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

Section 1 of 2

Document Information			
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W-026, TRANSURANIC WASTE (TRU) GLOVEBOX ACCEPTANCE TEST REPORT

KJ Leist

Waste Management Federal Services of Hanford, Richland, WA 99352
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Abstract: The Acceptance Test Report was performed to verify the TRU Glovebox operates in accordance with the system designs and specification.

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3/11/98
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ACCEPTANCE TEST REPORT

WRAP MODULE I TRU GLOVE BOX ACCEPTANCE TEST PROCEDURE 13021A-86

ABSTRACT:

On July 18, 1997, the Transuranic (TRU) glovebox was tested using glovebox acceptance test procedure 13021A-86.

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, sorting table, ladder/delidder device and the TRU empty drum compactor were also conducted.

As of February 25, 1998 10 of the 102 test exceptions that affect the TRU 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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INTRODUCTION

On July 18, 1997, the Transuranic (TRU) glovebox was tested using acceptance test procedure 13021A-86. Mr. Robert L. Warmenhoven served as test director/witness, Mr. Kendrick Leist acted as test operator/test witness, Mr. Michael Lane served as test operator/test witness, Mr. M. Sneider acted as test operator 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 one trip drums at the one trip ports, compacting the empty drums and load out of the compacted drums through the exit port was performed in the automatic mode utilizing four (4) 140 # drums and (1) 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 TRU 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.

DESCRIPTION OF TEST, TEST METHOD AND TEST EQUIPMENT

Testing was conducted on the TRU Glovebox using acceptance test procedure 13021A-86. This test procedure is designed to meet Project W-026 Specification Section 13021 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 30 - 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.
2. TC-1 Step 19 - Delete this step. LT202B does not have an AGV/Panel switch. Applies to RWM glovebox lift tables only.

3. TC-1 Step 32a - Add new step. "Force ZSC800A and ZSC800B not activated. Step required, missed on ATP.
4. TC-1 Step 38 - Delete step. "FAIL" is a passive indication - legend only.
5. TC-1 Step 93 - Delete step. "FAIL" is a passive indication - legend only.
6. TC-2 Step 29 - Delete step. Step not required, no reason to vent Raise/Lower cylinder after port locked closed on previous step.
7. TC-2 Step 37a - Add new step to open Transfer Port door. Step required, missed on ATP.
8. TC-2 Step 61 - 63 - Delete steps. Low differential pressure warning beacon "test operation" is not a function implemented in the PLC/OIU software.
9. TC-3 Step 48a - Add new step. Verify message "DRUM PICKUP IN PROGRESS". Step missed on ATP.
10. TC-3 Step 54a - 54d - Add new steps to close upper grab arm and verify message "UPPER GRAB CLOSED". Steps missed on ATP.
11. TC-4 Step 1 - Step out of sequence - change to step #32a.
12. TC-4 Step 12 - Delete step. Drum at end of conveyor has nothing to do with AGV height indication and there is not a drum at AGV end indicator on lift table control pedestals.
13. TC-4 Step 32a - 32e - Add new steps to verify Drum Centering extended interlock on drum entry sequence. Steps missed on ATP.
14. TC-4 Step 36a - Add new step to correctly verify interlock to prevent raising lift table to drum centering height if centering devices are extended. Step missed on ATP.
15. TC-5 Step 3, 29, 30, 31, 32 - Delete steps. Drum door in position switch 07-ZS-803B logic to open port not implemented in this manner, lift table stops if switch not activated based on lift table controller position.

16. TC-6 Step 16, 17, 18 - Delete steps. Drum lifter logic concerning closed limit switch, versus, raising hoist is not implemented in this manner. If logic were implemented as described it would be impossible to close lifter. Lifter closes around drum while raising hoist, not from pushing close button. Lifter is air to open, gravity mechanical to close.
17. TC-6 Step 40 - Out of sequence, change step to step # 51b.
18. TC-6 Step 43 - Delete step. Step not required, logic verified by forcing ZS802A and ZS802B, not by changing timer setting. Test method change only.
19. TC-6 Step 55 - Delete step. Step not required, logic verified by forcing ZS802A and ZS802B, not by changing timer setting. Test method change only.
20. TC-6 Step 58a - 58c - Add new steps to close upper grab arm. Steps missed on ATP.
21. TC-7 Step 9 - Delete step. This logic applies to TRU RWM lift table control logic, does not apply to TRU lift table control logic.
22. TC-7 Step 17 - Delete step. ZS-803A is not interlocked with lift table lowering. Interlock for port locking which is verified in new step 18a.
23. TC-7 Step 19 - Step out of sequence, change step # to step 17.
24. TC-7 Step 18a - Add new step. Verify port door does not lock if door lowered switch (ZS803A) not activated. Step missed on ATP.
25. TC-7 Step 70 and 77 - Change method of verifying lift table failed to lower alarm from removing lift table power, to changing timer setting for lift table failed to lower alarm. Test methodology.
26. TC-7 Step 73a - 73e - Add new steps to verify interlock, centering device not retracted prevents exit sequence from starting. Steps missed on ATP.
27. TC-9 Step 101 - Delete step. E-Stop affect on drum lifter open does not allow drum lifter to continue opening after E-Stop initiated, but rather allows drum lifter to drift closed. This is per design.

28. TC-30 Step 94 - Delete step. Disabling 07-FEV-332A to inhibit saw is not required. The saw is operable and not in a location where equipment damage will occur. Additionally personnel will not be allowed in glovebox during performance of this test.
29. TC-30 Step 149 - Delete step. "PASS" is a passive indication - legend only.
30. TC-31 Step 40, 48, 49, 51, 53, 55, 57, 58 - Delete steps. X-ray machine will not be energized during performance of this ATP. Enable/Disable X-Ray deleted from design. X-Ray machine is hardwired 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.
31. TC-31 Step 66, 67, 68, 69 - Steps out of sequence, change step #'s as follows: 66 to 95a, 67 to 95c, 68 to 95c, and 69 to 95d.
32. TC-31 Step 120a - Add new step to raise fixture. Fixture lowered on step 119, must raise fixture before rotating in step 121.
33. TC-31 Step 125 - 128 - Delete steps. Lid/delid fixture design revised, fixture rotates full clock wise of full counter clock wise only. Detentes were deleted.
34. TC-31 Step 131-147 - Delete steps. Crimp head deleted from delid fixture.
35. TC-31 Step 168, 169 - Delete steps. Vacuum Isolation valve deleted from delid fixture.
36. TC-31 Step 182, 183 - Delete step. Transfer car decelerate function is not applicable in maintenance mode.
37. TC-31 Steps 184 - 191 - Delete steps. Transfer car conveyor does not exist in TRU glovebox. LLW glovebox only.
38. TC-32 Steps 13-21 - Delete steps. Plastic liner will be removed manually at crimp/debag position. Change to glovebox operational requirements, this will be addressed in OP's during OTP performance.
39. TC-32 Step 26 through 30 - Delete steps. Delid fixture modifications removed multiple stop positions from fixture and resulted in 180 degree rotation with two stop points.

40. TC-32 Step 40 - 43, and 49 - 57- Delete steps. Current design does not include use of manipulator to remove plastic liners.
41. TC-32 Step 43a, 43b, 43c, and 57a -Add new steps. New steps required to change in Saw sequence on lid/delid fixture.
42. TC-32 Step 59 - Delet step. Step not required.
43. TC-32 Step 63a, 63b, 63c - Add new steps to verify message "DRUM LID REMOVAL COMPLETE" and to move fixture to park position.
44. TC-32 Step 64a - Add new step. Verify message "FIXTURE AT PARK POSITION". Step missing from ATP.
45. TC-32 Step 66a - Add new step. Press "RAISE TIPPER". Step missing from ATP.
46. TC-32 Step 68 - Delete step. Step not required.
47. TC-32 Step 79a through 79i - Add new steps. Design for Lid/Delid fixture Relid sequence changed. New steps required to verify the Relid sequence.
48. TC-32 Step 78a and 78b - Add new steps. Steps move sorting table from Tipper to RWM loadout position, versus Assay position.
49. TC-32 Step 83a - Add new step. Move sorting table to RWM loadout position.
50. TC-32 Step 92a - Add new step. Verify message "PACKET ASSAY CLOSING". Step missing from ATP.
51. TC-32 Step 108a through 108f - Add new step. Steps required to mate D&S drum to RWM port. Steps missing from ATP.
52. TC-32 Step 124a - Add new step. Move Hoist 301C to Loadout position. Can not open/close RWM port RWM port with hoist in Port position due to interference between port door and cake stand grapple.
53. TC-32 Step 132 - Delete step. Drum at lift table message not based on lift table at AGV height and drum on lift table. Incorrect ATP step.
54. TC-32 Step 148 through 169 - Delete steps. Crimp head deleted from

lid/delid mechanism.

- 55. TC-32 Step 147a - Add new step. Hand held crimper replaced crimp head. Step required to crimp lid on drum.
- 56. TC-33 Step 21 - Delete step. Step not required.
- 57. TC-34 Step 19 and 20 - Delete steps. Transfer car already located at entry position.
- 58. TC-35 Step 1a - Add new step. Verify manipulator at Park Position #1. Step missing from ATP.
- 59. TC-39 Step 29a and 29b - Add new steps. Verify manipulator at park position #1, interlock with drum tipper. Steps missing from ATP.
- 60. TC-39 Step 39 and 40 - Delete steps. Drum tipper raised to full up position on step 35. ATP test step error.
- 61. TC-39 Step 40a - Add new step. Move sorting table to Assay position. Step required because sorting table moved to tipper position after step 60.
- 62. TC-39 Step 60 - Change step #60 to step #40. Step out of sequence. ATP test step error.
- 63. TC-39 Step 59a - Add new step. Verify sorting table moves to tipper position. Step missing from ATP.
- 64. TC-40 Step 30 and 31 - Change step #30 to step #31 and step #31 to step #30. Steps out of sequence. Test step error.
- 65. TC-40 Step 46 and 47 - Delete steps. Sequence completes from step #42. Changing alarm time delay alarm time delay does not prevent sequence from completing.
- 66. TC-41 Step 15, 17, 18, and 20 - Delete steps. Drum tipper grab vertical is not a valid interlock to "Open Grab And Park" sequence.
- 67. TC-41 Step 23 and 24 - Steps out of sequence. Change step #23 to #24 and step #24 to step #23.
- 68. TC-41 Step 23a and 23b - Add new steps. Step 23a to reinitiate Open Grab

and Park sequence and 23b to move sorting table to RWM position.

69. TC-42 - Delete entire section. Crimp head deleted from lid/delidder.

70. TC-44 Step 6a, 6b, and 6c - Add new steps to verify interlock between sorting table move to tipper when tipper is not raised. Steps missing from ATP.

71. TC-46 Step 5 - Delete step. Processed 4 140# drums through sorting glove box, this is sufficient.

72. TC-67 Step 0 - Add new step. Place TRU Empty Drum Loadout glove box in AUTO. Step missing from ATP, TRU Loadout GB in manual at this point in procedure.

73. TC-67 Step 16a and 16b - Add new steps to start Aux. HPU. steps missing from ATP, and to press and hold Open push-button on 107-PC-07-011A for TRU Empty drum compacted drum lifter to open. Design change that was not incorporated into ATP.

74. TC-67 Step 29a and 29b - Add new steps to release open push-button on 107-PC-07-011A for TRU Empty drum compacted drum lifter to open and verify that compacted drum lifter closes. Design change that was not incorporated into ATP.

75. TC-67 Step 34 - Delete step. Erroneous step, step not required.

76. TC-68 Step 5a - Add new step. Simulate drum not at lift table (AGV status bit).

77. TC-68 Step 8 - Delete step. Bar code not tested on ATP.

78. TC-68 Step 11a - Add new step. Simulate drum at lift table (AGV status bit).

79. TC-68 Step 43 and 44 - Delete steps. Once the drum under port switch is activated, the conveyor stops and lift table raises. Changing the drum under port switch status has no affect after this. Per design.

80. TC-68 Step 48a - Add new step. Restore timer T4:142 to 2min. Register T4:142 changed to 5 sec. on step 33 to verify Failed to Raise alarm. ATP missing step for restoration.

81. TC-68 Step 79, 82, 83, 84, 85 and 86 - Delete steps. Design does not include a Bagless Transfer Port Trouble alarm. ATP error.

82. TC-68 Step 100 - Change step to press "START DRUM EXIT". In Auto mode, method of getting drum to end of lift table.
83. TC-68 Step 101 - Change step to verify message "DRUM EXIT SEQUENCE COMPLETE".
84. TC-68 Step 102 - Delete step. Step not required. Drum at lift table message based on AGV status bit, not drum location on lift table.
85. TC-73 Step 22, 23, and 25 - Delete steps. Vacuum isolation valve deleted from one trip port design.
86. TC-73 Step 33, 34, and 35 - Delete steps. Port 309 Weight Setpoint Change function on OIU not part of current design.
87. TC-75 Step 8a - Add new step. Step required to set bar code bit. Step missing from ATP.
88. TC-75 Step 32 - Change to step 38. Step 32 out of sequence.
89. TC-75 Step 33 - Change to step 39. Step 33 out of sequence.
90. TC-75 Step 38 - Change to step 33. Step 38 out of sequence.
91. TC-75 Step 41 - Delete step. Test step error.
92. TC-75 Step 118 and 123 - Delete steps. Interlock is with ZS-340A which was forced in step 117, not with ZS-340B.
93. TC-75 Step 116a, 131b, and 131c - Add new steps to verify failed to lower alarm. Steps missing from ATP.
94. TC-75 Step 125 - Change step number to 129a. Step out of sequence.
95. TC-75 Step 146 - Delete step. Test step error, performed on step 156.
96. TC-75 Step 147 - Delete step. Test step error, performed on step 104.
97. TC-75 Step 150 - Delete step. Step not required, ATP error.
98. TC-75 Step 151, 152, and 153 - Change step numbers to: #151 tp #163a, #152 to #163b, and #153 to #163c. Steps out of sequence.

-
99. TC-75 Step 154 - Delete step. Port already closed. Verified on step 145.
 100. TC-75 Step 161 - Delete step. ATP error, step not required.
 101. TC-75 Step 173 - Add new step to close LT209D conveyor local disconnect, disconnect opened on step 169.
 102. TC-80 Step 22, 24, 25 - Delete steps. Vacuum isolation valve deleted from one trip port design.
 103. TC-80 Step 36 through 50 - Delete steps. Previously tested on TC-73.
 104. TC-83 Step 8a - Add new step. Step required to set bar code bit. Step missing from ATP.
 105. TC-83 Step 32 - Change step #32 to #38. Step out of sequence.
 106. TC-83 Step 33 - Change step #33 to #39. Step out of sequence.
 107. TC-83 Step 38 - Delete step. Test step error.
 108. TC-83 Step 39 - Change step #39 to #40. Step out of sequence.
 109. TC-83 Step 40 - Delete step. Test step error.
 110. TC-83 Step 47a - Add new step. Set AGV status bit. Step missing.
 111. TC-83 Step 70a, 72a, 72b, and 72c - Add new steps. Verify Port 310 failed to raise alarm. Steps missing from ATP.
 112. TC-83 Step 114a, 129a, and 129b - Add new steps. Verify port 310 failed to lower alarm. Steps missing from ATP.
 113. TC-83 Step 123 - Delete step. Test step error, step not required.
 114. TC-83 Step 144, 145, and 148 - Delete steps. Test step error, steps not required.
 115. TC-83 Step 149, 150, and 151 - Change step #149 to #162a, step #150 to #162b, and step #151 to #162c. Steps out of sequence.
 116. TC-83 Step 152 - Delete step. Port closed verified on step 143.

117. TC-83 Step 159 - Delete step. Test step error, step already performed on step 154.
118. TC-83 Step 172 - Add new step. Close LT202E local 480v disconnect. Disconnect opened on step 167.
119. TC-10 Step 6 and 7 - Step replaced with new step 6 and 7 on new page 10-4. TC-10 Step 8, 9, 10 - Delete steps. Process (1) 1000# drum in liner and (1) 1000# drum without liner per new step #1 through step #84 on page new page 10-4 through 10-12. Processing two 1000# drums thru entry box in Auto is adequate test.
120. TC-8 Replaced entire TC-8 with new page 8-A.1 through 8-A.7 ATP steps as written would not work, new steps test transfer device logic as intended.
121. TC-46 Step 5 - Delete step. Processed (5) 140# drums thru sorting box - testing adequate, fifth drum not required.
122. TC-46 Step 6, 7, 8, and 9 - Delete steps. Processed (1) 1000 drum thru sorting box - adequate test, four 1000# drums not required to prove system works.
123. TC46 Step 10 - Change 86.32 to 86.46-1a thru 86.46-8a. Added new section to process 1000# drum thru sorting box.
124. Data Sheets 302-DS1000-1 through 302-DS1000-6 Delete pages, 1000# drum processing Performed/documented on page 86.46-1a thru 86.46-8a.
125. TC-46 Added new page 46-1a through 46-8a for processing 1000# drum thru sorting glove box.
126. TC-65 - Delete TC-65. This section replaced with new page 70-1a thru 70-DS-9.
127. TC-70 Change method testing Transfer Car (TC) failed to reach position alarm from forcing position switch to simulate car not in position, to changing alarm timer register. This is safer method of testing the alarm function.
128. TC-71 Step 21 through 25 - Delete steps. AGV Hold Point function tested on Cold Run Test.
129. TC-32 Step 116, 117 - Delete step. Bar Code not tested on ATP, will be verified during OTP performance.

130. TC-36 - Lid/Delid Fixture redesigned. This section replaced in its entirety. Section replaced with page 1 through 7 attached to ATP.
131. TC-37 - Lid/Delid Fixture redesigned. This section replaced in its entirety. Section replaced with page 1 through 11 attached to ATP.
132. TC-38 - Lid/Delid Fixture redesigned. This section replaced in its entirety. Section replaced with page 1 through 2 attached to ATP, 38A page 1 through 5, 38B page 1 through 6.
133. TC-9 Step 3,43, 82 and 114 - Delete steps. Video recording of E-stop testing deleted as test requirement. See TE#88.
134. TC-47 Step 3,66, and 163 - Delete steps. Video recording of E-stop testing deleted as test requirement. See TE#88.
135. TC-64 Step 3 and 17 - Delete steps. Video recording of E-stop testing deleted as test requirement. See TE#88.
136. TC-30 Step 103 through 118 - Delete steps. Crimper deleted from delid fixture.
137. TC-77 Step 3,46,89, and 113 - Delete steps. Video recording of E-stop testing deleted as test requirement. See TE#88.
138. TC-31 Step 131 though 147 - Delete steps. Compacted drum lifter pendent close button deleted from design.

TEST RESULTS

A total of 82 Test Exceptions were identified during performance of the TRU Acceptance Test. Additionally another 20 Test Exceptions that affect the TRU glovebox were identified during performance of TRU RWM, LLW and LLW RWM Acceptance Testing.

Of the 102 identified Test Exceptions that affect TRU, 92 have been retested and closed. There are 10 Test Exceptions that remain open. The open Test Exceptions that affect TRU glove box are listed below with a brief description of the deficiency, recommended corrective action, status and required completion for closure.

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

Corrective action: Work packages 97-307, 356, and 643 are currently being worked to troubleshoot and repair any grounding, shielding, or routing problems noted with lift table control and power cables. This deficiency was noted to occur three times approximately one year ago and has not occurred since. The root cause of this problem has not been identified to date. Port doors will remain closed except when waste is actually being passed through them. A facility modification will be pursued to remove the serial communication architecture currently employed in the facility and replace it with digital communications.

The work packages for trouble shooting the wiring must be resolved prior to Hot Operation.

TE #154 Sphincter port seal GB301 pressure bleeds down or PSL800 and PSL801 setpoints set incorrectly. Switches wired backwards, wiring corrected. Sphincter seal still leaks. Current software will reinflate seal when pressure drops below setpoint.

This TE does not have to be resolved until after Hot Operation. Modification to seal system to be implemented after Hot Operations.

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.

**WASTE MANAGEMENT HANFORD COMPANY
PROJECT W-026, WRAP
TRU GLOVEBOX ACCEPTANCE TEST REPORT**

**HNF-SD-W026-ATR-034
Rev. 0**

TE #361 Drum Transfer assembly upper and lower grab arm pressure switch PS395A/B bleed off over time after grab arms are closed. This results in alarm and sequence failed. Problem appears to be in sequence valve or manifold pilot check valve which is to be replaced soon.

This TE must be resolved prior to Hot Operations.

TE #376 Generic issue that applies to all lift tables. Lift table lowers with no control request for movement. Cause unknown.

Corrective action: Work packages 97-307, 356, and 643 are currently being worked to troubleshoot and repair any grounding, shielding, or routing problems noted with lift table control and power cables. This deficiency was noted to occur three times approximately one year ago and has not occurred since. The root cause of this problem has not been identified to date. Port doors will remain closed except when waste is actually being passed through them. A facility modification will be pursued to remove the serial communication architecture currently employed in the facility and replace it with digital communications.

The work packages for trouble shooting the wiring must be resolved prior to Hot Operation.

TE #377 Manipulator hose/cable management binds and interferes with other glove box equipment. Hose/cable management redesigned. Still too long and hits tipper.

This TE may be deferred until after Hot Operations. This is only a problem if waste is stuck in the bottom of the drum and can't be removed with a hand tool.

TE #378 Right manipulator jaw incremental control is not working properly. Inconvenient to use for some functions, but performs basic functions.

This TE may be resolved after Hot Operations.

TE #775 Drum is aligned to close to drum tipper when it comes out of drum transfer device. When drum tipper lowers, bevels move drum back, but drum hits switch. Move switch back. To be reworked under work package 98-195.

This TE must be resolved prior to Hot Operations.

TE #776 1000# Drum slips when tipper is rotated. Apparently 475# pressure is too low to firmly grasp a 1000# drum. Set pressure to be increased by COG engineer.

This TE must be resolved prior to Hot Operations.

**WASTE MANAGEMENT HANFORD COMPANY
PROJECT W-026, WRAP
TRU GLOVEBOX ACCEPTANCE TEST REPORT**

HNF-SD-W026-ATR-034

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TE #777 HPU Pressure gauges are not labeled. Install labels.

This TE should be resolved prior to Hot Operations.

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.

CONCLUSION AND RECOMMENDATIONS

TEST EXCEPTION RESOLUTION

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

Appendix A

TRU GLOVE BOX Test Exception Sign-Off Sheets
The 102 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.

Exception Closed By :

KJ Leist

Date : 2/8/98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

W R W

Date: _____

WMH Representative:

Date: 2-21-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

1/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

KL 9/17/97

Date : 5/7/97

APPROVAL OF RESOLUTION

Contractor Representative: *NA*

Date: _____

WMH Representative: *LRW*

Date: 2-10-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative: *NA*

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.

2/6/98 LOCKED, UNLOCKED SENSORS ADDED BUT ARE NOT RELIABLE. THIS TEST
EXCEPTION IS CLOSED, ALTHOUGH AN UPGRADE, SIMILAR TO OPTION ① ABOVE SHOULD
BE CONSIDERED AT A LATER DATE.

Exception Closed By :

Date : 2/6/98

APPROVAL OF RESOLUTION

Contractor Representative:

(Only as needed)

Date: _____

WMH Representative:

Date: 2-10-98

Additional Approval:

(Only as needed)

Date: _____

FDNW Representative:

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 36

ATP_YN : Y DESIGN
Test :
Step : Equipment Tag #:

Exception :

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 :

Exception Status :

9-2-97 KJ Leist to initiate change request. Need to order parts. 2/6/98 ENTRY/EXIT PORT UP CHANGES COMPLETE. BAGLESS TRANSFER PORT PARTS PROCURED, BUT CHANGES TRACKED ELSEWHERE AND CLOSED.

Exception Closed By :

KJ Leist

Date : 2/6/98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Le RWP

Date: _____

WMH Representative:

Date: 2-10-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

WJ

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.

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 #: 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 rehome 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 programed.

Exception Closed By :

Michael P. Lee

Date : 12-1-97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

WMH Representative:

Additional Approval:
(Only as needed)

FDNW Representative:

Date: _____

Date: 2-10-98

Date: _____

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 : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Weidert

Exception Description :

Exception Disposition :

Revise software specification section 13462 to reflect modified hardware.

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.

See letter 32600-97-260-203

Exception Closed By :

Date : 12-26-97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

WMH Representative:

Additional Approval:
(Only as needed)

FDNW Representative:

Date: _____

Date: 12-26-97

Date: _____

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 83

ATP_YN : Y

Test : 13031A-85

Step : 05.58

Equipment Tag #: 12-RIA-534

Exception : 5

Revision :

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.

9-18-97 RCT to recommend mod.

Equipment installed : RCT's changed

Exception Closed By :

Rich Swalla

Date : 2/22/98

APPROVAL OF RESOLUTION

Contractor Representative:

(Only as needed)

WMH Representative:

Additional Approval:

(Only as needed)

FDNW Representative:

Date: _____

Date: 2-22-98

Date: _____

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 105

ATP_YN : Y

Exception : 27

Test : 13031A-85

Revision :

Step : 07.51 Equipment Tag #: DK-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 PS703 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.

WP-97-501 Item # 25: 2/17/98 Vacuum Assy modified but sensitive to drum lid design variation. Follow on activity will optimize vacuum method. ~~From~~ This issue will be tracked on the Master Test Exception Data Base and closed as an FERT Acceptance Test Exception.

Exception Closed By :

Date : 2/17/98

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 #: 106

ATP_YN : Y

Test : 13031A-85

Step : ALL

Equipment Tag #: ALL

Exception : 28

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 - 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. This is not a test exception per se. All alarms verified to work via ATP/OTP testing.

Exception Closed By :

Michael P. Jew

Date : 2-18-98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

[Signature]

Date: _____

WMH Representative:

[Signature]

Date: 2-21-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

[Signature]

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. Code reviewed, modified, closed

Exception Closed By :

Michael P. Lane

Date : 2-18-98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

[Signature]

Date: 2-21-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

[Signature]

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 153

ATP_YN : Y

SW

Test : 13021A.85.02

Step : 30,31

Equipment Tag #: DO-07-101

Exception : 1

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 - 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

Date : 9/3/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

Date: 2-10-98

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 : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

7-22-97 MPL - Sphinchter 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. Sphincter seal still leaks. Modify software for ports 102, 302 to attempt re-inflation after leak noted. 2/21/98. Leak is likely considering the number of connections and valves. A future change will be implemented to remove isolation valve and pilot chain valve will be changed to a valve which provides constant pressure. Kfr.

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 #: 156

ATP_YN : Y

Test : 13031A.85.26

Step : 1

Equipment Tag #: DH-07-103

Exception : 60

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 - 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.

Completed, Closed.

Exception Closed By :

M. J. Jones

Date : 7-18-98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

[Signature]

Date: _____

WMH Representative:

[Signature]

Date: 2-21-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

[Signature]

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE
EXCEPTION LOG

Tracking #: 159

ATP_YN: Y

Exception : 62

Test : 13031A.85.44

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 - 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. 2-18-98- Alarm sealed in. When operator goes to maint mode, alarm unsealed. Alarms NS04:15/9, NS04:15/10
N414:13/2

Exception Closed By :

M. J. P. Aden

Date : 2-18-98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

Date: 2-21-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 160

ATP_YN : Y

Test : 13031A.85

Step : 1 Equipment Tag #: DH-103,303,~~80-301~~ DH-302

Exception : 63

Revision :

Date:

Specification Section : 13021

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Warmenhoven

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 Warmenhoven assigned to review, fix.

WP 97-502 Item #48.

WP 97-506 Item #31.

WP 97-507 Item #54.

2/17/98 Overtravel switches located and wired in series with to shut off drive through interlocks. Clutches located in drive will prevent substantial damage.

R/W 2/17/98

Exception Closed By :

R/W

Date : 2/17/98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

R/W

Date: _____

WMH Representative:

Date: 2-21-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

R/W

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 180

ATP_YN : Y SW
Test : ALL ATP
Step : ALL Equipment Tag #: GB-07-101,...

Exception : 99

Revision :

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.

known instances removed, closed, Code reviewed, mod. fixed, All

Exception Closed By :

Michael P. Jones

Date : 2-18-98

APPROVAL OF RESOLUTION

Contractor Representative:

(Only as needed)

WMH Representative:

Date: _____

Date: 2-21-98

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 :

8-3-97 Changes added to 102 by Mike Schneider. MP Lane to retest.

Does not apply to TRU Line. Closed.

Exception Closed By :

Michael P. Jones

Date : 2-18-98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

[Signature]

Date: 2-21-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

[Signature]

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 201

ATP_YN : Y SW

Test : 13021A.86.1

Step : 27,29,35,40 Equipment Tag #: OIU-12-104A

Exception :

Revision :

Date :

Specification Section : 13021

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

8-4-97 - MPL Systems diagnostics menu - Port not locked should be "PORT NOT CLOSED AND LOCKED".

Exception Disposition :

8-4-97 - MPL Make operation consistent for all Entry/Exit Port diagnostic indicators.

Exception Status :

9-3-97 MP Lane to retest. 9-16-97 DIAG 1 and 2 menus examined, consistent with other diagnostics menus. Closed.

Exception Closed By : Lane *M. Lane*

Date : 9/16/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

Date: *2-10-98*

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 202

ATP_YN : Y

Test : 13021A.86.1

Step : Equipment Tag #: DO-07-301

Exception :

Revision :

Date :

Specification Section : 13021

Test Witness/Author : Warmenhoven

Test Operator :

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

8-4-97 - MPL Lid in position sensor does not activate during port opening sequence.

Exception Disposition :

8-4-97 - MPL Adjust sensor.

Exception Status :

9-3-97 Duplicate of #5. Closed.

Exception Closed By : Leist

[Signature] 2/17/98

Date : 9/3/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

WMH Representative:

Additional Approval:
(Only as needed)

FDNW Representative:

Date: _____

Date: 2-20-98

Date: _____

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 203

ATP_YN : Y

SW

Test : 13021A.86.1

Step : Equipment Tag #: LT-09-202B

Exception :

Revision :

Date:

Specification Section : 13021

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

8-4-97 - MPL Lift table does not sufficiently raise to door in position height.

Exception Disposition :

8-4-97 - MPL Reprogram lift table.

Exception Status :

8-4-97 - MPL lift table reprogrammed, tested satisfactory. Closed.

Exception Closed By : Lane *Miese p2e*

Date : 8/4/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

WMH Representative:

Additional Approval:
(Only as needed)

FDNW Representative:

Date: _____

Date: *2-10-98*

Date: _____

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 204

ATP_YN : Y

Test : 13021A.86.1

Step : Equipment Tag #: DO-07-301

Exception :

Revision :

Date :

Specification Section : 13021

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

8-4-97 - MPL Front side side lock sticks.

Exception Disposition :

8-4-97 - MPL Cognizant engineer to review and disposition.

Exception Status :

9-3-97 Duplicate of #15. Closed.

Exception Closed By : Leist

Kyle 2/17/98

Date : 9/3/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

2/12
John R. [Signature]

Date: _____

WMH Representative:

Date: 2-22-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

2/12
[Signature]

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 205

ATP_YN : Y SW

Test : 13021A.86.1

Step : Equipment Tag #: DH-07-301 302 KJL 2/17/98

Exception :

Revision :

Date :

Specification Section : 13021

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

8-4-97 - MPL As per 134632, upper transfer grab automatically closes around drum wehn hoist reaches transfer port position.

Exception Disposition :

8-4-97 - MPL Safety Hazard - Modify sequence so that operator must initiate.

Exception Status :

9-3-97 Change implemented by Mike Schneider. Retested satisfactory. Acceptable to KJ Leist. Closed.

Exception Closed By : Leist

Date : 9/3/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

Date: 2-22-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 206

ATP_YN : Y SW
Test : 13021A.86.1
Step : Equipment Tag #: HS-306

Exception :
Revision :
Date:

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

Responsible Company: WMH
Responsible Subcontractor :
Responsible Individual: Lane

Exception Description :

8-4-97 - MPL When switch HS=306 switch turned from auto to maint., auto drum exit sequence stops and initialization bypass is lost. In all other gloveboxes, need to enter maintenance mode via password before auto sequences stop.

Exception Disposition :

8-4-97 - MPL Make consistent for all gloveboxes.

Exception Status :

9-3-97 MP Lane to retest. 9-16-97 Complete. Closed.

Exception Closed By : Lane Michael P. Lane Date : 9/16/97

APPROVAL OF RESOLUTION

Contractor Representative: [Signature] Date: _____
(Only as needed)

WMH Representative: [Signature] Date: 1-22-98

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

FDNW Representative: [Signature] Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 207

ATP_YN : Y

Test : 13021A.86.1

Step : ALL

Equipment Tag #: OIU-12-104A

Exception :

Revision :

Date:

Specification Section : 13021

Test Witness/Author : Vvarmenhoven

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 :

Added maint. screens to initial lockout. Problem not noted during training. OK seal.

Exception Closed By :

Michael P. Lee

Date :

2-18-98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

[Signature]

Date:

WMH Representative:

[Signature]

Date: *2-21-98*

Additional Approval:
(Only as needed)

[Signature]

Date:

FDNW Representative:

[Signature]

Date:

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 208

ATP_YN : Y SW
Test : 13021A.86.1
Step : ALL Equipment Tag #: LT-09-202B

Exception :
Revision :
Date:

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

Responsible Company: WMH
Responsible Subcontractor :
Responsible Individual: Lane

Exception Description :

8-4-97 -MPL Lift table entry sequence initiated but lift table does not raise to centering height.

Exception Disposition :

8-4-97 - MPL Investigate and fix.

Exception Status :

9-3-97 Retested. Problem not noted again. Closed.

Exception Closed By : Lane *Mrs. P. Lane*

Date : 9/3/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

[Signature]

Date: _____

WMH Representative:

[Signature]

Date: 1-22-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative: *[Signature]*

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 217

ATP_YN : Y

Test : 13021A-86,2

Step : GENERAL Equipment Tag #: DH-07-302

Exception :

Revision :

Date:

Specification Section : 13021

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

UPPER AND LOWER TRANSFER ASSEMBLYS MAKE LOUD ERRATIC NOISES. UPPER GRAB "THUMPS" AND SCREECHES. LOWER GRAB SCHREECHES. UPPER GRAB IS WORSE THAN LOWER GRAB.

Exception Disposition :

Exception Status :

9-3-97 - Lubricated. Acceptable to KJ Leist. Closed.

Exception Closed By : Leist

KJ Leist 2/17/98

Date : 9/3/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

W A
J R V

Date: _____

WMH Representative:

Date: 3-22-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

W A

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).

WP-97-502 Item #49.

Need design. 2/17/98. Magnetic Bilge Buckers procured, but in adequate strength. Band Removal Assy. added and tested. OK. Good Function. Feature does not work and will be removed. Bands will be taped to drum as a remedy. (will hold removal drum clamp bands up to table when tipped). I

Exception Closed By :

Date : 2/21/98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

Date: 2-21-98

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 :

Does not apply to TRU Line, Closed.

Exception Closed By :

M. Reed

Date : 2-18-98

APPROVAL OF RESOLUTION

Contractor Representative: *~ A*

Date: _____

WMH Representative: *Le R. W.*

Date: 2-21-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative: *u / d*

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 226

ATP_YN : y

Test : 13021A-86.67

Step : Various Equipment Tag #: OIU-12-104C

Exception :

Revision :

Date:

Specification Section : 13021

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

OIU sends back an input value of zero which is moved to the output screen register. This causes screen to go black. Cause is unknown.

Exception Disposition :

Exception Status :

9-3-97 MP Lane to Troubleshoot. Install spare when it arrives. If problem remains, have electrician wiring out wiring.

Spare installed. Functioning correctly for over 1 month, closed.

Exception Closed By : Michael Dora

Date : 2-18-98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

Date: 2-21-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 227

ATP_YN : Y SW
Test : 13021a-86.67
Step : 25 Equipment Tag #: DA-07-104

Exception :

Revision :

Date:

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

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

There is no indication as to when to weigh the compacted puck.

Exception Disposition :

Exception Status :

9-3-97 Duplicate of # 212. Closed.

Exception Closed By : Lane

Date : 9/3/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

Date: 2-21-98

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 : Warmenhoven

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. 2/21/98 Plant mod after startup will add an aircooled heat exchanger

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 #: 231

ATP_YN : Y

SW

Test : 13021A.86.9

Step : 39

Equipment Tag #: 107-GB-07-301

Exception :

Revision :

Date:

Specification Section : 13021

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

During port closing sequence, when door lowers, E-stop is pressed. When released, port does not lock. This is due to during one point while the door is lowering, the door close sensor is actuated before the locking reflectors are seen. This creates a closed and locked condition. Once port is closed and locked, lock bolt output is de-energized, preventing locks from extending

Exception Disposition :

Exception Status :

9-3-97 MPL to review, retest, resolve. 9-20-97 Door lowered closed switch adjusted to activate after locking cylinders receive reflection. Also, added door rotated closed switch to "CLOSED AND LOCKED" OTL rung for all Entry/Exit ports to eliminate false closed and locked indication if door is raised and vertically extended. Closed.

Exception Closed By : Lane

Date : 9/20/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

Date: 1-22-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative: _____

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 232

ATP_YN:Y

Test : 13021A-86.9

Step : 10,11,50,51 Equipment Tag #: DO-07-301

Exception :

Revision :

Date:

Specification Section : 13021

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

Activation of E-stop on GB301 - E/E port DO-301, rotate closed does not come to a complete stop. Control logic and valve correct, movement is used by air leak.

Exception Disposition :

Repair air leak on rotate air lines of DO-07-301.

Exception Status :

9-3-97 KJ Leist indicates problem fixed, acceptable. Closed.

Exception Closed By : Leist

KJ Leist 2/17/98

Date : 9/3/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

Date: 2-21-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 233

ATP_YN : Y SW

Test : 13021A-86.9

Step : 39 } Equipment Tag #: gb-301

Exception :

Revision :

Date:

Specification Section : 13021

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

E-stop on GB301 while auto sequence of moving hoist from any position will not result in completion of hoist sequence after E-stop is reset. Requires manual intervention.

Exception Disposition :

Exception Status :

Hoist works as designed.

Exception Closed By : Lane

Mered Pizer

Date : 9/20/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

W R V

Date: _____

WMH Representative:

W R V

Date: 2-21-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

W R V

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 234

ATP_YN : y

Test : 13021A-86.8

Step : General

Equipment Tag #: DH-07-302

Exception :

Revision :

Date:

Specification Section : 13021

Test Witness/Author : Warmenhoven

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, sequence for 101 more flexible, closed. Retested Sat.

Exception Closed By :

Mike P

Date : 2-18-98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

Date: 2-21-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 235

ATP_YN : Y SW
Test : 13021A.86.2
Step : 30,31 Equipment Tag #: 107-DO-07-301

Exception :
Revision :
Date:

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

Responsible Company: WMH
Responsible Subcontractor :
Responsible Individual: Lane

Exception Description :

OIU-12-104A maintenance menu for E/E port DO-07301 extend lid detach/retract lid detach buttons do not indicate correctly. Extend remains back light all the time, retract does not back light.

Exception Disposition :

Correct extend/retract lid detach OIU maint. menu buttons and download to OIU. Verify function behavior.

Exception Status :

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

Exception Closed By : Lane Michael P Jones Date : 9/3/97

APPROVAL OF RESOLUTION

Contractor Representative: ^{NA} Date:

WMH Representative: Date: 2-21-98

Additional Approval: Date:

FDNW Representative: Date:

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 236

ATP_YN : Y

Test : 13021A-86.3

Step : 28

Equipment Tag #: 107-DH-07-301

Exception :

Revision :

Date :

Specification Section : 13021

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

Drum lifter closed switch does not activate until hoist raises putting load onto hoist.

Exception Disposition :

107-DH-07-301 open/close was modified by design R110 which deleted air supply to close cylinder. When lifter is setting on a drum, it cannot fully close until hoist is slightly raised.

Exception Status :

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

Exception Closed By : Leist

Date : 9/3/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

Date: 2-21-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 237

ATP_YN : Y

SW

Test : 13021A-86.1

Step : 27,29

Equipment Tag #: OIU-12-104A

Exception :

Revision :

Date:

Specification Section : 13021

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

Message on OIU initialization menu "DO-07-301 port door not closed and locked" not implemented correctly.

Exception Disposition :

Correct message and download to OIU-12-014A. Verify correct message

Exception Status :

9-3-97 MP Lane to retest. 9-16-97 Duplicate of #201. Closed.

Exception Closed By : Lane Michael P. Jones

Date : 9/16/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

WMH Representative:

Additional Approval:
(Only as needed)

FDNW Representative:

Date: _____

Date: 2-21-98

Date: _____

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 238

ATP_YN : Y SW
Test : 13021A-86.2
Step : General Equipment Tag #: DH-07-302

Exception :
Revision :
Date:

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

Responsible Company: WMH
Responsible Subcontractor :
Responsible Individual: Lane

Exception Description :

Interference exists between the upper Transfer Assembly lowered position and the transfer port door. This is not a problem in automatic mode, but could be a problem while in maintenance mode.

Exception Disposition :

Add interlock in maintenance mode to only allow transfer device to lower when transfer port is in the open position.

Exception Status :

9-3-97 MP Lane to add code, retest. 9-16-07 Ref. pg. 56 WHC-N-930 #2. Code added, retested. Closed.

Exception Closed By : Lane *mofane*

Date : 9/16/97

APPROVAL OF RESOLUTION

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

WMH Representative: *[Signature]* Date: 2-21-98

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

FDNW Representative: *[Signature]* Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 239

ATP_YN : Y

Test : 13021A-86.2

Step : General Equipment Tag #: DH-07-302

Exception :

Revision :

Date:

Specification Section : 13021

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

Upper and lower transfer assemblies: only 1/4" thread engagement exists between Grab arms and transfer device.
Temporary bolts installed to allow testing to continue.

Exception Disposition :

Exception Status :

9-3-97 R Warmenhoven to review, write change request.

WP-97-506 Item # 32. ^{2/1/98} Grab on south side (upper, lower) reworked to grab drum better. Fastener design changed to provide full engagement.

Exception Closed By :

Date : 2/17/98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

Date: 2-21-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 240

ATP_YN : Y

Test : 13021A-86.2

Step : General Equipment Tag #: DH-07-302

Exception :

Revision :

Date:

Specification Section : 13021

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

Interference exists between the lower transfer device and the transfer CAR when transfer device is in lowered position to release drum onto car.

Exception Disposition :

Exception Status :

9-3-97 R Warmenhoven to review.

Design required.

WVP-97-506 Item #33.

2/19/98 Shim and adjuster added to minimize interference.
Small section cut out of clamp gusset (stress OK) eliminates interference.

Exception Closed By :

Date : 2/19/98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

Date: 2-21-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 241

ATP_YN : y

Test : 13021A-86.3

Step : 54

Equipment Tag #: DH-07-301

Exception :

Revision :

Date :

Specification Section : 13021

Test Witness/Author : Warmenhoven

Test Operator :

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

Due to possible mis-alignment of drum in upper drum grab during move trolley to transfer port sequence. (Grabs close automatically when trolley reaches transfer port.) Closing of arms was made manual via OIUI.

Exception Disposition :

Buttons added to transfer assembly OIU screen for opening and closing grabs to align drum properly before transfer assembly sequences start. Lifter must be open and grab arms closed around drum before lower to car sequence is initiated.

Exception Status :

Resolve trolley menu/transfer menu status messages for this sequence. 9-3-97 MP Lane to retest.

Retested Sat. 9/3/97

Exception Closed By :

Michael Pina

Date : 2-18-98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

[Signature]

Date: _____

WMH Representative:

[Signature]

Date: 2-21-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

[Signature]

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 325

ATP_YN : N

Test : 13021A-86.32

Step : 61

Equipment Tag #: RT-07-301

Exception :

Revision :

Date:

Specification Section : 13021

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

Delid Fixture vacuum switch PS-8/6 is not operational.

Exception Disposition :

Replace PS-8/6, calibrate switch and retest.

Exception Status :

Parts on site.

Generate new WP.

Exception Closed By :

[Signature]

Date : 11/26/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

[Signature]

Date: _____

WMH Representative:

[Signature]

Date: 2-21-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

[Signature]

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 326

ATP_YN : N

Test : 13021A-86032

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: Leist

Exception Description :

Method of removing clamp band from drum after saw sequence comple has not been defined.

Exception Disposition :

Exception Status :

Duplicate - Close

Exception Closed By : Leist

Kyle 2/17/98

Date : 9/5/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

N/A
WRV

Date: _____

WMH Representative:

Date: 2-21-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

N/A

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 327

ATP_YN : N SW
Test : 13021A-86032
Step : 11 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 close sequence does not result in full closure of drum grab around drum. Last 3 inches of lose travel results in pressure switch cycling which causes close sequence to stop.

