maintenance mode, in other cases they are not.

This is due to lack of design media for maintenance mode operation.

Exception Disposition :

Make all automatic and maintenance mode operations and transitions consistent for all gloveboxes:

1. Transition from automatic to maintenance mode "kills" any automatic sequence in progress, with the exception of vacuum generation.
2. Messages are sent regardless of maintenance or automatic mode condition.

Exception Status :

9-3-97 - MP Lane to review code, apply fixes as needed. ~~1-5-97~~ *in progress*. ~~12-1-97~~ *code reviewed, all known instances of this problem eliminated. Any future instances will be covered by new test exceptions or other means.*

Exception Closed By :

*Michael P. Lee*Date : *1-5-97*

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)*[Signature]*

Date: _____

WMH Representative:

Date: *2-2-98*Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

[Signature]

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 196

ATP_YN : y

Exception : 1

Test : 13031A.85.30

Revision :

Step : 5

Equipment Tag #: OIU-12-103C

Date:

Specification Section : 13031

Test Witness/Author : Vvarmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

8-4-97 - MPL When in alarms screen, switching to maintenance mode, bacu to auto causes OIU to lock in at alarms screen.

Exception Disposition :

8-4-97 - MPL 1) Unlatch alarms screen button when going to maint. mode. 2) Add rung if not in alarm screen and not locked out, move 1 -> O:65.

Exception Status :

8-4-97 - MPL Retested satisfactory. Closed.

Exception Closed By : Lane

Michael P. Jones

Date : 8/4/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

W R W

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

W R W

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 197

ATP_YN : Y

Test : 13031A.85.30

Step : ALL

Equipment Tag #: DO-07-106

Exception :

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

8-4-97 - MPL In maintenance mode, when centering clamps retracted, HVAC seal deflates.

Exception Disposition :

8-4-97 - MPL 1) Remove center clamp latch in on HVAC seal rung. 2) Add door closed switch (e.g., lowered closed) switch to vent rungs to prevent inadvertent activation.

Exception Status :

8-4-97 - MPL THIS APPLIES TO ALL ENTRY/EXIT PORTS:

Informally retested on port 106; problems remain. Modify - Add latched bit to inflate seal when port is opened. Unlatch bit when port is closed. 9-3-97 Work complete. MP Lane to retest.

Exception Closed By : m p d a e

Date : 11-18-97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 198

ATP_YN : Y

Test : 13031A.85.30

Step : ALL

Equipment Tag #: ALL

Exception :

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

8-4-97 - MPL Vacuum released, HVAC seal deflated indicators obscure "TURN OFF VACUUM" and "DEFLATE HVAC SEAL" button text when desired condition does not occur.

Exception Disposition :

8-4-97 - MPL 1) AFI affected OIU indicator rungs. 2) Modify diagnostics menu so that indicators reflect true status and don't rely on AFI'd rungs.

Exception Status :

8-4-97 - MPL Applied to all LLW, LLW RWM Entry/Exit Ports and Lid/Delid Devices. Need to apply to TRU line. 9-3-97 Work complete. MP Lane to retest.

Exception Closed By :

Michael P. Jue

Date : 11-18-97

APPROVAL OF RESOLUTION

Contractor Representative:

(Only as needed)

WMH Representative:

Date: _____

Date: 2-2-98

Additional Approval:

(Only as needed)

Date: _____

FDNW Representative:

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 199

ATP_YN : Y

Test : 13031A.85

Step : ALL

Equipment Tag #: LT-09-202A,203A,202C

Exception :

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Schneider

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

8-4-97 - MPL Make LLW lift table logic like TRU lift table logic. If M/O/N switch is switched to maint., stop entry and exit sequences. Once placed into normal, operator can restart sequence by selecting appropriate OIU button.

Exception Disposition :

8-4-97 - MPL Make operation consistent for all lift tables.

Exception Status :

9-3-97 Changes added to 102 by Mike Schneider. MP Lane to retest. 1-26-98 Reopened Set 15 Factory closed.

Exception Closed By :

Michael P. Jones

Date : 1-26-98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

u/a

Date: _____

WMH Representative:

10 R W O

Date: 2-2-98

Additional Approval:
(Only as needed)

u/a

Date: _____

FDNW Representative:

u/a

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 200

ATP_YN : Y

Test : 13031A.85

Step : ALL

Equipment Tag #: LT-09-202A,203A,202C

Exception :

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Wvarmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

8-4-97 - MPL Generating the "Lift Table Failed to Raise" alarm does not stop lift table 203A from raising.

Exception Disposition :

8-4-97 - MPL Make operation consistent for all lift tables.

Exception Status :

9-3-97 Duplicate of #85. Closed.

Exception Closed By : Lane

Michael R. Lane

Date : 9/8/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

W. R. W.

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

W. R. W.

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 207

ATP_YN : Y

SW

Exception :

Test : 13021A.86.1

Revision :

Step : ALL

Equipment Tag #: OIU-12-104A

Date:

Specification Section : 13021

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

8-4-97 - THIS APPLIES TO ALL OIUS:

MPL OIU locks up in alarms screen. N50:2/1 inner drum id verified bit reset, movement between screens restored.

Exception Disposition :

8-4-97 - MPL Fix it.

Exception Status :

Exception Closed By :

Mickel Price

Date : 11-19-97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

[Signature]

Date: _____

WMH Representative:

[Signature]

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

[Signature]

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 209

ATP_YN : Y

Test : 13031A.85.44

Step : Equipment Tag #: DO-07-106

Exception :

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

8-4-97 -MPL Port open sequence starts, even though e-stop activated.

Exception Disposition :

8-4-97 - MPL Incorrect e-stop contacts present; replaced and retested satisfactory. Closed.

Exception Status :

Exception Closed By : Lane

Michael P. Jones

Date : 8/5/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

W A
John R. W...

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

W A

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 210

ATP_YN : Y

Test : 13031A.85.44

Step : Equipment Tag #: DO-07-106

Exception :

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

8-4-97 -MPL HVAC seal inflates when door unlocked in maintenance mode. This applies to all entry/exit ports.

Exception Disposition :

8-4-97 - MPL Change auto mode HVAC seal activation to latched bit. Retest.

Exception Status :

9-3-97 Duplicate of #197. Closed.

Exception Closed By : Lane

Michael P. Lee

Date : 9/3/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

WMH Representative:

Additional Approval:
(Only as needed)

Date: _____

Date: 2-2-98

Date: _____

FDNW Representative:

N/A

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 211

ATP_YN : Y

Test : 13031A.85.44

Step : Equipment Tag #: CR-07-101D

Exception :

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

8-4-97 -MPL Pendant enabled indicator remains illuminated even though e-stop activated.

Exception Disposition :

8-4-97 - MPL Fix and retest.

Exception Status :

9-3-97 Fixed. Retested satisfactory. Closed.

Exception Closed By : Lane Michael P. Lee

Date : 9/3/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

W R Wood

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

W R Wood

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: **212**

ATP_YN : Y

Test : 13031A.85.44

Step : Equipment Tag #: DH-07-104

Exception :

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

8-4-97 -MPL 1) Weigh menu doesnt display actual compact weight. 2) Compact weight may be repeatedly added to loadout drum if "add to cumulative" button repeatedly pressed.

Exception Disposition :

8-4-97 - MPL Fix and retest.

Exception Status :

9-3-97 Work in progress. 9-16-97 Work Complete. Retested satisfactory. Description written. Closed.

Exception Closed By : Lane

Michael P. Joe

Date : 9/16/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

W. R. Vind

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

N/A

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 213

ATP_YN : Y

Test : 13031A.85.34

Step : Equipment Tag #: RT-07-101

Exception :

Revision :

Date :

Specification Section : 13031

Test Witness/Author : Leist

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

8-6-97 - MPL Relid function is no longer used. Replaced with hand-held unit. Features must be added to complete installation; hydraulic swivel, C-clip bracket, C-clip retainer on crimper, work platform, and relocation of Supercompactor I&C J-Box.

Exception Disposition :

8-6-97 - Complete work.

Exception Status :

11/17/97 All items done with exception of access platform change; I.C box relocation. Access platform modification, to be done after startup, will go over I.C. box, alleviating the need to move.

Exception Closed By :

Date : 11/17/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 214

ATP_YN : Y

Test : 13031A.85.46

Step : 23

Equipment Tag #: CR-07-101C

Exception :

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Wvarmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

8-6-97 -MPL Hoist is too slow.

Exception Disposition :

8-6-97 - Reprogram to run faster.

Exception Status :

1-5-98 - Removed temporary lockout of speed 1 to speed 2 transition.
Further refinement required (?) via frequency controller(?). Reprogramming
complete

Exception Closed By :

Michael Poree

Date : 1-5-98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

W R W

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

W R W

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 215

ATP_YN : Y

Test : 13031A.85.46

Step : 141

Equipment Tag #: LT-09-203A

Exception :

Revision :

Date :

Specification Section : 13031

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

8-6-97 -MPL During drum exit sequence: 1) At AGV height, overtravel (down) switch activated, sequence stops. 2) Drum is retained against port when lift table lowers.

Exception Disposition :

8-6-97 - MPL - 1) Adjust switch down to correct height. 2) Determine cause of drum retention and fix.

Exception Status :

8-6-97 MPL - 1) LT-09-203A down overtravel switch adjusted down to activate at 25 7/8" top of roller to floor. 9-3-97 KJ Leist indicates retention due to extra paint around rim of drum. Acceptable to KJ Leist. Closed.

Exception Closed By : Leist

KJ 9/17/97

Date : 9/3/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

WMH Representative:

Additional Approval:
(Only as needed)

FDNW Representative:

Date:

Date: 2-2-98

Date:

Date:

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 216

ATP_YN : Y

Test : 13031A.85.48

Step : 1

Equipment Tag #: ND-07-103

Exception :

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

8-6-97 - Change X-ray door initialization to door open.

Exception Disposition :

8-6-97 - Done - Closed.

Exception Status :

Exception Closed By : Lane

Michael P. J. J.

Date : 8/6/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

[Signature]

Date: _____

WMH Representative:

[Signature]

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

[Signature]

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 218

ATP_YN : y

Test : 1303A.85.34

Step : 9

Equipment Tag #: NT/NE312,316

Exception :

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: TBD

Exception Description :

Glovebox physical construction does not readily support required bar code operations:

- 1)selection of correct ward by operator
- 2)location of bar codes
- 3)fix/attachment of label to drum.

Exception Disposition :

Exception Status :

9-3-97 - Remove 2nd barcode reader from glovebox, retain as spare. Make barcode "english" text larger so that operator can visually verify drum puck pin. Operator(s) to test usability of barcode items in glovebox.

Exception Closed By :

Michael Pore

Date :

11-18-97

APPROVAL OF RESOLUTION

Contractor Representative:

(Only as needed)

WMH Representative:

W. R. W.

Date:

2-2-98

Additional Approval:

(Only as needed)

Date:

FDNW Representative:

v

Date:

**WRAP ACCEPTANCE TEST PROCEDURE
EXCEPTION LOG**

Tracking #: **219**

ATP_YN : y

Test : 13031A.85.34

Step : 9

Equipment Tag #: DH-07-104

Exception :

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Leist

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

Drum lifter will not consistently, securely grip compacted drum.

Exception Disposition :

Exception Status :

9-3-97 - Millwright has adjusted to drawing specifications. Retested satisfactory. Acceptable to KJ Leist. Closed.

Exception Closed By : Leist

KJ 9/17/97

Date : 9/3/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

WMH Representative:

Additional Approval:
(Only as needed)

FDNW Representative:

Date: _____

Date: 2-2-98

Date: _____

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 220

ATP_YN : Y

Test : 13031A-85.12

Step : 86

Equipment Tag #: RT-07-101

Exception :

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Leist

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

Drum with rusted band clamp - clamp does not fall off when delid attempted; list not retained when delid fixture raised.

Exception Disposition :

Provide method for removing band clamp.

Exception Status :

9-3-97 - KJ Leist to review, disposition (bilge pickers).

Grub Cleave. Need to test. 4/23/98 Bilge pickers received. Designed and installed. Grubbers tested, but does not operate consistently. Push-off feature operates. Change to packaging drawing will require tape to attach clamp band to drum. This will allow bands to stay with drum as it is raised and lowered.

Exception Closed By :

Date : 1/28/98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

Date: _____

**WRAP ACCEPTANCE TEST PROCEDURE
EXCEPTION LOG**

Tracking #: **221**

ATP_YN : y

Test : 13031A.85

Step : All

Equipment Tag #: All

Exception :

Revision :

Date:

Specification Section: 13031

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

E-Stop - entry/exit lift table sequences, hoist seq., conveyer seq. - E-Stop doesn't prevent sequence from starting.

Exception Disposition :

9-3-97 MP Lane to fix, retest.

Exception Status :

Code modified closed

Exception Closed By :

Michael P. Lee

Date : 11-18-97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

WMH Representative:

Additional Approval:
(Only as needed)

Date: _____

Date: 2-2-98

Date: _____

FDNW Representative:

nt

Date: _____

**WRAP ACCEPTANCE TEST PROCEDURE
EXCEPTION LOG**

Tracking #: **222**

ATP_YN : Y

Test : 13031A.85

Step : All Equipment Tag #: CR-07-101D

Exception :

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

Pendant enabled indicator remains illuminated even though e-stop activated.

Exception Disposition :

Exception Status :

9-3-97 Duplicate of 211. Closed.

Exception Closed By : Lane *mclaw P. Drew*

Date : 9/3/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

WMH Representative:

Additional Approval:
(Only as needed)

FDNW Representative:

Date: _____

Date: *2-2-98*

Date: _____

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 223

ATP_YN : y

Test : 13031A.85

Step : 9

Equipment Tag #: GB-104

Exception :

Revision :

Date :

Specification Section : 13031

Test Witness/Author : Leist

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

Super compactor drops approximately 1 inch/hour. Suspect counterbalance valve. Need to adjust.

Exception Disposition :

1-30-98 - Disposition - Leave ladder logic as is, modify operating procedure to rehome before operating. Code can be changed later as resources are available (POST-START) closed.

Exception Status :

9-3-97 Counterbalance investigated, problem remains. 11/17/97 INET notified. Assisting direction 1/5/98 valve adjusted, but did not stop dropping rate. Valve returned to original position. Need to hold step in ladder logic to home press prior to operation.

Exception Closed By :

Michael P. Jones

Date : 1-30-98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

[Signature]

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

[Signature]

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 224

ATP_YN : y

Test : 13031A-85

Step : 159

Equipment Tag #: ST-101

Exception :

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Leist

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: ~~Dunlap~~

LEIST

Exception Description :

Waste over shoots drum. Potential damage, housekeeping impacts.

Exception Disposition :

Exception Status :

9-3-97 Doug Dunlap to investigate.

1/28/98 Waste deflector added & operates. Improvements identified (Raised sensor, larger deflector size) and added to Post-Demonstration activities outside scope of ATP.

Exception Closed By :

[Signature]

Date : 1/28/98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

[Signature]

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

[Signature]

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 225

ATP_YN : Y

Test : 13031A.85

Step : 116a

Equipment Tag #: XX.101,102,301

Exception :

Revision :

Date :

Specification Section : 13031

Test Witness/Author : Leist

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

Packet trays are missing.

Exception Disposition :

Exception Status :

9-3-97 Parts on order.

9/17/97 Trays received and installed.

Exception Closed By :

K. Leist 9/17/97

Date : 9/17/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

NA

Date: _____

WMH Representative:

J. R. Ward

Date: 2-12-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

NA

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 228

ATP_YN : y

Exception :

Test : 13031A-85.46

Revision :

Step : General

Equipment Tag #: 107-TC-07-102

Date:

Specification Section : 13031

Test Witness/Author : Vvarmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

While setting up for transfer of drum from LLW transfer car to compactor entry, discovered that the compactor entry conveyor was damaged. Appears that something was stuck between mold and conveyor. Conveyor angle iron bent and one roller was bent.

Exception Disposition :

Exception Status :

9-3-97 NCR issued. Conveyor repaired. Need Bill of Materials from INET. When BOM available, order parts.

11/19/97 Testing completed successfully after interim completion of NCR resolution.

Exception Closed By :

Date : 11/19/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 229

ATP_YN : Y

Test : 1021A-86.2

Step : General

Equipment Tag #: 107-HPU-07-301

Exception :

Revision :

Date:

Specification Section : 13021

Test Witness/Author : Vvarmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

During performance of TC2, the Aux HPU was left running. After approximately 1 1/2 hours of run time, the Aux HPU tripped off line due to high fluid temperature. Local tank temperature indication was 143 degrees F.

Exception Disposition :

Exception Status :

9-3-97 Ken Leist to review and disposition, and write change request as needed.

9-25-97 Tie into compactor glycol system. *2/2/98 This upgrade will be implemented after startup. After adjustment of pressure valves, (WR-97508), system should operate hot, but below setpoint.*

Exception Closed By :

Date :

APPROVAL OF RESOLUTION

Contractor Representative: _____
(Only as needed)

Date: _____

WMH Representative: _____

Date: _____

Additional Approval: _____
(Only as needed)

Date: _____

FDNW Representative: _____

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 230

ATP_YN : y

Test : 13031A-85.46

Step : General

Equipment Tag #: 107-ST-07-101

Exception :

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Vvarmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

GB101 sorting table is hanging up on the splash guards when attempting to raise the table. Additionally, there appears to be erratic motion while cylinoles are raising, which seems to be caused by the upper cylinole mounting bracket (clearance/alignment).

Exception Disposition :

Exception Status :

9-3-97 Ken Leist indicates work complete, retested satisfactory. Closed.

Exception Closed By : Leist

K/L 9/17/97

Date : 9/3/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

[Signature]

Date: _____

WMH Representative:

[Signature]

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

[Signature]

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: **234**

ATP_YN : Y SW
Test : 13021A-86.8
Step : General Equipment Tag #: DH-07-302

Exception :
Revision :
Date:

Specification Section : 13021
Test Witness/Author : Vvarmenhoven
Test Operator:

Responsible Company: WMH
Responsible Subcontractor :
Responsible Individual: Lane

Exception Description :

Alarm for "lower to car sequence failed" (?) does not exist. On completion of lower to car sequence, id 25305 indicates no drum on car. Creates alarm condition.

Exception Disposition :

Add alarm to code and OIU alarms.

Exception Status :

9-3-97 MP Lane to modify code, retest for both 101, 301 gloveboxes. 10-17-97. Code added only for 301 glovebox - 301 sequence requires drum at lower end, 101 sequence is more flexible. Add later as needed. This exception is therefore closed.

Exception Closed By : McLane PO

Date : 11-19-97

APPROVAL OF RESOLUTION

Contractor Representative: LA R V O

Date: _____

WMH Representative: _____

Date: 2-2-98

Additional Approval: _____

Date: _____

FDNW Representative: v f

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: **242**

ATP_YN : D

Test : 13031A-85.29

Step : 19

Equipment Tag #: 107-CM-07-102

Exception :

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

During transfer of drum from transfer car to compactor, the transfer complete signal was not sent by the compactor. Additionally, the compact conveyor did not start upon receipt of the drums.

Exception Disposition :

Resolve issue with INET.

Exception Status :

9-3-97 MP Lane to resolve and retest. 1-5-97 - Retested satisfactory. in semi-auto mode. Closed.

Exception Closed By :

Michael P. Lane

Date : 1-5-97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

[Signature]

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

[Signature]

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 243

ATP_YN : y

Test : 13031A-85.43

Step : 99,237

Equipment Tag #: 107-GB-07-102

Exception :

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Vvarmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

Resetting E-stop HS-07-102A, 102B, 102C, 102D, or 315 does not result in continued automatic operation of BTP DO-07-105 or delid saw sequence

Exception Disposition :

M. Lane determine acceptability and/or resolve

Exception Status :

Acceptable

Exception Closed By : Lane

michael P. Lane

Date : 9/3/97

APPROVAL OF RESOLUTION

Contractor Representative:

(Only as needed)

WMH Representative:

Additional Approval:

(Only as needed)

FDNW Representative:

Date: _____

Date: 2-2-98

Date: _____

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: **244**

ATP_YN : y

Test : 13031A-85.43

Step : see below Equipment Tag #: RT-07-101

Exception :

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Wvarmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

Control valve used for delid raise/lower function (fixture) is 2-way shift valve which results in continued operation of device after E-stop is actuated. Device will move to commanded position, but no further movement is possible.

Steps: 64, 65, 66, 67, 68, 69, 164, 165, 166, 167, 168, 169, 224, 225

Exception Disposition :

Accept as is or specify different type control valve.

Exception Status :

9-3-97 KJ Leist to review, disposition, write change request as needed.

to closed center type.

11/19/97 Valve changed

Exception Closed By :

KJ Leist

Date : 11/19/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

W R W

Date: _____

WMH Representative:

Date: *2-2-98*

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

W R W

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: **245**

ATP_YN : y

Test : 13031A-85.43

Step : 131,131,133 Equipment Tag #: TC-07-101

Exception :

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Wvarmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

Operation of TC-07-101 not inhibited by activation of any E-stop HS (102A, 102B, 102C, 102D, 315) in maintenance mode.

Exception Disposition :

Add E-stop logic for TC-07-101 to ladder logic and retest.

Exception Status :

9-3-97 MP Lane to retest. 1-5-97 - E-Stop logic contacts added, Retested
Satisfactory. Closed

Exception Closed By :

Michael P. Lee

Date: 1-5-97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Le R V O

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

v /

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 246

ATP_YN : y

Test : 13031A-85.43

Step : see below

Equipment Tag #: HS-07-102C

Exception :

Revision :

Date :

Specification Section : 13031

Test Witness/Author : Vvarmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

HS-07-102C not currently configured as an input to CNR102.

Steps: 8, 18, 15, 18, 21, 25, 27, 30, 33, 36, 39, 42, 57, 60, 63, 66, 69, 72, 75, 78, 81, 83, 87, 90, 93, 96, 108, 112, 115, 118, 121, 124, 127, 130, 133, 136, 139, 142, 157, 160, 163, 166, 169, 172, 175, 178, 181, 184, 187, 190, 193, 196.

Exception Disposition :

1. Configure IAC 102 spare input from HS-07-102c (input X5315s) to CNR102.
2. Configure ladder logic to use xs 315s as part of E-stop logic.

Exception Status :

9-3-97 MP Lane to retest. 1-5-97 - code added, Retested Sixis Rotary 12-20-97 closed.

Exception Closed By :

Michael P. Lee

Date : 1-5-97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

[Signature]

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

[Signature]

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 248

ATP_YN : Y

Test : 13031-85.46

Step : 107 Equipment Tag #: DH-07-102

Exception :

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Leist

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

On dumping drum on sorting table, the waste piles up at one point and will not empty out completely. When upright, the bottom of the drum runs into the waste.

Exception Disposition :

Exception Status :

9-3-97 KJ Leist to have manipulator cable reel adjusted so that manipulator can move close enough to pull items out of drum.

1/28/98 Mech complete. Testing required. 2/2/98. Interference still exist ~6". will look at alternative means cable/flex management and follow-on activity.

Exception Closed By :

Date :

APPROVAL OF RESOLUTION

Contractor Representative: _____
(Only as needed)

Date: _____

WMH Representative: _____

Date: _____

Additional Approval: _____
(Only as needed)

Date: _____

FDNW Representative: _____

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 249

ATP_YN : Y

Test : 13031-85.48

Step : 1 Equipment Tag #: RT-101

Exception :

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Leist

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

Clamp bands fall on floor. Need to provide means to grab bands and put on sorting table.

Exception Disposition :

Exception Status :

9-3-97 Duplicate of #220. Closed.

Exception Closed By : Leist

Kp 9/17/97

Date : 9/3/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

WMH Representative:

Additional Approval:
(Only as needed)

Date: _____

Date: 7-2-98

Date: _____

FDNW Representative:

sp

Date: _____

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4:01:20 PM, 9/16/97

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 250

ATP_YN : Y

Test : 13031-85.48

Step : 1

Equipment Tag #: DH-102

Exception :

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Leist

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

Drum tipper is not grabbing drum well enough.

Exception Disposition :

Exception Status :

9-3-97 Duplicate of #150. Closed.

Exception Closed By : Leist

Kpc 9/17/97

Date : 9/5/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

WMH Representative:

Additional Approval:
(Only as needed)

Date: _____

Date: 2-2-98

Date: _____

FDNW Representative:

n 2

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 329

ATP_YN : N

SW

Test : 13021A-86.32

Step : 95c, 95d, 7

Equipment Tag #: 107-DH-07-303

Exception :

Revision :

Date:

Specification Section : 13021

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

Drum grab does not fully open, open switch is on non-regulated arm, regulated arm does not move until regulated arm is full travel; regulated arm will not move unless open switch disabled.

Exception Disposition :

Add switch to regulated arm for open position, wire in series with existing open switch ZS820B.

Exception Status :

Modification complete. Need to retest. Need as-built.

WP-97-502 Item #50.

WP 97-507 Item #31.

1-5-97 - switch added, retested satisfactory. closed for LLW
Tipper DH-07-103.

Exception Closed By :

Michael P. Lee

Date : 1-5-97

APPROVAL OF RESOLUTION

Contractor Representative:

(Only as needed)

WMH Representative:

W R W

Date: _____

Date: 2-2-98

Additional Approval:

(Only as needed)

Date: _____

FDNW Representative:

W R W

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 345

ATP_YN : N

Test : 13021A-86.46

Step : various

Equipment Tag #: RT-07-301

Exception :

Revision :

Date:

Specification Section : 13021

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: ~~Dunlap~~

LEIST

Exception Description :

Delid fixture saw blade is only good for approximately 20 cuts before teeth break.

Exception Disposition :

Investigate alternative parts (blade).

Exception Status :

Saw cuts North/South direction to prevent RT 301, 101 movement. Tougher blades found & ordered. This should resolve. Testlog not currently underway.

Exception Closed By :

Randall Gray

Date : 1/28/98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

WMH Representative:

Additional Approval:
(Only as needed)

FDNW Representative:

Date: _____

Date: 2-2-98

Date: _____

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: **362**

ATP_YN : Y

Test : 13031A-85

Step : Equipment Tag #: 104-CNR-12-102,-103

Exception :

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

Ladder logic rung comments don't match code, E-stop contacts mislabeled.

Exception Disposition :

Fix ladder logic symbols, descriptions, rung comments.

Exception Status :

12-1-97 Not a test exception per se. This work has been identified and is currently being pursued to completion. closed.

Exception Closed By : Michael P. Lane

Date : 1-5-97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

WMH Representative:

Additional Approval:
(Only as needed)

FDNW Representative:

Date: _____

Date: _____

Date: _____

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE
EXCEPTION LOG

Tracking #: 363

ATP_YN : Y

Test : 13031A-85

Step : 13031 Equipment Tag #: OIU-12-103C

Exception :

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Vvarmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

- 1) Puck in lifter pin not fully displayed.
- 2) Puck in lifter pin not erased after loadout.

Exception Disposition :

Exception Status :

Closed - Fixed.

Exception Closed By : Lane Michael P. Deen

Date : 9/5/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

[Signature]

Date: _____

WMH Representative:

[Signature]

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

[Signature]

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 365

ATP_YN : Y

Test : 13031A-85.36

Step : 67

Equipment Tag #: DH-07-104

Exception :

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Wvarmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist/Lane

Exception Description :

Drum lifter will release puck when puck not fully lowered.

Exception Disposition :

Enhancement - don't allow grab to open unless below certain weight (10 lbs), added.

Exception Status :

Retested satisfactory. Ken Leist to concur.

Exception Closed By : Leist

K/L 9/17/97

Date : 9/5/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

[Signature]

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

[Signature]

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: **366**

ATP_YN : Y

Test : 1303A.85.36

Step : 9

Equipment Tag #: DH-07-104

Exception :

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Vvarmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

Open/closed switch on drum lifter doesn't consistently activate.

Exception Disposition :

Revise switch mounting, retest. Switch mounting modified so that switch is horizontal.

Exception Status :

Retested satisfactory.

Exception Closed By : Leist

kg 9/17/97

Date : 9/5/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

kg *9/17/97*

Date: _____

WMH Representative:

Date: *2.2.98*

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

kg

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 367

ATP_YN : Y

Test : 13031A.85.36

Step : 20

Equipment Tag #: DH-07-104

Exception :

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

Drum liferweight scale consistently reads constant, incorrect value. After weight scales informally calibrated, OIU readout differs from scale readout by 1-2 kg per drum pack.

Exception Disposition :

1. Calibrate scales for both LLW EXIT, TRU empty drum loadout drum lifters.
2. Modify readout code as needed to OIU exactly track scale readout/determine if 1-2 kg discrepancy is acceptable.

Exception Status :

Discrepancy OK.

Exception Closed By : Leist

Kyz 9/17/97

Date : 9/16/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

N/A

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 368

ATP_YN : N

Test : 13031A-85.46

Step : 107

Equipment Tag #: EM-101

Exception :

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Leist

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

Manipulator cannot pull waste from drum. Right arm cable management will impact drum. Cable management change as in RWM's may help.

Exception Disposition :

Exception Status :

Duplicate. Closed

Exception Closed By : Lane

Michael P. Joe

Date : 9/5/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

W. R. V. O.

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

W. R. V. O.

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 369

ATP_YN : N

Test : 13031A.85

Step : Equipment Tag #: TC-101

Exception :

Revision :

Date :

Specification Section : 13031

Test Witness/Author : Leist

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

When the compactor glovebox is pressed and the compactor is busy, the transfer command is still active. This can become dangerous, as the compactory may be busy for maintenance, etc. The transfer command should time out.

Exception Disposition :

Programmed as per 13462. Modified for clarity:

1. "Compactor Glovebox" changed to Transfer drum to compactor " to more clearly indicate function.
2. Operator can press "compactor transfer" if compactor busy to cancel sequence.

Exception Status :

Retest.

Exception Closed By : Michael P. Roe

Date : 1-5-97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

WMH Representative:

Additional Approval:
(Only as needed)

FDNW Representative:

Date:

Date: 2-2-98

Date:

Date:

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 370

ATP_YN : N

Test : 13031A.85.36

Step : 5

Equipment Tag #: NE/NT-312

Exception :

Revision :

Date :

Specification Section : 13031

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual:

Exception Description :

Both fixed, portable barcode readers lockup, RB module faults.

Exception Disposition :

Portable reader lockup due to multiple readers programmed with identical terminal ID. Cause of rb module hardware fault unknown at this time. Investigate rb module failure.

Exception Status :

12-31-97 spent 3 hrs investigation - Need at most 1-2 full days estimated to resolve (P) (S+M) open - 1-26-98 - Initial investigation complete. Fix is to use portables, reset when necessary.

Exception Closed By :

Michael P. Jones

Date : 1-26-98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

[Signature]

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

u A

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 371

ATP_YN : Y

Test : 13031A.85.36

Step : 24

Equipment Tag #: DH-07-104

Exception :

Revision :

Date :

Specification Section : 13031

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

Not possible to cancel sequence (hoist movement) if wrong button inadvertently pressed.

Exception Disposition :

Enhancement - modify when time permits to allow operator to reselect sequence after incorrect sequence selected.

Exception Status :

9-16-97 -- Completed as part of LLW Exit Glovebox reprogramming. Closed.

Exception Closed By : Lane

Michael P. Lane

Date : 9/16/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

WMH Representative:

Additional Approval:
(Only as needed)

FDNW Representative:

Date: _____

Date: 2-2-98

Date: _____

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 372

ATP_YN : N

Test : 13031A.85.36

Step : 13

Equipment Tag #: DH-07-104

Exception :

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

Drum lifter does not securely grip drum puck.

Exception Disposition :

Millwrights to adjust lifter to provide secure grip. Also, perform same adjustments to glovebox lifter.

Exception Status :

Millwrights have re-adjusted, reinstalled DH-07-104, Ken Leist to concur

Exception Closed By : Leist

Kyle 9/19/97

Date : 9/5/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Ken Leist

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

N/A

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 373

ATP_YN : Y

Test : 13031A.85.36

Step : 5

Equipment Tag #: 12-NE/NT-312/316

Exception :

Revision :

Date :

Specification Section : 13031

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: TBD

Exception Description :

No method for determining successful bar code read when using fixed wand scanners, other than local readers.

Exception Disposition :

1. Make puck bar code pin readable by operator.
2. Require operator to visually verify puck at location matches pin displayed on OIU. (Change operating procedure.)
3. Remove reader NT-316

3/2
not 1/26/98

Exception Status :

Cognizant engineer notified of changes required.

Exception Closed By :

WES Plm

Date : 1/26/98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

WES Plm

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

WES Plm

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: **374**

ATP_YN : Y

Test : 13031A.85

Step : Equipment Tag #: GB-07-105

Exception :

Revision :

Date :

Specification Section : 13031

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

"Drum pin assigned" status at compact receipt unlatched when hoist reaches compact receipt, change to unlatch when drum removed (?)

Exception Disposition :

Fix LLW EXIT g.b. operation to match TRU E.D.L g.b.

Exception Status :

Duplicate

Exception Closed By : Lane

Michael Pore

Date : 9/5/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

LE R / W

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

u /

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 390

ATP_YN : Y

Test : 13031A.85.37

Step : 28

Equipment Tag #: OIU-12-103C

Exception :

Revision :

Date :

Specification Section : 13031

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: TBD

Exception Description :

ID discrepancy, ID match not possible due to lack of functioning bar code readers in exit glovebox.

Exception Disposition :

Exception Status :

Tested sat. closed - No longer applies.

Exception Closed By :

Michael P. [Signature]

Date :

11-18-97

APPROVAL OF RESOLUTION

Contractor Representative:

(Only as needed)

WMH Representative:

Additional Approval:

(Only as needed)

FDNW Representative:

Date:

Date: 2-2-98

Date:

Date:

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 445

ATP_YN : N

Test : 13031A.85

Step : Equipment Tag #: GB-104

Exception :

Revision :

Date :

Specification Section : 13031

Test Witness/Author : Leist

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

HPU filters plugged. Suspect inadequately cleaned piping. This filter has been replaced once already.

Exception Disposition :

Replace filters with 7 micron filters to clean oil. Install 0.5 micron filters after adequate cleaning is obtained.

Exception Status :

7 micron filters ordered. *New Filters installed.*
11/17/97

Exception Closed By :

K. Leist

Date : 11/17/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

W. A. Leist

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

W. A. Leist

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 717

ATP_YN :

Test : 13031A.85.7

Step : 6,14

Equipment Tag #: DO-07-102

Exception :

Revision :

Date:

Specification Section :

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Warmenhoven

LANE

Exception Description :

Audible alarm for loss of port door seal pressure not verified.

Exception Disposition :

Verify audible alarm in control room for loss of port 102 seal pressure.

Exception Status :

DCR WRP1.98-004 was issued to revise the
AR-0700 procedure after adding the applicable alarms
to R1AP

Exception Closed By :

DCR/K/O

Date: 1-22-98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

WMH Representative:

Additional Approval:
(Only as needed)

FDNW Representative:

Date:

Date: 2-2-98

Date:

Date:

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 719

ATP_YN : Y

Test : 13031A.86

Step : N/A

Equipment Tag #: OIU-12-106B

Exception :

Revision :

Date:

Specification Section :

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Warmenhoven

Exception Description :

OIU does not consistently communicate. RIO module appears "flakey".

Exception Disposition :

Exception Status :

1-5-97 Replaced. Proper operation verified. Closed.

Exception Closed By :

Michael P. Joe

Date : 11-19-97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

N/A

Date: _____

WMH Representative:

W. R. West

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

N/A

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 721

ATP_YN : Y

Test : 13031A.85

Step : Equipment Tag #: ST-07-101

Exception :

Revision :

Date:

Specification Section : 13462

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

This applies to all LLW Sorting Glovebox Items:

Maintenance mode and some auto mode interlocks not verified because they are not explicitly defined in 13462.

Exception Disposition :

Test, implement as needed.

Exception Status :

12-1-97 Not a test exception per SE, will be resolved via code review and retest. Closed.

Exception Closed By : Michael Price

Date : 1-5-97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

WMH Representative:

Additional Approval:
(Only as needed)

FDNW Representative:

Date: _____

Date: 2-2-98

Date: _____

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 147

ATP_YN : Y

Test : 13031A.85.09

Step : 126

Equipment Tag #: RT-07-101

Exception : 53

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

7-22-97 MPL - Lid / Delid translate motion is erratic.

Exception Disposition :

7-22-97 MPL - Glovebox cognizant engineer to review and disposition.

Exception Status :

9-3-97 KJ Leist to review.

Rails straightened.

Exception Closed By :

KJ Leist

Date : 1/28/98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

N/A
JOE WOOD

Date: _____

WMH Representative:

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

N/A

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 722

ATP_YN : Y

Test : 13031A.85.34

Step : 9 Equipment Tag #: CV-07-101

Exception :

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

There is currently no interface between the supercompactor exit conveyor and the PCS. The original design included an exit conveyor controlled by the PCS. The vendor modified the original design and provided an exit conveyor controlled by the Supercompactor. No design substitution requests have been received to-date concerning this modification.

Exception Disposition :

Cognizant glovebox engineer to review and disposition.

Exception Status :

11/11/97 Software changes made to add communications between systems 11/14/97
Current design precludes need to have communications between LLW Exit
and Supercompactor system

Exception Closed By :

Kendall

Date : 11/19/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

WMH Representative:

John R. Weir

Date: _____

Date: 2-2-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

W P

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 723

ATP_YN : Y

Test : 13031A.85.34

Step : 56

Equipment Tag #: DH-07-104

Exception :

Revision :

Date:

Specification Section : 13031

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

During initial testing, the exit glovebox hoist menu display was flawed; the compact drum weight wraps to second line and is obscured by weight reading.

Exception Disposition :

During testing, OIU screen modified, redownloaded, retested, passed.

Exception Status :

Closed

Exception Closed By : Lane

Michael P. Lane

Date : 9/9/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

WMH Representative:

Additional Approval:
(Only as needed)

FDNW Representative:

Date: _____

Date: 2-2-98

Date: _____

Date: _____

HNF-SD-W026-ATR-032, Rev. 0

WRAP MODULE 1

LLW SORTING GLOVEBOX

ACCEPTANCE TEST REPORT

Test Procedure
13031A-85

Revision
0

TITLE: LOW LEVEL WASTE GLOVEBOX LINE ACCEPTANCE TEST

REVISION STATUS

THIS SECTION MUST BE REVISED TO INCORPORATE ALL RECENT ECNS AND "R" WORK.

This test procedure has incorporated the applicable engineering changes issued against the related specification sections as of January 22, 1996 as listed below:

Raytheon Issued Engineering Change Notices:

ECN-W026-1002	ECN-W026-1077	ECN-W026-1105
ECN-W026-1011	ECN-W026-1089	ECN-W026-1123
ECN-W026-1014	ECN-W026-1091	ECN-W026-1127
ECN-W026-1038	ECN-W026-1098	ECN-W026-1148
ECN-W026-1051	ECN-W026-1100	ECN-W026-1152

ECN-W026-1164	ECN-W026-1260
ECN-W026-1185	ECN-W026-1263
ECN-W026-1185 R1	ECN-W026-1299
ECN-W026-1208	
ECN-W026-1234	

RFSH Issued Changes Implemented under Development Control:

R103	R111	R120
R104	R114	R124
R106	R115	R125
R109	R116	R131
R110	R117	R132

R133
R141

Test Procedure
13031A-85Revision
0

TITLE: LOW-LEVEL WASTE GLOVEBOX LINE ACCEPTANCE TEST

TEST OBJECTIVES

This test procedure will confirm that the LLW Glovebox Line functions according to specification requirements. This test procedure includes the following conventions, startup and shutdown steps, test cases, and data sheets:

TEST PROCEDURE 13031A-85 CONVENTIONS	Conventions-1
TEST PROCEDURE 13031A-85 SETUP	Setup-1
TEST CASE 13031A-85.01 EXAMINE LLW ENTRY GLOVEBOX (GB-07-101) INITIALIZATION CONDITIONS	1-2
TEST CASE 13031A-85.02 EXAMINE LLW ENTRY GLOVEBOX (GB-07-101) MAINTENANCE MENU FUNCTIONS	2-2
TEST CASE 13031A-85.03 EXAMINE LLW ENTRY GLOVEBOX 85 GALLON ENTRY/EXIT PORT (DO-07-101) LIFT TABLE INTERLOCKS	3-2
TEST CASE 13031A-85.04 MATE DRUM TO LLW ENTRY GLOVEBOX 85 GALLON ENTRY/EXIT PORT (DO-07-101)	4-2
TEST CASE 13031A-85.05 MOVE DRUM TO LLW ENTRY GLOVEBOX DRUM TRANSFER PORT (DO-07-102)	5-2
TEST CASE 13031A-85.06 REMOVE 320 LITER (85 GALLON) DRUM FROM LLW ENTRY GLOVEBOX ENTRY/EXIT PORT (DO-07-101)	6-2
TEST CASE 13031A-85.07 DELIVER DRUM FROM LLW ENTRY GLOVEBOX (GB-07-101) TO TRANSFER CAR (TC-07-101)	7-2
TEST CASE 13031A-85.08 EXAMINE LLW SORTING GLOVEBOX (GB-07-102) INITIALIZATION CONDITIONS	8-2
TEST CASE 13031A-85.09 EXAMINE LLW SORTING GLOVEBOX (GB-07-102) MAINTENANCE MENU FUNCTIONS	9-2
TEST CASE 13031A-85.10 EXAMINE LLW SORTING GLOVEBOX BAGLESS TRANSFER PORT (DO-07-105) MAINTENANCE MODE	10-2
TEST CASE 13031A-85.11 MATE DRUM TO LLW SORTING GLOVEBOX BAGLESS TRANSFER PORT (DO-07-105) AND REMOVE TRANSFER STAND	11-2
TEST CASE 13031A-85.12 EXAMINE LLW SORTING GLOVEBOX TRANSFER CAR (TC-07-101) ALARMS AND INTERLOCKS AND MOVE CAR TO DELID POSITION	12-2
TEST CASE 13031A-85.13 EXAMINE LLW SORTING GLOVEBOX DRUM TIPPER (DH-07-103) ALARMS AND INTERLOCKS AND GRIP DRUM WITH DRUM TIPPER	13-2
TEST CASE 13031A-85.14 EXAMINE LLW SORTING GLOVEBOX DRUM LID/DELID FIXTURE (RT-07-101) INTERLOCKS AND MOVE FIXTURE TO DELID POSITION	14-2
TEST CASE 13031A-85.15 EXAMINE LLW SORTING GLOVEBOX DRUM LID/DELID FIXTURE (RT-07-101) INTERLOCKS AND ROTATE TO CUT POSITION #1	15-2
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TEST CASE 13031A-85.51	PROCESS DRUMS #7 AND #8 THROUGH THE LLW GLOVEBOX LINE	51-2
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TEST CASE 13031A-85.56 PROCESS DRUMS #17 AND #18 THROUGH THE LLW GLOVEBOX LINE 56-2
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BASIS FOR A SUCCESSFUL TEST

A satisfactory demonstration test shall be when the Glovebox Assemblies have processed all of the drums with no equipment component failure, no loss of alignment, and no drum slippage or damage. The Seller shall make any corrections, adjustments and/or repairs as needed at no cost to the Buyer. If any corrections or adjustments are made, the test shall be repeated until the sequence is successfully completed without error.

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ITEMS TESTED**Low Level Waste Entry (LLW Entry) Glovebox**

LLW Entry Glovebox Monorail Hoist
 Trolley/Hoist/Lifter Pendant
 LLW Entry Glovebox Drum Lifter
 LLW Entry Glovebox Entry/Exit Port (320 liter [85 gallon])
 LLW Entry Glovebox Drum Transfer Port
 LLW Entry Glovebox Pneumatic Valve Manifold
 LLW Entry Glovebox In-Box Frisk Monitor
 Portable Hand Held Scanner / Terminal
 LLW Entry Glovebox Operator Interface Unit (OIU)

GB-07-101
 CR-07-101A
 PC-07-001
 DH-07-101
 DO-07-101
 DO-07-102
 SP-07-101
 12-RIA-534
 NE-12-310
 OIU-12-103A

Low Level Waste Sorting (LLW Sorting) Glovebox

LLW Sorting Glovebox Monorail Hoist
 LLW Sorting Glovebox (RWM Loadout) Monorail Hoist
 LLW Sorting Glovebox Drum Tipper
 LLW Sorting Glovebox Sample Transfer Port
 LLW Sorting Glovebox Bagless Transfer Port (RWM Loadout)
 LLW Sorting Glovebox Consumable Entry Port
 LLW Sorting Glovebox Manipulator
 LLW Sorting Glovebox Hydraulic Power Unit
 LLW Sorting Glovebox Manipulator Hydraulic Power Unit/Controller
 LLW Sorting Glovebox Packet X-ray Machine
 LLW Sorting Glovebox Packet X-ray Door
 LLW Sorting Glovebox Packet X-ray Tray
 Trolley/Hoist Pendant (Maintenance Hoist 101B)
 Trolley/Hoist Pendant (RWM Hoist, front side)
 Trolley/Hoist Pendant (RWM Hoist, back side)
 LLW Sorting Glovebox Lid/Delid Fixture
 (Including Air/Oil Intensifier)
 LLW Sorting Glovebox Pneumatic Valve Manifold
 LLW Sorting Glovebox Pneumatic Valve Manifold
 LLW Sorting Glovebox Sorting Table
 LLW Sorting Glovebox Drum Transfer Car
 Portable Hand Held Scanner / Terminal
 LLW Sorting Glovebox Operator Interface Unit (OIU)

GB-07-102
 CR-07-101B
 CR-07-101C
 DH-07-103
 DO-07-104
 DO-07-105
 DO-07-107
 EM-07-101
 HU-07-301
 HU-07-302
 ND-07-101
 DO-07-103
 XX-07-101A
 PC-07-002
 PC-07-003A
 PC-07-003B
 RT-07-101
 SP-07-105)
 SP-07-103
 SP-07-104
 ST-07-101
 TC-07-101
 NT/NE-12-310
 OIU-12-103B

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<u>ITEMS TESTED Continued....</u>		
Low Level Waste Exit (LLW Exit) Glovebox		GB-07-105
LLW Exit Glovebox Entry/Exit Port (320 liter [85 gallon])		DO-07-106
LLW Exit Glovebox Monorail Hoist		CR-07-101D
LLW Exit Glovebox Drum Lifter		DH-07-104
LLW Exit Glovebox Compact Conveyor		CV-101/M1
Portable Hand Held Scanner / Terminal		NT-12-310
Wand Bar code Scanner		NT-12-312
Wand Bar code Scanner		NT-12-316
LLW Exit Glovebox Operator Interface Unit (OIU)		OIU-12-103C
Low Level Waste Glovebox Line Lift Tables		
LLW Entry Glovebox Lift Table (Port 101)		LT-09-202A
LLW Sorting Glovebox Lift Table (Port 105)		LT-09-203A
LLW Exit Glovebox Lift Table (Port 106)		LT-09-202C

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ADDITIONAL TESTING EQUIPMENT REQUIRED

104-CNR-12-102

- 1 - LLW Glovebox Line Local Control Unit (LCU)
- 1 - Personal Computer with Allen-Bradley PLC Software
- 1 - Empty 320 liter (85 gallon) overpack drum per DOT/49 CFR part 173.3.
- 1 - Empty 208 liter (55 gallon) open head drum per DOT 17C with fully removable head.
- 1 - Empty 200 liter (55 gallon) Drath and Schrader Drum (For Use with Bagless Transfer Port) with inner and outer drum lids.
- 1 - 208 liter (55 gallon) open head drum per DOT 17C with fully removable head weighing 63.5 kilograms (140 pounds).
- 1 - 208 liter (55 gallon) open head drum per DOT 17C with fully removable head weighing 63.5 kilograms (140 pounds) enclosed in PVC liner.
- 1 - 208 liter (55 gallon) open head drum per DOT 17C with fully removable head weighing 454 kilograms (1000 pounds).
- 1 - 208 liter (55 gallon) open head drum per DOT 17C with fully removable head weighing 454 kilograms (1000 pounds) enclosed in PVC liner.
- 4 - 208 liter (55 gallon) empty drum that has been supercompacted to a height of 4-6 inches, less than or equal to 19 inches in diameter.
- 10 - 208 liter (55 gallon) drum weighing 63.5 kilograms (140 pounds) that has been supercompacted to a height of 4-6 inches, less than or equal to 19 inches in diameter.
- 10 - 208 liter (55 gallon) drum weighing 227.5 kilograms (500 pounds) that has been supercompacted to a height of 8-12 inches, less than or equal to 19 inches in diameter.

NOTE: All waste drums prepared to support testing should use simulated waste packets to achieve the weight required.

- 1 - Overhead hoist (or other support means) capable of supporting at least 454 kilograms (1000 pounds).
(Used to place and remove 454 kilogram (1000 pound) drums from 320 liter (85 gallon) overpack drums).
- 1 - Data Management System, or simulator as appropriate.
- 1 - Roll of Sample bar code labels.
- 1 - Roll of Noncompliant Packet bar code labels.
- 4 - Air Pressure Gauge, 0-150 psig approximate range, with calibration sheet.
- 12 - C-Clip Crimper Packages (12 C-Clips per package assumed for 144 clips total), or equivalent.
- 6 - 250 mL, 2.375 inch diameter sample tubes used to support sample loadout testing.
- 1 - Sample Canister Location bar code label.
- 1 - Drum Storage Location #1 bar code label.
- 1 - Drum Storage Location #2 bar code label.
- 1 - Drum Loadout Location bar code label.
- 1 - LLW Entry Glovebox location bar code label.
- 1 - LLW Sorting Glovebox RWM Loadout location bar code label.
- 1 - LLW Exit Glovebox location bar code label.
- 1 - LLW Sorting Glovebox Purge Port location bar code label.
- 7 - Unique bar code label for each drum used to support testing.

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TITLE: LOW-LEVEL WASTE GLOVEBOX LINE ACCEPTANCE TEST

REFERENCES

Specification Section 13031 3.05
 Specification Section 13462 Attachment 8
 Drawing H-2-131924 "WRAP MODULE I MECHANICAL FLOW DIAGRAM, LLW PROCESS ENTRY ENCLOSURE", Sheet 1, Rev. 3
 Drawing H-2-131924 "WRAP MODULE I MECHANICAL FLOW DIAGRAM, LLW PROCESS SORTING ENCLOSURE", Sheet 2, Rev. 0
 Drawing H-2-131924 "WRAP MODULE I MECHANICAL FLOW DIAGRAM, LLW PROCESS EXIT ENCLOSURE", Sheet 5
 Drawing H-2-132056 "WRAP MODULE I GLOVEBOX GB-07-101 LLW GLOVEBOX PNEUMATIC SCHEMATIC DIAGRAM" Sheet 1 Rev. 0, Sheet 2 Rev. 1, Sheet 3 Rev. 0.
 Drawing H-2-131819 "WRAP MODULE I MASTER ONE LINE DIAGRAM", Sheet 1 Rev. 3
 Drawing H-2-131820 "WRAP MODULE I 480V MOTOR CONTROL ONE LINE DIAGRAM", Sheet 2 Rev. 3, Sheet Rev. 1, Sheet 4 Rev. 6, Sheet 5 Rev. 6
 Drawing H-2-131829 "WRAP MODULE I ELECTRICAL PANEL SCHEDULES", Sheet 1 Rev. 1, Sheet 2 Rev. 9
 Drawing H-2-131873 "WRAP MODULE I UTILITY MFD COMPRESSED AIR SYSTEM", Sheet 1 Rev. 1, Sheet 2 Rev. 0
 Specification Section 11174 Appendix A "COMPACTION SYSTEM / PLANT CONTROL SYSTEM INTERFACE SIGNALS"
 WRAP 1 Computer System Interface Definition Document, WHC-SD-W026-CSWD-001, Revision 0
 Project W-026 (WRAP Module I) Submittal 222 - "Preliminary Software Design Description"

SAFETY PRECAUTIONS

1. Notify personnel prior to testing of special safety precautions and conditions during testing.
2. Prior to testing ensure that Test Operators are familiar with the normal operation of the equipment being tested and are instructed in the operations to be performed.
3. Ensure that all affected glovebox equipment is properly installed and operating correctly.
4. Ensure that this test procedure has been thoroughly reviewed by all persons involved in testing prior to beginning testing.
5. Revision 0 test procedures are draft test procedures. Revision 0 test procedures must be thoroughly reviewed and carefully walked through prior to actual use.
6. Follow all applicable Lockout/Tagout procedures.
7. Follow all Master Safety Rules.

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST PROCEDURE 13031A-85 CONVENTIONS					
1	This procedure contains several references to the "LLW Glovebox Line". The "LLW Glovebox Line" consists of all the LLW gloveboxes, including the LLW Entry Glovebox (GB-07-101), the LLW Sorting Glovebox (GB-07-102), the LLW Supercompactor Glovebox (GB-07-104), and the LLW Exit Glovebox (GB-07-105) and all items associated with these gloveboxes. All Low Level Waste gloveboxes, except the LLW Supercompactor Glovebox (GB-07-104), are tested using this test procedure.	Verify that the test procedure conventions have been reviewed prior to testing.	✓		Bh
2	This procedure contains several references to the "PCS" or "Plant Control System". This is the generic term applied to the computer hardware and software that supports glovebox operation. Local Control Units or "LCUs" are microprocessor devices that are an integral part of the PCS, and are used to status and control glovebox devices. Operator Interface Units or "OIUs" are display panels connected to the LCU's. The OIUs allow operators to start processing sequences, activate or shutdown glovebox devices, and process glovebox alarms.	Verify that the test procedure conventions have been reviewed prior to testing.	✓		Bh

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
3	<p>The convention used for switch states is "activated" and "not activated". An "activated" switch is a functioning switch that is depressed, illuminated, or provides electrical continuity or is otherwise actuated. A "not activated" switch is a functioning switch that is not depressed, not illuminated, does not provide electrical continuity, or is otherwise not actuated. Typically, vacuum switches are described as "activated" when vacuum is present and "not activated" when vacuum is not present. Pressure switches are typically described as "activated" when pressure is present and "not activated" when pressure is not present.</p> <p>LCU register status directly corresponds to switches and other sensors that are activated (STATUS = "1") or not activated (STATUS = "0"). LCU registers are forced activated or forced not activated using Allen Bradley PLC software.</p> <p>The Allen Bradley PLC software will be used to confirm the status of each switch and sensor examined during this test procedure.</p> <p>When a procedure step requests that a switch status be forced or confirmed as either "activated" or "not activated", the switch register will be examined using the PLC software. If the register status is "1", the switch or sensor is considered "activated". If the register status is "0", the switch or sensor is considered "not activated".</p>	Verify that the test procedure conventions have been reviewed prior to testing.	✓		R/W
4	<p>During testing it may be necessary to force input, data, and output bits to a particular value to facilitate testing. For example, if the Automated Guided Vehicle is not in operation, the drum dropoff AGV status data bit (bit 12) must be set "on" in order for glovebox sequences to continue.</p> <p>A note will be made in the test procedure each time a bit is set or other control system changes are made, that would not be required for "normal" operation, to facilitate testing.</p>	Verify that the test procedure conventions have been reviewed prior to testing.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
5	<p>Due to the current status of glovebox bar code operations, the bar code portions of this test will only be performed if all required bar code changes have been implemented. If bar code changes have not been fully implemented at the time that this test procedure is run, the appropriate status registers will be modified/forced to support test operations, and an additional test will be required to confirm correct bar code system operation.</p> <p>Record the status of the glovebox bar code systems below.</p> <p>Will Glovebox Bar Code Systems be tested as part of this test (YES/NO) ? <u>NO</u></p>	Verify that the bar code system status is recorded.	✓		R/W
6	<p>Every item listed in the "EXPECTED OUTPUT" column must be verified by the test witness for each procedure step. In many cases, multiple expected outputs must be verified for a single test procedure step.</p> <p>If the actual output of the test step matches the expected output for the test step, the test witness should place a check in the "PASS" column and initial the witness column. If the actual output of the test step significantly differs from expected output for the test step, the test witness should place a check in the "FAIL" column and initial the witness column.</p> <p>Any test procedure step that "fails" when actual output does not substantially match expected output is considered a test exception. Test exceptions are resolved by the test director with concurrence from the test operator and test witness.</p> <p>Any test procedure step that "fails" due to test procedure clerical error is not considered a test exception. Test procedure clerical errors will be corrected by ink modification, initialed and dated, in the test procedure during testing.</p> <p>Any additional changes to the test procedure, not associated with with a test step failure will be evaluated and approved by the test director and will be noted in the test log.</p>	Verify that the test procedure conventions have been reviewed prior to testing.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
7	<p>This test procedure references the "Data Management System" or "DMS". Because the Data Management System (DMS) may not be in operation during testing, a Data Management System Simulator may be used instead.</p> <p>All references to the "Data Management System" or "DMS" should be interpreted as references to the Data Management System simulator if the simulator is used.</p> <p>Record the status of the Data Management System simulator below.</p> <p>Data Management System simulator used (YES/NO) ? <u>NO</u></p>	Verify that the Data Management System simulator status is recorded.	✓		R/W
8	<p>Record the conventions used for each type of OIU alarm.</p> <p>Alarms may be generated at each OIU. Alarms may be:</p> <ol style="list-style-type: none"> "Active" "Acknowledged" "Cleared". <p>An "Active" alarm is an alarm in which the condition causing the alarm remains in effect. An "Acknowledged" alarm is an alarm in which the condition causing the alarm remains in effect, but an operator has confirmed (acknowledged) via the OIU that the alarm condition exists. A "Cleared" alarm is an alarm which has been generated, but the condition causing the alarm is no longer in effect. Please note that an alarm may be "Cleared" before it is "Acknowledged". Submittal #222, "Software Design Description" delineates the OIU conditions (e.g., Color schema, flashing vs. non-flashing, etc...) used for each type of alarm. Record the alarm conventions below:</p> <p>Active Alarm: Flashing yellow _____</p> <p>Cleared Alarm: No longer displayed _____</p> <p>Acknowledged Alarm: Steady Yellow _____</p>	Verify that OIU alarm conventions have been recorded.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
9	<p>Operation of several LLW Glovebox devices require that multiple interlocks be satisfied. Because of the number of alarm conditions encountered, the alarm acknowledgement sequence:</p> <ol style="list-style-type: none"> 1. Review the currently displayed OIU Screen. 2. Confirm that a flashing "Sequence Failed" message is displayed. 3. Confirm that the "ALARMS" button is flashing. 4. Press the "ALARMS" button. 5. Confirm that the "Local Alarms" screen is displayed. 6. Confirm that an active alarm is displayed. 7. Press the "Local Alarms" screen. 8. Confirm that the second "Local Alarms" screen is displayed. 9. Confirm that the alarm of interest is displayed. 10. Press the bottom area of the "Local Alarms" screen to enable alarm acknowledgement. 11. Press the up and down buttons as needed to highlight the alarm of interest. 12. Press the "ACK" button to acknowledge the alarm. 13. Press the "DONE" button to return to the "Local Alarms" screen. <p>has been condensed and listed as a single procedure step; "Acknowledge the (Alarm Description) alarm". When the generic "ALARM ACKNOWLEDGEMENT SEQUENCE" is encountered, all the steps listed above should be performed for the alarm listed.</p>	Verify that the alarm acknowledgement sequence has been reviewed.	✓		R/h
10	<p>Review the basis for successful completion of this test procedure.</p> <p>This test procedure consists of multiple test cases. Each test case tests a particular equipment item or feature of the LLW Glovebox Line.</p> <p>If a test case is completed without exceptions, it is said to be completed in one "execution". If errors are found during the execution of a test case, the test case must be started over from the most reasonable point and will require additional "executions" until it is completed in its entirety without exceptions.</p> <p>The test procedure is considered successfully completed when all test cases, or those test cases deemed necessary by the Glovebox Cognizant Engineer, have been executed without exceptions.</p>	Verify that the test procedure has been reviewed prior to testing.	✓		R/h
TEST PROCEDURE 13031A-85 CONVENTIONS COMPLETE					

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
TEST PROCEDURE 13031A-85-SETUP					
Test Prerequisites					
1	<p>NOTE: An "EQUIPMENT ITEM CHECKOUT LIST" is attached to this test procedure to facilitate equipment checkout.</p> <p>Please sign below to confirm that all mechanical equipment, electrical wiring, hydraulic, pneumatic, and sensor and control systems that will be used to support testing have been inspected and tested for correct installation and safe operation prior to beginning testing using this test procedure.</p> <p>Signature: <u><i>[Signature]</i></u> Date: <u>6/28/97</u></p>	<p>Verify that signature is present.</p> <p><i>Lidder/Delidder Rotate and Crimp Feed Functions not complete DW 6/28/97</i></p>	✓		<i>RW</i>
2	<p>Please sign below to confirm that all necessary utilities, including electrical power, conditioned electrical power (as needed for electronic control systems) hydraulic power, vacuum, and compressed air, are available as needed and are configured to support the operation of all testing devices.</p> <p>Signature: <u><i>[Signature]</i></u> Date: <u>6/28/97</u></p>	<p>Verify signature is present.</p>	✓		<i>RW</i>
3	<p>Visually inspect the LLW Glovebox Line area. Confirm that the LLW Gloveboxes and all items associated with these gloveboxes are ready for operation and that no debris or other foreign matter is present that would disrupt testing.</p>	<p>Verify that the LLW Glovebox Line has been prepared for operation and testing.</p>	✓		<i>RW</i>
4	<p>Confirm that all Lift Tables used to support the LLW Glovebox Line, including Lift Tables LT-09-202A, LT-09-203A, and LT-09-202C, are prepared for safe operation. Lift table limit switches should be properly adjusted and operation should be verified prior to acceptance testing.</p>	<p>Verify that the LLW Glovebox Line Lift Tables are configured for safe operation prior to testing.</p>	✓		<i>RW</i>

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Consumable Supplies Used to Support Testing					
5	<p>Prepare one empty 320 liter (85 gallon) overpack drum per DOT/49 CFR part 173.3. The drum should be labeled with a unique WRAP drum bar code label.</p> <p>Weigh the empty drum and record the drum tared weight below:</p> <p>Drum Tared Weight: <u>30</u> kilograms.</p>	<p>Verify that an empty overpack drum with bar code label is available for testing.</p> <p>Verify that the tared weight of the drum is recorded.</p>	✓		R/V
6	<p>Prepare one empty 208 liter (55 gallon) drum per DOT/17C. The drum should be labeled with a unique WRAP drum bar code label.</p> <p>Weigh the empty drum and record the drum tared weight below:</p> <p>Drum Tared Weight: <u>23</u> kilograms.</p>	<p>Verify that an empty drum with bar code label is available for testing.</p> <p>Verify that the tared weight of the drum is recorded.</p>	✓		R/V
7	<p>WARNING: The weighted drums used in this test procedure could cause equipment damage or personal injury if handled incorrectly. Please review this test procedure carefully and use extreme caution when handling weighted drums.</p> <p>Prepare one weighted DOT 17C 208 liter (55 gallon) drum.</p> <p>The drum should weigh 63.5 kilograms (140 pounds), and should be enclosed in a PVC bag liner. The drum should be filled with simulated waste packets. Each drum should be labeled with a unique WRAP bar code label.</p>	<p>Verify that one (1) 140 pound 55 gallon drum is available to support testing.</p>	✓		R/V
8	<p>Prepare one weighted DOT 17C 208 liter (55 gallon) drum.</p> <p>The drum should weigh 454 kilograms (100 pounds), and should be enclosed in a PVC bag liner. The drum should be filled with simulated waste packets. The drum should be labeled with a unique WRAP bar code label.</p>	<p>Verify that one (1) 1000 pound 55 gallon drum is available to support testing.</p>	✓		R/V
9	<p>Prepare two (3) DOT 17C 208 liter (55 gallon) drums that have been supercompacted. One drum should weigh 63.5 Kilograms (140 pounds) and one drum should weigh 227 Kilograms (500 pounds). Both drums should be compacted to a height of 10 - 15 centimeters (4 - 6 inches).</p>	<p>Verify that the 140 pound and 1000 227 pound supercompacted drums are available to support testing.</p>	✓		R/V
10	<p>Prepare a sample tube filled with water labeled "NON-COMPLIANT PACKET (TESTING PURPOSES ONLY-TAP WATER)".</p> <p>Place a bar code packet label on the "NON-COMPLIANT PACKET" and place the packet on the Non-Compliant Item Transfer Stand (SP-07-206) inside the Drath and Schrader Drum.</p>	<p>Verify that a barcoded "NON-COMPLIANT PACKET" sample tube filled with water is placed on the transfer stand.</p>	✓		R/V

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
11	Prepare an empty, capped sample tube labeled "SAMPLE". Place a bar code sample label on the "SAMPLE" and place the "SAMPLE" inside the LLW Sorting Glovebox.	Verify that an empty, capped, barcoded "SAMPLE" sample tube is placed inside the LLW Sorting Glovebox.	✓		N/A
12	Provide one sample canister to be used with the sample transfer port (D-07-204). Several sample tubes which fit inside the canister should be available to support testing.	Verify that a sample canister with at least two sample tubes is available for testing.	✓		N/A
13	Produce a "DRUM BAR CODE LABEL MISMATCH" bar code label. This label should be a unique, valid waste drum bar code label. Reading this label will allow the condition where the bar code scanned does not match the bar code expected condition to be tested.	Verify that the "DRUM BAR CODE LABEL MISMATCH" bar code label has been prepared.			N/A
14	Provide a backup supply of both sample and non-compliant packet pre-printed bar code labels and sample bottles to support testing.	Verify that the supplies necessary to conduct testing are available.			N/A
15	Provide twelve (12) packages of C-Clips (12 C-Clips per package assumed) to load into the crimper magazine when a drum lid is crimped. This should provide 144 C-Clips total.	Verify that 144 C-Clips, are available to support testing.	✓		6/18/97
16	To facilitate sample transfer from the LLW Sorting Glovebox, a bar code label must be created for the Sample Transfer Port (DO-07-104). This label is affixed to the side of the glovebox and scanned using portable scanner NE-12-310 prior to attaching a Sample Transfer Canister to the Sample Transfer Port. The Sample Transfer Canister label is then scanned using scanner NE-12-310, to allow the PCS to associate the Sample Transfer Canister with the Sample Transfer Port.	Verify that bar code label has been prepared for the Sample Transfer Port to support LLW Sorting Glovebox Sampling.			N/A
17	To facilitate drum tracking, the drum bar code label is read every time that a drum is mated to a drum port. Prepare one bar code label for each LLW Glovebox Line drum port: LLW Entry Glovebox Entry/Exit Port (DO-07-101) LLW Sorting Glovebox Bagless Transfer Port (DO-07-105) LLW Exit Glovebox Entry/Exit Port (DO-07-106)	Verify that location bar code labels have been prepared for each LLW Glovebox Line drum port.			N/A

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass	Fail	Witness (Initial)
	Instrument Air System Settings Used to Support Testing				
18	The Instrument Air System should be in operation. The breakers for both air compressors (C-13-101A, C-13-101B) at Motor Control Center MCC-11-101 should be closed to supply power to the air compressors.	Verify that the Instrument Air System can be used to support testing.	✓		M/G

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)										
Electrical Power System Settings Used to Support Testing															
19	Motor Control Center MCC-07-101 should be energized	Verify that Motor Control Center MCC-07-101 is energized.	✓		A/W										
20	Motor Control Center MCC-09-101 should be energized	Verify that Motor Control Center MCC-09-101 is energized.	✓		A/W										
21	Motor Control Center MCC-09-102 should be energized	Verify that Motor Control Center MCC-09-102 is energized.	✓		A/W										
22	<p>The supply breakers at Motor Control Center MCC-07-101 that supply power to the items listed below should be closed. If they are not, close the breakers.</p> <table border="0"> <tr> <td><u>Breaker Label</u></td><td><u>Tag Number</u></td></tr> <tr> <td>Manipulator HPU</td><td>HU-07-302</td></tr> <tr> <td>LLW Supercompactor HPU</td><td>HU-07-101</td></tr> <tr> <td>Power Panel PP-07-101</td><td>PP-07-101</td></tr> <tr> <td>Power Panel PP-07-102</td><td>PP-07-102</td></tr> </table>	<u>Breaker Label</u>	<u>Tag Number</u>	Manipulator HPU	HU-07-302	LLW Supercompactor HPU	HU-07-101	Power Panel PP-07-101	PP-07-101	Power Panel PP-07-102	PP-07-102	Verify that the breakers listed are closed.	✓		A/W
<u>Breaker Label</u>	<u>Tag Number</u>														
Manipulator HPU	HU-07-302														
LLW Supercompactor HPU	HU-07-101														
Power Panel PP-07-101	PP-07-101														
Power Panel PP-07-102	PP-07-102														
23	<p>The supply breakers at Motor Control Center MCC-09-101 that supply power to the items listed below should be closed. If they are not, close the breakers.</p> <table border="0"> <tr> <td><u>Breaker Label</u></td><td><u>Tag Number</u></td></tr> <tr> <td>Power Panel PP-09-102</td><td>PP-09-102</td></tr> </table>	<u>Breaker Label</u>	<u>Tag Number</u>	Power Panel PP-09-102	PP-09-102	Verify that the breakers listed are closed.	✓		A/W						
<u>Breaker Label</u>	<u>Tag Number</u>														
Power Panel PP-09-102	PP-09-102														
24	<p>The supply breakers at Motor Control Center MCC-09-102 that supply power to the items listed below should be closed. If they are not, close the breakers.</p> <table border="0"> <tr> <td><u>Breaker Label</u></td><td><u>Tag Number</u></td></tr> <tr> <td>Lift Table Conveyor Motor</td><td>LT-09-202A</td></tr> <tr> <td>Lift Table Conveyor Motor</td><td>LT-09-202C</td></tr> <tr> <td>Lift Table Conveyor Motor</td><td>LT-09-203A</td></tr> <tr> <td>Power Panel PP-09-103</td><td>PP-09-103</td></tr> </table>	<u>Breaker Label</u>	<u>Tag Number</u>	Lift Table Conveyor Motor	LT-09-202A	Lift Table Conveyor Motor	LT-09-202C	Lift Table Conveyor Motor	LT-09-203A	Power Panel PP-09-103	PP-09-103	Verify that the breakers listed are closed.	✓		R/S
<u>Breaker Label</u>	<u>Tag Number</u>														
Lift Table Conveyor Motor	LT-09-202A														
Lift Table Conveyor Motor	LT-09-202C														
Lift Table Conveyor Motor	LT-09-203A														
Power Panel PP-09-103	PP-09-103														

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)														
25	<p>The supply breakers on Power Panel PP-07-102 that supply power to the items listed below should be closed. If they are not, close the breakers.</p> <table><tr><td><u>Breaker Label</u></td><td><u>Tag Number</u></td></tr><tr><td>LLW Entry Trolley/Hoist</td><td>CR-07-101A</td></tr><tr><td>LLW Sort. Trolley/Hoist</td><td>CR-07-101B</td></tr><tr><td>LLW Sort. Transfer Car</td><td>TC-07-101</td></tr><tr><td>LLW Sort. Trolley/Hoist</td><td>CR-07-101C</td></tr><tr><td>LLW Exit Trolley/Hoist</td><td>CR-07-101D</td></tr></table>	<u>Breaker Label</u>	<u>Tag Number</u>	LLW Entry Trolley/Hoist	CR-07-101A	LLW Sort. Trolley/Hoist	CR-07-101B	LLW Sort. Transfer Car	TC-07-101	LLW Sort. Trolley/Hoist	CR-07-101C	LLW Exit Trolley/Hoist	CR-07-101D	Verify that the breakers listed are closed.	✓		mg		
<u>Breaker Label</u>	<u>Tag Number</u>																		
LLW Entry Trolley/Hoist	CR-07-101A																		
LLW Sort. Trolley/Hoist	CR-07-101B																		
LLW Sort. Transfer Car	TC-07-101																		
LLW Sort. Trolley/Hoist	CR-07-101C																		
LLW Exit Trolley/Hoist	CR-07-101D																		
26	<p>The supply breakers on Panel PP-09-102 that supply power to the items listed below should be closed. If they are not, close the breakers.</p> <p style="text-align: center;">Not Located</p> <table><tr><td><u>Breaker Label</u></td><td><u>Tag Number</u></td></tr><tr><td>LLW Local Control Unit (LCU)</td><td>104-CNR-12-102</td></tr></table>	<u>Breaker Label</u>	<u>Tag Number</u>	LLW Local Control Unit (LCU)	104-CNR-12-102	Verify that the breakers listed are closed.		✓	mg										
<u>Breaker Label</u>	<u>Tag Number</u>																		
LLW Local Control Unit (LCU)	104-CNR-12-102																		
27	<p>The supply breakers on Panel PP-07-101 that supply power to the items listed below should be closed. If they are not, close the breakers.</p> <table><tr><td><u>Breaker Label</u></td><td><u>Tag Number</u></td></tr><tr><td>LLW Entry Glovebox External Power</td><td>Various Items</td></tr><tr><td>LLW Entry Glovebox Internal Power</td><td>Various Items</td></tr><tr><td>LLW Sort. Glovebox External Power</td><td>Various Items</td></tr><tr><td>LLW Sort. Glovebox Internal Power</td><td>Various Items</td></tr><tr><td>LLW Exit Glovebox External Power</td><td>Various Items</td></tr><tr><td>LLW Exit Glovebox Internal Power</td><td>Various Items</td></tr></table>	<u>Breaker Label</u>	<u>Tag Number</u>	LLW Entry Glovebox External Power	Various Items	LLW Entry Glovebox Internal Power	Various Items	LLW Sort. Glovebox External Power	Various Items	LLW Sort. Glovebox Internal Power	Various Items	LLW Exit Glovebox External Power	Various Items	LLW Exit Glovebox Internal Power	Various Items	Verify that the breakers listed are closed.	✓		mg
<u>Breaker Label</u>	<u>Tag Number</u>																		
LLW Entry Glovebox External Power	Various Items																		
LLW Entry Glovebox Internal Power	Various Items																		
LLW Sort. Glovebox External Power	Various Items																		
LLW Sort. Glovebox Internal Power	Various Items																		
LLW Exit Glovebox External Power	Various Items																		
LLW Exit Glovebox Internal Power	Various Items																		
28	<p>The supply breakers on Panel PP-09-103 that supply power to the items listed below should be closed. If they are not, close the breakers.</p> <table><tr><td><u>Breaker Label</u></td><td><u>Tag Number</u></td></tr><tr><td>Lift Table Servo Motor</td><td>LT-09-202A</td></tr><tr><td>Lift Table Servo Motor</td><td>LT-09-202C</td></tr><tr><td>Lift Table Servo Motor</td><td>LT-09-203A</td></tr><tr><td>LLW DMS Pedestal</td><td>TE-12-103</td></tr></table>	<u>Breaker Label</u>	<u>Tag Number</u>	Lift Table Servo Motor	LT-09-202A	Lift Table Servo Motor	LT-09-202C	Lift Table Servo Motor	LT-09-203A	LLW DMS Pedestal	TE-12-103	Verify that the breakers listed are closed.	✓		mg				
<u>Breaker Label</u>	<u>Tag Number</u>																		
Lift Table Servo Motor	LT-09-202A																		
Lift Table Servo Motor	LT-09-202C																		
Lift Table Servo Motor	LT-09-203A																		
LLW DMS Pedestal	TE-12-103																		

* Reference Test exception 79 (Seventy nine) mpt 6-29-97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Fire Detection and Fire Control Settings Used to Support Testing					
NOTE: Whenever a Fire Detection or a Fire Suppression system is disabled, adequate measures must be taken to safeguard the WRAP facility in the event of a fire.					
29	The Fire Detection System interface from the LLW Entry Glovebox (GB-07-101) should be disabled by the Fire Department.	Verify that fire detection is disabled for the LLW Entry Glovebox.	✓		msb
30	The Fire Suppression System interface from the LLW Entry Glovebox (GB-07-101) should be disabled by the Fire Department.	Verify that fire Suppression is disabled for the LLW Entry Glovebox.	✓		msb
31	The Fire Detection System interface from the LLW Sorting Glovebox (GB-07-102) should be disabled by the Fire Department.	Verify that fire detection is disabled for the LLW Sorting Glovebox.	✓		msb
32	The Fire Suppression System interface from the LLW Sorting Glovebox (GB-07-102) should be disabled by the Fire Department.	Verify that fire suppression is disabled for the LLW Sorting Glovebox.	✓		msb
33	The Fire Detection System interface from the LLW Exit Glovebox (GB-07-105) should be disabled by the Fire Department.	Verify that fire detection is disabled for the LLW Exit Glovebox.	✓		msb
34	The Fire Suppression System interface from the LLW Exit Glovebox (GB-07-105) should be disabled by the Fire Department.	Verify that fire suppression is disabled for the LLW Exit Glovebox.	✓		msb

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Information Used to Support Testing					
35	Record the bar code identifier used for each drum below. <u>Drum Description</u> <u>Bar Code Identifier</u> 63.5 Kilogram Drum Without Outer Bag Liner _____ 63.5 Kilogram Drum With Outer Bag Liner _____ 227 Kilogram Drum Without Outer Bag Liner _____ 227 Kilogram Drum With Outer Bag Liner _____ Empty 208 Liter (55 gallon) Drum _____ 320 Liter (85 Gallon) Overpack Drum _____	Verify that the drum bar code label information is recorded.			N/A mgj 6-28-97
36	Several glovebox sequences and alarms are timed. The exact duration of each timed event may not be provided by the relevant specification section, but instead should be determined during glovebox setup and testing. Please document each timer setting and attach the timer setting information to this test procedure.	Verify that timed event information is provided as appropriate. Print out when complete			N/A N/A 9/15/97
37	The PCS software used to control glovebox components must be carefully controlled during testing. Provide one controlled copy of the software programs, settings, and all other related materials used to support testing.	Verify that a controlled copy of the software configuration during testing is provided.	✓		mgj
38	During the LLW Entry Glovebox single drum entry sequence, the PCS should raise the LLW Entry Glovebox Lift Table (LT-09-202A) so that the Drum is at "Drum Centering Height". Record the exact height for this pre-programmed position below: "Drum Centering" Height: <u>32 3/4</u> inches	Verify that the "Drum Centering" Height is recorded.	✓		N/A 2/6/98
39	During the LLW Sorting Glovebox Bagless Transfer Port (DO-07-105) Drum Entry sequence, the PCS should raise the Lift Table to a preprogrammed position. Record the exact height for this pre-programmed interim position below: Interim Position Height: _____ inches	Verify that the Preprogrammed interim position height is recorded.			N/A N/A 9/10/97

#39 Test clerical error. - During entry sequence lift table raises directly to port; does not stop at interim position, but does slow considerably approx. 1" below point at which drum contacts port. mgj 9-18-97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
40	A password is required to manually operate the LLW Sorting Glovebox Bagless Transfer Port. Record the password for Bagless Transfer Port "Manual Mode" operation below: Password: <u>88888888</u>	Verify that the Bagless Transfer Port "Manual Mode" password is recorded.	✓		maj
* 41	The Drum Lid/Delid Fixture (RT-07-101) C-Clip Crimper must be adjusted prior to testing. Record below, the amount of time that the C-Clip magazine drive solenoid 07-FEV-737G is energized to feed a C-Clip to the Crimp head: <u>Not Functioning at start of Test</u> C-Clip Magazine Solenoid Energize Time: _____ seconds	Verify that the amount of time that the C-Clip magazine drive solenoid 07-FEV-737G is energized to feed a C-Clip to the Crimp head is recorded.	✓		ALC
42	The LLW Sorting Glovebox Bagless Transfer Port requires that the port load cell indicate that predetermined weight set point has been reached before the port is enabled for operation. Record the weight set point for Bagless Transfer Port operation below: <u>PORT</u> <u>TRANSMITTER</u> SET POINT (<u>KILOGRAMS</u>) DO-07-105 09-WIT-241 650-700 kg	Verify that the weight set point used for testing purposes is recorded.	✓		maj

* Reference test exception 80

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)			EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Initial Equipment Conditions To Support Testing							
43	Place all LLW Entry Glovebox items in their parked positions including the following items:			Verify that all LLW Entry Glovebox items have been placed in their parked positions.	✓ P/W		P/W
	<u>ITEM</u>	<u>Tag Number</u>	<u>Parked Position</u>				
	Hoist/Trolley	CR-07-101A	Trolley over Drum Transfer Port, Hoist raised and unloaded.				
	Lift Table	LT-09-202A	Lift Table at AGV height, in "Normal" Mode.				
	Entry/Exit Port	DO-07-101	Rotated, lowered closed and locked, without vacuum. Drum Centering Device Retracted.				
	Drum Lifter	DH-07-101	Unloaded, raised, and open				
	Drum Transfer Port	DO-07-102	Closed, seal inflated.				
44	Place all LLW Sorting Glovebox items in their parked positions including the following items:			Verify that all LLW Sorting Glovebox items have been placed in their parked positions.	✓		P/W
	<u>ITEM</u>	<u>Tag Number</u>	<u>Parked Position</u>				
	Drum Transfer Car	TC-07-101	Drive disengaged, de-energized, at Entry Position.				
	Drum Tipper	DH-07-103	Raised, Grab Open and in vertical position.				
	Hoist/Trolley	CR-07-101B	Trolley at end nearest exit glovebox, Hoist raised.				
	RWM Loadout Hoist	CR-07-101C	Trolley at Tray Loading Position, Hoist raised and unloaded.				
	Manipulator	EM-07-101	Arms raised and parked, Manipulator at position #1 (nearest to sorting table).				
	Sorting Table	ST-07-101	Fully retracted, fully lowered horizontal position.				
	Lid/Delid Device	RT-07-101	Fully Raised, at Relid Position. Rotation head in parked position, Saw retracted and de-energized, crimp head back and crimp jaw open. Inert gas flow off.				
	Bagless Transfer Port	DO-07-105	Closed and Locked, No drum present.				
	Sample Transfer Port	DO-07-104	Canister removed, door closed.				
	Lift Table	LT-09-203A	Lift Table at AGV height, in "Normal" mode.				

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
45	Place all LLW Exit Glovebox items in their parked positions including the following items: <div> <div>ITEM</div> <div>Tag Number</div> <div>Parked Position</div> </div> Entry/Exit Port DO-07-106 Rotated, lowered closed and locked, without vacuum. Drum Centering Device Retracted, HVAC seal deflated. Compact Conveyor CV-07-101/M1 De-energized. Compact Lifter DH-07-104 Fully raised, open. Hoist/Trolley CR-07-101D Trolley at compact receipt position, fully raised. Lift Table LT-09-202C Lift Table at AGV height, in "Normal" mode.	Verify that all LLW Exit Glovebox items have been placed in their parked positions.	✓		P/E
46	Unforce all LCU 102 registers using the Allen Bradley PLC Software. <i>see note below.</i>	Verify that all LCU 102 registers are unforced.	✓		mgf
47	Confirm that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed at OIU-12-103B. If a sub-menu is displayed, press the "MAIN MENU" button to return to the "LLW SORTING GLOVEBOX MAIN MENU".	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed at OIU-12-103B.	✓		P/E
48	Confirm that the "LLW ENTRY GLOVEBOX MAIN MENU" is displayed at OIU-12-103A. If a sub-menu is displayed, press the "MAIN MENU" button to return to the "LLW ENTRY GLOVEBOX MAIN MENU".	Verify that the "LLW ENTRY GLOVEBOX MAIN MENU" is displayed at OIU-12-103A.	✓		P/E
49	Confirm that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed at OIU-12-103C. If a sub-menu is displayed, press the "MAIN MENU" button to return to the "LLW EXIT GLOVEBOX MAIN MENU".	Verify that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed at OIU-12-103C.	✓		P/E
TEST PROCEDURE 13031A-85 SETUP COMPLETE					

#46 LLW Manipulator position switches 2S715A (I:25/17), 2S715C (I:26/1) and 2S715D (I:26/2) forced activated due to lack of trained manipulator operator, unforced as needed. mgf 6-28-97

TEST CASE 13031A-85.01 EXAMINE LLW ENTRY GLOVEBOX (GB-07-101) INITIALIZATION CONDITIONS	1-2
Entry/Exit Port Locked Initialization	1-2
Lift Table at "AGV Height" Initialization	1-5
Drum Lid Vacuum Initialization	1-6
Entry/Exit Port Closed Initialization	1-7
Hoist at Drum Transfer Port Position Initialization	1-8
Drum Lifter Raised Initialization	1-10
Drum Transfer Port Seal Inflated Initialization	1-12
Drum Transfer Port Closed Initialization	1-13
Lift Table in "Normal" Mode Initialization	1-14
Centering Clamps Retracted Initialization	1-15
Test Case Shutdown	1-17

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)								
TEST CASE 13031A-85.01 EXAMINE LLW ENTRY GLOVEBOX (GB-07-101) INITIALIZATION CONDITIONS													
Entry/Exit Port Locked Initialization													
1	Typically, "Maintenance" mode is selected by placing the Data Management System (DMS) Terminal "AUTO/MAINTENANCE" mode switch to the "MAINTENANCE" position. Record the method used to place the LLW Entry Glovebox in "Maintenance" mode below: Maintenance Mode Method: Keyswitch 07-HS-316 _____ _____	Verify that the method used to place the LLW Entry Glovebox in Maintenance Mode is recorded.	✓		mrf								
2	Typically, "Automatic" mode is selected by placing the Data Management System (DMS) Terminal "AUTO/MAINTENANCE" mode switch to the "AUTOMATIC" position. Record the method used to place the LLW Entry Glovebox in "Automatic" mode below: Automatic Mode Method: Keyswitch 07-HS-316 _____ _____	Verify that the method used to place the LLW Entry Glovebox in Automatic Mode is recorded.	✓		mrf								
3	Place the LLW Entry Glovebox in "Maintenance" mode.	Verify that the glovebox is in "Maintenance" mode.	✓		mrf								
4	Force LCU 102 registers ZSC700A and ZSC700B not activated to simulate the Entry/Exit Port (DO-07-101) unlocked condition. Record the forced register status below: <table><tr><td>Register</td><td>Forced Status</td><td>Method of Confirmation</td></tr><tr><td>ZSC700A</td><td>0</td><td>1:22/10 _____</td></tr><tr><td>ZSC700B</td><td>0</td><td>1:22/11 _____</td></tr></table>	Register	Forced Status	Method of Confirmation	ZSC700A	0	1:22/10 _____	ZSC700B	0	1:22/11 _____	Verify that registers ZSC700A and ZSC700B are forced not activated. Verify that the forced register status is recorded.	✓	mrf
Register	Forced Status	Method of Confirmation											
ZSC700A	0	1:22/10 _____											
ZSC700B	0	1:22/11 _____											
5	Place the LLW Entry Glovebox in "Automatic" mode to allow the LLW Entry glovebox to re-initialize. The PCS should check the status of glovebox devices to ensure that they are initialized.	Verify that the glovebox is in "Automatic" mode.	✓		mrf								
6	Because registers ZSC700A and ZSC700B are forced not activated, simulating the Entry/Exit port unlocked condition, the "SYSTEM NOT INITIALIZED" message should be displayed on the "LLW ENTRY GLOVEBOX MAIN MENU" at OIU-12-103A.	Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		mrf								

#4 Diagnostics menu used to confirm all other items initialized mrf 6-28-97

#6 Alarm condition "Sequence Failed" overrides system not initialized. Verified can access TEST CASE 13031A-85.01 Rev. 0 in initialization, stop, alarm menus, but all operating menus LLW ENTRY GLOVEBOX are locked out, indicating system not initialized

* #6 Alarm screen locks up - See TE #89 mrf 6-29-97 * #5 Lift table cycles up/down see TE #90 mrf 6-29-97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
* 7	Press the "DIAGNOSTICS MENU" button from the "LLW ENTRY GLOVEBOX MAIN MENU" at OIU-12-103A.	Verify that the "DIAGNOSTICS MENU" is displayed.	✓		R/W
8	The "DO-07-101 PORT DOOR NOT CLOSED AND LOCKED" message should be displayed in red on the "DIAGNOSTICS MENU" at OIU-12-103A.	Verify that the "DO-07-101 PORT DOOR NOT CLOSED AND LOCKED" message is displayed.	✓		R/C
9	Unforce LCU 102 register ZSC700B. Record the unforced register status below: Unforced ZSC700B Status: <u>1</u>	Verify that register ZSC700B is unforced.	✓		R/C
10	The "DO-07-101 PORT DOOR NOT CLOSED AND LOCKED" message should continue to be displayed in red on the "DIAGNOSTICS MENU" at OIU-12-103A.	Verify that the "DO-07-101 PORT DOOR NOT CLOSED AND LOCKED" message is displayed.	✓		R/D
11	Force LCU 102 register ZSC700B not activated to simulate the Entry/Exit Port (DO-07-101) unlocked condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZSC700B <u>0</u> I:22/11	Verify that register ZSC700B is forced not activated. Verify that the forced register status is recorded.	✓		R/C
12	Unforce LCU 102 register ZSC700A. Record the unforced register status below: Unforced ZSC700A status: <u>1</u>	Verify that register ZSC700A is unforced.	✓		R/W
13	The "DO-07-101 PORT DOOR NOT CLOSED AND LOCKED" message should continue to be displayed in red on the "DIAGNOSTICS MENU" at OIU-12-103A.	Verify that the "DO-07-101 PORT DOOR NOT CLOSED AND LOCKED" message is displayed.	✓		R/W
14	Press the "MAIN MENU" button from the "DIAGNOSTICS MENU" at OIU-12-103A.	Verify that the "LLW ENTRY GLOVEBOX MAIN MENU" is displayed.	✓		R/W
15	Because the glovebox should not be initialized, the "SYSTEM NOT INITIALIZED" message should be displayed. <i>see note step 6</i>	Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		R/W
16	Press the "DIAGNOSTICS MENU" button to display the "DIAGNOSTICS MENU" at OIU-12-103A.	Verify that the "DIAGNOSTICS MENU" is displayed.	✓		R/W
17	Unforce LCU 102 register ZSC700B. Record the unforced register status below: Unforced ZSC700B Status: <u>1</u>	Verify that register ZSC700B is unforced.	✓		R/W

* "Sequence Failed" not noted when "Port (ZGZA) Failed to Close and Lock" alarm generated. See TE 91, 92
 mpt 6-29-97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
18	The "DO-07-101 PORT DOOR CLOSED AND LOCKED" message should be displayed in green on the "DIAGNOSTICS MENU" at OIU-12-103A.	Verify that the "DO-07-101 PORT DOOR CLOSED AND LOCKED" message is displayed.	✓		R/W
19	Press the "MAIN MENU" button from the "DIAGNOSTICS MENU" at OIU-12-103A.	Verify that the "LLW ENTRY GLOVEBOX MAIN MENU" is displayed.	✓		R/W
20	Because position switches 07-ZSC-700A and 07-ZSC-700B should indicate that the port is locked and all other glovebox items should be initialized, the "SYSTEM INITIALIZED" message should be displayed on the "LLW ENTRY GLOVEBOX MAIN MENU" at OIU-12-103A.	Verify that the "SYSTEM INITIALIZED" message is displayed.	✓		R/W
21	Place the LLW Entry Glovebox in "Maintenance" mode.	Verify that the glovebox is in "Maintenance" mode.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Lift Table at "AGV Height" Initialization					
22	Force LCU 102 register ZS233G not activated to simulate the Lift Table not at AGV height. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS233G <u> </u> 1:16/16	Verify that register ZS233G is forced activated. Verify that the forced register status is recorded.	✓		R/W
23	Place the LLW Entry Glovebox in "Automatic" mode.	Verify that the glovebox is in "Automatic" mode.	✓		R/W
24	Because register ZS233G is forced not activated to simulate the Lift Table not at AGV height, the "SYSTEM NOT INITIALIZED" message should be displayed on the "LLW ENTRY GLOVEBOX MAIN MENU" at OIU-12-103A.	Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		R/W
25	Press the "DIAGNOSTICS MENU" button from the "LLW ENTRY GLOVEBOX MAIN MENU" at OIU-12-103A.	Verify that the "DIAGNOSTICS MENU" is displayed.	✓		R/W
26	The "LT-09-202A LIFT TABLE NOT AT AGV HEIGHT" message should be displayed in red on the "DIAGNOSTICS MENU" at OIU-12-103A.	Verify that the "LT-09-202A LIFT TABLE NOT AT AGV HEIGHT" message is displayed.	✓		R/W
27	Unforce LCU 102 register ZS233G. Record the unforced register status below: Unforced ZS233G Status: <u> 1 </u>	Verify that register ZS233G is unforced.	✓		R/W
28	The "LT-09-202A LIFT TABLE AT AGV HEIGHT" message should be displayed in green on the "DIAGNOSTICS MENU" at OIU-12-103A.	Verify that the "LT-09-202A LIFT TABLE AT AGV HEIGHT" message is displayed.	✓		R/W
29	Press the "MAIN MENU" button from the "DIAGNOSTICS MENU" at OIU-12-103A.	Verify that the "LLW ENTRY GLOVEBOX MAIN MENU" is displayed.	✓		R/W
30	Because the Lift Table is at AGV height and all other glovebox items should be initialized, the "SYSTEM INITIALIZED" should be displayed on the "LLW ENTRY GLOVEBOX MAIN MENU" at OIU-12-103A.	Verify that the "SYSTEM INITIALIZED" message is displayed.	✓		R/W
31	Place the LLW Entry Glovebox in "Maintenance" mode.	Verify that the glovebox is in "Maintenance" mode.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Drum Lid Vacuum Initialization					
32	Force LCU 102 register PS703 activated to simulate vacuum between the Entry/Exit port and the drum lid. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> PS703 1 1:22/03	Verify that register PS703 is forced activated. Verify that the forced register status is recorded.	✓		R/W
33	Place the LLW Entry Glovebox in "Automatic" mode.	Verify that the glovebox is in "Automatic" mode.	✓		R/W
34	Because register PS703 is forced activated to simulate vacuum between the port door and the drum lid, the "SYSTEM NOT INITIALIZED" message should be displayed on the "LLW ENTRY GLOVEBOX MAIN MENU" at OIU-12-103A.	Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		R/W
35	Press the "DIAGNOSTICS MENU" button from the "LLW ENTRY GLOVEBOX MAIN MENU" at OIU-12-103A.	Verify that the "DIAGNOSTICS MENU" is displayed.	✓		R/W
36	The "DO-07-101 VACUUM NOT RELEASED" message should be displayed in red on the "DIAGNOSTICS MENU" at OIU-12-103A.	Verify that the "DO-07-101 VACUUM NOT RELEASED" message is displayed.	✓		R/W
37	Unforce LCU 102 register PS703. Record the unforced register status below: Unforced PS703 Status: 0	Verify that register PS703 is unforced.	✓		R/W
38	The "DO-07-101 VACUUM RELEASED" message should be displayed in green on the "DIAGNOSTICS MENU" at OIU-12-103A.	Verify that the "DO-07-101 VACUUM RELEASED" message is displayed.	✓		R/W
39	Press the "MAIN MENU" button from the "DIAGNOSTICS MENU" at OIU-12-103A.	Verify that the "LLW ENTRY GLOVEBOX MAIN MENU" is displayed.	✓		R/W
40	Because switch 07-PS-703 should indicate that vacuum is not present and all other glovebox items should be initialized, the "SYSTEM INITIALIZED" message should be displayed on the "LLW ENTRY GLOVEBOX MAIN MENU" at OIU-12-103A.	Verify that the "SYSTEM INITIALIZED" message is displayed.	✓		R/W
41	Place the LLW Entry Glovebox in "Maintenance" mode.	Verify that the glovebox is in "Maintenance" mode.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Entry/Exit Port Closed Initialization					
42	Force LCU 102 register ZS703A not activated to simulate the Entry/Exit port "open" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS703A 0 1:22/04	Verify that register ZS703A is forced not activated. Verify that the forced register status is recorded.	✓		R/W
43	Place the LLW Entry Glovebox in "Automatic" mode.	Verify that the glovebox is in "Automatic" mode.	✓		R/W
44	Because register ZS703A is forced activated to simulate the Entry/Exit port "open" condition, the "SYSTEM NOT INITIALIZED" message should be displayed on the "LLW ENTRY GLOVEBOX MAIN MENU" at OIU-12-103A.	Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		R/W
45	Press the "DIAGNOSTICS MENU" button from the "LLW ENTRY GLOVEBOX MAIN MENU" at OIU-12-103A.	Verify that the "DIAGNOSTICS MENU" is displayed.	✓		R/W
46	The "DO-07-101 PORT DOOR NOT CLOSED AND LOCKED" message should be displayed in red on the "DIAGNOSTICS MENU" at OIU-12-103A.	Verify that the "DO-07-101 PORT DOOR NOT CLOSED AND LOCKED" message is displayed.	✓		R/W
47	Unforce LCU 102 register ZS703A. Record the unforced register status below: Unforced ZS703A Status: 1	Verify that register ZS703A is unforced.	✓		R/W
48	The "DO-07-101 PORT DOOR CLOSED AND LOCKED" message should be displayed in green on the "DIAGNOSTICS MENU" at OIU-12-103A.	Verify that the "DO-07-101 PORT DOOR CLOSED AND LOCKED" message is displayed.	✓		R/W
49	Press the "MAIN MENU" button from the "DIAGNOSTICS MENU" at OIU-12-103A.	Verify that the "LLW ENTRY GLOVEBOX MAIN MENU" is displayed.	✓		R/W
50	Because the Entry/Exit Port is closed and all other glovebox items should be initialized, OIU-12-103A should display a "SYSTEM INITIALIZED" message is displayed.	Verify that the "SYSTEM INITIALIZED" message is displayed.	✓		R/W
51	Place the LLW Entry Glovebox in "Maintenance" mode.	Verify that the glovebox is in "Maintenance" mode.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Hoist at Drum Transfer Port Position Initialization					
52	Force LCU 102 registers ZS702A and ZS702B not activated to simulate the hoist trolley NOT at the "Drum Transfer Port" position. Record the forced register status below: <div> <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> </div> ZS702A <u>0</u> I:21/01 _____ ZS702B <u>0</u> I:21/02 _____	Verify that registers ZS702A and ZS702B are forced not activated. Verify that the forced register status is recorded.	✓		<i>RLV</i>
53	Place the LLW Entry Glovebox in "Automatic" mode.	Verify that the glovebox is in "Automatic" mode.	✓		<i>RLV</i>
54	Because registers ZS702A and ZS702B are forced not activated to simulate the hoist not at the "Drum Transfer Port" position, the "SYSTEM NOT INITIALIZED" message should be displayed on the "LLW ENTRY GLOVEBOX MAIN MENU" at OIU-12-103A.	Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		<i>RLV</i>
55	Press the "DIAGNOSTICS MENU" button from the "LLW ENTRY GLOVEBOX MAIN MENU" at OIU-12-103A.	Verify that the "DIAGNOSTICS MENU" is displayed.	✓		<i>RLV</i>
56	The "CR-07-101A HOIST NOT AT TRANSFER PORT" message should be displayed in red on the "DIAGNOSTICS MENU" at OIU-12-103A.	Verify that the "CR-07-101A HOIST NOT AT TRANSFER PORT" message is displayed.	✓		<i>RLV</i>
57	Unforce LCU 102 register ZS702B. Record the unforced register status below: Unforced ZS702B Status: <u>1</u>	Verify that register ZS702B is unforced.	✓		<i>RLV</i>
58	The "CR-07-101A HOIST NOT AT TRANSFER PORT" message should continue to be displayed in red on the "DIAGNOSTICS MENU" at OIU-12-103A.	Verify that the "CR-07-101A HOIST NOT AT TRANSFER PORT" message is displayed.	✓		<i>RLV</i>
59	Force LCU 102 register ZS702B not activated to simulate the hoist trolley NOT at the "Drum Transfer Port" position. Record the forced register status below: <div> <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> </div> ZS702B <u>0</u> I:21/02 _____	Verify that register ZS702B is forced not activated. Verify that the forced register status is recorded.	✓		<i>RLV</i>
60	Unforce LCU 102 register ZS702A. Record the unforced register status below: Unforced ZS702A Status: <u>1</u>	Verify that register ZS702A is unforced.	✓		<i>RLV</i>

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
61	The "CR-07-101A HOIST NOT AT TRANSFER PORT" message should continue to be displayed in red on the "DIAGNOSTICS MENU" at OIU-12-103A.	Verify that the "CR-07-101A HOIST NOT AT TRANSFER PORT" message is displayed.	✓		N/W
62	Press the "MAIN MENU" button from the "DIAGNOSTICS MENU" at OIU-12-103A.	Verify that the "LLW ENTRY GLOVEBOX MAIN MENU" is displayed.	✓		N/W
63	Because the glovebox should not be initialized, the "SYSTEM NOT INITIALIZED" message should be displayed.	Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		N/W
64	Press the "DIAGNOSTICS MENU" button to display the "DIAGNOSTICS MENU" at OIU-12-103A.	Verify that the "DIAGNOSTICS MENU" is displayed.	✓		N/W
65	Unforce LCU 102 register ZS702B. Record the unforced register status below: Unforced ZS702B Status: <u>1</u>	Verify that register ZS702B is unforced.	✓		N/W
66	The "CR-07-101A HOIST AT TRANSFER PORT" message should be displayed in green on the "DIAGNOSTICS MENU" at OIU-12-103A.	Verify that the "CR-07-101A HOIST AT TRANSFER PORT" message is displayed.	✓		N/W
67	Press the "MAIN MENU" button from the "DIAGNOSTICS MENU" at OIU-12-103A.	Verify that the "LLW ENTRY GLOVEBOX MAIN MENU" is displayed.	✓		N/W
68	Because position switches 07-ZS-702A and 07-ZS-702B should indicate that the hoist is at the Drum Transfer Port position, and all other glovebox items should be initialized, the "SYSTEM INITIALIZED" message should be displayed on the "LLW ENTRY GLOVEBOX MAIN MENU" at OIU-12-103A.	Verify that the "SYSTEM INITIALIZED" message is displayed.	✓		N/W
69	Place the LLW Entry Glovebox in "Maintenance" mode.	Verify that the glovebox is in "Maintenance" mode.	✓		N/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Drum Lifter Raised Initialization					
70	Force LCU 102 register ZS702C activated to simulate the Drum Lifter not fully raised condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS702C 1 1:21/03	Verify that register ZS702C is forced activated. Verify that the forced register status is recorded.	✓		R/W
71	Place the LLW Entry Glovebox in "Automatic" mode.	Verify that the glovebox is in "Automatic" mode.	✓		R/W
72	Because register ZS702C remains forced not activated to simulate the hoist not fully raised, the "SYSTEM NOT INITIALIZED" message should be displayed on the "LLW ENTRY GLOVEBOX MAIN MENU" at OIU-12-103A.	Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		R/W
73	Press the "DIAGNOSTICS MENU" button from the "LLW ENTRY GLOVEBOX MAIN MENU" at OIU-12-103A.	Verify that the "DIAGNOSTICS MENU" is displayed.	✓		R/W
74	The "CR-07-101A HOIST NOT RAISED" message should be displayed in red on the "DIAGNOSTICS MENU" at OIU-12-103A.	Verify that the "CR-07-101A HOIST NOT RAISED" message is displayed.	✓		R/W
75	Unforce LCU 102 register ZS702C. Record the unforced register status below: Unforced ZS702C Status: 0	Verify that register ZS702C is unforced.	✓		R/W
76	The "CR-07-101A HOIST RAISED" message should be displayed in green on the "DIAGNOSTICS MENU" at OIU-12-103A.	Verify that the "CR-07-101A HOIST RAISED" message is displayed.	✓		R/W
77	Press the "MAIN MENU" button from the "DIAGNOSTICS MENU" at OIU-12-103A.	Verify that the "LLW ENTRY GLOVEBOX MAIN MENU" is displayed.	✓		R/W
78	Because position switch 07-ZS-702C should indicate that the Drum Lifter is fully raised, and all other glovebox items should be initialized, the "SYSTEM INITIALIZED" message should be displayed on the "LLW ENTRY GLOVEBOX MAIN MENU" at OIU-12-103A.	Verify that the "SYSTEM INITIALIZED" message is displayed.	✓		R/W
79	Place the LLW Entry Glovebox in "Maintenance" mode.	Verify that the glovebox is in "Maintenance" mode.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Drum Lifter Open Initialization					
80	Force LCU 102 register ZSO704 not activated to simulate the Drum Lifter "not open" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZSO704 0 1:22/01	Verify that register ZSO704 is forced not activated. Verify that the forced register status is recorded.	✓		R/W
81	Place the LLW Entry Glovebox in "Automatic" mode.	Verify that the glovebox is in "Automatic" mode.	✓		R/W
82	Because register ZSO704 remains forced not activated to simulate the Drum Lifter "not open", the "SYSTEM NOT INITIALIZED" should be displayed on the "LLW ENTRY GLOVEBOX MAIN MENU" at OIU-12-103A.	Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		R/W
83	Press the "DIAGNOSTICS MENU" button from the "LLW ENTRY GLOVEBOX MAIN MENU" at OIU-12-103A.	Verify that the "DIAGNOSTICS MENU" is displayed.	✓		R/W
84	The "DH-07-101 LIFTER NOT OPEN" message should be displayed in red on the "DIAGNOSTICS MENU" at OIU-12-103A.	Verify that the "DH-07-101 LIFTER NOT OPEN" message is displayed.	✓		R/W
85	Unforce LCU 102 register ZS704. Record the unforced register status below: Unforced ZSC704 Status: 1	Verify that register ZS704 is unforced.	✓		R/W
86	The "DH-07-101 LIFTER OPEN" message should be displayed in green on the "DIAGNOSTICS MENU" at OIU-12-103A.	Verify that the "DH-07-101 LIFTER OPEN" message is displayed.	✓		R/W
87	Press the "MAIN MENU" button from the "DIAGNOSTICS MENU" at OIU-12-103A.	Verify that the "LLW ENTRY GLOVEBOX MAIN MENU" is displayed.	✓		R/W
88	Because position switch 07-ZSO-704 should indicate that the Drum Lifter is fully open, and all other glovebox items should be initialized, the "SYSTEM INITIALIZED" message should be displayed on the "LLW ENTRY GLOVEBOX MAIN MENU" at OIU-12-103A.	Verify that the "SYSTEM INITIALIZED" message is displayed.	✓		R/W
89	Place the LLW Entry Glovebox in "Maintenance" mode.	Verify that the glovebox is in "Maintenance" mode.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Drum Transfer Port Seal Inflated Initialization					
90	Force LCU 102 register PSL700 not activated to simulate the Drum Transfer Port seal deflated condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> PSL700 <u>0</u> <u>1:22/14</u>	Verify that register PSL700 is forced not activated. Verify that the forced register status is recorded.	✓		R/W
91	Place the LLW Glovebox Line in "Automatic" mode.	Verify that the LLW Glovebox Line is in "Automatic" mode.	✓		R/W
92	Because register PSL700 has been forced not activated to simulate the Drum Transfer Port seal deflated condition, the "SYSTEM NOT INITIALIZED" message should be displayed on the "LLW ENTRY GLOVEBOX MAIN MENU" at OIU-12-103A. <i>see note 6</i>	Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		R/W
93	Press the "DIAGNOSTICS MENU" button from the "LLW ENTRY GLOVEBOX MAIN MENU" at OIU-12-103A.	Verify that the "DIAGNOSTICS MENU" is displayed.	✓		R/W
94	The "DO-07-102 PORT DOOR SEAL NOT INFLATED" message should be displayed in red on the "DIAGNOSTICS MENU" at OIU-12-103A.	Verify that the "DO-07-102 PORT DOOR SEAL NOT INFLATED" message is displayed.	✓		R/W
95	Unforce LCU 102 register PSL700. Record the unforced register status below: Unforced PSL700 Status: <u>1</u>	Verify that register PSL700 is unforced.	✓		R/W
96	The "DO-07-102 PORT DOOR SEAL INFLATED" message should be displayed in green on the "DIAGNOSTICS MENU" at OIU-12-103A.	Verify that the "DO-07-102 PORT DOOR SEAL INFLATED" message is displayed.	✓		R/W
97	Press the "MAIN MENU" button from the "DIAGNOSTICS MENU" at OIU-12-103A.	Verify that the "LLW ENTRY GLOVEBOX MAIN MENU" is displayed.	✓		R/W
98	Because the Drum Transfer Port seal pressure switch should indicate that the HVAC seal is deflated and all other glovebox items should be initialized, OIU-12-103A should display a "SYSTEM INITIALIZED" message is displayed.	Verify that the "SYSTEM INITIALIZED" message is displayed.	✓		R/W
99	Place the LLW Entry Glovebox in "Maintenance" mode.	Verify that the glovebox is in "Maintenance" mode.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Drum Transfer Port Closed Initialization					
100	Force LCU 102 register ZSC705 not activated to simulate the Drum Transfer Port "open" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZSC705 0 I:22/16	Verify that register ZSC705 is forced not activated. Verify that the forced register status is recorded.	✓		R/V
101	Place the LLW Entry Glovebox in "Automatic" mode.	Verify that the glovebox is in "Automatic" mode.	✓		R/V
102	Because register ZSC705 is forced not activated to simulate the Drum Transfer Port "open" condition, the "SYSTEM NOT INITIALIZED" message should be displayed on the "LLW ENTRY GLOVEBOX MAIN MENU" at OIU-12-103A.	Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		R/V
103	Press the "DIAGNOSTICS MENU" button from the "LLW ENTRY GLOVEBOX MAIN MENU" at OIU-12-103A.	Verify that the "DIAGNOSTICS MENU" is displayed.	✓		R/V
104	The "DO-07-102 PORT DOOR NOT CLOSED" message should be displayed in red on the "DIAGNOSTICS MENU" at OIU-12-103A.	Verify that the "DO-07-102 PORT DOOR NOT CLOSED" message is displayed.	✓		R/V
105	Unforce LCU 102 register ZSC705. Record the unforced register status below: Unforced ZSC705 Status: _____	Verify that register ZSC705 is unforced.	✓		R/V
106	The "DO-07-102 PORT DOOR CLOSED" message should be displayed in green on the "DIAGNOSTICS MENU" at OIU-12-103A.	Verify that the "DO-07-102 PORT DOOR CLOSED" message is displayed.	✓		R/V
107	Press the "MAIN MENU" button from the "DIAGNOSTICS MENU" at OIU-12-103A.	Verify that the "LLW ENTRY GLOVEBOX MAIN MENU" is displayed.	✓		R/V
108	Because the Drum Transfer Port is closed and all other glovebox items should be initialized, the "SYSTEM INITIALIZED" message should be displayed on the "LLW ENTRY GLOVEBOX MAIN MENU" at OIU-12-103A.	Verify that the "SYSTEM INITIALIZED" message is displayed.	✓		R/V
109	Place the LLW Entry Glovebox in "Maintenance" mode.	Verify that the glovebox is in "Maintenance" mode.	✓		R/V

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Lift Table in "Normal" Mode Initialization					
110	Turn the Lift Table Pedestal PC-09-202A M/O/N switch 09-HS-233A to the "OFF" position to deactivate the Lift Table (LT-09-202A).	Verify that the M/O/N switch is switched to the "O" position	✓		R/W
111	Place the LLW Entry Glovebox in "Automatic" mode.	Verify that the glovebox is in "Automatic" mode.	✓		R/W
112	Because the M/O/N switch is not turned to "N", the system should not initialize and the "SYSTEM NOT INITIALIZED" should be displayed on the "LLW ENTRY GLOVEBOX MAIN MENU" at OIU-12-103A.	Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		R/W
113	Press the "DIAGNOSTICS MENU" button from the "LLW ENTRY GLOVEBOX MAIN MENU" at OIU-12-103A.	Verify that the "DIAGNOSTICS MENU" is displayed.	✓		R/W
114	The "LT-09-202A M/O/N NOT IN NORMAL" message should be displayed in red on the "DIAGNOSTICS MENU" at OIU-12-103A.	Verify that the "LT-09-202A M/O/N NOT IN NORMAL" message is displayed.	✓		R/W
115	Turn the Lift Table Pedestal PC-09-202A M/O/N switch 09-HS-233A to the "Maintenance" position to allow an operator to control the Lift Table.	Verify that the M/O/N switch 09-HS-233A is turned to the "M" position	✓		R/W
116	The "LT-09-202A M/O/N NOT IN NORMAL" message should continue to be displayed in red on the "DIAGNOSTICS MENU" at OIU-12-103A.	Verify that the "LT-09-202A M/O/N NOT IN NORMAL" message is displayed.	✓		R/W
117	Turn the Lift Table Pedestal PC-09-202A M/O/N switch 09-HS-233A to the "Normal" position to allow the PCS to control the Lift Table.	Verify that M/O/N switch 09-HS-233A is switched to the "N" position.	✓		R/W
118	The "LT-09-202A M/O/N IN NORMAL" message should be displayed in green on the "DIAGNOSTICS MENU" at OIU-12-103A.	Verify that the "LT-09-202A M/O/N IN NORMAL" message is displayed.	✓		R/W
119	Press the "MAIN MENU" button from the "DIAGNOSTICS MENU" at OIU-12-103A.	Verify that the "LLW ENTRY GLOVEBOX MAIN MENU" is displayed.	✓		R/W
120	Because the Lift Table M/O/N switch is turned to the "N" position for normal operation with control by the PCS, and all other glovebox items should be initialized, the "SYSTEM INITIALIZED" should be displayed on the "LLW ENTRY GLOVEBOX MAIN MENU" at OIU-12-103A.	Verify that the "SYSTEM INITIALIZED" message is displayed.	✓		R/W
121	Place the LLW Entry Glovebox in "Maintenance" mode.	Verify that the glovebox is in "Maintenance" mode.	✓		R/W

* "System Initialized" condition remains even after system not initialized. See TE # 93 displayed

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)								
Centering Clamps Retracted Initialization													
122	Place the LLW Entry Glovebox in "Maintenance" mode.	Verify that the glovebox is in "Maintenance" mode.	✓		N/A								
123	Force LCU 102 registers ZSO712A and ZSO712B not activated to simulate the Entry/Exit Port (DO-07-101) centering clamp extended condition. Record the forced register status below: <table><tr><td>Register</td><td>Forced Status</td><td>Method of Confirmation</td></tr><tr><td>ZSO712A</td><td>0</td><td>I:24/00</td></tr><tr><td>ZSO712B</td><td>0</td><td>I:24/01</td></tr></table>	Register	Forced Status	Method of Confirmation	ZSO712A	0	I:24/00	ZSO712B	0	I:24/01	Verify that registers ZSO712A and ZSO712B are forced not activated. Verify that the forced register status is recorded.	✓	N/A
Register	Forced Status	Method of Confirmation											
ZSO712A	0	I:24/00											
ZSO712B	0	I:24/01											
124	Place the LLW Entry Glovebox in "Automatic" mode to allow the LLW Entry glovebox to re-initialize. The PCS should check the status of glovebox devices to ensure that they are initialized.	Verify that the glovebox is in "Automatic" mode.	✓		N/A								
125	Because registers ZSO712A and ZSO712B are forced not activated, simulating the Entry/Exit port centering clamp extended condition, the "SYSTEM NOT INITIALIZED" message should be displayed on the "LLW ENTRY GLOVEBOX MAIN MENU" at OIU-12-103A.	Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		N/A								
126	Press the "DIAGNOSTICS MENU" button from the "LLW ENTRY GLOVEBOX MAIN MENU" at OIU-12-103A.	Verify that the "DIAGNOSTICS MENU" is displayed.	✓		N/A								
127	The "DO-07-101 CENTERING CLAMPS NOT RETRACTED" message should be displayed in red on the "DIAGNOSTICS MENU" at OIU-12-103A.	Verify that the "DO-07-101 CENTERING CLAMPS NOT RETRACTED" message is displayed.	✓		N/A								
128	Unforce LCU 102 register ZSO712B. Record the unforced register status below: Unforced ZSO712B Status: 1	Verify that register ZSO712B is unforced.	✓		N/A								
129	The "DO-07-101 CENTERING CLAMPS NOT RETRACTED" message should continue to be displayed in red on the "DIAGNOSTICS MENU" at OIU-12-103A.	Verify that the "DO-07-101 CENTERING CLAMPS NOT RETRACTED" message is displayed.	✓		N/A								
130	Force LCU 102 register ZSO712B not activated to simulate the Entry/Exit Port (DO-07-101) centering clamp extended condition. Record the forced register status below: <table><tr><td>Register</td><td>Forced Status</td><td>Method of Confirmation</td></tr><tr><td>ZSO712B</td><td>0</td><td>I:24/01</td></tr></table>	Register	Forced Status	Method of Confirmation	ZSO712B	0	I:24/01	Verify that register ZSO712B is forced not activated. Verify that the forced register status is recorded.	✓	N/A			
Register	Forced Status	Method of Confirmation											
ZSO712B	0	I:24/01											

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✗	Witness (initial)
131	Unforce LCU 102 register ZSO712A. Record the unforced register status below: Unforced ZSO712A status: <u>1</u> <i>NW 2/5/98</i>	Verify that register ZSO712A is unforced.	✓		<i>NW</i>
132	The "DO-07-101 CENTERING CLAMPS NOT RETRACTED" message should continue to be displayed in red on the "DIAGNOSTICS MENU" at OIU-12-103A.	Verify that the "DO-07-101 CENTERING CLAMPS NOT RETRACTED" message is displayed.	✓		<i>NW</i>
133	Press the "MAIN MENU" button from the "DIAGNOSTICS MENU" at OIU-12-103A.	Verify that the "LLW ENTRY GLOVEBOX MAIN MENU" is displayed.	✓		<i>NW</i>
134	Because the glovebox should not be initialized, the "SYSTEM NOT INITIALIZED" message should be displayed.	Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		<i>NW</i>
135	Press the "DIAGNOSTICS MENU" button to display the "DIAGNOSTICS MENU" at OIU-12-103A.	Verify that the "DIAGNOSTICS MENU" is displayed.	✓		<i>NW</i>
136	Unforce LCU 102 register ZSO712B. Record the unforced register status below: Unforced ZSO712B Status: <u>1</u> <i>NW 2/5/98</i>	Verify that register ZSO712B is unforced.	✓		<i>NW</i>
137	The "DO-07-101 CENTERING CLAMPS RETRACTED" message should be displayed in green on the "DIAGNOSTICS MENU" at OIU-12-103A.	Verify that the "DO-07-101 CENTERING CLAMPS RETRACTED" message is displayed.	✓		<i>NW</i>
138	Press the "MAIN MENU" button from the "DIAGNOSTICS MENU" at OIU-12-103A.	Verify that the "LLW ENTRY GLOVEBOX MAIN MENU" is displayed.	✓		<i>NW</i>
139	Because position switches 07-ZSO-712A and 07-ZSO-712B should indicate that the port centering clamps are retracted and all other glovebox items should be initialized, the "SYSTEM INITIALIZED" message should be displayed on the "LLW ENTRY GLOVEBOX MAIN MENU" at OIU-12-103A.	Verify that the "SYSTEM INITIALIZED" message is displayed.	✓		<i>NW</i>
140	Place the LLW Entry Glovebox in "Maintenance" mode.	Verify that the glovebox is in "Maintenance" mode.	✓		<i>NW</i>

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Test Case Shutdown					
141	Return all LLW Entry Glovebox items to a safe and stable condition.	Verify that all LLW Entry Glovebox items are safely positioned.	✓		R/W
142	Unforce all LCU 102 registers using the Allen Bradley PLC Software.	Verify that all LCU 102 registers are unforced.	✓		R/W
TEST CASE 13031A-85.01 COMPLETE					

TEST CASE 13031A-85.02 EXAMINE LLW ENTRY GLOVEBOX (GB-07-101) MAINTENANCE MENU FUNCTIONS	2-2
Enter Incorrect OIU Password and Verify that Access is Denied	2-2
Cancel Password	2-3
Change OIU Password	2-4
Enter New Password and Access Maintenance Menus	2-5
Review "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" Operations	2-6
Review "DRUM TRANSFER PORT MAINTENANCE MENU" Operations	2-9
Review "MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" Operations	2-11
Review "SYSTEM VARIABLES MENU" Operations	2-13
Test Case Shutdown	2-16

Retest 72-97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
TEST CASE 13031A-85.02 EXAMINE LLW ENTRY GLOVEBOX (GB-07-101) MAINTENANCE MENU FUNCTIONS					
CAUTION: Notify all appropriate personnel that alarm testing will be undertaken, and take appropriate precautions, prior to testing the LLW Entry Glovebox Low Differential Pressure Warning Beacon.					
Enter Incorrect OIU Password and Verify that Access is Denied					
NOTE: This test case assumes that a maintenance access code of "1111" has been previously entered.					
1	Turn the "AUTO MODE/MAINTENANCE MODE" keyed selector switch (07-HS-316) on the Data Management System Pedestal (TE-12-103) to "MAINTENANCE MODE".	Verify that "MAINTENANCE MODE" has been selected for the LLW Entry Glovebox.	✓		mg
2	The "MAINTENANCE ACCESS MENU" should be displayed at OIU-12-103A.	Verify that the "MAINTENANCE ACCESS MENU" is displayed.	✓		mg
3	The "ENTER ACCESS CODE:" message should be displayed on the "MAINTENANCE ACCESS MENU" at OIU-12-103A.	Verify that the "ENTER ACCESS CODE:" message is displayed.	✓		mg
4	Enter "333" and press the "ENTER" button	Verify that "333" is entered.	✓		mg
5	The "ACCESS DENIED" message should be displayed on the "MAINTENANCE ACCESS MENU" at OIU-12-103A.	Verify that the "ACCESS DENIED" message is displayed.	✓		mg
6	Press the "CANCEL OPERATION" button from the "MAINTENANCE ACCESS MENU" at OIU-12-103A to cancel maintenance menu access.	Verify that the "CANCEL OPERATION" button has been pressed.	✓		mg

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Cancel Password Change					
7	The "ENTER ACCESS CODE:" message should be displayed on the "MAINTENANCE ACCESS MENU" at OIU-12-103A.	Verify that the "ENTER ACCESS CODE:" message is displayed.	✓		mef
8	Press the "CHANGE PASSWORD" button from the "MAINTENANCE ACCESS MENU" at OIU-12-103A.	Verify that the "CHANGE PASSWORD" button has been pressed.	✓		mef
9	The "ENTER OLD PASSWORD:" message should be displayed on the "MAINTENANCE ACCESS MENU" at OIU-12-103A.	Verify that the "ENTER OLD PASSWORD:" message is displayed.	✓		mef
10	Enter "1111" and press the "ENTER" button	Verify that "1111" is entered.	✓		mef
11	The "ENTER NEW PASSWORD:" message should be displayed on the "MAINTENANCE ACCESS MENU" at OIU-12-103A.	Verify that the "ENTER NEW PASSWORD:" message is displayed.	✓		mef
12	Press the "CANCEL OPERATION" button from the "MAINTENANCE ACCESS MENU" at OIU-12-103A to cancel changing the OIU password.	Verify that the "CANCEL OPERATION" button has been pressed.	✓		mef
13	The "OPERATION CANCELED" message should be displayed on the "MAINTENANCE ACCESS MENU" at OIU-12-103A.	Verify that the "OPERATION CANCELED" message is displayed.	✓		mef

* 7 - With null ("") password, password modification not possible. See TE # 94
mef 6-29-97
7-2-97 Retested satisfactory mef

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Change OIU Password					
14	Press the "CHANGE PASSWORD" button from the "MAINTENANCE ACCESS MENU" at OIU-12-103A.	Verify that the "CHANGE PASSWORD" button has been pressed.	✓		med
15	The "ENTER OLD PASSWORD:" message should be displayed on the "MAINTENANCE ACCESS MENU" at OIU-12-103A.	Verify that the "ENTER OLD PASSWORD:" message is displayed.	✓		med
16	Enter "1111" and press the "ENTER" button	Verify that "1111" is entered.	✓		med
17	The "ENTER NEW PASSWORD:" message should be displayed on the "MAINTENANCE ACCESS MENU" at OIU-12-103A.	Verify that the "ENTER NEW PASSWORD:" message is displayed.	✓		med
18	Enter "9" and press the "ENTER" button	Verify that "9" is entered.	✓		med

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Enter New Password and Access Maintenance Menus					
19	The "MAINTENANCE ACCESS MENU" should be displayed at OIU-12-103A.	Verify that the "MAINTENANCE ACCESS MENU" is displayed.	✓		mrj
20	The "ENTER ACCESS CODE:" message should be displayed on the "MAINTENANCE ACCESS MENU" at OIU-12-103A.	Verify that the "ENTER ACCESS CODE:" message is displayed.	✓		mrj
21	Enter "9" and press the "ENTER" button	Verify that "9" is entered.	✓		mrj
22	The "MAINTENANCE MAIN MENU" should be displayed at OIU-12-103A.	Verify that the "MAINTENANCE MAIN MENU" is displayed.	✓		mrj

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Review "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" Operations					
23	Press the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" button from the "MAINTENANCE MAIN MENU" at OIU-12-103A.	Verify that the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" is displayed.	✓		RW
24	Press the "EXTEND CENTERING CLAMPS" button from the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-103A.	Verify that the "EXTEND CENTERING CLAMPS" button has been pressed.	✓		RW
25	The Entry/Exit Port (DO-07-101) Drum Centering Clamps should fully extend without erratic motion.	Verify that the Drum Centering Clamps completely extend.	✓		RW
26	Press the "RETRACT CENTERING CLAMPS" button from the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-103A.	Verify that the "RETRACT CENTERING CLAMPS" button has been pressed.	✓		RW
27	The Entry/Exit Port (DO-07-101) Drum Centering Clamps should fully retract without erratic motion.	Verify that the Drum Centering Clamps completely retract.	✓		RW
28	Press the "TURN ON VACUUM" button from the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-103A.	Verify that the "TURN ON VACUUM" button has been pressed.	✓		RW
29	The Entry/Exit Port vacuum generator solenoid (07-FEV-700D/V, Vacuum) should be energized, causing vacuum to be generated by passing plant compressed air past a small orifice. A distinct hiss should be noted, and vacuum should be present at the vacuum orifice on the underside of the Entry/Exit Port.	Verify that vacuum is being generated.	✓		RW
30	Press the "TURN OFF VACUUM" button from the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-103A.	Verify that the "TURN OFF VACUUM" button has been pressed.	✓		RW
31	The Entry/Exit Port vacuum generator solenoid (07-FEV-700D/V, Vacuum) should not be energized, causing vacuum to cease.	Verify that vacuum is not being generated.	✓		RW
32	Press the "TURN ON VACUUM" button from the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-103A.	Verify that the "TURN ON VACUUM" button has been pressed.	✓		RW
33	The Entry/Exit Port vacuum generator solenoid (07-FEV-700D/V, Vacuum) should be energized, causing vacuum to be generated by passing plant compressed air past a small orifice. A distinct hiss should be noted, and vacuum should be present at the vacuum orifice on the underside of the Entry/Exit Port.	Verify that vacuum is being generated.	✓		RW
34	Press the "TURN OFF VACUUM" button from the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-103A.	Verify that the "TURN OFF VACUUM" button has been pressed.	✓		RW
35	The Entry/Exit Port vacuum generator solenoid (07-FEV-700D/V, Vacuum) should not be energized, causing vacuum to cease.	Verify that vacuum is not being generated.	✓		RW

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
36	Press the "OPEN VENTS" button from the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-103A.	Verify that the "OPEN VENTS" button has been pressed.	✓		R/W
37	The Entry/Exit Port (DO-07-101) door raise and lower cylinder pressure vents should open. An audible "hiss" should be noted and an air stream should be noted coming from the vent solenoid valves.	Verify that the Entry/Exit Port pressure vents are open.	✓		R/W
38	Press the "UNLOCK PORT" button from the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-103A.	Verify that the "UNLOCK PORT" button has been pressed.	✓		R/W
39	The Entry/Exit Port locking cylinders should fully retract without erratic motion.	Verify that the locking cylinders fully retract.	✓		R/W
40	Press the "LOCK PORT" button from the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-103A.	Verify that the "LOCK PORT" button has been pressed.	✓		R/W
41	The Entry/Exit Port locking cylinders should fully extend without erratic motion.	Verify that the locking cylinders fully extend.	✓		R/W
42	Press the "UNLOCK PORT" button from the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-103A.	Verify that the "UNLOCK PORT" button has been pressed.	✓		R/W
43	The Entry/Exit Port locking cylinders should fully retract without erratic motion.	Verify that the locking cylinders fully retract.	✓		R/W
44	Press the "RAISE DOOR" button from the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-103A.	Verify that the "RAISE DOOR" button has been pressed.	✓		R/W
45	The Entry/Exit Port door should raise vertically, via the three port door lifting cylinders, without erratic motion.	Verify that port door raises.	✓		R/W
46	Press the "LOWER DOOR" button from the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-103A.	Verify that the "LOWER DOOR" button has been pressed.	✓		R/W
47	The Entry/Exit Port door should lower vertically, via the three port door lifting cylinders, without erratic motion.	Verify that port door lowers.	✓		R/W
48	Press the "RAISE DOOR" button from the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-103A.	Verify that the "RAISE DOOR" button has been pressed.	✓		R/W
49	The Entry/Exit Port door should raise vertically, via the three port door lifting cylinders, without erratic motion.	Verify that port door raises.	✓		R/W
50	Press the "ROTATE PORT OPEN" button from the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-103A.	Verify that the "ROTATE PORT OPEN" button has been pressed.	✓		R/W
51	The Entry/Exit Port door should rotate up, fully open without erratic motion.	Verify that port door rotates fully open.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
52	Press the "ROTATE PORT CLOSED" button from the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-103A.	Verify that the "ROTATE PORT CLOSED" button has been pressed.	✓		R/W
53	The Entry/Exit Port door should rotate fully down without erratic motion.	Verify that port door rotates fully down.	✓		R/W
54	Press the "ROTATE PORT OPEN" button from the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-103A.	Verify that the "ROTATE PORT OPEN" button has been pressed.	✓		R/W
55	The Entry/Exit Port door should rotate up, fully open without erratic motion.	Verify that port door rotates fully open.	✓		R/W
56	Press the "ROTATE PORT CLOSED" button from the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-103A.	Verify that the "ROTATE PORT CLOSED" button has been pressed.	✓		R/W
57	The Entry/Exit Port door should rotate fully down without erratic motion.	Verify that port door rotates fully down.	✓		R/W
58	Press the "LOWER DOOR" button from the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-103A.	Verify that the "LOWER DOOR" button has been pressed.	✓		R/W
59	The Entry/Exit Port door should lower vertically, via the three port door lifting cylinders, without erratic motion.	Verify that port door lowers.	✓		R/W
60	Press the "LOCK PORT" button from the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-103A.	Verify that the "LOCK PORT" button has been pressed.	✓		R/W
61	The Entry/Exit Port locking cylinders should fully extend without erratic motion.	Verify that the locking cylinders fully extend.	✓		R/W
62	Press the "EXTEND LID DETACH" button from the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-103A.	Verify that the "EXTEND LID DETACH" button has been pressed.	✓		R/W
63	The Entry/Exit Port lid detach cylinder should fully extend without erratic motion.	Verify that the lid detach cylinder fully extends without erratic motion.	✓		R/W
64	Press the "RETRACT LID DETACH" button from the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-103A.	Verify that the "RETRACT LID DETACH" button has been pressed.	✓		R/W
65	The Entry/Exit Port lid detach cylinder should fully retract without erratic motion.	Verify that the lid detach cylinder fully retracts without erratic motion.	✓		R/W
66	Press the "MAINT MAIN MENU" button from the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-103A.	Verify that the "MAINTENANCE MAIN MENU" is displayed.	✓		R/W

Verified Lid IN position Indication on OI-4 "NOT" ✓ R/W

Verified Drum IN Door IN position Indication on OI-4 ✓ R/W
* See TE 96 mple 6-30-97 "NOT" ✓

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✗	Witness (Initial)
Review "DRUM TRANSFER PORT MAINTENANCE MENU" Operations					
67	Press the "DRUM TRANSFER PORT MAINTENANCE MENU" button from the "MAINTENANCE MAIN MENU" at OIU-12-103A.	Verify that the "DRUM TRANSFER PORT MAINTENANCE MENU" is displayed.	✓		R/W
68	Press the "OPEN ISOLATION VALVE" button from the "DRUM TRANSFER PORT MAINTENANCE MENU" at OIU-12-103A.	Verify that the "OPEN ISOLATION VALVE" button has been pressed.	✓		R/W
69	Press and continue to press the "DEFLATE SEAL" button from the "DRUM TRANSFER PORT MAINTENANCE MENU" at OIU-12-103A until the transfer port seal is deflated.	Verify that the "DEFLATE SEAL" button has been pressed.	✓		R/W
70	The Drum Transfer Port (DO-07-102) seal should be fully deflated and evenly retracted from the port door. A continuous gap should be noted between the door and the entire seal circumference.	Verify that the seal is fully deflated.	✓		R/W
71	Briefly press and then release the "OPEN PORT" button from the "DRUM TRANSFER PORT MAINTENANCE MENU" at OIU-12-103A.	Verify that the "OPEN PORT" button has been briefly pressed.	✓		R/W
72	The Drum Transfer Port (DO-07-102) should translate open without erratic motion and should stop before hitting the Entry/Exit Port (DO-07-101) rear locking cylinder block.	Verify that the door translates open.	✓		R/W
73	Briefly press and then release the "CLOSE PORT" button from the "DRUM TRANSFER PORT MAINTENANCE MENU" at OIU-12-103A.	Verify that the "CLOSE PORT" button has been briefly pressed.	✓		R/W
74	The Drum Transfer Port (DO-07-102) should translate closed without erratic motion and should be centered directly above the port orifice.	Verify that the door translates closed and is centered over the port orifice.	✓		R/W
* 75	Press and continue to press the "INFLATE SEAL" button from the "DRUM TRANSFER PORT MAINTENANCE MENU" at OIU-12-103A until the seal is inflated.	Verify that the "INFLATE SEAL" button has been pressed.	✓		R/W
76	The Drum Transfer Port (DO-07-102) seal should inflate fully and evenly against the port door. No gaps should be noted between the door and the seal.	Verify that the seal is fully inflated.	✓		R/W
77	Press the "CLOSE ISOLATION VALVE" button from the "DRUM TRANSFER PORT MAINTENANCE MENU" at OIU-12-103A.	Verify that the "CLOSE ISOLATION VALVE" button has been pressed.	✓		R/W
78	The Drum Transfer Port (DO-07-102) seal should remain inflated. Wait 2 minutes.	Verify that the seal remains inflated during the waiting period.	✓		R/W
79	Press and continue to press the "DEFLATE SEAL" button from the "DRUM TRANSFER PORT MAINTENANCE MENU" at OIU-12-103A for at least 30 seconds.	Verify that the "DEFLATE SEAL" button has been pressed.	✓		R/W
80	The Drum Transfer Port (DO-07-102) seal should remain inflated.	Verify that the Transfer Port seal remains inflated.	✓		R/W

* See TE 97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
81	Press the "OPEN ISOLATION VALVE" button from the "DRUM TRANSFER PORT MAINTENANCE MENU" at OIU-12-103A.	Verify that the "OPEN ISOLATION VALVE" button has been pressed.	✓		R/W
82	Press and continue to press the "DEFLATE SEAL" button from the "DRUM TRANSFER PORT MAINTENANCE MENU" at OIU-12-103A until the transfer port seal is deflated.	Verify that the "DEFLATE SEAL" button has been pressed.	✓		R/W
83	The Drum Transfer Port (DO-07-102) seal should deflate fully and evenly retract from the port door. A continuous gap should be noted between the door and the entire seal circumference.	Verify that the Transfer Port seal is fully deflated.	✓		R/W
84	Press and continue to press the "INFLATE SEAL" button from the "DRUM TRANSFER PORT MAINTENANCE MENU" at OIU-12-103A until the transfer port seal is completely inflated.	Verify that the "INFLATE SEAL" button has been pressed.	✓		R/W
85	The Drum Transfer Port (DO-07-102) seal should inflate fully and evenly against the port door. No gaps should be noted between the door and the seal.	Verify that the Transfer Port seal is fully inflated.	✓		R/W
86	Press the "CLOSE ISOLATION VALVE" button from the "DRUM TRANSFER PORT MAINTENANCE MENU" at OIU-12-103A.	Verify that the "CLOSE ISOLATION VALVE" button has been pressed.	✓		R/W
87	The Drum Transfer Port (DO-07-102) seal should remain inflated. Wait 2 minutes.	Verify that the Transfer Port seal remains inflated during the waiting period.	✓		R/W
88	Press the "MAINT MAIN MENU" button from the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-103A.	Verify that the "MAINT MAIN MENU" button has been pressed.	✓		R/W
89	The "MAINTENANCE MAIN MENU" should be displayed at OIU-12-103A.	Verify that the "MAINTENANCE MAIN MENU" is displayed.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass	Fail	Witness (Initial)
Review "MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" Operations					
90	Press the "MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" button from the "MAINTENANCE MAIN MENU" at OIU-12-103A.	Verify that the "MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" is displayed.	✓		PLW
91	Place the LLW Entry Glovebox Hoist Pendant (PC-07-001) in full view.	Verify that the Hoist Pendant is in full view.	✓		PLW
92	Examine the hoist pendant. At least one pendant lamp/indicator should not be illuminated.	Confirm that at least one pendant lamp is not illuminated.	✓		PLW
93	Press and do not release the "TEST PENDANT LAMPS" button from the "MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-103A.	Verify that the "TEST PENDANT LAMPS" button has been pressed.	✓		PLW
94	Every indicator lamp on the Hoist Pendant (PC-07-001) should be illuminated.	Verify that every Hoist Pendant lamp is illuminated.	✓		PLW
95	Release the "TEST PENDANT LAMPS" button	Verify that the "TEST PENDANT LAMPS" button is released.	✓		PLW
96	Examine the hoist pendant.	Confirm that at least one pendant lamp is not illuminated.	✓		PLW
97	Press the "TURN OFF 20 PSI AIR" button from the "MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-103A.	Verify that the "TURN OFF 20 PSI AIR" button has been pressed.	✓		PLW
98	Pressure should be removed from the 20 psi air line.	Verify that pressure has been removed from the 20 psi line.	✓		PLW
99	Press the "TURN ON 20 PSI AIR" button from the "MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-103A.	Verify that the "TURN ON 20 PSI AIR" button has been pressed.	✓		PLW
100	Pressure should be returned to the 20 psi air line.	Verify that pressure has been restored to the 20 psi line.	✓		PLW
101	WARNING: All LLW Entry Glovebox (GB-07-101) items must be in their parked positions prior to removal of pressure from the 80 psi valve manifold.	Verify that all LLW Entry Glovebox items are parked.	✓		PLW
102	Press the "TURN OFF 80 PSI AIR" button from the "MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-103A.	Verify that the "TURN OFF 80 PSI AIR" button has been pressed.	✓		PLW
103	Pressure should be removed from the 80 psi air line.	Verify that pressure has been removed from the 80 psi line.	✓		PLW
104	Press the "TURN ON 80 PSI AIR" button from the "MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-103A.	Verify that the "TURN ON 80 PSI AIR" button has been pressed.	✓		PLW

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
105	Pressure should return to the 80 psi air line.	Verify that pressure has been restored to the 80 psi line.	✓		A/W
106	Turn the Lift Table Pedestal PC-09-202A M/O/N switch 09-HS-233A to the "Maintenance" position to allow an operator to control the Lift Table.	Verify that the M/O/N switch 09-HS-233A is turned to the "M" position	✓		A/W
107	Press the "UP" pushbutton at the Lift Table local control pedestal (PC-09-202A) until the lift table is raised approximately 2.5 centimeters (1 inch) above AGV height.	Verify that the Lift Table is raised at least 1 inch above AGV height.	✓		A/W
108	Turn the Lift Table Pedestal PC-09-202A M/O/N switch 09-HS-233A to the "Normal" position to allow the PCS to control the Lift Table.	Verify that M/O/N switch 09-HS-233A is switched to the "N" position.	✓		A/W
109	Press the "REHOME LIFT TABLE LT-09-202A" button from the "MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-103A.	Verify that the "MAINT MAIN MENU" button has been pressed.	✓		A/W
110	The lift table should automatically lower to AGV height, dip slightly below AGV height, and return to AGV height.	Verify that the lift table is at AGV height.	✓		A/W
111	The Lift Table "AGV LOAD HEIGHT" indicator (09-ZL-233E) on the Lift Table Control Pedestal (PC-09-202A) should be illuminated, indicating that the Lift Table is at AGV height.	Verify that the "AGV LOAD HEIGHT" indicator is illuminated.	✓		A/W
112	Press the "MAINT MAIN MENU" button from the "MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-103A.	Verify that the "MAINT MAIN MENU" button has been pressed.	✓		A/W
113	The "MAINTENANCE MAIN MENU" should be displayed at OIU-12-103A.	Verify that the "MAINTENANCE MAIN MENU" is displayed.	✓		A/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Review "SYSTEM VARIABLES MENU" Operations					
114	Press the "SYSTEM VARIABLES" button from the "MAINTENANCE MAIN MENU" at OIU-12-103A.	Verify that the "SYSTEM VARIABLES MENU" is displayed.	✓		R/W
115	Press the "SET SCREEN CONTRAST" button from the "SYSTEM VARIABLES MENU" at OIU-12-103A.	Verify that the "SET SCREEN CONTRAST" button has been pressed.	✓		R/W
116	The "SET SCREEN CONTRAST" screen should be displayed at OIU-12-103A.	Verify that the "SET SCREEN CONTRAST" screen is displayed.	✓		R/W
117	A numeric keypad with "ENTER" key should be displayed to allow system values to be modified.	Verify that a numeric keypad with "ENTER" key is displayed.	✓		R/W
118	Using the keypad, set the System Screen Contrast to "3" and press the "ENTER" key.	Verify that the System Screen Contrast has been set to "3"	✓		R/W
119	Press the "DONE" Key.	Verify that the "DONE" key has been pressed.	✓		R/W
120	The "SYSTEM VARIABLES MENU" should be displayed at OIU-12-103A.	Verify that the "SYSTEM VARIABLES MENU" is displayed.	✓		R/W
121	The value displayed on the "SET SCREEN CONTRAST" button should be "3"	Verify that the "SET SCREEN CONTRAST" value is "3"	✓		R/W
122	Press the "SET DAY" button from the "SYSTEM VARIABLES MENU" at OIU-12-103A.	Verify that the "SET DAY" button has been pressed.	✓		R/W
123	The "SET DAY" screen should be displayed at OIU-12-103A.	Verify that the "SET DAY" screen is displayed.	✓		R/W
124	A numeric keypad with "ENTER" key should be displayed to allow system values to be modified.	Verify that a numeric keypad with "ENTER" key is displayed.	✓		R/W
125	Using the keypad, set the System Day to "3" and press the "ENTER" key.	Verify that the System Day has been set to "3"	✓		R/W
126	Press the "DONE" Key.	Verify that the "DONE" key has been pressed.	✓		R/W
127	The "SYSTEM VARIABLES MENU" should be displayed at OIU-12-103A.	Verify that the "SYSTEM VARIABLES MENU" is displayed.	✓		R/W
128	The value displayed on the "SET DAY" button should be "3"	Verify that the "SET DAY" value is "3"	✓		R/W
129	Press the "SET MONTH" button from the "SYSTEM VARIABLES MENU" at OIU-12-103A.	Verify that the "SET MONTH" button has been pressed.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
130	The "SET MONTH" screen should be displayed at OIU-12-103A.	Verify that the "SET MONTH" screen is displayed.	✓		R/W
131	A numeric keypad with "ENTER" key should be displayed to allow system values to be modified.	Verify that a numeric keypad with "ENTER" key is displayed.	✓		R/W
132	Using the keypad, set the System Month to "3" and press the "ENTER" key.	Verify that the System Month has been set to "3"	✓		R/W
133	The "SYSTEM VARIABLES MENU" should be displayed at OIU-12-103A.	Verify that the "SYSTEM VARIABLES MENU" is displayed.	✓		R/W
134	The value displayed on the "SET MONTH" button should be "3"	Verify that the "SET MONTH" value is "3"	✓		R/W
135	Press the "SET YEAR" button from the "SYSTEM VARIABLES MENU" at OIU-12-103A.	Verify that the "SET YEAR" button has been pressed.	✓		R/W
136	The "SET YEAR" screen should be displayed at OIU-12-103A.	Verify that the "SET YEAR" screen is displayed.	✓		R/W
137	A numeric keypad with "ENTER" key should be displayed to allow system values to be modified.	Verify that a numeric keypad with "ENTER" key is displayed.	✓		R/W
138	Using the keypad, set the System Year to "3" and press the "ENTER" key.	Verify that the System Year has been set to "3"	✓		R/W
139	Press the "DONE" Key.	Verify that the "DONE" key has been pressed.	✓		R/W
140	The "SYSTEM VARIABLES MENU" should be displayed at OIU-12-103A.	Verify that the "SYSTEM VARIABLES MENU" is displayed.	✓		R/W
141	The value displayed on the "SET YEAR" button should be "3"	Verify that the "SET YEAR" value is "3"	✓		R/W
142	Press the "SET HOURS" button from the "SYSTEM VARIABLES MENU" at OIU-12-103A.	Verify that the "SET HOURS" button has been pressed.	✓		R/W
143	The "SET HOURS" screen should be displayed at OIU-12-103A.	Verify that the "SET HOURS" screen is displayed.	✓		R/W
144	A numeric keypad with "ENTER" key should be displayed to allow system values to be modified.	Verify that a numeric keypad with "ENTER" key is displayed.	✓		R/W
145	Using the keypad, set the System Hours to "15" and press the "ENTER" key.	Verify that the System Hours have been set to "15"	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✗	Witness (initial)
146	Press the "DONE" Key.	Verify that the "DONE" key has been pressed.	✓		R/W
147	The "SYSTEM VARIABLES MENU" should be displayed at OIU-12-103A.	Verify that the "SYSTEM VARIABLES MENU" is displayed.	✓		R/W
148	The value displayed on the "SET HOURS" button should be "15" NOTE: This value should represent 3 p.m. in the afternoon. If the value does not represent 3 p.m., then this step fails.	Verify that the "SET HOURS" value is "15"	✓		R/W
149	Press the "SET MINUTES" button from the "SYSTEM VARIABLES MENU" at OIU-12-103A.	Verify that the "SET MINUTES" button has been pressed.	✓		R/W
150	The "SET MINUTES" screen should be displayed at OIU-12-103A.	Verify that the "SET MINUTES" screen is displayed.	✓		R/W
151	A numeric keypad with "ENTER" key should be displayed to allow system values to be modified.	Verify that a numeric keypad with "ENTER" key is displayed.	✓		R/W
152	Using the keypad, set the System Minutes to "3" and press the "ENTER" key.	Verify that the System Minutes have been set to "3"	✓		R/W
153	Press the "DONE" Key.	Verify that the "DONE" key has been pressed.	✓		R/W
154	The "SYSTEM VARIABLES MENU" should be displayed at OIU-12-103A.	Verify that the "SYSTEM VARIABLES MENU" is displayed.	✓		R/W
155	The value displayed on the "SET MINUTES" button should start at "3" and then advance. (e.g., System Minutes will change each minute.)	Verify that the initial "SET MINUTES" value is "3"	✓		R/W
156	Press the "SET SECONDS" button from the "SYSTEM VARIABLES MENU" at OIU-12-103A.	Verify that the "SET SECONDS" button has been pressed.	✓		R/W
157	The "SET SECONDS" screen should be displayed at OIU-12-103A.	Verify that the "SET SECONDS" screen is displayed.	✓		R/W
158	A numeric keypad with "ENTER" key should be displayed to allow system values to be modified.	Verify that a numeric keypad with "ENTER" key is displayed.	✓		R/W
159	Using the keypad, set the System Seconds to "3" and press the "ENTER" key.	Verify that the System Seconds have been set to "3"	✓		R/W
160	The "SYSTEM VARIABLES MENU" should be displayed at OIU-12-103A.	Verify that the "SYSTEM VARIABLES MENU" is displayed.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass	Fail	Witness (Initial)
161	Press the "DONE" Key.	Verify that the "DONE" key has been pressed.	✓	✓	<i>[Signature]</i>
162	The value displayed on the "SET SECONDS" button should start at "3" and then rapidly advance (e.g., System Seconds will change each second.)	Verify that the "SET SECONDS" initial value is "3"	✓	✓	<i>[Signature]</i>

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Test Case Shutdown					
163	Press the "MAINT MAIN MENU" button from the "SYSTEM VARIABLES MENU" at OIU-12-103A.	Verify that the "MAINTENANCE MAIN MENU" is displayed.	✓		R/W
164	Return all LLW Entry Glovebox items to their parked, stable positions.	Verify that all LLW Entry Glovebox items are parked.	✓		R/W
165	Turn the "AUTO MODE/MAINTENANCE MODE" keyed selector switch (07-HS-716) on the Data Management System Pedestal (TE-12-103) to "AUTOMATIC MODE".	Verify that "AUTOMATIC MODE" has been selected for the LLW Entry Glovebox.	✓		R/W
166	The "LLW ENTRY GLOVEBOX MAIN MENU" should be displayed at OIU-12-103A.	Verify that the "LLW ENTRY GLOVEBOX MAIN MENU" is displayed.	✓		R/W
TEST CASE 13031A-85.02 COMPLETE					

TEST CASE 13031A-85.03 EXAMINE LLW ENTRY GLOVEBOX 85 GALLON ENTRY/EXIT PORT (DO-07-101) LIFT TABLE INTERLOCKS	3-2
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Examine Lift Table "Up Overtravel" Alarm	3-7
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Examine Lift Table "Conveyor Forward Failed" Alarm	3-9
Examine Drum Centering Device Extended Lift Table "Raise" Interlock	3-10
Examine Drum Under Glovebox Port Lift Table "Raise" Interlock	3-12
Examine "Lift Table Failed to Raise" Alarm	3-13

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
TEST CASE 13031A-85.03 EXAMINE LLW ENTRY GLOVEBOX 85 GALLON ENTRY/EXIT PORT (DO-07-101) LIFT TABLE INTERLOCKS					
Test Case Setup					
1	Turn the "AUTO MODE/MAINTENANCE MODE" keyed selector switch (07-HS-316) on the Data Management System Pedestal (TE-12-103) to "AUTOMATIC MODE".	Verify that "AUTOMATIC MODE" has been selected for the LLW Entry Glovebox.	✓		R/W
2	Place a drum lid on the empty 208 Liter (55 gallon) drum and secure the lid to the drum using a drum lid band clamp.	Verify that a lid has been placed on the empty 55 gallon drum.	✓		R/W
3	Using the Lift Table Local Control Pedestal (PC-09-202A), or other appropriate means, position the Lift Table (LT-09-202A) at AGV height.	Verify that the lift table is positioned at AGV height.	✓		R/W
4	Configure the PCS drum tracking table to reflect the overpack drum and inner drum that will be mated to the LLW Entry Glovebox Entry/Exit Port (DO-07-101). Record the drum pin contents: Outer Drum Pin: (N31:35-41) <u>OTP ATP 12345678</u> Inner Drum Pin (N31:62-69) <u>OTP ATP 87654321</u>	Verify that the drum data is recorded.	✓		R/W
5	Read the LLW Entry Glovebox location bar code using the portable scanner NE-12-310. This bar code label should indicate to the PCS that a drum bar code label will be read next. The scanner LED indicator should briefly flash, indicating that a bar code label has been successfully read.	Verify that the bar code label has been successfully read.			
		N/A			R/W 6/8/99
6	Read the "DRUM BAR CODE LABEL MISMATCH" bar code using the portable scanner NE-12-310. This bar code label should indicate to the PCS that a single incorrect drum will be mated to the port. The scanner LED indicator should briefly flash, indicating that a bar code label has been successfully read.	Verify that the bar code label has been successfully read.			
		N/A			R/W 6/8/99
7	The bar code label contents should be stored in LCU 102 register(s): N31:35-41 (MANUALLY ENTERED) N31:225 (FROM BARCODE READ)	Verify that the bar code label contents are stored in the appropriate LCU 102 register(s).			
		N/A			R/W 6/8/99
8	Press the "OVERPACK DRUM ENTRY MENU" button from the "LLW ENTRY GLOVEBOX MAIN MENU" at OIU-12-103A.	Verify that the "OVERPACK DRUM ENTRY MENU" button has been pressed.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass	Fail	Witness (Initial)
* 9	Because the correct drum bar code label has not been read, pressing the "OVERPACK DRUM ENTRY MENU" button should have no effect.	Verify that the "OVERPACK DRUM ENTRY MENU" is not displayed.	✓		N/W
10	Read the bar code label from the 320 liter (85 gallon) overpack drum using the portable scanner NE-12-310. This bar code label should indicate to the PCS that an overpack drum will be mated to the port.	Verify that the bar code label has been successfully read.	N/A		
	The scanner LED indicator should briefly flash, indicating that a bar code label has been successfully read.		P/W	6/8/99	
11	The bar code label contents should be stored in LCU 102 register(s):	Verify that the bar code label contents are stored in the appropriate LCU 102 register(s).	N/A		
			N/W	6/8/99	

Set N40:6/4 to 1

Bar code match

via following method.