Exception Disposition :

Exception Status :

Reset pressure switch above pressure (hydraulic) that moves from (~400psig) to pressure that corresponds to grab arms in full contact around drum,

Exception Closed By : Warmenhoven *[Signature]* Date : 9/5/97

APPROVAL OF RESOLUTION

Contractor Representative: *[Signature]* ^{N/A} Date: _____
(Only as needed)

WMH Representative: *[Signature]* Date: 1-22-98

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

FDNW Representative: *[Signature]* Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 328

ATP_YN : N

Exception :

Test : 13201A-86.32

Revision :

Step : 10

Equipment Tag #: 107-DH-07-303

Date:

Specification Section : 00000

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Warmenhoven

Exception Description :

Location of drum on transfer car results in close proximity of clamp band to tipper assembly. Drum processed on TC32 resulted in contact of clamp band to grab assembly.

Exception Disposition :

Retest auto handover from transfer device and make recommendation .

Exception Status :

WP-97-506 Item #34.

2/17/98 Bevel ground on grab cylinder shield. This acts to push drum away from grab.

Exception Closed By :

K. J. [Signature]

Date : 2/17/98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

W. R. [Signature]

Date: _____

WMH Representative:

Date: 2-21-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

W. R. [Signature]

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 329

ATP_YN : N

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.

Retested satisfactory. Closed!

Exception Closed By :

Michael P. Lee

Date : 2-21-98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

WMH Representative:

Additional Approval:
(Only as needed)

Date: _____

Date: 2-22-98

Date: _____

FDNW Representative:

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 330

ATP_YN : N

SW

Exception :

Test : 13021A-86.32

Revision :

Step : 63

Equipment Tag #: 107-DH-07-303

Date:

Specification Section : 13021

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

Last 3" of drum grab close results in continued setting and resetting of pressure switch until grab is fully closed.
Appears that cylinder is binding or ?

Exception Disposition :

Exception Status :

Inspected - sat.

Exception Closed By : Warmenhoven

Date : 9/5/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

Date: 1-22-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 331

ATP_YN : N

Test : 13021A-86.32

Step : 33

Equipment Tag #: 107-ST-07-302

Exception :

Revision :

Date:

Specification Section : 13021

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

Sorting table home button does not backlight on maintenance menu.

Exception Disposition :

Exception Status :

Retest.

*This is not a test exception & it works any way
Closed!*

Exception Closed By :

m-jane

Date : 2-18-98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

[Signature]

Date: _____

WMH Representative:

Date: 2-21-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

u/f

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 332

ATP_YN : N

Test : 13021A-86

Step : General Equipment Tag #: 107-ST-07-302

Exception :

Revision :

Date:

Specification Section : 13021

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

Tool holders on south end of sorting table are not useable as is, interfere with drum tipper.

Exception Disposition :

Move holder.

Exception Status :

WP-97-507 Item #56

2/17/98 Tool Holders relocated

Exception Closed By :

Date : 2/17/98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

Date: 2-21-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 333

ATP_YN : N

Test : 13021A-86

Step : General

Equipment Tag #: 107-ST-07-302 & 107-DH-07-303

Exception :

Revision :

Date :

Specification Section : 13021

Test Witness/Author : Vvarmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

If sorting table at assay position and drum tipper is to be raised or lowered with grab arms open, tipper arms will hit sorting table.

Exception Disposition :

Add interlock to prevent raising or lowering drum tipper if grab arms are open, with sorting table at assay or interlock to prevent raising/lowering if sorting table at tipper/assay position.

Exception Status :

Retest + Maint. mode.
9-25-97 Retest required.

2-18-98 Added Sort. Table at RWM Load out pos.
For raise / lower tipper closed.

Exception Closed By :

Michael Paine

Date :

2-18-98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

[Signature]

Date: _____

WMH Representative:

[Signature]

Date: 2-21-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

[Signature]

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 334

ATP_YN : N

SW

Test : 13021A-86.70

Step : General

Equipment Tag #: OIU-12-104C

Exception :

Revision :

Date:

Specification Section : 13021

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

OIU-12-104C

1. Screen blanks out periodically and must be reset to use.
2. Alarm screen - return to current screen does not work. Have to reset OIU to bet out of alarm screen.

Exception Disposition :

Troubleshoot. Spare OIU ordered.

Exception Status :

9-16-97 Duplicate of #226. Closed.

Exception Closed By : Lane

Date : 9/16/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

Date: 2-21-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 335

ATP_YN : N SW
Test : 13021A-86.30
Step : 55,56,58 Equipment Tag #: 107-XX-07-301B

Exception :

Revision :

Date:

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

Responsible Company: WMH
Responsible Subcontractor :
Responsible Individual: Lane

Exception Description :

Assay tray retracted needs to be added to diagnostic menu and initialization logic.

Exception Disposition :

Add assay retracted to diagnostic menu and initialization logic.
ZS835B

Exception Status :

Closed. - Added.

Exception Closed By : Lane *Michelle Price*

Date : 9/2/97

APPROVAL OF RESOLUTION

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

WMH Representative: *[Signature]* Date: 2-21-98

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

FDNW Representative: *[Signature]* Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 336

ATP_YN : N

Test : 13021A-86

Step : General 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: Leist

Exception Description :

Excessive length of manipulator hydraulic/electric festoonery is interfering with drum tipper grab arms.

Exception Disposition :

Exception Status :

WVP-97-507 Item #58.

2/17/98 Festoonery brackets manufactured to Stock spec. Additional clearance of 34" provided.

Exception Closed By :

Kudach

Date : 2/17/98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

[Signature]

Date: _____

WMH Representative:

[Signature]

Date: 2-21-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

[Signature]

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 347

ATP_YN : N

Test : 13021A-86.47

Step : See Below

Equipment Tag #: 107-ST-07-302

Exception :

Revision :

Date:

Specification Section : 13021

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

Step - 6, 7, 69, 70, 71-74, 132, 166, 167, 168

Sorting table ST-07-302 is not disabled by activation of E-stop HS-07-302A/B/C/D or 305.

Exception Disposition :

Exception Status :

Retest HS-302A, -302B, -302C, -302D, -328, and -329 only failed to stop
sequence in progress and sequence initiation. HS-305 also stops. Closed
NOTE: HS-305 requires software reset of both OIU 184B and 184D before
1st take will move again.

Exception Closed By :

Michael Pda

Date : 2-21-98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

Date: 2-22-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 337

ATP_YN : N

Test : 13021A-86.77

Step : See Below Equipment Tag #: CR-07-301D

Exception :

Revision :

Date :

Specification Section : 13021

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

Step - 6, 7, 20-27, 49, 50, 63-70, 92, 99-102, 116, 123-126

Activation of E-stop HS-07-308/309/305 has no impact on hoist 107-CR-07-301D.

Exception Disposition :

~~HS-305 not associated with 301D~~, N/A msg 2-21-98

Exception Status :

Retest. ^{msg 2-21-98} HS-302A, 302B, -302C, -302D ~~only~~ Found to stop in motion and action in progress, including raise, lower, forward, reverse, satisfactory. closed. HS-305 also stops hoist as well. closed.

Exception Closed By : Michael Pae

Date : 2-21-98

APPROVAL OF RESOLUTION

Contractor Representative: _____
(Only as needed)

Date: _____

WMH Representative: _____

Date: 2-22-98

Additional Approval: _____
(Only as needed)

Date: _____

FDNW Representative: _____

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 338

ATP_YN : N

Test : 13021A-86.64

Step : 6,9-12,20,23-26 Equipment Tag #: 107-CR-07-301F

Exception :

Revision :

Date:

Specification Section : 13021

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

Activation of E-stop HS-07-305 has no affect on hoist 107-CR-07-301F.

Exception Disposition :

Exception Status :

mg 2-21-98

Retest. HS-302A, -302B, -302C, -302D ~~not~~ Found to Stop Initiation and actions in progress, including raise, lowers forward, reverse. Set is factory HS-328, 389 can be added later if needed. Closed. HS-305 stops hoist as well.

Exception Closed By : Michael P. Lee

Date : 2-21-98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

Date: 2

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 339

ATP_YN : N

Test : 13201A-86.32

Step : 6 Equipment Tag #: TC-07-303

Specification Section : 00000

Test Witness/Author : Warmenhoven

Test Operator:

Exception :

Revision :

Date:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

Transfer car does not completely reach the delid position. Air drive hose to transfer car has a small hole approximately 1 foot prior to delid position.

Exception Disposition :

Replace TC-07-303 air drive hose.

Exception Status :

Replaced. Retested.

Exception Closed By : Leist

Date : 9/2/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

Date: 2-21-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 340

ATP_YN : N SW
Test : 13201A-86.31
Step : 203, 205 Equipment Tag #: SP-07-104 (FEV-318B)

Exception :

Revision :

Date :

Specification Section : 00000
Test Witness/Author : Warmerhoven
Test Operator :

Responsible Company: WMH
Responsible Subcontractor :
Responsible Individual: Lane

Exception Description :

Output to FEB-318 ASCO solenoid does not cycle, power remains to valve after output is turned off.

Exception Disposition :

Exception Status :

Discovered output forced on.

Exception Closed By : Lane Michael P. Lane

Date : 9/2/97

2-19-98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date : _____

WMH Representative:

Date : 2-21-98

Additional Approval:
(Only as needed)

Date : _____

FDNW Representative:

Date : _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 341

ATP_YN : N

SW

Test : 13021A-86.31

Step : 199, 201

Equipment Tag #: SP-07-301 (FEV318A)

Exception :

Revision :

Date:

Specification Section : 13021

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

Output to FEB-318A ASCO solenoid does not cycle, power remains to valve after output is turned off.

Exception Disposition :

Exception Status :

Discovered output forced on.

Exception Closed By : Lane

Date : 9/2/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

Date: 2-21-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 342

ATP_YN : N

Test : 13021A.86-31

Step : 91

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: Leist

Exception Description :

Drum tipper makes loud squealing noise when lowering.

Exception Disposition :

Change request or ?

Exception Status :

Lubricated - improved, but not eliminated.

See TE#144. 10-2-97

Closed per direction of WMH senior management
DOE to be formally notified upon failure. Internal notice previously
given.

Exception Closed By :

Le R W

Date : 10-2-97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

Le R W

Date: 10-2-97

Additional Approval:
(Only as needed)

N/A

Date: _____

FDNW Representative:

N/A

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 343

ATP_YN : N SW
Test : 13021A-86.9
Step : 39 Equipment Tag #: CR-07-301A

Exception :

Revision :

Date:

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

Responsible Company: WMH
Responsible Subcontractor :
Responsible Individual: Lane

Exception Description :

Hoist/trolley CR-07-301A will time out after E-stop initiated and will not complete auto sequence.

Exception Disposition :

Exception Status :

9-26-97 - Duplicate of #233. Closed.

Exception Closed By : Lane *miss R*

Date : 9/26/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

Date: 2-21-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 344

ATP_YN : N

Test : 13021A-86.10/46

Step : 6, 6 Equipment Tag #: GB-301, 302

Exception :

Revision :

Date:

Specification Section : 13021

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

Due to hardware modifications that will be made to transfer assembly DH-07-302, the 1000# drum test will be performed at a later date, after implementation of modifications to transfer assembly.

Exception Disposition :

Exception Status :

Perform retest after modifications.

tested @ 1250th

Exception Closed By :

[Signature]

Date : 2-19-98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

[Signature]

Date: _____

WMH Representative:

Date: 2-19-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

[Signature]

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

Exception Description :

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

Exception Disposition :

Investigate alternative parts (blade).

Exception Status :

^{7/11/98} Cut direction changed to North-South to prevent binding. New saw blades ordered to which are tougher. Test rig successfully once arrived 2/21/98. New saw arrangement tested with old blades and seems to work well.

Exception Closed By :

Kendall Shaw

Date : 2/21/98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

[Signature]

Date: 2-21-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

[Signature]

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 346

ATP_YN : N

Test : 13021A-86.32

Step : 148 Equipment Tag #: SP-07-314

Exception :

Revision :

Date:

Specification Section : 13021

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Warmenhoven

Exception Description :

GB302 hand held crimper assembly:
1) C-clips do not fit correctly.
2) Needs swivel fittings on hose.
3) C-clips fall out while moving device to make crimps.
4) Does not provide a good consistent crimp.
Also similar problems on SP-07-314.

Exception Disposition :

Exception Status :

Need parts.
WP-97-507 Item #57.

Exception Closed By: AW

Date: 11/26/97

APPROVAL OF RESOLUTION

Contractor Representative: W A

Date: _____

WMH Representative: John R. Ward

Date: 2-21-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative: W A

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 348

ATP_YN : N

Exception :

Test : 13021A-86.47

Revision :

Step : See below

Equipment Tag #: CR-07-301C

Date:

Specification Section : 13021

Test Witness/Author : Wvarmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

Step - 6, 7, 48-51, 69, 70, 111-114, 132, 153, 154, 166, 187, 188

Activation of E-stop HS-017-302A, B, C, D and 305 does not stop or prevent trolley movement.

Exception Disposition :

Exception Status :

Retest

~~Test~~ ²⁻²¹⁻⁹⁸ HS-302A, -302B, -302C, -302D, and HS-305 Confirmed
to stop initiation, sequence in progress for hoist 301C, including
raise, lower, forward, reverse, etc.

Exception Closed By :

michael pje

Date : 2-21-98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

Date: 2-22-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 349

ATP_YN : N

Test : 13021A-86.47

Step : See Below Equipment Tag #: CR-07-301B

Exception :

Revision :

Date:

Specification Section : 13021

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

Step - 6, 7, 40-43, 69, 70, 103-106, 132, 149, 150, 166, 183, 184

Activation of E-stop HS-07-302 A, B, C, D and 305 does not stop or prevent trolley movement.

Exception Disposition :

Exception Status :

Retest. Retested switches in exception description HS-302A, -302B, -302C, -302D, and HS-305 prevent and stop hoist movement. Closed.

Exception Closed By : Michael P. J. [Signature]

Date : 2-21-98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

Date: 2-22-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 350

ATP_YN : N

Test : 13021A-86.47

Step : See Below Equipment Tag #: DO-07-305

Exception :

Revision :

Date:

Specification Section : 13021

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

Step - 6, 7, 32-35, 69, 70, 95-98, 132, 166
Activation of E-stop HS-07-302 A, B, C, D has no affect on BTP DO-07-305.

Exception Disposition :

Exception Status :

Retest. They do now. HS-302A, -302B, -302C, and -302D confirmed to
stop sequences from starting and sequences in progress. Closed.

Exception Closed By : m. dot Pore

Date : 2-27-98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

WMH Representative:

Additional Approval:
(Only as needed)

FDNW Representative:

Date: _____

Date: 2-27-98

Date: _____

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 351

ATP_YN : N

Test : 13021A-86.32

Step : 36 Equipment Tag #: RT-301

Exception :

Revision :

Date :

Specification Section : 13021

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

Clamp band fell off drum rolling rig during second cut. Direction of saw rotation cause.

Exception Disposition :

Exception Status :

2/21/98 North-South cut rotation and tippy clamp bands keep resolves
problem of getting 2nd clamp band and potential damage incurred on
the saw (i.e. RT-301 cant move, so blade won't bind; 1st clamp band can be gripped
after falling off)

Exception Closed By :

Kochel J. Hunt

Date : 2/21/98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

WMH Representative:

Additional Approval:
(Only as needed)

FDNW Representative:

Date: _____

Date: 2-21-98

Date: _____

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 352

ATP_YN : N

Test : 13201A-86.32

Step : 172 Equipment Tag #: GB-307

Exception :

Revision :

Date:

Specification Section : 13021

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

The compactor is not communicating to the PCS in remote mode. Compactor does tel PCS that it is ready, but the final permission to crush is not received by the compactor.

Exception Disposition :

Exception Status :

Leist/Lane to resolve. Use drum compactor Control panel to crush drums.
Closed. 2-21-98 Verified EDC "Transfer Car Inposition" switch
I:15/60 activated by transfer car: Closed

Exception Closed By :

Michael P. Lee

Date : 2-19-98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

LA R W

Date: _____

WMH Representative:

Date: 2-24-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

N/A

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 353

ATP_YN : N SW
Test : 13021A-86.32
Step : Equipment Tag #: OIU-12-104B

Exception :

Revision :

Date :

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

Responsible Company: WMH
Responsible Subcontractor :
Responsible Individual: Lane

Exception Description :

In maintenance mode, the bypass initialization and rehome LT 103B are right next to each other. They need to be spread apart.

Exception Disposition :

Exception Status :

Make OIU change and verify. 9-26-97 - For all lift table rehome buttons, delay timer set at 250 ms added. Closed.

Exception Closed By : Lane *Michael P. Lane*

Date : 9/26/97

APPROVAL OF RESOLUTION

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

WMH Representative: *[Signature]* Date: 1-22-98

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

FDNW Representative: *[Signature]* Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 354

ATP_YN : N

SW

Exception :

Test : 13021A-86.GI

Revision :

Step : Equipment Tag #: GB308/309

Date:

Specification Section : 13021

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

When the G/B's are switched to maintenance mode, the air turns off.

Exception Disposition :

Exception Status :

Make change and retest. 9-24-97 Retested. Histogram indicates air remains on even after switched to maintenance mode. Closed.

Exception Closed By : Lane

Date : 9/24/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

Date: 2-21-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 355

ATP_YN : N

Test : 13021A-86.33

Step : 46, 49 Equipment Tag #: DO-07-305

Exception :

Revision :

Date:

Specification Section : 13021

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

Lift table weight falls below lift table weight setpoint after port DO-07-305 is opened.

Exception Disposition :

Exception Status :

OK According to Ken Leist

Exception Closed By : ~~Lane~~ *Ryland* 2/19/99

Date : 9/5/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

WMH Representative:

Additional Approval:
(Only as needed)

FDNW Representative:

Date: _____

Date: 2-21-98

Date: _____

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 356

ATP_YN : N

Test : 13021A-86.64

Step : See Below Equipment Tag #: 107-CR-07-301F

Exception :

Revision :

Date :

Specification Section : 13021

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

Step - 6, 9, 10, 11, 12, 20, 23, 24, 25, 26

Activation of E-stop HS-07-305 does not disable hoist/trolley CR-07-301F

Exception Disposition :

Exception Status :

Retest.

Retested satisfactory. Closed.

Exception Closed By :

Michael Pone

Date : 2-21-98

APPROVAL OF RESOLUTION

Contractor Representative: _____
(Only as needed)

Date: _____

WMH Representative: _____

Date: 2-22-98

Additional Approval: _____
(Only as needed)

Date: _____

FDNW Representative: _____

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 357

ATP_YN : N SW
Test : 13021A-86.67
Step : 8 Equipment Tag #: DO-07-308

Exception :

Revision :

Date:

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

Responsible Company: WMH
Responsible Subcontractor :
Responsible Individual: Lane

Exception Description :

Lift table weight falls below lift table weight setpoint after port DO-07-308 is opened.

Exception Disposition :

Exception Status :

2/21/98 This is normal as Port seals relax.

Exception Closed By : ~~Lane~~ *Kjhen* 2/21/98

Date : 2/21/98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

Date: 2-21-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 358

ATP_YN : N

Test : 13021A-86.77

Step : See Below Equipment Tag #: CR-07-301D

Exception :

Revision :

Date:

Specification Section : 13021

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

Step - 6, 7, 20-27, 49, 50, 63-70, 92, 99-102, 116, 123-126

Activation of E-stop HS-07-308, 309, and 305 has no affect on hoist CR-07-301D operation.

Exception Disposition :

Exception Status :

Retest. Duplicate. Retested Soti's Factory 2-21-98. closed.

Exception Closed By : Michael Pore

Date : 2-21-98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

Date: 2-22-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 359

ATP_YN : N SW
Test : 13021A-86.3
Step : General Equipment Tag #: DH-07-302

Exception :

Revision :

Date:

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

Responsible Company: WMH
Responsible Subcontractor :
Responsible Individual: Lane

Exception Description :

Drum transfer sequence messages need to be reviewed and revised to reflect sequence of operation.

Exception Disposition :

Exception Status :

9-16-97 - Duplicate of 241. Closed.

Exception Closed By : Lane Michael Paine

Date : 9/16/97

2-19-98

APPROVAL OF RESOLUTION

Contractor Representative: Date: _____

WMH Representative: _____ Date: 2-21-98

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

FDNW Representative: Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 360

ATP_YN : N

SW

Test : 13021A-86.2

Step : 30, 31

Equipment Tag #: 107-DO-07-301

Exception :

Revision :

Date:

Specification Section : 13021

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

Extend lid detach and retract lid detach function buttons on maint menu do not have correct behavior.

Exception Disposition :

Exception Status :

Exception Closed By :

Lane

Michael P. Lane

Date : 9/5/97

2-19-98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

W. R. W. D.

Date: _____

WMH Representative:

Date: 2-21-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

W. R. W. D.

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 361

ATP_YN : N

Exception :

Test : 13021A-86.6

Revision :

Step : 72

Equipment Tag #: PS395A/B

Date:

Specification Section : 13021

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

Drum transfer assembly upper and lower grab arm pressure switch PS395A/B bleed off over time after grab arms are closed. This results in alarm and sequence failed.

Exception Disposition :

Exception Status :

Design review.

4/17/98. Problem appears to be in sequence valve or manifold pilot check valve.
4/21/98 Ports have been opened. This needs to be resolved before hot operations.

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 #: 362

ATP_YN : Y

Test : 13031A-85

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

Exception :

Revision :

Date :

Specification Section : 13031

Test Witness/Author : Vvarmenhoven

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 :

Not a test exception per se. This is a rated activity, currently in progress, that can be completed after startup. Closed.

Exception Closed By : Michael Price

Date : 2-19-98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

Date: 2-22-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 376

ATP_YN : Y

Test : 13021A.86

Step : Equipment Tag #: LT-09-203C

Exception :

Revision :

Date :

Specification Section : 13021

Test Witness/Author : Warmenhoven

Test Operator :

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Jordal/Lane

Exception Description :

Lift table moves without operator input. With drum against port, lift table lowers and "rehomes." This problem twice acted, EXTREMELY SERIOUS MALFUNCTION.

Exception Disposition :

Exception Status :

Duplicate.

Exception Closed By : ~~Lane~~

Date : 9/5/97

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 #: 377

ATP_YN : N

Test : 13021A.86

Step : Equipment Tag #: EM-301

Exception :

Revision :

Date:

Specification Section : 13021

Test Witness/Author : Leist

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

Manipulator hose/cable management

- 1) binds and
- 2) interferes with other equipment. System needs to be like in RWM.

Exception Disposition :

Exception Status :

WVP-97-507 Item #59.

*Hose/CABLE Management redone. Still too long and kits tipped.
Will replace plastic track with hose*

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 #: 378

ATP_YN : N

Test : 13021.86

Step : Equipment Tag #: EM-301

Exception :

Revision :

Date:

Specification Section : 13021

Test Witness/Author : Leist

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

Right manipulator jaw open/close miswired. Open rig closes, close rig opens.

Exception Disposition :

Exception Status :

WP-97-507 Item #60.

2/17/98. Hoses switched and function normally. Incremental controls still does not work correctly although operational.

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 #: 379

ATP_YN : Y

Test : 13021A.86

Step : Equipment Tag #: CR-07-301A

Exception :

Revision :

Date :

Specification Section : 13021

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist/Lane

Exception Description :

Hoist trolley does not move to entry position during entry sequence. Apparently, trolley only "sees" entry position sensors.

Exception Disposition :

Options:

1. Change flags around and retry.
2. Hold time delay based on sensing 802B and not 802A for given period before PCS "thinks" trolley is at entry.

Exception Status :

Time delay added and retested satisfactory.

Exception Closed By : Lane *Michael P. Lee*

Date : 9/5/97

2-79-98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

WMH Representative:

Additional Approval:
(Only as needed)

FDNW Representative:

Date: _____

Date: *2-21-98*

Date: _____

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 380

ATP_YN: Y /

Test : 13020A.86

Step : Equipment Tag #: DO-07-302

Exception :

Revision :

Date:

Specification Section : 00000

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

Seal leaks

Exception Disposition :

Exception Status :

Fixed.

Exception Closed By : Warmenhoven

Date : 9/5/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

Date: 2-21-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 381

ATP_YN : Y

Test : 13021A.86

Step : Equipment Tag #: OIU-12-104A

Exception :

Revision :

Date:

Specification Section : 13021

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

Drum port menu "inner drum ID verified" does not illuminate after key press.

Exception Disposition :

Fix and retest.

Exception Status :

Reprogram.

Reprogrammed. Retested satisfactory. Closed.

Exception Closed By :

Michael Price

Date : 2-19-98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

Date: 2-21-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

1/P

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 382

ATP_YN : Y

Exception :

Test : 13021A.86

Revision :

Step : Equipment Tag #: OIU-12-104A

Date:

Specification Section : 13021

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

For drum pickup, message could reflect whether clean or contaminated pickup was requested.

Exception Disposition :

Add messages and retest.

Exception Status :

Retest.

"CLEAN / CONTAMINATED DRUM PICKUP IN PROGRESS..." displayed
depending on button pressed, closed.

Exception Closed By :

Michael Pina

Date : 2-21-98

APPROVAL OF RESOLUTION

Contractor Representative:

(Only as needed)

Date: _____

WMH Representative:

Date: 2-23-98

Additional Approval:

(Only as needed)

Date: _____

FDNW Representative:

n/p

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 383

ATP_YN : Y

Test : 13021A.86

Step : Equipment Tag #: DH-07-301

Exception :

Revision :

Date:

Specification Section : 13021

Test Witness/Author : Leist

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

Drum lifter "closed" switch is only marginally activated. Lifter grips drum, but closed switch is not activated; "lifter failed to close" alarm is generated.

Exception Disposition :

Adjust switch, retest.

Exception Status :

Duplicate.

Exception Closed By : Leist

Date : 9/5/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

Date: 2-25-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: **384**

ATP_YN : Y

Test : 13021A.86.32

Step : 9 Equipment Tag #: DH-07-303

Exception :

Revision :

Date :

Specification Section : 13021

Test Witness/Author : Leist

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

Drum tipper, while lowering, hits drum, starts to compact drum. When drum arrives on transfer car, it is positioned too close to tipper.

Exception Disposition :

Exception Status :

Duplicate.

Exception Closed By : Leist

Date : 9/5/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

Date: 2-21-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 726

ATP_YN : Y

Test : 13021A.86

Step : Equipment Tag #: DO-07-301

Exception :

Revision :

Date:

Specification Section : 13021

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

10-2-97 Bag interferes with door closing. Must manually push bag and horsetail out of the way of closing door.

Exception Disposition :

10-2-97 - Modify ladder logic, OIU menu to allow operator to control door opening and closing.

Exception Status :

This is a duplicate of # 385. Generator now controls port door
open/close sequence during drum handover. Closed.
2-19-98.

Exception Closed By :

Michael P. Doe

Date : 2-19-98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

[Signature]

Date: 2-21-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

[Signature]

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 385

ATP_YN : Y

Test : 13021A.86.3

Step : D-79 Equipment Tag #: DO-07-307

Exception :

Revision :

Date:

Specification Section : 13021

Test Witness/Author : Leist

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Schaeffer

Exception Description :

Drum in bag. When port door closes, bag and horsetail hit door, slide up, and are caught in door.

Exception Disposition :

Exception Status :

Add caution to OPS procedure.

2-19-98- Control sequence modified to allow operator to open/close port door as needed. Retested informally during training. Closed.

Exception Closed By :

Michael P. Lee

Date : 2-19-98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

[Signature]

Date: _____

WMH Representative:

[Signature]

Date: 2-21-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

[Signature]

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 386

ATP_YN : N

Test : 13021

Step : Equipment Tag #: GB-07-301

Exception :

Revision :

Date:

Specification Section : 13021

Test Witness/Author : Leist

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

1000 lb. drum not run through sequence. Drum transfer device must be OK'd for service. (Fix bolting method.)

Exception Disposition :

Exception Status :

Duplicate.

Exception Closed By : Leist

Date : 9/5/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

Date: 2-21-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 387

ATP_YN : Y

Test : 13021A.86

Step : Equipment Tag #: EM-07-301

Exception :

Revision :

Date :

Specification Section : 13021

Test Witness/Author : Leist

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

When tipper lowering, cables get in the way, are caught by tipper arms.

Exception Disposition :

Exception Status :

See TE#377. Duplicate

Exception Closed By : Warmenhoven

Date : 9/19/97

APPROVAL OF RESOLUTION

Contractor Representative:

(Only as needed)

Date: _____

WMH Representative:

Date: 2-21-98

Additional Approval:

(Only as needed)

Date: _____

FDNW Representative:

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 388

ATP_YN : N

Test : 13021-32

Step : 74 Equipment Tag #: DH-302

Exception :

Revision :

Date:

Specification Section : 13021

Test Witness/Author : Leist

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Warmenhoven

Exception Description :

Waste falling to floor when dumping.

Exception Disposition :

Exception Status :

Need design.

WP-97-507 Item #61.

Waste deflector gates added to the Table.

Exception Closed By :

Randall Gray

Date : 2/21/98

APPROVAL OF RESOLUTION

Contractor Representative:

(Only as needed)

[Signature]

Date: _____

WMH Representative:

Date: 2-22-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

[Signature]

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 389

ATP_YN : N

Test : 13021-32

Step : 74) Equipment Tag #: DH-302

Exception :

Revision :

Date:

Specification Section : 13021

Test Witness/Author : Leist

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

Waste not dumping completely out of drum. Manipulator cannot reach into drum.

Exception Disposition :

Exception Status :

Duplicate.

Exception Closed By : Leist

Date : 9/5/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

Date: 2-21-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE
EXCEPTION LOG

Tracking #: 720

ATP_YN : Y

Test : 13031A.86

Step : N/A

Equipment Tag #: LT-07-203B

Exception :

Revision :

Date:

Specification Section : 13462

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Lane

Exception Description :

TRU LINE: Interlocks between lift table entry and exit sequences not explicitly tested.

Exception Disposition :

Test, implement as needed.

Exception Status :

Code visually examined, modified to prevent entry/exit sequences from starting when exit/entry sequences in progress. OKed.

Exception Closed By :

Michael P. Jee

Date : 2-19-98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

W R K

Date: _____

WMH Representative:

Date: 2-23-98

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 :

Not a test exception perse. If a fault or dangerous condition is noted, interlocks may be added via Development Control. closed.

Exception Closed By : M. Paul Price

Date : 2-19-98

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

Date: 2-21-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

Date: _____

WRAP ACCEPTANCE TEST PROCEDURE EXCEPTION LOG

Tracking #: 768

ATP_YN : Y

Test : 13021A-86

Step : 47-145,146 Equipment Tag #: DO-07-305

Exception :

Revision :

Date :

Specification Section : 13462

Test Witness/Author : Warmenhoven

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Warmenhoven

Exception Description :

11-25-97- RWM Loadout Bagless Transfer Port does not stop rotating after E-Stop is pressed. This appears to be due to air leak.

Exception Disposition :

11-25-97 Remove quick disconnects, check for air leaks, retest port.

Exception Status :

11-25-97 - Work complete, retested sat. Closed.

Exception Closed By : Warmenhoven

Date : 11/26/97

APPROVAL OF RESOLUTION

Contractor Representative:
(Only as needed)

Date: _____

WMH Representative:

Date: 2-24-98

Additional Approval:
(Only as needed)

Date: _____

FDNW Representative:

Date: _____

EXCEPTION LOG

Tracking #: 775

ATP_YN : Y

Test : 13021A-86

Step : 46A-10 Equipment Tag #: DH-07-303

Exception :

Revision :

Date:

Specification Section : 13462

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

2-24-97 - Drum is aligned too close to drum tipper when it comes out of drum transfer device. When drum tipper lowers, bevells move drum back, but drum hits switch.

Exception Disposition :

Move drum switch back. In future, consider realigning transfer device grab arms to move drum away from drum tipper.

Exception Status :

2-24-98 -- Move switch back. Parts ordered and received. Maintenance to install.

Exception Closed By :

Date :

APPROVAL OF RESOLUTION

Contractor Representative:

Date: _____

(Only as needed)

WMH Representative:

Date: _____

Additional Approval:

Date: _____

(Only as needed)

FDNW Representative:

Date: _____

EXCEPTION LOG

Tracking #: 776

ATP_YN : Y

Test : 13021A-86

Step : 46A-34, 36, 38 Equipment Tag #: DH-07-303

Exception :

Revision :

Date:

Specification Section : 13462

Test Witness/Author : Lane

Test Operator:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

2-24-97 - Also affects steps 60, 62, 64.

Drum slips when rotated. Apparently 475 psi is not sufficient to firmly grasp a 1000 pound drum.

Exception Disposition :

Ken Leist to evaluate and resolve.

Exception Status :

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: _____

EXCEPTION LOG

Tracking #: 777

ATP_YN : Y

Test : 13021A-86

Step : 46A-34, 36, 38 Equipment Tag #: DH-07-303

Specification Section : 13462

Test Witness/Author : Lane

Test Operator:

Exception :

Revision :

Date:

Responsible Company: WMH

Responsible Subcontractor :

Responsible Individual: Leist

Exception Description :

2-24-97 - HPU Pressure gauges are not labeled.

Exception Disposition :

Label all HPU gauges.

Exception Status :

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 MODULE 1

TRU PROCESS GLOVEBOXES

ACCEPTANCE TEST PROCEDURE

13021A-86

TRU GLOVEBOX ACCEPTANCE TEST PROCEDURE 13021A-86

HNF-SD-W026-ATR-034 Rev. 0

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TEST PROCEDURE 13021A-86 SETUP

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TEST CASE 13021A-86.03	FULL AUTOMATIC CYCLE - DRUM ENTRY
TEST CASE 13021A-86.04	TRU ENTRY/EXIT PORT 301 LIFT TABLE 202B INTERLOCKS & ALARMS
TEST CASE 13021A-86.05	MATE DRUM TO TRU ENTRY/EXIT PORT 301 - INTERLOCKS/ALARMS
TEST CASE 13021A-86.06	MOVE DRUM TO SPHINCTER ENTRY PORT - INTERLOCKS/ALARMS
TEST CASE 13021A-86.07	REMOVE 322 LITER (85 GALLON) DRUM FROM ENTRY/EXIT PORT 301 - ALARMS & INTERLOCKS
TEST CASE 13021A-86.08	DELIVER DRUM TO TRANSFER CAR THROUGH SPHINCTER PORT; ALARMS & INTERLOCKS
TEST CASE 13021A-86.09	TRU ENTRY GLOVEBOX 301 EMERGENCY STOP OPERATION
TEST CASE 13021A-86.10	DRUM PROCESSING

Sorting Glovebox

TEST CASE 13021A-86.30	SORTING GLOVEBOX INITIALIZATION CONDITIONS
TEST CASE 13021A-86.31	TRU SORTING GLOVEBOX (GB-07-302) MAINTENANCE MENU FUNCTIONS
TEST CASE 13021A-86.32	FULL AUTOMATIC CYCLE - PROCESS 140 LB DRUM
TEST CASE 13021A-86.33	LIFT TABLE OPERATION AND INTERLOCKS; MATE DRUM TO BAGLESS TRANSFER PORT
TEST CASE 13021A-86.34	TRANSFER CAR OPERATION AND INTERLOCKS
TEST CASE 13021A-86.35	DRUM TIPPER "LOWER AND CLOSE GRAB" OPERATION AND INTERLOCKS
TEST CASE 13021A-86.36	LID/DELID FIXTURE OPERATION & INTERLOCKS
TEST CASE 13021A-86.37	LID/DELID FIXTURE OPERATION AND INTERLOCKS (ROTATION)
TEST CASE 13021A-86.38	LID/DELID FIXTURE OPERATION AND INTERLOCKS (SAW SEQUENCE)
TEST CASE 13021A-86.39	DRUM TIPPER "RAISED WITH GRAB CLOSED" OPERATION AND INTERLOCKS
TEST CASE 13021A-86.40	DRUM TIPPER "LOWER WITH GRAB CLOSED" OPERATION AND INTERLOCKS
TEST CASE 13021A-86.41	DRUM TIPPER "OPEN GRAB AND PARK" OPERATION AND INTERLOCKS
TEST CASE 13021A-86.42	LID/DELID FIXTURE CRIMP HEAD ALARMS AND INTERLOCKS

TRU GLOVEBOX ACCEPTANCE TEST PROCEDURE 13021A-86
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TEST CASE 13021A-86.43 TRANSFER CAR ALARMS
TEST CASE 13021A-86.44 SORTING TABLE ALARMS
TEST CASE 13021A-86.45 PACKET DOOR ALARMS
TEST CASE 13021A-86.46 DRUM PROCESSING
TEST CASE 13021A-86.47 - TRU SORTING GLOVEBOX 302 EMERGENCY STOP OPERATION

Empty Drum Loadout Glovebox 306

TEST CASE 13021A-86.64 TRU EMPTY DRUM LOADOUT GLOVEBOX 306 EMERGENCY STOP OPERATION
TEST CASE 13021A-86.65 DRUM PROCESSING
TEST CASE 13021A-86.66 TRU EMPTY DRUM LOADOUT GLOVEBOX MAINTENANCE MENU FUNCTIONS
TEST CASE 13021A-86.67 OPERATION CHECK - PROCESS ONE COMPACTED DRUM
TEST CASE 13021A-86.68 LIFT TABLE AND BAGLESS TRANSFER PORT OPERATION; ALARMS & INTERLOCKS
TEST CASE 13021A-86.69 MATE D&S DRUM NO. 1 TO BAGLESS TRANSFER PORT
TEST CASE 13021A-86.70 TRANSFER COMPACTED DRUMS TO D&S DRUMS; ALARMS
TEST CASE 13021A-86.71 REMOVE D&S DRUM NO. 1 FROM BAGLESS TRANSFER PORT; ALARMS & INTERLOCKS
TEST CASE 13021A-86.72 MATE D&S DRUM NO. 2 TO BAGLESS TRANSFER PORT

Waste Loadout Glovebox 308

TEST CASE 13021A-86.73 TRU WASTE LOADOUT GLOVEBOX (308) MAINTENANCE MENU FUNCTIONS
TEST CASE 13021A-86.74 AUTOMATIC CYCLE - PROCESS ONE TRIP DRUM
TEST CASE 13021A-86.75 WASTE LOADOUT PORT INTERLOCKS / ALARMS
TEST CASE 13021A-86.76 PROCESS ONE TRIP DRUMS
TEST CASE 13021A-86.77 TRU WASTE LOADOUT GLOVEBOXES 308 & 309 EMERGENCY STOP OPERATION
GENERIC INSTRUCTIONS WASTE LOADOUT GLOVEBOX (308) DRUM PROCESSING

Waste Loadout Glovebox 309

TEST CASE 13021A-87.80 TRU WASTE LOADOUT GLOVEBOX (309) MAINTENANCE MENU FUNCTIONS
TEST CASE 13021A-86.81 AUTOMATIC CYCLE - PROCESS ONE TRIP DRUM
TEST CASE 13021A-87.83 WASTE LOADOUT PORT INTERLOCKS / ALARMS
TEST CASE 13021A-86.84 PROCESS ONE TRIP DRUMS

TRU GLOVEBOX ACCEPTANCE TEST PROCEDURE 13021A-86
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GENERIC INSTRUCTIONS WASTE LOADOUT GLOVEBOX (309) DRUM PROCESSING

APPENDIX A - EQUIPMENT CHECKOUT DATA SHEETS

TRU GLOVEBOX ACCEPTANCE TEST PROCEDURE 13021A-86
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ITEMS TESTED

TRU Entry Glovebox	
TRU Entry Glovebox	107-GB-07-301
Operator Interface Unit	107-OIU-12-104A
TRU Glovebox Entry/Exit Port (85 gallon (322 Liter))	107-DO-07-301
TRU Glovebox Monorail Hoist	107-CR-07-301A
TRU Glovebox Drum Lifter	107-DH-07-301
TRU Glovebox Drum Entry Transfer Assembly	107-DH-07-302
TRU Glovebox Sphincter Entry Port	107-DO-07-302
TRU Trolley/Hoist/Lifter Pendant	107-PC-07-006
TRU Sorting Glovebox	
TRU Sorting Glovebox	107-GB-07-302
Operator Interface Unit	107-OIU-12-104B
TRU Sorting Glovebox Sort Table	107-ST-07-302
TRU Sorting Glovebox Drum Tipper	107-DH-07-303
TRU Sorting Glovebox Packet Tray Door	107-DO-07-303
TRU Sorting Glovebox Drum Lid/Delid Fixture	107-RT-07-301
TRU Sorting Glovebox RWM Bagless Transfer Port	107-DO-07-305
TRU Sorting Glovebox Drum Transfer Car	107-TC-07-301
TRU Sorting Glovebox Monorail Hoist	107-CR-07-301B
TRU Sorting Glovebox RWM Monorail Hoist	107-CR-07-301C
TRU Sorting Glovebox Packet X-Ray Machine	107-ND-07-301
TRU Sorting Glovebox Packet Assay Monitor	107-ND-07-302
TRU Sorting Glovebox Packet Tray	107-ND-07-301A, B
TRU Sorting Glovebox Shield Door	107-DO-07-303
TRU Sorting Glovebox Consumable Entry Port	107-DO-07-307
TRU Sorting Glovebox Waste Manipulator	107-EM-07-301
TRU Sorting Glovebox Hydraulic Power Unit/Controller	107-HU-07-301
TRU Sorting Glovebox Manipulator Hydraulic Power Unit/Controller	107-HU-07-302
TRU Sorting Glovebox Trolley/Hoist/Lifter Pendant	107-PC-07-007
TRU Sorting Glovebox RWM Trolley/Hoist/Lifter Pendants	107-PC-07-008A, B
Portable Hand Held Scanner / Terminal	107-NT-12-300

TRU GLOVEBOX ACCEPTANCE TEST PROCEDURE 13021A-86**HNF-SD-W026-ATR-034 Rev. 0****TRU Compacted Empty Drum Loadout Glovebox**

TRU Compacted Drum Loadout Glovebox	107-GB-07-306
Operator Interface Unit	107-OIU-12-104C
TRU Compacted Drum Loadout Glovebox Bagless Transfer Port	107-DO-07-308
TRU Compacted Drum Loadout Glovebox Monorail Hoist	107-CR-07-301F
TRU Compacted Drum Loadout Glovebox Drum Lifter	107-DH-07-305
TRU Compacted Drum Loadout Glovebox Trolley/Hoist/Lifter Pendants	107-PC-07-011A, B
Portable Hand Held Scanner / Terminal	107-NT-12-300

TRU Waste Loadout Glovebox #1

TRU Waste Loadout Glovebox	107-GB-07-308
Operator Interface Unit	107-OIU-12-104D
TRU Waste Loadout Glovebox Exit Port	107-DO-07-309
TRU Waste Loadout Glovebox Waste Chute	107-XX-07-302
TRU Waste Loadout Glovebox Lift Table	107-LT-09-202D

TRU Waste Loadout Glovebox #2

TRU Waste Loadout Glovebox	107-GB-07-309
Operator Interface Unit	107-OIU-12-104D
TRU Waste Loadout Glovebox One Trip Drum Port	107-DO-07-310
TRU Waste Loadout Glovebox One Trip Drum Port Waste Chute	107-XX-07-303
TRU Waste Loadout Glovebox Lift Table	107-LT-09-202E
TRU Waste Loadout Sample Transfer Port	107-DO-07-304

TRU GLOVEBOX ACCEPTANCE TEST PROCEDURE 13021A-86
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REFERENCES

Systems Interface Inc. LCU CNR-12-103 "I/O AND TERMINAL DESIGNATION LIST"
Specification Section 13462 Attachment 10

TRU Entry Glovebox

Specification Section 13021 paragraph 2.06 D.4.b
Drawing H-2-131922 "WRAP MODULE I MECHANICAL FLOW DIAGRAM, TRU PROCESS ENTRY ENCLOSURE", Sheet 1
Drawing H-2-131936 "WRAP MODULE I TRU GLOVEBOX - SECTIONS INTERNAL ARRANGEMENT", Sheets 5 and 6
Drawing H-2-132055 "WRAP MODULE I GLOVEBOX TRU GLOVEBOX PNEUMATIC SCHEMATIC DIAGRAM", Sheet 1
Drawing H-2-132055 "WRAP MODULE I GLOVEBOX TRU GLOVEBOX ELEC. EQUIP. WIRING DIAGRAM", Sheets 1-3

TRU Sorting Glovebox

Specification Section 13021 paragraph 2.06 D.4.c
Drawing H-2-131834 "ELECTRICAL SCHEMATICS", Sheet 15
Drawing H-2-131853 "WRAP MODULE I MECHANICAL FLOW DIAGRAM, INTERNAL TRANSPORT WASTE PROCESS", Sheet 4
Drawing H-2-131922 "WRAP MODULE I MECHANICAL FLOW DIAGRAM, TRU PROCESS SORTING ENCLOSURE", Sheets 4 and 5
Drawing H-2-132061 "WRAP MODULE I GLOVEBOX TRU SORT GLOVEBOX ELEC. EQUIP. WIRING DIAGRAM", Sheets 1-3
Drawing H-2-132082 "WRAP MODULE I TRU SORTING GLOVEBOX - INTERNAL/EXTERNAL ARRANGEMENTS", Sheets 1-7

TRU Empty Drum Loadout Glovebox

Specification Section 13021 paragraph 2.06 D.4.d
Drawing H-2-131922 "WRAP MODULE I MECHANICAL FLOW DIAGRAM, TRU COMPACTED EMPTY DRUM LOADOUT ENCLOSURE", Sheet 2
Drawing H-2-132090 "WRAP MODULE I TRU COMPACTED EMPTY DRUM LOADOUT - ARRANGEMENT", Sheets 1-3
Drawing H-2-132055 "WRAP MODULE I GLOVEBOX TRU COMPACTED DRUM LOADOUT ENCLOSURE ELEC. EQUIP. WIRING DIAGRAM", Sh. 1

TRU Waste Loadout Gloveboxes

Specification Section 13021, paragraph 2.06 D.4.e
Drawing H-2-131922 "WRAP MODULE I MECHANICAL FLOW DIAGRAM TRU WASTE LOADOUT ENCLOSURES", Sheet 6
Drawing H-2-132036 "WRAP MODULE I ONE TRIP DRUM PORT ASSEMBLY 107-DO-07-310", Sheet 3
Drawing H-2-132055 "WRAP MODULE I GLOVEBOX 107-GB-07-308&309 TRU WASTE LOADOUT GLOVEBOX PNEUMATIC SCHEMATIC DIAGRAM", Sheet 4

TRU GLOVEBOX ACCEPTANCE TEST PROCEDURE 13021A-86
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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 1 test procedures are draft test procedures. Revision 1 test procedures must be thoroughly reviewed and carefully walked through prior to beginning testing.
6. All TRU Glovebox functional tests must be successfully performed, without outstanding exceptions, prior to beginning this acceptance test procedure.
7. A "SETUP" section is provided at the beginning of this test procedure. The "SETUP" steps must be completed prior to running any test case steps.
8. The test cases within a glovebox test section are normally run in the order that they are listed. Any deviations from this convention, are noted in the procedure. Individual glovebox segments may be tested separately or together at the discretion of the Test Director.
9. Since lift table interlocks do not function in "Maintenance Mode", verify, prior to initiating an operation in "Maintenance Mode", that no obstacles are present and the port and drum are configured properly so that lift table movement will not be impeded or cause damage to the port, lift table and/or drum.
10. Ensure that the appropriate Hanford Lockout Tagout Procedure is followed, if required.
11. Follow Hanford General Safety Rules as applicable.