1. Bar code Scanner 12-NT/NE-313 changed to terminal 3.
2. "ZYLLW-ENTRY" hand entered
3. "OTPATP12345678" hand entered.

Drum pin verified causes N40:6/4 to match, as well as N40:0/14

* See TE #98, #99, mpl 6-30-97
#99, #100

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Attempt to Open Port Without Drum Present					
12	Press the "OVERPACK DRUM ENTRY MENU" button from the "LLW ENTRY GLOVEBOX MAIN MENU" at OIU-12-103A.	Verify that the "OVERPACK DRUM ENTRY MENU" is displayed.	✓		R/W
13	Because no drum is present, the "NO DRUM AT LIFT TABLE" message should be displayed on the "OVERPACK DRUM ENTRY MENU" at OIU-12-103A.	Verify that the "NO DRUM AT LIFT TABLE" message is displayed.	✓		R/W
14	Press the "OPEN PORT" button from the "OVERPACK DRUM ENTRY MENU" at OIU-12-103A. Because a drum is not mated to the Entry/Exit Port (DO-07-101), the port should not open.	Verify that port does not open.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine "No Drum at Lift Table" Interlock					
15	Manually activate (e.g., "Break the beam") the "Drum at End of Conveyor" position switch (09-ZS-233E) to simulate placing the 85 gallon drum on the Lift Table.	Verify that the "Drum at End of Conveyor" position switch is activated.	✓		ALW
16	Change the "Drum at Lift Table" bit for Lift Table LT-09-202A activated (value = 1). Please record the changed register status: <u>Register</u> <u>Changed Status</u> <u>Method of Confirmation</u> N31:46/12 1 N31:46/12	Verify that the register status is recorded in the space provided.	✓		ALW
17	The "DRUM AT AGV END" indicator (09-ZL-233A) on the Lift Table Control Pedestal (PC-09-202A) should be illuminated when the "Drum at End of Conveyor" position switch (09-ZS-233E) is activated.	Verify that the "DRUM AT AGV END" indicator is briefly illuminated.	✓		ALW
18	The Lift Table "AGV LOAD HEIGHT" indicator (09-ZL-233E) on the Lift Table Control Pedestal (PC-09-202A) should be illuminated, indicating that the Lift Table is at AGV height.	Verify that the "AGV LOAD HEIGHT" indicator is illuminated.	✓		ALW
19	Because a drum is present (simulated), the "DRUM AT LIFT TABLE" message should be displayed on the "OVERPACK DRUM ENTRY MENU" at OIU-12-103A.	Verify that the "DRUM AT LIFT TABLE" message is displayed.	✓		ALW

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Lift Table "Down Overtravel" Alarm					
20	Manually activate the "Down Overtravel" position switch (09-ZS-233C) to simulate that Lift Table (LT-09-202A) has been lowered below its normal travel range. This should cause the "Lift Table (202A) Down Overtravel" alarm to be generated.	Verify that the "Down Overtravel" position switch is activated.	✓		mef
21	The "DOWN OVERTRAVEL" indicator (09-ZL-233C) at the Lift Table Local Control Pedestal (PC-09-202A) should be illuminated, indicating that the "Down Overtravel" position switch has been activated.	Verify that the "DOWN OVERTRAVEL" indicator is illuminated.	✓		mef
22	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Lift Table (202A) Down Overtravel" alarm.	Verify that the alarm has been acknowledged.	✓		mef
23	Manually reset the "Down Overtravel" position switch (09-ZS-233C) to indicate that the Lift Table (LT-09-202A) is positioned within its normal vertical travel range.	Verify that the "Down Overtravel" position switch has been reset.	✓		mef
24	Resetting the "Down Overtravel" position switch (09-ZS-233C) should cause the "Lift Table (202A) Down Overtravel" alarm to clear.	Verify that the alarm is cleared.	✓		mef
25	The "DOWN OVERTRAVEL" indicator (09-ZL-233C) at the Lift Table Local Control Pedestal should not be illuminated, indicating that the "Down Overtravel" position switch is not activated.	Verify that the "DOWN OVERTRAVEL" indicator is not illuminated.	✓		mef
26	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "OVERPACK DRUM ENTRY MENU" at OIU-12-103A.	Verify that the "OVERPACK DRUM ENTRY MENU" is displayed.	✓		mef

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Lift Table "Up Overtravel" Alarm					
27	Manually activate the "Up Overtravel" position switch (09-ZS-233D) to simulate that Lift Table (LT-09-202A) has been raised above its normal travel range. This should cause the "Lift Table (202A) Up Overtravel" alarm to be generated.	Verify that the "Down Overtravel" position switch is activated.	✓		mef
28	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Lift Table (202A) Up Overtravel" alarm.	Verify that the alarm has been acknowledged.	✓		mef
29	Manually reset the "Up Overtravel" position switch (09-ZS-233D) to indicate that the Lift Table (LT-09-202A) is positioned within its normal vertical travel range.	Verify that the "Up Overtravel" position switch has been reset.	✓		mef
30	Resetting the "Up Overtravel" position switch (09-ZS-233D) should cause the "Lift Table (202A) Up Overtravel" alarm to clear.	Verify that the alarm is cleared.	✓		mef
31	Press the "RETURN TO CURRENT SCREEN" button to from the "LOCAL ALARMS" screen return to the "OVERPACK DRUM ENTRY MENU" at OIU-12-103A.	Verify that the "OVERPACK DRUM ENTRY MENU" is displayed.	✓		mef

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Lift Table "Rope Switch Pulled" Alarm					
32	Pull both Lift Table (LT-09-202A) Rope-Switches (09-XS-233A/B) to disable all Lift Table operations. This should cause a "Lift Table (202A) Rope Switch Pulled" alarm to be generated.	Verify that the rope switches have been pulled.	✓		mg
33	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Lift Table (202A) Rope Switch Pulled" alarm.	Verify that the alarm has been acknowledged.	✓		mg
34	Press all pushbuttons on the Lift Table Local Control Pedestal (PC-09-202A) in both "Normal" and "Maintenance" modes. (Use Lift Table Local Control Pedestal M/O/N switch to switch between operating modes).	Verify that pressing the Lift Table Local Control Pedestal pushbuttons has no effect on the Lift Table.	✓		mg
35	Manually reset both Lift Table Rope Switches (09-XS-233A/B) to allow normal Lift Table operation.	Verify that the Lift Table Rope Switches have been reset.	✓		mg
36	Resetting the Lift Table Rope switches (09-XS-233A/B) should cause the "Lift Table (202A) Rope Switch Pulled" alarm to clear.	Verify that the alarm is cleared.	✓		mg
37	Return the Lift Table Local Control Pedestal M/O/N switch (09-HS-233A) to the "NORMAL" position to allow the PCS to activate and control the Lift Table. (LT-09-202A).	Verify that the M/O/N switch is turned to the "N" position.	✓		mg
38	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "OVERPACK DRUM ENTRY MENU" at OIU-12-103A.	Verify that the "OVERPACK DRUM ENTRY MENU" is displayed.	✓		R/V

37 Lift table returned

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Lift Table "Conveyor Forward Failed" Alarm					
39	Press the "START DRUM ENTRY" button from the "OVERPACK DRUM ENTRY MENU" at OIU-12-103A.	Verify that the "START DRUM ENTRY" button has been pressed.	✓		R/W
40	The "DRUM ENTRY IN PROGRESS..." message should be displayed on the "OVERPACK DRUM ENTRY MENU" at OIU-12-103A.	Verify that the "DRUM ENTRY IN PROGRESS..." message is displayed.	✓		R/W
41	Pressing the "START DRUM ENTRY" button should cause the PCS to energize the Lift Table conveyor motor forward (LT-09-202A/M2) to move the drum under the port.	Verify that the Lift Table conveyor is energized forward.	✓		R/W
42	Failing to activate "Drum Under Glovebox Port" switch (e.g., no drum on lift table) within the time period specified in the setup section of this test procedure should cause a "Lift Table (202A) Conveyor Forward Failed" alarm to be generated. Wait 30 seconds.	Verify that the Lift Table roller conveyor stops during the waiting period.	✓		R/W
43	ALARM ACKNOWLEDGEMENT SEQUENCE:	Verify that the alarm has been acknowledged.	✓		R/W
44	Acknowledge the "Lift Table (202A) Conveyor Forward Failed" alarm.				R/W
45	Activate the "Drum Under Glovebox Port" switch.	Verify that the "Drum Under Glovebox Port" switch is activated.	✓		R/W
45	Because the "Drum Under Glovebox Port" switch is activated, the "Lift Table (202A) Conveyor Forward Failed" alarm should clear.	Verify that the alarm has cleared.	✓		R/W

* See TE #102

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Drum Centering Device Extended Lift Table "Raise" Interlock					
46 44 46 R/W 6/23/93	Force LCU 102 registers ZSO712A and ZSO712B not activated to simulate the "Drum Centering Device Extended" condition for Drum Entry/Exit Port DO-07-101. Record the forced register status below: <div> <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> </div> ZSO712A <u>0</u> I:24/00 ZSO712B <u>0</u> I:24/01	Verify that registers ZSO712A and ZSO712B are forced activated.	✓		R/W
47	Press the "START DRUM ENTRY" button from the "OVERPACK DRUM ENTRY MENU" at OIU-12-103A.	Verify that the "START DRUM ENTRY" button has been pressed.	✓		R/W
48	Because registers ZSO712A and ZSO712B are forced not activated, indicating that the Drum Centering Device is extended, the Lift Table conveyor should not activate and the drum should not move underneath the port. Wait thirty (30) seconds.	Verify that the Lift Table conveyor does not activate during the waiting period.	✓		R/W
49	Unforce LCU 102 register ZSO712A. Record the unforced register status below: Unforced ZSO712A Status: <u>1</u>	Verify that register ZSO712A is unforced.	✓		R/W
50	The "Centering Device Retracted" position switch (07-ZSO-712A) should be activated, indicating that the Drum Centering Device is retracted.	Verify that the "Centering Device Retracted" position switch (07-ZSO-712A) is activated.	✓		R/W
51	Press the "START DRUM ENTRY" button from the "OVERPACK DRUM ENTRY MENU" at OIU-12-103A.	Verify that the "START DRUM ENTRY" button has been pressed.	✓		R/W
52	Because register ZSO712B remains forced not activated, indicating that the Drum Centering Device is extended, the Lift Table conveyor should not activate and the drum should not move underneath the port. Wait thirty (30) seconds.	Verify that the Lift Table conveyor does not activate during the waiting period.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
53	Force LCU 102 register ZSO712A not activated to simulate the "Drum Centering Device Extended" condition for Drum Entry/Exit Port DO-07-101. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZSO712A <u>0</u> 1:24/00	Verify that register ZSO712A is forced activated.	✓		P/W
54	Unforce LCU 102 register ZSO712B. Record the unforced register status below: Unforced ZSO712B Status: <u>1</u>	Verify that register ZSO712B is unforced.	✓		P/W
55	The "Centering Device Retracted" position switch (07-ZSO-712B) should be activated, indicating that the Drum Centering Device is retracted.	Verify that the "Centering Device Retracted" position switch (07-ZSO-712B) is activated.	✓		P/W
56	Press the "START DRUM ENTRY" button from the "OVERPACK DRUM ENTRY MENU" at OIU-12-103A.	Verify that the "START DRUM ENTRY" button has been pressed.	✓		P/W
57	Because register ZSO712A remains forced not activated, indicating that the Drum Centering Device is extended, the Lift Table conveyor should not activate and the drum should not move underneath the port. Wait thirty (30) seconds.	Verify that the Lift Table conveyor does not activate during the waiting period.	✓		P/W
58	Because a drum is not present on the Lift Table, the "DRUM UNDER PORT" indicator (09-ZL-233B) on the Lift Table Control Pedestal (PC-09-202A) should not be illuminated.	Verify that the "DRUM UNDER PORT" indicator is not illuminated.	✓		P/W
59	Unforce LCU 102 register ZSO712A. Record the unforced register status below: Unforced ZSO712A Status: <u>1</u>	Verify that register ZSO712A is unforced.	✓		P/W
60	The "Centering Device Retracted" position switches (07-ZSO-712A and 07-ZSO-712B) should be activated, indicating that the Drum Centering Device is retracted.	Verify that the "Centering Device Retracted" position switches are activated.	✓		P/W
61	The Drum Centering Devices for Drum Entry/Exit Port DO-07-101 should remain retracted.	Verify that the Drum Centering Devices are retracted.	✓		P/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Drum Under Glovebox Port Lift Table "Raise" Interlock					
62	Because a drum is not centered beneath the port, the Lift Table should not raise to the "Drum Centering" position. Wait thirty (30) seconds.	Verify that the Lift Table does not raise to the "Drum Centering" position during the waiting period.	✓		R/W
63	Press the "START DRUM ENTRY" button from the "OVERPACK DRUM ENTRY MENU" at OIU-12-103A.	Verify that the "START DRUM ENTRY" button has been pressed.	✓		R/W
64	Manually activate (e.g., "Break the beam") the "Drum Under Glovebox Port" position switch (09-ZS-233F) to simulate centering the 85 gallon drum beneath the Entry/Exit Port (DO-07-101). This switch should remain activated.	Verify that the "Drum Under Glovebox Port" position switch is manually activated.	✓		R/W
65	The "DRUM UNDER PORT" indicator at the Lift Table Local Control Pedestal (PC-09-202A) should be illuminated, indicating the a drum (simulated) is centered under the glovebox port (DO-07-101).	Verify that the "DRUM UNDER PORT" indicator is illuminated.	✓		R/W
66	Because the Drum Centering Device is retracted, and the "Drum Under Glovebox Port" position switch is activated, the drum entry sequence should continue. The PCS should raise the Lift Table to the "Drum Centering" height.	Verify that the Lift Table raises to "Drum Centering" height.	✓		R/W
67	The "DRUM IN POSITION" indicator at the Lift Table Local Control Pedestal (PC-09-202A) should be illuminated, indicating the Lift Table has raised to "Drum Centering" height.	Verify that the "DRUM IN POSITION" indicator is illuminated.	✓		R/W
68	The "DRUM ENTRY COMPLETE" message should be displayed on the "OVERPACK DRUM ENTRY MENU" at OIU-12-103A.	Verify that the "DRUM ENTRY COMPLETE" message is displayed.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine "Lift Table Failed to Raise" Alarm					
69	Press the "OPEN PORT" button from the "OVERPACK DRUM ENTRY MENU" at OIU-12-103A.	Verify that the "OPEN PORT" button has been pressed.	✓		R/W
70	The "PORT OPENING..." message should be displayed on the "OVERPACK DRUM ENTRY MENU" at OIU-12-103A.	Verify that the "PORT OPENING..." message is displayed.	✓		R/W
71	The PCS should energize and hold solenoid valve 07-FEV-303 to extend the drum centering clamps.	Verify that the drum centering clamps extend.	✓		R/W
72	The PCS should cause the lift table to raise at slow speed until the "Lid in Position" switch (07-ZS-711) is activated. (e.g., Drum is not present, so switch will not be activated).	Verify that the lift table raises slowly.	✓		R/W
73	Because a drum is not present on the lift table, the "Lid in Position" switch will not be activated, the lift table should stop raising, and a "Lift Table (202A) Failed to Raise" alarm should be generated.	Verify that the lift table has stopped raising.	✓		R/W
74	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Lift Table (202A) Failed to Raise" alarm.	Verify that the alarm has been acknowledged.	✓		R/W
75	Place the LLW Entry Glovebox in "Maintenance" mode.	Verify that the LLW Entry Glovebox has been placed in "Maintenance" mode.	✓		R/W
76	Use the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" or other appropriate method to retract the drum centering clamps.	Verify that the drum centering clamps are retracted.	✓		R/W
77	Press the Lift Table "LOWER" pushbutton at the Lift Table local control pedestal (PC-09-202A) to until the Lift Table has lowered to AGV Height.	Verify that the LLW Process Entry Glovebox Lift Table is at AGV height.	✓		R/W
78	The Lift Table at "AGV LOAD HEIGHT" indicator (09-ZL-233E) should be illuminated, indicating that the Lift Table is at AGV height.	Verify that the "AGV LOAD HEIGHT" indicator is illuminated.	✓		R/W
79	Remove the manual activation (e.g., "Don't Break the beam") for the "Drum at End of Conveyor" position switch (09-ZS-233E) and for the "Drum Under Glovebox Port" position switch (09-ZS-233F).	Verify that the "Drum at End of Conveyor" and the "Drum Under Glovebox Port" switches are not activated.	✓		R/W
80	Place the LLW Entry Glovebox in "Automatic" mode to allow the LLW Entry glovebox to re-initialize.	Verify that the LLW Entry Glovebox has been placed in "Automatic" mode	✓		R/W
81	The "LLW ENTRY GLOVEBOX MAIN MENU" should be displayed at OIU-12-103A.	Verify that the "LLW ENTRY GLOVEBOX MAIN MENU" is displayed.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
82	Because all glovebox initialization conditions should be satisfied, the "SYSTEM INITIALIZED" message should be displayed on the "LLW ENTRY GLOVEBOX MAIN MENU" at OIU-12-103A.	Verify that the "SYSTEM INITIALIZED" message is displayed.	✓		[Signature]
	TEST CASE 13031A-85.03 COMPLETE				

TEST CASE 13031A-85.04 MATE DRUM TO LLW ENTRY GLOVEBOX 85 GALLON ENTRY/EXIT PORT (DO-07-101)	4-2
Complete Drum Entry Sequence	4-2
Examine Drum Lid Vacuum Interlock	4-5
Examine "Door In Position" Alarm	4-6
Examine "Port DO-07-101 Failed to Open" Alarm	4-7
Examine Hoist Not Raised Interlock	4-8
Examine Hoist "Trolley Failed to Reach Entry" Alarm	4-9
Examine Drum Lid Vacuum Loss Alarm	4-10

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.04 MATE DRUM TO LLW ENTRY GLOVEBOX 85 GALLON ENTRY/EXIT PORT (DO-07-101)					
Complete Drum Entry Sequence					
1	CAUTION: The following test procedure steps involve automatic port door opening, controlled by LCU 102 (Referred to as the "PCS" in this test procedure). These steps should be carefully reviewed to permit rapid verification of test conditions during the automatic port opening sequence.	Verify that the steps in this test case are carefully reviewed prior to using this test case.	✓		mgf
2	Turn the "AUTO MODE/MAINTENANCE MODE" keyed selector switch (07-HS-316) on the Data Management System Pedestal (TE-12-103) to "AUTOMATIC MODE".	Verify that "AUTOMATIC MODE" has been selected for the LLW Entry Glovebox.	✓		mgf
3	Force LCU 102 register ZS703B not activated to simulate that the "Drum Door In Position" switch (07-ZS-703B) is not activated. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS703B <u>0</u> I:22/05	Verify that register ZS703B is forced not activated. Verify that the register status is recorded.	✓		mgf
4	Force LCU 102 register ZSO701 to indicate that the "Drum Port Rotated" position switch 07-ZSO-701 is not activated. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZSO701 <u>0</u> I:22/13	Verify that register ZSO701 is forced not activated. Verify that the register status is recorded.	✓		mgf
5	Force LCU 102 register PS703 to indicate that the "System Established Adequate Vacuum" switch 07-PS-703 is not activated. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> PS703 <u>0</u> I:22/03	Verify that register PS703 is forced not activated. Verify that the register status is recorded.	✓		mgf
6	Set the timer period for the "Trolley Failed to Reach Entry" alarm to 1 second. Record the preset status below: <u>Register</u> <u>Initial Status</u> <u>Final Status</u> T4:11 Preset <u>475</u> 1 second	Verify that the preset status is set to 1 second.	✓		mgf

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
7	Force LCU 102 register ZS702C not activated to indicate that the Hoist is not fully raised. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS702C <u>0</u> I:21/03	Verify that register ZS702C is forced not activated. Verify that the register status is recorded.	✓		mfj
8	Place the empty 208 liter (55 gallon) waste drum: 1. With drum lid, secured with band clamp. 2. Not enclosed in Drum Liner. inside the 320 liter (85 gallon) waste drum. Replace the lid on the 320 liter (85 gallon) waste drum, but do not secure with a band clamp.	Verify that the empty 55 gallon waste drum has been placed inside the overpack drum.	✓		mfj
9	Place the 320 liter (85 gallon) overpack drum without band clamp containing the empty 55 gallon drum on the LLW Entry Glovebox Entry/Exit Port Lift Table, (LT-09-202A). The drum should be placed at the AGV end of the Lift Table.	Verify that the 85 gallon drum without band clamp has been placed on the Lift Table.	✓		mfj
10	The "DRUM AT AGV END" indicator (09-ZL-233A) on the Lift Table Control Pedestal (PC-09-202A) should be illuminated, indicating that a drum is at the AGV end of the Lift Table.	Verify that the "DRUM AT AGV END" indicator is illuminated.	✓		mfj
11	Press the "OVERPACK DRUM ENTRY MENU" button from the "LLW ENTRY GLOVEBOX MAIN MENU" at OIU-12-103A.	Verify that the "OVERPACK DRUM ENTRY MENU" is displayed.	✓		mfj
12	Change the "Drum at Lift Table" bit for Lift Table LT-09-202A activated (value = 1). Please record the changed register status: <u>Register</u> <u>Changed Status</u> <u>Method of Confirmation</u> N31:46/12 <u>1 → 51</u> N31:46/12	Verify that the register status is recorded in the space provided.	✓		mfj
13	The "DRUM AT LIFT TABLE" message should be displayed on the "OVERPACK DRUM ENTRY MENU" at OIU-12-103A.	Verify that the "DRUM AT LIFT TABLE" message is displayed.	✓		mfj
14	Press the "START DRUM ENTRY" button from the "OVERPACK DRUM ENTRY MENU" at OIU-12-103A.	Verify that the "START DRUM ENTRY" button has been pressed.	✓		mfj
15	The "DRUM ENTRY IN PROGRESS..." message should be displayed at OIU-12-103A.	Verify that the "DRUM ENTRY IN PROGRESS..." message is displayed.	✓		mfj
16	The PCS should energize the Lift Table conveyor motor forward (LT-09-202A/M2) to move the drum under the Entry/Exit Port.	Verify that the drum moves forward until it is centered beneath the Entry/Exit Port.	✓		mfj

#13 A Read drum pin barcode

* See TE-101

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass	Fail	Witness (Initial)
17	The drum should activate the "Drum Under Glovebox Port" position switch (09-ZS-233F).	Verify that the "Drum Under Glovebox Port" position switch is activated.	✓		A/W
18	The "DRUM UNDER PORT" indicator at the Lift Table Local Control Pedestal (PC-09-202A) should be illuminated, indicating the a drum is centered under the glovebox port (DO-07-101).	Verify that the "DRUM UNDER PORT" indicator is illuminated.	✓		A/W
19	The PCS should then energize the Lift Table motor (LT-09-202A/M1) to raise the drum to "Drum Centering" position.	Verify that the Lift Table raises the drum to the "Drum Centering" position.	✓		A/W
20	The "DRUM IN POSITION" indicator (09-ZL-233D) at the Lift Table Local Control Pedestal (PC- 09-202A) should be illuminated, indicating that the drum has been raised to the "Drum Centering" position.	Verify that the "DRUM IN POSITION" indicator is illuminated.	✓		A/W
21	Because the drum has been raised to the "Drum Centering" position, the Drum Entry Sequence is complete and the "DRUM ENTRY COMPLETE" message should be displayed on the "OVERPACK DRUM ENTRY MENU" at OIU-12-103A.	Verify that the "DRUM ENTRY COMPLETE" message is displayed.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✗	Witness (initial)
Examine Drum Lid Vacuum Interlock					
22	Press the "OPEN PORT" button from the "OVERPACK DRUM ENTRY MENU" at OIU-12-103A.	Verify that the "OPEN PORT" button has been pressed.	✓		R/W
23	The "PORT OPENING..." message should be displayed on the "OVERPACK DRUM ENTRY MENU" at OIU-12-103A while the port is opening.	Verify that a "PORT OPENING..." message is displayed.	✓		R/W
24	The PCS should energize the Drum Centering Clamp solenoid (07-FEV-303) to extend the Drum Centering clamps to secure the drum.	Verify that the Drum Centering Device clamps extend.	✓		R/W
25	The PCS should raise the Lift Table until the drum activates the "Drum Lid in Position" position switch (07-ZS-711).	Verify that the Lift Table raises and then stops.	✓		R/W
26	The "Drum Lid in Position" position switch 07-ZS-711 should be activated.	Verify that the "Drum Lid in Position" position switch is activated.	✓		R/W
27	The PCS should energize and hold the vacuum isolation solenoid valve 07-FEV-700F open, and then energize solenoid valve 07-FEV-700D/V (Vacuum) to create vacuum at the Drum Entry/Exit Port (DO-07-101). An audible "hiss" should be noted.	Verify that the vacuum generator is activated.	✓		R/W
28	Because register PS703 is forced not activated, the drum port opening sequence should stop. Wait thirty (30) seconds.	Verify that the port does not unlock during the waiting period.	✓		R/W
29	Unforce LCU 102 register PS703 to permit vacuum switch 07-PS-703 to indicate whether vacuum exists in the lid vacuum system. Record the unforced register status below: Unforced PS703 Status: <u>0</u>	Verify that register PS703 is unforced.	✓		R/W
30	Adjust the drum lid as needed to ensure that vacuum is generated and maintained between the port door and the drum lid.	Verify that vacuum exists between the port door and the drum lid.	✓		mgj
* 31	The PCS should de-energize vacuum isolation solenoid 07-FEV-700F to close the vacuum isolation valve so that vacuum is retained between the port door and the drum lid.	Verify that the vacuum isolation solenoid valve is de-energized.	✓		mgj
32	Vacuum switch 07-PS-703 should be activated, indicating that vacuum exists between the drum lid and the port door.	Verify that vacuum exists between the drum lid and the port door.	✓		mgj

* See TE# 105

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine "Door In Position" Alarm					
33	The PCS should de-energize solenoid valve 07-FEV-700D/V to turn off the vacuum generator.	Verify that the vacuum generator is turned off.	✓		mef
34	The PCS should briefly energize solenoid valves 07-FEV-701A and 07-FEV-701B (Vent) to release pressure on the port door open/close cylinders. An audible "hiss" should be noted.	Verify that the port open/close cylinders are vented.	✓		mef
35	The "PORT OPENING..." message should be displayed on the "OVERPACK DRUM ENTRY MENU" at OIU-12-103A while the port is opening.	Verify that a "PORT OPENING..." message is displayed.	✓		mef
36	The PCS should pulse energize solenoid 07-FEV-700A/UL (Unlock) to smoothly retract the port door locking cylinders.	Verify that both port door locking cylinders fully retract.	✓		mef
37	The "Drum Port Closed and Locked" position switches (07-ZSC-700A and 07-ZSC-700B) should not be activated, indicating that the port door is unlocked.	Verify that the "Drum Port Closed and Locked" position switches are not activated.	✓		mef
38	The glovebox pressurization alarm 07-PDISL-333 should be not be activated at loss of contact of switches 07-ZSC-700A and 07-ZSC-700B during the drum entry procedure.	Verify that no glovebox pressurization alarm messages are displayed during the drum port opening sequence.	✓		mef
39	The PCS should activate the Lift Table servo motor (LT-09-202A/M1) to raise the Lift Table, drum, and port door up until the port door is raised to the "Door In Position" height.	Verify that the Lift Table rises causing the drum to lift the port door to the "Door in Position" height.	✓		mef
40	Because position switch 07-ZS-703B (Door In Position) is forced not activated, the drum port opening sequence should stop. Wait thirty (30) seconds to confirm that the drum port opening sequence has stopped. A "Port (101) Door in Position Not Verified" alarm should be generated.	Verify that the port door does not rise to the "Open" position during the waiting period.	✓		mef
41	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Port (101) Door in Position Not Verified" alarm.	Verify that the alarm has been acknowledged.	✓		mef
42	Unforce LCU 102 register ZS703B. Record the unforced register status below: Unforced ZS703B Status: <u>1 → 0 (as door raises)</u>	Verify that register ZS703B is unforced.	✓		mef
43	The "Drum Door in Position" switch (07-ZS-703B) should be activated, indicating that the port door is raised to the "Door in Position" height.	Verify that the "Drum Door in Position" switch is activated.	✓		mef
44	Unforcing register ZS703B should cause the "Port (101) Door in Position Not Verified" alarm to clear.	Verify that the alarm is cleared.	✓		mef

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass	Fail	Witness (Initial)
45	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "OVERPACK DRUM ENTRY MENU" at OIU-12-103A.	Verify that the "OVERPACK DRUM ENTRY MENU" is displayed.	✓		mrg

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine "Port DO-07-101 Failed to Open" Alarm					
46	The PCS should pulse energize solenoid valve 07-FEV-700J/O (Open) to vertically raise the door to the "open" position.	Verify that the port door rises to the "open" position.	✓		mg
47	The "Drum Door Open" position switch (07-ZS-703C) should be activated, indicating that the port door is at the "open" position.	Verify that the "Drum Door Open" position switch is activated.	✓		mg
48	The PCS should pulse energize solenoid valve 07-FEV-700B/O (Open) to rotate the port door open.	Verify that the port door is rotated open.	✓		mg
49	Because register ZSO701 is forced not activated, simulating that the port has not been successfully rotated open, the port opening sequence should stop and a "Port (101) Failed To Open" alarm should be generated. Wait thirty (30) seconds.	Verify that the Hoist Trolley does not move to the Entry position during the waiting period.	✓		mg
50	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Port (101) Failed To Open" alarm.	Verify that the alarm has been acknowledged.	✓		mg
51	Unforce LCU 102 register ZSO701. Record the unforced register status below: Unforced ZSO701 Status: <u>1</u>	Verify that register ZSO701 is unforced.	✓		mg
52	Because the port is rotated open, the "Drum Port Rotated" position switch (07-ZSO-701) should be activated.	Verify that the "Drum Port Rotated" position switch is activated.	✓		mg
53	Unforcing register ZSO701 should cause the "Port (101) Failed To Open" alarm to clear.	Verify that the alarm is cleared.	✓		mg
54	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "OVERPACK DRUM ENTRY MENU" at OIU-12-103A.	Verify that the "OVERPACK DRUM ENTRY MENU" is displayed.	✓		mg

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Hoist Not Raised Interlock					
55	Because the "Hoist Raised" switch (07-ZS-702C) is forced activated, the PCS should not move the hoist to the entry position. <i>not</i> <i>msg 6-28-97</i> Wait thirty (30) seconds.	Verify that the hoist does not move to the entry position during the waiting period.	✓		<i>msg</i>
56	Unforce LCU 102 register ZS702C. Record the unforced register status below: Unforced ZS702C Status: <u>0</u>	Verify that register ZS702C is unforced.	✓		<i>msg</i>
57	The "Hoist Raised" switch (07-ZS-702C) should be activated, indicating that the hoist is raised.	Verify that the "Hoist Raised" switch is activated. <i>msg 6-28-97 not</i>	✓		<i>msg</i>
58	The PCS should energize the hoist trolley motor forward so that the trolley SLOWLY travels to and is positioned over the Entry/Exit Port (DO-07-101). The hoist trolley should stop before reaching the end of travel limit plate.	Verify that the Hoist Trolley is centered over the Entry/Exit Port.	✓		<i>msg</i>
59	The "PORT OPEN" message should be displayed on the "OVERPACK DRUM ENTRY MENU" at OHU-12-103A.	Verify that the "PORT OPEN" message is displayed. <i>msg 7-2-97</i>		N/A	

#55 ZS702C is normally closed switch

#59 "PORT OPEN" message displayed only after hoist has reached entry position.

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Hoist "Trolley Failed to Reach Entry" Alarm					
60	Because T4:11 preset is set to 1 second, indicating that Trolley Hoist has not reached the Entry/Exit Port position, a "Trolley Failed to Reach Entry" alarm should be generated and the "PORT OPEN" message should not be displayed on the "OVERPACK DRUM ENTRY MENU" at OIU-12-103A. Wait thirty (30) seconds.	Verify that the "PORT OPEN" message is not displayed during the waiting period.	✓		mog
61	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Trolley Failed to Reach Entry" alarm.	Verify that the alarm has been acknowledged.	✓		mog
62	Restore the timer period for the "Trolley Failed to Reach Entry" alarm to the initial value recorded above. Record the timer status below: <u>Register</u> <u>Initial Status</u> <u>Final Status</u> T4:11 Preset 1 second <u>47 s</u>	Verify that the preset initial status is restored.	✓		mog
63	Using appropriate methods, reset the Hoist Trolley so that it is at the "Entry" position.	Verify that the Hoist Trolley is at the "Entry" position.	✓		mog
64	Unforcing register ZS702B and activating hoist trolley position switch 07-ZS-702B should cause the "Trolley Failed to Reach Entry" alarm to clear.	Verify that the "Trolley Failed to Reach Entry" alarm is cleared.	✓		mog
65	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "OVERPACK DRUM ENTRY MENU" at OIU-12-103A.	Verify that the "OVERPACK DRUM ENTRY MENU" is displayed.	✓		mog
66	The port opening sequence should be considered successful and a "PORT OPEN" message should be displayed at OIU-12-103A.	Verify that the "PORT OPEN" message is displayed.	✓		mog
67	The drum lid should remain attached to the port door.	Verify that the drum lid remains attached to the port door.	✓		mog
68	Press the "MAIN MENU" button from the "OVERPACK DRUM ENTRY MENU" at OIU-12-103A to return to the "LLW ENTRY GLOVEBOX MAIN MENU".	Verify that the "LLW ENTRY GLOVEBOX MAIN MENU" is displayed.	✓		mog

#63 Go to maintenance mode, move hoist to entry, use initialization bypass, and return to auto mode.

* See TE # 103

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Drum Lid Vacuum Loss Alarm					
69	Force LCU 102 register PS703 to indicate that the "SYSTEM ESTABLISHED ADEQUATE VACUUM" switch 07-PS-703 is not activated. Record the forced register status below: Register Forced Status Method of Confirmation PS703 <u>6</u> 1:22/03	Verify that register PS703 is forced not activated. Verify that the register status is recorded.	✓ ✓		mrg mrg
70	The PCS should energize vacuum generator solenoid valve (07-FEV-700D/V) to generate vacuum.	Verify that the vacuum generator is energized.	✓		mrg
71	The PCS should then energize and hold solenoid valve 07-FEV-700F to allow vacuum to be applied to the drum lid vacuum system.	Verify that the vacuum isolation solenoid valve 07-FEV-700F is energized open.			N/A mrg 6-25-97
72	Because register PS703 is forced not activated, a "Port (101) Loss of Vacuum on Lid" alarm should be generated. A flashing "SEQUENCE FAILED" message should be displayed on the "OVERPACK DRUM ENTRY MENU" at OIU-12-103A.	Verify that a flashing "SEQUENCE FAILED" alarm is displayed.	✓		mrg
73	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Port (101) Loss of Vacuum on Lid" alarm.	Verify that the alarm has been acknowledged.	✓		mrg
74	Unforce LCU 102 register PS703 to permit vacuum switch 07-PS-703 to indicate whether vacuum exists in the lid vacuum system. Record the unforced register status below: Unforced PS703 Status: <u>1</u>	Verify that register PS703 is unforced.	✓		mrg
75	Adjust the drum lid as needed to ensure that vacuum is generated and maintained between the port door and the drum lid.	Verify that vacuum exists between the drum lid and the port door.	✓		mrg
76	Because vacuum exists between the drum lid and the port door, the "Port (101) Loss of Vacuum on Lid" alarm should clear.	Verify that the alarm is cleared.	✓		mrg
77	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "OVERPACK DRUM ENTRY MENU" at OIU-12-103A.	Verify that the "OVERPACK DRUM ENTRY MENU" is displayed.	✓		mrg
TEST CASE 13031A-85.04 COMPLETE					

TEST CASE 13031A-85.05 MOVE DRUM TO LLW ENTRY GLOVEBOX DRUM TRANSFER PORT (DO-07-102)	5-2
Examine Drum Lifter Open Interlock	5-2
Examine Drum Lifter "Failed to Close" Alarm	5-3
Examine Drum Lifter Closed Interlock	5-5
Examine Drum Lifter "Failed to Raise" Alarm	5-6
Examine Hoist "Trolley Failed to Reach Midway" Alarm	5-8
Confirm Inner Drum Identifier and Inspect Drum	5-10
Examine Hoist "Trolley Failed to Reach Transfer Port" Alarm	5-11

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.05 MOVE DRUM TO LLW ENTRY GLOVEBOX DRUM TRANSFER PORT (DO-07-102)					
Examine Drum Lifter Open Interlock					
1	Force LCU 102 register ZSO704 not activated to simulate the Drum Lifter "closed" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZSO704 <u>0</u> I:22/01	Verify that register ZSO704 is forced not activated. Verify that the register status is recorded.	✓		mgf
2	Press the "TROLLEY MENU" button from the "LLW ENTRY GLOVEBOX MAIN MENU" at OIU-12-103A.	Verify that the "TROLLEY MENU" is displayed.	✓		mgf
3	Press "LOWER" pushbutton on the Hoist/Trolley/Lifter pendant (PC-07-001) to attempt to lower the Drum Lifter.	Verify that the "LOWER" pushbutton has been pressed.	✓		mgf
4	Because "Drum Lifter Open" position switch (07-ZSO-704) register ZSO704 is forced not activated, the Drum Lifter should not lower.	Verify that the Drum Lifter does not lower.		✓	mgf
5	Unforce LCU 102 register ZSO704. Record the unforced register status below: Unforced ZSO704 Status: <u>1</u> <i>mgf 9-8-97</i>	Verify that register ZSO704 is unforced.	✓		mgf
6	Press and release the "LOWER" pushbutton on the Hoist/Trolley/Lifter pendant (PC-07-001) to lower the Drum Lifter. Because the "Drum Lifter Open" position switch (07-ZSO-704) should be activated, indicating that the Drum Lifter is "open", the Drum Lifter should lower.	Verify that the Drum Lifter lowers when the "LOWER" pushbutton is pressed.	✓		mgf
7	Press the "LOWER" pushbutton as needed until the Drum Lifter rests on top of the 208 liter (55 gallon) drum.	Verify that the Drum Lifter rests on the top of the 55 gallon drum.	✓		mgf

* # 4 Reference TE 81,82 mpl 6-29-97

** See TE # 103

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Drum Lifter "Failed to Close" Alarm					
8	Force LCU 102 register ZSC704 not activated to simulate the Drum Lifter "open" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZSC704 <u>CP</u> 1:22/00	Verify that register ZSC704 is forced not activated. Verify that the register status is recorded.	✓ ✓		<i>mg</i> <i>mg</i>
9	Press and continue to press the "CLOSE" pushbutton on the Hoist/Trolley/Lifter pendant (PC-07-001) for 30 seconds longer than the period specified in the SETUP section of this test procedure. The Drum Lifter should close. Because the "Drum Lifter Closed" position switch (07-ZSC-704) is forced not activated, a Drum Lifter "Drum Lifter Failed to Close" alarm should be generated.	Verify that the Drum Lifter is closed.	✓		<i>mg</i>
10	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Drum Lifter Failed to Close" alarm.	Verify that the alarm has been acknowledged.	✓		<i>mg</i>
11	Unforce LCU 102 register ZSC704. Record the unforced register status below: Unforced ZSC704 Status: _____	Verify that register ZSC704 is unforced.	✓		<i>mg</i>
12	Because the Drum Lifter is closed, the "Drum Lifter Closed" position switch (07-ZSC-704) should be activated.	Verify that the "Drum Lifter Closed" position switch is activated.		✓	<i>mg</i>
13	The Hoist/Trolley/Lifter "CLOSED" indicator should be illuminated, indicating that the Drum Lifter is closed.	Verify that the "CLOSED" indicator is illuminated.	✓	✓ FAIL	<i>mg</i>
14	Because position switch 07-ZSC-704 should be activated, indicating that the Drum Lifter is "closed", the "Drum Lifter Failed to Close" alarm should clear.	Verify that the alarm is cleared.	✓	✓ FAIL	<i>mg</i>
15	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "TROLLEY MENU" at OIU-12-103A.	Verify that the "OVERPACK DRUM ENTRY MENU" is displayed.	✓		<i>mg</i>
16	Press the "OPEN" pushbutton on the Hoist/Trolley/Lifter pendant (PC-07-001) as needed until the Drum Lifter is completely open.	Verify that the Drum Lifter is completely open.	✓		<i>mg</i>
17	The "Drum Lifter Open" position switch (07-ZSO-704) should be activated, indicating that the Drum Lifter is open.	Verify that the "Drum Lifter Open" position switch is activated	✓		<i>mg</i>
18	The Hoist/Trolley/Lifter "OPENED" indicator should be illuminated, indicating that the Drum Lifter is open.	Verify that the "OPENED" indicator is illuminated.	✓		<i>mg</i>

* Reference T.E. # 82,81 *mg* 6-29-97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
19	Adjust the Drum Lifter as needed so that the drum will be gripped by the Drum Lifter.	Verify that the Drum Lifter is positioned to securely grip the drum.	✓		mb
20	Press the "CLOSE" pushbutton on the Hoist/Trolley/Lifter pendant (PC-07-001) as needed until the Drum Lifter is closed, securing the drum.	Verify that the Drum Lifter is closed, securing the drum.	✓		mb
* 21	The "Drum Lifter Closed" position switch (07-ZSC-704) should be activated, indicating that the Drum Lifter is closed.	Verify that the "Drum Lifter Closed" position switch is activated		✓	mb
* 22	The "CLOSED" indicator on the Hoist/Trolley/Lifter pendant (PC-07-001) should be illuminated, indicating that the Drum Lifter is closed.	Verify that the "CLOSED" indicator is illuminated.		✓	mb

Note: Raise drum and then "Closed" switch activities.

* #21, 22 - Reference TE 81,82 mar 6-29-97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Drum Lifter Closed Interlock					
23	Force LCU 102 register ZSC704 not activated to simulate the Drum Lifter "NOT CLOSED" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZSC704 0 1:22/00	Verify that register ZSC704 is forced not activated. Verify that the register status is recorded.	✓		mog
24	Press the "RAISE" pushbutton on the Hoist/Trolley/Lifter pendant (PC-07-001) to attempt to raise the Drum Lifter. Because "Drum Lifter Closed" position switch (07-ZSC-704) register ZSO704 is forced not activated, the Drum Lifter should not raise.	Verify that the Drum Lifter does not raise.		✓	mog
25	Unforce LCU 102 register ZSC704. Record the unforced register status below: Unforced ZSC704 Status: 0	Verify that register ZSC704 is unforced.	✓		mog
26	Press the "RAISE" pushbutton on the Hoist/Trolley/Lifter pendant (PC-07-001) to raise the Drum Lifter.	Verify that the "RAISE" button has been pressed.	✓		mog
27	Because the "Drum Lifter Closed" position switch (07-ZSC-704) should be activated, indicating that the Drum Lifter is "closed", the Drum Lifter should raise.	Verify that the Drum Lifter raises when the "RAISE" pushbutton is pressed.	✓		mog
28	Press the "RAISE" pushbutton on the Hoist/Trolley/Lifter pendant (PC-07-001) as needed until the drum is sufficiently raised so that the top of the drum is positioned for inspection.	Verify that the drum is raised so that the top of the drum can be examined.	✓		mog

#25 Close switch ZSC704 does not activate until drum is raised.
 * #25 Reference TE 81,82 mpl. 6-29-97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Drum Lifter "Failed to Raise" Alarm					
29	Set the timer period for the "Lifter Not Raised" alarm to one second. Record the timer period below: <u>Register</u> <u>Initial Status</u> <u>Final Status</u> <u>ms 6-28-97</u> T4:17 Preset <u>90</u> 1 second	Verify that the preset status is set to 1 second.	✓		ms
30	Press and continue to press the "RAISE" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-001). The Hoist should rise to its fully raised position. Continue to press the "RAISE" pushbutton for at least 5 seconds longer than the time period specified in the previous step for the "Lifter Failed to Raise" alarm. Because the "RAISE" pushbutton has been activated for a time period sufficiently long to fully raise the hoist, but the "Hoist Raised" position switch does not indicate that the Hoist is raised, a "Lifter Failed to Raise" alarm should be generated.	Verify that the "RAISE" pushbutton has been continuously pressed for the time period specified.	✓		ms
31	The Hoist/Trolley/Lifter Pendant (PC-07-001) should remain enabled until this alarm is cleared.	Verify that the "Enabled" indicator remains illuminated.	✓		ms
32	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Lifter Failed to Raise" alarm.	Verify that the "Lifter Failed to Raise" alarm has been acknowledged.	✓		ms
33	Restore the timer period for the "Lifter Failed to Raise" alarm to the initial value recorded above. Record the timer status below: <u>Register</u> <u>Initial Status</u> <u>Final Status</u> T4:17 Preset 1 second <u>90</u>	Verify that the preset initial status is restored.	✓		ms
34	Press and continue to press the "RAISE" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-001) only until the hoist has risen to its fully raised position.	Verify that the hoist is fully raised.	✓		ms
35	The "Hoist Raised" position switch 07-ZS-702C should be activated.	Verify that the "Hoist Raised" position switch is activated.	✓		ms
36	The "HOIST RAISED LIMIT" indicator on the Hoist/Trolley/Lifter pendant (PC-07-001) should be illuminated, indicating that the hoist is fully raised.	Verify that the "HOIST RAISED LIMIT" indicator is illuminated.	✓		ms
37	The hoist raised condition should cause the "Hoist Failed to Raise" alarm to clear.	Verify that the "Hoist Failed to Raise" alarm is cleared.	✓		ms

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
38	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "TROLLEY MENU" at OIU-12-103A.	Verify that the "TROLLEY MENU" is displayed.	✓		A/C
39	After the Drum Lifter is fully raised, the PCS should disable the Hoist/Trolley/Lifter Pendant (PC-07-001).	Verify that the "Enabled" indicator is not illuminated.	✓		A/C

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass	Fail	Witness (Initial)
Examine Hoist "Trolley Failed to Reach Midway" Alarm					
40	Force LCU 102 register ZS702A not activated to indicate that the Hoist Trolley has not reached the "Swab" position. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS702A <u>0</u> I:21/01	Verify that register ZS702A is forced not activated. Verify that the register status is recorded.	✓		RW
41	Press the "SWAB POSITION" button from the "TROLLEY MENU" at OIU-12-103A.	Verify that the "SWAB POSITION" button has been pressed.	✓		RW
42	The "TROLLEY MOVING TO SWAB POSITION..." message should be displayed on the "TROLLEY MENU" at OIU-12-103A.	Verify that the "TROLLEY MOVING TO SWAB POSITION..." message is displayed.	✓		RW
43	CAUTION: Be prepared to safely stop the hoist trolley if the PCS does not.	Verify that the hoist trolley can be safely stopped.	✓		RW
44	The PCS should energize the Hoist Trolley motor (CR-07-101A/M1) forward so that the trolley SLOWLY travels to the "Swab" position.	Verify that the Hoist Trolley travels to the "Swab" position.			RW 6/29/97
45	Because register ZS702A is forced not activated indicating that Hoist Trolley has not reached the "Swab" position, the Hoist Trolley should travel only slightly beyond the "Swab" position (e.g. Hoist Trolley should stop prior to activating position switch 07-ZS-702A at the Transfer Port position). This should cause a "Trolley Failed to Reach Midway" alarm to be generated.	Verify that the Hoist Trolley travels slightly beyond the "Swab" position and stops. <i>see note below</i>	NA mgf		6-28-97
46	The Hoist/Trolley/Lifter Pendant (PC-07-001) "MIDWAY" indicator should not be illuminated.	Verify that the "MIDWAY" indicator is not illuminated.	✓		RW
47	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Trolley Failed to Reach Midway" alarm.	Verify that the "Trolley Failed to Reach Midway" alarm has been acknowledged.	✓		RW
48	Unforce LCU 102 register ZS702A. Record the unforced register status below: Unforced ZS702A Status: <u>0</u>	Verify that register ZS702A is unforced.	✓		RW
49	Because the Hoist Trolley is not at the "Swab" position, the Hoist Trolley position switch 07-ZS-702A should not be activated.	Verify that position switch 07-ZS-702A is not activated.	✓		RW
50	Using appropriate methods, reset the Hoist Trolley so that it is at the "Midway" position.	Verify that the Hoist Trolley is at the "Midway" position.	✓		RW

#40 For safety, instead timer T4:18 set to 0 seconds, alarm immediately generated after
 #44 "Swab Position" button pressed. Reset via set N40:6/1 to 0, reset T4:18 done
 #45 bit, set N404:13/2 to 0. mgf 6-29-97
 #48
 #49

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
51	The Hoist/Trolley/Lifter Pendant (PC-07-001) "MIDWAY" indicator should be illuminated.	Verify that the "MIDWAY" indicator is illuminated.	✓		R/W
52	Unforcing register ZS702A, and placing the Hoist Trolley at the "Midway" position, should cause the "Trolley Failed to Reach Midway" alarm to clear.	Verify that the alarm is cleared.	✓		R/W
53	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "TROLLEY MENU" at OIU-12-103A.	Verify that the "TROLLEY MENU" is displayed.	✓		R/W
54	Press the "MAIN MENU" button to return to the "LLW ENTRY GLOVEBOX MAIN MENU".	Verify that the "LLW ENTRY GLOVEBOX MAIN MENU" is displayed.	✓		R/W
55	Press the "OVERPACK ENTRY MENU" button from the "LLW ENTRY GLOVEBOX MAIN MENU" at OIU-12-103A to display the "OVERPACK DRUM ENTRY MENU".	Verify that the "OVERPACK DRUM ENTRY MENU" is displayed.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Confirm Inner Drum Identifier and Inspect Drum					
56	The PCS should display the inner drum identifier on the "OVERPACK DRUM ENTRY MENU" at OIU-12-103A. The inner drum identifier displayed should match the identifier recorded in the SETUP section of this test procedure for the empty 208 liter (55 gallon) drum.	Verify that the correct drum identifier is displayed.	✓		P/W
57	Press the "INNER DRUM ID VERIFIED" button from the "OVERPACK DRUM ENTRY MENU" at OIU-12-103A to acknowledge that the correct drum identifier is displayed.	Verify that the "INNER DRUM ID VERIFIED" button has been pressed.	✓		P/W
* 58	Using the In-Box Frisk Monitor (12-RIA-534), carry out swab counting.	Verify that swab counting has been carried out.		✓	MPD

* H-58 Reference T.E #83 mpe 6-29-97

6-29-97 8:37 A.M. testing resumes mrg

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Hoist "Trolley Failed to Reach Transfer Port" Alarm					
59	Force LCU 102 register ZS702B not activated to indicate that the Hoist Trolley has not reached the Transfer Port position. Record the forced register status below: Register Forced Status Method of Confirmation ZS702B 6 I:21/02	Verify that register ZS702B is forced not activated. Verify that the forced register status is recorded.	✓		mrg
60	Press the "MAIN MENU" button to return to the "LLW ENTRY GLOVEBOX MAIN MENU".	Verify that the "LLW ENTRY GLOVEBOX MAIN MENU" is displayed.	✓		mrg
61	Press the "TROLLEY MENU" button from the "LLW ENTRY GLOVEBOX MAIN MENU" at OIU-12-103A to display the "TROLLEY MENU".	Verify that the "TROLLEY MENU" is displayed.	✓		mrg
62	Press the "TRANSFER PORT" button from the "TROLLEY MENU" to move the Hoist with Drum to the Transfer Port position.	Verify that the "TRANSFER PORT" button has been pressed.	✓		mrg
63	The "TROLLEY MOVING TO TRANSFER PORT..." message should be displayed on the "TROLLEY MENU" at OIU-12-103A.	Verify that the "TROLLEY MOVING TO TRANSFER PORT..." message is displayed.	✓		mrg
64	The PCS should energize the Hoist Trolley motor (CR-07-101A/M1) forward so that the trolley SLOWLY travels the "Transfer Port" position.	Verify that the Hoist Trolley travels to the "Transfer Port" position.	✓		mrg
65	Because register ZS702B is forced not activated indicating that Hoist Trolley has not reached the "Transfer Port" position, the Hoist Trolley should substantially slow travel only slightly beyond the "Transfer Port" position (e.g. Hoist Trolley should crash into end stop). This should cause a "Trolley Failed to Reach Transfer Port" alarm to be generated.	Verify that the Hoist Trolley travels slightly beyond the "Transfer Port" position and stops.	✓		mrg
66	The Hoist/Trolley/Lifter Pendant (PC-07-001) "XFER" indicator should not be illuminated. "MIDWAY" illuminated	Verify that the "XFER" indicator is not illuminated.	✓		mrg
67	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Trolley Failed to Reach Transfer Port" alarm.	Verify that the alarm has been acknowledged.	✓		mrg
68	Unforce LCU 102 register ZS702B. Record the unforced register status below: Unforced ZS702B Status: 1	Verify that register ZS702B is unforced.	✓		mrg
69	Using appropriate methods, reset the Hoist Trolley so that it is at the "Transfer Port" position.	Verify that the Hoist Trolley is at the "Transfer Port" position.	✓		mrg

#459 For safety reasons, timer +4:20 changed from 30 seconds preset to 0 seconds preset. Alarm immediately generated, hoist doesn't move.

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
70	The "XFER" indicator on the Hoist/Trolley/Lifter Pendant (PC-07-001) should be illuminated.	Verify that the "XFER" indicator is illuminated.	✓		mfg
71	Because the Hoist Trolley is at the Transfer Port position, position switch 07-ZS-702B should be activated.	Verify that position switch 07-ZS-702B is activated.	✓		mfg
72	Unforcing register ZS702B, and placing the Hoist Trolley at the "Transfer Port" position, should cause the "Trolley Failed to Reach Transfer Port" alarm to clear.	Verify that the alarm is cleared.	✓		mfg
73	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "TROLLEY MENU" at OIU-12-103A.	Verify that the "TROLLEY MENU" is displayed.	✓		mfg
* 74	The "DRUM ABOVE TRANSFER PORT" message should be displayed on the "TROLLEY MENU" at OIU-12-103A.	Verify that the "DRUM ABOVE TRANSFER PORT" message is displayed.		✓	mfg
75	Press the "MAIN MENU" button from the "TROLLEY MENU" at OIU-12-103A to return to the "LLW ENTRY GLOVEBOX MAIN MENU".	Verify that the "LLW ENTRY GLOVEBOX MAIN MENU" is displayed.	✓		mfg
TEST CASE 13031A-85.05 COMPLETE					

* #74 "Trolley Moving to Transfer Port..." remains displayed.
Reference exception (TE) #84. mfg 6-29-97

TEST CASE 13031A-85.06 REMOVE 320 LITER (85 GALLON) DRUM FROM LLW ENTRY GLOVEBOX ENTRY/EXIT PORT (DO-07-101)	6-2
Examine Lift Table Lower, Raise, Forward, and Reverse Interlocks	6-4
Examine Door Rotated (Closed) Interlock	6-5
Examine Port Door Lowered (Closed) Interlock	6-6
Examine "Port Failed to Close and Lock" Alarm	6-7
Examine The Drum Centering Device Not Retracted Interlock	6-8
Examine "Close and Lock Not Verified" Alarm	6-9
Examine "Port Closed and Locked" Interlock	6-10
Examine "Lift Table Failed to Lower" Alarm	6-12
Examine "Lift Table Conveyor Reverse Failed" Alarm	6-13

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)						
TEST CASE 13031A-85-06 REMOVE 320 LITER (85 GALLON) DRUM FROM LLW ENTRY GLOVEBOX ENTRY/EXIT PORT (DO-07-101)											
CAUTION: The following sequence of test procedure steps involve automatic port door closing, controlled by LCU 102 (Referred to as the "PCS" in this test procedure). These test procedure steps should be carefully reviewed to permit rapid verification of test conditions during the automatic port opening sequence.											
1	Confirm that the Entry/Exit Port (DO-07-101) door is rotated open.	Verify that the Port door is rotated open.	✓		mg						
2	Confirm that a drum is mated to the Entry/Exit Port (DO-07-101).	Verify that a drum is mated to the port.	✓		mg						
3	Confirm that the Lift Table (LT-09-202A) is in "Normal" mode with the M/O/N switch (09-HS-233A) turned to the "N" position to support lift table control by the PCS. The M/O/N switch is located on the Lift Table Local Control Pedestal (PC-09-202A).	Verify that the lift table is in "Normal" mode.	✓		mg						
4	The "Drum Port Rotated" position switch (07-ZSO-701 should be activated, indicating that the port door is rotated open.	Verify that the "Drum Port Rotated" position switch is activated.	✓		mg						
5	Confirm that no items are present that would prevent the Entry/Exit Port (DO-07-101) from properly closing.	Verify that no items are present that would prevent the port from properly closing.	✓		mg						
6	Turn the "AUTO MODE/MAINTENANCE MODE" keyed selector switch (07-HS-316) on the Data Management System Pedestal (TE-12-103) to "AUTOMATIC MODE".	Verify that "AUTOMATIC MODE" has been selected for the LLW Entry Glovebox.	✓		mg						
7	Confirm that the "LLW ENTRY GLOVEBOX MAIN MENU" is displayed at OIU-12-103A. If a sub-menu is displayed, press the "MAIN MENU" button to return to the "LLW ENTRY GLOVEBOX MAIN MENU".	Verify that the "LLW ENTRY GLOVEBOX MAIN MENU" is displayed.	✓		mg						
8	Press the "OVERPACK DRUM ENTRY MENU" button from the "LLW ENTRY GLOVEBOX MAIN MENU" at OIU-12-103A.	Verify that the "OVERPACK DRUM ENTRY MENU" is displayed.	✓		mg						
9	Force LCU 102 register ZSC701 not activated to indicate that the Entry/Exit Port (DO-07-101) door is not rotated closed. Record the forced register status below:	Verify that register ZSC701 is forced not activated.	✓		mg						
	<table border="0"> <tr> <td><u>Register</u></td> <td><u>Forced Status</u></td> <td><u>Method of Confirmation</u></td> </tr> <tr> <td>ZSC701</td> <td>0</td> <td>I:22/12</td> </tr> </table>	<u>Register</u>	<u>Forced Status</u>	<u>Method of Confirmation</u>	ZSC701	0	I:22/12	Verify that the register status is recorded.			
<u>Register</u>	<u>Forced Status</u>	<u>Method of Confirmation</u>									
ZSC701	0	I:22/12									

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
10	Force LCU 102 register ZS703A not activated to indicate that the Entry/Exit Port (DO-07-101) door is not lowered closed. Record the forced register status below. <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS703A <u>B</u> I:22/04	Verify that register ZS703A is forced not activated. Verify that the register status is recorded.	✓ ✓		mgf mgf
11	Force LCU 102 registers ZSC700A and ZSC700B activated to indicate that the Entry/Exit Port (DO-07-101) door is not locked. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZSC700A <u>0</u> I:22/10 ZSC700B <u>0</u> I:22/11	Verify that registers ZSC700A and ZSC700B are forced not activated. Verify that the register status is recorded.	✓ ✓		mgf mgf
12	Force LCU 102 registers ZSO712A and ZSO712B not activated to indicate that the Entry/Exit Port (DO-07-101) drum centering device is not retracted. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZSO712A <u>0</u> I:24/00 ZSO712B <u>0</u> I:24/01	Verify that registers ZSO712A and ZSO712B are forced not activated. Verify that the register status is recorded.	✓ ✓		mgf mgf

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Lift Table Lower, Raise, Forward, and Reverse Interlocks					
NOTE: Because the port is not closed and locked, the "DOWN" "UP", "FORWARD", or "REVERSE" pushbuttons at the Lift Table local control pedestal should be disabled and pressing these buttons should have no effect on the Lift Table.					
13	Press the "DOWN" pushbutton at the Lift Table local control pedestal (PC-09-202A).	Verify that pressing the "DOWN" pushbutton has no effect on the Lift Table.	✓		msj
14	Press the "UP" pushbutton at the Lift Table local control pedestal (PC-09-202A).	Verify that pressing the "UP" pushbutton has no effect on the Lift Table.	✓		msj
15	Press the "FORWARD" pushbutton at the Lift Table local control pedestal (PC-09-202A).	Verify that pressing the "FORWARD" pushbutton has no effect on the Lift Table.	✓		msj
16	Press the "REVERSE" pushbutton at the Lift Table local control pedestal (PC-09-202A).	Verify that pressing the "REVERSE" pushbutton has no effect on the Lift Table.	✓		msj

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Door Rotated (Closed) Interlock					
17	Press the "CLOSE PORT" button from the "OVERPACK DRUM ENTRY MENU" at OIU-12-103A.	Verify that a "PORT CLOSING..." message is displayed.	✓		mrg
18	The PCS should pulse energize solenoid valve 07-FEV-700B/C (Close) to smoothly rotate the Entry/Exit Port (DO-07-101) door closed.	Verify that the port door rotates closed.	✓		mrg
19	Unforce LCU 102 register ZSC701. Record the unforced register status below: Unforced ZSC701 Status: <u>1</u>	Verify that register ZSC701 is unforced.	✓		mrg
20	Because the port door is rotated closed, the "Drum Port Down" position switch (07-ZSC-701) should be activated, indicating that the door is rotated closed.	Verify that position switch 07-ZSC-701 is activated.	✓		mrg
21	The PCS should pulse energize solenoid valve 07-FEV-700J/C (Close) to lower the Entry/Exit Port (DO-07-101) door closed.	Verify that the port door lowers closed.	✓		mrg
22	The PCS should de-energize vacuum generation solenoid valve 07-FEV-700D/V to turn off the vacuum generator.	Verify that the vacuum generator is turned off.	✓		mrg
23	The PCS should briefly energize the vacuum isolation solenoid valve (07-FEV-700F) to remove vacuum from the drum lid. <u>release</u> <u>mrg 6-29-97</u> <u>07-FEV-700D/V</u>	Verify that vacuum is vented.	✓		mrg
24	The PCS should then energize solenoid valve 07-FEV-700I/E (Extend) to extend the drum lid detachment cylinder for Entry/Exit Port DO-07-101.	Verify that the drum lid detachment cylinder is extended.	✓		mrg
25	The drum lid should release from the port door.	Verify that the drum lid does not adhere to the port door.	✓		mrg

#18 Door remains vertically raised after rotating closed mrg 6-29-97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Port Door Lowered (Closed) Interlock					
26	The PCS should energize the Lift Table motor (LT-09-202A/M1) to lower the Lift Table to "Drum Centering" height.	Verify that the Lift Table lowers to "Drum Centering" height.	✓		msj
27	The "Drum Port Down" position switch functions as an interlock for the Entry/Exit Port. Because this switch is forced not activated, the Entry/Exit Port (DO-07-101) should not lock. Wait thirty (30) seconds.	Verify that the port door does not lock during the waiting period.	✓		msj
28	Unforce LCU 102 register ZS703A. Record the unforced register status below: Unforced ZS703A Status: <u>1</u>	Verify that register ZS703A is unforced.	✓		msj
29	Because the port door should have been lowered closed, the "Drum Door Closed" position switch (07-ZS-703A) should be activated, indicating that the port door is lowered closed.	Verify that position switch 07-ZS-703A is activated.	✓		msj

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine "Port Failed to Close and Lock" Alarm					
30	The PCS should energize solenoid valve 07-FEV-700A/L (Lock) to extend the port door locking cylinders.	Verify that the port door locking cylinders fully extend to lock the port door.	✓		P/W
31	The door locked position switches (07-ZSC-700A and 07-ZSC-700B) function as an interlock for the Entry/Exit Port. The drum exit sequence should stop and a "Port (101) Failed to Close and Lock" alarm should be generated if the door locked position switches are not activated. Wait thirty (30) seconds.	Verify that the drum lid detachment cylinder does not retract during the waiting period. <i>via air regulator pressure to actuator</i>	✓		A/W
32	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Port (101) Failed to Close and Lock" alarm.	Verify that the alarm has been acknowledged.	✓		P/W
33	Unforce LCU 102 register ZSC700B. Record the unforced register status below: Unforced ZSC700B Status: <u>1</u>	Verify that register ZSC700B is unforced.	✓		P/W
34	Position switch 07-ZSC-700B should be activated, indicating that the port door is locked.	Verify that position switch 07-ZSC-700B is activated.	✓		MW 6/25/99 1/12
35	Because register ZSC700A remains forced not activated, indicating that the port is not fully locked, the "Port (101) Failed to Close and Lock" alarm should not clear.	Verify that the alarm is not cleared.	✓		P/W
36	Unforce LCU 102 register ZSC700A. Record the unforced register status below: Unforced ZSC700A Status: <u>1</u>	Verify that register ZSC700A is unforced:	✓		P/W
37	Position switch 07-ZSC-700A should be activated, indicating that the port door is locked.	Verify that position switch 07-ZSC-700A is activated.	✓		P/W
38	The "Port (101) Failed to Close and Lock" alarm should clear.	Verify that the alarm is cleared.	✓		P/W
39	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "OVERPACK DRUM ENTRY MENU" at OIU-12-103A.	Verify that the "OVERPACK DRUM ENTRY MENU" is displayed.	✓		P/W
40	The PCS should de-energize the port close (lower) solenoid valve 07-FEV-700J/C (Close)	Verify that solenoid valve 07-FEV-700J/C is de-energized.	✓		P/W
41	The PCS should pulse energize solenoid valve 07-FEV-700I/R (Retract) to retract the drum lid detachment cylinder.	Verify that the drum lid detachment cylinder is retracted.	✓		P/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine The Drum Centering Device Not Retracted Interlock					
42	The PCS should pulse-energize solenoid valve 07-FEV-303 (Retract) to retract the drum centering device for Drum Entry/Exit Port DO-07-101.	Verify that the drum centering device retracts.	✓		NA
43	Press the "LOWER LEFT TABLE" button from the "OVERPACK DRUM ENTRY MENU" at OIU-12-103A. <i>START DATA ENTRY</i>	Verify that the "LOWER LEFT TABLE" button has been pressed. <i>START DATA ENTRY</i>	✓		NA
44	The drum centering device retracted position switches (07-ZSO-712A and 07-ZSO-712B), function as an interlock for the Entry/Exit Port. Because these switches are forced not activated, the drum exit sequence should not proceed. The "DRUM EXIT IN PROGRESS..." message should not be displayed. Wait thirty (30) seconds.	Verify that the drum exit sequence does not proceed.	✓		NA
45	Unforce LCU 102 register ZSO712B. Record the unforced register status below: Unforced ZSO712B Status: <u>1</u>	Verify that register ZSO712B is unforced.	✓		NA
46	Position switch 07-ZSO-712B should be activated, indicating that the drum centering device for Entry/Exit Port 107-DO-07-101 is retracted.	Verify that position switch 07-ZSO-712B is activated.	✓		NA
47	Because register ZSO712A remains forced not activated, indicating that the centering device is not fully retracted, the "DRUM EXIT IN PROGRESS..." message should not be displayed on the "OVERPACK DRUM ENTRY MENU" at OIU-12-103A. Wait thirty (30) seconds.	Verify that the drum exit sequence does not proceed.	✓		NA
48	Unforce LCU 102 register ZSO712A. Record the unforced register status below: Unforced ZSO712A Status: <u>1</u>	Verify that register ZSO712A is unforced.	✓		NA
49	Position switch 07-ZSO-712A should be activated, indicating that the drum centering device for Entry/Exit Port DO-07-101 is retracted.	Verify that position switch 07-ZSO-712A is activated.	✓		NA
50	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "OVERPACK DRUM ENTRY MENU" at OIU-12-103A.	Verify that the "OVERPACK DRUM ENTRY MENU" is displayed.	NA		NA
51	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "OVERPACK DRUM ENTRY MENU" at OIU-12-103A.	Verify that the "OVERPACK DRUM ENTRY MENU" is displayed.	NA		NA

#50,51 TEST STEP ERRORS

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)								
Examine "Close and Lock Not Verified" Alarm													
52	Force LCU 102 registers ZSC700A and ZSC700B not activated to indicate that the Entry/Exit Port (DO-07-101) door is not locked. Record the forced register status below: <table><tr><td>Register</td><td>Forced Status</td><td>Method of Confirmation</td></tr><tr><td>ZSC700A</td><td><u>0</u></td><td>1:22/10</td></tr><tr><td>ZSC700B</td><td><u>0</u></td><td>1:22/11</td></tr></table> A "Port (101) Close and Lock Not Verified" alarm should be generated if the port door lock position switches indicate that the port door is unlocked after the drum exit sequence has been completed.	Register	Forced Status	Method of Confirmation	ZSC700A	<u>0</u>	1:22/10	ZSC700B	<u>0</u>	1:22/11	Verify that registers ZSC700A and ZSC700B are forced not activated. Verify that the register status is recorded.	✓	TCW
Register	Forced Status	Method of Confirmation											
ZSC700A	<u>0</u>	1:22/10											
ZSC700B	<u>0</u>	1:22/11											
53	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Port (101) Close and Lock Not Verified" alarm.	Verify that the alarm has been acknowledged.	✓		RW								
54	Unforce LCU 102 register ZSC700A. Record the unforced register status below: Unforced ZSC700A Status: <u>1</u>	Verify that register ZSC700A is unforced.	✓		RW								
55	Position switch 07-ZSC-700A should be activated, indicating that the Entry/Exit Port (DO-07-101) door is locked.	Verify that position switch 07-ZSC-700A is activated.	✓		RS								
56	Because register ZSC700B remains forced not activated, indicating that the port door is not locked, the "Port (101) Close and Lock Not Verified" alarm should not clear.	Verify that the alarm is not cleared.	✓		RW								
57	Unforce LCU 102 register ZSC700B. Record the unforced register status below: Unforced ZSC700B Status: <u>1</u>	Verify that register ZSC700B is unforced.	✓		RW								
58	Position switch 07-ZSC-700B should be activated, indicating that the Entry/Exit Port (DO-07-101) door is locked.	Verify that position switch 07-ZSC-700B is activated.	✓		RW								
59	Because position switches 07-ZSC-700A and 07-ZSC-700B are activated, indicating that the port door is locked, the "Port (101) Close and Lock Not Verified" alarm should clear.	Verify that the alarm is cleared.	✓		RW								
60	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "OVERPACK DRUM ENTRY MENU" at OIU-12-103A.	Verify that the "OVERPACK DRUM ENTRY MENU" is displayed.	✓		TCW								

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✗	Witness (initial)
	Examine "Port Closed and Locked" Interlock				
61	Force LCU 102 register ZS703A not activated to indicate that the Entry/Exit Port (DO-07-101) door is not lowered closed. Record the forced register status below. <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS703A <u>0</u> 1:22/04	Verify that register ZS703A is forced not activated. Verify that the register status is recorded.	✓		PG
62	Press the "LOWER LIFT TABLE" button from the "OVERPACK DRUM ENTRY MENU" at OIU-12-103A. <i>START DRUM EXIT</i>	Verify that the "LOWER LIFT TABLE" button has been pressed.	✓		PG
63	The "DRUM EXIT IN PROGRESS..." message should be displayed on the "OVERPACK DRUM ENTRY MENU" at OIU-12-103A. <i>not 6-29-97</i>	Verify that the "DRUM EXIT IN PROGRESS..." message is displayed.	✓		PG
64	The door lowered closed position switch functions as an interlock for the drum exit sequence. The Lift Table should not lower to its fully lowered position until the door lowered closed position switch 07-ZS-703A is activated. Wait thirty (30) seconds.	Verify that the Lift Table does not lower during the waiting period.	✓		PG
65	Force LCU 102 registers ZSC700A and ZCS700B not activated to indicate that the Entry/Exit Port (DO-07-101) door is not locked. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZSC700A <u>0</u> 1:22/10 ZSC700B <u>0</u> 1:22/11 The door locked position switches function as an interlock for the for the drum exit sequence. The Lift Table should not lower to its fully lowered height unless the port door is closed and locked.	Verify that registers ZSC700A and ZSC700B are forced not activated. Verify that the register status is recorded.	✓		PG
66	Unforce LCU 102 register ZS703A. Record the unforced register status below: Unforced ZS703A Status: <u>1</u>	Verify that register ZS703A is unforced.	✓		PG
67	Position switch 07-ZS-703A should be activated, indicating that the port is closed.	Verify that position switch 07-ZS-703A is activated.	✓		PG

#63 message should not be displayed - because interlock is not met, sequence should not start and message should not be displayed. mod 6-29-97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✗	Witness (Initial)
68	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Port (101) Close and Lock Not Verified" alarm.	Verify that the alarm has been acknowledged.	✓		
69	Press the "LOWER LIFT TABLE" button from the "OVERPACK DRUM ENTRY MENU" at OIU-12-103A. <i>START DRUM EXIT</i>	Verify that the "LOWER LIFT TABLE" button has been pressed.	✓		18
70	The door locked position switches (07-ZSC-700A and 07-ZSC-700B) function as an interlock for the drum exit sequence. The Lift Table should not lower to its fully lowered position until the door locked position switches (07-ZSC-700A and 07-ZSC-700B) are activated. Wait thirty (30) seconds.	Verify that the Lift Table does not lower during the waiting period.	✓		18
71	Unforce LCU 102 register ZSC700A. Record the unforced register status below: Unforced ZSC700A Status: <u>1</u>	Verify that register ZSC700A is unforced.	✓		18
72	Position switch 07-ZSC-700A should be activated, indicating that the Entry/Exit Port (DO-07-101) door is locked.	Verify that position switch 07-ZSC-700A is activated.	✓		18
73	Press the "LOWER LIFT TABLE" button from the "OVERPACK DRUM ENTRY MENU" at OIU-12-103A. <i>START DRUM EXIT</i>	Verify that the "LOWER LIFT TABLE" button has been pressed.	✓		
74	Because register ZSC700B remains forced not activated, indicating that the port door is not locked, the lift table should not lower. Wait thirty (30) seconds.	Verify that the Lift Table does not lower during the waiting period.	✓		18
75	Set the timer period for the "Lift Table Failed to Lower" alarm to one second. Record the timer status below: <u>Register</u> <u>Initial Status</u> <u>Final Status</u> T4:120 Preset <u>45</u> 1 second <u> </u>	Verify that the preset status is set to 1 second.	✓		18
76	Unforce LCU 102 register ZSC700B. Record the unforced register status below: Unforced ZSC700B Status: <u>1</u>	Verify that register ZSC700B is unforced.	✓		18
77	Position switch 07-ZSC-700B should be activated, indicating that the Entry/Exit Port (DO-07-101) door is locked.	Verify that position switch 07-ZSC-700B is activated.	✓		18

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
78	Because position switches 07-ZSC-700A and 07-ZSC-700B are activated, indicating that the port door is locked, the "Port (101) Close and Lock Not Verified" alarm should clear.	Verify that the alarm is cleared.	✓		P/V
79	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "OVERPACK DRUM ENTRY MENU" at OIU-12-103A.	Verify that the "OVERPACK DRUM ENTRY MENU" is displayed.	✓		P/V

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
<p><i>START DRUM ENTRY</i> Examine "Lift Table Failed to Lower" Alarm</p>					
80	Press the "LOWER LIFT TABLE" button from the "OVERPACK DRUM ENTRY MENU" at OIU-12-103A.	Verify that the "LOWER LIFT TABLE" button has been pressed.	✓		PC
81	Because the Lift Table should not complete the lower sequence within one second the "Lift Table (202A) Failed to Lower" alarm should be generated.	Verify that a flashing "Sequence Failed" message is displayed at OIU-12-103A.	✓		PC
82	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Lift Table (202A) Failed to Lower" alarm.	Verify that the alarm has been acknowledged.	✓		PC
83	Restore the timer period for the "Lift Table Failed to Lower" alarm to the initial value previously recorded above. Record the timer status below: <u>Register</u> <u>Initial Status</u> <u>Final Status</u> T4:120 Preset 1 second <u>45</u>	Verify that the preset initial status is restored.	✓		PC
84	Because the Lift Table should continue to lower until it reaches AGV height, the "Lift Table (202A) Failed to Lower" alarm should clear.	Verify that the alarm has cleared.	✓		PC
85	The PCS should energize the Lift Table motor (LT-202A/M1) to lower the Lift Table to AGV height.	Verify that the Lift Table lowers to AGV height.		✓	PC
86	The Lift Table "AGV LOAD HEIGHT" indicator (09-ZL-233E) on the Lift Table Control Pedestal (PC-09-202A) should be illuminated, indicating that the Lift Table is at AGV height.	Verify that the "AGV LOAD HEIGHT" indicator is illuminated.	✓		PC

* #84 Alarm does not clear now because alarm rung latches in and
 #85 does not unlatch. NB19:3/5 unlatched, set to 0 to unlatch
 alarm rung, so that Sequence can continue. mps 6-29-97
 Reference Test Exception #85

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine "Lift Table Conveyor Reverse Failed" Alarm					
87	After drum has moved approximately one foot, open the 480 volt lift table breaker to remove power from the lift table roller conveyor.	Verify that the drum is not positioned at the AGV end of the Lift Table.	✓		AW
88	The roller conveyor should stop.	Verify that the lift table roller conveyor has stopped and remains stopped.	✓		AW
89	The "DRUM AT AGV END" status indicator (09-ZL-233A) at the Lift Table Local Control Pedestal (PC-07-202A) should not be illuminated, indicating that the drum is not at the AGV end of the Lift Table.	Verify that the "DRUM AT AGV END" status indicator is not illuminated.	✓		AW
90	Because the Drum Exit sequence has not been successfully completed, the "DRUM EXIT COMPLETE" message should not be displayed on the "OVERPACK DRUM ENTRY MENU" at OIU-12-103A. Wait thirty (30) seconds.	Verify that the "DRUM EXIT COMPLETE" message is not displayed during the waiting period.	✓		AW
91	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Lift Table (202A) Conveyor Reverse Failed" alarm.	Verify that the "Lift Table (202A) Conveyor Reverse Failed" alarm has been acknowledged.	✓		AW
92	Close the 480 volt Lift Table breaker to restore power to the lift table. The roller conveyor should not start up again after power is restored.	Verify that the Lift Table breaker is closed.	✓		AW
93	Manually activate (e.g., "Break the beam") the "Drum at End of Conveyor" position switch (09-ZS-233E) to simulate the 85 gallon drum at the AGV end of the Lift Table. This switch should remain activated.	Verify that the "Drum at End of Conveyor" position switch is activated.	✓		AW
94	The "DRUM AT AGV END" status indicator (09-ZL-233A) at the Lift Table Local Control Pedestal (PC-07-202A) should be illuminated, indicating that the drum is at the AGV end of the Lift Table.	Verify that the "DRUM AT AGV END" status indicator (09-ZL-233A) is illuminated.	✓		AW
95	Because the drum is positioned at the AGV end of the Lift Table (simulated), the "Lift Table (202A) Conveyor Reverse Failed" alarm should clear.	Verify that the "Lift Table (202A) Conveyor Reverse Failed" alarm has cleared.	✓		AW
96	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "OVERPACK DRUM ENTRY MENU" at OIU-12-103A.	Verify that the "OVERPACK DRUM ENTRY MENU" is displayed.	✓		AW
97	Because the Drum Exit sequence is successfully completed, the "DRUM EXIT COMPLETE" message should be displayed on the "OVERPACK DRUM ENTRY MENU" at OIU-12-103A.	Verify that the "DRUM EXIT COMPLETE" message is displayed.	✓		AW

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
98	Press the "CLEAN DRUM READY FOR PICKUP" button on the "OVERPACK DRUM ENTRY MENU" at OIU-12-103A to indicate that the Drum is ready for pickup by the Automated Guided Vehicle (AGV).	Verify that the "CLEAN DRUM READY FOR PICKUP" button has been pressed.	✓		PC
99	The "DRUM PICKUP IN PROGRESS..." message should be displayed on the "OVERPACK DRUM ENTRY MENU" at OIU-12-103A.	Verify that the "DRUM PICKUP IN PROGRESS..." is displayed.		✓	ms
100	Remove the 320 liter (85 gallon) overpack drum from the Lift Table.	Verify that the drum has been removed from the Lift Table.	✓		ms
TEST CASE 13031A-85.06 COMPLETE					

#99 Message not initially displayed because N31:3/10 bit activated, in all likely hood due to previous activation of this button without requisite AGV pickup. N31:3/10 set to 0, button pressed, message displayed. mpe 6-29-97
 * 7-2-97 - Reference TE # 86 mpe

TEST CASE 13031A-85.07 DELIVER DRUM FROM LLW ENTRY GLOVEBOX (GB-07-101) TO TRANSFER CAR (TC-07-101)	7-2
Test Case Setup	7-2
Examine Transfer Port Seal "Loss of Pressure" Alarm	7-3
Examine Entry/Exit Port Unlocked, Transfer Port Seal Deflation Interlock	7-4
Examine Transfer Port Seal Deflated, Transfer Port Opening Interlock	7-5
Examine Entry/Exit Port Unlocked, Transfer Port Opening Interlock	7-6
Examine Transfer Port Open Message Interlock	7-7
Examine Transfer Car in Position, Hoist/Trolley/Lifter Pendant Enabled Interlock	7-8
Lower Drum to Transfer Car	7-9
Examine "Transfer Port Failed to Close" Alarm	7-10

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)		EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.07 DELIVER DRUM FROM LLW ENTRY GLOVEBOX (GB-07-101) TO TRANSFER CAR (TC-07-101)						
Test Case Setup						
1	Force LCU 102 registers ZSC700A and ZSC700B not activated to indicate that the Entry/Exit Port (DO-07-101) door is unlocked. Record the forced register status below:		Verify that registers ZSC700A and ZSC700B are forced not activated. Verify that the register status is recorded.	✓		RW
	<u>Register</u>	<u>Forced Status</u>	<u>Method of Confirmation</u>			
	ZSC700A	<u>0</u>	1:22/10			
	ZSC700B	<u>0</u>	1:22/11			
2	Force LCU 102 register PSL701 activated to simulate the Transfer Port Seal "inflated" condition. Record the forced register status below:		Verify that register PSL701 is forced not activated. Verify that the register status is recorded.	✓		RW
	<u>Register</u>	<u>Forced Status</u>	<u>Method of Confirmation</u>			
	PSL701	<u>1</u>	1:22/15			
3	Force LCU 102 register ZSO705 not activated to simulate the Transfer Port Door "not open" condition. Record the forced register status below:		Verify that register ZSO705 is forced not activated. Verify that the register status is recorded.	✓		RW
	<u>Register</u>	<u>Forced Status</u>	<u>Method of Confirmation</u>			
	ZSO705	<u>0</u>	1:22/17			
4	Force LCU 102 register PSL700 not activated to simulate the Transfer Port Seal "leaking" condition. Record the forced register status below:		Verify that register PSL700 is forced not activated. Verify that the register status is recorded.	✓		RW
	<u>Register</u>	<u>Forced Status</u>	<u>Method of Confirmation</u>			
	PSL700	<u>0</u>	1:22/14			
5	Use Operator Interface Unit OIU-12-103B or an appropriate method to move the Transfer Car (TC-07-101) to "Relid" position.		Verify that the Transfer Car (TC-07-101) is NOT located at the LLW Entry Glovebox Position.	✓		RW

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Transfer Port Seal "Loss of Pressure" Alarm					
* 6	Because the Transfer Port Seal "Inflated" pressure switch (07-PSL-700) is forced activated, an audible "Transfer Port Seal Leaking" alarm should sound.	Verify that an audible (RTAP) alarm is initiated in the control room.		✓	RW
7	Confirm that the "LLW ENTRY GLOVEBOX MAIN MENU" is displayed at OIU-12-103A. If a sub-menu is displayed, press the "MAIN MENU" button to return to the "LLW ENTRY GLOVEBOX MAIN MENU".	Verify that the "LLW ENTRY GLOVEBOX MAIN MENU" is displayed.	✓		RW
8	Press the "TRANSFER MENU" button from the "LLW ENTRY GLOVEBOX MAIN MENU" at OIU-12-103A.	Verify that the "TRANSFER MENU" is displayed.	✓		RW
9	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Port (101) Close and Lock Not Verified" alarm.	Verify that the alarm has been acknowledged.	✓		RW
10	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Transfer Port (102) Seal Pressure Lost" alarm.	Verify that the alarm has been acknowledged.	✓		RW
11	Unforce LCU 102 register PSL700. Record the unforced register status below: Unforced PSL700 Status: <u>✓</u>	Verify that register PSL700 is unforced.	✓		RW
12	Because the Transfer Port Seal is inflated, the Port Seal "Inflated" pressure switch 07-PSL-700 should be activated	Verify that the pressure switch 07-PSL-700 is activated.	✓		RW
13	The "Transfer Port (102) Seal Pressure Lost" alarm should clear.	Verify that the alarm has cleared.	✓		RW
* 14	The audible alarm should cease.	Verify that the audible alarm (RTAP) in the control room ceases.		✓	RW
15	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "TRANSFER MENU" at OIU-12-103A.	Verify that the "TRANSFER MENU" is displayed.	✓		RW

* See TE #717 RW 9/10/97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Entry/Exit Port Unlocked, Transfer Port Seal Deflation Interlock					
16	Press the "OPEN TRANSFER PORT" button from the "TRANSFER MENU" at OIU-12-103A.	Verify that the "OPEN TRANSFER PORT" button has been pressed.	✓		PN
17	Because the Entry/Exit Port locked registers ZSC700A and ZSC700B have been forced not activated to simulate the Entry/Exit Port door "unlocked" condition, the Transfer Port Seal should not deflate. Wait thirty (30) seconds.	Verify that the Transfer Port Seal does not deflate during the waiting period.	✓		R/W
18	Unforce LCU 102 register ZSC700B. Record the unforced register status below: Unforced ZSC700B Status: <u>1</u>	Verify that register ZSC700B is unforced.	✓		R/W
19	Position switch 07-ZSC-700B should be activated, indicating that the Entry/Exit Port (DO-07-101) door is locked.	Verify that position switch 07-ZSC-700B is activated.	✓		R/W
20	Press the "OPEN TRANSFER PORT" button from the "TRANSFER MENU" at OIU-12-103A.	Verify that the "OPEN TRANSFER PORT" button has been pressed.	✓		R/W
21	Because Entry/Exit Port "locked" register ZSC700A remains forced not activated, indicating that the port door is not locked, the Transfer Port seal should not deflate. Wait thirty (30) seconds.	Verify that the Transfer Port Seal does not deflate during the waiting period.	✓		R/W
22	Unforce LCU 102 register ZSC700A. Record the unforced register status below: Unforced ZSC700A Status: <u>1</u>	Verify that register ZSC700A is unforced.	✓		R/W
23	Position switch 07-ZSC-700A should be activated, indicating that the Entry/Exit Port (DO-07-101) door is locked.	Verify that position switch 07-ZSC-700A is activated.	✓		R/W
24	Press the "OPEN TRANSFER PORT" button from the "TRANSFER MENU" at OIU-12-103A.	Verify that the "OPEN TRANSFER PORT" button has been pressed.	✓		R/W
25	The PCS should energize the Transfer Port vacuum isolation solenoid valve 07-FEV-700G/O (Open) and vacuum vacuum generation solenoid valve 07-FEV-700H/DE (Deflate) to deflate the Transfer Port seal. <i>msg 6-29-97</i>	Verify that the Transfer Port seal is deflated.		✓	R/W
26	The "TRANSFER PORT OPENING..." message should be displayed on the "TRANSFER MENU" at OIU-12-103A.	Verify that the "TRANSFER PORT OPENING..." message is displayed.		✓	R/W

#25, 26 Inter lock added to prevent port door from opening unless transfer car at entry position (OIU indicator added for car at entry) 25 710 Transfer car not at entry forced not activated to allow port to open.
Reference TE #87 mpl 6-29-97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Transfer Port Seal Deflated, Transfer Port Opening Interlock					
27	Because the Transfer Port Seal pressure switch (07-PSLL-701) has been forced activated to simulate the Transfer Port Seal "inflated" condition, the Transfer Port should not open. Wait thirty (30) seconds.	Verify that the Transfer Port does not open during the waiting period.	✓		mg
28	Force LCU 102 register ZSC700B not activated to simulate the Entry/Exit Port (DO-07-101) door "unlocked" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZSC700B <u> d </u> I:22/11 _____	Verify that register ZSC700B is forced not activated. Verify that the register status is recorded.	✓ ✓		mg mg
29	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Port (101) Close and Lock Not Verified" alarm.	Verify that the alarm has been acknowledged.	✓		mg
30	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "TRANSFER MENU" at OIU-12-103A.	Verify that the "TRANSFER MENU" is displayed.	✓		mg
31	Unforce LCU 102 register PSLL701. Record the unforced register status below: Unforced PSLL701 Status: <u> 0 </u>	Verify that register PSLL701 is unforced.	✓		RW
32	Because the Transfer Port Seal is deflated, the "Seal Deflated" pressure switch (07-PSLL-701) should not be activated, indicating that the Transfer Port Seal is deflated.	Verify that pressure switch 07-PSLL-701 is not activated.	✓		RE
33	Because the Transfer Port Seal "Seal Deflated" pressure switch (07-PSLL-701) is not activated, the PCS should de-energize the Transfer Port isolation <u>solenoid</u> valve 07-FEV-700G and de-energize the pressure generation solenoid <u>solenoid</u> valve 07-FEV-700H. RW 6-29-97	Verify that solenoid valve 07-FEV-700G is de-energized. Verify that solenoid valve 07-FEV-700H is de-energized.	✓		RW

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Entry/Exit Port Unlocked, Transfer Port Opening Interlock					
34	Because the Entry/Exit Port locked position switch (07-ZSC-700B) register ZSC700B has been forced not activated to simulate the Entry/Exit Port door "unlocked" condition, the Transfer Port should not open. Wait thirty (30) seconds.	Verify that the Transfer Port does not open during the waiting period.	✓		RL ✓
35	Unforce LCU 102 register ZSC700B. Record the unforced register status below: Unforced ZSC700B Status: <u>1</u>	Verify that register ZSC700B is unforced.	✓		RL ✓
36	Because the port door is locked, position switch 07-ZSC-700B should be activated and the Transfer Port Opening Sequence should continue.	Verify that the position switch 07-ZSC-700B is activated.	✓		RL ✓
37	The PCS should pulse energize solenoid valve 07-FEV-700E/O (Open) to smoothly translate the Transfer Port door open.	Verify that the Transfer Port smoothly translates open.	✓		RL ✓
38	The Transfer Port door should not hit the Entry/Exit Port locking cylinder block.	Verify that the Transfer Port door does not hit the locking cylinder block.	✓		RL ✓
39	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "TRANSFER MENU" at OIU-12-103A.	Verify that the "TRANSFER MENU" is displayed.	✓		RL ✓

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Transfer Port Open Message Interlock					
40	Because register ZSO705 has been forced not activated to simulate the Transfer Port door "not open" condition, the Transfer Port opening sequence should be considered unsuccessful and the "TRANSFER PORT OPEN" message should not be displayed. Wait thirty (30) seconds.	Verify that the "TRANSFER PORT OPEN" message is not displayed during the waiting period.	✓		R/W
41	Unforce LCU 102 register ZSO705. Record the unforced register status below: Unforced ZSO705 Status: <u>1</u>	Verify that register ZSO705 is unforced.	✓		R/W
42	Because Transfer Port is open and the Transfer Port "Open" position switch (07-ZSO-705) is no longer forced not activated, the Transfer Port Opening Sequence should be considered successful and the "TRANSFER PORT OPEN" message should be displayed on the "TRANSFER MENU" at OIU-12-103A.	Verify that the "TRANSFER PORT OPEN" message is displayed.	✓		R/W

Below Additional Steps added, see TE #87 mps 6-29-92

42a UNForce ZS 710 (TC at Entry) ✓ R/W

switched to Maint mode, opened Xfer Port, switched to AUTO mode
and verified that hoist pendant PC-07-101
not Enabled.

Forced ZS 710 not activated to simulate TC at Entry,
PC-07-101 Enabled.

R/W 6-29-92

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Transfer Car in Position, Hoist/Trolley/Lifter Pendant Enabled Interlock					
43	Confirm that the "ENABLED" indicator on Hoist/Trolley/Lifter Pendant (PC-07-001) is not illuminated. Because the Transfer Car is not yet positioned at the Entry Glovebox position, the pendant should not be enabled.	Verify that the "ENABLED" indicator is NOT illuminated.	✓		PK
44	Press every button on the Hoist/Trolley/Lifter Pendant (PC-07-001) to confirm that the Hoist/Trolley/Lifter is not enabled.	Verify that pressing the buttons has no effect on the Hoist, Trolley, or the Drum Lifter.	✓		PK
45	Press the "MAIN MENU" button to return to the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.	✓		PK
46	Press the "TRANSFER CAR MENU" button from the "LLW SORTING GLOVEBOX MAIN MENU" to display the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "TRANSFER CAR MENU" is displayed.	✓		PK
47	Press the "ENTRY" button from the "TRANSFER CAR MENU" at OIU-12-103B to move the Transfer Car (TC-07-101) to the LLW Entry Glovebox position.	Verify that the "ENTRY" button has been pressed.	✓		PK
48	A "TRANSFER CAR MOVING TO ENTRY POSITION..." message should be displayed on the "TRANSFER CAR MENU" at OIU-12-103B while the Transfer Car is moving to the Entry position.	Verify that the "TRANSFER CAR MOVING TO ENTRY POSITION..." message is displayed.	✓		PK
49	The Transfer Car should activate position switch 07-ZS-710 when it reaches the Entry Glovebox Position.	Verify that position switch 07-ZS-710 is activated.	✓		PK
50	The "TRANSFER CAR AT ENTRY POSITION" message should be displayed at OIU-12-103B after the Transfer Car reaches the Entry position (07-ZS-710 activated).	Verify that the "TRANSFER CAR AT ENTRY POSITION" message is displayed.	✓		PK
51	Confirm that the "ENABLED" indicator on Hoist/Trolley/Lifter Pendant (PC-07-001) is illuminated. Because the Transfer Car is positioned at the Entry Glovebox position, the pendant should be enabled.	Verify that the "ENABLED" indicator is illuminated.	✓		PK
52	Because position switch 07-ZS-710 is activated, indicating that the Transfer Car is at the Entry Glovebox Position, the "TRANSFER CAR IN POSITION" message should be displayed on the "TRANSFER MENU" at OIU-12-103A.	Verify that the "TRANSFER CAR IN POSITION" message is displayed.	✓		PK

* See TE #104

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Lower Drum to Transfer Car					
53	Press the "LOWER" pushbutton on the Hoist/Trolley/Lifter pendant (PC-07-001) to completely lower the drum.	Verify that "LOWER" button has been pressed.	✓		R/W
54	The drum should rest centered on the Transfer Car and slack should be noted in the Hoist chain.	Verify that the drum is lowered onto the Transfer Car.	✓		R/W
55	Position switch 07-ZS-331 should be activated, indicating that the drum is positioned on the Transfer Car.	Verify that position switch 07-ZS-331 is activated.	✓		R/W
56	Press the "OPEN" pushbutton on the Hoist/Trolley/Lifter pendant (PC-07-001) as needed until the Drum Lifter is completely open.	Verify that "OPEN" button has been pressed.	✓		R/W
57	The Drum Lifter grab arms should open.	Verify that the Drum Lifter is completely open.	✓		R/W
58	The "Drum Lifter Open" position switch (07-ZSO-704) should be activated, indicating that the Drum Lifter is open.	Verify that the "Drum Lifter Open" position switch is activated.	✓		R/W
59	The Hoist/Trolley/Lifter "OPENED" indicator should be illuminated, indicating that the Drum Lifter is open.	Verify that the "OPENED" indicator is illuminated.	✓		R/W
60	Press the "RAISE" pushbutton on the Hoist/Trolley/Lifter pendant (PC-07-001) until the Drum Lifter is fully raised.	Verify that "RAISE" button has been pressed.	✓		R/W
61	The Hoist/Drum Lifter should fully raise so that the Drum Transfer Port can be closed.	Verify that the Hoist/Drum Lifter is fully raised.	✓		R/W
62	The "Hoist Raised" position switch (07-ZS-702C) should be activated, indicating that the Drum Lifter is fully raised.	Verify that the "Hoist Raised" position switch is activated.	✓		R/W
63	The "HOIST RAISED LIMIT" indicator on the Hoist/Trolley/Lifter pendant should be illuminated, indicating that the hoist is fully raised.	Verify that the "HOIST RAISED LIMIT" indicator is illuminated.	✓		R/W
64	Because the Hoist is fully raised, the PCS should disable the Hoist/Trolley/Lifter pendant (PC-07-001).	Verify that the "ENABLED" indicator is NOT illuminated.	✓		R/W
65	Press every button on the Hoist/Trolley/Lifter Pendant (PC-07-001) to confirm that the Hoist/Trolley/Lifter is not enabled.	Verify that pressing the buttons has no effect on the Hoist, Trolley, or the Drum Lifter.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine "Transfer Port Failed to Close" Alarm					
66	Force LCU 102 register ZSC705 not activated to simulate the Transfer Port Door "not closed" condition. Record the forced register status below: Register Forced Status Method of Confirmation ZSC705 0 I:22/16	Verify that register ZSC705 is forced not activated. Verify that the register status is recorded.	✓		RW
67	Press the "CLOSE TRANSFER PORT" button from the "TRANSFER MENU" at OIU-12-103A.	Verify that the "CLOSE TRANSFER PORT" button has been pressed.	✓		RN
68	The "TRANSFER PORT CLOSING..." message should be displayed on the "TRANSFER MENU" at OIU-12-103A.	Verify that the "TRANSFER PORT CLOSING..." message is displayed.	✓		RW
69	The PCS should pulse energize solenoid valve 07-FEV-700E/C (Close) to translate the Transfer Port door closed.	Verify that the Transfer Port door translates closed.	✓		RW
70	Because position switch 07-ZSC-705 is forced not activated, the port closing sequence should not be considered successful, the "TRANSFER PORT CLOSED" message should not be displayed, and a "Transfer Port (102) Failed to Close" alarm should be generated. Wait thirty (30) seconds.	Verify that the "TRANSFER PORT CLOSED" message is not displayed during the waiting period.	✓		RW
71	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Transfer Port (102) Failed to Close" alarm.	Verify that the alarm has been acknowledged.	✓		RW
72	Unforce LCU 102 register ZSC705. Record the unforced register status below: Unforced ZSC705 Status: 1	Verify that register ZSC705 is unforced.	✓		RW
73	Position switch 07-ZSC-705 should be activated, indicating that the port door is locked.	Verify that position switch 07-ZSC-705 is activated.	✓		RW
74	The "Transfer Port (102) Failed to Close" alarm should clear.	Verify that the alarm is cleared.	✓		RW
75	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "TRANSFER MENU" at OIU-12-103A.	Verify that the "TRANSFER MENU" is displayed.	✓		RW
76	The Transfer Port seal should fully inflate.	Verify that the Transfer Port seal is fully inflated.	✓		RW
77	The "TRANSFER PORT CLOSED" message should be displayed on the "TRANSFER MENU" at OIU-12-103A.	Verify that the "TRANSFER PORT CLOSED" message is displayed.	✓		RW

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass:	Fail:	Witness (initial)
78	Remove the empty drum from the Transfer Car (Or from replacement support stand if Transfer Car is not available to support testing).	Verify that the empty waste drum has been removed.	✓		PV
79	Press the "MAIN MENU" button to display the "LLW ENTRY GLOVEBOX MAIN MENU" at OIU-12-103A.	Verify that the "LLW ENTRY GLOVEBOX MAIN MENU" is displayed.	✓		PV
80	Because all glovebox items should be initialized, the "SYSTEM INITIALIZED" message should be displayed on the "LLW ENTRY GLOVEBOX MAIN MENU" at OIU-12-103A.	Verify that the "SYSTEM INITIALIZED" message is displayed.	✓		PV
TEST CASE 13031A-85.07 COMPLETE					

TEST CASE 13031A-85.08 EXAMINE LLW SORTING GLOVEBOX (GB-07-102) INITIALIZATION CONDITIONS	8-2
Bagless Transfer Port Closed Initialization	8-2
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1. PDFSL switches & PDA Forced to Mute Alarm Beepers
 2. Manipulator position switches Forced to simulate parked condition of manipulator. Required due to unavailability of manipulator.
 - X 3. Forced PS395D (Tipper grab Arm Hydraulic) as required to support testing.
- Commenced Testing 2/16/92 0830 PHB
- X See TE #150

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.08 EXAMINE LLW SORTING GLOVEBOX (GB-07-102) INITIALIZATION CONDITIONS					
Bagless Transfer Port Closed Initialization					
1	Confirm that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed at OIU-12-103B. If a sub-menu is displayed, press the "MAIN MENU" button to return to the "LLW SORTING GLOVEBOX MAIN MENU".	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.	✓		AW
2	Typically, "Maintenance" mode is selected by placing the Data Management System (DMS) Terminal "AUTO/MAINTENANCE" mode switch to the "MAINTENANCE" position. Record the method used to place the LLW Sorting Glovebox in "Maintenance" mode below: Maintenance Mode Method: <u>Key switch</u>	Verify that the method used to place the LLW Sorting Glovebox in Maintenance Mode is recorded.	✓		AW
3	Typically, "Automatic" mode is selected by placing the Data Management System (DMS) Terminal "AUTO/MAINTENANCE" mode switch to the "AUTOMATIC" position. Record the method used to place the LLW Sorting Glovebox in "Automatic" mode below: Automatic Mode Method: <u>Key switch</u>	Verify that the method used to place the LLW Sorting Glovebox in Automatic Mode is recorded.	✓		AW
4	Place the LLW Sorting Glovebox in "Maintenance" mode.	Verify that the glovebox is in "Maintenance" mode.	✓		AW
5	Force LCU 102 digital input register DO07105/CS not activated to simulate the Bagless Transfer Port (DO-07-105) open condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> DO105_CS 0 DO07105_CS	Verify that register DO07105/CS is forced not activated. Verify that the register status is recorded.	✓		AW

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
6	Place the LLW Sorting Glovebox in "Automatic" mode to allow the glovebox to re-initialize. The PCS should check the status of glovebox devices to ensure that they are initialized.	Verify that the glovebox is in "Automatic" mode.	✓		RA
7	Because register DO105/CS is forced not activated, simulating a port open condition, the "SYSTEM NOT INITIALIZED" message should be displayed on the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		RA
8	Press the "DIAGNOSTICS MENU" button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "DIAGNOSTICS MENU" is displayed.	✓		RA
9	The "DO-07-105 BAGLESS TRANSFER PORT NOT CLOSED" message should be displayed in red on the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "DO-07-105 BAGLESS TRANSFER PORT NOT CLOSED" message is displayed.	✓		RA
10	Unforce LCU 102 register DO07105/CS. Record the unforced register status below: Unforced DO105/CS Status: <u>1</u>	Verify that register DO07105/CS is unforced.	✓		RA
11	The "DO-07-105 BAGLESS TRANSFER PORT CLOSED" message should be displayed in green on the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "DO-07-105 BAGLESS TRANSFER PORT CLOSED" message is displayed.	✓		RA
12	Press the "MAIN MENU" button from the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.	✓		RA
13	Because the Bagless Transfer Port is closed and all other glovebox items should be initialized, the "SYSTEM INITIALIZED" message should be displayed on the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "SYSTEM INITIALIZED" message is displayed.	✓		RA
14	Place the LLW Sorting Glovebox in "Maintenance" mode.	Verify that the glovebox is in "Maintenance" mode.	✓		RA

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Transfer Car at Entry Position Initialization					
15	Force LCU 102 register ZS710 not activated to simulate the Transfer Car not at Entry Position condition. Record the forced register status below: <div> <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> </div> ZS710 <u>1</u> I:23/04	Verify that register ZS710 is forced not activated. Verify that the forced register status is recorded.	✓		R/W
16	Place the LLW Sorting Glovebox in "Automatic" mode to allow the glovebox to re-initialize.	Verify that the glovebox is in "Automatic" mode.	✓		R/W
17	Because register ZS710 is forced not activated, simulating the Transfer Car not at Entry Position condition, the "SYSTEM NOT INITIALIZED" message should be displayed on the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		R/W
18	Press the "DIAGNOSTICS MENU" button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B. <i>AT ENTRY</i>	Verify that the "DIAGNOSTICS MENU" is displayed.	✓		R/W
19	The "TC-07-101 TRANSFER CAR NOT IN POSITION" message should be displayed in red on the "DIAGNOSTICS MENU" at OIU-12-103B. <i>R/W 9/14/99</i>	Verify that the "TC-07-101 TRANSFER CAR NOT IN POSITION" message is displayed. <i>AT ENTRY</i>	✓		R/W
20	Unforce LCU 102 register ZS710. Record the unforced register status below: Unforced ZS710 Status: <u>0</u> <i>AT ENTRY</i>	Verify that register ZS710 is unforced.	✓		R/W
21	The "TC-07-101 TRANSFER CAR IN POSITION" message should be displayed in green on the "DIAGNOSTICS MENU" at OIU-12-103B. <i>R/W 9/14/99</i>	Verify that the "TC-07-101 TRANSFER CAR IN POSITION" message is displayed. <i>AT ENTRY</i>	✓		R/W
22	Press the "MAIN MENU" button from the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.	✓		R/W
23	Because the Transfer Car (TC-07-101) is positioned at the LLW Entry Glovebox and all other glovebox items should be initialized, the "SYSTEM INITIALIZED" message should be displayed on the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "SYSTEM INITIALIZED" message is displayed.	✓		R/W
24	Place the LLW Sorting Glovebox in "Maintenance" mode.	Verify that the glovebox is in "Maintenance" mode.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✗	Witness (initial)
Hoist Raised Initialization					
25	Force LCU 102 register ZS730C not activated to simulate the "Hoist Not Fully Raised" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS730C <u>1</u> I:32/O2	Verify that register ZS730C is forced not activated. Verify that the forced register status is recorded.	✓		R/W
26	Place the LLW Sorting Glovebox in "Automatic" mode to allow the glovebox to re-initialize.	Verify that the glovebox is in "Automatic" mode.	✓		R/W
27	Because register ZS730C is forced not activated to simulate the hoist not fully raised, the "SYSTEM NOT INITIALIZED" message should be displayed on the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		R/W
28	Press the "DIAGNOSTICS MENU" button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "DIAGNOSTICS MENU" is displayed.	✓		R/W
29	The "CR-07-101C HOIST NOT RAISED" message should be displayed in red on the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "CR-07-101C HOIST NOT RAISED" message is displayed.	✓		R/W
30	Unforce LCU 102 register ZS730C. Record the unforced register status below: Unforced ZS730C Status: <u>0</u>	Verify that register ZS730C is unforced.	✓		R/W
31	The "CR-07-101C HOIST RAISED" message should be displayed in green on the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "CR-07-101C HOIST RAISED" message is displayed.	✓		R/W
32	Press the "MAIN MENU" button from the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.	✓		R/W
33	Because the Hoist is fully raised and all other glovebox items should be initialized, the "SYSTEM INITIALIZED" message should be displayed on the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "SYSTEM INITIALIZED" message is displayed.	✓		R/W
34	Place the LLW Sorting Glovebox in "Maintenance" mode.	Verify that the glovebox is in "Maintenance" mode.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Hoist At Loadout Initialization					
35	Force LCU 102 register ZS730A not activated to simulate the "Hoist Trolley Not at Tray Loadout Position" condition. Record the forced register status below: <div> <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS730A <u>0</u> <u>1:32/00</u> </div>	Verify that register ZS730A is forced not activated. Verify that the forced register status is recorded.	✓		<i>AW</i>
36	Place the LLW Sorting Glovebox in "Automatic" mode to allow the glovebox to re-initialize.	Verify that the glovebox is in "Automatic" mode.	✓		<i>R/W</i>
37	Because register ZS730A is forced not activated, to simulate the Hoist Trolley NOT at the "Tray Loadout" position, the "SYSTEM NOT INITIALIZED" message should be displayed on the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		<i>R/W</i>
38	Press the "DIAGNOSTICS MENU" button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "DIAGNOSTICS MENU" is displayed. <i>CR-07-101C</i>	✓		<i>R/W</i>
39	The "HOIST NOT AT LOADOUT" message should be displayed in red on the "DIAGNOSTICS MENU" at OIU-12-103B. <i>R/W 2/16/07</i>	Verify that the "HOIST NOT AT LOADOUT" message is displayed.	✓		<i>R/W</i>
40	Unforce LCU 102 register ZS730A. Record the unforced register status below: Unforced ZS730A Status: <u>1</u>	Verify that register ZS730A is unforced.	✓		<i>R/W</i>
41	The "CR-07-101C HOIST AT LOADOUT" message should be displayed in green on the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "CR-07-101C HOIST AT LOADOUT" message is displayed.	✓		<i>R/W</i>
42	Press the "MAIN MENU" button from the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.	✓		<i>R/W</i>
43	Because the hoist is at the Tray Loadout position and all other glovebox items should be initialized, the "SYSTEM INITIALIZED" message should be displayed on the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "SYSTEM INITIALIZED" message is displayed.	✓		<i>R/W</i>
44	Place the LLW Sorting Glovebox in "Maintenance" mode.	Verify that the glovebox is in "Maintenance" mode.	✓		<i>R/W</i>

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Sorting Table Lowered Initialization					
45	Force LCU 102 register ZS716A not activated simulate the Sorting Table not Lowered condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS716A <u>0</u> I:27/04	Verify that register ZS716A is forced not activated. Verify that the forced register status is recorded.	✓		R/W
46	Place the LLW Sorting Glovebox in "Automatic" mode to allow the glovebox to re-initialize.	Verify that the glovebox is in "Automatic" mode.	✓		R/W
47	Because register ZS716A is forced not activated to simulate the Sorting Table not lowered, the "SYSTEM NOT INITIALIZED" message should be displayed on the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		R/W
48	Press the "DIAGNOSTICS MENU" button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "DIAGNOSTICS MENU" is displayed.	✓		R/W
49	The "ST-07-101 TABLE NOT IN LOWERED POSITION" message should be displayed in red on the "DIAGNOSTICS MENU" at OIU-12-103B. <i>R/W 7/16/97</i>	Verify that the "ST-07-101 TABLE NOT IN LOWERED POSITION" message is displayed.	✓		R/W
50	Force LCU 102 register ZS716B not activated simulate the Sorting Table not Lowered condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS716B <u>0</u> I:27/05	Verify that register ZS716B is forced not activated. Verify that the forced register status is recorded.	✓		R/W
51	Unforce LCU 102 register ZS716A. Record the unforced register status below: Unforced ZS716A Status: <u>1</u>	Verify that register ZS716A is unforced.	✓		R/W
52	The "ST-07-101 TABLE NOT IN LOWERED POSITION" message should continue to be displayed in red on the "DIAGNOSTICS MENU" at OIU-12-103B. <i>R/W 7/16/97</i>	Verify that the "ST-07-101 TABLE NOT IN LOWERED POSITION" message is displayed.	✓		R/W
53	Unforce LCU 102 register ZS716B. Record the unforced register status below: Unforced ZS716B Status: <u>1</u>	Verify that register ZS716B is unforced.	✓		R/W
54	The "ST-07-101 TABLE IN LOWERED POSITION" message should be displayed in green on the "DIAGNOSTICS MENU" at OIU-12-103B. <i>R/W 7/16/97</i>	Verify that the "ST-07-101 TABLE IN LOWERED POSITION" message is displayed.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
55	Press the "MAIN MENU" button from the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.	✓		ALW
56	Because switches 07-ZS-716A and 07-ZS-716B should indicate that the Sorting Table is fully Lowered and all other glovebox items should be initialized, the "SYSTEM INITIALIZED" message should be displayed on the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "SYSTEM INITIALIZED" message is displayed.	✓		ALW
57	Place the LLW Sorting Glovebox in "Maintenance" mode.	Verify that the glovebox is in "Maintenance" mode.	✓		ALW

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Sorting Table Fully Retracted Initialization					
58	Force LCU 102 register ZS717C not activated to simulate the "Sorting Table Not Fully Retracted" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS717C <u>0</u> I:27/10	Verify that register ZS717C is forced not activated. Verify that the forced register status is recorded.	✓		AK
59	Place the LLW Sorting Glovebox in "Automatic" mode to allow the glovebox to re-initialize.	Verify that the glovebox is in "Automatic" mode.	✓		AK
60	Because register ZS717C is forced not activated, the "SYSTEM NOT INITIALIZED" message should be displayed on the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		AK
61	Press the "DIAGNOSTICS MENU" button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "DIAGNOSTICS MENU" is displayed.	✓		AK
62	The "ST-07-101 TABLE NOT FULLY RETRACTED" message should be displayed in red on the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "ST-07-101 TABLE NOT FULLY RETRACTED" message is displayed.	✓		AK
63	Unforce LCU 102 register ZS717C. Record the unforced register status below: Unforced ZS717C Status: <u>1</u>	Verify that register ZS717C is unforced.	✓		AK
64	The "ST-07-101 TABLE FULLY RETRACTED" message should be displayed in green on the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "ST-07-101 TABLE FULLY RETRACTED" message is displayed.	✓		AK
65	Press the "MAIN MENU" button from the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.	✓		AK
66	Because position switch 07-ZS-717C should indicate that the Sorting Table (ST-07-101) is fully retracted and all other glovebox items should be initialized, the "SYSTEM INITIALIZED" message should be displayed on the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "SYSTEM INITIALIZED" message is displayed.	✓		AK
67	Place the LLW Sorting Glovebox in "Maintenance" mode.	Verify that the glovebox is in "Maintenance" mode.	✓		AK

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Drum Tipper Raised Initialization					
68	Force LCU 102 register ZS332A not activated to simulate the Drum Tipper "Not Raised" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS332A / 1:25/07	Verify that register ZS332A is forced not activated. Verify that the forced register status is recorded.	✓		AV
69	Place the LLW Sorting Glovebox in "Automatic" mode to allow the glovebox to re-initialize.	Verify that the glovebox is in "Automatic" mode.	✓		LW
70	Because the "Drum Tipper Raised" register ZS332A is forced not activated to simulate the Drum Tipper not raised, the "SYSTEM NOT INITIALIZED" message should be displayed on the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		R/W
71	Press the "DIAGNOSTICS MENU" button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "DIAGNOSTICS MENU" is displayed.	✓		R/W
72	The "DH-07-103 TIPPER NOT RAISED" message should be displayed in red on the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "DH-07-103 TIPPER NOT RAISED" message is displayed.	✓		R/W
73	Unforce LCU 102 register ZS332A. Record the unforced register status below: Unforced ZS332A Status: 0	Verify that register ZS332A is unforced.	✓		R/W
74	The "DH-07-103 TIPPER RAISED" message should be displayed in green on the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "DH-07-103 TIPPER RAISED" message is displayed.	✓		AW
75	Press the "MAIN MENU" button from the "DIAGNOSTICS MENU".	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.	✓		AW
76	Because position switch 07-ZS-332A should indicate that the Drum Tipper (ST-07-101) is fully raised and all other glovebox items should be initialized, the "SYSTEM INITIALIZED" message should be displayed on the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "SYSTEM INITIALIZED" message is displayed.	✓		R/W
77	Place the LLW Sorting Glovebox in "Maintenance" mode.	Verify that the glovebox is in "Maintenance" mode.	✓		AW

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
	<i>open</i> Drum Tipper Grab Open Initialization				
78	Force LCU 102 "Drum Grab Closed " position switch register ZS720A activated simulate the "Drum Tipper Grab Not Open" condition. Record the forced register status below: <i>mpj</i> <i>ZS720B not activated</i> Register <u>ZS720B</u> Forced Status <u>CS</u> Method of Confirmation <u>1:2542</u>	Verify that register ZS720A is forced activated <i>not activated, ZS720B</i> Verify that the forced register status is recorded.	✓		<i>mpj</i>
79	Place the LLW Sorting Glovebox in "Automatic" mode to allow the glovebox to re-initialize. <i>B Not</i>	Verify that the glovebox is in "Automatic" mode.	✓		<i>R/W</i>
80	Because register ZS720A is forced activated to simulate the "Drum Tipper Grab Not Open" condition, the "SYSTEM NOT INITIALIZED" message should be displayed on the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		<i>R/W</i>
81	Press the "DIAGNOSTICS MENU" button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "DIAGNOSTICS MENU" is displayed.	✓		<i>R/W</i>
82	The "DH-07-103 DRUM GRAB NOT OPEN" message should be displayed in red on the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "DH-07-103 DRUM GRAB NOT OPEN" message is displayed.	✓		<i>R/W</i>
83	Force LCU 102 register ZS720B not activated to simulate the "Drum Tipper Grab Not Open" condition. Record the forced register status below: Register <u>ZS720B</u> Forced Status <u> </u> Method of Confirmation <u>1:25/13</u>	Verify that register ZS720B is forced not activated. Verify that the forced register status is recorded.			
84	Unforce LCU 102 register ZS720A. Record the unforced register status below. Unforced ZS720A Status: <u> </u>	Verify that register ZS720A is unforced.			
85	The "DH-07-103 DRUM GRAB NOT OPEN" message should continue to be displayed in red on the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "DH-07-103 DRUM GRAB NOT OPEN" message is displayed.			
86	Because the register ZS720B remains forced activated, the LLW Sorting Glovebox should not initialize, and the "SYSTEM NOT INITIALIZED" message should continue to be displayed on the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "SYSTEM NOT INITIALIZED" message is displayed.			
87	Unforce LCU 102 register ZS720B. Record the unforced register status below: Unforced ZS720B Status: <u>1</u>	Verify that register ZS720B is unforced.	✓		<i>R/W</i>
88	The "DH-07-103 DRUM GRAB OPEN" message should be displayed in green on the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "DH-07-103 DRUM GRAB OPEN" message is displayed.	✓		<i>R/W</i>

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
89	Press the "MAIN MENU" button from the "DIAGNOSTICS MENU" at OIU-12-103B. <i>B</i> <i>R/W 5/16/97</i>	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.	✓		<i>16</i>
90	Because position switch 07-ZS-720A should not be activated and position switch 07-ZS-720B should be activated, indicating that the Drum Tipper (DH-07-103) grab is fully opened, and all other glovebox items should be initialized, the "SYSTEM INITIALIZED" message should be displayed on the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "SYSTEM INITIALIZED" message is displayed.	✓		<i>16</i>
91	Place the LLW Sorting Glovebox in "Maintenance" mode.	Verify that the glovebox is in "Maintenance" mode.	✓		<i>16</i>

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Drum Tipper Vertical Initialization					
92	Force LCU 102 register ZS333 activated to simulate the Drum Tipper Grab "Not Vertical" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS333 1 1:25/11	Verify that register ZS333 is forced activated. Verify that the forced register status is recorded.	✓		RLV
93	Place the LLW Sorting Glovebox in "Automatic" mode to allow the glovebox to re-initialize.	Verify that the glovebox is in "Automatic" mode.	✓		R/W
94	Because register ZS333 is forced activated to simulate the Drum Tipper Grab not in vertical position, the "SYSTEM NOT INITIALIZED" message should be displayed on the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		R/W
95	Press the "DIAGNOSTICS MENU" button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "DIAGNOSTICS MENU" is displayed.	✓		R/W
96	The "DH-07-103 TIPPER NOT IN VERTICAL POSITION" message should be displayed in red on the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "DH-07-103 TIPPER NOT IN VERTICAL POSITION" message is displayed.	✓		R/W
97	Unforce LCU 102 register ZS333. Record the unforced register status below: Unforced ZS333 Status: 0	Verify that register ZS333 is unforced.	✓		R/W
98	The "DH-07-103 TIPPER NOT IN VERTICAL POSITION" message should be displayed in <u>red</u> on the "DIAGNOSTICS MENU" at OIU-12-103B. <i>green</i>	Verify that the "DH-07-103 TIPPER NOT IN VERTICAL POSITION" message is displayed.	✓		R/W
99	Press the "MAIN MENU" button from the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.	✓		R/W
100	Because position switch 07-ZS-333 should indicate that the Drum Tipper Grab (DH-07-103) is in its vertical position, and all other glovebox items should be initialized, the "SYSTEM INITIALIZED" message should be displayed on the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "SYSTEM INITIALIZED" message is displayed.	✓		R/W
101	Place the LLW Sorting Glovebox in "Maintenance" mode.	Verify that the glovebox is in "Maintenance" mode.	✓		R/W

Step	#	ACCEPTANCE TEST-PROCEDURE STEPS (13031A-85)				EXPECTED OUTPUT				Drum Lid/Delid Fixture Translated Parked Initialization			
		Pass	Fail	Witness (Initial)									
102		Force LCU 102 register ZS728A not activated to simulate the "Drum Lid/Delid Fixture Not at Relid Position" condition. Record the forced register status below:	Register	Forced Status	Method of Confirmation	Verify that the forced register status is recorded.	Verify that register ZS728A is forced not activated.						
103		Place the LLW Sorting Glovebox in "Automatic" mode to allow the glovebox to re-initialize.				Verify that the glovebox is in "Automatic" mode.							
104		Because register ZS728A is forced not activated to simulate the Drum Lid/Delid Fixture not parked, the "SYSTEM NOT INITIALIZED" message should be displayed on the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-1-2-103B.				Verify that the "SYSTEM NOT INITIALIZED" message is displayed.							
105		Press the "DIAGNOSTICS MENU" button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-1-2-103B.				Verify that the "DIAGNOSTICS MENU" is displayed.							
106		The "DO-07-103 FIXTURE NOT AT PARK/RELID POSITION" message should be displayed in red on the "DIAGNOSTICS MENU" at OIU-1-2-103B.				Verify that the "DO-07-103 FIXTURE NOT AT PARK/RELID POSITION" message is displayed.							
107		Unforce LCU 102 register ZS728A. Record the unforced register status below:				Verify that register ZS728A is unforced.							
108		The "DO-07-103 FIXTURE AT PARK/RELID POSITION" message should be displayed in green on the "DIAGNOSTICS MENU" at OIU-1-2-103B.				Verify that the "DO-07-103 FIXTURE AT PARK/RELID POSITION" message is displayed.							
109		Press the "MAIN MENU" button from the "DIAGNOSTICS MENU" at OIU-1-2-103B.				Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.							
110		Because position switch 07-ZS-728A should indicate that the Drum Lid/Delid Fixture is translated parked at the Relid position and all other glovebox items should be initialized, the "SYSTEM INITIALIZED" message should be displayed on the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-1-2-103B.				Verify that the "SYSTEM INITIALIZED" message is displayed.							
111		Place the LLW Sorting Glovebox in "Maintenance" mode.				Verify that the glovebox is in "Maintenance" mode.							

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Drum Lid/Delid Fixture Raised Initialization					
112	Force LCU 102 register ZS726A not activated to simulate the "Drum Lid/Delid Fixture Not Raised" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS726A <u>0</u> 1:26/11	Verify that register ZS726A is forced not activated. Verify that the forced register status is recorded.	✓		AK
113	Place the LLW Sorting Glovebox in "Automatic" mode to allow the glovebox to re-initialize.	Verify that the glovebox is in "Automatic" mode.	✓		AK
114	Because register ZS726A is forced not activated to simulate the "Fixture Not Raised" condition, the "SYSTEM NOT INITIALIZED" message should be displayed on the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		AK
115	Press the "DIAGNOSTICS MENU" button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "DIAGNOSTICS MENU" is displayed.	✓		AK
116	The "RT-07-101 FIXTURE NOT RAISED" message should be displayed in red on the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "RT-07-101 FIXTURE NOT RAISED" message is displayed.	✓		AK
117	Unforce LCU 102 register ZS726A. Record the unforced register status below: Unforced ZS726A Status: <u>1</u>	Verify that register ZS726A is unforced.	✓		AK
118	The "RT-07-101 FIXTURE RAISED" message should be displayed in green on the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "RT-07-101 FIXTURE RAISED" message is displayed.	✓		AK
119	Press the "MAIN MENU" button from the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.	✓		AK
120	Because position switch 07-ZS-726A should indicate that the Drum Lid/Delid Fixture is raised, and all other glovebox items should be initialized, the "SYSTEM INITIALIZED" message should be displayed on the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "SYSTEM INITIALIZED" message is displayed.	✓		AK
121	Place the LLW Sorting Glovebox in "Maintenance" mode.	Verify that the glovebox is in "Maintenance" mode.	✓		AK

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Drum Lid/Delid Fixture Rotated Parked Initialization					
122	Force LCU 102 register ZS727A not activated to simulate the "Drum Lid/Delid Fixture Rotation Not At Park Position" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS727A <u>B</u> <u>0</u> 14 12:26/18	Verify that register ZS727A is forced not activated. Verify that the forced register status is recorded.	✓		RW
123	Place the LLW Sorting Glovebox in "Automatic" mode to allow the glovebox to re-initialize.	Verify that the glovebox is in "Automatic" mode.	✓		RW
124	Because register ZS727A is forced not activated to simulate the "Not Rotated Parked" condition, the "SYSTEM NOT INITIALIZED" message should be displayed on the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		RW
125	Press the "DIAGNOSTICS MENU" button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "DIAGNOSTICS MENU" is displayed.	✓		RW
126	The "RT-07-101 FIXTURE ROTATION HEAD NOT PARKED" message should be displayed in red on the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "RT-07-101 FIXTURE ROTATION HEAD NOT PARKED" message is displayed.	✓		RW
127	Unforce LCU 102 register ZS727A. Record the unforced register status below: Unforced ZS727A Status: <u>1</u>	Verify that register ZS727A is unforced.	✓		RW
128	The "RT-07-101 FIXTURE ROTATION HEAD PARKED" message should be displayed in green on the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "RT-07-101 FIXTURE ROTATION HEAD PARKED" message is displayed.	✓		RW
129	Press the "MAIN MENU" button from the "DIAGNOSTICS MENU".	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.	✓		RW
130	Because position switch 07-ZS-727A should indicate that the Drum Lid/Delid Fixture is rotated to the parked position, and all other glovebox items should be initialized, the "SYSTEM INITIALIZED" message should be displayed on the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "SYSTEM INITIALIZED" message is displayed.	✓		RW
131	Place the LLW Sorting Glovebox in "Maintenance" mode.	Verify that the glovebox is in "Maintenance" mode.	✓		RW

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Drum Lid/Delid Fixture Saw Retracted Initialization					
132	Force LCU 102 register ZS724B not activated to simulate the "Drum Lid/Delid Fixture Saw Not Retracted" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS724B 0 1:26/10	Verify that register ZS724B is forced not activated. Verify that the forced register status is recorded.	✓		NW
133	Place the LLW Sorting Glovebox in "Automatic" mode to allow the glovebox to re-initialize.	Verify that the glovebox is in "Automatic" mode.	✓		RW
134	Because register ZS724B is forced not activated to simulate the "Saw Not Retracted" condition, the "SYSTEM NOT INITIALIZED" message should be displayed on the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		RW
135	Press the "DIAGNOSTICS MENU" button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "DIAGNOSTICS MENU" is displayed.	✓		RW
136	The "RT-07-101 SAW NOT RETRACTED" message should be displayed in red on the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "RT-07-101 SAW NOT RETRACTED" message is displayed.	✓		RW
137	Unforce LCU 102 register ZS724B. Record the unforced register status below: Unforced ZS724B Status: _____	Verify that register ZS724B is unforced.	✓		NW
138	The "RT-07-101 SAW RETRACTED" message should be displayed in green on the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "RT-07-101 SAW RETRACTED" message is displayed.	✓		RW
139	Press the "MAIN MENU" button from the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.	✓		NW
140	Because position switch 07-ZS-724B should indicate that the saw is retracted, and all other glovebox items should be initialized, the "SYSTEM INITIALIZED" message should be displayed on the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "SYSTEM INITIALIZED" message is displayed.	✓		NW
141	Place the LLW Sorting Glovebox in "Maintenance" mode.	Verify that the glovebox is in "Maintenance" mode.	✓		RW

Step	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass	Fail	Witness (Initial)
Drum Lid/Delid Fixture Saw De-energized Initialization					
142	WARNING: Improper activation of the Drum Lid/Delid Fixture Saw Motor could cause equipment damage and/or personal injury. Take appropriate safety measures during testing to safeguard against injury and equipment damage.	Verify that safety precautions have been taken to avoid injury and equipment damage when the saw is energized.	✓		R/W
143	Force LCU 102 register FEV378A activated to simulate the "Drum Lid/Delid Fixture Saw Energized" condition. <u>Record the forced register status below:</u> <u>using maintenance mode start saw R/W 9/10/97</u> <u>Register Forced Status Method of Confirmation</u> <u>41188 - Bypass Saw start logic</u> <u>FEV378A 0:47112</u>	Verify that register FEV378A is forced activated. <u>Verify that the forced register status is recorded</u>	✓		R/W
144	Place the LLW Sorting Glovebox in "Automatic" mode to allow the glovebox to re-initialize.	Verify that the glovebox is in "Automatic" mode.	✓		R/W
145	Because the register FEV378A is forced activated to simulate the "Saw Energized" condition, the "SYSTEM NOT INITIALIZED" message should be displayed on the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		R/W
146	Press the "DIAGNOSTICS MENU" button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "DIAGNOSTICS MENU" is displayed.	✓		R/W
147	The "RT-07-101 SAW NOT OFF" message should be displayed in red on the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "RT-07-101 SAW NOT OFF" message is displayed.	✓		R/W
148	Unforce LCU 102 register FEV378A. Record the unforced register status below: <u>Remove 41188 Bypass Saw start logic R/W 9/10/97</u> <u>Unforced FEV378A Status:</u>	Verify that FEV378A is unforced.	✓		R/W
149	The "RT-07-101 SAW OFF" message should be displayed in green on the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "RT-07-101 SAW OFF" message is displayed.	✓		R/W
150	Press the "MAIN MENU" button from the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.	✓		R/W
151	Because solenoid 07-FEV-378A should not be energized, and all other glovebox items should be initialized, the "SYSTEM INITIALIZED" message should be displayed on the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "SYSTEM INITIALIZED" message is displayed.	✓		R/W
152	Place the LLW Sorting Glovebox in "Maintenance" mode.	Verify that the glovebox is in "Maintenance" mode.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Drum Lid/Delid Fixture C-Clip Crimp Head Retracted Initialization					
153	Force register ZS719A not activated to simulate the "Drum Lid/Delid Fixture Crimp Head Not Back" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS719A _____ I:26/17 _____	Verify that register ZS719A is forced not activated. Verify that the forced register status is recorded.			
154	Place the LLW Sorting Glovebox in "Automatic" mode to allow the glovebox to re-initialize.	Verify that the glovebox is in "Automatic" mode.			
155	Because register ZS719A is forced not activated to simulate the "Crimp Head Not Back" condition, the "SYSTEM NOT INITIALIZED" message should be displayed on the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "SYSTEM NOT INITIALIZED" message is displayed.			
156	Press the "DIAGNOSTICS MENU" button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "DIAGNOSTICS MENU" is displayed.			
157	The "RT-07-101 CRIMP HEAD NOT BACK" message should be displayed in red on the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "RT-07-101 CRIMP HEAD NOT BACK" message is displayed.			
158	Unforce LCU 102 register ZS719A. Record the unforced register status below: Unforced ZS719 Status: _____	Verify that register ZS719A is unforced.			
159	The "RT-07-101 CRIMP HEAD BACK" message should be displayed in green on the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "RT-07-101 CRIMP HEAD BACK" message is displayed.			
160	Press the "MAIN MENU" button from the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.			
161	Because position switch 07-ZS-719A should indicate that the Drum Lid/Delid Fixture (RT-07-101) Crimp Head is retracted, and all other glovebox items should be initialized, the "SYSTEM INITIALIZED" message should be displayed on the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "SYSTEM INITIALIZED" message is displayed.			
162	Place the LLW Sorting Glovebox in "Maintenance" mode.	Verify that the glovebox is in "Maintenance" mode.			

#153-162 deleted - Crimp Head deleted From Fixture

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Drum Lid/Delid Fixture C-Clip Crimp Head Open Initialization					
163	Force LCU 102 register ZS721 not activated to simulate the "Drum Lid/Delid Fixture Crimp Jaw Not Open" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS721 _____ 1:27/01 _____	Verify that register ZS721 is forced not activated. Verify that the forced register status is recorded.			
164	Place the LLW Sorting Glovebox in "Automatic" mode to allow the glovebox to re-initialize.	Verify that the glovebox is in "Automatic" mode.			
165	Because register ZS721 is forced not activated to simulate the "Crimp Head Not Open" condition, the "SYSTEM NOT INITIALIZED" message should be displayed on the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "SYSTEM NOT INITIALIZED" message is displayed.			
166	Press the "DIAGNOSTICS MENU" button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "DIAGNOSTICS MENU" is displayed.			
167	The "RT-07-101 CRIMP JAWS NOT OPEN" message should be displayed in red on the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "RT-07-101 CRIMP JAWS NOT OPEN" message is displayed.			
168	Unforce LCU 102 register ZS721. Record the unforced register status below: Unforced ZS721 Status: _____	Verify that register ZS721 is unforced.			
169	The "RT-07-101 CRIMP JAWS OPEN" message should be displayed in green on the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "RT-07-101 CRIMP JAWS OPEN" message is displayed.			
170	Press the "MAIN MENU" button from the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.			
171	Because position switch 07-ZS-721 should indicate that the Crimp Jaw is open and all other glovebox items should be initialized, the "SYSTEM INITIALIZED" message should be displayed on the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "SYSTEM INITIALIZED" message is displayed.			
172	Place the LLW Sorting Glovebox in "Maintenance" mode.	Verify that the glovebox is in "Maintenance" mode.			

#163-172 deleted - crimp Jaw deleted

Step #	ACCEPTANCE TEST PROCEDURE STEPS	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
	(13031A-85) 9/16/99 B R N 9/16/99 Drum Transfer Car Drive Disengaged Initialization				
173	Force LCU 102 register ZS718A activated to simulate the Transfer Car "Drive Engaged" condition. Record the forced register status below: Register <u>ZS718A</u> Forced Status <u>RO</u> Method of Confirmation <u>1:27/14</u>	Verify that register ZS718A is forced activated. Verify that the forced register status is recorded.	✓		mgf
174	Place the LLW Sorting Glovebox in "Automatic" mode to allow the glovebox to re-initialize.	Verify that the glovebox is in "Automatic" mode.	✓		mgf
175	Because register ZS718B is forced not activated to simulate the "Conveyor Drive Engaged" condition, the "SYSTEM NOT INITIALIZED" message should be displayed on the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		mgf
176	Press the "DIAGNOSTICS MENU" button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "DIAGNOSTICS MENU" is displayed.	✓		mgf
177	The "TC-07-101 TRANSFER CAR DRIVE NOT DISENGAGED" message should be displayed in red on the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "TC-07-101 TRANSFER CAR DRIVE NOT DISENGAGED" message is displayed.	✓		mgf
178	Unforce LCU 102 register ZS718A. Record the unforced register status below: Unforced ZS718A Status: <u>B R N 9/16/99</u>	Verify that register ZS718A is unforced.	✓		mgf
179	The "TC-07-101 TRANSFER CAR DRIVE DISENGAGED" message should be displayed in green on the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "TC-07-101 TRANSFER CAR DRIVE DISENGAGED" message is displayed.	✓		mgf
180	Press the "MAIN MENU" button from the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.	✓		mgf
181	Because position switch 07-ZS-718A should indicate that the Transfer Car conveyor Drive is not engaged, and all other glovebox items should be initialized, the "SYSTEM INITIALIZED" message should be displayed on the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "SYSTEM INITIALIZED" message is displayed.	✓		mgf
182	Place the LLW Sorting Glovebox in "Maintenance" mode.	Verify that the glovebox is in "Maintenance" mode.	✓		mgf

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Drum Transfer Car Drive Off Initialization					
183	Force LCU 102 register TC07101/ST activated to simulate the "Transfer Car Conveyor Drive Energized" condition. Record the forced register status below: <i>42107 Installed Oppress to Force output</i> <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> TC07101/ST TC07101/ST <i>RW 2/16/99</i>	Verify that register TC101/M1 is forced activated. Verify that the forced register status is recorded.	✓		<i>RW</i>
184	Place the LLW Sorting Glovebox in "Automatic" mode to allow the glovebox to re-initialize.	Verify that the glovebox is in "Automatic" mode.	✓		<i>RW</i>
185	Because register TC07101/ST is forced activated to simulate the "Conveyor Drive Energized" condition, the "SYSTEM NOT INITIALIZED" message should be displayed on the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		<i>RW</i>
186	Press the "DIAGNOSTICS MENU" button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "DIAGNOSTICS MENU" is displayed.	✓		<i>RW</i>
187	The "TC-07-101 TRANSFER CAR DRIVE NOT DE-ENERGIZED" message should be displayed in red on the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "TC-07-101 TRANSFER CAR DRIVE NOT DE-ENERGIZED" message is displayed.	✓		<i>RW</i>
188	Unforce LCU 102 register TC07101/ST. Record the unforced register status below: <i>42107 Remove bypass to unforce output</i> <u>Unforced TC07101/ST Status:</u> <i>RW 2/16/99</i>	Verify that register TC07101/ST is unforced.	✓		<i>RW</i>
189	The "TC-07-101 TRANSFER CAR DRIVE DE-ENERGIZED" message should be displayed in green on the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "TC-07-101 TRANSFER CAR DRIVE DE-ENERGIZED" message is displayed.	✓		<i>RW</i>
190	Press the "MAIN MENU" button from the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.	✓		<i>RW</i>
191	Because the Transfer Car Conveyor Drive motor (TC-07-101/M1) is not activated and all other glovebox items should be initialized, the "SYSTEM INITIALIZED" message should be displayed on the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "SYSTEM INITIALIZED" message is displayed.	✓		<i>RW</i>
192	Place the LLW Sorting Glovebox in "Maintenance" mode.	Verify that the glovebox is in "Maintenance" mode.	✓		<i>RW</i>

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Lift Table in "Normal" Mode Initialization					
193	Turn the Lift Table Pedestal PC-09-203A M/O/N switch 09-HS-241A to the "OFF" position to deactivate the Lift Table.	Verify that switch 09-HS-241A is switched to the "O" position (for Lift Table "Off").	✓		AW
194	Place the LLW Sorting Glovebox in "Automatic" mode to allow the glovebox to re-initialize.	Verify that the glovebox is in "Automatic" mode.	✓		AW
195	Because the M/O/N switch is not turned to "N" for normal operation controlled by PCS, the system should not initialize and OIU-12-103B should display a "SYSTEM NOT INITIALIZED" message.	Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		AW
196	Press the "DIAGNOSTICS MENU" button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "DIAGNOSTICS MENU" is displayed.	✓		AW
197	The "LIFT TABLE LT-09-203A M/O/N NOT IN NORMAL" message should be displayed in red on the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "LIFT TABLE LT-09-203A M/O/N NOT IN NORMAL" message is displayed.	✓		AW
198	Turn the Lift Table Pedestal PC-09-203A M/O/N switch 09-HS-241A to the "Maintenance" position to allow an operator to control the Lift Table.	Verify that switch 09-HS-241A is switched to the "M" position (for "Maintenance" control by operator).	✓		AW
199	The "LIFT TABLE LT-09-203A M/O/N NOT IN NORMAL" message should continue to be displayed in red on the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "LIFT TABLE LT-09-203A M/O/N NOT IN NORMAL" message is displayed.	✓		AW
200	Turn the Lift Table Pedestal PC-09-203A M/O/N switch 09-HS-241A to the "Normal" position to allow the PCS to control the Lift Table.	Verify that switch 09-HS-241A is switched to the "N" position (for "Normal" PCS Control).	✓		AW
201	The "LIFT TABLE LT-09-203A M/O/N IN NORMAL" message should be displayed in green on the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "LIFT TABLE LT-09-203A M/O/N IN NORMAL" message is displayed.	✓		AW
202	Press the "MAIN MENU" button from the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.	✓		AW
203	Because the Lift Table M/O/N switch is turned to the "N" position for normal operation with control by the PCS, and all other glovebox items should be initialized, the "SYSTEM INITIALIZED" message should be displayed on the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "SYSTEM INITIALIZED" message is displayed.	✓		AW
204	Place the LLW Sorting Glovebox in "Maintenance" mode.	Verify that the glovebox is in "Maintenance" mode.	✓		AW

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Manipulator Arms Parked Initialization					
205	Force LCU 102 registers ZS715C and ZS715D not activated to indicate that the manipulator arms are not parked. Record the forced register status below: <div> <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> </div> <div> ZS715C <u>0</u> I:26/1 </div> <div> ZS715D <u>0</u> I:26/2 </div>	Verify that registers ZS715C and ZS715D are forced not activated. Verify that the register status is recorded.	✓		R/W
206	Place the LLW Sorting Glovebox in "Automatic" mode to allow the glovebox to re-initialize.	Verify that the glovebox is in "Automatic" mode.	✓		R/W
207	Because registers ZS715C and ZS715D are forced not activated, simulating the Manipulator Arms not parked condition, the "SYSTEM NOT INITIALIZED" message should be displayed on the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		R/W
208	Press the "DIAGNOSTICS MENU" button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "DIAGNOSTICS MENU" is displayed.	✓		R/W
209	The "EM-07-101 LEFT ARM NOT RAISED" message should be displayed in red on the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "EM-07-101 LEFT ARM NOT RAISED" message is displayed.	✓		R/W
210	The "EM-07-101 RIGHT ARM NOT RAISED" message should be displayed in red on the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "EM-07-101 RIGHT ARM NOT RAISED" message is displayed.	✓		R/W
211	Unforce register ZS715D. Record the unforced register status below: Force Activated, see pg 8-1 R/W 7/16/97 Unforced ZS715D Status: 1	Verify that register ZS715D is unforced.	✓		R/W
212	The "EM-07-101 LEFT ARM NOT RAISED" message should continue to be displayed in red on the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "EM-07-101 LEFT ARM NOT RAISED" message is displayed.	✓		R/W
213	Press the "MAIN MENU" button from the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.	✓		R/W
214	Because the glovebox should not be initialized, the "SYSTEM NOT INITIALIZED" message should be displayed.	Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		R/W
215	Press the "DIAGNOSTICS MENU" button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "DIAGNOSTICS MENU" is displayed.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
216	Force LCU 102 register ZS715D not activated to indicate that the manipulator arms are not parked. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS715D 0 1:26/2	Verify that register ZS715D is forced not activated. Verify that the register status is recorded.	✓		AW
217	Unforce register ZS715C. Record the unforced register status below: <u>Force Activated</u> <u>see pg 8-21</u> <u>AW 7/16/97</u> Unforced ZS715C Status: 1	Verify that register ZS715C is unforced.	✓		AW
218	The "EM-07-101 RIGHT ARM NOT RAISED" message should continue to be displayed in red on the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "EM-07-101 RIGHT ARM NOT RAISED" message is displayed.	✓		AW
219	Press the "MAIN MENU" button from the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.	✓		AW
220	Because the glovebox should not be initialized, the "SYSTEM NOT INITIALIZED" message should be displayed.	Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		AW
221	Press the "DIAGNOSTICS MENU" button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "DIAGNOSTICS MENU" is displayed.	✓		AW
222	Force register ZS715D. Record the unforced register status below: <u>Force Activated</u> <u>1</u> <u>AW 7/16/97</u> Unforced ZS715D Status: 1	Verify that register ZS715D is unforced.	✓		AW
223	The "EM-07-101 MANIPULATOR PARKED" message should be displayed in green on the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "EM-07-101 MANIPULATOR PARKED" message is displayed.	✓		AW
224	The "EM-07-101 LEFT ARM RAISED" message should be displayed in green on the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "EM-07-101 LEFT ARM RAISED" message is displayed.	✓		AW
225	The "EM-07-101 RIGHT ARM RAISED" message should be displayed in green on the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "EM-07-101 RIGHT ARM RAISED" message is displayed.	✓		AW
226	Press the "MAIN MENU" button from the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.	✓		AW
227	Because the Manipulator and Manipulator arms are parked, and all other glovebox items should be initialized, the "SYSTEM INITIALIZED" message should be displayed on the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "SYSTEM INITIALIZED" message is displayed.	✓		AW
228	Place the LLW Sorting Glovebox in "Maintenance" mode.	Verify that the glovebox is in "Maintenance" mode.	✓		AW

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)								
Examine Manipulator Parked Initialization													
229	Force LCU 102 registers ZS715A and ZS715B not activated to indicate that the manipulator is not at park position 1 or at park position 2. Record the forced register status below: <table border="1"> <thead> <tr> <th>Register</th><th>Forced Status</th><th>Method of Confirmation</th></tr> </thead> <tbody> <tr> <td>ZS715A</td><td><u>0</u></td><td>I:25/17</td></tr> <tr> <td>ZS715B</td><td><u>0</u></td><td>I:26/00</td></tr> </tbody> </table>	Register	Forced Status	Method of Confirmation	ZS715A	<u>0</u>	I:25/17	ZS715B	<u>0</u>	I:26/00	Verify that registers ZS715A and ZS715B are forced not activated. Verify that the register status is recorded.	✓	N/A
Register	Forced Status	Method of Confirmation											
ZS715A	<u>0</u>	I:25/17											
ZS715B	<u>0</u>	I:26/00											
230	Place the LLW Sorting Glovebox in "Automatic" mode to allow the glovebox to re-initialize.	Verify that the glovebox is in "Automatic" mode.	✓		N/A								
231	Because registers ZS2715A and ZS715B are forced not activated to indicate that the manipulator is not parked the "SYSTEM NOT INITIALIZED" message should be displayed on the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		N/A								
232	Press the "DIAGNOSTICS MENU" button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "DIAGNOSTICS MENU" is displayed.	✓		N/A								
233	The "EM-07-101 MANIPULATOR NOT PARKED" message should be displayed in red on the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "EM-07-101 MANIPULATOR NOT PARKED" message is displayed.	✓		N/A								
234	Unforce register ZS715A. Record the unforced register status below: Unforced ZS715A Status: <u>1</u>	Verify that register ZS715A is unforced.	✓		N/A								
235	The "EM-07-101 MANIPULATOR NOT PARKED" message should continue to be displayed in red on the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "EM-07-101 MANIPULATOR NOT PARKED" message is displayed.	✓		N/A								
236	Press the "MAIN MENU" button from the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.	✓		N/A								
237	Because the glovebox should not be initialized, the "SYSTEM NOT INITIALIZED" message should be displayed.	Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		N/A								
238	Press the "DIAGNOSTICS MENU" button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "DIAGNOSTICS MENU" is displayed.	✓		N/A								
239	Unforce register ZS715B. Record the unforced register status below: Unforced ZS715B Status: <u>1</u>	Verify that register ZS715B is unforced.	✓		N/A								

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
240	The "EM-07-101 MANIPULATOR PARKED" message should be displayed in green on the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "EM-07-101 MANIPULATOR PARKED" message is displayed.	✓		RLW
241	Press the "MAIN MENU" button from the "DIAGNOSTICS MENU" to return to the "LLW SORTING GLOVEBOX MAIN MENU".	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.	✓		RLW
242	Because the Manipulator and Manipulator arms are parked, and all other glovebox items should be initialized, the "SYSTEM INITIALIZED" message should be displayed on the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "SYSTEM INITIALIZED" message is displayed.	✓		RLW
243	Place the LLW Sorting Glovebox in "Maintenance" mode.	Verify that the glovebox is in "Maintenance" mode.	✓		RLW
244	Place the manipulator at parked position #1 (Position switch 07-ZS-715A activated) with both manipulator arms parked.	Verify that the manipulator is at parked position #1 with both manipulator arms parked.	✓		RLW
245	Force LCU 102 registers ZS715A and ZS715B not activated to indicate that the manipulator is not at park position 1 or at park position 2. Record the forced register status below: <div> <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS715A 0 _____ I:25/17 _____ ZS715B 0 _____ I:26/0 _____ </div>	Verify that registers ZS715A and ZS715B are forced not activated. Verify that the register status is recorded.	✓		RLW
246	Place the LLW Sorting Glovebox in "Automatic" mode, to allow the glovebox to re-initialize.	Verify that the glovebox is in "Automatic" mode.	✓		RLW
247	Because registers ZS2715A and ZS715B are forced not activated to indicate that the manipulator is not parked the "SYSTEM NOT INITIALIZED" message should be displayed on the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		RLW
248	Press the "DIAGNOSTICS MENU" button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "DIAGNOSTICS MENU" is displayed.	✓		RLW
249	The "EM-07-101 MANIPULATOR NOT PARKED" message should be displayed in red on the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "EM-07-101 MANIPULATOR NOT PARKED" message is displayed.	✓		RLW
250	Unforce register ZS715B. Record the unforced register status below: Unforced ZS715B Status: <u> D </u>	Verify that register ZS715B is unforced.	✓		RLW

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
251	The "EM-07-101 MANIPULATOR NOT PARKED" message should continue to be displayed in red on the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "EM-07-101 MANIPULATOR NOT PARKED" message is displayed.	✓		AW
252	Press the "MAIN MENU" button from the "DIAGNOSTICS MENU" to return to the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.	✓		AW
253	Because the glovebox should not be initialized, the "SYSTEM NOT INITIALIZED" message should be displayed.	Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		AW
254	Press the "DIAGNOSTICS MENU" button to display the "DIAGNOSTICS MENU".	Verify that the "DIAGNOSTICS MENU" is displayed.	✓		AW
255	Unforce register ZS715A. Record the unforced register status below: Unforced ZS715A Status: <u>1</u>	Verify that register ZS715A is unforced.	✓		AW
256	The "EM-07-101 MANIPULATOR PARKED" message should be displayed in green on the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "EM-07-101 MANIPULATOR PARKED" message is displayed.	✓		AW
257	Press the "MAIN MENU" button from the "DIAGNOSTICS MENU" at OIU-12-103B.	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.	✓		AW
258	Because the Manipulator and Manipulator arms are parked, and all other glovebox items should be initialized, the "SYSTEM INITIALIZED" message should be displayed on the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "SYSTEM INITIALIZED" message is displayed.	✓		AW

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Test Case Shutdown					
259	Return all LLW Sorting Glovebox items to a safe and stable condition.	Verify that all LLW Sorting Glovebox items are safely positioned.	✓		R/W
260	Unforce all LCU 102 registers using the Allen Bradley PLC Software. <i>see note pg 8-1</i>	Verify that all LCU 102 registers are unforced.	✓		R/W
TEST CASE 13031A-85.08 COMPLETE					

This document was too large to scan as a single document; therefore, it has been divided into smaller sections.

Section 2 of 3

Document Information			
Document #	SD-W026-ATR-032	Revision	0
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Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass	Fail	Witness (Initial)
TEST CASE 13031A-85:09 EXAMINE LLW SORTING GLOVEBOX (GB-07-102) MAINTENANCE MENU FUNCTIONS					
Enter incorrect OIU Password and Verify that Access is Denied					
NOTE: This test procedure assumes that a maintenance access code of "1111" has been previously entered.					
1	Turn the "AUTO MODE/MAINTENANCE MODE" Keyed selector switch (07-HS-317) on the Data Management System Pedestal (TE-12-103) to "MAINTENANCE MODE".	Verify that "MAINTENANCE ACCESS GLOVEBOX."	✓		RLW
2	The "MAINTENANCE ACCESS MENU" should be displayed at OIU-12-103B.	Verify that the "MAINTENANCE ACCESS MENU" is displayed.	✓		RLW
3	The "ENTER ACCESS CODE" message should be displayed on the "MAINTENANCE ACCESS MENU" at OIU-12-103B.	Verify that the "ENTER ACCESS CODE" message is displayed.	✓		RLW
4	Enter "333" and press the "ENTER" button	Verify that "333" is entered.	✓		RLW
5	The "ACCESS DENIED" message should be displayed on the "MAINTENANCE ACCESS MENU" at OIU-12-103B.	Verify that the "ACCESS DENIED" message is displayed.	✓		RLW
6	Press the "CANCEL OPERATION" button to cancel maintenance menu access.	Verify that the "CANCEL OPERATION" button has been pressed.	✓		RLW

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Cancel Password Change					
7	The "ENTER ACCESS CODE:" message should be displayed on the "MAINTENANCE ACCESS MENU" at OIU-12-103B.	Verify that the "ENTER ACCESS CODE:" message is displayed.	✓		RLW
8	Press the "CHANGE PASSWORD" button from the "MAINTENANCE ACCESS MENU" at OIU-12-103B.	Verify that the "CHANGE PASSWORD" button has been pressed.	✓		RLW
9	The "ENTER OLD PASSWORD:" message should be displayed on the "MAINTENANCE ACCESS MENU" at OIU-12-103B.	Verify that the "ENTER OLD PASSWORD:" message is displayed.	✓		RLW
10	Enter "1111" and press the "ENTER" button	Verify that "1111" is entered.	✓		RLW
11	The "ENTER NEW PASSWORD:" message should be displayed on the "MAINTENANCE ACCESS MENU" at OIU-12-103B.	Verify that the "ENTER NEW PASSWORD:" message is displayed.	✓		RLW
12	Press the "CANCEL OPERATION" button from the "MAINTENANCE ACCESS MENU" to cancel changing the OIU password.	Verify that the "CANCEL OPERATION" button has been pressed.	✓		RLW
13	The "OPERATION CANCELED" message should be displayed on the "MAINTENANCE ACCESS MENU" at OIU-12-103B.	Verify that the "OPERATION CANCELED" message is displayed.	✓		RLW

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Change OIU Password					
14	Press the "CHANGE PASSWORD" button from the "MAINTENANCE ACCESS MENU" at OIU-12-103B.	Verify that the "CHANGE PASSWORD" button has been pressed.	✓		R/W
15	The "ENTER OLD PASSWORD:" message should be displayed on the "MAINTENANCE ACCESS MENU" at OIU-12-103B.	Verify that the "ENTER OLD PASSWORD:" message is displayed.	✓		R/W
16	Enter "1111" and press the "ENTER" button	Verify that "1111" is entered.	✓		R/W
17	The "ENTER NEW PASSWORD:" message should be displayed on the "MAINTENANCE ACCESS MENU" at OIU-12-103B.	Verify that the "ENTER NEW PASSWORD:" message is displayed.	✓		R/W
18	Enter "9" and press the "ENTER" button	Verify that "9" is entered.	✓		R/W
19	The "ENTER ACCESS CODE:" message should be displayed.	Verify that the "ENTER ACCESS CODE:" message is displayed.	✓		R/W
20	Enter "9" and press the "ENTER" button	Verify that "9" is entered.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Enter New Password and Access Maintenance Menus					
21	The "MAINTENANCE ACCESS MENU" should be displayed at OIU-12-103B.	Verify that the "MAINTENANCE ACCESS MENU" is displayed.	✓		R/W
22	The "ENTER ACCESS CODE:" message should be displayed on the "MAINTENANCE ACCESS MENU" at OIU-12-103B.	Verify that the "ENTER ACCESS CODE:" message is displayed.	✓		R/W
23	Enter "9" and press the "ENTER" button	Verify that "9" is entered.	✓		R/W
24	The "SORTING GLOVEBOX MAINTENANCE MAIN MENU" should be displayed at OIU-12-103B.	Verify that the "SORTING GLOVEBOX MAINTENANCE MAIN MENU" is displayed.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Review Sorting Table Operations					
25	Place all LLW Sorting Glovebox (GB-07-102) items in their parked, stable positions.	Verify that all items in the LLW Sorting Glovebox are parked.	✓		R/W
26	Press the "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" button from the "SORTING GLOVEBOX MAINTENANCE MAIN MENU" at OIU-12-103B.	Verify that the "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" is displayed.	✓		R/W
27	Press briefly and then release the Sorting Table "EXTEND TABLE" button from the "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" at OIU-12-103B.	Verify that the Sorting Table moves forward while the "EXTEND TABLE" button is pressed.	✓		R/W
28	Press briefly and then release the Sorting Table "RETRACT TABLE" button from the "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" at OIU-12-103B.	Verify that the Sorting Table retracts while the "RETRACT TABLE" button is pressed.	✓		R/W
29	Press and continue to press the Sorting Table "EXTEND TABLE" button from the "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" at OIU-12-103B, until the Sorting Table is fully extended.	Verify that the "EXTEND TABLE" button has been pressed.	✓		R/W
30	The Sorting Table should completely extend. Position switch 07-ZS-717A should be activated (e.g., LED indicator illuminated), indicating that the Sorting Table is fully extended.	Verify that the Sorting Table is fully extended.	✓		R/W
31	Press and continue to press the Sorting Table "RETRACT TABLE" button from the "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" at OIU-12-103B, until the Sorting Table is at the tip position <i>fully retracted</i> .	Verify that the "RETRACT TABLE" button has been pressed.	✓		R/W
32	When the Sorting Table is at the tip position, position switch 07-ZS-717B should be activated (e.g., LED indicator illuminated), and the locking holes in the Sorting Table should exactly line up with the locking cylinders, to permit the Sorting Table to be locked.	Verify that the Sorting Table is at the tip position.	✓		R/W
33	Press the Sorting Table "LOCK TABLE" button from the "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" at OIU-12-103A.	Verify that the "LOCK TABLE" button has been pressed.	✓		R/W
34	The Sorting Table locking cylinders should fully extend without erratic motion.	Verify that the locking cylinders fully extend.	✓		R/W
35	Press the Sorting Table "UNLOCK TABLE" button from the "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" at OIU-12-103A.	Verify that the "UNLOCK TABLE" button has been pressed.	✓		R/W

32a Extend Table to Tip Position

#33 Adjusted ZS-717B and retested. Step passes R/W 7/16/97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
36	The Sorting Table locking cylinders should fully retract without erratic motion.	Verify that the locking cylinders fully retract.	✓		RW
37	Press the Sorting Table "LOCK TABLE" button from the "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" at OIU-12-103A.	Verify that the "LOCK TABLE" button has been pressed.	✓		RW
38	The Sorting Table locking cylinders should fully extend without erratic motion.	Verify that the locking cylinders fully extend.	✓		RW
39	Press briefly and then release the Sorting Table "RAISE TABLE" button from the "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" at OIU-12-103B.	Verify that the Sorting Table raises while the "RAISE TABLE" button is pressed.	✓		RW
40	Press briefly and then release the Sorting Table "LOWER TABLE" button from the "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" at OIU-12-103B.	Verify that the Sorting Table lowers while the "LOWER TABLE" button is pressed.	✓		RW
41	Press and continue to press the Sorting Table "RAISE TABLE" button from the "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" at OIU-12-103B, until the Sorting Table is fully raised.	Verify that the "RAISE TABLE" button has been pressed.	✓		RW
42	The Sorting Table (ST-07-101) should raise smoothly without erratic motion or shaking to its fully raised position. The raise/lower cylinders should not slip off of the Sorting Table.	Verify that the Sorting Table is fully raised.	✓		RW
43	Press and continue to press the Sorting Table "LOWER TABLE" button from the "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" at OIU-12-103B, until the Sorting Table is fully lowered.	Verify that the "LOWER TABLE" button has been pressed.	✓		RW
44	The Sorting Table (ST-07-101) should lower smoothly without erratic motion or shaking to its fully lowered position.	Verify that the Sorting Table is fully lowered.	✓		RW
45	Press the Sorting Table "UNLOCK TABLE" button from the "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" at OIU-12-103A.	Verify that the "UNLOCK TABLE" button has been pressed.	✓		RW
46	The Sorting Table locking cylinders should fully retract without erratic motion.	Verify that the locking cylinders fully retract.	✓		RW
47	Press and continue to press the Sorting Table "RETRACT TABLE" button from the "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" at OIU-12-103B, until the Sorting Table is fully retracted.	Verify that the "RETRACT TABLE" button has been pressed.	✓		RW
48	When the Sorting Table is fully retracted, position switch 07-ZS-717C should be activated (e.g., LED indicator illuminated).	Verify that the Sorting Table is fully retracted.	✓		RW

TRW
mg
7-16-92
AS
7/18/92

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Review: Packet X-Ray Operations					
49	Remove power from or otherwise temporarily disable the Packet X-Ray so that it cannot be activated during testing.	Verify that the Packet X-Ray is temporarily disabled.	✓		mg
50	The "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" should be displayed at OIU-12-103B.	Verify that the "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" is displayed.	✓		mg
51	Press briefly and then release the Packet X-Ray "OPEN X-RAY DOOR" button from the "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" at OIU-12-103B.	Verify that the "OPEN X-RAY DOOR" button has been pressed.	✓		mg
52	The Packet X-Ray Door (DO-07-103) should smoothly translate open without erratic motion while the "OPEN X-RAY DOOR" button is pressed.	Verify that the Packet X-Ray Door translates open while the "OPEN X-RAY DOOR" button is pressed.	✓		mg
53	Press briefly and then release the Packet X-Ray "CLOSE X-RAY DOOR" button from the "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" at OIU-12-103B.	Verify that the "CLOSE X-RAY DOOR" button has been pressed.	✓		mg
54	The Packet X-Ray Door (DO-07-103) should smoothly translate closed without erratic motion while the "CLOSE X-RAY DOOR" button is pressed.	Verify that the Packet X-Ray Door translates closed while the "CLOSE X-RAY DOOR" button is pressed.	✓		mg
55	Press and continue to press the Packet X-Ray "OPEN X-RAY DOOR" button from the "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" at OIU-12-103B, until the Packet X-Ray Door is fully translated open.	Verify that the "OPEN X-RAY DOOR" button has been pressed.	✓		mg
56	The Packet X-Ray Door (DO-07-103) should translate completely open, uncovering the X-ray bulge.	Verify that the Packet X-Ray Door is fully translated open.	✓		mg
57	Press briefly and then release the Packet X-Ray "EXTEND X-RAY TRAY" button from the "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" at OIU-12-103B.	Verify that the "EXTEND X-RAY TRAY" button has been pressed.	✓		mg
58	The Packet X-Ray Tray should smoothly extend without erratic motion while the "EXTEND X-RAY TRAY" button is pressed.	Verify that the Packet X-Ray Tray extends open while the "EXTEND X-RAY TRAY" button is pressed.	✓		mg
59	Press briefly and then release the Packet X-Ray "RETRACT X-RAY TRAY" button from the "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" at OIU-12-103B.	Verify that the "RETRACT X-RAY TRAY" button has been pressed.	✓		mg

#49 hard-wired interlock used - when door open, X-ray off, mg 7/6-97

#52 interlocks added - cannot open door when tray extended, cannot shut door when tray extended, cannot extend tray when door is closed. LLW SORTING GLOVEBOX

See TE # 151

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
60	The Packet X-Ray Tray should smoothly retract without erratic motion while the "RETRACT X-RAY TRAY" button is pressed.	Verify that the Packet X-Ray Tray retracts while the "RETRACT X-RAY TRAY" button is pressed.			
61	Press and continue to press the Packet X-Ray "EXTEND X-RAY TRAY" button from the "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" at OIU-12-103B, until the Packet X-Ray Tray is fully extended.	Verify that the "EXTEND X-RAY TRAY" button has been pressed.			
62	The Packet X-Ray Tray should fully extend.	Verify that the Packet X-Ray Tray is fully extended.			
63	Press and then release the Packet X-Ray "ENABLE X-RAY" button from the "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" at OIU-12-103B.	Verify that the "ENABLE X-RAY" button has been pressed.			
64	Because the Packet X-Ray door is open, the Packet X-Ray should not be enabled (e.g., The Packet X-Ray should not receive output ND-07-101/EN from the PCS.)	Verify that pressing the "ENABLE X-RAY" does not enable the Packet X-Ray.			
65	Press and continue to press the Packet X-Ray "RETRACT X-RAY TRAY" button from the "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" at OIU-12-103B, until the Packet X-Ray Tray is fully retracted.	Verify that the "RETRACT X-RAY TRAY" button has been pressed.			
66	The Packet X-Ray Tray should fully retract so that the Packet X-Ray door can be closed.	Verify that the Packet X-Ray Tray is fully retracted.			
67	Press and then release the Packet X-Ray "ENABLE X-RAY" button from the "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" at OIU-12-103B.	Verify that the "ENABLE X-RAY" button has been pressed.			
68	Because the Packet X-Ray door is open, the Packet X-Ray should not be enabled.	Verify that pressing the "ENABLE X-RAY" button does not enable the Packet X-Ray.			
69	Press and continue to press the Packet X-Ray "CLOSE X-RAY DOOR" button from the "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" at OIU-12-103B, until the Packet X-Ray door is translated closed.	Verify that the "CLOSE X-RAY DOOR" button has been pressed.			
70	The Packet X-Ray Door (DO-07-103) should translate completely closed, covering the X-ray bulge.	Verify that the Packet X-Ray Door is fully translated closed.			
71	Press and then release the Packet X-Ray "ENABLE X-RAY" button from the "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" at OIU-12-103B.	Verify that the "ENABLE X-RAY" button has been pressed.			
72	Because the Packet X-Ray door is closed, the Packet X-Ray should be enabled.	Verify that pressing the "ENABLE X-RAY" button enables the Packet X-Ray.			

#63, 67, 71 - Enable X-ray button not implemented. Door closed switch wired to provide enable function.

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
73	Press and then release the Packet X-Ray "DISABLE X-RAY" button from the "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" at OIU-12-103B.	Verify that the "DISABLE X-RAY" button has been pressed.			
74	The Packet X-Ray should be disabled.	Verify that pressing the "DISABLE X-RAY" button disables the Packet X-Ray.			