TEST PROCEDURE 13021A-86 SETUP	2
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Consumable Supplies Used to Support Testing	3
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Initial Equipment Conditions To Support Testing.....	11

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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TEST PROCEDURE 13021A-86 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>7/18/97</u></p>	Verify signature is present.	✓		<i>P/W</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>2/13/92</u></p>	Verify signature is present.	✓		<i>P/W</i>
3.	<p>Visually inspect the TRU Glovebox Line area. Confirm that the TRU 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>	Verify that the LLW Glovebox Line has been prepared for operation and testing.	✓		<i>P/W</i>

1. Note: work ongoing A. Liddo/Deliddo 6A302 B. Installation of Hand Held crimper in 6A302 C. Install sphincter seal in 6A301

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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4.	Confirm that all Lift Tables used to support the LLW Glovebox Line, including Lift Tables LT-09-202B, LT-09-203B, LT-09-203C, LT-09-202D and LT-09-202E are prepared for operation. Lift table limit switches should be properly adjusted and operation should be verified prior to acceptance testing.	Verify that the LLW Glovebox Line Lift Tables are configured for safe operation prior to testing.	✓		<i>AW</i>
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Consumable Supplies Used to Support Testing

5.	Prepare one empty 320 liter (85 gallon) overpack drum with lid per DOT/49 CFR part 173.3.	Verify that an empty overpack drum is available for testing.	✓		<i>AW</i>
6.	Prepare 10 empty 208 liter (55 gallon) drums with lids and bandclamps per DOT/17C.	Verify that 10 empty 55 gallon drums are available for testing.	✓		<i>AW</i>
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.</p>	Verify that one (1) 140 pound 55 gallon drum is available to support testing.	✓		<i>AW</i>
8.	<p>Prepare one weighted DOT 17C 208 liter (55 gallon) drum.</p> <p>The drum should weigh 454 kilograms (1000 pounds), and should be enclosed in a PVC bag liner. The drum should be filled with simulated waste packets.</p>	Verify that one (1) 1000 pound 55 gallon drum is available to support testing.	✓		<i>AW</i>

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
9.	Prepare a sample tube filled with water labeled "NON-COMPLIANT PACKET (TESTING PURPOSES ONLY-TAP WATER)".	Verify that a barcoded "NON-COMPLIANT PACKET" sample tube filled with water is placed on the transfer stand.	✓		R/V
10.	Prepare an empty, capped sample tube labeled "SAMPLE". Place the "SAMPLE" inside the LLW Sorting Glovebox.	Verify that an empty, capped, sample tube is placed inside the TRU Sorting Glovebox.	✓		R/V
11.	Provide one sample canister to be used with the sample transfer port. 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.	✓		R/V
12.	Provide twelve (12) packages of C-Clips (6 C-Clips per package assumed) to load into the crimper magazine when a drum lid is crimped.	Verify that C-Clips, are available to support testing.	✓		R/V
Instrument Air System Settings Used to Support Testing					
13.	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.	✓		R/V
Electrical Power System Settings Used to Support Testing					
14.	Motor Control Center MCC-07-101 should be energized	Verify that Motor Control Center MCC-07-101 is energized.	✓		R/V
15.	Motor Control Center MCC-09-101 should be energized	Verify that Motor Control Center MCC-09-101 is energized.	✓		R/V
16.	Motor Control Center MCC-09-102 should be energized	Verify that Motor Control Center MCC-09-102 is energized.	✓		R/V

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)																				
17.	<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><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>Empty Drum Compactor HPU</td><td>HU-07-304</td></tr><tr><td>Waste Loadout Chute</td><td>XX-07-302</td></tr><tr><td>Waste Loadout Chute</td><td>XX-07-303</td></tr><tr><td>Sorting Drum Tipper</td><td>DH-07-303</td></tr><tr><td>Entry Transfer Hoist</td><td>DH-07-302/M1</td></tr><tr><td>Entry Transfer Hoist</td><td>DH-07-302/M2</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	Empty Drum Compactor HPU	HU-07-304	Waste Loadout Chute	XX-07-302	Waste Loadout Chute	XX-07-303	Sorting Drum Tipper	DH-07-303	Entry Transfer Hoist	DH-07-302/M1	Entry Transfer Hoist	DH-07-302/M2	Power Panel PP-07-101	PP-07-101	Power Panel PP-07-102	PP-07-102	Verify that the breakers listed are closed.	✓		RW
<u>Breaker Label</u>	<u>Tag Number</u>																								
Manipulator HPU	HU-07-302																								
Empty Drum Compactor HPU	HU-07-304																								
Waste Loadout Chute	XX-07-302																								
Waste Loadout Chute	XX-07-303																								
Sorting Drum Tipper	DH-07-303																								
Entry Transfer Hoist	DH-07-302/M1																								
Entry Transfer Hoist	DH-07-302/M2																								
Power Panel PP-07-101	PP-07-101																								
Power Panel PP-07-102	PP-07-102																								
18.	<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><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.	✓		RW																
<u>Breaker Label</u>	<u>Tag Number</u>																								
Power Panel PP-09-102	PP-09-102																								
19.	<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><tr><td><u>Breaker Label</u></td><td><u>Tag Number</u></td></tr><tr><td>Entry Lift Table Conveyor Motor</td><td>LT-09-202B</td></tr></table>	<u>Breaker Label</u>	<u>Tag Number</u>	Entry Lift Table Conveyor Motor	LT-09-202B	Verify that the breakers listed are closed.	✓		RW																
<u>Breaker Label</u>	<u>Tag Number</u>																								
Entry Lift Table Conveyor Motor	LT-09-202B																								

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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	Sorting Lift Table Conveyor Motor LT-09-203B Empty Drum Lift Table Conveyor Motor LT-09-203C Waste Loadout Lift Table Conveyor Motor LT-09-202D Waste Loadout Lift Table Conveyor Motor LT-09-202E Power Panel PP-09-103 PP-09-103		✓		AK
20.	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. <u>Breaker Label</u> <u>Tag Number</u> Entry Trolley/Hoist CR-07-301A Sorting Trolley/Hoist CR-07-301B Sorting Trolley/Hoist CR-07-301C Waste Loadout Trolley/Hoist CR-07-301D Waste Loadout Trolley/Hoist CR-07-301E Compacted Drum Trolley/Hoist CR-07-301F	Verify that the breakers listed are closed.	✓		AK
21.	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. <u>Breaker Label</u> <u>Tag Number</u> Local Control Unit (LCU) 104-CNR-12-103	Verify that the breakers listed are closed.	✓		AK
22.	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. <u>Breaker Label</u> <u>Tag Number</u> Entry Glovebox External Power Various Items	Verify that the breakers listed are closed.	✓		AK

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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	Entry Glovebox Internal Power Various Items Sort. Glovebox External Power Various Items Sort. Glovebox Internal Power Various Items Compacted Drum Glovebox External Power Various Items Waste Loadout Glovebox Internal Power Various Items		✓		RF
23.	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. <u>Breaker Label</u> <u>Tag Number</u> Entry Lift Table Servo Motor LT-09-202B Sorting Lift Table Servo Motor LT-09-203B Empty Drum Lift Table Servo Motor LT-09-203C Waste Loadout Lift Table Servo Motor LT-09-202D Waste Loadout Lift Table Servo Motor LT-09-202E LLW DMS Pedestal TE-12-104	Verify that the breakers listed are closed.	✓		RF

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.

24.	The Fire Suppression System for the TRU Entry Glovebox (GB-07-301) should be disabled.	Verify that fire Suppression is disabled.	✓		R/W
25.	The Fire Suppression System for the TRU Sorting Glovebox (GB-07-302) should be disabled.	Verify that fire Suppression is disabled.	✓		R/W
26.	The Fire Suppression System for the TRU Empty Drum Loadout Glovebox (GB-07-306) should be disabled.	Verify that fire Suppression is disabled.	✓		R/W
27.	The Fire Suppression System for the TRU Compactor Glovebox (GB-07-307) should be disabled.	Verify that fire Suppression is disabled.	✓		R/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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28.	The Fire Suppression System for the TRU Waste Loadout Glovebox (GB-07-308) should be disabled.	Verify that fire Suppression is disabled.	✓		R/W
29.	The Fire Suppression System for the TRU Waste Loadout Glovebox (GB-07-309) should be disabled.	Verify that fire Suppression is disabled.	✓		R/W
Information Used to Support Testing					
30.	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.	Verify that timed event information is provided as appropriate.			N/X
	Please document each timer setting and attach the timer setting information to this test procedure.	print out will be	✓		R/W 4/10/99 R/W

attached at
completion
of TRU ATP

~~2-28-98~~ mfg
3-2-98

3-2-98 - step #30 No printout is provided. Instead a copy of LCU 103 code retained at the completion of testing. mfg.

3-3-98. There was not a requirement to provide this information. Interlocks and alarms tested were found satisfactory, except where noted by exception. Over time as process knowledge is gained, alarm timers will be adjusted to provide optimal function. Therefore step 30 is deleted. mfg.

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
31.	<p>Operation of several TRU 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 the 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 preformed for the alarm listed.</p>		✓		RW

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
32.	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.	✓		J/a
33.	A password is required to manually operate the TRU Empty Drum Loadout 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.	✓		P/H

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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Initial Equipment Conditions To Support Testing					
34.	Place all TRU Entry Glovebox 301 items in their parked positions including the following items:		Verify that all TRU Entry Glovebox items have been placed in their parked positions.		P/W 2/18/93
	<u>ITEM</u>	<u>Tag Number</u> <u>Parked Position</u>			
	Hoist/Trolley	CR-07-301A Trolley over Drum Transfer Port, Hoist raised and unloaded.			
	Lift Table	LT-09-202B Lift Table at AGV height, in " Normal " Mode.			
	Entry/Exit Port	DO-07-301 Rotated, lowered closed and locked, without vacuum. Drum Centering Device Retracted.			
	Drum Lifter	DH-07-301 Unloaded, raised, and open			
	Drum Transfer Port	DO-07-302 Closed, seal inflated.			

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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35.	Place all TRU Sorting Glovebox 302 items in their parked positions including the following items:	Verify that all TRU Sorting Glovebox items have been placed in their parked positions.																																			
	<table><tr><td><u>ITEM</u></td><td><u>Tag Number</u></td><td><u>Parked Position</u></td></tr><tr><td>Drum Transfer Car</td><td>TC-07-301</td><td>Drive disengaged, de-energized, at Entry Position.</td></tr><tr><td>Drum Tipper</td><td>DH-07-303</td><td>Raised, Grab Open and in vertical position.</td></tr><tr><td>Hoist/Trolley</td><td>CR-07-301B</td><td>Trolley at end nearest exit glovebox, Hoist raised.</td></tr><tr><td>RWM Loadout Hoist</td><td>CR-07-301C</td><td>Trolley at Tray Loading Position, Hoist raised and unloaded.</td></tr><tr><td>Manipulator</td><td>EM-07-301</td><td>Arms raised and parked, Manipulator at position #1 (nearest to sorting table).</td></tr><tr><td>Sorting Table</td><td>ST-07-301</td><td>Fully retracted, fully lowered horizontal position.</td></tr><tr><td>Lid/Delid Device</td><td>RT-07-301</td><td>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.</td></tr><tr><td>Bagless Transfer Port</td><td>DO-07-308</td><td>Closed and Locked, No drum present.</td></tr><tr><td>Sample Transfer Port</td><td>DO-07-104</td><td>Canister removed, door closed.</td></tr><tr><td>Lift Table</td><td>LT-09-203C</td><td>Lift Table at AGV height, in "Normal" mode.</td></tr></table>	<u>ITEM</u>	<u>Tag Number</u>	<u>Parked Position</u>	Drum Transfer Car	TC-07-301	Drive disengaged, de-energized, at Entry Position.	Drum Tipper	DH-07-303	Raised, Grab Open and in vertical position.	Hoist/Trolley	CR-07-301B	Trolley at end nearest exit glovebox, Hoist raised.	RWM Loadout Hoist	CR-07-301C	Trolley at Tray Loading Position, Hoist raised and unloaded.	Manipulator	EM-07-301	Arms raised and parked, Manipulator at position #1 (nearest to sorting table).	Sorting Table	ST-07-301	Fully retracted, fully lowered horizontal position.	Lid/Delid Device	RT-07-301	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-07-308	Closed and Locked, No drum present.	Sample Transfer Port	DO-07-104	Canister removed, door closed.	Lift Table	LT-09-203C	Lift Table at AGV height, in "Normal" mode.		✓	RH
<u>ITEM</u>	<u>Tag Number</u>	<u>Parked Position</u>																																			
Drum Transfer Car	TC-07-301	Drive disengaged, de-energized, at Entry Position.																																			
Drum Tipper	DH-07-303	Raised, Grab Open and in vertical position.																																			
Hoist/Trolley	CR-07-301B	Trolley at end nearest exit glovebox, Hoist raised.																																			
RWM Loadout Hoist	CR-07-301C	Trolley at Tray Loading Position, Hoist raised and unloaded.																																			
Manipulator	EM-07-301	Arms raised and parked, Manipulator at position #1 (nearest to sorting table).																																			
Sorting Table	ST-07-301	Fully retracted, fully lowered horizontal position.																																			
Lid/Delid Device	RT-07-301	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-07-308	Closed and Locked, No drum present.																																			
Sample Transfer Port	DO-07-104	Canister removed, door closed.																																			
Lift Table	LT-09-203C	Lift Table at AGV height, in "Normal" mode.																																			

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)															
36.	<p>Place all TRU Waste Loadout Glovebox 308 items in their parked positions including the following items:</p> <table border="0"> <thead> <tr> <th><u>ITEM</u></th> <th><u>Tag Number</u></th> <th><u>Parked Position</u></th> </tr> </thead> <tbody> <tr> <td>One Trip Port</td> <td>DO-07-309</td> <td>Lowered closed and locked, without vacuum.</td> </tr> <tr> <td>Waste Chute</td> <td></td> <td>Parked position.</td> </tr> <tr> <td>Hoist/Trolley</td> <td>CR-07-101D</td> <td>Trolley at compact receipt position, fully raised.</td> </tr> <tr> <td>Lift Table</td> <td>LT-09-202D</td> <td>Lift Table at AGV height, in "Normal" mode.</td> </tr> </tbody> </table>	<u>ITEM</u>	<u>Tag Number</u>	<u>Parked Position</u>	One Trip Port	DO-07-309	Lowered closed and locked, without vacuum.	Waste Chute		Parked position.	Hoist/Trolley	CR-07-101D	Trolley at compact receipt position, fully raised.	Lift Table	LT-09-202D	Lift Table at AGV height, in "Normal" mode.	Verify that all TRU Waste Loadout Glovebox items have been placed in their parked positions.	✓		R/V
<u>ITEM</u>	<u>Tag Number</u>	<u>Parked Position</u>																		
One Trip Port	DO-07-309	Lowered closed and locked, without vacuum.																		
Waste Chute		Parked position.																		
Hoist/Trolley	CR-07-101D	Trolley at compact receipt position, fully raised.																		
Lift Table	LT-09-202D	Lift Table at AGV height, in "Normal" mode.																		
37.	<p>Place all TRU Waste Loadout Glovebox 309 items in their parked positions including the following items:</p> <table border="0"> <thead> <tr> <th><u>ITEM</u></th> <th><u>Tag Number</u></th> <th><u>Parked Position</u></th> </tr> </thead> <tbody> <tr> <td>One Trip Port</td> <td>DO-07-310</td> <td>Lowered closed and locked, without vacuum.</td> </tr> <tr> <td>Waste Chute</td> <td></td> <td>Parked position.</td> </tr> <tr> <td>Hoist/Trolley</td> <td>CR-07-101D</td> <td>Trolley at compact receipt position, fully raised.</td> </tr> <tr> <td>Lift Table</td> <td>LT-09-202E</td> <td>Lift Table at AGV height, in "Normal" mode.</td> </tr> </tbody> </table>	<u>ITEM</u>	<u>Tag Number</u>	<u>Parked Position</u>	One Trip Port	DO-07-310	Lowered closed and locked, without vacuum.	Waste Chute		Parked position.	Hoist/Trolley	CR-07-101D	Trolley at compact receipt position, fully raised.	Lift Table	LT-09-202E	Lift Table at AGV height, in "Normal" mode.	Verify that all TRU Waste Loadout Glovebox items have been placed in their parked positions.	✓		R/V
<u>ITEM</u>	<u>Tag Number</u>	<u>Parked Position</u>																		
One Trip Port	DO-07-310	Lowered closed and locked, without vacuum.																		
Waste Chute		Parked position.																		
Hoist/Trolley	CR-07-101D	Trolley at compact receipt position, fully raised.																		
Lift Table	LT-09-202E	Lift Table at AGV height, in "Normal" mode.																		
38.	<p>Unforce all LCU 102 registers using the Allen Bradley PLC Software.</p> <p>see note pg 1-2</p>	Verify that all LCU 102 registers are unforced.	✓		X/V															
TEST PROCEDURE 13021A-86 SETUP COMPLETE																				

TEST CASE 13021A-86.01 - TRU ENTRY GLOVEBOX INITIALIZATION CONDITIONS	2
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Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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TEST CASE 13021A-86.01 - TRU ENTRY GLOVEBOX INITIALIZATION CONDITIONS

1.	Place the TRU Entry Glovebox in "Maintenance" mode by placing the Data Management System (DMS) Terminal "AUTO/MAINTENANCE" mode switch to the "MAINTENANCE" position.	Verify that the TRU Entry Glovebox has been placed in "Maintenance" mode.	✓		R/V
2.	Place the TRU Entry Glovebox in "Automatic" mode by placing the Data Management System (DMS) Terminal "AUTO/MAINTENANCE" mode switch to the "AUTOMATIC" position. Review the "TRU ENTRY GLOVEBOX MAIN MENU" screen at OIU-12-104A. The PCS should automatically check the status of glovebox devices to ensure that they are initialized. A "SYSTEM INITIALIZED" message should be displayed.	Verify that the TRU Entry Glovebox has been placed in "Automatic" mode. Verify that OIU-12-104A displays the "SYSTEM INITIALIZED" message.	✓		R/V
3.	Place the TRU Entry Glovebox in "Maintenance" mode.	Verify that the TRU Entry Glovebox has been placed in "Maintenance" mode.	✓		R/V

① MANIPULATOR PRESSURE SWITCHES - MANIPs not functional at this time.

② Pressure Differential Switches to RATE REDUCERS.

③ Forced ZSC 809 (Lower Grab Closed) Drum Transfer Device and AS395A ^{ALIGHT} (Lower Grab Pressure Switch) on (1) to simulate lower grab closed.

④ Forced Z5800B (Drum In Switch) because seal is not yet installed & is in the way.

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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Lift Table Initialization Conditions

Lift Table LT-09-202B At AGV Height

4.	Force LCU 103 register ZS235G "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> ZS235G <u>0</u> <u># 13/16</u>	Verify that register ZS235G is forced "not activated".	✓		R/W
5.	Place the TRU Entry Glovebox in "Automatic" mode. Because register ZS235G is forced "not activated" to simulate the Lift Table not at AGV height, OIU-12-104A should display the "SYSTEM NOT INITIALIZED" message on the "TRU ENTRY GLOVEBOX MAIN MENU".	Verify that the TRU Entry Glovebox has been placed in "Automatic" mode. Verify that OIU-12-104A displays the "SYSTEM NOT INITIALIZED" message.	✓		R/W
6.	Press the "INITIAL DIAGNOSTICS" button from the "TRU ENTRY GLOVEBOX MAIN MENU" at OIU-12-104A.	Verify that the "INITIALIZATION DIAGNOSTICS MENU" is displayed.	✓		R/W
7.	The "LT-09-202B LIFT TABLE NOT AT AGV HEIGHT" message should be displayed RED on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104A.	Verify that the "LT-09-202B LIFT TABLE NOT AT AGV HEIGHT" message is displayed RED.	✓		R/W
8.	Unforce LCU 103 register ZS235G. Record the unforced register status below: Unforced ZS235G Status: <u>1</u>	Verify that register ZS235G is unforced.	✓		R/W
9.	Because the Lift Table is at AGV height, the "LT-09-202B LIFT TABLE AT AGV HEIGHT" message should be displayed GREEN on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104A.	Verify that the "LT-09-202B LIFT TABLE AT AGV HEIGHT" message is displayed GREEN.	✓		R/W
10.	Press the "MAIN MENU" button from the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104A.	Verify that the "TRU ENTRY GLOVEBOX MAIN MENU" is displayed.	✓		R/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
11.	Because all glovebox items should be initialized, OIU-12-104A should display a "SYSTEM INITIALIZED" message.	Verify that OIU-12-104A displays the "SYSTEM INITIALIZED" message.	✓		R/W
12.	Place the TRU Entry Glovebox in "Maintenance" mode.	Verify that the TRU Entry Glovebox has been placed in "Maintenance" mode.	✓		R/W
Lift Table LT-09-202B M/O/N Switch in Normal					
13.	Turn the Lift Table Pedestal 107-PC-09-202B AGV/Panel switch to the "PANEL" position and the M/O/N switch 09-HS-235A to the "OFF" position to deactivate the Lift Table. <i>R/W 7/2/97</i>	Verify that the M/O/N switch is switched to "OFF" and the AGV/Panel switch is switched to "PANEL".	✓		R/W
14.	Place the TRU Entry Glovebox in "Automatic" mode. Because the M/O/N switch is not turned to "NORMAL" for normal operation controlled by PCS, the system should not initialize and OIU-12-104A should display a "SYSTEM NOT INITIALIZED" message on the "TRU ENTRY GLOVEBOX MAIN MENU".	Verify that the TRU Entry Glovebox has been placed in "Automatic" mode. Verify that OIU-12-104A displays the "SYSTEM NOT INITIALIZED" message.	✓		R/W
15.	Press the "INITIAL. DIAGNOSTICS" button from the "TRU ENTRY GLOVEBOX MAIN MENU" at OIU-12-104A.	Verify that the "INITIALIZATION DIAGNOSTICS MENU" is displayed.	✓		R/W
16.	The "LT-09-202B M/O/N SWITCH NOT IN NORMAL" message should be displayed RED on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104A.	Verify that the "LT-09-202B M/O/N SWITCH NOT IN NORMAL" message is displayed RED.	✓		R/W
17.	Turn the Lift Table Pedestal 107-PC-09-202B M/O/N switch 09-HS-235A to the "MAINT." position to allow an operator to control the Lift Table. Because the M/O/N switch is not turned to "NORMAL" for normal operation controlled by PCS, the system should not initialize and OIU-12-104A should display a "SYSTEM NOT INITIALIZED" message.	Verify that switch 09-HS-235A is switched to the "MAINT." position. Verify that OIU-12-104A displays the "SYSTEM NOT INITIALIZED" message.	✓		R/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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18.	The "LT-09-202B M/O/N SWITCH NOT IN NORMAL" message should continue to be displayed RED on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104A.	Verify that the "LT-09-202B M/O/N SWITCH NOT IN NORMAL" message is displayed RED.	✓		R/W
19.	Turn the Lift Table Pedestal 107-PC-09-202B AGV/Panel switch to the "AGV" position and M/O/N switch 09-HS-235A to the "NORMAL" position to allow the PCS to control the Lift Table.	Verify that AGV/Panel switch is switched to the "AGV" position and the M/O/N switch is switched to the "NORMAL" position.			R/W 1/18/97
20.	Because the Lift Table M/O/N switch 09-HS-235A is in the "NORMAL" position, the "LT-09-202B M/O/N SWITCH IN NORMAL" message should be displayed GREEN on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104A.	Verify that the "LT-09-202B M/O/N SWITCH IN NORMAL" message is displayed GREEN.	✓		R/W
21.	Press the "MAIN MENU" button from the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104A.	Verify that the "TRU ENTRY GLOVEBOX MAIN MENU" is displayed.	✓		R/W
22.	Because all glovebox items should be initialized, OIU-12-104A should display a "SYSTEM INITIALIZED" message.	Verify that OIU-12-104A displays the "SYSTEM INITIALIZED" message.	✓		R/W
23.	Place the TRU Entry Glovebox in "Maintenance" mode.	Verify that the TRU Entry Glovebox has been placed in "Maintenance" mode.	✓		R/W

#19 LT 202B does not have AGV/Panel switch

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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Entry/Exit Port Initialization Conditions					
Entry Port DO-07-301 Door Closed					
24.	Force LCU 103 register ZS803A "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> ZS803A 0 F.21/05	Verify that register ZS803A is forced "not activated".	✓		R/W
25.	Place the TRU Entry Glovebox in "Automatic" mode. Because register ZS803A is forced "not activated" to simulate the Entry/Exit port "open" condition, OIU-12-104A should display the "SYSTEM NOT INITIALIZED" message on the "TRU ENTRY GLOVEBOX MAIN MENU".	Verify that the TRU Entry Glovebox has been placed in "Automatic" mode. Verify that OIU-12-104A displays the "SYSTEM NOT INITIALIZED" message.	✓		R/W
26.	Press the "INITIAL. DIAGNOSTICS" button from the "TRU ENTRY GLOVEBOX MAIN MENU" at OIU-12-104A. PORT AND LOCKED	Verify that the "INITIALIZATION DIAGNOSTICS MENU" is displayed.	✓		R/W
27.	The "DO-07-301 DOOR NOT CLOSED" message should be displayed RED on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104A. R/W 7/18/97	Verify that the "DO-07-301 DOOR NOT CLOSED" message is displayed RED.		✓	R/W
28.	Unforce LCU 103 register ZS803A. Record the unforced register status below: Unforced ZS803A Status: 1 PORT AND LOCKED	Verify that register ZS803A is unforced.	✓		R/W
29.	Because the Entry/Exit Port is closed, the "DO-07-301 DOOR CLOSED" message should be displayed GREEN on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104A.	Verify that OIU-12-104A displays the "DO-07-301 PORT DOOR CLOSED" message GREEN.	✓	✓	R/W
30.	Press the "MAIN MENU" button from the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104A.	Verify that the "TRU ENTRY GLOVEBOX MAIN MENU" is displayed.	✓		R/W

#27/29 Message incorrect - Fix on next OIU download.
TEST PROCEDURE 13021A-86
see TE #201

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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31.	Because all glovebox items should be initialized, OIU-12-104A should display a "SYSTEM INITIALIZED" message.	Verify that OIU-12-104A displays the "SYSTEM INITIALIZED" message.	✓		RW
32.	Place the TRU Entry Glovebox in "Maintenance" mode.	Verify that the TRU Entry Glovebox has been placed in "Maintenance" mode.	✓		RW

Entry Port DO-07-301 Door Locked

33.	Place the TRU Entry Glovebox in "Automatic" mode. Because Entry/Exit Port (107-DO-07-301) registers ZSC800A and ZSC800B are forced "not activated", simulating a port unlocked condition, OIU-12-104A should display a "SYSTEM NOT INITIALIZED" message on the "TRU ENTRY GLOVEBOX MAIN MENU".	Verify that the TRU Entry Glovebox has been placed in "Automatic" mode. Verify that OIU-12-104A displays the "SYSTEM NOT INITIALIZED" message.	✓		RW
34.	Press the "INITIAL. DIAGNOSTICS" button from the "TRU ENTRY GLOVEBOX MAIN MENU" at OIU-12-104A. <i>closed and per telcom 3/31/98</i>	Verify that the "INITIALIZATION DIAGNOSTICS MENU" is displayed.	✓		RW
35.	The "DO-07-301 PORT DOOR NOT LOCKED" message should be displayed RED on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104A. <i>closed and per telcom 3/31/98</i>	Verify that the "DO-07-301 PORT DOOR NOT LOCKED" message is displayed RED. <i>closed and per telcom 3/31/98</i>	✓		RW
36.	Unforce LCU 103 register ZSC800A. Record the unforced register status below: Unforced ZSC800A Status: <u>1</u>	Verify that register ZSC800A is unforced. <i>per telcom 3/31/98</i>	✓		RW
37.	Because Entry/Exit Port (107-DO-07-301) register ZSC800B remains forced "not activated", simulating a port unlocked condition, OIU-12-104A should continue to display RED the "DO-07-301 PORT DOOR NOT LOCKED" message. <i>closed and per telcom 3/31/98</i>	Verify that OIU-12-104A displays the "DO-07-301 PORT DOOR NOT LOCKED" message RED. <i>closed and per telcom 3/31/98</i>	✓		RW
38.	Because the glovebox should not be initialized, the "FAIL" indicator should be illuminated on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104A. <i>closed and per telcom 3/31/98</i>	Verify that the "FAIL" indicator is illuminated.		N/A	

32a Force ZSC 800A and 800B Not activated,
800 A 0 F: 21/03
800 B 0 I: 21/10

X # 35/37/40 see note page 6-6 see TE 201
#38 - FAIL is a passive indication - Legend only

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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39.	Unforce LCU 103 register ZSC800B. Record the unforced register status below: Unforced ZSC800B Status: <u>1</u>	Verify that register ZSC800B is unforced.	✓		P/W
X 40.	Because the port locked position switches should indicate that the port is locked and all other glovebox items should be initialized, the "DO-07-301 PORT DOOR LOCKED" message should be displayed GREEN on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104A.	Verify that OIU-12-104A displays the "DO-07-301 PORT DOOR LOCKED" message GREEN.		✓	P/W
41.	Press the "MAIN MENU" button from the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104A.	Verify that the "TRU ENTRY GLOVEBOX MAIN MENU" is displayed.	✓		P/W
42.	Because all glovebox items should be initialized, OIU-12-104A should display a "SYSTEM INITIALIZED" message.	Verify that OIU-12-104A displays the "SYSTEM INITIALIZED" message.	✓		P/W
43.	Place the TRU Entry Glovebox in "Maintenance" mode.	Verify that the TRU Entry Glovebox has been placed in "Maintenance" mode.	✓		P/W

Entry Port DO-07-301 Drum Centering Devices Retracted

44.	Force LCU 103 registers ZS812A & ZS812B "not activated" to simulate the Drum Centering Devices not retracted. Record the forced register status below: <div> <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS812A <u>0</u> <u>F! 30/0</u> ZS812B <u>0</u> <u>F! 30/01</u> </div>	Verify that registers ZS812A & ZS812B are forced "not activated".	✓		P/W
45.	Place the TRU Entry Glovebox in "Automatic" mode. Because registers ZS812A & ZS812B are forced not activated to simulate the Drum Centering Devices not retracted condition, the "SYSTEM NOT INITIALIZED" message should be displayed on the "TRU ENTRY GLOVEBOX MAIN MENU" at OIU-12-104A.	Verify that the TRU Entry Glovebox has been placed in "Automatic" mode. Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		P/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)						
46.	Press the "INITIAL. DIAGNOSTICS" button from the "TRU ENTRY GLOVEBOX MAIN MENU" at OIU-12-104A. <i>DO-07-301 CLAMPS</i>	Verify that the "INITIALIZATION DIAGNOSTICS MENU" is displayed.	✓		R/W						
47.	The " CENTERING DEVICES NOT RETRACTED " message should be displayed RED on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104A. <i>R/W 7/18/97</i>	Verify that the " CENTERING DEVICES NOT RETRACTED " message is displayed RED.	✓		R/W						
48.	Unforce LCU 103 register ZS812A. Record the unforced register status below: Unforced ZS812A Status: <u>1</u> <i>DO-07-301 CLAMPS</i>	Verify that register ZS812A is unforced.	✓		R/W						
49.	The " CENTERING DEVICES NOT RETRACTED " message should continue to be displayed RED on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104A. <i>R/W 7/18/97</i>	Verify that the " CENTERING DEVICES NOT RETRACTED " message is displayed RED.	✓		R/W						
50.	Force LCU 103 register ZS812A "not activated" to simulate the Drum Centering Device not retracted. Record the forced register status below: <table><tr><td><u>Register</u></td><td><u>Forced Status</u></td><td><u>Method of Confirmation</u></td></tr><tr><td>ZS812A</td><td><u>0</u></td><td><u>I: 30/0</u></td></tr></table>	<u>Register</u>	<u>Forced Status</u>	<u>Method of Confirmation</u>	ZS812A	<u>0</u>	<u>I: 30/0</u>	Verify that register ZS812A is forced "not activated".	✓		R/W
<u>Register</u>	<u>Forced Status</u>	<u>Method of Confirmation</u>									
ZS812A	<u>0</u>	<u>I: 30/0</u>									
51.	Unforce LCU 103 register ZS812B. Record the unforced register status below: Unforced ZS812B Status: <u>1</u> <i>DO-07-301 CLAMPS</i>	Verify that register ZS812B is unforced.	✓		R/W						
52.	The " CENTERING DEVICES NOT RETRACTED " message should continue to be displayed RED on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104A. <i>R/W 7/18/97</i>	Verify that the " CENTERING DEVICES NOT RETRACTED " message is displayed RED.	✓		R/W						
53.	Unforce LCU 103 register ZS812A. Record the unforced register status below: Unforced ZS812A Status: <u>1</u> <i>DO-07-301</i>	Verify that register ZS812A is unforced.	✓		R/W						
54.	Because the Drum Centering Devices are retracted, the " CENTERING DEVICES RETRACTED " message should be displayed GREEN on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104A. <i>CLAMPS R/W 7/18/97</i>	Verify that the " CENTERING DEVICES RETRACTED " message is displayed GREEN.	✓		R/W						
55.	Press the "MAIN MENU" button from the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104A.	Verify that the "TRU ENTRY GLOVEBOX MAIN MENU" is displayed.	✓		R/W						

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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56.	Because all glovebox items should be initialized, OIU-12-104A should display a "SYSTEM INITIALIZED" message.	Verify that OIU-12-104A displays the "SYSTEM INITIALIZED" message.	✓		RW
57.	Place the TRU Entry Glovebox in "Maintenance" mode.	Verify that the Entry Glovebox is in "Maintenance" mode.	✓		RW
Entry Port DO-07-301 No Vacuum Exists					
58.	Force LCU 103 register PS803 "activated" to simulate vacuum between the Entry/Exit port and the drum lid. Record the forced register status below: <div> <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> PS803 <u>1</u> <u>FI: 2/10/1</u> </div>	Verify that register PS803 is forced "activated".	✓		RW
59.	Place the TRU Entry Glovebox in "Automatic" mode. Because register PS803 is forced "activated" to simulate vacuum between the Entry/Exit port and the drum lid, OIU-12-104A should display should display a "SYSTEM NOT INITIALIZED" message on the "TRU ENTRY GLOVEBOX MAIN MENU".	Verify that the TRU Entry Glovebox has been placed in "Automatic" mode. Verify that OIU-12-104A displays a "SYSTEM NOT INITIALIZED" message.	✓		RW
60.	Press the "INITIAL. DIAGNOSTICS" button from the "TRU ENTRY GLOVEBOX MAIN MENU" at OIU-12-104A. NOT RELEASED	Verify that the "INITIALIZATION DIAGNOSTICS MENU" is displayed.	✓		RW
61.	The "DO-07-301 VACUUM EXISTS" message should be displayed RED on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104A. RW 7/18/99	Verify that the " DO-07-301 VACUUM EXISTS" message is displayed RED.	✓		RW
62.	Unforce LCU 103 register PS803. Record the unforced register status below: Unforced PS803 Status: <u>0</u>	Verify that register PS803 is unforced.	✓		RW
63.	Because the drum lid vacuum pressure switch should indicate that vacuum is not present, OIU-12-104A should display GREEN the " NO VACUUM EXISTS " message on the "TRU ENTRY GLOVEBOX MAIN MENU". RELEASED	Verify that OIU-12-104A displays the " NO VACUUM EXISTS " message GREEN.	✓		RW

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
64.	Press the "MAIN MENU" button from the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104A.	Verify that the "TRU ENTRY GLOVEBOX MAIN MENU" is displayed.	✓		<i>RG</i>
65.	Because all glovebox items should be initialized, OIU-12-104A should display a "SYSTEM INITIALIZED" message.	Verify that OIU-12-104A displays the "SYSTEM INITIALIZED" message.	✓		<i>RG</i>
66.	Place the TRU Entry Glovebox in "Maintenance" mode.	Verify that the TRU Entry Glovebox has been placed in "Maintenance" mode.	✓		<i>RG</i>

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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Drum Hoist/Lifter Initialization Conditions

Hoist CR-07-301A At Transfer Port

67.	Force LCU 103 registers ZS802A and ZS802B to "not activated" to simulate the hoist trolley NOT at the "Transfer Port" position. Record the forced register status below:	Verify that registers ZS802A and ZS802B are forced "not activated".												
	<table border="1"> <thead> <tr> <th>Register</th><th>Forced Status</th><th>Method of Confirmation</th></tr> </thead> <tbody> <tr> <td>ZS802A</td><td><u>0</u></td><td><u>I: 16/16</u></td></tr> <tr> <td>ZS802B</td><td><u>0</u></td><td><u>I: 16/17</u></td></tr> </tbody> </table>	Register	Forced Status	Method of Confirmation	ZS802A	<u>0</u>	<u>I: 16/16</u>	ZS802B	<u>0</u>	<u>I: 16/17</u>		✓		R/W
Register	Forced Status	Method of Confirmation												
ZS802A	<u>0</u>	<u>I: 16/16</u>												
ZS802B	<u>0</u>	<u>I: 16/17</u>												
68.	Place the TRU Entry Glovebox in "Automatic" mode. Because hoist position registers ZS802A and ZS802B, are forced "not activated" to simulate the hoist not at the "Transfer Port" position, OIU-12-104A should display the "SYSTEM NOT INITIALIZED" message on the "TRU ENTRY GLOVEBOX MAIN MENU".	Verify that the TRU Entry Glovebox has been placed in "Automatic" mode. Verify that OIU-12-104A displays the "SYSTEM NOT INITIALIZED" message.	✓		R/W									
69.	Press the "INITIAL. DIAGNOSTICS" button from the "TRU ENTRY GLOVEBOX MAIN MENU" at OIU-12-104A. <u>TRANSFER</u>	Verify that the "INITIALIZATION DIAGNOSTICS MENU" is displayed.	✓		R/W									
70.	The "CR-07-301A HOIST NOT AT TRANSFER PORT" message should be displayed RED on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104A. <u>R/W 7/18/97</u>	Verify that the "CR-07-301A HOIST NOT AT TRANSFER PORT" message is displayed RED.	✓		R/W									
71.	Unforce LCU 103 register ZS802A. Record the unforced register status below: Unforced ZS802A Status: <u>1</u>	Verify that register ZS802A is unforced.	✓		R/W									
72.	Because hoist position register ZS802B remains forced "not activated" indicating that the hoist is not at the Transfer Port position, the "CR-07-301A HOIST NOT AT TRANSFER PORT" message should continue to be displayed RED on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104A. <u>R/W 7/18/97</u>	Verify that the "CR-07-301A HOIST NOT AT TRANSFER PORT" message is displayed RED.	✓		R/W									

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
73.	Unforce LCU 103 register ZS802B. Record the unforced register status below: Unforced ZS802B Status: <u>1</u>	Verify that register ZS802B is unforced.	✓		R/W
74.	Because position switches 07-ZS-702A and 07-ZS-702B should indicate that the hoist is at the Transfer Port position, the "CR-07-301A HOIST AT TRANSFER PORT" message should be displayed GREEN on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104A.	Verify that the "CR-07-301A HOIST AT TRANSFER PORT" message is displayed GREEN.	✓		R/W
75.	Press the "MAIN MENU" button from the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104A.	Verify that the "TRU ENTRY GLOVEBOX MAIN MENU" is displayed.	✓		R/W
76.	Because all glovebox items should be initialized, OIU-12-104A should display a "SYSTEM INITIALIZED" message.	Verify that OIU-12-104A displays the "SYSTEM INITIALIZED" message.	✓		R/W
77.	Place the TRU Entry Glovebox in "Maintenance" mode.	Verify that the TRU Entry Glovebox has been placed in "Maintenance" mode.	✓		R/W
Hoist CR-07-301A Raised					
78.	Force LCU 103 register ZS802C to "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> ZS802C <u>1</u> <u>Fi 12/20</u>	Verify that register ZS802C is forced "activated".	✓		R/W
79.	Place the TRU Entry Glovebox in "Automatic" mode. Because Hoist fully raised register ZS802C remains forced "activated" to simulate the hoist not fully raised, OIU-12-104A should display the "SYSTEM NOT INITIALIZED" message on the "TRU ENTRY GLOVEBOX MAIN MENU".	Verify that the TRU Entry Glovebox has been placed in "Automatic" mode. Verify that OIU-12-104A displays the "SYSTEM NOT INITIALIZED" message.	✓		R/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)					
80.	Press the "INITIAL. DIAGNOSTICS" button from the "TRU ENTRY GLOVEBOX MAIN MENU" at OIU-12-104A.	Verify that the "INITIALIZATION DIAGNOSTICS MENU" is displayed.	✓		N/w					
81.	The "CR-07-301A HOIST NOT RAISED" message should be displayed RED on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104A.	Verify that the "CR-07-301A HOIST NOT RAISED" message is displayed RED.	✓		R/w					
82.	Unforce LCU 103 register ZS802C. Record the unforced register status below: Unforced ZS802C Status: <u>0</u>	Verify that register ZS802C is unforced.	✓		R/w					
83.	Because position switch 07-ZS-802C should indicate that the Hoist / Lifter is fully raised, the "CR-07-301A HOIST RAISED" message should be displayed GREEN on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104A.	Verify that the "CR-07-301A HOIST RAISED" message is displayed GREEN.	✓		R/w					
84.	Press the "MAIN MENU" button from the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104A.	Verify that the "TRU ENTRY GLOVEBOX MAIN MENU" is displayed.	✓		R/w					
85.	Because all glovebox items should be initialized, OIU-12-104A should display a "SYSTEM INITIALIZED" message.	Verify that OIU-12-104A displays the "SYSTEM INITIALIZED" message.	✓		R/w					
86.	Place the TRU Entry Glovebox in "Maintenance" mode.	Verify that the TRU Entry Glovebox has been placed in "Maintenance" mode.	✓		R/w					
Hoist DH-07-301 Lifter Open										
87.	DRUM LIFTER OPEN INITIALIZATION: Force LCU 103 register ZSO804 to "not activated" to simulate the Drum Lifter "not open" condition. Record the forced register status below: <table><tr><td><u>Register</u></td><td><u>Forced Status</u></td><td><u>Method of Confirmation</u></td></tr><tr><td>ZSO804</td><td><u>0</u></td><td><u>I: 17/16</u></td></tr></table>	<u>Register</u>	<u>Forced Status</u>	<u>Method of Confirmation</u>	ZSO804	<u>0</u>	<u>I: 17/16</u>	Verify that register ZSO804 is forced "not activated".	✓	R/w
<u>Register</u>	<u>Forced Status</u>	<u>Method of Confirmation</u>								
ZSO804	<u>0</u>	<u>I: 17/16</u>								