N/A mjd
7-16-97

Steps 61-74 - Hardware inter lock tested. X-rays cannot be generated when door is open. If door opens, X-rays cannot be generated.

mjd 7-16-97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Review Drum Tipper and Drum Grab Operations					
75	The Drum Tipper should be parked; raised with Drum Grab open and vertical.	Verify that the Drum Tipper is parked.	✓		R/W
76	Turn ON the Drum Tipper Filtration Pump and the Drum Tipper Main Pump. These pumps supply hydraulic pressure to the Drum Tipper Grabs.	Verify that the Drum Tipper filtration pump and the Drum Tipper main pump are running.	✓		R/W
77	The "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" should be displayed at OIU-12-103B.	Verify that the "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" is displayed.	✓		R/W
78	Press briefly and then release the Drum Tipper "CLOSE GRAB" button from the "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" at OIU-12-103B.	Verify that the "CLOSE GRAB" button has been pressed.	✓		R/W
79	The Drum Tipper grab should smoothly close without erratic motion while the "CLOSE GRAB" button is pressed.	Verify that the Drum Tipper grab closes while the "CLOSE GRAB" button is pressed.	✓		R/W
80	Press briefly and then release the Drum Tipper "OPEN GRAB" button from the "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" at OIU-12-103B.	Verify that the "OPEN GRAB" button has been pressed.	✓		NW
81	The Drum Tipper grab should smoothly open without erratic motion while the "OPEN GRAB" button is pressed.	Verify that the Drum Tipper Grab opens while the "OPEN GRAB" button is pressed.	✓		R/W
82	Press and continue to press the Drum Tipper "CLOSE GRAB" button from the "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" at OIU-12-103B, until the Drum Tipper grab is fully closed.	Verify that the "CLOSE GRAB" button has been pressed.	✓		R/W
83	The Drum Tipper grab should completely close.	Verify that the Drum Tipper grab is fully closed.	✓		R/W
84	Press and continue to press the Drum Tipper "OPEN GRAB" button from the "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" at OIU-12-103B, until the Drum Tipper grab is fully open.	Verify that the "OPEN GRAB" button has been pressed.	✓		R/W
85	The Drum Tipper grab should completely open.	Verify that the Drum Tipper grab is fully open.	✓		R/W
86	Briefly press the Drum Tipper Rotate Joystick fully right and then release.	Verify that the joystick has been pushed fully right.	✓		R/W

#80 simulated Drum Tipper lowered condition to satisfy open grab interlock. R/W 7/16/93

#85 closed grab arms to allow rotation NW 7/16/93

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
87	Because the Drum Tipper "ENABLE ROTATE JOYSTICK" button has not been pressed to enable Drum Tipper grab rotation, pressing the joystick should have no effect on the Drum Tipper.	Verify that the Drum Tipper does not rotate when the joystick is pressed.	✓		R/W
88	Briefly press the Drum Tipper Rotate Joystick fully left and then release.	Verify that the joystick has been pushed fully left.	✓		R/W
89	Because the Drum Tipper "ENABLE ROTATE JOYSTICK" button has not been pressed to enable Drum Tipper grab rotation, pressing the joystick button should have no effect on the Drum Tipper.	Verify that the Drum Tipper does not rotate when the joystick is pressed.	✓		R/W
90	Press briefly and then release the Drum Tipper "ENABLE ROTATE JOYSTICK" button from the "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" at OIU-12-103B.	Verify that the "ENABLE ROTATE JOYSTICK" button has been pressed.	✓		R/W
91	Briefly press the Drum Tipper Rotate Joystick fully right and then release the Drum Tipper Rotate Joystick.	Verify that the joystick has been pushed fully right.	✓		R/W
92	The Drum Tipper grab should rotate clockwise without erratic motion while the joystick is pressed right.	Verify that the Drum Tipper Grab rotates clockwise while the joystick is pressed.	✓		R/W
93	Briefly press the Drum Tipper Rotate Joystick fully left and then release the Drum Tipper Rotate Joystick.	Verify that the joystick has been pushed fully left.	✓		R/W
94	The Drum Tipper grab should smoothly rotate counterclockwise without erratic motion while the joystick is pressed left.	Verify that the Drum Tipper grab rotates counterclockwise while the joystick is pressed.	✓		R/W
95	Press and continue to press the Drum Tipper Rotate Joystick right until the Drum Tipper grab is fully rotated clockwise and stops.	Verify that the joystick has been pressed right.	✓		R/W
96	The Drum Tipper grab should rotate completely clockwise and stop.	Verify that the Drum Tipper grab is fully rotated clockwise.	✓		R/W
97	Press and continue to press the Drum Tipper Rotate Joystick left until the Drum Tipper grab is fully rotated counterclockwise and stops.	Verify that the joystick has been pressed left.	✓		R/W
98	The Drum Tipper grab should rotate completely counterclockwise and stop.	Verify that the Drum Tipper grab is fully rotated counterclockwise.	✓		R/W
99	Press and continue to press the Drum Tipper Rotate Joystick right until the Drum Tipper grab is rotated to its vertical position.	Verify that the joystick has been pressed right.	✓		R/W
100	The Drum Tipper grab should rotate to its upright, vertical position and stop.	Verify that the Drum Tipper grab is vertical.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
101	Press briefly and then release the Drum Tipper "DISABLE ROTATE JOYSTICK" button from the "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" at OIU-12-103B.	Verify that the "DISABLE ROTATE JOYSTICK" button has been pressed.	✓		R/W
102	Briefly press the Drum Tipper Rotate Joystick fully right and then release the Drum Tipper Rotate Joystick.	Verify that the joystick has been pressed right.	✓		R/W
103	Because the Drum Tipper "DISABLE ROTATE JOYSTICK" button has been pressed to disable Drum Tipper grab rotation, pressing the Drum Tipper Rotate Joystick right should have no effect on the Drum Tipper.	Verify that the Drum Tipper does not rotate when the joystick is pressed.	✓		R/W
104	Briefly press the Drum Tipper Rotate Joystick fully left and then release the Drum Tipper Rotate Joystick.	Verify that the joystick has been pressed left.	✓		R/W
105	Because the Drum Tipper "DISABLE ROTATE JOYSTICK" button has been pressed to disable Drum Tipper grab rotation, pressing the joystick should have no effect on the Drum Tipper.	Verify that the Drum Tipper does not rotate when the joystick is pressed.	✓		R/W
106	Press briefly and then release the Drum Tipper "LOWER TIPPER" button from the "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" at OIU-12-103B.	Verify that the "LOWER TIPPER" button has been pressed.	✓		R/W
107	The Drum Tipper should slowly lower without erratic motion AND WITHOUT A LOUD SCREECHING NOISE while the "LOWER TIPPER" button is pressed.	Verify that the Drum Tipper slowly lowers while the "LOWER TIPPER" button is pressed.		✓	R/W
108	Press briefly and then release the Drum Tipper "RAISE TIPPER" button from the "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" at OIU-12-103B.	Verify that the "RAISE TIPPER" button has been pressed.	✓		R/W
109	The Drum Tipper should slowly raise without erratic motion AND WITHOUT A LOUD SCREECHING NOISE while the "RAISE TIPPER" button is pressed.	Verify that the Drum Tipper slowly raises while the "RAISE TIPPER" button is pressed.	✓		R/W
110	Press and continue to press the Drum Tipper "LOWER TIPPER" button from the "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" at OIU-12-103B, until the Drum Tipper is lowered (e.g. Higher movable rail on Drum Tipper is aligned with fixed rail.)	Verify that the "LOWER TIPPER" button has been pressed.	✓		R/W
111	The Drum Tipper should lower slowly, without erratic motion, until the higher movable rail section attached to the Drum Tipper is aligned with the fixed rail.	Verify that the Drum Tipper is lowered.	✓		R/W
112	Press the "MAINT MAIN MENU" button from the "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" at OIU-12-103B.	Verify that the "MAINT MAIN MENU" button has been pressed.	✓		R/W

X SEE TE 144

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass	Fail	Witness (initial)
113	The "SORTING GLOVEBOX MAINTENANCE MAIN MENU" should be displayed at OIU-12-103B.	Verify that the "SORTING GLOVEBOX MAINTENANCE MAIN MENU" is displayed.	✓	✓	P16

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Review Drum Lid/Delid Fixture Operations					
114	The Drum Lid/Delid Fixture (RT-07-101) should be parked: 1. Raised 2. Translated to Relid/Park Position 3. Rotated Parked 4. Saw Retracted and Off 5. C-Clip Crimper open and retracted N/A R/W 7/1/99 6. Vacuum off	Verify that the Drum Lid/Delid Fixture is parked.	✓		R/W
115	Press the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" button from the "SORTING GLOVEBOX MAINTENANCE MAIN MENU" at OIU-12-103B.	Verify that the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" button has been pressed.	✓		R/W
116	The "DRUM LID/DELID FIXTURE MAINTENANCE MENU" should be displayed at OIU-12-103B.	Verify that the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" is displayed.	✓		R/W
117	Press briefly and then release the Fixture Direction "MOVE LEFT" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-103B.	Verify that the "MOVE LEFT" button has been pressed.	✓		R/W
118	The Drum Lid/Delid Fixture should smoothly translate without erratic motion toward the Delid Position while the "MOVE LEFT" button is pressed.	Verify that the Drum Lid/Delid Fixture translates forward while the "MOVE LEFT" button is pressed.	✓		R/W
119	Press briefly and then release the Fixture Direction "MOVE RIGHT" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-103B.	Verify that the "MOVE RIGHT" button has been pressed.	✓		R/W
120	The Drum Lid/Delid Fixture should smoothly translate without erratic motion toward the Relid Position while the "MOVE RIGHT" button is pressed.	Verify that the Drum Lid/Delid Fixture translates in reverse while the "MOVE RIGHT" button is pressed.	✓		R/W
121	Press and continue to press the Fixture Direction "MOVE LEFT" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-103B, until the Drum Lid/Delid Fixture has translated to the Delid position.	Verify that the "MOVE LEFT" button has been pressed.	✓		R/W
122	The Drum Lid/Delid Fixture should translate without erratic motion to the Delid Position. Position Switch 07-ZS-728B should be activated (e.g., LED indicator illuminated) when the Drum Lid/Delid Fixture is at the Delid position.	Verify that the Drum Lid/Delid Fixture has translated to the Delid Position.	✓		R/W
123	Press and continue to press the Fixture Direction "MOVE RIGHT" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-103B, until the Drum Lid/Delid Fixture has translated to the Relid position.	Verify that the "MOVE RIGHT" button has been pressed.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
124	The Drum Lid/Delid Fixture should translate without erratic motion to the Relid Position. Position Switch 07-ZS-728A should be activated (e.g., LED indicator illuminated) when the Drum Lid/Delid Fixture is at the Relid position.	Verify that the Drum Lid/Delid Fixture has translated to the Relid Position.	✓		R/W
125	Press and continue to press the Fixture Direction "MOVE LEFT" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-103B, until the Drum Lid/Delid Fixture has translated to the Delid position.	Verify that the "MOVE LEFT" button has been pressed.	✓		R/W
126	The Drum Lid/Delid Fixture should translate without erratic motion to the Delid Position. Position Switch 07-ZS-728B should be activated (e.g., LED indicator illuminated) when the Drum Lid/Delid Fixture is at the Delid position.	Verify that the Drum Lid/Delid Fixture has translated to the Delid Position.		✓	R/W
127	Press briefly and then release the Fixture Direction "LOWER FIXTURE" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-103B.	Verify that the "LOWER FIXTURE" button has been pressed.	✓		R/W
128	The Drum Lid/Delid Fixture should lower without erratic motion while the "LOWER FIXTURE" button is pressed.	Verify that the Drum Lid/Delid Fixture lowers while the "LOWER FIXTURE" button is pressed.	✓		R/W
129	Press briefly and then release the Fixture Direction "RAISE FIXTURE" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-103B.	Verify that the "RAISE FIXTURE" button has been pressed.	✓		R/W
130	The Drum Lid/Delid Fixture should raise without erratic motion while the "RAISE FIXTURE" button is pressed.	Verify that the Drum Lid/Delid Fixture raises while the "RAISE FIXTURE" button is pressed.	✓		R/W
131	Press and continue to press the Fixture Direction "LOWER FIXTURE" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-103B, until the Drum Lid/Delid Fixture is fully lowered.	Verify that the "LOWER FIXTURE" button has been pressed.	✓		R/W
132	The Drum Lid/Delid Fixture should lower without erratic motion to its fully lowered position.	Verify that the Drum Lid/Delid Fixture is fully lowered.	✓		R/W
133	Press and continue to press the Fixture Direction "RAISE FIXTURE" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-103B, until the Drum Lid/Delid Fixture is fully raised.	Verify that the "RAISE FIXTURE" button has been pressed.	✓		R/W
134	The Drum Lid/Delid Fixture should raise without erratic motion to its fully raised position.	Verify that the Drum Lid/Delid Fixture is fully raised.	✓		R/W
135	Press and continue to press the Fixture Direction "LOWER FIXTURE" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-103B, until the Drum Lid/Delid Fixture is fully lowered.	Verify that the "LOWER FIXTURE" button has been pressed.	✓		R/W
136	The Drum Lid/Delid Fixture should lower without erratic motion to its fully lowered position.	Verify that the Drum Lid/Delid Fixture is fully lowered.	✓		R/W

* see TE #147

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass	Fail	Witness (initial)
137	Press briefly and then release the Fixture Direction "ROTATE CLOCKWISE" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-103B.	Verify that the "ROTATE CLOCKWISE" button has been pressed.	✓		R/W
138	The Drum Lid/Delid Fixture should rotate clockwise without erratic motion while the "ROTATE CLOCKWISE" button is pressed. <i>R/W 7/16/97</i>	Verify that the Drum Lid/Delid Fixture rotates clockwise. <i>to the Park position</i>	✓		R/W
139	Press briefly and then release the Fixture Direction "ROTATE COUNTER-CW" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-103B.	Verify that the "ROTATE COUNTER-CW" button has been pressed.	✓		R/W
140	The Drum Lid/Delid Fixture should rotate counterclockwise without erratic motion while the "ROTATE COUNTER-CW" button is pressed. <i>R/W 7/16/97</i>	Verify that the Drum Lid/Delid Fixture rotates counterclockwise. <i>to the Park position</i>	✓		R/W
141	Press and continue to press the Fixture Direction "ROTATE CLOCKWISE" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-103B, until the Drum Lid/Delid Fixture rotates clockwise through two rotation indents.	Verify that the "ROTATE CLOCKWISE" button has been pressed.			N/A
142	The Drum Lid/Delid Fixture should rotate clockwise without erratic motion past two rotation indents while the "ROTATE CLOCKWISE" button is pressed.	Verify that the Drum Lid/Delid Fixture rotates clockwise past two rotation indents.			N/A
143	Press and continue to press the Fixture Direction "ROTATE COUNTER-CW" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-103B, until the Drum Lid/Delid Fixture rotates counterclockwise through two rotation indents.	Verify that the "ROTATE COUNTER-CW" button has been pressed.			N/A
144	The Drum Lid/Delid Fixture should rotate counterclockwise without erratic motion past two rotation indents while the "ROTATE COUNTER-CW" button is pressed.	Verify that the Drum Lid/Delid Fixture rotates counterclockwise past two rotation indents.			N/A
145	The Drum Lid/Delid Fixture should now be rotated parked. When the Drum Lid/Delid Fixture is parked, both the Fixture Rotation Index and Fixture Rotated Parked position switches (07-ZS-727A, 07-ZS-727B) should be activated (e.g., LED indicator illuminated).	Verify that the Drum Lid/Delid Fixture is rotated parked.			N/A
146	Press and continue to press the Fixture Direction "RAISE FIXTURE" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-103B, until the Drum Lid/Delid Fixture is fully raised.	Verify that the "RAISE FIXTURE" button has been pressed.	✓		R/W
147	The Drum Lid/Delid Fixture should raise without erratic motion to its fully raised position.	Verify that the Drum Lid/Delid Fixture is fully raised.	✓		R/W
148	Press briefly and then release the Fixture Crimper "EXTEND CRIMPER" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-103B.	Verify that the "EXTEND CRIMPER" button has been pressed.			N/A
149	The Drum Lid/Delid Fixture C-Clip Crimper should rotate down without erratic motion while the "EXTEND CRIMPER" button is pressed.	Verify that the Crimper rotates down.			N/A

#141-145 - Fixture only rotates 180°, East or West Park position

#148 & 149 - crimper deleted From Fixture

R/W 7/16/97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
150	Press briefly and then release the Fixture Crimper "RETRACT CRIMPER" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-103B.	Verify that the "RETRACT CRIMPER" button has been pressed.			
151	The Drum Lid/Delid Fixture C-Clip Crimper should rotate up without erratic motion while the "RETRACT CRIMPER" button is pressed.	Verify that the Crimper rotates up.			
152	Press and continue to press the Fixture Crimper "EXTEND CRIMPER" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-103B, until the C-Clip Crimper is fully rotated down.	Verify that the "EXTEND CRIMPER" button has been pressed.			RW 7/16/99
153	The Drum Lid/Delid Fixture C-Clip Crimper should rotate down without erratic motion to its fully lowered position.	Verify that the Crimper is fully rotated down.			
154	Press briefly and then release the C-Clip "TURN ON MAGAZINE" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-103B.	Verify that the "TURN ON MAGAZINE" button has been pressed.			
155	The C-Clip Crimper Magazine air motors (2) should both activate after the "TURN ON MAGAZINE" button is pressed.	Verify that the C-Clip magazine motors activate.			
156	Press briefly and then release the C-Clip "TURN OFF MAGAZINE" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-103B.	Verify that the "TURN OFF MAGAZINE" button has been pressed.			
157	The C-Clip Crimper Magazine air motors (2) should both deactivate after the "TURN OFF MAGAZINE" button is pressed.	Verify that the C-Clip magazine motors deactivate.			
158	Press and continue to press the Fixture Crimper "CLOSE JAW" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-103B, until the C-Clip Crimper jaw is fully extended closed.	Verify that the "CLOSE JAW" button has been pressed.			
159	The Drum Lid/Delid Fixture C-Clip Crimper jaw should extend without erratic motion.	Verify that the Crimper jaw is fully extended closed.			
160	Press and continue to press the Fixture Crimper "OPEN JAW" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-103B, until the C-Clip Crimper jaw is fully retracted open.	Verify that the "OPEN JAW" button has been pressed.			
161	The Drum Lid/Delid Fixture C-Clip Crimper jaw should fully retract open without erratic motion.	Verify that the Crimper jaw is fully retracted open.			
162	Press and continue to press the Fixture Crimper "RETRACT CRIMPER" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-103B, until the C-Clip Crimper is fully rotated up.	Verify that the "RETRACT CRIMPER" button has been pressed.			
163	The Drum Lid/Delid Fixture C-Clip Crimper should rotate up without erratic motion to its fully raised position.	Verify that the Crimper is fully rotated up.			

#150-163 - crimper deleted from Fixture

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✗	Witness (initial)
164	Press briefly and then release the Fixture Saw "TURN ON INERT GAS" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-103B.	Verify that the "TURN ON INERT GAS" button has been pressed.	✓		R/U
165	Inert gas should begin flowing to the Drum Lid/Delid Fixture Saw after the "TURN ON INERT GAS" button is pressed.	Verify that inert gas is flowing to the saw through the inert gas orifice located next to the saw.	✓		R/W
166	Press briefly and then release the Fixture Saw "EXTEND SAW" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-103B.	Verify that the "EXTEND SAW" button has been pressed.	✓		R/U
167	The Drum Lid/Delid Fixture Saw should rotate down without erratic motion while the "EXTEND SAW" button is pressed.	Verify that the Saw rotates down.	✓		R/W
168	Press briefly and then release the Fixture Saw "RETRACT SAW" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-103B.	Verify that the "RETRACT SAW" button has been pressed.	✓		R/W
169	The Drum Lid/Delid Fixture Saw should rotate up without erratic motion while the "RETRACT SAW" button is pressed.	Verify that the Saw rotates up.	✓		R/W
170	Press and continue to press the Fixture Saw "EXTEND SAW" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-103B, until the Drum Lid/Delid Fixture Saw is fully rotated down.	Verify that the "EXTEND SAW" button has been pressed.	✓		R/W
171	The Drum Lid/Delid Fixture Saw should rotate down without erratic motion to its fully lowered position.	Verify that the Saw is fully rotated down.	✓		R/W
172	Press briefly and then release the Fixture Saw "TURN ON SAW" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-103B.	Verify that the "TURN ON SAW" button has been pressed.	✓		R/U
173	The Drum Lid/Delid Fixture Saw should activate after the "TURN ON SAW" button is pressed.	Verify that the Saw activates.	✓		R/W
174	Press briefly and then release the Fixture Saw "TURN OFF SAW" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-103B.	Verify that the "TURN OFF SAW" button has been pressed.	✓		R/W
175	The Drum Lid/Delid Fixture Saw should deactivate after the "TURN OFF SAW" button is pressed.	Verify that the Saw deactivates.	✓		R/W
176	Press and continue to press the Fixture Saw "RETRACT SAW" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-103B, until the Drum Lid/Delid Fixture Saw is fully rotated up.	Verify that the "RETRACT SAW" button has been pressed.	✓		R/W
177	The Drum Lid/Delid Fixture Saw should rotate up without erratic motion to its fully raised position.	Verify that the Saw is fully rotate up.	✓		R/W
178	Press briefly and then release the Fixture Saw "TURN OFF INERT GAS" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-103B.	Verify that the "TURN OFF INERT GAS" button has been pressed.	✓		R/S

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✗	Witness (initial)
179	Inert gas should stop flowing to the Drum Lid/Delid Fixture Saw after the "TURN OFF INERT GAS" button is pressed.	Verify that inert gas is not flowing to the saw.	✓		R/W
180	Press briefly and then release the Lid Lifter "TURN ON VACUUM" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-103B.	Verify that the "TURN ON VACUUM" button has been pressed.	✓		R/W
181	Vacuum should be generated at the Drum Lid/Delid Fixture suction cups after the "TURN ON VACUUM" button is pressed. A distinctive "hiss" should be noted at the vacuum aspirator.	Verify that vacuum is present.	✓		R/W
182	Press briefly and then release the Lid Lifter "CLOSE ISOLATION VALVE" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-103B.	Verify that the "CLOSE ISOLATION VALVE" button has been pressed.	✓		R/W
183	The Vacuum generator should remain activated, but vacuum should no longer be present at the Drum Lid/Delid Fixture suction cups after the vacuum isolation solenoid is closed.	Verify that vacuum is not present.	✓		R/W
184	Press briefly and then release the Lid Lifter "OPEN ISOLATION VALVE" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-103B.	Verify that the "OPEN ISOLATION VALVE" button has been pressed.	✓		R/W
185	The Vacuum generator should remain activated, so that vacuum should be generated at the Drum Lid/Delid Fixture suction cups after the vacuum isolation solenoid is opened.	Verify that vacuum is present.			R/W 7/16/97
186	Press briefly and then release the Lid Lifter "TURN OFF VACUUM" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-103B.	Verify that the "TURN OFF VACUUM" button has been pressed.	✓		R/W
187	Vacuum should not be generated at the Drum Lid/Delid Fixture suction cups after the "TURN OFF VACUUM" button is pressed.	Verify that vacuum is not present.	✓		R/W
188	Press the "MAINT MAIN MENU" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-103B.	Verify that the "MAINT MAIN MENU" button has been pressed.	✓		R/W
189	The "SORTING GLOVEBOX MAINTENANCE MAIN MENU" should be displayed at OIU-12-103B.	Verify that the "SORTING GLOVEBOX MAINTENANCE MAIN MENU" is displayed.	✓		R/W

#184 & 185 Function does not exist

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Review Drum Transfer Car Operations					
190	Press the "DRUM TRANSFER CAR AND MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" button from the "SORTING GLOVEBOX MAINTENANCE MAIN MENU" at OIU-12-103B.	Verify that the "DRUM TRANSFER CAR AND MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" button has been pressed.	✓		R/W
191	The "DRUM TRANSFER CAR AND MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" should be displayed at OIU-12-103B.	Verify that the "DRUM TRANSFER CAR AND MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" is displayed.	✓		R/W
192	Press briefly and then release the Drum Transfer Car "MOVE RIGHT" button from the "DRUM TRANSFER CAR AND MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-103B.	Verify that the "MOVE RIGHT" button has been pressed.	✓		R/W
193	The Transfer Car should move to the right while the "MOVE RIGHT" button is pressed.	Verify that the Transfer Car moves to the right.	✓		R/W
194	Press briefly and then release the Drum Transfer Car "MOVE LEFT" button from the "DRUM TRANSFER CAR AND MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-103B.	Verify that the "MOVE LEFT" button has been pressed.	✓		R/W
195	The Transfer Car should move to the left while the "MOVE RIGHT" button is pressed.	Verify that the Transfer Car moves to the left.	✓		R/W
196	Press and continue to press the Drum Transfer Car "MOVE RIGHT" button from the "DRUM TRANSFER CAR AND MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-103B until the Transfer Car is approximately halfway between the Delid and the Compact Transfer Position.	Verify that the "MOVE RIGHT" button has been pressed.	✓		R/W
197	The Transfer Car should move forward to a point approximately halfway between the Delid and the Compact Transfer Position.	Verify that the Transfer Car moves forward to a point midway between the Delid and the Compact Transfer Positions.	✓		R/W
198	Press the Drum Transfer Car "DECELERATE" button as needed from the "DRUM TRANSFER CAR AND MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-103B until the Transfer Car Stops at the Delid position.	Verify that the "DECELERATE" button has been pressed.			N/A
199	The Transfer Car should smoothly decelerate and stop at the Compact Transfer position. Position switch 07-ZS-725A should be activated when the Transfer Car is at the Compact Transfer position.	Verify that the Transfer Car slows and stops at the Compact Transfer position.	✓		R/W
200	Press the Drum Transfer Car Conveyor "ENGAGE CONVEYOR" button from the "DRUM TRANSFER CAR AND MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-103B.	Verify that the "ENGAGE CONVEYOR" button has been pressed.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
201	The Drum Transfer Car Conveyor drive should engage.	Verify that the Drum Transfer Car Conveyor drive is engaged.	✓		R/W
202	Press the Drum Transfer Car Conveyor "TURN CONVEYOR ON" button from the "DRUM TRANSFER CAR AND MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-103B.	Verify that the "TURN CONVEYOR ON" button has been pressed.	✓		R/W
203	The Drum Transfer Car Conveyor drive should energize.	Verify that the Drum Transfer Car Conveyor drive is energized.	✓		R/W
204	Press the Drum Transfer Car Conveyor "TURN CONVEYOR OFF" button from the "DRUM TRANSFER CAR AND MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-103B.	Verify that the "TURN CONVEYOR OFF" button has been pressed.	✓		R/W
205	The Drum Transfer Car Conveyor drive should de-energize.	Verify that the Drum Transfer Car Conveyor drive is de-energized.	✓		R/W
206	Press the Drum Transfer Car Conveyor "DISENGAGE CONVEYOR" button from the "DRUM TRANSFER CAR AND MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-103B.	Verify that the "DISENGAGE CONVEYOR" button has been pressed.	✓		R/W
207	The Drum Transfer Car Conveyor drive should disengage.	Verify that the Drum Transfer Car Conveyor drive is disengaged.	✓		R/W
208	Press and continue to press the Drum Transfer Car "MOVE LEFT" button from the "DRUM TRANSFER CAR AND MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-103B until the Transfer Car is at the Entry Position.	Verify that the "MOVE LEFT" button has been pressed.	✓		R/W
209	Press the Drum Transfer Car "ENGAGE TRANSFER CAR STOP" button from the "DRUM TRANSFER CAR AND MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-103B.	Verify that the "ENGAGE TRANSFER CAR STOP" button has been pressed.	✓		R/W
210	The Transfer Car stops should raise.	Verify that the Transfer Car stops are raised.	✓		R/W
211	Press the Drum Transfer Car "DISENGAGE TRANSFER CAR STOP" button from the "DRUM TRANSFER CAR AND MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-103B.	Verify that the "DISENGAGE TRANSFER CAR STOP" button has been pressed.	✓		R/W
212	The Transfer Car stops should lower.	Verify that the Transfer Car stops are lowered.	✓		R/W
213	WARNING: All LLW Sorting Glovebox (GB-07-101) items must be in their parked positions prior to removal of pressure from the 80 psi valve manifold.	Verify that all LLW Sorting Glovebox items are parked.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
214	Press the "TURN OFF SP-07-103 80 PSI AIR" button from the "DRUM TRANSFER CAR AND MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-103B. The air supply to Manifold "A" is controlled by solenoid valve 07-FEV-376A.	Verify that the "TURN OFF SP-07-103 80 PSI AIR" button has been pressed. <i>(L: ddr / Del: ddc)</i>	✓		R/W
215	The indicator on the Manifold A air regulator should steadily drop and eventually indicate that there is no pressure in the 80 psi line.	Verify that pressure has been removed from the Manifold A 80 psi line.	✓		R/W
216	Press the "TURN ON SP-07-103 80 PSI AIR" button from the "DRUM TRANSFER CAR AND MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-103B.	Verify that the "TURN ON SP-07-103 80 PSI AIR" button has been pressed.	✓		R/W
217	The indicator on the Manifold A 80 psi air regulator should steadily rise and eventually indicate that there is at least 80 psi pressure in the Manifold A 80 psi line.	Verify that pressure has been restored to the Manifold A 80 psi line.	✓		R/W
218	Press the "TURN OFF SP-07-104 80 PSI AIR" button from the "DRUM TRANSFER CAR AND MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-103B. The air supply to Manifold "B" is controlled by solenoid valve 07-FEV-376B	Verify that the "TURN OFF SP-07-104 80 PSI AIR" button has been pressed. <i>(6B102 Manifold)</i>	✓		R/W
219	The indicator on the Manifold B air regulator should steadily drop and eventually indicate that there is no pressure in the 80 psi line.	Verify that pressure has been removed from the Manifold B 80 psi line.	✓		R/W
220	Press the "TURN ON SP-07-104 80 PSI AIR" button from the "DRUM TRANSFER CAR AND MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-103B.	Verify that the "TURN ON SP-07-104 80 PSI AIR" button has been pressed.	✓		R/W
221	The indicator on the Manifold B 80 psi air regulator should steadily rise and eventually indicate that there is at least 80 psi pressure in the Manifold B 80 psi line.	Verify that pressure has been restored to the Manifold B 80 psi line.	✓		R/W
222	Press the "TURN OFF BAGLESS TRANSFER PORT AIR" button from the "DRUM TRANSFER CAR AND MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-103B. The air supply to the LLW Sorting Glovebox Bagless Transfer Port is controlled by solenoid valve 07-FEV-377	Verify that the "TURN OFF BAGLESS TRANSFER PORT AIR" button has been pressed.	✓		R/W
223	The indicator on the Bagless Transfer Port air regulator should steadily drop and eventually indicate that there is no pressure in the 6-7 Bar line. NOTE: The Bagless Transfer Port air supply pressure regulator provided by the manufacturer denotes "BAR" pressure. 6-7 Bar pressure is approximately equivalent to 90-100 psi pressure.	Verify that pressure has been removed from the Bagless Transfer Port 6-7 Bar line.	✓		R/W
224	Press the "TURN ON BAGLESS TRANSFER PORT AIR" button from the "DRUM TRANSFER CAR AND MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-103B.	Verify that the "TURN ON BAGLESS TRANSFER PORT AIR" button has been pressed.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
225	The indicator on the Bagless Transfer Port 6-7 Bar air pressure regulator should steadily rise and eventually indicate that there is at least 6 Bar pressure in the Bagless Transfer Port 6-7 Bar air line.	Verify that pressure has been restored to the Bagless Transfer Port 6-7 Bar air line.	✓		R/W
226	Turn the Lift Table Pedestal PC-09-203A M/O/N switch 09-HS-241A to the "Maintenance" position to allow an operator to control the Lift Table.	Verify that the M/O/N switch 09-HS-241A is turned to the "M" position	✓		R/W
227	Press the "UP" pushbutton at the Lift Table local control pedestal (PC-09-203A) until the lift table is raised approximately 2.5 centimeters (1 inch) above AGV height.	Verify that the Lift Table is raised at least 1 inch above AGV height.	✓		R/W
228	Turn the Lift Table Pedestal PC-09-203A M/O/N switch 09-HS-241A to the "Normal" position to allow the PCS to control the Lift Table.	Verify that M/O/N switch 09-HS-241A is switched to the "N" position.	✓		R/W
229	Press the "REHOME LIFT TABLE LT-09-203A" button from the "DRUM TRANSFER CAR AND MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-103B.	Verify that the "MAINT MAIN MENU" button has been pressed.	✓		R/W
230	The lift table should automatically lower to AGV height, dip slightly below AGV height, and return to AGV height.	Verify that the lift table is at AGV height.	✓		R/W
231	The Lift Table "AGV LOAD HEIGHT" indicator (09-ZL-241E) on the Lift Table Control Pedestal (PC-09-203A) should be illuminated, indicating that the Lift Table is at AGV height.	Verify that the "AGV LOAD HEIGHT" indicator is illuminated.	✓ R-		R/W
232	Turn the Lift Table Pedestal PC-09-203A M/O/N switch 09-HS-241A to the "Maintenance" position to allow an operator to control the Lift Table.	Verify that the M/O/N switch 09-HS-241A is turned to the "M" position	✓		R/W
233	Press the "UP" pushbutton at the Lift Table local control pedestal (PC-09-203A) until the lift table is raised approximately 2.5 centimeters (1 inch) above AGV height.	Verify that the Lift Table is raised at least 1 inch above AGV height.	✓		R/W
234	Turn the Lift Table Pedestal PC-09-203A M/O/N switch 09-HS-241A to the "Normal" position to allow the PCS to control the Lift Table.	Verify that M/O/N switch 09-HS-241A is switched to the "N" position.	✓		R/W
235	Press the "REHOME LIFT TABLE LT-09-203A" button from the "DRUM TRANSFER CAR AND MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-103B.	Verify that the "REHOME LIFT TABLE LT-09-203A" button has been pressed.	✓		R/W
236	The lift table should automatically lower to AGV height, dip slightly below AGV height, and return to AGV height.	Verify that the lift table is at AGV height.	✓		R/W
237	The Lift Table "AGV LOAD HEIGHT" indicator (09-ZL-241E) on the Lift Table Control Pedestal (PC-09-203A) should be illuminated, indicating that the Lift Table is at AGV height.	Verify that the "AGV LOAD HEIGHT" indicator is illuminated.	✓		R/W
238	Press the "MAINT MAIN MENU" button from the "DRUM TRANSFER CAR AND MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-103B.	Verify that the "MAINT MAIN MENU" button has been pressed.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass	Fail	Witness (initial)
239	The "SORTING GLOVEBOX MAINTENANCE MAIN MENU" should be displayed at OIU-12-103B.	Verify that the "SORTING GLOVEBOX MAINTENANCE MAIN MENU" is displayed.	✓		[Signature]

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass	Fail	Witness (Initial)
Review "SYSTEM VARIABLES MENU" Operations					
240	Press the "SYSTEM VARIABLES" button from the "SORTING GLOVEBOX MAINTENANCE MAIN MENU" at OIU-12-103B.	Verify that the "SYSTEM VARIABLES" button has been pressed.	✓		R/W
241	The "SYSTEM VARIABLES MENU" should be displayed at OIU-12-103B.	Verify that the "SYSTEM VARIABLES MENU" is displayed.	✓		R/W
242	Press the "SET SCREEN CONTRAST" button from the "SYSTEM VARIABLES MENU" at OIU-12-103B.	Verify that the "SET SCREEN CONTRAST" button has been pressed.	✓		R/W
243	The "SET SCREEN CONTRAST" screen should be displayed at OIU-12-103B.	Verify that the "SET SCREEN CONTRAST" screen is displayed.	✓		R/W
244	A numeric keypad with "ENTER" key should be displayed to allow system values to be modified.	Verify that a numeric keypad with "ENTER" key is displayed.	✓		R/W
245	Using the keypad, set the System Screen Contrast to "3" and press the "ENTER" key. <i>THOU "DONE"</i> <i>R/W 7/16/99</i>	Verify that the System Screen Contrast has been set to "3"	✓		R/W
246	The "SYSTEM VARIABLES MENU" should be displayed at OIU-12-103B.	Verify that the "SYSTEM VARIABLES MENU" is displayed.	✓		R/W
247	The value displayed on the "SET SCREEN CONTRAST" button should be "3"	Verify that the "SET SCREEN CONTRAST" value is "3"	✓		R/W
248	Press the "SET DAY" button from the "SYSTEM VARIABLES MENU" at OIU-12-103B.	Verify that the "SET DAY" button has been pressed.	✓		R/W
249	The "SET DAY" screen should be displayed at OIU-12-103B.	Verify that the "SET DAY" screen is displayed.	✓		R/W
250	A numeric keypad with "ENTER" key should be displayed to allow system values to be modified.	Verify that a numeric keypad with "ENTER" key is displayed.	✓		R/W
251	Using the keypad, set the System Day to "3" and press the "ENTER" key.	Verify that the System Day has been set to "3"	✓		R/W
252	Press the "DONE" key.	Verify that the "DONE" key has been pressed.	✓		R/W
253	The "SYSTEM VARIABLES MENU" should be displayed at OIU-12-103B.	Verify that the "SYSTEM VARIABLES MENU" is displayed.	✓		R/W
254	The value displayed on the "SET DAY" button should be "3"	Verify that the "SET DAY" value is "3"	✓		R/W
255	Press the "SET MONTH" button from the "SYSTEM VARIABLES MENU" at OIU-12-103B.	Verify that the "SET MONTH" button has been pressed.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
256	The "SET MONTH" screen should be displayed at OIU-12-103B.	Verify that the "SET MONTH" screen is displayed.	✓		R/W
257	A numeric keypad with "ENTER" key should be displayed to allow system values to be modified.	Verify that a numeric keypad with "ENTER" key is displayed.	✓		R/W
258	Using the keypad, set the System Month to "3" and press the "ENTER" key.	Verify that the System Month has been set to "3"	✓		R/W
259	Press the "DONE" key.	Verify that the "DONE" key has been pressed.	✓		A/W
260	The "SYSTEM VARIABLES MENU" should be displayed at OIU-12-103B.	Verify that the "SYSTEM VARIABLES MENU" is displayed.	✓		R/W
261	The value displayed on the "SET MONTH" button should be "3"	Verify that the "SET MONTH" value is "3"	✓		R/W
262	Press the "SET YEAR" button from the "SYSTEM VARIABLES MENU" at OIU-12-103B.	Verify that the "SET YEAR" button has been pressed.	✓		R/W
263	The "SET YEAR" screen should be displayed at OIU-12-103B.	Verify that the "SET YEAR" screen is displayed.	✓		R/W
264	A numeric keypad with "ENTER" key should be displayed to allow system values to be modified.	Verify that a numeric keypad with "ENTER" key is displayed.	✓		R/W
265	Using the keypad, set the System Year to "3" and press the "ENTER" key.	Verify that the System Year has been set to "3"	✓		R/W
266	Press the "DONE" key.	Verify that the "DONE" key has been pressed.	✓		R/W
267	The "SYSTEM VARIABLES MENU" should be displayed at OIU-12-103B.	Verify that the "SYSTEM VARIABLES MENU" is displayed.	✓		A/W
268	The value displayed on the "SET YEAR" button should be "3" NOTE: This should represent the year 2003. If the value does not represent the year 2003, then this step fails.	Verify that the "SET YEAR" value is "3"	✓		R/W
269	Press the "SET HOURS" button from the "SYSTEM VARIABLES MENU" at OIU-12-103B.	Verify that the "SET HOURS" button has been pressed.	✓		A/W
270	The "SET HOURS" screen should be displayed at OIU-12-103B.	Verify that the "SET HOURS" screen is displayed.	✓		A/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
271	A numeric keypad with "ENTER" key should be displayed to allow system values to be modified.	Verify that a numeric keypad with "ENTER" key is displayed.	✓		RW
272	Using the keypad, set the System Hours to "15" and press the "ENTER" key.	Verify that the System Hours have been set to "15"	✓		RW
273	Press the "DONE" key.	Verify that the "DONE" key has been pressed.	✓		RW
274	The "SYSTEM VARIABLES MENU" should be displayed at OIU-12-103B.	Verify that the "SYSTEM VARIABLES MENU" is displayed.	✓		RW
275	The value displayed on the "SET HOURS" button should be "15" NOTE: This value should represent 3 p.m. in the afternoon. If the value does not represent 3 p.m., then this step fails.	Verify that the "SET HOURS" value is "15"	✓		RW
276	Press the "SET MINUTES" button from the "SYSTEM VARIABLES MENU" at OIU-12-103B.	Verify that the "SET MINUTES" button has been pressed.	✓		RW
277	The "SET MINUTES" screen should be displayed at OIU-12-103B.	Verify that the "SET MINUTES" screen is displayed.	✓		RW
278	A numeric keypad with "ENTER" key should be displayed to allow system values to be modified.	Verify that a numeric keypad with "ENTER" key is displayed.	✓		RW
279	Using the keypad, set the System Minutes to "3" and press the "ENTER" key.	Verify that the System Minutes have been set to "3"	✓		RW
280	Press the "DONE" key.	Verify that the "DONE" key has been pressed.	✓		RW
281	The "SYSTEM VARIABLES MENU" should be displayed at OIU-12-103B.	Verify that the "SYSTEM VARIABLES MENU" is displayed.	✓		RW
282	The value displayed on the "SET MINUTES" button should start at "3" and then advance. (e.g., System Minutes will change each minute.)	Verify that the initial "SET MINUTES" value is "3"	✓		RW
283	Press the "SET SECONDS" button from the "SYSTEM VARIABLES MENU" at OIU-12-103B.	Verify that the "SET SECONDS" button has been pressed.	✓		RW
284	The "SET SECONDS" screen should be displayed at OIU-12-103B.	Verify that the "SET SECONDS" screen is displayed.	✓		RW
285	A numeric keypad with "ENTER" key should be displayed to allow system values to be modified.	Verify that a numeric keypad with "ENTER" key is displayed.	✓		RW

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
286	Using the keypad, set the System Seconds to "3" and press the "ENTER" key.	Verify that the System Seconds have been set to "3"	✓		RW
287	Press the "DONE" key.	Verify that the "DONE" key has been pressed.	✓		RW
288	The "SYSTEM VARIABLES MENU" should be displayed at OIU-12-103B.	Verify that the "SYSTEM VARIABLES MENU" is displayed.	✓		RW
289	The value displayed on the "SET SECONDS" button should start at "3" and then rapidly advance (e.g., System Seconds will change each second.)	Verify that the "SET SECONDS" initial value is "3"	✓		RW

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Test Case Shutdown					
290	Press the "MAINT MAIN MENU" button from the "SYSTEM VARIABLES MENU" at OIU-12-103B.	Verify that the "MAINT MAIN MENU" button has been pressed.	✓		R/W
291	Press the "SORTING TABLE /PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" button from the "SORTING GLOVEBOX MAINTENANCE MAIN MENU" at OIU-12-103B.	Verify that the "SORTING TABLE /PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" button has been pressed.	✓		R/W
292	Press and continue to press the Drum Tipper "RAISE TIPPER" button from the "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" at OIU-12-103B, until the Drum Tipper is raised (e.g. Lower movable rail on Drum Tipper is aligned with fixed rail.)	Verify that the "RAISE TIPPER" button has been pressed.	✓		R/W
293	The Drum Tipper should rise slowly, without erratic motion, until the lower movable rail section attached to the Drum Tipper is aligned with the fixed rail.	Verify that the Drum Tipper grab is raised.	✓		R/W
294	Turn OFF the Drum Tipper Filtration Pump and the Drum Tipper Main Pump. These pumps supply hydraulic pressure to the Drum Tipper Grabs.	Verify that the Drum Tipper filtration pump and the Drum Tipper main pump are NOT running.	✓		R/W
295	Press the "MAINT MAIN MENU" button from the "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" at OIU-12-103B.	Verify that the "MAINT MAIN MENU" button has been pressed.	✓		R/W
296	The "SORTING GLOVEBOX MAINTENANCE MAIN MENU" should be displayed at OIU-12-103B.	Verify that the "SORTING GLOVEBOX MAINTENANCE MAIN MENU" is displayed.	✓		R/W
297	Return all LLW Sorting Glovebox items to their parked, stable positions.	Verify that all LLW Sorting Glovebox items are parked.	✓		R/W
298	Turn the "AUTO MODE/MAINTENANCE MODE" keyed selector switch (07-HS-317) on the Data Management System Pedestal (TE-12-103) to "AUTOMATIC MODE".	Verify that "AUTOMATIC MODE" has been selected for the LLW Sorting Glovebox.	✓		R/W
299	The "LLW SORTING GLOVEBOX MAIN MENU" should be displayed at OIU-12-103B.	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.	✓		R/W
TEST CASE 13031A-85.09 COMPLETE					

TEST CASE 13031A-85.10 EXAMINE LLW SORTING GLOVEBOX BAGLESS TRANSFER PORT (DO-07-105) MAINTENANCE MODE 10-2

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.10 EXAMINE LLW SORTING GLOVEBOX BAGLESS TRANSFER PORT (DO-07-105) MAINTENANCE MODE					
1	<p>The LLW Sorting Glovebox Bagless Transfer Port (DO-07-105) should be parked:</p> <ol style="list-style-type: none"> 1. Drum Not Mated to Port. 1. Port Rotated Closed. 2. Port Locked. 3. Double Lid Lowered. 4. Lid Gripper Released. 5. Drum and Lid not present under port. <p>If the Bagless Transfer Port is not parked, use the Bagless Transfer Port Control Panel to place the port in parked position.</p>	Verify that the Bagless Transfer Port is parked.	✓		R/W
2	The Bagless Transfer Port Control Panel should be turned off. If the Control Panel is not turned off, turn the panel off using the "On/Off" button on the side of the Control Panel.	Verify that the Control Panel is turned off.	✓		R/W
3	A drum should be in place at the AGV end of the lift table. If the drum is not present, place the 208 liter (55 gallon) Drath & Schrader drum with inner drum lid, and without band clamp at the AGV end of the Lift Table.	Verify that the Drath & Schrader drum is positioned on the lift table at the AGV end.	✓		R/W
4	Turn the Lift Table Pedestal PC-09-202A M/O/N switch 09-HS-233A to the "Maintenance" position to allow an operator to control the Lift Table.	Verify that the M/O/N switch is turned to the "M" position.	✓		R/W
5	Press the "FORWARD" button on Lift Table Local Control Pedestal PC-07-202A until the drum moves forward and is centered under the Bagless Transfer Port.	Verify that the "FORWARD" button has been pressed.	✓		R/W
6	The Lift Table roller conveyor should move the drum forward until it is centered under the Bagless Transfer Port.	Verify that the "DRUM UNDER PORT" light is illuminated.	✓		R/W
7	The "DRUM UNDER PORT" indicator (09-ZL-233B) the Lift Table Local Control Pedestal (PC-09-202A) should be illuminated.	Verify that the "DRUM UNDER PORT" indicator is illuminated.	✓		R/W
8	Turn on the Bagless Transfer Port using the "On/Off" turn switch on the side of the Control Panel.	Verify that the Bagless Transfer Port Control Panel is turned on.	✓		R/W
9	The initial Bagless Transfer Port menu should be displayed. This menu provides 3 menu choices; Automatic Mode "K2/Auto", Manual Mode "K3/Manu.", and a toggle between stepwise and fully automatic mode "K4 Op./Mode".	Verify that the initial Bagless Transfer Port menu is displayed.	✓		R/W
10	Press button "K3" to select "Manual Mode".	Verify that button "K3" has been pressed.	✓		R/W

79 Mate the Drath & Schrader drum to Port DO-07-105.

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
11	A message should be displayed indicating "MANUAL SERVICE - Be Careful! -". The Manual Mode menu displayed should also indicate that the operator can press button "F8" to continue or press "K5" to "ESC" (cancel manual mode operation).	Verify that the messages described are displayed.	✓		R/W
12	Press button "F8" to use "Manual Mode" to control the Bagless Transfer Port.	Verify that the "F8" button has been pressed.	✓		R/W
13	A message should briefly be displayed indicating "317 Password Level Invalid" immediately followed by a "Password....." message.	Verify that a "Password....." message is displayed.	✓		R/W
14	Enter the Bagless Transfer Port "Manual Mode" operation password established during setup, and then press the "Enter" button.	Verify that the password has been correctly entered.	✓		R/W
15	The "Password....." message should be displayed again.	Verify that the "Password....." message is displayed.	✓		R/W
16	Press the "ESC" button to return to initial Manual Mode menu.	Verify that the message described is displayed.	✓		R/W
17	A message should be displayed indicating "MANUAL SERVICE - Be Careful! -". The manual mode menu displayed should also indicate that the operator can press button "F8" to continue or press "K5" to "ESC" (cancel manual mode operation).	Verify that the messages described are displayed.	✓		R/W
18	Press the "F8" button to begin controlling the Bagless Transfer Port in manual mode. A menu should be displayed, labeled "MANU: SERVICE" should be displayed.	Verify that the menu described is displayed.	✓		R/W
19	Press the lift table "RAISE" pushbutton at the lift table local control pedestal to slowly raise the Lift Table until the drum is approximately 2.5 centimeters (1 inch) below the bagless transfer port mating surface.	Verify that the lift table raises the drum to within approximately 1 inch of the Bagless Transfer Port.	✓		R/W
20	CAUTION: Do not exceed the predetermined setpoint for the conveyor weight transmitter. Carefully activate the lift table "Raise" pushbutton at the lift table local control pedestal to slowly raise the Lift Table until the drum contacts the bagless transfer port mating surface. The weight transmitter (09-WIT-231) readout should be carefully monitored to ensure that the weight setpoint is not exceeded.	Verify that the weight transmitter readout is displayed.	✓		R/W
21	Press the "RAISE" pushbutton at the lift table local control pedestal to slowly raise the Lift Table until the weight setpoint, established during setup, is reached.	Verify that the predetermined weight set point has been reached.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
22	Using the Bagless Transfer Port Control Panel, press the up and down arrow buttons as needed, until the "LID GRIPPER" screen is displayed.	Verify that the "LID GRIPPER" screen is displayed.	✓		CV
23	Press the LID GRIPPER "HOLD" button (K13) to grip the cross lid.	Verify that the LID GRIPPER "HOLD" button (K13) has been pressed.	✓		RW
24	On the Bagless Transfer Port Control Panel, initially button "K13" should be illuminated and button "K14" should be flashing, indicating that the Lid Gripper is not gripping the Cross Lid. After "K13" has been pressed, "K14" should be illuminated and "K13" should be flashing, indicating that the Lid Gripper is holding the lid.	Verify that button "K13" is illuminated before being pressed and is flashing after being pressed.	✓		RW
25	The lid gripper cylinder should smoothly lower to project the gripper extensions to grip the drum lid.	Verify that the Lid Gripper grips the lid.	✓		RW
26	Using the Bagless Transfer Port Control Panel, press the up and down arrow buttons as needed, until the "DOUBLE LID VERTICAL" screen is displayed.	Verify that the "DOUBLE LID VERTICAL" screen is displayed.	✓		RW
27	Select the DOUBLE LID VERTICAL "UP" button (K14) to raise the Double Lid.	Verify that the DOUBLE LID VERTICAL "UP" button (K14) has been pressed.	✓		RW
28	On the Bagless Transfer Port Control Panel, initially button "K14" should be illuminated and button "K13" should be flashing, indicating that the Double Lid is not raised. After "K14" has been pressed, "K13" should be illuminated and "K14" should be flashing, indicating that the Double Lid has been raised.	Verify that button "K14" is illuminated before being pressed and is flashing after being pressed.	✓		RW
29	The three lifting cylinders should smoothly raise the Double lid to its fully raised position.	Verify that the Double Lid cylinders smoothly raise the Double Lid.	✓		RW
30	Using the Bagless Transfer Port Control Panel, press the up and down arrow buttons as needed, until the "DOUBLE LID LOCK" screen is displayed.	Verify that the "DOUBLE LID LOCK" screen is displayed.	✓		RW
31	Press the DOUBLE LID LOCK "OPEN" button (K14) to unlock the Double Lid.	Verify that the DOUBLE LID LOCK "OPEN" button (K14) has been pressed.	✓		RW
32	On the Bagless Transfer Port Control Panel, initially button "K14" should be illuminated and button "K13" should be flashing, indicating that the Double Lid is locked. After "K14" has been pressed, "K13" should be illuminated and "K14" should be flashing, indicating that the Double Lid is unlocked.	Verify that button "K14" is illuminated before being pressed and is flashing after being pressed.	✓		RW
33	The Double Lid Lock Cylinder should retract to unlock the port.	Verify that the Double Lid is unlocked.	✓		RW
34	Using the Bagless Transfer Port Control Panel, press the up and down arrow buttons as needed, until the "DOUBLE LID SYSTEM" screen is displayed.	Verify that the "DOUBLE LID SYSTEM" screen is displayed.	✓		RW
35	Press the DOUBLE LID SYSTEM "OPEN" button (K14) until the Double Lid is completely rotated open. (e.g., continue to press this button until port is open).	Verify that the DOUBLE LID SYSTEM "OPEN" button (K14) has been pressed.	✓		RW

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
36	On the Bagless Transfer Port Control Panel, initially button "K14" should be illuminated and button "K13" should be flashing, indicating that the Double Lid is lowered. After "K14" has been pressed and the Double Lid is rotated fully open, button "K14" should be flashing and button "K13" should be illuminated, indicating that the port is fully rotated open.	Verify that button "K14" is illuminated before being pressed and is flashing after being pressed.	✓		R/w
37	The Bagless Transfer Port door should smoothly rotate completely open.	Verify that the port door is completely rotated open.	✓		R/w
38	Press the DOUBLE LID SYSTEM "CLOSE" button (K13) until the Double Lid is completely rotated closed (e.g., continue to press this button until port is closed).	Verify that the DOUBLE LID SYSTEM "CLOSE" button (K13) has been pressed.	✓		R/w
39	On the Bagless Transfer Port Control Panel, initially button "K14" should be flashing and button "K13" should be illuminated, indicating that the Double Lid is raised. After "K13" has been pressed and the Double Lid is rotated fully closed, button "K14" should be illuminated and button "K13" should be flashing, indicating that the Double Lid is rotated closed.	Verify that button "K13" is illuminated before being pressed and is flashing after being pressed.	✓		R/w
40	The Bagless Transfer Port door should smoothly rotate closed.	Verify that the port door is rotated closed.	✓		R/w
41	Using the Bagless Transfer Port Control Panel, press the up and down arrow buttons as needed, until the "DOUBLE LID LOCK" screen is displayed.	Verify that the "DOUBLE LID LOCK" screen is displayed.	✓		R/w
42	Press the DOUBLE LID LOCK "CLOSE" button (K13) to lock the Double Lid.	Verify that the DOUBLE LID LOCK "CLOSE" button (K13) has been pressed.	✓		R/w
43	On the Bagless Transfer Port Control Panel, initially button "K13" should be illuminated and button "K14" should be flashing, indicating that the Double Lid is unlocked. After "K13" has been pressed, "K14" should be illuminated and "K13" should be flashing, indicating that the Double Lid is locked.	Verify that button "K13" is illuminated before being pressed and is flashing after being pressed.	✓		R/w
44	The Double Lid Lock Cylinder should extend to lock the port.	Verify that the Double Lid is locked.	✓		R/w
45	Using the Bagless Transfer Port Control Panel, press the up and down arrow buttons as needed, until the "DOUBLE LID VERTICAL" screen is displayed.	Verify that the "DOUBLE LID VERTICAL" screen is displayed.	✓		R/w
46	Press the DOUBLE LID VERTICAL "DOWN" button (K13) to lower the Double Lid.	Verify that the DOUBLE LID VERTICAL "DOWN" button (K13) has been pressed.	✓		R/w
47	On the Bagless Transfer Port Control Panel, initially button "K13" should be illuminated and button "K14" should be flashing, indicating that the Double Lid is not lowered. After "K13" has been pressed, "K14" should be illuminated and "K13" should be flashing, indicating that the Double Lid has been lowered.	Verify that button "K13" is illuminated before being pressed and is flashing after being pressed.	✓		R/w

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
48	On the Bagless Transfer Port Control Panel, initially button "K14" should be illuminated and button "K13" should be flashing, indicating that the Double Lid is not raised. After "K14" has been pressed, "K13" should be illuminated and "K14" should be flashing, indicating that the Double Lid has been raised.	Verify that button "K14" is illuminated before being pressed and is flashing after being pressed.			N/A RW 7/16/94
49	The three lifting cylinders should smoothly lower the Double lid to its fully lowered closed position.	Verify that the Double Lid cylinders smoothly lower the Double Lid.	✓		R/W
50	Using the Bagless Transfer Port Control Panel, press the up and down arrow buttons as needed, until the "LID GRIPPER" screen is displayed.	Verify that the "LID GRIPPER" screen is displayed.	✓		R/W
51	Press the LID GRIPPER "RELEASE" button (K13) to grip the cross lid.	Verify that the LID GRIPPER "RELEASE" button (K13) has been pressed.	✓		R/W
52	On the Bagless Transfer Port Control Panel, initially button "K14" should be illuminated and button "K13" should be flashing, indicating that the Lid Gripper is gripping the Cross Lid. After "K14" has been pressed, "K13" should be illuminated and "K14" should be flashing, indicating that the Lid Gripper has released the lid.	Verify that button "K14" is illuminated before being pressed and is flashing after being pressed.	✓		R/W
53	The lid gripper cylinder should smoothly raise to release the drum lid.	Verify that the lid gripper releases the drum lid.	✓		R/W
54	Press the "LOWER" pushbutton at the Lift Table Local Control Pedestal until the Lift Table is at AGV height. The AGV Mating Height indicator (09-ZL-233E) should be illuminated when the Lift Table is at AGV height.	Verify that the Lift Table is at AGV height.	✓		R/W
55	The Drath & Schrader Drum and lid should fully release and lower from the Bagless Transfer Port.	Verify that the drum and drum lid are completely free from the Bagless Transfer Port.	✓		R/W
56	The Cross lid should remain mated to the drum.	Verify that the drum lid remains mated to the drum.	✓		R/W
57	Remove the Cross Lid and inspect the drum and drum lid.	Verify that the drum and drum lid are not deformed.	✓		R/W
58	Inspect the Bagless Transfer Port mating surface.	Verify that the Bagless Transfer Port mating surface is not visibly deformed or damaged.	✓		R/W
59	Press "K5" to return to the main menu at the Bagless Transfer Port Control Panel.	Verify that the main menu is displayed.	✓		R/W
60	Press "K2" to select Automatic mode.	Verify that Automatic mode is selected.	✓		R/W
TEST CASE 13031A-85.10 COMPLETE					

#48 step not required

TEST CASE 13031A-85.11 MATE DRUM TO LLW SORTING GLOVEBOX BAGLESS TRANSFER PORT (DO-07-105) AND REMOVE TRANSFER STAND . . .	11-2
Attempt To Open Port Without Drum Present	11-2
Read Drum Bar Code Label	11-3
Examine "No Drum At Lift Table" Interlock	11-4
Examine Lift Table "Down Overtravel" Alarm	11-5
Examine Lift Table "Up Overtravel" Alarm	11-6
Examine Lift Table "Rope Switch Pulled" Alarm	11-7
Examine Lift Table "Conveyor Forward Failed" Alarm	11-8
Examine Lift Table Raise Interlock	11-9
Examine "Lift Table Failed to Raise" Alarm	11-10
Complete Drum Entry Sequence	11-11
Examine "Port Failed to Open" Alarm	11-13
Examine	11-15
Examine Lift Table Weight/Pressure Changes When Port Opened and Closed	11-17
Attempt To Open Port Without Manipulator Parked	11-19
Open Bagless Transfer Port	11-20
Move Transfer Stand to Tray Loading Position	11-21

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.11 MATE DRUM TO LLW SORTING GLOVEBOX BAGLESS TRANSFER PORT (DO-07-105) AND REMOVE TRANSFER STAND					
Attempt To Open Port Without Drum Present					
1	Unforce all LCU 102 registers using the Allen Bradley PLC Software. <i>see p. 8-1</i>	Verify that all LCU 102 registers are unforced.	✓		<i>PC</i>
2	Configure the PCS drum tracking table to reflect the drum that will be mated to the LLW Sorting Glovebox RWM Port (DO-07-105). Record the drum pin contents: Drum Pin: (N31:47-53) <i>OTPATP 87654321</i>	Verify that the drum data is recorded.	✓		<i>R/W</i>
3	Press the "UP" (09-HS-241B/U) button at the Lift Table Local Control Pedestal to raise the Lift Table above AGV height.	Verify that the lift table is raised above AGV Height.	✓		<i>R/W</i>
4	Using the Lift Table Local Control Pedestal (PC-09-203A), or other appropriate means, position the Lift Table (LT-09-203A) above AGV height.	Verify that the lift table is positioned above AGV height.	✓		<i>R/W</i>
5	Because the Lift Table is not at "AGV Height", the "AGV LOAD HEIGHT" indicator (09-ZL-241E) at the Lift Table Local Control Pedestal (PC-07-203A) should not be illuminated.	Verify that the "AGV LOAD HEIGHT" indicator is not illuminated.	✓		<i>R/W</i>
6	Turn on the Bagless Transfer Port Control panel using the red "ON/OFF" button on the panel side.	Verify that the control panel is turned on.	✓		<i>PC</i>
7	Press the "K2" button to select "Automatic Mode"	Verify that the "K2" button has been pressed.	✓		<i>PC</i>
8	Attempt to initiate the "DOUBLE LID OPEN AUTOMATIC" sequence by pressing the "START" button twice.	Verify that the "START" button has been pressed twice.	✓		<i>PC</i>
9	Because a drum is not mated to the port, the port should not open.	Verify that the Bagless Transfer Port does not open.	✓		<i>PC</i>
10	Press the Bagless Transfer Port control panel "STOP" button to return the Bagless Transfer Port to initial operating conditions.	Verify that the automatic port opening sequence has been stopped.	✓		<i>PC</i>
11	Press the "RWM PORT MENU" button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "RWM PORT MENU" is displayed.	✓		<i>PC</i>
12	Because the Lift Table is not at AGV height and no drum is present, the "NO DRUM AT LIFT TABLE" message should be displayed on the "RWM PORT MENU" at OIU-12-103B.	Verify that the "NO DRUM AT LIFT TABLE" message is displayed.	✓		<i>PC</i>
13	Press the "OPEN PORT" button from the "RWM PORT MENU" at OIU-12-103B to attempt to open the Bagless Transfer Port.	Verify that the "OPEN PORT" button has been pressed.	✓		<i>PC</i>

10a Place LLW Sorting Box in Auto Mode
12 Toggled Bit N31:58/12 (Drum Present Bit)

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
14	Because a drum is not mated to the port, the Bagless Transfer Port (DO-07-105) should not open.	Verify that the Bagless Transfer Port does not open.	✓		AI ✓

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Read Drum Bar Code Label					
15	Read the Drath & Schrader drum bar code label with the portable scanner (NE-12-310). The scanner LED indicator should briefly flash when a label is successfully read.	Verify that the bar code label is successfully read.			
16	Confirm that the bar code label contents are stored in LCU 102 register(s): N31:47-53 (MANUALLY ENTERED) 31:225 (FROM BARCODE READ)	Verify that the bar code label contents are stored in the appropriate LCU 102 register(s).			

Bar Code Steps Not Performed

N/A 7/17/23

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine "No Drum At Lift Table" Interlock					
17	Manually activate (e.g., "Break the beam") the "Drum at End of Conveyor" position switch (09-ZS-241E) to simulate placing the Drath & Schrader drum on the Lift Table.	Verify that the "Drum at End of Conveyor" position switch is activated.	✓		RLW
18	The "DRUM AT AGV END" indicator (09-ZL-241A) on the Lift Table Control Pedestal (PC-09-203A) should be illuminated after the "Drum at End of Conveyor" position switch (09-ZS-241E) is activated.	Verify that the "DRUM AT AGV END" indicator is illuminated. <i>illuminates only while power is interrupted</i>	✓		RLW
19	Change the "Drum at Lift Table" bit for Lift Table LT-09-203A activated (value=1). Please record the changed register status: <div> <u>Register</u> <u>Changed Status</u> <u>Method of Confirmation</u> N31:58/12 1 N31:58/12 </div>	Verify that the register status is recorded in the space provided.	✓		RLW
20	Because a drum is present (simulated) but the Lift Table is not at AGV height, the "NO DRUM AT LIFT TABLE" message should be displayed on the "RWM PORT MENU" at OIU-12-103B.	Verify that the "NO DRUM AT LIFT TABLE" message is displayed.	N/A		RLW 4/19/99
21	Using the Lift Table Local Control Pedestal (PC-09-203A), or other appropriate means, position the Lift Table (LT-09-203A) at AGV height.	Verify that the lift table is positioned at AGV height.	✓		RLW
22	The Lift Table "AGV LOAD HEIGHT" indicator (09-ZL-241E) on the Lift Table Control Pedestal (PC-09-203A) should be illuminated.	Verify that the "AGV LOAD HEIGHT" indicator is illuminated.	✓		RLW
23	Because a drum is present (simulated) and the Lift Table is at AGV height, the "DRUM AT LIFT TABLE" message should be displayed on the "RWM PORT MENU" at OIU-12-103B.	Verify that the "DRUM AT LIFT TABLE" message is displayed.	✓		RLW

#20 Drum at Lift Table Bit sets message, not AGV height.

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Lift Table "Down Overtravel" Alarm					
24	Manually activate the "Down Overtravel" position switch (09-ZS-241C) to simulate that Lift Table (LT-09-203A) has been lowered below its normal travel range. This should cause the "Lift Table (203A) Down Overtravel" alarm to be generated.	Verify that the "Down Overtravel" position switch is activated.	✓		R/W
25	The "DOWN OVERTRAVEL" indicator (09-ZL-241C) at the Lift Table Local Control Pedestal (PC-09-203A) should be illuminated, indicating that the "Down Overtravel" position switch has been activated.	Verify that the "DOWN OVERTRAVEL" indicator is illuminated.	✓		R/W
26	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Lift Table (203A) Down Overtravel" alarm.	Verify that the alarm has been acknowledged.	✓		R/W
27	Manually reset the "Down Overtravel" position switch (09-ZS-241C) to indicate that the Lift Table (LT-09-203A) is positioned within its normal vertical travel range.	Verify that the "Down Overtravel" position switch has been reset.	✓		R/W
28	Resetting the "Down Overtravel" position switch (09-ZS-241C) should cause the "Lift Table (203A) Down Overtravel" alarm to clear.	Verify that the alarm is cleared.	✓		R/W
29	The "DOWN OVERTRAVEL" indicator (09-ZL-241C) at the Lift Table Local Control Pedestal should not be illuminated, indicating that the "Down Overtravel" position switch is not activated.	Verify that the "DOWN OVERTRAVEL" indicator is not illuminated.	✓		R/W
30	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "RWM PORT MENU".	Verify that the "RWM PORT MENU" is displayed.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Lift Table "Up Overtravel" Alarm <i>UP R/W 9/12/99</i>					
31	Manually activate the "Up Overtravel" position switch (09-ZS-241D) to simulate that Lift Table (LT-09-203A) has been raised above its normal travel range. This should cause the "Lift Table (203A) Up Overtravel" alarm to be generated.	Verify that the " Down Overtravel" position switch is activated.	✓		R/W
32	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Lift Table (203A) Up Overtravel" alarm.	Verify that the alarm has been acknowledged.	✓		R/W
33	Manually reset the "Up Overtravel" position switch (09-ZS-241D) to indicate that the Lift Table (LT-09-203A) is positioned within its normal vertical travel range.	Verify that the "Up Overtravel" position switch has been reset.	✓		R/W
34	Resetting the "Up Overtravel" position switch (09-ZS-241D) should cause the "Lift Table (203A) Up Overtravel" alarm to clear.	Verify that the alarm is cleared.	✓		R/W
35	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "RWM PORT MENU".	Verify that the "RWM PORT MENU" is displayed with a "DRUM AT LIFT TABLE" message.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Lift Table "Rope Switch Pulled" Alarm					
36	Pull the Lift Table (LT-09-203A) Rope Switch to disable all Lift Table operations. This should cause a "Lift Table (203A) Rope Switch Pulled" alarm to be generated.	Verify that the rope switch has been pulled.	✓		R/W
37	Press all pushbuttons on the Lift Table Local Control Pedestal (PC-09-203A) in both "Normal" and "Maintenance" modes. (Use Lift Table Local Control Pedestal M/O/N switch to switch between operating modes).	Verify that pressing the Lift Table Local Control Pedestal pushbuttons has no effect on the Lift Table.	✓		R/W
38	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Lift Table (203A) Rope Switch Pulled" alarm.	Verify that the alarm has been acknowledged.	✓		R/W
39	Manually reset the Lift Table Rope Switch (09-XS-241A/B) to allow normal Lift Table operation.	Verify that the Lift Table Rope Switch has been reset.	✓		R/W
40	Resetting the Lift Table Rope switch (09-XS-241A/B) should cause the "Lift Table (203A) Rope Switch Pulled" alarm to clear.	Verify that the alarm is cleared.	✓		R/W
41	Return the Lift Table Local Control Pedestal M/O/N switch (09-HS-241A) to the "NORMAL" position to allow the PCS to activate and control the Lift Table. (LT-09-203A).	Verify that the M/O/N switch is turned to the "N" position.	✓		R/W
42	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "RWM PORT MENU" at OIU-12-103B	Verify that the "RWM PORT MENU" is displayed.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Lift Table "Conveyor Forward Failed" Alarm					
43	The Manipulator (EM-07-101) must be parked in order for the drum entry sequence to begin.	Verify that the Manipulator is parked at position #1 or position #2.	✓		R/W
44	Press the "START ENTRY" button from the "RWM PORT MENU" at OIU-12-103B.	Verify that the "START ENTRY" button has been pressed.	✓		R/W
45	The "DRUM ENTRY IN PROGRESS..." message should be displayed on the "RWM PORT MENU" at OIU-12-103B.	Verify that the "DRUM ENTRY IN PROGRESS..." message is displayed.	✓		R/W
46	The PCS should energize the Lift Table conveyor motor forward (LT-09-203A/M2) to move the drum under the port.	Verify that the Lift Table conveyor is energized forward.	✓		R/W
47	Failing to activate "Drum Under Glovebox Port" (09-ZS-241F) switch (e.g., no drum on lift table) within the time period specified in the setup section of this test procedure should cause "Lift Table (203A) Conveyor Forward Failed" alarm to be generated. Wait thirty (30) seconds.	Verify that the Lift Table roller conveyor remains energized during the waiting period. <i>R/W 7/12/97</i>	✓		R/W
48	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Lift Table (203A) Conveyor Forward Failed" alarm.	Verify that the alarm has been acknowledged.	✓		R/W

43a set N41:0/1 to 1 to simulate bar code ✓ R/W
verified, R/W 7/12/97

46a Open LT 203A conveyor local 480 ✓ Disconnect
to remove power to conveyor. R/W 7/12/97 ✓ R/W

48a close LT 203A conveyor disconnect, ✓ R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Lift Table Raise Interlock					
49	Briefly activate (e.g., "Break the beam") the "Drum Under Glovebox Port" position switch (09-ZS-241F). This switch should not remain activated.	Verify that the "Drum Under Glovebox Port" position switch is briefly activated.	✓		RW
50	Activating the "Drum Under Glovebox Port" position switch (09-ZS-241F) should cause the Lift Table roller conveyor to de-energize.	Verify that the Lift Table conveyor is not energized.			N/A RW 7/12/97
51	Manually activating the "Drum Under Glovebox Port" position switch (09-ZS-241F) should cause the "Lift Table (203A) Conveyor Forward Failed" alarm to clear.	Verify that the alarm is cleared.	✓		RW
52	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "RWM PORT MENU" at OIU-12-103B.	Verify that the "RWM PORT MENU" is displayed.	✓		RW
53	Because the "Drum Under Glovebox Port" position switch (09-ZS-241F) does not remain activated, the Lift Table should not raise.	Verify that the Lift Table does not raise during the waiting period.			N/A RW 7/12/97
	Wait thirty (30) seconds.				
54	Manually activate (e.g., "Break the beam") the "Drum Under Glovebox Port" position switch (09-ZS-241F). This switch should remain activated.	Verify that the "Drum Under Glovebox Port" position switch is activated.	✓		RW

#50 & 53 - Breaking the beam on 09-ZS-241F causes 4203A to rise regardless of whether the beam remains broken.

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine "Lift Table Failed to Raise" Alarm					
55	The PCS should cause the lift table to raise at slow speed until the pre-programmed interim position is reached.	Verify that the lift table raises slowly.	✓		RW
56	Because a drum is not present on the lift table, the Lift Table should raise, but the weight setpoint should not be reached. The lift table should stop raising and a "Lift Table (203A) Failed to Raise" alarm should be generated.	Verify that the lift table has stopped raising.		✓	R/W
57	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Lift Table (203A) Failed to Raise" alarm.	Verify that the alarm has been acknowledged.	✓		RW

* See TEST # 85

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Complete Drum Entry Sequence					
58	Place the LLW Sorting Glovebox in "Maintenance" mode.	Verify that the LLW Sorting Glovebox has been placed in "Maintenance" mode.	✓		R/W
59	Turn the M/O/N switch (09-HS-241A) to the "M" position at the Lift Table Local Control Pedestal (PC-07-203A) to place the Lift Table (LT-09-203A) in "Maintenance Mode".	Verify that the lift table has been placed in "Maintenance" mode.	✓		R/W
60	Press the "LOWER" pushbutton at the Lift Table local control pedestal (PC-09-203A) to lower the Lift Table (LT-09-203A) to AGV Height.	Verify that the Lift Table is at AGV height.	✓		R/W
61	The Lift Table "AGV LOAD HEIGHT" indicator (09-ZL-241E) should be illuminated, indicating that the Lift Table is at AGV height.	Verify that the "AGV LOAD HEIGHT" indicator is illuminated.	✓		R/W
62	Turn the M/O/N switch (09-HS-241A) to the "N" position at the Lift Table Local Control Pedestal (PC-07-203A) to place the Lift Table (LT-09-203A) in "Normal Mode", controlled by the PCS.	Verify that the lift table has been placed in "Normal Mode" mode.	✓		R/W
63	Remove the manual activation (e.g., "Don't Break the beam") for the "Drum at End of Conveyor" position switch (09-ZS-241E) and for the "Drum Under Glovebox Port" position switch (09-ZS-241F).	Verify that the "Drum at End of Conveyor" and the "Drum Under Glovebox Port" switches are not activated.	✓		R/W
64	Place the LLW Sorting Glovebox in "Automatic" mode to allow the LLW Entry glovebox to re-initialize.	Verify that the LLW Sorting Glovebox has been placed in "Automatic" mode	✓		R/W
65	The "LLW SORTING GLOVEBOX MAIN MENU" should be displayed at OIU-12-103B.	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.	✓		R/W
66	Because all glovebox initialization conditions should be satisfied, the "SYSTEM INITIALIZED" message should be displayed on the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "SYSTEM INITIALIZED" message is displayed.	✓		R/W
67	Place the 208 liter (55 gallon) Drath & Schrader drum: 1. With non-compliant item transfer stand 2. With non-compliant packet 3. With inner drum lid 4., Without band clamp on the LLW Sorting Glovebox Lift Table, (LT-09-203A). The drum should be placed at the AGV end of the Lift Table.	Verify that the drum described has been placed on the Lift Table.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
68	The drum should briefly activate (e.g., "Break the beam") the "Drum at End of Conveyor" position switch (09-ZS-241E). The "Drum at End of Conveyor" switch should not remain activated.	Verify that the "Drum at End of Conveyor" position switch is briefly activated.	✓		R/W
69	Because a drum is positioned at the AGV end of the Lift Table and the Lift Table is at AGV height, the "DRUM AT LIFT TABLE" message should be displayed on the "LLW SORTING GLOVEBOX MENU" at OIU-12-103B. (RWM PORT MENU)	Verify that the "DRUM AT LIFT TABLE" message is displayed.	✓		R/W
70	Press the "RWM PORT MENU" button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "RWM PORT MENU" is displayed.	✓		R/W
71	Press the "START ENTRY" button from the "RWM PORT MENU" at OIU-12-103B.	Verify that the "START ENTRY" button has been pressed.	✓		R/W
72	The "DRUM ENTRY IN PROGRESS..." message should be displayed on the "RWM PORT MENU" at OIU-12-103B.	Verify that the "DRUM ENTRY IN PROGRESS..." message is displayed.	✓		R/W
73	The PCS should energize the Lift Table conveyor motor forward (LT-09-203A/M2) to move the drum under the Entry/Exit Port.	Verify that the drum moves forward and is centered beneath the Bagless Transfer Port.	✓		R/W
74	The "Drum Under Glovebox Port" position switch (09-ZS-241F) should be activated	Verify that the "Drum Under Glovebox Port" position switch is activated.	✓		R/W
75	The "DRUM UNDER PORT" indicator at the Lift Table Local Control Pedestal (PC-09-203A) should be illuminated.	Verify that the "DRUM UNDER PORT" Indicator is illuminated.	✓		R/W
76	The PCS should energize the Lift Table motor (LT-09-203A/M1) to raise the drum to a preprogrammed interim position.	Verify that the Lift Table raises the drum to the preprogrammed interim position.	✓		R/W
77	The PCS should raise the lift table at slow speed until the drum contacts the port. The PCS should continue to energize the lift table servo motor until the predetermined weight setpoint is reached.	Verify that the lift table raises the drum to contact the Bagless Transfer Port.	✓		R/W
78	Record the "Lift Table Weight" displayed on the "RWM PORT MENU" at OIU-12-103B: Lift Table Weight: <u>9260</u> kilograms	Verify that the weight displayed is within the weight setpoint range established during setup of this procedure.	✓		R/W
79	Because the drum has been mated to the port, the Drum Entry Sequence is complete and the "DRUM ENTRY COMPLETE" message should be displayed at OIU-12-103B.	Verify that the "DRUM ENTRY COMPLETE" message is displayed.	✓		R/W

68 Toggled bit N31: 58/12 (Drum Present Bit)

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✗	Witness (Initial)
Examine "Port Failed to Open" Alarm					
80	Force LCU 102 register DO07105B_OS not activated to simulate the Bagless Transfer Port (DO-07-105) not open condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> DO07105_OS 0 DO07105_OS	Verify that register DO07105_OS is forced not activated. Verify that the forced register status is recorded.	✓		AW
81	Press the "OPEN PORT" button from the "RWM PORT MENU" at OIU-12-103B to open the Bagless Transfer Port (DO-07-105).	Verify that the "OPEN PORT" button is pressed.	✓		AW
82	The PCS should display a "PORT OPENING..." message on the "RWM PORT MENU" at OIU-12-103B while the port is opening.	Verify that a "PORT OPENING..." message is displayed.	✓		AW
83	The Bagless Transfer Port should, in the order listed,; 1. Grip the Cross Lid. 2. Raise the Double Lid. 3. Unlock the Port. 4. Rotate the Port Door (with Drum Lid) open. After these steps are completed, the Bagless Transfer Port is considered "open".	Verify that the Bagless Transfer Port is open.	✓		AW
84	Because the Bagless Transfer Port open input (DO07105_OS) has been forced not activated, the "PORT OPEN" message should not be displayed on the "RWM PORT MENU" at OIU-12-103B.	Verify that the "PORT OPEN" message is not displayed.	✓		AW
85	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Port (105) Failed to Open" alarm.	Verify that the alarm has been acknowledged.	✓		AW
86	Unforce LCU 102 register DO07105_OS. Record the unforced register status below: Unforced DO07105_OS Status: 1	Verify that register DO07105_OS is unforced.	✓		AW
87	Unforcing register DO07105_OS should cause the "Port (105) Failed to Open" alarm to clear.	Verify that the alarm is cleared.	✓		AW
88	The "PORT OPEN" message should be displayed on the "RWM PORT MENU" at OIU-12-103B.	Verify that the "PORT OPEN" message is displayed.	✓		AW

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
89	Press the "CLOSE PORT" button from the "RWM PORT MENU" at OIU-12-103B to close the port.	Verify that the "CLOSE PORT" button is pressed.	✓		R/W
90	The PCS should display the "PORT CLOSING..." message on the "RWM PORT MENU" at OIU-12-103B while the port is closing.	Verify that the "PORT CLOSING..." message is displayed.	✓		R/W
91	The Bagless Transfer Port should, in the order listed,;: 1. Rotate the Port Door (with Drum Lid) Closed. 2. Lock the Port. 3. Lower the Double Lid. 4. Release the Cross Lid. After these steps are completed, the Bagless Transfer Port is considered "closed".	Verify that the Bagless Transfer Port is closed.	✓		R/W
92	The "PORT CLOSED" message should be displayed on the "RWM PORT MENU" at OIU-12-103B.	Verify that the "PORT CLOSED" message is displayed.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine "Port Failed to Close" Alarm					
93	Press the "OPEN PORT" button from the "RWM PORT MENU" at OIU-12-103B to open the Bagless Transfer Port (DO-07-105).	Verify that the "OPEN PORT" button is pressed.	✓		R/g
94	The PCS should display a "PORT OPENING..." message on the "RWM PORT MENU" at OIU-12-103B while the port is opening.	Verify that a "PORT OPENING..." message is displayed.	✓		R/g
95	The Bagless Transfer Port should, in the order listed,: 1. Grip the Cross Lid. 2. Raise the Double Lid. 3. Unlock the Port. 4. Rotate the Port Door (with Drum Lid) open. After these steps are completed, the Bagless Transfer Port is considered "open".	Verify that the Bagless Transfer Port is open.	✓		R/g
96	The "PORT OPEN" message should be displayed on the "RWM PORT MENU" at OIU-12-103B.	Verify that the "PORT OPEN" message is displayed.	✓		R/W
97	Force LCU 102 register DO07105B_CS not activated to simulate the Bagless Transfer Port (DO-07-105) not closed condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> DO07105_CS 0 DO07105_CS	Verify that register DO07105_CS is forced not activated. Verify that the forced register status is recorded.	✓		R/W
98	Press the "CLOSE PORT" button from the "RWM PORT MENU" at OIU-12-103B to close the port.	Verify that the "CLOSE PORT" button is pressed.	✓		R/W
99	The PCS should display the "PORT CLOSING..." message on the "RWM PORT MENU" at OIU-12-103B while the port is closing.	Verify that the "PORT CLOSING..." message is displayed.	✓		R/W
100	The Bagless Transfer Port should, in the order listed,: 1. Rotate the Port Door (with Drum Lid) Closed. 2. Lock the Port. 3. Lower the Double Lid. 4. Release the Cross Lid. After these steps are completed, the Bagless Transfer Port is considered "closed".	Verify that the Bagless Transfer Port is closed.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
101	Because the Bagless Transfer Port open input (D007105_CS) has been forced not activated, the "PORT CLOSED" message should not be displayed on the "RWM PORT MENU" at OIU-12-103B.	Verify that the "PORT CLOSED" message is not displayed.	✓		R/W
102	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Port (105) Failed to Close" alarm.	Verify that the alarm has been acknowledged.	✓		R/W
103	Unforce LCU 102 register D007105_OS. Record the unforced register status below: Unforced D007105_OS Status: <u>1</u>	Verify that register D007105_OS is unforced.	✓		R/W
104	Unforcing register D007105_CS should cause the "Port (105) Failed to Close" alarm to clear.	Verify that the alarm is cleared.	✓		R/W
105	The "PORT CLOSED" message should be displayed on the "RWM PORT MENU" at OIU-12-103B.	Verify that the "PORT CLOSED" message is displayed.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Lift Table Weight/Pressure Changes When Port Opened and Closed					
106	Press the "OPEN PORT" button from the "RWM PORT MENU" at OIU-12-103B to open the Bagless Transfer Port (DO-07-105).	Verify that the "OPEN PORT" button is pressed.	✓		AW
107	The PCS should display a "PORT OPENING..." message on the "RWM PORT MENU" at OIU-12-103B while the port is opening.	Verify that a "PORT OPENING..." message is displayed.	✓		AW
108	The Bagless Transfer Port should, in the order listed,: 1. Grip the Cross Lid. 2. Raise the Double Lid. 3. Unlock the Port. 4. Rotate the Port Door (with Drum Lid) open. After these steps are completed, the Bagless Transfer Port is considered "open".	Verify that the Bagless Transfer Port is open.	✓		AW
109	The "PORT OPEN" message should be displayed on the "RWM PORT MENU" at OIU-12-103B.	Verify that the "PORT OPEN" message is displayed.	✓		AW
110	Record the "Lift Table Weight" and the "Lift Table Weight Setpoint" displayed on the "RWM PORT MENU" at OIU-12-103B: Lift Table Weight: <u>567</u> kilograms Lift Table Weight Setpoint: <u>730</u> kilograms The weight recorded with the port open should not fall below the "Lift Table Weight Setpoint" limit listed on the "RWM PORT MENU".	Verify that the weight recorded with the port open does not fall below the "Lift Table Weight Setpoint" limit.		✓	AW
111	Press the "CLOSE PORT" button from the "RWM PORT MENU" at OIU-12-103B to close the port.	Verify that the "CLOSE PORT" button is pressed.	✓		AW
112	The PCS should display the "PORT CLOSING..." message on the "RWM PORT MENU" at OIU-12-103B while the port is closing.	Verify that the "PORT CLOSING..." message is displayed.	✓		AW
113	The Bagless Transfer Port should, in the order listed,: 1. Rotate the Port Door (with Drum Lid) Closed. 2. Lock the Port. 3. Lower the Double Lid. 4. Release the Cross Lid. After these steps are completed, the Bagless Transfer Port is considered "closed".	Verify that the Bagless Transfer Port is closed.	✓		AW

* see TE # 8

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
114	The "PORT CLOSED" message should be displayed on the "RWM PORT MENU" at OIU-12-103B.	Verify that the "PORT CLOSED" message is displayed.	✓		R/W
115	Record the "Lift Table Weight" displayed on the "RWM PORT MENU" at OIU-12-103B. Lift Table Weight: <u>224</u> kilograms	Verify that the "Lift Table Weight" is recorded.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Attempt To Open Port Without Manipulator Parked					
116	Place the LLW Sorting Glovebox Waste Manipulator (EM-07-101) approximately one foot from park position 2 (farthest from Bagless Transfer Port DO-07-105) with both manipulator arms fully parked.	Verify that the waste manipulator is approximately one foot away park position 2 with both arms parked.	✓		R/W
117	The "Manipulator Parked" position switches (07-ZS-715A and 07-ZS-715B) should not be activated, indicating that the manipulator is not parked.	Verify that position switches 07-ZS-715A and 07-ZS-715B are not activated.	✓		R/W
118	Press the "OPEN PORT" button from the "RWM PORT MENU" at OIU-12-103B to attempt to open the port.	Verify that the "OPEN PORT" button has been pressed.	✓		R/W
119	Because the manipulator is not parked, the Bagless Transfer Port (DO-07-105) door should not open.	Verify that the Bagless Transfer Port does not open.	✓		R/W
120	Place the LLW Sorting Glovebox Waste Manipulator (EM-07-101) at park position 2 (farthest from Bagless Transfer Port DO-07-105) with both manipulator arms fully parked.	Verify that the waste manipulator is at park position 2 with both arms parked.	✓		R/W
121	Position switch 07-ZS-715B should be activated and position switch 07-ZS-715A should not be activated, indicating that the manipulator is at park position 2.	Verify that position switch 07-ZS-715B is activated and that switch 07-ZS-715A is not activated.	✓		R/W
122	Position switches 07-ZS-715C and 07-ZS-715D should both be activated, indicating that the manipulator arms are parked.	Verify that position switches 07-ZS-715C and 07-ZS-715D are both activated.	✓		R/W

116 see pg 8-1, unforced ZS-715B
 # 120 forced ZS-715B to 1

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Open Bagless Transfer Port					
123	Press the "OPEN PORT" button from the "RWM PORT MENU" at OIU-12-103B to open the port.	Verify that the "OPEN PORT" button has been pressed.	✓		R/W
124	The PCS should display a "PORT OPENING..." message on the "RWM PORT MENU" at OIU-12-103B while the port is opening.	Verify that a "PORT OPENING..." message is displayed.	✓		R/W
125	The Bagless Transfer Port should, in the order listed,;: 1. Grip the Cross Lid. 2. Raise the Double Lid. 3. Unlock the Port. 4. Rotate the Port Door (with Drum Lid) open. After these steps are completed, the Bagless Transfer Port is considered "open".	Verify that the Bagless Transfer Port is open.	✓		R/W
126	The "PORT OPEN" message should be displayed on the "RWM PORT MENU" at OIU-12-103B.	Verify that the "PORT OPEN" message is displayed.	✓		R/W
127	Record the "Lift Table Weight" and the "Lift Table Weight Setpoint" displayed on the "RWM PORT MENU" at OIU-12-103B: * Lift Table Weight: <u>577</u> kilograms Weight Setpoint: <u>530</u> kilograms	Verify that the weight recorded with the port open does not fall below the "Lift Table Weight Setpoint" limit listed on the "RWM PORT MENU".		✓	R/W

See TE #8

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Move Transfer Stand to Tray Loading Position					
128	The Hoist Pendant (PC-07-003A) "PENDANT SELECT" switch should have been turned to the "PEND A" position during test procedure setup to disable hoist pendant PC-07-003B.	Verify that the pendant PC-07-003B "ENABLED" indicator is NOT illuminated.	✓		R/W
129	Press the "LOWER" pushbutton on the Hoist Pendant (PC-07-003B) to attempt to lower the hoist.	Verify that the "LOWER" pushbutton has been pressed.	✓		R/W
130	Because hoist pendant PC-07-003B is not enabled, the hoist should not lower.	Verify that the hoist does not move when the hoist pendant PC-07-003B "LOWER" pushbutton is activated.	✓		R/W
131	Press the "LOWER" pushbutton on the Hoist/Trolley Pendant (PC-07-003A) to lower the hoist hook until it can be attached to the Non-Compliant Item Transfer Stand (SP-07-206).	Verify that the hoist can be attached to the stand.	✓		R/W
132	Attach the hoist hook to the non-compliant item transfer stand.	Verify that the hoist hook is securely attached to the stand	✓		R/W
133	Press the "RAISE" pushbutton on the Hoist/Trolley Pendant (PC-07-003A) to raise the hoist with the non-compliant item transfer stand at least one foot.	verify that the hoist with the non-compliant item transfer stand rise approximately one foot.	✓		R/W
134	Press the "LEFT" and "RIGHT" pushbuttons on the Hoist/Trolley Pendant (PC-07-003A) to attempt to move the Hoist Trolley left and right.	Verify that both the "LEFT" and "RIGHT" buttons have been pressed.	✓		R/W
135	Because the Hoist is not fully raised, pressing the "LEFT" and "RIGHT" pushbuttons should have no effect on the Hoist Trolley.	Verify that pressing the "LEFT" and "RIGHT" pushbuttons has no effect on the Hoist Trolley.	✓		R/W
136	Press the "RAISE" pushbutton on the Hoist/Trolley Pendant (PC-07-003A) as needed until the Hoist with non-compliant item transfer stand is fully raised.	Verify that the Hoist is fully raised.	✓		R/W
137	The "Hoist Raised" position switch (07-ZS-730C) should be activated.	Verify that the "Hoist Raised" position switch is activated.	✓		R/W
138	The Hoist/Trolley Pendant (PC-07-003A) "RAISED LIMIT" indicator should be illuminated, indicating that the Hoist is fully raised.	Verify that the "RAISED LIMIT" indicator is illuminated.	✓		R/W
139	Press the "RIGHT" pushbutton on the Hoist/Trolley Pendant (PC-07-003A) as needed to energize the Hoist motor (CR-07-101C/M1) left to move the Hoist to the Tray Loading Position.	Verify that the "RIGHT" button has been pressed.	✓		R/W
140	The Hoist translate to the Tray Loading Position.	Verify that the Hoist is at the Tray Loading Position.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
141	The Hoist position switch 07-ZS-730B should be activated.	Verify that position switch 07-ZS-730B is activated.	✓		R/W
142	The Hoist/Trolley Pendant "LOAD" indicator should be illuminated, indicating that the Hoist is positioned at the Tray Loading Position.	Verify that the "LOAD" indicator is illuminated.	✓		R/W
143	Press the "MAIN MENU" button from the "RWM PORT MENU" at OIU-12-103B to return to the "LLW SORTING GLOVEBOX MAIN MENU".	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.	✓		R/W
144	Unforce all LCU 102 registers using the Allen Bradley PLC Software. <i>See note pg 8-1</i>	Verify that all LCU 102 registers are unforced.	✓		R/W
TEST CASE 13031A-85.11 COMPLETE					

TEST CASE 13031A-85.12 EXAMINE LLW SORTING GLOVEBOX TRANSFER CAR (TC-07-101) ALARMS AND INTERLOCKS AND MOVE CAR TO DELID POSITION	
Examine Transfer Car Activation, Manipulator and Manipulator Arms Parked Interlocks	12-2
Examine Transfer Car Failed to Reach Delid Position Alarm	12-2
Examine Transfer Car Failed to Reach Relid Position Alarm	12-4
Examine Transfer Car Failed to Reach Compact Transfer From Relid Position Alarm	12-5
Examine Transfer Car Failed to Reach Entry Position Alarm	12-6
Examine Transfer Car Failed to Reach Compact Transfer From Entry Position Alarm	12-7
Attempt to Transfer Drum While Drum Compactor is Busy	12-8
Cancel Transfer of Drum to Drum Compactor	12-9
Examine Transfer Car Conveyor Drive Failed to Engage Alarm	12-10
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Move Drum to Delid Position using Transfer Car	12-15
	12-16

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
TEST CASE 13031A-85.12 EXAMINE LLW SORTING GLOVEBOX TRANSFER CAR (TC-07-101) ALARMS AND INTERLOCKS AND MOVE CAR TO DELID POSITION					
Examine Transfer Car Activation, Manipulator and Manipulator Arms Parked Interlocks					
1	Unforce all LCU 102 registers using the Allen Bradley PLC Software. <i>see not 198-1</i>	Verify that all LCU 102 registers are unforced.	✓		R/W
2	Confirm that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed at OIU-12-103B. If a sub-menu is displayed, press the "MAIN MENU" button to return to the "LLW SORTING GLOVEBOX MAIN MENU".	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.	✓		R/W
3	Press the "TRANSFER CAR MENU" button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "TRANSFER CAR MENU" is displayed.	✓		R/W
4	Position the LLW Sorting Glovebox Waste Manipulator (EM-07-101) approximately 1 foot from park position 2 with the manipulator arms not parked.	Verify that the Manipulator is not parked.	✓		R/W
5	Press the "ENTRY", "DELID/TIPPER", "RELID", "COMPACTOR TRANSFER", and the "COMPACTOR GLOVEBOX" buttons from the "TRANSFER CAR MENU" at OIU-12-103B. Because the manipulator is not parked and the manipulator arms are not parked, pressing these buttons should have no effect on the Transfer Car.	Verify that pressing the "ENTRY", "DELID/TIPPER", "RELID", "COMPACTOR TRANSFER", and the "COMPACTOR GLOVEBOX" buttons has no effect on the transfer car.	✓		R/W
6	Park the left manipulator arm.	Verify that the left manipulator arm is parked.	✓		R/W
7	Position switch 07-ZS-715C should be activated, indicating that the left manipulator arm is parked.	Verify that position switch 07-ZS-715C is activated.	✓		R/W
8	Press the "ENTRY", "DELID/TIPPER", "RELID", "COMPACTOR TRANSFER", and the "COMPACTOR GLOVEBOX" buttons from the "TRANSFER CAR MENU" at OIU-12-103B. Because the manipulator is not parked and the right manipulator arm is not parked, pressing these buttons should have no effect on the Transfer Car.	Verify that pressing the "ENTRY", "DELID/TIPPER", "RELID", "COMPACTOR TRANSFER", and the "COMPACTOR GLOVEBOX" buttons has no effect on the transfer car.	✓		R/W
9	Park the right manipulator arm.	Verify that the right manipulator arm is parked.	✓		R/W
10	Position switch 07-ZS-715D should be activated, indicating that the left manipulator arm is parked.	Verify that position switch 07-ZS-715D is activated.	✓		R/W
11	Remove the left manipulator arm from the parked position.	Verify that the left manipulator arm is not parked.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
12	Press the "ENTRY", "DELID/TIPPER", "RELID", "COMPACTOR TRANSFER", and the "COMPACTOR GLOVEBOX" buttons from the "TRANSFER CAR MENU" at OIU-12-103B. Because the manipulator is not parked and the left manipulator arm is not parked, pressing these buttons should have no effect on the Transfer Car.	Verify that pressing the "ENTRY", "DELID/TIPPER", "RELID", "COMPACTOR TRANSFER", and the "COMPACTOR GLOVEBOX" buttons has no effect on the transfer car.	✓		R/W
13	Park the left manipulator arm.	Verify that the left manipulator arm is parked.	✓		R/W
14	Position switch 07-ZS-715C should be activated, indicating that the left manipulator arm is parked.	Verify that position switch 07-ZS-715C is activated.	✓		R/W
15	Press the "ENTRY", "DELID/TIPPER", "RELID", "COMPACTOR TRANSFER", and the "COMPACTOR GLOVEBOX" buttons from the "TRANSFER CAR MENU" at OIU-12-103B. Because the manipulator is not parked, pressing these buttons should have no effect on the Transfer Car.	Verify that pressing the "ENTRY", "DELID/TIPPER", "RELID", "COMPACTOR TRANSFER", and the "COMPACTOR GLOVEBOX" buttons has no effect on the transfer car.	✓		R/W
16	Place the manipulator at Parked Position #2, farthest from the Bagless Transfer Port, with both Manipulator arms parked.	Verify that the Manipulator is at Parked Position #2 with both Manipulator arms parked.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Transfer Car Failed to Reach Delid Position Alarm					
17	Set the timer period for the "Transfer Car Failed to Reach Delid Position" alarm to one second. Record the timer period below: <u>Register</u> <u>Initial Status</u> <u>Final Status</u> T4:94 Preset <u>120</u> 1 second	Verify that the preset status is set to 1 second.	✓		R/W
18	Press the "DELID" button from the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "DELID" button has been pressed.	✓		R/W
19	The "TRANSFER CAR MOVING TO DELID POSITION..." message should be displayed on the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "TRANSFER CAR MOVING TO DELID POSITION..." message is displayed.	✓		R/W
20	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Transfer Car Failed to Reach Delid Position" alarm.	Verify that the alarm has been acknowledged.	✓		R/W
21 23	Because the Transfer Car has reached the selected position, the "Transfer Car Failed to Reach Delid Position" alarm should clear.	Verify that the alarm has cleared.	✓		R/W
22 21 b7	Restore the timer period for the "Transfer Car Failed to Reach Delid Position" alarm to the initial value recorded above. Record the timer status below: <u>Register</u> <u>Initial Status</u> <u>Final Status</u> T4:94 Preset 1 second <u>120</u>	Verify that the preset initial status is restored.	✓		R/W
23 23a	The "TRANSFER CAR AT DELID POSITION" message should be displayed on the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "TRANSFER CAR AT DELID POSITION" message is displayed.	✓		R/W

20 R/W 7/17/99

22 Perform step 18

✓ R/W

21-23 - sequence of events incorrect,
also must reinitiate sequence

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Transfer Car Failed to Reach Relid Position Alarm					
24	Set the timer period for the "Transfer Car Failed to Reach Relid Position" alarm to one second. Record the timer period below: <u>Register</u> <u>Initial Status</u> <u>Final Status</u> T4:95 Preset <u>120</u> 1 second	Verify that the preset status is set to 1 second.	✓		R/W
25	Press the "RELID" button from the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "RELID" button has been pressed.	✓		R/W
26	The "TRANSFER CAR MOVING TO RELID POSITION..." message should be displayed on the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "TRANSFER CAR MOVING TO RELID POSITION..." message is displayed.	✓		R/W
27	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Transfer Car Failed to Reach Relid Position" alarm.	Verify that the alarm has been acknowledged.	✓		R/W
28 29	Because the Transfer Car has reached the selected position, the "Transfer Car Failed to Reach Relid Position" alarm should clear.	Verify that the alarm has cleared.	✓		R/W
28 29	Restore the timer period for the "Transfer Car Failed to Reach Relid Position" alarm to the initial value recorded above. Record the timer status below: <u>Register</u> <u>Initial Status</u> <u>Final Status</u> T4:95 Preset 1 second <u>120</u>	Verify that the preset initial status is restored.	✓		R/W
30 30a	The "TRANSFER CAR AT RELID POSITION" message should be displayed on the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "TRANSFER CAR AT RELID POSITION" message is displayed.	✓		R/W

30 Perform step 25

✓ R/W

28-30 - sequence of events incorrect,
also must reinitiate sequence

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Transfer Car Failed to Reach Compact Transfer From Relid Position Alarm					
31	Set the timer period for the "Transfer Car Failed to Reach Compact Transfer - Relid" alarm to one second. Record the timer period below: <u>Register</u> <u>Initial Status</u> <u>Final Status</u> T4:96 Preset <u>30</u> 1 second	Verify that the preset status is set to 1 second.	✓		R/W
32	Press the "COMPACTOR TRANSFER" button from the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "COMPACTOR TRANSFER" button has been pressed.	✓		R/W
33	The "TRANSFER CAR MOVING TO COMPACT TRANSFER POSITION..." message should be displayed on the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "TRANSFER CAR MOVING TO COMPACT TRANSFER POSITION..." message is displayed.	✓		R/W
34	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Transfer Car Failed to Reach Compact Transfer - Relid" alarm.	Verify that the alarm has been acknowledged.	✓		R/W
35 36	Because the Transfer Car has reached the selected position, the "Transfer Car Failed to Reach Compact Transfer - Relid" alarm should clear.	Verify that the alarm has cleared.	✓		R/W
36 35	Restore the timer period for the "Transfer Car Failed to Reach Compact Transfer - Relid" alarm to the initial value recorded above. Record the timer status below: <u>Register</u> <u>Initial Status</u> <u>Final Status</u> T4:96 Preset 1 second <u>30</u>	Verify that the preset initial status is restored.	✓		R/W
37 37a	The "TRANSFER CAR AT COMPACT TRANSFER POSITION" message should be displayed on the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "TRANSFER CAR AT COMPACT TRANSFER POSITION" message is displayed.	✓		R/W

37 perform step 32

35-37 - sequence incorrect, also must reinitiate sequence

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Transfer Car Failed to Reach Entry Position Alarm					
38	Set the timer period for the "Transfer Car Failed to Reach Entry" alarm to one second. Record the timer period below: <u>Register</u> <u>Initial Status</u> <u>Final Status</u> T4:93 Preset <u>120</u> 1 second	Verify that the preset status is set to 1 second.	✓		R/W
39	Press the "ENTRY" button from the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "ENTRY" button has been pressed.	✓		R/W
40	The "TRANSFER CAR MOVING TO ENTRY POSITION..." message should be displayed on the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "TRANSFER CAR MOVING TO ENTRY POSITION..." message is displayed.	✓		R/W
41	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Transfer Car Failed to Reach Entry" alarm.	Verify that the alarm has been acknowledged.	✓		R/W
42 43	Because the Transfer Car has reached the selected position, the "Transfer Car Failed to Reach Entry" alarm should clear.	Verify that the alarm has cleared.	✓		R/W
42 43	Restore the timer period for the "Transfer Car Failed to Reach Entry" alarm to the initial value recorded above. Record the timer status below: <u>Register</u> <u>Initial Status</u> <u>Final Status</u> T4:93 Preset 1 second <u>120</u>	Verify that the preset initial status is restored.	✓		R/W
44 940	The "TRANSFER CAR AT ENTRY POSITION" message should be displayed on the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "TRANSFER CAR AT ENTRY POSITION" message is displayed.	✓		R/W

44 Perform step 39

✓ R/W

42-44 - sequence incorrect, also must reinitiate sequence

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Transfer Car Failed to Reach Compact Transfer From Entry Position Alarm					
45	Set the timer period for the "Transfer Car Failed to Reach Compact Transfer - Entry" alarm to one second. Record the timer period below. <u>Register</u> <u>Initial Status</u> <u>Final Status</u> T4:97 Preset <u>120</u> 1 second	Verify that the preset status is set to 1 second.	✓		R/V
46	Press the "COMPACTOR TRANSFER" button from the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "COMPACTOR TRANSFER" button has been pressed.	✓		R/V
47	The "TRANSFER CAR MOVING TO COMPACT TRANSFER POSITION..." message should be displayed on the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "TRANSFER CAR MOVING TO COMPACT TRANSFER POSITION..." message is displayed.	✓		R/V
48	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Transfer Car Failed to Reach Compact Transfer - Entry" alarm.	Verify that the alarm has been acknowledged.	✓		R/V
48 50	Because the Transfer Car has reached the selected position, the "Transfer Car Failed to Reach Compact Transfer - Entry" alarm should clear.	Verify that the alarm has cleared.	✓		R/V
50 49	Restore the timer period for the "Transfer Car Failed to Reach Compact Transfer - Entry" alarm to the initial value recorded above. Record the timer status below: <u>Register</u> <u>Initial Status</u> <u>Final Status</u> T4:97 Preset 1 second <u>120</u>	Verify that the preset initial status is restored.	✓		R/V
51 51a	The "TRANSFER CAR AT COMPACT TRANSFER POSITION" message should be displayed on the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "TRANSFER CAR AT COMPACT TRANSFER POSITION" message is displayed.	✓		R/V

51 perform step 46

✓ R/V

#49-51 sequence incorrect, also must reinitiate sequence

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Attempt to Transfer Drum While Drum Compactor is Busy					
52	Force LCU 102 register ZS718A not activated to simulate the "Transfer Car Conveyor Drive Not Engaged" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS718A <i>R/W 7/17/09</i> <i>0</i> I:27/13	Verify that register ZS718A is forced not activated. Verify that the register status is recorded.	✓		<i>R/W</i>
53	Force LCU 102 register ZS718B not activated to simulate the "Transfer Car Conveyor Drive Not Disengaged" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS718B <i>0</i> I:27/14	Verify that register ZS718B is forced not activated. Verify that the register status is recorded.	✓		<i>R/W</i>
54	Configure the compactor so that the "Compactor Busy" signal is sent to the PCS (instead of the "Ready to Receive Drum" signal).	Verify that a "Ready to Receive Drum" signal has not been sent to the PCS.	✓		<i>R/W</i>
55	Press the "COMPACTOR GLOVEBOX" button from the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "COMPACTOR GLOVEBOX" button has been pressed.	✓		<i>R/W</i>
56	Because the PCS should not receive the "Ready to Receive Drum" signal, the PCS should not engage the Transfer Car Conveyor Drive. Wait thirty (30) seconds.	Verify that the Transfer Car Conveyor Drive does not engage during the waiting period.	✓		<i>R/W</i>
57	The "COMPACTOR BUSY" message should be displayed on the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "COMPACTOR BUSY" message is displayed.	✓		<i>R/W</i>

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Cancel Transfer of Drum to Drum Compactor					
58	Press the "COMPACTOR TRANSFER" button from the "TRANSFER CAR MENU" at OIU-12-103B. Pressing the "COMPACTOR TRANSFER" button from the "TRANSFER CAR MENU" at OIU-12-103B should cause the PCS to cancel engagement of the Transfer Car Conveyor Drive.	Verify that the "COMPACTOR TRANSFER" button has been pressed.	✓		R/W
59	Configure the compactor so that the "Ready to Receive Drum" signal is sent to the PCS (instead of the "Compactor Busy" signal).	Verify that a "Ready to Receive Drum" signal has been sent to the PCS.	✓		R/W
60	Because the "COMPACTOR TRANSFER" button has been pressed, the Transfer Car Conveyor Drive should not Engage. Wait thirty (30) seconds.	Verify that the Transfer Car Conveyor Drive does not engage during the waiting period.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Transfer Car Conveyor Drive Failed to Engage Alarm					
61	Press the "COMPACTOR GLOVEBOX" button from the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "COMPACTOR GLOVEBOX" button has been pressed.	✓		R/W
62	The "TRANSFERRING DRUM TO COMPACTOR" message should be displayed on the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "TRANSFERRING DRUM TO COMPACTOR" message is displayed.	✓		R/W
63	The PCS should pulse energize the Transfer Car Conveyor Drive solenoid (07-FEV-737E/EN) to engage the conveyor.	Verify that the Transfer Car Conveyor Drive is engaged.	✓		R/W
64	The "TRANSFER TO COMPACTOR IN PROGRESS..." message should be displayed on the "TRANSFER CAR MENU" at OIU-12-103B. Because register ZS718A is forced not activated a "Transfer Car Failed to Engage" alarm should be generated.	Verify that the "TRANSFER TO COMPACTOR IN PROGRESS..." message is displayed.	✓		R/W
65	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Transfer Car Failed to Engage" alarm.	Verify that the alarm has been acknowledged.	✓		R/W
66	The Transfer Car Conveyor Drive should remain engaged but should not energize until switch 07-ZS-718A indicates that the Transfer Car Conveyor Drive is engaged. Because register ZS718A is forced not activated, indicating that the Transfer Car Conveyor Drive is not engaged, the Conveyor should not energize. Wait thirty (30) seconds.	Verify that the Transfer Car Conveyor Drive remains engaged but does not energize during the waiting period.	✓		R/W
67	Unforce LCU 102 register ZS718A. Record the unforced register status below: Unforced ZS718A Status: <u>1</u>	Verify that register ZS718A is unforced.	✓		R/W
68	Because position switch 07-ZS-718A should be activated, indicating that the Transfer Car Conveyor Drive is engaged, the PCS should energize the Transfer Car Conveyor Drive Motor (TC-07-101/ST).	Verify that the Transfer Car Conveyor Drive Motor is energized.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Transfer Car Conveyor Drive Failed to Disengage Alarm					
69	Configure the compactor so that the "Transfer Complete" signal is sent to the PCS.	Verify that a "Transfer Complete" signal has been sent to the PCS.	✓		R/W
70	Because the PCS should have received the "Transfer Complete" signal, the PCS should de-energize the Transfer Car Conveyor Drive.	Verify that the Transfer Car Conveyor Drive Motor is de-energized.	✓		R/W
71	The PCS should pulse energize the Transfer Car Conveyor Drive solenoid (07-FEV-737E/DE) to disengage the conveyor.	Verify that the Transfer Car Conveyor Drive is disengaged.	✓		R/W
72	Because register ZS718B is forced not activated a "Transfer Car Failed to Disengage" alarm should be generated and the "TRANSFER TO COMPACTOR COMPLETE" message should not be displayed on the "TRANSFER CAR MENU" at OIU-12-103B. Wait thirty (30) seconds.	Verify that the "TRANSFER TO COMPACTOR COMPLETE" message is not displayed during the waiting period.	✓		R/W
73	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Transfer Car Failed to Disengage" alarm.	Verify that the alarm has been acknowledged.	✓		R/W
74	Unforce LCU 102 register ZS718B. Record the unforced register status below: Unforced ZS718B Status: <u>1</u>	Verify that register ZS718B is unforced.	✓		R/W
75	The "Transfer Car Conveyor Drive Disengaged" switch (07-ZS-718B) should be activated, indicating that the Transfer Car Conveyor Drive is disengaged.	Verify that the "Transfer Car Conveyor Drive Disengaged" switch is activated.	✓		R/W
76	The PCS should display the "TRANSFER TO COMPACTOR COMPLETE" message on the "TRANSFER CAR MENU" at OIU-12-103B. <i>R/W 7/17/97</i>	Verify that the "TRANSFER TO COMPACTOR COMPLETE" message is displayed.	✓		R/W
77	Press the "ENTRY" button from the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "ENTRY" button has been pressed.	✓		R/W
78	The "TRANSFER CAR MOVING TO ENTRY POSITION..." message should be displayed on the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "TRANSFER CAR MOVING TO ENTRY POSITION..." message is displayed.	✓		R/W
79	The Transfer Car should slowly move to and stop at the Entry position.	Verify that the Transfer Car is at the Entry position.	✓		R/W
80	Position switch 07-ZS-710 should pulse activate twice when the Transfer Car moves to the Entry Position.	Verify that position switch 07-ZS-710 is pulsed twice.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass	Fail	Witness (initial)
81	The "TRANSFER CAR AT ENTRY POSITION" message should be displayed on the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "TRANSFER CAR AT ENTRY POSITION" message is displayed.	✓		RN

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Transfer Car Operation: Drum Tipper Vertical Interlock					
82	Unforce all LCU 102 registers using the Allen Bradley PLC Software. <i>see pg 8-1</i>	Verify that all LCU 102 registers are unforced.	✓		R/W
83	The Manipulator (M-07-101) and Lid/Delid Fixture (RT-07-101) should be fully parked. Refer to the setup section of this test procedure as needed to park these items.	Verify that the Manipulator and Lid/Delid Fixture are parked.	✓		R/W
84	Confirm that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed at OIU-12-103B. If a sub-menu is displayed, press the "MAIN MENU" button to return to the "LLW SORTING GLOVEBOX MAIN MENU".	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.	✓		R/W
85	Press the "TRANSFER CAR MENU" button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B. <i>activated R/W 7/19/97</i>	Verify that the "TRANSFER CAR MENU" is displayed.	✓		R/W
86	Force LCU 102 register ZS333 not to simulate the "Drum Tipper Grab Not Vertical" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS333 <u>1</u> I:25/11	Verify that register ZS333 is forced activated. Verify that the forced register status is recorded.	✓		R/W
87	Press the "DELID" button from the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "DELID" button has been pressed.	✓		R/W
88	The Drum Tipper Grab Vertical condition functions as an interlock for Transfer Car Operation. Because this interlock is not satisfied, the Transfer Car should not move.	Verify that the Transfer Car does not move.	✓		R/W
89	Unforce LCU 102 register ZS333. Record the unforced register status below: Unforced ZS333 Status: <u>0</u>	Verify that register ZS333 is unforced.	✓		R/W
90	Because the Drum Tipper Grab is vertically positioned, the "Drum Tipper Grab Vertical" position switch (07-ZS-333) should not be activated. <i>raised</i>	Verify that the "Drum Tipper Grab Vertical" position switch is not activated.	✓		R/W
91	Manually activate the Drum Tipper (DH-07-103) Lowered position switch (07-ZS-332B) to simulate the Drum Tipper Lowered Condition. <i>Not raised</i>	Verify that the Drum Tipper Lowered position switch is activated.	✓		R/W

Not raised 7/19/97
It should be not activated
Force ZS332A activated to simulate
Drum tipper not raised,

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Transfer Car Operation: Drum Tipper Raised Interlock					
92	Press the "DELID" button from the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "DELID" button has been pressed.	✓		R/W
93	The Drum Tipper Raised condition functions as an interlock for Transfer Car Operation. Because this interlock is not satisfied, the Transfer Car should not move. <i>use force R/W 7/13/07</i>	Verify that the Transfer Car does not move.	✓		R/W
94	Remove the manual activation from the "Drum Tipper Lowered" position switch (07-ZS-332B) to allow this switch to indicate whether the Drum Tipper is Lowered.	Verify that the "Drum Tipper Lowered" position switch is not activated.	✓		R/W
95	Place the LLW Sorting Glovebox Waste Manipulator (EM-07-101) approximately one foot from park position 2 (farthest from Bagless Transfer Port (DO-07-105)).	Verify that the waste manipulator is approximately one foot away park position 2.	✓		R/W
96	Unpark both LLW Sorting Glovebox Waste Manipulator (EM-07-101) arms.	Verify that the waste manipulator arms are not parked.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Transfer Car Operation, Manipulator Parked Interlock					
97	Press the "DELID" button from the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "DELID" button has been pressed.	✓		R/W
98	The Manipulator Parked condition functions as an interlock for Transfer Car Operation. Because this interlock is not satisfied, the Transfer Car should not move.	Verify that the Transfer Car does not move.	✓		R/W
99	Place the LLW Sorting Glovebox Waste Manipulator (EM-07-101) at park position 2 (farthest from Bagless Transfer Port (DO-07-105)).	Verify that the waste manipulator is at park position 2.	✓		R/W
100	Position switch 07-ZS-715B should be activated, indicating that the Waste Manipulator is at park position 2.	Verify that position switch 07-ZS-715B is activated.	✓		R/W
101	Position switch 07-ZS-715A should not be activated, indicating that the Waste Manipulator is not at park position 1.	Verify that position switch 07-ZS-715A is not activated.	✓		R/W
102	The Manipulator arms parked position switches, 07-ZS-715C and 07-ZS-715D should not be activated, indicating that the Manipulator arms are not parked.	Verify that position switches 07-ZS-715C and 07-ZS-715D are not activated.	✓		R/W
103	Press the "DELID" button from the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "DELID" button has been pressed.	✓		R/W
104	The Manipulator Arms Parked condition functions as an interlock for Transfer Car Operation. Because this interlock is not satisfied (Simulated), the Transfer Car should not move.	Verify that the Transfer Car does not move.	✓		R/W
105	Park both LLW Sorting Glovebox Waste Manipulator (EM-07-101) arms.	Verify that the waste manipulator arms are parked.	✓		R/W
106	The Manipulator arms parked position switches, 07-ZS-715C and 07-ZS-715D should be activated, indicating that the Manipulator arms are parked.	Verify that position switches 07-ZS-715C and 07-ZS-715D are activated.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Move Drum to Delid Position using Transfer Car					
107	Transfer or otherwise position an empty 208 liter (55 gallon) waste drum, with lid secured by band clamp, on the Transfer Car.	Verify that the drum has been placed on the Transfer Car.	✓		R/W
108	Press the "DELID" button from the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "DELID" button has been pressed.	✓		R/W
109	The Transfer Car should smoothly accelerate and move towards the Delid position.	Verify that the Transfer Car smoothly accelerates and move towards the Delid position.	✓		R/W
110	The "TRANSFER CAR MOVING TO DELID POSITION..." message should be displayed on the "TRANSFER CAR MENU" at OIU-12-103B while the Transfer Car is in motion.	Verify that the "TRANSFER CAR MOVING TO DELID POSITION..." message is displayed.	✓		R/W
111	The Transfer Car should reach the Delid position, smoothly decelerate, and stop.	Verify that the Transfer Car is stopped at the Delid position.	✓		R/W
112	The "TRANSFER CAR AT DELID POSITION" message should be displayed on the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "TRANSFER CAR AT DELID POSITION" message is displayed.	✓		R/W
113	Confirm that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed at OIU-12-103B. If a sub-menu is displayed, press the "MAIN MENU" button to return to the "LLW SORTING GLOVEBOX MAIN MENU".	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.	✓		R/W
114	Unforce all LCU 102 registers using the Allen Bradley PLC Software. <i>see pg 8-1</i>	Verify that all LCU 102 registers are unforced.	✓		R/W
TEST CASE 13031A-85.12 COMPLETE					

TEST CASE 13031A-85.13 EXAMINE LLW SORTING GLOVEBOX DRUM TIPPER (DH-07-103) ALARMS AND INTERLOCKS AND GRIP DRUM WITH

DRUM TIPPER	13-2
Examine Drum Tipper Lower, Drum Lid/Delid Fixture Parked Interlock	13-2
Examine Drum Tipper Lower, Manipulator Parked Interlock	13-3
Examine Drum Tipper Lower, Transfer Car at Delid Position Interlock	13-4
Examine Drum Tipper Lower, Drum Tipper Raised Interlock	13-5
Examine Drum Tipper Lower, Drum Tipper Grab Vertical Interlock	13-6
Examine Drum Tipper Lower, Drum Tipper Grab Open Interlock	13-7
Examine Drum Tipper Lower, Sorting Table Fully Retracted Interlock	13-8
Examine Drum Tipper Lower, Drum Tipper Clutch Not Tripped Interlock	13-9
Examine Drum Tipper Failed to Lower Alarm	13-10
Examine Drum Grab Failed to Close Alarm	13-12
Examine Drum Grab Failed to Open Alarm	13-13
Examine Drum Tipper Failed to Raise Alarm	13-14
Complete Lower and Close Grab Sequence	13-15

Test Case retested 7-21-97. by man

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass	Fail	Witness (Initial)
TEST CASE 13031A-85.13 EXAMINE LLW SORTING GLOVEBOX DRUM TIPPER (DH-07-103) ALARMS AND INTERLOCKS AND GRIP DRUM WITH DRUM TIPPER					
Examine Drum Tipper Lower, Drum Lid/Delid Fixture Parked Interlock					
1	Unforce all LCU 102 registers using the Allen Bradley PLC Software. <i>see note pg 8-1</i>	Verify that all LCU 102 registers are unforced.	✓		ms R/W
2	Confirm that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed at OIU-12-103B. If a sub-menu is displayed, press the "MAIN MENU" button to return to the "LLW SORTING GLOVEBOX MAIN MENU".	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.	✓		ms R/W
3	Press the "DRUM TIPPER MENU" button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "DRUM TIPPER MENU" is displayed.	✓		ms R/W
4	Force LCU 102 register ZS728A not activated to simulate the Drum Lid/Delid Fixture "Not Parked" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS728A <u>0</u> I:26/15	Verify that register ZS728A is forced not activated. Verify that the forced register status is recorded.	✓		ms R/W
5	Press the "LOWER AND CLOSE GRAB" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "LOWER AND CLOSE GRAB" button has been pressed.	✓		ms R/W
6	Press the "LOWER TIPPER" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "LOWER TIPPER" button has been pressed.	✓		ms R/W
7	The "Drum Lid/Delid Fixture in Park/Relid Position" condition functions as an interlock for Drum Tipper Operation. Because this interlock is not satisfied, the Drum Tipper should not lower.	Verify that the Drum Tipper does not lower.	✓		ms R/W
8	Unpark the left LLW Sorting Glovebox Waste Manipulator Arm (EM-07-101).	Verify that the Manipulator arm is not parked.	✓		ms R/W
9	Unforce LCU 102 register ZS728A. Record the unforced register status below: Unforced ZS728A Status: <u>1</u>	Verify that register ZS728A is unforced.	✓		ms R/W
10	The "Drum Lid/Delid Fixture in Park/Relid Position" switch (O7-ZS-728A) should be activated, indicating that the Drum Lid/Delid Fixture is parked.	Verify that the "Drum Lid/Delid Fixture in Park/Relid Position" position switch is activated.	✓		ms R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Drum Tipper Lower Manipulator Parked Interlock					
11	Press the "LOWER AND CLOSE GRAB" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "LOWER AND CLOSE GRAB" button has been pressed.	✓		mg RN
12	Press the "LOWER TIPPER" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "LOWER TIPPER" button has been pressed.	✓		mg RN
13	The Manipulator Arms Parked condition functions as an interlock for Drum Tipper Operation. Because this interlock is not satisfied, the Drum Tipper should not lower.	Verify that the Drum Tipper does not lower.	✓		mg RN
14	Force LCU 102 register ZS725C not activated to simulate the "Transfer Car not at the Delid position" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS725C 0 I:27/17	Verify that register ZS725C is forced not activated. Verify that the forced register status is recorded.	✓		mg RN
15	Park both LLW Sorting Glovebox Waste Manipulator (EM-07-101) Arms.	Verify that both Manipulator arms are parked.	✓		mg RN

#15- manipulator must be at parked position #1 for all drum tipper operations, but must be at parked position #2 for all sorting table operations.

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Drum Tipper Lower, Transfer Car at Delid Position Interlock					
16	Press the "LOWER AND CLOSE GRAB" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "LOWER AND CLOSE GRAB" button has been pressed.	✓		mg R/W
17	Press the "LOWER TIPPER" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "LOWER TIPPER" button has been pressed.	✓		mg R/W
18	The Transfer Car at Delid Position condition functions as an interlock for Drum Tipper Operation. Because this interlock is not satisfied, the Drum Tipper should not lower.	Verify that the Drum Tipper does not lower.	✓		mg R/W
19	Force LCU 102 register ZS332A activated to simulate the "Drum Tipper Not Raised" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS332A 1 1:25/07	Verify that register ZS332A is forced activated. Verify that the forced register status is recorded.	✓		mg R/W
20	Unforce LCU 102 register ZS725C. Record the unforced register status below: Unforced ZS725C Status: 1	Verify that register ZS725C is unforced.	✓		mg R/W
21	The "Transfer Car at Delid Position" switch (07-ZS-725C) should be activated, indicating that the Transfer Car is at the Delid position.	Verify that the "Transfer Car at Delid Position" switch is activated.	✓		mg R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Drum Tipper Lower, Drum Tipper Raised Interlock					
22	Press the "LOWER AND CLOSE GRAB" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "LOWER AND CLOSE GRAB" button has been pressed.	✓		mg R/W
23	Press the "LOWER TIPPER" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "LOWER TIPPER" button has been pressed.	✓		mg R/W
24	The Drum Tipper Raised condition functions as an interlock for Drum Tipper Operation. Because this interlock is not satisfied, the Drum Tipper should not lower.	Verify that the Drum Tipper does not lower.	✓		mg R/W
25	Force LCU 102 register ZS333 activated to simulate the "Drum Tipper Grab Not Vertical" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS333 <u>1</u> 1:25/11	Verify that register ZS333 is forced activated. Verify that the forced register status is recorded.	✓ ✓		mg R/W
26	Unforce LCU 102 register ZS332A. Record the unforced register status below: Unforced ZS332A Status: <u>0</u>	Verify that register ZS332A is unforced.	✓ ✓		mg R/W
27	The "Drum Grab/Tipper Raised" position switch (07-ZS-332A) should not be activated, indicating that the Drum Tipper is raised.	Verify that the "Drum Grab/Tipper Raised" position switch is not activated.	✓		mg R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass	Fail	Witness (initial)
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28	Press the "LOWER AND CLOSE GRAB" button from the "DRUM TIPPER MENU" at OIU-1-2-103B.	Verify that the "LOWER AND CLOSE GRAB" button has been pressed.	✓		ms
29	Press the "LOWER TIPPER" button from the "DRUM TIPPER MENU" at OIU-1-2-103B.	Verify that the "LOWER TIPPER" button has been pressed.	✓		ms
30	The Drum Tipper Grab Vertical condition functions as an interlock for Drum Tipper Operation. Because this interlock is not satisfied, the Drum Tipper should not lower.	Verify that the Drum Tipper does not lower.	✓		ms
31	Not Open" condition. Record the forced register status below: Register Forced Status ZS720B Unforce LCU 102 register ZS720B not activated to simulate the "Drum Tipper Grab Vertical" position switch (07-ZS-333) should not be activated, indicating that the Drum Tipper Grab is Vertical.	Verify that register ZS720B is forced not activated. Verify that the forced register status is recorded. Verify that register ZS333 is unforced.	✓	✓	ms
32	Unforce LCU 102 register ZS333. Record the unforced register status below: Unforced ZS333 Status: 0	Verify that register ZS333 is unforced.	✓		ms
33	The "Drum Tipper Drum Grab Vertical" position switch (07-ZS-333) should not be activated, indicating that the Drum Tipper Grab is Vertical.	Verify that the "Drum Tipper Drum Grab Vertical" position switch is not activated.	✓		ms

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Drum Tipper Lower, Drum Tipper Grab Open Interlock					
34	Press the "LOWER AND CLOSE GRAB" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "LOWER AND CLOSE GRAB" button has been pressed.	✓		<i>mg</i> <i>R/W</i>
35	Press the "LOWER TIPPER" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "LOWER TIPPER" button has been pressed.	✓		<i>mg</i> <i>R/W</i>
36	The Drum Tipper Grab Open condition functions as an interlock for Drum Tipper Operation. Because this interlock is not satisfied, the Drum Tipper should not lower.	Verify that the Drum Tipper does not lower.	✓		<i>mg</i> <i>R/W</i>
37	Force LCU 102 register ZS717C not activated to simulate the "Sorting Table Not Fully Retracted" condition. Record the forced register status below:	Verify that register ZS717C is forced not activated.	✓		<i>mg</i>
	<u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS717C 0 1:27/10	Verify that the forced register status is recorded.	✓		<i>mg</i> <i>R/W</i>
38	Because the Sorting Table fully retracted position cannot be verified by the PCS, a "Sorting Table Retract Position Not Verified" alarm should be generated. A flashing "SEQUENCE FAILED" message should be displayed on the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that a flashing "SEQUENCE FAILED" message is displayed.	✓		<i>mg</i> <i>R/W</i>
39	ALARM ACKNOWLEDGEMENT SEQUENCE: <i>Retracted mg 7-21-97</i> Acknowledge the "Sorting Table Retract Position Not Verified" alarm.	Verify that the alarm has been acknowledged.	✓		<i>mg</i> <i>R/W</i>
40	Unforce LCU 102 register ZS720B. Record the unforced register status below: Unforced ZS720B Status: <u>1</u>	Verify that register ZS720B is unforced.	✓		<i>mg</i> <i>R/W</i>
41	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "DRUM TIPPER MENU" is displayed.	✓		<i>mg</i> <i>R/W</i>

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass	Fail	Witness (Initial)
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42	Press the "LOWER AND CLOSE GRAB" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "LOWER AND CLOSE GRAB" button has been pressed.	✓	✓	msw
43	Press the "LOWER TIPPER" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "LOWER TIPPER" button has been pressed.	✓	✓	msw
44	The Sorting Table Fully Retracted condition functions as an interlock for Drum Tipper Operation. Because this interlock is not satisfied, the Drum Tipper should not lower.	Verify that the Drum Tipper does not lower.	✓	✓	msw
45	Force LCU 102 register ZS335 activated to simulate the "Drum Tipper Clutch Tripped" condition. Record the forced register status below: Register Forced Status ZS335 1 Method of Confirmation 1:25/14	Verify that register ZS335 is forced activated. Verify that the forced register status is recorded.	✓	✓	msw
46	Unforce LCU 102 register ZS717C. Record the unforced register status below: Unforced ZS717C Status: 1	Verify that register ZS717C is unforced.	✓	✓	msw
47	Because position switch 07-ZS-717C should be activated, indicating that the Sorting Table is retracted, the "Sorting Table Retract Position Not Verified" alarm should clear.	Verify that the alarm is cleared.	✓	✓	msw
48	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "DRUM TIPPER MENU" is displayed.	✓	✓	msw

#47 Note: Drum Tipper Clutch Tripped = alarm generated

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Drum Tipper Lower, Drum Tipper Clutch Not Tripped Interlock					
49	Press the "LOWER AND CLOSE GRAB" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "LOWER AND CLOSE GRAB" button has been pressed.	✓		mg RW
50	Press the "LOWER TIPPER" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "LOWER TIPPER" button has been pressed.	✓		mg RW
51	The Drum Tipper Clutch Not Tripped condition functions as an interlock for Drum Tipper Operation. Because this interlock is not satisfied, the Drum Tipper should not lower and a "Drum Tipper Clutch Tripped" alarm should be generated.	Verify that the Drum Tipper does not lower.	✓		mg RW
52	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Drum Tipper Clutch Tripped" alarm.	Verify that the alarm has been acknowledged.	✓		mg RW
53	Force LCU 102 register ZS720 not activated to simulate the "Drum Tipper Grab Not Closed" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS720B not closed mg 7-21-97 <u>R/W 9/17/97</u> ZS720A not closed mg 7-21-97 <u>mg</u> 1:25/17 97	Verify that register ZS720A is forced not activated. ZS720B mg	✓		mg
54	Unforce LCU 102 register ZS335. Record the unforced register status below: Unforced ZS335 Status: <u>0</u>	Verify that register ZS335 is unforced.	✓		mg RW
55	Because position switch 07-ZS-335 should be activated, indicating that the Drum Tipper Clutch is not tripped, the "Drum Tipper Clutch Tripped" alarm should clear.	Verify that the alarm is cleared.	✓		mg RW
56	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "DRUM TIPPER MENU" is displayed.	✓		mg RW

#53- Note in ladder logic, as per 13462, only open switch ZS720B is examined as interlock input 7-21-97.

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Drum Tipper Failed to Lower Alarm					
57	Set the timer period for the "Drum Tipper Failed to Lower" alarm to one second. Record the timer period below: <u>Register</u> <u>Initial Status</u> <u>Final Status</u> T4:84 Preset <u>240</u> 1 second	Verify that the preset status is set to 1 second.	✓		mj RW
58	Press the "LOWER AND CLOSE GRAB" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "LOWER AND CLOSE GRAB" button has been pressed.	✓		mj RW
59	The "LOWER AND CLOSE GRAB IN PROGRESS..." message should be displayed on the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "LOWER AND CLOSE GRAB IN PROGRESS..." message is displayed.	✓		mj RW
60	Press the "LOWER TIPPER" button from the "DRUM TIPPER MENU" at OIU-12-103B until the Drum Tipper is approximately one half lowered.	Verify that the Drum Tipper lowers.	✓		mj RW
61	Release the "LOWER TIPPER" button.	Verify that the "LOWER TIPPER" button is released.	✓		mj RW
62	The Drum Tipper should lower from its raised position while the "LOWER TIPPER" button is activated and the Drum Tipper should stop when the "LOWER TIPPER" button is released. <u>activated. RW 9/10/95 STOP</u>	Verify that the Drum Tipper stops when the "LOWER TIPPER" button is released. <u>STOP activated</u>	✓		mj RW
63	Because the Drum Tipper does not completely lower, a "Drum Tipper Failed to Lower" alarm should be generated.	Verify that a flashing "SEQUENCE FAILED" message is displayed.	✓		mj RW
64	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Drum Tipper Failed to Lower" alarm.	Verify that the alarm has been acknowledged.	✓		mj RW
65	Press the "OPEN GRAB AND PARK" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "OPEN GRAB AND PARK" button has been pressed.	✓		mj RW
66	Because the Drum Tipper is not fully lowered, pressing the "OPEN GRAB AND PARK" button should have no effect on the Drum Tipper.	Verify that pressing the "OPEN GRAB AND PARK" button has no effect on the Drum Tipper.	✓		mj RW
67	Restore the timer period for the "Drum Tipper Failed to Lower" alarm to the initial value recorded above. Record the timer status below: <u>Register</u> <u>Initial Status</u> <u>Final Status</u> T4:84 Preset 1 second <u>240</u>	Verify that the preset initial status is restored.	✓		mj RW

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass	Fail	Witness (initial)
68	Press the "LOWER TIPPER" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "LOWER TIPPER" button has been pressed.	✓		WJ
69	The Drum Tipper should lower to its fully lowered position.	Verify that the Drum Tipper is fully lowered.	✓		WJ

End of retest 7-21-97 mrf

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Drum Grab Failed to Close Alarm					
70	Because the Drum Tipper is fully lowered, the PCS should energize solenoid 07-FEV-395D/C (Close) to close the Drum Tipper Grab around the drum.	Verify that the Drum Tipper Grab closes and holds the drum.	✓		R/W
71	The "Lower and Close Grab Sequence Completed" message should not be displayed.	Verify that the "Lower and Close Grab Sequence Completed" message is not displayed.	✓		R/W
72	The Drum Tipper lower sequence should be considered unsuccessful, and a "Drum Tipper Grab Failed to Close" alarm should be generated. A flashing "SEQUENCE FAILED" message should be displayed on the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that a flashing "SEQUENCE FAILED" message is displayed.	✓		R/W
73	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Drum Tipper Grab Failed to Close" alarm.	Verify that the alarm has been acknowledged.	✓		R/W
74	Unforce LCU 102 register ZS720A. Record the unforced register status below: Unforced ZS720A Status: _____	Verify that register ZS720A is unforced.	✓		R/W
75	Because position switch 07-ZS-720A should be activated, indicating that the Drum Tipper Grab is closed, the "Drum Tipper Grab Failed to Close" alarm should clear.	Verify that the alarm is cleared.	✓		R/W
76	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "DRUM TIPPER MENU" is displayed.	✓		R/W
77	Because register ZS720A is unforced, position switch 07-ZS-720A should be activated, indicating that the Drum Tipper Grab is Closed.	Verify that position switch 07-ZS-720A is activated.	✓		R/W
78	Because the sequence should have been successfully completed, the "LOWER AND CLOSE GRAB COMPLETE" message should be displayed on the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "LOWER AND CLOSE GRAB COMPLETE" message is displayed.	✓		R/W
79	Force LCU 102 register ZS720B not activated to simulate the "Drum Tipper Grab Not Open" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS720B 0 I:25/13	Verify that register ZS720B is forced not activated. Verify that the forced register status is recorded.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Drum Grab Failed to Open Alarm					
80	WARNING: Drum Tipper Grab Arms will fully extend. Press the "OPEN GRAB AND PARK" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "OPEN GRAB AND PARK" button has been pressed.	✓		R/W
81	The PCS should energize solenoid 07-FEV-395D/O (Open) to open the Drum Tipper Grab and release the drum.	Verify that the Drum Tipper Grab opens.	✓		R/W
82	A "Drum Tipper Grab Failed to Open" alarm should be generated.	Verify that the Drum Tipper does not raise during the waiting period.	✓		R/W
83	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Drum Tipper Grab Failed to Open" alarm.	Verify that the alarm has been acknowledged.	✓		R/W
84	Unforce LCU 102 register ZS720B. Record the unforced register status below:	Verify that register ZS720B is unforced.			R/W
85	Unforced ZS720B Status: <u>1</u>		✓		R/W
85	Set the timer period for the "Drum Tipper Failed to Raise" alarm to one second. Record the timer period below:	Verify that the preset status is set to 1 second.			
84	Register Initial Status Final Status T4:83 Preset <u>240</u> 1 second		✓		R/W
86	Because position switch 07-ZS-720B should be activated, indicating that the Drum Tipper Grab is Open, the "Drum Tipper Grab Failed to Open" alarm should clear.	Verify that the alarm is cleared.	✓		R/W
87	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "DRUM TIPPER MENU" is displayed.	✓		R/W
88	The "OPEN GRAB AND PARK IN PROGRESS..." message should be displayed on the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "OPEN GRAB AND PARK IN PROGRESS..." message is displayed.	✓		R/W

84 - 88 - Sequence incorrect - as soon as ZS720B is unforced open grab and park sequence continues.

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Drum Tipper Failed to Raise Alarm					
89	Press the "RAISE TIPPER" button from the "DRUM TIPPER MENU" at OIU-12-103B until the Drum Tipper is approximately one half raised.	Verify that the Drum Tipper raises.			
90	Release the "RAISE TIPPER" button. The Drum Tipper should stop raising when the button is released.	Verify that the Drum Tipper stops when the "RAISE TIPPER" button is released.			N/A
91	Because the Drum Tipper has been raised, but does not completely raise, the Drum Tipper raise sequence should time out and a "Drum Tipper Failed to Raise" alarm should be generated. A flashing "SEQUENCE FAILED" message should be displayed on the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "SEQUENCE FAILED" message is displayed:			R/W 89-92 9/17/97
92	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Drum Tipper Failed to Raise" alarm.	Verify that the alarm has been acknowledged.			
93	Restore the timer period for the "Drum Tipper Failed to Raise" alarm to the initial value recorded above. Record the timer status below: <u>Register</u> <u>Initial Status</u> <u>Final Status</u> T4:83 Preset 1 second <u>240</u>	Verify that the preset initial status is restored.			
94	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "DRUM TIPPER MENU" is displayed.	✓		N/A
95	Press the "RAISE TIPPER" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "RAISE TIPPER" button has been pressed.			N/A 89-92 9/19/97
96	The Drum Tipper should raise to its fully raised position.	Verify that the Drum Tipper is fully raised.	✓		R/W
97	The "Drum Tipper Raised" position switch (07-ZS-332A) should be activated.	Verify that the "Drum Tipper Raised" position switch is activated.	✓		R/W
98	The "OPEN GRAB AND PARK COMPLETE" message should be displayed on the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "OPEN GRAB AND PARK COMPLETE" message is displayed.	✓		R/W

#89-92 Not per 13462 (SW Spec)
and 94-95

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Complete Lower and Close Grab Sequence					
99	Press the "LOWER AND CLOSE GRAB" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "LOWER AND CLOSE GRAB" button has been pressed.	✓		RW
100	The "LOWER AND CLOSE GRAB IN PROGRESS..." message should be displayed on the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "LOWER AND CLOSE GRAB IN PROGRESS..." message is displayed.	✓		RW
101	Press the "LOWER TIPPER" button from the "DRUM TIPPER MENU" at OIU-12-103B until the Drum Tipper is completely lowered.	Verify that the Drum Tipper is fully lowered.	✓		RW
102	The Drum Tipper should lower to its lowered position. When the Drum Tipper is lowered, the lower rail section mounted on the Drum Tipper should align with the fixed rail sections mounted on the glovebox walls.	Verify that the Drum Tipper is lowered.	✓		RW
103	The "Drum Tipper Lowered" position switch (07-ZS-332B) should be activated.	Verify that the "Drum Tipper Lowered" position switch is activated.	✓		RW
104	The "LOWER AND CLOSE GRAB COMPLETE" message should be displayed on the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "LOWER AND CLOSE GRAB COMPLETE" message is displayed.	✓		RW
105	Unforce all LCU 102 registers using the Allen Bradley PLC Software. see pg 8-1	Verify that all LCU 102 registers are unforced.	✓		RW
TEST CASE 13031A-85.13 COMPLETE					

TEST CASE 13031A-85.14 EXAMINE LLW SORTING GLOVEBOX DRUM LID/DELID FIXTURE (RT-07-101) INTERLOCKS AND MOVE FIXTURE TO DELID POSITION	14-2
Examine Drum Lid/Delid Fixture Move, Transfer Car at Delid Position Interlock	14-2
Examine Drum Lid/Delid Fixture Move, Fixture at Park (Relid) Position Interlock	14-3
Examine Drum Lid/Delid Fixture Move, Fixture Raised Interlock	14-4
Examine Drum Lid/Delid Fixture Move, Fixture Rotated Parked Interlock	14-5
Examine Drum Lid/Delid Fixture Move, C-Clip Crimper Retracted Interlock	14-6
Examine Drum Lid/Delid Fixture Move, Saw Retracted Interlock	14-7
Examine Drum Lid/Delid Fixture Move, Vacuum Generator Off Interlock	14-8
Examine Drum Lid/Delid Fixture Move, Manipulator Arm Parked Interlock	14-9
Examine Drum Lid/Delid Fixture Move, Saw De-energized Interlock	14-10
Examine Drum Lid/Delid Fixture "Fixture Failed to Move to Delid Position" Alarm	14-11

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.14 EXAMINE LLW SORTING GLOVEBOX DRUM LID/DELID FIXTURE (RT-07-101) INTERLOCKS AND MOVE FIXTURE TO DELID POSITION					
Examine Drum Lid/Delid Fixture Move, Transfer Car at Delid Position Interlock					
1	Unforce all LCU 102 registers using the Allen Bradley PLC Software.	Verify that all LCU 102 registers are unforced.			
2	Confirm that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed at OIU-12-103B. If a sub-menu is displayed, press the "MAIN MENU" button to return to the "LLW SORTING GLOVEBOX MAIN MENU".	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.			
3	Press the "LID/DELID MENU" button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "LID/DELID MENU" is displayed.			
4	Force LCU 102 register ZS725C not activated to simulate the "Transfer Car not at the Delid Position" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS725C _____ I:27/17 _____	Verify that register ZS725C is forced not activated. Verify that the forced register status is recorded.			
5	Press the "FIXTURE TO DELID POSITION" button from the "LID/DELID MENU" at OIU-12-103B.	Verify that the "FIXTURE TO DELID POSITION" button has been pressed.			
6	The Transfer Car at Delid Position condition functions as an interlock for Drum Lid/Delid Fixture Operation. Because this interlock is not satisfied, the fixture should not move. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not move during the waiting period.			
7	Force LCU 102 register ZS728A not activated to simulate the "Drum Lid/Delid Fixture Not in Park/Relid Position" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS728A _____ I:26/15 _____	Verify that register ZS728A is forced not activated. Verify that the forced register status is recorded.			
8	Unforce LCU 102 register ZS725C. Record the unforced register status below: Unforced ZS725C Status: _____	Verify that register ZS725C is unforced.			

see attached

pg 1-7 R/W 8/8/91

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
9	The "Transfer Car at Delid Position" switch (07-ZS-725C) should be activated, indicating that the Transfer Car is at the Delid position.	Verify that the "Transfer Car at Delid Position" switch is activated.			

see Attached pg 1-7
R/W 2/58/97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Drum Lid/Delid Fixture Move; Fixture at Park (Relid) Position Interlock					
10	Press the "FIXTURE TO DELID POSITION" button from the "LID/DELID MENU" at OIU-12-103B.	Verify that the "FIXTURE TO DELID POSITION" button has been pressed.			
11	The "Drum Lid/Delid Fixture in Park/Relid Position" condition functions as an interlock for Drum Lid/Delid Fixture Operation. Because this interlock is not satisfied, the fixture should not move. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not move during the waiting period.			
12	Force LCU 102 register ZS726A not activated to simulate the "Drum Lid/Delid Fixture Not Raised" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS726A _____ 1:26/11 _____	Verify that register ZS726A is forced not activated. Verify that the register status is recorded.			
13	Unforce LCU 102 register ZS728A. Record the unforced register status below: Unforced ZS728A Status: _____	Verify that register ZS728A is unforced.			
14	The "Drum Lid/Delid Fixture Parked" position switch (07-ZS-728A) should be activated, indicating that the Drum Lid/Delid Fixture is parked.	Verify that the "Drum Lid/Delid Fixture Parked" position switch is activated.			

see Attached pg 1-7
A/W 7/28/97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Drum Lid/Delid Fixture Move, Fixture Raised Interlock					
15	Press the "FIXTURE TO DELID POSITION" button from the "LID/DELID MENU" at OIU-12-103B.	Verify that the "FIXTURE TO DELID POSITION" button has been pressed.			
16	The "Drum Lid/Delid Fixture Raised" condition functions as an interlock for Drum Lid/Delid Fixture Operation. Because this interlock is not satisfied, the fixture should not move. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not move during the waiting period.			
17	Force LCU 102 register ZS727A not activated to simulate the "Drum Lid/Delid Fixture Rotation not at Park Position" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS727A _____ I:26/13 _____	Verify that register ZS727A is forced not activated. Verify that the forced register status is recorded.			
18	Unforce LCU 102 register ZS726A. Record the unforced register status below: Unforced ZS726A Status: _____	Verify that register ZS726A is unforced.			
19	The "Drum Lid/Delid Fixture Raised" position switch (07-ZS-726A) should be activated, indicating that the fixture is raised.	Verify that the "Drum Lid/Delid Fixture Raised" position switch is activated.			

See Attached
pg 1-4
1-7
R/W 7/28/91

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Drum Lid/Delid Fixture Move, Fixture Rotated Parked Interlock					
20	Press the "FIXTURE TO DELID POSITION" button from the "LID/DELID MENU" at OIU-12-103B.	Verify that the "FIXTURE TO DELID POSITION" button has been pressed.			
21	The "Drum Lid/Delid Fixture Rotation at Park Position" condition functions as an interlock for Drum Lid/Delid Fixture Operation. Because this interlock is not satisfied, the fixture should not move. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not move during the waiting period.			
22	Force LCU 102 register ZS719A not activated to simulate the "Drum Lid/Delid Fixture C-Clip Crimp Head not Back" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS719A _____ I:26/17 _____	Verify that register ZS719A is forced not activated. Verify that the forced register status is recorded.			
23	Unforce LCU 102 register ZS727A. Record the unforced register status below: Unforced ZS727A Status: _____	Verify that register ZS727A is unforced.			
24	The "Drum Lid/Delid Fixture Rotation at Park Position" switch (07-ZS-727A) should be activated, indicating that the fixture is rotated parked.	Verify that the "Drum Lid/Delid Fixture Rotation at Park Position" switch is activated.			

see Attached
pg 17 N/A 7/28/17

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Drum Lid/Delid Fixture Move, C-Clip Crimper Retracted Interlock					
25	Press the "FIXTURE TO DELID POSITION" button from the "LID/DELID MENU" at OIU-12-103B.	Verify that the "FIXTURE TO DELID POSITION" button has been pressed.			
26	The "Drum Lid/Delid Fixture Crimp Head Back" condition functions as an interlock for Drum Lid/Delid Fixture Operation. Because this interlock is not satisfied, the fixture should not move. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not move during the waiting period.			
27	Force LCU 102 register ZS724B not activated to simulate the "Drum Lid/Delid Fixture Saw Not Retracted" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS719A _____ 1:26/17 _____	Verify that register ZS724B is forced not activated. Verify that the forced register status is recorded.			
28	Unforce LCU 102 register ZS719A. Record the unforced register status below: Unforced ZS719A Status: _____	Verify that register ZS719A is unforced.			
29	The "Drum Lid/Delid Fixture Crimp Head Back" position switch (07-ZS-719A) should be activated, indicating that the C-Clip Crimper is retracted.	Verify that the "Drum Lid/Delid Fixture Crimp Head Back" position switch is activated.			

See Attached R/V 09 1-7
7/28/99

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Drum Lid/Delid Fixture Move, Saw Retracted Interlock					
30	Press the "FIXTURE TO DELID POSITION" button from the "LID/DELID MENU" at OIU-12-103B.	Verify that the "FIXTURE TO DELID POSITION" button has been pressed.			
31	The "Drum Lid/Delid Fixture Saw Retracted" condition functions as an interlock for Drum Lid/Delid Fixture Operation. Because this interlock is not satisfied, the fixture should not move. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not move during the waiting period.			
32	Energize vacuum generation solenoid (07-FEV-736E) to turn on the Drum Lid/Delid Fixture vacuum generator.	Verify that solenoid 07-FEV-736E is energized.			
33	The vacuum generator valve should open and a "hissing" sound should be noted, indicating that escaping pressurized air is being used to generate vacuum.	Audibly verify that the vacuum generator has been energized.			
34	Unforce LCU 102 register ZS724B. Record the unforced register status below: Unforced ZS724B Status: _____	Verify that register ZS724B is unforced.			
35	The "Drum Lid/Delid Fixture Saw Retracted" position switch (07-ZS-724B) should be activated, indicating that the saw is retracted.	Verify that the "Drum Lid/Delid Fixture Saw Retracted" position switch is activated.			

see Attached pg 1-7
R/V 9/28/97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✗	Witness (initial)
Examine Drum Lid/Delid Fixture Move, Vacuum Generator Off Interlock					
36	Press the "FIXTURE TO DELID POSITION" button from the "LID/DELID MENU" at OIU-12-103B.	Verify that the "FIXTURE TO DELID POSITION" button has been pressed.			
37	The "Drum Lid/Delid Fixture Drum Lid Lifter Vacuum Off" condition functions as an interlock for Drum Lid/Delid Fixture Operation. Because this interlock is not satisfied, the fixture should not move. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not move during the waiting period.			
38	Unpark the left LLW Sorting Glovebox Waste Manipulator Arm (EM-07-101).	Verify that the Manipulator arm is not parked.			
39	De-energize the vacuum generation solenoid (07-FEV-736E) to turn off the Drum Lid/Delid Fixture vacuum generator.	Verify that solenoid 07-FEV-736E is not energized.			
40	The valve should close and a "hissing" sound should not be noted, indicating that the vacuum generator has been turned off.	Audibly verify that the vacuum generator has been turned off.			

see Attached PG 1-1
ALW 9/20/99

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Drum Lid/Delid Fixture Move; Manipulator Arm Parked Interlock					
41	Press the "FIXTURE TO DELID POSITION" button from the "LID/DELID MENU" at OIU-12-103B.	Verify that the "FIXTURE TO DELID POSITION" button has been pressed.			
42	The Manipulator Arms Parked condition functions as an interlock for Drum Lid/Delid Fixture Operation. Because this interlock is not satisfied, the fixture should not move. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not move during the waiting period.			
43	WARNING: The following test procedure step involves energizing the Drum Lid/Delid Fixture reciprocating saw. Do not energize the saw if equipment damage or personal injury may result from the energized saw. Take sufficient precautions to safely stop the saw in the event of an emergency or alarm condition.	Verify that the saw can be stopped in a safe and orderly manner.			
44	Energize the Saw Motor (RT-07-101/M1).	Verify that the saw is energized.			
45	Park both LLW Sorting Glovebox Waste Manipulator (EM-07-101) Arms.	Verify that both Manipulator arms are parked.			

see Attached pg 1-7
R/W 7/28/99

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Drum Lid/Delid Fixture Move, Saw De-energized Interlock					
46	Press the "FIXTURE TO DELID POSITION" button from the "LID/DELID MENU" at OIU-12-103B.	Verify that the "FIXTURE TO DELID POSITION" button has been pressed.			
47	The Saw De-energized condition functions as an interlock for Drum Lid/Delid Fixture Operation. Because this interlock is not satisfied, the fixture should not move. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not move during the waiting period.			
48	Force LCU 102 register ZS728B not activated to simulate the "Drum Lid/Delid Fixture Not In Delid Position" condition. Record the forced register status below:	Verify that register ZS728B is forced not activated.			
	<u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS728B _____ I:26/16 _____	Verify that the forced register status is recorded.			
49	De-energize the Drum Lid/Delid Fixture Saw Motor (RT-07-101/M1).	Verify that the saw is de-energized.			

see attached
pg 1-11
R/W 7/28/97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Drum Lid/Delid Fixture "Fixture Failed to Move to Delid Position" Alarm					
50	Press the "FIXTURE TO DELID POSITION" button from the "LID/DELID MENU" at OIU-12-103B.	Verify that the "FIXTURE TO DELID POSITION" button has been pressed.			
51	The PCS should energize the Drum Lid/Delid Fixture horizontal movement solenoid 07-FEV-737A/F (Forward) to smoothly move the fixture to the Delid position.	Verify that the Drum Lid/Delid Fixture moves to the Delid position.			
52	Because the position switch (07-ZS-728B) has been forced not activated, the movement sequence should be considered unsuccessful, and a "Fixture Failed to Move to Delid Position" alarm should be generated. A flashing "SEQUENCE FAILED" message should be displayed on the "LID/DELID MENU" at OIU-12-103B.	Verify that a "SEQUENCE FAILED" message is displayed.			
53	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Fixture Failed to Move to Delid Position" alarm.	Verify that the alarm has been acknowledged.			
54	Unforce LCU 102 register ZS728B. Record the unforced register status below: Unforced ZS728B Status: _____	Verify that register ZS728B is unforced.			
55	Because position switch 07-ZS-728B should be activated, indicating that the Drum Lid/Delid Fixture is at the Delid position, the "Fixture Failed to Move to Delid Position" alarm should clear.	Verify that the alarm is cleared.			
56	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "LID/DELID MENU" at OIU-12-103B.	Verify that the "LID/DELID MENU" is displayed.			
57	The "Drum Lid/Delid Fixture in Delid Position" switch (07-ZS-728B) should be activated, indicating that the Drum Lid/Delid Fixture is at the Delid Position.	Verify that the "Drum Lid/Delid Fixture in Delid Position" position switch is activated.			
58	Because the Drum Lid/Delid Fixture is positioned at the Delid Position, the "DRUM LID/DELID FIXTURE AT DELID POSITION" message should be displayed on the "LID/DELID MENU" at OIU-12-103B.	Verify that the "DRUM LID/DELID FIXTURE AT DELID POSITION" message is displayed.			
59	Unforce all LCU 102 registers using the Allen Bradley PLC Software.	Verify that all LCU 102 registers are unforced.			
TEST CASE 13031A-85.14 COMPLETE					

1

TEST CASE 13031A-85.14 EXAMINE LLW SORTING GLOVEBOX DRUM LID/DELID
FIXTURE (RT-07-101) INTERLOCKS AND MOVE FIXTURE TO DELID POSITION

Tested 7/18/99 R/W & MS

PASS FAIL INIT.

A. Establish Initial Conditions

1. Park\Verify parked Manipulator arms.

✓ | | R/W

2. Park\verify Manipulator at park position #1.

✓ | | R/W

3. Move\verify Transfer car at tipper with a drum on car.

✓ | | R/W

4. Close\verify drum tipper grab arms are engaging drum.

✓ | | R/W

5. Move\verify delid fixture is at the park position.

✓ | | R/W

6. Move\verify sorting table at the fully retracted position.

C | | R/W

7. Place\verify the LLW Sorting Glovebox is Initialized.

✓ | | R/W

B. Manipulator Not Parked at Position #2

1. Force ZS715A not activated, to simulate manipulator not
Parked at Position #1.
Record register status.

✓ | | R/W

ZS715A Status: 0

Register: I:22\16

2. On the Saw menu press "MOVE TO DELID POSITION"
button.

✓ | | R/W

3. Verify that the delid fixture does not move.

C | | R/W

4. Unforce ZS715A, verify register status equals 1.
Record register status.

✓ | | R/W

ZS715A Status: 1

Register: I:22\16

R/W

2

TEST CASE 13031A-85.14 EXAMINE LLW SORTING GLOVEBOX DRUM LID/DELID
FIXTURE (RT-07-101) INTERLOCKS AND MOVE FIXTURE TO DELID POSITIONPASS FAIL INIT.

C. Manipulator Left Arm Not Parked

1. Force ZS715C not activated, to simulate manipulator left arm not parked.

Record register status.

ZS715C Status: 0

Register: I:23\0

2. On the Saw menu press "MOVE TO DELID POSITION" button.

3. Verify that the delid fixture does not move.

4. Unforce ZS715C, verify register status equals 1.

Record register status.

ZS715C Status: 1

Register: I:23\0

D. Manipulator Right Arm Not Parked

1. Force ZS715D not activated, to simulate manipulator right arm not parked.

Record register status.

ZS715D Status: 0

Register: I:23\01

2. On the Saw menu press "MOVE TO DELID POSITION" button.

3. Verify that the delid fixture does not move.

4. Unforce ZS715D, verify register status equals 1.

Record register status.

ZS715D Status: 1

Register: I:23\01

TEST CASE 13031A-85.14 EXAMINE LLW SORTING GLOVEBOX DRUM LID/DELID
FIXTURE (RT-07-101) INTERLOCKS AND MOVE FIXTURE TO DELID POSITION

E. Transfer Car Not At Delid/Tipper Position PASS FAIL INIT.

1. Force ZS725C not activated, to simulate Transfer Car not at Delid/Tipper position.
Record register status.

✓ | | R/W

ZS725C Status: 0 Register: I:24\04

2. On the Saw menu press "MOVE TO DELID POSITION" button.

✓ | | R/W

3. Verify that the delid fixture does not move.

✓ | | R/W

4. Unforce ZS725C, verify register status equals 1.
Record register status.

✓ | | R/W

ZS725C Status: 1 Register: I:24\04

F. Tipper Not Lowered

1. Force ZS332B activated, to simulate Tipper not in the lowered position.
Record register status.

✓ | | R/W

ZS332B Status: 1 Register: I:22\07

2. On the Saw menu press "MOVE TO DELID POSITION" button.

✓ | | R/W

3. Verify that the delid fixture does not move.

✓ | | R/W

4. Unforce ZS332B, verify register status equals 0.
Record register status.

✓ | | R/W

ZS332B Status: 0 Register: I:22\07

TEST CASE 13031A-85.14 EXAMINE LLW SORTING GLOVEBOX DRUM LID/DELID
FIXTURE (RT-07-101) INTERLOCKS AND MOVE FIXTURE TO DELID POSITION

PASS FAIL INIT.

G. Sorting Table Not Fully Retracted

1. Force ZS717C not activated, to simulate sorting table not fully retracted.

Record register status.

ZS717C Status: 0

Register: I:27/10

2. On the Saw menu press "MOVE TO DELID POSITION" button.

3. Verify that the delid fixture does not move.

4. Unforce ZS717C, verify register status equals 1.

Record register status.

ZS717C Status: 1

Register: I:27/10

H. Delid Fixture Saw Motor Not Running

1. CAUTION: The following step will cause the saw motor to run, ensure the saw blade is clear prior to performing the next step.

2. Force delid saw motor on by installing a bypass at rung 41:208.

3. Verify the saw motor starts.

4. On the Saw menu press "MOVE TO DELID POSITION" button.

5. Verify that the delid fixture does not move.

6. Remove bypass installed at rung 41:208.

7. Verify the delid saw motor stops.

5

TEST CASE 13031A-85.14 EXAMINE LLW SORTING GLOVEBOX DRUM LID/DELID
FIXTURE (RT-07-101) INTERLOCKS AND MOVE FIXTURE TO DELID POSITIONPASS FAIL INIT.

I. Saw Not Retracted

1. Force ZS724B not activated, to simulate delid saw not retracted.

✓ | | R/W

Record register status.

ZS724B Status: 0

Register: I:23\07

2. On the Saw menu press "MOVE TO DELID POSITION" button.

✓ | | R/W

3. Verify that the delid fixture does not move.

✓ | | R/W4. Unforce ZS724B, verify register status equals 1.
Record register status.✓ | | R/WZS724B Status: 1

Register: I:23\07

J. Delid Fixture Not Parked - Rotated Right

1. Force ZS727 not activated, to simulate delid fixture not rotated right.

✓ | | R/W

Record register status.

ZS727 Status: 0

Register: I:23\13

2. On the Saw menu press "MOVE TO DELID POSITION" button.

✓ | | R/W

3. Verify that the delid fixture does not move.

✓ | | R/W4. Unforce ZS727, verify register status equals 1.
Record register status.ZS727 Status: 1

Register: I:23\13

6

TEST CASE 13031A-85.14 EXAMINE LLW SORTING GLOVEBOX DRUM LID/DELID
FIXTURE (RT-07-101) INTERLOCKS AND MOVE FIXTURE TO DELID POSITION

PASS FAIL INIT

K. Fixture Not Raised

1. Force ZS726A not activated, to simulate delid fixture not raised. ✓ | | R/W
Record register status.

ZS726A Status: 0 Register: I:23\10

2. On the Saw menu press "MOVE TO DELID POSITION" ✓ | | R/W
button.

3. Verify that the delid fixture does not move. ✓ | | R/W

4. Unforce ZS726A, verify register status equals 1. ✓ | | R/W
Record register status.

ZS726A Status: 1 Register: I:23\10

K. Delid Fixture Not Parked

1. Force ZS728A not activated, to simulate delid fixture not parked. ✓ | | R/W
Record register status.

ZS728A Status: 0 Register: I:23\14

2. On the Saw menu press "MOVE TO DELID POSITION" ✓ | | R/W
button.

3. Verify that the delid fixture does not move. ✓ | | R/W

4. Unforce ZS728A, verify register status equals 1. ✓ | | R/W
Record register status.

ZS728A Status: 1 Register: I:23\14

7

TEST CASE 13031A-85.14 EXAMINE LLW SORTING GLOVEBOX DRUM LID/DELID
FIXTURE (RT-07-101) INTERLOCKS AND MOVE FIXTURE TO DELID POSITIONPASS FAIL INIT

L. Delid Fixture Failed To Reach Delid Position Alarm

1. Force ZS728B not activated, to simulate delid fixture not at the delid/tipper position.
Record register status.

✓		R/W
---	--	-----

ZS728B Status: 0

Register: I:23\15

2. On the Saw menu press "MOVE TO DELID POSITION" button.

✓		R/W
---	--	-----

3. Verify message on the SAW menu "FIXTURE MOVING TO DELID POSITION".

✓		R/W
---	--	-----

4. Verify that the delid fixture moves to the delid/tipper position.

✓		R/W
---	--	-----

5. On the Saw menu verify message "SEQUENCE FAILED".

✓		R/W
---	--	-----

6. On the Saw menu verify Alarm button is flashing red.

✓		R/W
---	--	-----

7. Acknowledge alarm "Fixture Failed to Move to Delid Position".

✓		R/W
---	--	-----

8. Unforce ZS728B, verify register status equals 1.
Record register status.

✓		R/W
---	--	-----

ZS728B Status: 1

Register: I:23\15

TEST CASE 13031A-85.15 EXAMINE LLW SORTING GLOVEBOX DRUM LID/DELID FIXTURE (RT-07-101) INTERLOCKS AND ROTATE TO CUT

POSITION #1	15-2
Examine Drum Lid/Delid Fixture Rotate, Fixture Rotated Parked Interlock	15-2
Examine Drum Lid/Delid Fixture Rotate, Fixture Raised Interlock	15-3
Examine Drum Lid/Delid Fixture Rotate, C-Clip Crimper Retracted Interlock	15-4
Examine Drum Lid/Delid Fixture Rotate, C-Clip Crimper Jaw Open Interlock	15-5
Examine Drum Lid/Delid Fixture Rotate, Saw Retracted Interlock	15-6
Examine Drum Lid/Delid Fixture Rotate, Vacuum Generator Off Interlock	15-7
Examine Drum Lid/Delid Fixture Rotate, Saw De-energized Interlock	15-8
Rotate Drum Lid/Delid Fixture Saw to Cut Position #2	15-9

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
TEST CASE 13031A-85.15 EXAMINE LLW SORTING GLOVEBOX DRUM LID/DELID FIXTURE (RT-07-101) INTERLOCKS AND ROTATE TO CUT POSITION #1					
Examine Drum Lid/Delid Fixture Rotate, Fixture Rotated Parked Interlock					
1	Unforce all LCU 102 registers using the Allen Bradley PLC Software.	Verify that all LCU 102 registers are unforced.			
2	Confirm that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed at OIU-12-103B. If a sub-menu is displayed, press the "MAIN MENU" button to return to the "LLW SORTING GLOVEBOX MAIN MENU".	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.			
3	Press the "SAW MENU" button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "SAW MENU" is displayed.			
4	Force LCU 102 register ZS727A not activated to simulate the "Drum Lid/Delid Fixture Rotation Not at Parked Position" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS727A _____ I:26/13 _____	Verify that register ZS727A is forced not activated. Verify that the forced register status is recorded.			
5	Press the "C2 & C5 SAW ORIENTATION" button from the "SAW MENU" at OIU-12-103B.	Verify that the "C2 & C5 SAW ORIENTATION" button has been pressed.			
6	The "Drum Lid/Delid Fixture Rotation Not at Parked Position" condition functions as an interlock for Drum Lid/Delid Fixture Operation. Because this interlock is not satisfied, the fixture should not rotate. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not rotate during the waiting period.			
7	Force LCU 102 register ZS726A not activated to simulate the "Drum Lid/Delid Fixture Not Raised" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS726A _____ I:26/11 _____	Verify that register ZS726A is forced not activated. Verify that the register status is recorded.			
8	Unforce LCU 102 register ZS727A. Record the unforced register status below: Unforced ZS727A Status: _____	Verify that register ZS727A is unforced.			

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass	Fail	Witness (Initial)
9	The "Drum Lid/Delid Fixture Rotation at Park Position" switch (07-ZS-727A) should be activated, indicating that the fixture is rotated parked.	Verify that the "Drum Lid/Delid Fixture Rotation at Park Position" position switch is activated.	☒	☐	☐

see Attached pg 1-11
 1-11
 7/28/97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Drum Lid/Delid Fixture Rotate; Fixture Raised Interlock					
10	Press the "C2 & C5 SAW ORIENTATION" button from the "SAW MENU" at OIU-12-103B.	Verify that the "C2 & C5 SAW ORIENTATION" button has been pressed.			
11	The "Drum Lid/Delid Fixture Raised" condition functions as an interlock for Drum Lid/Delid Fixture Operation. Because this interlock is not satisfied, the fixture should not rotate. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not rotate during the waiting period.			
12	Force LCU 102 register ZS719A not activated to simulate the "Drum Lid/Delid Fixture Crimp Head Not Back" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS719A _____ I:26/17 _____	Verify that register ZS719A is forced not activated. Verify that the forced register status is recorded.			
13	Unforce LCU 102 register ZS726A. Record the unforced register status below: Unforced ZS726A Status: _____	Verify that register ZS726A is unforced.			
14	The "Drum Lid/Delid Fixture Raised" position switch (07-28-726A) should be activated, indicating that the fixture is raised.	Verify that the "Drum Lid/Delid Fixture Raised" position switch is activated.			

see attached
pg 4-11
NW 7/28/97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Drum Lid/Delid Fixture Rotate, C-Clip Crimper Retracted Interlock					
15	Press the "C2 & C5 SAW ORIENTATION" button from the "SAW MENU" at OIU-12-103B.	Verify that the "C2 & C5 SAW ORIENTATION" button has been pressed.			
16	The "Drum Lid/Delid Fixture Crimp Head Back" condition functions as an interlock for Drum Lid/Delid Fixture Operation. Because this interlock is not satisfied, the fixture should not rotate. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not rotate during the waiting period.			
17	Force LCU 102 register ZS721 not activated to simulate the "Drum Lid/Delid Fixture Crimp Jaw Not Open" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS721 1:27/01	Verify that register ZS721 is forced not activated. Verify that the forced register status is recorded.			
18	Unforce LCU 102 register ZS719A. Record the unforced register status below: Unforced ZS719A Status: _____	Verify that register ZS719A is unforced.			
19	The "Drum Lid/Delid Fixture Crimp Head Back" position switch (07-ZS-719A) should be activated, indicating that the C-Clip Crimp head is retracted.	Verify that the "Drum Lid/Delid Fixture Crimp Head Back" position switch is activated.			

see attached
pg 4-11
R/W 7/28/97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Drum Lid/Delid Fixture Rotate, C-Clip Crimper Jaw Open Interlock					
20	Press the "C2 & C5 SAW ORIENTATION" button from the "SAW MENU" at OIU-12-103B.	Verify that the "C2 & C5 SAW ORIENTATION" button has been pressed.			
21	The "Drum Lid/Delid Fixture Crimp Jaw Open" condition functions as an interlock for Drum Lid/Delid Fixture Operation. Because this interlock is not satisfied, the fixture should not rotate. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not rotate during the waiting period.			
22	Force LCU 102 register ZS724B not activated to simulate the "Drum Lid/Delid Fixture Saw not Retracted" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS719A _____ I:26/17 _____	Verify that register ZS724B is forced not activated. Verify that the forced register status is recorded.			
23	Unforce LCU 102 register ZS721. Record the unforced register status below: Unforced ZS721 Status: _____	Verify that register ZS721 is unforced.			
24	The "Drum Lid/Delid Fixture Crimp Jaw Open" position switch (07-ZS-721) should be activated, indicating that the C-Clip Crimper is retracted.	Verify that the "Drum Lid/Delid Fixture Crimp Jaw Open" position switch is activated.			

see attached
pg 1-11
Alw 7/28/97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Drum Lid/Delid Fixture Rotate, Saw Retracted Interlock					
25	Press the "C2 & C5 SAW ORIENTATION" button from the "SAW MENU" at OIU-12-103B.	Verify that the "C2 & C5 SAW ORIENTATION" button has been pressed.			
26	The "Drum Lid/Delid Fixture Saw Retracted" condition functions as an interlock for Drum Lid/Delid Fixture Operation. Because this interlock is not satisfied, the fixture should not rotate. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not rotate during the waiting period.			
27	Energize the vacuum generation solenoid (07-FEV-736E) to turn on the Drum Lid/Delid Fixture vacuum generator.	Verify that solenoid 07-FEV-736E is energized.			
28	The valve should open and a "hissing" sound should be noted, indicating that escaping pressurized air is being used to generate vacuum.	Audibly verify that the vacuum generator has been turned on.			
29	Unforce LCU 102 register ZS724B. Record the unforced register status below: Unforced ZS724B Status: _____	Verify that register ZS724B is unforced.			
30	The "Drum Lid/Delid Fixture Saw Retracted" position switch (07-ZS-724B) should be activated, indicating that the Saw is retracted.	Verify that the "Drum Lid/Delid Fixture Saw Retracted" position switch is activated.			

see attached
pg 1-11
R/W 7/18/07

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Drum Lid/Delid Fixture Rotate, Vacuum Generator Off Interlock					
31	Press the "C2 & C5 SAW ORIENTATION" button from the "SAW MENU" at OIU-12-103B.	Verify that the "C2 & C5 SAW ORIENTATION" button has been pressed.			
32	The "Drum Lid/Delid Fixture Drum Lid Lifter Vacuum Off" condition functions as an interlock for Drum Lid/Delid Fixture Operation. Because this interlock is not satisfied, the fixture should not rotate. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not rotate during the waiting period.			
33	WARNING: The following test procedure step involves energizing the Drum Lid/Delid Fixture reciprocating saw. Do not energize the saw if equipment damage or personal injury may result from the energized saw. Take sufficient precautions to safely stop the saw in the event of an emergency or alarm condition.	Verify that the saw can be stopped in a safe and orderly manner.			
34	Energize the Drum Lid/Delid Fixture Saw Motor (RT-07-101/M1).	Verify that the saw is energized.			
35	De-energize the vacuum generation solenoid (07-FEV-736E) to turn off the Drum Lid/Delid Fixture vacuum generator.	Verify that the vacuum generator is turned off.			
36	The valve should close and a "hissing" sound should not be noted, indicating that the Vacuum Generator has been turned off.	Audibly verify that the vacuum generator has been turned off.			

see attached
pg 7
H-11
A/N 9/28/99

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Drum Lid/Delid Fixture Rotate; Saw De-energized Interlock					
37	Press the "C2 & C5 SAW ORIENTATION" button from the "SAW MENU" at OIU-12-103B.	Verify that the "C2 & C5 SAW ORIENTATION" button has been pressed.			
38	The "Drum Lid/Delid Fixture Saw De-energized" condition functions as an interlock for Drum Lid/Delid Fixture Operation. Because this interlock is not satisfied, the fixture should not rotate. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not rotate during the waiting period.			
39	De-energize the Drum Lid/Delid Fixture Saw Motor (RT-07-101/M1).	Verify that the saw is de-energized.			

see attached pg 1-1
 ALW 5-28-91

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Rotate Drum Lid/Delid Fixture Saw to Cut Position #2					
40	Press the "C2 & C5 SAW ORIENTATION" button from the "SAW MENU" at OIU-12-103B.	Verify that the "C2 & C5 SAW ORIENTATION" button has been pressed.			
41	The Drum Lid/Delid Fixture should smoothly rotate past two rotation indents. The Saw should be positioned at the cut #2 position.	Verify that the Drum Lid/Delid Fixture rotates to the cut #2 position.			
42	Because the Drum Lid/Delid Fixture has successfully rotated to the cut position #2, the "C2 & C5 SAW ORIENTATION READY" message should be displayed at OIU-12-103B.	Verify that the "C2 & C5 SAW ORIENTATION READY" message is displayed.			
43	Unforce all LCU 102 registers using the Allen Bradley PLC Software.	Verify that all LCU 102 registers are unforced.			
TEST CASE 13031A-85.15 COMPLETE					

see attached
AW 1/28/97

pg 1-11
1-14

15-10
15-8
1 2

AW 1/28/97

1

TEST CASE 13031A-85.15 EXAMINE LLW SORTING GLOVEBOX DRUM LID/DELID
FIXTURE (RT-07-101) INTERLOCKS AND START SAW CUT #1

PASS FAIL INIT.

A. Manipulator Not Parked at Position #1

1. Force ZS715A not activated, to simulate manipulator not
Parked at Position #1.
Record register status.

✓ | | *R/W*

ZS715A Status: 0

Register: I:22\16

2. On the Saw menu press "START SAW SEQUENCE"
button.

✓ | | *R/W*

3. Verify the saw sequence does start.

✓ | | *R/W*

4. Unforce ZS715A, verify register status equals 1.
Record register status.

✓ | | *R/W*

ZS715A Status: 1

Register: I:22\16

B. Manipulator Left Arm Not Parked

1. Force ZS715C not activated, to simulate manipulator left arm
not parked.
Record register status.

✓ | | *R/W*

ZS715C Status: 0

Register: I:23\0

2. On the Saw menu press "START SAW SEQUENCE"
button.

✓ | | *R/W*

3. Verify the saw sequence does not start.

✓ | | *R/W*

4. Unforce ZS715C, verify register status equals 1.
Record register status.

✓ | | *R/W*

ZS715C Status: 1

Register: I:23\0

2

TEST CASE 13031A-85.15 EXAMINE LLW SORTING GLOVEBOX DRUM LID/DELID
FIXTURE (RT-07-101) INTERLOCKS AND START SAW CUT #1PASS FAIL INIT.

C. Manipulator Right Arm Not Parked

1. Force ZS715D not activated, to simulate manipulator right arm
not parked.✓ | | *N/A*

Record register status.

ZS715D Status: 0

Register: I:23\01

2. On the Saw menu press "START SAW SEQUENCE"
button.✓ | | *N/A*

3. Verify the saw sequence does not start.

✓ | | *N/A*

4. Unforce ZS715D, verify register status equals 1.

✓ | | *N/A*

Record register status.

ZS715D Status: 1

Register: I:23\01

D. Transfer Car Not At Delid/Tipper Position

1. Force ZS725C not activated, to simulate Transfer Car not
at Delid/Tipper position.✓ | | *N/A*

Record register status.

ZS725C Status: 0

Register: I:24\04

2. On the Saw menu press "START SAW SEQUENCE"
button.✓ | | *N/A*

3. Verify the saw sequence does not start.

✓ | | *N/A*

4. Unforce ZS725C, verify register status equals 1.

✓ | | *N/A*

Record register status.

ZS725C Status: 1

Register: I:24\04

TEST CASE 13031A-85.15 EXAMINE LLW SORTING GLOVEBOX DRUM LID/DELID
FIXTURE (RT-07-101) INTERLOCKS AND START SAW CUT #1PASS FAIL INIT.

E. Tipper Not Lowered

1. Force ZS332B activated, to simulate Tipper not in the
lowered position.

Record register status.

✓			R/W
---	--	--	-----

ZS332B Status: 1

Register: I:22\07

2. On the Saw menu press "START SAW SEQUENCE"
button.

✓			R/W
---	--	--	-----

3. Verify the saw sequence does not start.

✓			R/W
---	--	--	-----

4. Unforce ZS332B, verify register status equals 0.

Record register status.

✓			R/W
---	--	--	-----

ZS332B Status: 0

Register: I:22\07

F. Sorting Table Not At Tipper Position

1. Force ZS717C not activated, to simulate sorting table not
fully retracted. Record register status.

✓			R/W
---	--	--	-----

ZS717C: 0

Register: I:27\10

2. On the Saw menu press "START SAW SEQUENCE"
button.

✓			R/W
---	--	--	-----

3. Verify the saw sequence does not start.

✓			R/W
---	--	--	-----

4. Unforce ZS717C, verify register status equals 1.

Record register status.

✓			R/W
---	--	--	-----

ZS717C: 1

Register: I:27\10

TEST CASE 13031A-85.15 EXAMINE LLW SORTING GLOVEBOX DRUM LID/DELID FIXTURE (RT-07-101) INTERLOCKS AND START SAW CUT #1

PASS FAIL INIT.

G. Delid Fixture Saw Motor Not Running

1. CAUTION: The following step will cause the saw motor to run, ensure the saw blade is clear prior to performing the

✓ | | R/W
next step.

2. Force delid saw motor on by installing a bypass at rung 41:208.

✓ | | R/W

3. Verify the saw motor starts.

✓ | | R/W

4. On the Saw menu press "START SAW SEQUENCE" button.

✓ | | R/W

5. Verify the saw sequence does not start.

✓ | | R/W

6. Remove bypass installed at rung 41:208.

✓ | | R/W

7. Verify the delid saw motor stops.

✓ | | R/W

H. Saw Not Retracted

1. Force ZS724B not activated, to simulate delid saw not retracted.

✓ | | R/W

Record register status.

ZS724B Status: 0

Register: I:23\07

2. On the Saw menu press "START SAW SEQUENCE" button.

✓ | | R/W

3. Verify the saw sequence does not start.

✓ | | R/W

4. Unforce ZS724B, verify register status equals 1.
Record register status.

✓ | | R/W

ZS724B Status: 1

Register: I:23\07

5

TEST CASE 13031A-85.15 EXAMINE LLW SORTING GLOVEBOX DRUM LID/DELID
FIXTURE (RT-07-101) INTERLOCKS AND START SAW CUT #1PASS FAIL INIT.

I. Fixture Not Raised

1. Force ZS726A not activated, to simulate delid fixture not raised.
Record register status.

ZS726A Status: 0

Register: I:23\10

2. On the Saw menu press "START SAW SEQUENCE"
button.

3. Verify the saw sequence does not start.

4. Unforce ZS726A, verify register status equals 1.
Record register status.

ZS726A Status: 1

Register: I:23\10

J. Fixture Lowered

1. Force ZS726B activated, to simulate delid fixture
lowered. Record register status.

ZS726B Status: 1

Register: I:23\11

2. On the Saw menu press "START SAW SEQUENCE"
button.

3. Verify message "SAW CUT #1 IN PROGRESS" on the
saw menu.

4. Verify the delid fixture rotates left.

5. Verify the delid fixture does not lower.

6. Unforce ZS726B, verify register status equals 0.
Record register status.

ZS726B Status: 0

Register: I:23\11

6

TEST CASE 13031A-85.15 EXAMINE LLW SORTING GLOVEBOX DRUM LID/DELID
FIXTURE (RT-07-101) INTERLOCKS AND START SAW CUT #1

7. Verify the fixture lowers.

PASS	FAIL	INIT
✓		N/A

9. Force ZS726B not activated, to simulate delid fixture not lowered. Record register status.

✓		N/A
---	--	-----

ZS726B Status: 0

Register: I:23\11

10. Verify message "SEQUENCE FAILED" on Saw menu.

✓		N/A
---	--	-----

11. Verify alarm button on Saw menu is flashing red.

✓		N/A
---	--	-----

12. Acknowledge alarm "Fixture Failed to Lower".

✓		N/A
---	--	-----

13. Verify the saw does not extend.

✓		N/A
---	--	-----

14. Verify the saw does not start.

✓		N/A
---	--	-----

15. Change timer T4:89, saw fails to extend, from 480 seconds to 5 seconds. Record Timer status.

✓		N/A
---	--	-----

Timer T4:89: 5 sec

16. Unforce ZS726B, verify register status equals 1. Record register status.

✓		N/A
---	--	-----

ZS726B Status: 1

Register: I:23\11

17. Verify alarm "Fixture Failed to Lower" clears.

✓		N/A
---	--	-----

18. Verify saw extends.

✓		N/A
---	--	-----

19. Verify saw turns on.

✓		N/A
---	--	-----

20. Verify inert gas flow is established.

✓		N/A
---	--	-----

TEST CASE 13031A-85.15 EXAMINE LLW SORTING GLOVEBOX DRUM LID/DELID FIXTURE (RT-07-101) INTERLOCKS AND START SAW CUT #1

PASS FAIL INIT.

K. Saw Fails To Extend Alarm

1. Verify message "SEQUENCE FAILED" on Saw menu.
2. Verify alarm button on Saw menu is flashing red.
3. Acknowledge alarm "Fixture Saw Failed to Extend".
4. Verify saw stops.
5. Verify saw stops extending.
6. Verify inert gas turns off.
7. Restore timer T4:89 to 480 seconds.
8. Restore delid fixture to raised position with the fixture rotated right.
9. Verify message "FIXTURE AT DELID POSITION" on the Saw menu.

✓		N/A
✓		N/A
✓		N/A
✓		N/A
✓		N/A
✓		N/A
✓		N/A
✓		N/A
✓		N/A

L. Fixture Saw Failed To Retract Alarm

1. Change timer T4:90, saw fails to retract, from 300 seconds to 35 seconds. Record Timer status.

Timer T4:90: 35 sec

2. On the Saw menu press "START SAW SEQUENCE" button.
2. Verify message "SAW CUT #1 IN PROGRESS" on the Saw menu.
4. Verify the delid fixture rotates left.
5. Verify the delid fixture lowers.

✓		N/A
✓		N/A
✓		N/A
✓		N/A
✓		N/A

TEST CASE 13031A-85.15 EXAMINE LLW SORTING GLOVEBOX DRUM LID/DELID FIXTURE (RT-07-101) INTERLOCKS AND START SAW CUT #1

	PASS	FAIL	INIT.
6. Verify saw extends.	✓		AW
7. Verify saw turns on.	✓		AW
8. Verify inert gas flow is established.	✓		AW
9. Verify saw cuts through clamp band.	✓		AW
10. Verify that after the saw reaches the fully extended position the saw stops extending and begins retracting.	✓		AW
11. Verify the saw stops after 30 seconds.			
12. Verify message "SEQUENCE FAILED" on Saw menu.	✓		AW
13. Verify alarm button on Saw menu is flashing red.	✓		AW
14. Acknowledge alarm "Fixture Saw Failed to Retract".	✓		AW
15. Verify saw stops retracting.	✓		AW
16. Verify inert gas turns off.	✓		AW
17. Restore delid fixture to raised position, fixture rotated right and saw fully retracted.	✓		AW
18. Restore timer T4:90 to 300 seconds.	✓		AW
M. Rotate Permissives			
1. On the Saw menu press "START SAW SEQUENCE" button.	✓		AW
2. Verify message "SAW CUT #1 IN PROGRESS" on the Saw menu.	✓		AW
3. Verify the delid fixture rotates left.	✓		AW

TEST CASE 13031A-85.15 EXAMINE LLW SORTING GLOVEBOX DRUM LID/DELID FIXTURE (RT-07-101) INTERLOCKS AND START SAW CUT #1

	PASS	FAIL	INIT.
4. Verify the delid fixture lowers.	✓		R/W
5. Verify saw extends.	✓		R/W
6. Verify saw turns on.	✓		R/W
7. Verify inert gas flow is established.	✓		R/W
8. Verify saw cuts through clamp band.	✓		R/W
10. Verify that after the saw reaches the fully extended position the saw stops extending and begins retracting.	✓		R/W
11. Force ZS726A not activated, to simulate delid fixture not raised. Record register status.	✓		R/W
ZS726A Status: <u>0</u>			
Register: I:23\10			
12. After the saw is fully retracted verify the fixture raises.	✓		R/W
13. Acknowledge alarm "Fixture Failed to Raise".	✓		R/W
14. Verify the fixture does not rotate.	✓		R/W
15. Force ZS724B not activated, to simulate delid fixture Saw not retracted. Record register status.	✓		R/W
ZS724B Status: <u>0</u>			
Register: I:23\07			
16. Unforce ZS726A, verify register status equals 1. Record register status.	✓		R/W
ZS726A Status: <u>1</u>			
Register: I:23\10			
17. Verify alarm "Fixture Failed to Raise" clears.	✓		R/W
18. Verify fixture does not rotate.	✓		R/W

TEST CASE 13031A-85.15 EXAMINE LLW SORTING GLOVEBOX DRUM LID/DELID
FIXTURE (RT-07-101) INTERLOCKS AND START SAW CUT #1

19. CAUTION: The following step will cause the saw motor to run, ensure the saw blade is clear prior to performing the next step.

PASS FAIL INIT.

✓		R/W
---	--	-----

20. Force delid saw motor on by installing a bypass at rung 41:208.

✓		R/W
---	--	-----

21. Verify the saw motor starts.

✓		R/W
---	--	-----

22. Unforce ZS724B, verify register status equals 1.
Record register status.

✓		R/W
---	--	-----

ZS724B Status: 1

Register: I:23\07

23. Verify the fixture does not rotate.

✓		R/W
---	--	-----

24. Remove bypass installed at rung 41:208.

✓		R/W
---	--	-----

25. Verify the delid saw motor stops.

✓		R/W
---	--	-----

26. Verify the fixture rotates right.

✓		R/W
---	--	-----

27. Verify message "OPERATOR: SAW CUT #1 COMPLETE
---PRESS "START SAW SEQUENCE" TO START SAW
CUT #2" on the Saw menu.

✓		R/W
---	--	-----

28. On the Saw menu press "START SAW SEQUENCE"
button.

✓		R/W
---	--	-----

29. Verify message "SAW CUT #2 IN PROGRESS" on the
Saw menu.

✓		R/W
---	--	-----

30. Verify the delid fixture lowers.

✓		R/W
---	--	-----

31. Verify saw extends.

✓		R/W
---	--	-----

32. Verify saw turns on.

✓		R/W
---	--	-----

33. Verify inert gas flow is established.

✓		R/W
---	--	-----

11

TEST CASE 13031A-85.15 EXAMINE LLW SORTING GLOVEBOX DRUM LID/DELID
FIXTURE (RT-07-101) INTERLOCKS AND START SAW CUT #1PASS FAIL INIT.

N. Inert Gas Low Flow Alarm

1. Isolate inert gas supply to secure inert gas flow.

✓ | | R/W

2. Verify Saw Sequence stops.

✓ | | R/W

3. Verify message "SEQUENCE FAILED" on Saw menu.

✓ | | R/W

4. Verify alarm button on Saw menu is flashing red.

✓ | | R/W

5. Acknowledge alarm "Inert Gas Low Flow".

✓ | | R/W

6. Restore delid fixture to raised position, fixture rotated right and saw fully retracted.

✓ | | R/W

7. Restore inert gas.

✓ | | R/W

TEST CASE 13031A-85.16 EXAMINE LLW SORTING GLOVEBOX DRUM LID/DELID FIXTURE (RT-07-101) INTERLOCKS AND MAKE FIRST CUT WITH SAW	16-2
Examine Drum Lid/Delid Fixture Saw Sequence Start, Fixture Rotated To Cut Position #2 Interlock	16-2
Examine Drum Lid/Delid Fixture Saw Sequence Start, Fixture Raised Interlock	16-3
Examine Drum Lid/Delid Fixture Saw Sequence Start, C-Clip Crimper Retracted Interlock	16-4
Examine Drum Lid/Delid Fixture Saw Sequence Start, C-Clip Crimper Jaw Open Interlock	16-5
Examine Drum Lid/Delid Fixture Saw Sequence Start, Saw Retracted Interlock	16-6
Examine Drum Lid/Delid Fixture Saw Sequence Start, Vacuum Generator Off Interlock	16-7
Examine Drum Lid/Delid Fixture Saw Sequence Start, Saw De-energized Interlock	16-8
Examine Drum Lid/Delid Fixture "Fixture Failed to Lower" Alarm	16-9
Examine Energize Drum Lid/Delid Fixture Saw, Inert Gas Flow Interlock and Alarm	16-10
Examine Drum Lid/Delid Fixture Saw Sequence, Fixture Lowered Interlock	16-11
Examine Drum Lid/Delid Fixture Saw Sequence Start, Saw Retracted Interlock	16-12
Examine Drum Lid/Delid Fixture Saw Alarms and Cut Band Clamp with Saw	16-13
Examine Drum Lid/Delid Fixture Failed to Raise Alarm	16-16

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.16 EXAMINE LLW SORTING GLOVEBOX DRUM LID/DELID FIXTURE (RT-07-101) INTERLOCKS AND MAKE FIRST CUT WITH SAW					
Examine Drum Lid/Delid Fixture Saw Sequence Start. Fixture Rotated To Cut Position #2 Interlock					
1	Force the LCU 102 register(s) containing the number of counts recorded by ZS727B to indicate that 3 counts have been recorded to simulate the "Drum Lid/Delid Fixture Not At Cut Position #2" condition. Record the register identifier and both the unforced (prior to being forced) and forced register status below: <u>Register</u> <u>Unforced Status</u> <u>Method of Confirmation</u> C5:5 _____ C5:5 Preset _____ <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> C5:5 _____ C5:5 Preset _____	Verify that the Drum Lid/Delid Fixture Rotation Counts register is forced with a value of "3". Verify that the unforced and forced register status is recorded. <i>pg 1-2 A167/23/99</i>			
2	Press the "START SAW SEQUENCE" button from the "SAW MENU" at OIU-1 103B.	Verify that the "START SAW SEQUENCE" button has been pressed.			
3	The "Drum Lid/Delid Fixture Rotated to Cut Position #2" condition functions as an interlock for Drum Lid/Delid Fixture Operation. Because this interlock is not satisfied, the Fixture should not lower. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not lower during the waiting period.			
4	Force LCU 102 register ZS726A not activated to simulate the "Drum Lid/Delid Fixture Not Raised" condition. Record the forced register status below. <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS726A _____ I:26/11 _____	Verify that register ZS726A is forced not activated. Verify that the register status is recorded.			
5	Return the LCU 102 register(s) containing the number of counts recorded by ZS727B to indicate to their pre-forced status, as recorded above. These registers should indicate that the Drum Lid/Delid Fixture Saw is at Cut Position #2. Record the register identifier and the register status below: <u>Register</u> <u>Status</u> <u>Method of Confirmation</u> C5:5 _____ C5:5 Preset _____	Verify that the Drum Lid/Delid Fixture Rotation Counts register is unforced. Verify that the register identifier and status is recorded.			

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Drum Lid/Delid Fixture Saw Sequence Start, Fixture Raised Interlock					
6	Press the "START SAW SEQUENCE" button from the "SAW MENU" at OIU-12-103B.	Verify that the "START SAW SEQUENCE" button has been pressed.			
7	The "Drum Lid/Delid Fixture Raised" condition functions as an interlock for Drum Lid/Delid Fixture Operation. Because this interlock is not satisfied, the fixture should not lower. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not lower during the waiting period.			
8	Force LCU 102 register ZS719A not activated to simulate the "Drum Lid/Delid Fixture Crimp Head Not Back" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS719A _____ 1:26/17 _____	Verify that register ZS719A is forced not activated. Verify that the forced register status is recorded.			
9	Unforce LCU 102 register ZS726A. Record the unforced register status below: Unforced ZS726A Status: _____	Verify that register ZS726A is unforced.			
10	The "Drum Lid/Delid Fixture Raised" position switch (07-ZS-726A) should be activated, indicating that the Drum Lid/Delid Fixture is raised.	Verify that the "Drum Lid/Delid Fixture Raised" position switch is activated.			

see attached pg 1-12
AV 7/28/97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Drum Lid/Delid Fixture Saw Sequence Start, C-Clip Crimper Retracted Interlock					
11	Press the "START SAW SEQUENCE" button from the "SAW MENU" at OIU-12-103B.	Verify that the "START SAW SEQUENCE" button has been pressed.			
12	The "Drum Lid/Delid Fixture Crimp Head Back" condition functions as an interlock for Drum Lid/Delid Fixture operation. Because this interlock is not satisfied, the fixture should not lower. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not lower during the waiting period.			
13	Force LCU 102 register ZS721 not activated to simulate the "Drum Lid/Delid Fixture Crimp Jaw Not Open" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS721 I:27/01	Verify that register ZS721 is forced not activated. Verify that the forced register status is recorded.			
14	Unforce LCU 102 register ZS719A. Record the unforced register status below: Unforced ZS719A Status: _____	Verify that register ZS719A is unforced.			
15	The "Drum Lid/Delid Fixture Crimp Head Back" position switch (07-ZS-719A) should be activated, indicating that the C-Clip Crimp head is retracted.	Verify that the "Drum Lid/Delid Fixture Crimp Head Back" position switch is activated.			

see attached 19-1-2
RIN 7/28/97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Drum Lid/Delid Fixture Saw Sequence Start, C-Clip Crimper Jaw Open Interlock					
16	Press the "START SAW SEQUENCE" button from the "SAW MENU" at OIU-12-103B.	Verify that the "START SAW SEQUENCE" button has been pressed.			
17	The "Drum Lid/Delid Fixture Crimp Jaw Open" condition functions as an interlock for Drum Lid/Delid Fixture Operation. Because this interlock is not satisfied, the Fixture should not lower. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not lower during the waiting period.			
18	Force LCU 102 register ZS724B not activated to simulate the "Drum Lid/Delid Fixture Saw Not Retracted" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS724B _____ I:26/10 _____	Verify that register ZS724B is forced not activated. Verify that the forced register status is recorded.			
19	Unforce LCU 102 register ZS721. Record the unforced register status below: Unforced ZS721 Status: _____	Verify that register ZS721 is unforced.			
20	The "Drum Lid/Delid Fixture Crimp Jaw Open" position switch (07-ZS-721) should be activated, indicating that the C-Clip Crimper Jaw is retracted open.	Verify that the "Drum Lid/Delid Fixture Crimp Jaw Open" position switch is activated.			

see attached pg 1-2
R/V 7/28/97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Drum Lid/Delid Fixture Saw Sequence Start, Saw Retracted Interlock					
21	Press the "START SAW SEQUENCE" button from the "SAW MENU" at OIU-12-103B.	Verify that the "START SAW SEQUENCE" button has been pressed.			
22	The "Drum Lid/Delid Fixture Saw Retracted" condition functions as an interlock for Drum Lid/Delid Fixture Operation. Because this interlock is not satisfied, the fixture should not lower. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not lower during the waiting period.			
23	Energize the vacuum generation solenoid (07-FEV-736E) to turn on the Drum Lid/Delid Fixture vacuum generator.	Verify that solenoid 07-FEV-736E is energized.			
24	The vacuum generator should turn on and "hissing" sound should be noted, indicating that escaping pressurized air is being used to generate vacuum.	Audibly verify that the vacuum generator has been turned on.			
25	Unforce LCU 102 register ZS724B. Record the unforced register status below: Unforced ZS724B Status: _____	Verify that register ZS724B is unforced.			
26	The "Drum Lid/Delid Fixture Saw Retracted" position switch (07-ZS-724B) should be activated, indicating that the saw is retracted.	Verify that the "Drum Lid/Delid Fixture Saw Retracted" position switch is activated.			

see attached pg 1-2
A/W 7/28/97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Drum Lid/Delid Fixture Saw Sequence Start, Vacuum Generator Off Interlock					
27	Press the "START SAW SEQUENCE" button from the "SAW MENU" at OIU-12-103B.	Verify that the "START SAW SEQUENCE" button has been pressed.			
28	The "Drum Lid/Delid Fixture Drum Lid Lifter Vacuum Off" condition functions as an interlock for Drum Lid/Delid Fixture Operation. Because this interlock is not satisfied, the fixture should not lower. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not lower during the waiting period.			
29	WARNING: The following test procedure step involves energizing the Drum Lid/Delid Fixture reciprocating saw. Do not energize the saw if equipment damage or personal injury may result from the energized saw. Take sufficient precautions to safely stop the saw in the event of an emergency or alarm condition.	Verify that the saw can be stopped in a safe and orderly manner.			
30	Energize the Drum Lid/Delid Fixture Saw Motor (RT-07-101/M1).	Verify that the saw is energized.			
31	De-energize the vacuum generation solenoid (07-FEV-736E) to turn off the Drum Lid/Delid Fixture vacuum generator.	Verify that solenoid 07-FEV-736E is not energized.			
32	The vacuum generator should turn off and a "hissing" sound should not be noted, indicating that the Vacuum Generator has been turned off.	Audibly verify that the vacuum generator has been turned off.			

see attached pg 1-3
RW 7/28/99

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Drum Lid/Delid Fixture Saw Sequence Start, Saw De-energized Interlock					
33	Press the "START SAW SEQUENCE" button from the "SAW MENU" at OIU-12-103B.	Verify that the "START SAW SEQUENCE" button has been pressed.			
34	The "Drum Lid/Delid Fixture Saw De-energized" condition functions as an interlock for Drum Lid/Delid Fixture Operation. Because this interlock is not satisfied, the fixture should not lower. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not lower during the waiting period.			
35	Force LCU 102 register FSL378 activated to simulate the "Inert Gas Purge Low Flow" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> FSL378 _____ I:27/2 _____	Verify that register FSL378 is forced activated. Verify that the forced register status is recorded.			
36	Force the register ZS726B not activated to simulate the "Drum Lid/Delid Fixture Not Lowered" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS726B _____ I:26/12 _____	Verify that register ZS726B is forced not activated. Verify that the register status is recorded.			
37	De-energize the Drum Lid/Delid Fixture Saw Motor (RT-07-101/M1).	Verify that the saw is de-energized.			

See attached 191-2
N/W 7/28/97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Drum Lid/Delid Fixture "Fixture Failed to Lower" Alarm					
38	Press the "START SAW SEQUENCE" button from the "SAW MENU" at OIU-12-103B.	Verify that the "START SAW SEQUENCE" button has been pressed.			
39	The PCS should pulse energize the lower/raise solenoid 07-FEV-736A/L (Lower) to smoothly lower the Drum Lid/Delid Fixture to its fully lowered position.	Verify that the Drum Lid/Delid Fixture is fully lowered.			
40	Because register ZS726B has been forced not activated, a "Fixture Failed to Lower" alarm should be generated. A flashing "SEQUENCE FAILED" message should be displayed.	Verify that a flashing "SEQUENCE FAILED" message is displayed.			
41	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Fixture Failed to Lower" alarm.	Verify that the alarm has been acknowledged.			
42	Unforce LCU 102 register ZS726B. Record the unforced register status below: Unforced ZS726B Status: _____	Verify that register ZS726B is unforced.			
43	Because position switch 07-ZS-726B should be activated, indicating that the Drum Lid/Delid Fixture is lowered, the "Fixture Failed to Lower" alarm should clear.	Verify that the alarm is cleared.			
44	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "SAW MENU" at OIU-12-103B.	Verify that the "SAW MENU" is displayed.			
45	The "SAWING IN PROGRESS..." message should be displayed on the "SAW MENU" at OIU-12-103B.	Verify the "SAWING IN PROGRESS..." message is displayed.			

see attached
AN 7/28/97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Energize Drum Lid/Delid Fixture Saw Inert Gas Flow Interlock and Alarm					
46	Inert Gas Flow to Drum Lid/Delid Fixture Saw functions as an interlock for fixture operation. Because this interlock is not satisfied, the saw should not energize, and an "Fixture Inert Gas Low Flow" alarm should be generated. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture saw does not energize during the waiting period.			
47	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Fixture Inert Gas Low Flow" alarm.	Verify that the alarm has been acknowledged.			
48	Force LCU 102 register ZS726B not activated to simulate the "Drum Lid/Delid Fixture Not Lowered" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS726B _____ I:26/12 _____	Verify that register ZS726B is forced not activated. Verify that the register status is recorded.			
49	Unforce LCU 102 register FSL378. Record the unforced register status below: Unforced FSL378 Status: _____	Verify that register FSL378 is unforced.			
50	Because pressure switch 07-FSL-378 should be activated, indicating that inert gas is flowing to the saw, the "Fixture Inert Gas Low Flow" alarm should clear.	Verify that the alarm is cleared.			
51	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "SAW MENU" at OIU-12-103B.	Verify that the "SAW MENU" is displayed.			

see attached
RW 7/28/97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Drum Lid/Delid Fixture Saw Sequence, Fixture Lowered Interlock					
52	Because register ZS726B has been forced not activated, indicating that the Drum Lid/Delid Fixture is not lowered, the Saw Sequence should remain suspended and the Saw motor should not energize. Wait thirty (30) seconds.	Verify that the Saw motor does not energize during the waiting period.			
53	Force LCU 102 register ZS724B not activated to simulate the "Drum Lid/Delid Fixture Saw Not Retracted" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS724B _____ 1:26/10 _____	Verify that register ZS724B is forced not activated. Verify that the forced register status is recorded.			
54	Unforce LCU 102 register ZS726B. Record the unforced register status below: Unforced ZS726B Status: _____	Verify that register ZS726B is unforced.			
55	The "Drum Lid/Delid Fixture Lowered" position switch (07-ZS-726B) should be activated, indicating that the Drum Lid/Delid Fixture is lowered.	Verify that the "Drum Lid/Delid Fixture Lowered" position switch is activated.			

see attached pg 1-2
R/W 7/28/97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Drum Lid/Delid Fixture Saw Sequence Start, Saw Retracted Interlock					
56	Because register ZS724B has been forced not activated to simulate the "Drum Lid/Delid Fixture Saw Not Retracted" condition, the Saw Sequence should remain suspended and the Saw motor should not energize. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture Saw motor does not energize during the waiting period.			
57	Force LCU 102 register ZS724A not activated to simulate the "Drum Lid/Delid Fixture Saw Not Extended" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS724A _____ I:26/07 _____	Verify that register ZS724A is forced not activated. Verify that the forced register status is recorded.			
58	Unforce LCU 102 register ZS724B. Record the unforced register status below. Unforced ZS724B Status: _____	Verify that register ZS724B is unforced.			
59	The "Drum Lid/Delid Fixture Saw Retracted" position switch (07-ZS-724B) should be activated, indicating that the Drum Lid/Delid Fixture Saw is retracted.	Verify that the "Drum Lid/Delid Fixture Saw Retracted" position switch is activated.			

see attached
 A/V
 7/28/07
 1-2

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Drum Lid/Delid Fixture Saw Alarms and Cut Band Clamp with Saw					
60	The PCS should energize the Saw motor.	Verify that the Saw motor is energized.			
61	The PCS should energize the saw extend/retract solenoid 07-FEV-736D/E (Extend) to extend the Drum Lid/Delid Fixture Saw.	Verify that the Drum Lid/Delid Fixture Saw is extended.			
62	Because LCU 102 register ZS724A has been forced not activated to simulate the "Drum Lid/Delid Fixture Saw Not Extended" condition, the saw motor should remain energized, the saw sequence should stop, and a "Fixture Saw Failed to Extend" alarm should be generated. Wait thirty (30) seconds.	Verify that the saw does not retract during the waiting period. <i>pg 1-2 R/W 1/28/97</i>			
63	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Fixture Saw Failed to Extend" alarm.	Verify that the "Fixture Saw Failed to Extend" alarm has been acknowledged.			
64	Force LCU 102 register PSL378 activated to simulate the "Low Inert Gas Pressure" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> PSL378 _____ 1:27/3 <i>see attached</i>	Verify that register PSL378 is forced activated. Verify that the forced register status is recorded.			
65	NOTE: If the "PSL 378 Inert Gas Low Pressure" alarm does not cause the PCS to de-energize the saw, this alarm must be configured so that it is tripped while some pre-determined amount of inert gas pressure remains to allow safe shutdown of the Drum Lid/Delid Fixture saw. Because register PSL378 is forced activated, indicating low inert gas pressure, a "PSL 378 Inert Gas Low Pressure" alarm should be generated. A flashing "SEQUENCE FAILED" message should be displayed on the "LID/DELID MENU" at OIU-12-103B.	Verify that a flashing "SEQUENCE FAILED" message is displayed.			
66	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "PSL 378 Inert Gas Low Pressure" alarm.	Verify that the "PSL 378 Inert Gas Low Pressure" alarm has been acknowledged.			

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass	Fail	Witness (Initial)
67	Force LCU 102 register ZS724B not activated to simulate the "Drum Lid/Delid Fixture Saw Not Retracted" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS724B _____ I:26/10 _____	Verify that register ZS724B is forced not activated. Verify that the forced register status is recorded.	☒	☒	
68	Unforce LCU 102 register PSL378. Record the unforced register status below: Unforced PSL378 Status: _____	Verify that register PSL378 is unforced.	☒	☒	
69	Because pressure switch 07-PSL-378 should not be activated, indicating that there is sufficient inert gas pressure to continue saw operations, the "PSL 378 Inert Gas Low Pressure" alarm should clear.	Verify that the "PSL 378 Inert Gas Low Pressure" alarm is cleared. <i>1-2 ALN 9/28/97</i>	☒	☒	
70	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "SAW MENU" at OIU-12-103B.	Verify that the "SAW MENU" is displayed.	☒	☒	
70	The Drum Lid/Delid Fixture Saw Sequence should begin and the Saw motor should energize.	Verify that the Saw motor is energized.	☒	☒	
71	The PCS should energize the saw extend/retract solenoid 07-FEV-246D/E (Extend) to extend the saw. (Because no saw blade is installed, the band clamp should remain intact).	Verify that the Drum Lid/Delid Fixture Saw is fully extended.	☒	☒	
72	Because the register (ZS724A) has been forced not activated to simulate the "Drum Lid/Delid Fixture Saw Not Extended" condition, the saw motor should remain energized, and the saw sequence should stop, and a "Fixture Saw Failed to Extend" alarm should be generated. Wait thirty (30) seconds.	Verify that the saw does not retract during the waiting period.	☒	☒	
73	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Fixture Saw Failed to Extend" alarm.	Verify that the "Fixture Saw Failed to Extend" alarm has been acknowledged.	☒	☒	
74	Force LCU 102 register ZS724B not activated to simulate the "Drum Lid/Delid Fixture Saw Not Retracted" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS724B _____ I:26/10 _____	Verify that register ZS724B is forced not activated. Verify that the forced register status is recorded.	☒	☒	

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass	Fail	Witness (Initial)
75	Unforce LCU 102 register ZS724A. Record the unforced register status below: Unforced ZS724A Status: _____	Verify that register ZS724A is unforced.			
76	Because the saw is completely extended, the saw sequence should continue. Activation of the "Saw Extended" position switch (07-ZS-724A) should cause the PCS to energize the saw extend/retract solenoid 07-FEV-736D/R (Retract) to retract the saw.	Verify that the saw retracts.			
77	Because the register ZS724B has been forced not activated to simulate the "Drum Lid/Delid Fixture Saw Not Retracted" condition, the saw motor should remain energized, the saw sequence should stop, and a "Fixture Saw Failed to Retract" alarm should be generated. Wait thirty (30) seconds.	Verify that the saw does not de-energize during the waiting period.			
78	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Fixture Saw Failed to Retract" alarm.	Verify that the "Fixture Saw Failed to Retract" alarm has been acknowledged.			
79	Force LCU 102 register ZS726A not activated to simulate the "Drum Lid/Delid Fixture not Raised" condition. Record the forced register status below. <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS726A _____ 1:26/11 _____	Verify that register ZS726A is forced not activated. Verify that the register status is recorded.			
80	Unforce LCU 102 register ZS724B. Record the unforced register status below: Unforced ZS724B Status: _____	Verify that register ZS724B is unforced.			
81	The "Fixture Saw Failed to Retract" alarm should clear.	Verify that the "Fixture Saw Failed to Retract" alarm is cleared.			
82	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "SAW MENU" at OIU-12-103B.	Verify that the "SAW MENU" is displayed.			
83	Because register ZS724B is unforced, and the Drum Lid/Delid Fixture Saw is retracted, the saw motor should de-energize.	Verify that the saw motor is de-energized.			
84	The PCS should de-energize the Inert Gas Flow solenoid (07-FEV-378B) to stop inert gas flow.	Verify that the inert gas flow has stopped.			

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail /	Witness (Initial)
Examine Drum Lid/Delid Fixture Failed to Raise Alarm					
85	The PCS should pulse energize the lower/raise solenoid 07-FEV-736A/R (Raise) to smoothly raise the Drum Lid/Delid Fixture to its fully raised position.	Verify that the Drum Lid/Delid Fixture is fully raised.			
86	Because register ZS726A has been forced not activated to indicate that the Drum Lid/Delid Fixture is not raised, a "Fixture Failed to Raise" alarm should be generated. A flashing "SEQUENCE FAILED" message should be displayed on the "SAW MENU" at OIU-12-103B.	Verify that a flashing "SEQUENCE FAILED" message is displayed.			
87	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Fixture Failed to Raise" alarm.	Verify that the alarm has been acknowledged. <i>Alw 8/28/02</i>			
88	Force LCU 102 register ZS719A not activated to simulate the "Drum Lid/Delid Fixture Crimp Head Not Back" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS719A _____ I:26/17 _____	Verify that register ZS719A is forced not activated. Verify that the forced register status is recorded.			
89	Unforce LCU 102 register ZS726A. Record the unforced register status below: Unforced ZS726A Status: _____	Verify that register ZS726B is unforced.			
90	Because position switch 07-ZS-726A should be activated, indicating that the Drum Lid/Delid Fixture is raised, the "Fixture Failed to Raise" alarm should clear.	Verify that the alarm is cleared.			
91	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "SAW MENU" at OIU-12-103B.	Verify that the "SAW MENU" is displayed.			
92	The Drum Lid/Delid Fixture should smoothly rotate counterclockwise 180 degrees, past three rotation indents.	Verify that the Drum Lid/Delid Fixture rotates counterclockwise 180 degrees.			
93	The "Drum Lid/Delid Fixture Rotation Index Positions" switch (07-ZS-727B) should pulse 3 times.	Verify that the "Drum Lid/Delid Fixture Rotation Index Positions" switch pulse 3 times.			
94	The Drum Lid/Delid Fixture should be positioned at the Cut #5 position.	Verify that the Drum Lid/Delid Fixture is positioned at the Cut #5 position.			
TEST CASE 13031A-85.16 COMPLETE					

TEST CASE 13031A-85.16 EXAMINE LLW SORTING GLOVEBOX DRUM LID/DELID
FIXTURE (RT-07-101) INTERLOCKS AND MAKE SAW CUT #2PASS FAIL INIT.

A. Complete Saw Cut #2 and Test Inert Gas Low Pressure Alarm

1. Verify message "OPERATOR: SAW CUT #1 COMPLETE
--PRESS "START SAW SEQUENCE" TO START SAW
CUT #2" on the Saw menu.

✓ | | R/W

2. On the Saw menu press "START SAW SEQUENCE"
button.

✓ | | R/W

3. Verify message "SAW CUT #2 IN PROGRESS" on the
Saw menu.

✓ | | R/W

4. Verify the delid fixture lowers.

✓ | | R/V

5. Verify saw extends.

✓ | | R/W

6. Verify saw turns on.

✓ | | R/W

7. Verify inert gas flow is established.

✓ | | R/W

8. Force PSL338 not activated, to simulate inert gas low pressure.
Record register status.

✓ | | R/W

PSL378 Status: 0

Register: I:2703

9. Verify the Alarm button is flashing red.

✓ | | R/W

10. Acknowledge alarm "Fixture Inert Gas Low Pressure".

11. Unforce PSL378, verify register status equals 1.
Record register status.

✓ | | R/W

PSL378 Status: 1

Register: I:2703

12. Verify saw cuts through clamp band.

✓ | | R/W

13. Verify after the saw fully extends that the saw retracts, the saw
turns off 30 seconds after the saw starts retracting and inert gas
turns off.

✓ | | R/W

TEST CASE 13031A-85.16 EXAMINE LLW SORTING GLOVEBOX DRUM LID/DELID
 FIXTURE (RT-07-101) INTERLOCKS AND MAKE SAW CUT #2

PASS FAIL INIT.

14. Verify the saw fully retracts.

✓ RW

15. Verify message "OPERATOR: SAW CUT #2 COMPLETE
 --PRESS "REMOVE LID" TO REMOVE DRUM LID".

✓ RW

TEST CASE 13031A-85.17 EXAMINE LLW SORTING GLOVEBOX DRUM LID/DELID FIXTURE (RT-07-101) INTERLOCKS AND MAKE SECOND CUT WITH	
SAW	17-2
Examine Drum Lid/Delid Fixture Lower, C-Clip Crimper Retracted Interlock	17-2
Examine Drum Lid/Delid Fixture Lower, Fixture Rotated To Cut Position #5 Interlock	17-3
Examine Drum Lid/Delid Fixture Lower, Fixture Raised Interlock	17-4
Examine Drum Lid/Delid Fixture Lower, C-Clip Crimper Jaw Open Interlock	17-5
Examine Drum Lid/Delid Fixture Lower, Saw Retracted Interlock	17-6
Examine Drum Lid/Delid Fixture Lower, Vacuum Generator Off Interlock	17-7
Examine Drum Lid/Delid Fixture Lower, Saw De-energized Interlock	17-8
Examine Drum Lid/Delid Fixture Lower, Vacuum Isolation Valve Closed Interlock	17-9
Examine Drum Lid/Delid Fixture Saw Sequence, Saw Retracted Interlock	17-10
Examine Drum Lid/Delid Fixture Saw Sequence, Inert Gas Flow Interlock	17-11
Examine Drum Lid/Delid Fixture Saw Sequence, Fixture Lowered Interlock	17-12
Cut Band Clamp with Saw	17-13
Examine Drum Lid/Delid Fixture Raise, Manipulator Parked Interlock	17-14
Examine Drum Lid/Delid Fixture Raise, Saw Retracted Interlock	17-15
Examine Drum Lid/Delid Fixture Raise, Saw De-Energized Interlock	17-16
Examine Drum Lid/Delid Fixture Rotate, Fixture Raised Interlock	17-17

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.17 EXAMINE LLW SORTING GLOVEBOX DRUM LID/DELID FIXTURE (RT-07-101) INTERLOCKS AND MAKE SECOND CUT WITH SAW					
Examine Drum Lid/Delid Fixture Lower, C-Clip Crimper Retracted Interlock					
1	The "Drum Lid/Delid Fixture Crimp Head Back" condition functions as an interlock for Drum Lid/Delid Fixture Operation. Because this interlock is not satisfied, the fixture should not lower. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not lower during the waiting period.			
2	Force the LCU 102 register(s) containing the number of counts recorded by ZS727B to indicate that 4 counts have been recorded to simulate the "Drum Lid/Delid Fixture Not At Cut Position #5" condition. Record the register identifier and both the unforced (prior to being forced) and forced register status below: <u>Register</u> <u>Unforced Status</u> <u>Method of Confirmation</u> C5:5 _____ C5:5 Preset _____ <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> C5:5 _____ C5:5 Preset _____	Verify that the Drum Lid/Delid Fixture Rotation Counts Register(s) is/are forced with a value of "4". Verify that the unforced and forced register status is recorded.			
3	Unforce LCU 102 register ZS719A. Record the unforced register status below: Unforced ZS719A Status: _____	Verify that register ZS719A is unforced.			
4	The "Drum Lid/Delid Fixture Crimp Head Back" position switch (07-ZS-719A) should be activated, indicating that the C-Clip Crimp head is retracted.	Verify that the "Drum Lid/Delid Fixture Crimp Head Back" position switch is activated.			

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Drum Lid/Delid Fixture Lower. Fixture Rotated To Cut Position #5 Interlock					
5	The "Drum Lid/Delid Fixture Rotated to Cut Position #5" condition functions as an interlock for Drum Lid/Delid Fixture Operation. Because this interlock is not satisfied, the fixture should not lower. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not lower during the waiting period.			
6	Force LCU 102 register ZS726A not activated to simulate the "Drum Lid/Delid Fixture Not Raised" condition. Record the forced register status below. <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS726A _____ 1:26/11 _____	Verify that register ZS726A is forced not activated. Verify that the register status is recorded.			
7	Return the LCU 102 register(s) containing the number of counts recorded by ZS727B to indicate to their pre-forced status, as recorded above. These registers should indicate that the Drum Lid/Delid Fixture Saw is at Cut Position #5. Record the register identifier and the register status below: <u>Register</u> <u>Status</u> <u>Method of Confirmation</u> C5:5 _____ C5:5 Preset _____	Verify that the Drum Lid/Delid Fixture Rotation Counts register is unforced. Verify that the register identifier and status is recorded.			

see Attached pg 1-5
R/W 7/28/97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Drum Lid/Delid Fixture Lower, Fixture Raised Interlock					
8	The "Drum Lid/Delid Fixture Raised" condition functions as an interlock for Drum Lid/Delid Fixture Operation. Because this interlock is not satisfied, the fixture should not lower. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not lower during the waiting period.			
9	Force LCU 102 register ZS721 not activated to simulate the "Drum Lid/Delid Fixture Crimp Jaw not Open" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS721 _____ 1:27/01 _____	Verify that register ZS721 is forced not activated. Verify that the forced register status is recorded.			
10	Unforce LCU 102 register ZS726A. Record the unforced register status below: Unforced ZS726A Status: _____	Verify that register ZS726A is unforced.			
11	The "Drum Lid/Delid Fixture Raised" position switch (07-ZS-726A) should be activated, indicating that the Drum Lid/Delid Fixture is raised.	Verify that the "Drum Lid/Delid Fixture Raised" position switch is activated.			

see Attached pg 1-5
Q/W 7/28/97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Drum Lid/Delid Fixture Lower, C-Clip Crimper Jaw Open Interlock					
12	The "Drum Lid/Delid Fixture C-Clip Crimper Jaw Open" condition functions as an interlock for Drum Lid/Delid Fixture Operation. Because this interlock is not satisfied, the fixture should not lower. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not lower during the waiting period.			
13	Force LCU 102 register ZS724B not activated to simulate the "Drum Lid/Delid Fixture Saw not retracted" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS724B _____ 1:26/10 _____	Verify that register ZS724B is forced not activated. Verify that the forced register status is recorded.			
14	Unforce LCU 102 register ZS721. Record the unforced register status below: Unforced ZS721 Status: _____	Verify that register ZS721 is unforced.			
15	The "Drum Lid/Delid Fixture Crimp Jaw Open" position switch (07-ZS-721) should be activated, indicating that the C-Clip Crimper is retracted.	Verify that the "Drum Lid/Delid Fixture Crimp Jaw Open" position switch is activated.			

See Attached PS 1-5
R/W 7/28/97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Drum Lid/Delid Fixture Lower, Saw Retracted Interlock					
16	The "Drum Lid/Delid Fixture Saw not retracted" condition functions as an interlock for Drum Lid/Delid Fixture Operation. Because this interlock is not satisfied, the fixture should not lower. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not lower during the waiting period.			
17	Energize the vacuum generation solenoid (07-FEV-736E) to turn on the Drum Lid/Delid Fixture vacuum generator.	Verify that solenoid 07-FEV-736E is energized.			
18	The valve should open and a "hissing" sound should be noted, indicating that escaping pressurized air is being used to generate vacuum.	Audibly verify that the vacuum generator has been turned on.			
19	Unforce LCU 102 register ZS724B. Record the unforced register status below: Unforced ZS724B Status: _____	Verify that register ZS724B is unforced.			
20	The "Drum Lid/Delid Fixture Saw Retracted" position switch (07-ZS-724B) should be activated, indicating that the Drum Lid/Delid Fixture Saw is retracted.	Verify that the "Drum Lid/Delid Fixture Saw Retracted" position switch is activated.			

see Attached 05 1-5
N/W 9/28/97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Drum Lid/Delid Fixture Lower, Vacuum Generator Off Interlock					
21	The "Drum Lid/Delid Fixture Drum Lid Lifter Vacuum Off" condition functions as an interlock for Drum Lid/Delid Fixture operation. Because this interlock is not satisfied, the fixture should not lower. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not lower during the waiting period.			
22	WARNING: The following test procedure step involves energizing the Drum Lid/Delid Fixture reciprocating saw. Do not energize the saw if equipment damage or personal injury may result from the energized saw. Take sufficient precautions to safely stop the saw in the event of an emergency or alarm condition.	Verify that the saw can be stopped in a safe and orderly manner.			
23	Energize the Drum Lid/Delid Fixture Saw Motor (RT-07-101/M1).	Verify that the saw is energized.			
24	De-energize the vacuum generation solenoid (07-FEV-736E) to turn off the Drum Lid/Delid Fixture vacuum generator.	Verify that solenoid 07-FEV-736E is not energized.			
25	The valve should close and a "hissing" sound should not be noted, indicating that the Vacuum Generator has been turned off.	Audibly verify that the vacuum generator has been turned off.			

see Attached 1-5
RW 7/28/97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Drum Lid/Delid Fixture Lower Saw De-energized Interlock					
26	Press the "START SAW SEQUENCE" button from the "SAW MENU" at OIU-12-103B.	Verify that the "START SAW SEQUENCE" button has been pressed.			
27	The Drum Lid/Delid Fixture Saw De-energized condition functions as an interlock for Drum Lid/Delid Fixture operation. Because this interlock is not satisfied, the fixture should not lower. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not lower during the waiting period.			
28	Force LCU 102 register PEV716 energized to simulate the "Vacuum Isolation Solenoid Valve Not Closed" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> PEV716 _____ O:47/7 _____	Verify that register PEV716 is forced activated. Verify that the forced register status is recorded.			
29	De-energize the Drum Lid/Delid Fixture Saw Motor (RT-07-101/M1).	Verify that the saw is de-energized.			

See Attached pg 1-5
R/W 7/28/97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Drum Lid/Delid Fixture Lower, Vacuum Isolation Valve Closed Interlock					
30	The "Drum Lid/Delid Fixture Vacuum Isolation Solenoid Valve Closed" condition functions as an interlock for Drum Lid/Delid Fixture operation. Because this interlock is not satisfied, the fixture should not lower. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not lower during the waiting period.			
31	De-energize the Drum Lid/Delid Fixture vacuum isolation solenoid (07-PEV-716). The Vacuum isolation solenoid valve should be closed.	Verify that solenoid 07-PEV-716 is de-energized.			
32	The PCS should energize the Drum Lid/Delid Fixture lower/raise solenoid 07-FEV-736A/L (Lower) to smoothly lower the fixture to its fully lowered position.	Verify that the Drum Lid/Delid Fixture is completely lowered.			
33	The "Drum Lid/Delid Fixture Lowered" position switch (07-ZS-726B) should be activated, indicating that the fixture is lowered.	Verify that the "Drum Lid/Delid Fixture Lowered" position switch is activated.			
34	The "OPERATOR ACTION VIA MANIPULATOR CONTROLS REQUIRED" message should be displayed on the "SAW MENU" at OIU-12-103B.	Verify that the "OPERATOR ACTION VIA MANIPULATOR CONTROLS REQUIRED" message is displayed.			
35	Use the manipulator arms to grip the drum band clamp.	Verify that the manipulator arms grip the band clamp.			
36	The manipulator arms should be positioned so that they will not interfere with saw operation.	Verify that the manipulator arms are positioned so that they will not interfere with saw operation.			
37	Force LCU 102 register ZS724B not activated to simulate the "Drum Lid/Delid Fixture Saw not Retracted" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS724B _____ I:26/10 _____	Verify that register ZS724B is forced not activated. Verify that the forced register status is recorded.			

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Drum Lid/Delid Fixture Saw Sequence, Saw Retracted Interlock					
38	Press the "CLAMP BAND HELD" button on the "SAW MENU" at OIU-12-103B to allow the saw sequence to continue.	Verify that the "CLAMP BAND HELD" button has been pressed.			
39	The "Drum Lid/Delid Fixture Saw Retracted" condition functions as an interlock for Drum Lid/Delid Fixture operation. Because this interlock is not satisfied, the saw should not energize. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture saw does not energize during the waiting period. <i>8/15 RWP/12/8/97</i>			
40	Force LCU 102 register FSL378 activated to simulate the "Inert Gas Purge Low Flow" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> FSL378 _____ I:27/2 _____	Verify that register FSL378 is forced activated. Verify that the forced register status is recorded.			
41	Unforce LCU 102 register ZS724B. Record the unforced register status below: Unforced ZS724B Status: _____	Verify that register ZS724B is unforced.			
42	The "Drum Lid/Delid Fixture Saw Retracted" position switch (07-ZS-724B) should be activated, indicating that the Saw is retracted.	Verify that the "Drum Lid/Delid Fixture Saw Retracted" position switch is activated.			

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Drum Lid/Delid Fixture Saw Sequence, Inert Gas Flow Interlock					
43	Press the "CLAMP BAND HELD" button on the "SAW MENU" at OIU-12-103B to allow the saw sequence to continue.	Verify that the "CLAMP BAND HELD" button has been pressed.			
44	The "Inert Gas Purge Flow" to Drum Lid/Delid Fixture Saw condition functions as an interlock for Drum Lid/Delid Fixture operation. Because this interlock is not satisfied, the saw should not energize. Wait thirty (30) seconds.	Verify that the saw motor does not energize during the waiting period.			
45	Force LCU 102 register ZS726B not activated to simulate the "Drum Lid/Delid Fixture Not Lowered" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS726B _____ I:26/12 _____	Verify that register ZS726B is forced not activated. Verify that the register status is recorded.			
46	Unforce LCU 102 register FSL378. Record the unforced register status below: Unforced FSL378 Status: _____	Verify that register FSL378 is unforced.			
47	The "Inert Gas Purge Low Flow" pressure switch (07-FSL-378) should not be activated, indicating that the inert gas flow to the Drum Lid/Delid Fixture Saw is sufficient to support Saw operation.	Verify that the "Inert Gas Purge Low Flow" pressure switch is not activated.			

see Attached pg 1-5
R/W 7/28/97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Drum Lid/Delid Fixture Saw Sequence, Fixture Lowered Interlock					
48	Press the "CLAMP BAND HELD" button on the "SAW MENU" at OIU-12-103B to allow the saw sequence to continue.	Verify that the "CLAMP BAND HELD" button has been pressed.			
49	Because register ZS726B has been not activated to simulate that the Drum Lid/Delid Fixture is not lowered, the Saw Sequence should remain suspended and the Saw motor should not energize. Wait thirty (30) seconds.	Verify that the Saw motor does not energize during the waiting period.			
50	Force LCU register ZS726A not activated to simulate the "Drum Lid/Delid Fixture not Raised" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS726A _____ I:26/11 _____	Verify that register ZS726A is forced not activated. Verify that the register status is recorded.			
51	Place the LLW Sorting Glovebox Waste Manipulator (EM-07-101) approximately one foot from park position 2 (farthest from Bagless Transfer Port (DO-07-105).	Verify that the waste manipulator is not parked.			
52	Unpark both of the LLW Sorting Glovebox Waste Manipulator (EM-07-101) arms.	Verify that the waste manipulator arms are not parked.			
53	Unforce LCU 102 register ZS726B. Record the unforced register status below: Unforced ZS726B Status: <u>15-5 N/A</u>	Verify that register ZS726B is unforced.			
54	The "Drum Lid/Delid Fixture Lowered" position switch (07-ZS-726B) should be activated, indicating that the Drum Lid/Delid Fixture is lowered.	Verify that the "Drum Lid/Delid Fixture Lowered" position switch is activated.			

see attached

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Cut Band Clamp with Saw					
55	The Drum Lid/Delid Fixture Saw Sequence should begin and the Saw motor should energize.	Verify that the Saw motor is energized.			
56	The PCS should energize the saw extend/retract solenoid 07-FEV-736D/E (Extend) to extend the saw. (Because no saw blade is installed, the band clamp should remain intact).	Verify that the Drum Lid/Delid Fixture Saw is fully extended.			
57	Because the saw is completely extended, the PCS should energize the saw extend/retract solenoid 07-FEV-736D/R (Retract) to retract the saw.	Verify that the saw retracts.			
58	Because the Drum Lid/Delid Fixture saw is retracted, the saw motor should de-energize.	Verify that the saw motor is de-energized.			
59	The PCS should de-energize the Inert Gas Flow solenoid (07-FEV-378B) to stop inert gas flow.	Verify that solenoid 07-FEV-378B is de-energized.			

see Attached 15 1-5 R/W 1/28/87

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
<u>Examine Drum Lid/Delid Fixture Raise Manipulator Parked Interlock</u>					
60	Because the Manipulator is not parked, the Drum Lid/Delid Fixture should not raise to its fully raised position. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not raise during the waiting period.			
61	Force LCU 102 register ZS724B not activated to simulate the "Drum Lid/Delid Fixture Saw Not Retracted" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS724B _____ I:26/10 _____	Verify that register ZS724B is forced not activated. Verify that the forced register status is recorded.			
62	Place the LLW Sorting Glovebox Waste Manipulator (EM-07-101) at park position 2 (farthest from Bagless Transfer Port (DO-07-105) with both manipulator arms fully parked.	Verify that the waste manipulator is at park position 2 with both arms parked.			

see Attached 05 1-5 R/W 7/20/17

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Drum Lid/Delid Fixture Raise, Saw Retracted Interlock					
63	The "Drum Lid/Delid Fixture Saw Retracted" condition functions as an interlock for Drum Lid/Delid Fixture operation. Because this interlock is not satisfied, the fixture should not raise. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not raise during the waiting period.			
64	WARNING: The following test procedure step involves energizing the Drum Lid/Delid Fixture reciprocating saw. Do not energize the saw if equipment damage or personal injury may result from the energized saw. Take sufficient precautions to safely stop the saw in the event of an emergency or alarm condition.	Verify that the saw can be stopped in a safe and orderly manner.			
65	Energize the Drum Lid/Delid Fixture Saw Motor (RT-07-101/M1).	Verify that the saw is energized.			
66	Unforce LCU 102 register ZS724B. Record the unforced register status below: Unforced ZS724B Status: _____	Verify that register ZS724B is unforced.			
67	The "Drum Lid/Delid Fixture Saw Retracted" position switch (07-ZS-724B) should be activated, indicating that the Saw is retracted.	Verify that the "Drum Lid/Delid Fixture Saw Retracted" position switch is activated.			

see Attached 1-5
RW 7/28/97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Drum Lid/Delid Fixture Raise, Saw De-Energized Interlock					
68	The "Drum Lid/Delid Fixture Saw De-energized" condition functions as an interlock for Drum Lid/Delid Fixture operation. Because this interlock is not satisfied, the fixture should not raise. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not raise during the waiting period.			
69	Force LCU 102 register ZS726A not activated to simulate the "Drum Lid/Delid Fixture Not Raised" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS726A _____ I:26/11 _____	Verify that register ZS726A is forced not activated. Verify that the register status is recorded.			
70	De-energize the Drum Lid/Delid Fixture Saw Motor (RT-07-101/M1).	Verify that the saw is de-energized.			
71	The "OPERATOR ACTION VIA MANIPULATOR CONTROLS" message should be displayed on the "SAW MENU" at OIU-12-103B.	Verify that the "OPERATOR ACTION VIA MANIPULATOR CONTROLS" message is displayed.			
72	Because the OIU message has not been acknowledged, the saw sequence should pause. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not raise during the waiting period.			
73	Press the "CLAMP BAND HELD" button on the "SAW MENU" at OIU-12-103B.	Verify that the "CLAMP BAND HELD" button has been pressed.			
74	The saw sequence should continue and the PCS should pulse energize the lower/raise solenoid 07-FEV-738A/R (Raise) to smoothly raise the Drum Lid/Delid Fixture to its fully raised position.	Verify that the Drum Lid/Delid Fixture is fully raised.			

see Attached

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Drum Lid/Delid Fixture Rotate, Fixture Raised Interlock					
75	The "Drum Lid/Delid Fixture Raised" condition functions as an interlock for Drum Lid/Delid Fixture operation. Because this interlock is not satisfied, the fixture should not rotate and "Fixture Failed to Raise" alarm should be generated. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not rotate during the waiting period.			
76	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Fixture Failed to Raise" alarm.	Verify that the alarm has been acknowledged.			
77	Unforce LCU 102 register ZS726A. Record the unforced register status below: Unforced ZS726A Status: _____	Verify that register ZS726A is unforced.			
78	Because position switch 07-ZS-726A should be activated, indicating that the Drum Lid/Delid Fixture is raised, the "Fixture Failed to Raise" alarm should clear.	Verify that the alarm is cleared.			
79	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "LID/DELID MENU" at OIU-12-103B.	Verify that the "LID/DELID MENU" is displayed.			
80	The PCS should energize and hold the fixture rotation solenoid 07-FEV-736B/C (Clockwise) to rotate the Drum Lid/Delid Fixture clockwise until it is rotated parked.	Verify that the Drum Lid/Delid Fixture is rotated parked.			
81	The "Drum Lid/Delid Fixture Rotation Index Positions" and the "Drum Lid/Delid Fixture Rotation at Park Position" switches (07-ZS-727A and 07-ZS-727B) should be activated, indicating that the fixture is rotated parked.	Verify that the "Drum Lid/Delid Fixture Rotation Index Positions" and the "Drum Lid/Delid Fixture Rotation at Park Position" switches are activated.			
82	The "SAWING COMPLETE" message should be displayed on the "LID/DELID MENU" at OIU-12-103B.	Verify that the "SAWING COMPLETE" message is displayed.			
TEST CASE 13031A-85.17 COMPLETE					

TEST CASE 13031A-85.17 COMPLETE

1

TEST CASE 13031A-85.17 EXAMINE LLW SORTING GLOVEBOX DRUM LID/DELID
FIXTURE (RT-07-101) INTERLOCKS AND REMOVE LID

PASS FAIL INIT.

A. Manipulator Not Parked at Position #1

1. Force ZS715A not activated, to simulate manipulator not
Parked at Position #1.
Record register status.

ZS715A Status: 0 Register: I:22\16

2. On the Saw menu press "REMOVE LID"
button.

3. Verify message "DRUM LID REMOVAL IN
IN PROGRESS".

4. Verify vacuum is generated.

5. Verify the fixture does not raise.

B. Manipulator Left Arm Not Parked

1. Force ZS715C not activated, to simulate manipulator left arm
not parked.
Record register status.

ZS715C Status: 0 Register: I:23\0

2. Unforce ZS715A, verify register status equals 1.
Record register status.

ZS715A Status: 1 Register: I:22\16

3. Verify the fixture does not raise.

TEST CASE 13031A-85.17 EXAMINE LLW SORTING GLOVEBOX DRUM LID/DELID
FIXTURE (RT-07-101) INTERLOCKS AND START SAW CUT #1PASS FAIL INIT.

C. Manipulator Right Arm Not Parked

1. Force ZS715D not activated, to simulate manipulator right arm not parked.
Record register status.

ZS715D Status: 0

Register: I:23\01

2. Unforce ZS715C, verify register status equals 1.
Record register status.

ZS715C Status: 1

Register: I:23\0

3. Verify the fixture does not raise.

D. Transfer Car Not At Delid/Tipper Position

1. Force ZS725C not activated, to simulate Transfer Car not at Delid/Tipper position.
Record register status.

ZS725C Status: 0

Register: I:24\04

2. Unforce ZS715D, verify register status equals 1.
Record register status.

ZS715D Status: 1

Register: I:23\01

3. Verify the fixture does not raise.

E. Tipper Not Lowered

1. Force ZS3328B activated, to simulate Tipper not in the lowered position.
Record register status.

ZS3328B Status: 1

Register: I:22\07

TEST CASE 13031A-85.17 EXAMINE LLW SORTING GLOVEBOX DRUM LID/DELID
FIXTURE (RT-07-101) INTERLOCKS AND REMOVE LIDPASS FAIL INIT.

2. Unforce ZS725C, verify register status equals 1.
Record register status.

✓		R/W
---	--	-----

ZS725C Status: 1 Register: I:24\04

3. Verify the fixture does not raise.

✓		R/W
---	--	-----

F. Sorting Table Not Fully Retracted

1. Force ZS717C not activated, to simulate sorting table not fully retracted. Record register status.

✓		R/W
---	--	-----

ZS717C Status: 0 Register: I:27\10

2. Unforce ZS332B, verify register status equals 0.
Record register status.

✓		R/W
---	--	-----

ZS332B Status: 0 Register: I:22\07

3. Verify the fixture does not raise.

✓		R/W
---	--	-----

G. Delid Fixture Saw Motor Not Running

1. CAUTION: The following step will cause the saw motor to run, ensure the saw blade is clear prior to performing the next step.

✓		R/W
---	--	-----

2. Force delid saw motor on by installing a bypass at rung 41:208.

✓		R/W
---	--	-----

3. Verify the saw motor starts.

✓		R/W
---	--	-----

4. Unforce ZS717C; verify register status equals 1.
Record register status.

✓		R/W
---	--	-----

ZS717C Status: 1 Register: I:27\10

TEST CASE 13031A-85.17 EXAMINE LLW SORTING GLOVEBOX DRUM LID/DELID
FIXTURE (RT-07-101) INTERLOCKS AND REMOVE LID

5. Verify the fixture does not raise.

PASS	FAIL	INIT
✓		R/W

H. Saw Not Retracted

1. Force ZS724B not activated, to simulate delid saw not retracted.

✓		R/W
---	--	-----

Record register status.

ZS724B Status: 0

Register: I:23\07

2. Remove bypass installed at rung 41:208.

✓		R/W
---	--	-----

3. Verify the delid saw motor stops.

✓		R/W
---	--	-----

4. Verify the fixture does not raise.

✓		R/W
---	--	-----

I. Fixture Not Lowered

1. Force ZS726B activated, to simulate delid fixture lowered. Record register status.

✓		R/W
---	--	-----

ZS726B Status: 1

Register: I:23\11

2. Unforce ZS724B, verify register status equals 1. Record register status.

✓		R/W
---	--	-----

ZS724B Status: 1

Register: I:23\07

3. Verify the fixture does not raise.

✓		R/W
---	--	-----

J. Fixture Not Raised

1. Force ZS726A activated, to simulate delid fixture raised. Record register status.

✓		R/W
---	--	-----

ZS726A Status: 1

Register: I:23\10

TEST CASE 13031A-85.17 EXAMINE LLW SORTING GLOVEBOX DRUM LID/DELID
FIXTURE (RT-07-101) INTERLOCKS AND REMOVE LID

2. Unforce ZS726B, verify register status equals 1.
Record register status.

PASS	FAIL	INIT
✓		N/A

ZS726B Status: 1 Register: I:23\11

3. Verify message "DRUM LID REMOVAL COMPLETE"
on the saw menu.

✓		N/A
---	--	-----

4. Manually raise fixture.

✓		N/A
---	--	-----

5. Unforce ZS726A, verify register status equals 1.
Record register status.

✓		N/A
---	--	-----

ZS726A Status: _____ Register: I:23\10

K. Fixture Vacuum Lost Alarm

1. Force PS716 not activated, to simulate delid fixture vacuum
lost. Record register status.

✓		N/A
---	--	-----

PS716 Status: 0 Register: I:20\11

2. On the Saw menu verify message "SEQUENCE FAILED".

✓		N/A
---	--	-----

3. On the Saw menu verify Alarm button is flashing red.

✓		N/A
---	--	-----

4. Acknowledge alarm "Fixture Vacuum Lost".

✓		N/A
---	--	-----

5. Unforce PS716, verify register status equals 1.
Record register status.

✓		N/A
---	--	-----

PS716 Status: 1 Register: I:20\11

6. Verify alarm "Fixture Vacuum Lost" clears.

✓		N/A
---	--	-----

TEST CASE 13031A-85.18 EXAMINE LLW SORTING GLOVEBOX DRUM LID/DELID FIXTURE (RT-07-101) INTERLOCKS, REMOVE DRUM LID, AND

PARK FIXTURE	18-2
Examine Drum Lid/Delid Fixture Lower, Fixture Rotated Parked Interlock	18-2
Examine Drum Lid/Delid Fixture Lower, Fixture Raised Interlock	18-4
Examine Drum Lid/Delid Fixture Lower, C-Clip Crimper Retracted Interlock	18-5
Examine Drum Lid/Delid Fixture Lower, C-Clip Crimper Jaw Open Interlock	18-6
Examine Drum Lid/Delid Fixture Lower, Saw Retracted Interlock	18-7
Examine Drum Lid/Delid Fixture Lower, Vacuum Generator Off Interlock	18-8
Examine Drum Lid/Delid Fixture Lower, Saw De-energized Interlock	18-9
Examine Drum Lid/Delid Fixture Lower, Vacuum Isolation Valve Closed Interlock	18-10
Examine Drum Lid/Delid Fixture Raise, Fixture Rotated Parked Interlock	18-12
Examine Drum Lid/Delid Fixture Raise, Fixture Lowered Interlock	18-13
Examine Drum Lid/Delid Fixture Raise, C-Clip Crimper Retracted Interlock	18-14
Examine Drum Lid/Delid Fixture Raise, C-Clip Crimper Jaw Open Interlock	18-15
Examine Drum Lid/Delid Fixture Raise, Saw Retracted Interlock	18-16
Examine Drum Lid/Delid Fixture Raise, Vacuum Generator Off Interlock	18-17
Examine Drum Lid/Delid Fixture Raise, Saw De-energized Interlock	18-18
Examine Drum Lid/Delid Fixture Raise, Vacuum Isolation Valve Closed Interlock	18-19
Examine Drum Lid/Delid Fixture "Fixture Failed to Move to Relid/Park Position" Alarm	18-20

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.18 EXAMINE LLW SORTING GLOVEBOX DRUM LID/DELID FIXTURE (RT-07-101) INTERLOCKS, REMOVE DRUM LID, AND PARK FIXTURE					
Examine Drum Lid/Delid Fixture Lower, Fixture Rotated, Parked Interlock					
1	Unforce all LCU 102 registers using the Allen Bradley PLC Software.	Verify that all LCU 102 registers are unforced.			
2	Confirm that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed at OIU-12-103B. If a sub-menu is displayed, press the "MAIN MENU" button to return to the "LLW SORTING GLOVEBOX MAIN MENU".	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.			
3	Remove the band clamp from the drum.	Verify that the band clamp has been removed.			
4	Press the "LID/DELID MENU" button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "LID/DELID MENU" is displayed.			
5	Force LCU 102 register ZS727A not activated to simulate the "Drum Lid/Delid Fixture Rotation Not at Parked Position" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS727A _____ I:26/12 _____	Verify that register ZS727A is forced not activated. Verify that the forced register status is recorded.			
6	Press the "START DELID SEQUENCE" button from the "LID/DELID MENU" at OIU-12-103B.	Verify that the "START DELID SEQUENCE" button has been pressed.			
7	The "Drum Lid/Delid Fixture Rotation Not at Parked Position" condition functions as an interlock for Drum Lid/Delid Fixture operation. Because this interlock is not satisfied, the fixture should not lower. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not lower during the waiting period.			
8	Force LCU 102 register ZS726A not activated to simulate the "Drum Lid/Delid Fixture not Raised" condition. Record the forced register status below. <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS726A _____ I:26/11 _____	Verify that register ZS726A is forced not activated. Verify that the register status is recorded.			

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
9	Unforce LCU 102 register ZS727A. Record the unforced register status below: Unforced ZS727A Status: _____	Verify that register ZS727A is unforced.			
10	The "Drum Lid/Delid Fixture Rotation at Park Position" switch (07-ZS-727A) should be activated, indicating that the fixture is rotated parked.	Verify that the "Drum Lid/Delid Fixture Rotation at Park Position" switch is activated.			

see Attached of 1-7 R/W 9/28/87

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Drum Lid/Delid Fixture Lower, Fixture Raised Interlock					
11	Press the "START DELID SEQUENCE" button from the "LID/DELID MENU" at OIU-12-103B.	Verify that the "START DELID SEQUENCE" button has been pressed.			
12	The "Drum Lid/Delid Fixture Raised" condition functions as an interlock for Drum Lid/Delid Fixture operation. Because this interlock is not satisfied, the fixture should not lower. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not lower during the waiting period.			
13	Force LCU 102 position switch (07-ZS-719A) register ZS719A not activated to simulate the "Drum Lid/Delid Fixture Crimp Head Not Back" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS719A _____ _____	Verify that register ZS719A is forced not activated. Verify that the forced register status is recorded.			
14	Unforce LCU 102 register ZS726A. Record the unforced register status below: Unforced ZS726A Status: _____	Verify that register ZS726A is unforced.			
15	The "Drum Lid/Delid Fixture Raised" position switch (07-ZS-726A) should be activated, indicating that the Drum Lid/Delid Fixture is raised.	Verify that the "Drum Lid/Delid Fixture Raised" position switch is activated.			

see Attached

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Drum Lid/Delid Fixture Lower, C-Clip Crimper Retracted Interlock					
16	Press the "START DELID SEQUENCE" button from the "LID/DELID MENU" at OIU-12-103B.	Verify that the "START DELID SEQUENCE" button has been pressed.			
17	The "Drum Lid/Delid Fixture Crimp Head Not Back" condition functions as an interlock for Drum Lid/Delid Fixture operation. Because this interlock is not satisfied, the fixture should not lower. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not lower during the waiting period.			
18	Force LCU 102 register ZS721 not activated to simulate the "Drum Lid/Delid Fixture C-Clip Crimper Jaw Not Open" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS721 _____ _____	Verify that register ZS721 is forced not activated. Verify that the forced register status is recorded.			
19	Unforce LCU 102 register ZS719A. Record the unforced register status below: Unforced ZS719A Status: _____	Verify that register ZS719A is unforced.			
20	The "Drum Lid/Delid Fixture Crimp Head Back" position switch (07-ZS-719A) should be activated, indicating that the C-Clip Crimp head is retracted.	Verify that the "Drum Lid/Delid Fixture Crimp Head Back" position switch is activated.			

see attached
1-7
R11/11/97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Drum Lid/Delid Fixture Lower, C-Clip Crimper Jaw Open Interlock					
21	Press the "START DELID SEQUENCE" button from the "LID/DELID MENU" at OIU-12-103B.	Verify that the "START DELID SEQUENCE" button has been pressed.			
22	The "Drum Lid/Delid Fixture C-Clip Crimper Jaw Not Open" condition functions as an interlock for Drum Lid/Delid Fixture operation. Because this interlock is not satisfied, the fixture should not lower. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not lower during the waiting period.			
23	Force LCU 102 register ZS724B not activated to simulate the "Drum Lid/Delid Fixture Saw Not Retracted" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS719A _____ _____	Verify that register ZS724B is forced not activated. Verify that the forced register status is recorded.			
24	Unforce LCU 102 register ZS721. Record the unforced register status below: Unforced ZS721 Status: _____	Verify that register ZS721 is unforced.			
25	The "Drum Lid/Delid Fixture Crimp Jaw Open" position switch (07-ZS-721) should be activated, indicating that the C-Clip Crimper is retracted.	Verify that the "Drum Lid/Delid Fixture Crimp Jaw Open" position switch is activated.			

see attached pg 1-2
R/W 9/28/99

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Drum Lid/Delid Fixture Lower, Saw Retracted Interlock					
26	Press the "START DELID SEQUENCE" button from the "LID/DELID MENU" at OIU-12-103B.	Verify that the "START DELID SEQUENCE" button has been pressed.			
27	The "Drum Lid/Delid Fixture Saw Not Retracted" condition functions as an interlock for Drum Lid/Delid Fixture operation. Because this interlock is not satisfied, the fixture should not lower. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not lower during the waiting period.			
28	Energize the vacuum generation solenoid (07-FEV-736E) to turn on the Drum Lid/Delid Fixture vacuum generator.	Verify that solenoid 07-FEV-736E is energized.			
29	The Vacuum Generation solenoid valve (07-FEV-736E) should open and a "hissing" sound should be noted, indicating that escaping pressurized air is being used to generate vacuum.	Audibly verify that the vacuum generator has been turned on.			
30	Unforce LCU 102 register ZS724B. Record the unforced register status below: Unforced ZS724B Status: _____	Verify that register ZS724B is unforced.			
31	The "Drum Lid/Delid Fixture Saw Retracted" position switch (07-ZS-724B) should be activated, indicating that the Saw is retracted.	Verify that the "Drum Lid/Delid Fixture Saw Retracted" position switch is activated.			

see Attached pg 1-2
ALW 9/28/99

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Drum Lid/Delid Fixture Lower Vacuum Generator Off Interlock					
32	Press the "START DELID SEQUENCE" button from the "LID/DELID MENU" at OIU-12-103B.	Verify that the "START DELID SEQUENCE" button has been pressed.			
33	The "Drum Lid/Delid Fixture Vacuum Generator Off" condition functions as an interlock for Drum Lid/Delid Fixture operation. Because this interlock is not satisfied, the fixture should not lower. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not lower during the waiting period.			
34	WARNING: The following test procedure step involves energizing the Drum Lid/Delid Fixture reciprocating saw. Do not energize the saw if equipment damage or personal injury may result from the energized saw. Take sufficient precautions to safely stop the saw in the event of an emergency or alarm condition.	Verify that the saw can be stopped in a safe and orderly manner.			
35	Energize the Drum Lid/Delid Fixture Saw Motor (RT-07-101/M1).	Verify that the saw is energized.			
36	De-energize the vacuum generation solenoid (07-FEV-736E) to turn off the Drum Lid/Delid Fixture vacuum generator.	Verify that solenoid 07-FEV-736E is not energized.			
37	The vacuum generation solenoid valve (07-FEV-736E) should close and a "hissing" sound should not be noted, indicating that the Vacuum Generator has been turned off.	Audibly verify that the vacuum generator has been turned off.			

see Attached 85 1-7
 R/W 9/28/97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Drum Lid/Delid Fixture Lower, Saw De-energized Interlock					
38	Press the "START DELID SEQUENCE" button from the "LID/DELID MENU" at OIU-12-103B.	Verify that the "START DELID SEQUENCE" button has been pressed.			
39	The "Drum Lid/Delid Fixture Saw De-energized" condition functions as an interlock for Drum Lid/Delid Fixture operation. Because this interlock is not satisfied, the fixture should not lower. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not lower during the waiting period.			
40	Force LCU 102 register PS716 not activated to simulate the "Drum Lid/Delid Fixture Vacuum Lost" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> PS716 _____ _____	Verify that register PS716 is forced not activated. Verify that the forced register status is recorded.			
41	Force energize solenoid valve 07-PEV-716 so that the Drum Lid/Delid Fixture vacuum isolation valve is open. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> PEV716 _____ _____	Verify that register PEV716 is forced activated. Verify that the forced register status is recorded.			
42	De-energize the Drum Lid/Delid Fixture Saw Motor (RT-07-101/M1).	Verify that the saw is de-energized.			

see Attached
RIN 1/28/99

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Drum Lid/Delid Fixture Lower, Vacuum Isolation Valve Closed Interlock					
43	The "Drum Lid/Delid Fixture Vacuum Isolation Valve Closed" condition functions as an interlock for Drum Lid/Delid Fixture operation. Because this interlock is not satisfied, the fixture should not lower. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not lower during the waiting period.			
44	De-energize the vacuum isolation solenoid (07-PEV-716) to close the Drum Lid/Delid Fixture vacuum isolation valve.	Verify that solenoid 07-FEV-716 is not energized.			
45	The PCS should pulse energize the lower/raise solenoid 07-FEV-736A/L (Lower) to smoothly lower the Drum Lid/Delid Fixture to its fully lowered position.	Verify that the Drum Lid/Delid Fixture is completely lowered.			
46	The "Drum Lid/Delid Fixture Lowered" position switch (07-ZS-726B) should be activated, indicating that the Drum Lid/Delid Fixture is lowered.	Verify that the "Drum Lid/Delid Fixture Lowered" position switch is activated.			
47	The "DELID IN PROGRESS..." message should be displayed on the "LID/DELID MENU" at OIU-12-103B.	Verify that the "DELID IN PROGRESS..." message is displayed.			
48	The PCS should pulse energize solenoid valve 07-FEV-736E/O (Open) to create vacuum.	Audibly verify that the vacuum generator has turned on.			
49	The PCS should energize solenoid valve 07-PEV-716 to open the vacuum isolation valve to apply vacuum between the Drum Lid/Delid Fixture and the drum lid.	Verify that solenoid valve 07-PEV-716 is energized.			
50	Vacuum should be generated between the suction tube and the drum lid. Vacuum switch 07-PS-716 should provide a visual indication (LED indicator) that vacuum is present.	Verify that vacuum has been generated.			
51	Because pressure switch register PS716 has been forced not activated, indicating that no vacuum is present, the vacuum generator should remain turned on. Wait thirty (30) seconds.	Verify that the vacuum generator does not turn off during the waiting period.			
52	Force LCU 102 register ZS728A not activated to simulate the "Drum Lid/Delid Fixture Rotation Not at Park Position" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS728A _____ _____	Verify that register ZS728A is forced not activated. Verify that the forced register status is recorded.			

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
53	Unforce LCU 102 register PS716. Record the unforced register status below: Unforced PS716 Status: _____	Verify that register PS716 is unforced.			
54	The "Pressure Switch for Vacuum Lost" switch (07-PS-716) should be activated, indicating that vacuum has been generated between the Drum Lid/Delid Fixture and the drum lid.	Verify that the "Pressure Switch for Vacuum Lost" switch is activated.			
55	The PCS should de-energize solenoid valve 07-PEV-716 to close the vacuum isolation valve to retain vacuum between the Drum Lid/Delid Fixture and the drum lid.	Verify that solenoid valve 07-PEV-716 is de-energized.			
56	The PCS should pulse energize solenoid valve 07-FEV-736E/C (Close) to turn off the vacuum generator.	Audibly verify that the vacuum generator is turned off.			
57	Because vacuum has been generated, the "VACUUM HELD" message should be displayed on the "LID/DELID MENU" at OIU-12-103B.	Verify that the "VACUUM HELD" message is displayed.			

see attached pg 1-7
A/W 9/28/97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Drum Lid/Delid Fixture Raise, Fixture Rotated, Parked, Interlock					
58	The "Drum Lid/Delid Fixture Rotation at Park Position" condition functions as an interlock for Drum Lid/Delid Fixture operation. Because this interlock is not satisfied, the fixture should not raise. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not raise during the waiting period.			
59	Force LCU 102 register ZS726B not activated to simulate the "Drum Lid/Delid Fixture Not Lowered" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS726B _____ _____	Verify that register ZS726B is forced not activated. Verify that the register status is recorded.			
60	Unforce LCU 102 register ZS728A. Record the unforced register status below: Unforced ZS728A Status: _____	Verify that register ZS728A is unforced.			
61	The "Drum Lid/Delid Fixture in Park/Relid Position" switch (07-ZS-728A) should be activated, indicating that the Drum Tipper is parked.	Verify that the "Drum Lid/Delid Fixture in Park/Relid Position" switch is activated.			

see Attached ① 1-5
N/W 9/8/89

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Drum Lid/Delid Fixture Raise, C-Clip Crimper Retracted Interlock					
66	The "Drum Lid/Delid Fixture Crimp Head Back" condition functions as an interlock for Drum Lid/Delid Fixture operation. Because this interlock is not satisfied, the fixture should not raise. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not raise during the waiting period.			
67	Force LCU 102 register ZS721 not activated to simulate the "Drum Lid/Delid Fixture Crimp Jaw Not Open" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS721 _____ _____	Verify that register ZS721 is forced not activated. Verify that the forced register status is recorded.			
68	Unforce LCU 102 register ZS719A. Record the unforced register status below: Unforced ZS719A Status: _____	Verify that register ZS719A is unforced.			
69	The "Drum Lid/Delid Fixture Crimp Head Back" position switch (07-ZS-719A) should be activated, indicating that the C-Clip Crimp head is retracted.	Verify that the "Drum Lid/Delid Fixture Crimp Head Back" position switch is activated.			

see Attached pg 1-7
O/W 5/28/99

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Drum Lid/Delid Fixture Raise, C-Clip Crimper Jaw Open Interlock					
70	The "Drum Lid/Delid Fixture Crimp Jaw Open" condition functions as an interlock for Drum Lid/Delid Fixture operation. Because this interlock is not satisfied, the fixture should not raise. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not raise during the waiting period.			
71	Force LCU 102 register ZS724B not activated to simulate the "Drum Lid/Delid Fixture Saw not Retracted" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS724B _____ 1:26/10 _____	Verify that register ZS724B is forced not activated. Verify that the forced register status is recorded.			
72	Unforce LCU 102 register ZS721. Record the unforced register status below: Unforced ZS721 Status: _____	Verify that register ZS721 is unforced.			
73	The "Drum Lid/Delid Fixture Crimp Jaw Open" position switch (07-ZS-721) should be activated, indicating that the C-Clip Crimper Jaw is retracted open.	Verify that the "Drum Lid/Delid Fixture Crimp Jaw Open" position switch is activated.			

see attached pg 1-7
R/W 9/28/99

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Drum Lid/Delid Fixture Raise, Saw Retracted Interlock					
74	The "Drum Lid/Delid Fixture Saw Retracted" condition functions as an interlock for Drum Lid/Delid Fixture operation. Because this interlock is not satisfied, the fixture should not raise. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not raise during the waiting period.			
75	Energize the vacuum generation solenoid (07-FEV-736E) to turn on the Drum Lid/Delid Fixture vacuum generator.	Verify that solenoid 07-FEV-736E is energized.			
76	The solenoid valve (07-FEV-736E) should open and a "hissing" sound should be noted, indicating that escaping pressurized air is being used to generate vacuum.	Audibly verify that the vacuum generator has been turned on.			
77	Unforce LCU 102 register ZS724B. Record the unforced register status below: Unforced ZS724B Status: _____	Verify that register ZS724B is unforced.			
78	The "Drum Lid/Delid Fixture Saw Retracted" position switch (07-ZS-724B) should be activated, indicating that the Saw is retracted.	Verify that the "Drum Lid/Delid Fixture Saw Retracted" position switch is activated.			

see Attached 85-1-7
RID 7/28/97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Drum Lid/Delid Fixture Raise, Vacuum Generator Off Interlock					
79	The "Drum Lid/Delid Fixture Drum Lid Lifter Vacuum Off" condition functions as an interlock for Drum Lid/Delid Fixture operation. Because this interlock is not satisfied, the fixture should not raise. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not raise during the waiting period.			
80	WARNING: The following test procedure step involves energizing the Drum Lid/Delid Fixture reciprocating saw. Do not energize the saw if equipment damage or personal injury may result from the energized saw. Take sufficient precautions to safely stop the saw in the event of an emergency or alarm condition.	Verify that the saw can be stopped in a safe and orderly manner.			
81	Energize the Drum Lid/Delid Fixture Saw Motor (RT-07-101/M1).	Verify that the saw is energized.			
82	De-energize vacuum generation solenoid (07-FEV-736E) to turn off the Drum Lid/Delid Fixture vacuum generator.	Verify that solenoid 07-FEV-736E is not energized.			
83	The solenoid valve (07-FEV-736E) should close and a "hissing" sound should not be noted, indicating that the vacuum generator has been turned off.	Audibly verify that the vacuum generator has been turned off.			

see Attached 17 1-7
11/16 7/28/97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Drum Lid/Delid Fixture Raise, Saw De-energized Interlock					
84	The "Drum Lid/Delid Fixture Saw De-energized" condition functions as an interlock for Drum Lid/Delid Fixture operation. Because this interlock is not satisfied, the fixture should not raise. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not raise during the waiting period.			
85	Force energize solenoid valve 07-PEV-716 so that the Drum Lid/Delid Fixture Vacuum Isolation Valve is open. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> PEV716 _____ _____	Verify that register PEV716 is forced activated. Verify that the forced register status is recorded.			
86	De-energize the Drum Lid/Delid Fixture Saw Motor (RT-07-101/M1).	Verify that the saw is de-energized.			

see Attached AG 1-7 A/W 9/58/87

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Drum Lid/Delid Fixture Raise, Vacuum Isolation Valve Closed Interlock					
87	The "Drum Lid/Delid Fixture Vacuum Isolation Valve Closed" condition functions as an interlock for Drum Lid/Delid Fixture operation. Because this interlock is not satisfied, the fixture should not raise. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not raise during the waiting period.			
88	Force LCU 102 register ZS728A not activated to simulate the "Drum Lid/Delid Fixture Not In Relid/Park Position" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS728A _____ _____	Verify that register ZS728A is forced not activated. Verify that the forced register status is recorded.			
89	De-energize the vacuum isolation solenoid (07-PEV-716) to close the Drum Lid/Delid Fixture Vacuum Isolation valve.	Verify that solenoid 07-FEV-716 is not energized.			
90	The PCS should pulse energize the lower/raise solenoid 07-FEV-736A/B (Raise) to smoothly raise the Drum Lid/Delid Fixture (with drum lid) to its fully raised position.	Verify that the Drum Lid/Delid Fixture is completely raised.			
91	The drum lid should remain attached to the Drum Lid/Delid Fixture (RT-07-101).	Verify that the drum lid remains attached to the Drum Lid/Delid Fixture.			
92	The "Drum Lid/Delid Fixture Raised" position switch (07-ZS-726A) should be activated, indicating that the fixture is raised.	Verify that the "Drum Lid/Delid Fixture Raised" position switch is activated.			

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Drum Lid/Delid Fixture "Fixture Failed to Move to Relid/Park Position" Alarm					
93	The PCS should energize the horizontal movement solenoid 07-FEV-737A/R (Reverse) to smoothly move the Drum Lid/Delid Fixture to the Relid/Park position.	Verify that the Drum Lid/Delid Fixture moves to the Relid/Park position.			
94	Because register ZS728A has been forced not activated to simulate the "Drum Lid/Delid Fixture Not at Park/Relid Position" condition, the fixture movement sequence should be considered unsuccessful, and a "Fixture Failed to Move to Relid/Park Position" alarm should be generated. A flashing "SEQUENCE FAILED" message should be displayed on the "LID/DELID MENU"	Verify that a "SEQUENCE FAILED" message is displayed.			
95	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Fixture Failed to Move to Relid/Park Position" alarm.	Verify that the alarm has been acknowledged.			
96	Unforce LCU 102 register ZS728A. Record the unforced register status below: Unforced ZS728A Status: _____	Verify that register ZS728A is unforced.			
97	Because position switch 07-ZS-728A should be activated, indicating that the Drum Lid/Delid Fixture is at the Park/Relid position, the "Fixture Failed to Move to Relid/Park Position" alarm should clear.	Verify that the alarm is cleared.			
98	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "LID/DELID MENU" at OIU-12-103B.	Verify that the "LID/DELID MENU" is displayed.			
99	The "DELID COMPLETE" message should be displayed on the "LID/DELID MENU" at OIU-12-103B.	Verify that the "DELID COMPLETE" message is displayed.			
TEST CASE 13031A-85.18 COMPLETE					

see Attached
R/W 1/28/12

1

TEST CASE 13031A-85.18 EXAMINE LLW SORTING GLOVEBOX DRUM LID/DELID
FIXTURE (RT-07-101) INTERLOCKS AND MOVE FIXTURE TO PARK POSITIONPASS FAIL INIT.

A. Manipulator Not Parked at Position #1

1. Force ZS715A not activated, to simulate manipulator not
Parked at Position #1.
Record register status.

✓		R/W
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ZS715A Status: 0

Register: I:22\16

2. On the Saw menu press "MOVE TO PARK POSITION"
button.

✓		R/W
---	--	-----

3. Verify that the delid fixture does not move.

✓		R/W
---	--	-----

4. Unforce ZS715A, verify register status equals 1.
Record register status.

✓		R/W
---	--	-----

ZS715A Status: 1

Register: I:22\16

B. Manipulator Left Arm Not Parked

1. Force ZS715C not activated, to simulate manipulator left arm
not parked.
Record register status.

✓		R/W
---	--	-----

ZS715C Status: 0

Register: I:23\0

2. On the Saw menu press "MOVE TO PARK POSITION"
button.

✓		R/W
---	--	-----

3. Verify that the delid fixture does not move.

✓		R/W
---	--	-----

4. Unforce ZS715C, verify register status equals 1.
Record register status.

✓		R/W
---	--	-----

ZS715C Status: 1

Register: I:23\0

TEST CASE 13031A-85.18 EXAMINE LLW SORTING GLOVEBOX DRUM LID/DELID
FIXTURE (RT-07-101) INTERLOCKS AND MOVE FIXTURE TO PARK POSITIONPASS FAIL INIT.

C. Manipulator Right Arm Not Parked

1. Force ZS715D not activated, to simulate manipulator right arm
not parked.

Record register status.

ZS715D Status: 0

Register: I:23\01

2. On the Saw menu press "MOVE TO PARK POSITION"
button.

3. Verify that the delid fixture does not move.

4. Unforce ZS715D, verify register status equals 1.

Record register status.

ZS715D Status: 1

Register: I:23\01

E. Transfer Car Not At Delid/Tipper Position

1. Force ZS725C not activated, to simulate Transfer Car not
at Delid/Tipper position.

Record register status.

ZS725C Status: 0

Register: I:24\04

2. On the Saw menu press "MOVE TO DELID POSITION"
button.

3. Verify that the delid fixture does not move.

4. Unforce ZS725C, verify register status equals 1.

Record register status.

ZS725C Status: 1

Register: I:24\04

TEST CASE 13031A-85:18 EXAMINE LLW SORTING GLOVEBOX DRUM LID/DELID
FIXTURE (RT-07-101) INTERLOCKS AND MOVE FIXTURE TO PARK POSITION

E. Tipper Not Lowered PASS FAIL INIT.

1. Force ZS332B activated, to simulate Tipper not in the lowered position.

Record register status.

ZS332B Status: 1

Register: I:22\07

2. On the Saw menu press "MOVE TO PARK POSITION" button.

3. Verify that the delid fixture does not move.

4. Unforce ZS332B, verify register status equals 0.

Record register status.

ZS332B Status: 0

Register: I:22\07

F. Sorting Table Not Fully Retracted

1. Force ZS717C not activated, to simulate sorting table not retracted.

Record register status.

ZS717C Status: 0

Register: I:27\10

2. On the Saw menu press "MOVE TO DELID POSITION" button.

3. Verify that the delid fixture does not move.

4. Unforce ZS717C, verify register status equals 1.

Record register status.

ZS717C Status: 1

Register: I:27\10

TEST CASE 13031A-85.18 EXAMINE LLW SORTING GLOVEBOX DRUM LID/DELID
FIXTURE (RT-07-101) INTERLOCKS AND MOVE FIXTURE TO PARK POSITIONPASS FAIL INIT.

G. Delid Fixture Saw Motor Not Running

1. CAUTION: The following step will cause the saw motor to run, ensure the saw blade is clear prior to performing the next step.

✓ | | R/W

2. Force delid saw motor on by installing a bypass at rung 41:208.

✓ | | R/W

3. Verify the saw motor starts.

✓ | | R/W

4. On the Saw menu press "MOVE TO PARK POSITION" button.

✓ | | R/W

5. Verify that the delid fixture does not move.

✓ | | R/W

6. Remove bypass installed at rung 41:208.

✓ | | R/W

7. Verify the delid saw motor stops.

✓ | | R/W

H. Saw Not Retracted

1. Force ZS724B not activated, to simulate delid saw not retracted.

✓ | | R/W

Record register status.

ZS724B Status: 0

Register: I:23\07

2. On the Saw menu press "MOVE TO PARK POSITION" button.

✓ | | R/W

3. Verify that the delid fixture does not move.

✓ | | R/W

4. Unforce ZS724B, verify register status equals 1.
Record register status.

✓ | | R/W

ZS724B Status: 1

Register: I:23\07

TEST CASE 13031A-85.18 EXAMINE LLW SORTING GLOVEBOX DRUM LID/DELID
FIXTURE (RT-07-101) INTERLOCKS AND MOVE FIXTURE TO PARK POSITIONPASS FAIL INIT.

I. Delid Fixture Not Parked - Rotated Right

1. Force ZS727 not activated, to simulate delid fixture not rotated right.

Record register status.

ZS727 Status: 0

Register: I:23\13

2. On the Saw menu press "MOVE TO PARK POSITION" button.

3. Verify that the delid fixture does not move.

4. Unforce ZS727, verify register status equals 1.

Record register status.

ZS727 Status: 1

Register: I:23\13

J. Fixture Not Raised

1. Force ZS726A not activated, to simulate delid fixture not raised.

Record register status.

ZS726A Status: 0

Register: I:23\10

2. On the Saw menu press "MOVE TO PARK POSITION" button.

3. Verify that the delid fixture does not move.

4. Unforce ZS726A, verify register status equals 1.

Record register status.

ZS726A Status: 1

Register: I:23\10

TEST CASE 13031A-85.18 EXAMINE LLW SORTING GLOVEBOX DRUM LID/DELID FIXTURE (RT-07-101) INTERLOCKS AND MOVE FIXTURE TO PARK POSITION

PASS FAIL INIT

K. Delid Fixture Not Parked

1. Force ZS728A not activated, to simulate delid fixture not parked.
Record register status.

ZS728A Status: 0

Register: I:23\14

2. On the Saw menu press "MOVE TO PARK POSITION" button.

3. Verify that the delid fixture does not move.

4. Unforce ZS728A, verify register status equals 1.
Record register status.

ZS728A Status: 1

Register: I:23\14

M. Delid Fixture Failed To Reach Delid Position Alarm

1. Force ZS728B not activated, to simulate delid fixture not at the delid/tipper position.
Record register status.

ZS728B Status: 0

Register: I:23\15

2. On the Saw menu press "MOVE TO PARK POSITION" button.

3. Verify message on the SAW menu "FIXTURE MOVING TO PARK POSITION".

4. Verify that the delid fixture moves to the park position.

5. On the SAW menu verify message "SEQUENCE FAILED".

6. On the SAW menu verify Alarm button is flashing red.

7. Acknowledge alarm "Fixture Failed to Move to Park Position".

TEST CASE 13031A-85.18 EXAMINE LLW SORTING GLOVEBOX DRUM LID/DELID
 FIXTURE (RT-07-101) INTERLOCKS AND MOVE FIXTURE TO PARK POSITION

8. Unforce ZS728B, verify register status equals 1.
 Record register status.

PASS FAIL INIT.

✓ | | RIK

ZS728B Status: 1

Register: I:23\15

9. Verify message "Fixture at Park Position".

✓ | | RIK

10. Verify alarm "Fixture Failed to Move to Park Position"
 clears.

✓ | | RIK

TEST CASE 13031A-85.19 EXAMINE LLW SORTING G.B. DRUM TIPPER (DH-07-103) INTERLOCKS, RAISE DRUM, AND EMPTY CONTENTS ONTO	
SORTING TABLE	19-2
Examine Drum Tipper Raise, Drum Lid/Delid Fixture Parked Interlock	19-2
Examine Drum Tipper Raise, Manipulator Parked Interlock	19-3
Examine Drum Tipper Raise, Transfer Car at Delid Position Interlock	19-4
Examine Drum Tipper Raise, Drum Tipper Lowered Interlock	19-5
Examine Drum Tipper Raise, Drum Tipper Grab Vertical Interlock	19-6
Examine Drum Tipper Raise, Drum Tipper Grab Closed Interlock	19-7
Examine Drum Tipper Raise, Sorting Table Fully Retracted Interlock	19-8
Examine Drum Tipper Raise, Drum Tipper Clutch Not Tripped Interlock	19-9
Examine Drum Tipper Raise, Sorting Table Lowered Interlock	19-10
Raise Drum with Grab Closed	19-11
Examine Sorting Table Extend, Sorting Table Lowered Interlock	19-12
Examine Sorting Table Extend, Sorting Table Retracted Interlock	19-14
Examine Sorting Table Extend, Drum Tipper Raised Interlock	19-15
Examine Sorting Table Extend, Drum Tipper Grab Vertical Interlock	19-16
Examine Sorting Table Extend, Drum Tipper Grab Close Interlock	19-17
Examine Sorting Table Extend, Manipulator Parked Interlock	19-18
Extend Sorting Table and Examine "Sorting Table Failed to Move to Fully Forward Position" Alarm	19-19
Examine "Sorting Table Forward Position Not Verified" Alarm	19-20
Rotate Drum Using Drum Tipper	19-21

7-21-97 - Retested after tipper interlock changes made 1235 pm moj

QW and AS commence testing

HNFS-D-W026-ATR-032 LLW GLOVEBOX ATR, Rev. 0

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.19 EXAMINE LLW SORTING G.B. DRUM TIPPER (DH-07-103) INTERLOCKS, RAISE DRUM, AND EMPTY CONTENTS ONTO SORTING TABLE					
Examine Drum Tipper Raise, Drum Lid/Delid Fixture Parked Interlock					
1	Unforce all LCU 102 registers using the Allen Bradley PLC Software. <i>see note pg 8-1</i>	Verify that all LCU 102 registers are unforced.	✓		moj R/W
2	Confirm that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed at OIU-12-103B. If a sub-menu is displayed, press the "MAIN MENU" button to return to the "LLW SORTING GLOVEBOX MAIN MENU".	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.	✓		moj R/W
3	Press the "DRUM TIPPER MENU" button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "DRUM TIPPER MENU" is displayed.	✓		moj R/W
4	Force LCU 102 register ZS728A not activated to simulate the "Drum Lid/Delid Fixture Not at Park/Relid Position" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS728A <u>0</u> <u>I:26/15</u>	Verify that register ZS728A is forced not activated. Verify that the forced register status is recorded.	✓ ✓		moj moj R/W
5	Press the "RAISE WITH GRAB CLOSED" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "RAISE WITH GRAB CLOSED" button has been pressed.	✓		moj R/W
6	Press the "RAISE TIPPER" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "RAISE TIPPER" button has been pressed.	✓		moj R/W
7	The "Drum Lid/Delid Fixture at Park/Relid Position" condition functions as an interlock for Drum Tipper Operation. Because this interlock is not satisfied, the Drum Tipper should not raise. Wait thirty (30) seconds.	Verify that the Drum Tipper does not raise during the waiting period.	✓ ✓		moj R/W
8	Unpark the left LLW Sorting Glovebox Waste Manipulator Arm (EM-07-101).	Verify that the Manipulator arm is not parked.	✓ ✓		moj R/W
9	Unforce LCU 102 register ZS728A. Record the unforced register status below: Unforced ZS728A Status: <u>1</u>	Verify that register ZS728A is unforced.	✓ ✓		moj R/W
10	The "Drum Lid/Delid Fixture in Park/Relid Position" switch (07-ZS-728A) should be activated, indicating that the Drum Tipper is parked.	Verify that the "Drum Lid/Delid Fixture in Park/Relid Position" position switch is activated.	✓ ✓		moj R/W

Forced PS 3950 (F:30/2) to 1 to allow testing to continue. See TE # 150

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Drum Tipper Raise Manipulator Parked Interlock					
11	Press the "RAISE WITH GRAB CLOSED" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "RAISE WITH GRAB CLOSED" button has been pressed.	✓		mg R/W
12	Press the "RAISE TIPPER" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "RAISE TIPPER" button has been pressed.	✓		mg R/W
13	The Manipulator Arms Parked condition functions as an interlock for Drum Tipper Operation. Because this interlock is not satisfied, the Drum Tipper should not raise. Wait thirty (30) seconds.	Verify that the Drum Tipper does not raise during the waiting period.	✓ ✓		mg R/W
14	Force LCU 102 register ZS725C not activated to simulate the "Transfer Car not at the Delid Position" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS725C 0 I: 27/17	Verify that register ZS725C is forced not activated. Verify that the forced register status is recorded.	✓ ✓		mg R/W
15	Place the LLW Sorting Glovebox Waste Manipulator (EM-07-101) at park position 2 (farthest from Bagless Transfer Port (DO-07-105) with both manipulator arms fully parked.	Verify that the waste manipulator is at park position 2 with both arms parked.	✓ ✓		mg R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Drum Tipper Raise, Transfer Car at Delid Position Interlock					
16	Press the "RAISE WITH GRAB CLOSED" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "RAISE WITH GRAB CLOSED" button has been pressed.	✓		mg RW
17	Press the "RAISE TIPPER" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "RAISE TIPPER" button has been pressed.	✓		mg RW
18	The Transfer Car at Delid Position condition functions as an interlock for Drum Tipper Operation. Because this interlock is not satisfied, the Drum Tipper should not raise.	Verify that the Drum Tipper does not raise.	✓		mg RW
19	Force LCU 102 register ZS332B activated to simulate the "Drum Tipper not Lowered" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS332B 1 I: 25/10	Verify that register ZS332B is forced activated. Verify that the forced register status is recorded.	✓ ✓		mg RW
20	Unforce LCU 102 register ZS725C. Record the unforced register status below: Unforced ZS725C Status: 1	Verify that register ZS725C is unforced.	✓ ✓ ✓		mg RW RW
21	The "Transfer Car at Delid Position" switch (07-ZS-725C) should be activated, indicating that the Transfer Car is at the Delid position.	Verify that the "Transfer Car at Delid Position" position switch is activated.	✓		mg RW

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)						
Examine Drum Tipper Raise, Drum Tipper Lowered Interlock											
22	Press the "RAISE WITH GRAB CLOSED" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "RAISE WITH GRAB CLOSED" button has been pressed.	✓ ✓		not PW						
23	Press the "RAISE TIPPER" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "RAISE TIPPER" button has been pressed.	✓ ✓		not PW						
24	The Drum Tipper Lowered condition functions as an interlock for Drum Tipper Operation. Because this interlock is not satisfied, the Drum Tipper should not raise.	Verify that the Drum Tipper does not raise.	✓ ✓		not PW						
25	Force LCU 102 register ZS333 not activated to simulate the "Drum Tipper Grab Not Vertical" condition. Record the forced register status below:	Verify that register ZS333 is forced not activated.			NA						
	<table><tr><th>Register</th><th>Forced Status</th><th>Method of Confirmation</th></tr><tr><td>ZS333</td><td>0</td><td>225 11/18/99</td></tr></table>	Register	Forced Status	Method of Confirmation	ZS333	0	225 11/18/99	Verify that the forced register status is recorded.		PW	11/18/99
Register	Forced Status	Method of Confirmation									
ZS333	0	225 11/18/99									
26	Unforce LCU 102 register ZS332B. Record the unforced register status below:	Verify that register ZS332B is unforced.	✓ ✓		not PW						
32	Unforced ZS332B Status: Lowered 0		✓ ✓		not PW						
27	The "Drum Tipper Vertical" position switch (07-ZS-332B) should not be activated, indicating that the Drum Tipper is lowered.	Verify that the "Drum Tipper Vertical" position switch is not activated.	✓ ✓		not PW						

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Drum Tipper Raise, Drum Tipper Grab Vertical Interlock					
28	Press the "RAISE WITH GRAB CLOSED" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "RAISE WITH GRAB CLOSED" button has been pressed.			N/A RN 2/18/99
29	Press the "RAISE TIPPER" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "RAISE TIPPER" button has been pressed.			N/A RN 2/18/99
30	The Drum Tipper Grab Vertical condition functions as an interlock for Drum Tipper Operation. Because this interlock is not satisfied, the Drum Tipper should not raise.	Verify that the Drum Tipper does not raise.			N/A RN 2/18/99
31	Force LCU 102 register ZS720A not activated to simulate the "Drum Tipper Grab Not Closed" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS720A 0 1:25/12	Verify that register ZS720A is forced not activated. Verify that the forced register status is recorded.	✓ ✓		no RV
32	Unforce LCU 102 register ZS333. Record the unforced register status below: Unforced ZS333 Status: _____	Verify that register ZS333 is unforced.			N/A RN 2/18/99
33	The "Drum Tipper Vertical" position switch (07-ZS-333) should be activated, indicating that the Drum Tipper Grab is Vertical.	Verify that the "Drum Tipper Vertical" position switch is activated.			N/A RN 2/18/99

#25, 28, 29, 30, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Drum Tipper Raise, Drum Tipper Grab Closed Interlock					
34	Press the "RAISE WITH GRAB CLOSED" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "RAISE WITH GRAB CLOSED" button has been pressed.	✓		mg ALW
35	Press the "RAISE TIPPER" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "RAISE TIPPER" button has been pressed.	✓		mg ALW
36	The Drum Tipper Grab Closed condition functions as an interlock for Drum Tipper Operation. Because this interlock is not satisfied, the Drum Tipper should not raise. Wait thirty (30) seconds.	Verify that the Drum Tipper does not raise during the waiting period.	✓ ✓		mg ALW
37	Force LCU 102 register ZS717C not activated to simulate the "Sorting Table Not Fully Retracted" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS717C 0 I:27/10	Verify that register ZS717C is forced not activated. Verify that the forced register status is recorded.	✓ ✓		mg ALW
38	Because the Sorting Table retracted position cannot be verified by the PCS, a "Sorting Table Retracted Not Verified" alarm should be generated. A flashing "SEQUENCE FAILED" message should be displayed on the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that a flashing "SEQUENCE FAILED" message is displayed.	✓ ✓		mg ALW
39	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Sorting Table Retracted Not Verified" alarm.	Verify that the alarm has been acknowledged.	✓ ✓		mg ALW
40	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "DRUM TIPPER MENU" is displayed.	✓		mg ALW
41	Unforce LCU 102 register ZS720A. Record the unforced register status below: Unforced ZS720A Status: 1	Verify that register ZS720A is unforced.	✓ ✓		mg ALW
42	The "Drum Tipper Drum Grab Closed" position switch (07-ZS-720A) should be activated, indicating that the Drum Tipper Grab is closed.	Verify that the "Drum Tipper Drum Grab Closed" position switch is activated.	✓ ✓		mg ALW

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Drum Tipper Raise, Sorting Table Fully Retracted Interlock					
43	Press the "RAISE WITH GRAB CLOSED" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "RAISE WITH GRAB CLOSED" button has been pressed.	✓		mg P/V
44	Press the "RAISE TIPPER" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "RAISE TIPPER" button has been pressed.	✓		mg P/V
45	The Sorting Table Fully Retracted condition functions as an interlock for Drum Tipper Operation. Because this interlock is not satisfied, the Drum Tipper should not raise.	Verify that the Drum Tipper does not raise.	✓		mg P/V
46	Force LCU 102 register ZS335 activated to simulate the "Drum Tipper Clutch Tripped" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS335 1 D: 25/14	Verify that register ZS335 is forced activated. Verify that the forced register status is recorded.	✓ ✓		mg P/V
47	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Drum Tipper Clutch Tripped" alarm.	Verify that the "Drum Tipper Clutch Tripped" alarm has been acknowledged.	✓		mg P/V
48	Unforce LCU 102 register ZS717C. Record the unforced register status below: Unforced ZS717C Status: 1	Verify that register ZS717C is unforced.	✓		mg P/V
49	Because position switch 07-ZS-717C should be activated, indicating that the Sorting Table is retracted, the "Sorting Table Retracted Not Verified" alarm should clear.	Verify that the alarm is cleared.	✓		mg P/V
50	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "DRUM TIPPER MENU" is displayed.	✓		mg P/V

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass	Fail	Witness (Initial)
Examine Drum Tipper Raise, Drum Tipper Clutch Not Tripped Interlock					
51	Press the "RAISE WITH GRAB CLOSED" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "RAISE WITH GRAB CLOSED" button has been pressed.	✓ ✓		mg R/W
52	Press the "RAISE TIPPER" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "RAISE TIPPER" button has been pressed.	✓ ✓		mg R/W
53	The "Drum Tipper Clutch Not Tripped" condition functions as an interlock for Drum Tipper Operation. Because this interlock is not satisfied, the Drum Tipper should not raise and a "Drum Tipper Clutch Tripped" alarm should be generated.	Verify that the Drum Tipper does not raise.	✓ ✓		mg R/W
54	Force LCU 102 registers ZS716A and ZS716B not activated to simulate the "Sorting Table Not Lowered" condition. Record the forced register status below: <div> <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> </div> <div> ZS716A 0 E-27/04 </div> <div> ZS716B 0 E-27/05 </div>	Verify that registers ZS716A and ZS716B are forced not activated. Verify that the forced register status is recorded.	✓ ✓ ✓ ✓		mg mg R/W
55	Press the "ALARMS" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "ALARMS" button has been pressed.	✓ ✓		mg R/W
56	The "LOCAL ALARMS" screen should be displayed.	Verify that the "LOCAL ALARMS" screen is displayed.	✓ ✓		mg R/W
57	Unforce LCU 102 register ZS335. Record the unforced register status below: Unforced ZS335 Status: 0	Verify that register ZS335 is unforced.	✓ ✓		mg R/W
58	Because position switch 07-ZS-335 should be activated, indicating that Drum Tipper clutch is not tripped, the "Drum Tipper Clutch Tripped" alarm should clear.	Verify that the "Drum Tipper Clutch Tripped" alarm is cleared.	✓ ✓		mg R/W
59	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "DRUM TIPPER MENU" is displayed.	✓ ✓		mg R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Drum Tipper Raise, Sorting Table Lowered Interlock					
60	Press the "RAISE WITH GRAB CLOSED" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "RAISE WITH GRAB CLOSED" button has been pressed.	✓ ✓		mg R/W
61	Press the "RAISE TIPPER" button from the "DRUM TIPPER MENU" at OIU-12-103B. The Drum Tipper should not raise.	Verify that the Drum Tipper does not raise.	✓ ✓		mg R/W
62	Unforce LCU 102 register ZS716A. Record the unforced register status below: Unforced ZS716A Status: <u>1</u>	Verify that register ZS716A is unforced.	✓ ✓		mg R/W
63	Press the "RAISE WITH GRAB CLOSED" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "RAISE WITH GRAB CLOSED" button has been pressed.	✓ ✓		mg R/W
64	Press the "RAISE TIPPER" button from the "DRUM TIPPER MENU" at OIU-12-103B. The Drum Tipper should not raise.	Verify that the Drum Tipper does not raise.	✓ ✓		mg R/W
65	Force LCU 102 register ZS716A not activated to simulate the "Sorting Table Not Lowered" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS716A <u>0</u> <u>I:27/4</u>	Verify that register ZS716A is forced not activated. Verify that the forced register status is recorded.	✓ ✓		mg R/W
66	Unforce LCU 102 register ZS716B. Record the unforced register status below: Unforced ZS716B Status: <u>1</u>	Verify that register ZS716B is unforced.	✓ ✓		mg R/W
67	Press the "RAISE WITH GRAB CLOSED" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "RAISE WITH GRAB CLOSED" button has been pressed.	✓ ✓		mg R/W
68	Press the "RAISE TIPPER" button from the "DRUM TIPPER MENU" at OIU-12-103B. The Drum Tipper should not raise.	Verify that the Drum Tipper does not raise.	✓ ✓		mg R/W
69	Unforce LCU 102 register ZS716A. Record the unforced register status below: Unforced ZS716A Status: <u>1</u>	Verify that register ZS716A is unforced.	✓ ✓		mg R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Raise Drum with Grab Closed					
70	Press the "RAISE WITH GRAB CLOSED" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "RAISE WITH GRAB CLOSED" button has been pressed.	✓	✓	mto R/W
71	The "RAISE WITH GRAB CLOSED IN PROGRESS..." message should be displayed on the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "RAISE WITH GRAB CLOSED IN PROGRESS..." message is displayed.	✓	✓	mto R/W
72	Press the "RAISE TIPPER" button from the "DRUM TIPPER MENU" at OIU-12-103B until the Drum Tipper is fully raised.	Verify that the Drum Tipper is fully raised.	✓	✓	mto R/W

~~72a Verify the Sorting Table moves to the Fully extended position.~~ ✓ R/W

~~72b Verify message "RAISE WITH GRAB CLOSED COMPLETE - ROTATE JOYSTICK ENABLED"~~ ✓ R/W

~~72c Verify Drum Tipper Joystick Enabled.~~ ✓ R/W

R/W 7/18/97

perform step 73
immediately after
step 72

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Sorting Table Extend, Sorting Table Lowered Interlock					
73	Force LCU 102 registers ZS716A and ZS716B not activated to simulate the "Sorting Table Not Lowered" condition. Record the forced register status below: <div> <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> </div> ZS716A <u>0</u> <u>F: 2714</u> ZS716B <u>0</u> <u>I: 2715</u>	Verify that registers ZS716A and ZS716B are forced not activated. Verify that the forced register status is recorded.	✓		AW
74	The Sorting Table Lowered condition functions as an interlock for Sorting Table operation. Because this interlock is not satisfied, the Drum Tipper "Raise with Grab Closed" sequence should pause and the Sorting Table should not extend. Wait thirty (30) seconds.	Verify that the Sorting Table does not extend during the waiting period.	✓		R/W
75	Unforce LCU 102 register ZS716B. Record the unforced register status below: Unforced ZS716B Status: <u>1</u>	Verify that register ZS716B is unforced.	✓		R/W
76	The "Sorting Table Lowered" position switch 07-ZS-716B should be activated, indicating that the Sorting Table is lowered.	Verify that "Sorting Table Lowered" position switch (07-ZS-716B) is activated.	✓		R/W
77	Because LCU 102 register ZS716A remains forced not activated, indicating that the Sorting Table is not lowered, the Sorting Table should not extend. Wait thirty (30) seconds.	Verify that the Sorting Table does not extend during the waiting period.	✓		R/W
78	Force LCU 102 register ZS716B not activated to simulate the "Sorting Table Not Lowered" condition. Record the forced register status below: <div> <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> </div> ZS716B <u>0</u> <u>I: 2715</u>	Verify that register ZS716B is forced not activated. Verify that the forced register status is recorded.	✓		R/W
79	Unforce LCU 102 register ZS716A. Record the unforced register status below: Unforced ZS716A Status: <u>1</u>	Verify that register ZS716A is unforced.	✓		R/W

AW 7/18/19
 Note: perform this step immediately after prior to step # 72.
 AW 7/18/19

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
80	The "Sorting Table Lowered" position switch (07-ZS-716A) should be activated, indicating that the Sorting Table is lowered.	Verify that "Sorting Table Lowered" position switch (07-ZS-716A) is activated.	✓		R/W
81	Because LCU 102 register ZS716B remains forced not activated, indicating that the Sorting Table is not lowered, the Sorting Table should not extend. Wait thirty (30) seconds.	Verify that the Sorting Table does not extend during the waiting period.	✓		R/W
82	Force LCU 102 register ZS717C not activated to simulate the "Sorting Table Not Fully Retracted" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS717C <u>0</u> <u>I: 27/10</u>	Verify that register ZS717C is forced not activated. Verify that the forced register status is recorded.	✓		R/W
83	Because the Sorting Table fully retracted position cannot be verified by the PCS, a "Sorting Table Retracted Not Verified" alarm should be generated. A flashing "SEQUENCE FAILED" message should be displayed on the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that a flashing "SEQUENCE FAILED" message is displayed.	✓		R/W
84	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Sorting Table Retracted Not Verified" alarm.	Verify that the alarm has been acknowledged.	✓		R/W
85	Unforce LCU 102 register ZS716B. Record the unforced register status below: Unforced ZS716B Status: <u>1</u>	Verify that register ZS716B is unforced.	✓		R/W
86	The "Sorting Table Lowered" position switch (07-ZS-716B) should be activated, indicating that the Sorting Table is lowered.	Verify that "Sorting Table Lowered" position switch (07-ZS-716B) is activated.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Sorting Table Extend, Sorting Table Retracted Interlock					
87	<p>The "Sorting Table Retracted" condition functions as an interlock for Sorting Table operation. Because this interlock is not satisfied, the Sorting Table should not extend.</p> <p>Wait thirty (30) seconds.</p>	Verify that the Sorting Table does not extend during the waiting period.	✓		P/W
88	<p>Force LCU 102 register ZS332A activated to simulate the Drum Tipper "Not Raised" condition. Record the forced register status below:</p> <p><u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u></p> <p>ZS332A <u>1</u> <u>F: 25/7</u></p>	<p>Verify that register ZS332A is forced activated.</p> <p>Verify that the forced register status is recorded.</p>	✓		P/W
89	<p>Unforce LCU 102 register ZS717C. Record the unforced register status below:</p> <p>Unforced ZS717C Status: <u>1</u></p>	Verify that register ZS717C is unforced.	✓		P/W
90	The "Sorting Table Fully Retracted" position switch (07-ZS-717C) should be activated, indicating that the Sorting Table is retracted.	Verify that the "Sorting Table Fully Retracted" position switch is activated.	✓		P/a

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Sorting Table Extend, Drum Tipper Raised Interlock					
91	<p>The Drum Tipper Raised condition functions as an interlock for Sorting Table Operation. Because this interlock is not satisfied, the Sorting Table should not extend.</p> <p>Wait thirty (30) seconds.</p>	<p>Verify that the Sorting Table does not extend during the waiting period.</p>	✓		R/W
92	<p>Force LCU 102 register ZS333 activated to simulate the "Drum Tipper Grab Not Vertical" condition. Record the forced register status below:</p> <p><u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u></p> <p>ZS333 <u>1</u> <u>F: 25/11</u></p>	<p>Verify that register ZS333 is forced activated.</p> <p>Verify that the forced register status is recorded.</p>	✓		R/W
93	<p>Unforce LCU 102 register ZS332A. Record the unforced register status below:</p> <p>Unforced ZS332A Status: <u>0</u></p>	<p>Verify that register ZS332A is unforced.</p>	✓		R/W
94	<p>The "Drum Grab/Tipper Raised" position switch (07-ZS-332A) should not be activated, indicating that the Drum Tipper is raised.</p>	<p>Verify that the "Drum Grab/Tipper Raised" position switch is not activated.</p>	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Sorting Table Extend, Drum Tipper Grab Vertical Interlock					
95	The Drum Tipper Grab Vertical condition functions as an interlock for Sorting Table Operation. Because this interlock is not satisfied, the Sorting Table should not extend. Wait thirty (30) seconds.	Verify that the Sorting Table does not extend during the waiting period.	✓		P/W
96	Force LCU 102 register ZS720A not activated to simulate the "Drum Tipper Grab Not Closed" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS720A <u>0</u> <u>I: 25/12</u>	Verify that register ZS720A is forced not activated. Verify that the forced register status is recorded.	✓		P/W
97	Unforce LCU 102 register ZS333. Record the unforced register status below: Unforced ZS333 Status: <u>0</u>	Verify that register ZS333 is unforced.	✓		P/W
98	The "Drum Tipper Vertical" position switch (07-ZS-333) should not be activated, indicating that the Drum Tipper Grab is Vertical.	Verify that the "Drum Tipper Vertical" position switch is not activated.	✓		P/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Sorting Table Extend, Drum Tipper Grab Closed Interlock					
99	The "Drum Tipper Grab Closed" condition functions as an interlock for Sorting Table Operation. Because this interlock is not satisfied, the Sorting Table should not extend. Wait thirty (30) seconds.	Verify that the Sorting Table does not extend during the waiting period.	✓		<i>RLW</i>
100	Place the LLW Sorting Glovebox Waste Manipulator (EM-07-101) approximately one foot from park position 2 (farthest from Bagless Transfer Port (DO-07-105)).	Verify that the waste manipulator is not parked.	✓		<i>RLW</i>
101	Unpark both of the LLW Sorting Glovebox Waste Manipulator (EM-07-101) arms.	Verify that the manipulator arms are not parked.	✓		<i>RLW</i>
102	Unforce LCU 102 register ZS720A. Record the unforced register status below: Unforced ZS720A Status: <u>1</u>	Verify that register ZS720A is unforced.	✓		<i>RLW</i>
103	The "Drum Tipper Grab Closed" position switch (07-ZS-720A) should be activated, indicating that the Drum Tipper Grab is Closed.	Verify that the "Drum Tipper Grab Closed" position switch is activated.	✓		<i>RLW</i>

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Sorting Table Extend; Manipulator Parked Interlock					
104	The "Manipulator Parked" condition functions as an interlock for Sorting Table Operation. Because this interlock is not satisfied, the Sorting Table should not extend. Wait thirty (30) seconds.	Verify that the Sorting Table does not extend during the waiting period.	✓		R/W
105	Park the left LLW Sorting Glovebox Waste Manipulator (EM-07-101) arm.	Verify that the left waste manipulator arm is parked.	✓		R/W
106	Because the LLW Glovebox Waste Manipulator (EM-07-101) and the right Manipulator arm is not parked, the "Raise with Grab Closed" sequence should not continue and the Sorting Table should not extend. Wait thirty (30) seconds.	Verify that the Sorting Table does not extend during the waiting period.	✓		R/W
107	Park the right LLW Sorting Glovebox Waste Manipulator (EM-07-101) arm.	Verify that the right waste manipulator arm is parked.	✓		R/W
108	Because the LLW Glovebox Waste Manipulator (EM-07-101) is not parked, the "Raise with Grab Closed" sequence should not continue and the Sorting Table should not extend. Wait thirty (30) seconds.	Verify that the Sorting Table does not extend during the waiting period.	✓		R/W
109	Force LCU 102 register ZS717A not activated to simulate the "Sorting Table Not Fully Extended" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS717A 0 F: 27106	Verify that register ZS717A is forced not activated. Verify that the forced register status is recorded.	✓		R/W
110	Place the LLW Sorting Glovebox Waste Manipulator (EM-07-101) at Parked Position #2, farthest from the Bagless Transfer Port, with both Manipulator arms parked.	Verify that the Manipulator is at Parked Position #2 with both Manipulator arms parked.	✓		R/W
111	The PCS should energize the Sorting Table Extend solenoid 07-FEV-737B/F (Forward) to extend the Sorting Table to its fully extended position.	Verify that the Sorting Table is fully extended.	✓		R/W
112	The "Sorting Table Fully Forward" position switch (07-ZS-717A) should be activated, indicating that the Sorting Table is extended.	Verify that the "Sorting Table Fully Forward" position switch is activated.	✓		R/W

step perform passed R/W 7/18/99

7/18/99

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Extend Sorting Table and Examine "Sorting Table Failed to Move to Fully Forward Position" Alarm					
113	Because LCU 102 register ZS717A is forced not activated, the "RAISE WITH GRAB CLOSED COMPLETE -- ROTATION JOYSTICK ENABLED" message should not be displayed on the "DRUM TIPPER MENU" at OIU-12-103B, and a "Sorting Table Failed to Move to Fully Forward Position" alarm should be generated.	Verify that the "RAISE WITH GRAB CLOSED COMPLETE -- ROTATION JOYSTICK ENABLED" message is not displayed.	✓		RLW
114	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Sorting Table Failed to Move to Fully Forward Position" alarm.	Verify that the alarm has been acknowledged.	✓		RLW
115	Unforce LCU 102 register ZS717A. Record the unforced register status below: Unforced ZS717A Status: <u> / </u>	Verify that register ZS717A is unforced.	✓		RLW
116	Because position switch 07-ZS-717A should be activated, indicating that the Sorting Table is extended, the "Sorting Table Failed to Move to Fully Forward Position" alarm should clear.	Verify that the alarm is cleared.	✓		RLW
117	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "DRUM TIPPER MENU" is displayed.	✓		RLW

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine "Sorting Table Forward Position Not Verified" Alarm					
118	Force LCU 102 register ZS717A not activated to simulate the "Sorting Table Not Fully Extended" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS717A <u>0</u> <u>F.27106</u>	Verify that register ZS717A is forced not activated. Verify that the forced register status is recorded.	✓		R/W
119	Because the Sorting Table at forward position cannot be verified by the PCS, a "Sorting Table at Forward Position Not Verified" alarm should be generated. A flashing "SEQUENCE FAILED" message should be displayed on the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that a flashing "SEQUENCE FAILED" message is displayed.	✓		R/W
120	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Sorting Table at Forward Position Not Verified" alarm.	Verify that the alarm has been acknowledged.	✓		R/W
121	Unforce LCU 102 register ZS717A. Record the unforced register status below: Unforced ZS717A Status: <u>1</u>	Verify that register ZS717A is unforced.	✓		R/W
122	Because position switch 07-ZS-717A be activated, indicating that the Sorting Table is extended, the "Sorting Table at Forward Position Not Verified" alarm should clear.	Verify that the alarm is cleared.	✓		R/W
123	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "DRUM TIPPER MENU" is displayed.	✓		R/W

#112,

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Rotate Drum Using Drum Tipper					
124	The "RAISE WITH GRAB CLOSED COMPLETE - ROTATION JOYSTICK ENABLED" message should be displayed on the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "RAISE WITH GRAB CLOSED COMPLETE - ROTATION JOYSTICK ENABLED" message is displayed.	✓		R/W
125	After successful conclusion of the "Raise with Grab Closed" sequence, the PCS should provide output 07-FEV-397/P (Permissive) to enable the Drum Tipper Joystick control.	Verify that the Drum Tipper Joystick control is enabled.	✓		R/W
126	Use the Drum Tipper joystick control to rotate the Drum Tipper with drum as far counter-clockwise as possible. Record below the extent of Drum Tipper counter-clockwise travel: <u>180°</u>	Verify that the drum is fully rotated counterclockwise. Verify that the extent of counter-clockwise travel is recorded.	✓		R/W
127	Use the Drum Tipper joystick control to rotate the Drum Tipper so that the drum is in a vertical position.	Verify that the drum is rotated vertical.	✓		R/W
128	The "TIPPER AT VERTICAL" message should be displayed on the "DRUM TIPPER MENU" at OIU-12-103B when the drum is in the vertical position.	Verify that the "TIPPER AT VERTICAL" message is displayed.	✓		R/W
129	Use the Drum Tipper joystick control to rotate the Drum Tipper with drum as far clockwise as possible. Record below the extent of Drum Tipper clockwise travel: <u>180°</u>	Verify that the drum is fully rotated clockwise. Verify that the extent of clockwise travel is recorded.	✓		R/W
130	Use the Drum Tipper joystick control to rotate the Drum Tipper so that the drum is in a vertical position.	Verify that the drum is rotated vertical.	✓		R/W
131	The "TIPPER AT VERTICAL" message should be displayed on the "DRUM TIPPER MENU" at OIU-12-103B when the drum is in the vertical position.	Verify that the "TIPPER AT VERTICAL" message is displayed.	✓		R/W
TEST CASE 13031A-85-19 COMPLETE					

TEST CASE 13031A-85.20 EXAMINE LLW SORTING GLOVEBOX DRUM TIPPER (DH-07-103) INTERLOCKS AND LOWER DRUM WITH GRAB CLOSED	20-2
Examine Sorting Table Retract, Sorting Table Lowered Interlock	20-2
Examine Sorting Table Retract, Sorting Table Extended Interlock	20-4
Examine Sorting Table Retract, Drum Tipper Raised Interlock	20-5
Examine Sorting Table Retract, Drum Tipper Grab Vertical Interlock	20-6
Examine Sorting Table Retract, Drum Tipper Grab Closed Interlock	20-7
Examine Sorting Table Retract, Manipulator Parked Interlock	20-8
Examine "Sorting Table Retracted Not Verified" Alarm	20-9
Examine Drum Tipper Lower, Transfer Car at Delid Position Interlock	20-10
Examine Drum Tipper Lower, Drum Tipper Raised Interlock	20-11
Examine Drum Tipper Lower, Drum Tipper Grab Vertical Interlock	20-12
Examine Drum Tipper Lower, Drum Tipper Grab Close Interlock	20-13
Examine Drum Tipper Lower, Sorting Table Fully Retracted Interlock	20-14
Examine Drum Tipper Lower, Drum Tipper Clutch Not Tripped Interlock	20-15
Lower Drum with Grab Closed Using Drum Tipper	20-16

Retested 7-22-97 not

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.20 EXAMINE LLW SORTING GLOVEBOX DRUM TIPPER (DH-07-103) INTERLOCKS AND LOWER DRUM WITH GRAB CLOSED					
Examine Sorting Table Retract, Sorting Table Lowered Interlock					
1	Unforce all LCU 102 registers using the Allen Bradley PLC Software. <i>See Page 8-1</i>	Verify that all LCU 102 registers are unforced.	✓		<i>not R/W</i>
2	Confirm that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed at OIU-12-103B. If a sub-menu is displayed, press the "MAIN MENU" button to return to the "LLW SORTING GLOVEBOX MAIN MENU".	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.	✓		<i>not R/W</i>
3	Press the "DRUM TIPPER MENU" button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "DRUM TIPPER MENU" is displayed.	✓		<i>not R/W</i>
4	Force LCU 102 registers ZS716A and ZS716B not activated to simulate the Sorting Table Not Lowered condition. Record the forced register status below: <div style="display: flex; justify-content: space-around;"> <div> <u>Register</u> ZS716A <u>0</u> ZS716B <u>0</u> </div> <div> <u>Forced Status</u> </div> <div> <u>Method of Confirmation</u> I: 2714 I: 2715 </div> </div>	Verify that registers ZS716A and ZS716B are forced not activated. Verify that the forced register status is recorded.	✓ ✓		<i>not R/W</i>
5	Press the "LOWER WITH GRAB CLOSED" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "LOWER WITH GRAB CLOSED" button has been pressed.	✓		<i>not R/W</i>
6	The Sorting Table Lowered condition functions as an interlock for the "Lower With Grab Closed" sequence. Because this interlock is not satisfied, the Drum Tipper "Lower With Grab Closed" sequence should stop and the Sorting Table should not retract. Wait thirty (30) seconds.	Verify that the Sorting Table does not retract during the waiting period.	✓ ✓		<i>not R/W</i>
7	Unforce LCU 102 register ZS716B. Record the unforced register status below: Unforced ZS716B Status: <u>1</u>	Verify that register ZS716B is unforced.	✓ ✓		<i>not R/W</i>
8	The "Sorting Table Lowered" position switch 07-ZS-716B should be activated, indicating that the Sorting Table is lowered.	Verify that the "Sorting Table Lowered" position switch (07-ZS-716B) is activated.	✓ ✓		<i>not R/W</i>
9	Because the register ZS716A remains forced not activated, indicating that the Sorting Table is not lowered, the Sorting Table should not retract. Wait thirty (30) seconds.	Verify that the Sorting Table does not retract during the waiting period.	✓ ✓		<i>not R/W</i>

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
10	Force LCU 102 register ZS716B not activated to simulate the "Sorting Table Not Lowered" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS716B <u>0</u> <u>I: 27105</u>	Verify that register ZS716B is forced not activated. Verify that the forced register status is recorded.	✓ ✓		mg R/W
11	Unforce LCU 102 register ZS716A. Record the unforced register status below: Unforced ZS716A Status: <u>1</u>	Verify that register ZS716A is unforced.	✓ ✓		mg R/W
12	The "Sorting Table Lowered" position switch 07-ZS-716A should be activated, indicating that the Sorting Table is lowered.	Verify that the "Sorting Table Lowered" position switch (07-ZS-716A) is activated.	✓ ✓		mg R/W
13	Because register ZS716B remains forced not activated, indicating that the Sorting Table is not lowered, the Sorting Table should not retract. Wait thirty (30) seconds.	Verify that the Sorting Table does not retract during the waiting period.	✓ ✓		mg R/W
14	Force LCU 102 register ZS717A not activated to simulate the "Sorting Table Not Fully Extended" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS717A <u>0</u> <u>I: 27106</u>	Verify that register ZS717A is forced not activated. Verify that the forced register status is recorded.	✓ ✓		mg R/W
15	Unforce LCU 102 register ZS716B. Record the unforced register status below: Unforced ZS716B Status: <u>1</u>	Verify that register ZS716B is unforced.	✓ ✓		mg R/W
16	The "Sorting Table Lowered" position switch 07-ZS-716B should be activated, indicating that the Sorting Table is lowered.	Verify that the "Sorting Table Lowered" position switch (07-ZS-716B) is activated.	✓ ✓		mg R/W

12A - SAME AS STEP 5.

✓

R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Sorting Table Retract, Sorting Table Extended Interlock					
17	Because the "Sorting Table at Forward Position" condition cannot be verified by the PCS, a "Sorting Table at Forward Position Not Verified" alarm should be generated. A flashing "SEQUENCE FAILED" message should be displayed on the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that a flashing "SEQUENCE FAILED" message is displayed.	✓ ✓		mg RW
18	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Sorting Table at Forward Position Not Verified" alarm.	Verify that the alarm has been acknowledged.	✓ ✓		mg RW
19	The Sorting Table Extended condition functions as an interlock for the "Lower With Grab Closed" sequence. Because this interlock is not satisfied, the Sorting Table should not retract. Wait thirty (30) seconds.	Verify that the Sorting Table does not retract during the waiting period.	✓ ✓		mg RW
20	Force LCU 102 register ZS332A activated to simulate the "Drum Tipper Not Raised" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS332A 1 F: 25/07	Verify that register ZS332A is forced activated. Verify that the forced register status is recorded.	✓ ✓		RW
21	Unforce LCU 102 register ZS717A. Record the unforced register status below: Unforced ZS717A Status: 1	Verify that register ZS717A is unforced.	✓ ✓		RW
22	Because the "Sorting Table Fully Forward" position switch (07-ZS-717A) should be activated, indicating that the Sorting Table is fully extended, the "Sorting Table at Forward Position Not Verified" alarm should clear.	Verify that the alarm has cleared.	✓ ✓		RW
23	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "DRUM TIPPER MENU" is displayed.	✓ ✓		RW

23A - SAME, AS STEP 5

✓ RW

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Sorting Table Retract, Drum Tipper Raised Interlock					
24	The "Drum Tipper Raised" condition functions as an interlock for the "Lower With Grab Closed" sequence. Because this interlock is not satisfied, the Sorting Table should not retract. Wait thirty (30) seconds.	Verify that the Sorting Table does not retract during the waiting period.	✓	✓	mf R/W
25	Force LCU 102 register ZS333 activated to simulate the "Drum Tipper Grab Not Vertical" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS333 <u>1</u> <u>I, 25/11</u>	Verify that register ZS333 is forced activated. Verify that the forced register status is recorded.	✓ ✓		mf R/W
26	Unforce LCU 102 register ZS332A. Record the unforced register status below: Unforced ZS332A Status: <u>0</u>	Verify that register ZS332A is unforced.	✓		mf R/W
27	The "Drum Grab/Tipper Raised" position switch (07-ZS-332A) should not be activated, indicating that the Drum Tipper is raised.	Verify that the "Drum Grab/Tipper Raised" position switch is not activated.	✓		mf R/W

#24 Sorting Table retracts - see TE #156
Retested SAT R/W 9/9/97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Sorting Table Retract, Drum Tipper Grab Vertical Interlock					
28	The "Drum Tipper Grab Vertical" condition functions as an interlock for the "Lower With Grab Closed" sequence. cause this interlock is not satisfied, the Sorting Table should not retract. Wait thirty (30) seconds.	Verify that the Sorting Table does not retract during the waiting period.	✓	✓	MD RW
29	Force LCU 102 register ZS720A not activated to simulate the "Drum Tipper Grab Not Closed" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS720A 0 F: 25112	Verify that register ZS720A is forced not activated. Verify that the forced register status is recorded.	✓		RW
30	Unforce LCU 102 register ZS333. Record the unforced register status below: Unforced ZS333 Status: 0	Verify that register ZS333 is unforced.	✓		RW
31	The "Drum Tipper Vertical" position switch (07-ZS-333) should not be activated, indicating that the Drum Tipper Grab is Vertical.	Verify that the "Drum Tipper Vertical" position switch is not activated.	✓		RW

#28 Sorting table retracts

See TE #156 - Retested SAT A/W 9/9/97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Sorting Table Retract, Drum Tipper Grab Closed Interlock					
32	The Drum Tipper Grab Closed condition functions as an interlock for the "Lower With Grab Closed" sequence. Because this interlock is not satisfied, the Sorting Table should not retract. Wait thirty (30) seconds.	Verify that the Sorting Table does not retract during the waiting period.	✓ ✓	✓ ✓	mg RW
33	Place the LLW Sorting Glovebox Waste Manipulator (EM-07-101) approximately one foot from park position 2 (farthest from Bagless Transfer Port (DO-07-105).	Verify that the waste manipulator is not parked.	✓	✓	mg RW
34	Unpark both of the LLW Sorting Glovebox Waste Manipulator (EM-07-101) arms.	Verify that the manipulator arms are not parked.	✓	✓	mg RW
35	Unforce LCU 102 register ZS720A. Record the unforced register status below: Unforced ZS720A Status: <u>1</u>	Verify that register ZS720A is unforced.	✓	✓	mg RW
36	The "Drum Tipper Drum Grab Closed" position switch (07-ZS-720A) should be activated, indicating that the Drum Tipper Grab is closed.	Verify that the "Drum Tipper Drum Grab Closed" position switch is activated.	✓	✓	mg RW

1255
mg
9-8-97

#32 Sorting Table already retracted, re-extended
#33 Both ZS 715A, B forced off, 0.

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Sorting Table Retract, Manipulator Parked Interlock					
37	The "Manipulator Parked" condition functions as an interlock for Sorting Table Operation. Because this interlock is not satisfied, the Sorting Table should not retract. Wait thirty (30) seconds.	Verify that the Sorting Table does not retract during the waiting period.	✓ ✓		mgj RW
38	Park the left LLW Sorting Glovebox Waste Manipulator (EM-07-101) arm. <i>I:22/02 Forced "on"</i>	Verify that the left waste manipulator arm is parked.	✓		mgj RW
39	Press the "LOWER WITH GRAB CLOSED" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "LOWER WITH GRAB CLOSED" button has been pressed.	✓		mgj RW
40	Because the LLW Glovebox Waste Manipulator (EM-07-101) and the right Manipulator arm is not parked, the "Lower with Grab Closed" sequence should not continue and the Sorting Table should not retract. Wait thirty (30) seconds.	Verify that the Sorting Table does not retract during the waiting period.	✓ ✓		mgj RW
41	Park the right LLW Sorting Glovebox Waste Manipulator (EM-07-101) arm. <i>I:26/01 Forced On</i>	Verify that the right waste manipulator arm is parked.	✓		mgj RW
42	Press the "LOWER WITH GRAB CLOSED" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "LOWER WITH GRAB CLOSED" button has been pressed.	✓		mgj RW
43	Because the LLW Glovebox Waste Manipulator (EM-07-101) is not parked, the "Lower with Grab Closed" sequence should not continue and the Sorting Table should not retract. Wait thirty (30) seconds.	Verify that the Sorting Table does not retract during the waiting period.	✓	✓	mgj RW
44	Place the manipulator at Parked Position #2, farthest from the Bagless Transfer Port, with both Manipulator arms parked. <i>I:27/15 Forced "on"</i>	Verify that the Manipulator is at Parked Position #2 with both Manipulator arms parked.	✓		mgj RW
45	Press the "LOWER WITH GRAB CLOSED" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "LOWER WITH GRAB CLOSED" button has been pressed.	✓		mgj RW
46	The PCS should energize the Sorting Table extend/retract solenoid 07-FEV-737B/R (Retract) and the Sorting Table should retract to its fully retracted position.	Verify that the Sorting Table is fully retracted.	✓		mgj RW
47	The "Sorting Table Fully Retracted" position switch (07-ZS-717C) should be activated, indicating that the Sorting Table is retracted.	Verify that the "Sorting Table Fully Retracted" position switch is activated.	✓		mgj RW

#37 Test Exaption - For Lower w/ grab closed see note pg 20-2, interlock for sort table transition manipulator translated Parked removed, see TEST #152

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine "Sorting Table Retracted Not Verified" Alarm					
48	Force LCU 102 register ZS717C not activated to simulate the "Sorting Table Not Fully Retracted" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS717C <u>0</u> <u>I: 27/10</u>	Verify that register ZS717C is forced not activated. Verify that the forced register status is recorded.	✓ ✓		mg R/W
49	Because the Sorting Table fully retracted position cannot be verified by the PCS, a "Sorting Table Retracted Not Verified" alarm should be generated. A flashing "SEQUENCE FAILED" message should be displayed on the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that a flashing "SEQUENCE FAILED" message is displayed.	✓ ✓		mg R/W
50	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Sorting Table Retracted Not Verified" alarm.	Verify that the alarm has been acknowledged.	✓ ✓		mg R/W
51	Unforce LCU 102 register ZS717C. Record the unforced register status below: Unforced ZS717C Status: <u>1</u>	Verify that register ZS717C is unforced.	✓ ✓		mg R/W
52	Force LCU 102 register ZS725C not activated to simulate the "Transfer Car not at the Delid Position" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS725C <u>0</u> <u>I: 27/10</u>	Verify that register ZS725C is forced not activated. Verify that the forced register status is recorded.	✓ ✓		mg mg R/W
53	Because position switch 07-ZS-717C should be activated, indicating that Sorting Table is retracted, the "Sorting Table Retracted Not Verified" alarm should clear.	Verify that the alarm is cleared.	✓ ✓		mg R/W
54	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "DRUM TIPPER MENU" is displayed.	✓ ✓		mg R/W
55	The "LOWER WITH GRAB CLOSED IN PROGRESS..." message should be displayed on the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "LOWER WITH GRAB CLOSED IN PROGRESS..." message is displayed.	✓ ✓		mg R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass	Fail	Witness (initial)
Examine Drum Tipper Lower, Transfer Car at Delid Position Interlock					
56	Press the "LOWER TIPPER" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "LOWER TIPPER" button has been pressed.	✓	✓	mgj
57	The Transfer Car at Delid Position condition functions as an interlock for Drum Tipper Operation. Because this interlock is not satisfied, The Drum Tipper should not lower.	Verify that the Drum Tipper does not lower during the waiting period.	✓	✓	mgj
* 58	Wait thirty (30) seconds.			✓	mgj
58	Force LCU 102 register ZS332A activated to simulate the "Drum Tipper Not Lowered" condition. Record the forced register status below: <i>RAISED mod 7-22-97</i>	Verify that register ZS332A is forced activated. <i>mod 7-22-97</i>	✓		mgj
	Register: <u>ZS332A</u> Forced Status: <u>1</u> Method of Confirmation: <u>12517</u>	Verify that the forced register status is recorded.	✓		mgj
59	Unforce LCU 102 register ZS725C. Record the unforced register status below: Unforced ZS725C Status: _____	Verify that register ZS725C is unforced.	✓		mgj
60	The "Transfer Car at Delid Position" switch (07-ZS-725C) should be activated, indicating that the Transfer Car is at the Delid position.	Verify that the "Transfer Car at Delid Position" position switch is activated.	✓		mgj

~~#59 ECN 1245 not implemented - this step incorrect~~
 * see TEST # 156 dlv 9/9/97
 Step passed

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)					
Examine Drum Tipper Lower, Drum Tipper Raised Interlock										
61	Press the "LOWER TIPPER" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "LOWER TIPPER" button has been pressed.	✓		mg					
62	The Drum Tipper Raised condition functions as an interlock for Drum Tipper Operation. Because this interlock is not satisfied, the Drum Tipper should not lower. Wait thirty (30) seconds.	Verify that the Drum Tipper does not lower during the waiting period.	✓		mg					
63	Force LCU register ZS333 activated to simulate the "Drum Tipper Grab Not Vertical" condition. Record the forced register status below: <table><tr><td>Register</td><td>Forced Status</td><td>Method of Confirmation</td></tr><tr><td>ZS333</td><td>1</td><td>I-25/11</td></tr></table>	Register	Forced Status	Method of Confirmation	ZS333	1	I-25/11	Verify that register ZS333 is forced activated. Verify that the forced register status is recorded.	✓ ✓	mg mg
Register	Forced Status	Method of Confirmation								
ZS333	1	I-25/11								
64	Unforce LCU 102 register ZS332B. Record the unforced register status below: Unforced ZS332B Status: <u>ok</u>	Verify that register ZS332B is unforced.	✓		mg					

#62 Initially, tipper does lower. N41:073, N41:010, bits - added un'atch when in maintenance mode. Retested Sat. mpe 7-22-98.