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
88.	Place the TRU Entry Glovebox in "Automatic" mode. Because Drum Lifter open register ZSO804 remains forced "not activated" to simulate the Drum Lifter "not open", OIU-12-104A should display the "SYSTEM NOT INITIALIZED" message on the "TRU ENTRY GLOVEBOX MAIN MENU".	Verify that the TRU Entry Glovebox has been placed in "Automatic" mode. Verify that OIU-12-104A displays the "SYSTEM NOT INITIALIZED" message.	✓		R/W
89.	Press the "INITIAL. DIAGNOSTICS" button from the "TRU ENTRY GLOVEBOX MAIN MENU" at OIU-12-104A.	Verify that the "INITIALIZATION DIAGNOSTICS MENU" is displayed.	✓		R/W
90.	The "DH-07-301 LIFTER NOT OPEN" message should be displayed RED on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104A.	Verify that the "DH-07-301 LIFTER NOT OPEN" message is displayed RED.	✓		R/W
91.	Unforce LCU 103 register ZSO804. Record the unforced register status below: Unforced ZSO804 Status: _____	Verify that register ZSO804 is unforced.	✓		R/W
92.	Because the Drum Lifter "Open" position switch should indicate that the Drum Lifter is fully open, the "DH-07-301 LIFTER OPEN" message should be displayed GREEN on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104A.	Verify that the "DH-07-301 LIFTER OPEN" message is displayed GREEN.	✓		R/W
93.	Because the glovebox should be initialized, the "PASS" indicator should be illuminated on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104A.	Verify that the "PASS" indicator is illuminated.			N/A R/W 2/18/99
94.	Press the "MAIN MENU" button from the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104A.	Verify that the "TRU ENTRY GLOVEBOX MAIN MENU" is displayed.	✓		R/W
95.	Because all glovebox items should be initialized, OIU-12-104A should display a "SYSTEM INITIALIZED" message.	Verify that OIU-12-104A displays the "SYSTEM INITIALIZED" message.	✓		R/W
96.	Place the TRU Entry Glovebox in "Maintenance" mode.	Verify that the TRU Entry Glovebox has been placed in "Maintenance" mode.	✓		R/W

IF 93 Legend only

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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Drum Transfer Assembly Initialization Conditions					
Transfer Assembly DH-07-302 Upper Grab Raised					
97.	Force LCU 103 register ZS807A "not activated" to simulate the Transfer Assembly Upper Grab NOT Raised condition. Record the forced register status below: <div> <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS807A 0 1:20/02 </div>	Verify that register ZS807A is forced "not activated".	✓		R/W
98.	Place the TRU Glovebox Line in "Automatic" mode. Because register ZS807A is forced not activated to simulate the Upper Grab not raised condition, the "SYSTEM NOT INITIALIZED" message should be displayed on the "TRU ENTRY GLOVEBOX MAIN MENU" at OIU-12-104A.	Verify that the TRU Glovebox Line has been placed in "Automatic" mode. Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		R/W
99.	Press the "INITIAL. DIAGNOSTICS" button from the "TRU ENTRY GLOVEBOX MAIN MENU" at OIU-12-104A.	Verify that the "INITIALIZATION DIAGNOSTICS MENU" is displayed.	✓		R/W
100.	The "DH-07-302 UPPER GRAB NOT RAISED" message should be displayed RED on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104A.	Verify that the "DH-07-302 UPPER GRAB NOT RAISED" message is displayed RED.	✓		R/W
101.	Unforce LCU 103 register ZS807A. Record the unforced register status below: Unforced ZS807A Status: 1	Verify that register ZS807A is unforced.	✓		R/W
102.	Because the Transfer Assembly Upper Grab raised position switch should indicate that the Upper Grab is raised, the "DH-07-302 UPPER GRAB RAISED" message should be displayed GREEN on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104A.	Verify that the "DH-07-302 UPPER GRAB RAISED" message is displayed GREEN.	✓		R/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
103.	Press the "MAIN MENU" button from the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104A.	Verify that the "TRU ENTRY GLOVEBOX MAIN MENU" is displayed.	✓		R/W
104.	Because all glovebox items should be initialized, OIU-12-104A should display a "SYSTEM INITIALIZED" message.	Verify that OIU-12-104A displays the "SYSTEM INITIALIZED" message.	✓		R/W
105.	Place the TRU Entry Glovebox in "Maintenance" mode.	Verify that the TRU Entry Glovebox has been placed in "Maintenance" mode.	✓		R/W
Transfer Assembly DH-07-302 Upper Grab Open					
106.	Force LCU 103 register ZSO806A "not activated" to simulate the Transfer Assembly Upper Grab NOT Open condition. Record the forced register status below: <div> <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZSO806A 0 I: 20113 </div>	Verify that register ZSO806A is forced "not activated".	✓		R/W
107.	Place the TRU Glovebox Line in "Automatic" mode. Because register ZSO806A is forced not activated to simulate the Upper Grab not open condition, the "SYSTEM NOT INITIALIZED" message should be displayed on the "TRU ENTRY GLOVEBOX MAIN MENU" at OIU-12-104A.	Verify that the TRU Glovebox Line has been placed in "Automatic" mode. Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		R/W
108.	Press the "INITIAL. DIAGNOSTICS" button from the "TRU ENTRY GLOVEBOX MAIN MENU" at OIU-12-104A.	Verify that the "INITIALIZATION DIAGNOSTICS MENU" is displayed.	✓		R/W
109.	The "DH-07-302 UPPER GRAB NOT OPEN" message should be displayed RED on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104A.	Verify that the "DH-07-302 UPPER GRAB NOT OPEN" message is displayed RED.	✓		R/W
110.	Unforce LCU 103 register ZSO806A. Record the unforced register status below: Unforced ZSO806A Status: 1	Verify that register ZSO806A is unforced.	✓		R/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
111.	Because the Transfer Assembly Upper Grab open position switch should indicate that the Upper Grab is open, the "DH-07-302 UPPER GRAB OPEN" message should be displayed GREEN on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104A.	Verify that the "DH-07-302 UPPER GRAB OPEN" message is displayed GREEN.	✓		R/W
112.	Press the "MAIN MENU" button from the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104A.	Verify that the "TRU ENTRY GLOVEBOX MAIN MENU" is displayed.	✓		R/W
113.	Because all glovebox items should be initialized, OIU-12-104A should display a "SYSTEM INITIALIZED" message.	Verify that OIU-12-104A displays the "SYSTEM INITIALIZED" message.	✓		R/W
114.	Place the TRU Entry Glovebox in "Maintenance" mode.	Verify that the TRU Entry Glovebox has been placed in "Maintenance" mode.	✓		R/W
Transfer Assembly DH-07-302 Lower Grab Closed					
115.	Force LCU 103 register ZSC809 "not activated" to simulate the Transfer Assembly Lower Grab NOT closed condition. Record the forced register status below: <div> <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZSC809 <u>0</u> <u>I. 20112</u> </div>	Verify that register ZS809 is forced "not activated".	✓		R/W
116.	Place the TRU Glovebox Line in "Automatic" mode. Because register ZSC809 is forced not activated to simulate the Lower Grab not closed condition, the "SYSTEM NOT INITIALIZED" message should be displayed on the "TRU ENTRY GLOVEBOX MAIN MENU" at OIU-12-104A.	Verify that the TRU Glovebox Line has been placed in "Automatic" mode. Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		R/W
117.	Press the "INITIAL. DIAGNOSTICS" button from the "TRU ENTRY GLOVEBOX MAIN MENU" at OIU-12-104A.	Verify that the "INITIALIZATION DIAGNOSTICS MENU" is displayed.	✓		R/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
118.	The "DH-07-302 LOWER GRAB NOT CLOSED" message should be displayed RED on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104A.	Verify that the "DH-07-302 LOWER GRAB NOT CLOSED" message is displayed RED.	✓		R/W
119.	Unforce LCU 103 register ZSC809. Record the unforced register status below: Unforced ZSC809 Status: <u>1</u>	Verify that register ZSC809 is unforced.	✓		R/W
120.	Because the Transfer Assembly Lower Grab closed position switch should indicate that the Lower Grab is closed, the "DH-07-302 LOWER GRAB CLOSED" message should be displayed GREEN on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104A.	Verify that the "DH-07-302 LOWER GRAB CLOSED" message is displayed GREEN.	✓		R/W
121.	Press the "MAIN MENU" button from the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104A.	Verify that the "TRU ENTRY GLOVEBOX MAIN MENU" is displayed.	✓		R/W
122.	Because all glovebox items should be initialized, OIU-12-104A should display a "SYSTEM INITIALIZED" message.	Verify that OIU-12-104A displays the "SYSTEM INITIALIZED" message.	✓		R/W
123.	Place the TRU Entry Glovebox in "Maintenance" mode.	Verify that the TRU Entry Glovebox has been placed in "Maintenance" mode.	✓		R/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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Sphincter Port Initialization Conditions					
Port DO-07-302 Drum in Sphincter					
124.	Force LCU 103 register ZS808B "not activated" to simulate a drum NOT in the Sphincter condition. Record the forced register status below: <div> <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS808B <u>0</u> <u>F: 20107</u> </div>	Verify that register ZS808B is forced "not activated".	✓		RIS
125.	Place the TRU Glovebox Line in "Automatic" mode. Because register ZS807C is forced not activated to simulate a drum not in the Sphincter condition, the "SYSTEM NOT INITIALIZED" message should be displayed on the "TRU ENTRY GLOVEBOX MAIN MENU" at OIU-12-104A.	Verify that the TRU Glovebox Line has been placed in "Automatic" mode. Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		RIS
126.	Press the "INITIAL. DIAGNOSTICS" button from the "TRU ENTRY GLOVEBOX MAIN MENU" at OIU-12-104A.	Verify that the "INITIALIZATION DIAGNOSTICS MENU" is displayed.	✓		RIS
127.	The "DH-07-302 DRUM NOT IN SPHINCTER" message should be displayed RED on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104A.	Verify that the "DH-07-302 DRUM NOT IN SPHINCTER" message is displayed RED.	✓		RIS
128.	Unforce LCU 103 register ZS808B. Record the unforced register status below: Unforced ZS808B Status: <u>1</u>	Verify that register ZS808B is unforced.	✓		RIS
129.	Because the Drum in Sphincter position switch should indicate that a drum is in the Sphincter, the "DH-07-302 DRUM IN SPHINCTER" message should be displayed GREEN on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104A.	Verify that the "DH-07-302 DRUM IN SPHINCTER" message is displayed GREEN.	✓		RIS
130.	Press the "MAIN MENU" button from the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104A.	Verify that the "TRU ENTRY GLOVEBOX MAIN MENU" is displayed.	✓		RIS

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
131.	Because all glovebox items should be initialized, OIU-12-104A should display a "SYSTEM INITIALIZED" message.	Verify that OIU-12-104A displays the "SYSTEM INITIALIZED" message.	✓		<i>R/W</i>
132.	Place the TRU Entry Glovebox in "Maintenance" mode.	Verify that the TRU Entry Glovebox has been placed in "Maintenance" mode.	✓		<i>R/W</i>
Port DO-07-302 Door Seal Inflated					
133.	Force LCU 103 register PSL800 "not activated" to simulate the Sphincter Entry Port seal NOT inflated condition. Record the forced register status below: <div> <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> PSL800 <u>0</u> <u>I, 2/1/12</u> </div>	Verify that register PSL800 is forced "not activated".	✓		<i>R/W</i>
134.	Place the TRU Glovebox Line in "Automatic" mode. Because register PSL800 is forced not activated to simulate the Sphincter Entry Port seal not inflated condition, the "SYSTEM NOT INITIALIZED" message should be displayed on the "TRU ENTRY GLOVEBOX MAIN MENU" at OIU-12-104A.	Verify that the TRU Glovebox Line has been placed in "Automatic" mode. Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		<i>R/W</i>
135.	Press the "INITIAL. DIAGNOSTICS" button from the "TRU ENTRY GLOVEBOX MAIN MENU" at OIU-12-104A.	Verify that the "INITIALIZATION DIAGNOSTICS MENU" is displayed.	✓		<i>R/W</i>
136.	The "DO-07-302 PORT DOOR SEAL NOT INFLATED" message should be displayed RED on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104A.	Verify that the "DO-07-302 PORT DOOR SEAL NOT INFLATED" message is displayed RED.	✓		<i>R/W</i>
137.	Unforce LCU 103 register PSL800. Record the unforced register status below: Unforced PSL800 Status: <u>1</u>	Verify that register PSL800 is unforced.	✓		<i>R/W</i>

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138.	Because the Port seal pressure switch should indicate that the HVAC seal is inflated, the "DO-07-302 PORT DOOR SEAL INFLATED" message should be displayed GREEN on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104A.	Verify that the "DO-07-302 PORT SEAL INFLATED" message is displayed GREEN.	✓		R/W
139.	Press the "MAIN MENU" button from the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104A.	Verify that the "TRU ENTRY GLOVEBOX MAIN MENU" is displayed.	✓		R/W
140.	Because all glovebox items should be initialized, OIU-12-104A should display a "SYSTEM INITIALIZED" message.	Verify that the "SYSTEM INITIALIZED" message is displayed.	✓		R/W
141.	Place the TRU Entry Glovebox in "Maintenance" mode.	Verify that the Entry Glovebox is in "Maintenance" mode.	✓		R/W

Port DO-07-302 Door Closed

142.	Force LCU 103 register ZSC805 "not activated" to simulate the Sphincter Entry Port NOT open condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZSC805 0 F: 2/1/14	Verify that register ZSC805 is forced "not activated".	✓		R/W
143.	Place the TRU Entry Glovebox in "Automatic" mode. Because register ZSC805 is forced not activated to simulate the Port Door not closed condition, the "SYSTEM NOT INITIALIZED" message should be displayed on the "TRU ENTRY GLOVEBOX MAIN MENU" at OIU-12-104A.	Verify that the TRU Entry Glovebox has been placed in "Automatic" mode. Verify that the "SYSTEM NOT INITIALIZED" message is displayed.	✓		R/W
144.	Press the "INITIAL. DIAGNOSTICS" button from the "TRU ENTRY GLOVEBOX MAIN MENU" at OIU-12-104A.	Verify that the "INITIALIZATION DIAGNOSTICS MENU" is displayed.	✓		R/W
145.	The "DO-07-302 PORT DOOR NOT CLOSED" message should be displayed RED on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104A.	Verify that the "DO-07-302 PORT DOOR NOT CLOSED" message is displayed RED.	✓		R/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
146.	Unforce LCU 103 register ZSC805. Record the unforced register status below: Unforced ZSC805 Status: <u>1</u>	Verify that register ZSO805 is unforced.	✓		R/W
147.	Because the Sphincter Entry Port is closed, the "DO-07-302 PORT DOOR CLOSED" message should be displayed GREEN on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104A.	Verify that the "DO-07-302 PORT DOOR CLOSED" message is displayed GREEN.	✓		R/W
148.	Press the "MAIN MENU" button from the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104A.	Verify that the "TRU ENTRY GLOVEBOX MAIN MENU" is displayed.	✓		R/W
149.	Because all glovebox items should be initialized, OIU-12-104A should display a "SYSTEM INITIALIZED" message.	Verify that OIU-12-104A displays the "SYSTEM INITIALIZED" message.	✓		R/W
150.	Place the TRU Entry Glovebox in "Maintenance" mode.	Verify that the Entry Glovebox is in "Maintenance" mode.	✓		R/W
Test Case Shutdown					
151.	Return all TRU Entry Glovebox items to a safe and stable condition.	Verify that all TRU Entry Glovebox items are safely positioned.	✓		R/W
152.	Unforce all LCU 103 registers using the Allen Bradley PLC Software. <i>see note pg 12</i>	Verify that all LCU 103 registers are unforced.	✓		R/W
TEST CASE 13021A-86.01 COMPLETE					

D.O NOT TEST PS395B - LOWER GEAR PRESSURE SWITCH.
IN TEST PROCEDURE ZSO806B - UPPER GEAR OPEN.

ROBERT & MIKE TESTED THESE INITIALIZATION INTERLOCKS ON 7/18/97 @ 1:48 pm.

R/W 7/18/97

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TEST CASE 13021A-86.02 TRU ENTRY GLOVEBOX MAINTENANCE MENU FUNCTIONS

Maintenance Access Menu

1.	Place all TRU Entry Glovebox (107-GB-07-301) items in their parked, stable positions.	Verify that all items in the TRU Entry Glovebox are parked.	✓		<i>Riv</i>
2.	A maintenance access code of "1111" should have been previously entered.	Verify that a maintenance access code of "1111" has been entered.	✓		<i>Riv</i>
3.	At Data Management Pedestal (PC-07-104), position the Entry Glovebox (GB-07-301) Auto Mode/Maintenance Mode keyswitch to "MAINTENANCE MODE". The "MAINTENANCE ACCESS MENU" should be displayed on the OIU. Message "ENTER ACCESS CODE" should be displayed on the menu.	Verify that the keyswitch is positioned to "MAINTENANCE MODE". Verify that the "MAINTENANCE ACCESS MENU" is displayed on the OIU. Verify the "ENTER ACCESS CODE" message is displayed.	✓ ✓ ✓		<i>Riv</i>
4.	Enter "1112" and press "ENTER". Message "ACCESS DENIED" should be displayed on the screen.	Verify that "1112" is entered. Verify that the "ACCESS DENIED" message is displayed.	✓		<i>Riv</i>
5.	Press "CHANGE PASSWORD" on the "MAINTENANCE ACCESS MENU". Message "ENTER OLD PASSWORD" should be displayed on the screen.	Verify that the "ENTER OLD PASSWORD" message is displayed.	✓		<i>Riv</i>

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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6.	<p>Enter "1111" and press "CANCEL OPERATION."</p> <p>Password "1111" should disappear from the display.</p> <p>Message "OPERATION CANCELLED" should be displayed on the screen.</p>	<p>Verify that password "1111" disappears from the display.</p> <p>Verify that "1111" has disappeared.</p> <p>Verify that the "CANCEL OPERATION" message is displayed.</p>	<p>✓</p> <p>✓</p> <p>✓</p>		R/W
Change Password					
7.	<p>Press "CHANGE PASSWORD" on the "MAINTENANCE ACCESS MENU".</p> <p>Message "ENTER OLD PASSWORD" should be displayed on the screen.</p>	<p>Verify that the "ENTER OLD PASSWORD" message is displayed.</p>	<p>✓</p>		R/W
8.	<p>Enter "1111" and press "ENTER".</p> <p>Message "ENTER NEW PASSWORD" should be displayed on the screen.</p>	<p>Verify that the "ENTER NEW PASSWORD" message is displayed.</p>	<p>✓</p>		R/W
9.	<p>Enter "2222" and press "ENTER".</p> <p>Message "ENTER ACCESS CODE" should be displayed.</p>	<p>Verify that the "ENTER ACCESS CODE" message is displayed.</p>	<p>✓</p>		R/W
10.	<p>Enter "2222" and press "ENTER".</p> <p>The "MAINTENANCE MAIN MENU" should be displayed on the OIU.</p>	<p>Verify that the "MAINTENANCE MAIN MENU" is displayed on the OIU.</p>	<p>✓</p>		R/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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Drum Entry/Exit Port Maintenance Menu					
Centering Clamps					
11.	<p>Press the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" button on the "MAINTENANCE MAIN MENU" at OIU-12-104A.</p> <p>The "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" should be displayed at OIU-12-104A.</p>	Verify that the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" is displayed.	✓		PLW
12.	<p>Press the "EXTEND CENTERING CLAMPS" button on the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-104A.</p> <p>The Entry/Exit Port (107-DO-07-301) Drum Centering Clamps should fully extend without erratic motion.</p> <p>The button now should read "CENTERING CLAMPS EXTENDED" and be highlighted.</p>	<p>Verify that the Drum Centering Clamps completely extend.</p> <p>Verify that the button now reads "CENTERING CLAMPS EXTENDED" and is highlighted.</p>	✓		PLW
13.	<p>Press the "RETRACT CENTERING CLAMPS" button on the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU".</p> <p>The Entry/Exit Port (107-DO-07-301) Drum Centering Clamps should fully retract without erratic motion.</p> <p>The button now should read "CENTERING CLAMPS RETRACTED" and be highlighted.</p>	<p>Verify that the Drum Centering Clamps completely retract.</p> <p>Verify that the button now reads "CENTERING CLAMPS RETRACTED" and is highlighted.</p>	✓		PLW
Vacuum					

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
14.	<p>Press the "TURN ON VACUUM" button on the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-104A.</p> <p>Vacuum should be present at the orifice on the underside of the Entry/Exit Port.</p> <p>The button should now read "VACUUM GENERATED" and be highlighted. <i>R/W 7/18/97</i></p>	<p>Verify that vacuum is being generated.</p> <p>Verify that the button now reads "VACUUM GENERATED" and is highlighted. <i>R/W</i></p>	✓		
15.	<p>Press the "TURN OFF VACUUM" button on the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU".</p> <p>Vacuum should not be present at the orifice on the underside of the Entry/Exit Port.</p> <p>The button which previously read "VACUUM GENERATED" should now read "TURN ON VACUUM" and not be highlighted. <i>R/W 7/18/97</i></p>	<p>Verify that vacuum is not being generated.</p> <p>Verify that the button which previously read "VACUUM GENERATED" now read "TURN ON VACUUM" and is not highlighted.</p>	✓		<i>R/W</i>
Venting					
16.	<p>Press the "OPEN VENTS" button on the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-104A.</p> <p>The Entry/Exit Port 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.</p> <p>The button which previously read "OPEN VENTS" should now read "VENT SOLENOID ACTIVATED" and be highlighted. <i>VENTS OPEN</i></p>	<p>Verify that the Entry/Exit Port pressure vents are open.</p> <p>Verify that the button now reads "VENT SOLENOID ACTIVATED" and is highlighted. <i>VENTS OPEN R/W 7/18/97</i></p>	✓		<i>R/W</i>
17. <i>RELEASE</i>	<p>Press the "VENT SOLENOID ACTIVATED" button on the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-104A. <i>R/W 7/18/97</i></p> <p>The Entry/Exit Port 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.</p> <p>The button should now read "OPEN VENTS" and not be highlighted.</p>	<p>Verify that the Entry/Exit Port pressure vents are closed.</p> <p>Verify that the button now reads "OPEN VENTS" and is not highlighted. <i>R/W</i></p>	✓		

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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18.	Press the "OPEN VENTS" button on the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-104A.	Verify that the Entry/Exit Port pressure vents are open.	✓		<i>PL</i>
Port Lock/Unlock					
19.	<p>Press the "UNLOCK PORT" button on the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-104A.</p> <p>The Entry/Exit Port locking cylinders should fully retract without erratic motion.</p> <p>The button which previously read "UNLOCK PORT" and was not highlighted should now read "PORT UNLOCKED" and be highlighted.</p> <p>The button which previously read "PORT LOCKED" and was highlighted should now read "LOCK PORT" and not be highlighted.</p>	<p>Verify that the locking cylinders fully retract.</p> <p>Verify that the button now reads "PORT UNLOCKED" and is highlighted.</p> <p>Verify that the button now reads "LOCK PORT" and is not highlighted.</p>	<p>✓</p> <p>✓</p> <p>✓</p>		<i>PL</i>
20.	<p>Press the "LOCK PORT" button on the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-104A.</p> <p>The Entry/Exit Port locking cylinders should fully extend without erratic motion.</p> <p>The button which previously read "LOCK PORT" and was not highlighted should now read "PORT LOCKED" and be highlighted.</p> <p>The button which previously read "PORT UNLOCKED" and was highlighted should now read "UNLOCK PORT" and not be highlighted.</p>	<p>Verify that the locking cylinders fully extend.</p> <p>Verify that the button now reads "PORT LOCKED" and is highlighted.</p> <p>Verify that the button now reads "UNLOCK PORT" and is not highlighted.</p>	<p>✓</p> <p>✓</p> <p>✓</p>		<i>PL</i>

Step #	TEST PROCEDURE STEPS	EXPECTED OUTPUT	PASS	FAIL	WITNESS (initial)
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21.	Press the "UNLOCK PORT" button on the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-104A. The Entry/Exit Port locking cylinders should fully retract without erratic motion.	Verify that the locking cylinders fully retract.	✓		R/W
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Port Open/Close (Raise, Lower & Rotate)

22.	Press the "RAISE DOOR" button on the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-104A. The Entry/Exit Port door should raise vertically, via the three port door lifting cylinders, without erratic motion. The button which previously read "RAISE DOOR" and was not highlighted should now read "DOOR RAISED" and be highlighted. The button which previously read "DOOR LOWERED" and was highlighted should now read "LOWER DOOR" and not be highlighted.	Verify that port door raises without erratic motion. Verify that the button now reads "DOOR RAISED" and is highlighted. Verify that the button now reads "LOWER DOOR" and is not highlighted.	✓ ✓ ✓ ✓		R/W
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23.	Press the "LOWER DOOR" button on the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-104A. The Entry/Exit Port door should lower vertically, via the three port door lifting cylinders, without erratic motion. The button which previously read "LOWER DOOR" and was not highlighted should now read "DOOR LOWERED" and be highlighted. The button which previously read "DOOR RAISED" and was highlighted should now read "RAISE DOOR" and not be highlighted.	Verify that port door lowers. Verify that the button now reads "DOOR LOWERED" and is highlighted. Verify that the button now reads "RAISE DOOR" and is not highlighted.	✓ ✓ ✓ ✓		R/W
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Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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24.	<p>Press the "RAISE DOOR" button on the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-104A.</p> <p>The Entry/Exit Port door should raise vertically, via the three port door lifting cylinders, without erratic motion.</p>	<p>Verify that port door raises without erratic motion.</p>	✓		R/W
25.	<p>Press the "ROTATE PORT OPEN" button on the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-104A.</p> <p>The Entry/Exit Port door should rotate up, fully open without erratic motion.</p> <p>The button which previously read "ROTATE PORT OPEN" and was not highlighted should now read "PORT ROTATED OPEN" and be highlighted.</p> <p>The button which previously read "PORT ROTATED CLOSED" and was highlighted should now read "ROTATE PORT CLOSED" and not be highlighted.</p>	<p>Verify that port door rotates fully open without erratic motion.</p> <p>Verify that the button now reads "PORT ROTATED OPEN" and is highlighted.</p> <p>Verify that the button now reads "ROTATE PORT CLOSED" and is not highlighted.</p>	✓		R/W
26.	<p>Press the "ROTATE PORT CLOSED" button on the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-104A.</p> <p>The Entry/Exit Port door should rotate fully down without erratic motion.</p> <p>The button which previously read "ROTATE PORT CLOSED" and was not highlighted should now read "PORT ROTATED CLOSED" and be highlighted.</p> <p>The button which previously read "PORT ROTATED OPEN" and was highlighted should now read "ROTATE PORT OPEN" and not be highlighted.</p>	<p>Verify that port door rotates fully down without erratic motion.</p> <p>Verify that the button now reads "PORT ROTATED CLOSED" and is highlighted.</p> <p>Verify that the button now reads "ROTATE PORT OPEN" and is not highlighted.</p>	✓		R/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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27.	<p>Press the "LOWER DOOR" button on the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-104A.</p> <p>The Entry/Exit Port door should lower vertically, via the three port door lifting cylinders, without erratic motion.</p>	Verify that port door lowers without erratic motion.	✓		<i>RW</i>
28.	<p>Press the "LOCK PORT" button on the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-104A.</p> <p>The Entry/Exit Port locking cylinders should fully extend without erratic motion.</p>	Verify that the locking cylinders fully extend.	✓		<i>RW</i>
29.	<p>Press the "VENT SOLENOID ACTIVATED" button on the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-104A.</p> <p>The Entry/Exit Port 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.</p> <p>The button which previously read "VENT SOLENOIDS ACTIVATED" and was highlighted should now read "OPEN VENTS" and not be highlighted.</p>	<p>Verify that the Entry/Exit Port pressure vents are closed.</p> <p>Verify that the button now reads "OPEN VENTS" and is not highlighted.</p>	N/A		<i>RW 7/18/93</i>
Lid Detach					

#29 Not required

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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30.	<p>Press the "EXTEND LID DETACH" button on the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-104A.</p> <p>The Entry/Exit Port lid detach cylinder should fully extend without erratic motion.</p> <p>The button which previously read "EXTEND LID DETACH" and was not highlighted should now read "EXTEND SOLENOID ACTIVATED" and be highlighted.</p> <p>The button which previously read "RETRACT SOLENOID ACTIVATED" and was highlighted should now read "RETRACT LID DETACH" and not be highlighted.</p>	<p>Verify that the lid detach cylinder fully extends without erratic motion.</p> <p>Verify that the button now reads "EXTEND SOLENOID ACTIVATED" and is highlighted.</p> <p>Verify that the button now reads "RETRACT LID DETACH" and is not highlighted.</p>			
31.	<p>Press the "RETRACT LID DETACH" button on the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-104A.</p> <p>The Entry/Exit Port lid detach cylinder should fully retract without erratic motion.</p> <p>The button which previously read "RETRACT LID DETACH" and was not highlighted should now read "RETRACT SOLENOID ACTIVATED" and be highlighted.</p> <p>The button which previously read "EXTEND SOLENOID ACTIVATED" and was highlighted should now read "EXTEND LID DETACH" and not be highlighted.</p>	<p>Verify that the lid detach cylinder fully retracts without erratic motion.</p> <p>Verify that the button now reads "RETRACT SOLENOID ACTIVATED" and is highlighted.</p> <p>Verify that the button now reads "EXTEND LID DETACH" and is not highlighted.</p>			
32.	<p>Press the "MAINT MAIN MENU" button on the "DRUM ENTRY/EXIT PORT MAINTENANCE MENU" at OIU-12-104A.</p> <p>The "MAINTENANCE MAIN MENU" should be displayed at OIU-12-104A.</p>	<p>Verify that the "MAINTENANCE MAIN MENU" is displayed.</p>			

X # 30 & 31 see TE 360

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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Recommended ATP on 7/22/97 0630 RJW & MS

Drum Transfer Assembly Maintenance Menu Functions					
Upper Grab Operation					
33.	Press the "DRUM TRANSFER ASSEMBLY MAINTENANCE MENU" button on the "MAINTENANCE MAIN MENU" at OIU-12-104A. The "DRUM TRANSFER ASSEMBLY MAINTENANCE MENU" should be displayed at OIU-12-104A.	Verify that the "DRUM TRANSFER ASSEMBLY MAINTENANCE MENU" is displayed.	✓		RJW
34.	Press the "CLOSE UPPER GRAB" button on the "DRUM TRANSFER ASSEMBLY MAINTENANCE MENU" at OIU-12-104A until the Drum Entry Transfer Assembly upper grab arms fully close. The button which previously read "CLOSE UPPER GRAB" and was not highlighted should now read "UPPER GRAB IS CLOSED" and be highlighted. <i>RJW 7/22/97</i> The button which previously read "UPPER GRAB IS OPEN" and was highlighted should now read "OPEN UPPER GRAB" and not be highlighted. <i>RJW 7/22/97</i>	Verify that the upper grab arms fully close without erratic motion. Verify that the button now reads "UPPER GRAB IS CLOSED" and is highlighted. Verify that the button now reads "OPEN UPPER GRAB" and is not highlighted.	✓		RJW
35.	Press the "OPEN UPPER GRAB" button on the "DRUM TRANSFER ASSEMBLY MAINTENANCE MENU" at OIU-12-104A until the Drum Entry Transfer Assembly upper grab arms fully open. <i>RJW 7/22/97</i> The button which previously read "OPEN UPPER GRAB" and was not highlighted should now read "UPPER GRAB IS OPEN" and be highlighted. The button which previously read "UPPER GRAB IS CLOSED" and was highlighted should now read "CLOSE UPPER GRAB" and not be highlighted.	Verify that the upper grab arms fully open without erratic motion. Verify that the button now reads "UPPER GRAB IS OPEN" and is highlighted. Verify that the button now reads "CLOSE UPPER GRAB" and is not highlighted.	✓		RJW

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36.	<p>Press the "RAISE UPPER GRAB" button on the "DRUM TRANSFER ASSEMBLY MAINTENANCE MENU" at OIU-12-104A until the Drum Entry Transfer Assembly upper grab slide fully raises.</p> <p><i>Top grab raised indication</i> Message "UPPER GRAB RAISED" should be displayed on the "DRUM TRANSFER ASSEMBLY MAINTENANCE MENU".</p>	<p>Verify that the upper grab slide fully raises without erratic motion.</p> <p><i>indication</i> Verify that the proper message is displayed.</p>	✓		<i>PK</i>
37.	<p>Press the "LOWER UPPER GRAB" button on the "DRUM TRANSFER ASSEMBLY MAINTENANCE MENU" at OIU-12-104A until the Drum Entry Transfer Assembly upper grab slide fully lowers.</p> <p><i>Top grab lowered indication R/W 7/23/97</i> Message "UPPER GRAB LOWERED" should be displayed on the "DRUM TRANSFER ASSEMBLY MAINTENANCE MENU".</p>	<p>Verify that the upper grab slide fully lowers without erratic motion.</p> <p><i>indication</i> Verify that the proper message is displayed.</p>	✓		<i>PK</i>
Lower Grab Operation					
38.	<p>Press the "CLOSE LOWER GRAB" button on the "DRUM TRANSFER ASSEMBLY MAINTENANCE MENU" at OIU-12-104A until the Drum Entry Transfer Assembly ^{lower} upper grab arms fully close.</p> <p>The button which previously read "CLOSE LOWER GRAB" and was not highlighted should now read "LOWER GRAB IS CLOSED" and be highlighted.</p> <p><i>R/W 7/23/97</i></p> <p>The button which previously read "LOWER GRAB IS OPEN" and was highlighted should now read "OPEN LOWER GRAB" and not be highlighted.</p>	<p>Verify that the lower grab arms fully close without erratic motion.</p> <p>Verify that the button now reads "LOWER GRAB IS CLOSED" and is highlighted.</p> <p>Verify that the button now reads "OPEN LOWER GRAB" and is not highlighted.</p>	✓		<i>R/W</i>

*#37a Must first open transfer port door
R/W 7/23/97*

✓ PK

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39.	<p>Press the "OPEN LOWER GRAB" button on the "DRUM TRANSFER ASSEMBLY MAINTENANCE MENU" at OIU-12-104A until the Drum Entry Transfer Assembly upper grab arms fully open.</p> <p><i>lower</i> The button which previously read "OPEN LOWER GRAB" and was not highlighted should now read "LOWER GRAB IS OPEN" and be highlighted.</p> <p><i>R/W 9/23/97</i> The button which previously read "LOWER GRAB IS CLOSED" and was highlighted should now read "CLOSE LOWER GRAB" and not be highlighted.</p>	<p>Verify that the upper grab arms fully open without erratic motion.</p> <p>Verify that the button now reads "LOWER GRAB IS OPEN" and is highlighted.</p> <p>Verify that the button now reads "CLOSE LOWER GRAB" and is not highlighted.</p>	✓		<i>RF</i>
40.	<p>Press the "RAISE LOWER GRAB" button on the "DRUM TRANSFER ASSEMBLY MAINTENANCE MENU" at OIU-12-104A until the Drum Entry Transfer Assembly lower grab slide fully raises.</p> <p><i>Lower grab lowered indication</i> Message "LOWER GRAB RAISED" should be displayed on the "DRUM TRANSFER ASSEMBLY MAINTENANCE MENU".</p>	<p>Verify that the lower grab slide fully raises without erratic motion.</p> <p><i>R/W 9/23/97 indication</i> Verify that the proper message is displayed.</p>	✓		<i>RF</i>
41.	<p>Press the "LOWER LOWER GRAB" button on the "DRUM TRANSFER ASSEMBLY MAINTENANCE MENU" at OIU-12-104A until the Drum Entry Transfer Assembly lower grab slide fully lowers.</p> <p><i>lower grab lowered indication</i> Message "LOWER GRAB LOWERED" should be displayed on the "DRUM TRANSFER ASSEMBLY MAINTENANCE MENU".</p>	<p>Verify that the lower grab slide fully lowers without erratic motion.</p> <p><i>indication</i> Verify that the proper message is displayed.</p>	✓		<i>RF</i>
Combined Grabs Operation					

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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42.	<p>Press the "RAISE BOTH GRABS" button on the "DRUM TRANSFER ASSEMBLY MAINTENANCE MENU" at OIU-12-104A until the Drum Entry Transfer Assembly upper and lower grab slides fully raise.</p> <p><i>Indication</i> Message "UPPER GRAB RAISED" should be displayed on the "DRUM TRANSFER ASSEMBLY MAINTENANCE MENU".</p> <p><i>Indication</i> <i>R/W 7/27/97</i> Message "LOWER GRAB RAISED" should be displayed on the "DRUM TRANSFER ASSEMBLY MAINTENANCE MENU".</p>	<p>Verify that the both grab slides fully raise without erratic motion.</p> <p><i>indication</i> Verify that the proper messages are displayed.</p>	✓		<i>RV</i>
43.	<p>Press the "LOWER BOTH GRABS" button on the "DRUM TRANSFER ASSEMBLY MAINTENANCE MENU" at OIU-12-104A until the Drum Entry Transfer Assembly upper and lower grab slides fully lower.</p> <p><i>Indication</i> Message "UPPER GRAB LOWERED" should be displayed on the "DRUM TRANSFER ASSEMBLY MAINTENANCE MENU".</p> <p><i>Indication</i> <i>R/W 7/27/97</i> Message "LOWER GRAB LOWERED" should be displayed on the "DRUM TRANSFER ASSEMBLY MAINTENANCE MENU".</p>	<p>Verify that the both grab slides fully lower without erratic motion.</p> <p><i>indication</i> Verify that the proper messages are displayed.</p>	✓		<i>RV</i>
Sphincter Door Operation					
44.	<p>Press the "OPEN ISOLATION VALVE" button on the "DRUM TRANSFER ASSEMBLY MAINTENANCE MENU" at OIU-12-104A to open Isolation Solenoid Valve Solenoid (07-FEV-800G).</p> <p>The Isolation Solenoid Valve Solenoid (07-FEV-800G) should be energized.</p>	<p>Verify that the Isolation Valve Solenoid is energized.</p>	✓		<i>R/W</i>
45.	<p>Press and hold the "DEFLATE SPHINCTER SEAL" button on the "DRUM TRANSFER ASSEMBLY MAINTENANCE MENU" at OIU-12-104A until the Sphincter Door Seal completely deflates.</p>	<p>Verify that the Sphincter Door Seal completely deflates.</p>	✓		<i>RV</i>
46.	<p><i>PORT</i> <i>R/W 7/27/97</i> Press the "OPEN SPHINCTER DOOR" button on the "DRUM TRANSFER ASSEMBLY MAINTENANCE MENU" at OIU-12-104A.</p> <p>The Sphincter Door should open.</p>	<p>Verify that the Sphincter Door opens.</p>	✓ <i>R</i>		<i>R/W</i>

At 46 and 47 upper Grab arms must be above lowered position to open & close port

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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47.	<p>Press the "CLOSE SPHINCTER DOOR" button on the "DRUM TRANSFER ASSEMBLY MAINTENANCE MENU" at OIU-12-104A.</p> <p>The Sphincter Door should close. <i>R/W 7/22/97</i></p>	Verify that the Sphincter Door closes.	✓		<i>R/W</i>
48.	<p>Press and hold the "INFLATE SPHINCTER SEAL" button on the "DRUM TRANSFER ASSEMBLY MAINTENANCE MENU" at OIU-12-104A until the sphincter door seal completely inflates.</p> <p>The Sphincter Door Seal should completely inflate in approximately 10 seconds.</p>	Verify that the Sphincter Door Seal completely inflates.	✓		<i>R/W</i>
49.	<p>Press the "CLOSE ISOLATION VALVE" button on the "DRUM TRANSFER ASSEMBLY MAINTENANCE MENU" at OIU-12-104A to close Isolation Valve Solenoid (07-FEV-800G).</p> <p>The Isolation Solenoid Valve Solenoid (07-FEV-800G) should be de-energized and the Sphincter Door inflatable seal should remain closed.</p>	Verify that the Isolation Valve Solenoid is de-energized and the Sphincter Door inflatable seal remains closed.	<i>Pass</i> ✓	<i>✓</i> <i>R/W 2/23/97</i>	<i>R/W</i>
50.	<p>Press the "MAINT MAIN MENU" button on the "DRUM TRANSFER ASSEMBLY MAINTENANCE MENU" at OIU-12-104A.</p> <p>The "MAINTENANCE MAIN MENU" should be displayed at OIU-12-104A.</p>	Verify that the " MAINTENANCE MAIN MENU " is displayed.	✓		<i>R/W</i>

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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Miscellaneous Equipment Maintenance Menu

Hoist Pendant Lamp Test

51.	Press the "MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" button on the "MAINTENANCE MAIN MENU" at OIU-12-104A. The "MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" should be displayed at OIU-12-104A.	Verify that the The "MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" is displayed.	✓		RW
52.	Place the TRU Entry Glovebox Hoist Pendant (PC-07-006) in full view.	Verify that the Hoist Pendant is in full view.	✓		RW
53.	Examine the hoist pendant. At least one pendant lamp/indicator should not be illuminated.	Verify that at least one pendant lamp is not illuminated.	✓		RW
54.	Press and hold the "TEST PENDANT LAMPS" button on the "MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-104A. Every indicator lamp on Hoist Pendant (PC-07-006) should be illuminated.	Verify that every Hoist Pendant lamp is illuminated.	✓		RW
55.	Release the "TEST PENDANT LAMPS" button. Examine the hoist pendant. At least one pendant lamp should not be illuminated.	Verify that at least one pendant lamp is not illuminated.	✓		RW
20 PSI Valve Manifold Operation					
56.	Press the "TURN OFF 20 PSI AIR" button on the "MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-104A. The indicator on the 20 psi air regulator should steadily drop and eventually indicate that there is no pressure in the 20 psi line.	Verify that pressure has been removed from the 20 psi line.	✓		RW

Step	#	TEST PROCEDURE STEPS	EXPECTED OUTPUT	PASS	FAIL	WITNESS (initial)
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57.	Press the "TURN ON 20 PSI AIR" button on the "MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-104A.	The indicator on the 20 psi air regulator should steadily rise and eventually indicate that there is at least 20 psi pressure in the 20 psi line.	Verify that pressure has been restored to the 20 psi line.	✓		RLW
80 PSI Valve Manifold Operation						
58.	WARNING: All TRU Entry Glovebox (107-CB-07-301) equipment must be in the parked positions prior to removal of pressure from the 80 psi valve manifold.	Verify that all TRU Entry Glovebox equipment is parked.	✓			RLW
59.	Press the "TURN OFF 80 PSI AIR" button on the "MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-104A.	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.	✓		RLW
60.	Press the "TURN ON 80 PSI AIR" button on the "MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-104A.	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.	✓		RLW
Low Differential Pressure Warning Beacon Test Operation						
61.	WARNING: All appropriate personnel should be notified that the TRU Entry Glovebox Low Differential Pressure Warning Beacon will be tested.	Verify that the appropriate personnel have been notified that the TRU Entry Glovebox Low Differential Pressure Warning Beacon will be tested.	N/A			
62.	Press and hold the "TEST WARNING BEACON" button on the "MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-104A.	The TRU Entry Glovebox Low Differential Pressure Warning Beacon (07-PDA-303) should activate.	Verify that the Low Differential Pressure Warning Beacon is activated.			