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Drum Tipper Lower, Drum Tipper Grab Vertical Interlock					
65	Press the "LOWER TIPPER" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "LOWER TIPPER" button has been pressed.	✓		mg
66	The Drum Tipper Grab Vertical condition functions as an interlock for Drum Tipper Operation. Because this interlock is not satisfied, The Drum Tipper should not lower. Wait thirty (30) seconds.	Verify that the Drum Tipper does not lower during the waiting period.	✓		mg
67	Force LCU 102 register ZS720A not activated to simulate the "Drum Tipper Grab Not Closed" condition. Record the forced register status below: <div> <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS720A <u>0</u> <u>T:25/12</u> </div>	Verify that register ZS720A is forced not activated. Verify that the forced register status is recorded.	✓		mg
68	Unforce LCU 102 register ZS333. Record the unforced register status below: Unforced ZS333 Status: <u>0</u>	Verify that register ZS333 is unforced.	✓		mg
69	The "Drum Tipper Vertical" position switch (07-ZS-333) should not be activated, indicating that the Drum Tipper Grab is Vertical.	Verify that the "Drum Tipper Vertical" position switch is not activated.	✓		mg

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Drum Tipper Lower, Drum Tipper Grab Closed Interlock					
70	Press the "LOWER TIPPER" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "LOWER TIPPER" button has been pressed.	✓		mg
71	The Drum Tipper Grab Closed condition functions as an interlock for Drum Tipper Operation. Because this interlock is not satisfied, The Drum Tipper should not lower. Wait thirty (30) seconds.	Verify that the Drum Tipper does not lower during the waiting period.	✓		mg
72	Force LCU 102 register ZS717C not activated to simulate the "Sorting Table Not Fully Retracted" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS717C <u>0</u> <u>I: 27/10</u>	Verify that register ZS717C is forced not activated. Verify that the forced register status is recorded.	✓ ✓		mg mg
73	Because the Sorting Table fully retracted position cannot be verified by the PCS, a "Sorting Table Retracted Not Verified" alarm should be generated. A flashing "SEQUENCE FAILED" message should be displayed on the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that a flashing "SEQUENCE FAILED" message is displayed.	✓		mg
74	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Sorting Table Retracted Not Verified" alarm.	Verify that the alarm has been acknowledged.	✓		mg
75	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "DRUM TIPPER MENU" is displayed.	✓		mg
76	Unforce LCU 102 register ZS720A. Record the unforced register status below: Unforced ZS720A Status: <u>1</u>	Verify that register ZS720A is unforced.	✓		mg
77	The "Drum Tipper Drum Grab Closed" position switch (07-ZS-720A) should be activated, indicating that the Drum Tipper Grab is closed.	Verify that the "Drum Tipper Drum Grab Closed" position switch is activated.	✓		mg

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Drum Tipper Lower, Sorting Table Fully Retracted Interlock					
78	Press the "LOWER TIPPER" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "LOWER TIPPER" button has been pressed.	✓		mrg
79	The "Sorting Table Fully Retracted" condition functions as an interlock for Drum Tipper Operation. Because this interlock is not satisfied, The Drum Tipper should not lower. Wait thirty (30) seconds.	Verify that the Drum Tipper does not lower during the waiting period.	✓		mrg
80	Force LCU 102 register ZS335 activated to simulate the "Drum Tipper Clutch Tripped" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS335 <u>1</u> <u>I-25/14</u>	Verify that register ZS335 is forced activated. Verify that the forced register status is recorded.	✓ ✓		mrg mrg
81	Press the "ALARMS" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "ALARMS" button has been pressed.	✓		mrg
82	The "LOCAL ALARMS" screen should be displayed.	Verify that the "LOCAL ALARMS" screen is displayed.	✓		mrg
83	Unforce LCU 102 register ZS717C. Record the unforced register status below: Unforced ZS717C Status: <u>1</u>	Verify that register ZS717C is unforced.	✓		mrg
84	Because position switch 07-ZS-717C should be activated, indicating that Sorting Table is retracted, the "Sorting Table Retracted Not Verified" alarm should clear.	Verify that the alarm is cleared.	✓		mrg
85	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "DRUM TIPPER MENU" is displayed.	✓		mrg

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Drum Tipper Lower, Drum Tipper Clutch Not Tripped Interlock					
86	Press the "LOWER TIPPER" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "LOWER TIPPER" button has been pressed.	✓		mf
87	The "Drum Tipper Clutch Not Tripped" condition functions as an interlock for Drum Tipper Operation. Because this interlock is not satisfied, the Drum Tipper should not lower and a "Drum Tipper Clutch Tripped" alarm should be generated. Wait thirty (30) seconds.	Verify that the Drum Tipper does not lower during the waiting period.	✓		mf
88	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Drum Tipper Clutch Tripped" alarm.	Verify that the alarm has been acknowledged.	✓		mf
89	Unforce LCU 102 register ZS335. Record the unforced register status below: Unforced ZS335 Status: <u>6</u>	Verify that register ZS335 is unforced.	✓		mf
90	Because position switch 07-ZS-335 should not be activated, indicating that Drum Tipper clutch is not tripped, the "Drum Tipper Clutch Tripped" alarm should clear.	Verify that the "Drum Tipper Clutch Tripped" alarm is cleared.	✓		mf
91	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "DRUM TIPPER MENU" is displayed.	✓		mf

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Lower Drum With Grab Closed Using Drum Tipper					
92	Press the "LOWER TIPPER" button from the "DRUM TIPPER MENU" at OIU-12-103B until the Drum Tipper is fully lowered.	Verify that the Drum Tipper is fully lowered.	✓		mrj
93	The "Drum Grab/Tipper Lowered" position switch (07-ZS-332B) should be activated, indicating that the Drum Tipper is fully lowered.	Verify that the "Drum Grab/Tipper Lowered" position switch is activated.	✓		mrj
94	The "LOWER WITH GRAB CLOSED COMPLETE" message should be displayed on the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "LOWER WITH GRAB CLOSED COMPLETE" message is displayed.	✓		mrj
TEST CASE 13031A-85.20 COMPLETE					

TEST CASE 13031A-85.21 EXAMINE LLW SORTING G.B. PACKET X-RAY (ND-07-101) INTERLOCKS AND ALARMS AND TAKE PACKET X-RAY	21-2
Examine Packet X-Ray "Packet Door Failed to Open" Alarm	21-2
Examine Packet X-Ray Tray Failed to Retract Interlock	21-4
Examine Packet X-Ray "Packet X-Ray Door Failed to Close" Alarm	21-5
Enable Packet X-Ray and Take Packet X-Ray (Simulated)	21-6
Remove Packet from Packet X-Ray, Affix Bar Code Label, and Place Packet on Transfer Stand	21-7
Retract Tray and Close Packet X-Ray Door	21-8

Retested 7-21-97 4:28 PM after X-Ray Rec charges made.

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
TEST CASE 13031A-85.21 EXAMINE LLW SORTING G.B. PACKET X-RAY (ND-07-101) INTERLOCKS AND ALARMS AND TAKE PACKET X-RAY					
Examine Packet X-Ray "Packet Door Failed to Open" Alarm					
1	Unforce all LCU 102 registers using the Allen Bradley PLC Software. <i>See pg 8-1</i>	Verify that all LCU 102 registers are unforced.	✓		<i>mrg PIA</i>
2	The Packet X-Ray door should be closed.	Verify that the Packet X-Ray door is closed.	✓		<i>mrg AC</i>
3	The Packet X-Ray Door Not Closed switch (07-ZS-334B) should be activated, indicating that the Packet X-Ray Door is closed.	Verify that switch 07-ZS-334B is activated.	✓		<i>mrg</i>
4	Confirm that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed at OIU-12-103B. If a sub-menu is displayed, press the "MAIN MENU" button to return to the "LLW SORTING GLOVEBOX MAIN MENU".	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.	✓		<i>mrg</i>
5	Press the "PACKET X-RAY MENU" button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B. <i>not R/W 9/18/97</i>	Verify that the "PACKET X-RAY MENU" is displayed.	✓		<i>mrg</i>
6	Force LCU 102 register ZS334A activated to simulate the "Packet X-Ray Door Not Open" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS334A <u>0</u> <u>I: 25/15</u>	Verify that register ZS334A is forced <i>not</i> activated. <i>not R/W 9/18/97</i> Verify that the forced register status is recorded.	✓ ✓		<i>mrg</i>
7	Press the "OPEN PACKET X-RAY " button from the "PACKET X-RAY MENU" at OIU-12-103B. <i>Door 7-21-97</i>	Verify that the "OPEN PACKET X-RAY " button has been pressed. <i>Door 7-21-97</i>	✓		<i>mrg</i>
8	The "PACKET X-RAY OPENING..." message should be displayed on the "PACKET X-RAY MENU" at OIU-12-103B. <i>7-21-97 mrg</i>	Verify that the "PACKET X-RAY DOOR OPENING..." message is displayed. <i>7-21-97</i>	✓		<i>mrg</i>
9	The PCS should pulse energize the Packet X-Ray Door forward/reverse solenoid 07-FEV-737H/F (Forward) to smoothly open the packet door.	Verify that the Packet X-Ray Door is open.	✓		<i>mrg</i>
10	Because register ZS334A remains forced activated, the "Open Packet X-Ray" sequence should not be considered successful. The "PACKET X-RAY OPEN" message should not be displayed on the "PACKET X-RAY MENU" at OIU-12-103B, and a "Packet X-Ray Door Failed to Open" alarm should be generated.	Verify that the "PACKET X-RAY OPEN" message is not displayed. <i>Door 7-21-97</i>	✓		<i>mrg</i>
11	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Packet X-ray Door Failed to Open" alarm.	Verify that the alarm has been acknowledged.	✓		<i>mrg</i>

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
12	Unforce LCU 102 register ZS334A. Record the unforced register status below: Unforced ZS334A Status: <u>1</u>	Verify that register ZS334A is unforced.	✓		mg RW
13	Because position switch 07-ZS-334A should not be activated, indicating that the Packet X-Ray Door is open, the "Packet X-Ray Door Failed to Open" alarm should clear.	Verify that the alarm is cleared.	✓		mg RW
14	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "PACKET X-RAY MENU" at OIU-12-103B.	Verify that the "PACKET X-RAY MENU" is displayed.	✓		mg RW
15	Because the Packet X-Ray Door is completely open, the "PACKET X-RAY DOOR OPENING..." message should be displayed on the "PACKET X-RAY MENU" at OIU-12-103B. <i>msg 7-21-97</i>	Verify that the "PACKET X-RAY DOOR OPENING..." message is displayed. <i>DOOR OPEN 7-21-97</i>	✓		mg RW
16	The PCS should pulse energize the Packet X-Ray Tray extend/retract solenoid 07-FEV-737I/E (Extend) to smoothly extend the Packet X-Ray Tray. (This sequence is timed.)	Verify that the Packet X-Ray Tray is fully extended.	✓		mg RW
17	The Packet X-Ray Door open sequence should be considered successful and the "PACKET X-RAY DOOR OPEN" message should be displayed on the "PACKET X-RAY MENU" at OIU-12-103B. <i>TRAY EXTENDED msg 7-21-97</i>	Verify that the "PACKET X-RAY DOOR OPEN" message is displayed. <i>TRAY EXTENDED msg 7-21-97</i>	✓		mg RW
18	Use the Manipulator to transfer the "Non-compliant Item" packet on the Sorting Table to the Packet X-Ray Tray.	Verify that the "Non-compliant Item" packet has been placed on the Packet X-Ray Tray.	✓		mg RW

#16A Must now press "EXTEND X-RAY TRAY"

B "PACKET X-RAY TRAY EXTENDING ..." message displayed

C. TRAY fully extends.

D. "PACKET X-RAY TRAY EXTENDED" message displayed

msg 9-9-97

✓	mg
✓	mg
✓	mg
✓	mg

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Packet X-Ray Tray Failed to Retract Interlock					
19	Force LCU 102 ZS735 not activated to simulate the "Packet X-Ray Tray Not Retracted" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS735 0 I: 30101 <i>Not 2/10/97</i>	Verify that register ZS735 is forced not activated. Verify that the forced register status is recorded.	✓		mg RW
20	Force LCU 102 register ZS334B activated to simulate the "Packet X-Ray Door Not Closed" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS334B 0 I: 25116	Verify that register ZS334B is forced not activated. Verify that the forced register status is recorded.	✓		mb RW
21	Press the "CLOSE PACKET X-RAY" button from the "PACKET X-RAY MENU" at OIU-12-103B. <i>Retract X-RAY TRAY msg 7-21-97</i>	Verify that the "CLOSE PACKET X-RAY" button has been pressed. <i>msg 7-21-97</i>	✓		mg RW
22	The "PACKET X-RAY CLOSING" message should be displayed on the "PACKET X-RAY MENU" at OIU-12-103B. <i>TRAY RETRACTING msg 7-21-97</i>	Verify that the "PACKET X-RAY CLOSING" message is displayed. <i>msg 7-21-97</i>	✓		RW
23	The PCS should pulse energize the Packet X-Ray Tray extend/retract solenoid 07-FEV-7371/R (Retract) to retract the Packet X-Ray Tray.	Verify that the Packet X-Ray is fully retracted.	✓		RW
24	Because register ZS735 remains forced not activated, the "Close Packet X-Ray" sequence should not be considered successful and the "PACKET X-RAY CLOSED" message should not be displayed on the "PACKET X-RAY MENU" at OIU-12-103B. <i>TRAY RETRACTED msg 7-21-97</i>	Verify that the "PACKET X-RAY CLOSED" message is not displayed during the waiting period. <i>PACKET X-RAY TRAY RETRACTED</i>	✓		RW
	Wait thirty (30) seconds.				

* 21-25. Door close and tray retract now separate operations. Verified door will not close if tray is extended. Verified "PACKET X-RAY TRAY RETRACTED" message is not displayed unless ZS735 is activated - msg 7-21-97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Packet X-Ray "Packet X-Ray Door Failed to Close" Alarm					
25	Unforce LCU 102 register ZS735. Record the unforced register status below: Unforced ZS335 Status: <u>1</u>	Verify that register ZS335 is unforced.	✓		ms
26	Because register ZS735 is unforced, position switch 07-ZS-735 should be activated, indicating that the Packet X-Ray Tray is fully retracted.	Verify that position switch 07-ZS-735 is activated.	✓		PLW ms RN
27	Because the Packet X-Ray Tray is completely retracted, the "PACKET X-RAY CLOSING... " message should be displayed on the "PACKET X-RAY MENU" at OIU-12-103B. <i>TRAY RETRACTED</i>	Verify that the "PACKET X-RAY CLOSING... " message is displayed. <i>TRAY RETRACTED</i>	✓		PLW
28	The PCS should pulse energize the Packet X-Ray Door forward/reverse solenoid 07-FEV-737H/R (Reverse) to close the packet door.	Verify that the Packet X-Ray Door closes smoothly and completely.	✓		PLW
29	Because register ZS334B remains forced not activated, the "PACKET X-RAY DOOR CLOSED " message should not be displayed on the "PACKET X-RAY MENU" at OIU-12-103B and a "Packet X-Ray Door Failed to Close" alarm should be generated. Wait thirty (30) seconds. <i>ms 7-21-97</i>	Verify that the "PACKET X-RAY DOOR CLOSED " message is not displayed during the waiting period.	✓ ✓		ms PLW
30	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Packet X-Ray Door Failed to Close" alarm.	Verify that the alarm has been acknowledged.	✓		ms PLW
31	Unforce LCU 102 register ZS334B. Record the unforced register status below: Unforced ZS334B Status: <u>1</u>	Verify that register ZS334B is unforced.	✓		ms PLW
32	Because position switch 07-ZS-334B should be activated, indicating that the Packet X-Ray Door is closed, the "Packet X-Ray Door Failed to Close" alarm should clear.	Verify that the alarm is cleared.	✓		ms PLW
33	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "PACKET X-RAY MENU" at OIU-12-103B.	Verify that the "PACKET X-RAY MENU" is displayed.	✓		ms PLW
34	The Packet X-Ray Door Close sequence should be considered successful and the "PACKET X-RAY CLOSED " message should be displayed on the "PACKET X-RAY MENU" at OIU-12-103B. <i>DOOR</i>	Verify that the "PACKET X-RAY CLOSED " message is displayed. <i>DOOR</i>	✓ ✓		ms PLW

#27A Press "CLOSE X-RAY DOOR"
 "PACKET X-RAY DOOR CLOSING" message displayed.
ms 9-9-97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Enable Packet X-Ray and Take Packet X-Ray (Simulated)					
35	Because the Packet X-Ray has not been enabled, the PCS should not provide output ND-07-101/EN (Enable) to enable the Packet X-Ray.	Verify that the PCS has not enabled the Packet X-Ray.			N/A
36	Press the "ENABLE PACKET X-RAY" button from the "PACKET X-RAY MENU" at OIU-12-103B.	Verify that the "ENABLE PACKET X-RAY" button has been pressed.			N/A
37	The PCS should provide output ND-07-101/EN (Enable) to enable the Packet X-Ray.	Verify that the PCS has provided output ND-07-101/EN (Enable) to enable the Packet X-Ray.			N/A
38	The "PACKET X-RAY ENABLED" message should be displayed on the "PACKET X-RAY MENU" at OIU-12-103B.	Verify that the "PACKET X-RAY ENABLED" message is displayed.			N/A
39	Force the "X-Ray in Progress Input" ND-07-101/ES register (ND101/ES) activated to simulate taking a Packet X-Ray. Record the forced register status below:	Verify that register ND101/ES is forced activated.			N/A
	Register Forced Status Method of Confirmation				
	ND101/ES	Verify that the register status is recorded.			N/A
40	When the ND-07-101/ES input is received resulting from forced activated register ND101/ES, the PCS should disable the "PACKET X-RAY MENU" at OIU-12-103B.	Verify that the "PACKET X-RAY MENU" has been disabled.			N/A
41	Press every button except the "MAIN MENU" button on the "PACKET X-RAY MENU" to verify that pressing these buttons has no effect on the Packet X-Ray.	Verify that pressing the "PACKET X-RAY MENU" buttons has no effect on the Packet X-Ray.			N/A
42	Unforce LCU 102 register ND101/ES. Record the unforced register status below:	Verify that register ND101/ES is unforced.			N/A
	Unforced ND101/ES Status:				
43	Because register ND101/ES is unforced, the 07-ND-101/ES input should not be activated, indicating that the Packet X-Ray is no longer being used.	Verify that the 07-ND-101/ES input is not activated.			N/A

435-43 See TE # 131

step 35-43 N/A R/W 8/18/99

Retested 7-22-97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Remove Packet from Packet X-Ray, Affix Bar Code Label, and Place Packet on Transfer Stand					
44	The PCS should re-enable the "PACKET X-RAY MENU". Press the "OPEN PACKET X-RAY" button from the "PACKET X-RAY MENU" at OIU-12-103B. <i>Done 7-22-97</i>	Verify that the "OPEN PACKET X-RAY" button has been pressed. <i>Obs'd mpe 7-22-97</i>	✓		<i>mg</i>
45	The "PACKET X-RAY OPENING..." message should be displayed on the "PACKET X-RAY MENU" at OIU-12-103B. <i>Done 7-22-97</i>	Verify that the "PACKET X-RAY OPENING..." message is displayed. <i>Door</i>	✓		<i>mg</i> <i>RLW</i>
46	The PCS should pulse energize the Packet X-Ray Door forward/reverse solenoid 07-FEV-737H/F (Forward) to open the packet door.	Verify that the Packet X-Ray Door opens smoothly and completely.	✓		<i>mg</i> <i>RLW</i>
47	The PCS should pulse energize the Packet X-Ray Tray extend/retract solenoid 07-FEV-737I/E (Extend) to smoothly extend the Packet X-Ray Tray. (This sequence is timed)	Verify that the Packet X-Ray Tray is fully extended.	✓		<i>mg</i> <i>RLW</i>
48	The Packet X-Ray Door open sequence should be considered successful and the "PACKET X-RAY OPEN " message should be displayed on the "PACKET X-RAY MENU" at OIU-12-103B. <i>TRAY EXTENDED 7-22-97</i>	Verify that the "PACKET X-RAY OPEN " message is displayed. <i>TRAY EXTENDED 7-22-97</i>	✓		<i>mg</i> <i>RLW</i>
49	Use the Manipulator to affix a Non-Compliant Item Bar Code Label to the "Non-compliant Item" packet.	Verify that a Non-Compliant Item Bar Code Label has been placed on the "Non-compliant Item" packet.			<i>N/A</i>
50	Use the Manipulator to scan the Non-Compliant Item Bar Code Label on the "Non-compliant Item" packet using Packet Bar Code Scanner 12-NE-311. The Bar Code Scanner should briefly flash when the Label has been successfully read.	Verify that the label has been scanned.			<i>N/A RLW 7/22/97</i>
51	Use the Manipulator to transfer the "Non-compliant Item" packet to the Non-Compliant Item Transfer Stand.	Verify that the "Non-compliant Item" packet has been placed on the Sorting Table.	✓		<i>RLW</i>

FF 49-50 Bar code Not Tested

- # 47 A. Press "PACKET X-RAY DOOR OPEN" MESSAGE DISPLAYED. ✓ *mg*
 B. Press "EXTEND X-RAY TRAYS" MESSAGE DISPLAYED. ✓ *mg*
 C. "PACKET X-RAY TRAY EXTENDING" MESSAGE DISPLAYED. ✓
 ⑤

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Retract Tray and Close Packet X-Ray Door					
52	Press the "CLOSE PACKET X-RAY" button from the "PACKET X-RAY MENU" at OIU-12-103B. <i>DOOR</i> <i>msg 7-22-97</i>	Verify that the "CLOSE PACKET X-RAY" button has been pressed. <i>DOOR</i>	✓		<i>R/W</i>
53	The "PACKET X-RAY CLOSING..." message should be displayed on the "PACKET X-RAY MENU" at OIU-12-103B. <i>DOOR</i> <i>msg 7-22-97</i>	Verify that the "PACKET X-RAY CLOSING..." message is displayed. <i>DOOR</i>	✓		<i>R/W</i>
54	The PCS should pulse energize the Packet X-Ray Tray extend/retract solenoid 07-FEV-737I/R (Retract) to retract the Packet X-Ray Tray.	Verify that the Packet X-Ray is fully retracted.	✓		<i>R/W</i>
55	The PCS should pulse energize the Packet X-Ray Door forward/reverse solenoid 07-FEV-737H/R (Reverse) to smoothly close the packet door.	Verify that the Packet X-Ray Door is closed.	✓		<i>R/W</i>
56	The Packet X-Ray Door Close sequence should be considered successful and the "PACKET X-RAY CLOSED" message should be displayed on the "PACKET X-RAY MENU" at OIU-12-103B. <i>DOOR</i>	Verify that the "PACKET X-RAY CLOSED" message is displayed. <i>DOOR</i> <i>msg 7-22-97</i>	✓		<i>R/W</i>
TEST CASE 13031A-85.21 COMPLETE					

52A. PRESS "RETRACT X-RAY TRAY"

B. "PACKET X-RAY TRAY RETRACTING..." MESSAGE DISPLAYED ✓

C. TRAY RETRACTED

D. "PACKET X-RAY TRAY RETRACTED" MESSAGE DISPLAYED ✓

*msg 9-9-97**msg*
msg
msg
msg

TEST CASE 13031A-85.22 LOAD OUT SAMPLE VIA LLW SORTING GLOVEBOX SAMPLE TRANSFER PORT (DO-07-104) 22-2

Testing begins 9-15-97 2:24 p.m. mof

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
TEST CASE 13031A-85.22 LOAD OUT SAMPLE VIA LLW SORTING GLOVEBOX SAMPLE TRANSFER PORT (DO-07-104)					
1	NOTE: As part of the test procedure setup, a sample container labeled "SAMPLE" should have been placed inside the LLW Sorting Glovebox. This sample container should be labeled with a unique sample bar code label.	Verify that a bar code labeled "Sample" container is located in the LLW Sorting glovebox.	N/A		mgf 2-6-98
2	Confirm that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed at OIU-12-103B. If a sub-menu is displayed, press the "MAIN MENU" button to return to the Main Menu.	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.	✓		mgf
3	Confirm that the sample transfer port (DO-07-104) door is closed.	Verify that the sample transfer port is closed.	✓		mgf
4	Press the "SAMPLE MENU" from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "SAMPLE MENU" is displayed.	✓		mgf
5	Press the " SAMPLE LOADOUT LOADOUT SAMPLES" button from the "SAMPLE MENU" at OIU-12-103B. The selection of the "SAMPLE LOADOUT" button notifies the PCS that bar coded items read using portable scanner NE-12-310 are samples that are being removed from the glovebox.	Verify that the "SAMPLE MENU" is displayed.	✓		mgf
6	Because a canister has not been attached to the Sample Transfer Port, the PCS should display the "NO PURGE PORT CANISTER PRESENT" message on the "SAMPLE MENU" at OIU-12-103B.	Verify that a "NO PURGE PORT CANISTER PRESENT" message is displayed.	✓		mgf
7	Align the sample canister to the sealed cell flange.	Verify that the sample canister is aligned with the flange.	✓		mgf
8	Orient the canister locking bayonets with the openings on the cell flange.	Verify that the locking bayonets are aligned with the cell flange.	✓		mgf
9	Rotate the canister clockwise 60 degrees. NOTE: Ensure that the canister is fully rotated, before proceeding. Often the canister will appear to be fully mated, when in fact the canister is not fully rotated.	Verify that the canister is mated to the flange.	✓		mgf
10	The canister cover should release from the canister and lock and seal against the port door.	Verify the cover unlocks from the canister and locks and seals to the port door.	✓		mgf
11	Read the Sample Transfer Port location bar code label using portable scanner 12-NE-310. The scanner LED indicator should briefly flash, indicating that a bar code label has been successfully read.	Verify that the location bar code label has been successfully read.	✓		mgf

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
12	Read the Sample Transfer Port Container bar code label using using portable scanner 12-NE-310. The scanner LED indicator should briefly flash, indicating that a bar code label has been successfully read. Scanning the Sample Transfer Port label followed by the Sample Transfer Port Container label should cause the PCS to associate the Container with the Port.	Verify that the Container bar code label has been scanned.			
13	The Sample Transfer Port Container bar code label contents should be stored in LCU 102 register(s):	Verify that the bar code label contents are correctly stored in the appropriate LCU 102 register(s).			
14	Press the "SAMPLE MENU" button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "SAMPLE MENU" is displayed.	✓		mg
15	Press the "LOADOUT SAMPLES" button from the "SAMPLE MENU" at OIU-12-103B. The selection of the "LOADOUT SAMPLES" button notifies the PCS that bar coded items read at portable scanner NE-12-310 are samples that are being removed from the glovebox.	Verify that the "LOADOUT SAMPLES" is displayed.	✓		mg
16	A "SAMPLE LOADOUT IN PROGRESS..." message should be displayed on the "SAMPLE MENU" at OIU-12-103B.	Verify that a "SAMPLE LOADOUT IN PROGRESS..." message is displayed.	✓		mg
17	Read the "SAMPLE" bar code label using portable scanner 12-NE-310. The scanner LED indicator should briefly flash, indicating that a bar code label has been successfully read.	Verify that the "SAMPLE" bar code label has been successfully read.			
18	The "SAMPLE" bar code label contents should be stored in LCU 102 register(s):	Verify that the bar code label contents are correctly stored in the appropriate LCU 102 register(s).			
19	Open the sample transfer port (DO-07-104) hinged double door inside the glovebox.	Verify that the hinged double door opens fully and smoothly.	✓		mg
20	Transfer the sample container to the sample canister through the open double door.	Verify that the sample container was transferred into the sample canister.	✓		mg
21	Close the double door.	Verify that the hinged double door is closed.	✓		mg

#14- Set N41106 to 1 to simulate canister present

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
22	Press the "END SAMPLE LOADOUT" button from the "SAMPLE MENU" at OIU-12-103B.	Verify that the "END SAMPLE LOADOUT" button has been pressed.	✓		me
23	The "SAMPLE LOADOUT COMPLETE" message should be displayed on the "SAMPLE MENU" at OIU-12-103B.	Verify that the "SAMPLE LOADOUT COMPLETE" message is displayed.	✓		me
24	From outside the glovebox, rotate the sample canister counterclockwise 60 degrees.	Verify that the sample canister rotates smoothly.	✓		me
25	The canister cover should release from the door and lock and seal to the canister.	Verify the cover-unlocks from the cell port and locks and seals to the canister.	✓		me
26	The canister should unlock from the flange.	Verify that the canister unlocks from the flange.	✓		me
27	From outside the glovebox, disengage the sample canister from the cell flange.	Verify that the sample canister is disengaged from the cell flange.	✓		me
TEST CASE 13031A-85.22 COMPLETE					

TEST CASE 13031A-85.23 REMOVE 208 LITER (55 GALLON) DRUM FROM LLW SORTING GLOVEBOX BAGLESS TRANSFER PORT (DO-07-105)	23-2
Return Non-Compliant Item Transfer Stand to Drum	23-2
Examine Lift Table Lower, Raise, Forward, and Reverse Interlocks	23-5
Close Bagless Transfer Port and Initiate Exit Sequence	23-6
Examine Lift Table "Failed to Lower" Alarm	23-7
Examine Lift Table "Conveyor Reverse Failed" Alarm	23-8

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
TEST CASE 13031A-85.23 REMOVE 208 LITER (55 GALLON) DRUM FROM LLW SORTING GLOVEBOX BAGLESS TRANSFER PORT (DO-07-105)					
Return Non-Compliant Item Transfer Stand to Drum					
1	WARNING: The "MATE DRUM TO BAGLESS TRANSFER PORT AND REMOVE TRANSFER STAND" test case is a prerequisite for this test case. <u>Do not perform this test case unless the pre-requisite test case has already been successfully completed.</u>	Verify that the prerequisite test case(s) have already been successfully completed prior to running this test case.	✓		R/W
2	A 200 liter (55 gallon) Drath & Schrader drum should be mated to the Bagless Transfer Port (DO-07-105).	Verify that a Drath & Schrader drum is mated to the Bagless Transfer Port.	✓		R/W
3	The Bagless Transfer Port door should be rotated completely open.	Verify that the Bagless Transfer Port is open.	✓		R/W
4	Place the manipulator at Parked Position #2, farthest from the Bagless Transfer Port, with both Manipulator arms parked.	Verify that the Manipulator is at Parked Position #2 with both Manipulator arms parked.	✓		R/W
5	Confirm that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed at OIU-12-103B. If a sub-menu is displayed, press the "MAIN MENU" button to return to the "LLW SORTING GLOVEBOX MAIN MENU".	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.	✓		R/W
6	Press the "RWM PORT MENU" button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "RWM PORT MENU" is displayed.	✓		R/W
7	The "PORT OPEN" message should be displayed on the "RWM PORT MENU" at OIU-12-103B.	Verify that a "PORT OPEN" message is displayed.	✓		R/W
8	NOTE: The hoist pendant PC-07-003A "PENDANT SELECT" switch should have been turned to the "PEND A" position during test procedure setup to disable hoist pendant PC-07-003B. Examine hoist pendant PC-07-003B	Verify that the "ENABLED" indicator is NOT illuminated.	✓		R/W
9	Press the "LOWER" pushbutton on the Hoist Pendant (PC-07-003B) to attempt to lower the hoist hook.	Verify that the "LOWER" pushbutton has been pressed.	✓		R/W
10	Because the Hoist Pendant PC-07-003B is not enabled, the hoist hook should not lower.	Verify that the hoist hook does not move when the "LOWER" pushbutton is pressed.	✓		R/W
11	Press the "LEFT" and "RIGHT" pushbuttons on the Trolley/Hoist Pendant (PC-07-003A) to attempt to energize the trolley motor CR-07-101C/M1. Because the Hoist is not fully raised, the Trolley should not move.	Verify that pressing the "LEFT" and "RIGHT" pushbuttons has no effect on the Trolley.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
12	Press the "RAISE" pushbutton on the Trolley/Hoist Pendant (PC-07-003A) as needed to energize the Hoist Motor (CR-101C/M2) to completely raise the hoist with the non-compliant item transfer stand.	Verify that the Hoist with non-compliant item transfer stand is fully raised.	✓		R/W
13	When the Hoist is fully raised, the "Hoist Raised" position switch (07-ZS-730C) should be activated, indicating that the Hoist is fully raised.	Verify that the "Hoist Raised" position switch is activated.	✓		R/W
14	Activating the Hoist Raised position switch (07-ZS-730C) should cause the Hoist Motor (CR-101C/M2) to de-energize.	Verify that the Hoist Motor is de-energized.	✓		R/W
15	The "HOIST RAISED LIMIT" indicator on the Trolley/Hoist Pendant (PC-07-003A) should be illuminated, indicating that the Hoist is raised.	Verify that the Hoist Raised Limit indicator is illuminated.	✓		R/W
16	Continue to activate the "RAISE" pushbutton on the Trolley/Hoist Pendant (PC-07-003A) after the Hoist is completely raised. Pressing the "RAISE" pushbutton should have no effect on the Hoist.	Verify that pressing the "RAISE" pushbutton has no effect on the fully raised Hoist.	✓		R/W
17	Turn the "PENDANT SELECT" switch on the Trolley/Hoist Pendant (PC-07-003A) to the "PEND B" position.	Verify that the "PENDANT SELECT" switch is turned to the "PEND B" position.	✓		R/W
18	Selecting the "PEND B" position should enable the PC-07-003B pendant and disable the PC-07-003A pendant.	Verify that the "ENABLED" indicator on the PC-07-003B pendant is illuminated.	✓		R/W
19	Press the "LOWER" pushbutton on the on the Trolley/Hoist Pendant (PC-07-003A) to attempt to lower the hoist hook. Pressing the "LOWER" pushbutton should have no effect on the Hoist.	Verify that the hoist does not move when the "LOWER" pushbutton is pressed.	✓		R/W
20	Press the "LEFT" and "RIGHT" pushbuttons on the Trolley/Hoist Pendant (PC-07-003B) as needed so that the trolley SLOWLY travels to and is positioned over the Bagless Transfer Port (DO-07-105)	Verify that the hoist trolley is positioned over the Bagless Transfer Port.	✓		R/W
21	The "Tray Loadout" position switch (07-ZS-730A) should be activated, indicating that the hoist is positioned over the Bagless Transfer Port.	Verify that the "Tray Loadout" position switch is activated.	✓		R/W
22	Activating the Tray Loadout position switch (07-ZS-730A) should cause the Trolley Motor (CR-101C/M1) to de-energize.	Verify that the Trolley Motor is de-energized.	✓		R/W
23	The "PORT" indicator on the Trolley/Hoist Pendant should be illuminated, indicating that the Trolley is positioned over the Bagless Transfer Port.	Verify that the "PORT" indicator is illuminated.	✓		R/W
24	Press the "LOWER" pushbutton on the Trolley/Hoist Pendant (PC-07-003B) to lower the hoist until the bottom of the transfer stand is within one foot of the Drath and Schrader drum mated to the Bagless Transfer Port.	Verify that the transfer stand is properly centered to allow the transfer stand to be lowered into the drum.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
25	Press the "LOWER" pushbutton on the Trolley/Hoist Pendant (PC-07-003B) to slowly lower the non-compliant item transfer stand into the Drath and Schrader drum.	Verify that the non-compliant item transfer stand is fully seated in the drum.	✓		R/W
26	Continue to lower the hoist hook until slack is noted in the hoist chain.	Verify that slack is noted in the hoist chain.	✓		R/W
27	Remove the hoist hook from the non-compliant item transfer stand.	Verify that the hoist hook is removed from the non-compliant item transfer stand.	✓		R/W
28	Press the "RAISE" pushbutton on the Trolley/Hoist Pendant (PC-07-003B) to slowly raise the hoist until the hoist is fully raised.	Verify that the hoist is fully raised.	✓		R/W
29	The "RAISED LIMIT" indicator on the Trolley/Hoist Pendant (PC-07-003B) should be illuminated, indicating that the hoist is fully raised.	Verify that the "RAISED LIMIT" indicator is illuminated.	✓		R/W
30	The non-compliant item transfer stand should be completely lowered into the Drath & Schrader drum mated to the Bagless Transfer Port (DO-07-105).	Verify that the stand is inside the Drath & Schrader drum.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Lift Table Lower, Raise, Forward, and Reverse Interlocks					
NOTE: Because the port is not closed and locked, the "LOWER", "RAISE", "FORWARD", or "REVERSE" pushbuttons at the Lift Table local control pedestal should be disabled and pressing these buttons should have no effect on the Lift Table (LT-09-203A).					
31	Press the "LOWER" pushbutton at the Lift Table local control pedestal (PC-09-203A).	Verify that pressing the "LOWER" pushbutton has no effect on the Lift Table.	✓		R/W
32	Press the "RAISE" pushbutton at the Lift Table local control pedestal (PC-09-203A).	Verify that pressing the "RAISE" pushbutton has no effect on the Lift Table.	✓		R/W
33	Press the "FORWARD" pushbutton at the Lift Table local control pedestal (PC-09-203A).	Verify that pressing the "FORWARD" pushbutton has no effect on the Lift Table.	✓		R/W
34	Press the "REVERSE" pushbutton at the Lift Table local control pedestal (PC-09-203A).	Verify that pressing the "REVERSE" pushbutton has no effect on the Lift Table.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Close Bagless Transfer Port and Initiate Exit Sequence					
35	<p>NOTE: During the following steps, the PCS will activate the Lift Table Roller Conveyor motor to move the drum from under the port. A following step will simulate a power failure at the lift table. The 480 volt lift table breaker will be opened during drum transfer under the glovebox port. The lift table breaker must be turned off before the drum reaches the end of the conveyor.</p> <p>Carefully review the remaining test steps so that the rapid response required can be provided.</p>	Verify that the remaining test procedure steps have been reviewed prior to testing.	✓		P/W
36	Press the "START DRUM EXIT" button from the "RWM PORT MENU" at OIU-12-103B to remove the drum from the Bagless Transfer Port.	Verify that the "START DRUM EXIT" button has been pressed.	✓		P/W
37	Because the port is open, pressing the "START DRUM EXIT" button should have no effect on the Bagless Transfer Port (DO-07-105) or the Port Lift Table (LT-09-203A).	Verify that pressing the "START DRUM EXIT" button has no effect on the Bagless Transfer Port or the Lift Table.	✓		P/W
38	Press the "CLOSE PORT" button from the "RWM PORT MENU" at OIU-12-103B to close the port. The port should begin to close.	Verify that the "CLOSE PORT" button has been pressed.	✓		P/W
39	Because the port is open and a drum has been mated to the port, the port should close. The PCS should display a "PORT CLOSING..." message on the "RWM PORT MENU" at OIU-12-103B while the port is closing.	Verify that a "PORT CLOSING..." message is displayed.	✓		P/W
40	The port should completely close.	Verify that the Bagless Transfer Port is closed.	✓		P/W
41	Because the Bagless Transfer Port has closed, the "PORT CLOSED" message should be displayed on the "RWM PORT MENU" at OIU-12-103B.	Verify that the "PORT CLOSED" message is displayed.	✓		P/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Lift Table "Failed to Lower" Alarm					
42	Set the timer period for the "Lift Table Failed to Lower" alarm to one second. Record the timer period below: <u>Register</u> <u>Initial Status</u> <u>Final Status</u> T4:124 Preset <u>300</u> 1 second	Verify that the preset status is set to 1 second.	✓		R/W
43	Press the "START DRUM EXIT" button from the "RWM PORT MENU" at OIU-12-103B to remove the drum from the Bagless Transfer Port.	Verify that the "START DRUM EXIT" button has been pressed.	✓		R/W
44	The PCS should display an "DRUM EXIT IN PROGRESS..." message at OIU-12-103B while the drum is being removed from the port.	Verify that a "DRUM EXIT IN PROGRESS..." message is displayed.	✓		R/W
45	Because the Lift Table should not complete the lower sequence within one second the "Lift Table (203A) Failed to Lower" alarm should be generated.	Verify that a flashing "SEQUENCE FAILED" message is displayed at OIU-12-103C.	✓		R/W
46	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Lift Table (203A) Failed to Lower" alarm.	Verify that the alarm has been acknowledged.	✓		R/W
47	Because the Lift Table should continue to lower until it reaches AGV height, the "Lift Table (203A) Failed to Lower" alarm should clear.	Verify that the alarm has cleared.	✓		R/W
48	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "RWM PORT MENU" at OIU-12-103B.	Verify that the "RWM PORT MENU" is displayed.	✓		R/W
49	Restore the timer period for the "Lift Table Failed to Lower" alarm to the initial value recorded above. Record the timer status below: <u>Register</u> <u>Initial Status</u> <u>Final Status</u> T4:124 Preset 1 second <u>300</u>	Verify that the preset initial status is restored.	✓		R/W
50	Press the "START DRUM EXIT" button from the "RWM PORT MENU" at OIU-12-103B to remove the drum from the Bagless Transfer Port.	Verify that the "START DRUM EXIT" button has been pressed.			R/W
51	The "DRUM EXIT IN PROGRESS..." message should be displayed on the "RWM PORT MENU" at OIU-12-103B.	Verify that the "DRUM EXIT IN PROGRESS..." message is displayed.			R/W
52	The PCS should energize the Lift Table Servo Motor (LT-09-203A/M1) to lower the Lift Table until the Lift Table is at "AGV Height".	Verify that the Lift Table is at AGV Height.	✓		R/W

50 & 51 Lift Table does not stop lowering
see TE # 85

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
53	The "AGV LOAD HEIGHT" indicator (09-ZL-241E) on the Lift Table Control Pedestal (PC-09-203A) should be illuminated, indicating that the lift table is at AGV height.	Verify that the "AGV LOAD HEIGHT" indicator is illuminated.	✓		AK

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Lift Table "Conveyor Reverse Failed" Alarm					
54	The PCS should energize the Lift Table Roller Conveyor Motor (LT-09-203A/M2) to move the drum to the AGV end of the Lift Table.	Verify that the Lift Table Roller Conveyors are energized.	✓		RLW
55	After drum has moved approximately one foot, open the 480 volt lift table breaker to remove power from the lift table roller conveyor.	Verify that the drum is not positioned at the AGV end of the Lift Table.	✓		RLW
56	The roller conveyor should stop.	Verify that the lift table roller conveyor has stopped and remains stopped.	✓		RLW
57	The "DRUM AT AGV END" status indicator (09-ZL-241A) at the Lift Table Local Control Pedestal (PC-07-203A) should not be illuminated, indicating that the drum is not at the AGV end of the Lift Table.	Verify that the "DRUM AT AGV END" status indicator is not illuminated.	✓		RLW
58	Because the Drum Exit sequence has not been successfully completed, the "DRUM EXIT COMPLETE" message should not be displayed on the "RWM PORT MENU" at OIU-12-103B. Wait thirty (30) seconds.	Verify that the "DRUM EXIT COMPLETE" message is not displayed during the waiting period.	✓		RLW
59	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Lift Table (203A) Conveyor Reverse Failed" alarm.	Verify that the alarm has been acknowledged.	✓		RLW
60	Close the 480 volt Lift Table breaker to restore power to the lift table. The roller conveyor should not start up again after power is restored.	Verify that the Lift Table breaker is closed.	✓		RLW
61	Turn the Lift Table Local Control Pedestal M/O/N switch (09-HS-241A) to the "MAINTENANCE" position to allow an operator to activate and control the Lift Table. (LT-09-203A).	Verify that the M/O/N switch is turned to the "M" position.	✓		RLW
62	Press the "REVERSE" pushbutton at the Lift Table Local Control Pedestal (PC-09-203A) to energize the lift table conveyor motor in reverse (LT-09-203A/M2) until the drum is at the AGV end of the Lift Table.	Verify that the drum is at the AGV end of the Lift Table.	✓		RLW
63	The "DRUM AT AGV END" status indicator (09-ZL-241A) at the Lift Table Local Control Pedestal (PC-07-203A) should be illuminated, indicating that the drum is at the AGV end of the Lift Table.	Verify that the "DRUM AT AGV END" status indicator (09-ZL-241A) is illuminated.	✓		RLW
64	Return the Lift Table Local Control Pedestal M/O/N switch (09-HS-241A) to the "NORMAL" position to allow the PCS to activate and control the Lift Table. (LT-09-203A).	Verify that the M/O/N switch is turned to the "N" position.	✓		RLW

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
65	Because the drum is positioned at the AGV end of the Lift Table, the "Lift Table (203A) Conveyor Reverse Failed" alarm should clear.	Verify that the alarm has cleared.	✓		R/W
66	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "RWM PORT MENU" at OIU-12-103B.	Verify that the "RWM PORT MENU" is displayed.	✓		R/W
67	Because the Drum Exit sequence is successfully completed, the "DRUM EXIT COMPLETE" message should be displayed on the "RWM PORT MENU" at OIU-12-103B.	Verify that the "DRUM EXIT COMPLETE" message is displayed.	✓		R/W
68	Press the "DRUM READY FOR PICKUP" button on the "RWM PORT MENU" at OIU-12-103B to indicate that the Drum is ready for pickup by the Automated Guided Vehicle (AGV).	Verify that the "DRUM READY FOR PICKUP" button has been pressed.	✓		R/W
69	The drum at the end of the lift table should be added by the PCS to the AGV task list for transfer to the LLW RWM glovebox.	Verify that the drum has been placed on the AGV task list for transfer to the LLW RWM glovebox.	N/A		R/W
TEST CASE 13031A-85.23 COMPLETE					

9/19/97 68a Verify Message

"DRUM PICKUP IN PROGRESS..."

✓ R/W

TEST CASE 13031A-85.24 EXAMINE LLW SORTING GLOVEBOX SORTING TABLE (DO-07-101) INTERLOCKS AND EXTEND TABLE	24-2
Examine Sorting Table Extend, Sorting Table Lowered Interlock	24-2
Examine Sorting Table Extend, Sorting Table Retracted Interlock	24-5
Examine Sorting Table Extend, Sorting Table Unlocked Interlock	24-6
Examine Sorting Table Extend, Drum Tipper Lowered Interlock	24-8
Examine Sorting Table Extend, Drum Tipper Grab Vertical Interlock	24-9
Examine Sorting Table Extend, Drum Tipper Grab Close Interlock	24-10
Examine Sorting Table Extend, Manipulator Parked Interlock	24-11
Examine "Failed to Move to Tip Position - Retracted" Alarm	24-12
Extend the Sorting Table to the Tip Position and Lock in Place	24-14

Commenced Testing 06/5 7/2/97 R/W & MS

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
TEST CASE 13031A-85.24 EXAMINE LLW SORTING GLOVEBOX SORTING TABLE (DO-07-101) INTERLOCKS AND EXTEND TABLE					
Examine Sorting Table Extend, Sorting Table Lowered Interlock					
1	Unforce all LCU 102 registers using the Allen Bradley PLC Software. <i>see pg 8-1</i>	Verify that all LCU 102 registers are unforced.	✓		R/W
2	Confirm that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed at OIU-12-103B. If a sub-menu is displayed, press the "MAIN MENU" button to return to the "LLW SORTING GLOVEBOX MAIN MENU".	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.	✓		R/W
3	Confirm that no loose items are present on the Sorting Table (ST-07-101). If loose items are present, remove these items from the Sorting Table.	Verify that no loose items are present on the Sorting Table.	✓		R/W
4	Press the "SORTING TABLE MENU" button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "SORTING TABLE MENU" is displayed.	✓		R/W
5	Force LCU 102 registers ZS716A and ZS716B not activated to simulate the "Sorting Table Not Lowered" condition. Record the forced register status below: <div> <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS716A <u>0</u> <u>I:02/104</u> ZS716B <u>0</u> <u>I:02/105</u> </div>	Verify that registers ZS716A and ZS716B are forced not activated. Verify that the forced register status is recorded.	✓		R/W
6	Press the "EXTEND TABLE" button from the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "EXTEND TABLE" button has been pressed.	✓		R/W
7	The Sorting Table Lowered condition functions as an interlock for Sorting Table extension. Because this interlock is not satisfied, the Sorting Table "Extend" sequence should pause and the Sorting Table should not extend. Wait thirty (30) seconds.	Verify that the Sorting Table does not extend during the waiting period.	✓		R/W
8	Unforce LCU 102 register ZS716B. Record the unforced register status below: Unforced ZS716B Status: <u>1</u>	Verify that register ZS716B is unforced.	✓		R/W
9	The "Sorting Table Lowered" position switch 07-ZS-716B should be activated, indicating that the Sorting Table is lowered.	Verify that "Sorting Table Lowered" position switch (07-ZS-716B) is activated.	✓		R/W
10	Press the "EXTEND TABLE" button from the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "EXTEND TABLE" button has been pressed.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
11	Because register ZS716A remains forced not activated, indicating that the Sorting Table is not lowered, the Sorting Table should not extend. Wait thirty (30) seconds.	Verify that the Sorting Table does not extend during the waiting period.	✓		<i>PK</i>
12	Force LCU 102 register ZS716B not activated to simulate the "Sorting Table Not Lowered" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS716B <u>0</u> <u>I: 27/05</u>	Verify that register ZS716B is forced not activated. Verify that the forced register status is recorded.	✓		<i>PK</i>
13	Unforce LCU 102 register ZS716A. Record the unforced register status below: Unforced ZS716A Status: <u>1</u>	Verify that register ZS716A is unforced.	✓		<i>PK</i>
14	The "Sorting Table Lowered" position switch (07-ZS-716A) should be activated, indicating that the Sorting Table is lowered.	Verify that "Sorting Table Lowered" position switch (07-ZS-716A) is activated.	✓		<i>PK</i>
15	Press the "EXTEND TABLE" button from the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "EXTEND TABLE" button has been pressed.	✓		<i>PK</i>
16	Because register ZS716B remains forced not activated, indicating that the Sorting Table is not lowered, the Sorting Table should not extend. Wait thirty (30) seconds.	Verify that the Sorting Table does not extend during the waiting period.	✓		<i>PK</i>
17	Force LCU 102 register ZS717C not activated to simulate the "Sorting Table Not Fully Retracted" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS717C <u>0</u> <u>I: 27/10</u>	Verify that register ZS717C is forced not activated. Verify that the forced register status is recorded.	✓		<i>PK</i>
18	Because the Sorting Table fully retracted position cannot be verified by the PCS, a "Sorting Table Retracted Not Verified" alarm should be generated. A flashing "SEQUENCE FAILED" message should be displayed on the "SORTING TABLE MENU" at OIU-12-103B.	Verify that a flashing "SEQUENCE FAILED" message is displayed.	✓		<i>PK</i>

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass	Fail	Witness (initial)
19	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Sorting Table Retracted Not Verified" alarm.	Verify that the alarm has been acknowledged.	✓		ML
20	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "SORTING TABLE MENU" is displayed.	✓		ML
21	Unforce LCU 102 register ZS716B. Record the unforced register status below:	Verify that register ZS716B is unforced.	✓		ML
22	Unforced ZS716B Status: <u>1</u> The "Sorting Table Lowered" position switch 07-ZS-716B should be activated, indicating that the Sorting Table is lowered.	Verify that "Sorting Table Lowered" position switch (07-ZS-716B) is activated.	✓		ML

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Sorting Table Extend, Sorting Table Retracted Interlock					
23	Press the "EXTEND TABLE" button from the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "EXTEND TABLE" button has been pressed.	✓		RV
24	The Sorting Table Retracted condition functions as an interlock for Sorting Table operation. Because this interlock is not satisfied, the Sorting Table should not extend. Wait thirty (30) seconds.	Verify that the Sorting Table does not extend during the waiting period.	✓		RV
25	Force LCU 102 registers ZS729A and ZS729B activated to simulate the Sorting Table "Locked" condition. Record the forced register status below: <div> <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS729A <u>0</u> <u>F: 27/11</u> ZS729B <u>0</u> <u>F: 27/12</u> </div>	Verify that registers ZS729A and ZS729B are forced activated. Verify that the forced register status is recorded.	✓		RV
26	Press the "ALARMS" button from the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "ALARMS" button has been pressed.	✓		RV
27	The "LOCAL ALARMS" screen should be displayed.	Verify that the "LOCAL ALARMS" screen is displayed.	✓		RV
28	Unforce LCU 102 register ZS717C. Record the unforced register status below: Unforced ZS717C Status: <u>1</u>	Verify that register ZS717C is unforced.	✓		RV
29	Because position switch 07-ZS-717C should be activated, indicating that Sorting Table is retracted, the "Sorting Table Retracted Not Verified" alarm should clear.	Verify that the alarm is cleared.	✓		RV
30	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "SORTING TABLE MENU" is displayed.	✓		RV

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Sorting Table Extend, Sorting Table Unlocked Interlock					
31	Press the "EXTEND TABLE" button from the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "EXTEND TABLE" button has been pressed.	✓		<i>AP 11/10/92</i> <i>R/W</i>
32	The Sorting Table Unlocked condition functions as an interlock for Sorting Table operation. Because this interlock is not satisfied, the Sorting Table should not extend. Wait thirty (30) seconds.	Verify that the Sorting Table does not extend during the waiting period.	✓		<i>mo</i> <i>R/W</i>
33	Unforce LCU 102 register ZS729B. Record the unforced register status below: Unforced ZS729B Status: <u>0</u>	Verify that register ZS729B is unforced.	✓		<i>mo</i> <i>R/W</i>
34	Because register ZS729B is unforced, the "Sorting Table Travel Locked" position switch (07-ZS-729B) should not be activated, indicating that the Sorting Table is not locked.	Verify that the "Sorting Table Travel Locked" position switch (07-ZS-729B) is not activated.	✓		<i>R/W</i>
35	Because register ZS729A remains forced activated, indicating that the Sorting Table is locked, the Sorting Table should not extend. Wait thirty (30) seconds.	Verify that the Sorting Table does not extend during the waiting period.	✓		<i>R/W</i>
36	Force LCU 102 register ZS729B activated to simulate the "Sorting Table Locked" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS729B <u>1</u> <u>F 1 27/12</u>	Verify that register ZS729B is forced activated. Verify that the forced register status is recorded.	✓		<i>R/W</i>
37	Unforce LCU 102 register ZS729A. Record the unforced register status below: Unforced ZS729A Status: <u>0</u>	Verify that register ZS729A is unforced.	✓		<i>R/W</i>
38	Because register ZS729A is unforced, the "Sorting Table Travel Locked" position switch (07-ZS-729A) should not be activated, indicating that the Sorting Table is not locked.	Verify that the "Sorting Table Travel Locked" position switch (07-ZS-729A) is not activated.	✓		<i>R/W</i>
39	Because register ZS729B remains forced activated, indicating that the Sorting Table is locked, the Sorting Table should not extend. Wait thirty (30) seconds.	Verify that the Sorting Table does not extend during the waiting period.	✓		<i>R/W</i>

AP 11/10/92
34a perform step #31

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
40	Force LCU 102 register ZS332B activated to simulate the "Drum Tipper Not Lowered" condition. Record the forced register status below: <div> <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS332B <u>1</u> <u>I: 25/10</u> </div>	Verify that register ZS332B is forced activated. Verify that the forced register status is recorded.	✓		PW
41	Unforce LCU 102 register ZS729B. Record the unforced register status below: Unforced ZS729B Status: <u>0</u>	Verify that register ZS729B is unforced.	✓		RIV
42	Because register ZS729B is unforced, the "Sorting Table Travel Locked" position switch (07-ZS-729B) should not be activated, indicating that the Sorting Table is not locked.	Verify that the "Sorting Table Travel Locked" position switch (07-ZS-729B) is not activated.	✓		PW

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)						
Examine Sorting Table Extend, Drum Tipper Lowered Interlock											
43	Press the "EXTEND TABLE" button from the."SORTING TABLE MENU" at OIU-12-103B.	Verify that the "EXTEND TABLE" button has been pressed.	✓		R/W						
44	The Drum Tipper Lowered condition functions as an interlock for Sorting Table Operation. Because this interlock is not satisfied, the Sorting Table should not extend. Wait thirty (30) seconds.	Verify that the Sorting Table does not extend during the waiting period.	✓		R/W						
45	Force LCU 102 register ZS333 activated to simulate the "Drum Tipper Grab Not Vertical" condition. Record the forced register status below:	Verify that register ZS333 is forced activated.	N/A								
	<table><tr><td>Register</td><td>Forced Status</td><td>Method of Confirmation</td></tr><tr><td>ZS333</td><td>_____</td><td>_____</td></tr></table>	Register	Forced Status	Method of Confirmation	ZS333	_____	_____	Verify that the forced register status is recorded.	R/W	2/2/92	
Register	Forced Status	Method of Confirmation									
ZS333	_____	_____									
46	Unforce LCU 102 register ZS332B. Record the unforced register status below: Unforced ZS332A Status: 0	Verify that register ZS332B is unforced.	✓		R/W						
47	The "Drum Grab/Tipper Lowered" position switch (07-ZS-332B) should not be activated, indicating that the Drum Tipper is lowered.	Verify that the "Drum Grab/Tipper Lowered" position switch is not activated.	✓		R/W						

#45 Not part of interlock logic (Tipper not vertical)

48.

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52

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail /	Witness (initial)
Examine Sorting Table Extend, Drum Tipper Grab Vertical Interlock					
48	Press the "EXTEND TABLE" button from the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "EXTEND TABLE" button has been pressed.			N/A PN/12-1
49	The Drum Tipper Grab Vertical condition functions as an interlock for Sorting Table Operation. Because this interlock is not satisfied, the Sorting Table should not extend. Wait thirty (30) seconds.	Verify that the Sorting Table does not extend during the waiting period.			N/A PN 21/4/2
50	Force LCU 102 register ZS720A not activated to simulate the "Drum Tipper Grab Not Closed" condition. Record the forced register status below: <div> <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS720A 0 F: 25/12 </div>	Verify that register ZS720A is forced not activated. Verify that the forced register status is recorded.	✓		RJV
51	Unforce LCU 102 register ZS333. Record the unforced register status below: Unforced ZS333 Status: _____	Verify that register ZS333 is unforced.			N/A PN 21/4/2
52	The "Drum Tipper Vertical" position switch (07-ZS-333) should not be activated, indicating that the Drum Tipper Grab is Vertical.	Verify that the "Drum Tipper Vertical" position switch is not activated.			N/A PN 21/4/2

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✗	Witness (initial)
Examine Sorting Table Extend, Drum Tipper Grab Close Interlock					
53	Press the "EXTEND TABLE" button from the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "EXTEND TABLE" button has been pressed.	✓		R/W
54	The "Drum Tipper Grab Closed" condition functions as an interlock for Sorting Table Operation. Because this interlock is not satisfied, the Sorting Table should not extend. Wait thirty (30) seconds.	Verify that the Sorting Table does not extend during the waiting period.	✓		R/W
55	Place the LLW Sorting Glovebox Waste Manipulator (EM-07-101) approximately one foot from park position 2 (farthest from Bagless Transfer Port (DO-07-105).	Verify that the waste manipulator is not parked.	✓		R/W
56	Unpark both of the LLW Sorting Glovebox Waste Manipulator (EM-07-101) arms.	Verify that the manipulator arms are not parked.	✓		R/W
57	Unforce LCU 102 register ZS720A. Record the unforced register status below: Unforced ZS720A Status: <u>1</u>	Verify that register ZS720A is unforced.	✓		R/W
58	The "Drum Tipper Drum Grab Closed" position switch (07-ZS-720A) should be activated, indicating that the Drum Tipper Grab is closed.	Verify that the "Drum Tipper Drum Grab Closed" position switch is activated.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Sorting Table Extend Manipulator Parked Interlock					
59	Press the "EXTEND TABLE" button from the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "EXTEND TABLE" button has been pressed.	✓		R/W
60	The Manipulator Parked condition functions as an interlock for Sorting Table Operation. Because this interlock is not satisfied, the Sorting Table should not extend. Wait thirty (30) seconds.	Verify that the Sorting Table does not extend during the waiting period.	✓		R/W
61	Park the left LLW Sorting Glovebox Waste Manipulator (EM-07-101) arm.	Verify that the left waste manipulator arm is parked.	✓		R/W
62	Press the "EXTEND TABLE" button from the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "EXTEND TABLE" button has been pressed.	✓		R/W
63	Because the LLW Glovebox Waste Manipulator (EM-07-101) and the right Manipulator arm is not parked, the Sorting Table should not extend. Wait thirty (30) seconds.	Verify that the Sorting Table does not extend during the waiting period.	✓		R/W
64	Park the right LLW Sorting Glovebox Waste Manipulator (EM-07-101) arm.	Verify that the right waste manipulator arm is parked.	✓		R/W
65	Press the "EXTEND TABLE" button from the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "EXTEND TABLE" button has been pressed.	✓		R/W
66	Because the LLW Glovebox Waste Manipulator (EM-07-101) is not parked, the Sorting Table should not extend. Wait thirty (30) seconds.	Verify that the Sorting Table does not extend during the waiting period.	✓		R/W
67	Force LCU 102 register ZS717B not activated to simulate the "Sorting Table Not at Tip Position" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS717B <u>0</u> <u>I: 27/07</u>	Verify that register ZS717B is forced not activated. Verify that the forced register status is recorded.	✓		R/W
68	Place the LLW Sorting Glovebox Waste Manipulator (EM-07-101) at Parked Position #2, farthest from the Bagless Transfer Port, with both Manipulator arms parked.	Verify that the Manipulator is at Parked Position #2 with both Manipulator arms parked.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
	Examine "Failed to Move to Tip Position - Retracted" Alarm				
69	WARNING: The following test procedure steps involve extending the Sorting Table to the tip position when the tip position switch has been forced not activated. Equipment damage and personal injury could result if the Sorting Table cannot be safely stopped. DO NOT PERFORM THE FOLLOWING TEST STEPS IF THE SORTING TABLE CANNOT BE SAFELY STOPPED.	Verify that the Sorting Table can be safely stopped.	✓		RW
70	Record below the steps taken to safely stop the Sorting Table in the event of overtravel beyond the tip position: Sorting Table Safe Stop Steps: <u>1. E-Stop</u> <u>2. Locking Pins Extended at</u> <u>Beginning of sequence</u>	Verify that the steps to safely stop the Sorting Table have been recorded.	✓		RW
71	WARNING: If the Sorting Table does not stop at the Tip Position, take safe, rapid corrective measures to stop the Sorting Table. Press the "EXTEND TABLE" button from the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "EXTEND TABLE" button has been pressed.	✓		RW
72	The PCS should pulse energize the Sorting Table extend/retract solenoid 07-FEV-737B/F (Forward).	Verify that the Sorting Table moves forward.	✓		RW
73	Because the "Sorting Table Tip Position" switch (07-ZS-717B) is forced not activated, the Sorting Table should not stop at the Tip position.	Verify that the Sorting Table does not stop at the Tip position.			N/A
74	If the Sorting Table does not stop at the Tip Position, take safe, rapid corrective measures to stop the Sorting Table.	Verify that the Sorting Table is safely stopped.	✓		RW
75	Because register ZS717B is forced not activated, simulating the "Sorting Table Not at Tip Position" condition, the "Sorting Table Extend" sequence should not be considered successful. The "SORTING TABLE EXTENDING...." message should not be displayed on the "SORTING TABLE MENU" at OIU-12-103B and the "Failed to Move to Tip Position - Retracted" alarm should be generated.	Verify that the "SORTING TABLE EXTENDING...." message is not displayed.	✓		RW

#73 LOCK PINS Extend at Beginning of sequence
74a verify sorting table LOCK PINS Extended

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
76	ALARM ACKNOWLEDGEMENT SEQUENCE: <i>FORWARD RIN 9/21/97</i> Acknowledge the "Failed to Move to Tip Position - Retracted " alarm.	Verify that the alarm has been acknowledged.	✓		<i>RIV</i>
77	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "SORTING TABLE MENU" is displayed.	✓		<i>RIV</i>
78	Unforce LCU 102 register ZS717B. Record the unforced register status below: Unforced ZS717B Status: <u>1</u>	Verify that register ZS717B is unforced.	✓		<i>RIV</i>
79	Using the "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" option from the "SORTING GLOVEBOX MAINTENANCE MAIN MENU", or other appropriate means, return the Sorting Table to the fully retracted position.	Verify that the Sorting Table has been returned to the fully retracted position.	✓		<i>RIV</i>
80	The "Sorting Table Fully Retracted" position switch (07-ZS-717C) should be activated, indicating that the Sorting Table is fully retracted.	Verify that the "Sorting Table Fully Retracted" position switch is activated.	✓		<i>RIV</i>

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Extend the Sorting Table to the Tip Position and Lock in Place					
81	Press the "EXTEND TABLE" button from the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "EXTEND TABLE" button has been pressed.	✓		R/W
82	The "SORTING TABLE EXTENDING..." message should be displayed on the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "SORTING TABLE EXTENDING..." message is displayed.	✓		R/W
83 85	The PCS should pulse energize the Sorting Table extend/retract solenoid 07-FEV-737B/F (Forward) to move the Sorting Table forward to the Tip position.	Verify that the Sorting Table moves forward to the Tip Position.	✓		R/W
84 86	The "Sorting Table Tip Position" switch (07-ZS-717B) should be activated.	Verify that the "Sorting Table Tip Position" switch is activated.	✓		R/W
85 83	The PCS should pulse energize solenoid 07-FEV-737D/L (Lock) to extend the locking pins to lock the Sorting Table at the Tip Position.	Verify that the Sorting Table locking pins are fully extended.	✓		R/W
86 84	When the locking pins are fully extended, the "Sorting Table Travel Locked" position switches (07-ZS-729A and 07-ZS-729B) should be activated, indicating that the Sorting Table is locked.	Verify that the "Sorting Table Travel Locked" position switches are activated.		✓	R/W
87	Because the Sorting Table is locked at the Tip Position, the "SORTING TABLE EXTENDED" message should be displayed on the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "SORTING TABLE EXTENDED" message is displayed.	✓		R/W
TEST CASE 13031A-85.24 COMPLETE					

10/11/97 #83-86 incorrect sequence of events

#84 Forced ZS-729A activated. see TE #14/

TEST CASE 13031A-85.25 EXAMINE LLW SORTING GLOVEBOX SORTING TABLE (ST-07-101) INTERLOCKS AND RETURN CONTENTS TO DRUM	25-2
Examine "Sorting Table at Tip Position Not Verified" Alarm	25-2
Enable Sorting Table Raise	25-3
Examine Sorting Table Raise, Drum Tipper Lowered Interlock	25-4
Examine Sorting Table Raise, Sorting Table at Tip Position Interlock	25-5
Examine Sorting Table Raise, Sorting Table Locked Interlock	25-6
Examine Sorting Table Raise, Drum Tipper Grab Vertical Interlock	25-8
Examine Sorting Table Raise, Drum Tipper Grab Close Interlock	25-9
Examine Sorting Table Raise, Manipulator Parked Interlock and Raise Table	25-10
Examine Sorting Table Lower, Sorting Table at Tip Position Interlock	25-12
Examine Sorting Table Lower, Sorting Table Locked Interlock	25-13
Examine Sorting Table Lower, Sorting Table Sorting Table Not Completely Lowered Interlock	25-15
Unlock and Retract Sorting Table	25-17

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.25 EXAMINE LLW SORTING GLOVEBOX SORTING TABLE (ST-07-101) INTERLOCKS AND RETURN CONTENTS TO DRUM					
Examine "Sorting Table at Tip Position Not Verified" Alarm					
1	Force LCU 102 register ZS717B not activated to simulate the "Sorting Table Not at Tip Position" condition. Record the forced register status below: Register <u>4/11 97</u> Forced Status <u>0</u> Method of Confirmation <u>IS 27102</u> ZS717B <u>AB</u>	Verify that register ZS717B is forced not activated. Verify that the forced register status is recorded.	✓		R/W
2	Because register ZS717B is forced not activated, a "Sorting Table at Tip Position Not Verified" alarm should be generated. A flashing "SEQUENCE FAILED" message should be displayed on the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that a flashing "SEQUENCE FAILED" message is displayed.	✓		R/W
3	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Sorting Table at Tip Position Not Verified" alarm.	Verify that the alarm has been acknowledged.	✓		R/W
4	Unforce LCU 102 register ZS717B. Record the unforced register status below: Unforced ZS717B Status: <u>1</u>	Verify that register ZS717B is unforced.	✓		R/W
5	Because the "Sorting Table at Tip Position" switch (07-ZS-717B) should be activated, indicating that the Sorting Table is at the Tip position, the "Sorting Table at Tip Position Not Verified" alarm should clear.	Verify that the position switch is activated.	✓		R/W
6	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "SORTING TABLE MENU" is displayed.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Enable Sorting Table Raise					
7	Press the "RAISE SORTING TABLE" and "LOWER SORTING TABLE" buttons on the "SORTING TABLE MENU" at OIU-12-103B.	Verify that pressing the "RAISE SORTING TABLE" and "LOWER SORTING TABLE" buttons have been pressed.	✓		R/W
8	Pressing the "RAISE SORTING TABLE" and "LOWER SORTING TABLE" buttons should have no effect on the Sorting Table.	Verify that pressing the "RAISE SORTING TABLE" and "LOWER SORTING TABLE" buttons has no effect on the Sorting Table.	✓		R/W
9	Press the "DISABLE RAISE/LOWER" button on the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "DISABLE RAISE/LOWER" button has been pressed.	✓		R/W
10	The "RAISE/LOWER DISABLED" message should be displayed at OIU-12-103B.	Verify that the "RAISE/LOWER DISABLED" message is displayed.	✓		R/W
11	Press the "RAISE SORTING TABLE" and "LOWER SORTING TABLE" buttons on the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "RAISE SORTING TABLE" and "LOWER SORTING TABLE" buttons have been pressed.	✓		R/W
12	Pressing the "RAISE SORTING TABLE" and "LOWER SORTING TABLE" buttons should have no effect on the Sorting Table.	Verify that pressing the "RAISE SORTING TABLE" and "LOWER SORTING TABLE" buttons has no effect on the Sorting Table.	✓		R/W
13	Press the "ENABLE RAISE/LOWER" button on the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "ENABLE RAISE/LOWER" button has been pressed.	✓		R/W
14	The "RAISE/LOWER ENABLED" message should be displayed at OIU-12-103B. <i>R/W 9/21/95</i>	Verify that the "RAISE/LOWER ENABLED" message is displayed.	✓		R/W
15	Force LCU 102 register ZS332B not activated to simulate the "Drum Tipper Not Lowered" condition. Record the forced register status below: <div> <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS332B <u>1</u> <u>I; 25:10</u> </div>	Verify that register ZS332B is forced not activated. Verify that the forced register status is recorded.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Sorting Table Raise, Drum Tipper Lowered Interlock					
16	Press the "RAISE SORTING TABLE" button from the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "RAISE SORTING TABLE" button has been pressed.	✓		AW
17	The Drum Tipper Lowered condition functions as an interlock for raising the Sorting Table. Because this interlock is not satisfied, the Sorting Table "Raise" sequence should pause and the Sorting Table should not raise. Wait thirty (30) seconds.	Verify that the Sorting Table does not raise during the waiting period.	✓		AW
18	Force LCU 102 register ZS717B not activated to simulate the "Sorting Table Not at Tip Position" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS717B 0 I, 25/107	Verify that register ZS717B is forced not activated. Verify that the forced register status is recorded.	✓		AW
19	Because LCU 102 register ZS717B is forced not activated, simulating the Sorting Table Not at Tip Position condition, a "Sorting Table at Tip Position Not Verified" alarm should be generated. A flashing "SEQUENCE FAILED" message should be displayed on the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that a flashing "SEQUENCE FAILED" message is displayed.	✓		AW
20	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Sorting Table at Tip Position Not Verified" alarm.	Verify that the alarm has been acknowledged.	✓		AW
21	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "SORTING TABLE MENU" is displayed.	✓		AW
22	Unforce LCU 102 register ZS332B. Record the unforced register status below: B. RV 2/21/97 Unforced ZS332B Status: 0	Verify that register ZS332B is unforced.	✓		AW
23	The "Drum Grab/Tipper Lowered" position switch (07-ZS-332B) should be activated, indicating that the Drum Tipper is lowered.	Verify that the "Drum Grab/Tipper Lowered" position switch is activated.	✓		AW

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Sorting Table Raise, Sorting Table at Tip Position Interlock					
24	Press the "RAISE SORTING TABLE" button from the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "RAISE SORTING TABLE" button has been pressed.	✓		R/W
25	The Sorting Table at Tip Position functions as an interlock for Sorting Table operation. Because this interlock is not satisfied, the Sorting Table should not raise. Wait thirty (30) seconds.	Verify that the Sorting Table does not raise during the waiting period.	✓		R/W
26	Force LCU 102 registers ZS729A and ZS729B not activated to simulate the "Sorting Table Unlocked" condition. Record the forced register status below: <div style="display: flex; justify-content: space-around;"> <div> <u>Register</u> ZS729A <u>0</u> ZS729B <u>0</u> </div> <div> <u>Forced Status</u> </div> <div> <u>Method of Confirmation</u> <u>I: 27/11</u> <u>I: 27/12</u> </div> </div>	Verify that registers ZS729A and ZS729B are forced not activated. Verify that the forced register status is recorded.	✓		R/W
27	Unforce LCU 102 register ZS717B. Record the unforced register status below: Unforced ZS717B Status: <u>1</u>	Verify that register ZS717B is unforced.	✓		R/W
28	The "Sorting Table Tip Position" switch (07-ZS-717B) should be activated.	Verify that the "Sorting Table Tip Position" switch is activated.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Sorting Table Raise, Sorting Table Locked Interlock					
29	Press the "RAISE SORTING TABLE" button from the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "RAISE SORTING TABLE" button has been pressed.	✓		R/W
30	The "Sorting Table Locked" condition functions as an interlock for raising the Sorting Table. Because this interlock is not satisfied, the Sorting Table should not raise. Wait thirty (30) seconds.	Verify that the Sorting Table does not raise during the waiting period.	✓		R/W
31	Unforce LCU 102 register ZS729B. Record the unforced register status below: Unforced ZS729B Status: <u>1</u>	Verify that register ZS729B is unforced.	✓		R/W
32	The "Sorting Table Travel Locked" position switch (07-ZS-729B) should be activated, indicating that the Sorting Table is locked.	Verify that the "Sorting Table Travel Locked" position switch (07-ZS-729B) is activated.	✓		R/W
33	Press the "RAISE SORTING TABLE" button from the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "RAISE SORTING TABLE" button has been pressed.	✓		R/W
34	Because register ZS729A remains forced not activated, indicating that the Sorting Table is not locked, the Sorting Table should not raise. Wait thirty (30) seconds.	Verify that the Sorting Table does not raise during the waiting period.	✓		R/W
35	Force LCU 102 register ZS729B not activated to simulate the "Sorting Table Unlocked" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS729B <u>0</u> <u>F: 27112</u>	Verify that register ZS729B is forced not activated. Verify that the forced register status is recorded.	✓		R/W
36	Unforce LCU 102 register ZS729A. Record the unforced register status below: Unforced ZS729A Status: <u>1</u>	Verify that register ZS729A is unforced.	✓		R/W
37	The "Sorting Table Travel Locked" position switch (07-ZS-729A) should be activated, indicating that the Sorting Table is locked.	Verify that the "Sorting Table Travel Locked" position switch (07-ZS-729A) is activated.	✓		R/W
38	Press the "RAISE SORTING TABLE" button from the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "RAISE SORTING TABLE" button has been pressed.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass /	Fail /	Witness (initial)
39	Because register ZS729B remains forced not activated, the Sorting Table should not raise. Wait thirty (30) seconds.	Verify that the Sorting Table does not raise during the waiting period.	✓		R/W
40	Force LCU 102 register ZS333 not activated to simulate the "Drum Tipper-Grab Not Vertical" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS333 _____ _____	Verify that register ZS333 is forced not activated.			N/A
		Verify that the forced register status is recorded.		AW	2/21/97
41	Unforce LCU 102 register ZS729B. Record the unforced register status below: Unforced ZS729B Status: <u>1</u>	Verify that register ZS729B is unforced.	✓		R/W
42	The "Sorting Table Travel Locked" position switch (07-ZS-729B) should be activated, indicating that the Sorting Table is locked.	Verify that the "Sorting Table Travel Locked" position switch (07-ZS-729B) is activated.	✓		R/W

#40, 43, 44, Tipper Vertical not part of Interlock logic
46, 47

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Sorting Table Raise, Drum Tipper Grab Vertical Interlock					
43	Press the "RAISE SORTING TABLE" button from the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "RAISE SORTING TABLE" button has been pressed.			N/A N/A 1/4/97
44	The Drum Tipper Grab Vertical condition functions as an interlock for Sorting Table Operation. Because this interlock is not satisfied, the Sorting Table should not raise. Wait thirty (30) seconds.	Verify that the Sorting Table does not raise during the waiting period.			N/A N/A 1/4/97
45	Force LCU 102 register ZS720A not activated to simulate the "Drum Tipper Grab Not Closed" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS720A <u>0</u> <u>F:2512</u>	Verify that register ZS720A is forced not activated. Verify that the forced register status is recorded.	✓		N/A N/A 1/4/97
46	Unforce LCU 102 register ZS333. Record the unforced register status below: Unforced ZS333 Status: _____	Verify that register ZS333 is unforced.			N/A N/A 1/4/97
47	The "Drum Tipper Vertical" position switch (07-ZS-333) should be activated, indicating that the Drum Tipper Grab is Vertical.	Verify that the "Drum Tipper Vertical" position switch is activated.			N/A N/A 1/4/97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Sorting Table Raise, Drum Tipper Grab Close Interlock					
48	Press the "RAISE SORTING TABLE" button from the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "RAISE SORTING TABLE" button has been pressed.	✓		R/W
49	The "Drum Tipper Grab Closed" condition functions as an interlock for Sorting Table Operation. Because this interlock is not satisfied, the Sorting Table should not raise. Wait thirty (30) seconds.	Verify that the Sorting Table does not raise during the waiting period.	✓		R/W
50	Place the LLW Sorting Glovebox Waste Manipulator (EM-07-101) approximately one foot from park position 2 (farthest from Bagless Transfer Port (DO-07-105)).	Verify that the waste manipulator is not parked.	✓		R/W
51	Unpark both of the LLW Sorting Glovebox Waste Manipulator (EM-07-101) arms.	Verify that the manipulator arms are not parked.	✓		R/W
52	Unforce LCU 102 register ZS720A. Record the unforced register status below: Unforced ZS720A Status: <u>1</u>	Verify that register ZS720A is unforced.	✓		R/W
53	The "Drum Tipper Drum Grab Closed" position switch (07-ZS-720A) should be activated, indicating that the Drum Tipper Grab is closed.	Verify that the "Drum Tipper Drum Grab Closed" position switch is activated.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Sorting Table Raise, Manipulator Parked Interlock and Raise Table					
54	Press the "RAISE SORTING TABLE" button from the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "RAISE SORTING TABLE" button has been pressed.	✓		R/W
55	The "Manipulator Parked" condition functions as an interlock for Sorting Table Operation. Because this interlock is not satisfied, the Sorting Table should not raise. Wait thirty (30) seconds.	Verify that the Sorting Table does not raise during the waiting period.	✓		R/W
56	Park the left LLW Sorting Glovebox Waste Manipulator (EM-07-101) arm.	Verify that the left waste manipulator arm is parked.	✓		R/W
57	Press the "RAISE SORTING TABLE" button from the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "RAISE SORTING TABLE" button has been pressed.	✓		R/W
58	Because the LLW Glovebox Waste Manipulator (EM-07-101) and the right Manipulator arm is not parked, the Sorting Table should not raise. Wait thirty (30) seconds.	Verify that the Sorting Table does not raise during the waiting period.	✓		R/W
59	Park the right LLW Sorting Glovebox Waste Manipulator (EM-07-101) arm.	Verify that the right waste manipulator arm is parked.	✓		R/W
60	Press the "RAISE SORTING TABLE" button from the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "RAISE SORTING TABLE" button has been pressed.	✓		R/W
61	Because the LLW Glovebox Waste Manipulator (EM-07-101) is not parked, the Sorting Table should not raise. Wait thirty (30) seconds.	Verify that the Sorting Table does not raise during the waiting period.	✓		R/W
62	Place the LLW Sorting Glovebox Waste Manipulator (EM-07-101) at Parked Position #2, farthest from the Bagless Transfer Port, with both Manipulator arms parked.	Verify that the Manipulator is at Parked Position #2 with both Manipulator arms parked.	✓		R/W
63	Press the "RAISE SORTING TABLE" button from the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "RAISE SORTING TABLE" button has been pressed.	✓		R/W
64	Pressing the "RAISE SORTING TABLE" button should cause the PCS to energize the Sorting Table raise/lower solenoid 07-FEV-737C/R (Raise).	Verify that the Sorting Table raises when the "RAISE SORTING TABLE" button is pressed.	✓		R/W
65	Continue to press the "RAISE SORTING TABLE" button until the Sorting Table no longer raises.	Verify that the Sorting Table is fully raised.	✓		R/W

#63 OPEN X-Ray Door prior to raising sorting table, see TE #151
 TEST CASE 13031A-85.25 Rev. 0 25-10 R/W 7/2/97 LLW SORTING GLOVEBOX

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)						
66	Force LCU 102 register ZS717B not activated to simulate the "Sorting Table Not at Tip Position" condition. Record the forced register status below: <table><tr><td>Register</td><td>Forced Status</td><td>Method of Confirmation</td></tr><tr><td>ZS717B</td><td>0</td><td>I: 27107</td></tr></table>	Register	Forced Status	Method of Confirmation	ZS717B	0	I: 27107	Verify that register ZS717B is forced not activated. Verify that the forced register status is recorded.	✓		R/W
Register	Forced Status	Method of Confirmation									
ZS717B	0	I: 27107									
67	Because LCU 102 register ZS717B is forced not activated, simulating the Sorting Table Not at Tip Position condition, a "Sorting Table at Tip Position Not Verified" alarm should be generated. A flashing "SEQUENCE FAILED" message should be displayed on the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that a flashing "SEQUENCE FAILED" message is displayed.	✓		R/W						
68	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Sorting Table at Tip Position Not Verified" alarm.	Verify that the alarm has been acknowledged.	✓		R/W						
69	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "SORTING TABLE MENU" is displayed.	✓		R/W						

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Sorting Table Lower, Sorting Table at Tip Position Interlock					
70	Press the "LOWER SORTING TABLE" button from the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "LOWER SORTING TABLE" button has been pressed.	✓		P/W
71	The Sorting Table At Tip Position functions as an interlock for Sorting Table operation. Because this interlock is not satisfied, the Sorting Table should not lower. Wait thirty (30) seconds.	Verify that the Sorting Table does not lower during the waiting period.	✓		P/W
72	Unforce LCU 102 register ZS717B. Record the unforced register status below: Unforced ZS717B Status: <u>1</u>	Verify that register ZS717B is unforced.	✓		P/W
73	The "Sorting Table Tip Position" switch (07-ZS-717B) should be activated.	Verify that the "Sorting Table Tip Position" switch is activated.	✓		P/W
74	Briefly press the "LOWER SORTING TABLE" button from the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "LOWER SORTING TABLE" button has been pressed.	✓		P/W
75	The Sorting Table should lower as long as the "LOWER SORTING TABLE" button is depressed.	Verify that the Sorting Table lowers when the "LOWER SORTING TABLE" button is pressed.	✓		P/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Sorting Table Lower, Sorting Table Locked Interlock					
76	Force LCU 102 registers ZS729A and ZS729B not activated to simulate the "Sorting Table Unlocked" condition. Record the forced register status below: <div> <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> </div> <div> ZS729A 0 I: 27/11 </div> <div> ZS729B 0 I: 27/12 </div>	Verify that registers ZS729A and ZS729B are forced not activated. Verify that the forced register status is recorded.	✓ ✓		mgj mgj
77	Press the "LOWER SORTING TABLE" button from the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "LOWER SORTING TABLE" button has been pressed.	✓		mgj
78	The Sorting Table Locked condition functions as an interlock for lowering the Sorting Table. Because this interlock is not satisfied, the Sorting Table should not lower. Wait thirty (30) seconds.	Verify that the Sorting Table does not lower during the waiting period.	✓		mgj
79	Unforce LCU 102 register ZS729B. Record the unforced register status below: Unforced ZS729B Status: 1	Verify that register ZS729B is unforced.	✓		mgj
80	Because register ZS729B is unforced, the "Sorting Table Travel Locked" position switch (07-ZS-729B) should be activated, indicating that the Sorting Table is locked.	Verify that the "Sorting Table Travel Locked" position switch (07-ZS-729B) is activated.	✓		mgj
81	Press the "LOWER SORTING TABLE" button from the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "LOWER SORTING TABLE" button has been pressed.	✓		mgj
82	Because register ZS729A remains forced not activated, indicating that the Sorting Table is not locked, the Sorting Table should not lower. Wait thirty (30) seconds.	Verify that the Sorting Table does not lower during the waiting period.	✓		mgj
83	Force LCU 102 register ZS729B not activated to simulate the "Sorting Table Unlocked" condition. Record the forced register status below: <div> <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> </div> <div> ZS729B 0 I: 27/12 </div>	Verify that register ZS729B is forced not activated. Verify that the forced register status is recorded.	✓ ✓		mgj mgj

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
84	Unforce LCU 102 register ZS729A. Record the unforced register status below: Unforced ZS729A Status: <u>1</u>	Verify that register ZS729A is unforced.	✓		mgj
85	Because register ZS729A is unforced, the "Sorting Table Travel Locked" position switch (07-ZS-729A) should be activated, indicating that the Sorting Table is locked.	Verify that the "Sorting Table Travel Locked" position switch (07-ZS-729A) is activated.	✓		mgj
86	Press the "LOWER SORTING TABLE" button from the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "LOWER SORTING TABLE" button has been pressed.	✓		mgj
87	Because register ZS729B remains forced not activated, indicating that the Sorting Table is Unlocked, the Sorting Table should not lower. Wait thirty (30) seconds.	Verify that the Sorting Table does not lower during the waiting period.	✓		mgj
88	Unforce LCU 102 register ZS729B. Record the unforced register status below: Unforced ZS729B Status: <u>mgj 7-21-97</u> <u>1</u>	Verify that register ZS729B is unforced.	✓		mgj
89	Because register ZS729B is unforced, the "Sorting Table Travel Locked" position switch (07-ZS-729B) should be activated, indicating that the Sorting Table is locked.	Verify that the "Sorting Table Travel Locked" position switch (07-ZS-729B) is activated.	✓		mgj
90	Briefly press the "LOWER SORTING TABLE" button from the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "LOWER SORTING TABLE" button has been pressed.	✓		mgj
91	The Sorting Table should lower as long as the "LOWER SORTING TABLE" button is depressed.	Verify that the Sorting Table lowers when the "LOWER SORTING TABLE" button is pressed.	✓		mgj

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Sorting Table Lower, Sorting Table Sorting Table Not Completely Lowered Interlock					
92	Force LCU 102 registers ZS716A and ZS716B activated to simulate the "Sorting Table Fully Lowered" condition. Record the forced register status below: <div> <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> </div> ZS716A <u>1</u> <u>I:27/4</u> ZS716B <u>1</u> <u>I:27/5</u>	Verify that registers ZS716A and ZS716B are forced activated. Verify that the forced register status is recorded.	✓ ✓		mg mg
93	Press the "LOWER SORTING TABLE" button from the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "LOWER SORTING TABLE" button has been pressed.	✓		mg
94	Because registers ZS716A and ZS716B are forced activated, indicating that the Sorting Table is lowered, pressing the "LOWER SORTING TABLE" button should have no effect on the Sorting Table.	Verify that pressing the "LOWER SORTING TABLE" button has no effect on the Sorting Table.	✓		mg
95	Unforce LCU 102 register ZS716A. Record the unforced register status below: Unforced ZS716A Status: <u>0</u>	Verify that register ZS716A is unforced.	✓		mg
96	The "Sorting Table Lowered" position switch (07-ZS-716A) should not be activated indicating that the Sorting Table is not lowered.	Verify that "Sorting Table Lowered" position switch (07-ZS-716A) is not activated.	✓		mg
97	Press the "LOWER SORTING TABLE" button from the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "LOWER SORTING TABLE" button has been pressed.	✓		mg
98	Because register ZS716B is forced activated, indicating that the Sorting Table is lowered, pressing the "LOWER SORTING TABLE" button should have no effect on the Sorting Table.	Verify that pressing the "LOWER SORTING TABLE" button has no effect on the Sorting Table.	✓		mg
99	Force LCU 102 register ZS716A activated to simulate the "Sorting Table Fully Lowered" condition. Record the forced register status below: <div> <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> </div> ZS716A <u>1</u> <u>I:27/4</u>	Verify that register ZS716A is forced activated. Verify that the forced register status is recorded.	✓ ✓		mg mg
100	Unforce LCU 102 register ZS716B. Record the unforced register status below: Unforced ZS716B Status: <u>0</u>	Verify that register ZS716B is unforced.	✓		mg

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
101	Press the "LOWER SORTING TABLE" button from the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "LOWER SORTING TABLE" button has been pressed.	✓		mgj
102	Because register ZS716A is forced activated, indicating that the Sorting Table is lowered, pressing the "LOWER SORTING TABLE" button should have no effect on the Sorting Table.	Verify that pressing the "LOWER SORTING TABLE" button has no effect on the Sorting Table.	✓		mgj
103	Unforce LCU 102 register ZS716A. Record the unforced register status below: Unforced ZS716A Status: <u>0</u>	Verify that register ZS716A is unforced.	✓		mgj
104	The "Sorting Table Lowered" position switch (07-ZS-716A) should not be activated indicating that the Sorting Table is not lowered.	Verify that "Sorting Table Lowered" position switch (07-ZS-716A) is not activated.	✓		mgj
105	Briefly press the "LOWER SORTING TABLE" button from the "SORTING TABLE MENU" at OIU-12-103B until the Sorting Table lowers slightly.	Verify that the "LOWER SORTING TABLE" button has been pressed.	✓		mgj
106	Because all Sorting Table raise interlocks should be satisfied, the Sorting Table should lower as long as the "LOWER SORTING TABLE" button is pressed.	Verify that the Sorting Table lowers when the "LOWER SORTING TABLE" button is pressed.	✓		mgj
107	Continue to press the "LOWER SORTING TABLE" button from the "SORTING TABLE MENU" at OIU-12-103B until the Sorting Table no longer lowers.	Verify that the "LOWER SORTING TABLE" button has been pressed.	✓		mgj
108 X	The Sorting Table (ST-07-101) should smoothly and completely lower to its fully lowered position.	Verify that the Sorting Table is fully lowered.		✓	mgj
109 X	The "Sorting Table Lowered" position switches (07-ZS-716A and 07-ZS-716B) should be activated, indicating that the Sorting Table is lowered.	Verify that the "Sorting Table Lowered" position switches are activated.		✓	mgj

#108 - Lower motion erratic, also table lowered but switches don't indicate table lowered.
 #109 lowered.
 see TE #155 RIV 9/9/97

191

X see TE #139

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Unlock and Retract Sorting Table					
110	Press the "RETRACT SORTING TABLE" button from the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "RETRACT SORTING TABLE" button has been pressed.	✓		mg
111	The PCS should pulse energize the Sorting Table lock/unlock solenoid 07-FEV-737D/UL (Unlock) to retract the locking pins to unlock the Sorting Table at the Tip Position.	Verify that the Sorting Table locking pins are fully retracted.	✓		mg
112	The PCS should energize the Sorting Table extend/retract solenoid 07-FEV-737B/R (Retract) and the Sorting Table should retract to its fully retracted position.	Verify that the Sorting Table is fully retracted.	✓		mg
113	Because the Sorting Table has reached the Retracted Position, the "SORTING TABLE RETRACTED" message should be displayed on the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "SORTING TABLE RETRACTED" message is displayed.	✓		mg
TEST CASE 13031A-85.25 COMPLETE					

#110- see note pg. 24.14

TEST CASE 13031A-85.26 EXAMINE LLW SORTING GLOVEBOX DRUM TIPPER (DH-07-103) INTERLOCKS AND LOWER DRUM WITH GRAB CLOSED	26-2
Examine Drum Tipper Lower, Transfer Car at Delid Position Interlock	26-2
Examine Drum Tipper Lower, Drum Tipper Grab Vertical Interlock	26-2
Examine Drum Tipper Lower, Sorting Table Fully Retracted Interlock	26-3
Examine Drum Tipper Lower, Drum Tipper Clutch Not Tripped Interlock	26-4
Lower Drum with Grab Closed Using Drum Tipper	26-5
	26-6

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✗	Witness (Initial)
TEST CASE 13031A-85.26 EXAMINE LLW SORTING GLOVEBOX DRUM TIPPER (DH-07-103) INTERLOCKS AND LOWER DRUM WITH GRAB CLOSED					
Examine Drum Tipper Lower Transfer Car at Delid Position Interlock					
1	Unforce all LCU 102 registers using the Allen Bradley PLC Software.	Verify that all LCU 102 registers are unforced.			
2	Confirm that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed at OIU-12-103B. If a sub-menu is displayed, press the "MAIN MENU" button to return to the "LLW SORTING GLOVEBOX MAIN MENU".	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.			
3	Press the "DRUM TIPPER MENU" button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "DRUM TIPPER MENU" is displayed.			
4	Force LCU 102 register ZS725C not activated to simulate the "Transfer Car not at Delid Position" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS725C _____ _____	Verify that register ZS725C is forced not activated. Verify that the forced register status is recorded.			
5	Press the "LOWER WITH GRAB CLOSED" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "LOWER WITH GRAB CLOSED" button has been pressed.			
6	Press the "LOWER TIPPER" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "LOWER TIPPER" button has been pressed.			
7	The Transfer Car at Delid Position condition functions as an interlock for Drum Tipper Operation. Because this interlock is not satisfied, The Drum Tipper should not lower.	Verify that the Drum Tipper does not lower.			
8	Force LCU 102 register ZS333 activated to simulate the "Drum Tipper Grab Not Vertical" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS333 _____ _____	Verify that register ZS333 is forced activated. Verify that the forced register status is recorded.			
9	Unforce LCU 102 register ZS725C.	Verify that register ZS725C is unforced.			
10	The "Transfer Car at Delid Position" switch (07-ZS-725C) should be activated, indicating that the Transfer Car is at the Delid position.	Verify that the "Transfer Car at Delid Position" position switch is activated.			

Steps 1-35 - Repeated, already covered in test case 20,
mfg 9-9-97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass /	Fail /	Witness (Initial)
Examine Drum Tipper Lower, Drum Tipper Grab Vertical Interlock					
11	Press the "LOWER WITH GRAB CLOSED" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "LOWER WITH GRAB CLOSED" button has been pressed.			
12	Press the "LOWER TIPPER" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "LOWER TIPPER" button has been pressed.			
13	The Drum Tipper Grab Vertical condition functions as an interlock for Drum Tipper Operation. Because this interlock is not satisfied, The Drum Tipper should not lower.	Verify that the Drum Tipper does not lower.			
14	Force LCU 102 register ZS717C not activated to simulate the "Sorting Table Not Fully Retracted" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS717C _____ _____	Verify that register ZS717C is forced not activated. Verify that the forced register status is recorded.			
15	Because the Sorting Table fully retracted position cannot be verified by the PCS, a "Sorting Table Retracted Not Verified" alarm should be generated. A flashing "SEQUENCE FAILED" message should be displayed on the "SORTING TABLE MENU" at OIU-12-103B.	Verify that a flashing "SEQUENCE FAILED" message is displayed.			
16	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Sorting Table Retracted Not Verified" alarm.	Verify that the alarm has been acknowledged.			
17	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "DRUM TIPPER MENU" is displayed.			
18	Unforce LCU 102 register ZS333. Record the unforced register status below: Unforced ZS333 Status: _____	Verify that register ZS333 is unforced.			
19	The "Drum Tipper Vertical" position switch (07-ZS-333) should be activated, indicating that the Drum Tipper Grab is Vertical.	Verify that the "Drum Tipper Vertical" position switch is activated.			

See note pg 26-2

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Drum Tipper Lower, Sorting Table Fully Retracted Interlock					
20	Press the "LOWER WITH GRAB CLOSED" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "LOWER WITH GRAB CLOSED" button has been pressed.			
21	Press the "LOWER TIPPER" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "LOWER TIPPER" button has been pressed.			
22	The Sorting Table Fully Retracted condition functions as an interlock for Drum Tipper Operation. Because this interlock is not satisfied, The Drum Tipper should not lower.	Verify that the Drum Tipper does not lower.			
23	Force LCU 102 register ZS335 activated to simulate the "Drum Tipper Clutch Tripped" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS335 _____ _____	Verify that register ZS335 is forced activated. Verify that the forced register status is recorded.			
24	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Drum Tipper Clutch Tripped" alarm.	Verify that the alarm has been acknowledged.			
25	Unforce LCU 102 register ZS717C. Record the unforced register status below: Unforced ZS717C Status: _____	Verify that register ZS717C is unforced.			
26	Because position switch 07-ZS-717C should be activated, indicating that Sorting Table is retracted, the "Sorting Table Retracted Not Verified" alarm should clear.	Verify that the alarm is cleared.			
27	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "SORTING TABLE MENU" is displayed.			

See note 26-2

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Drum Tipper Lower, Drum Tipper Clutch Not Tripped Interlock					
28	Press the "LOWER TIPPER" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "LOWER TIPPER" button has been pressed.			
29	The "Drum Tipper Clutch Not Tripped" condition functions as an interlock for Drum Tipper Operation. Because this interlock is not satisfied, the Drum Tipper should not lower.	Verify that the Drum Tipper does not lower.			
30	Unforce LCU 102 register ZS335. Record the unforced register status below: Unforced ZS335 Status: _____	Verify that register ZS335 is unforced.			
31	Because position switch 07-ZS-335 should be activated, indicating that Drum Tipper clutch is not tripped, the "Drum Tipper Clutch Tripped" alarm should clear.	Verify that the alarm is cleared.			
32	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "DRUM TIPPER MENU" is displayed.			

See note pg 26-2

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Lower Drum with Grab Closed Using Drum Tipper					
33	Press the "LOWER TIPPER" button from the "DRUM TIPPER MENU" at OIU-12-103B until the Drum Tipper is fully lowered.	Verify that the "LOWER TIPPER" button has been pressed.			
34	Pressing the "LOWER TIPPER" button should cause the PCS to energize the Drum Tipper Motor DH-07-103M1/SD (Down).	Verify that the Drum Tipper is fully lowered.			
35	The "LOWER WITH GRAB CLOSED COMPLETE" message should be displayed on the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "LOWER WITH GRAB CLOSED COMPLETE" message is displayed.			
TEST CASE 13031A-85.26 COMPLETE					

see note pg 26-2.

TEST CASE 13031A-85.27 COMPLETE LLW SORTING GLOVEBOX DRUM TIPPER (DH-07-103) "OPEN DRUM TIPPER GRAB AND PARK" SEQUENCE . . .	27-2
Examine Drum Tipper Grab Open, Drum Lid/Delid Fixture Parked Interlock	27-2
Examine Drum Tipper Grab Open, Manipulator Parked Interlock	27-3
Examine Drum Tipper Grab Open, Transfer Car at Delid Position Interlock	27-4
Examine Drum Tipper Grab Open, Drum Tipper Lowered Interlock	27-5
Examine Drum Tipper Grab Open, Drum Tipper Grab Vertical Interlock	27-6
Examine Drum Tipper Grab Open, Drum Tipper Clutch Not Tripped Interlock	27-7
Examine Drum Tipper Grab Open, Sorting Table Fully Retracted Interlock	27-8
Raise Drum with Grab Closed	27-9
Move Transfer Car to Relid Position	27-10

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.27 COMPLETE LLW SORTING GLOVEBOX DRUM TIPPER (DH-07-103) "OPEN DRUM TIPPER GRAB AND PARK" SEQUENCE					
Examine Drum Tipper Grab Open, Drum Lid/Delid Fixture Parked Interlock					
1	Unforce all LCU 102 registers using the Allen Bradley PLC Software.	Verify that all LCU 102 registers are unforced.	✓		mg
2	Confirm that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed at OIU-12-103B. If a sub-menu is displayed, press the "MAIN MENU" button to return to the "LLW SORTING GLOVEBOX MAIN MENU".	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.	✓		mg
3	Press the "DRUM TIPPER MENU" button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "DRUM TIPPER MENU" is displayed.	✓		mg
4	Force LCU 102 register ZS728A not activated to simulate the "Drum Lid/Delid Fixture in Park/Relid" condition. Record the forced register status below: <div> <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS728A <u> X </u> <u>I:26/15</u> </div>	Verify that register ZS728A is forced not activated. Verify that the forced register status is recorded.	✓ ✓		mg mg
5	Press the "OPEN GRAB AND PARK" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "OPEN GRAB AND PARK" button has been pressed.	✓		mg
6	The "Drum Lid/Delid Fixture in Park/Relid" condition functions as an interlock for Drum Tipper Operation. Because this interlock is not satisfied, the Drum Tipper grab should not open. Wait thirty (30) seconds.	Verify that the Drum Tipper Grab does not open during the waiting period.	✓		mg
7	Unpark the left LLW Sorting Glovebox Waste Manipulator Arm (EM-07-101). <u>I:26/1, ZS75C forced off</u>	Verify that the Manipulator arm is not parked.	✓		mg
8	Unforce LCU 102 register ZS728A. Record the unforced register status below: Unforced ZS728A Status: <u> 1 </u>	Verify that register ZS728A is unforced.	✓		mg
9	The "Drum Lid/Delid Fixture in Park/Relid Position" switch (07-ZS-728A) should be activated, indicating that the Drum Tipper is parked.	Verify that the "Drum Lid/Delid Fixture in Park/Relid Position" position switch is activated.	✓		mg

#1 See pg 8-7

#4A. Start hydraulic, filter pumps mg 9-9-97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Drum Tipper Grab Open, Manipulator Parked Interlock					
10	Press the "OPEN GRAB AND PARK" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "OPEN GRAB AND PARK" button has been pressed.	✓		mg
11	The "Manipulator Arms Parked" condition functions as an interlock for Drum Tipper Operation. Because this interlock is not satisfied, the Drum Tipper Grab should not open. Wait thirty (30) seconds:	Verify that the Drum Tipper Grab does not open during the waiting period.	✓		mg
12	Force LCU 102 register ZS725C not activated to simulate the "Transfer Car not at Delid Position" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS725C <u> X </u> <u>I: 27/17</u>	Verify that register ZS725C is forced not activated. Verify that the forced register status is recorded.	✓		mg
13	Place the LLW Sorting Glovebox Waste Manipulator (EM-07-101) at Parked Position #2, farthest from the Bagless Transfer Port, with both Manipulator arms parked. <u>I: 26/11 forced on.</u>	Verify that the Manipulator is at Parked Position #2 with both Manipulator arms parked.	✓		mg

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Drum Tipper Grab Open, Transfer Car at Delid Position Interlock					
14	Press the "OPEN GRAB AND PARK" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "OPEN GRAB AND PARK" button has been pressed.	✓		mg
15	The "Transfer Car at Delid Position" condition functions as an interlock for Drum Tipper Operation. Because this interlock is not satisfied, the Drum Tipper Grab should not open. Wait thirty (30) seconds.	Verify that the Drum Tipper Grab does not open during the waiting period.	✓		mg
16	Force LCU 102 register ZS332B activated to simulate the "Drum Tipper/Grab Not Lowered" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS332B <u>1</u> <u>I:25/10</u>	Verify that register ZS332B is forced activated. Verify that the forced register status is recorded.	✓ ✓		mg mg
17	Unforce LCU 102 register ZS725C. Record the unforced register status below: Unforced ZS725C Status: <u>1</u>	Verify that register ZS725C is unforced.	✓		mg
18	The "Transfer Car at Delid Position" switch (07-ZS-725C) should be activated, indicating that the Transfer Car is at the Delid position.	Verify that the "Transfer Car at Delid Position" position switch is activated.	✓		mg

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass	Fail	Witness (Initial)
Examine Drum Tipper Grab Open, Drum Tipper Lowered Interlock					
19	Press the "OPEN GRAB AND PARK" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "OPEN GRAB AND PARK" button has been pressed.	✓		mjo
20	The "Drum Tipper Lowered" condition functions as an interlock for Drum Tipper Operation. Because this interlock is not satisfied, the Drum Tipper Grab should not open. Wait thirty (30) seconds.	Verify that the Drum Tipper Grab does not open during the waiting period.	✓		mjo
21	Force LCU 102 register ZS333 activated to simulate the "Drum Tipper Grab Not Vertical" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS333 <u>1</u> <u>I:25/11</u>	Verify that register ZS333 is forced activated. Verify that the forced register status is recorded.	✓ ✓		mjo
22	Unforce LCU 102 register ZS332B. Record the unforced register status below: Unforced ZS332B Status: <u>0</u>	Verify that register ZS332B is unforced.	✓		mjo
23	The "Drum Not Lowered" position switch (07-ZS-332B) should not be activated, indicating that the Drum Tipper is lowered.	Verify that the "Drum Not Lowered" position switch is not activated.	✓		mjo

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Drum Tipper Grab Open, Drum Tipper Grab Vertical Interlock					
24	Press the "OPEN GRAB AND PARK" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "OPEN GRAB AND PARK" button has been pressed.	✓		mj
25	The Drum Tipper Grab Vertical condition functions as an interlock for Drum Tipper Operation. Because this interlock is not satisfied, the Drum Tipper Grab should not open.	Verify that the Drum Tipper Grab does not open during the waiting period.		✓	mj
	Wait thirty (30) seconds. <i>N/A mj 11-18-99</i>				
26	Force LCU 102 register ZS335 activated to simulate the "Drum Tipper Clutch Tripped" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS335 <i>I mj 9-8-99</i> <i>I:25/14</i>	Verify that register ZS335 is forced activated. Verify that the forced register status is recorded.	✓ ✓		 mj
27	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Drum Tipper Clutch Tripped" alarm.	Verify that the alarm has been acknowledged.	✓		mjs
28	Unforce LCU 102 register ZS333. Record the unforced register status below: Unforced ZS333 Status: _____	Verify that register ZS333 is unforced.	✓		mjs
29	The "Drum Tipper Vertical" position switch (07-ZS-333) should not be activated, indicating that the Drum Tipper Grab is Vertical.	Verify that the "Drum Tipper Vertical" position switch is not activated.	✓		mj

#25 - Drum Tipper Vertical switch functions only when tipper is fully raised, Tipper reset in maintenance mode, testing continues.
mj 11-18-99 Step #25 not valid.

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)								
Examine Drum Tipper Grab Open, Drum Tipper Clutch Not Tripped Interlock													
30	Press the "OPEN GRAB AND PARK" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "OPEN GRAB AND PARK" button has been pressed.	✓		mg								
31	The "Drum Tipper Clutch Not Tripped" condition functions as an interlock for Drum Tipper Operation. Because this interlock is not satisfied, the Drum Tipper should not raise and a "Drum Tipper Clutch Tripped" alarm should be generated.	Verify that the Drum Tipper Grab does not open during the waiting period.	✓		mg								
32	Force LCU 102 registers ZS716A and ZS716B not activated to simulate the "Sorting Table Not Lowered" condition. Record the forced register status below:	Verify that registers ZS716A and ZS716B are forced not activated.	✓		mg								
	<table border="1"> <thead> <tr> <th>Register</th><th>Forced Status</th><th>Method of Confirmation</th></tr> </thead> <tbody> <tr> <td>ZS716A</td><td>0</td><td>I: 27/4</td></tr> <tr> <td>ZS716B</td><td>0</td><td>I: 27/5</td></tr> </tbody> </table>	Register	Forced Status	Method of Confirmation	ZS716A	0	I: 27/4	ZS716B	0	I: 27/5	Verify that the forced register status is recorded.	✓	mg
	Register	Forced Status	Method of Confirmation										
ZS716A	0	I: 27/4											
ZS716B	0	I: 27/5											
33	Force LCU 102 register ZS717C not activated to simulate the "Sorting Table Not Fully Retracted" condition. Record the forced register status below:	Verify that register ZS717C is forced not activated.	✓		mg								
	<table border="1"> <thead> <tr> <th>Register</th><th>Forced Status</th><th>Method of Confirmation</th></tr> </thead> <tbody> <tr> <td>ZS717C</td><td>0</td><td>I: 27/10</td></tr> </tbody> </table>	Register	Forced Status	Method of Confirmation	ZS717C	0	I: 27/10	Verify that the forced register status is recorded.	✓	mg			
Register	Forced Status	Method of Confirmation											
ZS717C	0	I: 27/10											
34	Because the Sorting Table fully retracted position cannot be verified by the PCS, a "Sorting Table Retracted Not Verified" alarm should be generated. A flashing "SEQUENCE FAILED" message should be displayed on the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that a flashing "SEQUENCE FAILED" message is displayed.	✓		mg								
35	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Sorting Table Retract Position Not Verified" alarm.	Verify that the alarm has been acknowledged.	✓		mg								
36	Unforce LCU 102 register ZS335. Record the unforced register status below: Unforced ZS335 Status: _____	Verify that register ZS335 is unforced.	✓		mg								
37	Because position switch 07-ZS-335 should be activated, indicating that Drum Tipper clutch is not tripped, the "Drum Tipper Clutch Tripped" alarm should clear.	Verify that the alarm is cleared.	✓		mg								

#32 Step appears extraneous.

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass	Fail	Witness (Initial)
38	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "DRUM TIPPER MENU" is displayed.	✓		mf

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass	Fail	Witness (initial)
Examine Drum Tipper Grab Open, Sorting Table Fully Retracted Interlock					
39	Press the "OPEN GRAB AND PARK" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "OPEN GRAB AND PARK" button has been pressed.	✓		<i>mrf</i>
40	The Sorting Table Fully Retracted condition functions as an interlock for Drum Tipper Operation. Because this interlock is not satisfied, the Drum Tipper Grab should not open. Wait thirty (30) seconds.	Verify that the Drum Tipper Grab does not open during the waiting period.	✓		<i>mrf</i>
41	Force LCU 102 register ZS720B not activated to simulate the "Drum Tipper Grab Not Open" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS720B <u>0</u> <u>I:25/13</u>	Verify that register ZS720B is forced not activated. Verify that the forced register status is recorded.	✓ ✓		<i>mrf</i> <i>mrf</i>
42	Press the "ALARMS" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "ALARMS" button has been pressed.	✓		<i>mrf</i>
43	The "LOCAL ALARMS" screen should be displayed.	Verify that the "LOCAL ALARMS" screen is displayed.	✓		<i>mrf</i>
44	Unforce LCU 102 register ZS717C. Record the unforced register status below: Unforced ZS717C Status: <u>1</u> <i>mrf 9-9-94</i>	Verify that register ZS717C is unforced.	✓		<i>mrf</i>
45	Because position switch 07-ZS-717C should be activated, indicating that Sorting Table is retracted, the "Sorting Table Retracted Not Verified" alarm should clear.	Verify that the "Sorting Table Retracted Not Verified" alarm is cleared.	✓		<i>mrf</i>
46	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "DRUM TIPPER MENU" is displayed.	✓		<i>mrf</i>

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Raise Drum with Grab Closed					
47	Press the "OPEN GRAB AND PARK" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "OPEN GRAB AND PARK" button has been pressed.	✓		mrf
48	The PCS should energize the Drum Tipper Grab Solenoid 07-FEV-395D/O (Open) to open the Drum Tipper Grab.	Verify that the Drum Tipper Grab is completely open.	✓		mrf
49	Because register ZS720B is forced not activated, the "OPEN GRAB AND PARK" sequence should stop and the "OPEN GRAB AND PARK IN PROGRESS..." message should not be displayed. Wait thirty (30) seconds.	Verify that the "OPEN GRAB AND PARK IN PROGRESS..." message is not displayed during the waiting period.	✓		mrf
50	Unforce LCU 102 register ZS720B. Record the unforced register status below: Unforced ZS720B Status: _____	Verify that register ZS720B is unforced.	✓		mrf
51	The "Drum Tipper Drum Grab Open" position switch (07-ZS-720B) should be activated, indicating that the Drum Tipper Grab is open.	Verify that the "Drum Tipper Drum Grab Open" position switch is activated.	✓		mrf
52	The "OPEN GRAB AND PARK IN PROGRESS..." message should be displayed on the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "OPEN GRAB AND PARK IN PROGRESS..." message is displayed.	✓		mrf
53	The PCS should energize the Drum Tipper Motor DH-07-103M1/R (Raise) until the Drum Tipper Raised position switch 07-ZS-332A is activated.	Verify that the Drum Tipper is fully raised.	✓		mrf
54	The "OPEN GRAB AND PARK COMPLETE..." message should be displayed on the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "OPEN GRAB AND PARK COMPLETE..." message is displayed.	✓		mrf

#53 - Must press "RAISE TIPPER". Sequence modified to make identical to all other drum tipper sequences

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Move Transfer Car to Relid Position					
55	Confirm that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed at OIU-12-103B. If a sub-menu is displayed, press the "MAIN MENU" button to return to the "LLW SORTING GLOVEBOX MAIN MENU".	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.	✓		<i>msj</i>
56	Press the "TRANSFER CAR MENU" button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "TRANSFER CAR MENU" is displayed.	✓		<i>msj</i>
57	Press the "RELID" button from the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "RELID" button has been pressed.	✓		<i>msj</i>
58	The "TRANSFER CAR MOVING TO RELID POSITION..." message should be displayed on the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "TRANSFER CAR MOVING TO RELID POSITION..." message is displayed.	✓		<i>msj</i>
59	The Transfer Car should slowly move to and stop at the Relid position.	Verify that the Transfer Car is at the Relid position.	✓		<i>msj</i>
60	The "Transfer Car at Relid Position" switch (07-ZS-725C) should pulse activate twice when the Transfer Car moves to the Relid Position.	Verify that the "Transfer Car at Relid Position" switch is pulsed twice.	✓		<i>msj</i>
61	The "TRANSFER CAR AT RELID POSITION" message should be displayed on the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "TRANSFER CAR AT RELID POSITION" message is displayed.	✓		<i>msj</i>
TEST CASE 13031A-85.27 COMPLETE					

This document was too large to scan as a single document; therefore, it has been divided into smaller sections.

Section 3 of 3

Document Information			
Document #	SD-W026-ATR-032	Revision	0
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TEST CASE 13031A-85.28 EXAMINE LLW SORTING GLOVEBOX LID/DELID FIXTURE (RT-07-101) INTERLOCKS AND COMPLETE DRUM RELID

SEQUENCE	28-2
Examine Drum Lid/Delid Fixture Lower, Fixture Rotated Parked Interlock	28-2
Examine Drum Lid/Delid Fixture Lower, C-Clip Crimper Retracted Interlock	28-3
Examine Drum Lid/Delid Fixture Lower, C-Clip Crimper Jaw Open Interlock	28-4
Examine Drum Lid/Delid Fixture Lower, Saw Retracted Interlock	28-5
Examine Drum Lid/Delid Fixture Lower, Saw De-energized Interlock	28-6
Initiate Drum Relid Sequence	28-7
Load a C-Clip Cartridge and Examine the "Fixture Crimp Head Failed to Extend" Alarm	28-8
Examine the "Fixture Crimp Jaw Failed to Close" Alarm	28-10
Examine the "Fixture Crimp Jaw Failed to Open" Alarm	28-11
Examine the "Crimp Head Failed to Retract" Alarm	28-12
Crimp Second (#2) C-Clip onto Drum	28-13
Crimp Third (#3) C-Clip onto Drum	28-14
Crimp Fourth (#4) C-Clip onto Drum	28-15
Crimp Fifth (#5) C-Clip onto Drum	28-16
Crimp Sixth (#6) C-Clip onto Drum	28-17
Complete Drum Relid Sequence	28-18

Crimp Head deleted From Lid/Delid Fixture
 R/W 9/9/27

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.28 EXAMINE LLW SORTING GLOVEBOX LID/DELID FIXTURE (RT-07-101) INTERLOCKS AND COMPLETE DRUM RELID SEQUENCE					
Examine Drum Lid/Delid Fixture Lower. Fixture Rotated Parked Interlock					
1	Confirm that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed at OIU-12-103B. If a sub-menu is displayed, press the "MAIN MENU" button to return to the "LLW SORTING GLOVEBOX MAIN MENU".	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.			
2	Press the "LID/DELID MENU" button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "LID/DELID MENU" is displayed.			
3	Force LCU 102 register ZS727A not activated to simulate the "Drum Lid/Delid Fixture not Rotated Parked" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS727A _____ I:26/13 _____	Verify that register ZS727A is forced not activated. Verify that the forced register status is recorded.			
4	Press the "START RELID SEQUENCE" button from the "LID/DELID MENU" at OIU-12-103B.	Verify that the "START RELID SEQUENCE" button has been pressed.			
5	The "Drum Lid/Delid Fixture Rotated Parked" condition functions as an interlock for Drum Lid/Delid Fixture operation. Because this interlock is not satisfied, the fixture should not lower. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not lower during the waiting period.			
6	Force LCU 102 register ZS719A not activated to simulate the "Drum Lid/Delid Fixture Crimp Head Not Back" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS719A _____ I:26/17 _____	Verify that register ZS719A is forced not activated. Verify that the forced register status is recorded.			
7	Unforce LCU 102 register ZS727A. Record the unforced register status below: Unforced ZS727A Status: _____	Verify that register ZS727A is unforced.			
8	The "Drum Lid/Delid Fixture Rotation at Park Position" switch (07-ZS-727A) should be activated, indicating that the fixture is rotated parked.	Verify that the "Drum Lid/Delid Fixture Rotation at Park Position" position switch is activated.			

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass	Fail	Witness (Initial)
Examine Drum Lid/Delid Fixture Lower, C-Clip Crimper Retracted Interlock					
9	Press the "START RELID SEQUENCE" button from the "LID/DELID MENU" at OIU-12-103B.	Verify that the "START RELID SEQUENCE" button has been pressed.			
10	The "Drum Lid/Delid Fixture Crimp Head Back" condition functions as an interlock for Drum Lid/Delid Fixture operation. Because this interlock is not satisfied, the fixture should not lower. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not lower during the waiting period.			
11	Force LCU 102 register ZS721 not activated to simulate the "Drum Lid/Delid Fixture Crimp Jaw Not Open" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS721 I:27/1	Verify that register ZS721 is forced not activated. Verify that the forced register status is recorded.			
12	Unforce LCU 102 register ZS719A. Record the unforced register status below: Unforced ZS719A Status: _____	Verify that register ZS719A is unforced.			
13	The "Drum Lid/Delid Fixture Crimp Head Back" position switch (07-ZS-719A) should be activated, indicating that the C-Clip Crimp head is retracted.	Verify that the "Drum Lid/Delid Fixture Crimp Head Back" position switch is activated.			

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Drum Lid/Delid Fixture Lower C-Clip Crimper Jaw Open Interlock					
14	Press the "START RELID SEQUENCE" button from the "LID/DELID MENU" at OIU-12-103B.	Verify that the "START RELID SEQUENCE" button has been pressed.			
15	The "Drum Lid/Delid Fixture Crimp Jaw Open" condition functions as an interlock for Drum Lid/Delid Fixture operation. Because this interlock is not satisfied, the fixture should not lower. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not lower during the waiting period.			
16	Force LCU 102 register ZS724B not activated to simulate the "Drum Lid/Delid Fixture Saw not Retracted" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS719A _____ 1:26/17 _____	Verify that register ZS724B is forced not activated. Verify that the forced register status is recorded.			
17	Unforce LCU 102 register ZS721. Record the unforced register status below: Unforced ZS721 Status: _____	Verify that register ZS721 is unforced.			
18	The "Drum Lid/Delid Fixture Crimp Jaw Open" position switch (07-ZS-721) should be activated, indicating that the C-Clip Crimper is retracted.	Verify that the "Drum Lid/Delid Fixture Crimp Jaw Open" position switch is activated.			

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Drum Lid/Delid Fixture Lower Saw Retracted Interlock					
19	Press the "START RELID SEQUENCE" button from the "LID/DELID MENU" at OIU-12-103B.	Verify that the "START RELID SEQUENCE" button has been pressed.			
20	The "Drum Lid/Delid Fixture Saw Retracted" condition functions as an interlock for Drum Lid/Delid Fixture operation. Because this interlock is not satisfied, the fixture should not lower. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not lower during the waiting period.			
21	WARNING: The following test procedure step involves energizing the Drum Lid/Delid Fixture reciprocating saw. Do not energize the saw if equipment damage or personal injury may result from the energized saw. Take sufficient precautions to safely stop the saw in the event of an emergency or alarm condition.	Verify that the saw can be stopped in a safe and orderly manner.			
22	Energize the Drum Lid/Delid Fixture Saw Motor (RT-07-101/M1).	Verify that the saw is energized.			
23	Unforce LCU 102 register ZS724B. Record the unforced register status below: Unforced ZS724B Status: _____	Verify that register ZS724B is unforced.			
24	The "Drum Lid/Delid Fixture Saw Retracted" position switch (07-ZS-724B) should be activated, indicating that the Saw is retracted.	Verify that the "Drum Lid/Delid Fixture Saw Retracted" position switch is activated.			

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Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Drum Lid/Delid Fixture Lower. Saw De-energized Interlock					
25	Press the "START RELID SEQUENCE" button from the "LID/DELID MENU" at OIU-12-103B.	Verify that the "START RELID SEQUENCE" button has been pressed.			
26	The "Drum Lid/Delid Fixture Saw De-energized" condition functions as an interlock for Drum Lid/Delid Fixture operation. Because this interlock is not satisfied, the fixture should not lower. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not lower during the waiting period.			
27	After every twelve (12) C-Clips, the PCS should cause the "LOAD CLIPS" button on the "LID/DELID MENU" at OIU-12-103B to flash, indicating that a new C-Clip Cartridge must be loaded into the Drum Lid/Delid Fixture. Force the appropriate LCU 102 register to indicate that 12 C-Clips have been used and that a new C-Clip Cartridge must be loaded. Record the register identifier and the forced register status below. <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> C5:11_ _____ C5:11 Preset _____	Verify that the LCU 102 "LOAD CLIPS" register has been forced to indicate that a new C-Clip Cartridge must be loaded.			

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass	Fail	Witness (initial)
Initiate Drum Relid Sequence					
28	De-energize the Drum Lid/Delid Fixture Saw Motor (RT-07-101/M1).	Verify that the saw is de-energized.			
29	The PCS should energize the raise/lower solenoid 07-FEV-736A/L (Lower) until the "Drum Lid/Delid Fixture Lowered" position switch 07-ZS-726B is activated.	Verify that the Drum Lid/Delid Fixture is completely lowered.			
30	The "RELID IN PROGRESS..." message should be displayed on the "LID/DELID MENU" at OIU-12-103B.	Verify that the "RELID IN PROGRESS..." message is displayed			
31	The PCS should energize the vacuum isolation solenoid 07-PEV-716 to release the vacuum between the Drum Lid/Delid Fixture and the drum lid.	Verify that vacuum is not present between the drum lid and the suction cups.			
32	The drum lid should release from the Drum Lid/Delid Fixture and drop onto the top of the drum.	Verify that the drum lid is released from the Drum Lid/Delid Fixture and is centered on the Drum.			
33	The PCS should energize the rotate solenoid 07-FEV-736B/C (Clockwise) until the "Drum Lid/Delid Fixture Rotation Index" switch (07-ZS-727B) is pulsed three (3) times.	Verify that the Drum Lid/Delid Fixture rotates clockwise.			
34	The "Drum Lid/Delid Fixture Rotation Index" switch (07-ZS-727B) should be pulsed three (3) times.	Verify that the "Drum Lid/Delid Fixture Rotation Index" switch is pulsed three times.			
35	The Drum Lid/Delid Fixture should be rotated to crimp position 1.	Verify that the Drum Lid/Delid Fixture is rotated to crimp position 1.			
36	Because the "LOAD CLIPS" register has been forced to indicate that a new C-Clip Cartridge must be loaded, the Relid sequence should pause and the "LOAD CLIPS" button on the "LID/DELID MENU" should be flashing, indicating that the operator should load a new C-Clip Cartridge.	Verify that the "LOAD CLIPS" button is flashing.			
37	The Drum Lid/Delid Fixture should not lower. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not lower during the waiting period.			

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Load a C-Clip Cartridge and Examine the "Fixture Crimp Head Failed to Extend" Alarm					
38	Force the "Drum Lid/Delid Fixture Crimp Head Extended" register ZS719B not activated to simulate the "Drum Lid/Delid Fixture Crimp Head Not Extended" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS719B _____ I:27/O _____	Verify that register ZS719B is forced not activated. Verify that the forced register status is recorded.			
39	Force the "Drum Lid/Delid Fixture Crimp Head Back" register ZS719A not activated to simulate the "Drum Lid/Delid Fixture Crimp Head Not Back" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS719A _____ I:26/I7 _____	Verify that register ZS719A is forced not activated. Verify that the forced register status is recorded.			
40	Load a new C-Clip Cartridge in the Drum Lid/Delid Fixture.	Verify that a new C-Clip Cartridge has been loaded.			
41	Press the "LOAD CLIPS" button from the "LID/DELID MENU" at OIU-12-103B.	Verify that the "LOAD CLIPS" button has been pressed.			
42	The "LOAD CLIPS" button should stop flashing.	Verify that the "LOAD CLIPS" button stops flashing.			
43	The PCS should energize the Drum Lid/Delid Fixture Raise/Lower solenoid 07-FEV-736A/L (Lower) until the "Drum Lid/Delid Fixture Lowered" position switch (07-ZS-726B) is activated.	Verify that the Drum Lid/Delid Fixture is completely lowered.			
44	The PCS should energize the Drum Lid/Delid Fixture C-Clip Magazine solenoid (07-FEV-736G) for the time period specified in the Setup section of this test procedure. A C-Clip should be fed into the C-Clip Crimper Jaw.	Verify that a C-Clip has been correctly fed into the C-Clip Crimper Jaw.			
45	The PCS should energize the Drum Lid/Delid Fixture C-Clip Crimper extend/retract solenoid 07-FEV-736F/F (Forward) to fully extend the C-Clip Crimper.	Verify that the C-Clip Crimper is fully extended.			
46	Because register ZS719B has been forced not activated, the Relid sequence should pause and a "Fixture Crimp Head Failed to Extend" alarm should be generated. Wait thirty (30) seconds.	Verify that the C-Clip Crimper does not crimp the C-Clip during the waiting period.			

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
47	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Fixture Crimp Head Failed to Extend" alarm.	Verify that the alarm has been acknowledged.			
48	Force LCU 102 position switch (07-ZS-721) register ZS721 activated to simulate the "Drum Lid/Delid Fixture C-Clip Crimper Jaw Open" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS721 _____ I:27/1 _____	Verify that register ZS721 is forced activated. Verify that the forced register status is recorded			

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Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine the "Fixture Crimp Jaw Failed to Close" Alarm					
49	Unforce LCU 102 register ZS719B. Record the unforced register status below: Unforced ZS719B Status: _____	Verify that register ZS719B is unforced.			
50	Because position switch 09-ZS-719B should be activated, indicating that the Drum Lid/Delid Fixture Crimp Head is forward, the "Fixture Crimp Head Failed to Extend" alarm should clear.	Verify that the alarm is cleared.			
51	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "LID/DELID MENU" at OIU-12-103B.	Verify that the "DRUM TIPPER MENU" is displayed.			
52	The PCS should energize the Crimp Jaw solenoid 07-FEV-736C/C (Close) to crimp the C-clip onto the drum and lid.	Verify that C-Clip Crimper jaw fully extends to crimp the C-Clip.			
53	The PCS should not de-energize the Crimp Jaw solenoid 07-FEV-736C/C (Close) to allow the Crimp Jaw to retract. Wait thirty (30) seconds.	Verify that C-Clip Crimper jaw does not retract during the waiting period.			
54	Because register ZS721 has been forced activated, indicating that the Crimper Jaw has not extended, the Relid sequence should pause and a "Fixture Crimp Jaw Failed to Close" alarm should be generated. A flashing "SEQUENCE FAILED" message should be displayed on the "LID/DELID MENU" at OIU-12-103B.	Verify that a flashing "SEQUENCE FAILED" message is displayed.			
55	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Fixture Crimp Jaw Failed to Close" alarm.	Verify that the alarm has been acknowledged.			
56	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "LID/DELID MENU" at OIU-12-103B.	Verify that the "LID/DELID MENU" is displayed.			

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine the "Fixture Crimp Jaw Failed to Open" Alarm					
57	<p>Force LCU 102 register ZS721 not activated to simulate the "Drum Lid/Delid Fixture C-Clip Crimper Jaw Closed" condition. Record the forced register status below:</p> <p><u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u></p> <p>ZS721 1:27/1</p>	<p>Verify that register ZS721 is forced not activated.</p> <p>Verify that the forced register status is recorded.</p>			
58	<p>Because position switch 07-ZS-721 should not be not activated, indicating that the Crimper Jaw has extended, the Relid sequence should continue. The PCS should energize solenoid 07-FEV-736C/B (Back) to retract the C-clip Crimper Jaw.</p>	<p>Verify that C-Clip Crimper jaw fully retracts.</p>			
59	<p>Because register ZS721 has been forced not activated, indicating that the Crimper Jaw has not retracted, the Relid sequence should pause and a "Fixture Crimp Jaw Failed to Open" alarm should be generated.</p> <p>Wait thirty (30) seconds.</p>	<p>Verify that the C-Clip Crimper does not retract during the waiting period.</p>			
60	<p>ALARM ACKNOWLEDGEMENT SEQUENCE:</p> <p>Acknowledge the "Fixture Crimp Jaw Failed to Open" alarm.</p>	<p>Verify that the alarm has been acknowledged.</p>			

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine the "Crimp Head Failed to Retract" Alarm					
61	Unforce LCU 102 register ZS721. Record the unforced register status below: Unforced ZS721 Status: _____	Verify that register ZS721 is unforced.			
62	Because position switch 07-ZS-721 should be activated, indicating that the Drum Lid/Delid Fixture Crimp Jaw is open, the "Fixture Crimp Jaw Failed to Open" alarm should clear.	Verify that the alarm is cleared.			
63	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "LID/DELID MENU" at OIU-12-103B.	Verify that the "LID/DELID MENU" is displayed.			
64	The PCS should energize the C-Clip Crimper extend/retract solenoid 07-FEV-736F/R (Retract) to retract the C-Clip Crimper.	Verify that the C-Clip Crimper is fully retracted.			
65	Because register ZS719A has been forced not activated, the Relid sequence should pause and a "Crimp Head Failed to Retract" alarm should be generated. Wait thirty (30) seconds.	Verify that the Drum Lid/Delid Fixture does not raise during the waiting period.			
66	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Crimp Head Failed to Retract" alarm.	Verify that the alarm has been acknowledged.			
67	Unforce LCU 102 register ZS719A. Record the unforced register status below: Unforced ZS719A Status: _____	Verify that register ZS719A is unforced.			
68	Because position switch 07-ZS-719A should be activated, indicating that the Drum Lid/Delid Fixture Crimp Head is retracted, the "Crimp Head Failed to Retract" alarm should clear.	Verify that the alarm is cleared.			
69	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "LID/DELID MENU" at OIU-12-103B.	Verify that the "LID/DELID MENU" is displayed.			

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
	Crimp Second (#2) C-Clip onto Drum				
70	<p>Because the C-Clip Crimper is retracted, the Relid sequence should continue. The PCS should perform the following steps, in the order listed, to Crimp the next C-Clip to the drum and lid:</p> <ol style="list-style-type: none"> 1. Raise the Drum Lid/Delid Fixture. 2. Rotate the Drum Lid/Delid Fixture counter-clockwise to the second (#2) Crimp position. 3. Lower the Drum Lid/Delid Fixture. 4. Energize the C-Clip Magazine solenoid to force a C-Clip into the C-Clip Crimper Jaw. 5. Extend the Crimp head. 6. Extend the C-Clip Crimper Jaw to crimp the C-Clip. 7. Retract the C-Clip Crimper Jaw. 8. Retract the Crimp head. 	<p>Verify that the steps listed on the left have been successfully performed in the order listed.</p> <p>Verify that the C-Clip has been successfully crimped.</p>			

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Crimp Third (#3) C-Clip onto Drum					
71	<p>The PCS should perform the following steps, in the order listed, to Crimp the next C-Clip to the drum and lid:</p> <ol style="list-style-type: none"> 1. Raise the Drum Lid/Delid Fixture. 2. Rotate the Drum Lid/Delid Fixture counter-clockwise to the third (#3) Crimp position. 3. Lower the Drum Lid/Delid Fixture. 4. Energize the C-Clip Magazine solenoid to force a C-Clip into the C-Clip Crimper Jaw. 5. Extend the Crimp head. 6. Extend the C-Clip Crimper Jaw to crimp the C-Clip. 7. Retract the C-Clip Crimper Jaw. 8. Retract the Crimp head. 	<p>Verify that the steps listed on the left have been successfully performed in the order listed.</p> <p>Verify that the C-Clip has been successfully crimped.</p>			

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Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Crimp Fourth (#4) C-Clip onto Drum					
72	The PCS should perform the following steps, in the order listed, to Crimp the next C-Clip to the drum and lid:	Verify that the steps listed on the left have been successfully performed in the order listed.			
	<ol style="list-style-type: none"> 1. Raise the Drum Lid/Delid Fixture. 2. Rotate the Drum Lid/Delid Fixture counter-clockwise to the fourth (#4) Crimp position. 3. Lower the Drum Lid/Delid Fixture. 4. Energize the C-Clip Magazine solenoid to force a C-Clip into the C-Clip Crimper Jaw. 5. Extend the Crimp head. 6. Extend the C-Clip Crimper Jaw to crimp the C-Clip. 7. Retract the C-Clip Crimper Jaw. 8. Retract the Crimp head. 	Verify that the C-Clip has been successfully crimped.			

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Crimp Fifth (#5) C-Clip onto Drum					
73	<p>The PCS should perform the following steps, in the order listed, to Crimp the next C-Clip to the drum and lid:</p> <ol style="list-style-type: none"> 1. Raise the Drum Lid/Delid Fixture. 2. Rotate the Drum Lid/Delid Fixture counter-clockwise to the fifth (#5) Crimp position. 3. Lower the Drum Lid/Delid Fixture. 4. Energize the C-Clip Magazine solenoid to force a C-Clip into the C-Clip Crimper Jaw. 5. Extend the Crimp head. 6. Extend the C-Clip Crimper Jaw to crimp the C-Clip. 7. Retract the C-Clip Crimper Jaw. 8. Retract the Crimp head. 	<p>Verify that the steps listed on the left have been successfully performed in the order listed.</p> <p>Verify that the C-Clip has been successfully crimped.</p>			

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Crimp Sixth (#6) C-Clip onto Drum					
74	<p>The PCS should perform the following steps, in the order listed, to Crimp the last C-Clip to the drum and lid:</p> <ol style="list-style-type: none"> 1. Raise the Drum Lid/Delid Fixture. 2. Rotate the Drum Lid/Delid Fixture counter-clockwise to the sixth (#6) Crimp position. 3. Lower the Drum Lid/Delid Fixture. 4. Energize the C-Clip Magazine solenoid to force a C-Clip into the C-Clip Crimper Jaw. 5. Extend the Crimp head. 6. Extend the C-Clip Crimper Jaw to crimp the C-Clip. 7. Retract the C-Clip Crimper Jaw. 8. Retract the Crimp head. 	<p>Verify that the steps listed on the left have been successfully performed in the order listed.</p> <p>Verify that the C-Clip has been successfully crimped.</p>			

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Complete Drum Relid Sequence					
75	The PCS should energize the rotate solenoid 07-FEV-736B/C (Clockwise) until the "Drum Lid/Delid Fixture Rotation at Parked Position" switch 07-ZS-727A is activated.	Verify that the Drum Lid/Delid Fixture is rotated parked.			
76	The "Drum Lid/Delid Fixture Rotation at Park Position" switch (07-ZS-727A) should be activated.	Verify that the "Drum Lid/Delid Fixture Rotation at Park Position" switch is activated.			
77	Because the Relid sequence should have been successfully completed, the "RELID COMPLETE" message should be displayed on the "LID/DELID MENU" at OIU-12-103B.	Verify that the "RELID COMPLETE" message is displayed.			
TEST CASE 13031A-85.28 COMPLETE					

TEST CASE 13031A-85.29 MOVE LLW SORTING GLOVEBOX TRANSFER CAR (TC-07-101) WITH DRUM TO COMPACT TRANSFER POSITION	29-2
Move Transfer Car To Compact Transfer Position	29-2
Attempt to Transfer Drum While Drum Compactor is Busy	29-3
Cancel Transfer of Drum to Drum Compactor	29-4
Complete Transfer of Drum to Drum Compactor	29-5

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.29 MOVE LLW SORTING GLOVEBOX TRANSFER CAR (TC-07-101) WITH DRUM TO COMPACT TRANSFER POSITION					
Move Transfer Car To Compact Transfer Position					
1	Confirm that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed at OIU-12-103B. If a sub-menu is displayed, press the "MAIN MENU" button to return to the "LLW SORTING GLOVEBOX MAIN MENU".	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.	✓		R/W
2	Press the "TRANSFER CAR MENU" button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "TRANSFER CAR MENU" is displayed.	✓		R/W
3	Press the "COMPACT TRANSFER" button from the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "COMPACT TRANSFER" button has been pressed.	✓		R/W
4	The "TRANSFER CAR MOVING TO COMPACT TRANSFER POSITION..." message should be displayed on the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "TRANSFER CAR MOVING TO COMPACT TRANSFER POSITION..." message is displayed.	✓		R/W
5	The Transfer Car should slowly move to and stop at the Compact Transfer position.	Verify that the Transfer Car is at the Compact Transfer position.	✓		R/W
6	The "TRANSFER CAR AT COMPACT TRANSFER POSITION" message should be displayed on the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "TRANSFER CAR AT COMPACT TRANSFER POSITION" message is displayed.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Attempt to Transfer Drum While Drum Compactor is Busy					
7	Configure the compactor so that the "Compactor Busy" signal is sent to the PCS (instead of the "Ready to Receive Drum" signal).	Verify that a "Compactor Busy" signal has been sent to the PCS.	✓		RLW
8	Press the "COMPACTOR GLOVEBOX" button from the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "COMPACTOR GLOVEBOX" button has been pressed.	✓		RLW
9	Because the PCS should receive the "Compactor Busy" signal and not receive the "Ready to Receive Drum" signal, the PCS should not engage the Transfer Car Conveyor Drive. Wait thirty (30) seconds.	Verify that the Transfer Car Conveyor Drive does not engage during the waiting period.	✓		RLW
10	The "COMPACTOR BUSY" message should be displayed on the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "COMPACTOR BUSY" message is displayed.	✓		RLW

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Cancel Transfer of Drum to Drum Compactor					
11	NOTE: Pressing the "COMPACT TRANSFER" button from the "TRANSFER CAR MENU" at OIU-12-103B should cause the PCS to cancel engagement of the Transfer Car Conveyor Drive. Press the "COMPACT TRANSFER" button from the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "COMPACT TRANSFER" button has been pressed.	✓		Ra
12	Configure the compactor so that the "Ready to Receive Drum" signal is sent to the PCS (instead of the "Compactor Busy" signal).	Verify that a "Ready to Receive Drum" signal has been sent to the PCS.	✓		Ra
13	Because the "COMPACT TRANSFER" button has been pressed, the Transfer Car Conveyor Drive should not Engage. Wait thirty (30) seconds.	Verify that the Transfer Car Conveyor Drive does not engage during the waiting period.	✓		Ra

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass	Fail	Witness (initial)
Complete Transfer of Drum to Drum Compactor					
14	Press the "COMPACTOR GLOVEBOX" button from the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "COMPACTOR GLOVEBOX" button has been pressed.	✓		RW
15	The "TRANSFERRING DRUM TO COMPACTOR" message should be displayed on the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "TRANSFERRING DRUM TO COMPACTOR" message is displayed.	✓		RW
16	The PCS should pulse energize the Transfer Car Conveyor Drive solenoid (07-FEV-737E/EN) to engage the conveyor.	Verify that the Transfer Car Conveyor Drive is engaged.	✓		RW
17	The "TRANSFER TO COMPACTOR IN PROGRESS..." message should be displayed on the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "TRANSFER TO COMPACTOR IN PROGRESS..." message is displayed.	✓		RW
18	The PCS should energize the Transfer Car Conveyor Drive Motor (TC-07-101/ST).	Verify that the Conveyor Drive Motor energized.	✓		RW
19	Configure the compactor so that the "Transfer Complete" signal is sent to the PCS.	Verify that a "Transfer Complete" signal has been sent to the PCS.	✓	✓	RW
20	Because the PCS should have received the "Transfer Complete" signal, the PCS should de-energize the Transfer Car Conveyor Drive.	Verify that the Conveyor Drive Motor is de-energized.	✓	✓	RW 2/25/03 RW
21	The PCS should pulse energize the Transfer Car Conveyor Drive solenoid (07-FEV-737E/DE) to disengage the conveyor.	Verify that the Conveyor Drive is disengaged.	✓		RW
22	The "Transfer Car Conveyor Drive Disengaged" position switch (07-ZS-718B) should be activated, indicating that the Transfer Car Conveyor Drive is disengaged	Verify that the "Transfer Car Conveyor Drive Disengaged" position switch is activated.	✓		RW
23	The "TRANSFER TO COMPACTOR COMPLETE" message should be displayed on the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "TRANSFER TO COMPACTOR COMPLETE" message is displayed.	✓		RW
24	Press the "ENTRY" button from the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "ENTRY" button has been pressed.	✓		RW
25	The "TRANSFER CAR MOVING TO ENTRY POSITION..." message should be displayed on the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "TRANSFER CAR MOVING TO ENTRY POSITION..." message is displayed.	✓		RW
26	The Transfer Car should slowly move to and stop at the Entry position.	Verify that the Transfer Car is at the Entry position.	✓		RW

#19 compactor Transfer complete signal not sent from compactor. TEF 242

#20 configured PCS to simulate Transfer complete signal received.

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass	Fail	Witness (initial)
27	The "TRANSFER CAR AT ENTRY POSITION" message should be displayed on the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "TRANSFER CAR AT ENTRY POSITION" message is displayed.	✓		✓
TEST CASE 13031A-85.29 COMPLETE					

TEST CASE 13031A-85.30 EXAMINE LLW EXIT GLOVEBOX (GB-07-105) INITIALIZATION CONDITIONS	30-2
Entry/Exit Port Locked Initialization	30-2
Drum Lid Vacuum Initialization	30-4
Hoist at Compact Receipt Position Initialization	30-5
Drum Lifter Raised Initialization	8
Compact Conveyor De-energized Initialization	9
Lift Table in "Normal" Mode Initialization	10
Drum Centering Device Retracted Initialization	11
HVAC Seal Deflated Initialization	13
Test Case Shutdown	14

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)									
TEST CASE 13031A-85.30 EXAMINE LLW EXIT GLOVEBOX (GB-07-105) INITIALIZATION CONDITIONS														
Entry/Exit Port Locked Initialization														
1	<p>Typically, "Maintenance" mode is selected by placing the Data Management System (DMS) Terminal "AUTO/MAINTENANCE" mode switch to the "MAINTENANCE" position. Record the method used to place the LLW Exit Glovebox in "Maintenance" mode below:</p> <p>Maintenance Mode Method:</p> <p><u>Input HS 318 (I:25/5) remains</u> <u>off / bit unforced, enter password, enter maint.</u></p>	<p>Verify that the method used to place the LLW Exit Glovebox in Maintenance Mode is recorded.</p> <p><u>main menu.</u></p>	✓		mg									
2	<p>Typically, "Automatic" mode is selected by placing the Data Management System (DMS) Terminal "AUTO/MAINTENANCE" mode switch to the "AUTOMATIC" position. Record the method used to place the LLW Exit Glovebox in "Automatic" mode below:</p> <p>Automatic Mode Method:</p> <p><u>Input HS 318 (I:25/5) forced on.</u></p>	<p>Verify that the method used to place the LLW Exit Glovebox in Automatic Mode is recorded.</p>	✓		mg									
3	Place the LLW Exit Glovebox in "Maintenance" mode.	Verify that the glovebox is in "Maintenance" mode.	✓		mg									
4	<p>Force LCU 102 registers ZSC765A and ZSC765B not activated to simulate the Entry/Exit Port (DO-07-106) unlocked condition. Record the forced register status below:</p> <table border="1"> <thead> <tr> <th>Register</th><th>Forced Status</th><th>Method of Confirmation</th></tr> </thead> <tbody> <tr> <td>ZSC765A</td><td><u>0</u></td><td>I:24/17: _____</td></tr> <tr> <td>ZSC765B</td><td><u>0</u></td><td>I:25/00: _____</td></tr> </tbody> </table>	Register	Forced Status	Method of Confirmation	ZSC765A	<u>0</u>	I:24/17: _____	ZSC765B	<u>0</u>	I:25/00: _____	<p>Verify that registers ZSC765A and ZSC765B are forced not activated.</p> <p>Verify that the forced register status is recorded.</p>	✓	✓	mg
Register	Forced Status	Method of Confirmation												
ZSC765A	<u>0</u>	I:24/17: _____												
ZSC765B	<u>0</u>	I:25/00: _____												
5	Place the LLW Exit Glovebox in "Automatic" mode to allow the LLW Exit glovebox to re-initialize. The PCS should check the status of glovebox devices to ensure that they are initialized.	Verify that the glovebox is in "Automatic" mode.	✓		R/W									

Testing begins 7-9-97 6:52 A.M.

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
6	Because registers ZSC765A and ZSC765B are forced not activated, simulating the Entry/Exit port unlocked condition, the "SYSTEM NOT INITIALIZED" message should be displayed on the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		mgj
7	Press the "DIAGNOSTICS MENU" button from the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "DIAGNOSTICS MENU" is displayed.	✓		mgj
8	The "DO-07-106 DOOR NOT CLOSED AND LOCKED" message should be displayed in red on the "DIAGNOSTICS MENU" at OIU-12-103C.	Verify that the "DO-07-106 DOOR NOT CLOSED AND LOCKED" message is displayed.	✓		mgj
9	Unforce LCU 102 register ZSC765B. Record the unforced register status below: Unforced ZSC765B Status: <u>1</u>	Verify that register ZSC765B is unforced.	✓		mgj
10	The "DO-07-106 PORT DOOR NOT CLOSED AND LOCKED" message should continue to be displayed on the "DIAGNOSTICS MENU" at OIU-12-103C.	Verify that the "DO-07-106 PORT DOOR NOT CLOSED AND LOCKED" message is displayed.	✓		mgj
11	Press the "MAIN MENU" button from the "DIAGNOSTICS MENU" at OIU-12-103C.	Verify that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed.	✓		mgj
12	Because the glovebox should not be initialized, the "SYSTEM NOT INITIALIZED" message should be displayed. <i>N/A mod 7-9-97</i>	Verify that the "SYSTEM NOT INITIALIZED" message is displayed.		✓	mgj
13	Press the "DIAGNOSTICS MENU" button from the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "DIAGNOSTICS MENU" is displayed.	✓		mgj
14	Unforce LCU 102 register ZSC765A. Record the unforced register status below: Unforced ZSC765A Status: <u>1</u>	Verify that register ZSC765A is unforced.	✓		mgj
15	The "DO-07-106 PORT DOOR CLOSED AND LOCKED" message should be displayed in green on the "DIAGNOSTICS MENU" at OIU-12-103C.	Verify that the "DO-07-106 PORT DOOR CLOSED AND LOCKED" message is displayed.	✓		mgj
16	Press the "MAIN MENU" button from the "DIAGNOSTICS MENU" at OIU-12-103C.	Verify that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed.	✓		mgj
17	Because position switches 07-ZSC-765A and 07-ZSC-765B should indicate that the port is locked, and all other glovebox items should be initialized, the "SYSTEM INITIALIZED" message should be displayed on the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that OIU-12-103C displays the "SYSTEM INITIALIZED" message.	✓		mgj
18	Place the LLW Exit Glovebox in "Maintenance" mode.	Verify that the glovebox is in "Maintenance" mode.	✓		mgj

#12 Due to alarm generated, "System Not Initialized" message overridden by "SEQUENCE FAILED" mod 7-9-97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Drum Lid Vacuum Initialization					
19	Force LCU 102 register PS704 activated to simulate vacuum between the Entry/Exit port and the drum lid. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> PS704 1 I:24/15	Verify that register PS704 is forced activated. Verify that the forced register status is recorded.	✓ ✓		mg mg
20	Place the LLW Exit Glovebox in "Automatic" mode.	Verify that the glovebox is in "Automatic" mode.	✓		mg
21	Because register PS704 is forced activated to simulate vacuum between the Entry/Exit port and the drum lid, the "SYSTEM NOT INITIALIZED" message should be displayed on the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		mg
22	Press the "DIAGNOSTICS MENU" button from the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "DIAGNOSTICS MENU" is displayed.	✓		mg
23	The "DO-07-106 VACUUM NOT RELEASED" message should be displayed in red on the "DIAGNOSTICS MENU" at OIU-12-103C.	Verify that the "DO-07-106 VACUUM NOT RELEASED" message is displayed.	✓		mg
24	Unforce LCU 102 register PS704. Record the unforced register status below: Unforced PS704 Status: 0	Verify that register PS704 is unforced.	✓		mg
25	The "DO-07-106 VACUUM RELEASED" message should be displayed in green on the "DIAGNOSTICS MENU" at OIU-12-103C.	Verify that the "DO-07-106 VACUUM RELEASED" message is displayed.	✓		mg
26	Press the "MAIN MENU" button from the "DIAGNOSTICS MENU" at OIU-12-103C.	Verify that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed.	✓		mg
27	Because switch 07-PS-704 should indicate that vacuum is not present and all other glovebox items should be initialized, the "SYSTEM INITIALIZED" message should be displayed on the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "SYSTEM INITIALIZED" message is displayed.	✓		mg
28	Place the LLW Exit Glovebox in "Maintenance" mode.	Verify that the glovebox is in "Maintenance" mode.	✓		mg

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Hoist at Compact Receipt Position Initialization					
29	Force LCU 102 registers ZS763B, ZS763C, and ZS765D not activated to simulate the hoist trolley not at the "Compact Receipt" position. Record the forced register status below: <div> <div>Register</div> <div>Forced Status</div> <div>Method of Confirmation</div> </div> <div> <div>ZS763B</div> <div><u>6</u></div> <div>I:23/7</div> </div> <div> <div>ZS763C</div> <div><u>0</u></div> <div>I:23/10</div> </div> <div> <div>ZS763D</div> <div><u>0</u></div> <div>I:23/11</div> </div>	Verify that registers ZS763B, ZS763C, and ZS763D are forced activated. Verify that the forced register status is recorded.	✓ ✓		mmf mmf
30	Place the LLW Exit Glovebox in "Automatic" mode.	Verify that the glovebox is in "Automatic" mode.	✓		mmf
31	Because hoist position registers ZS763B, ZS763C, and ZS763D are forced not activated to simulate the hoist not at the "Compact Receipt" position, the "SYSTEM NOT INITIALIZED" message should be displayed on the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		mmf
32	Press the "DIAGNOSTICS MENU" button from the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "DIAGNOSTICS MENU" is displayed.	✓		mmf
33	The "CR-07-101D HOIST NOT AT COMPACT RECEIPT POSITION" message should be displayed in red on the "DIAGNOSTICS MENU" at OIU-12-103C. mmf 7-9-97	Verify that the "CR-07-101D HOIST NOT AT COMPACT RECEIPT POSITION" message is displayed. →	✓		mmf
34	Unforce LCU 102 register ZSC763B. Record the unforced register status below: Unforced ZSC763B Status: <u>1</u>	Verify that register ZS763B is unforced.	✓		mmf
35	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "OVERPACK DRUM ENTRY MENU" at OIU-12-103A.	Verify that the "OVERPACK DRUM ENTRY MENU" is displayed.			mmf 7-9-97 N/A
36	Press the "MAIN MENU" button from the "DIAGNOSTICS MENU" to return to the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed.	✓		mmf
37	Because the glovebox should not be initialized, the "SYSTEM NOT INITIALIZED" message should be displayed.	Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		mmf
38	Press the "DIAGNOSTICS MENU" button from the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "DIAGNOSTICS MENU" is displayed.	✓		mmf

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
39	Unforce LCU 102 register ZSC763C. Record the unforced register status below: Unforced ZSC763C Status: <u>1</u>	Verify that register ZS763C is unforced.	✓		mgf
40	The "CR-07-101D HOIST NOT AT COMPACT RECEIPT" message should continue to be displayed on the "DIAGNOSTICS MENU" at OIU-12-103C.	Verify that the "CR-07-101D HOIST NOT AT COMPACT RECEIPT" message is displayed.	✓		mgf
41	Press the "MAIN MENU" button from the "DIAGNOSTICS MENU" to return to the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed.	✓		mgf
42	Because the glovebox should not be initialized, the "SYSTEM NOT INITIALIZED" message should be displayed.	Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		mgf
43	Press the "DIAGNOSTICS MENU" button from the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "DIAGNOSTICS MENU" is displayed.	✓		mgf
44	Force LCU 102 register ZS763B not activated to continue to simulate the hoist trolley NOT at the "Compact Receipt" position. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS763B <u>0</u> 1:23/7	Verify that register ZS763B is forced not activated. <i>not</i> <i>7-9-97</i> Verify that the forced register status is recorded.	✓ ✓	✓	mgf mgf
45	Unforce LCU 102 register ZSC763D. Record the unforced register status below: Unforced ZSC763D Status: <u>1</u>	Verify that register ZS763D is unforced.	✓		mgf
46	The "CR-07-101D HOIST NOT AT COMPACT RECEIPT" message should continue to be displayed on the "DIAGNOSTICS MENU" at OIU-12-103C.	Verify that the "CR-07-101D HOIST NOT AT COMPACT RECEIPT" message is displayed.	✓		mgf
47	Press the "MAIN MENU" button from the "DIAGNOSTICS MENU" to return to the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed.	✓		mgf
48	Because the glovebox should not be initialized, the "SYSTEM NOT INITIALIZED" message should be displayed.	Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		mgf
49	Press the "DIAGNOSTICS MENU" button to display the "DIAGNOSTICS MENU".	Verify that the "DIAGNOSTICS MENU" is displayed.	✓		mgf

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
50	Force LCU 102 register ZS763C not activated to continue to simulate the hoist trolley NOT at the "Compact Receipt" position. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS763C <u> b </u> 1:23/10	Verify that register ZS763C is forced not activated. Verify that the forced register status is recorded.	✓		mgj
51	Unforce LCU 102 register ZSC763B. Record the unforced register status below: Unforced ZSC763B Status: <u> 1 </u>	Verify that register ZS763B is unforced.	✓		mgj
52	The "CR-07-101D HOIST NOT AT COMPACT RECEIPT" message should continue to be displayed on the "DIAGNOSTICS MENU" at OIU-12-103C.	Verify that the "CR-07-101D HOIST NOT AT COMPACT RECEIPT" message is displayed.	✓		mgj
53	Press the "MAIN MENU" button from the "DIAGNOSTICS MENU" to return to the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed.	✓		mgj
54	Because the glovebox should not be initialized, the "SYSTEM NOT INITIALIZED" message should be displayed.	Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		mgj
55	Press the "DIAGNOSTICS MENU" button to display the "DIAGNOSTICS MENU".	Verify that the "DIAGNOSTICS MENU" is displayed.	✓		mgj
56	Unforce LCU 102 register ZSC763C. Record the unforced register status below: Unforced ZSC763C Status: <u> 1 </u>	Verify that register ZS763C is unforced.	✓		mgj
57	The "CR-07-101D HOIST AT COMPACT RECEIPT" message should be displayed in red on the "DIAGNOSTICS MENU" at OIU-12-103C.	Verify that the "CR-07-101D HOIST AT COMPACT RECEIPT" message is displayed.	✓		mgj
58	Press the "MAIN MENU" button from the "DIAGNOSTICS MENU" at OIU-12-103C.	Verify that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed.	✓		mgj
59	Place the LLW Exit Glovebox in "Maintenance" mode.	Verify that the glovebox is in "Maintenance" mode.	✓		mgj

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Drum Lifter Raised Initialization					
60	Force LCU 102 register ZS763A not activated to simulate the drum lifter NOT fully raised condition. Record the forced register status below: <i>mod 7-9-97</i> <div> <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS763A 1 I:23/6 </div>	Verify that register ZS763A is forced not activated. <i>mod 7-9-97</i> Verify that the forced register status is recorded.	✓		<i>mef</i>
61	Place the LLW Exit Glovebox in " Maintenance " mode. <i>Automatic</i> <i>mod 7-9-97</i>	Verify that the glovebox is in " Maintenance " mode.	✓		<i>mef</i>
62	Because register ZS763A is forced not activated to simulate the hoist not fully raised condition, the "SYSTEM NOT INITIALIZED" message should be displayed on the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		<i>mef</i>
63	Press the "DIAGNOSTICS MENU" button from the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "DIAGNOSTICS MENU" is displayed.	✓		<i>mef</i>
64	The "CR-07-101D HOIST NOT RAISED" message should be displayed in red on the "DIAGNOSTICS MENU" at OIU-12-103C.	Verify that the "CR-07-101D HOIST NOT RAISED" message is displayed.	✓		<i>mef</i>
65	Unforce LCU 102 register ZS763A. Record the unforced register status below: Unforced ZS763A Status: <i>0</i>	Verify that register ZS763A is unforced.	✓		<i>mef</i>
66	The "CR-07-101D HOIST RAISED" message should be displayed in green on the "DIAGNOSTICS MENU" at OIU-12-103C.	Verify that the "CR-07-101D HOIST RAISED" message is displayed.	✓		<i>mef</i>
67	Press the "MAIN MENU" button from the "DIAGNOSTICS MENU" at OIU-12-103C.	Verify that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed.	✓		<i>mef</i>
68	Because position switch 07-ZS-763A should indicate that the drum lifter is fully raised, and all other glovebox items should be initialized, the "SYSTEM INITIALIZED" message should be displayed on the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "SYSTEM INITIALIZED" message is displayed.	✓		<i>mef</i>
69	Place the LLW Exit Glovebox in "Maintenance" mode.	Verify that the glovebox is in "Maintenance" mode.	✓		<i>mef</i>

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Compact Conveyor De-energized Initialization					
70	Force LCU 102 register CV071M1F activated to simulate the LLW Exit Glovebox Compact Conveyor energized forward condition. Record the forced register status below: <i>not 7-9-94</i> <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> CV071M1F <u>1</u> <u>0:46/3</u>	Verify that register CV101M1 is forced activated.	✓		<i>mg</i>
71	Place the LLW Exit Glovebox in "Automatic" mode.	Verify that the glovebox is in "Automatic" mode.	✓		<i>mg</i>
72	Because register CV071M1F is forced activated to simulate the Compact Conveyor energized condition, the "SYSTEM NOT INITIALIZED" message should be displayed on the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		<i>mg</i>
73	Press the "DIAGNOSTICS MENU" button from the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "DIAGNOSTICS MENU" is displayed.	✓		<i>mg</i>
74	The " CV-07-101M1 CONVEYOR NOT DE-ENERGIZED" message should be displayed in red on the "DIAGNOSTICS MENU" at OIU-12-103C. <i>CV-07-101M1F not 7-9-94</i>	Verify that the " CV-07-101M1 CONVEYOR NOT DE-ENERGIZED" message is displayed. <i>CV-07-101M1F</i>	✓		<i>mg</i>
75	Unforce LCU 102 register CV071M1F. Record the unforced register status below: Unforced CV071M1F Status: <u>0</u>	Verify that register CV071M1F is unforced.	✓		<i>mg</i>
76	The " CV-07-101M1 CONVEYOR DE-ENERGIZED" message should be displayed in green on the "DIAGNOSTICS MENU" at OIU-12-103C. <i>CV-07-101M1F not 7-9-94</i>	Verify that the " CV-07-101M1 CONVEYOR NOT DE-ENERGIZED" message is displayed. <i>CV-07-101M1F</i>	✓		<i>mg</i>
77	Press the "MAIN MENU" button from the "DIAGNOSTICS MENU" at OIU-12-103C.	Verify that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed.	✓		<i>mg</i>
78	Because the Compact Conveyor is not energized, and all other glovebox items should be initialized, the "SYSTEM INITIALIZED" message should be displayed on the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "SYSTEM INITIALIZED" message is displayed.	✓		<i>mg</i>
79	Place the LLW Exit Glovebox in "Maintenance" mode.	Verify that the glovebox is in "Maintenance" mode.	✓		<i>mg</i>

#70 Forced output does not affect interlock logic. CV07101M1F STE rung latched via OIU N435:2/a.