#61-63 Function not indicated

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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63.	Release the "TEST WARNING BEACON" button on the "MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-104A. The TRU Entry Glovebox Low Differential Pressure Warning Beacon (07-PDA-303) should de-activate.	Verify that the Low Differential Pressure Warning Beacon is deactivated.			N/A A/W 7/18/11
Exhaust Bypass Valve Solenoid					
64.	Press the "OPEN BYPASS VALVE" button on the "MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-104A to energize Exhaust Bypass Valve Solenoid (07-FEV-305). The Exhaust Bypass Valve Solenoid (07-FEV-305) should be energized.	Verify that the Exhaust Bypass Valve Solenoid (07-FEV-305) is energized.	✓		A/W
65.	Press the "CLOSE BYPASS VALVE" button on the "MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-104A to de-energize Exhaust Bypass Valve Solenoid (07-FEV-305). The Exhaust Bypass Valve Solenoid (07-FEV-305) should be de-energized.	Verify that the Exhaust Bypass Valve Solenoid is de-energized.	✓		A/W
System Variables Menu Functions					
66.	Press the "SYSTEM VARIABLES MENU" button on the "MAINTENANCE MAIN MENU". The "SYSTEM VARIABLES MENU" should be displayed on OIU-12-104A.	Verify that the "SYSTEM VARIABLES MENU" is displayed on the OIU.	✓		A/W
67.	Press the "SET SCREEN CONTRAST" button on the "SYSTEM VARIABLES MENU" on the OIU. The "SET SCREEN CONTRAST" screen should be displayed on the OIU. A numeric keypad with "ENTER" key should be displayed to allow system values to be modified.	Verify that the "SET SCREEN CONTRAST" button has been pressed. Verify that the "SET SCREEN CONTRAST" screen is displayed. Verify that a numeric keypad with "ENTER" key is displayed.	✓		A/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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68.	<p>Using the keypad, set the System Screen Contrast to "3" and press the "ENTER" key.</p> <p><i>Press "Done" key QW 7/23/99</i></p> <p>The "SYSTEM VARIABLES MENU" should be displayed on the OIU.</p> <p>The value displayed on the "SET SCREEN CONTRAST" button should be "3".</p>	<p>Verify that the System Screen Contrast has been set to "3".</p> <p>Verify that the "SYSTEM VARIABLES MENU" is displayed.</p> <p>Verify that the "SET SYSTEM SCREEN CONTRAST" value is "3".</p>	✓		<i>QW</i>
69.	<p>Press the "SET SYSTEM DAY" button on the "SYSTEM VARIABLES MENU" on the OIU.</p> <p>The "SET SYSTEM DAY" screen should be displayed on the OIU.</p> <p>A numeric keypad with "ENTER" key should be displayed to allow system values to be modified.</p>	<p>Verify that the "SET SYSTEM DAY" button has been pressed.</p> <p>Verify that the "SET SYSTEM DAY" screen is displayed.</p> <p>Verify that a numeric keypad with "ENTER" key is displayed.</p>	✓		<i>QW</i>
70.	<p>Using the keypad, set the System Day to "3" and press the "ENTER" key.</p> <p><i>Press "Done" key QW 8/23/99</i></p> <p>The "SYSTEM VARIABLES MENU" should be displayed on the OIU.</p> <p>The value displayed on the "SET SYSTEM DAY" button should be "3".</p>	<p>Verify that the System Day has been set to "3".</p> <p>Verify that the "SYSTEM VARIABLES MENU" is displayed.</p> <p>Verify that the "SET SYSTEM DAY" value is "3".</p>	✓		<i>QW</i>

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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71.	<p>Press the "SET SYSTEM MONTH" button on the "SYSTEM VARIABLES MENU" on the OIU.</p> <p>The "SET SYSTEM MONTH" screen should be displayed on the OIU.</p> <p>A numeric keypad with "ENTER" key should be displayed to allow system values to be modified.</p>	<p>Verify that the "SET SYSTEM MONTH" button has been pressed.</p> <p>Verify that the "SET SYSTEM MONTH" screen is displayed.</p> <p>Verify that a numeric keypad with "ENTER" key is displayed.</p>	✓		<i>HW</i>
72.	<p>Using the keypad, set the System Month to "3" and press the "ENTER" key. <i>Press "DONE" key HW 1/27/99</i></p> <p>The "SYSTEM VARIABLES MENU" should be displayed on the OIU.</p> <p>The value displayed on the "SET SYSTEM MONTH" button should be "3".</p>	<p>Verify that the System Month has been set to "3".</p> <p>Verify that the "SYSTEM VARIABLES MENU" is displayed.</p> <p>Verify that the "SET SYSTEM MONTH" value is "3".</p>	✓		<i>HW</i>
73.	<p>Press the "SET SYSTEM YEAR" button on the "SYSTEM VARIABLES MENU" on the OIU.</p> <p>The "SET SYSTEM YEAR" screen should be displayed on the OIU.</p> <p>A numeric keypad with "ENTER" key should be displayed to allow system values to be modified.</p>	<p>Verify that the "SET SYSTEM YEAR" button has been pressed.</p> <p>Verify that the "SET SYSTEM YEAR" screen is displayed.</p> <p>Verify that a numeric keypad with "ENTER" key is displayed.</p>	✓		<i>HW</i>

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
74.	<p>Using the keypad, set the System Year to "3" and press the "ENTER" key. <i>Press "Done" key R/W 7/23/99</i> The "SYSTEM VARIABLES MENU" should be displayed on the OIU.</p> <p>The value displayed on the "SET SYSTEM YEAR" button should be "3".</p>	<p>Verify that the System Year has been set to "3".</p> <p>Verify that the "SYSTEM VARIABLES MENU" is displayed.</p> <p>Verify that the "SET SYSTEM YEAR" value is "3".</p>	✓		A/W
75.	<p>Press the "SET SYSTEM HOURS" button on the "SYSTEM VARIABLES MENU" on the OIU.</p> <p>The "SET SYSTEM HOURS" screen should be displayed on the OIU.</p> <p>A numeric keypad with "ENTER" key should be displayed to allow system values to be modified.</p>	<p>Verify that the "SET SYSTEM HOURS" button has been pressed.</p> <p>Verify that the "SET SYSTEM HOURS" screen is displayed.</p> <p>Verify that a numeric keypad with "ENTER" key is displayed.</p>	✓		R/W
76.	<p>Using the keypad, set the System Hours to "15" and press the "ENTER" key. <i>Press "Done" key R/W 7/23/99</i> The "SYSTEM VARIABLES MENU" should be displayed on the OIU.</p> <p>The value displayed on the "SET SYSTEM HOURS" button should be "15".</p> <p>NOTE: This value should represent 3 p.m. in the afternoon. If the value does not represent 3 p.m., then this step fails.</p>	<p>Verify that the System Hours have been set to "15".</p> <p>Verify that the "SYSTEM VARIABLES MENU" is displayed.</p> <p>Verify that the "SET SYSTEM HOURS" value is "15".</p>	✓		R/W
77.	<p>Press the "SET SYSTEM MINUTES" button on the "SYSTEM VARIABLES MENU" on the OIU.</p> <p>The "SET SYSTEM MINUTES" screen should be displayed on the OIU.</p> <p>A numeric keypad with "ENTER" key should be displayed to allow system values to be modified.</p>	<p>Verify that the "SET SYSTEM MINUTES" button has been pressed.</p> <p>Verify that the "SET SYSTEM MINUTES" screen is displayed.</p> <p>Verify that a numeric keypad with</p>	✓		R/W

Step	#	TEST PROCEDURE STEPS	EXPECTED OUTPUT	PASS	FAIL	WITNESS (Initial)
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78.	Using the keypad, set the System Minutes to "3" and press the "ENTER" key. <i>Press "Done" key 11/12/91</i>	The "SYSTEM VARIABLES MENU" should be displayed on the OIU.	Verify that the "SYSTEM VARIABLES MENU" is displayed. Verify that the initial "SET SYSTEM MINUTES" value is "3".	✓		<i>AW</i>
79.	Press the "SET SYSTEM SECONDS" button on the "SYSTEM VARIABLES MENU" on the OIU. The "SET SYSTEM SECONDS" screen should be displayed on the OIU. A numeric keypad with "ENTER" key should be displayed to allow system values to be modified.		Verify that the "SET SYSTEM SECONDS" button has been pressed. Verify that the "SET SYSTEM SECONDS" screen is displayed. Verify that a numeric keypad with "ENTER" key is displayed.	✓		<i>AW</i>
80.	Using the keypad, set the System Seconds to "3" and press the "ENTER" key. <i>Press "Done" key 11/12/91</i> The "SYSTEM VARIABLES MENU" should be displayed on the OIU. The value displayed on the "SET SYSTEM SECONDS" button should start at "3" and then rapidly advance (e.g., System Seconds will change each second).		Verify that the System Seconds have been set to "3". Verify that the "SYSTEM VARIABLES MENU" is displayed. Verify that the "SET SYSTEM SECONDS" initial value is "3".	✓		<i>AW</i>
81.	Press "RETURN TO MAINT. MAIN MENU" on the "SYSTEM VARIABLES MENU". The "MAINTENANCE MAIN MENU" should be displayed on the OIU.		Verify that the "MAINTENANCE MAIN MENU" is displayed on the OIU.	✓		<i>AW</i>

Test Case Shutdown

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS	FAIL	WITNESS (initial)
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82.	Return all TRU Entry Glovebox items to their parked, stable positions.	Verify that all TRU Entry Glovebox items are parked.	✓		<i>AP</i>
83.	At Data Management Pedestal (PC-07-104), turn the "AUTO MODE/MAINTENANCE MODE" keyed selector switch to "AUTOMATIC MODE". The "TRU ENTRY GLOVEBOX MAIN MENU" should be displayed on the OIU.	Verify that the keyswitch is positioned to "AUTOMATIC MODE". Verify that the "TRU ENTRY GLOVEBOX MAIN MENU" is displayed.	✓		<i>AP</i>
TEST CASE 13021A-86.02 COMPLETE					

TEST CASE 13021A-86.03 FULL AUTOMATIC CYCLE - DRUM ENTRY.....	2
Mate Overpack Drum (322 Liter/85 Gallon) to Entry/Exit Port DO-07-301	2
Move Drum to "Swab" Position	4
Close Entry/Exit Port (and Remove Overpack Drum).....	5
Move Drum to Sphincter Entry Port	6
Position Transfer Car at Entry Glovebox.....	7
Open Sphincter Entry Port and Deliver Drum to Transfer Car	8
Transfer Drum into Sphincter Position	9
Deliver Drum to Transfer Car	10

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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Refer Formed 7/30/09 0615 R/W & MS

TEST CASE 13021A-86.03 FULL AUTOMATIC CYCLE - DRUM ENTRY

Mate Overpack Drum (322 Liter/85 Gallon) to Entry/Exit Port DO-07-301

1.	Unforce all LCU 103 registers.	Verify that all LCU registers are unforced.	✓		R/W
2.	Use OIU-12-104B (TRU Sorting G.B. OIU) to return the Drum Transfer Car (107-TC-07-301) to the Relid Position.	Verify that the Transfer Car is not positioned at the Sphincter Entry Port.	✓		R/W
3.	Confirm that the "TRU ENTRY GLOVEBOX MAIN MENU" screen is displayed at OIU-12-104A. If a sub-menu screen is displayed, select the "MAIN MENU" menu choice to return to the "TRU ENTRY GLOVEBOX MAIN MENU".	Verify that the "TRU ENTRY GLOVEBOX MAIN MENU" screen is displayed at OIU-12-104A.	✓		R/W
4.	A "SYSTEM INITIALIZED" message should be displayed on the "TRU ENTRY GLOVEBOX MAIN MENU"	Verify that a "SYSTEM INITIALIZED" message is displayed.	✓		R/W
5.	Place a 208 liter (55 gallon) empty drum in the 322 liter (85 gallon) overpack drum. Do NOT add a band clamp or drum lid for the 322 liter (85 gallon) overpack drum.	Verify that the waste drum has been placed inside the overpack drum.	✓		R/W
6.	Place the overpack with waste drum on the TRU Entry Glovebox Entry/Exit Port Lift Table, (107-LT-09-202B). The drum should be placed at the AGV end of the Lift Table.	Verify that the drum has been placed on the Entry/Exit Port Lift Table.	✓		R/W
7.	The "AGV END" indicator (09-ZL-235A) on the Lift Table Control Pedestal (107-PC-09-202B) should be illuminated, indicating that a drum is positioned at the AGV end of the Lift Table.	Verify that the "AGV END" indicator (09-ZL-235A) is illuminated.	✓		R/W
8.	Force AGV status bit N32:61/12 to simulate drum dropoff to the PLC.	Verify that the AGV bit is forced.	✓		R/W
9.	Force Barcode match bit N50:70/2 to simulate the DMS input.	Verify that the Barcode bit is forced.	✓		R/W
10.	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-12-104A.	Verify that a "DRUM AT LIFT TABLE" message is displayed at OIU-12-104A.	✓		R/W
11.	Press the "OVERPACK ENTRY MENU" button from the "TRU ENTRY GLOVEBOX MAIN MENU" screen at OIU-12-104A.	Verify that the "OVERPACK ENTRY MENU" screen is displayed.	✓		R/W

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TRU ENTRY GLOVEBOX 301

* Step #1: MANIPULATOR PARK POSITIONS & PRESSURE DIFFERENTIAL VALVES ARE THE ONLY FORCES THAT EXIST. R/W 7/30/09
PS395A PS395B - Transfer Device Pressure Switch, ES 8/10 To Entry
forced on see TEE 150

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
12.	Press the "START DRUM ENTRY" button from the "OVERPACK ENTRY MENU" at OIU-12-104A.	Verify that the "START DRUM ENTRY" button has been pressed.	✓ ✓		RW RW
13.	The "DRUM ENTRY IN PROGRESS" message should be displayed at OIU-12-104A.	Verify that the "DRUM ENTRY IN PROGRESS" message is displayed.	✓ ✓		RW RW
14.	The PCS should energize the Lift Table conveyor motor forward (107-LT-09-202B/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.	✓ ✓		RW RW
15.	The "DRUM UNDER PORT" indicator at the Lift Table Local Control Pedestal (107-PC-09-202B) should be illuminated, indicating the a drum is centered under the glovebox port (107-DO-07-301).	Verify that the "DRUM UNDER PORT" indicator is illuminated.	✓ ✓		RW RW
16.	The PCS should then automatically energize the Lift Table motor (107-LT-09-202B/M1) to raise the drum to "Drum Centering" position.	Verify that the Lift Table raises the drum to the "Drum Centering" position.	✓ ✓		RW RW
17.	The "DRUM IN POSITION" indicator (09-ZL-235D) at the Lift Table Local Control Pedestal (107-PC- 09-202B) should be illuminated, indicating that the drum has been raised to the "Drum Centering" position.	Verify that the "DRUM IN POSITION" indicator is illuminated.	✓ ✓		RW RW
18.	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-12-104A.	Verify that the "DRUM ENTRY COMPLETE" message is displayed at OIU-12-104A.	✓ ✓		RW RW
19.	Press the "OPEN PORT" button from the currently displayed drum entry screen at OIU-12-104A.	Verify that the "OPEN PORT" button has been pressed.	✓ ✓		RW RW
20.	The PCS should display a "PORT OPENING" message at OIU-12-104A while the port is opening.	Verify that a "PORT OPENING " message is displayed.	✓ ✓		RW RW
21.	The PCS should automatically, in order, complete the following steps: 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 automatically performs the steps listed in the order provided.	✓ ✓		RW RW RW

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
22.	The PCS should automatically energize the Hoist Trolley motor (107-CR-07-301A/M1) (Trolley Traverse Drive) forward so that the trolley SLOWLY travels to, and is positioned over the 322 liter (85 gallon) Entry/Exit Port (107-DO-07-301).	Verify that the Hoist Trolley is centered over the Entry/Exit Port.	✓		R/W
23.	Because the port opening sequence is complete, the " PORT OPEN " message should be displayed at OIU-12-104A.	Verify that the " PORT OPEN " message is displayed at OIU-12-104A.	✓		R/W
Move Drum to "Swab" Position					
24.	The PCS should enable the Hoist/Trolley/Lifter Pendant (107-PC-07-006).	Verify that the pendant " ENABLED " indicator is illuminated.	✓		R/W
25.	Activate the Hoist/Trolley/Lifter pendant (107-PC-07-006) " LOWER " pushbutton 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 208 liter (55 gallon) drum.	✓		R/W
26.	Manually 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.	✓		R/W
27.	Activate the Hoist/Trolley/Lifter pendant 107-PC-07-006 " CLOSE " pushbutton as needed until the Drum Lifter is closed, securing the drum.	Verify that the Drum Lifter is closed, securing the drum.	✓		R/W
28.	The Hoist/Trolley/Lifter " CLOSED " indicator should be illuminated, indicating that the Drum Lifter is closed.	Verify that the " CLOSED " indicator is illuminated.		✓	R/W
29.	Activate the Hoist/Trolley/Lifter pendant (107-PC-07-006) " RAISE " pushbutton 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.	✓		R/W
30.	Activate the Hoist/Trolley/Lifter pendant (107-PC-07-006) " RAISE " pushbutton as needed until the Hoist is fully raised.	Verify that the Hoist is fully raised.	✓		R/W
31.	The Hoist " RAISED LIMIT " indicator on the Hoist/Trolley/Lifter pendant (107-PC-07-006) should be illuminated, indicating that the hoist is fully raised.	Verify that the " RAISED LIMIT " indicator is illuminated.	✓		R/W
32.	The PCS should disable the Hoist/Trolley/Lifter Pendant (107-PC-07-006).	Verify that the " Enabled " indicator is not illuminated.	✓		R/W
33.	Press the " MAIN MENU " button to return to the " TRU ENTRY GLOVEBOX MAIN MENU " and then press the " TROLLEY MENU " button.	Verify that the " TROLLEY MENU " screen is displayed.	✓		R/W

#28 Activating close pushbutton only removes air from open cylinder. Design change. R/W revised lifter, close switch will not activate until lifter is partially raised.

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see TE # 236

TRU ENTRY GLOVEBOX 301

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
34.	Press the "SWAB POSITION" button on the "TROLLEY MENU" at OIU-12-104A.	Verify that the "SWAB POSITION" button has been pressed.	✓		RIV
35.	The PCS should automatically energize the Hoist Trolley motor (107-CR-07-301A/M1) (Trolley Traverse Drive) forward so that the trolley SLOWLY travels to the "Swab" position.	Verify that the Hoist Trolley travels to, and is positioned at the "Swab" position.	✓		RIV
36.	The "MIDWAY" indicator on the Hoist/Trolley/Lifter pendant (107-PC-07-006) should be illuminated, indicating that the hoist trolley is located at the "Swab" position. <i>message - "Trolley at swab position"</i>	Verify that the "MIDWAY" indicator is illuminated.	✓		RIV
OVERPACK ENTRY MENU <i>Close Entry/Exit Port (and Remove Overpack Drum)</i>					
37.	Press the " MAIN MENU " button to return to the "TRU ENTRY GLOVEBOX MAIN MENU" and then press the "OVERPACK ENTRY MENU" button.	Verify that the "OVERPACK ENTRY MENU" screen is displayed.	✓		RIV
38.	The inner drum identifier should be displayed at OIU-12-104A. 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.	✓		RIV
39.	Press the "INNER DRUM ID VERIFIED" button on the "OVERPACK ENTRY MENU" screen at OIU-12-104A to acknowledge that the correct drum identifier is displayed.	Verify that the "INNER DRUM ID VERIFIED" button has been pressed.	✓		RIV
40.	Press the "CLOSE PORT" button from the "OVERPACK ENTRY MENU" screen at OIU-12-104A to begin the Entry/Exit Port closing sequence.	Verify that the "CLOSE PORT" button has been pressed. <i>IN 6</i>	✓		RIV
41.	The PCS should display a "PORT CLOSING" message at OIU-12-104A while the port is closing.	Verify that a "PORT CLOSING" message is displayed. <i>RIV 10/30/07</i>	✓		RIV
42.	The PCS should automatically, 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 automatically performs the steps listed in the order provided.	✓		RIV

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
43.	The PCS should display a "PORT CLOSED" message at OIU-12-104A after the port is closed.	Verify that a "PORT CLOSED" message is displayed.	✓		R/W
44.	Press the "START DRUM EXIT" button from the currently displayed drum entry menu at OIU-12-104A.	Verify that the "START DRUM EXIT" button has been pressed.	✓		R/W
45.	The "DRUM EXIT IN PROGRESS" message should be displayed at OIU-12-104A.	Verify that the "DRUM EXIT IN PROGRESS" message is displayed.	✓		R/W
46.	The PCS should automatically, in order, 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.	Verify that the PCS automatically performs the steps listed in the order provided.	✓		R/W
47.	Press the "DRUM READY FOR PICKUP" button on the "OVERPACK DRUM ENTRY MENU" at OIU-12-104A.	Verify that the "DRUM READY FOR PICKUP" button has been pressed.	✓		R/W
48.	The "DRUM EXIT COMPLETE" message should be displayed at OIU-12-104A.	Verify that the "DRUM EXIT COMPLETE" message is displayed.	✓		R/W
Move Drum to Sphinxter Entry Port					
49.	Press the "MAIN MENU" button to return to the "TRU ENTRY GLOVEBOX MAIN MENU" and then press the "TROLLEY MENU" button.	Verify that the "TROLLEY MENU" screen is displayed.	✓		R/W
50.	Press the "TRANSFER ASSEMBLY" button from the "TROLLEY MENU" to move the Hoist with Drum to the Sphinxter Entry Port position.	Verify that the "TRANSFER ASSEMBLY" button has been pressed.	✓		R/W
51.	The "DRUM TRANSFER IN PROGRESS" message should be displayed at OIU-12-104A.	Verify that the "DRUM TRANSFER IN PROGRESS" message is displayed.	✓		R/W
52.	The PCS should energize the Hoist Trolley motor (107-CR-07-301A/M1) (Trolley Traverse Drive) forward so that the Trolley (with drum) SLOWLY travels to, and is positioned over the Sphinxter Entry Port (107-DO-07-302).	Verify that the Hoist Trolley is centered over the Sphinxter Entry Port.	✓		R/W

48a Verify message "DRUM PICKUP IN PROGRESS"

✓ R/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
54.2	The PCS should close the Drum Transfer Assembly upper drum grab. Note: The sequence is interrupted at this time to allow Drum Lifter (107-DH-07-301) to be disconnected from the drum. The PCS should enable the Trolley/Hoist/Lifter Pendant 107-PC-07-006. ✓	Verify that the Drum Transfer Assembly upper drum grab closes. Verify that the Trolley/Hoist/Lifter Pendant 107-PC-07-006 is enabled.		✓	R/W
54.3	The "DRUM TRANSFER COMPLETE - DRUM AT UPPER GRAB" message should be displayed on the "TROLLEY MENU" at OIU-12-104A.	Verify that the "DRUM TRANSFER COMPLETE - DRUM AT UPPER GRAB" message is displayed.	✓		R/W
55.	Using the "LOWER" pushbutton on Pendant 107-PC-07-006, lower the hoist until sufficient slack in the hoist chain will allow Drum Lifter (107-DH-07-301) to be opened.	Visually verify that the hoist is lowered with sufficient slack in the hoist chain.	✓		R/W
56.	Using the "OPEN" pushbutton on Pendant 107-PC-07-006, open the Drum Lifter jaws. The "OPENED" indicator on the Hoist/Trolley/Lifter pendant (107-PC-07-006) should be illuminated, indicating that the Drum Lifter jaws are opened.	Visually verify that the Drum Lifter jaws are open. Verify that the "OPENED" indicator is illuminated.	✓		R/W
57.	Using the "RAISE" pushbutton on Pendant 107-PC-07-006, raise Drum Lifter (107-DH-07-301). The "RAISED LIMIT" indicator on the Hoist/Trolley/Lifter pendant (107-PC-07-006) should be illuminated, indicating that the Drum Lifter is fully raised.	Verify that the Drum Lifter is raised. Verify that the "RAISED LIMIT" indicator is illuminated.	✓		R/W
58.	The PCS should disable Trolley/Hoist/Lifter Pendant 107-PC-07-006. The "ENABLED" indicator on the Hoist/Trolley/Lifter pendant (107-PC-07-006) should be turned off, indicating that the pendant is disabled.	Verify that the "ENABLED" LED is turned off.	✓		R/W
Position Transfer Car at Entry Glovebox					
59.	At OIU-12-104B (TRU Sorting G.B. OIU): Press the "MAIN MENU" button to return to the "TRU SORTING G.B. MAIN MENU" and then press the "TRANSFER CAR MENU" button.	Verify that the "TRANSFER CAR MENU" is displayed at OIU-12-104B. 6A302 not in Auto		✓	R/W

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TRU ENTRY GLOVEBOX 301

54 a select Transfer MENU

54 b start aux HPU

54 c Press close upper grab From the Transfer menu

✓

✓

✓

R/W

R/W

R/W

Over

new 7/24/03

X

X see TE #205/241

54d Verify "Upper Lab closed" displayed on
Transfer Menu,

✓

R/V

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
60.	At OIU-12-104B (TRU Sorting G.B. OIU): Press the "ENTRY GLOVEBOX" button to move the Transfer Car (107-TC-07-301) to the TRU Entry Glovebox position. A "TRANSFER CAR MOVING TO ENTRY GLOVEBOX" message should be displayed while the Transfer Car is moving to the Entry position.	Verify that a "TRANSFER CAR MOVING TO ENTRY GLOVEBOX" message is displayed at OIU-12-104B. <i>6B302 not in auto</i>	✓	<i>AWH/04/03</i>	<i>R/V</i>
61.	When the Transfer Car reaches the Entry Glovebox Position A "TRANSFER CAR AT ENTRY GLOVEBOX" message should be displayed at OIU-12-104B. <i>Transfer Car at Entry position</i>	Verify that a "TRANSFER CAR AT ENTRY GLOVEBOX" message is displayed at OIU-12-104B. <i>6B302 not in auto</i>	✓	<i>AWH/04/03</i>	<i>R/V</i>
Open Sphincter Entry Port and Deliver Drum to Transfer Car					
62.	Press the "MAIN MENU" button to return to the "TRU ENTRY GLOVEBOX MAIN MENU" and then press the "TRANSFER ASSEMBLY MENU" button from the "TRU ENTRY G.B. MAIN MENU" at OIU-12-104A to display the "TRANSFER ASSEMBLY MENU".	Verify that the "TRANSFER ASSEMBLY MENU" screen is displayed.	✓		<i>R/V</i>
63.	Select "LOWER TO CAR" from "TRANSFER ASSEMBLY MENU" at OIU-12-104A. The PCS should deflate the sphincter door seal.	Verify that the "TRANSFER ASSEMBLY MENU" at OIU-12-104A is displayed. Verify that the sphincter door seal is deflated.	✓		<i>R/V</i>
64.	<i>ENG</i> "DRUM LOWER TO CAR SEQUENCE IN PROGRESS " message should be displayed at OIU-12-104A. <i>R/V 7/30/99</i> PCS should open Sphincter Door (107-DO-07-302).	Verify that the "DRUM LOWER TO CAR SEQUENCE IN PROGRESS " message is displayed at. Verify that Sphincter Door (107-DO-07-302) is open.	✓		<i>R/V</i>
65.	The PCS should lower the Drum Transfer Assembly Upper Slide Drive.	Verify that the Drum Transfer Assembly Upper Slide Drive is lowered.	✓		<i>R/V</i>
66.	PCS should lower Drum Transfer Assembly Upper Slide Drive and Lower Slide Drive.	Verify that the Drum Transfer Assembly Upper Slide Drive and Lower Slide Drive are lowered.	✓		<i>R/V</i>

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
67.	PCS should open the Drum Transfer Assembly lower drum grab. <i>DRAWN</i>	Verify that the Drum Transfer Assembly lower drum grab is open. <i>DRUM OPEN</i>	✓		<i>R/W</i>
68.	The "LOWER TO CAR SEQUENCE COMPLETE" message should be displayed at OIU-12-104A after the drum has been "Passed Through" the sphincter. <i>R/W 7/30/99</i> Any "previous" drum should be lowered onto the Transfer Car. Note: For the first drum processed, unless a "previous" drum has been loaded into the Sphincter Entry Port, this sequence is performed primarily to open the Sphincter Entry Port.	Verify that the "LOWER TO CAR SEQUENCE COMPLETE" message is displayed at OIU-12-104A after the drum has been "Passed Through" the sphincter. Verify that the "previous" drum (if present) is lowered onto the Transfer Car.	✓		<i>R/W</i>
69.	Position switch 07-ZS-305 should be activated, indicating that the "previous" drum (if present) is positioned on the Transfer Car. <i>no drum present position switch not activated 7/30/99</i>	Verify that position switch 07-ZS-305 is activated (if a "previous" drum is present).	✓		<i>R/W</i>
70.	Note: Normally the operator moves Drum Transfer Car (107-TC-07-301) to the Sorting Glovebox at this time. Remove the empty drum from the Transfer Car.	Verify that the empty waste drum has been removed.	✓		<i>R/W</i>
Transfer Drum into Sphincter Position <i>START</i>					
71.	Press the "HANDOVER" button from the "TRANSFER ASSEMBLY MENU" screen at OIU-12-104A. <i>R/W 7/30/99</i>	Verify that the "HANDOVER" button has been pressed.	✓		<i>R/W</i>
72.	The PCS should display the "DRUM HANDOVER SEQUENCE IN PROGRESS" message at OIU-12-104A. <i>R/W 7/30/99</i>	Verify that the "DRUM HANDOVER SEQUENCE IN PROGRESS" message is displayed.	✓		<i>R/W</i>
73.	The PCS should raise Drum Transfer Assembly (107-DH-07-302) Lower Slide Drive.	Verify that the Drum Transfer Assembly Lower Slide Drive is raised.	✓		<i>R/W</i>
74.	The PCS should lower the Drum Transfer Assembly Upper Slide Drive.	Verify that the Drum Transfer Assembly Upper Slide Drive is lowered.	✓		<i>R/W</i>
75.	The PCS should close the Drum Transfer Assembly lower drum grab.	Verify that the Drum Transfer Assembly lower drum grab is closed.	✓		<i>R/W</i>

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
76.	The PCS should open the Drum Transfer Assembly upper drum grab.	Verify that the Drum Transfer Assembly upper drum grab is open.	✓		R/W
77.	The PCS should raise the Drum Transfer Assembly Upper Slide Drive.	Verify that the Drum Transfer Assembly Upper Slide Drive is raised.	✓		R/W
78.	The PCS should lower the Drum Transfer Assembly Lower Slide Drive.	Verify that the Drum Transfer Assembly Lower Slide Drive is lowered.	✓		R/W
79.	The PCS should close the Sphincter Port Door.	Verify that the Sphincter Port Door is closed.	✓		R/W
80.	The PCS should inflate the Sphincter Door seal.	Verify that the Sphincter Door seal is inflated.	✓		R/W
81.	The " DRUM HANDOVER SEQUENCE COMPLETE " SEQUENCE message should be displayed at OIU-12-104A. <i>R/W 5/30/97</i> The drum should now be held in the "sphincter position".	Verify that the " DRUM HANDOVER SEQUENCE COMPLETE " SEQUENCE message is displayed. Verify that the drum is held in the "sphincter position".	✓		R/W
82.	Confirm that the "TRU ENTRY GLOVEBOX MAIN MENU" screen is displayed at OIU-12-104A. If a sub-menu screen is displayed, select the "MAIN MENU" menu choice to return to the "TRU ENTRY GLOVEBOX MAIN MENU".	Verify that the "TRU ENTRY GLOVEBOX MAIN MENU" screen is displayed.	✓		R/W
83.	Because all glovebox items should be initialized, OIU-12-104A should display a "SYSTEM INITIALIZED" message.	Verify that OIU-12-104A displays the "SYSTEM INITIALIZED" message.	✓		R/W
Deliver Drum to Transfer Car					
84.	Select "LOWER TO CAR" from "TRANSFER ASSEMBLY MENU" at OIU-12-104A. The PCS should deflate the sphincter door seal.	Verify that the "TRANSFER ASSEMBLY MENU" at OIU-12-104A is displayed. Verify that the sphincter door seal is deflated.	✓		R/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
85.	"DRUM LOWER TO CAR SEQUENCE IN PROGRESS" message should be displayed at OIU-12-104A. PCS should open Sphincter Door (107-DO-07-302).	Verify that the "DRUM LOWER TO CAR SEQUENCE IN PROGRESS" message is displayed at OIU-12-104A. Verify that Sphincter Door (107-DO-07-302) is open.	✓		R/W
86.	The PCS should lower the Drum Transfer Assembly Upper Slide Drive.	Verify that the Drum Transfer Assembly Upper Slide Drive is lowered.	✓		R/W
87.	PCS should lower Drum Transfer Assembly Upper Slide Drive and Lower Slide Drive.	Verify that the Drum Transfer Assembly Upper Slide Drive and Lower Slide Drive are lowered.	✓		R/W
88.	PCS should open the Drum Transfer Assembly lower drum grab.	Verify that the Drum Transfer Assembly lower drum grab is open.	✓		R/W
89.	The "LOWER TO CAR SEQUENCE COMPLETE" message should be displayed at OIU-12-104A after the drum has been "Passed Through" the sphincter. The drum should be lowered onto the Transfer Car.	Verify that the "LOWER TO CAR SEQUENCE COMPLETE" message is displayed after the drum has been "Passed Through" the sphincter. Verify that the drum is lowered onto the Transfer Car.	✓		R/W
90.	Position switch 07-ZS-305 should be activated, indicating that the drum is positioned on the Transfer Car.	Verify that position switch 07-ZS-305 is activated.	✓		R/W
91.	Note: Normally the operator moves Drum Transfer Car (107-TC-07-301) to the Sorting Glovebox at this time. Remove the empty drum from the Transfer Car.	Verify that the empty waste drum has been removed.	✓		R/W
92.	Confirm that the "TRU ENTRY GLOVEBOX MAIN MENU" screen is displayed at OIU-12-104A. If a sub-menu screen is displayed, select the "MAIN MENU" menu choice to return to the "TRU ENTRY GLOVEBOX MAIN MENU".	Verify that the "TRU ENTRY GLOVEBOX MAIN MENU" screen is displayed.	✓		R/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATP-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
93.	Because all glovebox items should be initialized, OIU-12-104A should display a "SYSTEM INITIALIZED" message.	Verify that OIU-12-104A displays the "SYSTEM INITIALIZED" message.	✓		R/W ✓
TEST CASE 13021A-86.03 COMPLETE					

TEST CASE 13021A-86.04 - TRU ENTRY/EXIT PORT 301 LIFT TABLE 202B INTERLOCKS & ALARMS	2
Test Case Setup.....	2
Lift Table Functions	2
Attempt To Open Port Without Drum Present Interlock.....	2
"No Drum at Lift Table" Interlock.....	3
Lift Table "Down Overtravel" Alarm	4
Lift Table "Up Overtravel" Alarm	5
Lift Table "Rope Switch Pulled" Alarm	5
Lift Table "Conveyor Forward Failed" Alarm	6
"Drum Centering Device Extended Lift Table Raise" Interlock.....	7
"Drum Under Glovebox Port Lift Table Raise" Interlock.....	9
"Lift Table (202B) Failed to Raise" Alarm	9
"Lift Table (202B) Failed to Lower" Alarm	11
"Lift Table (202B) Conveyor Reverse Failed" Alarm.....	11
"Lift Table (202B) Reverse" Interlock.....	11
"Servo Motor Power Fail - Rehome (202B)" Alarm.....	11

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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TEST CASE 13021A-86.04 - TRU ENTRY/EXIT PORT 301 LIFT TABLE 202B INTERLOCKS & ALARMS					
Test Case Setup					
1. 32q N/w N/A	Force LCU 103 registers ZSO812A and ZSO812B to "not activated" to simulate the DRUM CENTERING DEVICE extended condition. Record the forced register status below: <div> <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZSO812A <u>0</u> <u>I: 30/00</u> ZSO812B <u>0</u> <u>I: 30/01</u> </div>	Verify that registers ZSO812A and ZSO812B are forced "not activated".	✓		R/V
2.	Position the overpack and empty 208 liter (55 gallon) drums near the TRU Entry glovebox lift table. 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/V
3.	Using the Lift Table Local Control Pedestal (PC-09-202B) position the Lift Table (LT-09-202B) above AGV height.	Verify that the lift table is positioned above AGV height.	✓		R/V
Lift Table Functions					
Attempt To Open Port Without Drum Present Interlock					
4.	Press the "OVERPACK ENTRY MENU" button from the "TRU ENTRY GLOVEBOX MAIN MENU" screen at OIU-12-104A. NOTE: The selection of this menu should cause the PCS to check the status of position switch 09-ZS-235E to determine if an empty drum is present at the AGV end of the Lift Table and check the status of position switch 09-ZS-235G to determine if the Lift Table is at AGV height.	Verify that the "OVERPACK ENTRY MAIN MENU" screen is displayed.	✓		R/V

step #1 out of sequence

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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5.	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 "OVERPACK ENTRY MAIN MENU" at OIU-12-104A.	Verify that the "NO DRUM AT LIFT TABLE" message is displayed.	✓		R/W
6.	Press the "OPEN & DELETE " button from the "OVERPACK ENTRY MAIN MENU" at OIU-12-104A. <i>R/W 9/30/97</i> Because a drum is not mated to the port, port DO-07-301 should not open.	Verify that the port does not open.	✓		R/W

"No Drum at Lift Table" Interlock

7.	Manually activate (e.g., "Break the beam") the "Drum at End of Conveyor" position switch (09-ZS-235E) to simulate placing the 85 gallon drum on the Lift Table. Take appropriate actions so that this switch remains activated. The "AGV END" indicator (09-ZL-235A) on the Lift Table Control Pedestal (107-PC-09-202B) should be illuminated, indicating that a drum is positioned at the AGV end of the Lift Table.	Verify that the "Drum at End of Conveyor" position switch (09-ZS-235E) is activated. Verify that the "AGV END" indicator (09-ZL-235A) is illuminated.	✓		R/W
8.	Because a drum is present (or simulated) but the AGV Status Bit & the Barcode Bit are not true, the OIU-12-104A should display a "NO DRUM AT LIFT TABLE" message on the "OVERPACK ENTRY MAIN MENU" screen at OIU-12-104A.	Verify that OIU-12-104A displays the "NO DRUM AT LIFT TABLE" message.	✓		R/W
9.	Force AGV status bit N32:61/12 to simulate drum dropoff to the PLC.	Verify that the AGV bit is forced.	✓		R/W
10.	Force Barcode bit N50:70/2 to simulate the DMS input.	Verify that the barcode bit is forced.	✓		R/W
11.	Because a drum is present (simulated) and the Lift Table is at AGV height, OIU-12-104A should display a "DRUM AT LIFT TABLE" message.	Verify that OIU-12-104A displays the "DRUM AT LIFT TABLE" message.	✓		R/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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Lift Table "Down Overtravel" Alarm					
12.	Confirm that the ADrum at End of Conveyor@ position switch (09-ZS-235E) remains manually activated to simulate placing the 85 gallon drum on the Lift Table. If this switch is not activated, manually activate it *e.g. ABreak the Beam@).	Verify that the ADrum at End of Conveyor@ position switch is activated.			
	The AAGV END@ indicator (09-ZL-235A) on the Lift Table Control Pedestal should remain illuminated, indicating that a drum is positioned at the AGV end of the Lift Table (simulated).	Verify that the AAGV END@ indicator is illuminated.			<i>N/A</i> <i>R/W 9/30/97</i>
13.	Manually activate and release the "Down Overtravel" position switch (09-ZS-235C) to simulate that Lift Table (107-LT-09-202B) has been lowered below its normal travel range. The " DOWN OVERTRAVEL " status indicator (09-ZL-235C) at the Lift Table Local Control Pedestal (107-PC-09-202B) should be illuminated. A " Lift Table (202B) Down Overtravel " alarm should be generated.	Verify that the " Down Overtravel " position switch is activated and released. Verify that the " DOWN OVERTRAVEL " indicator remains illuminated. Verify that the proper alarm is generated.	✓		<i>R/W</i>
14.	Review the "OVERPACK ENTRY MAIN MENU" status. A flashing " SEQUENCE FAILED " message should be displayed and the " ALARMS " button should be flashing.	Verify that a flashing " SEQUENCE FAILED " message is displayed and the " ALARMS " button is flashing.	✓		<i>R/W</i>
15.	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the " Lift Table (202B) Down Overtravel " alarm.	Verify that the alarm has been acknowledged.	✓		<i>R/W</i>
16.	Manually reset the "Down Overtravel" position switch (09-ZS-235C) to indicate that the Lift Table (LT-09-202B) is positioned within its normal vertical travel range.	Verify that the "Down Overtravel" position switch has been reset.	✓		<i>R/W</i>
17.	Resetting the "Down Overtravel" position switch (09-ZS-235C) should cause the "Lift Table (202B) Down Overtravel" alarm to clear.	Verify that the "Lift Table (202B) Down Overtravel" alarm is cleared.	✓		<i>R/W</i>
18.	The " DOWN OVERTRAVEL " indicator at the Lift Table Local Control Pedestal should not be illuminated.	Verify that the " DOWN OVERTRAVEL " indicator is not illuminated.	✓		<i>R/W</i>

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
19.	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "OVERPACK ENTRY MAIN MENU" at OIU-12-104A.	Verify that the "OVERPACK ENTRY MAIN MENU" is displayed.	✓		R/W
Lift Table "Up Overtravel" Alarm					
20.	Manually activate the "Up Overtravel" position switch (09-ZS-235D) to simulate that Lift Table (LT-09-202B) has been raised above its normal travel range.	Verify that the "Up Overtravel" position switch is activated.	✓		R/W
21.	This should cause the "Lift Table (202B) Up Overtravel" alarm to be generated.	Verify that the proper alarm is displayed.	✓		R/W
22.	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Lift Table (202B) Up Overtravel" alarm.	Verify that the "Lift Table (202B) Up Overtravel" alarm has been acknowledged.	✓		R/W
23.	Manually reset the "Up Overtravel" position switch (09-ZS-235D) to indicate that the Lift Table (LT-09-202B) is positioned within its normal vertical travel range.	Verify that the "Up Overtravel" position switch has been reset.	✓		R/W
24.	Resetting the "Up Overtravel" position switch (09-ZS-235D) should cause the "Lift Table (202B) Up Overtravel" alarm to clear.	Verify that the "Lift Table (202B) Up Overtravel" alarm is cleared.	✓		R/W
25.	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen return to the "OVERPACK ENTRY MAIN MENU" at OIU-12-104A.	Verify that the "OVERPACK ENTRY MAIN MENU" is displayed.	✓		R/W
Lift Table "Rope Switch Pulled" Alarm					
26.	Pull the Lift Table (107-LT-09-202B) Rope Switch to disable all Lift Table operations. The Lift Table Local Control Pedestal pushbuttons should have no effect on the Lift Table movement.	Verify that the rope switch has been pulled. Verify that pressing the Lift Table Local Control Pedestal pushbuttons have no effect on the Lift Table movement.	✓		R/W
27.	Review the "OVERPACK ENTRY MAIN MENU" status. A flashing "SEQUENCE FAILED" message should be displayed and the "ALARMS" button should be flashing.	Verify that a flashing "SEQUENCE FAILED" message is displayed and the "ALARMS" button is flashing.	✓		R/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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28.	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Lift Table (202B) Rope Switch Pulled" alarm.	Verify that the alarm has been acknowledged.	✓		R/W
29.	Turn the Lift Table Pedestal 107-PC-09-202B M/O/N switch 09-HS-235A to the "MAINT." position. Press all pushbuttons on the Lift Table Local Control Pedestal (107-PC-09-202B) in both "Normal" and "Maintenance" modes. Because the rope switch has been pulled, pressing the buttons should have no effect on the Lift Table.	Verify that pressing the Lift Table Local Control Pedestal pushbuttons has no effect on the Lift Table.	✓		R/W
30.	Manually reset the Lift Table Rope Switch (09-XS-235A/B) to allow normal Lift Table operation. Resetting the Lift Table Rope switch (09-XS-235A/B) should cause the "Lift Table (202B) Rope Switch Pulled" alarm to clear.	Verify that the Lift Table Rope Switches have been reset. Verify that the "Lift Table (202B) Rope Switch Pulled" alarm is cleared.	✓		R/W
31.	Return the Lift Table Pedestal 107-PC-09-202B M/O/N switch 09-HS-235A to the "NORMAL" position to allow the PCS to control the Lift Table.	Verify that the M/O/N switch is switched to the "NORMAL" position.	✓		R/W
32.	Press the "RETURN TO CURRENT SCREEN" button to return to the "OVERPACK ENTRY MAIN MENU" at OIU-12-104A	Verify that the "OVERPACK ENTRY MAIN MENU" is displayed.	✓		R/W

Lift Table "Conveyor Forward Failed" Alarm

33.	Press the "START DRUM ENTRY" button from the "OVERPACK ENTRY MAIN MENU" at OIU-12-104A. Pressing this button should cause the PCS to energize the Lift Table conveyor motor forward (107-LT-09-202B/M2). The "DRUM ENTRY IN PROGRESS..." message should be displayed at OIU-12-104A.	Verify that the Lift Table conveyor is energized forward. Verify that the "DRUM ENTRY IN PROGRESS..." message is displayed at OIU-12-104A.	✓		R/W
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32a see pg 4-2

32b Press "START DRUM ENTRY"

32c verify Drum Entry sequence does not start

32d verify alarm "Port (301) Centering Device Abnormal Position"

TEST PROCEDURE 13021A-86

32e unforce 250812A and 250812A

TRU ENTRY GLOVEBOX 301

✓ R/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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34.	Because a drum has not been placed on the Lift Table, the "Drum Under Glovebox Port" (09-ZS-235F) switch will not be activated within the specified time period. This timed condition should cause the Lift Table conveyor motor (107-LT-09-202B/M2) to stop and should cause a "Lift Table (202B) Conveyor Forward Failed" alarm to be generated.	Verify that the Lift Table roller conveyors have stopped and remain stopped.	✓		R/W
35.	Wait 30 seconds. Review the "OVERPACK ENTRY MAIN MENU" status. A flashing "SEQUENCE FAILED" message should be displayed and the "ALARMS" button should be flashing.	Verify that a flashing "SEQUENCE FAILED" message is displayed and the "ALARMS" button is flashing.	✓		R/W
36.	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Lift Table (202B) Conveyor Forward Failed" alarm.	Verify that the alarm has been acknowledged.	✓		R/W
37.	Manually activate (e.g., "Break the beam") the "Drum Under Port" position switch (09-ZS-235F) to simulate centering the drum beneath the Entry/Exit Port (107-DO-07-301). This switch should remain activated. The "GLOVEBOX END" indicator at the Lift Table Local Control Pedestal (107-PC-09-202B) should be illuminated, indicating the a drum (simulated) is centered under the port.	Verify that the switch is activated. Verify that the "GLOVEBOX END" indicator is illuminated.	✓		R/W
38.	Manually activating the "Drum Under Port" position switch should cause the "Lift Table (202B) Conveyor For. Failed" alarm to clear.	Verify that the "Lift Table (202B) Conveyor For. Failed" alarm is cleared.	✓		R/W
39.	Press the "RETURN TO CURRENT SCREEN" button to return to the "OVERPACK ENTRY MAIN MENU" at OIU-12-104A.	Verify that the "OVERPACK ENTRY MAIN MENU" is displayed.	✓		R/W

"Drum Centering Device Extended Lift Table Raise" Interlock

40. 39 New 9/30/07	Because registers ZSO812A and ZSO812B are forced "not activated", indicating that the Drum Centering Device is extended, the Lift Table should not raise to the "Drum Centering" position. Wait 30 seconds.	Verify that the Lift Table does not raise to the "Drum Centering" position during the 30 second waiting period.	✓		R/W
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36a Force ZSO 812A and ZSO 812B not activated

✓ R/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)						
41. 24 R/W 7/16/89	<p>Unforce register ZSO812A. Record the unforced register status below:</p> <p>Unforced ZSO812A Register Status: <u>1</u></p> <p>Because register ZSO812B remains forced "not activated", indicating that the Drum Centering Device is extended, the Lift Table should not raise to the "Drum Centering" position.</p>	<p>Verify that Drum Centering Device position switch 07-ZSO-812A is activated.</p> <p>Verify that the Lift Table does not raise to the "Drum Centering" position during the waiting period.</p>	✓		R/W						
42.	<p>Force register ZSO812A "not activated" "again" to simulate the "Drum Centering Device Extended" condition. Record the forced register status below:</p> <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>ZSO812A</td> <td><u>0</u></td> <td><u>I: 30\00</u></td> </tr> </table>	<u>Register</u>	<u>Forced Status</u>	<u>Method of Confirmation</u>	ZSO812A	<u>0</u>	<u>I: 30\00</u>	<p>Verify that register ZSO812A is forced activated.</p>	✓		R/W
<u>Register</u>	<u>Forced Status</u>	<u>Method of Confirmation</u>									
ZSO812A	<u>0</u>	<u>I: 30\00</u>									
43.	<p>Unforce register ZSO812B. Record the unforced register status below:</p> <p>Unforced ZSO812B Status: <u>1</u></p>	<p>Verify that register ZSO812B is unforced.</p>	✓		R/W						
44.	<p>Because register ZSO812A remains forced "not activated", indicating that the Drum Centering Device is extended, the Lift Table should not raise to the "Drum Centering" position.</p> <p>Wait 30 seconds.</p>	<p>Verify that the Lift Table does not raise to the "Drum Centering" position during the waiting period.</p>	✓		R/W						
45.	<p>Remove the manual activation (e.g., "Don't break the beam") of the "Drum Under Glovebox Port" position switch (09-ZS-235F).</p> <p>Because a drum is not present on the Lift Table, the "DRUM UNDER PORT" indicator (09-ZL-235B) on the Lift Table Control Pedestal (107-PC-09-202B) should not be illuminated.</p>	<p>Verify that the "Drum Under Glovebox Port" position switch is not activated.</p> <p>Verify that the "DRUM UNDER PORT" indicator is not illuminated.</p>	✓		R/W						
46.	<p>Unforce register ZSO812A. Record the unforced register status below:</p> <p>Unforced ZSO812A Status: <u>1</u></p>	<p>Verify that register ZSO812A is unforced.</p>	✓		R/W						

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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"Drum Under Glovebox Port Lift Table Raise" Interlock					
47.	Because a drum is not centered beneath the port, the Lift Table should not raise to the "Drum Centering" position. Wait 30 seconds.	Verify that the Lift Table does not raise to the "Drum Centering" position during the waiting period.	✓		R/W
48.	Manually activate (e.g., "Break the beam") the "Drum Under Glovebox Port" position switch (09-ZS-235F) to simulate centering the 85 gallon drum beneath the Entry/Exit Port. This switch should remain activated.	Verify that the "Drum Under Glovebox Port" position switch is manually activated.	✓		R/W
49.	The "DRUM UNDER PORT" indicator at the Lift Table Local Control Pedestal (PC-09-202B) should be illuminated, indicating the a drum (simulated) is centered under the glovebox port.	Verify that the "DRUM UNDER PORT" indicator is illuminated.	✓		R/W
50.	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
51.	The "DRUM IN POSITION" indicator at the Lift Table Local Control Pedestal (PC-09-202B) should be illuminated, indicating the Lift Table has raised to "Drum Centering" height.	Verify that the "DRUM IN POSITION" indicator is illuminated.	✓		R/W
52.	The "DRUM ENTRY COMPLETE" message should be displayed on the "OVERPACK ENTRY MAIN MENU" at OIU-12-104A.	Verify that the "DRUM ENTRY COMPLETE" message is displayed.	✓		R/W
"Lift Table (202B) Failed to Raise" Alarm					
53.	Press the "OPEN PORT" button from the "OVERPACK ENTRY MENU" at OIU-12-104A.	Verify that the "OPEN PORT" button has been pressed.	✓		R/W
54.	The "PORT OPENING..." message should be displayed on the "OVERPACK ENTRY MAIN MENU" at OIU-12-104A.	Verify that the "PORT OPENING..." message is displayed.	✓		R/W
55.	The PCS should energize and hold solenoid valve 07-FEV-303 to extend the drum centering clamps around the drum.	Verify that the drum centering clamps extend.	✓		R/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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56.	The PCS should cause the lift table to raise at slow speed until the "Lid in Position" switch (07-ZS-811) is activated. (e.g., Drum is not present, so switch will not be activated).	Verify that the lift table raises slowly.	✓		R/W
57.	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 (202B) Fails to Raise" alarm should be generated.	Verify that the lift table has stopped raising.	✓		R/W
58.	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Lift Table (202B) Fails to Raise" alarm.	Verify that the "Lift Table (202B) Fails to Raise" alarm has been acknowledged.	✓		R/W
59.	Place the TRU Entry Glovebox in "Maintenance" mode.	Verify that the TRU Entry Glovebox has been placed in "Maintenance" mode.	✓		R/W
60.	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
61.	Press the Lift Table "DOWN" pushbutton at the Lift Table local control pedestal (PC-09-202B) to until the Lift Table has lowered to AGV Height.	Verify that the Lift Table is at AGV height.	✓		R/W
62.	The Lift Table at "AGV LOAD HEIGHT" indicator (09-ZL-235E) should be illuminated.	Verify that the "AGV LOAD HEIGHT" indicator is illuminated.	✓		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-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
64.	Place the TRU Entry Glovebox in "Automatic" mode to allow the TRU Entry glovebox to re-initialize.	Verify that the TRU Entry Glovebox has been placed in "Automatic" mode	✓		R/W
65.	The "TRU ENTRY GLOVEBOX MAIN MENU" should be displayed at OIU-12-104A.	Verify that the "TRU ENTRY GLOVEBOX MAIN MENU" is displayed.	✓		R/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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66.	Because all glovebox initialization conditions should be satisfied, the "SYSTEM INITIALIZED" message should be displayed on the "TRU ENTRY GLOVEBOX MAIN MENU" at OIU-12-104A.	Verify that the "SYSTEM INITIALIZED" message is displayed.	✓		R/W
"Lift Table (202B) Failed to Lower" Alarm					
Note: See Test Case 86.07					
"Lift Table (202B) Conveyor Reverse Failed" Alarm					
Note: See Test Case 86.07					
"Lift Table (202B) Reverse" Interlock					
Note: See Test Case 86.07					
"Servo Motor Power Fail - Rehome (202B)" Alarm					
67.	Place Lift Table LT-202B in Maintenance mode.	Verify that the Lift Table is in Maintenance mode.	✓		R/W
68.	Using the " LOWER " button on the Lift Table Control Pedestal, place the Lift Table below AGV height. <i>20.15" R/W 12/20/99</i> The " AGV HEIGHT " indicator on the Control Pedestal should not be illuminated.	Verify that the " AGV HEIGHT " indicator on the Control Pedestal is not illuminated.	✓		R/W
69.	Place Lift Table LT-202B in Normal mode.	Verify that the Lift Table is in Normal mode.	✓		R/W
70.	At DMS Pedestal TE-12-104, place the TRU Entry/Exit Glovebox in Maintenance mode.	Verify that the TRU Entry/Exit Glovebox is in Maintenance mode.	✓		R/W
71.	Display the "MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" on OIU-104A.	Verify that the "MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" is displayed.	✓		R/W
72.	Press " REHOME LIFT TABLE LT-09-202B ". The Lift Table Servo should move the Lift Table to AGV Height and stop. The " AGV HEIGHT " indicator on the Control Pedestal should be illuminated.	Verify that the " AGV HEIGHT " indicator on the Control Pedestal is illuminated.	✓		R/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
73.	At DMS Pedestal TE-12-104, place the TRU Entry/Exit Glovebox in Automatic mode.	Verify that the TRU Entry/Exit Glovebox is in Automatic mode.	✓		R/W ✓
TEST CASE 13021A-86.04 COMPLETE					

TEST CASE 13021A-86.05 - MATE DRUM TO TRU ENTRY/EXIT PORT 301 - INTERLOCKS/ALARMS	2
Drum Entry Sequence.....	2
"Loss of Vacuum on Lid" Alarm	4
"Door In Position" and "Door Rotated" Interlocks	6
"Port Failed to Open" Alarm	7
"Hoist Not Raised" Interlock.....	8
"Trolley Failed to Reach Entry" Alarm	8

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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TEST CASE 13021A-86.05 - MATE DRUM TO TRU ENTRY/EXIT PORT 301 - INTERLOCKS/ALARMS

Drum Entry Sequence

1.	CAUTION: The following sequence of test procedure steps involve automatic port door opening, controlled by LCU 103 (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 remaining test procedure steps in this test case are carefully reviewed prior to completing this test case.	✓		R/V
2.	Force register ZS803B to indicate that the "Drum Door in Position" switch 07-ZS-803B is "not activated". Record the forced status of this register below: <div> <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS803B 0 I </div>	Verify that register ZS803B is forced to indicate that switch 07-ZS-803B is "not activated".		N/A	
3.	Force register ZSO801 to indicate that the "Drum Port Rotated" position switch 07-ZSO-801 is "not activated". Record the forced status of this register below: <div> <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZSO801 0 I:21/04 </div>	Verify that register ZSO801 is forced to indicate that the "Drum Port Rotated" position switch 07-ZSO-801 is "not activated".	✓		R/V
4.	Force register PS803 to indicate that the AVacuum Switch@ 07-PS-803 is "not activated". Record the forced status of this register below: <div> <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> PS803 0 I 21/01 </div>	Verify that register PS803 is forced to indicate that vacuum switch 07-PS-803 is "not activated".	✓		R/V

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
5.	<p>60 R/W 7/30/93</p> <p>Change register T4:51 from #5 sec to 2 sec to indicate that the Hoist Trolley has not reached the Entry/Exit Port position in the required time. Record the forced status of this register below:</p> <p><u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u></p> <p>T4:51 <u>2</u> <u>T 4:51</u></p>	Verify that register T4:51 is changed to 2 sec".	✓		R/W
6.	<p>R/W 7/30/93</p> <p>Force register ZS802C "not activated" to indicate that the Hoist is not fully raised. Record the forced register status below:</p> <p><u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u></p> <p>ZS802C <u>.</u> <u>I: 17)00</u></p>	<p>Verify that register ZS802C is forced not activated.</p> <p>R/W 7/30/93</p>	✓		R/W
7.	Place the 322 liter (85 gallon) overpack drum without band clamp containing the empty 55 gallon drum with band clamp on the TRU Entry Glovebox Entry/Exit Port Lift Table, (107-LT-09-202B). 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.	✓		R/W
8.	The "AGV END" indicator (09-ZL-235A) on the Lift Table Control Pedestal (107-PC-09-202B) should be illuminated, indicating that a drum is positioned at the AGV end of the Lift Table.	Verify that the "AGV END" indicator (09-ZL-235A) is illuminated.	✓		R/W
9.	Force AGV status bit N32:61/12 True to simulate drum dropoff to the PLC.	Verify that the AGV bit is forced True.	✓		R/W
10.	Force Barcode match bit N50:70/2 True to simulate the DMS input.	Verify that the Barcode bit is forced True.	✓		R/W
11.	Display the "OVERPACK ENTRY MENU" screen at OIU-12-104A.	Verify that the "OVERPACK ENTRY MENU" screen is displayed.	✓		R/W
12.	The "DRUM AT LIFT TABLE" message should be displayed on the "OVERPACK ENTRY MENU" at OIU-12-104A.	Verify that the "DRUM AT LIFT TABLE" message is displayed.	✓		R/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
13.	Press the "START DRUM ENTRY" button from the "OVERPACK ENTRY MENU" at OIU-12-104A. The "DRUM ENTRY IN PROGRESS..." message should be displayed at OIU-12-104A.	Verify that the "DRUM ENTRY IN PROGRESS..." message is displayed.	✓		R/W
14.	The PCS should energize the Lift Table conveyor motor forward (107-LT-09-202B/M2) to move the drum under the Entry/Exit Port. The "DRUM UNDER PORT" indicator at the Lift Table Local Control Pedestal (107-PC-09-202B) should be illuminated.	Verify that the drum moves forward until it is centered beneath the Entry/Exit Port. Verify that the "DRUM UNDER PORT" indicator is illuminated.	✓		R/W
15.	The PCS should then automatically energize the Lift Table motor (107-LT-09-202B/M1) to raise the drum to "Drum Centering" position. The "DRUM IN POSITION" indicator (09-ZL-235D) at the Lift Table Local Control Pedestal (107-PC-09-202B) should be illuminated.	Verify that the Lift Table raises the drum to the "Drum Centering" position. Verify that the "DRUM IN POSITION" indicator is illuminated.	✓		R/W
16.	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-12-104A.	Verify that the "DRUM ENTRY COMPLETE" message is displayed.	✓		R/W
"Loss of Vacuum on Lid" Alarm					
17.	Press the "OPEN PORT" button from the "OVERPACK ENTRY MENU" screen at OIU-12-104A. The PCS should display a "PORT OPENING..." message at OIU-12-104A while the port is opening.	Verify that a "PORT OPENING..." message is displayed while the port is opening.	✓		R/W
18.	The PCS should automatically 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 to firmly grip the drum.	✓		R/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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19.	<p>The PCS should energize solenoid valve 07-FEV-800D/V (Vacuum) to generate vacuum at the Drum Entry/Exit Port (107-DO-07-301).</p> <p>The PCS should automatically energize Lift Table motor (107-LT-09-202B/M1) to slowly raise the Lift Table until the drum activates the "Drum Lid in Position" position switch or the Vacuum Switch activates.</p>	<p>Verify that vacuum is being generated.</p> <p>Verify that the Lift Table raises and then stops.</p>	✓		R/W
20.	Because vacuum switch (07-PS-803) register PS803 is forced "not activated" , the drum port opening sequence should stop. Wait 30 seconds.	Verify that the port does not unlock during the 30 second time period, indicating that the drum port opening sequence has stopped.	✓		R/W
21.	Review the "OVERPACK ENTRY MENU" status. A flashing "SEQUENCE FAILED" message should be displayed and the "ALARMS" button should be flashing.	Verify that a flashing "SEQUENCE FAILED" message is displayed and the "ALARMS" button is flashing.	✓		R/W
22.	<p>ALARM ACKNOWLEDGEMENT SEQUENCE:</p> <p>Acknowledge the "Port (301) Loss of Vacuum on Lid" alarm.</p>	Verify that the alarm has been acknowledged.	✓		R/W
23.	<p>Unforce register PS803 status to permit vacuum switch 07-PS-803 to indicate whether vacuum exists in the lid vacuum system. Record the unforced register status below:</p> <p>Unforced PS803 Register Status: <u>1</u></p>	Verify that the register has been unforced.	✓		R/W
24.	<p>Because register PS803 has been unforced, the "Loss of Vacuum on Lid" alarm should clear.</p> <p>The port opening sequence should continue.</p>	<p>Verify that the alarm clears.</p> <p>Verify that the port opening sequence continues.</p>	✓		R/W
25.	Display the "OVERPACK ENTRY MENU" screen at OIU-12-104A.	Verify that the "OVERPACK ENTRY MENU" is displayed.	✓		R/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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"Door In Position" and "Door Rotated" Interlocks					
26.	The PCS should briefly energize solenoid valves 07-FEV-801A and 07-FEV-801B (Vent) to release pressure on the port door open/close cylinders.	Verify that the port open/close cylinders are vented.	✓		R/W
27.	The PCS should pulse energize solenoid 07-FEV-800A/UN (Unlock) to fully retract the port door locking cylinders.	Visually verify that both port door locking cylinders are fully retracted.	✓		R/W
28.	The glovebox pressurization alarm 07-PDISL-303 should be not be activated at loss of contact of switches 07-ZSC-800A and 07-ZSC-800B during the drum entry procedure.	Verify that no glovebox pressurization alarm occurs during the drum port opening sequence.	✓		R/W
29.	The PCS should activate the Lift Table servo motor (107-LT-09-202B/M1) to raise the Lift Table and port door until the port door is raised to the "Door in Position" height. Because position switch 07-ZS-803B (Door in Position) is forced "not activated", the drum port opening sequence should stop.	Visually verify that the Lift Table rises and the port door rises to the "Door in Position" height.	✓		R/W
30.	Review the "OVERPACK ENTRY MENU" status. A flashing "SEQUENCE FAILED" message should be displayed and the "ALARMS" button should be flashing. Because position switch (07-PS-803B) register PS803 is forced "not activated", a "Port (301) Door In Position Not Verified" alarm should be generated.	Verify that a flashing "SEQUENCE FAILED" message is displayed and the "ALARMS" button is flashing.			N/A
31.	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Port (301) Door In Position Not Verified" alarm.	Verify that the alarm has been acknowledged.			N/A
32.	Unforce register ZS803B status to permit position switch 07-ZS-803B to indicate that the port door is raised to the "Door in Position" height. Record the unforced register status below: Unforced ZS803B Register Status: _____ The PCS should continue to check the status of position switch ZS-803B.	Verify that register ZS803B is unforced.			N/A

30, 31, 32 not implemented in this manner R/W 9/30/99

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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33.	Press the "RETURN TO CURRENT SCREEN" button to return to the "OVERPACK ENTRY MENU" at OIU-12-104A.	Verify that the "OVERPACK ENTRY MENU" is displayed.	✓		R/W
"Port Failed to Open" Alarm					
34.	The drum port opening sequence should continue. The PCS should pulse energize solenoid valve 07-FEV-800J/O (Open) to pressurize the port door open cylinders to vertically raise the door to the "open" position.	Verify that the opening sequence continues. Verify that the port door rises to the "open" position.	✓		R/W
35.	The PCS should pulse energize solenoid valve 07-FEV-800B/O (Open) to pressurize the door rotation cylinder to move the port door to the fully rotated open position. Wait 30 seconds. Because position switch 07-ZSO-801 (Drum Port Rotated) is forced "not activated" indicating that the port has not been successfully rotated open, a "Port Failed to Open" should be generated.	Visually verify that the port door is rotated open.	✓		R/W
36.	Review the "OVERPACK ENTRY MENU" status. A flashing "SEQUENCE FAILED" message should be displayed and the "ALARMS" button should be flashing.	Verify that a flashing "SEQUENCE FAILED" message is displayed and the "ALARMS" button is flashing.	✓		R/W
37.	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Port Failed to Open" alarm.	Verify that the alarm has been acknowledged.	✓		R/W
38.	Unforce register ZSO801 status to permit position switch 07-ZSO-801 to indicate that the port door is rotated open. Record the unforced register status below: Unforced ZSO801 Register Status: <u>1</u>	Verify that position switch 07-ZSO-801 is activated, indicating that the port door is rotated open.	✓		R/W
39.	Unforcing register ZSO801 should cause the "Port Failed To Open" alarm to clear.	Verify that the "Port Failed To Open" alarm is cleared.	✓		R/W
40.	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "OVERPACK ENTRY MENU" at OIU-12-104A.	Verify that the "OVERPACK ENTRY MENU" is displayed.	✓		R/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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"Hoist Not Raised" Interlock					
41.	Because the "Hoist Raised" switch (07-ZS-802C) is forced activated, the PCS should not move the hoist to the entry position. Wait 30 seconds.	Verify that the hoist does not move to the entry position during the waiting period.	✓		R/W
42.	Unforce register ZS802C. Record the unforced register status below: Unforced ZS802C Status: <u>0</u>	Verify that register ZS802C is unforced.	✓		R/W
"Trolley Failed to Reach Entry" Alarm					
43.	The PCS should energize the Hoist Trolley motor (107-CR-07-301A/M1) (Trolley Traverse Drive) forward so that the trolley SLOWLY travels to and is positioned over the Entry/Exit Port. Because timer T4:51 is set at 2 sec, simulating that Trolley Hoist has not reached the Entry/Exit Port position, a "Trolley Failed to Reach Entry" alarm should be generated.	Verify that the Hoist Trolley is centered over the Entry/Exit Port.	✓		R/W
44.	Wait 30 seconds. Review the "OVERPACK ENTRY MENU" status. A flashing "SEQUENCE FAILED" message should be displayed and the "ALARMS" button should be flashing.	Verify that a flashing "SEQUENCE FAILED" message is displayed and the "ALARMS" button is flashing.	✓		R/W
45.	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Trolley Failed to Reach Entry" alarm.	Verify that the alarm has been acknowledged.	✓		R/W
46.	Reset timer T4:51 to ⁶⁰ 45 seconds to indicate that the Hoist Trolley has reached the Entry/Exit Port position. Record the unforced register status below: Unforced ZS802B Register Status: <u>60</u>	Verify that the timer is reset to ⁴⁵ 45 sec.	✓		R/W
47.	Unforcing register ZS802B should cause the "Trolley Failed to Reach Entry" alarm to clear. <i>Restoring T4:51 and locating the trolley at the Entry position</i>	Verify that the "Trolley Failed to Reach Entry" alarm is cleared.	✓		R/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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48.	Press the "RETURN TO CURRENT SCREEN" button to return to the "OVERPACK ENTRY MAIN MENU" at OIU-12-104A.	Verify that the "OVERPACK ENTRY MAIN MENU" is displayed.	✓		R/W
49.	Restart the drum port opening sequence from the PLC interface.	Verify that the opening sequence is restarted.	✓		R/W
50.	The port opening sequence should be considered successful and a "PORT OPEN" message should be displayed at OIU-12-104A.	Verify that a "PORT OPEN" message is displayed.	✓		R/W
51.	The drum lid should remain attached to the port door.	Verify that the drum lid remains attached to the port door.	✓		R/W
52.	Press the "MAIN MENU" button at OIU-12-104A to return to the "TRU ENTRY GLOVEBOX MAIN MENU" screen.	Verify that the "TRU ENTRY GLOVEBOX MAIN MENU" screen is displayed at OIU-12-104A.	✓		R/W

TEST CASE 13021A-86.05 COMPLETE

TEST CASE 13021A-86.06 - MOVE DRUM TO SPHINCTER ENTRY PORT - INTERLOCKS/ALARMS	2
"Drum Lifter Open" Interlock	2
"Lifter Failed to Close" Alarm	3
"Drum Lifter Closed" Interlock	4
"Lifter Failed to Raise" Alarm	5
"Trolley Failed to Reach Midway" Alarm	7
Confirm Inner Drum Identifier	8
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"Trolley Failed to Reach Sphincter" Alarm and Associated Interlocks.....	9
"Upper Grab Fails to Close" and "Upper Grab Loss of Pressure" Alarms.....	12
Disengage Drum Lifter from Drum	14

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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TEST CASE 13021A-86.06 - MOVE DRUM TO SPHINCTER ENTRY PORT - INTERLOCKS/ALARMS					
"Drum Lifter Open" Interlock					
1.	Force LCU 103 register ZSO804 to "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> ZSO804 <u>0</u> <u>IS 17/16</u>	Verify that register ZSO804 is forced "not activated".	✓		R/W
2.	Press the "TROLLEY MENU" button from the "TRU ENTRY GLOVEBOX MAIN MENU" screen at OIU-12-104A.	Verify that the "TROLLEY MENU" screen is displayed.	✓		R/W
3.	Activate the Hoist/Trolley/Lifter pendant 107-PC-07-006 "LOWER" pushbutton to attempt to lower the Drum Lifter. Because "Drum Lifter Open" position switch (07-ZSO-804) register ZSO804 is forced "not activated", the Drum Lifter should not lower.	Verify that the Drum Lifter does not lower.	✓		R/W
4.	Unforce LCU 103 register ZSO804. Record the unforced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZSO804 <u>1</u> <u>IS 17/16</u> Activate the Hoist/Trolley/Lifter pendant (107-PC-07-006) "LOWER" pushbutton to attempt to lower the Drum Lifter.	Verify that register ZSO804 is unforced. Verify that the Drum Lifter does lower.	✓		R/W
5.	Activate the Hoist/Trolley/Lifter pendant (107-PC-07-006) "LOWER" pushbutton 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 208 liter (55 gallon) drum.	✓		R/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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"Lifter Failed to Close" Alarm					
6.	Force LCU 103 register ZSC804 "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> ZSC804 <u>0</u> <u># 117116</u>	Verify that register ZSC804 is forced "not activated".	✓		P/W
7.	Activate and continue to activate the Hoist/Trolley/Lifter pendant 107-PC-07-006 "CLOSE" pushbutton 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-804) register ZSC804 is forced "not activated", a "Drum Lifter Failed to Close" alarm should be generated.	Verify that the Drum Lifter is closed.	✓		P/W
8.	Review the "TROLLEY MENU" status. A flashing "SEQUENCE FAILED" message should be displayed and the "ALARMS" button should be flashing.	Verify that a flashing "SEQUENCE FAILED" message is displayed and the "ALARMS" button is flashing.	✓		P/W
9.	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Drum Lifter Failed to Close" alarm.	Verify that the alarm has been acknowledged.	✓		P/W
10.	Unforce LCU 103 register ZSC804. Record the unforced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZSC804 <u>1</u> <u># 117116</u> Because both the "Drum Lifter Closed" and the "Drum Lifter Open" registers (ZSO804 and ZSC804) and the corresponding position switches (07-ZSO-804 and 07-ZSC-804) should indicate that the Drum Lifter is "closed", the "Drum Lifter Failed to Close" alarm should clear.	Verify that register ZSC804 is unforced. Verify that the "Drum Lifter Failed to Close" alarm is cleared.	✓		P/W
11.	The Hoist/Trolley/Lifter "CLOSED" indicator should be illuminated, indicating that the Drum Lifter is closed.	Verify that the "CLOSED" indicator is illuminated.	✓		P/W
12.	Press the "RETURN TO CURRENT SCREEN" button to return to the "TROLLEY MENU" at OIU-12-104A.	Verify that the TROLLEY MENU is displayed.	✓		P/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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13.	<p>Activate the Hoist/Trolley/Lifter pendant 107-PC-07-006 "OPEN" pushbutton as needed until the Drum Lifter is completely open.</p> <p>The Hoist/Trolley/Lifter "OPEN" indicator should be illuminated, indicating that the Drum Lifter is open.</p>	<p>Verify that the Drum Lifter is completely open.</p> <p>Verify that the "OPEN" indicator is illuminated.</p>	✓		R/W
14.	<p>Manually adjust the Drum Lifter as needed so that the drum will be gripped by the Drum Lifter.</p>	<p>Verify that the Drum Lifter is positioned to securely grip the drum.</p>	✓		R/W
15.	<p>Activate the Hoist/Trolley/Lifter pendant 107-PC-07-006 "CLOSE" pushbutton as needed until the Drum Lifter is closed, securing the drum.</p> <p>The Hoist/Trolley/Lifter "CLOSED" indicator should be illuminated, indicating that the Drum Lifter is closed.</p>	<p>Verify that the Drum Lifter is closed, securing the drum.</p> <p>Verify that the "CLOSED" indicator is illuminated.</p>	✓		R/W

"Drum Lifter Closed" Interlock

16.	<p>Force LCU 103 register ZSC804 "not activated" to simulate the Drum Lifter "not closed" condition. Record the forced register status below:</p> <p><u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u></p> <p>ZSC804 _____ _____</p>	<p>Verify that register ZSC804 is forced "not activated".</p>			N/A
17.	<p>Activate the Hoist/Trolley/Lifter pendant 107-PC-07-006 "RAISE" pushbutton to attempt to raise the Drum Lifter.</p> <p>Because "Drum Lifter Closed" position switch (07-ZSC-804) register ZSC804 is forced "not activated", the Drum Lifter should not raise.</p>	<p>Verify that the Drum Lifter does not raise.</p>			N/A

16, 17, 18 not per implemented/revised logic R/W 7/30/97

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)						
18.	<p>Unforce LCU 103 register ZSC804. Record the unforced register status below:</p> <table border="1"> <thead> <tr> <th><u>Register</u></th> <th><u>Forced Status</u></th> <th><u>Method of Confirmation</u></th> </tr> </thead> <tbody> <tr> <td>ZSC804</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table> <p>Activate the Hoist/Trolley/Lifter pendant (107-PC-07-006) "RAISE" pushbutton to raise the Drum Lifter.</p> <p>Because both the "Drum Lifter Closed" and the "Drum Lifter Open" position switches (07-ZSO-804 and 07-ZSC-804) should indicate that the Drum Lifter is "closed", the Drum Lifter should raise.</p>	<u>Register</u>	<u>Forced Status</u>	<u>Method of Confirmation</u>	ZSC804	_____	_____	<p>Verify that register ZSC804 is unforced.</p> <p>Verify that the Drum Lifter raises when the "RAISE" pushbutton is pressed.</p>			N/A
<u>Register</u>	<u>Forced Status</u>	<u>Method of Confirmation</u>									
ZSC804	_____	_____									
19.	<p>Activate the Hoist/Trolley/Lifter pendant (107-PC-07-006) "RAISE" pushbutton as needed until the drum is sufficiently raised so that the top of the drum is positioned for inspection.</p>	<p>Verify that the drum is raised so that the top of the drum can be examined.</p>	✓		R/W 9/30/99						
"Lifter Failed to Raise" Alarm											
20.	<p>Change register T4:57 from 2 minutes to 5 sec.</p> <p>Force the "Hoist Raised" position switch (07-ZS-802C) register ZS802C "not activated" to indicate that the Hoist is not raised. Record the forced status of this register below:</p> <table border="1"> <thead> <tr> <th><u>Register</u></th> <th><u>Forced Status</u></th> <th><u>Method of Confirmation</u></th> </tr> </thead> <tbody> <tr> <td>T4:57</td> <td><u>5</u></td> <td><u>T 4:57</u></td> </tr> </tbody> </table> <p>NOTE: If the "Hoist Raised" position switch register 07-ZS-802C is "not activated" after the Hoist/Trolley/Lifter pendant "RAISE" pushbutton is continuously depressed for a period equal to or greater than the timed period specified in the SETUP section of this test procedure, an error message should be displayed at the OIU.</p>	<u>Register</u>	<u>Forced Status</u>	<u>Method of Confirmation</u>	T4:57	<u>5</u>	<u>T 4:57</u>	<p>Verify that register T4:57 is changed to 5 sec.</p>	✓		R/W
<u>Register</u>	<u>Forced Status</u>	<u>Method of Confirmation</u>									
T4:57	<u>5</u>	<u>T 4:57</u>									

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
21.	<p>Activate and do not release the Hoist/Trolley/Lifter Pendant (107-PC-07-006) "RAISE" pushbutton for 10 sec.</p> <p>Because the "RAISE" pushbutton has been continuously 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.</p> <p>The Hoist/Trolley/Lifter Pendant (107-PC-07-006) should remain enabled until this alarm is cleared.</p>	<p>Verify that the "RAISE" pushbutton has been continuously pressed for the time period specified.</p> <p>Verify that the "ENABLED" indicator remains illuminated.</p>	✓		R/W
22.	Review the "TROLLEY MENU" status. A flashing "SEQUENCE FAILED" message should be displayed and the "ALARMS" button should be flashing.	Verify that a flashing "SEQUENCE FAILED" message is displayed and the "ALARMS" button is flashing.	✓		R/W
23.	<p>ALARM ACKNOWLEDGEMENT SEQUENCE:</p> <p>Acknowledge the "Lifter Failed to Raise" alarm.</p>	Verify that the alarm has been acknowledged.	✓		R/W
24.	<p>Restore register T4:57 to 2 minutes.</p> <p>Unforced T4:57 Register Status: <u>2 min</u></p>	Verify that register T4:57 is restored to 2 minutes.	✓		R/W
25.	Fully raise the hoist.	Verify visually the hoist if fully raised.	✓		R/W
26.	<p>Because the Hoist is fully raised, the "Hoist Raised" position switch 07-ZS-802C should be activated and the "RAISED LIMIT" indicator on the Hoist/Trolley/Lifter pendant (107-PC-07-006) should be illuminated.</p> <p>The "Lifter Failed to Raise" alarm should clear.</p>	<p>Verify that the "RAISED LIMIT" indicator is illuminated.</p> <p>Verify that the "Lifter Failed to Raise" alarm is cleared.</p>	✓		R/W
27.	After the Drum Lifter is fully raised, the PCS should disable the Hoist/Trolley/Lifter Pendant (107-PC-07-006).	Verify that the "ENABLED" indicator is not illuminated.	✓		R/W
28.	Press the "RETURN TO CURRENT SCREEN" button to return to the "TROLLEY MENU" at OIU-12-104A.	Verify that the "TROLLEY MENU" is displayed.	✓		R/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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"Trolley Failed to Reach Midway" Alarm											
29.	<p>Change register T4:58 from ⁴⁵30 sec to 2 sec. Record the forced status of this register below: NW 8/30/97</p> <table border="1"> <thead> <tr> <th>Register</th> <th>Forced Status</th> <th>Method of Confirmation</th> </tr> </thead> <tbody> <tr> <td>T4:58</td> <td>2</td> <td>T4:58</td> </tr> </tbody> </table> <p>NOTE: If the Hoist Trolley position switch register 07-ZS-802A is not activated in the required time after the "SWAB POSITION" button is pressed from the "TROLLEY MENU", indicating that the Hoist Trolley is at the "Swab" position, an error message should be displayed at the OIU.</p>	Register	Forced Status	Method of Confirmation	T4:58	2	T4:58	Verify that register T4:58 is changed to 2 sec.	✓		R/W
Register	Forced Status	Method of Confirmation									
T4:58	2	T4:58									
30.	<p>Press the "SWAB POSITION" button from the "TROLLEY MENU" at OIU-12-104A.</p> <p>The PCS should automatically energize the Hoist Trolley motor (107-CR-07-301A/M1) (Trolley Traverse Drive) forward so that the trolley SLOWLY travels to the "Swab" position and stops.</p>	Verify that the Hoist Trolley travels slightly towards the "Swab" position and stops.	✓		R/W						
31.	Review the "TROLLEY MENU" status. A flashing "SEQUENCE FAILED" message should be displayed and the "ALARMS" button should be flashing.	Verify that a flashing "SEQUENCE FAILED" message is displayed and the "ALARMS" button is flashing.	✓		R/W						
32.	<p>ALARM ACKNOWLEDGEMENT SEQUENCE:</p> <p>Acknowledge the "Trolley Failed to Reach Midway" alarm.</p>	Verify that the alarm has been acknowledged.	✓		R/W						
33.	<p>Restore register T4:58 to ⁴⁵30 sec. R/W 8/30/97</p> <p>Unforced T4:58 Register Status: 45</p>	Verify that register T4:58 is restored to ⁴⁵ 30 sec.	✓		R/W						
34.	<p>From the PLC interface, continue the process.</p> <p>The "Trolley Failed to Reach Midway" alarm should clear.</p>	Verify that the "Trolley Failed to Reach Midway" alarm is cleared.	✓		R/W						
35.	Press the "RETURN TO CURRENT SCREEN" button to return to the "TROLLEY MENU" at OIU-12-104A.	Verify that the "TROLLEY MENU" is displayed.	✓		R/W						

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)								
36.	Using the hoist control pendant, position the hoist at the "SWAB" position. The "SWAB" indicator on the control pendant should be illuminated.	Verify that the "SWAB" indicator is illuminated.	✓		R/W								
37.	Press the "MAIN MENU" button to return to the "TRU ENTRY GLOVEBOX MAIN MENU" and then press the "OVERPACK ENTRY MENU" button from the "TRU ENTRY GLOVEBOX MAIN MENU" at OIU-12-104A to display the "OVERPACK ENTRY MENU".	Verify that the "OVERPACK ENTRY MENU" screen is displayed.	✓		R/W								
Confirm Inner Drum Identifier													
38.	The PCS should display the inner drum identifier (previously entered) on the "OVERPACK ENTRY MENU" at OIU-12-104A. 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.	✓		R/W								
39.	Press the "INNER DRUM ID VERIFIED" button from the "OVERPACK ENTRY MENU" screen at OIU-12-104A to acknowledge that the correct drum identifier is displayed.	Verify that the "INNER DRUM ID VERIFIED" button has been pressed.	✓		R/W								
"Sphincter Port and Transfer Assembly" Alarms & Interlocks													
40. 516	Force the Hoist Trolley position switches (07-ZS-802A) and (07-ZS-802B) register ZS802A and ZS802B "not activated" to indicate that the Hoist Trolley has not reached the Sphincter Entry Port position. Record the forced status of these registers below: <table border="1"> <thead> <tr> <th>Register</th> <th>Forced Status</th> <th>Method of Confirmation</th> </tr> </thead> <tbody> <tr> <td>ZS802A</td> <td>0</td> <td>I: 16116</td> </tr> <tr> <td>ZS802B</td> <td>0</td> <td>I: 16115</td> </tr> </tbody> </table> <p>NOTE: If the Trolley position switch registers ZS802A and ZS802B are "not activated" when the Trolley is moved to the Sphincter Entry Port Position, indicating that the Trolley is NOT positioned over the Sphincter Entry Port, an error message should be displayed at the OIU.</p>	Register	Forced Status	Method of Confirmation	ZS802A	0	I: 16116	ZS802B	0	I: 16115	Verify that registers ZS802A and ZS802B are forced "not activated".	✓	R/W
Register	Forced Status	Method of Confirmation											
ZS802A	0	I: 16116											
ZS802B	0	I: 16115											

* Step out of sequence

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)						
41.	<p>Force the "Upper Grab Closed" position switch (07-ZSC-806) register ZSC806 "not activated" to indicate that the upper grab is open. Record the forced status of this register below:</p> <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>ZSC806</td><td><u>0</u></td><td><u>F: 20/11</u></td></tr> </table> <p>NOTE: If the "Upper Grab Closed" switch register is forced "not activated", the Trolley/Hoist/Lifter pendant will not be enabled and error messages should be displayed at the OIU.</p>	<u>Register</u>	<u>Forced Status</u>	<u>Method of Confirmation</u>	ZSC806	<u>0</u>	<u>F: 20/11</u>	Verify that register ZSC806 is forced "not activated".	✓		P/W
<u>Register</u>	<u>Forced Status</u>	<u>Method of Confirmation</u>									
ZSC806	<u>0</u>	<u>F: 20/11</u>									
"Trolley Failed to Reach Sphinxter" Alarm and Associated Interlocks											
42.	<p>Force the "Hoist Raised" position switch (07-ZS-802C) register ZS802C "activated" to indicate that the Hoist is not raised. Record the forced status of this register below:</p> <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>ZS802C</td><td><u>1</u></td><td><u>F: 17/00</u></td></tr> </table> <p>NOTE: If the "Hoist Raised" position switch register 07-ZS-802C is "activated", the trolley traverse drive motor cannot be energized.</p>	<u>Register</u>	<u>Forced Status</u>	<u>Method of Confirmation</u>	ZS802C	<u>1</u>	<u>F: 17/00</u>	Verify that register ZS802C is forced "activated".	✓		P/W
<u>Register</u>	<u>Forced Status</u>	<u>Method of Confirmation</u>									
ZS802C	<u>1</u>	<u>F: 17/00</u>									
43.	<p>Change register T4:60 from 30 sec to 2 sec. Record the forced status of this register below:</p> <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>T4:60</td><td></td><td></td></tr> </table> <p>NOTE: If the Hoist Trolley position switch register 07-ZS-802A is not activated within the time delay, indicating that the Hoist Trolley is NOT positioned over the Sphinxter Port, an error message should be displayed at the OIU.</p>	<u>Register</u>	<u>Forced Status</u>	<u>Method of Confirmation</u>	T4:60			Verify that the register is change to 2 sec.	N/A		P/W 7/30/09
<u>Register</u>	<u>Forced Status</u>	<u>Method of Confirmation</u>									
T4:60											

#43 step not required due to forcing ZS802A and ZS802B
on step 516
7/30/09

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)								
44.	Press the "MAIN MENU" button to return to the "TRU ENTRY GLOVEBOX MAIN MENU" and then press the "TROLLEY MENU" button from the "TRU ENTRY GLOVEBOX MAIN MENU" at OIU-12-104A to display the "TROLLEY MENU".	Verify that the "TROLLEY MENU" screen is displayed.	✓		R/W								
45.	Press the "TRANSFER ASSEMBLY" button from the "TROLLEY MENU" to move the Hoist with Drum to the Sphincter Entry Port position.	Verify that the "TRANSFER ASSEMBLY" button has been pressed.	✓		R/W								
46.	Because the "Hoist Raised" position switch (07-ZS-802C) register ZS802C is forced "activated", the Trolley Traverse Drive Motor 107-CR-301A/M1 should not energize.	Verify that the trolley traverse drive motor 107-CR-301A/M1 is not energized.	✓		R/W								
47.	Force position switches (07-ZSO-806A) and (07-ZSO-806B) registers ZSO806A and ZSO806A "not activated" to indicate that the upper drum grab arms are open. Record the forced status of these registers below: <table><tr><td><u>Register</u></td><td><u>Forced Status</u></td><td><u>Method of Confirmation</u></td></tr><tr><td>ZSO806A</td><td><u>0</u></td><td><u>I: 20/13</u></td></tr><tr><td>ZSO806B</td><td><u>0</u></td><td><u>I: 20/14</u></td></tr></table> NOTE: If position switch registers ZSO806A and ZS806B are "not activated", the trolley traverse drive motor cannot be energized.	<u>Register</u>	<u>Forced Status</u>	<u>Method of Confirmation</u>	ZSO806A	<u>0</u>	<u>I: 20/13</u>	ZSO806B	<u>0</u>	<u>I: 20/14</u>	Verify that registers ZSO806A and ZS806B are forced "not activated".	✓	R/W
<u>Register</u>	<u>Forced Status</u>	<u>Method of Confirmation</u>											
ZSO806A	<u>0</u>	<u>I: 20/13</u>											
ZSO806B	<u>0</u>	<u>I: 20/14</u>											
48.	Unforce LCU 103 register ZS802C to allow the "Hoist Raised" position switch 07-ZS-802C to indicate whether the Hoist is fully raised. Record the unforced register status below: Unforced ZS802C Register Status: <u>1</u> The "RAISED LIMIT" indicator on the Hoist/Trolley pendant should be illuminated.	Verify that register ZS802C is unforced. Verify that the "RAISED LIMIT" indicator on the Hoist/Trolley pendant is illuminated.	✓		R/W								
49.	From the Trolley Menu, press "TRANSFER ASSEMBLY".	Verify that "TRANSFER ASSEMBLY" is pressed.	✓		R/W								
50.	Because "Upper Drum Grab open" position switch registers ZSO806A and ZS806B are forced "not activated" (grab closed), the Trolley Traverse Drive Motor 107-CR-301A/M1 should not energize.	Verify that the trolley traverse drive motor 107-CR-301A/M1 is not energized.	✓		R/W								

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)						
51.	<p>CAUTION: Prior to performing this step, be prepared to remove power from the Trolley Traverse Drive Motor in case the motor continues to run after the Trolley reaches the Sphincter Port.</p> <p>Unforce LCU 103 registers ZSO806A and ZSO806B to allow the "Upper Grab Arm" position switches 07-ZSO-806A and 07-ZSO-806B to indicate whether the upper grab arm is open. Record the unforced register status below:</p> <p>Unforced ZSO806A Register Status: <u>1</u></p> <p>Unforced ZSO806B Register Status: <u>1</u></p>	Verify that registers ZS806A and ZS806B are unforced.	✓		P/W						
52.	<p>Because registers ZS802C, ZSO806A, and ZSO806B status have been unforced, the PCS should energize the Trolley Traverse Drive Motor (107-CR-07-301A/M1) forward so that the trolley SLOWLY travels to, and is positioned over the Sphincter Entry Port (107-DO-07-302).</p> <p><i>Message "Drive Transfer In Progress"</i></p>	Verify that the Trolley Traverse Drive Motor is energized and the trolley is positioned over the Sphincter Entry Port.	✓		P/W						
53.	<p>NOTE: Remove power from the Trolley Traverse Drive Motor if the motor continues to run after the Trolley reaches the Sphincter Port.</p> <p><i>(P/W 9/30/97)</i></p> <p>Wait 30 seconds. Because position switches 07-ZS-802A and 07-ZS-802B registers are forced "not activated", indicating that the Trolley is not positioned above the Sphincter Door, a flashing "SEQUENCE FAILED" message should be displayed at OIU-12-104A and the "ALARMS" button should be flashing.</p>	Verify that a flashing "SEQUENCE FAILED" message is displayed and the "ALARMS" button is flashing.	✓		P/W						
54.	<p>ALARM ACKNOWLEDGEMENT SEQUENCE:</p> <p>Acknowledge the "Trolley Failed to Reach Sphincter" alarm.</p>	Verify that the alarm has been acknowledged.	✓		P/W						
55.	<p>Change register T4:60 from 2 sec to 30 sec. Record the unforced status of this register below:</p> <table><thead><tr><th>Register</th><th>Unforced Status</th><th>Method of Confirmation</th></tr></thead><tbody><tr><td>T4:60</td><td><u> </u></td><td><u> </u></td></tr></tbody></table>	Register	Unforced Status	Method of Confirmation	T4:60	<u> </u>	<u> </u>	Verify that the register is change to 30 sec.		N/A	P/W 9/30/97
Register	Unforced Status	Method of Confirmation									
T4:60	<u> </u>	<u> </u>									
56.	Using the Hoist/Trolley pendant, position the Trolley at the Transfer Port.	Verify that the Trolley is positioned at the Transfer Port.	✓		P/W						

51a Perform step 49

TEST PROCEDURE 13021A-86

51b see pg 6-8

#55 not required see pg 6-9

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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57.	Unforce registers ZS802A and ZS802B status to permit position switches 07-ZS-802A and 07-ZS-802B to indicate that the Hoist Trolley has reached the Sphincter Port position. Record the unforced register status below: Unforced ZS802A Register Status: <u>1</u> Unforced ZS802B Register Status: <u>1</u>	Verify that registers ZS802A and ZS802B are unforced.	✓		P/V
58.	Because the Hoist Trolley has reached the Sphincter Port position, the "Trolley Failed to Reach Sphincter" alarm should clear. The "DRUM TRANSFER COMPLETE - DRUM AT UPPER GRAB" message should be displayed at OIU-12-104A.	Verify that the "Trolley Failed to Reach Sphincter" alarm is cleared. Verify that the "DRUM TRANSFER COMPLETE - DRUM AT UPPER GRAB" message is displayed.	✓		P/V

"Upper Grab Fails to Close" and "Upper Grab Loss of Pressure" Alarms

59.	The PCS should energize the Upper Drum Grab close solenoid and the drum should be held in the upper grab. Wait 30 seconds. Because the "Upper Grab Closed" position switch (07-ZSC-806) register ZSC806 is forced "not activated", the Hoist Trolley/Lifter pendant is remains disabled , and a "Upper Grab Fails to Close" alarm should be generated.	Verify that the drum is held in the upper grab. Verify that the Hoist Trolley/Lifter pendant is disabled	✓		P/V
60.	Review the " TROLLEY MENU " status. A flashing "SEQUENCE FAILED" message should be displayed and the "ALARMS" button should be flashing.	Verify that a flashing "SEQUENCE FAILED" message is displayed and the "ALARMS" button is flashing.	✓		P/V
61.	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Upper Grab Fails to Close" alarm.	Verify that the alarm has been acknowledged.	✓		P/V
62.	Press the "RETURN TO CURRENT SCREEN" button to return to the " TROLLEY MENU " at OIU-12-104A.	Verify that the " TROLLEY MENU " is displayed.	✓		P/V

58a select Transfer Menu

58b start Aux HPV

58c Press "close Upper Grab" from the Transfer Menu.