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Lift Table in "Normal" Mode Initialization					
80	Turn the Lift Table Pedestal PC-09-202C M/O/N switch 09-HS-237A to the "OFF" position to deactivate the Lift Table (LT-09-202C).	Verify that the M/O/N switch is switched to the "O" position	✓		mg
81	Place the LLW Exit Glovebox in "Automatic" mode.	Verify that the glovebox is in "Automatic" mode.	✓		mg
82	Because the M/O/N switch is not turned to "N", the system should not initialize and the "SYSTEM NOT INITIALIZED" should be displayed on the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		mg
83	Press the "DIAGNOSTICS MENU" button from the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "DIAGNOSTICS MENU" is displayed.	✓		mg
84	The "LT-09-202C M/O/N NOT IN NORMAL" message should be displayed in red on the "DIAGNOSTICS MENU" at OIU-12-103C.	Verify that the "LT-09-202C M/O/N NOT IN NORMAL" message is displayed.	✓		mg
85	Turn the Lift Table Pedestal PC-09-202C M/O/N switch 09-HS-237A to the "Maintenance" position to allow an operator to control the Lift Table.	Verify that the M/O/N switch 09-HS-237A is turned to the "M" position	✓		mg
86	The "LT-09-202C M/O/N NOT IN NORMAL" message should continue to be displayed on the "DIAGNOSTICS MENU" at OIU-12-103C.	Verify that the "LT-09-202C M/O/N NOT IN NORMAL" message is displayed.	✓		mg
87	Turn the Lift Table Pedestal PC-09-202C M/O/N switch 09-HS-237A to the "Normal" position to allow the control the Lift Table.	Verify that M/O/N switch 09-HS-237A is switched to the "N" position.	✓		mg
88	The "LT-09-202C M/O/N IN NORMAL" message should be displayed in green on the "DIAGNOSTICS MENU" at OIU-12-103C.	Verify that the "LT-09-202C M/O/N IN NORMAL" message is displayed.	✓		mg
89	Press the "MAIN MENU" button from the "DIAGNOSTICS MENU" at OIU-12-103C.	Verify that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed.	✓		mg
90	Because the Lift Table M/O/N switch is turned to the "N" position for normal operation with control by the PCS, and all other glovebox items should be initialized, the "SYSTEM INITIALIZED" should be displayed on the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "SYSTEM INITIALIZED" message is displayed.	✓		mg
91	Place the LLW Exit Glovebox in "Maintenance" mode.	Verify that the glovebox is in "Maintenance" mode.	✓		mg

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Drum Centering Device Retracted Initialization					
92	Force LCU 102 registers ZSO767A and ZSO767B not activated to simulate the drum centering device extended condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZSO767A <u>0</u> I:32/04 ZSO767B <u>0</u> I:32/05	Verify that registers ZSO767A and ZSO767B are forced activated. Verify that the forced register status is recorded.	✓ ✓		mrf mrf
93	Place the LLW Exit Glovebox in "Automatic" mode.	Verify that the glovebox is in "Automatic" mode.	✓		mrf
94	Because registers ZSO767A and ZSO767B are forced not activated to simulate the drum centering device extended condition, the "SYSTEM NOT INITIALIZED" message should be displayed on the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		mrf
95	Press the "DIAGNOSTICS MENU" button from the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "DIAGNOSTICS MENU" is displayed.	✓		mrf
96	The "DO-07-202C CENTERING CLAMPS NOT RETRACTED" message should be displayed in red on the "DIAGNOSTICS MENU" at OIU-12-103C.	Verify that the "DO-07-202C CENTERING CLAMPS NOT RETRACTED" message is displayed.	✓		mrf
97	Unforce LCU 102 register ZSO767A. Record the unforced register status below: Unforced ZSO767A Status: <u>1</u>	Verify that register ZSO767A is unforced.	✓		mrf
98	The "DO-07-202C CENTERING CLAMPS NOT RETRACTED" message should continue to be displayed on the "DIAGNOSTICS MENU" at OIU-12-103C.	Verify that the "DO-07-202C CENTERING CLAMPS NOT RETRACTED" message is displayed.	✓		mrf
99	Press the "MAIN MENU" button from the "DIAGNOSTICS MENU" at OIU-12-103C.	Verify that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed.	✓		mrf
100	Because the glovebox should not be initialized, the "SYSTEM NOT INITIALIZED" message should be displayed.	Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		mrf
101	Press the "DIAGNOSTICS MENU" button from the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "DIAGNOSTICS MENU" is displayed.	✓		mrf

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
102	Force LCU 102 register ZSO767A not activated to simulate the drum centering device extended condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZSO767A <u>0</u> I:32/04	Verify that register ZSO767A is forced activated. Verify that the forced register status is recorded.	✓		msf
103	Unforce LCU 102 register ZSO767B. Record the unforced register status below: Unforced ZSO767B Status: <u>1</u>	Verify that register ZSO767B is unforced.	✓		msf
104	The "DO-07-202C CENTERING CLAMPS NOT RETRACTED" message should continue to be displayed on the "DIAGNOSTICS MENU" at OIU-12-103C.	Verify that the "DO-07-202C CENTERING CLAMPS NOT RETRACTED" message is displayed.	✓		msf
105	Press the "MAIN MENU" button from the "DIAGNOSTICS MENU" at OIU-12-103C.	Verify that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed.	✓		msf
106	Because the glovebox should not be initialized, the "SYSTEM NOT INITIALIZED" message should be displayed.	Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		msf
107	Press the "DIAGNOSTICS MENU" button from the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "DIAGNOSTICS MENU" is displayed.	✓		msf
108	Unforce LCU 102 register ZSO767A. Record the unforced register status below: Unforced ZSO767A Status: <u>1</u>	Verify that register ZSO767A is unforced.	✓		msf
109	The "DO-07-202C CENTERING CLAMPS RETRACTED" message should be displayed in green on the "DIAGNOSTICS MENU" at OIU-12-103C.	Verify that the "DO-07-202C CENTERING CLAMPS RETRACTED" message is displayed.	✓		msf
110	Press the "MAIN MENU" button from the "DIAGNOSTICS MENU" at OIU-12-103C.	Verify that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed.	✓		msf
111	Because position switches 07-ZS-767A and 07-ZS-767B should indicate that the centering device is retracted, and all other glovebox items should be initialized, the "SYSTEM INITIALIZED" should be displayed on the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "SYSTEM INITIALIZED" message is displayed.	✓		msf
112	Place the LLW Exit Glovebox in "Maintenance" mode.	Verify that the glovebox is in "Maintenance" mode.	✓		msf

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
HVAC Seal Deflated Initialization					
113	Force LCU 102 register PS768 activated to simulate the drum HVAC seal inflated condition. Record the forced register status below: <div> <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> PS768 1 1:32/06 </div>	Verify that register PS768 is forced activated. Verify that the forced register status is recorded.	✓ ✓		mgf mgf
114	Place the LLW Exit Glovebox in "Automatic" mode.	Verify that the glovebox is in "Automatic" mode.	✓		mgf
115	Because register PS768 is forced not activated to simulate the HVAC seal inflated condition, the "SYSTEM NOT INITIALIZED" message should be displayed on the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		mgf
116	Press the "DIAGNOSTICS MENU" button from the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "DIAGNOSTICS MENU" is displayed.	✓		mgf
117	The " HVAC CONTROL SEAL NOT DEFLATED " message should be displayed in red on the "DIAGNOSTICS MENU" at OIU-12-103C. DO-07-106 HVAC SEAL NOT DEFLATED	Verify that the " HVAC CONTROL SEAL NOT DEFLATED " message is displayed.	✓		mgf
118	Unforce LCU 102 register PS768. Record the unforced register status below: <div> Unforced PS768 Status: 2 </div>	Verify that register PS768 is unforced.	✓		mgf
119	The " HVAC CONTROL SEAL DEFLATED " message should be displayed in green on the "DIAGNOSTICS MENU" at OIU-12-103C. DO-07-106 HVAC SEAL DEFLATED	Verify that the " HVAC CONTROL SEAL DEFLATED " message is displayed.	✓		mgf
120	Press the "MAIN MENU" button from the "DIAGNOSTICS MENU" at OIU-12-103C.	Verify that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed.	✓		mgf
121	Because pressure switch 07-PS-768 should indicate that the HVAC seal is deflated, and all other glovebox items should be initialized, the "SYSTEM INITIALIZED" should be displayed on the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "SYSTEM INITIALIZED" message is displayed.	✓		mgf
122	Place the LLW Exit Glovebox in "Maintenance" mode.	Verify that the glovebox is in "Maintenance" mode.	✓		mgf

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Test Case Shutdown					
123	Return all LLW Sorting Glovebox items to a safe and stable condition.	Verify that all LLW Sorting Glovebox items are safely positioned.	✓		mtg
124	Unforce all LCU 102 registers using the Allen Bradley PLC Software.	Verify that all LCU 102 registers are unforced.	✓		mtg
TEST CASE 13031A-85.30 COMPLETE					

A 12-1 Manipulator arm/ manipulator position switches for EM-07-101,
EM-07-201 remain forced activated as needed.

TEST CASE 13031A-85.31 EXAMINE LLW EXIT GLOVEBOX (GB-07-105) MAINTENANCE MENU FUNCTIONS	31-2
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Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
TEST CASE 13031A-85.31 EXAMINE LLW EXIT GLOVEBOX (GB-07-105) MAINTENANCE MENU FUNCTIONS					
Enter Incorrect OIU Password and Verify that Access is Denied					
NOTE: This test procedure assumes that a maintenance access code of "1111" has been previously entered.					
1	Turn the "AUTO MODE/MAINTENANCE MODE" keyed selector switch (07-HS-318) on the Data Management System Pedestal (TE-12-103) to "MAINTENANCE MODE".	Verify that "MAINTENANCE MODE" has been selected for the LLW Exit Glovebox.	✓		mg
2	The "MAINTENANCE ACCESS MENU" should be displayed at OIU-12-103C.	Verify that the "MAINTENANCE ACCESS MENU" is displayed.	✓		mg
3	The "ENTER ACCESS CODE:" message should be displayed on the "MAINTENANCE ACCESS MENU" at OIU-12-103C.	Verify that the "ENTER ACCESS CODE:" message is displayed.	✓		mg
4	Enter "333" and press the "ENTER" button	Verify that "333" is entered.	✓		mg
5	The "ACCESS DENIED" message should be displayed on the "MAINTENANCE ACCESS MENU" at OIU-12-103C.	Verify that the "ACCESS DENIED" message is displayed.	✓		mg
6	Press the "CANCEL OPERATION" button to cancel maintenance menu access.	Verify that the "CANCEL OPERATION" button has been pressed.	✓		mg

#6 For all OIUs - Cancel operation is not necessary after "ACCESS DENIED"
mg 7-9-97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Cancel Password Change					
7	The "ENTER ACCESS CODE:" message should be displayed on the "MAINTENANCE ACCESS MENU" at OIU-12-103C.	Verify that the "ENTER ACCESS CODE:" message is displayed.	✓		mg
8	Press the "CHANGE PASSWORD" button from the "MAINTENANCE ACCESS MENU" at OIU-12-103C.	Verify that the "CHANGE PASSWORD" button has been pressed.	✓		mg
9	The "ENTER OLD PASSWORD:" message should be displayed on the "MAINTENANCE ACCESS MENU" at OIU-12-103C.	Verify that the "ENTER OLD PASSWORD:" message is displayed.	✓		RV
10	Enter "1111" and press the "ENTER" button	Verify that "1111" is entered.	✓		RV
11	The "ENTER NEW PASSWORD:" message should be displayed on the "MAINTENANCE ACCESS MENU" at OIU-12-103C.	Verify that the "ENTER NEW PASSWORD:" message is displayed.	✓		RV
12	Press the "CANCEL OPERATION" button from the "MAINTENANCE ACCESS MENU" to cancel changing the OIU password.	Verify that the "CANCEL OPERATION" button has been pressed.	✓		RV
13	The "OPERATION CANCELED" message should be displayed on the "MAINTENANCE ACCESS MENU" at OIU-12-103C.	Verify that the "OPERATION CANCELED" message is displayed.	✓		RV

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Change OIU Password					
14	Press the "CHANGE PASSWORD" button from the "MAINTENANCE ACCESS MENU" at OIU-12-103C.	Verify that the "CHANGE PASSWORD" button has been pressed.	✓		1/16
15	The "ENTER OLD PASSWORD:" message should be displayed on the "MAINTENANCE ACCESS MENU" at OIU-12-103C.	Verify that the "ENTER OLD PASSWORD:" message is displayed.	✓		1/16
16	Enter "1111" and press the "ENTER" button	Verify that "1111" is entered.	✓		1/16
17	The "ENTER NEW PASSWORD:" message should be displayed on the "MAINTENANCE ACCESS MENU" at OIU-12-103C.	Verify that the "ENTER NEW PASSWORD:" message is displayed.	✓		1/16
18	Enter "9" and press the "ENTER" button	Verify that "9" is entered.	✓		1/16
19	The "ENTER ACCESS CODE:" message should be displayed.	Verify that the "ENTER ACCESS CODE:" message is displayed.	✓		1/16
20	Enter "9" and press the "ENTER" button	Verify that "9" is entered.	✓		1/16

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Enter New Password and Access Maintenance Menus					
21	The "MAINTENANCE ACCESS MENU" should be displayed at OIU-12-103C.	Verify that the "MAINTENANCE ACCESS MENU" is displayed.	✓		KJ
22	The "ENTER ACCESS CODE:" message should be displayed on the "MAINTENANCE ACCESS MENU" at OIU-12-103C.	Verify that the "ENTER ACCESS CODE:" message is displayed.	✓		KJ
23	Enter "9" and press the "ENTER" button	Verify that "9" is entered.	✓		KJ
24	The "MAINTENANCE MAIN MENU" should be displayed at OIU-12-103C.	Verify that the "MAINTENANCE MAIN MENU" is displayed.	✓		KJ

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Review "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" Operations					
25	Press the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" button from the "MAINTENANCE MAIN MENU" at OIU-12-103C.	Verify that the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" button has been pressed.	✓		RV
26	The "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" should be displayed at OIU-12-103C.	Verify that the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" is displayed.	✓		RV
27	Press the "EXTEND CENTERING CLAMPS" button from the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-103C.	Verify that the "EXTEND CENTERING CLAMPS" button has been pressed.	✓		RV
28	The Entry/Exit Port (DO-07-106) Drum Centering Clamps should fully extend without erratic motion.	Verify that the Drum Centering Clamps completely extend.	✓		RV
29	Press the "RETRACT CENTERING CLAMPS" button from the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-103C.	Verify that the "RETRACT CENTERING CLAMPS" button has been pressed.	✓		RV
30	The Entry/Exit Port (DO-07-106) Drum Centering Clamps should fully retract without erratic motion.	Verify that the Drum Centering Clamps completely retract.	✓		RV
31	Press the "TURN ON VACUUM" button from the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-103C.	Verify that the "TURN ON VACUUM" button has been pressed.	✓		RV
32	The Entry/Exit Port vacuum generator solenoid (07-FEV-700D/V, Vacuum) should be energized, causing vacuum to be generated by passing plant compressed air past a small orifice. A distinct hiss should be noted, and vacuum should be present at the vacuum orifice on the underside of the Entry/Exit Port.	Verify that vacuum is generated.	✓		RV
33	Press the "TURN OFF VACUUM" button from the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-103C.	Verify that the "TURN OFF VACUUM" button has been pressed.	✓		RV
34	The Entry/Exit Port vacuum generator solenoid (07-FEV-700D/V, Vacuum) should not be energized, causing vacuum to cease.	Verify that vacuum is not being generated.	✓		RV
35	Press the "TURN ON VACUUM" button from the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-103C.	Verify that the "TURN ON VACUUM" button has been pressed.	✓		RV
36	The Entry/Exit Port vacuum generator solenoid (07-FEV-700D/V, Vacuum) should be energized, causing vacuum to be generated by passing plant compressed air past a small orifice. A distinct hiss should be noted, and vacuum should be present at the vacuum orifice on the underside of the Entry/Exit Port.	Verify that vacuum is being generated.	✓		RV
37	Press the "VACUUM ISOLATION VALVE CLOSED" button from the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-103C.	Verify that the "VACUUM ISOLATION VALVE CLOSED" button has been pressed.	N/A		RV

437 - Due to mechanical changes, isolation valve removed, no longer present RV 7-9-97
 TEST CASE 13031A-85.31 Rev.0 31-6 LLW EXIT GLOVEBOX

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
38	The vacuum generator should remain on, but vacuum should not be present at the vacuum orifice on the underside of the Entry/Exit Port, because the vacuum isolation valve (07-FEV-700F) should be closed.	Verify that vacuum is not present.	~ / 2		mef
39	Press the "VACUUM ISOLATION VALVE OPEN" button from the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-103C.	Verify that the "VACUUM ISOLATION VALVE OPEN" button has been pressed.	~ / 2		mef
40	The vacuum generator should remain on and vacuum should be present at the vacuum orifice on the underside of the Entry/Exit Port, because the vacuum isolation valve (07-FEV-700F) should be open. <i>mef 7-9-97</i>	Verify that vacuum is present at orifice beneath port.	✓		mef
41	Press the "TURN OFF VACUUM" button from the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-103C.	Verify that the "TURN OFF VACUUM" button has been pressed.	✓		mef
42	The Entry/Exit Port vacuum generator solenoid (07-FEV-700D/V, Vacuum) should not be energized, causing vacuum to cease.	Verify that vacuum is not generated.	✓		mef
43	Press the "INFLATE HVAC SEAL" button from the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-103C.	Verify that the "INFLATE HVAC SEAL" button has been pressed.	✓		mef
44	The Entry/Exit Port (DO-07-106) HVAC control seal should inflate.	Verify that the HVAC control seal is inflated.	✓		mef
45	Press the "DEFLATE HVAC SEAL" button from the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-103C.	Verify that the "DEFLATE HVAC SEAL" button has been pressed.	✓		mef
46	The Entry/Exit Port (DO-07-106) HVAC control seal should deflate.	Verify that the HVAC control seal is deflated.	✓		mef
47	Press the "OPEN VENTS" button from the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-103C.	Verify that the "OPEN VENTS" button has been pressed.	✓		AW
48	The Entry/Exit Port (DO-07-106) port door raise and lower cylinder pressure vents should open. An audible "hiss" should be noted and an air stream should be noted coming from the vent solenoid valves.	Verify that the Entry/Exit Port pressure vents are open.	✓		AW
49	Press the "CLOSE VENTS" button from the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-103C.	Verify that the "CLOSE VENTS" button has been pressed.	✓		AW
50	The Entry/Exit Port (DO-07-106) port door raise and lower cylinder pressure vents should close. The audible hiss and the air stream from the pressure vent solenoid valves should cease.	Verify that the Entry/Exit Port pressure vents are closed.	✓		AW
51	Press the "OPEN VENTS" button from the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-103C.	Verify that the "OPEN VENTS" button has been pressed.	✓		AW

#38, #39 See note pg 31-6 mps 7-9-97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✗	Witness (initial)
52	The Entry/Exit Port (DO-07-106) port door raise and lower cylinder pressure vents should open. An audible "hiss" should be noted and an air stream should be noted coming from the vent solenoid valves.	Verify that the Entry/Exit Port pressure vents are open.	✓		AW
53	Press the "UNLOCK PORT" button from the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-103C.	Verify that the "UNLOCK PORT" button has been pressed.	✓		AW
54	The Entry/Exit Port locking cylinders should fully retract without erratic motion.	Verify that the locking cylinders fully retract.	✓		AW
55	Press the "LOCK PORT" button from the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-103C.	Verify that the "LOCK PORT" button has been pressed.	✓		AW
56	The Entry/Exit Port locking cylinders should fully extend without erratic motion.	Verify that the locking cylinders fully extend.	✓		AW
57	Press the "UNLOCK PORT" button from the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-103C.	Verify that the "UNLOCK PORT" button has been pressed.	✓		AW
58	The Entry/Exit Port locking cylinders should fully retract without erratic motion.	Verify that the locking cylinders fully retract.	✓		AW
59	Press the "RAISE DOOR" button from the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-103C.	Verify that the "RAISE DOOR" button has been pressed.	✓		AW
60	The Entry/Exit Port door should raise vertically, via the three port door lifting cylinders, without erratic motion.	Verify that port door raises.	✓		AW
61	Press the "LOWER DOOR" button from the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-103C.	Verify that the "LOWER DOOR" button has been pressed.	✓		AW
62	The Entry/Exit Port door should lower vertically, via the three port door lifting cylinders, without erratic motion.	Verify that port door lowers.	✓		AW
63	Press the "RAISE DOOR" button from the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-103C.	Verify that the "RAISE DOOR" button has been pressed.	✓		AW
64	The Entry/Exit Port door should raise vertically, via the three port door lifting cylinders, without erratic motion.	Verify that port door raises.	✓		AW
65	Press the "OPEN PORT" button from the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-103C. <i>ROTATE PORT OPEN</i>	Verify that the "OPEN PORT" button has been pressed. <i>AW 7/9/97</i>	✓		AW
66	The Entry/Exit Port door should rotate up, fully open without erratic motion. <i>ROTATE PORT CLOSE</i>	Verify that port door rotates fully open.	✓		AW
67	Press the "CLOSE PORT" button from the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-103C. <i>AW 7/9/97</i>	Verify that the "CLOSE PORT" button has been pressed.	✓		AW

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✗	Witness (initial)
68	The Entry/Exit Port door should rotate fully down without erratic motion.	Verify that port door rotates fully down.	✓		RLW
69	Press the " OPEN PORT " button from the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-103C. <i>RLW 7/2/97</i>	Verify that the " OPEN PORT " button has been pressed.	✓		RLW
70	The Entry/Exit Port door should rotate up, fully open without erratic motion.	Verify that port door rotates fully open.	✓		RLW
71	Press the " CLOSE PORT " button from the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-103C. <i>RLW 7/2/97</i>	Verify that the " CLOSE PORT " button has been pressed.	✓		RLW
72	The Entry/Exit Port door should rotate fully down without erratic motion.	Verify that port door rotates fully down.	✓		RLW
73	Press the "LOWER DOOR" button from the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-103C.	Verify that the "LOWER DOOR" button has been pressed.	✓		RLW
74	The Entry/Exit Port door should lower vertically, via the three port door lifting cylinders, without erratic motion.	Verify that port door lowers.	✓		RLW
75	Press the "LOCK PORT" button from the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-103C.	Verify that the "LOCK PORT" button has been pressed.	✓		RLW
76	The Entry/Exit Port locking cylinders should fully extend without erratic motion.	Verify that the locking cylinders fully extend.	✓		RLW
77	Press the " CLOSE VENTS " button from the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-103C.	Verify that the " CLOSE VENTS " button has been pressed.			N/A RLW 7/2/97
78	The Entry/Exit Port (DO-07-106) port door raise and lower cylinder pressure vents should close. The audible hiss and the air stream from the pressure vent solenoid valves should cease.	Verify that the Entry/Exit Port pressure vents are closed.			N/A RLW 7/2/97
79	Press the "EXTEND LID DETACH" button from the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-103C.	Verify that the "EXTEND LID DETACH" button has been pressed.	✓		RLW 7/2/97
80	The Entry/Exit Port lid detach cylinder should fully extend without erratic motion.	Verify that the lid detach cylinder fully extends without erratic motion.	✓		RLW
81	Press the "RETRACT LID DETACH" button from the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-103C.	Verify that the "RETRACT LID DETACH" button has been pressed.	✓		RLW
82	The Entry/Exit Port lid detach cylinder should fully retract without erratic motion.	Verify that the lid detach cylinder fully retracts without erratic motion.	✓		RLW
83	Press the "MAINT MAIN MENU" button from the "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" should be displayed at OIU-12-103B.	Verify that the "MAINT MAIN MENU" button has been pressed.	✓		RLW

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass	Fail	Witness (initial)
84	The "MAINTENANCE MAIN MENU" should be displayed at OIU-12-103B.	Verify that the "MAINTENANCE MAIN MENU" is displayed.	✓	✓	RL

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass / Fail	Witness (Initial)
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85	Press the "MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" button from the "MAINTENANCE MAIN MENU" at OIU-12-103C.	Verify that the "MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" button has been pressed.	✓	✓
86	The "MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" should be displayed at OIU-12-103C.	Verify that the "MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" is displayed.	✓	✓
87	Place the LLW Exit Glovebox Hoist Pendant (PC-07-004) in full view.	Verify that the Hoist Pendant is in full view.	✓	✓
88	Examine the hoist pendant. At least one pendant lamp/indicator should not be illuminated.	Confirm that at least one pendant lamp is not illuminated.	✓	✓
89	Press and do not release the "TEST PENDANT LAMPS" button from the "MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-103C.	Verify that the "TEST PENDANT LAMPS" button has been pressed.	✓	✓
90	Every indicator lamp on the Hoist Pendant (PC-07-004) should be illuminated.	Verify that every Hoist Pendant lamp is illuminated.	✓	✓
91	Release the "TEST PENDANT LAMPS" button	Verify that the "TEST PENDANT LAMPS" button is released.	✓	✓
92	Examine the hoist pendant.	Confirm that at least one pendant lamp is not illuminated.	✓	✓
93	WARNING: All LLW Exit Glovebox (GB-07-105) items must be in their parked positions prior to removal of pressure from the 80 psi valve manifold.	Verify that all LLW Exit Glovebox items are parked.	✓	✓
94	Press the "TURN OFF 80 PSI AIR" button from the "MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-103C.	Verify that the "TURN OFF 80 PSI AIR" button has been pressed.	✓	✓
95	The indicator on the 80 psi air regulator should steadily drop and eventually indicate that there is no pressure in the 80 psi line.	Verify that pressure has been removed from the 80 psi line.	✓	✓
96	Press the "TURN ON 80 PSI AIR" button from the "MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-103C.	Verify that the "TURN ON 80 PSI AIR" button has been pressed.	✓	✓
97	The indicator on the 80 psi air regulator should steadily rise and eventually indicate that there is at least 80 psi pressure in the 80 psi line.	Verify that pressure has been restored to the 80 psi line.	✓	✓
98	Turn the Lift Table Pedestal PC-09-202C M/O/N switch 09-HS-237A to the "Maintenance" position to allow an operator to control the Lift Table.	Verify that the M/O/N switch 09-HS-237A is turned to the "M" position	✓	✓

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85) <i>Down</i>	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
99	Press the "UP" pushbutton at the Lift Table local control pedestal (PC-09-202C) until the lift table is lowered approximately 2.5 centimeters (1 inch) below AGV height.	Verify that the Lift Table is lowered at least 1 inch below AGV height.	✓		<i>ng</i>
100	Turn the Lift Table Pedestal PC-09-202C M/O/N switch 09-HS-237A to the "Normal" position to allow the PCS to control the Lift Table.	Verify that M/O/N switch 09-HS-237A is switched to the "N" position.	✓		<i>ng</i>
101	Press the "REHOME LIFT TABLE LT-09-202C" button from the "DRUM TRANSFER CAR AND MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-103B.	Verify that the "MAINT MAIN MENU" button has been pressed. <i>11/7/99</i>	✓		<i>ng</i>
102	The lift table should automatically raise to AGV height, dip slightly below AGV height, and return to AGV height.	Verify that the lift table is at AGV height.	✓		<i>ng</i>
103	The Lift Table "AGV LOAD HEIGHT" indicator (09-ZL-237E) on the Lift Table Control Pedestal (PC-09-202C) should be illuminated, indicating that the Lift Table is at AGV height.	Verify that the "AGV LOAD HEIGHT" indicator is illuminated.	<i>n</i>		<i>ng</i>
104	Turn the Lift Table Pedestal PC-09-202C M/O/N switch 09-HS-237A to the "Maintenance" position to allow an operator to control the Lift Table.	Verify that the M/O/N switch 09-HS-237A is turned to the "M" position			<i>ng</i>
105	Press the "UP" pushbutton at the Lift Table local control pedestal (PC-09-202C) until the lift table is raised approximately 2.5 centimeters (1 inch) above AGV height.	Verify that the Lift Table is raised at least 1 inch above AGV height.			<i>ng</i>
106	Turn the Lift Table Pedestal PC-09-202C M/O/N switch 09-HS-237A to the "Normal" position to allow the PCS to control the Lift Table.	Verify that M/O/N switch 09-HS-237A is switched to the "N" position.			<i>ng</i>
107	Press the "REHOME LIFT TABLE LT-09-202C" button from the "DRUM TRANSFER CAR AND MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-103B.	Verify that the "REHOME LIFT TABLE LT-09-202C" button has been pressed.			<i>ng</i>
108	The lift table should automatically lower to AGV height, dip slightly below AGV height, and return to AGV height.	Verify that the lift table is at AGV height.			<i>ng</i>
109	The Lift Table "AGV LOAD HEIGHT" indicator (09-ZL-237E) on the Lift Table Control Pedestal (PC-09-202C) should be illuminated, indicating that the Lift Table is at AGV height.	Verify that the "AGV LOAD HEIGHT" indicator is illuminated.			<i>ng</i>
110	Press the "MAINT MAIN MENU" button from the "MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-103C.	Verify that the "MAINT MAIN MENU" button has been pressed.	✓		<i>ng</i>
111	The "MAINTENANCE MAIN MENU" should be displayed at OIU-12-103C.	Verify that the "MAINTENANCE MAIN MENU" is displayed.	✓		<i>ng</i>

Steps 104-109 Not Applicable - Duplicate Steps *ng* 7-9-97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Review "SYSTEM VARIABLES MENU" Operations					
112	Press the "SYSTEM VARIABLES" button from the "MAINTENANCE MAIN MENU" at OIU-12-103C.	Verify that the "SYSTEM VARIABLES" button has been pressed.	✓		R/W
113	The "SYSTEM VARIABLES MENU" should be displayed at OIU-12-103C.	Verify that the "SYSTEM VARIABLES MENU" is displayed.	✓		R/W
114	Press the "SET SCREEN CONTRAST" button from the "SYSTEM VARIABLES MENU" at OIU-12-103C.	Verify that the "SET SCREEN CONTRAST" button has been pressed.	✓		R/W
115	The "SET SCREEN CONTRAST" screen should be displayed at OIU-12-103C.	Verify that the "SET SCREEN CONTRAST" screen is displayed.	✓		R/W
116	A numeric keypad with "ENTER" key should be displayed to allow system values to be modified.	Verify that a numeric keypad with "ENTER" key is displayed.	✓		R/W
117	Using the keypad, set the System Screen Contrast to "3" and press the "ENTER" key.	Verify that the System Screen Contrast has been set to "3"	✓		R/W
118	Press the "DONE" key.	Verify that the "DONE" key has been pressed.	✓		R/W
119	The "SYSTEM VARIABLES MENU" should be displayed at OIU-12-103C.	Verify that the "SYSTEM VARIABLES MENU" is displayed.	✓		R/W
120	The value displayed on the "SET SCREEN CONTRAST" button should be "3"	Verify that the "SET SCREEN CONTRAST" value is "3"	✓		R/W
121	Press the "SET DAY" button from the "SYSTEM VARIABLES MENU" at OIU-12-103C.	Verify that the "SET DAY" button has been pressed.	✓		R/W
122	The "SET DAY" screen should be displayed at OIU-12-103C.	Verify that the "SET DAY" screen is displayed.	✓		R/W
123	A numeric keypad with "ENTER" key should be displayed to allow system values to be modified.	Verify that a numeric keypad with "ENTER" key is displayed.	✓		R/W
124	Using the keypad, set the System Day to "3" and press the "ENTER" key.	Verify that the System Day has been set to "3"	✓		R/W
125	Press the "DONE" key.	Verify that the "DONE" key has been pressed.	✓		R/W
126	The "SYSTEM VARIABLES MENU" should be displayed at OIU-12-103C.	Verify that the "SYSTEM VARIABLES MENU" is displayed.	✓		R/W
127	The value displayed on the "SET DAY" button should be "3"	Verify that the "SET DAY" value is "3"	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✗	Witness (Initial)
128	Press the "SET MONTH" button from the "SYSTEM VARIABLES MENU" at OIU-12-103C.	Verify that the "SET MONTH" button has been pressed.	✓		R/W
129	The "SET MONTH" screen should be displayed at OIU-12-103C.	Verify that the "SET MONTH" screen is displayed.	✓		R/W
130	A numeric keypad with "ENTER" key should be displayed to allow system values to be modified.	Verify that a numeric keypad with "ENTER" key is displayed.	✓		R/W
131	Using the keypad, set the System Month to "3" and press the "ENTER" key.	Verify that the System Month has been set to "3"	✓		R/W
132	Press the "DONE" key.	Verify that the "DONE" key has been pressed.	✓		R/W
133	The "SYSTEM VARIABLES MENU" should be displayed at OIU-12-103C.	Verify that the "SYSTEM VARIABLES MENU" is displayed.	✓		R/W
134	The value displayed on the "SET MONTH" button should be "3"	Verify that the "SET MONTH" value is "3"	✓		R/W
135	Press the "SET YEAR" button from the "SYSTEM VARIABLES MENU" at OIU-12-103C.	Verify that the "SET YEAR" button has been pressed.	✓		R/W
136	The "SET YEAR" screen should be displayed at OIU-12-103C.	Verify that the "SET YEAR" screen is displayed.	✓		R/W
137	A numeric keypad with "ENTER" key should be displayed to allow system values to be modified.	Verify that a numeric keypad with "ENTER" key is displayed.	✓		R/W
138	Using the keypad, set the System Year to "3" and press the "ENTER" key.	Verify that the System Year has been set to "3"	✓		R/W
139	Press the "DONE" key.	Verify that the "DONE" key has been pressed.	✓		R/W
140	The "SYSTEM VARIABLES MENU" should be displayed at OIU-12-103C.	Verify that the "SYSTEM VARIABLES MENU" is displayed.	✓		R/W
141	The value displayed on the "SET YEAR" button should be "3" NOTE: This should represent the year 2003. If the value does not represent the year 2003, then this step fails.	Verify that the "SET YEAR" value is "3"	✗		mgf
142	Press the "SET HOURS" button from the "SYSTEM VARIABLES MENU" at OIU-12-103C.	Verify that the "SET HOURS" button has been pressed.	✓		R/W

#141 Disregard note - Cannot determine whether this represents 1903, 2003, etc.
mpe 7-9-97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
143	The "SET HOURS" screen should be displayed at OIU-12-103C.	Verify that the "SET HOURS" screen is displayed.	✓		maj
144	A numeric keypad with "ENTER" key should be displayed to allow system values to be modified.	Verify that a numeric keypad with "ENTER" key is displayed.	✓		maj
145	Using the keypad, set the System Hours to "15" and press the "ENTER" key.	Verify that the System Hours have been set to "15"	✓		maj
146	Press the "DONE" key.	Verify that the "DONE" key has been pressed.	✓		maj
147	The "SYSTEM VARIABLES MENU" should be displayed at OIU-12-103C.	Verify that the "SYSTEM VARIABLES MENU" is displayed.	✓		maj
148	The value displayed on the "SET HOURS" button should be "15" NOTE: This value should represent 3 p.m. in the afternoon. If the value does not represent 3 p.m., then this step fails.	Verify that the "SET HOURS" value is "15"	✓		maj
149	Press the "SET MINUTES" button from the "SYSTEM VARIABLES MENU" at OIU-12-103C.	Verify that the "SET MINUTES" button has been pressed.	✓		maj
150	The "SET MINUTES" screen should be displayed at OIU-12-103C.	Verify that the "SET MINUTES" screen is displayed.	✓		maj
151	A numeric keypad with "ENTER" key should be displayed to allow system values to be modified.	Verify that a numeric keypad with "ENTER" key is displayed.	✓		maj
152	Using the keypad, set the System Minutes to "3" and press the "ENTER" key.	Verify that the System Minutes have been set to "3"	✓		maj
153	Press the "DONE" key.	Verify that the "DONE" key has been pressed.	✓		maj
154	The "SYSTEM VARIABLES MENU" should be displayed at OIU-12-103C.	Verify that the "SYSTEM VARIABLES MENU" is displayed.	✓		maj
155	The value displayed on the "SET MINUTES" button should start at "3" and then advance. (e.g., System Minutes will change each minute.)	Verify that the initial "SET MINUTES" value is "3"	✓		maj
156	Press the "SET SECONDS" button from the "SYSTEM VARIABLES MENU" at OIU-12-103C.	Verify that the "SET SECONDS" button has been pressed.	✓		maj
157	The "SET SECONDS" screen should be displayed at OIU-12-103C.	Verify that the "SET SECONDS" screen is displayed.	✓		maj

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass	Fail	Witness (initial)
			✓	✓	
158	A numeric keypad with "ENTER" key should be displayed to allow system values to be modified.	Verify that a numeric keypad with "ENTER" key is displayed.	✓		mmf
159	Using the keypad, set the System Seconds to "3" and press the "ENTER" key.	Verify that the System Seconds have been set to "3"	✓		mmf
160	Press the "DONE" key.	Verify that the "DONE" key has been pressed.	✓		mmf
161	The "SYSTEM VARIABLES MENU" should be displayed at OIU-12-103C.	Verify that the "SYSTEM VARIABLES MENU" is displayed.	✓		mmf
162	The value displayed on the "SET SECONDS" button should start at "3" and then rapidly advance (e.g., System Seconds will change each second.)	Verify that the "SET SECONDS" initial value is "3"	✓		mmf

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Test Case Shutdown					
163	Press the "MAINT MAIN MENU" button from the "SYSTEM VARIABLES MENU" at OIU-12-103C.	Verify that the "MAINT MAIN MENU" button has been pressed.	✓		mg
164	The "MAINTENANCE MAIN MENU" should be displayed at OIU-12-103C.	Verify that the "MAINTENANCE MAIN MENU" is displayed.	✓		mg
165	Return all LLW Exit Glovebox items to their parked, stable positions.	Verify that all LLW Exit Glovebox items are parked.	✓		mg
166	Turn the "AUTO MODE/MAINTENANCE MODE" keyed selector switch (07-HS-716) on the Data Management System Pedestal (TE-12-103) to "AUTOMATIC MODE".	Verify that "AUTOMATIC MODE" has been selected for the LLW Exit Glovebox.	✓		mg
167	The "LLW EXIT GLOVEBOX MAIN MENU" should be displayed at OIU-12-103C.	Verify that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed.	✓		mg
TEST CASE 13031A-85.31 COMPLETE					

TEST CASE 13031A-85.32 EXAMINE LLW EXIT GLOVEBOX 320 LITER (85 GALLON) ENTRY/EXIT PORT (DO-07-106) LIFT TABLE INTERLOCKS	32-2
Test Case Setup	32-2
Attempt To Open Port Without Drum Present	32-3
Examine "No Drum at Lift Table" Interlock	32-4
Examine Lift Table "Down Overtravel" Alarm	32-5
Examine Lift Table "Up Overtravel" Alarm	32-6
Examine Lift Table "Rope Switch Pulled" Alarm	32-7
Examine Lift Table "Failed To Lower" Alarm	32-8
Examine Lift Table Conveyor Forward/Centering Clamps Retracted Alarm	32-9
Examine Lift Table "Conveyor Forward Failed" Alarm	32-11
Examine HVAC Seal Inflated Lift Table "Raise" Interlock	32-13
Examine Drum Centering Device Extended Lift Table "Raise" Interlock	32-15
Examine Drum Under Glovebox Port Lift Table "Raise" Interlock	32-17
Examine Lift Table "Failed to Raise" Alarm	32-18

Step #	TEST PROCEDURE STEPS (13031P-72)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.32 EXAMINE LLW EXIT GLOVEBOX 320 LITER (85 GALLON) ENTRY/EXIT PORT (DO-07-106) LIFT TABLE INTERLOCKS					
Test Case Setup					
1	Confirm that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed at OIU-12-103C. If a sub-menu is displayed, press the "MAIN MENU" button to return to the "LLW EXIT GLOVEBOX MAIN MENU".	Verify that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed.	✓		RV
2	Configure the PCS drum tracking table to reflect the overpack drum drum that will be mated to the LLW Exit Glovebox Entry/Exit Port (DO-07-106). Record the drum pin contents: Outer Drum Pin: (N31:59-65)	Verify that the drum data is recorded. N/A Bar Code Related			RV 7/9/97
3	Place the 320 liter (85 gallon) overpack drum at the AGV end of the LLW Exit Glovebox Lift Table (LT-09-202C).	Verify that the overpack drum has been placed on the lift table.	✓		RV
4	Using the Lift Table Local Control Pedestal (PC-09-202A), or other appropriate means, position the Lift Table (LT-09-202A) above AGV height.	Verify that the lift table is positioned above AGV height.			N/A mod 7-9-97
5	Return the Lift Table Local Control Pedestal M/O/N switch (09-HS-237A) to the "NORMAL" position to allow the PCS to activate and control the Lift Table. (LT-09-202C).	Verify that the M/O/N switch is turned to the "N" position.	✓		mgj
6	Read the LLW Exit Glovebox location bar code using the portable scanner NE-12-310. This bar code label should indicate to the PCS that a drum bar code label will be read next. The scanner LED indicator should briefly flash, indicating that a bar code label has been successfully read.	Verify that the bar code label has been successfully read. N/A BARCODE RELATED mgj 7-9-97			
7	Read the bar code label from the 322 liter (85 gallon) overpack drum using the portable scanner NE-12-310. The scanner LED indicator should briefly flash, indicating that a bar code label has been successfully read.	Verify that the bar code label has been successfully read.			
8	The bar code label contents should be stored in LCU 102 register(s): N31:59-65	Verify that the label contents are stored in the appropriate LCU 102 register(s).			

Steps 4, 10 - Logic modified - "Drum at Lift Table" message based on AGV transfer status bit, N31:72/12. Bit toggled to remove/display message mod 7-9-97

steps 2, 6, 7, 8 - Bar code related - To be tested in O/P, not performed mod 7-9-97

Step #	TEST PROCEDURE STEPS (13031P-72)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Attempt To Open Port Without Drum Present					
9	Press the "EXIT PORT MENU" button from the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "EXIT PORT MENU" is displayed.	✓		mof
10	Because the Lift Table is not at AGV height and no drum is present, the "NO DRUM AT LIFT TABLE" message should be displayed on the "EXIT PORT" menu at OIU-12-103C.	Verify that the "NO DRUM AT LIFT TABLE" message is displayed.	✓		mof
11	Press the "OPEN PORT" button from the "EXIT PORT MENU" at OIU-12-103C.	Verify that the "OPEN PORT" button has been pressed.	✓		mof
12	Because a drum is not mated to the port, the Entry/Exit Port (DO-07-106) should not open.	Verify that the Entry/Exit Port does not open.	✓		mof

10 See note page 322 mof 7-9-97

Step #	TEST PROCEDURE STEPS (13031P-72)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine "No Drum at Lift Table" Interlock					
13	Briefly activate (e.g., "Break the beam") the "Drum at End of Conveyor" position switch (09-ZS-237E) to simulate placing the 85 gallon drum on the Lift Table.	Verify that the "Drum at End of Conveyor" position switch is briefly activated.	✓		mgf
14	Change the "Drum at Lift Table" bit for Lift Table LT-09-202C activated (value=1). Please record the changed register status: <u>Register</u> <u>Changed Status</u> <u>Method of Confirmation</u> N31:70/12 N31:70/12	Verify that the register status is recorded in the space provided.	✓		mgf
15	Because a drum is present (simulated) but the Lift Table is not at AGV height , the "NO DRUM AT LIFT TABLE" message should be displayed on the "EXIT PORT MENU" at OIU-12-103C.	Verify that the NO DRUM AT LIFT TABLE message is displayed. met 7-9-97	✓		mgf
16	Using the Lift Table Local Control Pedestal (PC-09-202A), or other appropriate means, position the Lift Table (LT-09-202A) at AGV height.	Verify that the lift table is positioned at AGV height.	✓		mgf
17	The at "AGV LOAD HEIGHT" indicator (09-ZL-237E) on the Lift Table Control Pedestal (PC-09-202C) should be illuminated, indicating that the Lift Table is at AGV height.	Verify that the "AGV LOAD HEIGHT" indicator is illuminated.	✓		mgf
18	Return the Lift Table Local Control Pedestal M/O/N switch (09-HS-237A) to the "NORMAL" position to allow the PCS to activate and control the Lift Table. (LT-09-202C).	Verify that the M/O/N switch is turned to the "N" position.	✓		mgf
19	Because a drum is present (simulated) and the Lift Table is at AGV height , the "DRUM AT LIFT TABLE" message should be displayed on the "EXIT PORT MENU" at OIU-12-103C. met 7-9-97	Verify that the "DRUM AT LIFT TABLE" message is displayed.	✓		mgf

Steps 15, 19- See now page 32-2 met 7-9-97

Step #	TEST PROCEDURE STEPS (13031P-72)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Lift Table "Down Overtravel" Alarm					
20	Manually activate the "Down Overtravel" position switch (09-ZS-237C) to simulate that Lift Table (LT-09-202C) has been lowered below its normal travel range. This should cause the "Lift Table (202C) Down Overtravel" alarm to be generated.	Verify that the "Down Overtravel" position switch is activated.	✓		mgf
21	The "DOWN OVERTRAVEL" indicator (09-ZL-237C) at the Lift Table Local Control Pedestal (PC-09-202C) should be illuminated, indicating that the "Down Overtravel" position switch has been activated.	Verify that the "DOWN OVERTRAVEL" indicator is illuminated.	✓		mgf
22	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Lift Table (202C) Down Overtravel" alarm.	Verify that the alarm has been acknowledged.	✓		mgf
23	Manually reset the "Down Overtravel" position switch (09-ZS-237C) to indicate that the Lift Table (LT-09-202C) is positioned within its normal vertical travel range.	Verify that the "Down Overtravel" position switch has been reset.	✓		mgf
24	Resetting the "Down Overtravel" position switch (09-ZS-237C) should cause the "Lift Table (202C) Down Overtravel" alarm to clear.	Verify that the alarm is cleared.	✓		mgf
25	The "DOWN OVERTRAVEL" indicator (09-ZL-237C) at the Lift Table Local Control Pedestal should not be illuminated, indicating that the "Down Overtravel" position switch is not activated.	Verify that the "DOWN OVERTRAVEL" indicator is not illuminated.	✓		mgf
26	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "EXIT PORT MENU".	Verify that the "EXIT PORT MENU" is displayed with a "DRUM AT LIFT TABLE" message.	✓		mgf

Step #	TEST PROCEDURE STEPS (13031P-72)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Lift Table "Up Overtravel" Alarm					
27	Manually activate the "Up Overtravel" position switch (09-ZS-237D) to simulate that Lift Table (LT-09-202C) has been raised below its normal travel range. This should cause the "Lift Table (202C) Up Overtravel" alarm to be generated.	Verify that the "Down Overtravel" position switch is activated.	✓		mf
28	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Lift Table (202C) Up Overtravel" alarm	Verify that the alarm has been acknowledged.	✓		mf
29	Manually reset the "Up Overtravel" position switch (09-ZS-237D) to indicate that the Lift Table (LT-09-202C) is positioned within its normal vertical travel range.	Verify that the "Up Overtravel" position switch has been reset.	✓		mf
30	Resetting the "Up Overtravel" position switch (09-ZS-237D) should cause the "Lift Table (202C) Up Overtravel" alarm to clear.	Verify that the alarm is cleared.	✓		mf
31	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "EXIT PORT MENU".	Verify that the "EXIT PORT MENU" is displayed with a "DRUM AT LIFT TABLE" message.	✓		mf

Step #	TEST PROCEDURE STEPS (13031P-72)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Lift Table "Rope Switch Pulled" Alarm					
32	Pull the Lift Table (LT-09-202C) Rope Switches (09-XS-237A/B) to disable all Lift Table operations. This should cause a "Lift Table (202C) Rope Switch Pulled" alarm to be generated.	Verify that the rope switches have been pulled.	✓		mgj
33	Press all pushbuttons on the Lift Table Local Control Pedestal (PC-09-202C) in both "Normal" and "Maintenance" modes. (Use Lift Table Local Control Pedestal M/O/N switch to switch between operating modes).	Verify that pressing the pushbuttons has no effect on the Lift Table.	✓		mgj
34	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Lift Table (202C) Rope Switch Pulled" alarm	Verify that the alarm has been acknowledged.	✓		mgj
35	Manually reset the Lift Table Rope Switches (09-XS-237A/B) to allow normal Lift Table operation.	Verify that the Lift Table Rope Switches have been reset.	✓		mgj
36	Resetting the Lift Table Rope Switches (09-XS-237A/B) should cause the "Lift Table (202C) Rope Switch Pulled" alarm to clear.	Verify that the alarm is cleared.	✓		mgj
37	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "EXIT PORT MENU" at OIU-12-103C	Verify that the "EXIT PORT MENU" is displayed.	✓		mgj

#32 - Rope appears loose, needs to be tightened

Note: Forced N43: 4/7 activated to simulate correct Drum AIN read.

Step #	TEST PROCEDURE STEPS (13031P-72)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Lift Table "Failed To Lower" Alarm					
38	Set the timer period for the "Lift Table (202C) Failed to Lower" alarm to one second. Record the timer period below: Register <u>NW 2/3/97</u> Initial Status Final Status T4:120 Preset <u>90 48</u> 1 second _____	Verify that the preset status is set to 1 second.	✓		10
39	Press the "START DRUM ENTRY" button from the "EXIT PORT MENU" at OIU-12-103C.	Verify that the Lift Table does not lower.	✓		10
40	The "DRUM ENTRY IN PROGRESS..." message should be displayed at OIU-12-103C.	Verify that the "DRUM ENTRY IN PROGRESS..." message is displayed.	✓		10
41	Because the timer period has been set to 1 second, the drum entry sequence should stop and a "Lift Table (202C) Failed to Lower" alarm should be generated. A flashing "SEQUENCE FAILED" message should be displayed on the "EXIT PORT MENU" at OIU-12-103B.	Verify that a flashing "SEQUENCE FAILED" message is displayed.	✓		mg
42	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Lift Table (202C) Failed to Lower" alarm.	Verify that the alarm has been acknowledged.	✓		mg
43	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "DRUM TIPPER MENU" at OIU-12-103B. <u>mod 7-9-97</u>	Verify that the "DRUM TIPPER MENU" is displayed.	✓		mg
44	Restore the timer period for the "Lift Table (202C) Failed to Lower" alarm to the initial value recorded above. Record the timer status below: Register <u>84</u> Initial Status Final Status T4:120 Preset 1 second <u>90</u>	Verify that the preset initial status is restored.	✓		mg

Note! Restore Drum to Entry Position
prior to step 45.

Step #	TEST PROCEDURE STEPS (13031P-72)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Lift Table Conveyor Forward/Centering Clamps Retracted Alarm					
45	Force LCU 102 registers ZSO767A and ZSO767B not activated to simulate the "The Drum Centering Device Extended" condition for Drum Entry/Exit Port DO-07-106. Record the forced register status below: <div> <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> </div> ZSO767A 0 I:32/04 ZSO767B 0 I:32/05	Verify registers ZSO767A and ZSO767B are forced not activated. Verify that the forced register status is recorded.	✓		P/W
46	Press the "START DRUM ENTRY" button from the "EXIT PORT MENU" at OIU-12-103C.	Verify that the Lift Table lowers below AGV height.	✓		P/W
47	Because ZSO767A and ZSO767B are forced not activated, indicating that the centering clamps are extended, the drum entry sequence should not start. Wait 30 seconds.	Verify that the lift table roller conveyors do not move during the waiting period.	✓		P/W
48	Unforce LCU 102 register ZSO767A. Record the unforced register status below: Unforced ZSO767A Status: 1	Verify that register ZSO767A is unforced.	✓		P/W
49	The "Centering Device Retracted" position switch (07-ZSO-767A) should be activated, indicating that the Drum Centering Device is retracted.	Verify that the "Centering Device Retracted" position switch (07-ZSO-767A) is activated.	✓		P/W
50	Because register ZSO767B remains forced not activated, indicating that the Drum Centering Device is extended, the drum entry sequence should not start. Wait thirty (30) seconds.	Verify that the lift table roller conveyors do not move during the waiting period.	✓		P/W
51	Force LCU 102 register ZSO767A not activated to simulate the "Drum Centering Device Extended" condition for Drum Entry/Exit Port DO-07-106. Record the forced register status below: <div> <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> </div> ZSO767A 0 I:32/04	Verify that register ZSO767A is forced activated.	✓		P/W
52	Unforce LCU 102 register ZSO767B. Record the unforced register status below: Unforced ZSO767B Status: 1	Verify that register ZSO767B is unforced.	✓		P/W

Step #	TEST PROCEDURE STEPS (13031P-72)	EXPECTED OUTPUT	Pass	Fail	Witness (Initial)
53	The "Centering Device Retracted" position switch (07-ZSO-767B) should be activated, indicating that the Drum Centering Device is retracted.	Verify that the "Centering Device Retracted" position switch (07-ZSO-767B) is activated.	✓		<i>RM</i>
54	Because register ZS0767A remains forced not activated, indicating that the Drum Centering Device is extended, the drum entry sequence should not start. Wait thirty (30) seconds.	Verify that the lift table roller conveyors do not move during the waiting period.	✓		<i>RM</i>
55	Unforce LCU 102 register ZS0767A. Record the unforced register status below: <u>1</u> Unforced ZS0767A Status:	Verify that register ZS0767A is unforced.	✓		<i>RM</i>
56	The "Centering Device Retracted" position switch (07-ZSO-767A) should be activated, indicating that the Drum Centering Device is retracted.	Verify that the "Centering Device Retracted" position switch (07-ZSO-767A) is activated.	✓		<i>RM</i>

Step #	TEST PROCEDURE STEPS (13031P-72)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Lift Table "Conveyor Forward Failed" Alarm					
57	Press the "START DRUM ENTRY" button from the "EXIT PORT MENU" at OIU-12-103C.	Verify that the Lift Table lowers below AGV height.	✓		AK
58	The "DRUM ENTRY IN PROGRESS..." message should be displayed at OIU-12-103C.	Verify that the "DRUM ENTRY IN PROGRESS..." message is displayed.	✓		AK
59	The PCS should energize the Lift Table motor (LT-202C/M1) to lower the Lift Table to a position twelve (12) inches above the floor.	Verify that the Lift Table is lowered.	✓		AK
60	The PCS should energize the Lift Table conveyor motor forward (LT-09-202C/M2) to move the drum under the port.	Verify that the Lift Table conveyor is energized forward.	✓		AK
61	Because a drum has not been placed on the Lift Table, the PCS will not receive confirmation that the "Drum Under Glovebox Port" switch (09-ZS-237F) has been activated within the time period specified in the Setup section of this test procedure, a "Lift Table (202C) Conveyor Forward Failed" alarm should be generated.	Verify that the Lift Table roller conveyor is de-energized.	✓		AK
62	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Lift Table (202C) Conveyor Forward Failed" alarm.	Verify that the alarm has been acknowledged.	✓		AK
63	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "EXIT PORT MENU" at OIU-12-103C.	Verify that the "EXIT PORT MENU" is displayed.	✓		AK
64	Manually activate (e.g., "Break the beam") the "Drum Under Glovebox Port" position switch (09-ZS-237F) to simulate centering the drum beneath the Entry/Exit port (DO-07-106). This switch should remain activated.	Verify that the "Drum Under Glovebox Port" position switch is manually activated.	✓		AK
65	Because the "Drum Under Glovebox Port" position switch (09-ZS-237F) is activated, the PCS should de-energize the lift table (LT-07-202C) roller conveyor.	Verify that the lift table roller conveyor is de-energized.	✓		AK
66	The "DRUM UNDER PORT" indicator at the Lift Table Local Control Pedestal (PC-09-202C) should be illuminated, indicating the a drum (simulated) is centered under the glovebox port (DO-07-106).	Verify that the "DRUM UNDER PORT" indicator is illuminated.	✓		AK
67	Manually activating the "Drum Under Glovebox Port" position switch should cause the "Lift Table (202C) Conveyor Forward Failed" alarm to clear.	Verify that the alarm is cleared.	✓		AK
68	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "EXIT PORT MENU" at OIU-12-103C.	Verify that the "EXIT PORT MENU" is displayed.	✓		AK

#57 removed drum from lift table.

Step #	TEST PROCEDURE STEPS (13031P-72)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
69	NOTE: This step is used to reset the LLW Exit Glovebox operation. Current specification sections do not detail glovebox failed sequence recovery conditions, and additional steps or modifications to this step may be required. Place the LLW Exit Glovebox in "Maintenance" mode.	Verify that the glovebox is in "Maintenance" mode.	✓		R/V
70	Set Lift Table Pedestal PC-07-202C M/O/N switch (09-HS-237A) to "MAINTENANCE" to allow an operator to activate and control the Lift Table.	Verify that the M/O/N switch is turned to the "M" position.	✓		R/V
71	Press the "RAISE" pushbutton to raise the Lift Table to AGV height.	Visually verify that the Lift Table is at AGV height.	✓		R/V
72	The "LOAD" status indicator at the Lift Table Local Control Pedestal (PC-09-202C) should be illuminated, indicating that the Lift Table is at AGV height.	Verify that the "LOAD" status indicator is illuminated.	✓		R/V
73	Return the Lift Table Local Control Pedestal M/O/N switch (09-HS-237A) to the "NORMAL" position to allow the PCS to activate and control the Lift Table. (LT-09-202C).	Verify that the M/O/N switch is turned to the "N" position.	✓		R/V
74	Place the LLW Exit Glovebox in "Automatic" mode.	Verify that the glovebox is in "Automatic" mode.	✓		R/V
75	The "SYSTEM INITIALIZED" message should be displayed on the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "SYSTEM INITIALIZED" message is displayed.	✓		R/V

Step #	TEST PROCEDURE STEPS (13031P-72)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)						
Examine HVAC Seal Inflated Lift Table "Raise" Interlock											
76	Briefly activate (e.g., "Break the beam") the "Drum at End of Conveyor" position switch (09-ZS-237E) to simulate placing the 85 gallon drum on the Lift Table.	Verify that the "Drum at End of Conveyor" position switch is briefly activated.	✓								
* 77	The "DRUM AT AGV END" indicator (09-ZL-237A) on the Lift Table Control Pedestal (PC-09-202C) should be illuminated, indicating that a drum is positioned at the AGV end of the Lift Table.	Verify that the "DRUM AT AGV END" indicator is illuminated. <i>See note below</i>	<i>N/A</i>		<i>msj 7-9-97</i>						
* 78	Because a drum is present (simulated) and the Lift Table is at AGV height, the "DRUM AT LIFT TABLE" message should be displayed on the "EXIT PORT MENU" at OIU-12-103C.	Verify that the "DRUM AT LIFT TABLE" message is displayed.	✓		<i>msj</i>						
79	Press the "START DRUM ENTRY" button from the "EXIT PORT MENU" at OIU-12-103C.	Verify that the "START DRUM ENTRY" button has been pressed.	✓		<i>msj</i>						
80	The PCS should energize the Lift Table motor (LT-09-202C/M1) to lower the Lift Table below AGV height.	Verify that the Lift Table lowers below AGV height.	✓		<i>msj</i>						
81	The "DRUM ENTRY IN PROGRESS..." message should be displayed on the "EXIT PORT MENU" at OIU-12-103C.	Verify that the "DRUM ENTRY IN PROGRESS..." message is displayed.	✓		<i>msj</i>						
82	The PCS should energize the Lift Table motor (LT-202C/M1) to lower the Lift Table to a position twelve (12) inches above the floor.	Verify that the Lift Table is lowered.	✓		<i>msj</i>						
83	The PCS should energize the Lift Table roller conveyor motor (LT-09-202C/M2) to move the drum under the glovebox port.	Verify that the Lift Table roller conveyor is energized.	✓		<i>msj</i>						
84	Force LCU 102 register PS768 activated to indicate that the HVAC seal for Drum Entry/Exit Port DO-07-106 is inflated. Record the forced register status:	Verify that register PS768 is forced activated.	✓		<i>msj</i>						
	<table border="0"> <tr> <td><u>Register</u></td> <td><u>Forced Status</u></td> <td><u>Method of Confirmation</u></td> </tr> <tr> <td>PS768</td> <td><u>1</u></td> <td><u>1:32/06</u></td> </tr> </table>	<u>Register</u>	<u>Forced Status</u>	<u>Method of Confirmation</u>	PS768	<u>1</u>	<u>1:32/06</u>	Verify that the forced register status is recorded.	✓		<i>msj</i>
<u>Register</u>	<u>Forced Status</u>	<u>Method of Confirmation</u>									
PS768	<u>1</u>	<u>1:32/06</u>									
85	Manually activate (e.g., "Break the beam") the "Drum Under Glovebox Port" position switch (09-ZS-237F) within the time period specified in the SETUP section of this test procedure. This switch should remain activated.	Verify that the "Drum Under Glovebox Port" position switch is activated.	✓		<i>msj</i>						
86	The PCS should de-energize the Lift Table roller conveyor motor (LT-09-202C/M2) after the "Drum Under Glovebox Port" position switch (09-ZS-237F) is activated.	Verify that the Lift Table roller conveyor is de-energized.	✓		<i>msj</i>						

* #77 Toggled N31:70/12 to activate "DRUM AT LIFT TABLE" Set N43:4/7 "PCS Drum Pin Confirm" to allow sequence to proceed.

Step #	TEST PROCEDURE STEPS (13031P-72)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
87	The "DRUM UNDER PORT" indicator at the Lift Table Local Control Pedestal (PC-09-202C) should be illuminated, indicating the a drum (simulated) is centered under the glovebox port (DO-07-106).	Verify that the "DRUM UNDER PORT" indicator is illuminated.	✓		mgf
88	Because register PS768 is forced activated, indicating that the HVAC Seal is inflated, the Lift Table should not raise to the "Drum Centering" position. Wait thirty (30) seconds.	Verify that the Lift Table does not raise to the "Drum Centering" position during the waiting period.	✓		mgf
89	Force LCU 102 registers ZS0767A and ZS0767B not activated to simulate the "The Drum Centering Device Extended" condition for Drum Entry/Exit Port DO-07-106. Record the forced register status below: <div> <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS0767A <u>Ø</u> I:32/04 _____ ZS0767B <u>Ø</u> I:32/05 _____ </div>	Verify registers ZS0767A and ZS0767B are forced not activated. Verify that the forced register status is recorded.	✓ ✓		mgf mgf
90	The Drum Centering Device for Drum Entry/Exit Port DO-07-106 should remain retracted.	Verify that the Drum Centering Device is retracted.	✓		mgf
91	Unforce register PS768. Record the unforced register status below: Unforced PS768 Register Status: <u>Ø</u>	Verify that register PS768 is unforced.	✓		mgf
92	The HVAC Seal for Drum Entry/Exit Port DO-07-106 should remain deflated.	Verify that the HVAC Seal is deflated.	✓		mgf
93	The "HVAC Control Seal Deflated" pressure switch (07-PS-768) should be activated, indicating that the HVAC seal is deflated. <i>mgf 7-9-97 not</i>	Verify that the "HVAC Control Seal Deflated" pressure switch is activated.	✓		mgf

#93 Raytheon apparently misnamed this switch, which is normally open until seal is inflated, mgf 7-9-97

Step #	TEST PROCEDURE STEPS (13031P-72)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine Drum Centering Device Extended Lift Table "Raise" Interlock					
94	Because registers ZSO767A and ZSO767B are forced not activated, indicating that the Drum Centering Device is extended, the Lift Table should not raise to the "Drum Centering" position. Wait thirty (30) seconds.	Verify that the Lift Table does not raise to the "Drum Centering" position during the waiting period.	✓		mgf
95	Unforce LCU 102 register ZSO767A. Record the unforced register status below: Unforced ZSO767A Status: _____	Verify that register ZSO767A is unforced.	✓		mgf
96	The "Centering Device Retracted" position switch (07-ZSO-767A) should be activated, indicating that the Drum Centering Device is retracted.	Verify that the "Centering Device Retracted" position switch (07-ZSO-767A) is activated.	✓		mgf
97	Because register ZSO767B remains forced not activated, indicating that the Drum Centering Device is extended, the Lift Table should not raise to the "Drum Centering" position. Wait thirty (30) seconds.	Verify that the Lift Table does not raise to the "Drum Centering" position during the waiting period.	✓		mgf
98	Force LCU 102 register ZSO767A not activated to simulate the "Drum Centering Device Extended" condition for Drum Entry/Exit Port DO-07-106. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZSO767A <u>0</u> I:32/04	Verify that register ZSO767A is forced activated.	✓		mgf
99	Unforce LCU 102 register ZSO767B. Record the unforced register status below: Unforced ZSO767B Status: _____	Verify that register ZSO767B is unforced.	✓		mgf
100	The "Centering Device Retracted" position switch (07-ZSO-767B) should be activated, indicating that the Drum Centering Device is retracted.	Verify that the "Centering Device Retracted" position switch (07-ZSO-767B) is activated.	✓		mgf
101	Because register ZSO767A remains forced not activated, indicating that the Drum Centering Device is extended, the Lift Table should not raise to the "Drum Centering" position. Wait thirty (30) seconds.	Verify that the Lift Table does not raise to the "Drum Centering" position during the waiting period.	✓		mgf

Step #	TEST PROCEDURE STEPS (13031P:72)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
102	Remove the manual activation (e.g., "Don't break the beam") of the "Drum Under Glovebox Port" position switch (09-ZS-237F) to allow this switch to indicate whether or not a drum is present on the Lift Table.	Verify that the "Drum Under Glovebox Port" position switch is not activated.	✓		mg
103	Because a drum is not present on the Lift Table, the "DRUM UNDER PORT" indicator (09-ZL-237B) on the Lift Table Control Pedestal (PC-09-202C) should not be illuminated.	Verify that the "DRUM UNDER PORT" indicator is not illuminated.	✓		mg
104	Unforce LCU 102 register ZS0767A. Record the unforced register status below: Unforced ZS0767A Status: _____	Verify that register ZS0767A is unforced.	✓		mg
105	The "Centering Device Retracted" position switches (07-ZSO-767A and 07-ZSO-767B) should be activated, indicating that the Drum Centering Device is retracted.	Verify that the "Centering Device Retracted" position switches are activated.	✓		mg
106	The Drum Centering Devices for Drum Entry/Exit Port DO-07-106 should remain retracted.	Verify that the Drum Centering Devices are retracted.	✓		mg

9-9-97

#102 Conveyor rollers reset

Step #	TEST PROCEDURE STEPS (13031P-72)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Drum Under Glovebox Port Lift Table "Raise" Interlock					
107	Because a drum is not centered beneath the port, the Lift Table should not raise to the "Drum Centering" position. Wait thirty (30) seconds.	Verify that the Lift Table does not raise to the "Drum Centering" position during the waiting period.	✓		msj
108	Manually activate (e.g., "Break the beam") the "Drum Under Glovebox Port" position switch (09-ZS-237F) to simulate centering the 85 gallon drum beneath the Entry/Exit Port (DO-07-106). This switch should remain activated.	Verify that the "Drum Under Glovebox Port" position switch is manually activated.	✓		msj
109	The "DRUM UNDER PORT" indicator at the Lift Table Local Control Pedestal (PC-09-202C) should be illuminated, indicating the a drum (simulated) is centered under the glovebox port (DO-07-106).	Verify that the "DRUM UNDER PORT" indicator is illuminated.	✓		msj
110	Because the Drum Centering Device is retracted, and the "Drum Under Glovebox Port" position switch is activated, the drum entry sequence should continue. The PCS should raise the Lift Table to the "Drum Centering" height.	Verify that the Lift Table raises to "Drum Centering" height.	✓		msj
111	The "DRUM IN POSITION" indicator at the Lift Table Local Control Pedestal (PC-09-202C) should be illuminated, indicating the Lift Table has raised to "Drum Centering" height.	Verify that the "DRUM IN POSITION" indicator is illuminated.	✓		msj
112	The "DRUM ENTRY COMPLETE" message should be displayed on the "EXIT PORT MENU" at OIU-12-103C.	Verify that the "DRUM ENTRY COMPLETE" message is displayed.	✓		msj

Step #	TEST PROCEDURE STEPS (13031P-72)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Lift Table "Failed to Raise" Alarm					
113	Press the "OPEN PORT" button from the "EXIT PORT MENU" at OIU-12-103C.	Verify that the "OPEN PORT" button has been pressed.	✓		R/W
114	The "PORT OPENING..." message should be displayed on the "EXIT PORT MENU" at OIU-12-103C.	Verify that the "PORT OPENING..." message is displayed.	✓		R/W
115	The PCS should energize and hold solenoid valve 07-FEV-304 to extend the drum centering clamps around the drum.	Verify that the drum centering clamps extend.	✓		R/W
116	The PCS should cause the lift table to raise at slow speed until the "Lid in Position" switch (07-ZS-764) is activated. (e.g., Drum is not present, so switch will not be activated).	Verify that the lift table raises slowly.	✓		R/W
117	Because a drum is not present on the lift table, the "Lid in Position" switch will not be activated, the lift table should stop raising, and a "Lift Table (202C) Failed to Raise" alarm should be generated.	Verify that the lift table has stopped raising.	✓		R/W
118	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Lift Table (202C) Failed to Raise" alarm	Verify that the alarm has been acknowledged.	✓		R/W
119	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "EXIT PORT MENU".	Verify that the "EXIT PORT MENU" is displayed.	✓		R/W
120	Place the LLW Exit Glovebox in "Maintenance" mode.	Verify that the LLW Exit Glovebox has been placed in "Maintenance" mode.	✓		R/W
121	Use the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" or other appropriate methods to retract the drum centering clamps.	Verify that the drum centering clamps are retracted.	✓		R/W
122	Press the "UP" pushbutton at the Lift Table local control pedestal (PC-09-202C) to raise the Lift Table to AGV Height.	Visually Verify that the Lift Table is at AGV height.	✓		R/W
123	The Lift Table at "AGV LOAD HEIGHT" indicator (09-ZL-237E) should be illuminated, indicating that the Lift Table is at AGV height.	Verify that the "AGV LOAD HEIGHT" indicator is illuminated.	✓		R/W
124	Remove the manual activation (e.g., "Don't Break the beam") for the "Drum at End of Conveyor" position switch (09-ZS-237E) and for the "Drum Under Glovebox Port" position switch (09-ZS-237F).	Verify that the "Drum at End of Conveyor" and the "Drum Under Glovebox Port" switches are not activated.	✓		R/W
125	Place the LLW Exit Glovebox in "Automatic" mode to allow the LLW Exit glovebox to re-initialize.	Verify that the LLW Exit Glovebox has been placed in "Automatic" mode	✓		R/W

Step #	TEST PROCEDURE STEPS (13031P-72)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
126	The "LLW EXIT GLOVEBOX MAIN MENU" should be displayed at OIU-12-103C.	Verify that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed.	✓		P/V
127	Because all glovebox initialization conditions should be satisfied, the "SYSTEM INITIALIZED" message should be displayed on the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "SYSTEM INITIALIZED" message is displayed.	✓		P/V
TEST CASE 13031A-85.32 COMPLETE					

TEST CASE 13031A-85.33 MATE DRUM TO LLW EXIT GLOVEBOX 320 LITER (85 GALLON) ENTRY/EXIT PORT (DO-07-106)	33-2
Complete Drum Entry Sequence	33-2
Examine Drum Lid Vacuum Interlock	33-4
Examine "Door In Position" Alarm	33-5
Examine "Port Failed to Open" Alarm	33-7
Open 320 Liter (85 Gallon) Entry/Exit Port	33-8
Examine Drum Lid Vacuum Loss Alarm	33-9

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
TEST CASE 13031A-85.33 MATE DRUM TO LLW EXIT GLOVEBOX 320-LITER (85 GALLON) ENTRY/EXIT PORT (DO-07-106)					
Complete Drum Entry Sequence					
1	CAUTION: The following sequence of test procedure steps involve automatic port door opening, controlled by LCU 102 (Referred to as the "PCS" in this test procedure). These test procedure steps should be carefully reviewed to permit rapid verification of test conditions during the automatic port opening sequence.	Verify that the steps in this test case are carefully reviewed prior to using this test case.	✓		mgf
2	Confirm that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed at OIU-12-103C. If a sub-menu is displayed, press the "MAIN MENU" button to return to the "LLW EXIT GLOVEBOX MAIN MENU".	Verify that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed.	✓		mgf
3	Force LCU 102 register ZS761B not activated, to simulate that the "DRUM DOOR IN POSITION" switch 07-ZS-761B is not activated. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS761B <u>0</u> I:24/12	Verify that register ZS761B is forced not activated. Verify that the forced register status is recorded.	✓ ✓		mgf mgf
4	Force LCU 102 register ZSO760 to indicate that the "DRUM PORT ROTATED" position switch 07-ZSO-760 is not activated. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZSO760 <u>0</u> I:25/01	Verify that register ZSO760 is forced not activated. Verify that the register status is recorded.	✓ ✓		mgf mgf
5	Force LCU 102 register PS704 to indicate that the "SYSTEM ESTABLISHED ADEQUATE VACUUM" pressure switch 07-PS-704 is not activated. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> PS704 <u>0</u> I:24/15	Verify that register PS704 is forced not activated. Verify that the register status is recorded.	✓ ✓		mgf mgf
6	Place the 320 liter (85 gallon) waste drum without band clamp on the LLW Exit Glovebox Entry/Exit Port Lift Table, (LT-09-202C). The drum should be placed at the AGV end of the lift table.	Verify that the drum without band clamp has been placed on the Lift Table.	✓		mgf

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
7	The "DRUM AT AGV END" indicator (09-ZL-237A) on the Lift Table Control Pedestal (PC-09-202C) should be illuminated, indicating that a drum is positioned at the AGV end of the lift table.	Verify that the "DRUM AT AGV END" indicator is illuminated.	✓		mrg
8	Press the "EXIT PORT MENU" button from the "LLW ENTRY GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "EXIT PORT MENU" is displayed.	✓		mrg
9	The "DRUM AT LIFT TABLE" message should be displayed on the "EXIT PORT MENU" at OIU-12-103C.	Verify that the "DRUM AT LIFT TABLE" message is displayed.	✓		A/W
10	Press the "START DRUM ENTRY" button from the "EXIT PORT MENU" at OIU-12-103C.	Verify that the "START DRUM ENTRY" button has been pressed.	✓		mrg
11	The "DRUM ENTRY IN PROGRESS..." message should be displayed on the "EXIT PORT MENU" at OIU-12-103C.	Verify that the "DRUM ENTRY IN PROGRESS..." message is displayed.	✓		mrg
12	The PCS should energize the Lift Table motor down (LT-09-202C/M1) to move the Lift Table to its lowered position below AGV height.	Verify that the Lift Table is at its lowered position below AGV height.	✓		mrg
13	The PCS should energize the Lift Table conveyor motor forward (LT-09-202C/M2) to move the drum under the Entry/Exit Port.	Verify that the drum is centered beneath the Entry/Exit Port.	✓		mrg
14	The "DRUM UNDER PORT" indicator at the Lift Table Local Control Pedestal (PC-09-202C) should be illuminated, indicating the a drum is centered under the glovebox port (DO-07-106).	Verify that the "DRUM UNDER PORT" indicator is illuminated.	✓		mrg
15	The PCS should then energize the Lift Table motor (LT-09-202C/M1) to raise the drum to "Drum Centering" position.	Verify that the Lift Table raises the drum to the "Drum Centering" position.	✓		mrg
16	The "DRUM IN POSITION" indicator (09-ZL-237D) at the Lift Table Local Control Pedestal (PC-09-202C) should be illuminated, indicating that the drum has been raised to the "Drum Centering" position.	Verify that the "DRUM IN POSITION" indicator is illuminated.	✓		mrg
17	Because the drum has been raised to the "Drum Centering" position, the Drum Entry Sequence is complete and the "DRUM ENTRY COMPLETE" message should be displayed at OIU-12-103C.	Verify that the "DRUM ENTRY COMPLETE" message is displayed.	✓		mrg

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Drum Lid Vacuum Interlock					
18	Press the "OPEN PORT" button from the "EXIT PORT MENU" at OIU-12-103C.	Verify that the "OPEN PORT" button has been pressed.	✓		mgf
19	The "PORT OPENING..." message should be displayed on the "EXIT PORT MENU" at OIU-12-103C while the port is opening.	Verify that a "PORT OPENING..." message is displayed.	✓		mgf
20	The PCS should energize the Drum Centering Clamp solenoid (07-FEV-304) to extend the Drum Centering clamps to secure the drum.	Verify that the Drum Centering Device clamps extend.	✓		mgf
21	The PCS should raise the Lift Table until the drum activates the "Drum Lid in Position" position switch (07-ZS-764).	Verify that the Lift Table raises and then stops.	✓		mgf
22	The "Drum Lid in Position" position switch 07-ZS-764 should be activated.	Verify that the "Drum Lid in Position" position switch is activated.	✓		mgf
23	The PCS should energize and hold the vacuum isolation solenoid valve 07-FEV-761C open, and then energize solenoid valve 07-FEV-761D/V (Vacuum) to create vacuum at the Drum Entry/Exit Port (DO-07-106). An audible "hiss" should be noted.	Audibly verify that the vacuum generator is activated.	✓		mgf
24	Because register PS704 is forced not activated, the drum port opening sequence should stop. Wait thirty (30) seconds.	Verify that the port does not unlock during the waiting period.	✓		mgf
25	Unforce LCU 102 register PS704. Record the unforced register status below: Unforced PS704 Status: <u>1</u>	Verify that register PS704 is unforced.	✓		mgf
26	The "System Established Adequate Vacuum" vacuum switch should be activated, indicating that vacuum is present.	Verify that the "System Established Adequate Vacuum" vacuum switch is activated.	✓		mgf
27	The PCS should de-energize the vacuum isolation solenoid 07-FEV-761C so that vacuum is retained between the port door and the drum lid after the vacuum generator is turned off.	Verify that the vacuum isolation solenoid valve is de-energized.	N/A		mgf 7-9-76
28	The "System Established Adequate Vacuum" vacuum switch should be activated, indicating that vacuum is present.	Verify that the "System Established Adequate Vacuum" vacuum switch is activated.	✓		mgf

* 27 Due to mechanical changes, vacuum isolation valve no longer exists. mgf 7-9-97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine "Door In Position" Alarm					
29	The PCS should check the status of pressure switch 07-PS-704. If 07-PS-704 indicates that adequate vacuum is present, the PCS should de-energize 07-FEV-761D/V to stop generating vacuum.	Audibly verify that the vacuum generation solenoid valve is de-energized.	✓		mg
30	The PCS should energize solenoid valve 07-FEV-305 to inflate the HVAC Seal for Drum Entry/Exit Port DO-07-106.	Verify that the HVAC Seal is inflated.	✓		mg
31	The PCS should briefly energize solenoid valves 07-FEV-913A and 07-FEV-913B (Vent) to release pressure on the port door open/close cylinders.	Audibly verify that the port open/close cylinders are vented.	✓		mg
32	The PCS should pulse energize solenoid 07-FEV-761A/UL (Unlock) to fully retract the port door locking cylinders.	Verify that both port door locking cylinders are fully retracted.	✓		mg
33	The "DRUM PORT CLOSED AND LOCKED" Position switches 07-ZSC-765A and 07-ZSC-765B should not be activated, indicating that the port door is unlocked.	Verify that the "DRUM PORT CLOSED AND LOCKED" position switches are not activated.	✓		mg
34	The glovebox pressurization alarm 07-PDISL-393 should be not be activated at loss of contact of switches 07-ZSC-765A and 07-ZSC-765B during the drum entry procedure.	Verify that no glovebox pressurization alarm messages are displayed during the drum port opening sequence.	✓		mg
35	The PCS should activate the Lift Table servo motor (LT-09-202C/M1) to raise the Lift Table, drum, and port door up until the port door is raised to the "DOOR IN POSITION" height.	Verify that the Lift Table rises causing the drum to lift the port door to the "Door in Position" height.	✓		mg
36	Because position switch 07-ZS-761B (Door In Position) is forced not activated, the drum port opening sequence should stop. Wait thirty (30) seconds to confirm that the drum port opening sequence has stopped. A "Port DO-07-106 Failed to Open" alarm should be generated.	Verify that the port door does not raise to the "Open" position during the waiting period.	✓		mg
37	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Port (106) Failed to Open" alarm.	Verify that the alarm has been acknowledged.	✓		mg
38	Unforce LCU 102 register ZS761B. Record the unforced register status below: Unforced ZS761B Status: _____	Verify that register ZS761B is unforced.	✓		mg
39	The "Drum Door in Position" switch (07-ZS-761B) should be activated, indicating that the port door is raised to the "DOOR IN POSITION" height.	Verify that the "Drum Door in Position" position switch is activated.	✓		mg

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
40	Unforcing register ZS761B should cause the "Port DO-07-106 Failed to Open" alarm to clear. <i>N/A mrg 11-18-97</i>	Verify that the alarm is cleared.		✓	<i>mrg</i>
41	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "EXIT PORT MENU" at OIU-12-103C.	Verify that the "EXIT PORT MENU" is displayed.	✓		<i>mrg</i>

#40 Alarm does not clear, will not clear until port open Switch ZS0760, is activated. *mrg 9-9-97*

#40 Step invalid. *mrg 11-18-97*

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine "Port Failed to Open" Alarm					
42	The PCS should pulse energize solenoid valve 07-FEV-761F/O (Open) to vertically raise the door to the "open" position.	Verify that the port door rises to the "open" position.	✓		mro
43	The "Drum Door Open" position switch (07-ZS-761C) should be activated, indicating that the port door is at the "open" position.	Verify that the "Drum Door Open" position switch is activated.	✓		mro
44	The PCS should pulse energize solenoid valve 07-FEV-761B/O (Open) to rotate the port door open.	Verify that the port door is rotated open.	✓		mro
45	Because register ZSO760 is forced not activated, simulating that the port has not been successfully rotated open, the port opening sequence should stop, the "PORT OPEN" message should not be displayed on the "EXIT PORT MENU" at OIU-12-103C, and a "Port (106) Failed To Open" alarm should be generated. Wait thirty (30) seconds.	Verify that the "PORT OPEN" message is not displayed during the waiting period.	✓		mro
46	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Port (106) Failed To Open" alarm.	Verify that the alarm has been acknowledged.	✓		mro
47	Unforce LCU 102 register ZSO760. Record the unforced register status below: Unforced ZSO60 Status: _____	Verify that register ZSO760 is unforced.	✓		mro
48	Because the port is rotated open, the "Drum Port Rotated" position switch (07-ZSO-760) should be activated.	Verify that the "Drum Port Rotated" position switch is activated.	✓		mro
49	Unforcing register ZSO760 should cause the "Port DO-07-106 Failed To Open" alarm to clear.	Verify that the alarm is cleared.	✓		mro
50	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "EXIT PORT MENU" at OIU-12-103C.	Verify that the "EXIT PORT MENU" is displayed.	✓		mro
51	The "PORT OPEN" message should be displayed on the "EXIT PORT MENU" at OIU-12-103C.	Verify that the "PORT OPEN" message is displayed.	✓		mro

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Open 320 Liter (85 Gallon) Entry/Exit Port					
52	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "EXIT PORT MENU" at OIU-12-103C.	Verify that the "EXIT PORT MENU" is displayed.	✓		mrg
53	The drum lid should remain attached to the port door.	Verify that the drum lid remains attached to the port door.	✓		mrg
54	Press the "MAIN MENU" button from the "EXIT PORT MENU" to return to the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed.	✓		mrg
55	Press the "WEIGH MENU" button from the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "WEIGH MENU" is displayed.	✓		mrg
56 <i>see TE# 723</i>	Three data items should be displayed on the "WEIGH MENU" at OIU-12-103C: 1. The "COMPACT DRUM WEIGHT" 2. The "CUMULATIVE WEIGHT" (of the Loadout Drum) 3. The "# OF DRUMS IN LDOUT" (The number of drums in the loadout drum)	Verify that the data items described are displayed.		✓	mrg
57	Because a compacted drum is not secured by the Hoist, the "COMPACT DRUM WEIGHT" should be 0.	Verify that the "COMPACT DRUM WEIGHT" is "0"		✓	mrg
58	Because no compacted drums have been placed in the loadout drum, the "CUMULATIVE WEIGHT" should be equivalent to the tared weight of the Loadout Drum.	Verify that the "CUMULATIVE WEIGHT" displayed is equivalent to the tared weight of the Loadout Drum.	✓		mrg
59	Because no compacted drums have been placed in the loadout drum, the "# OF DRUMS IN LDOUT" should be 0.	Verify that the "# OF DRUMS IN LDOUT" displayed is 0.	✓		mrg
60	Press the "MAIN MENU" button at OIU-12-103C to return to the "LLW EXIT GLOVEBOX MAIN MENU".	Verify that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed.	✓		mrg

#56 All items are displayed, but "Compact drum weight" "weight" wraps to second line and is obscured by weight reading. mrg 9-9-97

#57 Fluctuates between 0 and 1. mrg 7-9-97. See TE# 367

#58 Set to 0 (or "0") mrg 7-10-97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Drum Lid Vacuum Loss Alarm					
61	Press the "EXIT PORT MENU" button from the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "EXIT PORT MENU" is displayed.	✓		mgj
62	Force LCU 102 register PS704 to indicate that the "SYSTEM ESTABLISHED ADEQUATE VACUUM" switch 07-PS-704 is not activated. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> PS704 <u>0</u> 1:24/15	Verify that register PS704 is forced not activated. Verify that the register status is recorded.	✓ ✓		mgj mgj
63	The PCS should energize vacuum generator solenoid valve (07-FEV-761D/V) to generate vacuum.	Verify that the vacuum generator is energized.	✓		R/W
64	The PCS should then energize and hold solenoid valve 07-FEV-761C to allow vacuum to be applied to the drum lid vacuum system.	Verify that the vacuum isolation solenoid valve 07-FEV-761C is energized open.			R/W 2-10-92
65	Because register PS704 is forced not activated, a "Port (106) Loss of Vacuum on Lid" alarm should be generated. A flashing "SEQUENCE FAILED" message should be displayed on the "EXIT PORT MENU" at OIU-12-103C.	Verify that a flashing "SEQUENCE FAILED" alarm is displayed.	✓		R/W
66	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Port (106) Loss of Vacuum on Lid" alarm.	Verify that the alarm has been acknowledged.	✓		R/W
67	Unforce LCU 102 register PS704 to permit vacuum switch 07-PS-704 to indicate whether vacuum exists in the lid vacuum system. Record the unforced register status below: Unforced PS704 Status: <u>1</u>	Verify that register PS704 is unforced.	✓		R/W
68	Adjust the drum lid as needed to ensure that vacuum is generated and maintained between the port door and the drum lid.	Verify that vacuum exists between the drum lid and the port door.	✓		R/W
69	Because vacuum exists between the drum lid and the port door, the "Port (106) Loss of Vacuum on Lid" alarm should clear.	Verify that the alarm is cleared.	✓		R/W
70	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "EXIT PORT MENU" at OIU-12-103A.	Verify that the "EXIT PORT MENU" is displayed.	✓		R/W
TEST CASE 13031A-85.33 COMPLETE					

TEST CASE 13031A-85.34 EXAMINE LLW EXIT GLOVEBOX COMPACT DRUM CONVEYOR (CV-07-101/M1) OPERATION 34-2

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass	Fail	Witness (initial)
TEST CASE 13031A-85.34 EXAMINE LLW EXIT GLOVEBOX COMPACT DRUM CONVEYOR (CV-07-101/M1) OPERATION					
Examine Compact Start Interlock					
1	The LLW Exit Glovebox should be empty and no drum should be located at the end of the Compact Conveyor (CV-07-101). <i>Compact at end mrf 8-6-97</i>	Verify that no drum is at the end of the Compact Conveyor.	<i>Pass</i>		<i>mrf</i>
2	Force LCU 102 register ZS762 activated to simulate the "Drum at End of Compact Conveyor" condition. Record the forced register status below. <i>Compact at end of conveyor mrf 8-6-97</i> Register <u>Forced Status</u> Method of Confirmation ZS762 <u>1</u> 1:24/6 <i>confirmed</i>	Verify that register ZS762 is forced activated. Verify that the register status is recorded. <i>Compact at end of conveyor</i>	<i>Pass</i>		<i>mrf</i>
3	Confirm that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed at OIU-12-103C. If a sub-menu is displayed, press the "MAIN MENU" button to return to the "LLW EXIT GLOVEBOX MAIN MENU".	Verify that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed.	<i>Pass</i>		<i>mrf</i>
4	Press the "CONVEYOR MENU" button from the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "CONVEYOR MENU" is displayed.	<i>Pass</i>		<i>mrf</i>
5	Confirm that an empty compacted drum is ready for receipt from the Compact Conveyor to the LLW Exit Glovebox.	Verify that a compacted drum is ready to transfer from the Compact Conveyor to the LLW Exit Glovebox.	<i>Pass</i>		<i>mrf</i>
6	When a compacted drum is ready for receipt from the Compact Conveyor, the Compact Conveyor should send a "Ready to transfer puck to LLW Exit Glovebox" signal.	Verify that PCS has received a "Ready to transfer puck to LLW Exit Glovebox" signal.		<i>Pass</i>	<i>mrf</i>
7	The "READY TO TRANSFER COMPACTED DRUM" message should be displayed on the "ENTRY CONVEYOR MENU" at OIU-12-103C.	Verify that the "READY TO TRANSFER COMPACTED DRUM" message is displayed.		<i>Pass</i>	<i>mrf</i>
8	Press the "START COMPACT RECEIPT" button from the "ENTRY CONVEYOR MENU" at OIU-12-103C.	Verify that the "START COMPACT RECEIPT" button has been pressed.	<i>Pass</i>		<i>mrf</i>
9	Because register ZS762 is forced activated, the PCS should not send a "Transfer Puck to LLW Exit Glovebox" signal, and the Compact Conveyor should not start. Wait thirty (30) seconds.	Verify that the Compact Conveyor does not start during the waiting period.	<i>Pass</i>		<i>mrf</i>

*#7 - Interface between PCS, SC. does not exist mrf 8-6-97
 #6-#7 See TE #722

11-18-97 #1 Step failure is only to show actual setup for running test. Test step should have been marked "PASS" with note ³⁴² as to actual procedure setup. This does not represent LLW EXIT GLOVEBOX
 + test exception. mrf

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
10	Force LCU 102 register ZS762 not activated to simulate the "Drum at End of Compact Conveyor" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS762 <u>0</u> 1:24/6	Verify that register ZS762 is forced, activated. Verify that the forced register status is recorded.	✓		mfg
11	Press the "START COMPACT RECEIPT" button from the "ENTRY CONVEYOR MENU" at OIU-12-103C.	Verify that the "START COMPACT RECEIPT" button has been pressed.	✓		mfg
* 12	The "COMPACTED DRUM RECEIPT IN PROGRESS..." message should be displayed on the "ENTRY CONVEYOR MENU" at OIU-12-103C.	Verify that the "COMPACTED DRUM RECEIPT IN PROGRESS..." message is displayed.		✓	mfg
* 13	Because position switch 07-ZS-762 is forced not activated, the PCS should send a "Transfer Puck to LLW Exit Glovebox" signal to the Compact Conveyor (CV-07-101).	Verify that the "Transfer Puck to LLW Exit Glovebox" signal is sent to the Compact Conveyor.		✓	mfg
* 14	The Compact Conveyor (CV-07-101) should transfer the 63.5 kilogram (140 pound) drum to the LLW Exit Glovebox.	Verify that the Compact Conveyor transfers the drum to the LLW Exit Glovebox.		✓	mfg
* 15	The "COMPACTED DRUM RECEIPT COMPLETE" message should be displayed on the "ENTRY CONVEYOR MENU" at OIU-12-103C.	Verify that a "COMPACTED DRUM RECEIPT COMPLETE" message is displayed.		✓	mfg
TEST CASE 13031A-85.34 COMPLETE					

* See note page 34-2, TE# 722

NOTE: TEST CASE #35, WHICH DEALT WITH STORAGE POSITION #3 HAS BEEN DELETED BECAUSE STORAGE POSITION #3 DOES NOT EXIST.

TEST CASE 13031A-85.36 MOVE COMPACTED DRUMS TO LLW EXIT GLOVEBOX (GB-07-105) STORAGE POSITIONS	36-2
Move Compacted Drum to Storage Position 1	36-2
Move Compacted Drum to Storage Position 2	36-5

Testing begins 8-13-97 1:52 a.m., Restarts 8-15-97 11:24 a.m.

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
TEST CASE 13031A-85.36 MOVE COMPACTED DRUMS TO LLW EXIT GLOVEBOX (GB-07-105) STORAGE POSITIONS					
Move Compacted Drum to Storage Position 1					
1	Confirm that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed at OIU-12-103C. If a sub-menu is displayed, press the "MAIN MENU" button to return to the "LLW EXIT GLOVEBOX MAIN MENU".	Verify that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed.	✓		<i>mg</i>
2	Press the "WEIGH MENU" button from the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "WEIGH MENU" is displayed. <i>empty mg 29.9g</i>	✓		<i>mg</i>
3	Confirm that an empty compacted drum is positioned at the "Compact Receipt" position, ready for transfer to a compacted drum storage position.	Verify that a 140 <i>empty</i> compacted drum is positioned at the "Compact Receipt" position.	✓		<i>mg</i>
4	Attach a pre-printed bar code label to the compacted drum.	Verify that a bar code label has been affixed to the compacted drum.	✓		<i>mg</i>
5	Read the compacted drum bar code label with the portable scanner NE-12-310. The scanner LED indicator should briefly flash, indicating that a bar code label has been successfully read.	Verify that the bar code label has been successfully read.	✓		<i>mg</i>
6	The bar code label contents should be stored in LCU 102 register(s): <i>mg 8-13-97</i> <i>N31-50-65 043:50-52 "OTR 001"</i>	Verify that the bar code label contents are correctly stored in the appropriate LCU 102 register.	✓		<i>mg</i>
7	Press the "LIFTER OPEN" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) until the Drum Lifter grab is fully open.	Verify that the "LIFTER OPEN" button has been pressed.	✓		<i>mg</i>
8	The Drum Lifter (DH-07-104) grab should be completely open.	Verify that the Drum Lifter grab is completely open.	✓		<i>mg</i>
9	The "LIFTER OPEN" indicator on the Hoist/Trolley/Lifter Pendant (PC-07-004) should be illuminated, indicating that the Drum Lifter grab is completely open.	Verify that the "LIFTER OPEN" indicator is illuminated.		✓	<i>mg</i>
10	Press the "LOWER" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) until the Hoist is fully lowered.	Verify that the "LOWER" button has been pressed.	✓		<i>mg</i>
11	The Drum Lifter (DH-07-104) should be fully lowered.	Verify that the Drum Lifter is fully lowered.	✓		<i>mg</i>
12	The Drum Lifter (DH-07-104) should rest on the compacted drum and should be positioned so that the Drum Lifter grab can be attached to the compacted drum.	Verify that the Drum Lifter grab is positioned on top of the compacted drum.	✓		<i>mg</i>

#5 Both terminals 3,5 locked up. Portable does not ^(connect) read label on pack, but can read label through window *mg 8-13-97* - NT-312 to be used for b.code activities

TEST CASE 13031A-85.36 Rev. 0

36-2

LLW EXIT GLOVEBOX

#6 Wand reader 312 provides no feedback, requires several passes, and is not labeled.
#7 Switch action is erratic. See TE#2612

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
13	Attach the Drum Lifter (DH-07-104) grab to the compacted drum.	Verify that the Drum Lifter grab is closed, securely attached to the compacted drum.	✓		mg
14	Press the "LIFTER CLOSE" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) to close the grab to secure the compacted drum.	Verify that the "LIFTER CLOSE" button has been pressed.	NA	MA	8-13-97
15	Adjust the Drum Lifter as needed so that the Drum Lifter is securely attached to the drum.	Verify that the Drum Lifter is securely attached to the drum.	✓		mg
16	The "LIFTER CLOSED" indicator on the Hoist/Trolley/Lifter Pendant (PC-07-004) should be illuminated, indicating that the Drum Lifter grab is closed. Erratic	Verify that the "LIFTER CLOSED" indicator is illuminated.	✓		mg
17	Press the "RAISE" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) until the Drum Lifter (DH-07-104) is fully raised.	Verify that the Hoist is fully raised.	✓		mg
18	The Drum Lifter (DH-07-104) should rise with the compacted drum to its fully raised position.	Verify that the compacted drum remains secured by the Drum Lifter.	+	FAIL	mg
19	The "HOIST RAISED LIMIT" indicator on the Hoist/Trolley/Lifter Pendant (PC-07-004) should be illuminated, indicating that the Hoist is fully raised.	Verify that the "HOIST RAISED LIMIT" indicator is illuminated.	✓		mg
20	The "COMPACT DRUM WEIGHT" displayed on the "WEIGH MENU" at OIU-12-103C should rise, stabilize, and be equivalent to the weight of the compacted drum. Scale: 66.25 kg OIU: 67 kg	Verify that the "COMPACT DRUM WEIGHT" displayed is equivalent to the weight of the compacted drum.		✓	mg
21	Record the "COMPACT DRUM WEIGHT" displayed on the "WEIGH MENU" below: see TE#367 COMPACT DRUM WEIGHT: 67 64 kg not kilograms	Verify that the "COMPACT DRUM WEIGHT" is recorded.	✓		mg
22	Press the "MAIN MENU" button from the "WEIGH MENU" at OIU-12-103C to return to the "LLW EXIT GLOVEBOX MAIN MENU". Trolley motor 3-13-97	Verify that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed.	✓		mg
23	Press the "HOIST MENU" button from the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C to display the "HOIST MENU".	Verify that the "HOIST MENU" is displayed.	✓		mg
24	Press the "STORAGE POSITION 1" button from the "HOIST MENU" at OIU-12-103C.	Verify that the "STORAGE POSITION 1" button has been pressed.	✓		mg
25	Press the "RIGHT" pushbutton on the Trolley/Hoist/Lifter Pendant (PC-07-004) as needed to energize trolley motor CR-07-101D/M1 forward so that the trolley SLOWLY travels to and is centered over the Compacted Drum Storage Position 1.	Verify that the Hoist Trolley is centered over the Compacted Drum Storage Position 1.	✓		mg
26	The "TROLLEY 1" indicator on the Trolley/Hoist/Lifter Pendant (PC-07-004) should be illuminated.	Verify that the "TROLLEY 1" indicator is illuminated.	✓		mg

#14- Lifter "close" button not active - lifter automatically closes when "NO ARM" released, to prevent inadvertent release. Also, interlocks added so that grab will not release unless ≤ 5 kg weight held by lifter. #18 compacted drum not solidly secured by lifter

TEST CASE 13031A-85.36 Rev. 0

see next page 36.3.1 for #20 QBR 2/4/98

LLW EXIT GLOVEBOX

#20 "Compact drum in lifter" puck pin display added to provide operator feedback as to current puck hold by lifter, x10 N43:4/5 + N43:5/3, GNS added to "Trolley at Compact Receipt" N43:2/1 OTE rung, so that initial data made after switch from maint. shows hoist at compact receipt. See TE# 373

#25. Hoist moves far too slowly. Need to adjust frequency controller ^{see TE# 374}

Also, "ID DISCREPANCY" noted on Trolley Menu. x10 N43:2/1 added to rung that causes message so that barcode scans at compact receipt do not cause this error. See TE# 367

8-13-97 4:02 AM - noted that logic doesn't support accurate drum tracking
see TE# 367

PLD
9-6-97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
27	Press the "LOWER" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) until the Hoist with the compacted drum is fully lowered.	Verify that the "LOWER" button has been pressed.	✓		mrj
28	The compacted drum should be positioned near the center of the Compacted Drum Storage Position 1.	Verify that the compacted drum is centered at Storage Position 1.	✓		mrj
29	The Drum Lifter (DH-07-104) should rest on the compacted drum and should be positioned so that the Drum Lifter grab can be removed from the compacted drum.	Verify that the Drum Lifter grab is positioned on top of the compacted drum.	✓		mrj
30	Press the "LIFTER OPEN" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) to release the grab from the compacted drum.	Verify that the "LIFTER OPEN" button has been pressed.	✓		mrj
31	The Drum Lifter (DH-07-104) grab should be completely open. <i>Continue to press open while raising</i>	Verify that the Drum Lifter grab is completely open.	✓		mrj
32	Adjust the Drum Lifter grab as needed to fully release the compacted drum.	Verify that the Drum Lifter grab has fully released the compacted drum.	✓		mrj
33	The "LIFTER OPEN" indicator on the Hoist/Trolley/Lifter Pendant (PC-07-004) should be illuminated, indicating that the Drum Lifter grab is open.	Verify that the "LIFTER OPEN" indicator is illuminated.	✓		mrj
34	Press the "RAISE" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) until the Drum Lifter (DH-07-104) is fully raised.	Verify that the Hoist is fully raised.	✓		mrj
35	The "HOIST RAISED LIMIT" indicator on the Hoist/Trolley/Lifter Pendant (PC-07-004) should be illuminated, indicating that the Hoist is fully raised.	Verify that the "HOIST RAISED LIMIT" indicator is illuminated.	✓		mrj
36	Press the "COMPACT RECEIPT" button from the "HOIST MENU" at OIU-12-103C.	Verify that the "COMPACT RECEIPT" button has been pressed.	✓		mrj
37	Press the "LEFT" pushbutton on the Trolley/Hoist/Lifter Pendant (PC-07-004) as needed to energize trolley motor CR-07-101D/M1 in reverse so that the trolley SLOWLY travels to, and is positioned at the Compact Receipt position.	Verify that the "LEFT" button has been pressed.	✓		mrj
38	The Hoist Trolley should be positioned at the Compact Receipt position.	Verify that the Hoist Trolley is at the Compact Receipt position.	✓		mrj
39	The "TROLLEY RECPT" indicator on the Trolley/Hoist/Lifter Pendant (PC-07-004) should be illuminated, indicating that the hoist is positioned at the Compact Receipt position.	Verify that the "TROLLEY RECPT" indicator is illuminated.	✓		mrj

#26A: Press "Store Puck"
 26B: Verify PIN in lifter transferred to pos. #1
 on Trolley menu.
 mrj 9-9-97

verify "store Puck"
 ✓ mrj

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Move Compacted Drum to Storage Position 2					
40	Confirm that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed at OIU-12-103C. If a sub-menu is displayed, press the "MAIN MENU" button to return to the "LLW EXIT GLOVEBOX MAIN MENU".	Verify that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed.	✓		mg
41	Press the "WEIGH MENU" button from the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "WEIGH MENU" is displayed.	✓		mg
42	Confirm that an empty compacted drum is positioned at the "Compact Receipt" position, ready for transfer to a compacted drum storage position.	Verify that an empty compacted drum is positioned at the "Compact Receipt" position.	✓		mg
43	Attach a pre-printed bar code label to the compacted drum. OTPO02 NE-12-312	Verify that a bar code label has been affixed to the compacted drum.	✓		mg
44	Read the drum bar code label with the portable scanner NE-12-310 . The scanner LED indicator should briefly flash, indicating that a bar code label has been successfully read.	Verify that the bar code label has been successfully read.	✓		mg
45	The bar code label contents should be stored in LCU 102 register(s): N31:59-65 N43:50-52 "OTPO02"	Verify that the bar code label contents are correctly stored in the appropriate LCU 102 register.	✓		mg
46	Press the "LIFTER OPEN" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) until the Drum Lifter grab is fully open.	Verify that the "LIFTER OPEN" button has been pressed.	Pass ✓		mg
47	The Drum Lifter (DH-07-104) grab should be completely open.	Verify that the Drum Lifter grab is completely open.	✓		mg
48	The "LIFTER OPEN" indicator on the Hoist/Trolley/Lifter Pendant (PC-07-004) should be illuminated, indicating that the Drum Lifter grab is completely open.	Verify that the "LIFTER OPEN" indicator is illuminated.	✓		mg
49	Press the "LOWER" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) until the Hoist is fully lowered.	Verify that the "LOWER" button has been pressed.	✓		mg
50	The Drum Lifter (DH-07-104) should be fully lowered.	Verify that the Drum Lifter is fully lowered.	✓		mg
51	The Drum Lifter (DH-07-104) should rest on the compacted drum and should be positioned so that the Drum Lifter grab can be attached to the compacted drum.	Verify that the Drum Lifter grab is positioned on top of the compacted drum.	✓		mg
52	Attach the Drum Lifter (DH-07-104) grab to the compacted drum.	Verify that the Drum Lifter grab is closed, securely attached to the compacted drum.	✓		mg

#44 Portable Readers will not work at LLW exit LOC. Wand readers do not provide feedback

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
53	Press the "LIFTER CLOSE" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) to close the grab to secure the compacted drum.	Verify that the "LIFTER CLOSE" button has been pressed.	✓		mgj
54	Adjust the Drum Lifter as needed to so that the Drum Lifter is securely attached to the drum.	Verify that the Drum Lifter is securely attached to the drum.	✓		mgj
55	The "LIFTER CLOSED" indicator on the Hoist/Trolley/Lifter Pendant (PC-07-004) should be illuminated, indicating that the Drum Lifter grab is closed.	Verify that the "LIFTER CLOSED" indicator is illuminated.	✓		mgj
56	Press the "RAISE" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) until the Drum Lifter (DH-07-104) is fully raised.	Verify that the Hoist is fully raised.	✓		mgj
57	The Drum Lifter (DH-07-104) should rise with the compacted drum to its fully raised position.	Verify that the compacted drum remains secured by the Drum Lifter.	✓		mgj
58	The "HOIST RAISED LIMIT" indicator on the Hoist/Trolley/Lifter Pendant (PC-07-004) should be illuminated, indicating that the Hoist is fully raised.	Verify that the "HOIST RAISED LIMIT" indicator is illuminated.	✓		mgj
59	The "COMPACT DRUM WEIGHT" displayed on the "WEIGH MENU" at OIU-12-103C should rise, stabilize, and be equivalent to the weight of the compacted drum. 221 ² 220 kg scale weight	Verify that the "COMPACT DRUM WEIGHT" displayed is equivalent to the weight of the compacted drum.	✓	Fail	mgj 9-9-97 FAIL
60	Record the "COMPACT DRUM WEIGHT" displayed on the "WEIGH MENU" below: COMPACT DRUM WEIGHT: 221 kilograms	Verify that the "COMPACT DRUM WEIGHT" is recorded.	✓		mgj
61	Press the "MAIN MENU" button from the "WEIGH MENU" at OIU-12-103C to return to the "LLW EXIT GLOVEBOX MAIN MENU".	Verify that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed.	✓		mgj
62	Press the "HOIST MENU" button from the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C to display the "HOIST MENU".	Verify that the "HOIST MENU" is displayed.	✓		mgj
63	Press the "STORAGE POSITION 2" button from the "HOIST MENU" at OIU-12-103C.	Verify that the "STORAGE POSITION 2" button has been pressed.	✓		mgj
64	Press the "RIGHT" pushbutton on the Trolley/Hoist/Lifter Pendant (PC-07-004) as needed to energize trolley motor CR-07-101D/M1 forward so that the trolley SLOWLY travels to and is centered over the Compacted Drum Storage Position 2.	Verify that the Hoist Trolley is centered over the Compacted Drum Storage Position 2.	✓		mgj
65	The "TROLLEY 2" indicator on the Trolley/Hoist/Lifter Pendant (PC-07-004) should be illuminated.	Verify that the "TROLLEY 2" indicator is illuminated.	✓		mgj
66	Press the "LOWER" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) until the Hoist with the compacted drum is fully lowered.	Verify that the "LOWER" button has been pressed.	✓		mgj
67	The compacted drum should be positioned near the center of the Compacted Drum Storage Position 2.	Verify that the compacted drum is centered at Storage Position 2.	✓		mgj

H 59 1 kg difference between scale & div
TEST CASE 13031A-85-36 Rev. 0

#65A Press "Store Puck" mgj 9-9-97 36-6

✓ TE #367

LLW EXIT GLOVEBOX

mgj

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
68	The Drum Lifter (DH-07-104) should rest on the compacted drum and should be positioned so that the Drum Lifter grab can be removed from the compacted drum.	Verify that the Drum Lifter grab is positioned on top of the compacted drum.	✓		mrf
69	Press the "LIFTER OPEN" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) until the lifter grab releases the compacted drum.	Verify that the "LIFTER OPEN" button has been pressed.	✓		mrf
70	The Drum Lifter (DH-07-104) grab should be completely open.	Verify that the Drum Lifter grab is completely open.	✓		mrf
71	Adjust the Drum Lifter grab as needed to fully release the compacted drum.	Verify that the Drum Lifter grab has fully released the compacted drum.	✓		mrf
72	The "LIFTER OPEN" indicator on the Hoist/Trolley/Lifter Pendant (PC-07-004) should be illuminated, indicating that the Drum Lifter grab is open.	Verify that the "LIFTER OPEN" indicator is illuminated.	✓		mrf
73	Press the "RAISE" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) until the Drum Lifter (DH-07-104) is fully raised.	Verify that the Hoist is fully raised.	✓		mrf
74	The "HOIST RAISED LIMIT" indicator on the Hoist/Trolley/Lifter Pendant (PC-07-004) should be illuminated, indicating that the Hoist is fully raised.	Verify that the "HOIST RAISED LIMIT" indicator is illuminated.	✓		mrf
75	Press the "COMPACT RECEIPT" button from the "HOIST MENU" at OIU-12-103C.	Verify that the "COMPACT RECEIPT" button has been pressed.	✓		mrf
76	Press the "LEFT" pushbutton on the Trolley/Hoist/Lifter Pendant (PC-07-004) as needed to energize trolley motor CR-07-101D/M1 in reverse so that the trolley SLOWLY travels to, and is positioned at the Compact Receipt position.	Verify that the "LEFT" button has been pressed.	✓		mrf
77	The Hoist Trolley should be positioned at the Compact Receipt position.	Verify that the Hoist Trolley is at the Compact Receipt position.	✓		mrf
78	The "TROLLEY RECPT" indicator on the Trolley/Hoist/Lifter Pendant (PC-07-004) should be illuminated, indicating that the hoist is positioned at the Compact Receipt position.	Verify that the "TROLLEY RECPT" indicator is illuminated.	✓		mrf
79	Press the "RAISE" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) until the Drum Lifter (DH-07-104) is fully raised.	Verify that the Hoist is fully raised.	✓		mrf
80	The "HOIST RAISED LIMIT" indicator on the Hoist/Trolley/Lifter Pendant (PC-07-004) should be illuminated, indicating that the Hoist is fully raised.	Verify that the "HOIST RAISED LIMIT" indicator is illuminated.	✓		mrf
TEST CASE 13031A-85.36 COMPLETE					

TEST CASE 13031A-85.37 LOAD OUT COMPACTED DRUM FROM LLW EXIT GLOVEBOX ((GB-07-105) COMPACT RECEIPT POSITION	37-2
Load Out Compacted Drum from Compact Receipt Position	37-2

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.37 LOAD OUT COMPACTED DRUM FROM LLW EXIT GLOVEBOX ((GB-07-105) COMPACT RECEIPT POSITION					
Load Out Compacted Drum from Compact Receipt Position					
1	Confirm that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed at OIU-12-103C. If a sub-menu is displayed, press the "MAIN MENU" button to return to the "LLW EXIT GLOVEBOX MAIN MENU".	Verify that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed.	✓		mg
2	Press the "WEIGH MENU" button from the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "WEIGH MENU" is displayed.	✓		mg
3	Confirm that an empty compacted drum is positioned at the "Compact Receipt" position, ready for transfer to a compacted drum storage position.	Verify that an empty compacted drum is positioned at the "Compact Receipt" position.	✓		mg
4	Attach a pre-printed bar code label to the compacted drum.	Verify that a bar code label has been affixed to the compacted drum.	✓		mg
5	Read the compacted drum bar code label with the wand scanner NE-12-312. The scanner LED indicator should briefly flash, indicating that a bar code label has been successfully read.	Verify that the bar code label has been successfully read.	✓		mg
6	The bar code label contents should be stored in LCU 102 register(s): N43:50-56 N43:50-52 "OTPO99"	Verify that the bar code label contents are correctly stored in the appropriate LCU 102 register.	✓		mg
7	Press the "LIFTER OPEN" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) until the Drum Lifter grab is fully open.	Verify that the "LIFTER OPEN" button has been pressed.	✓		mg
8	The Drum Lifter (DH-07-104) grab should be completely open.	Verify that the Drum Lifter grab is completely open.	✓		mg
9	The "LIFTER OPEN" indicator on the Hoist/Trolley/Lifter Pendant (PC-07-004) should be illuminated, indicating that the Drum Lifter grab is completely open.	Verify that the "LIFTER OPEN" indicator is illuminated.	✓		mg
10	Press the "LOWER" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) until the Hoist is fully lowered.	Verify that the "LOWER" button has been pressed.	✓		mg
11	The Drum Lifter (DH-07-104) should be fully lowered.	Verify that the Drum Lifter is fully lowered.	✓		mg
12	The Drum Lifter (DH-07-104) should rest on the compacted drum and should be positioned so that the Drum Lifter grab can be attached to the compacted drum.	Verify that the Drum Lifter grab is positioned on top of the compacted drum.	✓		mg

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
13	Attach the Drum Lifter (DH-07-104) grab to the compacted drum.	Verify that the Drum Lifter grab is closed, securely attached to the compacted drum.	✓		mg
14	Press the "LIFTER CLOSE" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) to close the grab to secure the compacted drum.	Verify that the "LIFTER CLOSE" button has been pressed.	✓		mg
15	Adjust the Drum Lifter as needed so that the Drum Lifter is securely attached to the drum.	Verify that the Drum Lifter is securely attached to the drum.	✓		mg
16	The "LIFTER CLOSED" indicator on the Hoist/Trolley/Lifter Pendant (PC-07-004) should be illuminated, indicating that the Drum Lifter grab is closed.	Verify that the "LIFTER CLOSED" indicator is illuminated.	✓		mg
17	Press the "RAISE" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) until the Drum Lifter (DH-07-104) is fully raised.	Verify that the Hoist is fully raised.	✓		mg
18	The Drum Lifter (DH-07-104) should rise with the compacted drum to its fully raised position.	Verify that the compacted drum remains secured by the Drum Lifter.	✓		mg
19	The "HOIST RAISED LIMIT" indicator on the Hoist/Trolley/Lifter Pendant (PC-07-004) should be illuminated, indicating that the Hoist is fully raised.	Verify that the "HOIST RAISED LIMIT" indicator is illuminated.	✓		mg
20	The "COMPACT DRUM WEIGHT" displayed on the "WEIGH MENU" at OIU-12-103C should rise, stabilize, and be equivalent to the weight of the compacted drum. <i>Scale: 81.00 kg OIU: 82.8 kg</i>	Verify that the "COMPACT DRUM WEIGHT" displayed is equivalent to the weight of the compacted drum.		✓	mg
21	Record the "COMPACT DRUM WEIGHT" displayed on the "WEIGH MENU" below: COMPACT DRUM WEIGHT: <u>82</u> kilograms	Verify that the "COMPACT DRUM WEIGHT" is recorded.	✓		mg
22	Press the "MAIN MENU" button from the "WEIGH MENU" at OIU-12-103C to return to the "LLW EXIT GLOVEBOX MAIN MENU".	Verify that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed.	✓		mg
23	Press the "HOIST MENU" button from the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C to display the "HOIST MENU".	Verify that the "HOIST MENU" is displayed.	✓		mg
24	Read the "Compact Receipt" position bar code label with the wand scanner NE-12-312. The scanner LED indicator should briefly flash, indicating that a bar code label has been successfully read.	Verify that the bar code label has been successfully read.	✓		mg
25	The bar code label contents should be stored in LCU 102 register(s): <u>N43:50-52</u>	Verify that the bar code label contents are correctly stored in the appropriate LCU 102 register(s).	✓		mg

#24-23 - ID DISCREPANCY/MATCH cannot be generated from drum at compact receipt position - To be performed using drum at storage pos. #2.

* TE #367

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
26	Read the bar code label on the drum located at Drum Storage Position 1 with the wand scanner NE-12-312. The scanner LED indicator should briefly flash, indicating that a bar code label has been successfully read.	Verify that the bar code label has been successfully read.		✓	mfj
27	The bar code label contents should be stored in LCU 102 register(s): <u>N43:50-52 "OTP099"</u>	Verify that the bar code label contents are correctly stored in the appropriate LCU 102 register(s).	✓		mfj
28	Because the drum bar code label does not represent the drum currently located at the Compact Receipt position, the "ID DISCREPANCY" message should be displayed on the "HOIST MENU" at OIU-12-103C.	Verify that the "ID DISCREPANCY" message is displayed.			
29	Read the "Compact Receipt" position bar code label with the wand scanner NE-12-312. The scanner LED indicator should briefly flash, indicating that a bar code label has been successfully read.	Verify that the bar code label has been successfully read.			
30	The bar code label contents should be stored in LCU 102 register(s): <u>N/A</u>	Verify that the bar code label contents are correctly stored in the appropriate LCU 102 register(s).			
31	Read the bar code label on the drum located at the Compact Receipt position with the wand scanner NE-12-312. The scanner LED indicator should briefly flash, indicating that a bar code label has been successfully read.	Verify that the bar code label has been successfully read.			
32	The bar code label contents should be stored in LCU 102 register(s): <u>N43:50-52 "OTP099"</u>	Verify that the bar code label contents are correctly stored in the appropriate LCU 102 register(s).	✓		
33	Because the compacted drum bar code label does not represent the compacted drum currently located at the Compact Receipt position, the "ID MATCH" message should be displayed on the "HOIST MENU" at OIU-12-103C.	Verify that the "ID MATCH" message is displayed. <u>N/A</u> <u>mfj 8-15-97</u>			
34	Press the "MAIN MENU" button from the "HOIST MENU" at OIU-12-103C to return to the "LLW EXIT GLOVEBOX MAIN MENU".	Verify that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed.	✓		mfj
35	Press the "WEIGH MENU" button from the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C to display the "WEIGH MENU".	Verify that the "WEIGH MENU" is displayed.	✓		mfj
36	The "COMPACT DRUM WEIGHT" displayed on the "WEIGH MENU" at OIU-12-103C should stabilize.	Verify that the "COMPACT DRUM WEIGHT" displayed has stabilized.	✓		mfj
37	Press the "ADD TO CUMULATIVE" button on the "WEIGH MENU" at OIU-12-103C to add the weight of the currently suspended drum to the loadout drum.	Verify that the "ADD TO CUMULATIVE" button has been pressed.	✓		mfj

#26 - Wand readers provide no feedback

#26-33 steps really required, but tested during STP. mfj 9-9-97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
38	Because the compacted drum weight should not cause the cumulative weight of the loadout drum to exceed 453 kilograms (1000 pounds), a warning message indicating that the cumulative weight has been exceeded should not be displayed.	Verify that the "CUMULATIVE WEIGHT EXCEEDED" message is not displayed.	✓		mrt
39	Press the "LOAD OUT" button from the "HOIST MENU" at OIU-12-103C.	Verify that the "LOAD OUT" button has been pressed.	✓		mrt
40	Press the "RIGHT" pushbutton on the Trolley/Hoist/Lifter Pendant (PC-07-004) as needed to energize trolley motor CR-07-101D/M1 forward so that the trolley SLOWLY travels to and is positioned directly over the Entry/Exit Port (DO-07-106).	Verify that the Hoist Trolley is centered over the Entry/Exit Port.	✓		mrt
41	The "TROLLEY LOADOUT" indicator on the Trolley/Hoist/Lifter Pendant (PC-07-004) should be illuminated.	Verify that the "TROLLEY LOADOUT" indicator is illuminated.	✓		mrt
42	Press the "LOWER" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) until the Hoist with the compacted drum is fully lowered.	Verify that the "LOWER" button has been pressed.	✓		mrt
43	The compacted drum should be positioned near the center of the Compacted Drum Loadout Position.	Verify that the compacted drum is centered at the Loadout position.	✓		mrt
44	The Drum Lifter (DH-07-104) should rest on the compacted drum and should be positioned so that the Drum Lifter grab can be removed from the compacted drum.	Verify that the Drum Lifter grab is positioned on top of the compacted drum.	✓		mrt
45	Press the "LIFTER OPEN" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) to release the grab from the compacted drum.	Verify that the "LIFTER OPEN" button has been pressed.	✓		mrt
46	The Drum Lifter (DH-07-104) grab should be completely open.	Verify that the Drum Lifter grab is completely open.	✓		mrt
47	Adjust the Drum Lifter grab as needed to fully release the compacted drum.	Verify that the Drum Lifter grab has fully released the compacted drum.	✓		mrt
48	The "LIFTER OPEN" indicator on the Hoist/Trolley/Lifter Pendant (PC-07-004) should be illuminated, indicating that the Drum Lifter grab is open.	Verify that the "LIFTER OPEN" indicator is illuminated.	✓		mrt
49	Press the "RAISE" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) until the Drum Lifter (DH-07-104) is fully raised.	Verify that the Hoist is fully raised.	✓		mrt
50	The "HOIST RAISED LIMIT" indicator on the Hoist/Trolley/Lifter Pendant (PC-07-004) should be illuminated, indicating that the Hoist is fully raised.	Verify that the "HOIST RAISED LIMIT" indicator is illuminated.	✓		mrt
TEST CASE 13031A-85.37 COMPLETE					

#41A: Press "STORE PUCK"

✓ mrt WIA.

NOTE: TEST CASE #38, WHICH DEALT WITH STORAGE POSITION #3 HAS BEEN DELETED BECAUSE STORAGE POSITION #3 DOES NOT EXIST.

TEST CASE 13031A-85.39 LOAD OUT COMPACTED DRUM FROM LLW EXIT GLOVEBOX (GB-07-105) STORAGE POSITION 2	
Examine "Cumulative Weight Exceeded" Message	39-2
Replace Filled Loadout Drum with Empty Loadout Drum	39-2
Load Out Compacted Drum from Storage Position 2	39-5
	39-8

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
TEST CASE 13031A-85.39 LOAD OUT COMPACTED DRUM FROM LLW EXIT GLOVEBOX (GB-07-105) STORAGE POSITION 2					
Examine "Cumulative Weight Exceeded" Message					
WARNING: The weighted drums used in this test procedure could cause equipment damage or personal injury if handled incorrectly. Review this test procedure carefully and use extreme caution when handling weighted drums.					
1	Confirm that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed at OIU-12-103C. If a sub-menu is displayed, press the "MAIN MENU" button to return to the "LLW EXIT GLOVEBOX MAIN MENU".	Verify that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed.	✓		mfj
2	Press the "HOIST MENU" button from the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "HOIST MENU" is displayed.	✓		mfj
3	Press the "STORAGE POSITION 2" button from the "HOIST MENU" at OIU-12-103C.	Verify that the "STORAGE POSITION 2" button has been pressed.	✓		mfj
4	Press the "LEFT" pushbutton on the Trolley/Hoist/Lifter Pendant (PC-07-004) as needed to energize trolley motor CR-07-101D/M1 forward so that the trolley SLOWLY travels to and is centered over the Compacted Drum Storage Position 2.	Verify that the Hoist Trolley is centered over the Compacted Drum Storage Position 2.	✓		mfj
5	The "TROLLEY 2" indicator on the Trolley/Hoist/Lifter Pendant (PC-07-004) should be illuminated.	Verify that the "TROLLEY 2" indicator is illuminated.	✓		mfj
6	Press the "MAIN MENU" button from the "WEIGH MENU" at OIU-12-103C to return to the "LLW EXIT GLOVEBOX MAIN MENU".	Verify that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed.	✓		mfj
7	Press the "WEIGH MENU" button from the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C to display the "WEIGH MENU".	Verify that the "WEIGH MENU" is displayed.	✓		mfj
8	Press the "LIFTER OPEN" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) until the Drum Lifter grab is fully open.	Verify that the "LIFTER OPEN" button has been pressed.	✓		mfj
9	The Drum Lifter (DH-07-104) grab should be completely open.	Verify that the Drum Lifter grab is completely open.	✓		mfj
10	The "LIFTER OPEN" indicator on the Hoist/Trolley/Lifter Pendant (PC-07-004) should be illuminated, indicating that the Drum Lifter grab is completely open.	Verify that the "LIFTER OPEN" indicator is illuminated.	✓		mfj
11	Press the "LOWER" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) until the Hoist with the compacted drum is fully lowered.	Verify that the "LOWER" button has been pressed.	✓		mfj
12	The Drum Lifter (DH-07-104) should be fully lowered.	Verify that the Drum Lifter is fully lowered.	✓		mfj
13	The Drum Lifter (DH-07-104) should rest on the compacted drum and should be positioned so that the Drum Lifter grab can be attached to the compacted drum.	Verify that the Drum Lifter grab is positioned on top of the compacted drum.	✓		mfj

#10A Press Pick up PUCK mfj 9-9-97
TEST CASE 13031A-85.39 Rev. 0

#7 - See Reverse Side

#7: Puck "OT0002" stored at position 2. Barcode "OT0001" read using reader 316. - Scan "ZYLW20 Exit", then "OT0001", then "YEND" upon "YES". "ID Discrepancy" displayed on trolley screen. Sequence repeated using "OT0002". (Puck had retried during movement to pos. #2 - could not reach barcode on puck.) "ID Match" message is displayed.

ref 99-97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
14	Attach the Drum Lifter (DH-07-104) grab to the compacted drum.	Verify that the Drum Lifter grab is closed, securely attached to the compacted drum.	✓		mfj
15	Press the "LIFTER CLOSE" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) to close the grab to secure the compacted drum.	Verify that the "LIFTER CLOSE" button has been pressed.	✓		mfj
16	Adjust the Drum Lifter as needed so that the Drum Lifter is securely attached to the drum.	Verify that the Drum Lifter is securely attached to the drum.	✓		mfj
17	The "LIFTER CLOSED" indicator on the Hoist/Trolley/Lifter Pendant (PC-07-004) should be illuminated, indicating that the Drum Lifter grab is closed.	Verify that the "LIFTER CLOSED" indicator is illuminated.	✓		mfj
18	Press "RAISE" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) until the Drum Lifter (DH-07-104) is fully raised.	Verify that the Hoist is fully raised.	✓		mfj
19	The Drum Lifter (DH-07-104) should rise with the compacted drum to its fully raised position.	Verify that the compacted drum remains secured by the Drum Lifter.		✓	mfj
20	The "HOIST RAISED LIMIT" indicator on the Hoist/Trolley/Lifter Pendant (PC-07-004) should be illuminated, indicating that the Hoist is fully raised.	Verify that the "HOIST RAISED LIMIT" indicator is illuminated.	✓		mfj
21	The "COMPACT DRUM WEIGHT" displayed on the "WEIGH MENU" at OIU-12-103C should rise, stabilize, and be equivalent to the weight of the compacted drum. <i>Scale: 221.35 kg OIU: 222 kg</i>	Verify that the "COMPACT DRUM WEIGHT" displayed is equivalent to the weight of the compacted drum.		✓	mfj
22	Record the "COMPACT DRUM WEIGHT" displayed on the "WEIGH MENU" below: COMPACT DRUM WEIGHT: <u>222</u> kilograms	Verify that the "COMPACT DRUM WEIGHT" is recorded.	✓		mfj
23	Press the "MAIN MENU" button from the "WEIGH MENU" at OIU-12-103C to return to the "LLW EXIT GLOVEBOX MAIN MENU".	Verify that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed.	✓		mfj
24	Press the "HOIST MENU" button from the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C to display the "HOIST MENU".	Verify that the "HOIST MENU" is displayed.	✓		mfj
25	Read the "Storage Position 2" position bar code label with the wand scanner NE-12-312. The scanner LED indicator should briefly flash, indicating that a bar code label has been successfully read.	Verify that the bar code label has been successfully read.	✓		mfj
26	The bar code label contents should be stored in LCU 102 register(s):	Verify that the bar code label contents are correctly stored in the appropriate LCU 102 register(s).			N/A mfj 8-15-97

#25-29 - Drum Pin scanned prior to picking up puck - drum lifter would obscure bar code label mfj 8-15-97. See back of page 39-2 for bar code sequence description

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
27	Read the bar code label on the drum located at the Drum Storage Position #2 with the wand scanner NE-12-312. The scanner LED indicator should briefly flash, indicating that a bar code label has been successfully read.	Verify that the bar code label has been successfully read.	✓		mfj
28	The bar code label contents should be stored in LCU 102 register(s): <u>N43:62 - "OTPOB2"</u>	Verify that the bar code label contents are correctly stored in the appropriate LCU 102 register(s).	✓		mfj
29	Because the compacted drum bar code label does represent the compacted drum currently located at the Drum Storage Position #2, the "ID MATCH" message should be displayed on the "HOIST MENU" at OIU-12-103C.	Verify that the "ID MATCH" message is displayed.	✓		mfj
30	Press the "MAIN MENU" button from the "HOIST MENU" at OIU-12-103C to return to the "LLW EXIT GLOVEBOX MAIN MENU".	Verify that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed.	✓		mfj
31	Press the "WEIGH MENU" button from the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C to display the "WEIGH MENU".	Verify that the "WEIGH MENU" is displayed.	✓		mfj
32	The "COMPACT DRUM WEIGHT" displayed on the "WEIGH MENU" at OIU-12-103C should stabilize.	Verify that the "COMPACT DRUM WEIGHT" displayed has stabilized.	✓		mfj
33	Force the LCU 102 register(s) containing the cumulative weight in the loadout drum to indicate that the cumulative weight is 999 pounds. Record the register identifier and both the unforced (prior to being forced) and forced register status below: <u>Register</u> <u>Unforced Status</u> <u>Method of Confirmation</u> <u>N43:215</u> <u>1000</u> <u>N43:21</u> <u>N43:21</u> <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> <u>N43:215</u> <u>82</u> <u>N43:21</u> <u>N43:21</u>	Verify that the Loadout Drum Cumulative Weight register(s) is/are forced with a value of "999". Verify that the unforced and forced register status is recorded.	✓		mfj
34	Press the "ADD TO CUMULATIVE" button on the "WEIGH MENU" at OIU-12-103C to add the weight of the currently suspended drum to the loadout drum.	Verify that the "ADD TO CUMULATIVE" button has been pressed.	✓		mfj
35	The "CUMULATIVE WEIGHT EXCEEDED" message should be displayed on the "WEIGH MENU" at OIU-12-103C should be displayed, indicating that the cumulative weight limit for the loadout drum has been exceeded.	Verify that the "CUMULATIVE WEIGHT EXCEEDED" message is displayed.	✓		mfj

#33 - Reduced N43:215, weight limit to limit value/weight of drums in loadout
 This causes indicator to flash "weight limit exceeded" (later changed to
 "ADD TO CUMULATIVE NOT POSSIBLE")

#35 - See Reverse

#35. Because add to cumulative not possible,
store puck is pressed and puck is returned
to position #2.

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Replace Filled Loadout Drum with Empty Loadout Drum					
36	Press the "MAIN MENU" button from the "HOIST MENU" at OIU-12-103C to return to the "LLW EXIT GLOVEBOX MAIN MENU".	Verify that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed.	✓		mg
37	Press the "EXIT PORT MENU" button from the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C to display the "EXIT PORT MENU".	Verify that the "EXIT PORT MENU" is displayed.	✓		mg
38	Press the " CLOSE & RELID " button from the "EXIT PORT MENU" at OIU-12-103C to close the port. <i>"CLOSE PORT" mg 8-15-97</i>	Verify that the " CLOSE & RELID " button has been pressed. <i>PORT</i>	✓		mg
39	A "PORT CLOSING..." message should be displayed at OIU-12-103C while the port is closing.	Verify that a "PORT CLOSING..." message is displayed.	✓		mg
40	The PCS should in the order listed complete the following steps: <i>mg 8-15-97</i> <ol style="list-style-type: none"> 1. Rotate the port door. 2. Lower the port door closed. 3. Remove vacuum from the drum lid. 4. Extend the lid detachment cylinder. 5. Deflate the HVAC seal. 6. Lower the lift table to "Drum Centering" height. 7. Extend the port door locking cylinders. 8. Retract the lid detachment cylinder. 9. Retract the drum centering device. 	Verify that the PCS performs the steps listed.	✓		mg
41	After completing the port closing sequence steps, a " PORT CLOSE SEQ. COMPLETE - PORT CLOSED" message should be displayed on the "EXIT PORT MENU" at OIU-12-103C. <i>mg 8-15-97</i>	Verify that a " PORT CLOSE SEQ. COMPLETE - PORT CLOSED" message is displayed.	✓		mg
42	Return the LCU 102 register(s) containing the cumulative weight of the loadout drum to indicate the correct weight for the empty loadout drum. Record the register identifier and the register status below: <div style="display: flex; justify-content: space-between;"> <div><i>mg 9-9-97</i> Register N43:215 N43/24</div> <div><i>mg 9-9-97</i> Status 1000</div> <div><i>mg 9-9-97</i> Method of Confirmation N43/24 VISA</div> </div>	Verify that the Loadout Drum Cumulative Weight register(s) contain the correct empty loadout drum weight. Verify that the register identifier and status is recorded.	✓		mg mg
43	Press the "START DRUM EXIT" button from the "EXIT PORT MENU" at OIU-12-103C to begin the drum exit sequence.	Verify that the "START DRUM EXIT" button has been pressed.	✓		mg
44	A "DRUM EXIT IN PROGRESS..." message should be displayed at OIU-12-103C while the drum is being removed from the port.	Verify that a "DRUM EXIT IN PROGRESS..." message is displayed.	✓		mg

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail /	Witness (initial)
45	The PCS should in the order listed, complete the following steps: 1. Lower the Lift Table to its lowered position below AGV height. 2. Energize the Lift Table conveyor to move the drum to the AGV end of the lift table. 3. Raise the lift table to AGV height.	Verify that the PCS performs the steps listed in the order provided.	✓		mgj
46	After completing the drum exit sequence steps, a "DRUM EXIT COMPLETE" message should be displayed on the "EXIT PORT MENU" at OIU-12-103C.	Verify that a "DRUM EXIT COMPLETE" message is displayed.	✓		mgj
47	Read the LLW Exit Glovebox location bar code using the portable scanner NE-12-310. This bar code label should indicate to the PCS that a drum bar code label will be read next. The scanner LED indicator should briefly flash, indicating that a bar code label has been successfully read.	Verify that the bar code label has been successfully read.			
48	Read the bar code label from the 320 liter (85 gallon) overpack drum using the portable scanner NE-12-310. This should indicate to the PCS that the overpack drum will be closed out. The scanner LED indicator should briefly flash, indicating that a bar code label has been successfully read.	Verify that the bar code label has been successfully read. N/A mgj 8-15-97			
49	Remove all compacted drums from the 320 liter (85 gallon) loadout drum.	Verify that the loadout drum is empty.			
50	Position the 320 liter (85 gallon) loadout drum at the AGV end of the lift table.	Verify that the loadout drum has been placed at the AGV end of the lift table.			
51	Read the drum bar code label with the portable scanner NE-12-310. The scanner LED indicator should briefly flash, indicating that a bar code label has been successfully read.	Verify that the bar code label has been successfully read.			
52	The bar code label contents should be stored in LCU 102 register(s):	Verify that the bar code label contents are correctly stored in the appropriate LCU 102 register(s).			
53	Press the "START DRUM ENTRY" button from the "EXIT PORT MENU" at OIU-12-103C to begin the drum entry sequence.	Verify that the "START DRUM ENTRY" button has been pressed.	✓		mgj
54	A "DRUM ENTRY IN PROGRESS..." message should be displayed on the "EXIT PORT MENU" at OIU-12-103C while the drum is being positioned under the Entry/Exit Port (DO-07-106).	Verify that a "DRUM ENTRY IN PROGRESS..." message is displayed.	✓		mgj

#47-52. To be performed during ODP

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
55	The PCS should in the order listed, complete the following steps: 1. Lower the Lift Table to its lowered position below AGV height. 2. Energize the Lift Table conveyor to move the drum to the glovebox end of the lift table. 3. Raise the lift table to "Drum Centering" position.	Verify that the PCS performs the steps listed in the order provided.	✓		mg
56	After completing the drum entry sequence steps, a "DRUM ENTRY COMPLETE" message should be displayed on the "EXIT PORT MENU" at OIU-12-103C.	Verify that a "DRUM ENTRY COMPLETE" message is displayed.	✓		mg
57	Press the "OPEN" button from the "EXIT PORT MENU" at OIU-12-103C to open the Entry/Exit Port (DO-07-106).	Verify that the "OPEN" button has been pressed.	✓		mg
58	A "PORT OPENING..." message should be displayed on the "EXIT PORT MENU" at OIU-12-103C while the port is being opened.	Verify that a "PORT OPENING..." message is displayed.	✓		mg
59	The PCS should in the order listed, complete the following steps: 1. Extend the Drum Centering Device. 2. Raise the Lift Table. 3. Create vacuum to attach drum lid. 4. Inflate HVAC seal. 5. Unlock port door. 6. Raise the Lift Table. 7. Rotate the port door open.	Verify that the PCS performs the steps listed in the order provided.	✓		mg
60	After completing the port opening sequence steps, a "PORT OPEN" message should be displayed on the "EXIT PORT MENU" at OIU-12-103C.	Verify that a "PORT OPEN" message is displayed.	✓		mg

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Load Out Compacted Drum from Storage Position 2					
61	Press the "MAIN MENU" button to return to the "LLW EXIT GLOVEBOX MAIN MENU" and then press the "HOIST MENU" button from the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C to display the "HOIST MENU".	Verify that the "HOIST MENU" is displayed.	✓		mpj
62	Press the "MAIN MENU" button from the "HOIST MENU" at OIU-12-103C to return to the "LLW EXIT GLOVEBOX MAIN MENU".	Verify that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed.	✓		mpj
63	Press the "HOIST MENU" button from the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C to display the "HOIST MENU".	Verify that the "HOIST MENU" is displayed.	✓		mpj
64	Press the "LOAD OUT" button from the "HOIST MENU" at OIU-12-103C.	Verify that the "LOAD OUT" button has been pressed.	✓		mpj
65	Press the "RIGHT" pushbutton on the Trolley/Hoist/Lifter Pendant (PC-07-004) as needed to energize trolley motor CR-07-101D/M1 forward so that the trolley SLOWLY travels to and is positioned directly over the Entry/Exit Port (DO-07-106).	Verify that the Hoist Trolley is centered over the Entry/Exit Port.	✓		mpj
66	The "TROLLEY LOADOUT" indicator on the Trolley/Hoist/Lifter Pendant (PC-07-004) should be illuminated.	Verify that the "TROLLEY LOADOUT" indicator is illuminated.	✓		mpj
67	Press the "LOWER" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) until the Hoist with the compacted drum is fully lowered.	Verify that the "LOWER" button has been pressed.	✓		mpj
68	The compacted drum should be positioned near the center of the Compacted Drum Loadout Position.	Verify that the compacted drum is centered at the Loadout position.	✓		mpj
69	The Drum Lifter (DH-07-104) should rest on the compacted drum and should be positioned so that the Drum Lifter grab can be removed from the compacted drum.	Verify that the Drum Lifter grab is positioned on top of the compacted drum.	✓		mpj
70	Press the "LIFTER OPEN" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) to release the grab from the compacted drum.	Verify that the "LIFTER OPEN" button has been pressed.	✓		mpj
71	The Drum Lifter (DH-07-104) grab should be completely open.	Verify that the Drum Lifter grab is completely open.	✓		mpj
72	Adjust the Drum Lifter grab as needed to fully release the compacted drum.	Verify that the Drum Lifter grab has fully released the compacted drum.	✓		mpj
73	The "LIFTER OPEN" indicator on the Hoist/Trolley/Lifter Pendant (PC-07-004) should be illuminated, indicating that the Drum Lifter grab is open.	Verify that the "LIFTER OPEN" indicator is illuminated.	✓		mpj
74	Press the "RAISE" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) until the Drum Lifter (DH-07-104) is fully raised.	Verify that the Hoist is fully raised.	✓		mpj

#68A Press "Pickup Photo" mpj 7-9-87
 #63B Press Add to Cumulative mpj 9-9-87
 TEST CASE 13031A-85.39 Rev. 0
 #72- puck does not readily release from lifter. 39-8 See TE #219

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
75	The "HOIST RAISED LIMIT" indicator on the Hoist/Trolley/Lifter Pendant (PC-07-004) should be illuminated, indicating that the Hoist is fully raised.	Verify that the "HOIST RAISED LIMIT" indicator is illuminated.	✓		mpj
TEST CASE 13031A-85.39 COMPLETE					

TEST CASE 13031A-85.40 LOAD OUT COMPACTED DRUM FROM LLW EXIT GLOVEBOX (GB-07-105) STORAGE POSITION 1	40-2
Load Out Compacted Drum from Storage Position 1	40-2

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.40 LOAD OUT COMPACTED DRUM FROM LLW EXIT GLOVEBOX (GB-07-105) STORAGE POSITION 1					
Load Out Compacted Drum from Storage Position 1					
WARNING: The weighted drums used in this test procedure could cause equipment damage or personal injury if handled incorrectly. Review this test procedure carefully and use extreme caution when handling weighted drums.					
1	Confirm that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed at OIU-12-103C. If a sub-menu is displayed, press the "MAIN MENU" button to return to the "LLW EXIT GLOVEBOX MAIN MENU".	Verify that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed.	✓		mof
2	Press the "HOIST MENU" button from the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "HOIST MENU" is displayed.	✓		mof
3	Press the "STORAGE POSITION 1" button from the "HOIST MENU" at OIU-12-103C.	Verify that the "STORAGE POSITION 1" button has been pressed.	✓		mof
4	Press the "LEFT" pushbutton on the Trolley/Hoist/Lifter Pendant (PC-07-004) as needed to energize trolley motor CR-07-101D/M1 forward so that the trolley SLOWLY travels to and is centered over the Compacted Drum Storage Position 1.	Verify that the Hoist Trolley is centered over the Compacted Drum Storage Position 1.	✓		mof
5	The "TROLLEY 1" indicator on the Trolley/Hoist/Lifter Pendant (PC-07-004) should be illuminated.	Verify that the "TROLLEY 1" indicator is illuminated.	✓		mof
6	Press the "MAIN MENU" button from the "WEIGH MENU" at OIU-12-103C to return to the "LLW EXIT GLOVEBOX MAIN MENU".	Verify that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed.	✓		mof
7	Press the "WEIGH MENU" button from the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C to display the "WEIGH MENU".	Verify that the "WEIGH MENU" is displayed.	✓		mof
8	Press the "LIFTER OPEN" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) until the Drum Lifter grab is fully open.	Verify that the "LIFTER OPEN" button has been pressed.	✓		mof
9	The Drum Lifter (DH-07-104) grab should be completely open.	Verify that the Drum Lifter grab is completely open.	✓		mof
10	The "LIFTER OPEN" indicator on the Hoist/Trolley/Lifter Pendant (PC-07-004) should be illuminated, indicating that the Drum Lifter grab is completely open.	Verify that the "LIFTER OPEN" indicator is illuminated.	✓		mof
11	Press the "LOWER" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) until the Hoist with the compacted drum is fully lowered.	Verify that the "LOWER" button has been pressed.	✓		mof
12	The Drum Lifter (DH-07-104) should be fully lowered.	Verify that the Drum Lifter is fully lowered.	✓		mof
13	The Drum Lifter (DH-07-104) should rest on the compacted drum and should be positioned so that the Drum Lifter grab can be attached to the compacted drum.	Verify that the Drum Lifter grab is positioned on top of the compacted drum.	✓		mof

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
27	Read the bar code label on the drum located at the Drum Storage Position #1 with the wand scanner NE-12-312. The scanner LED indicator should briefly flash, indicating that a bar code label has been successfully read.	Verify that the bar code label has been successfully read.	✓		mef
28	The bar code label contents should be stored in LCU 102 register(s): "6TP001"	Verify that the bar code label contents are correctly stored in the appropriate LCU 102 register(s).	✓		mef
29	Because the compacted drum bar code label does represent the compacted drum currently located at the Drum Storage Position #1, the "ID MATCH" message should be displayed on the "HOIST MENU" at OIU-12-103C.	Verify that the "ID MATCH" message is displayed.	✓		mef
30	Press the "MAIN MENU" button from the "HOIST MENU" at OIU-12-103C to return to the "LLW EXIT GLOVEBOX MAIN MENU".	Verify that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed.	✓		mef
31	Press the "WEIGH MENU" button from the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C to display the "WEIGH MENU".	Verify that the "WEIGH MENU" is displayed.	✓		mef
32	The "COMPACT DRUM WEIGHT" displayed on the "WEIGH MENU" at OIU-12-103C should stabilize.	Verify that the "COMPACT DRUM WEIGHT" displayed has stabilized.	✓		mef
33	Press the "ADD TO CUMULATIVE" button on the "WEIGH MENU" at OIU-12-103C to add the weight of the currently suspended drum to the loadout drum.	Verify that the "ADD TO CUMULATIVE" button has been pressed.	✓		mef
34	Because the compacted drum weight should not cause the cumulative weight of the loadout drum to exceed 453 kilograms (1000 pounds), a warning message should not be displayed, indicating that the cumulative weight has been exceeded.	Verify that the "CUMULATIVE WEIGHT EXCEEDED" message is not displayed.	✓		mef
35	Press the "LOAD OUT" button from the "HOIST MENU" at OIU-12-103C.	Verify that the "LOAD OUT" button has been pressed.	✓		mef
36	Press the "RIGHT" pushbutton on the Trolley/Hoist/Lifter Pendant (PC-07-004) as needed to energize trolley motor CR-07-101D/M1 forward so that the trolley SLOWLY travels to and is positioned directly over the Entry/Exit Port (DO-07-106).	Verify that the Hoist Trolley is centered over the Entry/Exit Port.	✓		mef
37	The "TROLLEY LOADOUT" indicator on the Trolley/Hoist/Lifter Pendant (PC-07-004) should be illuminated.	Verify that the "TROLLEY LOADOUT" indicator is illuminated.	✓		mef
38	Press the "LOWER" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) until the Hoist with the compacted drum is fully lowered.	Verify that the "LOWER" button has been pressed.	✓		mef
39	The compacted drum should be positioned near the center of the Compacted Drum Loadout Position.	Verify that the compacted drum is centered at the Loadout position.	✓		mef

#37A Press "Store Puck" mef 9-9-97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
40	The Drum Lifter (DH-07-104) should rest on the compacted drum and should be positioned so that the Drum Lifter grab can be removed from the compacted drum.	Verify that the Drum Lifter grab is positioned on top of the compacted drum.	✓		mgf
41	Press the "LIFTER OPEN" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) to release the grab from the compacted drum.	Verify that the "LIFTER OPEN" button has been pressed.	✓		mgf
42	The Drum Lifter (DH-07-104) grab should be completely open.	Verify that the Drum Lifter grab is completely open.	✓		mgf
43	Adjust the Drum Lifter grab as needed to fully release the compacted drum.	Verify that the Drum Lifter grab has fully released the compacted drum.	✓		mgf
44	The "LIFTER OPEN" indicator on the Hoist/Trolley/Lifter Pendant (PC-07-004) should be illuminated, indicating that the Drum Lifter grab is open.	Verify that the "LIFTER OPEN" indicator is illuminated.	✓		mgf
45	Press the "RAISE" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) until the Drum Lifter (DH-07-104) is fully raised.	Verify that the Hoist is fully raised.	✓		mgf
46	The "HOIST RAISED LIMIT" indicator on the Hoist/Trolley/Lifter Pendant (PC-07-004) should be illuminated, indicating that the Hoist is fully raised.	Verify that the "HOIST RAISED LIMIT" indicator is illuminated.	✓		mgf
TEST CASE 13031A-85.40 COMPLETE					

#27-#46 Test steps completed 8-13-97 early in morning but not signed off until 9-9-97.

TEST CASE 13041A-85.41 REMOVE 320 LITER (85 GALLON) DRUM FROM LLW EXIT GLOVEBOX ENTRY/EXIT PORT (DO-07-106)	41-2
Examine Lift Table Lower, Raise, Forward, and Reverse Interlocks	41-4
Examine Door Rotated (Closed) Interlock	41-5
Examine The HVAC Seal Interlock	41-6
Examine Port Door Lowered (Closed) Interlock	41-7
Examine "Port Failed to Close and Lock" Alarm	41-8
Examine The Drum Centering Device Not Retracted Interlock	41-9
Close 320 Liter (85 Gallon) Entry/Exit Port	41-10
Examine "Abnormal Position" Alarm	41-11
Examine "Port Closed and Locked" Interlock	41-12
Examine "Lift Table Failed to Lower" Alarm	41-15
Examine "Lift Table Conveyor Reverse Failed" Alarm	41-16

8-15-97 3:56 PM - Performed out of order due to overtemp hpu.

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13041A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
TEST CASE 13041A-85.41 REMOVE 320 LITER (85 GALLON) DRUM FROM LLW EXIT GLOVEBOX ENTRY/EXIT PORT (DO-07-106)					
CAUTION: The following sequence of test procedure steps involve automatic port door closing, controlled by LCU 102 (Referred to as the "PCS" in this test procedure). These test procedure steps should be carefully reviewed to permit rapid verification of test conditions during the automatic port opening sequence.					
1	Confirm that the Entry/Exit Port (DO-07-106) door is rotated open.	Verify that the Port door is rotated open.	✓		mg
2	Confirm that a drum is mated to the Entry/Exit Port (DO-07-106).	Verify that a drum is mated to the port.	✓		mg
3	Confirm that the Lift Table (LT-09-202C) is in "Normal" mode with the M/O/N switch (09-HS-237A) turned to the "N" position to support lift table control by the PCS. The M/O/N switch is located on the Lift Table Local Control Pedestal (PC-09-202C).	Verify that the lift table is in "Normal" mode.	✓		mg
4	The "Drum Port Rotated" position switch (07-ZSO-760 should be activated, indicating that the port door is rotated open.	Verify that the "Drum Port Rotated" position switch is activated.	✓		mg
5	Confirm that no items are present that would prevent the Entry/Exit Port (DO-07-106) from properly closing.	Verify that no items are present that would prevent the port from properly closing.	✓		mg
6	Confirm that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed at OIU-12-103C. If a sub-menu is displayed, press the "MAIN MENU" button to return to the "LLW EXIT GLOVEBOX MAIN MENU".	Verify that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed.	✓		mg
7	Press the "EXIT PORT MENU" button from the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "EXIT PORT MENU" is displayed.	✓		mg
8	Force LCU 102 register ZSC760 not activated to indicate that the Entry/Exit Port (DO-07-106) door is not rotated closed. Record the register status below. <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZSC760 <u> 0 </u> I:24/14	Verify that register ZSC760 is forced not activated. Verify that the register status is recorded.	✓		mg
9	Force LCU 102 register ZS761A not activated to indicate that the Entry/Exit Port (DO-07-106) door is not lowered closed. Record the forced register status below. <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS761A <u> 0 </u> I:24/11	Verify that register ZS761A is forced not activated. Verify that the register status is recorded.	✓		mg

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13041A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
10	Force LCU 102 registers ZSC765A and ZCS765B not activated to indicate that the Entry/Exit Port (DO-07-106) door is not locked. Record the register status below: <div> <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> </div> ZSC765A <u> φ </u> I:24/17 _____ ZSC765B <u> X </u> I:25/00 _____	Verify that registers ZSC765A and ZSC765B are forced not activated. Verify that the register status is recorded.	✓ ✓		mg mg
11	Force LCU 102 registers ZSO767A and ZSO767B not activated to simulate the "Drum Centering Deice not Retracted" condition for Entry/Exit Port (DO-07-106). Record the forced register status below: <div> <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> </div> ZSO767A <u> φ </u> I:32/04 _____ ZSO767B <u> φ </u> I:32/05 _____	Verify that registers ZSO767A and ZSO767B are forced not activated. Verify that the register status is recorded.	✓ ✓		mg mg

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13041A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Lift Table Lower, Raise, Forward, and Reverse Interlocks					
NOTE: Because the port is not closed and locked, the "LOWER" "RAISE", "FORWARD", or "REVERSE" pushbuttons at the Lift Table local control pedestal should be disabled and pressing these buttons should have no effect on the Lift Table.					
12	Press the "LOWER" pushbutton at the Lift Table local control pedestal (PC-09-202C).	Verify that pressing the "LOWER" pushbutton has no effect on the Lift Table.	✓		mg
13	Press the "RAISE" pushbutton at the Lift Table local control pedestal (PC-09-202C).	Verify that pressing the "RAISE" pushbutton has no effect on the Lift Table.	✓		mg
14	Press the "FORWARD" pushbutton at the Lift Table local control pedestal (PC-09-202C).	Verify that pressing the "FORWARD" pushbutton has no effect on the Lift Table.	✓		mg
15	Press the "REVERSE" pushbutton at the Lift Table local control pedestal (PC-09-202C).	Verify that pressing the "REVERSE" pushbutton has no effect on the Lift Table.	✓		mg

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13041A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Door Rotated (Closed) Interlock					
16	Press the "CLOSE PORT" button from the "EXIT PORT MENU" at OIU-12-103C.	Verify that the "CLOSE PORT" button has been pressed.	✓		mrf
17	The "PORT CLOSING..." message should be displayed on the "EXIT PORT MENU" at OIU-12-103C.	Verify that the "PORT CLOSING..." message is displayed.	✓		mrf
18	The PCS should pulse energize solenoid valve 07-FEV-765B/C (Close) to smoothly rotate the Entry/Exit Port (DO-07-106) door closed.	Verify that the port door rotates closed.	✓		mrf
19	The "Drum Port Down" position switch functions as an interlock for the Entry/Exit Port. Because this switch is forced not activated, the Entry/Exit Port (DO-07-106) door should not lower closed. Wait thirty (30) seconds.	Verify that the port door does not lower closed during the waiting period.	✓		mrf
20	Unforce LCU 102 register ZSC760. Record the unforced register status below: Unforced ZSC760 Status: <u>1</u>	Verify that register ZSC760 is unforced.	✓		mrf
21	Because the port door is rotated closed, the "Drum Port Down" position switch (07-ZSC-760) should be activated, indicating that the door is rotated closed.	Verify that position switch 07-ZSC-760 is activated.	✓		mrf
22	The PCS should pulse energize solenoid valve 07-FEV-761F/C (Close) to lower the Entry/Exit Port (DO-07-106) door closed.	Verify that the port door lowers closed.	✓		mrf
23	The PCS should de-energize vacuum generation solenoid valve 07-FEV-761D/V to turn off the vacuum generator.	Verify that the vacuum generator is turned off.	✓		mrf
24	The PCS should de-energize vacuum isolation solenoid valve (07-FEV-761C) to remove vacuum from the drum lid.	Verify that the vacuum isolation valve (07-FEV-761C) is open.	N/A	mrf	8-15-97
25	The PCS should then energize solenoid valve 07-FEV-761E/E (Extend) to extend the drum lid detachment cylinder for Entry/Exit Port DO-07-106.	Verify that the drum lid detachment cylinder is extended.		✓	mrf
26	The drum lid should release from the port door.	Verify that the drum lid does not adhere to the port door.		✓	mrf

#19 "Port F-106) Failed to Close and Lock" alarm generated
 #25, 26 could not verify.
 #25, 26 Verified 9-10-97. mrf Retest Satisfactory

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13041A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine The HVAC Seal Interlock					
27	The PCS should de-energize solenoid valve 07-FEV-305 (Deflate) to deflate the HVAC seal for Drum Entry/Exit Port DO-07-106. The HVAC seal should deflate. Pressure switch 07-PS-768, because of its forced status, should be activated, indicating that the HVAC seal remains inflated.	Verify that the HVAC seal deflates. <i>N/A mfg 11/8/97</i>		✓	<i>mfg</i>
28	The HVAC seal pressure switch 07-PS-768 and the Drum Centering Device position switches 07-ZSO-767A and 07-ZSO-767B function as interlocks for the Entry/Exit Port drum exit sequence. The drum exit sequence should not proceed if the HVAC seal pressure switch is activated, indicating that the HVAC seal is inflated. Wait thirty (30) seconds.	Verify that a "PORT DO-07-106 CLOSED AND LOCKED" message is NOT displayed during the waiting period.	✓		<i>mfg</i>
29	Unforce LCU 102 register PS768. Record the unforced register status below: Unforced PS768 register status: <u>1</u>	Verify that register PS768 is unforced.	✓		<i>mfg</i>
30	Because the HVAC seal is deflated, the "HVAC Control Seal Deflated" pressure switch (07-PS-768) should not be activated, indicating that the HVAC seal is deflated.	Verify that the "HVAC Control Seal Deflated" pressure switch is not activated.		✓	<i>mfg</i>

#27 All Entry/Exit ports standardized. HVAC seal does not deflate until after port door is lowered closed and is locked. *mfg 9-9-97*

#28-30 - Test procedure error. PS768 not previously forced. To remedy test proc. error, PS768 I:32/06 forced not activated. "Port (106) HVAC pressure seal lost" alarm is promptly generated. HVAC seal remains inflated. *mfg 9-9-97*

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13041A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine Port Door Lowered (Closed) Interlock					
31	The Lift Table should not lower to "Drum Centering" height until the "Drum Door Closed" position switch (07-ZS-761A) is activated. Wait thirty (30) seconds.	Verify that the Lift Table does not lower to "Drum Centering" height during the waiting period.		✓	mg
32	Unforce the register ZS761A. Record the unforced register status below: Unforced ZS761A Status: <u>1</u>	Verify that register ZS761A is unforced.	✓		mg
33	Because the port door should have been lowered closed, the "Drum Door Closed" position switch (07-ZS-761A) should be activated, indicating that the port door is lowered closed.	Verify that position switch 07-ZS-761A is activated.	✓		mg

~~#31 Lift table lowers to centering height as soon as switch ZS761A is activated during close sequence.~~ *only after switch ZS761A is activated* *mg 9-10-97*

*#31- Lift table does not depend on ZS761A as an interlock prior to lowering to centering height. Instead ZS761B must be activated prior to lift table lowering. Code verified for all Entry/Exit ports; 101, 106, 202, 203, 301, that this interlock is uniformly implemented so that port door must reach door in position before lift table will begin lowering to centering height. *mg 9-10-97*

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13041A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine "Port Failed to Close and Lock" Alarm					
34	The PCS should energize the Lift Table motor (LT-09-202C/M1) to lower the Lift Table to "Drum Centering" height.	Verify that the Lift Table lowers to "Drum Centering" height.	✓		mfj
35	The PCS should energize solenoid valve 07-FEV-761A/L (Lock) to extend the port door locking cylinders.	Verify that the cylinders fully extend to lock the port door.	✓		mfj
36	The door locked position switches (07-ZSC-765A and 07-ZSC-765B) function as an interlock for the Entry/Exit Port. The drum exit sequence should stop and a "Port (106) Failed to Close and Lock" alarm should be generated if the door locked position switches are not activated. Wait thirty (30) seconds.	Verify that the drum lid detachment cylinder does not retract during the waiting period.	✓		mfj
37	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Port (106) Failed to Close and Lock" alarm.	Verify that the alarm has been acknowledged.	✓		mfj
38	Unforce LCU 102 register ZSC765B. Record the unforced register status below: Unforced ZSC765B Status: <u>1</u>	Verify that register ZSC765B is unforced.	✓		el
39	Position switch 07-ZS-765B should be activated, indicating that the port door is locked.	Verify that position switch 07-ZS-765B is activated.	✓		el
40	Because register ZSC765A remains forced not activated, indicating that the port is not fully locked, the "Port (106) Failed to Close and Lock" alarm should not clear.	Verify that the alarm is not cleared.	✓		el
41	Unforce LCU 102 register ZSC765A. Record the unforced register status below: Unforced ZSC765A Status: <u>1</u>	Verify that register ZSC765A is unforced.	✓		el
42	Because position switch 07-ZSC-765A should be activated, The "Port (106) Failed to Close and Lock" alarm should clear.	Verify that the alarm is cleared.	✓		el
43	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "EXIT PORT MENU" at OIU-12-103C.	Verify that the "EXIT PORT MENU" is displayed.	✓		el
44	The PCS should de-energize the port close (lower) solenoid valve 07-FEV-761F/C (Close)	Verify that solenoid valve 07-FEV-761F/C is de-energized.	✓		el
45	The PCS should pulse energize solenoid valve 07-FEV-761E/R (Retract) to retract the drum lid detachment cylinder.	Verify that the drum lid detachment cylinder is retracted.	✓		el

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13041A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine The Drum Centering Device Not Retracted Interlock					
46	The PCS should pulse-energize solenoid valve 07-FEV-304 (Retract) to retract the drum centering device for Drum Entry/Exit Port DO-07-106.	Verify that the drum centering device retracts.	✓		DL
47	The "Drum Centering Device Retracted" position switches (07-ZSO-767A and 07-ZSO-767B), function as an interlock for the Entry/Exit Port. Because these switches are forced not activated, the drum exit sequence should not proceed. <i>VERIFY ALARM "CONTINUING DEVICES ABNORMAL POS" WAIT 30 SECONDS.</i>	Verify that a "PORT DO-07-106 CLOSED AND LOCKED" message is NOT displayed during the waiting period. <i>VERIFY ALARM DISPLAYED.</i>	✓		DL
48	Unforce LCU 102 register ZSO767B. Record the unforced register status below: Unforced ZSO767B Status: <u>1</u>	Verify that register ZSO767B is unforced.	✓		DL
49	Position switch 07-ZSO-767B should be activated, indicating that the drum centering device for Entry/Exit Port DO-07-106 is retracted.	Verify that position switch 07-ZSO-767B is activated.	✓		DL
50	Because register ZSO767A remains forced not activated, indicating that the centering device is not fully retracted, the "PORT CLOSED" message should not be displayed on the "EXIT PORT MENU" at OIU-12-103C. <i>ALARM STILL DISPLAYED WAIT 30 SECONDS.</i>	Verify that the "PORT CLOSED" message is NOT displayed during the waiting period. <i>VERIFY ALARM STILL DISPLAYED</i>	✓		DL
51	Unforce LCU 102 register ZSO767A. Record the unforced register status below: Unforced ZSO767A Status: <u>1</u>	Verify that register ZSO767A is unforced.	✓		DL
52	Position switch 07-ZSO-767A should be activated, indicating that the drum centering device for Entry/Exit Port DO-07-106 is retracted.	Verify that position switch 07-ZSO-767A is activated.	✓		DL
53	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "EXIT PORT MENU" at OIU-12-103C.	Verify that the "EXIT PORT MENU" is displayed.	✓		DL

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13041A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
54	<p>Close 320 Liter (85 Gallon) Entry/Exit Port</p> <p>Because all Entry/Exit Port closing interlocks have been satisfied, the "PORT CLOSED" message should be displayed on the "EXIT PORT MENU" at OIU-12-103C.</p>	<p>Verify that a "PORT CLOSED" status message is displayed.</p>	✓

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13041A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Examine "Abnormal Position" Alarm					
55	Force LCU 102 registers ZSC765A and ZSC765B not activated to simulate the "Drum Port Not Closed and Locked" condition for Entry/Exit Port DO-07-106. Record the forced register status below. <div> <div>Register</div> <div>Forced Status</div> <div>Method of Confirmation</div> </div> ZSC765A <u>0</u> I:24/17 _____ ZSC765B <u>0</u> I:25/00 _____ A "Port (106) Close and Lock Not Verified" alarm should be generated if the "Drum Port Closed and Locked" position switches indicate that the port door is unlocked after the drum exit sequence has been completed.	Verify that registers ZSC765A and ZSC765B are forced not activated. Verify that the register status is recorded.	✓		shl
56	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Port (106) Close and Lock Not Verified" alarm.	Verify that the alarm has been acknowledged.	✓		shl
57	Unforce LCU 102 register ZSC765A. Record the unforced register status below: Unforced ZSC765A Status: <u>1</u>	Verify that register ZSC765A is unforced.	✓		shl
58	Position switch 07-ZSC-765A should be activated, indicating that the Entry/Exit Port (DO-07-106) door is locked.	Verify that position switch 07-ZSC-765A is activated.	✓		shl
59	Because register ZSC765B remains forced not activated, indicating that the port door is not-locked, the "Port (106) Close and Lock Not Verified" alarm should not clear.	Verify that the alarm is not cleared.	✓		shl
60	Unforce LCU 102 register ZSC765B. Record the unforced register status below: Unforced ZSC765B Status: <u>1</u>	Verify that register ZSC765B is unforced.	✓		shl
61	Position switch 07-ZSC-765B should be activated, indicating that the Entry/Exit Port (DO-07-106) door is locked.	Verify that position switch 07-ZSC-765B is activated.	✓		shl
62	Because position switches 07-ZSC-765A and 07-ZSC-765B are activated, indicating that the port door is locked, the "Port (106) Close and Lock Not Verified" alarm should clear.	Verify that the alarm is cleared.	✓		shl
63	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "EXIT PORT MENU" at OIU-12-103C.	Verify that the "EXIT PORT MENU" is displayed.	✓		shl

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Step #	ACCEPTANCE TEST PROCEDURE STEPS (13041A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine "Port Closed and Locked" Interlock					
64	Force LCU 102 register ZS761A not activated to simulate the "Port Door Not Lowered Closed" condition for Entry/Exit Port DO-07-106. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS761A 0 I:24/11	Verify that register ZS761A is forced not activated. Verify that the register status is recorded.	✓		el
65	Press the "START DRUM EXIT" button from the "EXIT PORT MENU" at OIU-12-103C. <i>NOT Pressed</i>	Verify that the "START DRUM EXIT" button has been pressed.	✓		el
66	The "DRUM EXIT IN PROGRESS..." message should be displayed on the "EXIT PORT MENU" at OIU-12-103C. <i>NOT displayed</i>	Verify that the "DRUM EXIT IN PROGRESS..." message is displayed.	✓		el
67	The "Drum Door Closed" position switch (07-ZS-761A) functions as an interlock for the drum exit sequence. The Lift Table should not lower to its fully lowered position until this switch is activated. Wait thirty (30) seconds.	Verify that the Lift Table does not lower during the waiting period.	✓		el
68	Force LCU 102 registers ZSC765A and ZCS765B not activated to simulate the "Drum Port Not Closed and Locked" condition for Entry/Exit Port DO-07-106. Record the forced register status below. <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZSC765A 0 I:24/17 ZSC765B 0 I:25/00 A "Port (106) Close and Lock Not Verified" alarm should be generated if the "Drum Port Closed and Locked" position switches indicate that the port door is unlocked after the drum exit sequence has been completed.	Verify that registers ZSC765A and ZSC765B are forced not activated. Verify that the register status is recorded.	✓		el
69	Unforce LCU 102 register ZS761A. Record the unforced register status below: Unforced ZS761A Status: <u>1</u>	Verify that register ZS761A is unforced.	✓		el
70	The "Drum Door Closed" position switch (07-ZS-761A) should be activated, indicating that the port is closed.	Verify that the "Drum Door Closed" position switch is activated.	✓		el

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13041A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
71	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Port (106) Close and Lock Not Verified" alarm.	Verify that the alarm has been acknowledged.	✓		RL
72	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "EXIT PORT MENU" at OIU-12-103C.	Verify that the "EXIT PORT MENU" is displayed.	✓		RL
73	Press the "START DRUM EXIT" button from the "EXIT PORT MENU" at OIU-12-103C.	Verify that the "START DRUM EXIT" button has been pressed.	✓		RL
74	The Lift Table should not lower to its fully lowered position until the "Port Closed and Locked" position switches (07-ZSC-765A and 07-ZSC-765B) are activated. Wait thirty (30) seconds.	Verify that the Lift Table does not lower during the waiting period.	✓		RL
75	Unforce LCU 102 register ZSC765A. Record the unforced register status below: Unforced ZSC765A Status: <u> / </u>	Verify that register ZSC765A is unforced.	✓		RL
76	The "Port Closed and Locked" Position switch (07-ZSC-765A) should be activated, indicating that the Entry/Exit Port (DO-07-106) door is locked.	Verify that the "Port Closed and Locked" position switch is activated.	✓		RL
77	Press the "START DRUM EXIT" button from the "EXIT PORT MENU" at OIU-12-103C.	Verify that the "START DRUM EXIT" button has been pressed.	✓		RL
78	Because register ZSC765B remains forced not activated, indicating that the port door is not locked, the lift table should not lower. Wait thirty (30) seconds.	Verify that the Lift Table does not lower during the waiting period.	✓		RL
79	Set the timer period for the "Lift Table Failed to Lower" alarm to one second. Record the timer period below: <u>Register</u> <u>Initial Status</u> <u>Final Status</u> T4:128 Preset <u>90</u> 1 second <u>1</u>	Verify that the preset status is set to 1 second.	✓		RL
80	Press the "ALARMS" button from the "EXIT PORT MENU" at OIU-12-103C.	Verify that the "ALARMS" button has been pressed.	✓		RL
81	The "LOCAL ALARMS" screen should be displayed.	Verify that the "LOCAL ALARMS" screen is displayed.	✓		RL

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13041A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
82	Unforce LCU 102 register ZSC765B. Record the unforced register status below: Unforced ZSC765B Status: <u> / </u>	Verify that register ZSC765B is unforced.	✓		ll
83	The "Port Closed and Locked" Position switch (07-ZSC-765B) should be activated, indicating that the Entry/Exit Port (DO-07-106) door is locked.	Verify that the "Port Closed and Locked" position switch is activated.	✓		ll
84	Because position switches 07-ZSC-765A and 07-ZSC-765B are activated, indicating that the port door is locked, the "Port (106) Close and Lock Not Verified" alarm should clear.	Verify that the alarm is cleared.	✓		ll
85	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "EXIT PORT MENU" at OIU-12-103C.	Verify that the "EXIT PORT MENU" is displayed.	✓		ll

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13041A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine "Lift Table Failed to Lower" Alarm					
86	Because the Lift Table should not complete the lower sequence within one second the "Lift Table (202C) Failed to Lower" alarm should be generated. <i>PRESS "START DRUM EXIT" 9-10-97</i>	Verify that a flashing "SEQUENCE FAILED" message is displayed at OIU-12-103C.	✓		<i>el</i>
87	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Lift Table (202C) Failed to Lower" alarm.	Verify that the alarm has been acknowledged.	✓		<i>el</i>
88	Because the Lift Table should continue to lower until it reaches AGV height, the "Lift Table (202A) Failed to Lower" alarm should clear. <i>Lowered 9-10-97</i>	Verify that the alarm has cleared.	✓		<i>el</i>
89	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "EXIT PORT MENU" at OIU-12-103C.	Verify that the "EXIT PORT MENU" is displayed.	✓		<i>el</i>
90	Restore the timer period for the "Lift Table (202A) Failed to Lower" alarm to the initial value recorded above. Record the timer status below: <u>Register</u> <u>Initial Status</u> <u>Final Status</u> T4:128 Preset 1 1 second <i>9-10-97</i>	Verify that the preset initial status is restored.	✓		<i>el</i>
91	The PCS should energize the Lift Table motor (LT-202C/M1) to lower the Lift Table to lowered height.	Verify that the Lift Table lowers to its lowered height.			<i>N/A</i> <i>RM 9/10/97</i>

- #90 Drum at AGV end switch accidentally tripped, lift table rolls conveyors stop; drum remains under port and lift table begins to raise. while resetting table, table attempts to complete exit sequence by raising.
1. need to administratively clear area before any exit sequence is started.
 2. Need to modify exit sequence to stop after error/alarm.