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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63.	Force register PS395A "not activated" to indicate a loss of upper grab pressure. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> PS395A 0 F: 1/1/17	Verify that register PS395A status is forced "not activated".	✓		RIW
64.	Unforce register ZSC806 status to permit position switch 07-ZSC-806 to indicate that the upper grab is closed. Record the unforced register status below: Unforced ZSC806 Register Status: 1 but PS395A is not activated	Verify that register ZSC806 is unforced.	✓		RIW
65.	Because the "Upper Grab Closed" position switch register ZSC806 is unforced, the "Upper Grab Fails to Close" alarm should clear. not RIW 7/30/97	Verify that the "Upper Grab Fails to Close" alarm is cleared. not	✓		RIW
66.	Because switch register PS395A is forced "not activated", the Trolley/Hoist/Lifter pendant remains disabled, and a "Upper Grab Loss of Pressure" alarm should be generated. TRANSFER RIW 7/30/97	Verify that the pendant is disabled.	✓		RIW
67.	Wait 30 seconds. Review the "TROLLEY MENU" status. A flashing "SEQUENCE FAILED" message should be displayed and the "ALARMS" button should be flashing.	Verify that a flashing "SEQUENCE FAILED" message is displayed and the "ALARMS" button is flashing.	✓		RIW
68.	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Upper Grab Loss of Pressure" alarm. TRANSFER RIW 7/30/97	Verify that the alarm has been acknowledged. TRANSFER	✓		RIW
69.	Press the "RETURN TO CURRENT SCREEN" button to return to the "TROLLEY MENU" at OIU-12-104A. TROLLEY	Verify that the "TROLLEY MENU" is displayed.	✓		RIW
70.	Unforce register PS395A status to permit pressure switch 07-PS-395A (activated) to indicate that the upper grab pressure is normal. Record the unforced register status below: Unforced PS395A Register Status: 1	Verify that register PS395A is unforced.	✓		RIW
71.	Because register PS395A unforced the "Upper Grab Loss of Pressure" alarm should clear. and "Upper Grab Fails to Close"	Verify that the "Upper Grab Loss of Pressure" alarm is cleared.	✓		RIW

RIW 7/30/97

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
72. ✕	<p>The PCS should continue to check the status of switch registers ZSC806 and PS395A. Because both switch registers are unforced and position switch 07-ZSC-806 and pressure switch 07-PS-395A should be activated, the Hoist/Trolley/Lifter pendant should be enabled ("ENABLED" light on).</p> <p>The "DRUM HANDOVER COMPLETE" message should be displayed on the "TROLLEY MENU" at OIU-12-104A.</p>	<p>Verify that the Hoist/Trolley/Lifter pendant is enabled.</p> <p>Verify that the "DRUM HANDOVER COMPLETE" message is displayed.</p>		✓	<i>Plw</i>
Disengage Drum Lifter from Drum					
73.	Using the Trolley/Hoist/Lifter pendant 107-PC-07-006, lower the hoist until there's sufficient slack in the chain to allow the drum lifter to be opened.	Verify that the hoist is lowered and sufficient slack is in the chain to allow the drum lifter to be opened.	✓		<i>Plw</i>
74.	<p>Press the Hoist/Trolley/Lifter pendant 107-PC-07-006 "OPEN" pushbutton as needed until the Drum Lifter is completely open and the drum is released.</p> <p>The Hoist/Trolley/Lifter "OPEN" indicator should be illuminated, indicating that the Drum Lifter is open.</p>	<p>Verify that the Drum Lifter is completely open and the drum is released.</p> <p>Verify that the "OPEN" indicator is illuminated.</p>	✓		<i>Plw</i>
75.	<p>Fully raise the Drum Lifter.</p> <p>The "RAISED LIMIT" indicator on the Hoist/Trolley/Lifter pendant should be illuminated, indicating that the hoist is fully raised.</p>	<p>Verify that the Drum Lifter is fully raised.</p> <p>Verify that the "RAISED LIMIT" indicator on the Hoist/Trolley/Lifter pendant is illuminated.</p>	✓		<i>Plw</i>
76.	Because the Hoist is fully raised, the PCS should disable the Trolley/Hoist/Lifter pendant 107-PC-07-006 ("ENABLED" light off).	Verify that the Trolley/Hoist/Lifter pendant 107-PC-07-006 is disabled ("ENABLED" light off).	✓		<i>Plw</i>
77.	Press the "MAIN MENU" button at OIU-12-104A to return to the "TRU ENTRY GLOVEBOX MAIN MENU" screen.	Verify that the "TRU ENTRY GLOVEBOX MAIN MENU" screen is displayed at OIU-12-104A.	✓		<i>Plw</i>
78.	Because all glovebox items should be initialized, OIU-12-104A should display a "SYSTEM INITIALIZED" message.	Verify that OIU-12-104A displays the "SYSTEM INITIALIZED" message.	✓		<i>Plw</i>

* See TE 361
TEST PROCEDURE 13021A-86

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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TEST CASE 13021A-86.06 COMPLETE

TEST CASE 13021A-86.07 - REMOVE 322 LITER (85 GALLON) DRUM FROM ENTRY/EXIT PORT 301 -

ALARMS & INTERLOCKS.....	2
"Lift Table Lower, Raise, Forward, and Reverse" Interlocks	4
"Port Door Rotated Down" Interlock.....	4
"Port Door Lowered Closed" Interlock.....	5
"Port Door Locked" Interlock.....	5
"Port (301) Centering Device Abnormal Position" Interlock; Close Port	7
"Port (301) Close and Lock Not Verified" Alarm	9
"Port (301) Closed and Locked" Interlock.....	10
"Lift Table (202B) Failed to Lower" Alarm	12
"Lift Table (202B) Conveyor Reverse Failed" Alarm	13

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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TEST CASE 13021A-86.07 - REMOVE 322 LITER (85 GALLON) DRUM FROM ENTRY/EXIT PORT 301 - ALARMS & INTERLOCKS

1.	The Entry/Exit Port (107-DO-07-301) door should be rotated open and a drum mated to the port.	Verify that the Entry/Exit Port door is rotated open and that a drum is mated to the port.	✓		R/W						
2.	Confirm that the Lift Table (LT-09-202B) is in "Normal" mode.	Verify that the lift table is in "Normal" mode.	✓		R/W						
3.	The "TRU ENTRY GLOVEBOX MAIN MENU" screen should be displayed at OIU-12-104A. If a sub-menu screen is displayed, select the "MAIN MENU" menu choice to return to the "TRU ENTRY GLOVEBOX MAIN MENU".	Verify that the "TRU ENTRY GLOVEBOX MAIN MENU" screen is displayed at OIU-12-104A.	✓		R/W						
4.	Press the "OVERPACK ENTRY MENU" button from the "TRU ENTRY GLOVEBOX MAIN MENU" screen at OIU-12-104A.	Verify that the "OVERPACK ENTRY MENU" screen is displayed.	✓		R/W						
5.	Force LCU 103 register ZSC801 (Entry/Exit Port 107-DO-07-301) to "not activated" to indicate that the port door is not rotated closed. Record the forced register status below: <table><tr><td><u>Register</u></td><td><u>Forced Status</u></td><td><u>Method of Confirmation</u></td></tr><tr><td>ZSC801</td><td><u>0</u></td><td><u>I: 21/11</u></td></tr></table> NOTE: The door rotated closed position switch functions as an interlock for the Entry/Exit Port. The drum exit sequence should not proceed until the position switch is activated.	<u>Register</u>	<u>Forced Status</u>	<u>Method of Confirmation</u>	ZSC801	<u>0</u>	<u>I: 21/11</u>	Verify that register ZSC801 is forced "not activated".	✓		R/W
<u>Register</u>	<u>Forced Status</u>	<u>Method of Confirmation</u>									
ZSC801	<u>0</u>	<u>I: 21/11</u>									

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)									
6.	<p>Force LCU 103 register ZS803A (Entry/Exit Port 107-DO-07-301) to "not activated" to indicate that the port door is not lowered closed. Record the forced register status below:</p> <table><tr><td><u>Register</u></td><td><u>Forced Status</u></td><td><u>Method of Confirmation</u></td></tr><tr><td>ZS803A</td><td><u>8</u></td><td><u>I: 21/05</u></td></tr></table> <p>NOTE: The door closed position switch functions as an interlock for the Entry/Exit Port. The port door should not lock until the door closed position switch is activated.</p>	<u>Register</u>	<u>Forced Status</u>	<u>Method of Confirmation</u>	ZS803A	<u>8</u>	<u>I: 21/05</u>	<p>Verify that register ZS803A is forced "not activated".</p>	✓		R/W			
<u>Register</u>	<u>Forced Status</u>	<u>Method of Confirmation</u>												
ZS803A	<u>8</u>	<u>I: 21/05</u>												
7.	<p>Force LCU 103 registers ZSC800A and ZCS800B to "not activated" to indicate that the port door is not locked. Record the forced register status below:</p> <table><tr><td><u>Register</u></td><td><u>Forced Status</u></td><td><u>Method of Confirmation</u></td></tr><tr><td>ZSC800A</td><td><u>Ø</u></td><td><u>I: 21/03</u></td></tr><tr><td>ZSC800B</td><td><u>Ø</u></td><td><u>I: 21/10</u></td></tr></table> <p>NOTE: The door locked position switches function as an interlock for the Entry/Exit Port. An alarm should be generated during the drum exit sequence if the port does not lock (as indicated by the port lock/unlock position switches) during the exit sequence.</p>	<u>Register</u>	<u>Forced Status</u>	<u>Method of Confirmation</u>	ZSC800A	<u>Ø</u>	<u>I: 21/03</u>	ZSC800B	<u>Ø</u>	<u>I: 21/10</u>	<p>Verify that registers ZSC800A and ZSC800B are forced "not activated".</p>	✓		R/W
<u>Register</u>	<u>Forced Status</u>	<u>Method of Confirmation</u>												
ZSC800A	<u>Ø</u>	<u>I: 21/03</u>												
ZSC800B	<u>Ø</u>	<u>I: 21/10</u>												

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)									
8.	<p>Force LCU103 registers (ZSO812A and ZSO812B) (Entry/Exit Port 107-DO-07-301) to "not activated" to indicate that the drum centering device is not retracted. 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>ZSO812A</td> <td><u>Ø</u></td> <td><u>I:30/00</u></td> </tr> <tr> <td>ZSO812B</td> <td><u>Ø</u></td> <td><u>I:30/01</u></td> </tr> </tbody> </table> <p>NOTE: The drum centering device position switches function as an interlock for the Entry/Exit Port drum exit sequence. The drum exit sequence should not proceed if the drum centering device does not retract.</p>	Register	Forced Status	Method of Confirmation	ZSO812A	<u>Ø</u>	<u>I:30/00</u>	ZSO812B	<u>Ø</u>	<u>I:30/01</u>	Verify that registers ZSO812A and ZSO812B are forced "not activated".	✓		RJW
Register	Forced Status	Method of Confirmation												
ZSO812A	<u>Ø</u>	<u>I:30/00</u>												
ZSO812B	<u>Ø</u>	<u>I:30/01</u>												
"Lift Table Lower, Raise, Forward, and Reverse" Interlocks														
9.	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.	Verify that the "DOWN" "UP", "FORWARD", or "REVERSE" pushbuttons are disabled.	N/A		RJW 8/30/02									
"Port Door Rotated Down" Interlock														
10.	Press the "CLOSE PORT" button from the "OVERPACK ENTRY MENU" at OIU-12-104A.	Verify that a "PORT CLOSING..." message is displayed.	✓		RJW									
11.	The PCS should pulse energize solenoid valve 07-FEV-800B/C (close) to pressurize the door rotation cylinder to rotate the port door to the down position.	Verify that the port door rotates down.	✓		RJW									
12.	<p>The "Door Down" position switch (07-ZSC-801) functions as an interlock for the Entry/Exit Port close sequence. Because the "Door Down" position switch is forced "not activated" the port door should not lower closed.</p> <p>Wait 30 seconds.</p>	Verify that the port door does not lower closed during the waiting period.	✓		RJW									
13.	<p>Unforce register ZSC801. Record the unforced register status below:</p> <p>Unforced ZSC801 Register Status: <u>1</u></p>	Verify that register ZSC801 is unforced.	✓		RJW									

#9 From TRU RJW not TRU

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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14.	Because the port door is rotated down, position switch 07-ZSC-801 should be activated and the closing sequence should continue. The PCS should pulse energize solenoid valve 07-FEV-800J/C (close) to lower the port door closed.	Verify that the port (107-DO-07-301) door lowers closed.	✓		R/W
15.	The PCS should automatically de-energize vacuum generator solenoid valve 07-FEV-800D/V to remove vacuum from the drum lid.	Verify that the vacuum generator is turned off.	✓		R/W
16.	The PCS should then energize solenoid valve 07-FEV-800I/E (extend) to extend the drum lid detachment cylinder and the drum lid should release from the port door.	Verify that the drum lid detachment cylinder is extended. Verify that the drum lid does not adhere to the port door.	✓		R/W

"Port Door Lowered Closed" Interlock

17.	The door lowered closed position switch functions as an interlock for the Entry/Exit Port close sequence. The Lift Table should not lower to "Drum Centering" height until the door lowered closed position switch 07-ZS-803A is activated. Wait 30 seconds.	Verify that the Lift Table does not lower to "Drum Centering" height during the waiting period.	✓	N/A	
18.	Unforce register ZS803A. Record the unforced register status below: Unforced ZS803A Register Status: <u>1</u>	Verify that register ZS803A is unforced.	✓		R/W
19. 17	The PCS should automatically energize the Lift Table motor (107-LT-09-202B/M1) to lower the Lift Table to "Drum Centering" height.	Verify that the Lift Table lowers to "Drum Centering" height.	✓		R/W

"Port Door Locked" Interlock

20.	The PCS should automatically energize solenoid valve 07-FEV-800A/L (lock) to extend the port door locking cylinders.	Verify that the port door locking cylinders fully extend to lock the port door.	✓		R/W
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NW 18a verify the port does not lock

✓ R/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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21.	Because position switch (07-ZSC-800A and 07-ZSC-800B) function as an interlock for the Entry/Exit Port close sequence and their registers ZSC800A and ZSC800B are forced "not activated" , the drum exit sequence should stop. Wait 30 seconds. A "Port (301) Failed to Close and Lock" alarm should be generated.	Verify that the drum lid detachment cylinder does not retract during the waiting period.	✓		R/W
22.	Review the "OVERPACK ENTRY MENU" status. A flashing "SEQUENCE FAILED" message should be displayed and the "ALARMS" button should be flashing.	Verify that a flashing "SEQUENCE FAILED" message is displayed and the "ALARMS" button is flashing.	✓		R/W
23.	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Port (301) Failed to Close and Lock" alarm.	Verify that the alarm has been acknowledged.	✓		R/W
24.	Unforce register ZSC800B. Record the unforced register status below: Unforced ZSC800B Register Status: <u> 1 </u>	Verify that register ZSC800B is unforced.	✓		R/W
25.	Position switch 07-ZSC-800B should be activated, indicating that the port door is locked.	Verify that position switch 07-ZSC-800B is activated.	✓		R/W
26.	Because register ZSC800A remains forced not activated, indicating that the port is not fully locked, the "Port (301) Failed to Close and Lock" alarm should not clear.	Verify that the "Port (301) Failed to Close and Lock" alarm is not cleared.	✓		R/W
27.	Unforce register ZSC800A. Record the unforced register status below: Unforced ZSC800A Status: <u> 1 </u>	Verify that register ZSC800A is unforced.	✓		R/W
28.	Position switch 07-ZSC-800A should be activated, indicating that the port door is locked.	Verify that position switch 07-ZSC-800A is activated.	✓		R/W
29.	Because registers ZSC800A and ZSC800B are unforced, the "Port (301) Failed to Close and Lock" alarm should clear.	Verify that the "Port (301) Failed to Close and Lock" alarm is cleared.	✓		R/W
30.	Press the "RETURN TO CURRENT SCREEN" button to return to the "OVERPACK ENTRY MENU" at OIU-12-104A.	Verify that the "OVERPACK ENTRY MENU" is displayed.	✓		R/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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31.	<p>The PCS should automatically de-energize the port close (lower) solenoid valve 07-FEV-800J/C (close).</p> <p>The PCS should then pulse energize solenoid valve 07-FEV-800I/R (Retract) to retract the drum lid detachment cylinder.</p>	Verify that the drum lid detachment cylinder is retracted.	✓		P/W
"Port (301) Centering Device Abnormal Position" Interlock; Close Port					
32.	The port closing sequence should continue. The PCS should automatically de-energize solenoid valve 07-FEV-303 (Retract) to retract the drum centering device for Drum Entry/Exit Port 107-DO-07-301.	Verify that the drum centering device retracts.	✓		P/W
33.	<p>Because the centering device switch registers ZSO812A and ZSO812B act as interlock for the Entry/Exit Port close sequence and are forced "not activated", the drum exit sequence should be suspended.</p> <p>Wait 30 seconds. The "PORT CLOSED" message should NOT be displayed at OIU-12-104A.</p>	<p>Verify that the sequence is suspended.</p> <p>Verify that a "PORT CLOSED" message is NOT displayed during the waiting period.</p>	✓		P/W
34.	Review the "OVERPACK ENTRY MENU" status. A flashing "SEQUENCE FAILED" message should be displayed and the "ALARMS" button should be flashing.	Verify that a flashing "SEQUENCE FAILED" message is displayed and the "ALARMS" button is flashing.	✓		P/W
35.	<p>ALARM ACKNOWLEDGEMENT SEQUENCE:</p> <p>Acknowledge the "Port (301) Centering Device Abnormal Position" alarm.</p>	Verify that the alarm has been acknowledged.	✓		P/W
36.	<p>Unforce register ZSO812B. Record the unforced register status below:</p> <p>Unforced ZSO812B Register Status: <u>1</u></p>	Verify that register ZSO812B is unforced.	✓		P/W
37.	Position switch 07-ZSO-812B should be activated, indicating that the drum centering device for the Entry/Exit Port is retracted.	Verify that position switch 07-ZSO-812B is activated.	✓		P/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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38.	Because register ZSO812A remains forced not activated, indicating that the centering device is not fully retracted, the "PORT CLOSED" message should not be displayed on the "OVERPACK ENTRY MENU" at OIU-12-104A. Wait 30 seconds.	Verify that the "PORT CLOSED" message is NOT displayed during the waiting period.	✓		RW
39.	Unforce register ZSO812A. Record the unforced register status below: Unforced ZSO812A Status: <u>1</u>	Verify that register ZSO812A is unforced.	✓		RW
40.	Position switch 07-ZSO-812A should be activated, indicating that the drum centering device for the Entry/Exit Port is retracted.	Verify that position switch 07-ZSO-812A is activated.	✓		RW
41.	Because registers ZSO812A and ZSO812B are unforced, the "Port (301) Centering Device Abnormal Position" alarm should clear.	Verify that the "Port (301) Centering Device Abnormal Position" alarm is cleared.	✓		RW
42.	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "OVERPACK ENTRY MENU" at OIU-12-104A.	Verify that the "OVERPACK ENTRY MENU" is displayed.	✓		RW
43.	Because all Entry/Exit Port closing interlocks have been satisfied, the PCS should display a "PORT CLOSED" status message at OIU-12-104A.	Verify that a "PORT CLOSED" status message is displayed at OIU-12-104A.	✓		RW

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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"Port (301) Close and Lock Not Verified" Alarm														
44.	<p>Force the status of port lock position switch (07-ZSC-800A and 07-ZSC-800B) registers ZSC800A and ZSC800B (Entry/Exit Port 107-DO-07-301) to "not activated" to indicate that the port door is not locked. Record the register status below:</p> <table border="0"> <thead> <tr> <th><u>Register</u></th> <th><u>Forced Status</u></th> <th><u>Method of Confirmation</u></th> </tr> </thead> <tbody> <tr> <td>ZSC800A</td> <td><u>0</u></td> <td><u>I: 21/3</u></td> </tr> <tr> <td>ZSC800B</td> <td><u>0</u></td> <td><u>I: 21/10</u></td> </tr> </tbody> </table> <p>A "Port (301) Close and Lock Not Verified" alarm should be generated when the port door lock position switches indicate that the port door is unlocked after a successful drum exit sequence.</p>	<u>Register</u>	<u>Forced Status</u>	<u>Method of Confirmation</u>	ZSC800A	<u>0</u>	<u>I: 21/3</u>	ZSC800B	<u>0</u>	<u>I: 21/10</u>	Verify that registers ZSC800A and ZSC800B are forced "not activated".	✓		R/V
<u>Register</u>	<u>Forced Status</u>	<u>Method of Confirmation</u>												
ZSC800A	<u>0</u>	<u>I: 21/3</u>												
ZSC800B	<u>0</u>	<u>I: 21/10</u>												
45.	Review the "OVERPACK ENTRY MENU" status. A flashing "SEQUENCE FAILED" message should be displayed and the "ALARMS" button should be flashing.	Verify that a flashing "SEQUENCE FAILED" message is displayed and the "ALARMS" button is flashing.	✓		A/W									
46.	<p>ALARM ACKNOWLEDGEMENT SEQUENCE:</p> <p>Acknowledge the "Port (301) Close and Lock Not Verified" alarm.</p>	Verify that the alarm has been acknowledged.	✓		A/W									
47.	<p>Unforce register ZSC800A. Record the unforced register status below:</p> <p>Unforced ZSC800A Status: <u>1</u></p>	Verify that register ZSC800A is unforced.	✓		A/W									
48.	Position switch 07-ZSC-800A should be activated, indicating that the Entry/Exit Port door is locked.	Verify that position switch 07-ZSC-800A is activated.	✓		A/W									
49.	Because register ZSC800B remains forced not activated, indicating that the port door is not locked, the "Port (301) Close and Lock Not Verified" alarm should not clear.	Verify that the "Port (301) Close and Lock Not Verified" alarm is not cleared.	✓		M/V									

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
50.	Unforce register ZSC800B. Record the unforced register status below: Unforced ZSC800B Status: <u>1</u>	Verify that register ZSC800B is unforced.	✓		R/W
51.	Position switch 07-ZSC-800B should be activated, indicating that the Entry/Exit Port door is locked.	Verify that position switch 07-ZSC-800B is activated.	✓		R/W
52.	Because position switches 07-ZSC-800A and 07-ZSC-800B are activated, indicating that the port door is locked, the Port (301) Close and Lock Not Verified alarm should clear.	Verify that the "Port (301) Close and Lock Not Verified" alarm is cleared.	✓		R/W
53.	Press the "RETURN TO CURRENT SCREEN" button to return to the "OVERPACK ENTRY MENU" at OIU-12-104A.	Verify that the "OVERPACK ENTRY MENU" is displayed.	✓		R/W
"Port (301) Closed and Locked" Interlock					
54.	Force register ZS803A to "not activated" to indicate that the Entry/Exit Port 107-DO-07-301 is not lowered closed. Record the forced register status below: <div> <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS803A <u>0</u> <u>I: 21/5</u> </div> NOTE: The door closed position switch functions as an interlock 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 register ZS803A is forced "not activated" .	✓		R/W
55.	Press the "START DRUM EXIT" button from the "OVERPACK ENTRY MENU" at OIU-12-104A.	Verify that the "START DRUM EXIT" button has been pressed.	✓		R/W
56.	The "DRUM EXIT IN PROGRESS..." message should be displayed on the "OVERPACK ENTRY MAIN MENU" at OIU-12-104A. <i>not</i> <u>R/W 1/30/97</u>	Verify that the "DRUM EXIT IN PROGRESS..." message is <i>not</i> displayed.	✓		R/W
57.	The Lift Table should not lower until the door lowered closed position switch 07-ZS-803A is activated. Wait 30 seconds.	Verify that the Lift Table does not lower during the waiting period.	✓		R/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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58.	Force registers ZSC800A and ZCS800B to "not activated" to indicate that the Entry/Exit Port 107-DO-07-301 door is not locked. Record the register status below: <table><tr><td><u>Register</u></td><td><u>Forced Status</u></td><td><u>Method of Confirmation</u></td></tr><tr><td>ZSC800A</td><td><u>0</u></td><td><u>I; 2113</u></td></tr><tr><td>ZSC800B</td><td><u>0</u></td><td><u>I; 2110</u></td></tr></table> The door locked position switches function as an interlock for the drum exit sequence. The Lift Table should not lower to its fully lowered height unless the port door is closed and locked.	<u>Register</u>	<u>Forced Status</u>	<u>Method of Confirmation</u>	ZSC800A	<u>0</u>	<u>I; 2113</u>	ZSC800B	<u>0</u>	<u>I; 2110</u>	Verify that registers ZSC800A and ZSC800B are forced "not activated".	✓		R/W ✓
<u>Register</u>	<u>Forced Status</u>	<u>Method of Confirmation</u>												
ZSC800A	<u>0</u>	<u>I; 2113</u>												
ZSC800B	<u>0</u>	<u>I; 2110</u>												
59.	Unforce register ZS803A. Record the unforced register status below: Unforced ZS803A Status: <u>1</u>	Verify that register ZS803A is unforced.	✓		R/W									
60.	Review the "OVERPACK ENTRY MENU" status. A flashing "SEQUENCE FAILED" message should be displayed and the "ALARMS" button should be flashing.	Verify that a flashing "SEQUENCE FAILED" message is displayed and the "ALARMS" button is flashing.	✓		R/W									
61.	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Port (301) Close and Lock Not Verified" alarm.	Verify that the "Port (301) Close and Lock Not Verified" alarm has been acknowledged.	✓		R/W									
62.	Press the "RETURN TO CURRENT SCREEN" button to return to the "OVERPACK ENTRY MAIN MENU" at OIU-12-104A.	Verify that the "OVERPACK ENTRY MENU" is displayed.	✓		R/W									
63.	Press the "START DRUM EXIT" button from the "OVERPACK ENTRY MAIN MENU" at OIU-12-104A.	Verify that the "START DRUM EXIT" button has been pressed.	✓		R/W									
64.	The "DRUM EXIT IN PROGRESS..." message should be displayed on the "OVERPACK ENTRY MAIN MENU" at OIU-12-104A. <i>not</i> <i>R/W 2/30/97</i>	Verify that a "DRUM EXIT IN PROGRESS..." message is <i>not</i> displayed.	✓		R/W ✓									

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
65.	The door locked position switches (07-ZSC-800A and 07-ZSC-800B) function as an interlock for the drum exit sequence. The Lift Table should not lower until the door locked position switches (07-ZSC-800A and 07-ZSC-800B) are activated. Wait 30 seconds.	Verify that the Lift Table does not lower during the waiting period.	✓		AW
66.	Unforce register ZSC800A. Record the unforced register status below: Unforced ZSC800A Status: <u>1</u>	Verify that register ZSC800A is unforced.	✓		AW
67.	Position switch 07-ZSC-800A should be activated, indicating that the Entry/Exit Port door is locked.	Verify that position switch 07-ZSC-800A is activated.	✓		AW
68.	Press the "START DRUM EXIT" button from the "OVERPACK ENTRY MAIN MENU" at OIU-12-104A.	Verify that the "START DRUM EXIT" button has been pressed.	✓		AW
69.	Because register ZSC800B remains forced not activated, indicating that the port door is not locked, the lift table should not lower. Wait 30 seconds.	Verify that the Lift Table does not lower during the waiting period.	✓		AW
70.	Remove 120 VAC power from lift table LT-09-202B. <i>change lift table failed to lower TD from 120sec to 10sec Register 74:133</i>	Verify that 120 VAC power has been removed from the lift table.	✓		AW
71.	Unforce register ZSC800B. Record the unforced register status below: Unforced ZSC800B Status: <u>1</u>	Verify that register ZSC800B is unforced.	✓		AW
72.	Because position switches 07-ZSC-800A and 07-ZSC-800B are activated, indicating that the port door is locked, the Port (301) Close and Lock Not Verified" alarm should clear.	Verify that the "Port (301) Close and Lock Not Verified" alarm is cleared.	✓		AW
73.	Press the "RETURN TO CURRENT SCREEN" button to return to the "OVERPACK ENTRY MENU" at OIU-12-104A.	Verify that the "OVERPACK ENTRY MENU" is displayed.	✓		AW
"Lift Table (202B) Failed to Lower" Alarm					
74.	Because power has been removed from the lift table, the lift table should not lower and a "Lift Table (202B) Failed to Lower" alarm should be generated.	Verify that the lift table does not lower.	✓		AW

Pass

- 72a Force Z50812A and Z50812B
not activated (centering device retracted) ✓ R/V
- 72b Press start Drum Exit ✓ R/d
- 72c verify Exit sequence does
not start ✓ R/d
- 73d unForce Z50812A and Z50812B ✓ R/d
- 73e Press start Drum Exit ✓ R/V

#73a-c required to verify interlock

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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75.	Review the "OVERPACK ENTRY MENU" status. A flashing "SEQUENCE FAILED" message should be displayed and the "ALARMS" button should be flashing.	Verify that a flashing "SEQUENCE FAILED" message is displayed and the "ALARMS" button is flashing.	✓		R/W
76.	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Lift Table (202B) Failed to Lower" alarm.	Verify that the "Lift Table (202A) Failed to Lower" alarm has been acknowledged. <i>R/W 7/7/06</i>	✓		R/W
77.	Restore 120 VAC power to lift table LT-09-202B.	Verify that 120 VAC power has been restored to the lift table.		<i>N/A</i> <i>R/W 7/10/07</i>	
78.	The PCS should energize the Lift Table motor (LT-202B/M1) to lower the Lift Table to AGV height.	Verify that the Lift Table lowers to AGV height.	✓		R/W
79.	The Lift Table "AGV LOAD HEIGHT" indicator (09-ZL-235E) on the Lift Table Control Pedestal (PC-09-202B) should be illuminated.	Verify that the "AGV LOAD HEIGHT" indicator is illuminated.	✓		R/W
80.	After drum has moved approximately one foot toward the pickup end, 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.	✓		R/W

"Lift Table (202B) Conveyor Reverse Failed" Alarm

81.	Because power is removed from the lift table roller conveyor, the conveyor should stop.	Verify that the lift table roller conveyor has stopped and remains stopped.	✓		R/W
82.	The "DRUM AT AGV END" status indicator (09-ZL-235A) at the Lift Table Local Control Pedestal (PC-07-202B) should not be illuminated.	Verify that the "DRUM AT AGV END" status indicator is not illuminated.	✓		R/W
83.	Because the Drum Exit sequence has not been successfully completed, the "DRUM EXIT COMPLETE" message should not be displayed on the "OVERPACK ENTRY MENU" at OIU-12-104A. Wait 30 seconds.	Verify that the "DRUM EXIT COMPLETE" message is not displayed during the waiting period.	✓		R/W
84.	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Lift Table (202B) Conveyor Reverse Failed" alarm.	Verify that the "Lift Table (202B) Conveyor Reverse Failed" alarm has been acknowledged.	✓		R/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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85.	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. Verify that the roller conveyor does not start.	✓		R/W
86.	Manually activate (e.g., "Break the beam") at the "Drum at End of Conveyor" position switch (09-ZS-235E) 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.	✓		R/W
87.	The "DRUM AT AGV END" status indicator (09-ZL-235A) at the Lift Table Local Control Pedestal (PC-07-202B) should be illuminated.	Verify that the "DRUM AT AGV END" status indicator (09-ZL-235A) is illuminated.	✓		R/W
88.	Because the drum is positioned at the AGV end of the Lift Table (simulated), the "Lift Table (202B) Conveyor Reverse Failed" alarm should clear.	Verify that the "Lift Table (202B) Conveyor Reverse Failed" alarm has cleared.	✓		R/W
89.	Press the "RETURN TO CURRENT SCREEN" button from the "LOCAL ALARMS" screen to return to the "OVERPACK ENTRY MENU" at OIU-12-104A.	Verify that the "OVERPACK ENTRY MENU" is displayed.	✓		R/W
90.	Because the Drum Exit sequence is successfully completed, the "DRUM EXIT COMPLETE" message should be displayed on the "OVERPACK ENTRY MENU" at OIU-12-104A.	Verify that the "DRUM EXIT COMPLETE" message is displayed.	✓		R/W
91.	Press the "CLEAN DRUM READY FOR PICKUP" button from the "OVERPACK ENTRY MENU" at OIU-12-104A. The PCS should send a pickup request message to the AGV computer or file it for later transmission.	Verify that the "CLEAN DRUM READY FOR PICKUP" button has been pressed. Verify that the PCS processes the pickup request.	✓		R/W
92.	Press the "MAIN MENU" menu button to return to the "TRU ENTRY GLOVEBOX MAIN MENU".	Verify that the "TRU ENTRY GLOVEBOX MAIN MENU" screen is displayed.	✓		R/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
93.	Because all glovebox items should be initialized, OIU-12-104A should display a "SYSTEM INITIALIZED" message.	Verify that OIU-12-104A displays the "SYSTEM INITIALIZED" message.	✓		R/W
94.	Remove the 322 liter (85 gallon) overpack drum from the Lift Table.	Verify that the overpack drum has been removed from the Lift Table.	✓		R/W
TEST CASE 13021A-86.07 COMPLETE					

TEST CASE 13021A-86.08 DELIVER DRUM TO TRANSFER CAR THROUGH SPHINCTER PORT; ALARMS & INTERLOCKS.....	2
Move Transfer Car to Entry Position.....	2
"Sphincter Port Loss of Pressure" Alarm.....	3
"Lower to Car" Sequence; Alarms & Interlocks.....	4
"Deflate Sphincter Seal" Operation; Interlocks.....	6
"Open Sphincter Door" Operation; Alarms & Interlocks.....	7
"Lower Upper Drum Grab" Operation; Interlocks.....	8
"Lower Upper and Lower Drum Grabs" Operation; Alarms & Interlocks.....	11
"Handover Sequence" Operation; Alarms & Interlocks.....	14
"Raise Lower Drum Grab" Operation; Interlocks.....	15
"Lower Upper Drum Grab" Operation; Interlocks.....	16
"Lower Grab Fails to Close" Alarm.....	18
"Open Upper Drum Grab" Operation; Alarms & Interlocks.....	18
"Raise Upper Drum Grab" Operation; Interlocks.....	22
"Lower the Lower Drum Grab" and "Close Sphincter" Operation; Alarms & Interlocks.....	23

N/A

see

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NO

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3-18

HW

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8-28

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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TEST CASE 13021A-86.08 DELIVER DRUM TO TRANSFER CAR THROUGH SPHINCTER PORT; ALARMS & INTERLOCKS

1.	For this test case, the 55 gallon (208 liter) drum should be positioned above the Sphincter Entry Port and held in the upper grab. If it is not, take the appropriate steps to place the drum in the upper grab over the Sphincter Entry Port.	Verify that the drum is positioned above the Sphincter Entry Port and held in the upper grab.	8-20 NW	2/1/98	
2.	Display the "TRANSFER ASSEMBLY MENU" at OIU-12-104A.	Verify that the "TRANSFER ASSEMBLY MENU" screen is displayed.			
Move Transfer Car to Entry Position					
3.	Prior to the start of this test sequence, the Transfer Car should be in any position except below the Entry Glovebox Sphincter Port. If not, use OIU-12-104B (TRU Sorting G.B. OIU) to relocate the Transfer Car.	Verify that the Transfer Car is NOT positioned below the Sphincter Entry Port.			
4.	Because the Transfer Car is not positioned at the Entry Glovebox position, the "ENABLED" indicator on Hoist/Trolley/Lifter Pendant (107-PC-07-006) should NOT be illuminated.	Verify that the "ENABLED" indicator on Hoist/Trolley/Lifter Pendant (107-PC-07-006) is NOT illuminated.			
5.	At OIU-12-104B (TRU Sorting G.B. OIU): Display the "TRANSFER CAR MENU".	Verify that the "TRANSFER CAR MENU" is displayed.			
6.	At OIU-12-104B (TRU Sorting G.B. OIU): Press the "ENTRY" button to move the Transfer Car (107-TC-07-301) to the TRU Entry Glovebox position. A "TRANSFER CAR MOVING TO ENTRY POSITION" message should be displayed while the Transfer Car is moving to the Entry position.	Verify that a "TRANSFER CAR MOVING TO ENTRY POSITION" message is displayed while the Transfer Car is moving to the Entry position.			
7.	A "TRANSFER CAR AT ENTRY GLOVEBOX" message should be displayed at OIU-12-104B after the Transfer Car reaches the Entry position.	Verify that a "TRANSFER CAR AT ENTRY GLOVEBOX" message is displayed at OIU-12-104B.			

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✗	WITNESS (initial)
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Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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13.	<p>Unforce LCU 103 register PSL800 to allow the Sphincter Entry Port Seal "Inflated" pressure switch (07-PSL-800) to indicate whether the Sphincter Entry Port Seal is inflated. Record the unforced register status below:</p> <p>Unforced PSL800 Register Status: _____</p> <p>Because the Sphincter Entry Port Seal is inflated, the Port Seal "Inflated" pressure switch 07-PSL-800 should not be activated and the "Sphincter Port Loss of Pressure" alarm should clear.</p>	<p>Verify that register PSL800 is unforced.</p> <p>Verify that the pressure switch 07-PSL-800 is not activated.</p> <p>Verify that the "Sphincter Port Loss of Pressure" alarm has cleared</p>			
14.	<p>Because the Sphincter Entry Port Seal "Inflated" pressure switch (07-PSL-800) is no longer forced "activated", the "Sphincter Port Loss of Pressure" audible alarm should cease.</p>	<p>Verify that the audible alarm ceases.</p>			
15.	<p>Press the "RETURN TO CURRENT SCREEN" button to return to the "TRANSFER MENU" at OIU-12-104A.</p>	<p>Verify that the "TRANSFER MENU" is displayed.</p>			

"Lower to Car" Sequence: Alarms & Interlocks

16.	<p>Force Entry/Exit Port locked position switch (07-ZSC-800A and 07-ZSC-800B) registers ZSC800A and ZSC800B to "not activated" to simulate the Entry/Exit Port door "unlocked" condition. Record the forced register status below:</p> <table><tr><td>Register</td><td>Forced Status</td><td>Method of Confirmation</td></tr><tr><td>ZSC800A</td><td>_____</td><td>_____</td></tr><tr><td>ZSC800B</td><td>_____</td><td>_____</td></tr></table> <p>NOTE: The Entry Exit/Port door locked position switches act as an interlock for Sphincter Entry Port Operation. If the Entry/Exit Port is unlocked, the Sphincter Entry Port should be prevented from opening.</p>	Register	Forced Status	Method of Confirmation	ZSC800A	_____	_____	ZSC800B	_____	_____	<p>Verify that registers ZSC800A and ZSC800B are forced "not activated".</p>			
Register	Forced Status	Method of Confirmation												
ZSC800A	_____	_____												
ZSC800B	_____	_____												

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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17.	<p>Force the Sphincter Entry Port Seal "Deflated" pressure switch (07-PSLL-801) register PSLL801 to "not activated" to simulate the Sphincter Entry Port Seal "inflated" condition. Record the forced register status below:</p> <p><u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u></p> <p>PSLL801 _____ _____</p> <p>NOTE: The Sphincter Entry Port Seal pressure switch acts as an interlock for Sphincter Entry Port Operation. If the Seal is not deflated during the port opening sequence, the port should not open.</p>	Verify that register PSLL801 is forced "not activated".			
18.	<p>Force the Sphincter Entry Port Door "Open" position switch (07-ZSO-805) register ZSO805 "not activated" to simulate the Sphincter Entry Port Door "not open" condition. Record the forced register status below:</p> <p><u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u></p> <p>ZSO805 _____ _____</p> <p>NOTE: During the Sphincter Entry Port Opening Sequence, if the "Open" position switch (07-ZSO-805) switch is not activated, the upper drum slide motor cannot be energized.</p>	Verify that register ZSO805 is forced "not activated".			