#91 see step 88 - lift table already lowered, step is extraneous.
9-10-97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13041A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Examine "Lift Table Conveyor Reverse Failed" Alarm					
92	After drum has moved approximately one foot, open the 480 volt lift table breaker to remove power from the lift table roller conveyor.	Verify that the drum is not positioned at the AGV end of the Lift Table.	✓		el
93	The roller conveyor should stop.	Verify that the lift table roller conveyor has stopped and remains stopped.	✓		el
94	The "DRUM AT AGV END" status indicator (09-ZL-237A) at the Lift Table Local Control Pedestal (PC-07-202C) should not be illuminated, indicating that the drum is not at the AGV end of the Lift Table.	Verify that the "DRUM AT AGV END" status indicator is not illuminated.	✓		el
95	Because the Drum Exit sequence has not been successfully completed, the "DRUM EXIT COMPLETE" message should not be displayed on the "EXIT PORT MENU" at OIU-12-103C. Wait thirty (30) seconds.	Verify that the "DRUM EXIT COMPLETE" message is not displayed during the waiting period.	✓		el
96	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Lift Table (202C) Conveyor Reverse Failed" alarm.	Verify that the alarm has been acknowledged.	✓		el
97	Close the 480 volt Lift Table breaker to restore power to the lift table. The roller conveyor should not start up again after power is restored.	Verify that the Lift Table breaker is closed.	✓		el
98	Manually activate (e.g., "Break the beam") the "Drum at End of Conveyor" position switch (09-ZS-233E) to simulate the 85 gallon drum at the AGV end of the Lift Table. This switch should remain activated.	Verify that the "Drum at End of Conveyor" position switch is activated.	✓		el
99	The "DRUM AT AGV END" status indicator (09-ZL-237A) at the Lift Table Local Control Pedestal (PC-07-202C) should be illuminated, indicating that the drum is at the AGV end of the Lift Table.	Verify that the "DRUM AT AGV END" status indicator (09-ZL-237A) is illuminated.	✓		el
100	Because the drum is positioned at the AGV end of the Lift Table (simulated), the "Lift Table (202C) Conveyor Reverse Failed" alarm should clear.	Verify that the alarm has cleared.	✓		el
101	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "EXIT PORT MENU" at OIU-12-103C.	Verify that the "EXIT PORT-MENU" is displayed.	✓		el
102	Because the Drum Exit sequence is successfully completed, the "DRUM EXIT COMPLETE" message should be displayed on the "EXIT PORT MENU" at OIU-12-103C.	Verify that the "DRUM EXIT COMPLETE" message is displayed.	✓		el
103	Press the "DRUM READY FOR PICKUP" button on the "EXIT PORT MENU" at OIU-12-103C to indicate that the Drum is ready for pickup by the Automated Guided Vehicle (AGV).	Verify that the "DRUM READY FOR PICKUP" button has been pressed.	✓		el

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13041A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
104	Remove the 320 liter (85 gallon) drum from the Lift Table.	Verify that the drum has been removed from the Lift Table.	✓
TEST CASE 13041A-85.41 COMPLETE					

TEST CASE 13031A-85.42 EXAMINE LLW ENTRY GLOVEBOX (GB-07-101) EMERGENCY STOP OPERATION	42-2
Examine LLW Entry Glovebox Automatic Mode Local Emergency Stop	42-2
Examine LLW Entry Glovebox Maintenance Mode Local Emergency Stop	42-6
Examine LLW Entry Glovebox Automatic Mode Emergency Stop	42-10
Examine LLW Entry Glovebox Maintenance Mode Emergency Stop	42-13

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.42 EXAMINE LLW ENTRY GLOVEBOX (GB-07-101) EMERGENCY STOP OPERATION					
Examine LLW Entry Glovebox Automatic Mode Local Emergency Stop					
1	NOTE: The following test case steps are "generic steps" that will be performed for each applicable local emergency stop.	Verify that the note has been reviewed.	✓		N/N
2	NOTE: Emergency Stop is abbreviated as E-Stop in this test procedure.	Verify that the test procedure conventions have been reviewed.	✓		N/N
3	NOTE: To conclusively document test results, video recording must be used when this section of testing is performed.	Verify that a video recorder is available, with tape and with battery.			R/W 6-29-97
4	Place all items in the LLW Entry Glovebox (GB-07-101) in initialized, parked condition. Please refer to the "Setup" section of this test procedure for additional details.	Verify that all glovebox items are parked and initialized.	✓		A/V
5	Place the LLW Entry Glovebox in Automatic Mode. Although test step setup may require maintenance mode operation, all test case steps must be performed with the LLW Entry Glovebox in Automatic Mode.	Verify that the LLW Entry Glovebox is in Automatic Mode.	✓		A/V
6	Activation of the E-Stop (HS-07-101A) should disable the following items until the E-Stop is reset: Entry/Exit Port (DO-07-101) Hoist/Trolley (CR-07-101A) Drum Transfer Port (DO-07-102) Drum Lifter (DH-07-101)	Verify that activating the E-stop disables all operations for the items listed until the E-Stop is reset.	✓		mg
7	Activation of the E-Stop (HS-07-101B) should disable the following items until the E-Stop is reset: Entry/Exit Port (DO-07-101) Hoist/Trolley (CR-07-101A) Drum Transfer Port (DO-07-102) Drum Lifter (DH-07-101)	Verify that activating the E-stop disables all operations for the items listed until the E-Stop is reset.	✓		mg
8	Activation of the E-Stop (HS-07-101A) when the port is rotating open must cause the Entry/Exit Port (DO-07-101) to stop, hold in place, and disable further port movement until the E-Stop is reset.	Verify that activating the E-stop causes the port door to stop rotating, hold in place, and disables port operations until the E-Stop is reset.	✓		mg
9	Activation of the E-Stop (HS-07-101B) when the port is rotating open must cause the Entry/Exit Port (DO-07-101) to stop, hold in place, and disable further port movement until the E-Stop is reset.	Verify that activating the Local Emergency stop causes the port door to stop rotating, hold in place, and disables port operations until the E-Stop is reset.	✓		mg

K#3 As per review comments, agreement with Mr. Thackaberry, this section was to be removed - not necessary due to paper documentation. This step is therefore removed. mgd 6-29-97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
TEST CASE 13031A-85.42 EXAMINE LLW ENTRY GLOVEBOX (GB-07-101) EMERGENCY STOP OPERATION					
10	Activation of the E-Stop (HS-07-101A) when the port is rotating closed must cause the Entry/Exit Port (DO-07-101) to stop, hold in place, and disable further port movement until the E-Stop is reset.	Verify that activating the E-stop causes the port door to stop rotating, hold in place, and disables port operations until the E-Stop is reset.	✓		mrf
11	Activation of the E-Stop (HS-07-101B) when the port is rotating closed must cause the Entry/Exit Port (DO-07-101) to stop, hold in place, and disable further port movement until the E-Stop is reset.	Verify that activating the E-Stop causes the port door to stop rotating, hold in place, and disables port operations until the E-Stop is reset.	✓		mrf
12	The Entry/Exit Port must retain drum lid vacuum even during activation and reset of the E-Stop (HS-07-101A).	Verify port vacuum is retained against a drum lid during E-Stop activation and during E-Stop reset.	✓		mrf
13	The Entry/Exit Port must retain drum lid vacuum even during activation and reset of the E-Stop (HS-07-101B).	Verify port vacuum is retained against a drum lid during E-Stop activation and during E-Stop reset.	✓		mrf
14	Activation of the E-Stop (HS-07-101A) when the port is opening must cause the Drum Transfer Port (DO-07-102) to stop, hold in place, and disable further port movement until the E-Stop is reset.	Verify that activating the E-stop causes the port door to stop opening, hold in place, and disables port operations until the E-Stop is reset.	✓		mrf
15	Activation of the E-Stop (HS-07-101B) when the port is opening must cause the Drum Transfer Port (DO-07-102) to stop, hold in place, and disable further port movement until the E-Stop is reset.	Verify that activating the Local Emergency stop causes the port door to stop opening, hold in place, and disables port operations until the E-Stop is reset.	✓		mrf
16	Activation of the E-Stop (HS-07-101A) when the port is closing must cause the Drum Transfer Port (DO-07-102) to stop, hold in place, and disable further port movement until the E-Stop is reset.	Verify that activating the E-stop causes the port door to stop closing, hold in place, and disables port operations until the E-Stop is reset.	✓		mrf
17	Activation of the E-Stop (HS-07-101B) when the port is closing must cause the Drum Transfer Port (DO-07-102) to stop, hold in place, and disable further port movement until the E-Stop is reset.	Verify that activating the E-Stop causes the port door to stop closing, hold in place, and disables port operations until the E-Stop is reset.	✓		mrf
18	Activation of the E-Stop (HS-07-101A) when the Hoist (CR-07-101A) is moving forward must cause the Hoist to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist to stop moving, hold in place, and disables Hoist operations until the E-Stop is reset.	✓		mrf

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.42 EXAMINE LLW ENTRY GLOVEBOX (GB-07-101) EMERGENCY STOP OPERATION					
19	Activation of the E-Stop (HS-07-101B) when the Hoist (CR-07-101A) is moving forward must cause the Hoist to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist to stop moving, hold in place, and disables Hoist operations until the E-Stop is reset.	✓		mg
20	Activation of the E-Stop (HS-07-101A) when the Hoist (CR-07-101A) is moving in reverse must cause the Hoist to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist to stop moving, hold in place, and disables Hoist operations until the E-Stop is reset.	✓		mg
21	Activation of the E-Stop (HS-07-101B) when the Hoist (CR-07-101A) is moving in reverse must cause the Hoist to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist to stop moving, hold in place, and disables Hoist operations until the E-Stop is reset.	✓		mg
22	Activation of the E-Stop (HS-07-101A) when the Hoist (CR-07-101A) chain is lowering must cause the Hoist chain to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist chain to stop moving, hold in place, and disables Hoist operations until the E-Stop is reset.	✓		mg
23	Activation of the E-Stop (HS-07-101B) when the Hoist (CR-07-101A) chain is lowering must cause the Hoist chain to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist chain to stop moving, hold in place, and disables Hoist operations until the E-Stop is reset.	✓		mg
24	Activation of the E-Stop (HS-07-101A) when the Hoist (CR-07-101A) chain is raising must cause the Hoist chain to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist chain to stop moving, hold in place, and disables Hoist operations until the E-Stop is reset.	✓		mg
25	Activation of the E-Stop (HS-07-101B) when the Hoist (CR-07-101A) chain is raising must cause the Hoist chain to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist chain to stop moving, hold in place, and disables Hoist operations until the E-Stop is reset.	✓		mg
26	Activation of the E-Stop (HS-07-101A) when the Drum Lifter (DH-07-101) is closing must allow the Drum Lifter to fully close, hold in place, and disable further drum lifter movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Drum Lifter to continue closing, hold in place, and disables Drum Lifter operations until the E-Stop is reset.	✓		mg

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.42 EXAMINE LLW ENTRY GLOVEBOX (GB-07-101) EMERGENCY STOP OPERATION					
27	Activation of the E-Stop (HS-07-101B) when the Drum Lifter (DH-07-101) is closing must allow the Drum Lifter to fully close, hold in place, and disable further drum lifter movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Drum Lifter to continue closing, hold in place, and disables Drum Lifter operations until the E-Stop is reset.	✓		mg
28	Activation of the E-Stop (HS-07-101A) when the Drum Lifter (DH-07-101) is opening must allow the Drum Lifter to fully open, hold in place, and disable further drum lifter movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Drum Lifter to continue opening, hold in place, and disables Drum Lifter operations until the E-Stop is reset.	✓		mg
29	Activation of the E-Stop (HS-07-101B) when the Drum Lifter (DH-07-101) is opening must allow the Drum Lifter to fully close, hold in place, and disable further drum lifter movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Drum Lifter to continue opening, hold in place, and disables Drum Lifter operations until the E-Stop is reset.	✓		mg
30	The LLW Entry Glovebox must be in Automatic Mode during execution of the preceding Automatic Mode test case steps.	Verify that the LLW Entry Glovebox was in Automatic Mode during all Automatic Mode test case steps.	✓		mg
31 ✕	Resetting the Local E-Stops (HS-07-101A, HS-07-101B), in all cases tested, must result in continued, normal equipment operation and completion of all automatic sequences without manual intervention.	For all test steps, verify that all automatic sequences are completed correctly without manual intervention, after an E-Stop has been activated and reset during the automatic sequence.		✓	mg
32	Place all items in the LLW Entry Glovebox (GB-07-101) in initialized, parked condition. Please refer to the "Setup" section of this test procedure for additional details.	Verify that all glovebox items are parked and initialized.	✓		mg

* Reference TE#102 mbl 7-297

Testing resumes 6-30-97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass	Fail	Witness (Initial)
TEST CASE 13031A-85.42 EXAMINE LLW ENTRY GLOVEBOX (GB-07-101) EMERGENCY STOP OPERATION					
Examine LLW Entry Glovebox Maintenance Mode Local Emergency Stop					
33	NOTE: The following test case steps are "generic steps" that will be performed for each applicable local emergency stop.	Verify that the note has been reviewed.	✓		mef
34	NOTE: Emergency Stop is abbreviated as E-Stop in this test procedure.	Verify that the test procedure conventions have been reviewed.	✓		mef
35	NOTE: To conclusively document test results, video recording must be used when this section of testing is performed.	Verify that a video recorder is available, with tape and with battery.	✓		mef
36	Place all items in the LLW Entry Glovebox (GB-07-101) in initialized, parked condition. Please refer to the "Setup" section of this test procedure for additional details.	Verify that all glovebox items are parked and initialized.	✓		mef
37	Place the LLW Entry Glovebox in Maintenance Mode. All test case steps must be performed with the LLW Entry Glovebox in Maintenance Mode.	Verify that the LLW Entry Glovebox is in Maintenance Mode.	✓		mef
38	Activation of the E-Stop (HS-07-101A) should disable the following items until the E-Stop is reset: Entry/Exit Port (DO-07-101) Hoist/Trolley (CR-07-101A) Drum Transfer Port (DO-07-102) Drum Lifter (DH-07-101)	Verify that activating the E-stop disables all operations for the items listed until the E-Stop is reset.	✓		mef
39	Activation of the E-Stop (HS-07-101B) should disable the following items until the E-Stop is reset: Entry/Exit Port (DO-07-101) Hoist/Trolley (CR-07-101A) Drum Transfer Port (DO-07-102) Drum Lifter (DH-07-101)	Verify that activating the E-stop disables all operations for the items listed until the E-Stop is reset.	✓		mef
40	Activation of the E-Stop (HS-07-101A) when the port is rotating open must cause the Entry/Exit Port (DO-07-101) to stop, hold in place, and disable further port movement until the E-Stop is reset.	Verify that activating the E-stop causes the port door to stop rotating, hold in place, and disables port operations until the E-Stop is reset.	✓		mef
41	Activation of the E-Stop (HS-07-101B) when the port is rotating open must cause the Entry/Exit Port (DO-07-101) to stop, hold in place, and disable further port movement until the E-Stop is reset.	Verify that activating the Local Emergency stop causes the port door to stop rotating, hold in place, and disables port operations until the E-Stop is reset.	✓		mef

See note pg 42-2

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.42 EXAMINE LLW ENTRY GLOVEBOX (GB-07-101) EMERGENCY STOP OPERATION					
42	Activation of the E-Stop (HS-07-101A) when the port is rotating closed must cause the Entry/Exit Port (DO-07-101) to stop, hold in place, and disable further port movement until the E-Stop is reset.	Verify that activating the E-stop causes the port door to stop rotating, hold in place, and disables port operations until the E-Stop is reset.	✓		mgf
43	Activation of the E-Stop (HS-07-101B) when the port is rotating closed must cause the Entry/Exit Port (DO-07-101) to stop, hold in place, and disable further port movement until the E-Stop is reset.	Verify that activating the E-Stop causes the port door to stop rotating, hold in place, and disables port operations until the E-Stop is reset.		✓	mgf
44	Activation of the E-Stop (HS-07-101A) when the port is opening must cause the Drum Transfer Port (DO-07-102) to stop, hold in place, and disable further port movement until the E-Stop is reset.	Verify that activating the E-stop causes the port door to stop opening, hold in place, and disables port operations until the E-Stop is reset.		✓	mgf
45	The Entry/Exit Port must retain drum lid vacuum even during activation and reset of the E-Stop (HS-07-101A).	Verify port vacuum is retained against a drum lid during E-Stop activation and during E-Stop reset.	✓		mgf
46	The Entry/Exit Port must retain drum lid vacuum even during activation and reset of the E-Stop (HS-07-101B).	Verify port vacuum is retained against a drum lid during E-Stop activation and during E-Stop reset.	✓		mgf
47	Activation of the E-Stop (HS-07-101B) when the port is opening must cause the Drum Transfer Port (DO-07-102) to stop, hold in place, and disable further port movement until the E-Stop is reset.	Verify that activating the Local Emergency stop causes the port door to stop opening, hold in place, and disables port operations until the E-Stop is reset.	✓		mgf
48	Activation of the E-Stop (HS-07-101A) when the port is closing must cause the Drum Transfer Port (DO-07-102) to stop, hold in place, and disable further port movement until the E-Stop is reset.	Verify that activating the E-stop causes the port door to stop closing, hold in place, and disables port operations until the E-Stop is reset.		✓	mgf
49	Activation of the E-Stop (HS-07-101B) when the port is closing must cause the Drum Transfer Port (DO-07-102) to stop, hold in place, and disable further port movement until the E-Stop is reset.	Verify that activating the E-Stop causes the port door to stop closing, hold in place, and disables port operations until the E-Stop is reset.		✓	mgf
50	Activation of the E-Stop (HS-07-101A) when the Hoist (CR-07-101A) is moving forward must cause the Hoist to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist to stop moving, hold in place, and disables port operations until the E-Stop is reset.	✓		mgf

* See TE # 114 Slight movement of port door when closing, not when opening

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.42 EXAMINE LLW ENTRY GLOVEBOX (GB-07-101) EMERGENCY STOP OPERATION					
51 ✱	Activation of the E-Stop (HS-07-101B) when the Hoist (CR-07-101A) is moving forward must cause the Hoist to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist to stop moving, hold in place, and disables port operations until the E-Stop is reset.		✓	mrf
52 ✱	Activation of the E-Stop (HS-07-101A) when the Hoist (CR-07-101A) is moving in reverse must cause the Hoist to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist to stop moving, hold in place, and disables port operations until the E-Stop is reset.		✓	mrf
53 ✱	Activation of the E-Stop (HS-07-101B) when the Hoist (CR-07-101A) is moving in reverse must cause the Hoist to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist to stop moving, hold in place, and disables port operations until the E-Stop is reset.		✓	mrf
54	Activation of the E-Stop (HS-07-101A) when the Hoist (CR-07-101A) chain is lowering must cause the Hoist chain to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist chain to stop moving, hold in place, and disables port operations until the E-Stop is reset.	✓		mrf
55	Activation of the E-Stop (HS-07-101B) when the Hoist (CR-07-101A) chain is lowering must cause the Hoist chain to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist chain to stop moving, hold in place, and disables port operations until the E-Stop is reset.	✓		mrf
56	Activation of the E-Stop (HS-07-101A) when the Hoist (CR-07-101A) chain is raising must cause the Hoist chain to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist chain to stop moving, hold in place, and disables port operations until the E-Stop is reset.	✓		mrf
57	Activation of the E-Stop (HS-07-101B) when the Hoist (CR-07-101A) chain is raising must cause the Hoist chain to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist chain to stop moving, hold in place, and disables port operations until the E-Stop is reset.	✓		mrf
58	Activation of the E-Stop (HS-07-101A) when the Drum Lifter (DH-07-101) is closing must allow the Drum Lifter to fully close, hold in place, and disable further drum lifter movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Drum Lifter to continue closing, hold in place, and disables Drum Lifter operations until the E-Stop is reset.	✓		mrf

✱ See TE #115

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
TEST CASE 13031A-85.42 EXAMINE LLW ENTRY GLOVEBOX (GB-07-101) EMERGENCY STOP OPERATION					
59	Activation of the E-Stop (HS-07-101B) when the Drum Lifter (DH-07-101) is closing must allow the Drum Lifter to fully close, hold in place, and disable further drum lifter movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Drum Lifter to continue closing, hold in place, and disables Drum Lifter operations until the E-Stop is reset.	✓		mgf
60	Activation of the E-Stop (HS-07-101A) when the Drum Lifter (DH-07-101) is opening must allow the Drum Lifter to fully open, hold in place, and disable further drum lifter movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Drum Lifter to continue opening, hold in place, and disables Drum Lifter operations until the E-Stop is reset.	✓		mgf
61	Activation of the E-Stop (HS-07-101B) when the Drum Lifter (DH-07-101) is opening must allow the Drum Lifter to fully close, hold in place, and disable further drum lifter movement until the E-Stop is reset. <i>open</i> <i>mgf 6-30-97</i>	Verify that activating the E-Stop causes the Drum Lifter to continue opening, hold in place, and disables Drum Lifter operations until the E-Stop is reset.	✓		mgf
62	All preceding Maintenance Mode test case steps must be performed with the LLW Entry Glovebox in Maintenance Mode.	Verify that the LLW Entry Glovebox is in Maintenance Mode during all Maintenance Mode test steps.	✓		mgf
63	Place all items in the LLW Entry Glovebox (GB-07-101) in initialized, parked condition. Please refer to the "Setup" section of this test procedure for additional details.	Verify that all glovebox items are parked and initialized.	✓		mgf

Testing begins 7-3-97. 10:48 a.m. mrg

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.42 EXAMINE LLW ENTRY GLOVEBOX (GB-07-101) EMERGENCY STOP OPERATION					
Examine LLW Entry Glovebox Automatic Mode Emergency Stop					
64	NOTE: The following test case steps are "generic steps" that will be performed for each applicable local emergency stop.	Verify that the note has been reviewed.	✓		mrg
65	NOTE: Emergency Stop is abbreviated as E-Stop in this test procedure.	Verify that the test procedure conventions have been reviewed.	✓		mrg
66	Step Deleted		✓		mrg
67	Place all items in the LLW Entry Glovebox (GB-07-101) in initialized, parked condition. Please refer to the "Setup" section of this test procedure for additional details.	Verify that all glovebox items are parked and initialized.	✓		mrg
68	Place the LLW Entry Glovebox in Automatic Mode. Although test step setup may require maintenance mode operation, all test case steps must be performed with the LLW Entry Glovebox in Automatic Mode.	Verify that the LLW Entry Glovebox is in Automatic Mode.	✓		mrg
69	Activation of the E-Stop (HS-07-315) should disable the following items until the E-Stop is reset: Entry/Exit Port (DO-07-101) Hoist/Trolley (CR-07-101A) Drum Transfer Port (DO-07-102) Drum Lifter (DH-07-101)	Verify that activating the E-stop disables all operations for the items listed until the E-Stop is reset.	✓		mrg
70	Activation of the E-Stop (HS-07-315) when the port is rotating open must cause the Entry/Exit Port (DO-07-101) to stop, hold in place, and disable further port movement until the E-Stop is reset.	Verify that activating the E-stop causes the port door to stop rotating, hold in place, and disables port operations until the E-Stop is reset.	✓		mrg
71	Activation of the E-Stop (HS-07-315) when the port is rotating closed must cause the Entry/Exit Port (DO-07-101) to stop, hold in place, and disable further port movement until the E-Stop is reset.	Verify that activating the E-stop causes the port door to stop rotating, hold in place, and disables port operations until the E-Stop is reset.	✓		mrg
72	The Entry/Exit Port must retain drum lid vacuum even during activation and reset of the E-Stop (HS-07-315).	Verify port vacuum is retained against a drum lid during E-Stop activation and during E-Stop reset.	✓		mrg

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
TEST CASE 13031A-85.42 EXAMINE LLW ENTRY GLOVEBOX (GB-07-101) EMERGENCY STOP OPERATION					
73	Activation of the E-Stop (HS-07-315) when the port is opening must cause the Drum Transfer Port (DO-07-102) to stop, hold in place, and disable further port movement until the E-Stop is reset.	Verify that activating the E-stop causes the port door to stop opening, hold in place, and disables port operations until the E-Stop is reset.	✓		msj
74	Activation of the E-Stop (HS-07-315) when the port is closing must cause the Drum Transfer Port (DO-07-102) to stop, hold in place, and disable further port movement until the E-Stop is reset.	Verify that activating the E-stop causes the port door to stop closing, hold in place, and disables port operations until the E-Stop is reset.	✓		msj
75	Activation of the E-Stop (HS-07-315) when the Hoist (CR-07-101A) is moving forward must cause the Hoist to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist to stop moving, hold in place, and disables Hoist operations until the E-Stop is reset.	✓		msj
76	Activation of the E-Stop (HS-07-315) when the Hoist (CR-07-101A) is moving forward must cause the Hoist to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist to stop moving, hold in place, and disables Hoist operations until the E-Stop is reset.	✓		msj
77	Activation of the E-Stop (HS-07-315) when the Hoist (CR-07-101A) is moving in reverse must cause the Hoist to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist to stop moving, hold in place, and disables Hoist operations until the E-Stop is reset.	✓		msj
78	Activation of the E-Stop (HS-07-315) when the Hoist (CR-07-101A) chain is lowering must cause the Hoist chain to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist chain to stop moving, hold in place, and disables Hoist operations until the E-Stop is reset.	✓		msj
79	Activation of the E-Stop (HS-07-315) when the Hoist (CR-07-101A) chain is lowering must cause the Hoist chain to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist chain to stop moving, hold in place, and disables Hoist operations until the E-Stop is reset.	✓		msj
80	Activation of the E-Stop (HS-07-315) when the Hoist (CR-07-101A) chain is raising must cause the Hoist chain to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist chain to stop moving, hold in place, and disables Hoist operations until the E-Stop is reset.	✓		msj

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
TEST CASE 13031A-85.42 - EXAMINE LLW ENTRY GLOVEBOX (GB-07-101) EMERGENCY STOP OPERATION					
81	Activation of the E-Stop (HS-07-315) when the Hoist (CR-07-101A) chain is raising must cause the Hoist chain to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist chain to stop moving, hold in place, and disables Hoist operations until the E-Stop is reset.	✓		mg
82	Activation of the E-Stop (HS-07-315) when the Drum Lifter (DH-07-101) is closing must allow the Drum Lifter to fully close, hold in place, and disable further drum lifter movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Drum Lifter to continue closing, hold in place, and disables Drum Lifter operations until the E-Stop is reset.	✓		mg
83	Activation of the E-Stop (HS-07-315) when the Drum Lifter (DH-07-101) is closing must allow the Drum Lifter to fully close, hold in place, and disable further drum lifter movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Drum Lifter to continue closing, hold in place, and disables Drum Lifter operations until the E-Stop is reset.	✓		mg
84	Activation of the E-Stop (HS-07-315) when the Drum Lifter (DH-07-101) is opening must allow the Drum Lifter to fully open, hold in place, and disable further drum lifter movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Drum Lifter to continue opening, hold in place, and disables Drum Lifter operations until the E-Stop is reset.	✓		mg
85	Activation of the E-Stop (HS-07-315) when the Drum Lifter (DH-07-101) is opening must allow the Drum Lifter to fully close, hold in place, and disable further drum lifter movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Drum Lifter to continue opening, hold in place, and disables Drum Lifter operations until the E-Stop is reset.	✓		mg
86	The LLW Entry Glovebox must be in Automatic Mode during execution of the preceding Automatic Mode test case steps.	Verify that the LLW Entry Glovebox was in Automatic Mode during all Automatic Mode test case steps.	✓		mg
87	Place all items in the LLW Entry Glovebox (GB-07-101) in initialized, parked condition. Please refer to the "Setup" section of this test procedure for additional details.	Verify that all glovebox items are parked and initialized.	✓		mg

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.42 EXAMINE LLW ENTRY GLOVEBOX (GB-07-101) EMERGENCY STOP OPERATION					
Examine LLW Entry Glovebox Maintenance Mode Emergency Stop					
88	NOTE: The following test case steps are "generic steps" that will be performed for each applicable local emergency stop.	Verify that the note has been reviewed.	✓		mrg
89	NOTE: Emergency Stop is abbreviated as E-Stop in this test procedure.	Verify that the test procedure conventions have been reviewed.	✓		mrg
90	Step Deleted		✓		mrg
	Place all items in the LLW Entry Glovebox (GB-07-101) in initialized, parked condition. Please refer to the "Setup" section of this test procedure for additional details.	Verify that all glovebox items are parked and initialized.	✓		mrg
92	Place the LLW Entry Glovebox in Maintenance Mode. All test case steps must be performed with the LLW Entry Glovebox in Maintenance Mode.	Verify that the LLW Entry Glovebox is in Maintenance Mode.	✓		mrg
93	Activation of the E-Stop (HS-07-315) should disable the following items until the E-Stop is reset: Entry/Exit Port (DO-07-101) Hoist/Trolley (CR-07-101A) Drum Transfer Port (DO-07-102) Drum Lifter (DH-07-101)	Verify that activating the E-stop disables all operations for the items listed until the E-Stop is reset.	✓		mrg
94	Activation of the E-Stop (HS-07-315) when the port is rotating open must cause the Entry/Exit Port (DO-07-101) to stop, hold in place, and disable further port movement until the E-Stop is reset.	Verify that activating the E-stop causes the port door to stop rotating, hold in place, and disables port operations until the E-Stop is reset.	✓		mrg
95	Activation of the E-Stop (HS-07-315) when the port is rotating closed must cause the Entry/Exit Port (DO-07-101) to stop, hold in place, and disable further port movement until the E-Stop is reset.	Verify that activating the E-stop causes the port door to stop rotating, hold in place, and disables port operations until the E-Stop is reset.	✓		mrg
96	The Entry/Exit Port must retain drum lid vacuum even during activation and reset of the E-Stop (HS-07-315).	Verify port vacuum is retained against a drum lid during E-Stop activation and during E-Stop reset.	✓		mrg
97	Activation of the E-Stop (HS-07-315) when the port is opening must cause the Drum Transfer Port (DO-07-102) to stop, hold in place, and disable further port movement until the E-Stop is reset.	Verify that activating the E-stop causes the port door to stop opening, hold in place, and disables port operations until the E-Stop is reset.	✓		mrg

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.42 EXAMINE LLW ENTRY GLOVEBOX (GB-07-101) EMERGENCY STOP OPERATION					
98	Activation of the E-Stop (HS-07-315) when the port is closing must cause the Drum Transfer Port (DO-07-102) to stop, hold in place, and disable further port movement until the E-Stop is reset.	Verify that activating the E-stop causes the port door to stop closing, hold in place, and disables port operations until the E-Stop is reset.	✓		mg
99	Activation of the E-Stop (HS-07-315) when the Hoist (CR-07-101A) is moving forward must cause the Hoist to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist to stop moving, hold in place, and disables Hoist operations until the E-Stop is reset.	✓		mg
100	Activation of the E-Stop (HS-07-315) when the Hoist (CR-07-101A) is moving forward must cause the Hoist to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist to stop moving, hold in place, and disables Hoist operations until the E-Stop is reset.	✓		mg
101	Activation of the E-Stop (HS-07-315) when the Hoist (CR-07-101A) is moving in reverse must cause the Hoist to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist to stop moving, hold in place, and disables Hoist operations until the E-Stop is reset.	✓		mg
102	Activation of the E-Stop (HS-07-315) when the Hoist (CR-07-101A) chain is lowering must cause the Hoist chain to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist chain to stop moving, hold in place, and disables Hoist operations until the E-Stop is reset.	✓		mg
103	Activation of the E-Stop (HS-07-315) when the Hoist (CR-07-101A) chain is lowering must cause the Hoist chain to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist chain to stop moving, hold in place, and disables Hoist operations until the E-Stop is reset.	✓		mg
104	Activation of the E-Stop (HS-07-315) when the Hoist (CR-07-101A) chain is raising must cause the Hoist chain to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist chain to stop moving, hold in place, and disables Hoist operations until the E-Stop is reset.	✓		mg
105	Activation of the E-Stop (HS-07-315) when the Hoist (CR-07-101A) chain is raising must cause the Hoist chain to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist chain to stop moving, hold in place, and disables Hoist operations until the E-Stop is reset.	✓		mg

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85-42 EXAMINE LLW ENTRY GLOVEBOX (GB-07-101) EMERGENCY STOP OPERATION					
106	Activation of the E-Stop (HS-07-315) when the Drum Lifter (DH-07-101) is closing must allow the Drum Lifter to fully close, hold in place, and disable further drum lifter movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Drum Lifter to continue closing, hold in place, and disables Drum Lifter operations until the E-Stop is reset.	✓		mgf
107	Activation of the E-Stop (HS-07-315) when the Drum Lifter (DH-07-101) is closing must allow the Drum Lifter to fully close, hold in place, and disable further drum lifter movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Drum Lifter to continue closing, hold in place, and disables Drum Lifter operations until the E-Stop is reset.	✓		mgf
108	Activation of the E-Stop (HS-07-315) when the Drum Lifter (DH-07-101) is opening must allow the Drum Lifter to fully open, hold in place, and disable further drum lifter movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Drum Lifter to continue opening, hold in place, and disables Drum Lifter operations until the E-Stop is reset.	✓		mgf
109	Activation of the E-Stop (HS-07-315) when the Drum Lifter (DH-07-101) is opening must allow the Drum Lifter to fully close, hold in place, and disable further drum lifter movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Drum Lifter to continue opening, hold in place, and disables Drum Lifter operations until the E-Stop is reset.	✓		mgf
110	All preceding Maintenance Mode test case steps must be performed with the LLW Entry Glovebox in Maintenance Mode.	Verify that the LLW Entry Glovebox is in Maintenance Mode during all Maintenance Mode test steps.	✓		mgf
111	Place all items in the LLW Entry Glovebox (GB-07-101) in initialized, parked condition. Please refer to the "Setup" section of this test procedure for additional details.	Verify that all glovebox items are parked and initialized.	✓		mgf
TEST CASE 13031A-85-42 COMPLETE					

TEST CASE 13031A-85.43 EXAMINE LLW SORTING GLOVEBOX (GB-07-102) EMERGENCY STOP OPERATION	43-2
Examine LLW Sorting Glovebox Automatic Mode Local Emergency Stop	43-2
Examine LLW Sorting Glovebox Maintenance Mode Local Emergency Stop	43-14
Examine LLW Sorting Glovebox Automatic Mode Emergency Stop	43-26
Examine LLW Sorting Glovebox Maintenance Mode Emergency Stop	43-31

Tested 7/28/77

R/W & MS

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.43 EXAMINE LLW SORTING GLOVEBOX (GB-07-102) EMERGENCY STOP OPERATION					
Examine LLW Sorting Glovebox Automatic Mode Local Emergency Stop					
1	NOTE: The following test case steps are "generic steps" that will be performed for each applicable local emergency stop.	Verify that the note has been reviewed.	✓		R/W
2	NOTE: Emergency Stop is abbreviated as E-Stop in this test procedure.	Verify that the test procedure conventions have been reviewed.	✓		R/W
3	Step Deleted		✓		R/W
4	Place all items in the LLW Sorting Glovebox (GB-07-102) in initialized, parked condition. Please refer to the "Setup" section of this test procedure for additional details.	Verify that all glovebox items are parked and initialized.	✓		R/W
5	Place the LLW Sorting Glovebox in Automatic Mode. Although test step setup may require maintenance mode operation, all test case steps must be performed with the LLW Sorting Glovebox in Automatic Mode.	Verify that the LLW Sorting Glovebox is in Automatic Mode.	✓		R/W
6	Activation of the E-Stop (HS-07-102A) should disable the following items until the E-Stop is reset: Sorting Table (ST-07-101) Drum Tipper (DH-07-103) Transfer Car (TC-07-101) Lid/Delid Fixture (RT-07-101) X-Ray Shield Door (DO-07-103) X-Ray Tray (XX-07-101)	Verify that activating the E-stop disables all operations for the items listed until the E-Stop is reset.	✓		R/W
7	Activation of the E-Stop (HS-07-102B) should disable the following items until the E-Stop is reset: Sorting Table (ST-07-101) Drum Tipper (DH-07-103) Transfer Car (TC-07-101) Lid/Delid Fixture (RT-07-101) X-Ray Shield Door (DO-07-103) X-Ray Tray (XX-07-101)	Verify that activating the E-stop disables all operations for the items listed until the E-Stop is reset.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
TEST CASE 13031A-85.43 EXAMINE LLW SORTING GLOVEBOX (GB-07-102) EMERGENCY STOP OPERATION					
8	Activation of the E-Stop (HS-07-102C) should disable the following items until the E-Stop is reset: Sorting Table (ST-07-101) Drum Tipper (DH-07-103) Transfer Car (TC-07-101) Lid/Delid Fixture (RT-07-101) X-Ray Shield Door (DO-07-103) X-Ray Tray (XX-07-101)	Verify that activating the E-stop disables all operations for the items listed until the E-Stop is reset.		✓	R/W
9	Activation of the E-Stop (HS-07-102D) should disable the following items until the E-Stop is reset: Bagless Transfer Port (DO-07-105)	Verify that activating the E-stop disables all operations for the items listed until the E-Stop is reset.	✓		R/W
10	Activation of the E-Stop (HS-07-102A) when the Drum Tipper (DH-07-103) is raising must cause the Drum Tipper to stop, hold in place, and disable further Drum Tipper movement until the E-Stop is reset.	Verify that activating the E-stop causes the Drum Tipper to stop raising, hold in place, and disables Drum Tipper operations until the E-Stop is reset.	✓		R/W
11	Activation of the E-Stop (HS-07-102B) when the Drum Tipper (DH-07-103) is raising must cause the Drum Tipper to stop, hold in place, and disable further Drum Tipper movement until the E-Stop is reset.	Verify that activating the E-stop causes the Drum Tipper to stop raising, hold in place, and disables Drum Tipper operations until the E-Stop is reset.	✓		R/W
12	Activation of the E-Stop (HS-07-102C) when the Drum Tipper (DH-07-103) is raising must cause the Drum Tipper to stop, hold in place, and disable further Drum Tipper movement until the E-Stop is reset.	Verify that activating the E-stop causes the Drum Tipper to stop raising, hold in place, and disables Drum Tipper operations until the E-Stop is reset.		✓	R/W
13	Activation of the E-Stop (HS-07-102A) when the Drum Tipper (DH-07-103) is lowering must cause the Drum Tipper to stop, hold in place, and disable further Drum Tipper movement until the E-Stop is reset.	Verify that activating the E-stop causes the Drum Tipper to stop lowering, hold in place, and disables Drum Tipper operations until the E-Stop is reset.	✓		R/W
14	Activation of the E-Stop (HS-07-102B) when the Drum Tipper (DH-07-103) is lowering must cause the Drum Tipper to stop, hold in place, and disable further Drum Tipper movement until the E-Stop is reset.	Verify that activating the E-stop causes the Drum Tipper to stop lowering, hold in place, and disables Drum Tipper operations until the E-Stop is reset.	✓		R/W
15	Activation of the E-Stop (HS-07-102C) when the Drum Tipper (DH-07-103) is lowering must cause the Drum Tipper to stop, hold in place, and disable further Drum Tipper movement until the E-Stop is reset.	Verify that activating the E-stop causes the Drum Tipper to stop lowering, hold in place, and disables Drum Tipper operations until the E-Stop is reset.		✓	R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
TEST CASE 13031A-85.43 EXAMINE LLW SORTING GLOVEBOX (GB-07-102) EMERGENCY STOP OPERATION					
16	Activation of the E-Stop (HS-07-102A) when the Drum Tipper (DH-07-103) Grab is closing must cause the Drum Tipper Grab to fully close , hold in place, and disable further Drum Tipper movement until the E-Stop is reset. <i>stop closing</i> <i>R/W 7/28/97</i>	Verify that activating the E-stop causes the Drum Tipper Grab to continue until fully closed , hold in place, and disables Drum Tipper operations until the E-Stop is reset. <i>stop closing</i>	✓		R/W
17	Activation of the E-Stop (HS-07-102B) when the Drum Tipper (DH-07-103) Grab is closing must cause the Drum Tipper Grab to fully close , hold in place, and disable further Drum Tipper movement until the E-Stop is reset. <i>stop closing</i> <i>R/W 7/28/97</i>	Verify that activating the E-stop causes the Drum Tipper Grab to continue until fully closed , hold in place, and disables Drum Tipper operations until the E-Stop is reset. <i>stop closing</i>	✓		R/W
* 18	Activation of the E-Stop (HS-07-102C) when the Drum Tipper (DH-07-103) Grab is closing must cause the Drum Tipper Grab to fully close , hold in place, and disable further Drum Tipper movement until the E-Stop is reset. <i>stop closing</i> <i>R/W 7/28/97</i>	Verify that activating the E-stop causes the Drum Tipper Grab to continue until fully closed , hold in place, and disables Drum Tipper operations until the E-Stop is reset. <i>stop closing</i>	✓	✓	R/W
19	Activation of the E-Stop (HS-07-102A) when the Drum Tipper (DH-07-103) Grab is opening must cause the Drum Tipper Grab to fully close , hold in place, and disable further Drum Tipper movement until the E-Stop is reset. <i>stop opening</i> <i>R/W 7/28/97</i>	Verify that activating the E-stop causes the Drum Tipper Grab to continue until fully open , hold in place, and disables Drum Tipper operations until the E-Stop is reset. <i>stop opening</i>	✓		R/W
20	Activation of the E-Stop (HS-07-102B) when the Drum Tipper (DH-07-103) Grab is opening must cause the Drum Tipper Grab to fully close , hold in place, and disable further Drum Tipper movement until the E-Stop is reset. <i>stop opening</i> <i>R/W 7/28/97</i>	Verify that activating the E-stop causes the Drum Tipper Grab to continue until fully open , hold in place, and disables Drum Tipper operations until the E-Stop is reset. <i>stop opening</i>	✓		R/W
* 21	Activation of the E-Stop (HS-07-102C) when the Drum Tipper (DH-07-103) Grab is opening must cause the Drum Tipper Grab to fully close , hold in place, and disable further Drum Tipper movement until the E-Stop is reset. <i>stop opening</i> <i>R/W 7/28/97</i>	Verify that activating the E-stop causes the Drum Tipper Grab to continue until fully open , hold in place, and disables Drum Tipper operations until the E-Stop is reset. <i>stop opening</i>	✓	✓	R/W
22	Activation of the E-Stop (HS-07-102A) should stop Drum Tipper (DH-07-103) rotation until the E-Stop is reset.	Verify that activating the E-stop causes the Drum Tipper to hold in place and disables Drum Tipper rotation until the E-Stop is reset.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.43 EXAMINE LLW SORTING GLOVEBOX (GB-07-102) EMERGENCY STOP OPERATION					
23	Activation of the E-Stop (HS-07-102B) should stop Drum Tipper (DH-07-103) rotation until the E-Stop is reset. <i>c R/W 2/19/8</i>	Verify that activating the E-stop causes the Drum Tipper to hold in place and disables Drum Tipper rotation until the E-Stop is reset.	✓		R/W
<i>X</i> 24	Activation of the E-Stop (HS-07-102B) should stop Drum Tipper (DH-07-103) rotation until the E-Stop is reset.	Verify that activating the E-stop causes the Drum Tipper to hold in place and disables Drum Tipper rotation until the E-Stop is reset.		✓	R/W
25	Activation of the E-Stop (HS-07-102A) when the Transfer Car is moving forward should stop the Transfer Car (TC-07-101) and disable further Transfer Car movement until the E-Stop is reset.	Verify that activating the E-stop causes the Transfer Car to stop, hold in place, and disables Transfer Car movement until the E-Stop is reset.	✓		R/W
26	Activation of the E-Stop (HS-07-102B) is moving forward should stop the Transfer Car (TC-07-101) and disable further Transfer Car movement until the E-Stop is reset.	Verify that activating the E-stop causes the Transfer Car to stop, hold in place, and disables Transfer Car movement until the E-Stop is reset.	✓		R/W
<i>X</i> 27	Activation of the E-Stop (HS-07-102C) is moving forward should stop the Transfer Car (TC-07-101) and disable further Transfer Car movement until the E-Stop is reset.	Verify that activating the E-stop causes the Transfer Car to stop, hold in place, and disables Transfer Car movement until the E-Stop is reset.		✓	R/W
28	Activation of the E-Stop (HS-07-102A) when the Transfer Car is moving in reverse should stop the Transfer Car (TC-07-101) and disable further Transfer Car movement until the E-Stop is reset.	Verify that activating the E-stop causes the Transfer Car to stop, hold in place, and disables Transfer Car movement until the E-Stop is reset.	✓		R/W
29	Activation of the E-Stop (HS-07-102B) when the Transfer Car is moving in reverse should stop the Transfer Car (TC-07-101) and disable further Transfer Car movement until the E-Stop is reset.	Verify that activating the E-stop causes the Transfer Car to stop, hold in place, and disables Transfer Car movement until the E-Stop is reset.	✓		R/W
<i>X</i> 30	Activation of the E-Stop (HS-07-102C) when the Transfer Car is moving in reverse should stop the Transfer Car (TC-07-101) and disable further Transfer Car movement until the E-Stop is reset.	Verify that activating the E-stop causes the Transfer Car to stop, hold in place, and disables Transfer Car movement until the E-Stop is reset.		✓	R/W

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Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✗	Witness (initial)
TEST CASE 13031A-85.43 EXAMINE LLW SORTING GLOVEBOX (GB-07-102) EMERGENCY STOP OPERATION					
31	Activation of the E-Stop (HS-07-102A) when the Transfer Car conveyor is energized should stop the Transfer Car (TC-07-101) conveyor and disable further Transfer Car movement until the E-Stop is reset.	Verify that activating the E-stop causes the Transfer Car conveyor to stop, hold in place, and disables Transfer Car movement until the E-Stop is reset.	✓		R/W
32	Activation of the E-Stop (HS-07-102B) when the Transfer Car conveyor is energized should stop the Transfer Car (TC-07-101) conveyor and disable further Transfer Car movement until the E-Stop is reset.	Verify that activating the E-stop causes the Transfer Car conveyor to stop, hold in place, and disables Transfer Car movement until the E-Stop is reset.	✓		R/W
X 33	Activation of the E-Stop (HS-07-102C) when the Transfer Car conveyor is energized should stop the Transfer Car (TC-07-101) conveyor and disable further Transfer Car movement until the E-Stop is reset.	Verify that activating the E-stop causes the Transfer Car conveyor to stop, hold in place, and disables Transfer Car movement until the E-Stop is reset.	R/W 2/28/97 ✓	✓	R/W
34	Activation of the E-Stop (HS-07-102A) when the Lid/Delid Device (RT-07-101) Saw is energized should stop the saw and disable further saw action until the E-Stop is reset.	Verify that activating the E-stop causes the saw to stop and disables saw movement until the E-Stop is reset.	✓		R/W
35	Activation of the E-Stop (HS-07-102B) when the Lid/Delid Device (RT-07-101) Saw is energized should stop the saw and disable further saw action until the E-Stop is reset.	Verify that activating the E-stop causes the saw to stop and disables saw movement until the E-Stop is reset.	✓		R/W
X 36	Activation of the E-Stop (HS-07-102C) when the Lid/Delid Device (RT-07-101) Saw is energized should stop the saw and disable further saw action until the E-Stop is reset.	Verify that activating the E-stop causes the saw to stop and disables saw movement until the E-Stop is reset.		✓	R/W
37	Activation of the E-Stop (HS-07-102A) when the Lid/Delid Device (RT-07-101) Saw is extending should stop the saw and disable further saw action until the E-Stop is reset.	Verify that activating the E-stop causes the saw to stop extending and disables saw movement until the E-Stop is reset.	✓		R/W
38	Activation of the E-Stop (HS-07-102B) when the Lid/Delid Device (RT-07-101) Saw is extending should stop the saw and disable further saw action until the E-Stop is reset.	Verify that activating the E-stop causes the saw to stop extending and disables saw movement until the E-Stop is reset.	✓		R/W
X 39	Activation of the E-Stop (HS-07-102C) when the Lid/Delid Device (RT-07-101) Saw is extending should stop the saw and disable further saw action until the E-Stop is reset.	Verify that activating the E-stop causes the saw to stop extending and disables saw movement until the E-Stop is reset.		✓	R/W
40	Activation of the E-Stop (HS-07-102A) when the Lid/Delid Device (RT-07-101) Saw is retracting should stop the saw and disable further saw action until the E-Stop is reset.	Verify that activating the E-stop causes the saw to stop retracting and disables saw movement until the E-Stop is reset.	✓		R/W

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Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
TEST CASE 13031A-85.43 EXAMINE LLW SORTING GLOVEBOX (GB-07-102) EMERGENCY STOP OPERATION					
41	Activation of the E-Stop (HS-07-102B) when the Lid/Delid Device (RT-07-101) Saw is retracting should stop the saw and disable further saw action until the E-Stop is reset.	Verify that activating the E-stop causes the saw to stop retracting and disables saw movement until the E-Stop is reset.	✓		R/W
X 42	Activation of the E-Stop (HS-07-102C) when the Lid/Delid Device (RT-07-101) Saw is retracting should stop the saw and disable further saw action until the E-Stop is reset.	Verify that activating the E-stop causes the saw to stop retracting and disables saw movement until the E-Stop is reset.		✓	R/W
43	Activation of the E-Stop (HS-07-102A) when the Lid/Delid Device (RT-07-101) C-Crimp Magazine Feed is energized should stop the feed motor(s) and disable further feed motor(s) action until the E-Stop is reset.	Verify that activating the E-stop causes the feed motor(s) to stop and disables feed motor(s) movement until the E-Stop is reset.			N/A
44	Activation of the E-Stop (HS-07-102B) when the Lid/Delid Device (RT-07-101) C-Crimp Magazine Feed is energized should stop the feed motor(s) and disable further feed motor(s) action until the E-Stop is reset.	Verify that activating the E-stop causes the feed motor(s) to stop and disables feed motor(s) movement until the E-Stop is reset.			N/A
45	Activation of the E-Stop (HS-07-102C) when the Lid/Delid Device (RT-07-101) C-Crimp Magazine Feed is energized should stop the feed motor(s) and disable further feed motor(s) action until the E-Stop is reset.	Verify that activating the E-stop causes the feed motor(s) to stop and disables feed motor(s) movement until the E-Stop is reset.			N/A
46	Activation of the E-Stop (HS-07-102A) when the Lid/Delid Device (RT-07-101) Crimp Head is crimping should stop the Crimp Head Jaw and disable further movement until the E-Stop is reset.	Verify that activating the E-stop causes the Crimp Jaw to stop and disables Crimp Jaw until the E-Stop is reset.			N/A
47	Activation of the E-Stop (HS-07-102B) when the Lid/Delid Device (RT-07-101) Crimp Head is crimping should stop the Crimp Head Jaw and disable further movement until the E-Stop is reset.	Verify that activating the E-stop causes the Crimp Jaw to stop and disables Crimp Jaw until the E-Stop is reset.			N/A
48	Activation of the E-Stop (HS-07-102C) when the Lid/Delid Device (RT-07-101) Crimp Head is crimping should stop the Crimp Head Jaw and disable further movement until the E-Stop is reset.	Verify that activating the E-stop causes the Crimp Jaw to stop and disables Crimp Jaw until the E-Stop is reset.			N/A
49	Activation of the E-Stop (HS-07-102A) when the Lid/Delid Device (RT-07-101) Crimp Head is extending should allow the Crimp Head to continue to the selected position and disable further Crimp Head action until the E-Stop is reset.	Verify that activating the E-stop allows the Crimp Head to move to the selected position and then disables Crimp Head movement until the E-Stop is reset.			N/A

#43-54 - Crimp Device Deleted From Design

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Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.43 EXAMINE LLW SORTING GLOVEBOX (GB-07-102) EMERGENCY STOP OPERATION					
50	Activation of the E-Stop (HS-07-102B) when the Lid/Delid Device (RT-07-101) Crimp Head is extending should allow the Crimp Head to continue to the selected position and disable further Crimp Head action until the E-Stop is reset.	Verify that activating the E-stop allows the Crimp Head to move to the selected position and then disables Crimp Head movement until the E-Stop is reset.			N/A R/W 7/18/91
51	Activation of the E-Stop (HS-07-102C) when the Lid/Delid Device (RT-07-101) Crimp Head is extending should allow the Crimp Head to continue to the selected position and disable further Crimp Head action until the E-Stop is reset.	Verify that activating the E-stop allows the Crimp Head to move to the selected position and then disables Crimp Head movement until the E-Stop is reset.			N/A R/W 7/18/91
52	Activation of the E-Stop (HS-07-102A) when the Lid/Delid Device (RT-07-101) Crimp Head is retracting should allow the Crimp Head to continue to the selected position and disable further Crimp Head action until the E-Stop is reset.	Verify that activating the E-stop allows the Crimp Head to move to the selected position and then disables Crimp Head movement until the E-Stop is reset.			N/A R/W 7/18/91
53	Activation of the E-Stop (HS-07-102B) when the Lid/Delid Device (RT-07-101) Crimp Head is retracting should allow the Crimp Head to continue to the selected position and disable further Crimp Head action until the E-Stop is reset.	Verify that activating the E-stop allows the Crimp Head to move to the selected position and then disables Crimp Head movement until the E-Stop is reset.			N/A R/W 7/18/91
54	Activation of the E-Stop (HS-07-102C) when the Lid/Delid Device (RT-07-101) Crimp Head is retracting should allow the Crimp Head to continue to the selected position and disable further Crimp Head action until the E-Stop is reset.	Verify that activating the E-stop allows the Crimp Head to move to the selected position and then disables Crimp Head movement until the E-Stop is reset.			N/A R/W 7/18/91
55	Activation of the E-Stop (HS-07-102A) when the Lid/Delid Device (RT-07-101) is rotating should cause the Lid/Delid Device to rotate to the selected position and disable further rotation until the E-Stop is reset.	Verify that activating the E-stop causes the Lid/Delid Device to rotate to the selected position and disables rotation until the E-Stop is reset.	✓		R/W
56	Activation of the E-Stop (HS-07-102B) when the Lid/Delid Device (RT-07-101) is rotating should cause the Lid/Delid Device to rotate to the selected position and disable further rotation until the E-Stop is reset.	Verify that activating the E-stop causes the Lid/Delid Device to complete rotation to the selected position and disables rotation until the E-Stop is reset.	✓		R/W
57	Activation of the E-Stop (HS-07-102C) when the Lid/Delid Device (RT-07-101) is rotating should cause the Lid/Delid Device to rotate to the selected position and disable further rotation until the E-Stop is reset.	Verify that activating the E-stop causes the Lid/Delid Device to complete rotation to the selected position and disables rotation until the E-Stop is reset.	✓		R/W

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Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.43 EXAMINE LLW SORTING GLOVEBOX (GB-07-102) EMERGENCY STOP OPERATION					
58	Activation of the E-Stop (HS-07-102A) when the Lid/Delid Device (RT-07-101) is moving forward should cause the Lid/Delid Device to stop and disable further movement until the E-Stop is reset.	Verify that activating the E-stop causes the Lid/Delid Device to stop moving and disables further movement until the E-Stop is reset.	✓		RIV
59	Activation of the E-Stop (HS-07-102B) when the Lid/Delid Device (RT-07-101) is moving forward should cause the Lid/Delid Device to stop and disable further movement until the E-Stop is reset.	Verify that activating the E-stop causes the Lid/Delid Device to stop moving and disables further movement until the E-Stop is reset.	✓		RIV
* 60	Activation of the E-Stop (HS-07-102C) when the Lid/Delid Device (RT-07-101) is moving forward should cause the Lid/Delid Device to stop and disable further movement until the E-Stop is reset.	Verify that activating the E-stop causes the Lid/Delid Device to stop moving and disables further movement until the E-Stop is reset.		✓	RIV
61	Activation of the E-Stop (HS-07-102A) when the Lid/Delid Device (RT-07-101) is moving in reverse should cause the Lid/Delid Device to stop and disable further movement until the E-Stop is reset.	Verify that activating the E-stop causes the Lid/Delid Device to stop moving and disables further movement until the E-Stop is reset.	✓		RIV
62	Activation of the E-Stop (HS-07-102B) when the Lid/Delid Device (RT-07-101) is moving in reverse should cause the Lid/Delid Device to stop and disable further movement until the E-Stop is reset.	Verify that activating the E-stop causes the Lid/Delid Device to stop moving and disables further movement until the E-Stop is reset.	✓		RIV
* 63	Activation of the E-Stop (HS-07-102C) when the Lid/Delid Device (RT-07-101) is moving in reverse should cause the Lid/Delid Device to stop and disable further movement until the E-Stop is reset.	Verify that activating the E-stop causes the Lid/Delid Device to stop moving and disables further movement until the E-Stop is reset.		✓	RIV
* 64	Activation of the E-Stop (HS-07-102A) when the Lid/Delid Device (RT-07-101) is raising should cause the Lid/Delid Device to stop and disable further movement until the E-Stop is reset.	Verify that activating the E-stop causes the Lid/Delid Device to stop moving and disables further movement until the E-Stop is reset.		✓	RIV
* 65	Activation of the E-Stop (HS-07-102B) when the Lid/Delid Device (RT-07-101) is raising should cause the Lid/Delid Device to stop and disable further movement until the E-Stop is reset.	Verify that activating the E-stop causes the Lid/Delid Device to stop moving and disables further movement until the E-Stop is reset.		✓	RIV

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** TE # 244

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
TEST CASE 13031A-85.43 EXAMINE LLW SORTING GLOVEBOX (GB-07-102) EMERGENCY STOP OPERATION					
* **	66 Activation of the E-Stop (HS-07-102C) when the Lid/Delid Device (RT-07-101) is raising should cause the Lid/Delid Device to stop and disable further movement until the E-Stop is reset.	Verify that activating the E-stop causes the Lid/Delid Device to stop moving and disables further movement until the E-Stop is reset.		✓	R/W
**	67 Activation of the E-Stop (HS-07-102A) when the Lid/Delid Device (RT-07-101) is moving lowering should cause the Lid/Delid Device to stop and disable further movement until the E-Stop is reset.	Verify that activating the E-stop causes the Lid/Delid Device to stop moving and disables further movement until the E-Stop is reset.		✓	R/W
**	68 Activation of the E-Stop (HS-07-102B) when the Lid/Delid Device (RT-07-101) is moving lowering should cause the Lid/Delid Device to stop and disable further movement until the E-Stop is reset.	Verify that activating the E-stop causes the Lid/Delid Device to stop moving and disables further movement until the E-Stop is reset.		✓	R/W
* **	69 Activation of the E-Stop (HS-07-102C) when the Lid/Delid Device (RT-07-101) is moving lowering should cause the Lid/Delid Device to stop and disable further movement until the E-Stop is reset.	Verify that activating the E-stop causes the Lid/Delid Device to stop moving and disables further movement until the E-Stop is reset.		✓	R/W
	70 The Lid/Delid Device must retain drum lid vacuum even during activation and reset of the E-Stop (HS-07-102A).	Verify vacuum is retained against a drum lid during E-Stop activation and during E-Stop reset.	✓		R/W
	71 The Lid/Delid Device must retain drum lid vacuum even during activation and reset of the E-Stop (HS-07-102B).	Verify vacuum is retained against a drum lid during E-Stop activation and during E-Stop reset.	✓		R/W
*	72 The Lid/Delid Device must retain drum lid vacuum even during activation and reset of the E-Stop (HS-07-102C).	Verify vacuum is retained against a drum lid during E-Stop activation and during E-Stop reset.		✓	R/W
	73 Activation of the E-Stop (HS-07-102A) when the Packet X-Ray Shield Door (DO-07-103) is extending should allow the door to continue to the selected position and disable further door action until the E-Stop is reset.	Verify that activating the E-stop allows the door to move to the selected position and then disables door movement until the E-Stop is reset.	✓		R/W
	74 Activation of the E-Stop (HS-07-102B) when the Packet X-Ray Shield Door (DO-07-103) is extending should allow the door to continue to the selected position and disable further door action until the E-Stop is reset.	Verify that activating the E-stop allows the door to move to the selected position and then disables door movement until the E-Stop is reset.	✓		R/W

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 TEST CASE 13031A-85.43 Rev. 0

Step	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass	Fail	Witness (Initial)
TEST CASE 13031A-85.43 EXAMINE LLW SORTING GLOVEBOX (GB-07-102) EMERGENCY STOP OPERATION					
75	Activation of the E-Stop (HS-07-102C) when the Packet X-Ray Shield Door (DO-07-103) is extending should allow the door to continue to the selected position and disable further door action until the E-Stop is reset.	Verify that activating the E-stop allows the door to move to the selected position and then disables door movement until the E-Stop is reset.		✓	RW
76	Activation of the E-Stop (HS-07-102A) when the Packet X-Ray Shield Door (DO-07-103) is retracting should allow the door to continue to the selected position and disable further door action until the E-Stop is reset.	Verify that activating the E-stop allows the door to move to the selected position and then disables door movement until the E-Stop is reset.	✓		RW
77	Activation of the E-Stop (HS-07-102B) when the Packet X-Ray Shield Door (DO-07-103) is retracting should allow the door to continue to the selected position and disable further door action until the E-Stop is reset.	Verify that activating the E-stop allows the door to move to the selected position and then disables door movement until the E-Stop is reset.	✓		RW
78	Activation of the E-Stop (HS-07-102C) when the Packet X-Ray Shield Door (DO-07-103) is retracting should allow the door to continue to the selected position and disable further door action until the E-Stop is reset.	Verify that activating the E-stop allows the door to move to the selected position and then disables door movement until the E-Stop is reset.		✓	RW
79	Activation of the E-Stop (HS-07-102A) when the Packet X-Ray Tray (XX-07-101) is extending should allow the tray to continue to the selected position and disable further tray action until the E-Stop is reset.	Verify that activating the E-stop allows the tray to move to the selected position and then disables tray movement until the E-Stop is reset.	✓		RW
80	Activation of the E-Stop (HS-07-102B) when the Packet X-Ray Tray (XX-07-101) is extending should allow the tray to continue to the selected position and disable further tray action until the E-Stop is reset.	Verify that activating the E-stop allows the tray to move to the selected position and then disables tray movement until the E-Stop is reset.	✓		RW
81	Activation of the E-Stop (HS-07-102C) when the Packet X-Ray Tray (XX-07-101) is extending should allow the tray to continue to the selected position and disable further tray action until the E-Stop is reset.	Verify that activating the E-stop allows the tray to move to the selected position and then disables tray movement until the E-Stop is reset.		✓	RW
82	Activation of the E-Stop (HS-07-102A) when the Packet X-Ray Tray (XX-07-101) is retracting should allow the tray to continue to the selected position and disable further tray action until the E-Stop is reset.	Verify that activating the E-stop allows the tray to move to the selected position and then disables tray movement until the E-Stop is reset.	✓		RW

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Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.43 EXAMINE LLW SORTING GLOVEBOX (GB-07-102) EMERGENCY STOP OPERATION					
83	Activation of the E-Stop (HS-07-102B) when the Packet X-Ray Tray (XX-07-101) is retracting should allow the tray to continue to the selected position and disable further tray action until the E-Stop is reset.	Verify that activating the E-stop allows the tray to move to the selected position and then disables tray movement until the E-Stop is reset.	✓		R/W
84	Activation of the E-Stop (HS-07-102C) when the Packet X-Ray Tray (XX-07-101) is retracting should allow the tray to continue to the selected position and disable further tray action until the E-Stop is reset.	Verify that activating the E-stop allows the tray to move to the selected position and then disables tray movement until the E-Stop is reset.		✓	R/W
85	Activation of the E-Stop (HS-07-102A) when the Sorting Table (ST-07-101) is raising should cause the table to stop, hold in place, and disable further table movement until the E-Stop is reset.	Verify that activating the E-stop causes the table to stop, hold in place, and disables table movement until the E-Stop is reset.	✓		R/W
86	Activation of the E-Stop (HS-07-102B) when the Sorting Table (ST-07-101) is raising should cause the table to stop, hold in place, and disable further table movement until the E-Stop is reset.	Verify that activating the E-stop causes the table to stop, hold in place, and disables table movement until the E-Stop is reset.	✓		R/W
87	Activation of the E-Stop (HS-07-102C) when the Sorting Table (ST-07-101) is raising should cause the table to stop, hold in place, and disable further table movement until the E-Stop is reset.	Verify that activating the E-stop causes the table to stop, hold in place, and disables table movement until the E-Stop is reset.	✓		R/W
88	Activation of the E-Stop (HS-07-102A) when the Sorting Table (ST-07-101) is lowering should cause the table to stop, hold in place, and disable further table movement until the E-Stop is reset.	Verify that activating the E-stop causes the table to stop, hold in place, and disables table movement until the E-Stop is reset.	✓		R/W
89	Activation of the E-Stop (HS-07-102B) when the Sorting Table (ST-07-101) is lowering should cause the table to stop, hold in place, and disable further table movement until the E-Stop is reset.	Verify that activating the E-stop causes the table to stop, hold in place, and disables table movement until the E-Stop is reset.	✓		R/W
90	Activation of the E-Stop (HS-07-102C) when the Sorting Table (ST-07-101) is lowering should cause the table to stop, hold in place, and disable further table movement until the E-Stop is reset.	Verify that activating the E-stop causes the table to stop, hold in place, and disables table movement until the E-Stop is reset.	✓		R/W

X TE #246

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
TEST CASE 13031A-85.43 EXAMINE LLW SORTING GLOVEBOX (GB-07-102) EMERGENCY STOP OPERATION					
91	Activation of the E-Stop (HS-07-102A) when the Sorting Table (ST-07-101) is extending should cause the table to stop, hold in place, and disable further table movement until the E-Stop is reset.	Verify that activating the E-stop causes the table to stop, hold in place, and disables table movement until the E-Stop is reset.	✓		R/V
92	Activation of the E-Stop (HS-07-102B) when the Sorting Table (ST-07-101) is extending should cause the table to stop, hold in place, and disable further table movement until the E-Stop is reset.	Verify that activating the E-stop causes the table to stop, hold in place, and disables table movement until the E-Stop is reset.	✓		R/V
X 93	Activation of the E-Stop (HS-07-102C) when the Sorting Table (ST-07-101) is extending should cause the table to stop, hold in place, and disable further table movement until the E-Stop is reset.	Verify that activating the E-stop causes the table to stop, hold in place, and disables table movement until the E-Stop is reset.		✓	R/V
94	Activation of the E-Stop (HS-07-102A) when the Sorting Table (ST-07-101) is retracting should cause the table to stop, hold in place, and disable further table movement until the E-Stop is reset.	Verify that activating the E-stop causes the table to stop, hold in place, and disables table movement until the E-Stop is reset.	✓		R/V
95	Activation of the E-Stop (HS-07-102B) when the Sorting Table (ST-07-101) is retracting should cause the table to stop, hold in place, and disable further table movement until the E-Stop is reset.	Verify that activating the E-stop causes the table to stop, hold in place, and disables table movement until the E-Stop is reset.	✓		R/V
X 96	Activation of the E-Stop (HS-07-102C) when the Sorting Table (ST-07-101) is retracting should cause the table to stop, hold in place, and disable further table movement until the E-Stop is reset.	Verify that activating the E-stop causes the table to stop, hold in place, and disables table movement until the E-Stop is reset.		✓	R/V
97	Activation of the E-Stop (HS-07-102D) when the Bagless Transfer Port (DO-07-105) is opening should cause the port to stop, hold in place, and disable further port movement until the E-Stop is reset.	Verify that activating the E-stop causes the port to stop, hold in place, and disables port movement until the E-Stop is reset.	✓		R/V
98	Activation of the E-Stop (HS-07-102D) when the Bagless Transfer Port (DO-07-105) is closing should cause the port to stop, hold in place, and disable further port movement until the E-Stop is reset.	Verify that activating the E-stop causes the port to stop, hold in place, and disables port movement until the E-Stop is reset.	✓		R/V

X TE#246

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.43 EXAMINE LLW SORTING GLOVEBOX (GB-07-102) EMERGENCY STOP OPERATION					
99 XX T	Resetting the Local E-Stops (HS-07-102A, HS-07-102B, HS-07-102C, HS-07-102D), in all cases tested, must result in continued, normal equipment operation and completion of all automatic sequences without manual intervention. <i>DD-07-105 and RT-07-101 do not continue in Auto sequence</i>	For all test steps, verify that all automatic sequences are completed correctly without manual intervention, after an E-Stop has been activated and reset during the automatic sequence.		✓	P/V
100	Place all items in the LLW Sorting Glovebox (GB-07-102) in initialized, parked condition. Please refer to the "Setup" section of this test procedure for additional details.	Verify that all glovebox items are parked and initialized.	✓		P/V

*** TE #243

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
TEST CASE 13031A-85.43 EXAMINE LLW SORTING GLOVEBOX (GB-07-102) EMERGENCY STOP OPERATION					
Examine LLW Sorting Glovebox Maintenance Mode Local Emergency Stop					
101	NOTE: The following test case steps are "generic steps" that will be performed for each applicable local emergency stop.	Verify that the note has been reviewed.	✓		R/W
102	NOTE: Emergency Stop is abbreviated as E-Stop in this test procedure.	Verify that the test procedure conventions have been reviewed.	✓		R/W
103	NOTE: To conclusively document test results, video recording must be used when this section of testing is performed.	Verify that a video recorder is available, with tape and with battery.			N/A R/W 2/28/93
104	Place all items in the LLW Sorting Glovebox (GB-07-102) in initialized, parked condition. Please refer to the "Setup" section of this test procedure for additional details.	Verify that all glovebox items are parked and initialized.	✓		R/W
105	Place the LLW Sorting Glovebox in Maintenance Mode. All test case steps must be performed with the LLW Sorting Glovebox in Maintenance Mode.	Verify that the LLW Sorting Glovebox is in Maintenance Mode.	✓		R/W
106	Activation of the E-Stop (HS-07-102A) should disable the following items until the E-Stop is reset: Sorting Table (ST-07-101) Drum Tipper (DH-07-103) Transfer Car (TC-07-101) Lid/Delid Fixture (RT-07-101) X-Ray Shield Door (DO-07-103) X-Ray Tray (XX-07-101)	Verify that activating the E-stop disables all operations for the items listed until the E-Stop is reset.	✓		R/W
107	Activation of the E-Stop (HS-07-102B) should disable the following items until the E-Stop is reset: Sorting Table (ST-07-101) Drum Tipper (DH-07-103) Transfer Car (TC-07-101) Lid/Delid Fixture (RT-07-101) X-Ray Shield Door (DO-07-103) X-Ray Tray (XX-07-101)	Verify that activating the E-stop disables all operations for the items listed until the E-Stop is reset.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass	Fail	Witness (initial)
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TEST CASE 13031A-85.43 EXAMINE LLW SORTING GLOVEBOX (GB-07-102) EMERGENCY STOP OPERATION

108	<p>Activation of the E-Stop (HS-07-102C) should disable the following items until the E-Stop is reset:</p> <ul style="list-style-type: none"> Sorting Table (ST-07-101) Drum Tipper (DH-07-103) Transfer Car (TC-07-101) Lid/Deild Fixture (RT-07-101) X-Ray Shield Door (DO-07-103) X-Ray Tray (XX-07-101) 	Verify that activating the E-Stop disables all operations for the items listed until the E-Stop is reset.	✓		RV
109	<p>Activation of the E-Stop (HS-07-102D) should disable the following items until the E-Stop is reset:</p> <ul style="list-style-type: none"> Bagless Transfer Port (DO-07-105) 	Verify that activating the E-Stop disables all operations for the items listed until the E-Stop is reset.	✓		RV
110/	<p>Activation of the E-Stop (HS-07-102A) when the Drum Tipper (DH-07-103) is raising must cause the Drum Tipper to stop, hold in place, and disable further Drum Tipper movement until the E-Stop is reset.</p>	Verify that activating the E-Stop causes the Drum Tipper to stop raising, hold in place, and disables Drum Tipper operations until the E-Stop is reset.	✓		RV
111	<p>Activation of the E-Stop (HS-07-102B) when the Drum Tipper (DH-07-103) is raising must cause the Drum Tipper to stop, hold in place, and disable further Drum Tipper movement until the E-Stop is reset.</p>	Verify that activating the E-Stop causes the Drum Tipper to stop raising, hold in place, and disables Drum Tipper operations until the E-Stop is reset.	✓		RV
112	<p>Activation of the E-Stop (HS-07-102C) when the Drum Tipper (DH-07-103) is raising must cause the Drum Tipper to stop, hold in place, and disable further Drum Tipper movement until the E-Stop is reset.</p>	Verify that activating the E-Stop causes the Drum Tipper to stop raising, hold in place, and disables Drum Tipper operations until the E-Stop is reset.	✓		RV
113	<p>Activation of the E-Stop (HS-07-102A) when the Drum Tipper (DH-07-103) is lowering must cause the Drum Tipper to stop, hold in place, and disable further Drum Tipper movement until the E-Stop is reset.</p>	Verify that activating the E-Stop causes the Drum Tipper to stop lowering, hold in place, and disables Drum Tipper operations until the E-Stop is reset.	✓		RV
114	<p>Activation of the E-Stop (HS-07-102B) when the Drum Tipper (DH-07-103) is lowering must cause the Drum Tipper to stop, hold in place, and disable further Drum Tipper movement until the E-Stop is reset.</p>	Verify that activating the E-Stop causes the Drum Tipper to stop lowering, hold in place, and disables Drum Tipper operations until the E-Stop is reset.	✓		RV
115	<p>Activation of the E-Stop (HS-07-102C) when the Drum Tipper (DH-07-103) is lowering must cause the Drum Tipper to stop, hold in place, and disable further Drum Tipper movement until the E-Stop is reset.</p>	Verify that activating the E-Stop causes the Drum Tipper to stop lowering, hold in place, and disables Drum Tipper operations until the E-Stop is reset.	✓		RV

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass	Fail	Witness (Initial)
TEST CASE 13031A-85.43 EXAMINE LLW SORTING GLOVEBOX (GB-07-102) EMERGENCY STOP OPERATION					
116	Activation of the E-Stop (HS-07-102A) when the Drum Tipper (DH-07-103) Grab is closing must cause the Drum Tipper Grab to fully close , hold in place, and disable further Drum Tipper movement until the E-Stop is reset. <i>STOP 9/28/97</i> <i>R/W 9/28/97</i>	Verify that activating the E-stop causes the Drum Tipper Grab to continue until fully closed , hold in place, and disables Drum Tipper operations until the E-Stop is reset.	✓		<i>R/W</i>
117	Activation of the E-Stop (HS-07-102B) when the Drum Tipper (DH-07-103) Grab is closing must cause the Drum Tipper Grab to fully close , hold in place, and disable further Drum Tipper movement until the E-Stop is reset. <i>STOP 9/28/97</i> <i>R/W 9/28/97</i>	Verify that activating the E-stop causes the Drum Tipper Grab to continue until fully closed , hold in place, and disables Drum Tipper operations until the E-Stop is reset.	✓		<i>R/W</i>
118	Activation of the E-Stop (HS-07-102C) when the Drum Tipper (DH-07-103) Grab is closing must cause the Drum Tipper Grab to fully close , hold in place, and disable further Drum Tipper movement until the E-Stop is reset. <i>STOP 9/28/97</i> <i>R/W 9/28/97</i>	Verify that activating the E-stop causes the Drum Tipper Grab to continue until fully closed , hold in place, and disables Drum Tipper operations until the E-Stop is reset.	✓		<i>R/W</i>
119	Activation of the E-Stop (HS-07-102A) when the Drum Tipper (DH-07-103) Grab is opening must cause the Drum Tipper Grab to fully close , hold in place, and disable further Drum Tipper movement until the E-Stop is reset. <i>STOP 9/28/97</i> <i>R/W 9/28/97</i>	Verify that activating the E-stop causes the Drum Tipper Grab to continue until fully open , hold in place, and disables Drum Tipper operations until the E-Stop is reset.	✓		<i>R/W</i>
120	Activation of the E-Stop (HS-07-102B) when the Drum Tipper (DH-07-103) Grab is opening must cause the Drum Tipper Grab to fully close , hold in place, and disable further Drum Tipper movement until the E-Stop is reset. <i>STOP 9/28/97</i> <i>R/W 9/28/97</i>	Verify that activating the E-stop causes the Drum Tipper Grab to continue until fully open , hold in place, and disables Drum Tipper operations until the E-Stop is reset.	✓		<i>R/W</i>
121	Activation of the E-Stop (HS-07-102C) when the Drum Tipper (DH-07-103) Grab is opening must cause the Drum Tipper Grab to fully close , hold in place, and disable further Drum Tipper movement until the E-Stop is reset. <i>STOP 9/28/97</i> <i>R/W 9/28/97</i>	Verify that activating the E-stop causes the Drum Tipper Grab to continue until fully open , hold in place, and disables Drum Tipper operations until the E-Stop is reset.	✓		<i>R/W</i>
122	Activation of the E-Stop (HS-07-102A) should stop Drum Tipper (DH-07-103) rotation until the E-Stop is reset.	Verify that activating the E-stop causes the Drum Tipper to hold in place and disables Drum Tipper rotation until the E-Stop is reset.	✓		<i>R/W</i>

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Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.43 EXAMINE LLW SORTING GLOVEBOX (GB-07-102) EMERGENCY STOP OPERATION					
123	Activation of the E-Stop (HS-07-102B) should stop Drum Tipper (DH-07-103) rotation until the E-Stop is reset.	Verify that activating the E-stop causes the Drum Tipper to hold in place and disables Drum Tipper rotation until the E-Stop is reset.	✓		R/W
X 124	Activation of the E-Stop (HS-07-102B) should stop Drum Tipper (DH-07-103) rotation until the E-Stop is reset. <i>R/W 8/28/97</i>	Verify that activating the E-stop causes the Drum Tipper to hold in place and disables Drum Tipper rotation until the E-Stop is reset.		✓	R/W
125	Activation of the E-Stop (HS-07-102A) when the Transfer Car is moving forward should stop the Transfer Car (TC-07-101) and disable further Transfer Car movement until the E-Stop is reset.	Verify that activating the E-stop causes the Transfer Car to stop, hold in place, and disables Transfer Car movement until the E-Stop is reset.	✓		R/W
126	Activation of the E-Stop (HS-07-102B) is moving forward should stop the Transfer Car (TC-07-101) and disable further Transfer Car movement until the E-Stop is reset.	Verify that activating the E-stop causes the Transfer Car to stop, hold in place, and disables Transfer Car movement until the E-Stop is reset.	✓		R/W
127	Activation of the E-Stop (HS-07-102C) is moving forward should stop the Transfer Car (TC-07-101) and disable further Transfer Car movement until the E-Stop is reset.	Verify that activating the E-stop causes the Transfer Car to stop, hold in place, and disables Transfer Car movement until the E-Stop is reset.		✓	R/W
128	Activation of the E-Stop (HS-07-102A) when the Transfer Car is moving in reverse should stop the Transfer Car (TC-07-101) and disable further Transfer Car movement until the E-Stop is reset.	Verify that activating the E-stop causes the Transfer Car to stop, hold in place, and disables Transfer Car movement until the E-Stop is reset.	✓		R/W
129	Activation of the E-Stop (HS-07-102B) when the Transfer Car is moving in reverse should stop the Transfer Car (TC-07-101) and disable further Transfer Car movement until the E-Stop is reset.	Verify that activating the E-stop causes the Transfer Car to stop, hold in place, and disables Transfer Car movement until the E-Stop is reset.	✓		R/W
X 130	Activation of the E-Stop (HS-07-102C) when the Transfer Car is moving in reverse should stop the Transfer Car (TC-07-101) and disable further Transfer Car movement until the E-Stop is reset.	Verify that activating the E-stop causes the Transfer Car to stop, hold in place, and disables Transfer Car movement until the E-Stop is reset.		✓	R/W

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Step #	ACCEPTANCE TEST PROCEDURE STEPS	EXPECTED OUTPUT	Pass	Fail	Witness (Initial)
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131	Activation of the E-Stop (HS-07-102A) when the Transfer Car conveyor is energized should stop the Transfer Car (TC-07-101) conveyor and disable further Transfer Car movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Transfer Car conveyor to stop, hold in place, and disables Transfer Car movement until the E-Stop is reset.	✓		RLW
132	should stop the Transfer Car (TC-07-101) conveyor and disable further Transfer Car movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Transfer Car conveyor to stop, hold in place, and disables Transfer Car movement until the E-Stop is reset.	✓		RLW
133	Activation of the E-Stop (HS-07-102C) when the Transfer Car conveyor is energized should stop the Transfer Car (TC-07-101) conveyor and disable further Transfer Car movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Transfer Car conveyor to stop, hold in place, and disables Transfer Car movement until the E-Stop is reset.	✓		RLW
134	Activation of the E-Stop (HS-07-102A) when the Lid/Delid Device (RT-07-101) Saw is energized should stop the Transfer Car (TC-07-101) conveyor and disable further Transfer Car movement until the E-Stop is reset.	Verify that activating the E-Stop causes movement until the E-Stop is reset.	✓		RLW
135	Activation of the E-Stop (HS-07-102B) when the Lid/Delid Device (RT-07-101) Saw is energized should stop the Transfer Car (TC-07-101) conveyor and disable further Transfer Car movement until the E-Stop is reset.	Verify that activating the E-Stop causes movement until the E-Stop is reset.	✓		RLW
136	Activation of the E-Stop (HS-07-102C) when the Lid/Delid Device (RT-07-101) Saw is energized should stop the Transfer Car (TC-07-101) conveyor and disable further Transfer Car movement until the E-Stop is reset.	Verify that activating the E-Stop causes movement until the E-Stop is reset.	✓		RLW
137	Activation of the E-Stop (HS-07-102A) when the Lid/Delid Device (RT-07-101) Saw is energized should stop the Transfer Car (TC-07-101) conveyor and disable further Transfer Car movement until the E-Stop is reset.	Verify that activating the E-Stop causes movement until the E-Stop is reset.	✓		RLW
138	Activation of the E-Stop (HS-07-102B) when the Lid/Delid Device (RT-07-101) Saw is energized should stop the Transfer Car (TC-07-101) conveyor and disable further Transfer Car movement until the E-Stop is reset.	Verify that activating the E-Stop causes movement until the E-Stop is reset.	✓		RLW
139	Activation of the E-Stop (HS-07-102C) when the Lid/Delid Device (RT-07-101) Saw is retracting should stop the Transfer Car (TC-07-101) conveyor and disable further Transfer Car movement until the E-Stop is reset.	Verify that activating the E-Stop causes movement until the E-Stop is reset.	✓		RLW
140	Activation of the E-Stop (HS-07-102A) when the Lid/Delid Device (RT-07-101) Saw is retracting should stop the Transfer Car (TC-07-101) conveyor and disable further Transfer Car movement until the E-Stop is reset.	Verify that activating the E-Stop causes movement until the E-Stop is reset.	✓		RLW

TEST CASE 13031A-85.43 EXAMINE LLW SORTING GLOVEBOX (GB-07-102) EMERGENCY STOP OPERATION

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Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.43 EXAMINE LLW SORTING GLOVEBOX (GB-07-102) EMERGENCY STOP OPERATION					
141	Activation of the E-Stop (HS-07-102B) when the Lid/Delid Device (RT-07-101) Saw is retracting should stop the saw and disable further saw action until the E-Stop is reset.	Verify that activating the E-stop causes the saw to stop retracting and disables saw movement until the E-Stop is reset.	✓		R/V
* 142	Activation of the E-Stop (HS-07-102C) when the Lid/Delid Device (RT-07-101) Saw is retracting should stop the saw and disable further saw action until the E-Stop is reset.	Verify that activating the E-stop causes the saw to stop retracting and disables saw movement until the E-Stop is reset.		✓	R/V
143	Activation of the E-Stop (HS-07-102A) when the Lid/Delid Device (RT-07-101) C-Crimp Magazine Feed is energized should stop the feed motor(s) and disable further feed motor(s) action until the E-Stop is reset.	Verify that activating the E-stop causes the feed motor(s) to stop and disables feed motor(s) movement until the E-Stop is reset.		N/A	N/A
144	Activation of the E-Stop (HS-07-102B) when the Lid/Delid Device (RT-07-101) C-Crimp Magazine Feed is energized should stop the feed motor(s) and disable further feed motor(s) action until the E-Stop is reset.	Verify that activating the E-stop causes the feed motor(s) to stop and disables feed motor(s) movement until the E-Stop is reset.		N/A	N/A
145	Activation of the E-Stop (HS-07-102C) when the Lid/Delid Device (RT-07-101) C-Crimp Magazine Feed is energized should stop the feed motor(s) and disable further feed motor(s) action until the E-Stop is reset.	Verify that activating the E-stop causes the feed motor(s) to stop and disables feed motor(s) movement until the E-Stop is reset.		N/A	N/A
146	Activation of the E-Stop (HS-07-102A) when the Lid/Delid Device (RT-07-101) Crimp Head is crimping should stop the Crimp Head Jaw and disable further movement until the E-Stop is reset.	Verify that activating the E-stop causes the Crimp Jaw to stop and disables Crimp Jaw until the E-Stop is reset.		N/A	N/A
147	Activation of the E-Stop (HS-07-102B) when the Lid/Delid Device (RT-07-101) Crimp Head is crimping should stop the Crimp Head Jaw and disable further movement until the E-Stop is reset.	Verify that activating the E-stop causes the Crimp Jaw to stop and disables Crimp Jaw until the E-Stop is reset.		N/A	N/A
148	Activation of the E-Stop (HS-07-102C) when the Lid/Delid Device (RT-07-101) Crimp Head is crimping should stop the Crimp Head Jaw and disable further movement until the E-Stop is reset.	Verify that activating the E-stop causes the Crimp Jaw to stop and disables Crimp Jaw until the E-Stop is reset.		N/A	N/A
149	Activation of the E-Stop (HS-07-102A) when the Lid/Delid Device (RT-07-101) Crimp Head is extending should allow the Crimp Head to continue to the selected position and disable further Crimp Head action until the E-Stop is reset.	Verify that activating the E-stop allows the Crimp Head to move to the selected position and then disables Crimp Head movement until the E-Stop is reset.		N/A	N/A

#143-154 Crimp Device Deleted From Design

* TE #246

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
TEST CASE 13031A-85.43 EXAMINE LLW SORTING GLOVEBOX (GB-07-102) EMERGENCY STOP OPERATION					
150	Activation of the E-Stop (HS-07-102B) when the Lid/Delid Device (RT-07-101) Crimp Head is extending should allow the Crimp Head to continue to the selected position and disable further Crimp Head action until the E-Stop is reset.	Verify that activating the E-stop allows the Crimp Head to move to the selected position and then disables Crimp Head movement until the E-Stop is reset.			N/A R/W 7/28/92
151	Activation of the E-Stop (HS-07-102C) when the Lid/Delid Device (RT-07-101) Crimp Head is extending should allow the Crimp Head to continue to the selected position and disable further Crimp Head action until the E-Stop is reset.	Verify that activating the E-stop allows the Crimp Head to move to the selected position and then disables Crimp Head movement until the E-Stop is reset.			N/A R/W 7/28/92
152	Activation of the E-Stop (HS-07-102A) when the Lid/Delid Device (RT-07-101) Crimp Head is retracting should allow the Crimp Head to continue to the selected position and disable further Crimp Head action until the E-Stop is reset.	Verify that activating the E-stop allows the Crimp Head to move to the selected position and then disables Crimp Head movement until the E-Stop is reset.			N/A R/W 7/28/92
153	Activation of the E-Stop (HS-07-102B) when the Lid/Delid Device (RT-07-101) Crimp Head is retracting should allow the Crimp Head to continue to the selected position and disable further Crimp Head action until the E-Stop is reset.	Verify that activating the E-stop allows the Crimp Head to move to the selected position and then disables Crimp Head movement until the E-Stop is reset.			N/A R/W 7/28/92
154	Activation of the E-Stop (HS-07-102C) when the Lid/Delid Device (RT-07-101) Crimp Head is retracting should allow the Crimp Head to continue to the selected position and disable further Crimp Head action until the E-Stop is reset.	Verify that activating the E-stop allows the Crimp Head to move to the selected position and then disables Crimp Head movement until the E-Stop is reset.			N/A R/W 7/28/92
155	Activation of the E-Stop (HS-07-102A) when the Lid/Delid Device (RT-07-101) is rotating should cause the Lid/Delid Device to rotate to the selected position and disable further rotation until the E-Stop is reset.	Verify that activating the E-stop causes the Lid/Delid Device to complete rotation to the selected position and disables rotation until the E-Stop is reset.	✓		R/W
156	Activation of the E-Stop (HS-07-102B) when the Lid/Delid Device (RT-07-101) is rotating should cause the Lid/Delid Device to rotate to the selected position and disable further rotation until the E-Stop is reset.	Verify that activating the E-stop causes the Lid/Delid Device to complete rotation to the selected position and disables rotation until the E-Stop is reset.	✓		R/W
157	Activation of the E-Stop (HS-07-102C) when the Lid/Delid Device (RT-07-101) is rotating should cause the Lid/Delid Device to rotate to the selected position and disable further rotation until the E-Stop is reset.	Verify that activating the E-stop causes the Lid/Delid Device to complete rotation to the selected position and disables rotation until the E-Stop is reset.	✓		R/W

* TE # 246

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.43 EXAMINE LLW SORTING GLOVEBOX (GB-07-102) EMERGENCY STOP OPERATION					
158	Activation of the E-Stop (HS-07-102A) when the Lid/Delid Device (RT-07-101) is moving forward should cause the Lid/Delid Device to stop and disable further movement until the E-Stop is reset.	Verify that activating the E-stop causes the Lid/Delid Device to stop moving and disables further movement until the E-Stop is reset.	✓		R/W
159	Activation of the E-Stop (HS-07-102B) when the Lid/Delid Device (RT-07-101) is moving forward should cause the Lid/Delid Device to stop and disable further movement until the E-Stop is reset.	Verify that activating the E-stop causes the Lid/Delid Device to stop moving and disables further movement until the E-Stop is reset.	✓		R/W
X 160	Activation of the E-Stop (HS-07-102C) when the Lid/Delid Device (RT-07-101) is moving forward should cause the Lid/Delid Device to stop and disable further movement until the E-Stop is reset.	Verify that activating the E-stop causes the Lid/Delid Device to stop moving and disables further movement until the E-Stop is reset.		✓	R/W
161	Activation of the E-Stop (HS-07-102A) when the Lid/Delid Device (RT-07-101) is moving in reverse should cause the Lid/Delid Device to stop and disable further movement until the E-Stop is reset.	Verify that activating the E-stop causes the Lid/Delid Device to stop moving and disables further movement until the E-Stop is reset.	✓		R/W
162	Activation of the E-Stop (HS-07-102B) when the Lid/Delid Device (RT-07-101) is moving in reverse should cause the Lid/Delid Device to stop and disable further movement until the E-Stop is reset.	Verify that activating the E-stop causes the Lid/Delid Device to stop moving and disables further movement until the E-Stop is reset.	✓		R/W
X 163	Activation of the E-Stop (HS-07-102C) when the Lid/Delid Device (RT-07-101) is moving in reverse should cause the Lid/Delid Device to stop and disable further movement until the E-Stop is reset.	Verify that activating the E-stop causes the Lid/Delid Device to stop moving and disables further movement until the E-Stop is reset.		✓	R/W
X 164	Activation of the E-Stop (HS-07-102A) when the Lid/Delid Device (RT-07-101) is raising should cause the Lid/Delid Device to stop and disable further movement until the E-Stop is reset.	Verify that activating the E-stop causes the Lid/Delid Device to stop moving and disables further movement until the E-Stop is reset.		✓	R/W
XX 165	Activation of the E-Stop (HS-07-102B) when the Lid/Delid Device (RT-07-101) is raising should cause the Lid/Delid Device to stop and disable further movement until the E-Stop is reset.	Verify that activating the E-stop causes the Lid/Delid Device to stop moving and disables further movement until the E-Stop is reset.		✓	R/W
XX				✓	R/W

* TE #246

* TE #244

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.43 EXAMINE LLW SORTING GLOVEBOX (GB-07-102) EMERGENCY STOP OPERATION					
166 ✕	Activation of the E-Stop (HS-07-102C) when the Lid/Delid Device (RT-07-101) is raising should cause the Lid/Delid Device to stop and disable further movement until the E-Stop is reset.	Verify that activating the E-stop causes the Lid/Delid Device to stop moving and disables further movement until the E-Stop is reset.		✓	R/W
✕✕ 167	Activation of the E-Stop (HS-07-102A) when the Lid/Delid Device (RT-07-101) is moving lowering should cause the Lid/Delid Device to stop and disable further movement until the E-Stop is reset.	Verify that activating the E-stop causes the Lid/Delid Device to stop moving and disables further movement until the E-Stop is reset.		✓	R/W
✕✕ 168	Activation of the E-Stop (HS-07-102B) when the Lid/Delid Device (RT-07-101) is moving lowering should cause the Lid/Delid Device to stop and disable further movement until the E-Stop is reset.	Verify that activating the E-stop causes the Lid/Delid Device to stop moving and disables further movement until the E-Stop is reset.		✓	R/W
✕✕ 169	Activation of the E-Stop (HS-07-102C) when the Lid/Delid Device (RT-07-101) is moving lowering should cause the Lid/Delid Device to stop and disable further movement until the E-Stop is reset.	Verify that activating the E-stop causes the Lid/Delid Device to stop moving and disables further movement until the E-Stop is reset.		✓	R/W
170	The Lid/Delid Device must retain drum lid vacuum even during activation and reset of the E-Stop (HS-07-102A).	Verify vacuum is retained against a drum lid during E-Stop activation and during E-Stop reset.	✓		R/W
171	The Lid/Delid Device must retain drum lid vacuum even during activation and reset of the E-Stop (HS-07-102B).	Verify vacuum is retained against a drum lid during E-Stop activation and during E-Stop reset.	✓		R/W
172 ✕	The Lid/Delid Device must retain drum lid vacuum even during activation and reset of the E-Stop (HS-07-102C).	Verify vacuum is retained against a drum lid during E-Stop activation and during E-Stop reset.		✓	R/W
173	Activation of the E-Stop (HS-07-102A) when the Packet X-Ray Shield Door (DO-07-103) is extending should allow the door to continue to the selected position and disable further door action until the E-Stop is reset.	Verify that activating the E-stop allows the door to move to the selected position and then disables door movement until the E-Stop is reset.	✓		R/W
174	Activation of the E-Stop (HS-07-102B) when the Packet X-Ray Shield Door (DO-07-103) is extending should allow the door to continue to the selected position and disable further door action until the E-Stop is reset.	Verify that activating the E-stop allows the door to move to the selected position and then disables door movement until the E-Stop is reset.	✓		R/W

✕ TE # 246

✕✕ TE # 245

TEST CASE 13031A-85.43 Rev. 0

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.43 EXAMINE LLW SORTING GLOVEBOX (GB-07-102) EMERGENCY STOP OPERATION					
* 175	Activation of the E-Stop (HS-07-102C) when the Packet X-Ray Shield Door (DO-07-103) is extending should allow the door to continue to the selected position and disable further door action until the E-Stop is reset.	Verify that activating the E-stop allows the door to move to the selected position and then disables door movement until the E-Stop is reset.		✓	R/W
176	Activation of the E-Stop (HS-07-102A) when the Packet X-Ray Shield Door (DO-07-103) is retracting should allow the door to continue to the selected position and disable further door action until the E-Stop is reset.	Verify that activating the E-stop allows the door to move to the selected position and then disables door movement until the E-Stop is reset.	✓		R/W
177	Activation of the E-Stop (HS-07-102B) when the Packet X-Ray Shield Door (DO-07-103) is retracting should allow the door to continue to the selected position and disable further door action until the E-Stop is reset.	Verify that activating the E-stop allows the door to move to the selected position and then disables door movement until the E-Stop is reset.	✓		R/W
* 178	Activation of the E-Stop (HS-07-102C) when the Packet X-Ray Shield Door (DO-07-103) is retracting should allow the door to continue to the selected position and disable further door action until the E-Stop is reset.	Verify that activating the E-stop allows the door to move to the selected position and then disables door movement until the E-Stop is reset.		✓	R/W
179	Activation of the E-Stop (HS-07-102A) when the Packet X-Ray Tray (XX-07-101) is extending should allow the tray to continue to the selected position and disable further tray action until the E-Stop is reset.	Verify that activating the E-stop allows the tray to move to the selected position and then disables tray movement until the E-Stop is reset.	✓		R/W
180	Activation of the E-Stop (HS-07-102B) when the Packet X-Ray Tray (XX-07-101) is extending should allow the tray to continue to the selected position and disable further tray action until the E-Stop is reset.	Verify that activating the E-stop allows the tray to move to the selected position and then disables tray movement until the E-Stop is reset.	✓		R/W
* 181	Activation of the E-Stop (HS-07-102C) when the Packet X-Ray Tray (XX-07-101) is extending should allow the tray to continue to the selected position and disable further tray action until the E-Stop is reset.	Verify that activating the E-stop allows the tray to move to the selected position and then disables tray movement until the E-Stop is reset.		✓	R/W
182	Activation of the E-Stop (HS-07-102A) when the Packet X-Ray Tray (XX-07-101) is retracting should allow the tray to continue to the selected position and disable further tray action until the E-Stop is reset.	Verify that activating the E-stop allows the tray to move to the selected position and then disables tray movement until the E-Stop is reset.	✓		R/W

* TE #246

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
TEST CASE 13031A-85.43 EXAMINE LLW SORTING GLOVEBOX (GB-07-102) EMERGENCY STOP OPERATION					
183	Activation of the E-Stop (HS-07-102B) when the Packet X-Ray Tray (XX-07-101) is retracting should allow the tray to continue to the selected position and disable further tray action until the E-Stop is reset.	Verify that activating the E-stop allows the tray to move to the selected position and then disables tray movement until the E-Stop is reset.	✓		R/W
X 184	Activation of the E-Stop (HS-07-102C) when the Packet X-Ray Tray (XX-07-101) is retracting should allow the tray to continue to the selected position and disable further tray action until the E-Stop is reset.	Verify that activating the E-stop allows the tray to move to the selected position and then disables tray movement until the E-Stop is reset.		✓	R/W
185	Activation of the E-Stop (HS-07-102A) when the Sorting Table (ST-07-101) is raising should cause the table to stop, hold in place, and disable further table movement until the E-Stop is reset.	Verify that activating the E-stop causes the table to stop, hold in place, and disables table movement until the E-Stop is reset.	✓		R/W
186	Activation of the E-Stop (HS-07-102B) when the Sorting Table (ST-07-101) is raising should cause the table to stop, hold in place, and disable further table movement until the E-Stop is reset.	Verify that activating the E-stop causes the table to stop, hold in place, and disables table movement until the E-Stop is reset.	✓		R/W
187	Activation of the E-Stop (HS-07-102C) when the Sorting Table (ST-07-101) is raising should cause the table to stop, hold in place, and disable further table movement until the E-Stop is reset.	Verify that activating the E-stop causes the table to stop, hold in place, and disables table movement until the E-Stop is reset.	✓		R/W
188	Activation of the E-Stop (HS-07-102A) when the Sorting Table (ST-07-101) is lowering should cause the table to stop, hold in place, and disable further table movement until the E-Stop is reset.	Verify that activating the E-stop causes the table to stop, hold in place, and disables table movement until the E-Stop is reset.	✓		R/W
189	Activation of the E-Stop (HS-07-102B) when the Sorting Table (ST-07-101) is lowering should cause the table to stop, hold in place, and disable further table movement until the E-Stop is reset.	Verify that activating the E-stop causes the table to stop, hold in place, and disables table movement until the E-Stop is reset.	✓		R/W
190	Activation of the E-Stop (HS-07-102C) when the Sorting Table (ST-07-101) is lowering should cause the table to stop, hold in place, and disable further table movement until the E-Stop is reset.	Verify that activating the E-stop causes the table to stop, hold in place, and disables table movement until the E-Stop is reset.	✓		R/W

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Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
TEST CASE 13031A-85.43 EXAMINE LLW SORTING GLOVEBOX (GB-07-102) EMERGENCY STOP OPERATION					
191	Activation of the E-Stop (HS-07-102A) when the Sorting Table (ST-07-101) is extending should cause the table to stop, hold in place, and disable further table movement until the E-Stop is reset.	Verify that activating the E-stop causes the table to stop, hold in place, and disables table movement until the E-Stop is reset.	✓		R/W
192	Activation of the E-Stop (HS-07-102B) when the Sorting Table (ST-07-101) is extending should cause the table to stop, hold in place, and disable further table movement until the E-Stop is reset.	Verify that activating the E-stop causes the table to stop, hold in place, and disables table movement until the E-Stop is reset.	✓		R/W
X 193	Activation of the E-Stop (HS-07-102C) when the Sorting Table (ST-07-101) is extending should cause the table to stop, hold in place, and disable further table movement until the E-Stop is reset.	Verify that activating the E-stop causes the table to stop, hold in place, and disables table movement until the E-Stop is reset.		✓	R/W
194	Activation of the E-Stop (HS-07-102A) when the Sorting Table (ST-07-101) is retracting should cause the table to stop, hold in place, and disable further table movement until the E-Stop is reset.	Verify that activating the E-stop causes the table to stop, hold in place, and disables table movement until the E-Stop is reset.	✓		R/W
195	Activation of the E-Stop (HS-07-102B) when the Sorting Table (ST-07-101) is retracting should cause the table to stop, hold in place, and disable further table movement until the E-Stop is reset.	Verify that activating the E-stop causes the table to stop, hold in place, and disables table movement until the E-Stop is reset.	✓		R/W
X 196	Activation of the E-Stop (HS-07-102C) when the Sorting Table (ST-07-101) is retracting should cause the table to stop, hold in place, and disable further table movement until the E-Stop is reset.	Verify that activating the E-stop causes the table to stop, hold in place, and disables table movement until the E-Stop is reset.		✓	R/W
197	Activation of the E-Stop (HS-07-102D) when the Bagless Transfer Port (DO-07-105) is opening should cause the port to stop, hold in place, and disable further port movement until the E-Stop is reset.	Verify that activating the E-stop causes the port to stop, hold in place, and disables port movement until the E-Stop is reset.	✓		R/W
198	Activation of the E-Stop (HS-07-102D) when the Bagless Transfer Port (DO-07-105) is closing should cause the port to stop, hold in place, and disable further port movement until the E-Stop is reset.	Verify that activating the E-stop causes the port to stop, hold in place, and disables port movement until the E-Stop is reset.	✓		R/W

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Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
199	TEST CASE 13031A-85.43 EXAMINE LLW SORTING GLOVEBOX (GB-07-102) EMERGENCY STOP OPERATION Place all items in the LLW Sorting Glovebox (GB-07-102) in initialized, parked condition. Please refer to the "Setup" section of this test procedure for additional details.	Verify that all glovebox items are parked and initialized.	✓		AK

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.43: EXAMINE LLW SORTING GLOVEBOX (GB-07-102) EMERGENCY STOP OPERATION					
Examine LLW Sorting Glovebox Automatic Mode Emergency Stop					
200	NOTE: The following test case steps are "generic steps" that will be performed for each applicable local emergency stop.	Verify that the note has been reviewed.	✓		R/W
201	NOTE: Emergency Stop is abbreviated as E-Stop in this test procedure.	Verify that the test procedure conventions have been reviewed.	✓		R/W
202	NOTE: To conclusively document test results, video recording must be used when this section of testing is performed.	Verify that a video recorder is available, with tape and with battery.	R/W	2/28/97	N/A
203	Place all items in the LLW Sorting Glovebox (GB-07-102) in initialized, parked condition. Please refer to the "Setup" section of this test procedure for additional details.	Verify that all glovebox items are parked and initialized.	✓		R/W
204	Place the LLW Sorting Glovebox in Automatic Mode. Although test step setup may require maintenance mode operation, all test case steps must be performed with the LLW Sorting Glovebox in Automatic Mode.	Verify that the LLW Sorting Glovebox is in Automatic Mode.	✓		R/W
205	Activation of the E-Stop (HS-07-315) should disable the following items until the E-Stop is reset: Bagless Transfer Port (DO-07-105) Sorting Table (ST-07-101) Drum Tipper (DH-07-103) Transfer Car (TC-07-101) Lid/Delid Fixture (RT-07-101) X-Ray Shield Door (DO-07-103) X-Ray Tray (XX-07-101)	Verify that activating the E-stop disables all operations for the items listed until the E-Stop is reset.	✓		R/W
206	Activation of the E-Stop (HS-07-315) when the Drum Tipper (DH-07-103) is raising must cause the Drum Tipper to stop, hold in place, and disable further Drum Tipper movement until the E-Stop is reset.	Verify that activating the E-stop causes the Drum Tipper to stop raising, hold in place, and disables Drum Tipper operations until the E-Stop is reset.	✓		R/W
207	Activation of the E-Stop (HS-07-315) when the Drum Tipper (DH-07-103) is lowering must cause the Drum Tipper to stop, hold in place, and disable further Drum Tipper movement until the E-Stop is reset.	Verify that activating the E-stop causes the Drum Tipper to stop lowering, hold in place, and disables Drum Tipper operations until the E-Stop is reset.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.43 EXAMINE LLW SORTING GLOVEBOX (GB-07-102) EMERGENCY STOP OPERATION					
208	Activation of the E-Stop (HS-07-315) when the Drum Tipper (DH-07-103) Grab is closing must cause the Drum Tipper Grab to fully close ^{stop} , hold in place, and disable further Drum Tipper movement until the E-Stop is reset. <i>R/W 7/15/07</i>	Verify that activating the E-stop causes the Drum Tipper Grab to continue ^{stop} until fully closed , hold in place, and disables Drum Tipper operations until the E-Stop is reset.	✓		R/W
209	Activation of the E-Stop (HS-07-315) when the Drum Tipper (DH-07-103) Grab is opening must cause the Drum Tipper Grab to fully close ^{stop} , hold in place, and disable further Drum Tipper movement until the E-Stop is reset. <i>R/W 7/28/07</i>	Verify that activating the E-stop causes the Drum Tipper Grab to continue ^{stop} until fully open , hold in place, and disables Drum Tipper operations until the E-Stop is reset.	✓		R/W
210	Activation of the E-Stop (HS-07-315) should stop Drum Tipper (DH-07-103) rotation until the E-Stop is reset.	Verify that activating the E-stop causes the Drum Tipper to hold in place and disables Drum Tipper rotation until the E-Stop is reset.	✓		R/W
211	Activation of the E-Stop (HS-07-315) when the Transfer Car is moving forward should stop the Transfer Car (TC-07-101) and disable further Transfer Car movement until the E-Stop is reset.	Verify that activating the E-stop causes the Transfer Car to stop, hold in place, and disables Transfer Car movement until the E-Stop is reset.	✓		R/W
212	Activation of the E-Stop (HS-07-315) when the Transfer Car is moving in reverse should stop the Transfer Car (TC-07-101) and disable further Transfer Car movement until the E-Stop is reset.	Verify that activating the E-stop causes the Transfer Car to stop, hold in place, and disables Transfer Car movement until the E-Stop is reset.	✓		R/W
213	Activation of the E-Stop (HS-07-315) when the Transfer Car conveyor is energized should stop the Transfer Car (TC-07-101) conveyor and disable further Transfer Car movement until the E-Stop is reset.	Verify that activating the E-stop causes the Transfer Car conveyor to stop, hold in place, and disables Transfer Car movement until the E-Stop is reset.	✓		R/W
214	Activation of the E-Stop (HS-07-315) when the Lid/Delid Device (RT-07-101) Saw is energized should stop the saw and disable further saw action until the E-Stop is reset.	Verify that activating the E-stop causes the saw to stop and disables saw movement until the E-Stop is reset.	✓		R/W
215	Activation of the E-Stop (HS-07-315) when the Lid/Delid Device (RT-07-101) Saw is extending should stop the saw and disable further saw action until the E-Stop is reset.	Verify that activating the E-stop causes the saw to stop extending and disables saw movement until the E-Stop is reset.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.43 EXAMINE LLW SORTING GLOVEBOX (GB-07-102) EMERGENCY STOP OPERATION					
216	Activation of the E-Stop (HS-07-315) when the Lid/Delid Device (RT-07-101) Saw is retracting should stop the saw and disable further saw action until the E-Stop is reset.	Verify that activating the E-stop causes the saw to stop retracting and disables saw movement until the E-Stop is reset.	✓		R/W
217	Activation of the E-Stop (HS-07-315) when the Lid/Delid Device (RT-07-101) C-Crimp Magazine Feed is energized should stop the feed motor(s) and disable further feed motor(s) action until the E-Stop is reset.	Verify that activating the E-stop causes the feed motor(s) to stop and disables feed motor(s) movement until the E-Stop is reset.			N/A
218	Activation of the E-Stop (HS-07-315) when the Lid/Delid Device (RT-07-101) Crimp Head is crimping should stop the Crimp Head Jaw and disable further movement until the E-Stop is reset.	Verify that activating the E-stop causes the Crimp Jaw to stop and disables Crimp Jaw until the E-Stop is reset.			N/A
219	Activation of the E-Stop (HS-07-315) when the Lid/Delid Device (RT-07-101) Crimp Head is extending should allow the Crimp Head to continue to the selected position and disable further Crimp Head action until the E-Stop is reset.	Verify that activating the E-stop allows the Crimp Head to move to the selected position and then disables Crimp Head movement until the E-Stop is reset.			N/A
220	Activation of the E-Stop (HS-07-315) when the Lid/Delid Device (RT-07-101) Crimp Head is retracting should allow the Crimp Head to continue to the selected position and disable further Crimp Head action until the E-Stop is reset.	Verify that activating the E-stop allows the Crimp Head to move to the selected position and then disables Crimp Head movement until the E-Stop is reset.			N/A
221	Activation of the E-Stop (HS-07-315) when the Lid/Delid Device (RT-07-101) is rotating should cause the Lid/Delid Device to rotate to the selected position and disable further rotation until the E-Stop is reset.	Verify that activating the E-stop causes the Lid/Delid Device to complete rotation to the selected position and disables rotation until the E-Stop is reset.	✓		N/W
222	Activation of the E-Stop (HS-07-315) when the Lid/Delid Device (RT-07-101) is moving forward should cause the Lid/Delid Device to stop and disable further movement until the E-Stop is reset.	Verify that activating the E-stop causes the Lid/Delid Device to stop moving and disables further movement until the E-Stop is reset.	✓		N/W
223	Activation of the E-Stop (HS-07-315) when the Lid/Delid Device (RT-07-101) is moving in reverse should cause the Lid/Delid Device to stop and disable further movement until the E-Stop is reset.	Verify that activating the E-stop causes the Lid/Delid Device to stop moving and disables further movement until the E-Stop is reset.	✓		N/W
224	Activation of the E-Stop (HS-07-315) when the Lid/Delid Device (RT-07-101) is raising should cause the Lid/Delid Device to stop and disable further movement until the E-Stop is reset.	Verify that activating the E-stop causes the Lid/Delid Device to stop moving and disables further movement until the E-Stop is reset.		✓	N/W

*TE# 246
EST CASE 13031A-85.43 Rev. 0

43-30

LLW SORTING GLOVEBOX

217-220 crimpers Deleted

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.43 EXAMINE LLW SORTING GLOVEBOX (GB-07-102) EMERGENCY STOP OPERATION					
X 225	Activation of the E-Stop (HS-07-315) when the Lid/Delid Device (RT-07-101) is moving lowering should cause the Lid/Delid Device to stop and disable further movement until the E-Stop is reset.	Verify that activating the E-stop causes the Lid/Delid Device to stop moving and disables further movement until the E-Stop is reset.			R/W
226	The Lid/Delid Device must retain drum lid vacuum even during activation and reset of the E-Stop (HS-07-315).	Verify vacuum is retained against a drum lid during E-Stop activation and during E-Stop reset.	✓		R/W
227	Activation of the E-Stop (HS-07-315) when the Packet X-Ray Shield Door (DO-07-103) is extending should allow the door to continue to the selected position and disable further door action until the E-Stop is reset.	Verify that activating the E-stop allows the door to move to the selected position and then disables door movement until the E-Stop is reset.	✓		R/W
228	Activation of the E-Stop (HS-07-315) when the Packet X-Ray Shield Door (DO-07-103) is retracting should allow the door to continue to the selected position and disable further door action until the E-Stop is reset.	Verify that activating the E-stop allows the door to move to the selected position and then disables door movement until the E-Stop is reset.	✓		R/W
229	Activation of the E-Stop (HS-07-315) when the Packet X-Ray Tray (XX-07-101) is extending should allow the tray to continue to the selected position and disable further tray action until the E-Stop is reset.	Verify that activating the E-stop allows the tray to move to the selected position and then disables tray movement until the E-Stop is reset.	✓		R/W
230	Activation of the E-Stop (HS-07-315) when the Packet X-Ray Tray (XX-07-101) is retracting should allow the tray to continue to the selected position and disable further tray action until the E-Stop is reset.	Verify that activating the E-stop allows the tray to move to the selected position and then disables tray movement until the E-Stop is reset.	✓		R/W
231	Activation of the E-Stop (HS-07-315) when the Sorting Table (ST-07-101) is raising should cause the table to stop, hold in place, and disable further table movement until the E-Stop is reset.	Verify that activating the E-stop causes the table to stop, hold in place, and disables table movement until the E-Stop is reset.	✓		R/W
232	Activation of the E-Stop (HS-07-315) when the Sorting Table (ST-07-101) is lowering should cause the table to stop, hold in place, and disable further table movement until the E-Stop is reset.	Verify that activating the E-stop causes the table to stop, hold in place, and disables table movement until the E-Stop is reset.	✓		R/W

* TE # 244 245
A/W 9/9/92

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✗	Witness (initial)
TEST CASE 13031A-85.43 EXAMINE LLW SORTING GLOVEBOX (GB-07-102) EMERGENCY STOP OPERATION					
233	Activation of the E-Stop (HS-07-315) when the Sorting Table (ST-07-101) is extending should cause the table to stop, hold in place, and disable further table movement until the E-Stop is reset.	Verify that activating the E-stop causes the table to stop, hold in place, and disables table movement until the E-Stop is reset.	✓		R/W
234	Activation of the E-Stop (HS-07-315) when the Sorting Table (ST-07-101) is retracting should cause the table to stop, hold in place, and disable further table movement until the E-Stop is reset.	Verify that activating the E-stop causes the table to stop, hold in place, and disables table movement until the E-Stop is reset.	✓		R/W
235	Activation of the E-Stop (HS-07-315) when the Bagless Transfer Port (DO-07-105) is opening should cause the port to stop, hold in place, and disable further port movement until the E-Stop is reset.	Verify that activating the E-stop causes the port to stop, hold in place, and disables port movement until the E-Stop is reset.	✓		R/W
236	Activation of the E-Stop (HS-07-315) when the Bagless Transfer Port (DO-07-105) is closing should cause the port to stop, hold in place, and disable further port movement until the E-Stop is reset.	Verify that activating the E-stop causes the port to stop, hold in place, and disables port movement until the E-Stop is reset.	✓		R/W
X 237	Resetting the Local E-Stop (HS-07-315), in all cases tested, must result in continued, normal equipment operation and completion of all automatic sequences without manual intervention.	For all test steps, verify that all automatic sequences are completed correctly without manual intervention, after an E-Stop has been activated and reset during the automatic sequence.		✓	R/W
238	Place all items in the LLW Sorting Glovebox (GB-07-102) in initialized, parked condition. Please refer to the "Setup" section of this test procedure for additional details.	Verify that all glovebox items are parked and initialized.	✓		R/W

* TEST # 243

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
TEST CASE 13031A-85.43 EXAMINE LLW SORTING GLOVEBOX (GB-07-102) EMERGENCY STOP OPERATION					
Examine LLW Sorting Glovebox Maintenance Mode Emergency Stop					
239	NOTE: The following test case steps are "generic steps" that will be performed for each applicable local emergency stop.	Verify that the note has been reviewed.	✓		R/W
240	NOTE: Emergency Stop is abbreviated as E-Stop in this test procedure.	Verify that the test procedure conventions have been reviewed.	✓		R/W
241	Step Deleted				
242	Place all items in the LLW Sorting Glovebox (GB-07-102) in initialized, parked condition. Please refer to the "Setup" section of this test procedure for additional details.	Verify that all glovebox items are parked and initialized.	✓		R/W
243	Place the LLW Sorting Glovebox in Maintenance Mode. All test case steps must be performed with the LLW Sorting Glovebox in Maintenance Mode.	Verify that the LLW Sorting Glovebox is in Maintenance Mode.	✓		R/W
244	Activation of the E-Stop (HS-07-315) should disable the following items until the E-Stop is reset: Bagless Transfer Port (DO-07-105) Sorting Table (ST-07-101) Drum Tipper (DH-07-103) Transfer Car (TC-07-101) Lid/Delid Fixture (RT-07-101) X-Ray Shield Door (DO-07-103) X-Ray Tray (XX-07-101)	Verify that activating the E-stop disables all operations for the items listed until the E-Stop is reset.	✓		R/W
245	Activation of the E-Stop (HS-07-315) when the Drum Tipper (DH-07-103) is raising must cause the Drum Tipper to stop, hold in place, and disable further Drum Tipper movement until the E-Stop is reset.	Verify that activating the E-stop causes the Drum Tipper to stop raising, hold in place, and disables Drum Tipper operations until the E-Stop is reset.	✓		R/W
246	Activation of the E-Stop (HS-07-315) when the Drum Tipper (DH-07-103) is lowering must cause the Drum Tipper to stop, hold in place, and disable further Drum Tipper movement until the E-Stop is reset.	Verify that activating the E-stop causes the Drum Tipper to stop lowering, hold in place, and disables Drum Tipper operations until the E-Stop is reset.	✓		R/W
247	Activation of the E-Stop (HS-07-315) when the Drum Tipper (DH-07-103) Grab is closing must cause the Drum Tipper Grab to fully close, hold in place, and disable further Drum Tipper movement until the E-Stop is reset. <i>Stop closing</i> <i>R/W 7/28/10</i>	Verify that activating the E-stop causes the Drum Tipper Grab to continue until fully closed, hold in place, and disables Drum Tipper operations until the E-Stop is reset. <i>Stop closing</i>	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.43 EXAMINE LLW SORTING GLOVEBOX (GB-07-102) EMERGENCY STOP OPERATION					
248	Activation of the E-Stop (HS-07-315) when the Drum Tipper (DH-07-103) Grab is opening must cause the Drum Tipper Grab to fully close ^{stop & release} , hold in place, and disable further Drum Tipper movement until the E-Stop is reset.	Verify that activating the E-stop causes the Drum Tipper Grab to continue until fully open ^{stop & release} , hold in place, and disables Drum Tipper operations until the E-Stop is reset.	✓		R/W
249	Activation of the E-Stop (HS-07-315) should stop Drum Tipper (DH-07-103) rotation until the E-Stop is reset.	Verify that activating the E-stop causes the Drum Tipper to hold in place and disables Drum Tipper rotation until the E-Stop is reset.	✓		R/W
250	Activation of the E-Stop (HS-07-315) when the Transfer Car is moving forward should stop the Transfer Car (TC-07-101) and disable further Transfer Car movement until the E-Stop is reset.	Verify that activating the E-stop causes the Transfer Car to stop, hold in place, and disables Transfer Car movement until the E-Stop is reset.	✓		R/W
251	Activation of the E-Stop (HS-07-315) when the Transfer Car is moving in reverse should stop the Transfer Car (TC-07-101) and disable further Transfer Car movement until the E-Stop is reset.	Verify that activating the E-stop causes the Transfer Car to stop, hold in place, and disables Transfer Car movement until the E-Stop is reset.	✓		R/W
252	Activation of the E-Stop (HS-07-315) when the Transfer Car conveyor is energized should stop the Transfer Car (TC-07-101) conveyor and disable further Transfer Car movement until the E-Stop is reset.	Verify that activating the E-stop causes the Transfer Car conveyor to stop, hold in place, and disables Transfer Car movement until the E-Stop is reset.		✓	R/W
253	Activation of the E-Stop (HS-07-315) when the Lid/Delid Device (RT-07-101) Saw is energized should stop the saw and disable further saw action until the E-Stop is reset.	Verify that activating the E-stop causes the saw to stop and disables saw movement until the E-Stop is reset.	✓		R/W
254	Activation of the E-Stop (HS-07-315) when the Lid/Delid Device (RT-07-101) Saw is extending should stop the saw and disable further saw action until the E-Stop is reset.	Verify that activating the E-stop causes the saw to stop extending and disables saw movement until the E-Stop is reset.	✓		R/W
255	Activation of the E-Stop (HS-07-315) when the Lid/Delid Device (RT-07-101) Saw is retracting should stop the saw and disable further saw action until the E-Stop is reset.	Verify that activating the E-stop causes the saw to stop retracting and disables saw movement until the E-Stop is reset.	✓		R/W
256	Activation of the E-Stop (HS-07-315) when the Lid/Delid Device (RT-07-101) C-Clamp Magazine Feed is energized should stop the feed motor(s) and disable further feed motor(s) action until the E-Stop is reset.	Verify that activating the E-stop causes the feed motor(s) to stop and disables feed motor(s) movement until the E-Stop is reset.			N/A

R/W 7/18/97

#256-259 Crimp Head deleted from design

EST CASE 13031A-85.43 Rev. 0

43-34

LLW SORTING GLOVEBOX

X TE #25 243
R/W 9/9/97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✗	Witness (initial)
TEST CASE 13031A-85.43 EXAMINE LLW SORTING GLOVEBOX (GB-07-102) EMERGENCY STOP OPERATION					
257	Activation of the E-Stop (HS-07-315) when the Lid/Delid Device (RT-07-101) Crimp Head is crimping should stop the Crimp Head Jaw and disable further movement until the E-Stop is reset.	Verify that activating the E-stop causes the Crimp Jaw to stop and disables Crimp Jaw until the E-Stop is reset.			N/A R/W 2/28/92
258	Activation of the E-Stop (HS-07-315) when the Lid/Delid Device (RT-07-101) Crimp Head is extending should allow the Crimp Head to continue to the selected position and disable further Crimp Head action until the E-Stop is reset.	Verify that activating the E-stop allows the Crimp Head to move to the selected position and then disables Crimp Head movement until the E-Stop is reset.			N/A R/W 2/28/92
259	Activation of the E-Stop (HS-07-315) when the Lid/Delid Device (RT-07-101) Crimp Head is retracting should allow the Crimp Head to continue to the selected position and disable further Crimp Head action until the E-Stop is reset.	Verify that activating the E-stop allows the Crimp Head to move to the selected position and then disables Crimp Head movement until the E-Stop is reset.			N/A R/W 2/28/92
260	Activation of the E-Stop (HS-07-315) when the Lid/Delid Device (RT-07-101) is rotating should cause the Lid/Delid Device to rotate to the selected position and disable further rotation until the E-Stop is reset.	Verify that activating the E-stop causes the Lid/Delid Device to complete rotation to the selected position and disables rotation until the E-Stop is reset.	✓		R/W
261	Activation of the E-Stop (HS-07-315) when the Lid/Delid Device (RT-07-101) is moving forward should cause the Lid/Delid Device to stop and disable further movement until the E-Stop is reset.	Verify that activating the E-stop causes the Lid/Delid Device to stop moving and disables further movement until the E-Stop is reset.	✓		R/W
262	Activation of the E-Stop (HS-07-315) when the Lid/Delid Device (RT-07-101) is moving in reverse should cause the Lid/Delid Device to stop and disable further movement until the E-Stop is reset.	Verify that activating the E-stop causes the Lid/Delid Device to stop moving and disables further movement until the E-Stop is reset.	✓		R/W
263	Activation of the E-Stop (HS-07-315) when the Lid/Delid Device (RT-07-101) is raising should cause the Lid/Delid Device to stop and disable further movement until the E-Stop is reset.	Verify that activating the E-stop causes the Lid/Delid Device to stop moving and disables further movement until the E-Stop is reset.		✓	R/W
264	Activation of the E-Stop (HS-07-315) when the Lid/Delid Device (RT-07-101) is moving lowering should cause the Lid/Delid Device to stop and disable further movement until the E-Stop is reset.	Verify that activating the E-stop causes the Lid/Delid Device to stop moving and disables further movement until the E-Stop is reset.		✓	R/W
265	The Lid/Delid Device must retain drum lid vacuum even during activation and reset of the E-Stop (HS-07-315).	Verify vacuum is retained against a drum lid during E-Stop activation and during E-Stop reset.	✓		R/W

* TE # 244

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.43 EXAMINE LLW SORTING GLOVEBOX (GB-07-102) EMERGENCY STOP OPERATION					
266	Activation of the E-Stop (HS-07-315) when the Packet X-Ray Shield Door (DO-07-103) is extending should allow the door to continue to the selected position and disable further door action until the E-Stop is reset.	Verify that activating the E-stop allows the door to move to the selected position and then disables door movement until the E-Stop is reset.	✓		R/W
267	Activation of the E-Stop (HS-07-315) when the Packet X-Ray Shield Door (DO-07-103) is retracting should allow the door to continue to the selected position and disable further door action until the E-Stop is reset.	Verify that activating the E-stop allows the door to move to the selected position and then disables door movement until the E-Stop is reset.	✓		R/W
268	Activation of the E-Stop (HS-07-315) when the Packet X-Ray Tray (XX-07-101) is extending should allow the tray to continue to the selected position and disable further tray action until the E-Stop is reset.	Verify that activating the E-stop allows the tray to move to the selected position and then disables tray movement until the E-Stop is reset.	✓		R/W
269	Activation of the E-Stop (HS-07-315) when the Packet X-Ray Tray (XX-07-101) is retracting should allow the tray to continue to the selected position and disable further tray action until the E-Stop is reset.	Verify that activating the E-stop allows the tray to move to the selected position and then disables tray movement until the E-Stop is reset.	✓		R/W
270	Activation of the E-Stop (HS-07-315) when the Sorting Table (ST-07-101) is raising should cause the table to stop, hold in place, and disable further table movement until the E-Stop is reset.	Verify that activating the E-stop causes the table to stop, hold in place, and disables table movement until the E-Stop is reset.	✓		R/W
271	Activation of the E-Stop (HS-07-315) when the Sorting Table (ST-07-101) is lowering should cause the table to stop, hold in place, and disable further table movement until the E-Stop is reset.	Verify that activating the E-stop causes the table to stop, hold in place, and disables table movement until the E-Stop is reset.	✓		R/W
272	Activation of the E-Stop (HS-07-315) when the Sorting Table (ST-07-101) is extending should cause the table to stop, hold in place, and disable further table movement until the E-Stop is reset.	Verify that activating the E-stop causes the table to stop, hold in place, and disables table movement until the E-Stop is reset.	✓		R/W
273	Activation of the E-Stop (HS-07-315) when the Sorting Table (ST-07-101) is retracting should cause the table to stop, hold in place, and disable further table movement until the E-Stop is reset.	Verify that activating the E-stop causes the table to stop, hold in place, and disables table movement until the E-Stop is reset.	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
TEST CASE 13031A-85.43 EXAMINE LLW SORTING GLOVEBOX (GB-07-102) EMERGENCY STOP OPERATION					
274	Activation of the E-Stop (HS-07-315) when the Bagless Transfer Port (DO-07-105) is opening should cause the port to stop, hold in place, and disable further port movement until the E-Stop is reset.	Verify that activating the E-stop causes the port to stop, hold in place, and disables port movement until the E-Stop is reset.	✓		R/W
275	Activation of the E-Stop (HS-07-315) when the Bagless Transfer Port (DO-07-105) is closing should cause the port to stop, hold in place, and disable further port movement until the E-Stop is reset.	Verify that activating the E-stop causes the port to stop, hold in place, and disables port movement until the E-Stop is reset.	✓		R/W
276	Place all items in the LLW Sorting Glovebox (GB-07-102) in initialized, parked condition. Please refer to the "Setup" section of this test procedure for additional details.	Verify that all glovebox items are parked and initialized.	✓		R/W
TEST CASE 13031A-85.43 COMPLETE					

TEST CASE 13031A-85.44 EXAMINE LLW EXIT GLOVEBOX (GB-07-105) EMERGENCY STOP OPERATION	44-2
Examine LLW Exit Glovebox Automatic Mode Local Emergency Stop	44-2
Examine LLW Exit Glovebox Maintenance Mode Local Emergency Stop	44-5
Examine LLW Exit Glovebox Automatic Mode Emergency Stop	44-8
Examine LLW Exit Glovebox Maintenance Mode Emergency Stop	44-11

Testing begins 7-22-96

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
TEST CASE 13031A-85.44 EXAMINE LLW EXIT GLOVEBOX (GB-07-105) EMERGENCY STOP OPERATION					
Examine LLW Exit Glovebox Automatic Mode Local Emergency Stop					
1	NOTE: The following test case steps are "generic steps" that will be performed for each applicable local emergency stop.	Verify that the note has been reviewed.	✓		mgj
2	NOTE: Emergency Stop is abbreviated as E-Stop in this test procedure.	Verify that the test procedure conventions have been reviewed.	✓		mgj
3	Step Deleted		✓		mgj
4	Place all items in the LLW Exit Glovebox (GB-07-105) in initialized, parked condition. Please refer to the "Setup" section of this test procedure for additional details.	Verify that all glovebox items are parked and initialized.	✓		mgj
5	Place the LLW Exit Glovebox in Automatic Mode. Although test step setup may require maintenance mode operation, all test case steps must be performed with the LLW Exit Glovebox in Automatic Mode.	Verify that the LLW Exit Glovebox is in Automatic Mode.	✓		mgj
* 6	Activation of the E-Stop (HS-07-105A) should disable the following items until the E-Stop is reset: Entry/Exit Port (DO-07-106) Hoist/Trolley (CR-07-101D) Drum Lifter (DH-07-104)	Verify that activating the E-stop disables all operations for the items listed until the E-Stop is reset.		✓	mgj
* 7	Activation of the E-Stop (HS-07-105B) should disable the following items until the E-Stop is reset: Entry/Exit Port (DO-07-106) Hoist/Trolley (CR-07-101D) Drum Lifter (DH-07-104)	Verify that activating the E-stop disables all operations for the items listed until the E-Stop is reset.		FAIL ✓	mgj
8	Activation of the E-Stop (HS-07-105A) when the port is rotating open must cause the Entry/Exit Port (DO-07-106) to stop, hold in place, and disable further port movement until the E-Stop is reset.	Verify that activating the E-stop causes the port door to stop rotating, hold in place, and disables port operations until the E-Stop is reset.	✓		mgj
9	Activation of the E-Stop (HS-07-105B) when the port is rotating open must cause the Entry/Exit Port (DO-07-106) to stop, hold in place, and disable further port movement until the E-Stop is reset.	Verify that activating the Local Emergency stop causes the port door to stop rotating, hold in place, and disables port operations until the E-Stop is reset.	✓		mgj

#6 Open Port Sequence, continues, starts, even though e-stop activated

* See TE-221

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.44 EXAMINE LLW EXIT GLOVEBOX (GB-07-105) EMERGENCY STOP OPERATION					
10	Activation of the E-Stop (HS-07-105A) when the port is rotating closed must cause the Entry/Exit Port (DO-07-106) to stop, hold in place, and disable further port movement until the E-Stop is reset.	Verify that activating the E-Stop causes the port door to stop rotating, hold in place, and disables port operations until the E-Stop is reset.	✓		mg
11	Activation of the E-Stop (HS-07-105B) when the port is rotating closed must cause the Entry/Exit Port (DO-07-106) to stop, hold in place, and disable further port movement until the E-Stop is reset.	Verify that activating the E-Stop causes the port door to stop rotating, hold in place, and disables port operations until the E-Stop is reset.	✓		mg
12	The Entry/Exit Port must retain drum lid vacuum even during activation and reset of the E-Stop (HS-07-105A).	Verify port vacuum is retained against a drum lid during E-Stop activation and during E-Stop reset.	✓		mg
13	The Entry/Exit Port must retain drum lid vacuum even during activation and reset of the E-Stop (HS-07-105B).	Verify port vacuum is retained against a drum lid during E-Stop activation and during E-Stop reset.	✓		mg
14	Activation of the E-Stop (HS-07-105A) when the Hoist (CR-07-101D) is moving forward must cause the Hoist to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist to stop moving, hold in place, and disables Hoist operations until the E-Stop is reset.	✓		mg
15	Activation of the E-Stop (HS-07-105B) when the Hoist (CR-07-101D) is moving forward must cause the Hoist to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist to stop moving, hold in place, and disables Hoist operations until the E-Stop is reset.	✓		mg
16	Activation of the E-Stop (HS-07-105A) when the Hoist (CR-07-101D) is moving in reverse must cause the Hoist to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist to stop moving, hold in place, and disables Hoist operations until the E-Stop is reset.	✓		mg
17	Activation of the E-Stop (HS-07-105B) when the Hoist (CR-07-101D) is moving in reverse must cause the Hoist to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist to stop moving, hold in place, and disables Hoist operations until the E-Stop is reset.	✓		mg
18	Activation of the E-Stop (HS-07-105A) when the Hoist (CR-07-101D) chain is lowering must cause the Hoist chain to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist chain to stop moving, hold in place, and disables Hoist operations until the E-Stop is reset.	✓		mg

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
TEST CASE 13031A-85.44 EXAMINE LLW EXIT GLOVEBOX (GB-07-105) EMERGENCY STOP OPERATION					
19	Activation of the E-Stop (HS-07-105B) when the Hoist (CR-07-101D) chain is lowering must cause the Hoist chain to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist chain to stop moving, hold in place, and disables Hoist operations until the E-Stop is reset.	✓		mg
20	Activation of the E-Stop (HS-07-105A) when the Hoist (CR-07-101D) chain is raising must cause the Hoist chain to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist chain to stop moving, hold in place, and disables Hoist operations until the E-Stop is reset.	✓		mg
21	Activation of the E-Stop (HS-07-105B) when the Hoist (CR-07-101D) chain is raising must cause the Hoist chain to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist chain to stop moving, hold in place, and disables Hoist operations until the E-Stop is reset.	✓		mg
22	Activation of the E-Stop (HS-07-105A) when the Drum Lifter (DH-07-104) is closing must allow the Drum Lifter to fully close, hold in place, and disable further drum lifter movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Drum Lifter to continue closing, hold in place, and disables Drum Lifter operations until the E-Stop is reset.	✓		mg
23	Activation of the E-Stop (HS-07-105B) when the Drum Lifter (DH-07-104) is closing must allow the Drum Lifter to fully close, hold in place, and disable further drum lifter movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Drum Lifter to continue closing, hold in place, and disables Drum Lifter operations until the E-Stop is reset.	✓		mg
24	Activation of the E-Stop (HS-07-105A) when the Drum Lifter (DH-07-104) is opening must allow the Drum Lifter to fully open, hold in place, and disable further drum lifter movement until the E-Stop is reset. <i>close ← A/W 11/19/97</i>	Verify that activating the E-Stop causes the Drum Lifter to continue opening, hold in place, and disables Drum Lifter operations until the E-Stop is reset. <i>Pass 11-18-97</i>	✓		mg
25	Activation of the E-Stop (HS-07-105B) when the Drum Lifter (DH-07-104) is opening must allow the Drum Lifter to fully close, hold in place, and disable further drum lifter movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Drum Lifter to continue opening, hold in place, and disables Drum Lifter operations until the E-Stop is reset. <i>Pass 11-18-97</i>	✓		mg
26	The LLW Exit Glovebox must be in Automatic Mode during execution of the preceding Automatic Mode test case steps.	Verify that the LLW Exit Glovebox was in Automatic Mode during all Automatic Mode test case steps.	✓		mg

#24, 25, Drum lifter will close when e-stop activated.

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.44 EXAMINE LLW EXIT GLOVEBOX (GB-07-105) EMERGENCY STOP OPERATION					
27.	Resetting the Local E-Stops (HS-07-105A, HS-07-105B), in all cases tested, must result in continued, normal equipment operation and completion of all automatic sequences without manual intervention.	For all test steps, verify that all automatic sequences are completed correctly without manual intervention, after an E-Stop has been activated and reset during the automatic sequence.	✓		mj
28	Place all items in the LLW Exit Glovebox (GB-07-105) in initialized, parked condition. Please refer to the "Setup" section of this test procedure for additional details.	Verify that all glovebox items are parked and initialized.	✓		mj

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
TEST CASE 13031A-85.44 EXAMINE LLW EXIT GLOVEBOX (GB-07-105) EMERGENCY STOP OPERATION					
Examine LLW Exit Glovebox Maintenance Mode Local Emergency Stop					
29	NOTE: The following test case steps are "generic steps" that will be performed for each applicable local emergency stop.	Verify that the note has been reviewed.	✓		mef
30	NOTE: Emergency Stop is abbreviated as E-Stop in this test procedure.	Verify that the test procedure conventions have been reviewed.	✓		mef
31	Step Deleted		✓		mef
	Place all items in the LLW Exit Glovebox (GB-07-105) in initialized, parked condition. Please refer to the "Setup" section of this test procedure for additional details.	Verify that all glovebox items are parked and initialized.	✓		mef
33	Place the LLW Exit Glovebox in Maintenance Mode. All test case steps must be performed with the LLW Exit Glovebox in Maintenance Mode.	Verify that the LLW Exit Glovebox is in Maintenance Mode.	✓		mef
34	Activation of the E-Stop (HS-07-105A) should disable the following items until the E-Stop is reset: Entry/Exit Port (DO-07-106) Hoist/Trolley (CR-07-101D) Drum Lifter (DH-07-104)	Verify that activating the E-stop disables all operations for the items listed until the E-Stop is reset.	✓	Fail	mef
35	Activation of the E-Stop (HS-07-105B) should disable the following items until the E-Stop is reset: Entry/Exit Port (DO-07-106) Hoist/Trolley (CR-07-101D) Drum Lifter (DH-07-104)	Verify that activating the E-stop disables all operations for the items listed until the E-Stop is reset.	✓	Fail	mef
36	Activation of the E-Stop (HS-07-105A) when the port is rotating open must cause the Entry/Exit Port (DO-07-106) to stop, hold in place, and disable further port movement until the E-Stop is reset.	Verify that activating the E-stop causes the port door to stop rotating, hold in place, and disables port operations until the E-Stop is reset.	✓		mef
37	Activation of the E-Stop (HS-07-105B) when the port is rotating open must cause the Entry/Exit Port (DO-07-106) to stop, hold in place, and disable further port movement until the E-Stop is reset.	Verify that activating the Local Emergency stop causes the port door to stop rotating, hold in place, and disables port operations until the E-Stop is reset.	✓		mef

#34,35 Not all port 106 functions disabled 9-10-97 - Vacuum, raise/lower vertical cylinder vent, remain active mref 7/1/8 97 This is a test stop wording problem, Test stop error.

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.44 EXAMINE LLW EXIT GLOVEBOX (GB-07-105) EMERGENCY STOP OPERATION					
38	Activation of the E-Stop (HS-07-105A) when the port is rotating closed must cause the Entry/Exit Port (DO-07-106) to stop, hold in place, and disable further port movement until the E-Stop is reset.	Verify that activating the E-stop causes the port door to stop rotating, hold in place, and disables port operations until the E-Stop is reset.	✓		mrg
39	Activation of the E-Stop (HS-07-105B) when the port is rotating closed must cause the Entry/Exit Port (DO-07-106) to stop, hold in place, and disable further port movement until the E-Stop is reset.	Verify that activating the E-Stop causes the port door to stop rotating, hold in place, and disables port operations until the E-Stop is reset.	✓		mrg
40	The Entry/Exit Port must retain drum lid vacuum even during activation and reset of the E-Stop (HS-07-105A).	Verify port vacuum is retained against a drum lid during E-Stop activation and during E-Stop reset.	✓		mrg
41	The Entry/Exit Port must retain drum lid vacuum even during activation and reset of the E-Stop (HS-07-105B).	Verify port vacuum is retained against a drum lid during E-Stop activation and during E-Stop reset.	✓		mrg
42	Activation of the E-Stop (HS-07-105A) when the Hoist (CR-07-101D) is moving forward must cause the Hoist to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist to stop moving, hold in place, and disables port operations until the E-Stop is reset.	✓		mrg
43	Activation of the E-Stop (HS-07-105B) when the Hoist (CR-07-101D) is moving forward must cause the Hoist to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist to stop moving, hold in place, and disables port operations until the E-Stop is reset. hoist mrg 7-22-97	✓		mrg
44	Activation of the E-Stop (HS-07-105A) when the Hoist (CR-07-101D) is moving in reverse must cause the Hoist to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist to stop moving, hold in place, and disables port operations until the E-Stop is reset. hoist mrg 7-22-97	✓		mrg
45	Activation of the E-Stop (HS-07-105B) when the Hoist (CR-07-101D) is moving in reverse must cause the Hoist to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist to stop moving, hold in place, and disables port operations until the E-Stop is reset. hoist mrg 7-22-97	✓		mrg
46	Activation of the E-Stop (HS-07-105A) when the Hoist (CR-07-101D) chain is lowering must cause the Hoist chain to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist chain to stop moving, hold in place, and disables port operations until the E-Stop is reset. hoist mrg 7-22-97	✓		mrg

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
TEST CASE 13031A-85.44 EXAMINE LLW EXIT GLOVEBOX (GB-07-105) EMERGENCY STOP OPERATION					
47	Activation of the E-Stop (HS-07-105B) when the Hoist (CR-07-101D) chain is lowering must cause the Hoist chain to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist chain to stop moving, hold in place, and disables port operations until the E-Stop is reset.	✓		mgf
48	Activation of the E-Stop (HS-07-105A) when the Hoist (CR-07-101D) chain is raising must cause the Hoist chain to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist chain to stop moving, hold in place, and disables port operations until the E-Stop is reset.	✓		mgf
49	Activation of the E-Stop (HS-07-105B) when the Hoist (CR-07-101D) chain is raising must cause the Hoist chain to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist chain to stop moving, hold in place, and disables port operations until the E-Stop is reset.	✓		mgf
50	Activation of the E-Stop (HS-07-105A) when the Drum Lifter (DH-07-104) is closing must allow the Drum Lifter to fully close, hold in place, and disable further drum lifter movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Drum Lifter to continue closing, hold in place, and disables Drum Lifter operations until the E-Stop is reset.	✓		mgf
51	Activation of the E-Stop (HS-07-105B) when the Drum Lifter (DH-07-104) is closing must allow the Drum Lifter to fully close, hold in place, and disable further drum lifter movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Drum Lifter to continue closing, hold in place, and disables Drum Lifter operations until the E-Stop is reset.	✓		mgf
52	Activation of the E-Stop (HS-07-105A) when the Drum Lifter (DH-07-104) is opening must allow the Drum Lifter to fully close ^{open} , hold in place, and disable further drum lifter movement until the E-Stop is reset. <i>ALW 11/18/97</i>	Verify that activating the E-Stop causes the Drum Lifter to continue closing ^{continue opening} , hold in place, and disables Drum Lifter operations until the E-Stop is reset. <i>ALW 11/18/97</i>	Pass mgf 11/18/97	✓	mgf
53	Activation of the E-Stop (HS-07-105B) when the Drum Lifter (DH-07-104) is opening must allow the Drum Lifter to fully close ^{open} , hold in place, and disable further drum lifter movement until the E-Stop is reset. <i>ALW 11/18/97</i>	Verify that activating the E-Stop causes the Drum Lifter to continue closing ^{continue opening} , hold in place, and disables Drum Lifter operations until the E-Stop is reset. <i>ALW 11/18/97</i>	Pass mgf 11/18/97	✓	mgf
54	All preceding Maintenance Mode test case steps must be performed with the LLW Exit Glovebox in Maintenance Mode.	Verify that the LLW Exit Glovebox is in Maintenance Mode during all Maintenance Mode test steps.	✓		mgf
55	Place all items in the LLW Exit Glovebox (GB-07-105) in initialized, parked condition. Please refer to the "Setup" section of this test procedure for additional details.	Verify that all glovebox items are parked and initialized.	✓		mgf

#52, 53 Drum lifter closes

Tested 7-24-97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.44 EXAMINE LLW EXIT GLOVEBOX (GB-07-105) EMERGENCY STOP OPERATION					
Examine LLW Exit Glovebox Automatic Mode Emergency Stop					
56	NOTE: The following test case steps are "generic steps" that will be performed for each applicable local emergency stop.	Verify that the note has been reviewed.	✓		mfj
57	NOTE: Emergency Stop is abbreviated as E-Stop in this test procedure.	Verify that the test procedure conventions have been reviewed.	✓		mfj
58	Step Deleted		✓		mfj
	Place all items in the LLW Exit Glovebox (GB-07-105) in initialized, parked condition. Please refer to the "Setup" section of this test procedure for additional details.	Verify that all glovebox items are parked and initialized.	✓		mfj
60	Place the LLW Exit Glovebox in Automatic Mode. Although test step setup may require maintenance mode operation, all test case steps must be performed with the LLW Exit Glovebox in Automatic Mode.	Verify that the LLW Exit Glovebox is in Automatic Mode.	✓		mfj
61	Activation of the E-Stop (HS-07-315) should disable the following items until the E-Stop is reset: Entry/Exit Port (DO-07-106) Hoist/Trolley (CR-07-101D) Drum Lifter (DH-07-104)	Verify that activating the E-stop disables all operations for the items listed until the E-Stop is reset.		✓	mfj
62	Activation of the E-Stop (HS-07-315) when the port is rotating open must cause the Entry/Exit Port (DO-07-106) to stop, hold in place, and disable further port movement until the E-Stop is reset.	Verify that activating the E-stop causes the port door to stop rotating, hold in place, and disables port operations until the E-Stop is reset.	✓		mfj
63	Activation of the E-Stop (HS-07-315) when the port is rotating closed must cause the Entry/Exit Port (DO-07-106) to stop, hold in place, and disable further port movement until the E-Stop is reset.	Verify that activating the E-stop causes the port door to stop rotating, hold in place, and disables port operations until the E-Stop is reset.	✓		mfj
64	The Entry/Exit Port must retain drum lid vacuum even during activation and reset of the E-Stop (HS-07-315).	Verify port vacuum is retained against a drum lid during E-Stop activation and during E-Stop reset.	✓		mfj
65	Activation of the E-Stop (HS-07-315) when the Hoist (CR-07-101D) is moving forward must cause the Hoist to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist to stop moving, hold in place, and disables Hoist operations until the E-Stop is reset.	✓		mfj

#61 movement disabled by auto sequences. Start for hoist, lift table, conveyor starts.
 * see TE 221
 TEST CASE 13031A-85.44 Rev. 2

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.44 EXAMINE LLW EXIT GLOVEBOX (GB-07-105) EMERGENCY STOP OPERATION					
66	Activation of the E-Stop (HS-07-315) when the Hoist (CR-07-101D) is moving forward must cause the Hoist to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist to stop moving, hold in place, and disables Hoist operations until the E-Stop is reset.	✓		mg
67	Activation of the E-Stop (HS-07-315) when the Hoist (CR-07-101D) is moving in reverse must cause the Hoist to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist to stop moving, hold in place, and disables Hoist operations until the E-Stop is reset.	✓		mg
68	Activation of the E-Stop (HS-07-315) when the Hoist (CR-07-101D) chain is lowering must cause the Hoist chain to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist chain to stop moving, hold in place, and disables Hoist operations until the E-Stop is reset.	✓		mg
69	Activation of the E-Stop (HS-07-315) when the Hoist (CR-07-101D) chain is lowering must cause the Hoist chain to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist chain to stop moving, hold in place, and disables Hoist operations until the E-Stop is reset.	✓		mg
70	Activation of the E-Stop (HS-07-315) when the Hoist (CR-07-101D) chain is raising must cause the Hoist chain to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist chain to stop moving, hold in place, and disables Hoist operations until the E-Stop is reset.	✓		mg
71	Activation of the E-Stop (HS-07-315) when the Hoist (CR-07-101D) chain is raising must cause the Hoist chain to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist chain to stop moving, hold in place, and disables Hoist operations until the E-Stop is reset.	✓		mg
72	Activation of the E-Stop (HS-07-315) when the Drum Lifter (DH-07-104) is closing must allow the Drum Lifter to fully close, hold in place, and disable further drum lifter movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Drum Lifter to continue closing, hold in place, and disables Drum Lifter operations until the E-Stop is reset.	✓		mg
73	Activation of the E-Stop (HS-07-315) when the Drum Lifter (DH-07-104) is closing must allow the Drum Lifter to fully close, hold in place, and disable further drum lifter movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Drum Lifter to continue closing, hold in place, and disables Drum Lifter operations until the E-Stop is reset.	✓		mg

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.44 EXAMINE LLW EXIT GLOVEBOX (GB-07-105) EMERGENCY STOP OPERATION					
74	Activation of the E-Stop (HS-07-315) when the Drum Lifter (DH-07-104) is opening must allow the Drum Lifter to fully open, hold in place, and disable further drum lifter movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Drum Lifter to continue opening, hold in place, and disables Drum Lifter operations until the E-Stop is reset.	Pass mg 11/19/97	✓	mg
75	Activation of the E-Stop (HS-07-315) when the Drum Lifter (DH-07-104) is opening must allow the Drum Lifter to fully close, hold in place, and disable further drum lifter movement until the E-Stop is reset. <i>mg 7-21-97 11/19/97</i>	Verify that activating the E-Stop causes the Drum Lifter to continue opening, hold in place, and disables Drum Lifter operations until the E-Stop is reset. <i>11/19/97</i>	Pass mg 11/19/97	✓	mg
76	The LLW Exit Glovebox must be in Automatic Mode during execution of the preceding Automatic Mode test case steps.	Verify that the LLW Exit Glovebox was in Automatic Mode during all Automatic Mode test case steps.	✓		mg
77	Place all items in the LLW Exit Glovebox (GB-07-105) in initialized, parked condition. Please refer to the "Setup" section of this test procedure for additional details.	Verify that all glovebox items are parked and initialized.	✓		mg

#74, 75 Drum lifter closes

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.44 EXAMINE LLW EXIT GLOVEBOX (GB-07-105) EMERGENCY STOP OPERATION					
Examine LLW Exit Glovebox Maintenance Mode Emergency Stop					
78	NOTE: The following test case steps are "generic steps" that will be performed for each applicable local emergency stop.	Verify that the note has been reviewed.	✓		mro
79	NOTE: Emergency Stop is abbreviated as E-Stop in this test procedure.	Verify that the test procedure conventions have been reviewed.	✓		mro
80	Step Deleted		✓		mro
	Place all items in the LLW Exit Glovebox (GB-07-105) in initialized, parked condition. Please refer to the "Setup" section of this test procedure for additional details.	Verify that all glovebox items are parked and initialized.	✓		mro
82	Place the LLW Exit Glovebox in Maintenance Mode. All test case steps must be performed with the LLW Exit Glovebox in Maintenance Mode.	Verify that the LLW Exit Glovebox is in Maintenance Mode.	✓		mro
83	Activation of the E-Stop (HS-07-315) should disable the following items until the E-Stop is reset: Entry/Exit Port (DO-07-106) Hoist/Trolley (CR-07-101D) Drum Lifter (DH-07-104)	Verify that activating the E-stop disables all operations for the items listed until the E-Stop is reset.		✓	mro
84	Activation of the E-Stop (HS-07-315) when the port is rotating open must cause the Entry/Exit Port (DO-07-106) to stop, hold in place, and disable further port movement until the E-Stop is reset.	Verify that activating the E-stop causes the port door to stop rotating, hold in place, and disables port operations until the E-Stop is reset.	✓		mro
85	Activation of the E-Stop (HS-07-315) when the port is rotating closed must cause the Entry/Exit Port (DO-07-106) to stop, hold in place, and disable further port movement until the E-Stop is reset.	Verify that activating the E-stop causes the port door to stop rotating, hold in place, and disables port operations until the E-Stop is reset.	✓		mro
86	The Entry/Exit Port must retain drum lid vacuum even during activation and reset of the E-Stop (HS-07-315).	Verify port vacuum is retained against a drum lid during E-Stop activation and during E-Stop reset.	✓		mro
87	Activation of the E-Stop (HS-07-315) when the Hoist (CR-07-101D) is moving forward must cause the Hoist to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist to stop moving, hold in place, and disables Hoist operations until the E-Stop is reset.	✓		mro

9-10-74

* See TE 221

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.44 EXAMINE LLW EXIT GLOVEBOX (GB-07-105) EMERGENCY STOP OPERATION					
88	Activation of the E-Stop (HS-07-315) when the Hoist (CR-07-101D) is moving forward must cause the Hoist to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist to stop moving, hold in place, and disables Hoist operations until the E-Stop is reset.	✓		mg
89	Activation of the E-Stop (HS-07-315) when the Hoist (CR-07-101D) is moving in reverse must cause the Hoist to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist to stop moving, hold in place, and disables Hoist operations until the E-Stop is reset.	✓		mg
90	Activation of the E-Stop (HS-07-315) when the Hoist (CR-07-101D) chain is lowering must cause the Hoist chain to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist chain to stop moving, hold in place, and disables Hoist operations until the E-Stop is reset.	✓		mg
91	Activation of the E-Stop (HS-07-315) when the Hoist (CR-07-101D) chain is lowering must cause the Hoist chain to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist chain to stop moving, hold in place, and disables Hoist operations until the E-Stop is reset.	✓		mg
92	Activation of the E-Stop (HS-07-315) when the Hoist (CR-07-101D) chain is raising must cause the Hoist chain to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist chain to stop moving, hold in place, and disables Hoist operations until the E-Stop is reset.	✓		mg
93	Activation of the E-Stop (HS-07-315) when the Hoist (CR-07-101D) chain is raising must cause the Hoist chain to stop, hold in place, and disable further hoist trolley and hoist chain movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Hoist chain to stop moving, hold in place, and disables Hoist operations until the E-Stop is reset.	✓		mg
94	Activation of the E-Stop (HS-07-315) when the Drum Lifter (DH-07-104) is closing must allow the Drum Lifter to fully close, hold in place, and disable further drum lifter movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Drum Lifter to continue closing, hold in place, and disables Drum Lifter operations until the E-Stop is reset.	✓		mg
95	Activation of the E-Stop (HS-07-315) when the Drum Lifter (DH-07-104) is closing must allow the Drum Lifter to fully close, hold in place, and disable further drum lifter movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Drum Lifter to continue closing, hold in place, and disables Drum Lifter operations until the E-Stop is reset.	✓		mg

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.44 EXAMINE LLW EXIT GLOVEBOX (GB-07-105) EMERGENCY STOP OPERATION					
96	Activation of the E-Stop (HS-07-315) when the Drum Lifter (DH-07-104) is opening must allow the Drum Lifter to fully open, hold in place, and disable further drum lifter movement until the E-Stop is reset. <i>11/14/97</i>	Verify that activating the E-Stop causes the Drum Lifter to continue opening <i>fully close</i> , hold in place, and disables Drum Lifter operations until the E-Stop is reset.	Pass <i>mg</i> 11-14-97 ✓		<i>mh</i>
97	Activation of the E-Stop (HS-07-315) when the Drum Lifter (DH-07-104) is opening must allow the Drum Lifter to fully close, hold in place, and disable further drum lifter movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Drum Lifter to continue opening <i>fully close</i> , hold in place, and disables Drum Lifter operations until the E-Stop is reset.	Pass <i>mg</i> 11-14-97 ✓		<i>mg</i>
98	All preceding Maintenance Mode test case steps must be performed with the LLW Exit Glovebox in Maintenance Mode.	Verify that the LLW Exit Glovebox is in Maintenance Mode during all Maintenance Mode test steps.	✓		<i>mg</i>
99	Place all items in the LLW Exit Glovebox (GB-07-105) in initialized, parked condition. Please refer to the "Setup" section of this test procedure for additional details.	Verify that all glovebox items are parked and initialized.	✓		<i>mg</i>
TEST CASE 13031A-85.44 COMPLETE					

#96, 97 - Lifter Closes

TEST CASE 13031A-85.45 GENERIC INSTRUCTIONS FOR LLW ENTRY GLOVEBOX (GB-07-101) ACCEPTANCE TEST	45-2
Mate Drum to 320 Liter (85 Gallon) Entry/Exit Port	45-2
Move Drum to "Swab" Position	45-4
Close Entry/Exit Port (And Remove Overpack Drum as Needed)	45-5
Move Drum to Drum Transfer Port	45-7
Open Transfer Port	45-8
Deliver Drum to Transfer Car	45-9
Close Transfer Port	45-10

Commenced Testing 2/28/97 1600 R/W & M/L

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.45 GENERIC INSTRUCTIONS FOR LLW ENTRY GLOVEBOX (GB-07-101) ACCEPTANCE TEST					
Mate Drum to 320 Liter (85 Gallon) Entry/Exit Port					
NOTE: This test case comprises the generic instructions for processing drums through the LLW Entry Glovebox. This test case is only used to support other test cases.					
1	Unforce all LCU 102 registers. <i>see Note pg 8-1</i>	Verify that all LCU registers are unforced.	✓		R/W
2	Use OIU-12-103B (LLW Sorting G.B. OIU) to return the Drum Transfer Car (TC-07-101) to the Reid Position. <i>ENTRY R/W 2/28/97</i>	Verify that the Transfer Car is not positioned at the Transfer Port. <i>R/W 2/28/97</i>	✓		R/W
3	Confirm that the "LLW ENTRY GLOVEBOX MAIN MENU" is displayed at OIU-12-103A. If a sub-menu is displayed, press the "MAIN MENU" button to return to the "LLW ENTRY GLOVEBOX MAIN MENU".	Verify that the "LLW ENTRY GLOVEBOX MAIN MENU" is displayed.	✓		R/W
4	Take the appropriate steps to allow PCS to support the overpack drum entry sequence. <i>N402 G/H sub.</i>	Verify that an overpack drum will be simulated.	✓		R/W
5	Place the appropriate 208 liter (55 gallon) drum in the 320 liter (85 gallon) overpack drum. Do NOT add a band clamp or drum lid for the overpack drum.	Verify that the correct waste drum has been placed inside the overpack drum.	✓		R/W
6	Place the drum, either the overpack with waste drum or waste drum alone as appropriate, on the LLW Entry Glovebox Entry/Exit Port Lift Table, (LT-09-202A). The drum should be placed at the AGV end of the Lift Table.	Verify that the appropriate drum has been placed on the Entry/Exit Port Lift Table.	✓		R/W
7	The "DRUM AT AGV END" indicator (09-ZL-233A) on the Lift Table Control Pedestal (PC-09-202A) should be illuminated, indicating that a drum is positioned at the AGV end of the Lift Table.	Verify that the "DRUM AT AGV END" indicator is illuminated.	✓		R/W
8	Press the "OVERPACK DRUM ENTRY MENU" button from the "LLW ENTRY GLOVEBOX MAIN MENU" at OIU-12-103A.	Verify that the "OVERPACK DRUM ENTRY MENU" is displayed.	✓		R/W
9	Because a drum has been placed at the AGV end of the Lift Table and the Lift Table is at AGV height, the "DRUM AT LIFT TABLE" message should be displayed at OIU-12-103A.	Verify that a "DRUM AT LIFT TABLE" message is displayed.	✓		R/W
10	Press the "START DRUM ENTRY" button from the currently displayed drum entry menu at OIU-12-103A.	Verify that the "START DRUM ENTRY" button has been pressed.	✓		R/W
11	The "DRUM ENTRY IN PROGRESS..." message should be displayed at OIU-12-103A.	Verify that the "DRUM ENTRY IN PROGRESS..." message is displayed.	✓		R/W
12	The PCS should energize the Lift Table conveyor motor forward (LT-09-202A/M2) to move the drum under the Entry/Exit Port.	Verify that the drum moves forward until it is centered beneath the Entry/Exit Port.	✓		R/W

Commenced Testing 8/5/97 0945 R/W M/L FJL

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✗	Witness (initial)
13	The "DRUM UNDER PORT" indicator at the Lift Table Local Control Pedestal (PC-09-202A) should be illuminated, indicating the a drum is centered under the glovebox port (DO-07-101).	Verify that the "DRUM UNDER PORT" indicator is illuminated.	✓		KZ P/W
14	The PCS should then energize the Lift Table motor (LT-09-202A/M1) to raise the drum to "Drum Centering" position.	Verify that the Lift Table raises the drum to the "Drum Centering" position.	✓		KZ P/W
15	The "DRUM IN POSITION" indicator (09-ZL-233D) at the Lift Table Local Control Pedestal (PC-09-202A) should be illuminated, indicating that the drum has been raised to the "Drum Centering" position.	Verify that the "DRUM IN POSITION" indicator is illuminated.	✓		KZ P/W
16	The "DRUM ENTRY COMPLETE" message should be displayed at OIU-12-103A.	Verify that the "DRUM ENTRY COMPLETE" message is displayed.	✓		KZ P/W
17	Press the "OPEN PORT" button from the "OVERPACK ENTRY MENU" at OIU-12-103A.	Verify that the "OPEN PORT" button has been pressed.	✓		P/W/KZ
18	The "PORT OPENING..." message should be displayed at OIU-12-103A while the port is opening.	Verify that a "PORT OPENING..." message is displayed.	✓		P/W
19	The PCS should, in order, complete the following steps: <ol style="list-style-type: none"> 1. Extend the Drum Centering Device. ✓ 2. Raise the Lift Table. ✓✓ 3. Create vacuum to attach drum lid. ✓✓ 4. Unlock port door. ✓ 5. Raise the Lift Table. ✓ 6. Raise the port door. ✓ 7. Rotate the port door open. ✓ 	Verify that the PCS performs the steps listed in the order provided. <i>Vacuum Alarm intermittently</i> <i>Alarms. Timer set at 10 sec.</i> <i>Timer changed to 20 seconds</i>	✓		KZ P/W
20	The PCS should energize the Hoist Trolley motor (CR-07-101A/M1) (Trolley Traverse Drive) forward so that the trolley SLOWLY travels to, and is positioned over the 320 liter (85 gallon) Entry/Exit Port (DO-07-101).	Verify that the Hoist Trolley is centered over the Entry/Exit Port.	✓		KZ P/W
21	Because the port opening sequence is complete, a "PORT OPEN" message should be displayed at OIU-12-103A.	Verify that a "PORT OPEN" message is displayed.	✓		KZ P/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Move Drum to "Swab" Position					
22	The PCS should enable the Hoist/Trolley/Lifter Pendant (PC-07-001).	Verify that the pendant "Enabled" indicator is illuminated.	✓		RLW
23	Press the "LOWER" pushbutton on the Hoist/Trolley/Lifter pendant (PC-07-001) as needed until the Drum Lifter rests on top of the 208 liter (55 gallon) drum.	Verify that the Drum Lifter is lowered and rests on the top of the 55 gallon drum.	✓		RLW
24	Adjust the Drum Lifter as needed so that the drum will be gripped by the Drum Lifter.	Verify that the Drum Lifter is positioned to grip the drum.	✓		RLW
25	Press the "CLOSE" pushbutton on the Hoist/Trolley/Lifter pendant (PC-07-001) as needed until the Drum Lifter is closed, securing the drum.	Verify that the Drum Lifter is closed, securing the drum.	✓		RLW
26	The "CLOSED" indicator on the Hoist/Trolley/Lifter Pendant (PC-07-001) should be illuminated, indicating that the Drum Lifter is closed.	Verify that the "CLOSED" indicator is illuminated.	✓		RLW
27	Press the "RAISE" pushbutton on the Hoist/Trolley/Lifter pendant (PC-07-001) as needed until the drum is sufficiently raised so that the top of the drum is positioned for inspection.	Verify that the drum is raised so that the top of the drum can be examined.	✓		RLW
28	Press the "RAISE" pushbutton on the Hoist/Trolley/Lifter pendant (PC-07-001) as needed until the Hoist is fully raised.	Verify that the Hoist is fully raised.	✓		RLW
29	The "HOIST RAISED LIMIT" indicator on the Hoist/Trolley/Lifter pendant (PC-07-001) should be illuminated, indicating that the hoist is fully raised.	Verify that the "HOIST RAISED LIMIT" indicator is illuminated.	✓		RLW
30	The PCS should disable the Hoist/Trolley/Lifter Pendant (PC-07-001).	Verify that the "Enabled" indicator is not illuminated.	✓		RLW
31	Press the "MAIN MENU" button to return to the "LLW ENTRY GLOVEBOX MAIN MENU" at OIU-12-103A.	Verify that the "LLW ENTRY GLOVEBOX MAIN MENU" is displayed.	✓		RLW
32	Press the "TROLLEY MENU" button from the "LLW ENTRY GLOVEBOX MAIN MENU" at OIU-12-103A.	Verify that the "TROLLEY MENU" is displayed.	✓		RLW
33	Press the "SWAB POSITION" button from the "TROLLEY MENU" at OIU-12-103A.	Verify that the "SWAB POSITION" button has been pressed.	✓		RLW
34	The PCS should energize the Hoist Trolley motor (CR-07-101A/M1) (Trolley Traverse Drive) forward so that the trolley SLOWLY travels the "Swab" position.	Verify that the Hoist Trolley travels to, and is positioned at the "Swab" position.	✓		RLW
35	The "MIDWAY" indicator on the Hoist/Trolley/Lifter pendant (PC-07-001) should be illuminated, indicating that the hoist trolley is located at the "Swab" position.	Verify that the "MIDWAY" indicator is illuminated.	✓		RLW

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Close Entry/Exit Port (And Remove Overpack Drum as Needed)					
36	Press the "MAIN MENU" button to return to the "LLW ENTRY GLOVEBOX MAIN MENU" and then press the "OVERPACK DRUM ENTRY MENU" button from the "LLW ENTRY GLOVEBOX MAIN MENU" at OIU-12-103A to display the "OVERPACK DRUM ENTRY MENU".	Verify that the "OVERPACK DRUM ENTRY MENU" is displayed.	✓		KR R/W
37	The inner drum identifier should be displayed at OIU-12-103A. Confirm that the drum identifier displayed exactly matches the waste drum currently being processed through the glovebox.	Verify that the correct drum identifier is displayed.	✓		KR R/W
38	Press the "INNER DRUM ID VERIFIED" button from the "OVERPACK DRUM ENTRY MENU" at OIU-12-103A to acknowledge that the correct drum identifier is displayed. <i>PORT</i>	Verify that the "INNER DRUM ID VERIFIED" button has been pressed.	✓		KR R/W
39	Press the "CLOSE AND RELID CLEAN" button from the "OVERPACK DRUM ENTRY MENU" at OIU-12-103A to begin the Entry/Exit Port closing sequence. <i>PORT</i>	Verify that the "CLOSE AND RELID CLEAN" button has been pressed.	✓		KR R/W
40	The "PORT CLOSING..." message should be displayed at OIU-12-103A while the port is closing.	Verify that a "PORT CLOSING..." message is displayed.	✓		T/W
41	The PCS should, in order, complete the following steps: <ol style="list-style-type: none"> 1. Rotate the port door. ✓ 2. Lower the port door closed. ✓ 3. Remove vacuum from the drum lid. ✓ 4. Extend the lid detachment cylinder. ✓ 5. Lower the Lift Table to "Drum Centering" height. ✓ 6. Extend the port locking cylinders to lock the port. ✓ 7. Retract the lid detachment cylinder. ✓ 8. Retract the drum centering clamps. ✓ 	Verify that the PCS performs the steps listed in the order provided. <i>Emergency stop pressed and released. Message appears OK. Port closed. Message provided</i>	✓		KR R/W
42	The "PORT CLOSED" message should be displayed at OIU-12-103A after the port is closed. <i>"START DRUM EXIT"</i>	Verify that a "PORT CLOSED" message is displayed.	✓		KR R/W
43	Press the "LOWER LIFT TABLE" button from the currently displayed drum entry menu at OIU-12-103A.	Verify that the "LOWER LIFT TABLE" button has been pressed.	✓		KR R/W
44	The "DRUM EXIT IN PROGRESS..." message should be displayed at OIU-12-103A.	Verify that the "DRUM EXIT IN PROGRESS..." message is displayed.	✓		KR R/W
45	The PCS should lower the Lift Table to its lowered position below AGV height. <ol style="list-style-type: none"> 2. Energize the Lift Table conveyor to move the drum to the AGV end of the Lift Table. 	Verify that the lift table is lowered.	✓		KR R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass	Fail	Witness (Initial)
46	The PCS should energize the Lift Table conveyor to move the drum to the AGV end of the Lift Table. <i>CLEAN R/W 2/28/97</i>	Verify that the overpack drum is at the AGV end of the lift table. <i>CLEAN</i>	✓		R/W
47	Press the "DRUM READY FOR PICKUP" button from the "OVERPACK DRUM ENTRY MENU" at OIU-12-103A.	Verify that the "DRUM READY FOR PICKUP" button has been pressed.	✓		R/W
48	The "DRUM EXIT COMPLETE" message should be displayed at OIU-12-103A.	Verify that the "DRUM EXIT COMPLETE" message is displayed.	✓		R/W

48a "DRUM PICKUP IN PROGRESS" message.

✓✓ R/W R/W

8/5/97 Mike Lane changed message on Drum Pickup to Clean Drum Pickup in Progress and "Contaminated Drum Pickup in Progress".

Step	#	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass	Fail	Witness (Initial)
Move Drum to Drum Transfer Port						
49		Press the "MAIN MENU" button to return to the "LLW ENTRY GLOVEBOX MAIN MENU" at OIU-12-103A.	Verify that the "LLW ENTRY GLOVEBOX MAIN MENU" is displayed.	☒	☐	RLW
50		Press the "TROLLEY MENU" button from the "LLW ENTRY GLOVEBOX MAIN MENU" at OIU-12-103A.	Verify that the "TROLLEY MENU" is displayed.	☒	☐	RLW
51		Press the "TRANSFER PORT" button from the "TROLLEY MENU" to move the Hoist with Drum to the Transfer Port position.	Verify that the "TRANSFER PORT" button has been pressed.	☒	☐	RLW
52		The "TROLLEY MOVING TO TRANSFER PORT..." message should be displayed on the "TROLLEY MENU" at OIU-12-103A.	Verify that the "TROLLEY MOVING TO TRANSFER PORT..." message is displayed.	☒	☐	RLW
53		The PCS should energize the Hoist Trolley motor (CR-07-101A/M1) (Trolley Traverse Drive) forward so that the Trolley (with drum) SLOWLY travels to, and is positioned over the Transfer Port (DO-07-102).	Verify that the Hoist Trolley is centered over the Transfer Port.	☒	☐	RLW
54		The "TROLLEY AT TRANSFER PORT" message should be displayed on the "TROLLEY MENU" at OIU-12-103A.	Verify that the "TROLLEY AT TRANSFER PORT" message is displayed.	☒	☐	RLW

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Open Transfer Port					
55	Press the "MAIN MENU" button from the "TROLLEY MENU" at OIU-12-103A to return to the "LLW ENTRY GLOVEBOX MAIN MENU". <i>PORT</i> <i>R/W 2/28/92</i>	Verify that the "LLW ENTRY GLOVEBOX MAIN MENU" is displayed. <i>PORT</i>	✓		<i>R/W</i>
56	Press the "TRANSFER MENU" button from the "LLW ENTRY GLOVEBOX MAIN MENU" at OIU-12-103A.	Verify that the "TRANSFER MENU" is displayed.	✓		<i>R/W</i>
57	Press the "OPEN TRANSFER PORT" button from the "TRANSFER MENU" at OIU-12-103A.	Verify that the "OPEN TRANSFER PORT" button has been pressed.	✓		<i>R/W</i>
58	The "TRANSFER PORT OPENING..." message should be displayed on the "TRANSFER MENU" at OIU-12-103A while the Transfer Port is opening.	Verify that a "TRANSFER PORT OPENING..." message is displayed.	✓		<i>R/W</i>
59	The PCS should deflate the Transfer Port Seal.	Verify that the Transfer Port Seal is deflated.	✓		<i>R/W</i>
60	The PCS should translate the Transfer Port door (DO-07-102) open.	Verify that the Transfer Port is completely open.	✓		<i>R/W</i>
61	The "TRANSFER PORT OPEN" message should be displayed on the "TRANSFER MENU" at OIU-12-103A after the Transfer Port is open.	Verify that a "TRANSFER PORT OPEN" message is displayed.	✓		<i>R/W</i>

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Deliver Drum to Transfer Car					
62	Press the "MAIN MENU" button from the "TRANSFER MENU" at OIU-12-103A to return to the "LLW ENTRY GLOVEBOX MAIN MENU".	Verify that the "LLW ENTRY GLOVEBOX MAIN MENU" is displayed.	✓		KV
63	Press the "TRANSFER CAR MENU" button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B (LLW SORTING GLOVEBOX OIU)	Verify that the "TRANSFER CAR MENU" is displayed.	✓		
64	Press the "ENTRY" button from the "TRANSFER CAR MENU" at OIU-12-103B to move the Transfer Car (TC-07-101) to the LLW Entry Glovebox position.	Verify that the "ENTRY" button has been pressed.			
65	The "TRANSFER CAR MOVING TO ENTRY POSITION..." message should be displayed on the "TRANSFER CAR MENU" at OIU-12-103B while the Transfer Car is moving to the Entry position.	Verify that a "TRANSFER CAR MOVING TO ENTRY POSITION..." message is displayed. <i>R/W 7/28/99</i>			
66	A "TRANSFER CAR AT ENTRY POSITION" message should be displayed at OIU-12-103B after the Transfer Car reaches the Entry position (07-ZS-710 activated).	Verify that a "TRANSFER CAR AT ENTRY POSITION" message is displayed.			
67	The "ENABLED" indicator on the Hoist/Trolley/Lifter Pendant (PC-07-001) should be illuminated.	Verify that the "ENABLED" indicator is illuminated.	✓		KV RV
68	The "TRANSFER CAR IN POSITION" message should be displayed on the "TRANSFER MENU" at OIU-12-103A.	Verify that the "TRANSFER CAR IN POSITION" message is displayed.	✓		R/R
69	Press the "LOWER" pushbutton on the Hoist/Trolley/Lifter pendant (PC-07-001) to lower the drum until the drum rests on the Transfer Car and slack is noted in the Hoist chain.	Verify that the drum is lowered onto the Transfer Car.	✓		KV RV
70	Press the "OPEN" pushbutton on the Hoist/Trolley/Lifter pendant (PC-07-001) as needed until the Drum Lifter is completely open.	Verify that the Drum Lifter is completely open.	✓		KV RV
71	The "OPEN" indicator on the Hoist/Trolley/Lifter pendant (PC-07-001) should be illuminated, indicating that the Drum Lifter is open.	Verify that the "OPEN" indicator is illuminated.	✓		KV RV
72	Press the "RAISE" pushbutton on the Hoist/Trolley/Lifter pendant (PC-07-001) to raise the Drum Lifter until the Drum Lifter is fully raised.	Verify that the Hoist is fully raised.	✓		R/W KV
73	The "HOIST RAISED LIMIT" indicator on the Hoist/Trolley/Lifter pendant (PC-07-001) should be illuminated, indicating that the hoist is fully raised.	Verify that the "HOIST RAISED LIMIT" indicator is illuminated.	✓		R/V KV
74	The PCS should disable the Hoist/Trolley/Lifter pendant (PC-07-001). The "ENABLED" indicator on the Hoist/Trolley/Lifter pendant should not be illuminated.	Verify that the "ENABLED" indicator is NOT illuminated.	✓		R/V KV

#62-66 - Not Required Transfer car at Entry

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Close Transfer Port					
75	Press the "CLOSE TRANSFER PORT" button from the "TRANSFER MENU" at OIU-12-103A. <i>h ppr</i>	Verify that the "CLOSE TRANSFER PORT" button has been pressed.	✓		<i>RLW</i>
76	The "TRANSFER PORT CLOSING..." message should be displayed on the "TRANSFER MENU" at OIU-12-103A while the Transfer Port is opening.	Verify that a "TRANSFER PORT CLOSING..." message is displayed.	✓		<i>RLW</i>
77	The PCS should close the Transfer Port (DO-07-102).	Verify that the Transfer Port is closed.	✓		<i>RLW</i>
78	The PCS should deflate the Transfer Port Seal. <i>inflate RLW 7/8/97</i>	Verify that the Transfer Port Seal is deflated <i>inflated</i>	✓		<i>RLW</i>
79	The "TRANSFER PORT CLOSED" message should be displayed on the "TRANSFER MENU" at OIU-12-103A after the Transfer Port is open.	Verify that a "TRANSFER PORT CLOSED" message is displayed.	✓		<i>RLW</i>
80	Remove the drum from the Transfer Car. <i>Leave drum on Transfer Car for next test sequence. 7/9/97</i>	Verify that the waste drum has been removed from the Transfer Car.	✓		<i>RLW</i>
81	Confirm that the "LLW ENTRY GLOVEBOX MAIN MENU" is displayed at OIU-12-103A. If a sub-menu is displayed, press the "MAIN MENU" button to return to the "LLW ENTRY GLOVEBOX MAIN MENU".	Verify that the "LLW ENTRY GLOVEBOX MAIN MENU" is displayed.	✓		<i>RLW</i>
82	Because all glovebox items should be initialized, the "SYSTEM INITIALIZED" message should be displayed on the "LLW ENTRY GLOVEBOX MAIN MENU" at OIU-12-103A.	Verify that the "SYSTEM INITIALIZED" message is displayed.	✓		<i>RLW</i>
TEST CASE 13031A-85.45 COMPLETE					

TEST CASE 13031A-85.46 GENERIC INSTRUCTIONS FOR LLW SORTING GLOVEBOX (GB-07-102) ACCEPTANCE TEST	46-2
Mate Drum to Bagless Transfer Port	46-2
Remove Transfer Stand From Drum and Move to Loading Position	46-4
Place Drum on Transfer Car and Move in Front of Drum Tipper Using The Transfer Car	46-5
Grip Drum With Drum Tipper	46-6
Translate Manipulator Over Drum and Remove PVC Liner (If Present)	46-7
Make First Cut on Band Clamp using Drum Lid/Delid Fixture Saw	46-8
Make Second Cut on Band Clamp using Saw	46-10
Remove Drum Lid Using Drum Lid/Delid Fixture	46-12
Using Drum Tipper, Empty Drum Contents on to Sorting Table	46-14
Open Waste Packet using Manipulator	46-16
Remove Non-compliant Items using Non-compliant Item Transfer Stand	46-17
Remove Non-Compliant Item Drum From Port	46-19
Return Packets from Sorting Table to Drum Held by Drum Tipper	46-21
Lower Drum Tipper With Grab Closed	46-23
Open Drum Tipper Grab and Raise to Park Position	46-24
Move Transfer Car to Relid Position	46-25
Reattach Lid to Drum	46-26
Move Transfer Car To Compact Transfer Position	46-29

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
TEST CASE 13031A-85.46 GENERIC INSTRUCTIONS FOR LLW SORTING GLOVEBOX (GB-07-102) ACCEPTANCE TEST					
Mate Drum to Bagless Transfer Port					
1	Confirm that the Drum Lid/Delid Fixture saw blade is installed.	Verify that the saw blade is installed.	✓		KW
2	Place all LLW Sorting Glovebox Items in their parked positions.	Verify that all LLW Sorting Glovebox Items have been parked.	✓		KW P/W
3	Confirm that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed at OIU-12-103B. If a sub-menu is displayed, press the "MAIN MENU" button to return to the "LLW SORTING GLOVEBOX MAIN MENU".	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.	✓		KW P/W
4	Press the "RWM PORT MENU" button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "RWM PORT MENU" is displayed.	✓		KW P/W
5	Place the 208 liter (55 gallon) Drath & Schrader drum with non-compliant item transfer stand, with non-compliant packet, with inner drum lid, and without band clamp on the LLW Sorting Glovebox Lift Table, (LT-09-203A). The drum should be placed at the AGV end of the Lift Table.	Verify that the Drath & Schrader drum described has been placed on the Lift Table (LT-09-203A).	✓		KW P/W
6	Because a drum is positioned at the AGV end of the Lift Table and the Lift Table is at AGV height, the "DRUM AT LIFT TABLE" message should be displayed on the "RWM PORT MENU" at OIU-12-103B.	Verify that the "DRUM AT LIFT TABLE" message is displayed.	✓		KW P/W
7	Press the "START DRUM ENTRY" button from the "RWM PORT MENU" at OIU-12-103B.	Verify that the "START DRUM ENTRY" button has been pressed.	✓		KW P/W
8	The "DRUM ENTRY IN PROGRESS..." message should be displayed on the "RWM PORT MENU" at OIU-12-103B.	Verify that the "DRUM ENTRY IN PROGRESS..." message is displayed.	✓		KW P/W
9	The PCS should energize the Lift Table conveyor motor forward (LT-09-203A/M2) to move the drum under the Entry/Exit Port until the "Drum Under Glovebox Port" position switch (09-2S-241F) is activated.	Verify that the drum moves forward until it is centered beneath the Bagless Transfer Port.	✓		KW P/W
10	The "DRUM UNDER PORT" indicator at the Lift Table Local Control Pedestal (PC-09-203A) should be illuminated, indicating the a drum is centered under the glovebox port (DO-07-105).	Verify that the "DRUM UNDER PORT" indicator is illuminated.	✓		KW P/W

FORCED AGV
Status Bt.

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
11	The PCS should energize the Lift Table motor (LT-09-203A/M1) to raise the drum to a preprogrammed interim position.	Verify that the Lift Table raises the drum to the pre-programmed interim position.	✓ ✓		KL RW
12	The PCS should raise the lift table at slow speed until the drum contacts the port. The PCS should continue to energize the lift table servo motor until the predetermined weight setpoint is reached.	Verify that the lift table raises the drum to contact the Bagless Transfer Port until the weight displayed meets the weight setpoint.	✓ ✓		KL RW
13	Because the drum has been mated to the port, the Drum Entry Sequence is complete and the "DRUM ENTRY COMPLETE" message should be displayed on the "RWM PORT MENU" at OIU-12-103B.	Verify that the "DRUM ENTRY COMPLETE" message is displayed.	✓ ✓		KL RW
14	Press the "OPEN PORT" button from the "RWM PORT MENU" at OIU-12-103B to open the port.	Verify that the "OPEN PORT" button has been pressed.	✓ ✓		KL RW
15	The PCS should display a "PORT OPENING..." message on the "RWM PORT MENU" at OIU-12-103B while the port is opening.	Verify that a "PORT OPENING..." message is displayed while the port is opening.	✓ ✓		KL RW
16	The Bagless Transfer Port (DO-07-105) should open.	Verify that the Bagless Transfer Port door is opened.	✓ ✓		KL RW
17	The "PORT OPEN" message should be displayed on the "RWM PORT MENU" at OIU-12-103B.	Verify that the "PORT OPEN" message is displayed.	✓ ✓		KL RW

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Remove Transfer Stand From Drum and Move to Loading Position					
18	Confirm that the hoist trolley is parked centered over the Bagless Transfer Port (DO-07-105). If the trolley is not parked, use the Hoist/Trolley Pendant (PC-07-003A or PC-07-003B) to park the hoist trolley.	Verify that the hoist is parked, centered directly over the Bagless Transfer Port.	✓		KA
19	Press the "LOWER" pushbutton on the Hoist/Trolley Pendant (PC-07-003A) to lower the hoist hook until it is slightly below the non-compliant item transfer stand attachment ring.	Verify that the hoist hook is lowered slightly below the transfer stand attachment ring.	✓		KA
20	Attach the hoist hook to the non-compliant item transfer stand.	Verify that the hoist hook is attached to the non-compliant item transfer stand.	✓		KA
21	Press the "RAISE" pushbutton the Hoist/Trolley Pendant (PC-07-003A) as needed until the Hoist with non-compliant item transfer stand is fully raised.	Verify that the Hoist is fully raised.	✓		KA
22	The "RAISED LIMIT" indicator on the Hoist/Trolley Pendant should be illuminated, indicating that the Hoist is fully raised.	Verify that the "RAISED LIMIT" indicator is illuminated.	✓		KA
23	Press the Hoist/Trolley Pendant (PC-07-003A) "LEFT" pushbutton to move the Hoist to the Tray Loading Position. <i>LOAD 11/6 9/18/99</i> The Hoist/Trolley Pendant "AGV LOAD HEIGHT" indicator should be illuminated, indicating that the Hoist is positioned at the Tray Loading Position.	Verify that the Hoist is positioned at the Tray Loading Position.		✓	KA
24	Press the "MAIN MENU" button from the "RWM PORT MENU" at OIU-12-103B to return to the "LLW SORTING GLOVEBOX MAIN MENU".	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.	✓		KA

#23 see TE #214

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Place Drum on Transfer Car and Move in Front of Drum Tipper Using The Transfer Car					
25	Select the "TRANSFER CAR MENU" from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU 107-OIU-12-103B	Verify that the "TRANSFER CAR MENU" is displayed.	✓		KL
26	Press the "ENTRY" button from the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "ENTRY" button has been pressed.			N/A
27	The "TRANSFER CAR MOVING TO ENTRY POSITION..." message should be displayed on the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "TRANSFER CAR MOVING TO ENTRY POSITION..." message is displayed.			N/A
28	The Transfer Car should slowly move to and stop at the Entry position.	Verify that the Transfer Car is at the Entry position.			N/A
29	The "TRANSFER CAR AT ENTRY POSITION" message should be displayed on the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "TRANSFER CAR AT ENTRY POSITION" message is displayed.			N/A
30	Confirm that the Transfer Car (TC-07-101) is loaded with the drum appropriate to the test case being conducted.	Verify that the appropriate drum is loaded.	✓		KL
31	Press the "DELID" button from the "TRANSFER CAR MENU" at OIU-12-103B. <i>DELID/TIPPER</i>	Verify that the "DELID" button has been pressed. <i>DELID/TIPPER</i>	✓		KL
32	The "TRANSFER CAR MOVING TO DELID POSITION..." message should be displayed on the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "TRANSFER CAR MOVING TO DELID POSITION..." message is displayed.	✓		KL
33	The Transfer Car should slowly move to and stop at the Delid position.	Verify that the Transfer Car is at the Delid position.	✓		KL
34	The "TRANSFER CAR AT DELID POSITION" message should be displayed on the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "TRANSFER CAR AT DELID POSITION" message is displayed.	✓		KL
35	Press the "MAIN MENU" button from the "TRANSFER CAR MENU" to return to the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.	✓		KL

26, 27, 28, 29 N/A Car at Entry Position From Previous Test Case
Case N/A 2/28/99

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Grip Drum With Drum Tipper					
36	Press the "DRUM TIPPER MENU" button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "DRUM TIPPER MENU" is displayed.	✓		KJ
37	Press the "LOWER AND CLOSE GRAB" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "LOWER AND CLOSE GRAB" button has been pressed.	✓		KJ
38	The "LOWER AND CLOSE GRAB IN PROGRESS..." message should be displayed on the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "LOWER AND CLOSE GRAB IN PROGRESS..." message is displayed.	✓		KJ
39	Press the "LOWER TIPPER" button from the "DRUM TIPPER MENU" at OIU-12-103B until the Drum Tipper is completely lowered.	Verify that the Drum Tipper is completely lowered.	✓		KJ
40	Because the Drum Tipper is fully lowered, the PCS should energize solenoid 07-FEV-395D/C (Close) to close the Drum Tipper Grab around the drum.	Verify that the Drum Tipper Grab closes and holds the drum.	KJ 11/18/97	✓	KJ
41	Because the sequence should have been successfully completed, the "LOWER AND CLOSE GRAB COMPLETE" message should be displayed on the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "LOWER AND CLOSE GRAB COMPLETE" message is displayed.	✓		KJ

36a Start Aux HPU

✓ KJ

#40 AS 395D Forced Close - See TEF 150

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Translate Manipulator Over Drum and Remove PVC Liner (If Present)					
42	Using the Manipulator controls, move the Manipulator (EM-07-101) directly over the drum.	Verify that the Manipulator is positioned directly over the drum.	N/A	✓	R/W 9/10/97
43	If the Drum is enclosed in a PVC liner: Using the Manipulator and Manipulator tools as needed to remove the PVC liner from the top of the drum. The PVC liner should be sufficiently removed so that the Drum Lid can also be removed.	If the Drum is enclosed in a PVC liner: Verify that the PVC liner has been completely removed from the top of the drum.	N/A	✓	R/W 9/10/97
44	Using the Manipulator controls, move the Manipulator (EM-07-101) to Parked Position #2, farthest <i>closest</i> from the Bagless Transfer Port with both arms parked. <i>R/W 9/28/97</i>	Verify that the Manipulator is positioned at Parked Position #2 with both arms parked.	✓		R/W
45	Press the "MAIN MENU" button from the "DRUM TIPPER MENU" at OIU-12-103B to return to the "LLW SORTING GLOVEBOX MAIN MENU".	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.	✓		R/W

#42 & #43 Bag will be removed manually
at Relid/Debag position *R/W 9/28/97*

Liners not used in this test procedure.

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
SAW Make First Cut on Band Clamp using Drum Lid/Delid Fixture Saw					
46	Press the " LID/DELID MENU " button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B. <i>R/W 2/28/97</i>	Verify that the " LID/DELID MENU " is displayed. <i>SAW</i>	✓		<i>RJ</i>
47	Press the "MOVE TO DELID POSITION" button from the " LID/DELID MENU " at OIU-12-103B. <i>SAW</i>	Verify that the "MOVE TO DELID POSITION" button has been pressed.	✓		<i>KV</i>
48	The "FIXTURE MOVING TO DELID POSITION..." message should be displayed on the " LID/DELID MENU " at OIU-12-103B.	Verify that the "FIXTURE MOVING TO DELID POSITION..." message is displayed.	✓		<i>KV</i>
49	The PCS should energize the horizontal movement solenoid 07-FEV-737A/F (Forward) to smoothly move the Drum Lid/Delid Fixture (DO-07-101) to the Delid position. <i>R/W 2/5/97</i>	Verify that the Drum Lid/Delid Fixture moves to the Delid position.	✓		<i>R</i>
50	The " DRUM LID/DELID FIXTURE AT DELID POSITION " message should be displayed on the " LID/DELID MENU " at OIU-12-103B.	Verify that the " DRUM LID/DELID FIXTURE AT DELID POSITION " message is displayed.	✓		<i>KV</i>
51	Press the " MAIN MENU " button to return to the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the " LLW SORTING GLOVEBOX MAIN MENU " is displayed.			<i>N/A</i>
52	Press the " SAW MENU " button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the " SAW MENU " is displayed.			<i>N/A</i>
53	Determine which saw orientation; positions C2 and C5, or C3 and C6 will allow the Saw to saw through the drum band clamp without hitting the band clamp bolt. <i>START SAW SEQUENCE</i>	Verify that the correct saw positions have been selected to saw through the drum band clamp. <i>R/W 2/5/97</i>			<i>N/A</i>
54	Press either the " C2 & C5 SAW ORIENTATION " button or the " C3 & C6 SAW ORIENTATION " button as appropriate from the " SAW MENU " at OIU-12-103B.	Verify that either the " C2 & C5 SAW ORIENTATION " button or the " C3 & C6 SAW ORIENTATION " button has been pressed.			<i>N/A</i>
55	The Drum Lid/Delid Fixture (RT-07-101) should smoothly rotate to the first cut position. <i>SAW - To the West End of Glove Box</i>	Verify that the Drum Lid/Delid Fixture rotates to the first cut position.	✓		<i>R/W</i>
56	Press the "START SAW SEQUENCE" button from the "SAW MENU" at OIU-12-103B.	Verify that the "START SAW SEQUENCE" button has been pressed.	✓		<i>R/W</i>

55a message "Cut #1 in Progress"

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
57	The PCS should pulse energize the lower/raise solenoid 07-FEV-736A/L (Lower) to smoothly lower the Drum Lid/Delid Fixture (RT-07-101) to its fully lowered position. <i>"SAW CUT #1 IN PROGRESS"</i>	Verify that the Drum Lid/Delid Fixture is fully lowered.	✓		R/W
58	The "SAWING IN PROGRESS..." message should be displayed on the "SAW MENU" at OIU-12-103B. <i>R/W 9/28/02</i>	Verify the "SAWING IN PROGRESS..." message is displayed.	✓		R/W 9/28/02
59	The Saw Sequence should begin and the saw motor should energize.	Verify that the saw motor is energized.	✓		R/W
60	The PCS should energize the Inert Gas Purge Solenoid 07-FEV-378B to start inert gas flow to the Drum Lid/Delid Fixture saw and then energize the saw extend/retract solenoid 07-FEV-736D/E (Extend) to extend the saw.	Verify that the saw is fully extended.	✓		R/W
61	The saw should saw completely through the drum band clamp. The saw should be completely extended.	Verify that the saw has cut completely through the drum band clamp.	✓		R/W
62	Activation of the Saw Extended position switch (07-ZS-724A should cause the PCS to energize the saw extend/retract solenoid 07-FEV-736D/R (Retract) to retract the saw.	Verify that the saw is fully retracted.	✓		R/W
63	Because the Drum Lid/Delid Fixture saw is retracted, the saw motor should de-energize.	Verify that the saw motor is de-energized.	✓		R/W
64	The PCS should de-energize the Inert Gas Purge Solenoid 07-FEV-378B to stop inert gas flow to the Drum Lid/Delid Fixture saw.	Verify that inert gas flow has stopped.	✓		R/W
65	The PCS should pulse energize the lower/raise solenoid 07-FEV-736A/R (Raise) to smoothly raise the Drum Lid/Delid Fixture (RT-07-101) to its fully raised position.	Verify that the Drum Lid/Delid Fixture is fully raised.	✓		R/W
66	The PCS should energize the rotation solenoid 07-FEV-736B/CC (Counterclockwise) to smoothly rotate the Drum Lid/Delid Fixture counterclockwise 180 degrees, past three rotation indents. <i>right</i>	Verify that the Drum Lid/Delid Fixture rotates counterclockwise 180 degrees. <i>right</i>	✓		R/W

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Make Second Cut on Band Clamp using Saw					
67	The PCS should energize the lower/raise solenoid 07-FEV-736A/L (Lower) to smoothly lower the Drum Lid/Delid Fixture (RT-07-101) to its fully lowered position.	Verify that the Drum Lid/Delid Fixture is completely lowered.	✓		RW
68	The "OPERATOR: GRAB CLAMP BAND WITH MANIPULATOR" message should be displayed on the "SAW MENU" at OIU-12-103B.	Verify that the "OPERATOR: GRAB CLAMP BAND WITH MANIPULATOR" message is displayed.		N/A	
69	Use the manipulator arms to grip the drum band clamp.	Verify that the manipulator arms grip the band clamp.		N/A	
70	The manipulator arms should be positioned so that they will not interfere with saw operation.	Verify that the manipulator arms will not interfere with saw operation.		N/A	
71	Press the "CONFIRM CLAMP BAND HELD" button on the "SAW MENU" at OIU-12-103B to allow the saw sequence to continue.	Verify that the "CONFIRM CLAMP BAND HELD" button has been pressed.		N/A	
72	The PCS should energize the Inert Gas Purge Solenoid 07-FEV-378B to start inert gas flow to the Drum Lid/Delid Fixture (RT-07-101) saw.	Verify that inert gas is flowing to the saw.	✓		RW
73	The PCS should energize the extend/retract solenoid 07-FEV-736D/E (Extend) to extend the Drum Lid/Delid Fixture (RT-07-101) saw.	Verify that the saw is fully extended.	✓		RW
74	The saw should saw completely through the drum band clamp.	Verify that the saw has sawn through the band clamp.	✓		RW
75	The PCS should energize the saw extend/retract solenoid 07-FEV-736D/R (Retract) to retract the saw.	Verify that the saw is fully retracted.	✓		RW
76	Because the Drum Lid/Delid Fixture saw is retracted, the saw motor should de-energize after this <i>should remain energized for 10 seconds after start</i>	Verify that the saw motor is de-energized.	✓		RW
77	The PCS should de-energize the Inert Gas Purge Solenoid 07-FEV-378B to stop inert gas flow to the Drum Lid/Delid Fixture saw.	Verify that inert gas flow has stopped.	✓		RW
78	The "OPERATOR: GRAB CLAMP BAND WITH MANIPULATOR" message should be displayed on the "SAW MENU" at OIU-12-103B.	Verify that the "OPERATOR: GRAB CLAMP BAND WITH MANIPULATOR" message is displayed.		N/A	
79	Use the manipulator arms to place the drum band clamp pieces on the Sorting Table.	Verify that the band clamp pieces have been placed on the Sorting Table.		N/A	

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass	Fail	Witness (initial)
80	Place the manipulator at park position #2 (Farthest from the Bagless Transfer Port) with both arms parked.	Verify that the Manipulator and Manipulator arms are parked at position #2.		NA	
81	Press the "CONFIRM CLAMP BAND HELD" button on the "SAW MENU" at OIU-12-103B.	Verify that the "CLAMP BAND HELD" button has been pressed.		NA	
82	The PCS should pulse energize the lower/raise solenoid 07-FEV-736A/R (Raise) to smoothly raise the Drum Lid/Delid Fixture (RT-07-101) to its fully raised position.	Verify that the Drum Lid/Delid Fixture is fully raised.		NA	
83	The "SAWING COMPLETE" message should be displayed on the "LID/DELID MENU" at OIU-12-103B.	Verify that the "SAWING COMPLETE" message is displayed.		NA	
84	Press the "MAIN MENU" button to return to the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.		NA	

78 verify air is supplied to vacuum cups.

✓ R/W

79 10 seconds after step 78 the Fixture raises

✓ R/W

80 After the fixture raises, verify that it rotates to cut position #2.

✓ R/W

81 Verify message "OPERATOR, SAW CUT #1 COMPLETE -
"PRESS START SAW SEQUENCE" TO START CUT #2"

✓ R/W
LLW SORTING GLOVEBOX

82 Press "START SEQUENCE"

✓ R/W

1000 F. 17 J. 17

83 Verify message "SAW CUT #2 IN
PROGRESS" ✓ RV

84 Verify the Fixture lowers, ✓ RV

85 Verify the saw motor starts, Invert ✓
has turns on and the saw Extends. RV

86, Verify the band (clamp) is cut ✓
through. RV

87, Verify the saw retracts and 10 sec ✓
later the saw turns off. RV

88, Verify Invert has turns off, ✓ RV

89, After the saw is Fully retracted ✓ RV
Verify message "OPERATOR: SAW CUT #2 COMPLETE
- PRESS "REMOVED" TO REMOVE DRUM LEED. AM1987

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass	Fail	Witness (initial)
Remove Drum Lid Using Drum Lid/Delid Fixture					
85	Press the "LID/DELID MENU" button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "LID/DELID MENU" is displayed.			N/A
86	Press the "START DELID SEQUENCE" button from the "LID/DELID MENU" at OIU-12-103B. <i>"REMOVE LID" R/W 7/29/99</i>	Verify that the "START DELID SEQUENCE" button has been pressed.	✓		R/W
87	The PCS should pulse energize the lower/raise solenoid 07-FEV-736A/L (Lower) to smoothly lower the Drum Lid/Delid Fixture to its fully lowered position.	Verify that the Drum Lid/Delid Fixture is completely lowered.	✓		R/W
88	The "DELID IN PROGRESS..." message should be displayed on the "LID/DELID MENU" at OIU-12-103B. <i>R/W 7/28/99</i>	Verify that the "DELID IN PROGRESS..." message is displayed.	✓		R/W
89	The PCS should pulse energize solenoid valve 07-FEV-736E/O (Open) to create vacuum via aspirator air flow.	Audibly verify that the vacuum generator is turned on.	✓		R/W
90	The PCS should energize the vacuum isolation solenoid valve 07-PEV-716 to apply vacuum between the Drum Lid/Delid Fixture and the drum lid.	Verify that the vacuum isolation valve is open.			N/A
91	Vacuum should be generated between the Drum Lid/Delid Fixture (RT-07-101) and the drum lid.	Verify that vacuum is generated.	✓		R/W
92	The PCS should de-energize the vacuum isolation solenoid valve 07-PEV-716 to retain vacuum between the Drum Lid/Delid Fixture (RT-07-101) and the drum lid.	Verify that the vacuum isolation valve is closed.			N/A
93	The PCS should pulse energize solenoid valve 07-FEV-736E/C (Close) to turn off the vacuum generator.	Audibly verify that the vacuum generator is turned off.	✓		R/W
94	The "VACUUM HELD" message should be displayed on the "LID/DELID MENU" at OIU-12-103B. <i>"DRUM LID REMOVAL COMPLETE" R/W 7/28/99</i>	Verify that the "VACUUM HELD" message is displayed.			N/A
95	The PCS should pulse energize the lower/raise solenoid 07-FEV-736A/R (Raise) to smoothly raise the Drum Lid/Delid Fixture (RT-07-101) with drum lid to its fully raised position.	Verify that the Drum Lid/Delid Fixture is fully raised.	✓		R/W
96	The drum lid should remain attached to the Drum Lid/Delid Fixture (RT-07-101).	Verify that the drum lid remains attached to the Drum Lid/Delid Fixture.	✓		R/W

"DRUM REMOVAL IN PROGRESS"

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
97	The PCS should energize the horizontal movement solenoid 07-FEV-737A/R (Reverse) to smoothly move the Drum Lid/Delid Fixture (RT-07-101) to the Relid/Park position. <i>FIXTURE AT PARK POSITION</i>	Verify that the Drum Lid/Delid Fixture is at the Relid/Park position.	✓		<i>AW</i>
98	The " DELID COMPLETE " message should be displayed on the " LID/DELID MENU" at OIU-12-103B. <i>RIW 9/28/97 SAW</i>	Verify that the " DELID COMPLETE " message is displayed.	✓		<i>AW</i>
99	Press the "MAIN MENU" button to return to the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.	✓		<i>AW</i>

AW 11/28/97
 96a Press "MOVE TO PARK POSITION", ✓ *AW*
 96b Verify message "Fixture Moving TO PARK POSITION", ✓ *AW*

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Using Drum Tipper, Empty Drum Contents on to Sorting Table					
100	Press the "DRUM TIPPER MENU" button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "DRUM TIPPER MENU" is displayed.	✓		KP
101	Press the "RAISE WITH GRAB CLOSED" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "RAISE WITH GRAB CLOSED" button has been pressed.	✓		KP
102	The "RAISE WITH GRAB CLOSED IN PROGRESS..." message should be displayed on the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "RAISE WITH GRAB CLOSED IN PROGRESS..." message is displayed.	✓		KV
103	Press the "RAISE TIPPER" button from the "DRUM TIPPER MENU" at OIU-12-103B until the Drum Tipper is fully raised.	Verify that the Drum Tipper is fully raised.	✓		KP
104	The PCS should energize the Sorting Table Extend solenoid 07-FEV-737B/F (Forward) to extend the Sorting Table to its fully extended position. <i>TIPPER AT VERTICAL DISPLAYED (BUTTON)</i>	Verify that the Sorting Table is fully extended.	✓		KP
105	The "RAISE WITH GRAB CLOSED COMPLETE, ROTATION JOYSTICK ENABLED" message should be displayed on the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "RAISE WITH GRAB CLOSED COMPLETE, ROTATION JOYSTICK ENABLED" message is displayed.	✓		KP
106	Use the Drum Tipper joystick control to carefully rotate the Drum Tipper with drum to place the drum contents on the Sorting Table.	Verify that the drum contents have been placed on the Sorting Table.	✓		KP
107	Use the Drum Tipper joystick control to rotate the Drum Tipper so that the drum is in a vertical position.	Verify that the drum is rotated vertical.	✓		KP
108	The "TIPPER AT VERTICAL" message should be displayed on the "DRUM TIPPER MENU" at OIU-12-103B when the drum is in the vertical position.	Verify that the "TIPPER AT VERTICAL" message is displayed.	✓		KP
109	Press the "LOWER WITH GRAB CLOSED" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "LOWER WITH GRAB CLOSED" button has been pressed.	✓		KP
110	The "LOWER WITH GRAB CLOSED IN PROGRESS..." message should be displayed on the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "LOWER WITH GRAB CLOSED IN PROGRESS..." message is displayed.	✓		KP
111	Press the "LOWER TIPPER" button from the "DRUM TIPPER MENU" at OIU-12-103B until the Drum Tipper is fully lowered.	Verify that the Drum Tipper is fully lowered.	✓		KP

Add step to pick up clamp bands. From Floor

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
112	The "LOWER WITH GRAB CLOSED COMPLETE" message should be displayed on the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "LOWER WITH GRAB CLOSED COMPLETE" message is displayed.	✓		KA

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass	Fail	Witness (initial)
Open Waste Packet using Manipulator					
113	Using the Manipulator controls, move the Manipulator (EM-07-101) directly over the drum <i>table</i> <i>KP 9/17/97</i>	Verify that the Manipulator is positioned directly over the drum.	✓		KP
114	Visually scan waste packets placed on the sorting table. Visually locate and identify the packet labeled "Non-Compliant".	Verify that a "Non-Compliant" packet is on the sorting table.	✓		KP
115	Move the manipulator carriage above the non-compliant packet on the sorting table. Lower the manipulator carriage so that the manipulator arms can reach the packet.	Verify that the manipulator arms can reach the non-compliant packet on the sorting table.	✓		KP
116	Carefully open the non-compliant packet using the manipulator.	Verify that the "Non-Compliant" packet has been opened.	✓		KP
117	Using the Manipulator, place the "Non-Compliant" packet on the Non-Compliant Item Transfer stand.	Verify that the "Non-Compliant" packet has been placed on the Transfer stand.	✓		KP
118	Using the Manipulator controls, move the Manipulator (EM-07-101) to Parked Position #2, farthest from the Bagless Transfer Port.	Verify that the Manipulator is at Parked Position #2 with both arms parked.	✓		KP

116a. Go to Parked X-Ray Menu. *KP 9/17/97*
 116 b. Verify X-ray Door is open
 116 c. Press *Extend* X-ray Tray, *"Parked"* X-Ray Tray *Extend* → *Parked* X-ray Tray *Extended*
 116 d. Place article in Tray.
 116 e. Press Close X-ray Door, *Parked* X-Ray door *Close*, *Parked* X-Ray door *closed*,
 116 f. Press Open X-ray Door open, *Parked* X-Ray Door *Opening*, *Parked* X-Ray Door *open*

Note: Step 116 D: Tray missing. Reboot not necessary *KP 9/17/97*

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Remove Non-compliant Items using Non-compliant Item Transfer Stand					
119	Press the "MAIN MENU" button to return to the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.	✓		KJ
120	Press the "RWM PORT MENU" button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "RWM PORT MENU" is displayed.	✓		KJ
121	Because a drum is mated to this port, the "PORT OPEN" message on should be displayed on the "RWM PORT MENU" at OIU-12-103B.	Verify that a "PORT OPEN" message is displayed.	✓		KJ
122	Press the "RAISE" pushbutton on the Trolley/Hoist Pendant (PC-07-003A) as needed to energize the hoist motor (CR-101C/M2) to completely raise the hoist with the non-compliant item transfer stand.	Verify that the Hoist with non-compliant item transfer stand is fully raised.	✓		KJ
123	The Hoist Motor (CR-101C/M2) should de-energize.	Verify that the hoist motor is de-energized.	✓		KJ
124	Turn the "Pendant Select" switch on the Trolley/Hoist Pendant (PC-07-003A) to the "PEND B" position.	Verify that the "Pendant Select" switch has been turned to the "PEND B" position.	✓		KJ
125	Selecting the "PEND B" position should enable the PC-07-003B pendant and disable the PC-07-003A pendant. The "ENABLED" indicator on the PC-07-003B pendant should be illuminated.	Verify that the PC-07-003B "ENABLED" indicator is illuminated.	✓		KJ
126	Press the "LEFT" and "RIGHT" pushbuttons on the Trolley/Hoist Pendant (PC-07-003B) as needed so that the trolley SLOWLY travels to and is positioned over the Bagless Transfer Port (DO-07-105)	Verify that the trolley with transfer stand is positioned over the Bagless Transfer Port.	✓		KJ
127	The "PORT" indicator on the Trolley/Hoist Pendant (PC-07-003B) should be illuminated, indicating that the Trolley is positioned over the Bagless Transfer Port.	Verify that the "PORT" indicator is illuminated.	✓		KJ
128	The Trolley Motor (CR-101C/M1) should de-energize.	Verify that the trolley motor is de-energized.	✓		KJ
129	Press the "LOWER" pushbutton on the Trolley/Hoist Pendant (PC-07-003B) to lower the hoist until the transfer stand is positioned within one foot of the Drath and Schrader drum mated to the Bagless Transfer Port.	Verify that the transfer stand is properly centered to allow the transfer stand to be lowered into the drum.	✓		KJ

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)			EXPECTED OUTPUT		
130	Press the "LOWER" pushbutton on the Trolley/Hoist Pendant (PC-07-003B) to slowly lower the non-compliant item transfer stand into the Drath and Schrader drum.			Verify that the non-compliant item transfer stand is fully lowered in the Drath and Schrader drum.	✓	KJ
131	Remove the hoist hook from the non-compliant item transfer stand.			Verify that the hoist hook is removed from the transfer stand	✓	KJ
132	Press the "RAISE" pushbutton on the Trolley/Hoist Pendant (PC-07-003B) to slowly raise the hoist until the hoist is fully raised.			Verify that the hoist is fully raised.	✓	KJ
133	The "RAISED LIMIT" indicator on the Trolley/Hoist Pendant (PC-07-003B) should be illuminated, indicating that the hoist is fully raised.			Verify that the "RAISED LIMIT" indicator is illuminated.	✓	KJ

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Remove Non-Compliant Item Drum From Port					
134	Press the "CLOSE PORT" button from the "RWM PORT MENU" at OIU-12-103B to close the port. The port should begin to close.	Verify that the "CLOSE PORT" button has been pressed.		✓	KL
135	The "PORT CLOSING..." message should be displayed on the "RWM PORT MENU" at OIU-12-103B while the port is closing.	Verify that the "PORT CLOSING..." message is displayed.	✓		KL
136	The Bagless Transfer Port (DO-07-105) should close.	Verify that the port is closed.	✓		KL
137	The "PORT CLOSED" message should be displayed on the "RWM PORT MENU" at OIU-12-103B after the port is closed.	Verify that the "PORT CLOSED" message is displayed.	✓		KL
138	Press the "START DRUM EXIT" button from the "RWM PORT MENU" at OIU-12-103B to remove the drum from the Bagless Transfer Port. The drum exit sequence should begin.	Verify that the "START DRUM EXIT" button has been pressed.	✓		KL
139	The PCS should display a "DRUM EXIT IN PROGRESS..." message on the "RWM PORT MENU" at OIU-12-103B while the drum is being removed from the port.	Verify that a "DRUM EXIT IN PROGRESS..." message is displayed.	✓		KL
140	The PCS should energize the Lift Table Servo Motor (LT-09-203A/M1) to lower the Lift Table until the "AGV Height" limit switch (09-ZS-241G) is activated.	Verify that the Lift Table lowers to AGV Mating Height. <i>Reaches First</i>	✓		KL
141	The "AGV LOAD HEIGHT" indicator (09-ZL-241E) on the Lift Table Control Pedestal (PC-09-203A) should be illuminated, indicating that the lift table is at AGV height.	Verify that the "AGV LOAD HEIGHT" indicator is illuminated.	✓	✓	KL
142	The PCS should energize the Lift Table Roller Conveyor Motor (LT-09-203A/M2) to move the drum to the AGV end of the Lift Table.	Verify that the Roller Conveyor is energized.		✓	KL
143	The Lift Table Roller Conveyor should move the drum to the AGV end of the Lift Table.	Verify that the drum is at the AGV end of the Lift Table.		✓	KL
144	The "DRUM AT AGV END" status indicator (09-ZL-241A) at the Lift Table Local Control Pedestal (PC-07-203A) should be illuminated, indicating that the drum is at the AGV end of the Lift Table.	Verify that the "DRUM AT AGV END" indicator is illuminated.	✓		KL
145	The "DRUM EXIT COMPLETE" message should be displayed on the "RWM PORT MENU" at OIU-12-103B.	Verify that the "DRUM EXIT COMPLETE" message is displayed.	✓		KL

Step 134: Hoist must be in load not be in port position during closing. Moved hoist and opened port T.E. documents hoist location Hg 9/17/17

EST CASE 13031A-85.46 Rev. 0 46-19 see TE # 148 LLW SORTING GLOVEBOX

* See TE # 215

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
146	Press the "DRUM READY FOR PICKUP" button on the "RWM PORT MENU" at OIU-12-103B to indicate that the Drum is ready for pickup by the Automated Guided Vehicle (AGV). <i>DRUM PICKUP IN PROGRESS... DISPLAYED</i>	Verify that the "DRUM READY FOR PICKUP" button has been pressed. <i>9/17/97</i>	✓		<i>KF</i>
147	Press the "MAIN MENU" button to return to the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.	✓		<i>KF</i>

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Return Packets from Sorting Table to Drum Held by Drum Tipper					
148	Press the "SORTING TABLE MENU" button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "SORTING TABLE MENU" is displayed.	✓		KP
149	Press the "EXTEND TABLE" button from the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "EXTEND TABLE" button has been pressed.	✓		KP
150	Because the Sorting Table has reached the Tip Position, the "SORTING TABLE EXTENDING..." message should be displayed on the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "SORTING TABLE EXTENDING..." message is displayed.	✓		KP
151	The PCS should pulse energize the Sorting Table lock/unlock solenoid 07-FEV-737D/L (Lock) to extend the locking pins to lock the Sorting Table at the Tip Position.	Verify that the Sorting Table locking pins are fully extended to lock the Sorting Table.	✓		KP
152	Because the Sorting Table is locked at the Tip Position, the "SORTING TABLE EXTENDED" message should be displayed on the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "SORTING TABLE EXTENDED" message is displayed.	✓		KP
153	Press the "ENABLE RAISE/LOWER" button on the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "ENABLE RAISE/LOWER" button has been pressed.	✓		KP
154	Because the "ENABLE RAISE/LOWER" button has been pressed, the "RAISE/LOWER ENABLED" message should be displayed on the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "RAISE/LOWER ENABLED" message is displayed.	✓		KP
155	If a 454 kilogram (1000 lb) drum is used: Actual test conditions will affect testing. If the 1000 pound drums processed through the LLW Entry and the LLW Sorting Glovebox will be compacted and then processed through the LLW Exit Glovebox, steps must be taken to remove the extra 500 pounds of packets from the LLW Sorting Glovebox.	If a 454 kilogram (1000 lb) drum is used: Verify that any extra simulated waste packets are safely removed from the LLW Sorting Glovebox.	N/A		KP
156	Press the "RAISE SORTING TABLE" button from the "SORTING TABLE MENU" at OIU-12-103B to raise the Sorting Table, to carefully dump all remaining packets on the Sorting Table back into the drum held by the Drum Tipper.	Verify that all remaining packets have been returned from the Sorting Table to the drum.	✓		KL

153a) *Verify*
Open & say door. KP 9/17/97

✓ KP

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
157	Pressing the "RAISE SORTING TABLE" button should cause the PCS to energize the Sorting Table raise/lower solenoid 07-FEV-737C/R (Raise) to raise the Sorting Table.	Verify that the Sorting Table raises.	✓		KR
158	The "SORTING TABLE RAISING..." message should be displayed on the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "SORTING TABLE RAISING..." message is displayed.	✓		KL
159	Press the "LOWER SORTING TABLE" button from the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "LOWER SORTING TABLE" button has been pressed.	✓		KR
160	Pressing the "LOWER SORTING TABLE" button should cause the PCS to energize the Sorting Table raise/lower solenoid 07-FEV-737C/L (Lower) to lower the Sorting Table.	Verify that the Sorting Table lowers.		SEE ✓ TE. 441	KR
161	The "SORTING TABLE LOWERING..." message should be displayed on the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "SORTING TABLE LOWERING..." message is displayed.	✓		KR
162	Continue to press the "LOWER SORTING TABLE" button from the "SORTING TABLE MENU" at OIU-12-103B until the Sorting Table no longer lowers.	Verify that the Sorting Table is completely lowered.	✓		KR
163	Press the "RETRACT TABLE" button from the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "EXTEND TABLE" button has been pressed. RETRACT	✓		KR
164	The PCS should pulse energize the Sorting Table lock/unlock solenoid 07-FEV-737D/UL (Unlock) to retract the locking pins to unlock the Sorting Table (ST-07-101)	Verify that the Sorting Table locking pins are fully retracted.	✓		KR
165	The "SORTING TABLE RETRACTING..." message should be displayed on the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "SORTING TABLE RETRACTING..." message is displayed.	✓		KR
166	The PCS should energize the Sorting Table extend/retract solenoid 07-FEV-737B/R (Retract) and the Sorting Table should retract to its fully retracted position.	Verify that the Sorting Table is fully retracted.	✓		KR
167	Because the Sorting Table has reached the Retracted Position, the "SORTING TABLE RETRACTED" message should be displayed on the "SORTING TABLE MENU" at OIU-12-103B.	Verify that the "SORTING TABLE RETRACTED" message is displayed.	✓		KR

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Lower Drum Tipper With Grab Closed					
168	Press the "MAIN MENU" button to return to the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.	✓		SP
169	Press the "DRUM TIPPER MENU" button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "DRUM TIPPER MENU" is displayed.	✓		KJ
170	Press the "LOWER WITH GRAB CLOSED" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "LOWER WITH GRAB CLOSED" button has been pressed.			
171	The "LOWER WITH GRAB CLOSED IN PROGRESS..." message should be displayed on the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "LOWER WITH GRAB CLOSED IN PROGRESS..." message is displayed.			
172	Press the "LOWER TIPPER" button from the "DRUM TIPPER MENU" at OIU-12-103B until the Drum Tipper is fully lowered.	Verify that the Drum Tipper is fully lowered.			
173	The "LOWER WITH GRAB CLOSED COMPLETE" message should be displayed on the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "LOWER WITH GRAB CLOSED COMPLETE" message is displayed.			

N/A.
JPL
5/11/97

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Open Drum Tipper Grab and Raise to Park Position					
174	Press the "MAIN MENU" button to return to the "LLW SORTING GLOVEBOX MAIN-MENU" at OIU-12-103B. <i>Add 174a (below) Kf 9/17/97</i>	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.	✓		Kf
175	Press the "DRUM TIPPER MENU" button from the "LLW SORTING GLOVEBOX MAIN-MENU" at OIU-12-103B. <i>Add 175a (over) Kf 9/17/97</i>	Verify that the "DRUM TIPPER MENU" is displayed.	✓		Kf
176	Press the "OPEN GRAB AND PARK" button from the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "OPEN GRAB AND PARK" button has been pressed.	✓		Kf
177	The PCS should energize the Drum Tipper Grab Solenoid 07-FEV-395D/O (Open) to open the Drum Tipper Grab until the Drum Tipper Grab Open position switch 07-ZS-720B is activated.	Verify that the Drum Tipper Grab is completely open.	✓		Kf
178	The "OPEN GRAB AND PARK IN PROGRESS..." message should be displayed on the "DRUM TIPPER MENU" at OIU-12-103B. <i>Add 178a (below) Kf 9/17/97</i>	Verify that the "OPEN GRAB AND PARK IN PROGRESS..." message is displayed.	✓		Kf
179	The PCS should energize the Drum Tipper Motor DH-07-193M1/R (Raise) until the Drum Tipper Raised position switch 07-ZS-332A is activated, indicating that the Drum Tipper is fully raised.	Verify that the Drum Tipper is fully raised.	✓		Kf
180	The "OPEN GRAB AND PARK COMPLETE" message should be displayed on the "DRUM TIPPER MENU" at OIU-12-103B.	Verify that the "OPEN GRAB AND PARK COMPLETE" message is displayed.	✓		Kf
181	Press the "MAIN MENU" button from the "DRUM TIPPER MENU" to return to the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.	✓		Kf

179a (over) Go to Jaw Menu. Press "Move to Delid Position". FIKTORG MOVING TO DELID POSITION. FIKTORG AT DELID POSITION

176a Move manipulator to Park Position 1.

173a Kf 9/17/97

178a. Press "Raise Tipper" Kf 9/17/97

175a (over) Kf 9/17/97

173a. "DRUM"
Relid. Square in Progress" Displayed.

"DRUM"
Relid. Square Complete" Displayed.

Press "MOVE TO PARK POSITION". READ "FIXTURE MOVING TO PARK POSITION, THEN FIXTURE at

Park Position"

Return to Main ~~Position~~ Menu

✓	Kf
✓	Kf
✓	Kf
✓	Kf

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Move Transfer Car to Relid Position					
182	Press the "TRANSFER CAR MENU" button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "TRANSFER CAR MENU" is displayed.	✗		KF
183	Press the "RELID" button from the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "RELID" button has been pressed.	✓		KF
184	The "TRANSFER CAR MOVING TO RELID POSITION..." message should be displayed on the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "TRANSFER CAR MOVING TO RELID POSITION..." message is displayed.	✓		KF
185	The Transfer Car should slowly move to and stop at the Relid position.	Verify that the Transfer Car is at the Relid position.	✓		KF
186	The "TRANSFER CAR AT RELID POSITION" message should be displayed on the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "TRANSFER CAR AT RELID POSITION" message is displayed.	✓		KF
187	Press the "MAIN MENU" button from the "TRANSFER CAR MENU" at OIU-12-103B to return to the "LLW SORTING GLOVEBOX MAIN MENU".	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.	✓		KF

187a. Relid Drum KF 9/17/97

✓ KF

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Reattach Lid to Drum					
188	Press the "LID/DELID MENU" button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "LID/DELID MENU" is displayed.			KJ
189	Press the "START RELID SEQUENCE" button from the "LID/DELID MENU" at OIU-12-103B.	Verify that the "START RELID SEQUENCE" button has been pressed.			KJ
190	The "RELID IN PROGRESS..." message should be displayed on the "LID/DELID MENU" at OIU-12-103B.	Verify that the "RELID IN PROGRESS..." message is displayed.			KJ
191	The PCS should energize the vacuum isolation solenoid 07-PEV-716 to release the vacuum between the Drum Lid/Delid Fixture and the drum lid.	Verify that vacuum has been released.	✓		KJ
192	The drum lid should release from the Drum Lid/Delid Fixture (DO-07-101) and drop onto the top of the drum.	Verify that the drum lid is centered on the Drum.			KJ
193	The PCS should energize the rotation solenoid 07-FEV-736B/C (Clockwise) to smoothly rotate the Drum Lid/Delid Fixture clockwise 180 degrees, past three rotation indents.	Verify that the Drum Lid/Delid Fixture rotates clockwise 180 degrees.			KJ
194	The Drum Lid/Delid Fixture should be positioned at crimp position 1.	Verify that the Drum Lid/Delid Fixture is at crimp position 1.			KJ
195	If the "LOAD CLIPS" button from the "LID/DELID MENU" at OIU-12-103B is flashing: Carefully load a new C-Clip Cartridge onto the Drum Lid/Delid Fixture C-Clip magazine and press the "LOAD CLIPS" button from the "LID/DELID MENU" at OIU-12-103B.	If the "LOAD CLIPS" button is flashing: Verify that a new C-Clip Cartridge has been loaded and that the "LOAD CLIPS" button has been pressed.			KJ
196	The "LOAD CLIPS" button should not be flashing.	Verify that the "LOAD CLIPS" button is not flashing.			KJ
197	The PCS should energize the raise/lower solenoid 07-FEV-736A/L (Lower) until the Drum Lid/Delid Fixture (DO-07-101) is completely lowered.	Verify that the Drum Lid/Delid Fixture is completely lowered.			KJ
198	The PCS should energize the C-Clip Magazine solenoid 07-FEV-736G for the time period specified in the Setup section of this test procedure. A C-Clip should be fed into the C-Clip Crimper Jaw.	Verify that a C-Clip has been correctly fed into the C-Clip Crimper Jaw.			KJ

Steps 188 - 207 deleted. For Hand crimping replaces Function. 46-26 KJ 9/17/17

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
199.	The PCS should energize the C-Clip Crimper extend/retract solenoid 07-FEV-736F/F (Forward) to extend the C-Clip Crimper.	Verify that the C-Clip Crimper is fully extended.			
200	The PCS should energize the Crimp Jaw solenoid 07-FEV-736C/C (Close) to crimp the C-clip onto the drum and lid.	Verify that the Crimper jaw fully extends to crimp the C-Clip.			
201	The PCS should de-energize the Crimp Jaw solenoid 07-FEV-736C/B (Back) to retract the C-clip Crimper Jaw.	Verify that C-Clip Crimper jaw fully retracts.			
202	The PCS should energize the C-Clip Crimper extend/retract solenoid 07-FEV-736F/R (Retract) to retract the Crimper.	Verify that the C-Clip Crimper is fully retracted.			
203	<p>The PCS should perform the following steps, in the order listed, to Crimp the next C-Clip to the drum and lid:</p> <ol style="list-style-type: none"> 1. Raise the Drum Lid/Delid Fixture. 2. Rotate the Drum Lid/Delid Fixture counter-clockwise to the second (#2) Crimp position. 3. Lower the Drum Lid/Delid Fixture. 4. Energize the C-Clip Magazine solenoid to force a C-Clip into the C-Clip Crimper Jaw. 5. Extend the Crimp head. 6. Extend the C-Clip Crimper Jaw to crimp the C-Clip. 7. Retract the C-Clip Crimper Jaw. 8. Retract the Crimp head. 	<p>Verify that the steps listed on the left have been successfully performed in the order listed.</p> <p>Verify that the C-Clip has been successfully crimped.</p>			
204	<p>The PCS should perform the following steps, in the order listed, to Crimp the next five C-Clips to the drum and lid:</p> <ol style="list-style-type: none"> 1. Raise the Drum Lid/Delid Fixture 2. Rotate the Drum Lid/Delid Fixture counter-clockwise to the next Crimp position. 3. Lower the Drum Lid/Delid Fixture. 4. Energize the C-Clip Magazine solenoid to force a C-Clip into the C-Clip Crimper Jaw. 5. Extend the Crimp head. 6. Extend the C-Clip Crimper Jaw to crimp the C-Clip. 7. Retract the C-Clip Crimper Jaw. 8. Retract the Crimp head. 	<p>Verify that the steps listed on the left have been successfully performed in the order listed.</p> <p>Verify that the remaining five C-Clips have been successfully crimped onto the Drum and Drum Lid.</p>			

N/A
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Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
205	The PCS should energize the rotation solenoid 07-FEV-736B/C (Clockwise) until the Drum Lid/Delid Fixture is rotated parked.	Verify that the Drum Lid/Delid Fixture is rotated parked.			
206	The "RELID COMPLETE" message should be displayed on the "LID/DELID MENU" at OIU-12-103B.	Verify that the "RELID COMPLETE" message is displayed.			
207	Press the "MAIN MENU" button from the "LID/DELID MENU" to return to the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.			

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 All
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Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Move Transfer Car To Compact Transfer Position					
208	Press the "TRANSFER CAR MENU" button from the "LLW SORTING GLOVEBOX MAIN MENU" at OIU-12-103B.	Verify that the "TRANSFER CAR MENU" is displayed.	✓		KZ
209	Press the "COMPACT TRANSFER" button from the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "COMPACT TRANSFER" button has been pressed.	✓		KZ
210	The "TRANSFER CAR MOVING TO COMPACT TRANSFER POSITION..." message should be displayed on the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "TRANSFER CAR MOVING TO COMPACT TRANSFER POSITION..." message is displayed.	✓		KZ
211	The Transfer Car should slowly move to and stop at the Compact Transfer position.	Verify that the Transfer Car is at the Compact Transfer position.	✓		KZ
212	The "TRANSFER CAR AT COMPACT TRANSFER POSITION" message should be displayed on the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "TRANSFER CAR AT COMPACT TRANSFER POSITION" message is displayed.	✓		KZ
213	Configure the compactor so that the "Ready to Receive Drum" signal is sent to the PCS.	Verify that the Compactor Glovebox is ready to receive a drum.	✓		KZ
214	Press the "COMPACTOR GLOVEBOX" button from the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "COMPACTOR GLOVEBOX" button has been pressed.	✓		KZ
215	The "TRANSFERRING DRUM TO COMPACTOR..." message should be displayed on the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "TRANSFERRING DRUM TO COMPACTOR..." message is displayed.	✓		KZ
216	The PCS should pulse energize the Transfer Car Conveyor Drive solenoid (07-FEV-737E/EN) to engage the conveyor.	Verify that the Transfer Car Conveyor Drive is engaged.	✓		KZ
217	The "TRANSFER TO COMPACTOR IN PROGRESS..." message should be displayed on the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "TRANSFER TO COMPACTOR IN PROGRESS..." message is displayed.	✓		KZ
218	The PCS should energize the Transfer Car Conveyor Drive Motor (TC-07-101/ST) to transfer the drum from the Transfer Car to the LLW Supercompactor.	Verify that the drum has been transferred to the LLW Supercompactor.	✓		KZ

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
219	The PCS should de-energize the Transfer Car Conveyor Drive.	Verify that the Transfer Car conveyor drive is de-energized.	✓		KR
220	The PCS should disengage the Transfer Car Conveyor Drive.	Verify that the Transfer Car conveyor drive is disengaged.	✓		KR
221	The "TRANSFER TO COMPACTOR COMPLETE" message should be displayed on the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "TRANSFER TO COMPACTOR COMPLETE" message is displayed.	✓		KR
222	Press the "ENTRY" button from the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "ENTRY" button has been pressed.	✓		KR
223	The "TRANSFER CAR MOVING TO ENTRY POSITION..." message should be displayed on the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "TRANSFER CAR MOVING TO ENTRY POSITION..." message is displayed.	✓		KR
224	The Transfer Car should slowly move to and stop at the Entry position.	Verify that the Transfer Car is at the Entry position.	✓		KR
225	The "TRANSFER CAR AT ENTRY POSITION" message should be displayed on the "TRANSFER CAR MENU" at OIU-12-103B.	Verify that the "TRANSFER CAR AT ENTRY POSITION" message is displayed.	✓		KR
TEST CASE 13031A-85.46 COMPLETE					

LLW Exit Glovebox Testing Note:

During the performance of LLW Glovebox ATP test cases 33, 34, 36, 37, 39, 40, 41, the following weighted drums were processed through the LLW Exit Glovebox:

- 2 - Approximately 140 pound drums
- 1 - Approximately 500 pound drum

The actual, uncalibrated LLW Exit Glovebox Drum Lifter (DH-07-104) scale readings for these weights were 67.82, and 221 kilograms, respectively.

A drum was loaded out from each position, Compact Receipt, Storage position #1, and Storage Position #2.

The LLW ATP was initially drafted, for obvious safety reasons, with the intent that these test steps be performed using empty pucks. In actual fact, weighted drums were used to reduce the amount of testing required, to account for both interlock and alarm testing as well as some portion of the weighted drum processing (i.e., processing two 140 pound and one 500 pound drum) through the glovebox (e.g., test case 47).

Michael Lane

Michael Lane
September 10, 1997

TEST CASE 13031A-85.47 GENERIC INSTRUCTIONS FOR LLW EXIT GLOVEBOX (GB-07-105) ACCEPTANCE TEST	47-2
Mate Drum to Entry/Exit Port	47-2
Receive drum from Compact Conveyor	47-4
Move 63.5 kilogram (140 pound) Compacted Drum to Storage Position 1	47-5
Move 227 kilogram (500 pound) Compacted Drum to Storage Position 2	47-8
Load Out 227 kilogram (500 pound) Compacted Drum From Storage Position 2	47-10
Load Out 63.5 kilogram (140 pound) Compacted Drum from Storage Position 1	47-13
Remove Filled Drum from Entry/Exit Port	47-16

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass	Fail	Witness (initial)
TEST CASE 13031A-85.47 GENERIC INSTRUCTIONS FOR LLW EXIT GLOVEBOX (GB-07-105) ACCEPTANCE TEST					
Mate Drum to Entry/Exit Port					
1	Place the empty 320 liter (85 gallon) waste drum without band clamp on the LLW Exit Glovebox Entry/Exit Port Lift Table, (LT-09-202C) at the AGV end of the lift table.	Verify that the drum without band clamp has been placed on the Entry/Exit Port lift table.			
2	The "DRUM AT AGV END" indicator (09-ZL-237A) on the Lift Table Control Pedestal (PC-09-202C) should be illuminated, indicating that a drum is positioned at the AGV end of the lift table.	Verify that the "DRUM AT AGV END" indicator is illuminated.			
3	The "DRUM AT LIFT TABLE" message should be displayed on the "EXIT PORT MENU" at OIU-12-103C.	Verify that a "DRUM AT LIFT TABLE" message is displayed.			
4	Press the "START DRUM ENTRY" button from the "EXIT PORT MENU" at OIU-12-103C to move the Lift Table to its lowered position below AGV height.	Verify that the Lift Table lowers to its lowered position below AGV height.			
5	The "DRUM ENTRY IN PROGRESS..." message should be displayed on the "EXIT PORT MENU" at OIU-12-103C.	Verify that the "DRUM ENTRY IN PROGRESS..." message is displayed.			
6	The PCS should then energize the Lift Table conveyor motor forward (LT-09-202C/M2) to move the drum under the Entry/Exit Port.	Verify that the drum moves forward until it is centered beneath the Entry/Exit Port.			
7	The "DRUM UNDER PORT" indicator at the Lift Table Local Control Pedestal (PC-09-202C) should be illuminated, indicating the a drum is centered under the glovebox port (DO-07-106).	Verify that the "DRUM UNDER PORT" indicator is illuminated.			
8	The PCS should then energize the Lift Table motor (LT-09-202C/M1) to raise the drum to "Drum Centering" position.	Verify that the Lift Table raises the drum to the "Drum Centering" position.			
9	The "DRUM IN POSITION" indicator (09-ZL-237D) at the Lift Table Local Control Pedestal (PC-09-202C) should be illuminated, indicating that the drum has been raised to the "Drum Centering" position.	Verify that the "DRUM IN POSITION" indicator is illuminated.			
10	The "DRUM ENTRY COMPLETE" message should be displayed on the "EXIT PORT MENU" at OIU-12-103C.	Verify that the "DRUM ENTRY COMPLETE" message is displayed.			
11	Press the "OPEN PORT" button from the "EXIT PORT MENU" at OIU-12-103C.	Verify that the "OPEN PORT" button has been pressed.			
12	The "PORT OPENING..." message should be displayed on the "EXIT PORT MENU" at OIU-12-103C while the port is opening.	Verify that a "PORT OPENING..." message is displayed.			
13	The PCS should energize the Drum Centering Clamp solenoid (07-FEV-304) to extend the Drum Centering clamps to secure the drum.	Verify that the Drum Centering Device clamps extend to center the drum.			

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
14	The PCS should energize Lift Table motor (LT-09-202C/M1) to slowly raise the Lift Table until the drum activates the "Drum in Position" position switch 07-ZS-764, indicating that the drum is in position to begin the port opening sequence.	Verify that the Lift Table raises to the "Drum in Position" height.			
15	The PCS should energize and hold the vacuum isolation solenoid valve (07-FEV-761C) to allow vacuum to be applied to the drum lid.	Verify that the vacuum isolation valve is open.			
16	The PCS should energize vacuum solenoid valve 07-FEV-761D/V (Vacuum) to create vacuum between the port door and the drum lid for Entry/Exit Port DO-07-106.	Audibly verify that the vacuum generator is turned on.			
17	The PCS should de-energize isolation solenoid 07-FEV-761C to close the vacuum isolation valve so that vacuum is retained between the port door and the drum lid.	Verify that the vacuum isolation valve is closed.			
18	Pressure switch 07-PS-704 should be activated, indicating that vacuum is present between the drum lid and the port door.	Verify that vacuum has been generated between the port door and the drum lid.			
19	The PCS should energize solenoid valve 07-FEV-305 to inflate the HVAC Seal for Drum Entry/Exit Port DO-07-106.	Verify that the HVAC Seal is inflated.			
20	The PCS should briefly energize solenoid valves 07-FEV-913A and 07-FEV-913B (Vent) to release pressure on the port door open/close cylinders.	Audibly verify that the open/close cylinders are vented.			
21	The PCS should pulse energize solenoid 07-FEV-761A/UL (Unlock) to fully retract the port door locking cylinders.	Verify that both port door locking cylinders are fully retracted.			
22	The PCS should activate the Lift Table servo motor (LT-09-202C/M1) to raise the Lift Table, drum, and port door up to the "DOOR IN POSITION" height.	Verify that the Lift Table raises the drum and the port door to the "Door in Position" height.			
23	The PCS should pulse energize solenoid valve 07-FEV-761F/O (Open) to pressurize the port door open cylinders to vertically raise the door to the "OPEN" position.	Visually verify that the port door raises to the "OPEN" position.			
24	The PCS should pulse energize solenoid valve 07-FEV-761B/O (Open) to rotate the port door open.	Visually verify that the port door is rotated open.			
25	The "PORT OPEN" message should be displayed on the "EXIT PORT MENU" at OIU-12-103C.	Verify that the "PORT OPEN" message is displayed.			
26	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "EXIT PORT MENU" at OIU-12-103C.	Verify that the "EXIT PORT MENU" is displayed.			
27	Press the "MAIN MENU" button from the "EXIT PORT MENU" at OIU-12-103C to return to the "LLW EXIT GLOVEBOX MAIN MENU".	Verify that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed.			

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Receive drum from Compact Conveyor					
28	Press the "CONVEYOR MENU" button from the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "CONVEYOR MENU" is displayed.			
29	Confirm that a 63.5 kilogram (140 pound) compacted drum is ready for receipt from the Compact Conveyor to the LLW Exit Glovebox.	Verify that a compacted drum is ready to transfer from the Compact Conveyor.			
30	The "READY TO TRANSFER COMPACTED DRUM" message should be displayed on the "ENTRY CONVEYOR MENU" at OIU-12-103C.	Verify that the "READY TO TRANSFER COMPACTED DRUM" message is displayed.			
31	Press the "START COMPACT RECEIPT" button from the "ENTRY CONVEYOR MENU" at OIU-12-103C.	Verify that the "START COMPACT RECEIPT" button has been pressed.			
32	The "COMPACTED DRUM RECEIPT IN PROGRESS..." message should be displayed on the "ENTRY CONVEYOR MENU" at OIU-12-103C.	Verify that the "COMPACTED DRUM RECEIPT IN PROGRESS..." message is displayed			
33	The Compact Conveyor should transfer the drum to the LLW Exit Glovebox.	Verify that the Drum is transferred to the LLW Exit Glovebox.			
34	The "COMPACT RECEIPT COMPLETE" message should be displayed on the "ENTRY CONVEYOR MENU" at OIU-12-103C.	Verify that a "COMPACT RECEIPT COMPLETE" message is displayed.			
35	Press the "MAIN MENU" button from the "ENTRY CONVEYOR MENU" at OIU-12-103C to return to the "LLW EXIT GLOVEBOX MAIN MENU".	Verify that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed.			

N/A See Attached
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Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Move 63.5 kilogram (140 pound) Compacted Drum to Storage Position 1					
36	Press the "WEIGH MENU" button from the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "WEIGH MENU" is displayed.			
37	Attach a pre-printed bar code label to the compacted drum.	Verify that a bar code label has been affixed to the compacted drum.			
38	Read the drum bar code label with the wand scanner NE-12-312. The scanner LED indicator should briefly flash, indicating that a bar code label has been successfully read.	Verify that the bar code label has been successfully read.			
39	The bar code label contents should be stored in LCU 102 register(s): _____	Verify that the bar code label contents are correctly stored in the appropriate LCU 102 register.			
40	Press the "LIFTER OPEN" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) until the Drum Lifter grab is fully open.	Verify that the "LIFTER OPEN" button has been pressed.			
41	The Drum Lifter (DH-07-104) grab should be completely open.	Verify that the Drum Lifter grab is completely open.			
42	The "LIFTER OPEN" indicator on the Hoist/Trolley/Lifter Pendant (PC-07-004) should be illuminated, indicating that the Drum Lifter grab is completely open.	Verify that the "LIFTER OPEN" indicator is illuminated.			
43	Press the "LOWER" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) until the Hoist is fully lowered.	Verify that the "LOWER" button has been pressed.			
44	The Drum Lifter (DH-07-104) should be fully lowered.	Verify that the Drum Lifter is fully lowered.			
45	The Drum Lifter (DH-07-104) should rest on the compacted drum and should be positioned so that the Drum Lifter grab can be attached to the compacted drum.	Verify that the Drum Lifter grab is positioned on top of the compacted drum.			
46	Press the "LIFTER CLOSE" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) until the lift grab is securely attached to the compacted drum.	Verify that the Drum Lifter is securely attached to the drum.			
47	The "LIFTER CLOSED" indicator on the Hoist/Trolley/Lifter Pendant (PC-07-004) should be illuminated, indicating that the Drum Lifter grab is closed.	Verify that the "LIFTER CLOSED" indicator is illuminated.			
48	Press the "RAISE" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) until the Drum Lifter (DH-07-104) is fully raised.	Verify that the Hoist is fully raised.			
49	The Drum Lifter (DH-07-104) should rise with the compacted drum to its fully raised position.	Verify that the compacted drum remains secured by the Drum Lifter.			

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
50	The "HOIST RAISED LIMIT" indicator on the Hoist/Trolley/Lifter Pendant (PC-07-004) should be illuminated, indicating that the Hoist is fully raised.	Verify that the "HOIST RAISED LIMIT" indicator is illuminated.			
51	The "COMPACT DRUM WEIGHT" displayed on the "WEIGH MENU" at OIU-12-103C should rise, stabilize, and be equivalent to the weight of the compacted drum	Verify that the "COMPACT DRUM WEIGHT" displayed is equivalent to the weight of the compacted drum.			
52	Record the "COMPACT DRUM WEIGHT" displayed on the "WEIGH MENU" below: COMPACT DRUM WEIGHT: _____ kilograms	Verify that the "COMPACT DRUM WEIGHT" is recorded.			
53	Press the "MAIN MENU" button from the "WEIGH MENU" at OIU-12-103C to return to the "LLW EXIT GLOVEBOX MAIN MENU".	Verify that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed.			
54	Press the "HOIST MENU" button from the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C to display the "HOIST MENU".	Verify that the "HOIST MENU" is displayed.			
55	Press the "STORAGE POSITION 1" button from the "HOIST MENU" at OIU-12-103C.	Verify that the "STORAGE POSITION 1" button has been pressed.			
56	Press the "RIGHT" pushbutton on the Trolley/Hoist/Lifter Pendant (PC-07-004) as needed to energize trolley motor CR-07-101D/M1 forward so that the trolley SLOWLY travels to and is centered over the Compacted Drum Storage Position 1.	Verify that the Hoist Trolley is centered over the Compacted Drum Storage Position 1.			
57	The "TROLLEY 1" indicator on the Trolley/Hoist/Lifter Pendant (PC-07-004) should be illuminated.	Verify that the "TROLLEY 1" indicator is illuminated.			
58	Press the "LOWER" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) until the Hoist with the compacted drum is fully lowered.	Verify that the "LOWER" button has been pressed.			
59	The compacted drum should be positioned near the center of the Compacted Drum Storage Position 1.	Verify that the compacted drum is centered at Storage Position 1.			
60	The Drum Lifter (DH-07-104) should rest on the compacted drum and should be positioned so that the Drum Lifter grab can be removed from the compacted drum.	Verify that the Drum Lifter grab is positioned on top of the compacted drum.			
61	Press the "LIFTER OPEN" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) to release the grab from the compacted drum.	Verify that the "LIFTER OPEN" button has been pressed.			
62	The Drum Lifter (DH-07-104) grab should be completely open.	Verify that the Drum Lifter grab is completely open.			
63	Adjust the Drum Lifter grab as needed to fully release the compacted drum.	Verify that the Drum Lifter grab has fully released the compacted drum.			

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
64	The "LIFTER OPEN" indicator on the Hoist/Trolley/Lifter Pendant (PC-07-004) should be illuminated, indicating that the Drum Lifter grab is open.	Verify that the "LIFTER OPEN" indicator is illuminated.			
65	Press the "RAISE" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) until the Drum Lifter (DH-07-104) is fully raised.	Verify that the Hoist is fully raised.			
66	The "HOIST RAISED LIMIT" indicator on the Hoist/Trolley/Lifter Pendant (PC-07-004) should be illuminated, indicating that the Hoist is fully raised.	Verify that the "HOIST RAISED LIMIT" indicator is illuminated.			
67	Press the "COMPACT RECEIPT" button from the "HOIST MENU" at OIU-12-103C.	Verify that the "COMPACT RECEIPT" button has been pressed.			
68	Press the "LEFT" pushbutton on the Trolley/Hoist/Lifter Pendant (PC-07-004) as needed to energize trolley motor CR-07-101D/M1 in reverse so that the trolley SLOWLY travels to, and is positioned at the Compact Receipt position.	Verify that the "LEFT" button has been pressed.			
69	The Hoist Trolley should be positioned at the Compact Receipt position.	Verify that the Hoist Trolley is at the Compact Receipt position.			
70	The "TROLLEY RECPT" indicator on the Trolley/Hoist/Lifter Pendant (PC-07-004) should be illuminated, indicating that the hoist is positioned at the Compact Receipt position.	Verify that the "TROLLEY RECPT" indicator is illuminated.			
71	Press the "MAIN MENU" button from the "HOIST MENU" to return to the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed.			

NOTE
See Attached
R/N 9/15/97

N/A

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
Move 227 kilogram (500 pound) Compacted Drum to Storage Position 2					
72	Transfer a 227 kilogram (500 pound) compacted drum from the Compact Conveyor to the LLW Exit Glovebox. The compacted drum should be positioned at the Compact Receipt position, ready for transfer to a compacted drum storage position.	Verify that a 500 pound compacted drum is positioned at the "Compact Receipt" position.			
73	Attach a pre-printed bar code label to the compacted drum.	Verify that a bar code label has been affixed to the compacted drum.			
74	Read the drum bar code label with the wand scanner NE-12-312. The scanner LED indicator should briefly flash, indicating that a bar code label has been successfully read.	Verify that the bar code label has been successfully read.			
75	The bar code label contents should be stored in LCU 102 register(s):	Verify that the bar code label contents are correctly stored in the appropriate LCU 102 register.			
76	Press the "LIFTER OPEN" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) until the Drum Lifter grab is fully open.	Verify that the "LIFTER OPEN" button has been pressed.			
77	The Drum Lifter (DH-07-104) grab should be completely open.	Verify that the Drum Lifter grab is completely open.			
78	The "LIFTER OPEN" indicator on the Hoist/Trolley/Lifter Pendant (PC-07-004) should be illuminated, indicating that the Drum Lifter grab is completely open.	Verify that the "LIFTER OPEN" indicator is illuminated.			
79	Press the "LOWER" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) until the Hoist is fully lowered.	Verify that the "LOWER" button has been pressed.			
80	The Drum Lifter (DH-07-104) should be fully lowered.	Verify that the Drum Lifter is fully lowered.			
81	The Drum Lifter (DH-07-104) should rest on the compacted drum and should be positioned so that the Drum Lifter grab can be attached to the compacted drum.	Verify that the Drum Lifter grab is positioned on top of the compacted drum.			
82	Press the "LIFTER CLOSE" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) until the lift grab is securely attached to the compacted drum.	Verify that the Drum Lifter is securely attached to the drum.			
83	The "LIFTER CLOSED" indicator on the Hoist/Trolley/Lifter Pendant (PC-07-004) should be illuminated, indicating that the Drum Lifter grab is closed.	Verify that the "LIFTER CLOSED" indicator is illuminated.			
84	Press the "RAISE" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) until the Drum Lifter (DH-07-104) is fully raised.	Verify that the Hoist is fully raised.			
85	The Drum Lifter (DH-07-104) should rise with the compacted drum to its fully raised position.	Verify that the compacted drum remains secured by the Drum Lifter.			

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
86	The "HOIST RAISED LIMIT" indicator on the Hoist/Trolley/Lifter Pendant (PC-07-004) should be illuminated, indicating that the Hoist is fully raised.	Verify that the "HOIST RAISED LIMIT" indicator is illuminated.			
87	The "COMPACT DRUM WEIGHT" displayed on the "WEIGH MENU" at OIU-12-103C should rise, stabilize, and be equivalent to the weight of the compacted drum.	Verify that the "COMPACT DRUM WEIGHT" displayed is equivalent to the weight of the compacted drum.			
88	Record the "COMPACT DRUM WEIGHT" displayed on the "WEIGH MENU" below: COMPACT DRUM WEIGHT: _____ kilograms	Verify that the "COMPACT DRUM WEIGHT" is recorded.			
89	Press the "MAIN MENU" button from the "WEIGH MENU" at OIU-12-103C to return to the "LLW EXIT GLOVEBOX MAIN MENU".	Verify that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed.			
90	Press the "HOIST MENU" button from the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C to display the "HOIST MENU".	Verify that the "HOIST MENU" is displayed.			
91	Press the "STORAGE POSITION 2" button from the "HOIST MENU" at OIU-12-103C.	Verify that the "STORAGE POSITION 2" button has been pressed.			
92	Press the "RIGHT" pushbutton on the Trolley/Hoist/Lifter Pendant (PC-07-004) as needed to energize trolley motor CR-07-101D/M1 forward so that the trolley SLOWLY travels to and is centered over the Compacted Drum Storage Position 2.	Verify that the Hoist Trolley is centered over the Compacted Drum Storage Position 2.			
93	The "TROLLEY 2" indicator on the Trolley/Hoist/Lifter Pendant (PC-07-004) should be illuminated.	Verify that the "TROLLEY 2" indicator is illuminated.			
94	Press the "LOWER" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) until the Hoist with the compacted drum is fully lowered.	Verify that the "LOWER" button has been pressed.			
95	The compacted drum should be positioned near the center of the Compacted Drum Storage Position 2.	Verify that the compacted drum is centered at Storage Position 2.			
96	The Drum Lifter (DH-07-104) should rest on the compacted drum and should be positioned so that the Drum Lifter grab can be removed from the compacted drum.	Verify that the Drum Lifter grab is positioned on top of the compacted drum.			
97	Press the "LIFTER OPEN" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) to release the grab from the compacted drum.	Verify that the "LIFTER OPEN" button has been pressed.			
98	The Drum Lifter (DH-07-104) grab should be completely open.	Verify that the Drum Lifter grab is completely open.			
99	Adjust the Drum Lifter grab as needed to fully release the compacted drum.	Verify that the Drum Lifter grab has fully released the compacted drum.			

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
100	The "LIFTER OPEN" indicator on the Hoist/Trolley/Lifter Pendant (PC-07-004) should be illuminated, indicating that the Drum Lifter grab is open.	Verify that the "LIFTER OPEN" indicator is illuminated.			
101	Press the "RAISE" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) until the Drum Lifter (DH-07-104) is fully raised.	Verify that the Hoist is fully raised.			
102	The "HOIST RAISED LIMIT" indicator on the Hoist/Trolley/Lifter Pendant (PC-07-004) should be illuminated, indicating that the Hoist is fully raised.	Verify that the "HOIST RAISED LIMIT" indicator is illuminated.			
103	Press the "COMPACT RECEIPT" button from the "HOIST MENU" at OIU-12-103C.	Verify that the "COMPACT RECEIPT" button has been pressed.			
104	Press the "LEFT" pushbutton on the Trolley/Hoist/Lifter Pendant (PC-07-004) as needed to energize trolley motor CR-07-101D/M1 in reverse so that the trolley SLOWLY travels to, and is positioned at the Compact Receipt position.	Verify that the "LEFT" button has been pressed.			
105	The Hoist Trolley should be positioned at the Compact Receipt position.	Verify that the Hoist Trolley is at the Compact Receipt position.			
106	The "TROLLEY RECPT" indicator on the Trolley/Hoist/Lifter Pendant (PC-07-004) should be illuminated, indicating that the hoist is positioned at the Compact Receipt position.	Verify that the "TROLLEY RECPT" indicator is illuminated.			
107	Press the "MAIN MENU" button from the "HOIST MENU" to return to the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed.			
Load Out 227 Kilogram (500 pound) Compacted Drum from Storage Position 2					
108	Press the "WEIGH MENU" button from the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "WEIGH MENU" is displayed.			
109	Press the "LIFTER OPEN" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) until the Drum Lifter grab is fully open.	Verify that the Drum Lifter grab is completely open.			
110	Press the "LOWER" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) until the hoist is fully lowered.	Verify that the Hoist is fully lowered.			
111	The Drum Lifter (DH-07-104) should rest on the compacted drum and should be positioned so that the Drum Lifter grab can be attached to the compacted drum.	Verify that the Drum Lifter grab is positioned on top of the compacted drum.			
112	Press the "LIFTER CLOSE" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) until the lift grab is securely attached to the compacted drum.	Verify that the Drum Lifter is securely attached to the drum.			
113	The "LIFTER CLOSED" indicator on the Hoist/Trolley/Lifter Pendant (PC-07-004) should be illuminated, indicating that the Drum Lifter grab is closed.	Verify that the "LIFTER CLOSED" indicator is illuminated.			

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)				EXPECTED OUTPUT			
114	Press the "RAISE" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) until the Drum Lifter (DH-07-104) is fully raised.				Verify that the hoist with compacted drum is fully raised.			
115	Press the "MAIN MENU" button from the "WEIGH MENU" to return to the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.				Verify that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed.			
116	Press the "HOIST MENU" button from the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.				Verify that the "HOIST MENU" is displayed.			
117	Read the "Storage Position 2" position bar code label using the wand scanner NE-12-312. The scanner LED indicator should briefly flash, indicating that a bar code label has been successfully read.				Verify that the "Storage Position 2" position bar code label has been successfully scanned.			
118	Read the bar code label for the compacted drum at Compacted Drum Storage Position 2 using the wand scanner NE-12-312. The scanner LED indicator should briefly flash, indicating that a bar code label has been successfully read.				Verify that the bar code label for the compacted drum at Compacted Drum Storage Position 2 has been successfully read.			
119	The "ID MATCH" message should be displayed on the "HOIST MENU" at OIU-12-103C.				Verify that the "ID MATCH" message is displayed.			
120	The bar code label contents should be stored in LCU 102 register(s).				are correctly stored in the appropriate LCU 102 register(s).			
121	Press the "MAIN MENU" button from the "HOIST MENU" to return to the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.				Verify that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed.			
122	Press the "WEIGH MENU" button from the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.				Verify that the "WEIGH MENU" is displayed.			
123	After the "COMPACT DRUM WEIGHT" is displayed on the "WEIGH MENU" at OIU-12-103C has stabilized, press the "ADD TO CUMULATIVE" button on the "WEIGH MENU" at OIU-12-103C to add the weight of the currently suspended drum to the loadout drum.				Verify that the "ADD TO CUMULATIVE" button has been pressed.			
124	The weight of the compact drum added to the loadout drum should be added to the "CUMULATIVE WEIGHT DISPLAYED".				Verify that the weight of the compacted drum has been added to the "CUMULATIVE WEIGHT DISPLAYED".			
125	The "#OF DRUMS IN LDOUT" displayed should change from "0" to "1".				Verify that the "#OF DRUMS IN LDOUT" changes from "0" to "1".			
126	Press the "MAIN MENU" button from the "WEIGH MENU" to return to the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.				Verify that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed.			

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
127	Press the "HOIST MENU" button from the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "HOIST MENU" is displayed.			
128	Press the "LOAD OUT" button from the "HOIST MENU" at OIU-12-103C.	Verify that the "LOAD OUT" button has been pressed.			
129	Press the "RIGHT" pushbutton on the Trolley/Hoist/Lifter Pendant (PC-07-004) as needed so that the trolley SLOWLY travels to and is positioned directly over the Entry/Exit Port (DO-07-106).	Verify that the Hoist Trolley is centered over the Entry/Exit Port.			
130	The "TROLLEY LOADOUT" indicator on the Trolley/Hoist/Lifter Pendant (PC-07-004) should be illuminated, indicating that the hoist is positioned at the Compact Loadout position.	Verify that the "TROLLEY LOADOUT" indicator is illuminated.			
131	Press the "LOWER" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) until the Hoist with the compacted drum is fully lowered into the loadout drum.	Verify that the Hoist is lowered.			
132	Press the "LIFTER OPEN" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) to release the grab from the compacted drum. Adjust the grab as needed to fully release the compacted drum.	Verify that the Drum Lifter grab is opened and has fully released the compacted drum.			
133	Press the "RAISE" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) until the Hoist, with compacted drum, is fully raised. The Hoist should raise without interference from the load out drum.	Verify that the Hoist, with compacted drum, is fully raised.			
134	Press the "MAIN MENU" button to return to the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed.			

N/A see Attached

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail /	Witness (initial)
Load Out 63.5 kilogram (140 pound) Compacted Drum from Storage Position 1					
135	Press the "HOIST MENU" button from the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "HOIST MENU" is displayed.			
136	Press the "STORAGE POSITION 1" button from the "HOIST MENU" at OIU-12-103C.	Verify that the "STORAGE POSITION 1" button has been pressed.			
137	Press the "LEFT" pushbutton on the Trolley/Hoist/Lifter Pendant (PC-07-004) so that the trolley SLOWLY travels to and is positioned at the Compacted Drum Storage Position 1.	Verify that the Hoist Trolley is positioned at the Compacted Drum Storage Position 1.			
138	The "TROLLEY 1" indicator on the Trolley/Hoist/Lifter Pendant (PC-07-004) should be illuminated, indicating that the hoist is positioned at the Compacted Drum Storage Position 1.	Verify that the "TROLLEY 1" indicator is illuminated.			
139	Press the "LIFTER OPEN" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) until the Drum Lifter grab is fully open.	Verify that the Drum Lifter grab is completely open.			
140	Press the "LOWER" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) until the hoist is fully lowered and positioned so that the Drum Lifter grab can be attached to the compacted drum.	Verify that the Hoist is fully lowered, positioned on top of the compacted drum.			
141	The Drum Lifter (DH-07-104) should rest on the compacted drum and should be positioned so that the Drum Lifter grab can be attached to the compacted drum.	Verify that the Drum Lifter grab is positioned on top of the compacted drum.			
142	Press the "LIFTER CLOSE" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) until the lift grab is securely attached to the compacted drum.	Verify that the Drum Lifter is securely attached to the drum.			
143	The "LIFTER CLOSED" indicator on the Hoist/Trolley/Lifter Pendant (PC-07-004) should be illuminated, indicating that the Drum Lifter grab is closed.	Verify that the "LIFTER CLOSED" indicator is illuminated.			
144	Press the "RAISE" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) until the Drum Lifter (DH-07-104) is fully raised.	Verify that the Hoist is fully raised.			
145	Read the "Storage Position 1" position bar code label using the wand scanner NE-12-312. The scanner LED indicator should briefly flash, indicating that a bar code label has been successfully read.	Verify that the "Storage Position 1" position bar code label has been successfully scanned.			
146	Read the bar code label for the compacted drum at Compacted Drum Storage Position 1 using the wand scanner NE-12-312. The scanner LED indicator should briefly flash, indicating that a bar code label has been successfully read.	Verify that the bar code label for the compacted drum at Compacted Drum Storage Position 1 has been successfully read.			

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
147	The "ID MATCH" message should be displayed on the "HOIST MENU" at OIU-12-103C.	Verify that the "ID MATCH" message is displayed on the "HOIST MENU" at OIU-12-103C.			
148	The bar code label contents should be stored in LCU 102 register(s): _____	Verify that the bar code label contents are correctly stored in the appropriate LCU 102 register(s).			
149	Press the "MAIN MENU" button from the "HOIST MENU" to return to the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed.			
150	Press the "WEIGH MENU" button from the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "WEIGH MENU" is displayed.			
151	After the "COMPACT DRUM WEIGHT" displayed on the "WEIGH MENU" at OIU-12-103C has stabilized, press the "ADD TO CUMULATIVE" button on the "WEIGH MENU" at OIU-12-103C to add the weight of the currently suspended drum to the loadout drum.	Verify that the "ADD TO CUMULATIVE" button has been pressed.			
152	The weight of the compact drum added to the loadout drum should be added to the "CUMULATIVE WEIGHT DISPLAYED".	Verify that the weight of the compacted drum has been added to the "CUMULATIVE WEIGHT DISPLAYED".			
153	The "#OF DRUMS IN LDOUT" displayed should change from "1" to "2".	Verify that the "#OF DRUMS IN LDOUT" changes from "1" to "2".			
154	Press the "MAIN MENU" button from the "WEIGH MENU" to return to the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed.			
155	Press the "HOIST MENU" button from the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "HOIST MENU" is displayed.			
156	Press the "LOAD OUT" button from the "HOIST MENU" at OIU-12-103C.	Verify that the "LOAD OUT" button has been pressed.			
157	Press the "RIGHT" pushbutton on the Trolley/Hoist/Lifter Pendant (PC-07-004) as needed so that the trolley SLOWLY travels to and is positioned directly over the Entry/Exit Port (DO-07-106).	Verify that the Hoist Trolley is centered over the Entry/Exit Port.			
158	The "TROLLEY LOADOUT" indicator on the Trolley/Hoist/Lifter Pendant (PC-07-004) should be illuminated, indicating that the hoist is positioned at the Compact Loadout position.	Verify that the "TROLLEY LOADOUT" indicator is illuminated.			
159	Press the "LOWER" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) until the Hoist with the compacted drum is fully lowered into the loadout drum.	Verify that the Hoist is lowered.			

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
160	Press the "LIFTER OPEN" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) to release the grab from the compacted drum. Adjust the grab as needed to fully release the compacted drum.	Verify that the Drum Lifter grab is opened and has fully released the compacted drum.			
161	Press the "RAISE" pushbutton on the Hoist/Trolley/Lifter Pendant (PC-07-004) until the Hoist, with compacted drum, is fully raised. The Hoist should raise without interference from the load out drum.	Verify that the Hoist, with compacted drum, is fully raised.			
162	Press the "MAIN MENU" button to return to the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "LLW EXIT GLOVEBOX MAIN MENU" is displayed.			

N/A See Attached NOTE R/W 9/15/93

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
Remove Filled Drum from Entry/Exit Port					
163	Press the "EXIT PORT MENU" button from the "LLW EXIT GLOVEBOX MAIN MENU" at OIU-12-103C.	Verify that the "EXIT PORT MENU" is displayed.			
164	Press the "CLOSE & RELID" button from the "EXIT PORT MENU" at OIU-12-103C to close the port.	Verify that the "CLOSE & RELID" button has been pressed.			
165	The "PORT CLOSING..." message should be displayed on the "EXIT PORT MENU" at OIU-12-103C while the port is closing.	Verify that the "PORT CLOSING..." message is displayed.			
166	The PCS should, in order, complete the following steps: <ol style="list-style-type: none"> 1. Rotate the port door. 2. Lower the port door closed. 3. Remove vacuum from the drum lid. 4. Extend the lid detachment cylinder. 5. Deflate the HVAC seal. 6. Lower the lift table to "Drum Centering" height. 7. Extend the port door locking cylinders. 8. Retract the lid detachment cylinder. 9. Retract the drum centering device. 	Verify that the PCS performs the steps listed.			
167	After completing the port closing sequence steps, a "PORT CLOSED" message should be displayed on the "EXIT PORT MENU" at OIU-12-103C.	Verify that a "PORT CLOSED" message is displayed.			
168	Press the "START DRUM EXIT" button from the "EXIT PORT MENU" at OIU-12-103C to begin the drum exit sequence.	Verify that the "START DRUM EXIT" button has been pressed.			
169	The "DRUM EXIT IN PROGRESS..." message should be displayed at OIU-12-103C while the drum is being removed from the port.	Verify that a "DRUM EXIT IN PROGRESS..." message is displayed.			
170	The PCS should, in order, complete the following steps: <ol style="list-style-type: none"> 1. Lower the Lift Table to its lowered position below AGV height. 2. Energize the Lift Table conveyor to move the drum to the AGV end of the lift table. 3. Raise the lift table to AGV height. 	Verify that the PCS performs the steps listed.			
171	After completing the drum exit sequence steps, a "DRUM EXIT COMPLETE" message should be displayed on the "EXIT PORT MENU" at OIU-12-103C.	Verify that a "DRUM EXIT COMPLETE" message is displayed.			
172	Remove all compacted drums from the 320 liter (85 gallon) loadout drum.	Verify that the loadout drum is empty.			
TEST CASE 13031A-85.47 COMPLETE					

TEST CASE 13031A-85.48 PROCESS DRUMS #1 AND #2 THROUGH THE LLW GLOVEBOX LINE 48-2

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.48 PROCESS DRUMS #1 AND #2 THROUGH THE LLW GLOVEBOX LINE					
NOTE: The "Single" drums denoted in this test case are drums that are NOT overpacked					
NOTE: Each sequence which results in a compacted drum should be noted in this test procedure1					
1	Process a single 63.5 Kilogram (140 pound) drum without liner through the LLW Entry Glovebox using Test Case 13031A-85.42 Instructions. <i>45 RW 9/10/97</i>	Verify that the drum described has been successfully processed through the LLW Entry Glovebox using the instructions listed.	✓		<i>KR 9/17/97</i>
2	Process a single 63.5 Kilogram (140 pound) drum without liner through the LLW Sorting Glovebox using Test Case 13031A-85.43 Instructions. <i>46 RW 9/10/97</i> <i>KR 9/17/97</i>	Verify that the drum described has been successfully processed through the LLW Sorting Glovebox using the instructions listed.	✓		<i>KR 9/17/97</i>
3	Process a single 227 kilogram (500 pound) drum without liner through the LLW Entry Glovebox using Test Case 13031A-85.42 Instructions. <i>45 RW 9/10/97</i> <i>KR 9/17/97</i>	Verify that the drum described has been successfully processed through the LLW Entry Glovebox using the instructions listed.	✓		<i>KR 9/17/97</i>
4	Process a single 227 kilogram (500 pound) drum without liner through the LLW Sorting Glovebox using Test Case 13031A-85.43 Instructions.	Verify that the drum described has been successfully processed through the LLW Sorting Glovebox using the instructions listed.			<i>13A</i> <i>RW 9-10-97</i> <i>KR 9/17/97</i>
5	Process a 63.5 Kilogram (140 pound) compacted drum and a 227 kilogram (500 pound) compacted drum through the LLW Exit Glovebox using Test Case 13031A-85.44 Instructions.	Verify that the drums described have been successfully processed through the LLW Exit Glovebox using the instructions listed.	✓		<i>KR 9/17/97</i>
TEST CASE 13031A-85.48 COMPLETE					

TEST CASE 13031A-85.49 PROCESS DRUMS #3 AND #4 THROUGH THE LLW GLOVEBOX LINE 49-2

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
TEST CASE 13031A-85.49 PROCESS DRUMS #3 AND #4 THROUGH THE LLW GLOVEBOX LINE					
NOTE: The "Single" drums denoted in this test case are drums that are NOT overpacked1					
1	REPEAT - Process a single 63.5 Kilogram (140 pound) drum without liner through the LLW Entry Glovebox using Test Case 13031A-85.42 Instructions. <i>45 R/W 9/15/97</i>	Verify that the drum described has been successfully processed through the LLW Entry Glovebox using the instructions listed.	✓		<i>KR 9/17/97</i>
2	REPEAT - Process a single 63.5 Kilogram (140 pound) drum without liner through the LLW Sorting Glovebox using Test Case 13031A-85.43 Instructions. <i>46 R/W 9/15/97</i>	Verify that the drum described has been successfully processed through the LLW Sorting Glovebox using the instructions listed.	✓		<i>KR 9/17/97</i>
3	REPEAT - Process a single 227 kilogram (500 pound) drum without liner through the LLW Entry Glovebox using Test Case 13031A-85.42 Instructions.	Verify that the drum described has been successfully processed through the LLW Entry Glovebox using the instructions listed.			<i>N/A</i>
4	REPEAT - Process a single 227 kilogram (500 pound) drum without liner through the LLW Sorting Glovebox using Test Case 13031A-85.43 Instructions.	Verify that the drum described has been successfully processed through the LLW Sorting Glovebox using the instructions listed.			<i>N/A</i>
5	Process a 63.5 Kilogram (140 pound) compacted drum and a 227 kilogram (500 pound) compacted drum through the LLW Exit Glovebox using Test Case 13031A-85.44 Instructions. <i>R/W 9/15/97</i>	Verify that the drums described have been successfully processed through the LLW Exit Glovebox using the instructions listed.	✓		<i>KR 9/17/97</i>
TEST CASE 13031A-85.49 COMPLETE					

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TEST CASE 13031A-85.50 PROCESS DRUMS #5 AND #6 THROUGH THE LLW GLOVEBOX LINE 50-2

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
TEST CASE 13031A-85.50 PROCESS DRUMS #5 AND #6 THROUGH THE LLW GLOVEBOX LINE					
NOTE: The "Single" drums denoted in this test case are drums that are NOT overpacked1					
1	REPEAT #2 - Process a single 63.5 Kilogram (140 pound) drum without liner through the LLW Entry Glovebox using Test Case 13031A-85.42 Instructions.	Verify that the drum described has been successfully processed through the LLW Entry Glovebox using the instructions listed.			
2	REPEAT #2 - Process a single 63.5 Kilogram (140 pound) drum without liner through the LLW Sorting Glovebox using Test Case 13031A-85.43 Instructions.	Verify that the drum described has been successfully processed through the LLW Sorting Glovebox using the instructions listed.			
3	REPEAT #2 - Process a single 227 kilogram (500 pound) drum without liner through the LLW Entry Glovebox using Test Case 13031A-85.42 Instructions.	Verify that the drum described has been successfully processed through the LLW Entry Glovebox using the instructions listed.			
4	REPEAT #2 - Process a single 227 kilogram (500 pound) drum without liner through the LLW Sorting Glovebox using Test Case 13031A-85.43 Instructions.	Verify that the drum described has been successfully processed through the LLW Sorting Glovebox using the instructions listed.			
5	Process a 63.5 Kilogram (140 pound) compacted drum and a 227 kilogram (500 pound) compacted drum through the LLW Exit Glovebox using Test Case 13031A-85.44 Instructions.	Verify that the drums described have been successfully processed through the LLW Exit Glovebox using the instructions listed.			
TEST CASE 13031A-85.50 COMPLETE					

TEST CASE 13031A-85.51 PROCESS DRUMS #7 AND #8 THROUGH THE LLW GLOVEBOX LINE 51-2

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.51 PROCESS DRUMS #7 AND #8 THROUGH THE LLW GLOVEBOX LINE					
1	Process an overpacked 63.5 Kilogram (140 pound) drum without liner through the LLW Entry Glovebox using Test Case 13031A-85.42 Instructions.	Verify that the drum described has been successfully processed through the LLW Entry Glovebox using the instructions listed.			
2	Process an overpacked 63.5 Kilogram (140 pound) drum without liner through the LLW Sorting Glovebox using Test Case 13031A-85.43 Instructions.	Verify that the drum described has been successfully processed through the LLW Sorting Glovebox using the instructions listed.			
3	Process an overpacked 227 kilogram (500 pound) drum without liner through the LLW Entry Glovebox using Test Case 13031A-85.42 Instructions.	Verify that the drum described has been successfully processed through the LLW Entry Glovebox using the instructions listed.			
4	Process an overpacked 227 kilogram (500 pound) drum without liner through the LLW Sorting Glovebox using Test Case 13031A-85.43 Instructions.	Verify that the drum described has been successfully processed through the LLW Sorting Glovebox using the instructions listed.			
5	Process a 63.5 Kilogram (140 pound) compacted drum and a 227 kilogram (500 pound) compacted drum through the LLW Exit Glovebox using Test Case 13031A-85.44 Instructions.	Verify that the drums described have been successfully processed through the LLW Exit Glovebox using the instructions listed.			
TEST CASE 13031A-85.51 COMPLETE					

N/A RW 9/15/97
 KR 9/17/97

TEST CASE 13031A-85.52 PROCESS DRUMS #9 AND #10 THROUGH THE LLW GLOVEBOX LINE 52-2

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
TEST CASE 13031A-85.52 PROCESS DRUMS #9 AND #10 THROUGH THE LLW GLOVEBOX LINE					
1	REPEAT - Process an overpacked 63.5 Kilogram (140 pound) drum without liner through the LLW Entry Glovebox using Test Case 13031A-85.42 Instructions.	Verify that the drum described has been successfully processed through the LLW Entry Glovebox using the instructions listed.			
2	REPEAT - Process an overpacked 63.5 Kilogram (140 pound) drum without liner through the LLW Sorting Glovebox using Test Case 13031A-85.43 Instructions.	Verify that the drum described has been successfully processed through the LLW Sorting Glovebox using the instructions listed.			
3	REPEAT - Process an overpacked 227 kilogram (500 pound) drum without liner through the LLW Entry Glovebox using Test Case 13031A-85.42 Instructions.	Verify that the drum described has been successfully processed through the LLW Entry Glovebox using the instructions listed.			
4	REPEAT - Process an overpacked 227 kilogram (500 pound) drum without liner through the LLW Sorting Glovebox using Test Case 13031A-85.43 Instructions.	Verify that the drum described has been successfully processed through the LLW Sorting Glovebox using the instructions listed.			
5	Process a 63.5 Kilogram (140 pound) compacted drum and a 227 kilogram (500 pound) compacted drum through the LLW Exit Glovebox using Test Case 13031A-85.44 Instructions.	Verify that the drums described have been successfully processed through the LLW Exit Glovebox using the instructions listed.			
TEST CASE 13031A-85.52 COMPLETE					

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TEST CASE 13031A-85.53 PROCESS DRUMS #11 AND #12 THROUGH THE LLW GLOVEBOX LINE 53-2

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.53 PROCESS DRUMS #11 AND #12 THROUGH THE LLW GLOVEBOX LINE					
NOTE: The "Single" drums denoted in this test case are drums that are NOT overpacked1					
1	Process a single 63.5 Kilogram (140 pound) drum with liner through the LLW Entry Glovebox using Test Case 13031A-85.42 Instructions. <i>45 RW 9/15/97</i>	Verify that the drum described has been successfully processed through the LLW Entry Glovebox using the instructions listed.	✓		<i>RJ 9/19/97</i>
2	Process a single 63.5 Kilogram (140 pound) drum with liner through the LLW Sorting Glovebox using Test Case 13031A-85.43 Instructions.	Verify that the drum described has been successfully processed through the LLW Sorting Glovebox using the instructions listed.			
3	Process a single 227 kilogram (500 pound) drum with liner through the LLW Entry Glovebox using Test Case 13031A-85.42 Instructions.	Verify that the drum described has been successfully processed through the LLW Entry Glovebox using the instructions listed.			
4	Process a single 227 kilogram (500 pound) drum with liner through the LLW Sorting Glovebox using Test Case 13031A-85.43 Instructions. <i>D/A RW 9/15/97 RJ 9/17/97</i>	Verify that the drum described has been successfully processed through the LLW Sorting Glovebox using the instructions listed.			
5	Process a 63.5 Kilogram (140 pound) compacted drum and a 227 kilogram (500 pound) compacted drum through the LLW Exit Glovebox using Test Case 13031A-85.44 Instructions.	Verify that the drums described have been successfully processed through the LLW Exit Glovebox using the instructions listed.			
TEST CASE 13031A-85.53 COMPLETE					

TEST CASE 13031A-85.54 PROCESS DRUMS #13 AND #14 THROUGH THE LLW GLOVEBOX LINE

54-2

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
TEST CASE 13031A-85.54 PROCESS DRUMS #13 AND #14 THROUGH THE LLW GLOVEBOX LINE					
NOTE: The "Single" drums denoted in this test case are drums that are NOT overpacked!					
1	REPEAT - Process a single 63.5 Kilogram (140 pound) drum with liner through the LLW Entry Glovebox using Test Case 13031A-85.42 Instructions.	Verify that the drum described has been successfully processed through the LLW Entry Glovebox using the instructions listed.			N/A
2	REPEAT - Process a single 63.5 Kilogram (140 pound) drum with liner through the LLW Sorting Glovebox using Test Case 13031A-85.43 Instructions.	Verify that the drum described has been successfully processed through the LLW Sorting Glovebox using the instructions listed.			N/A
3	REPEAT - Process a single 227 kilogram (500 pound) drum with liner through the LLW Entry Glovebox using Test Case 13031A-85.44 Instructions.	Verify that the drum described has been successfully processed through the LLW Entry Glovebox using the instructions listed.	✓		N/A
4	REPEAT - Process a single 227 kilogram (500 pound) drum with liner through the LLW Sorting Glovebox using Test Case 13031A-85.45 Instructions.	Verify that the drum described has been successfully processed through the LLW Sorting Glovebox using the instructions listed.			N/A
5	Process a 63.5 Kilogram (140 pound) compacted drum and a 227 kilogram (500 pound) compacted drum through the LLW Exit Glovebox using Test Case 13031A-85.44 Instructions.	Verify that the drums described have been successfully processed through the LLW Exit Glovebox using the instructions listed.			N/A
TEST CASE 13031A-85.54 COMPLETE					

TEST CASE 13031A-85.55 PROCESS DRUMS #15 AND #16 THROUGH THE LLW GLOVEBOX LINE

..... 55-2

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
TEST CASE 13031A-85.55 PROCESS DRUMS #15 AND #16 THROUGH THE LLW GLOVEBOX LINE					
NOTE: The "Single" drums denoted in this test case are drums that are NOT overpacked1					
1	REPEAT #2 - Process a single 63.5 Kilogram (140 pound) drum with liner through the LLW Entry Glovebox using Test Case 13031A-85.42 Instructions.	Verify that the drum described has been successfully processed through the LLW Entry Glovebox using the instructions listed.			
2	REPEAT #2 - Process a single 63.5 Kilogram (140 pound) drum with liner through the LLW Sorting Glovebox using Test Case 13031A-85.43 Instructions.	Verify that the drum described has been successfully processed through the LLW Sorting Glovebox using the instructions listed.			
3	REPEAT #2 - Process a single 227 kilogram (500 pound) drum with liner through the LLW Entry Glovebox using Test Case 13031A-85.42 Instructions.	Verify that the drum described has been successfully processed through the LLW Entry Glovebox using the instructions listed.			
4	REPEAT #2 - Process a single 227 kilogram (500 pound) drum with liner through the LLW Sorting Glovebox using Test Case 13031A-85.43 Instructions.	Verify that the drum described has been successfully processed through the LLW Sorting Glovebox using the instructions listed.			
5	Process a 63.5 Kilogram (140 pound) compacted drum and a 227 kilogram (500 pound) compacted drum through the LLW Exit Glovebox using Test Case 13031A-85.44 Instructions.	Verify that the drums described have been successfully processed through the LLW Exit Glovebox using the instructions listed.			
TEST CASE 13031A-85.55 COMPLETE					

N/A R/W 9/15/97
K 9/17/97

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..... 56-2

TEST CASE 13031A-85.56 PROCESS DRUMS #17 AND #18 THROUGH THE LLW GLOVEBOX LINE

LLW GLOVEBOX LINE

56-1

TEST CASE 13031A-85.56 Rev. 0

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (initial)
TEST CASE 13031A-85.56 PROCESS DRUMS #17 AND #18 THROUGH THE LLW GLOVEBOX LINE					
1	Process an overpacked 63.5 Kilogram (140 pound) drum with liner through the LLW Entry Glovebox using Test Case 13031A-85.42 Instructions.	Verify that the drum described has been successfully processed through the LLW Entry Glovebox using the instructions listed.			
2	Process an overpacked 63.5 Kilogram (140 pound) drum with liner through the LLW Sorting Glovebox using Test Case 13031A-85.43 Instructions.	Verify that the drum described has been successfully processed through the LLW Sorting Glovebox using the instructions listed.			
3	Process an overpacked 227 kilogram (500 pound) drum with liner through the LLW Entry Glovebox using Test Case 13031A-85.42 Instructions.	Verify that the drum described has been successfully processed through the LLW Entry Glovebox using the instructions listed.			
4	Process an overpacked 227 kilogram (500 pound) drum with liner through the LLW Sorting Glovebox using Test Case 13031A-85.43 Instructions.	Verify that the drum described has been successfully processed through the LLW Sorting Glovebox using the instructions listed.			
5	Process a 63.5 Kilogram (140 pound) compacted drum and a 227 kilogram (500 pound) compacted drum through the LLW Exit Glovebox using Test Case 13031A-85.44 Instructions.	Verify that the drums described have been successfully processed through the LLW Exit Glovebox using the instructions listed.			
TEST CASE 13031A-85.56 COMPLETE					

N/A
 RLV 9/15/97
 KA 9/17/97

TEST CASE 13031A-85.57 PROCESS DRUMS #19 AND #20 THROUGH THE LLW GLOVEBOX LINE

..... 57-2

Step #	ACCEPTANCE TEST PROCEDURE STEPS (13031A-85)	EXPECTED OUTPUT	Pass ✓	Fail ✓	Witness (Initial)
TEST CASE 13031A-85.57 PROCESS DRUMS #19 AND #20 THROUGH THE LLW GLOVEBOX LINE					
1	REPEAT - Process an overpacked 63.5 Kilogram (140 pound) drum with liner through the LLW Entry Glovebox using Test Case 13031A-85.42 Instructions.	Verify that the drum described has been successfully processed through the LLW Entry Glovebox using the instructions listed.			
2	REPEAT - Process an overpacked 63.5 Kilogram (140 pound) drum with liner through the LLW Sorting Glovebox using Test Case 13031A-85.43 Instructions.	Verify that the drum described has been successfully processed through the LLW Sorting Glovebox using the instructions listed.			
3	REPEAT - Process an overpacked 227 kilogram (500 pound) drum with liner through the LLW Entry Glovebox using Test Case 13031A-85.42 Instructions.	Verify that the drum described has been successfully processed through the LLW Entry Glovebox using the instructions listed.			
4	REPEAT - Process an overpacked 227 kilogram (500 pound) drum with liner through the LLW Sorting Glovebox using Test Case 13031A-85.43 Instructions.	Verify that the drum described has been successfully processed through the LLW Sorting Glovebox using the instructions listed.			
5	Process a 63.5 Kilogram (140 pound) compacted drum and a 227 kilogram (500 pound) compacted drum through the LLW Exit Glovebox using Test Case 13031A-85.44 Instructions.	Verify that the drums described have been successfully processed through the LLW Exit Glovebox using the instructions listed.			
TEST CASE 13031A-85.57 COMPLETE					

N/A ALW 9/15/94

APPENDIX A - EQUIPMENT CHECKOUT DATA SHEETS	A-2
LLW Entry Glovebox Equipment Checkout Data Sheets	A-3
LLW Sorting Glovebox Equipment Checkout Data Sheets	A-7
LLW Exit Glovebox Equipment Checkout Data Sheets	A-14

APPENDIX A - EQUIPMENT CHECKOUT DATA SHEETS

Use these data sheets to verify that all appropriate equipment items, inputs, and outputs are available and correctly labeled for the LLW Glovebox Line items. The "Register Status" column is used to verify register status for the switch when the switch is activated or "ON" and when the switch is not activated or "OFF". Where a determination of availability and / or label is inappropriate or otherwise not feasible, the data sheet should be marked as "Passing" for this item and explanatory note would be provided in the "NOTES" column.

N/A R/W 11/24/99

Info Only, Equipment previously tested by
Contractors.

LLW Entry Glovebox Equipment Checkout Data Sheets

LLW ENTRY GLOVEBOX LIFT TABLE CHECKOUT DATA SHEET							
07-LT-09-202A LLW ENTRY GLOVEBOX LIFT TABLE		PROCEDURE: 13031A-85		TITLE: LLW GLOVEBOX LINE ACCEPTANCE TEST			
TAG ID	DESCRIPTION	Register Status		Pass	Fail	Witness (initial)	NOTES
		ON	OFF				
INPUTS							
09-HS-233A	LOCAL-OFF-NORMAL (M-O-N) SWITCH						<i>11/21/99</i> <i>R/W</i> <i>N/A INFO ONLY</i>
09-HS-233B/U	RAISE LIFT TABLE PUSHBUTTON						
09-HS-233B/D	LOWER LIFT TABLE PUSHBUTTON						
09-HS-233C/F	ROLLER CONVEYOR FORWARD PUSHBUTTON						
09-HS-233C/R	ROLLER CONVEYOR REVERSE PUSHBUTTON						
09-HS-233D	AGV/PANEL SWITCH-LIFT TABLE LOCAL CONTROL						
09-ZS-233C	LIFT TABLE DOWN OVERTRAVEL						
09-ZS-233D	LIFT TABLE UP OVERTRAVEL						
09-ZS-233E	DRUM AT END OF CONVEYOR						
09-ZS-233F	DRUM UNDER GLOVEBOX PORT						
09-ZS-233G	AGV MATING HEIGHT						
09-XS-233A/B	ROPE SWITCH A/B						
OUTPUTS							
107-LT-09-202A/F	ROLLER CONVEYOR FORWARD						
107-LT-09-202A/R	ROLLER CONVEYOR REVERSE						
107-LT-09-202A/RS	LIFT TABLE SERVO MOTOR CONTROLLER COMMUNICATIONS INTERFACE (B8422)						
09-ZL-233D	DRUM IN POSITION						

LLW ENTRY GLOVEBOX EQUIPMENT ITEM CHECKOUT LIST							
ITEM	CHECKOUT	Register Status		Pass	Fail	Witness (initial)	
		ON	OFF				
LLW Entry Glovebox (107-GB-07-101)							
LLW Entry Glovebox 322 liter (85 gallon) Entry/Exit Port (107-DO-07-101)							
"Drum Port Closed and Locked" Position Switch	Label: 07-ZSC-700A Status:						
"Drum Port Closed and Locked" Position Switch	Label: 07-ZSC-700B Status:						
"Door Down" Position Switch	Label: 07-ZSC-701 Status:						
"Drum Port Rotated" Position Switch	Label: 07-ZSO-701 Status:						
"Drum Door Closed" Position Switch	Label: 07-ZS-703A Status:						
"Drum Door in position" Position Switch	Label: 07-ZS-703B Status:						
"Drum Door Open" Position Switch	Label: 07-ZS-703C Status:						
"System Established Adequate Vacuum" vacuum switch	Label: 07-PS-703 Status:						
"Drum Lid in Position" Position Switch	Label: 07-ZS-711 Status:						
"Drum Port Centering Device Retracted" Position Switch	Label: 07-ZSO-767A Status:						
"Drum Port Centering Device Retracted" Position Switch	Label: 07-ZSO-767B Status:						
"Drum Centering" solenoid	Label: 07-FEV-303 Status:						
"Entry/Exit Port Lock" solenoid	Label: 07-FEV-700A/L Status:						
"Entry/Exit Port Unlock" solenoid	Label: 07-FEV-700A/UN Status:						
"Entry/Exit Port Open" solenoid	Label: 07-FEV-700B/O Status:						
"Entry/Exit Port Close" solenoid	Label: 07-FEV-700B/C Status:						
"Entry/Exit Port Drum Lid Removal System Vacuum" solenoid	Label: 07-FEV-700D/V Status:						
"Entry/Exit Port Lid Detach Extend" solenoid	Label: 07-FEV-9700I/E Status:						
"Entry/Exit Port Lid Detach Retract" solenoid	Label: 07-FEV-700I/R Status:						
"Entry/Exit Port Door Close" solenoid	Label: 07-FEV-700J/C Status:						
"Entry/Exit Port Door Open" solenoid	Label: 07-FEV-700J/O Status:						
"Entry/Exit Port Door Close Pressure Vent" solenoid	Label: 07-FEV-701B Status:						
"Entry/Exit Port Door Open Pressure Vent" solenoid	Label: 07-FEV-701A Status:						
"Entry/Exit Port Vacuum Isolation" solenoid	Label: 07-FEV-700F Status:						
LLW Entry Glovebox Monorail Hoist (107-CR-07-101A)							

LLW ENTRY GLOVEBOX EQUIPMENT ITEM CHECKOUT LIST						
ITEM	CHECKOUT	Register Status		Pass	Fail	Witness (Initial)
		ON	OFF			
"Hoist Raised" Position Switch	Label: 07-ZS-702C Status:					
Hoist Trolley Position Switch	Label: 07-ZS-702A Status:					
Hoist Trolley Position Switch	Label: 07-ZS-702B Status:					
W Entry Glovebox Monorail Hoist Pendant (107-PC-07-001)						
Trolley Travel "LEFT" Pushbutton	Status:					
Trolley Travel "RIGHT" Pushbutton	Status:					
Hoist "RAISE" Pushbutton	Status:					
Hoist "LOWER" Pushbutton	Status:					
Drum Lifter "OPEN" Pushbutton	Status:					
Drum Lifter "CLOSE" Pushbutton	Status:					
Trolley "ENABLED" Indicator	Status:					
Trolley Position "XFER" Indicator	Status:					
Trolley Position "MIDWAY" Indicator	Status:					
Trolley Position "ENTRY" Indicator	Status:					
Hoist "RAISED LIMIT" Indicator	Status:					
Drum Lifter "OPEN" Indicator	Label: PC-07-001/OS Status:					
Drum Lifter "CLOSED" Indicator	Label: PC-07-001/CS Status:					
W Entry Glovebox Drum Lifter (107-DH-07-101)						
Drum Lifter "Open" Solenoid (RS-422)	Label: 07-FEV-700C/O Status:					
Drum Lifter "Close" Solenoid (RS-422)	Label: 07-FEV-700C/C Status:					
Drum Lifter "Open" Position Switch	Label: 07-ZSO-704 Status:					
Drum Lifter "Close" Position Switch	Label: 07-ZSC-704 Status:					
Drum Lifter "Open" Command	Label: PC-07-001/O Status:					
Drum Lifter "Close" Command	Label: PC-07-001/C Status:					
W Entry Drum Transfer Port (107-DO-07-102)						
Transfer Port Door Seal "Deflated" Pressure Switch	Label: 07-PSLL-701 Status:					
Transfer Port Door Seal "Leaking" Pressure Switch	Label: 07-PSL-700 Status:					
Transfer Port Door "Open" Position Switch	Label: 07-ZSO-705 Status:					

LLW ENTRY GLOVEBOX EQUIPMENT ITEM CHECKOUT LIST						
ITEM	CHECKOUT	Register Status		Pass ✓	Fail ✓	Witness (Initial)
		ON	OFF			
Transfer Port Door "Closed" Position Switch	Label: 07-ZSC-705 Status:					
Transfer Port Door "Open" Solenoid	Label: 07-FEV-700E/O Status:					
Transfer Port Door "Closed" Solenoid	Label: 07-FEV-700E/C Status:					
Transfer Port Door Seal "Vacuum Isolation" Solenoid	Label: 07-FEV-700G Status:					
Transfer Port Door Seal "Inflate" Solenoid	Label: 07-FEV-700H/IN Status:					
Transfer Port Door Seal "Deflate" Solenoid	Label: 07-FEV-700H/DE Status:					
Miscellaneous LLW Entry Glovebox Equipment Items						
Portable Bar Code Reader	Label: 107-NE-12-310 Status:					
Operator Interface Unit	Label: 107-OIU-12-103A Status:					
Operator Interface Unit (Used to support Transfer Car)	Label: 107-OIU-12-103B Status:					
LLW Entry Glovebox Differential Pressure Alarm	Label: 107-PDISL-07-333 Status:					
"Drum Transfer Car under Transfer Port" Position Switch	Label: 107-ZS-07-331 Status:					
LLW Entry Glovebox Differential Pressure Alarm Beacon	Label: 107-PDA-07-333 Status:					
LLW Entry Glovebox 80 PSI Air Supply Solenoid Valve	Label: 107-FEV-07-375A Status:					
LLW Entry Glovebox 20 PSI Air Supply Solenoid Valve	Label: 107-FEV-07-375B Status:					
LLW Entry Glovebox Pneumatic Value Manifold	Label: 107-SP-07-101 Status:					
End of Equipment Checkout List						

W Sorting Glovebox Equipment Checkout Data Sheets

LLW SORTING GLOVEBOX LIFT TABLE CHECKOUT DATA SHEET							
07-LT-09-203A LLW SORTING GLOVEBOX LIFT TABLE		PROCEDURE: 13031A-85		TITLE: LLW GLOVEBOX LINE ACCEPTANCE TEST			
TAG ID	DESCRIPTION	Register Status		Pass ✓	Fail ✓	Witness (Initial)	NOTES
		ON	OFF				
INPUTS							
09-HS-241A	MAINTENANCE-OFF-NORMAL (M-O-N) SWITCH						<p><i>DNV</i></p> <p><i>11/24/97</i></p> <p><i>INFD</i></p> <p><i>N/A</i></p> <p><i>R/W</i></p>
09-HS-241D	LIFT LOCAL CONTROL (AGV/PANEL)						
09-ZS-241C	LIFT TABLE DOWN OVERTRAVEL						
09-ZS-241D	LIFT TABLE UP OVERTRAVEL						
09-ZS-241E	DRUM AT END OF CONVEYOR						
09-ZS-241F	DRUM UNDER GLOVEBOX PORT						
09-ZS-241G	AGV MATING HEIGHT						
09-XS-241A/B	ROPE SWITCH A/B						
09-WIT-241	CONVEYOR WEIGHT TRANSMITTER (RS-422)						
OUTPUTS							
107-LT-09-203A/F	ROLLER CONVEYOR FORWARD						
107-LT-09-203A/R	ROLLER CONVEYOR REVERSE						
107-LT-09-203A/RS	LIFT TABLE SERVO MOTOR CONTROLLER COMMUNICATIONS INTERFACE (RS422)						
09-ZL-241D	DRUM IN POSITION						

LLW SORTING GLOVEBOX EQUIPMENT ITEM CHECKOUT LIST

ITEM	CHECKOUT	Register Status		Pass ✓	Fail ✓	Witness (initial)
		ON	OFF			
"Bagless Transfer Port Door Open" solenoid	Label: 07-FEV-700J/O Status:					
"Bagless Transfer Port Door Close Pressure Vent" solenoid	Label: 07-FEV-701B Status:					
"Bagless Transfer Port Door Open Pressure Vent" solenoid	Label: 07-FEV-701A Status:					
"Bagless Transfer Port Vacuum Isolation" solenoid	Label: 07-FEV-700F Status:					
LLW Sorting Glovebox Monorail Hoist (107-CR-07-101C)						
"Hoist Raised" Position Switch	Label: 07-ZS-730C Status:					
Hoist Trolley Position Switch	Label: 07-ZS-730A Status:					
Hoist Trolley Position Switch	Label: 07-ZS-730B Status:					
LLW Sorting Glovebox Monorail Hoist Pendant (107-PC-07-003A)						
Hoist Pendant Select Switch	Status:					
Trolley Travel "LEFT" Pushbutton	Status:					
Trolley Travel "RIGHT" Pushbutton	Status:					
Hoist "RAISE" Pushbutton	Status:					
Hoist "LOWER" Pushbutton	Status:					
Trolley "ENABLED" Indicator	Status:					
Trolley Position "LOAD" Indicator	Status:					
Trolley Position "PORT" Indicator	Status:					
Hoist "RAISED LIMIT" Indicator	Status:					
LLW Sorting Glovebox Monorail Hoist Pendant (107-PC-07-003B)						
Trolley Travel "LEFT" Pushbutton	Status:					
Trolley Travel "RIGHT" Pushbutton	Status:					
Hoist "RAISE" Pushbutton	Status:					
Hoist "LOWER" Pushbutton	Status:					
Trolley "ENABLED" Indicator	Status:					

INTD ONLY

12/21/97

N/A

R/W

LLW SORTING GLOVEBOX EQUIPMENT ITEM CHECKOUT LIST						
ITEM	CHECKOUT	Register Status		Pass	Fail	Witness (Initial)
		ON	OFF			
Trolley Position "LOAD" Indicator	Status:					
Trolley Position "PORT" Indicator	Status:					
Hoist "RAISED LIMIT" Indicator	Status:					
LW Sorting Glovebox Sorting Table (ST-07-101)						
Sorting Table Lowered	Tag: 07-ZS-716A Status:					
Sorting Table Lowered Position Switch	Tag: 07-ZS-716B Status:					
Sorting Table Fully Forward Position Switch	Tag: 07-ZS-717A Status:					
Sorting Table Tip Position Position Switch	Tag: 07-ZS-717B Status:					
Sorting Table Fully Retracted Position Switch	Tag: 07-ZS-717C Status:					
Sorting Table Travel Locked Position Switch	Tag: 07-ZS-729A Status:					
Sorting Table Travel Locked Position Switch	Tag: 07-ZS-729A Status:					
Sorting Table Raise Solenoid	Tag: 07-FEV-737C/R Status:					
Sorting Table Lower Solenoid	Tag: 07-FEV-737C/L Status:					
Sorting Table Lock Solenoid	Tag: 07-FEV-737D/L Status:					
Sorting Table Unlock Solenoid	Tag: 07-FEV-737D/UN Status:					
Sorting Table Forward Solenoid	Tag: 07-FEV-737B/F Status:					
Sorting Table Retract Solenoid	Tag: 07-FEV-737B/R Status:					
LW Sorting Glovebox Packet X-Ray Door (107-D0-07-103)						
Packet Shield Door Open Position Switch	Tag: 07-ZS-334A Status:					
Packet Shield Door Closed Position Switch	Tag: 07-ZS-334B Status:					
Packet X-Ray In Progress Digital Input	Tag: 07-ND-101/ES Status:					
Packet Door Forward Solenoid	Tag: 07-FEV-737H/F Status:					
Packet Door Reverse Solenoid	Tag: 07-FEV-737H/R Status:					
Packet Tray Extend Solenoid	Tag: 07-FEV-737I/E Status:					
Packet Tray Retract Solenoid	Tag: 07-FEV-737I/R Status:					
Packet X-Ray Enabled Digital Output	Tag: 07-ND-101/EN Status:					

LLW SORTING GLOVEBOX EQUIPMENT ITEM CHECKOUT LIST									
ITEM	CHECKOUT	Register Status		Pass	Fail	Witness (Initial)			
		ON	OFF						
LW Sorting Glovebox Drum Tipper (107-DH-07-103)									
Drum Tipper Drum Grab Open Position Switch	Tag: 07-ZS-720A Status:								
Drum Tipper Drum Grab Closed Position Switch	Tag: 07-ZS-720B Status:								
Drum Tipper Vertical Position Switch	Tag: 07-ZS-333 Status:								
Drum Tipper Raised Position Switch	Tag: 07-ZS-332A Status:								
Drum Tipper Lowered Position Switch	Tag: 07-ZS-332B Status:								
Drum Tipper Clutch Tripped Position Switch	Tag: 07-ZS-335 Status:								
Drum Tipper Motor Raise	Tag: DH-07-103M1/SU Status:								
Drum Tipper Motor Lower	Tag: DH-07-103M1/SD Status:								
Drum Tipper Grab Open Solenoid	Tag: 07-FEV-395D/O Status:								
Drum Tipper Grab Close Solenoid	Tag: 07-FEV-395D/C Status:								
Drum Tipper Grab Rotate Left Solenoid	Tag: 07-FEV-397/L Status:								
Drum Tipper Grab Rotate Right Solenoid	Tag: 07-FEV-397/R Status:								
Drum Tipper Joystick Rotate Permissive	Tag: 07-FEV-397/P Status:								
W Sorting Glovebox Drum Lid/Delid Fixture (107-RT-07-101)									
Drum Lid/Delid Fixture Raised Position Switch	Tag: 07-ZS-726A Status:								
Drum Lid/Delid Fixture Lowered Position Switch	Tag: 07-ZS-726B Status:								
Drum Lid/Delid Fixture Rotated Parked Position Switch	Tag: 07-ZS-727A Status:								
Drum Lid/Delid Fixture Rotation Index	Tag: 07-ZS-727B Status:								
Drum Lid/Delid Fixture at Park/Delid Position Switch	Tag: 07-ZS-728A Status:								
Drum Lid/Delid Fixture at Delid Position Switch	Tag: 07-ZS-728B Status:								
Drum Lid/Delid Fixture Saw Extended Position Switch	Tag: 07-ZS-724A Status:								
Drum Lid/Delid Fixture Saw Retracted Position Switch	Tag: 07-ZS-724B Status:								
Drum Lid/Delid Fixture Crimp Head Retracted Position Switch	Tag: 07-ZS-719A Status:								

LLW SORTING GLOVEBOX EQUIPMENT ITEM CHECKOUT LIST

ITEM	CHECKOUT	Register Status		Pass	Fail	Witness (Initial)
		ON	OFF			
Drum Lid/Delid Fixture Crimp Head Forward Position Switch	Tag: 07-ZS-719B Status:					
Drum Lid/Delid Fixture Crimp Jaw Open	Tag: 07-ZS-721 Status:					
Drum Lid/Delid Fixture Inert Gas Purge Low Flow Pressure Switch	Tag: 07-FSL-378 Status:					
Drum Lid/Delid Fixture Inert Gas Purge Cylinder Low Pressure Switch	Tag: 07-PSL-378 Status:					
Drum Lid/Delid Fixture Vacuum Lost Pressure Switch	Tag: 07-PS-716 Status:					
Drum Lid/Delid Fixture Rotation Clockwise Solenoid	Tag: 07-FEV-736B/C Status:					
Drum Lid/Delid Fixture Rotation Counter-Clockwise Solenoid	Tag: 07-FEV-736B/CC Status:					
Drum Lid/Delid Fixture Forward Solenoid	Tag: 07-FEV-737A/F Status:					
Drum Lid/Delid Fixture Reverse Solenoid	Tag: 07-FEV-737A/R Status:					
Drum Lid/Delid Fixture Saw Extend Solenoid	Tag: 07-FEV-736D/E Status:					
Drum Lid/Delid Fixture Saw Retract Solenoid	Tag: 07-FEV-736D/R Status:					
Drum Lid/Delid Fixture Drum Lid Lifter Vacuum Generator On Solenoid	Tag: 07-FEV-736E/V Status:					
Drum Lid/Delid Fixture Drum Lid Lifter Vacuum Generator On Solenoid	Tag: 07-FEV-736E/R Status:					
Drum Lid/Delid Fixture Raise Solenoid	Tag: 07-FEV-736A/R Status:					
Drum Lid/Delid Fixture Lower Solenoid	Tag: 07-FEV-736A/L Status:					
Drum Lid/Delid Fixture Crimper Tilt Forward Solenoid	Tag: 07-FEV-736F/F Status:					
Drum Lid/Delid Fixture Crimper Tilt Back Solenoid	Tag: 07-FEV-736F/B Status:					
Drum Lid/Delid Fixture C-Clip Magazine Drive Solenoid	Tag: 07-FEV-736G Status:					
Drum Lid/Delid Fixture Crimper Jaw Close Solenoid	Tag: 07-FEV-736C/C Status:					
Drum Lid/Delid Fixture Vacuum Isolation Solenoid	Tag: 07-FEV-716 Status:					
Drum Lid/Delid Fixture Saw Motor Energize	Tag: 07-FEV-378A Status:					
Drum Lid/Delid Fixture Inert Gas Purge Flow Solenoid	Tag: 07-FEV-378B Status:					

LLW SORTING GLOVEBOX EQUIPMENT ITEM CHECKOUT LIST							
ITEM	CHECKOUT	Register Status		Pass	Fail	Witness (initial)	
		ON	OFF				
LLW Sorting Glovebox Drum Transfer Car (107-ST-07-101)							
Drum Transfer Car Conveyor Drive Engaged Switch	Tag: 07-ZS-718A Status:						
Drum Transfer Car Conveyor Drive Disengaged Switch	Tag: 07-ZS-718B Status:						
Drum Transfer Car Decelerate and Car at Compactor Transfer Position Switch	Tag: 07-ZS-725A Status:						
Drum Transfer Car Decelerate and Car at Re-lid Position Switch	Tag: 07-ZS-725B Status:						
Drum Transfer Car Decelerate and Car at Delid Position Switch	Tag: 07-ZS-725C Status:						
Drum Transfer Car Conveyor Drive Engage Solenoid	Tag: 07-FEV-737E/EN Status:						
Drum Transfer Car Conveyor Drive Disengage Solenoid	Tag: 07-FEV-737E/DE Status:						
Drum Transfer Car Forward Solenoid	Tag: 07-FEV-737F/F Status:						
Drum Transfer Car Reverse Solenoid	Tag: 07-FEV-737J/R Status:						
Drum Transfer Car Decelerate Solenoid	Tag: 07-FEV-737G Status:						
Drum Transfer Car Conveyor Drive (Energize)	Tag: TC-07-101/ST Status:						
Drum Transfer Car Engage Drive Solenoid	Tag: 07-FEV-737C/E Status:						
Miscellaneous LLW Sorting Glovebox Equipment Items							
Operator Interface Unit	Tag: 107-OIU-12-103B Status:						
Low Glovebox Differential Pressure Switch	Tag: 07-PDISL-341 Status:						
Packet Bar Code Scanner	Tag: 12-NE-311 Status:						
Bar Code Scanner	Tag: 12-NE-310 Status:						
Manipulator Parked at Position 1 Switch	Tag: 07-ZS-715A Status:						
Manipulator Parked at Position 2 Switch	Tag: 07-ZS-715B Status:						
End of Equipment Checkout List							

W Exit Glovebox Equipment Checkout Data Sheets

07-LT-09-202C LLW EXIT DRUM LIFT TABLE		LLW EXIT LIFT TABLE CHECKOUT DATA SHEET					PROCEDURE: 13031A-85 TITLE: LLW GLOVEBOX LINE ACCEPTANCE TEST	
TAG ID	DESCRIPTION	Register	Status	Pass	Fail	Witness	NOTES	
		ON	OFF	✓	✓	(initial)		
INPUTS								
09-HS-237A	LOCAL-OFF-NORMAL (M-O-N) SWITCH						<i>11/28/99</i> <i>INFO only</i>	
09-HS-237B/U	RAISE LIFT TABLE PUSHBUTTON							
09-HS-237B/D	LOWER LIFT TABLE PUSHBUTTON							
09-HS-237C/F	ROLLER CONVEYOR FORWARD PUSHBUTTON							
09-HS-237C/R	ROLLER CONVEYOR REVERSE PUSHBUTTON							
09-HS-237D	AGV/PANEL SWITCH-Lift Table LOCAL CONTROL							
09-ZS-237A	AGV HANDSHAKE SIGNAL S1							
09-ZS-237B	AGV HANDSHAKE SIGNAL S2 (NOT USED)							
09-ZS-237C	LIFT TABLE DOWN OVERTRAVEL							
09-ZS-237D	LIFT TABLE UP OVERTRAVEL							
09-ZS-237E	DRUM AT END OF CONVEYOR							
09-ZS-237F	DRUM UNDER GLOVEBOX PORT							
09-ZS-237G	AGV MATING HEIGHT							
09-XS-237A/B	ROPE SWITCH A/B							
OUTPUTS								
09-ZY-237A	AGV HANDSHAKE SIGNAL S1							
09-ZY-237B	AGV HANDSHAKE SIGNAL S2 (NOT USED)							
107-LT-09-202C/F	ROLLER CONVEYOR FORWARD							
107-LT-09-202C/R	ROLLER CONVEYOR REVERSE							
107-LT-09-202C/RS	LIFT TABLE SERVO MOTOR CONTROLLER COMMUNICATIONS INTERFACE (RS422)							
09-ZL-237D	DRUM IN POSITION							

LLW EXIT GLOVEBOX EQUIPMENT ITEM CHECKOUT LIST						
ITEM	CHECKOUT	Register Status		Pass	Fail	Witness (initial)
		ON	OFF			
LW Exit Glovebox (107-GB-07-105)						
LW Exit Glovebox 322 liter (85 gallon) Entry/Exit Port (107-DO-07-106)						
"Drum Port Closed and Locked" position switch	Label: 07-ZSC-765A Status:					
"Drum Port Closed and Locked" position switch	Label: 07-ZSC-765B Status:					
"Door Down" position switch	Label: 07-ZSC-760 Status:					
"Drum Port Rotated" position switch	Label: 07-ZSO-760 Status:					
"Drum Door Closed" position switch	Label: 07-ZS-761A Status:					
"Drum Door in position" position switch	Label: 07-ZS-761B Status:					
"Drum Door Open" position switch	Label: 07-ZS-761C Status:					
"System Established Adequate Vacuum" vacuum switch	Label: 07-PS-704 Status:					
"Drum Lid in Position" position switch	Label: 07-ZS-764 Status:					
"Drum Port Centering Device Retracted" position switch	Label: 07-ZSO-767A Status:					
"Drum Port Centering Device Retracted" position switch	Label: 07-ZSO-767B Status:					
"Drum Port HVAC Seal Deflated" pressure switch	Label: 07-PS-768 Status:					
"Drum Centering" solenoid	Label: 07-FEV-304 Status:					
"Entry/Exit Port Lock" solenoid	Label: 07-FEV-761A/L Status:					
"Entry/Exit Port Unlock" solenoid	Label: 07-FEV-761A/UN Status:					
"Entry/Exit Port Open" solenoid	Label: 07-FEV-761B/O Status:					
"Entry/Exit Port Close" solenoid	Label: 07-FEV-761B/C Status:					
"Entry/Exit Port Drum Lid Removal System Vacuum" solenoid	Label: 07-FEV-761D/V Status:					
"Entry/Exit Port Lid Detach Extend" solenoid	Label: 07-FEV-9761E/E Status:					
"Entry/Exit Port Lid Detach Retract" solenoid	Label: 07-FEV-761E/R Status:					
"Entry/Exit Port Door Close" solenoid	Label: 07-FEV-761F/C Status:					
"Entry/Exit Port Door Open" solenoid	Label: 07-FEV-761F/O Status:					
"Entry/Exit Port Door Close Pressure Vent" solenoid	Label: 07-FEV-762B Status:					
"Entry/Exit Port Door Open Pressure Vent" solenoid	Label: 07-FEV-762A Status:					
"Entry/Exit Port Vacuum Isolation" solenoid	Label: 07-FEV-761C Status:					
"Entry/Exit Port HVAC Control Seal" solenoid	Label: 07-FEV-305 Status:					

LLW EXIT GLOVEBOX EQUIPMENT ITEM CHECKOUT LIST									
ITEM		CHECKOUT		Register Status		Pass ✓	Fail ✓	Witness (initial)	
				ON	OFF				
LW Exit Glovebox Monorail Hoist (107-CR-07-101D)									
"Hoist Raised" Position Switch		Label: 07-ZS-763A	Status:						
Hoist Trolley Position Switch		Label: 07-ZS-763B	Status:						
Hoist Trolley Position Switch		Label: 07-ZS-763C	Status:						
Hoist Trolley Position Switch		Label: 07-ZS-763D	Status:						
LW Exit Glovebox Monorail Hoist Pendant (107-PC-07-004)									
Trolley Travel "LEFT" Pushbutton		Status:							
Trolley Travel "RIGHT" Pushbutton		Status:							
Hoist "RAISE" Pushbutton		Status:							
Hoist "LOWER" Pushbutton		Status:							
Drum Lifter "OPEN" Pushbutton		Status:							
Drum Lifter "CLOSE" Pushbutton		Status:							
Trolley "ENABLED" Indicator		Status:							
Trolley Storage Position "1" Indicator		Status:							
Trolley Storage Position "2" Indicator		Status:							
Trolley Storage Position "3" Indicator		Status:							
Trolley "LOADOUT" Indicator		Status:							
Trolley "RECPT" Indicator		Status:							
Hoist "RAISED LIMIT" Indicator		Status:							
Drum Lifter "OPEN" Indicator		Status:							
Drum Lifter "CLOSED" Indicator		Status:							
Miscellaneous LLW Exit Glovebox Equipment Items									
Bar Code Label Dispenser		Tag No. 107-SP-07-102B	Status:						
Compact Conveyor		Tag No. 107-CV-07-101	Status:						
Hand Held Portable Bar Code Reader		Tag No. 107-NE-12-310	Status:						
Operator Interface Unit		Tag No. 107-OIU-12-103C	Status:						
Pneumatic Value Manifold		Tag No. 107-SP-07-106	Status:						
End of Equipment Checkout List									

DISTRIBUTION SHEET

To	From	Page 1 of 1
Distribution	WRAP Engineering	Date 02/05/98
Project Title/Work Order		EDT No. 621921
HNF-SD-W026-ATR-032, Rev. 0, LLW GLOVEBOX ATR		ECN No. N/A

Name	MSIN	Text With All Attach.	Text Only	Attach./ Appendix Only	EDT/ECN Only
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WG Jasen	T4-52	X			
JK Kersten	T4-52	X			
RJ Koll	T4-51				X
KJ Leist	T4-52				
WR Thackaberry	T4-52				X
JR Weidert	T4-52				X
Engineering Files	A3-88	X			