N/A see Attached
page 8-1a through 8-1a
AW 2/7/98

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
19.	<p>Force Transfer Assembly Upper and Lower Slide Drive clutch switch (07-ZS-302 and 07-ZS-303) registers ZS302 and ZS303 to "activated" to simulate the tripping of Upper and Lower Slide motors 107-DH-07-302/M1 and 107-DH-07-302/M2, respectively. Record the forced register status below:</p> <p><u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u></p> <p>ZS302 _____ _____</p> <p>ZS303 _____ _____</p> <p>NOTE: The Transfer Assembly Upper and Lower Slide Drive clutch switches act as an interlock for slide drive motor operation.</p>	<p>Verify that registers ZS302 and ZS303 are forced "activated".</p> <p><i>N/A see attached page 8-1a through 8-7a NW 2/1/98</i></p>			
20.	<p>Force the Transfer Car at Sphincter position switch (07-ZS-810) register ZS810 "not activated" to simulate the Transfer Car NOT positioned below the Sphincter Port condition. Record the forced register status below:</p> <p><u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u></p> <p>ZS810 _____ _____</p> <p>NOTE: The Transfer Car at Sphincter position switch (07-ZS-810) switch acts as an interlock for slide drive motor operation.</p>	<p>Verify that register ZS810 is forced "not activated".</p>			
"Deflate Sphincter Seal" Operation; Interlocks					
21.	<p>Press the "LOWER DRUM TO CAR" button from the "TRANSFER MENU" screen at OIU-12-104A.</p> <p>The "DRUM LOWER TO CAR..." message should be displayed on the "TRANSFER MENU" screen at OIU-12-104A.</p>	<p>Verify that the "DRUM LOWER TO CAR..." message is displayed.</p>			
22.	<p>Because the Entry/Exit Port locked position switch registers ZSC800A and ZSC800B have been forced "not activated" to simulate the Entry/Exit Port door "unlocked" condition, the Sphincter Entry Port Seal should not deflate.</p>	<p>Verify that the Sphincter Entry Port Seal does not deflate.</p>			

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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23.	Unforce LCU 103 registers ZSC800A and ZSC800B to allow the "Port Locked" position switches 07-ZSC-800A and 07-ZSC-800B to indicate whether the port door is locked. Record the unforced register status below: Unforced ZSC800A Register Status: _____ Unforced ZSC800B Register Status: _____	Verify that registers ZSC800A and ZSC800B are unforced.			
24.	The PCS should automatically energize the Transfer Port vacuum isolation solenoid valve 07-FEV-800G/O (Open) and vacuum generation solenoid valve 07-FEV-800H/DE (Deflate) to deflate the Sphincter Port seal.	Verify that solenoid valves 07-FEV-800G/O (Open) and 07-FEV-800H/DE (deflate) are energized. Verify that the Sphincter Port seal is deflated.			
"Open Sphincter Door" Operation; Alarms & Interlocks					
25.	Because the Sphincter Entry Port Seal pressure switch (07-PSLL-801) has been forced "not activated" to simulate the Sphincter Entry Port Seal "inflated" condition, the Sphincter Entry Port should not open.	Verify that the Sphincter Entry Port does not open.			
26.	Unforce LCU 103 register PSLL801 to allow the Sphincter Entry Port Seal "Seal Deflated" pressure switch (07-PSL-801) to indicate whether the Sphincter Entry Port Seal is deflated. Record the unforced register status below: Unforced PSL801 Register Status: _____	Verify that register PSL801 is unforced.			
27.	Because the Sphincter Entry Port Seal "Seal Deflated" pressure switch (07-PSL-801) is activated, indicating that the Sphincter Entry Port Seal is deflated, the PCS should pulse-energize Sphincter Door cylinder solenoid FEV800E/O (open). The Sphincter Door should open.	Verify that the Sphincter Door opens.			

NA
see 8-1a through 8-1a
10/12
AW
2/7/98

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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28.	Because the Sphincter Entry Port (107-DO-07-302) "Open" position switch (07-ZSO-805) register ZSO805 is forced "not activated" to simulate the Sphincter Entry Port door "not open" condition, the "Drum Lower to Car" sequence should be suspended. The Upper Drum Grab should not move forward (lower). The "Sphincter Port Failed to Open" alarm should be generated.	Verify that the Upper Drum Grab does not move forward (lower).	N/A see Attached Page 8-1a through R/W 2/1/98		
29.	Review the "TRANSFER MENU" status. A flashing "SEQUENCE FAILED" message should be displayed and the "ALARMS" button should be flashing.	Verify that a flashing "SEQUENCE FAILED" message is displayed and the "ALARMS" button is flashing.			
30.	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Sphincter Port Failed to Open" alarm.	Verify that the alarm has been acknowledged.			
31.	Unforce LCU 103 register ZSO805 to allow the Sphincter Entry Port "Open" position switch 07-ZSO-805 indicate whether the Sphincter Entry Port is open. Record the unforced register status below: Unforced ZSO805 Register Status: _____ The "Sphincter Port Failed to Open" alarm should clear.	Verify that register ZSO805 is unforced. Verify that the "Sphincter Port Failed to Open" alarm clears.			
32.	Press the "RETURN TO CURRENT SCREEN" button to return to the "TRANSFER MENU" at OIU-12-104A.	Verify that the "TRANSFER MENU" is displayed.			
"Lower Upper Drum Grab" Operation; Interlocks					
33.	Because Upper Slide motor clutch switch (07-ZS-302) register ZS302 has been forced "activated" to simulate a clutch "tripped" condition, the Upper Slide Drive Motor 107-DH-07-302/M1 should not be energized, and the Upper Drum Grab should not move forward (lower).	Verify that the the Upper Drum Grab does not move forward (lower).			
34.	Review the "TRANSFER MENU" status. A flashing "SEQUENCE FAILED" message should be displayed and the "ALARMS" button should be flashing.	Verify that a flashing "SEQUENCE FAILED" message is displayed and the "ALARMS" button is flashing.			

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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35.	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Clutch Tripped - Motor 1" alarm.	Verify that the alarm has been acknowledged.			
36.	Force LCU 103 Sphincter Entry Port "Open" position switch 07-ZSO-805 register ZSO805 "not activated" to simulate the Sphincter Entry Port "not open" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZSO805 _____ _____	Verify that register ZSO805 is forced "not activated".			
37.	Unforce LCU 103 register ZS302 to remove the Upper Slide motor clutch switch "tripped" condition. Record the unforced register status below: Unforced ZS302 Register Status: _____	Verify that register ZS302 is unforced.			
38.	Because register ZS302 has been unforced "Clutch Tripped - Motor 1" alarm should clear.	Verify that the "Clutch Tripped - Motor 1" alarm is cleared.			
39.	Because the Sphincter Entry Port (107-DO-07-302) "Open" position switch (07-ZSO-805) register ZSO805 is forced "not activated" to simulate the Sphincter Entry Port door "not open" condition, the Upper Slide Drive Motor 107-DH-07-302/M1 should not be energized, and the Upper Drum Grab should not move forward (lower).	Verify that the the Upper Drum Grab does not move forward (lower).			
40.	Force Drum Lifter open position switch (07-ZSO-804) register ZSO804 to "not activated" to simulate the Drum Lifter NOT open. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZSO804 _____ _____ NOTE: The Drum Lifter open position switch acts as an interlock for upper slide drive motor operation.	Verify that register ZSO804 is forced "not activated".			

*N/A see Attached page 8-1a through 8-1a
RLM 2/11/98*

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
41.	Unforce LCU 103 Sphincter Entry Port position switch 07-ZSO-805 register ZSO805 to remove the Sphincter Entry Port "not open" condition. Record the unforced register status below: Unforced ZSO805 Register Status: _____	Verify that register ZSO805 is unforced.			
42.	Because Drum Lifter position switch (07-ZSO-804) register ZSO804 has been forced "not activated" to simulate the Drum Lifter NOT open condition, the Upper Slide Drive Motor 107-DH-07-302/M1 should not be energized, and the Upper Drum Grab should not move forward (lower).	Verify that the the Upper Drum Grab does not move forward (lower).			
43.	Force Drum Lifter fully raised position switch (07-ZS-802C register ZS802C to "not activated" to simulate the Drum Lifter NOT fully raised. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS802C _____ _____ NOTE: The Drum Lifter fully raised position switch acts as an interlock for slide drive motor operation.	Verify that register ZS802C is forced "not activated". <i>N/A see attached page 8-1a through 8-1e R/W 2/4/98</i>			
44.	Unforce LCU 103 register ZSO804 to remove the Drum Lifter NOT open condition. Record the unforced register status below: Unforced ZSO804 Register Status: _____	Verify that register ZSO804 is unforced.			
45.	Because Drum Lifter position switch (07-ZS-802C) register ZS802C has been forced "not activated" to simulate the Drum Lifter NOT fully raised condition, the Upper Slide Drive Motor 107-DH-07-302/M1 should not be energized, and the Upper Drum Grab should not move forward (lower).	Verify that the the Upper Drum Grab does not move forward (lower).			
46.	Unforce LCU 103 register ZS802C to remove the Drum Lifter NOT open condition. Record the unforced register status below: Unforced ZS802C Register Status: _____	Verify that register ZS802C is unforced.			

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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47.	<p>Because all registers are unforced: Upper Slide motor clutch switch (07-ZS-302) should indicate a "non-trip" condition, Sphincter Entry Port position switch 07-ZSO-805 should indicate an "open" condition, and position switches (07-ZSO-804) and (07-ZS-802C) should indicate Drum Lifter "open" and "raised" conditions, respectively, the PCS should energize Upper Slide Drive Motor 107-DH-07-302/M1 forward.</p> <p>The Upper Drum Grab should move forward (lower).</p>	Verify that the Upper Drum Grab moves forward (lower).			
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"Lower Upper and Lower Drum Grabs" Operation; Alarms & Interlocks

48.	<p>Because the Transfer Car at Sphincter position switch (07-ZS-810) register ZS810 has been forced "not activated" to simulate the Transfer Car NOT at Sphincter condition, the Upper Slide Drive Motor 107-DH-07-302/M1 and Lower Slide Drive Motor 107-DH-07-302/M2 should not be energized, and the Upper and Lower Drum Grabs should not move forward (lower).</p>	Verify that the the Upper and Lower Drum Grabs do not move forward (lower).			
49.	<p>Unforce LCU 103 register ZS810 to remove the "Transfer Car at Sphincter position" condition to allow position switch 07-ZS-810 to indicate whether the Transfer Car is below the Sphincter Door. Record the unforced register status below:</p> <p>Unforced ZS810 Register Status: _____</p>	Verify that register ZS810 is unforced.			
50.	<p>Because Lower Slide motor clutch switch (07-ZS-303) register ZS303 has been forced "activated" to simulate a clutch "tripped" condition, the Upper Slide Drive Motor 107-DH-07-302/M1 and Lower Slide Drive Motor 107-DH-07-302/M2 should not be energized, and the Upper and Lower Drum Grabs should not move forward (lower).</p>	Verify that the the Upper and Lower Drum Grabs do not move forward (lower).			
51.	<p>Review the "TRANSFER MENU" status. A flashing "SEQUENCE FAILED" message should be displayed and the "ALARMS" button should be flashing.</p>	Verify that a flashing "SEQUENCE FAILED" message is displayed and the "ALARMS" button is flashing.			
52.	<p>ALARM ACKNOWLEDGEMENT SEQUENCE:</p> <p>Acknowledge the "Clutch Tripped - Motor 2" alarm.</p>	Verify that the alarm has been acknowledged.			

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
53.	Force Transfer Assembly Upper Drive clutch switch (07-ZS-302) register ZS302 to "activated" to simulate the tripping of Upper Slide motor 107-DH-07-302/M1 clutch. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS302	Verify that register ZS302 is forced "activated".			
54.	Unforce LCU 103 register ZS303 to remove the Lower Slide motor clutch switch "tripped" condition. Record the unforced register status below: Unforced ZS303 Register Status: _____	Verify that register ZS303 is unforced.			
55.	Because register ZS303 has been unforced, the "Clutch Tripped - Motor 2" alarm should clear.	Verify that the "Clutch Tripped - Motor 2" alarm is cleared.			
56.	Because Upper Slide motor clutch switch (07-ZS-302) register ZS302 has been forced "activated" to simulate a clutch "tripped" condition, the Upper Slide Drive Motor 107-DH-07-302/M1 and Lower Slide Drive Motor 107-DH-07-302/M2 should not be energized, and the Upper and Lower Drum Grabs should not move forward (lower).	Verify that the the Upper and Lower Drum Grabs do not move forward (lower).			
57.	Review the "TRANSFER MENU" status. A flashing "SEQUENCE FAILED" message should be displayed and the "ALARMS" button should be flashing.	Verify that a flashing "SEQUENCE FAILED" message is displayed and the "ALARMS" button is flashing.			
58.	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Clutch Tripped - Motor 1" alarm.	Verify that the alarm has been acknowledged.			

N/A
8-12
8-12
2/17/98
Attached through 8-12

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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59.	<p>Force Grab Arm "open" position switch (07-ZSO-809A) and (07-ZSO-809B) registers ZSO809A and ZSO809B, respectively to "not activated" to simulate the Lower Grab Arms "not open" 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>ZSO809A</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>ZSO809B</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table> <p>NOTE: The Grab Arm "open" position switches act as a permissive to end the "Lower to Car" sequence. Because the sequence is interrupted, the "Lower Grab Fails to Open" alarm should be generated.</p>	Register	Forced Status	Method of Confirmation	ZSO809A	_____	_____	ZSO809B	_____	_____	<p>Verify that registers ZSO809A and ZSO809B are forced "not activated".</p> <p><i>N/A see Attached through 8-72 A/W 2/7/98</i></p>			
Register	Forced Status	Method of Confirmation												
ZSO809A	_____	_____												
ZSO809B	_____	_____												
60.	<p>Unforce LCU 103 register ZS302 to remove the Upper Slide motor clutch switch "tripped" condition. Record the unforced register status below:</p> <p>Unforced ZS302 Register Status: _____</p>	<p>Verify that register ZS302 is unforced.</p>												
61.	<p>Because register ZS302 is unforced, the "Clutch Tripped - Motor 1" alarm should clear.</p>	<p>Verify that the "Clutch Tripped - Motor 1" alarm is cleared.</p>												
62.	<p>Because the registers are unforced: Upper Slide motor clutch switch (07-ZS-302) and Lower Slide motor clutch switch (07-ZS-303) should indicate a "non-trip" condition, and position switch (07-ZS-810) should indicate that the Transfer Car is under the Sphincter Door, the PCS should energize Upper Slide Drive Motor 107-DH-07-302/M1 and Lower Slide Drive Motor 107-DH-07-302/M21 forward.</p> <p>The Upper and Lower Drum Grabs should move forward (lower).</p>	<p>Verify that the Upper and Lower Drum Grabs move forward (lower).</p>												
63.	<p>Because the Upper and Lower Slides are lowered, the PCS should energize the Lower Drum Grab "open" solenoid and the Lower Grab should open.</p> <p>Because the Lower Grab Arm "open" position switch registers ZSO809A and ZSO809B are forced "not activated", the sequence is suspended and the "Lower Grab Fails to Open" alarm should be generated.</p>	<p>Verify that the Lower Grab opens.</p>												

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
64.	Review the "TRANSFER MENU" status. A flashing "SEQUENCE FAILED" message should be displayed and the "ALARMS" button should be flashing.	Verify that a flashing "SEQUENCE FAILED" message is displayed and the "ALARMS" button is flashing.			
65.	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Lower Grab Fails to Open" alarm.	Verify that the alarm has been acknowledged.			
66.	Unforce LCU 103 registers ZSO809A and ZSO809A to indicate whether the Lower Grab is open. Record the unforced register status below: Unforced ZSO809A Register Status: _____ Unforced ZSO809B Register Status: _____ The "Lower Grab Fails to Open" alarm should clear.	Verify that registers ZSO809A and ZSO809B are unforced. Verify that the "Lower Grab Fails to Open" alarm clears.			
67.	Press the "RETURN TO CURRENT SCREEN" button to return to the "TRANSFER MENU" at OIU-12-104A. Because all registers are unforced and all interlocks are now satisfied, the "DRUM LOWERED TO CAR" message should be displayed.	Verify that the "TRANSFER MENU" is displayed. Verify that the "DRUM LOWERED TO CAR" message is displayed.			
"Handover Sequence" Operation; Alarms & Interlocks					
68.	Force Transfer Assembly Lower Slide Drive clutch switch (07-ZS-303) register ZS303 to "activated" to simulate the tripping of Lower Slide motor 107-DH-07-302/M2 clutch. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS303 _____ _____ NOTE: The Transfer Assembly Lower Slide Drive clutch switch acts as an interlock for slide drive motor operation.	Verify that register ZS303 is forced "activated".			

Attached 8-7e
see page 8-1a through 8-7e
N/A
page 8-1a
2/1/98

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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"Raise Lower Drum Grab" Operation; Interlocks													
69.	<p>Press the "START HANDOVER" button from the "TRANSFER MENU" screen at OIU-12-104A.</p> <p>Because Lower Slide Drive clutch switch (07-ZS-303) register ZS303 is forced "activated", the PCS should not energize the Lower Slide motor 107-DH-07-302/M2 and the Lower Drum Grab should not be raised.</p>	<p>Verify that the Lower Drum Grab should is not raised.</p>	<p><i>N/A</i></p>	<p><i>see page 8-1a</i></p>	<p><i>Attached through 8-72</i></p>								
70.	<p>Review the "TRANSFER MENU" status. A flashing "SEQUENCE FAILED" message should be displayed and the "ALARMS" button should be flashing.</p>	<p>Verify that a flashing "SEQUENCE FAILED" message is displayed and the "ALARMS" button is flashing.</p>											
71.	<p>ALARM ACKNOWLEDGEMENT SEQUENCE:</p> <p>Acknowledge the "Clutch Tripped - Motor 2" alarm.</p>	<p>Verify that the alarm has been acknowledged.</p>											
72.	<p>Force Lower Grab Arm "open" position switch (07-ZSO-809A) and (07-ZSO-809B) registers ZSO809A and ZSO809B, respectively to "not activated" to simulate the Lower Grab Arms "not open" 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>ZSO809A</td> <td>_____</td> <td>_____</td> </tr> <tr> <td>ZSO809B</td> <td>_____</td> <td>_____</td> </tr> </tbody> </table> <p>NOTE: The Grab Arm "open" position switches act as an interlock to the Lower Slide motor 107-DH-07-302/M2.</p>	Register	Forced Status	Method of Confirmation	ZSO809A	_____	_____	ZSO809B	_____	_____	<p>Verify that registers ZSO809A and ZSO809B are forced "not activated".</p>		
Register	Forced Status	Method of Confirmation											
ZSO809A	_____	_____											
ZSO809B	_____	_____											
73.	<p>Unforce LCU 103 register ZS303 to remove the Lower Slide motor clutch switch "tripped" condition. Record the unforced register status below:</p> <p>Unforced ZS303 Register Status: _____</p>	<p>Verify that register ZS303 is unforced.</p>											
74.	<p>Because register ZS303 is unforced, the "Clutch Tripped - Motor 2" alarm should clear.</p>	<p>Verify that the "Clutch Tripped - Motor 2" alarm is cleared.</p>											

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
75.	Because the Lower Grab Arm "open" position switch (07-ZSO-809A) and (07-ZSO-809B) registers ZSO809A and ZSO809B are forced "not activated", the PCS should not energize the Lower Slide motor 107-DH-07-302/M2 and the Lower Drum Grab should not raise.	Verify that the Lower Drum Grab does not raise.			
76.	Force Transfer Assembly Upper Slide Drive clutch switch (07-ZS-302) register ZS302 to "activated" to simulate the tripping of Upper Slide motor 107-DH-07-302/M1 clutch. Record the forced register status below: <div> <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS302 _____ _____ NOTE: The Transfer Assembly Upper Slide Drive clutch switch acts as an interlock for slide drive motor operation. </div>	Verify that register ZS302 is forced "activated". <i>N/A see Attached page 8-1a through R/W 2/1/98</i>	8-17a		
77.	Unforce LCU 103 registers ZSO809A and ZSO809B to indicate whether the Lower Grab is open. Record the unforced register status below: Unforced ZSO809A Register Status: _____ Unforced ZSO809B Register Status: _____	Verify that registers ZSO809A and ZSO809B are unforced.			
78.	The PCS should energize Lower Slide motor 107-DH-07-302/M2 and the Lower Drum Grab should be raised. The "DRUM HANDOVER IN PROGRESS..." message should be displayed on the "TRANSFER MENU" screen at OIU-12-104A.	Verify that the Lower Drum Grab is raised. Verify that the "DRUM HANDOVER IN PROGRESS..." message is displayed.			
"Lower Upper Drum Grab" Operation; Interlocks					
79.	Because Upper Slide Drive clutch switch (07-ZS-302) register ZS302 is forced "activated" to simulate the tripping of Upper Slide motor 107-DH-07-302/M1 clutch, the PCS should not energize the Upper Slide motor and the Upper Grab should not be lowered.	Verify that the Upper Grab is not lowered.			

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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80.	Review the "TRANSFER MENU" status. A flashing "SEQUENCE FAILED" message should be displayed and the "ALARMS" button should be flashing.	Verify that a flashing "SEQUENCE FAILED" message is displayed and the "ALARMS" button is flashing.			
81.	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Clutch Tripped - Motor 1" alarm.	Verify that the alarm has been acknowledged.			
82.	Force Lower Grab Arm "closed" position switch (07-ZSC-809) register ZSC809 to "not activated" to simulate the Lower Grab Arm "open" condition. Record the forced register status below: <div style="display: flex; justify-content: space-between;"> <div>Register</div> <div>Forced Status</div> <div>Method of Confirmation</div> </div> ZSC809 _____ NOTE: The Lower Grab Arm "closed" position switch acts as a permissive to the Handover Sequence.	Verify that register ZSC809 is forced "not activated".			
83.	Unforce LCU 103 register ZS302 to remove the Upper Slide motor clutch switch "tripped" condition. Record the unforced register status below: Unforced ZS302 Register Status: _____	Verify that register ZS302 is unforced.			
84.	Because register ZS302 is unforced, the "Clutch Tripped - Motor 1" alarm should clear.	Verify that the "Clutch Tripped - Motor 1" alarm is cleared.			
85.	Because the Upper Slide motor clutch switch "tripped" condition is removed, the PCS should energize the Upper Slide motor 107-DH-07-302/M1 and the Upper Drum Grab should be lowered.	Verify that the Upper Drum Grab is lowered.			

N/A sec
Attached page 8-1a
through 8-7a
N/A 2/1/98

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
"Lower Grab Fails to Close" Alarm					
86.	<p>After the Upper Drum Grab is lowered, the PCS should close the Lower Drum Grab as indicated by position switch (07-ZSC-809).</p> <p>Because the Lower Grab Arm "closed" position switch (07-ZSC-809) register ZSC809 is forced "not activated", the Handover Sequence should be suspended and a "Lower Grab Failed to Close" alarm should be generated and the Handover Sequence should be suspended.</p>	<p>Verify that the Lower Drum Grab is closed.</p> <p>Verify that the Handover Sequence is suspended.</p>	<i>N/A</i> <i>see page 8-1a</i> <i>Attached through 8-1a</i> <i>AW 2/7/98</i>		
87.	Wait 30 seconds. Review the "TRANSFER MENU" status. A flashing "SEQUENCE FAILED" message should be displayed and the "ALARMS" button should be flashing.	Verify that a flashing "SEQUENCE FAILED" message is displayed and the "ALARMS" button is flashing.			
88.	<p>ALARM ACKNOWLEDGEMENT SEQUENCE:</p> <p>Acknowledge the "Lower Grab Failed to Close" alarm.</p>	Verify that the alarm has been acknowledged.			
89.	Press the "RETURN TO CURRENT SCREEN" button to return to the "TRANSFER MENU" at OIU-12-104A.	Verify that the "TRANSFER MENU" is displayed.			
"Open Upper Drum Grab" Operation; Alarms & Interlocks					
90.	<p>Force Lower Grab Arm pressure switch (07-PS-395B) register PS395B to "not activated" to simulate the Lower Grab Arm "loss of pressure" condition. Record the forced register status below:</p> <p><u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u></p> <p>PS395B _____ _____</p> <p>NOTE: The Lower Grab Arm "loss of pressure" pressure switch acts as a permissive to the Handover Sequence. Because the Lower Grab Arm pressure switch (07-PS-395B) register PS395B is forced "not activated", the "Lower Grab Loss of Pressure" alarm should be generated.</p>	Verify that register PS395B is forced "not activated".			

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
91.	Unforce LCU 103 Lower Grab Arm "closed" position switch (07-ZSC-809) register ZSC809 to remove the Lower Grab Arm "open" condition. Record the unforced register status below: Unforced ZSC809 Register Status: _____	Verify that register ZS809 is unforced.			
92.	Because register ZSC809 is unforced, the "Lower Grab Fails to Close" alarm should clear.	Verify that the "Lower Grab Fails to Close" alarm is cleared.			
93.	Review the "TRANSFER MENU" status. A flashing "SEQUENCE FAILED" message should be displayed and the "ALARMS" button should be flashing.	Verify that a flashing "SEQUENCE FAILED" message is displayed and the "ALARMS" button is flashing.			
94.	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Lower Grab Loss of Pressure" alarm.	Verify that the alarm has been acknowledged.			
95.	Press the "RETURN TO CURRENT SCREEN" button to return to the "TRANSFER MENU" at OIU-12-104A.	Verify that the "TRANSFER MENU" is displayed.			
96.	Force Lower Drum Grab "raised" position switch (07-ZS-808A) register ZS808A to "not activated" to simulate the Lower Drum Grab "not raised" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS808A _____ _____ NOTE: The Lower Drum Grab "raised" position switch acts as an interlock to opening the Upper Drum Grab.	Verify that register ZS808A is forced "not activated".			
97.	Unforce LCU 103 register PS395B to remove the "loss of pressure" condition and indicate whether the Lower Grab has normal pressure. Record the unforced register status below: Unforced PS395B Register Status: _____	Verify that register PS395B is unforced.			

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
98.	Because register PS395B is unforced, the "Lower Grab Loss of Pressure" alarm should clear.	Verify that the "Lower Grab Loss of Pressure" alarm is cleared.			
99.	Because Lower Drum Grab "raised" position switch (07-ZS-808A) register ZS808A is forced "not activated" to simulate the Lower Drum Grab "not raised" condition, the PCS should not energize the Upper Drum Grab Open solenoid and the Upper Drum Grab should not open.	Verify that the Upper Drum Grab does not open.			
100.	Force Lower Drum Grab Arm "closed" position switch (07-ZSC-809) register ZSC809 to "not activated" to simulate the Lower Drum Grab Arm "open" condition. Record the forced register status below: <div style="display: flex; justify-content: space-between;"> <div>Register</div> <div>Forced Status</div> <div>Method of Confirmation</div> </div> ZSC809 _____ NOTE: The Lower Drum Grab Arm "closed" position switch acts as an interlock to opening the Upper Drum Grab.	Verify that register ZSC809 is forced "not activated" <i>N/A see Attached page 8-1a through 8-7e AW 2/4/98</i>			
101.	Because Lower Drum Grab Arm "closed" position switch (07-ZSC-809) register ZSC809 is forced "not activated" to simulate the Lower Drum Grab Arm "open" condition, the PCS should not energize the Upper Drum Grab Open solenoid and the Upper Drum Grab should not open.	Verify that the Upper Drum Grab does not open.			
102.	Force Upper Drum Grab Arms "open" position switch (07-ZSO-806A & B) registers ZSO806A and ZSO806B to "not activated" to simulate the Upper Drum Grab Arms "closed" condition. Record the forced register status below: <div style="display: flex; justify-content: space-between;"> <div>Register</div> <div>Forced Status</div> <div>Method of Confirmation</div> </div> ZSO806A _____ ZSO806B _____ NOTE: The Upper Drum Grab Arms "open" position switches act as an interlock to raising the Upper Drum Grab.	Verify that registers ZSO806A and ZSO806B are forced "not activated".			

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)					
103.	Unforce LCU 103 register ZSC809 to remove the Lower Drum Grab Arm "open" condition and indicate whether the Lower Drum Grab Arm is "closed". Record the unforced register status below: Unforced ZSC809 Register Status: _____	Verify that register ZSC809 is unforced.								
104.	Because the Lower Drum Grab Arm register ZSC809 "open" condition is removed, the PCS should energize the Upper Slide motor 107-DH-07-302/M1 (reverse) and the Upper Drum Grab should be opened. Because Upper Drum Grab Arms "open" position switch (07-ZSO-806A & B) registers ZSO806A and ZSO806B are forced "not activated" to simulate the Upper Drum Grab Arms "closed" condition, the "Upper Grab Failed to Open" alarm should be generated.	Verify that the Upper Drum Grab is open.								
105.	Review the "TRANSFER MENU" status. A flashing "SEQUENCE FAILED" message should be displayed and the "ALARMS" button should be flashing.	Verify that a flashing "SEQUENCE FAILED" message is displayed and the "ALARMS" button is flashing.								
106.	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Upper Grab Failed to Open" alarm.	Verify that the alarm has been acknowledged.								
107.	Press the "RETURN TO CURRENT SCREEN" button to return to the "TRANSFER ASSEMBLY MENU" at OIU 12-104A.	Verify that the "TRANSFER MENU" is displayed.								
108.	Force Transfer Assembly Upper Slide Drive clutch switch (07-ZS-302) register ZS302 to "activated" to simulate the tripping of Upper Slide motor 107-DH-07-302/M1 clutch. Record the forced register status below: <table><tr><td><u>Register</u></td><td><u>Forced Status</u></td><td><u>Method of Confirmation</u></td></tr><tr><td>ZS302</td><td>_____</td><td>_____</td></tr></table> NOTE: The Transfer Assembly Upper Slide Drive clutch switch acts as an interlock for slide drive motor operation.	<u>Register</u>	<u>Forced Status</u>	<u>Method of Confirmation</u>	ZS302	_____	_____	Verify that register ZS302 is forced "activated".		
<u>Register</u>	<u>Forced Status</u>	<u>Method of Confirmation</u>								
ZS302	_____	_____								

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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109.	<p>Unforce LCU 103 registers ZSO806A and ZSO806B to indicate whether the Lower Grab is open. Record the unforced register status below:</p> <p>Unforced ZSO806A Register Status: _____</p> <p>Unforced ZSO806B Register Status: _____</p> <p>NOTE: Registers ZSO806A and ZSO806B "activated" is a permissive for the Raise Upper Grab Sequence.</p>	Verify that registers ZSO806A and ZSO806B are unforced.			
110.	Because registers ZSO806A and ZSO806B are unforced, the "Upper Grab Failed to Open" alarm should clear.	Verify that the "Upper Grab Failed to Open" alarm is cleared.			
"Raise Upper Drum Grab" Operation; Interlocks					
111.	Because Upper Slide Drive clutch switch (07-ZS-302) register ZS302 is forced "activated" to simulate the tripping of Upper Slide motor 107-DH-07-302/M1 clutch, motor 107-DH-07-302/M1 should not be energized and the Upper Drum Grab should not be raised.	Verify that the Upper Drum Grab is not raised.			
112.	Review the "TRANSFER MENU" status. A flashing "SEQUENCE FAILED" message should be displayed and the "ALARMS" button should be flashing.	Verify that a flashing "SEQUENCE FAILED" message is displayed and the "ALARMS" button is flashing.			
113.	<p>ALARM ACKNOWLEDGEMENT SEQUENCE:</p> <p>Acknowledge the "Clutch Tripped - Motor 1" alarm.</p>	Verify that the alarm has been acknowledged.			

*N/A see Attached page 8-1a through 8-7a
AW 2/7/98*

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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114.	Force "Drum in Position" position switch (07-ZS-305) register ZS305 "activated" to simulate a drum present below Sphincter Port. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS305 _____ _____ NOTE: The "Drum in Position" position switch acts as an interlock for Lower Slide Drive Motor 107-DH-07-302/M2 operation to lower Lower Drum Grab.	Verify that register ZS305 is forced "activated".			
115.	Unforce LCU 103 register ZS302 to remove the Upper Slide motor clutch switch "tripped" condition. Record the unforced register status below: Unforced ZS302 Register Status: _____	Verify that register ZS302 is unforced.			
116.	Because register ZS302 is unforced, the "Clutch Tripped - Motor 1" alarm should clear.	Verify that the "Clutch Tripped - Motor 1" alarm is cleared.			
117.	Because the Upper Slide Drive motor clutch switch "tripped" condition is removed, Upper Slide Drive Motor 107-DH-07-302/M1 should be energized and the Upper Drum Grab should be raised.	Verify that the Upper Drum Grab is raised.			
"Lower the Lower Drum Grab" and "Close Sphincter" Operation; Alarms & Interlocks					
118.	Because the "Drum in Position" position switch (07-ZS-305) register ZS305 is forced "activated" to simulate a drum present below Sphincter Port, Lower Slide Drive Motor 107-DH-07-302/M2 should not be energized and the Lower Drum Grab should not be lowered. The "Drum Handover Sequence Failed" alarm should be generated.	Verify that the Lower Drum Grab is not lowered.			
119.	Review the "TRANSFER MENU" status. A flashing "SEQUENCE FAILED" message should be displayed and the "ALARMS" button should be flashing.	Verify that a flashing "SEQUENCE FAILED" message is displayed and the "ALARMS" button is flashing.			
120.	ALARM ACKNOWLEDGEMENT SEQUENCE:	Verify that the alarm has been acknowledged.			

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS	FAIL	WITNESS (initial)
	Acknowledge the "Drum Handover Sequence Failed" alarm.				
121.	Press the "RETURN TO CURRENT SCREEN" button to return to the "TRANSFER MENU" at OIU-12-104A.	Verify that the "TRANSFER MENU" is displayed.			
122.	Unforce LCU 103 register ZS305 to remove the "Drum in Position" (to simulate a drum present below Sphincter Port) condition. Record the unforced register status below: Unforced ZS305 Register Status: _____	Verify that register ZS305 is unforced.			
123.	Because register ZS305 is unforced, the "Drum Handover Sequence Failed" alarm should clear.	Verify that the "Drum Handover Sequence Failed" alarm is cleared.			
124.	Because the "Drum in Position" condition is removed, the PCS should energize Lower Slide Drive Motor 107-DH-07-302/M2 and the Lower Drum Grab should be lowered. The PCS should pulse-energize the Sphincter Door close solenoid to close the Sphincter Door and inflate the door seal.	Verify that the Lower Drum Grab is lowered. Verify that the Sphincter Door is closed and the door seal is inflated.			
125.	Because Sphincter Entry Port is closed and seal inflated, the Drum Handover Sequence should be considered successful and the "DRUM HANDOVER COMPLETE" message should be displayed. The drum should now be held in the Sphincter Port.	Verify that the "DRUM HANDOVER COMPLETE" message is displayed. Verify that the drum is in the Sphincter Port.			
126.	Press the "MAIN MENU" button on the "TRANSFER MENU" to return to the "TRU ENTRY GLOVEBOX MAIN MENU".	Verify that the "TRU ENTRY GLOVEBOX MAIN MENU" screen is displayed at OIU-12-104A.			
127.	Because all glovebox items should be initialized, OIU-12-104A displays a "SYSTEM INITIALIZED" message.	Verify that OIU-12-104A displays the "SYSTEM INITIALIZED" message.			
TEST		13021A-86.08 COMPLETE			

Handwritten notes:
 NA
 see through
 8-7A
 2/7/98
 Attached page 8-1a

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Step #	TEST PROCEDURE STEPS (13021A-86)	EXPECTED OUTPUT	Pass ✓	Fail ✓	WITNESS (initial)
13021A-86.08 DELIVER DRUM TO TRANSFER CAR THROUGH SPHINCTER PORT, ALARMS AND INTERLOCKS					
1	During the single drum entry sequence, the PCS should automatically raise the Lift Table so that the Drum is at " Drum Centering Height ". Record the exact height for this pre-programmed position in the space provided below: "Drum Centering" Height: <u>N/A mfg 2-24-98</u>	Verify that the " Drum Centering " Height is recorded in the space provided.			
2	Use OIU-12-104B to move the Transfer Car (107-TC-07-303) to "Delid" position.	Verify that the Transfer Car (107-TC-07-303) is NOT located at the TRU Entry Glovebox Position.	✓		mfg
3	Confirm that the "Transfer Car (107-TC-07-303) at TRU Entry Glovebox" position switch (07-ZS-810) is not activated, indicating that the Transfer Car is NOT located at the TRU Entry Glovebox Position.	Verify that position switch (07-ZS-810) is not activated.	✓		mfg
4	Unforce all LCU 103 registers using the Allen Bradley PLC Software.	Verify that all LCU 103 registers are unforced.	✓		mfg
Entry/Exit Port Door					
5	Confirm that the Drum Centering Device for Drum Entry/Exit Port (107-DO-07-301) is retracted. If the centering device is not retracted de-energize solenoid 07-FEV-302 (Retract) to retract the centering device. The " Centering Device Retracted " position switches switches 07-ZSO-812A and 07-ZSO-812B) should be activated, indicating that the Drum Centering Device is retracted.	Visually verify that the Drum Centering Device for Drum Entry/Exit Port (107-DO-07-301) is retracted. Verify that the " Centering Device Retracted " position switches are activated.	✓		mfg
6	Confirm that the Entry/Exit Port (107-DO-07-301) door is rotated closed. If the port door is not rotated closed, energize solenoid 07-FEV-800B/C (Close) to close the port door. The " Drum Port Rotated Closed " position switch (07-ZSC-801) should be activated, indicating that the port door is rotated closed.	Visually verify that port door is rotated closed. Verify that the " Drum Port Rotated Closed " position switch (07-ZSC-801) is activated.	✓		mfg
7	Confirm that the port is closed. If the port is not closed, energize solenoid 07-FEV-800J/C (Close) to fully extend the 3 closing cylinders. The " Drum Door Closed " position switch (07-ZS-803A) should be activated, indicating that the port door is closed.	Verify that the port door is closed. Verify that the " Drum Door Closed " position switch (07-ZS-803A) is activated.	✓		mfg

Step #	TEST PROCEDURE STEPS (13021A-86)	EXPECTED OUTPUT	Pass ✓	Fail ✓	WITNESS (initial)
8	<p>Confirm that the port door is locked. If the port door is not locked, energize solenoid 07-FEV-800A/L (Lock) to fully extend both locking cylinders arms to lock the port door.</p> <p>The "Drum Port Closed and Locked" position switches (07-ZSC-800A and 07-ZSC-800B) should be activated, indicating that the port door is locked.</p>	Verify that the "Drum Port Closed and Locked" position switches (07-ZSC-800A and 07-ZSC-800B) are activated.	✓		ma
Lift Table at AGV Height					
9	Set the Lift Table Pedestal 107-PC-09-202B AGV/Panel switch to the "PANEL" position and the M/O/N switch (09-HS-235A) to "MAINT." to allow an operator to activate and control the Lift Table.	Verify that the M/O/N switch is switched to "MAINT." and the AGV/Panel switch is switched to the "PANEL" position.	✓		mg
10	Press the Lift Table "UP" or "DOWN" pushbutton to position the Lift Table at AGV height.	Visually verify that the Lift Table is at AGV height.	✓		mg
11	Return the Lift Table Local Control Pedestal M/O/N switch (09-HS-235A) to the "NORMAL" position and the AGV/Panel switch to the "AGV" position to allow the PCS to activate and control the Lift Table. (107-LT-09-202B).	Verify that M/O/N switch is switched to "NORMAL" and the AGV/Panel switch is switched to "AGV".	✓		mg
Drum Lid Vacuum System					
12	<p>Confirm that the Drum Lid Vacuum System (for Drum Entry/Exit Port (107-DO-07-301)) has no vacuum in the system.</p> <p>If vacuum exists in the system, de-energize the vacuum generation solenoid valve 07-FEV-800D/V (No vacuum) and briefly energize the vacuum isolation solenoid 07-FEV-800F to release any residual vacuum.</p> <p>The "System Established Adequate Vacuum" pressure switch (07-PS-803) should not be activated, indicating that vacuum is not present.</p>	Verify that pressure switch 07-PS-803 is not activated, indicating that vacuum is not present in the Drum Lid Vacuum System for Drum Entry/Exit Port (107-DO-07-301.)	✓		mg
Hoist Positioned and Lifters Raised					
13	<p>Confirm that the hoist is unloaded.</p> <p>If the hoist is not unloaded use the Hoist/Trolley/Lifter pendant (107-PC-07-006), to unload the hoist.</p>	Verify that the hoist is unloaded.	✓		mg

Step #	TEST PROCEDURE STEPS (13021A-86)	EXPECTED OUTPUT	Pass ✓	Fail ✓	WITNESS (initial)
14	<p>Confirm that the hoist is fully raised.</p> <p>If the hoist is not fully raised, use the Hoist/Trolley/Lifter pendant (107-PC-07-006), to fully raise the hoist.</p> <p>The "Hoist Raised" position switch (07-ZS-802C) should be activated, indicating that the hoist is fully raised.</p> <p>The "RAISED LIMIT" indicator on the Hoist/Trolley/Lifter pendant should be illuminated, indicating that the hoist is fully raised.</p>	<p>Verify that the hoist is fully raised.</p> <p>Verify that the "Hoist Raised" position switch is activated.</p> <p>Verify that the "RAISED LIMIT" indicator on the Hoist/Trolley/Lifter pendant is illuminated.</p>	✓		mg
15	<p>Confirm that the hoist trolley is positioned at the Sphincter Entry Port position.</p> <p>If the hoist is not positioned at the Sphincter Entry Port position, use the Hoist/Trolley/Lifter pendant (107-PC-07-006) to place the Hoist Trolley (107-CR-07-301A) at the Sphincter Entry Port position.</p> <p>Position switches 07-ZS-802A and 07-ZS-802B should be activated, indicating that the hoist trolley is positioned at the Sphincter Entry Port position.</p> <p>The "XFER" indicator on the Hoist/Trolley/Lifter pendant should be illuminated, indicating that the hoist trolley is located at the Sphincter Entry Port position.</p>	<p>Verify that the hoist trolley is positioned at the Sphincter Entry Port position.</p> <p>Verify that position switches 07-ZS-802A and 07-ZS-802B are activated.</p> <p>Verify that the "XFER" indicator on the Hoist/Trolley/Lifter pendant is illuminated.</p>	✓		mg
Lifter Jaws Open					
16	<p>Confirm that the drum lifter jaws are fully open.</p> <p>If the lifter jaws are not fully open, use the trolley/hoist/lifter pendant to fully open the lifter jaws.</p> <p>Position switch 07-ZSO-804 should be activated, indicating that the lifter jaws are fully open.</p>	<p>Verify that the lifter jaws are fully open.</p> <p>Verify that position switch 07-ZSO-804 is activated.</p> <p>Verify that the "LIFTER OPENED" indicator on the Hoist/Trolley/Lifter pendant is illuminated.</p>	✓		mg
Upper Grab Raised and Opened					
17	<p>Confirm that the Drum Entry Transfer Assembly (107-DH-07-302) upper drum grab arms are fully raised.</p> <p>If the upper drum grab arms are not fully raised, energize Transfer Assembly Motor raise DH-07-302/M1/R.</p> <p>Position Switch 07-ZS-807A should indicate that the drum transfer device upper grab is fully raised.</p>	<p>Verify that position switch 07-ZS-807A indicates that the drum transfer device upper grab is fully raised.</p>	✓		mg

Step #	TEST PROCEDURE STEPS (13021A-86)	EXPECTED OUTPUT	Pass ✓	Fail ✓	WITNESS (initial)
18	Confirm that the Drum Entry Transfer Assembly (107-DH-07-302) upper drum grab arms are fully open. If the upper drum grab arms are not fully open, energize solenoid 07-FEV-395-A/O to open the upper grab arms. Position Switches 07-ZSO-806A and 07-ZSO-806B should indicate that the upper grab arms are fully open.	Verify that Position Switches 07-ZSO-806A and 07-ZSO-806B indicate that the upper grab arms are fully open.	✓		mej
Drum in Sphincter Entry Port					
19	NOTE: During initialization, as well as, operation in the TRU Entry Glovebox, the PCS assumes a drum is located in the sphincter entry port. Either an empty drum should be positioned in the port or it can be simulated by forcing several position switches.		✓		mej
20	Transfer an empty drum to the lower grab arms of the transfer device (DH-07-302). The lower grab arms should be fully raised.	Verify that an empty drum is held in the lower grab arms.	✓		mej
21	Confirm that the "TRU ENTRY GLOVEBOX MAIN MENU" screen is displayed at OIU-12-104A. If a sub-menu screen is displayed, select the "MAIN MENU" menu choice to return to the "TRU ENTRY GLOVEBOX MAIN MENU".	Verify that the "TRU ENTRY GLOVEBOX MAIN MENU" screen is displayed at OIU-12-104A. Verify that OIU-12-104A displays the "SYSTEM INITIALIZED" message.	✓		mej
Examine "Upper Grab Fails to Close" and "Upper Grab Loss of Pressure" Alarms					
NOTE: This test procedure must be performed by someone who is already extensively trained and familiar with the operation of the TRU Glovebox line.					
22	Obtain empty 85 gallon overpack drum with lid.	Verify drum with lid is available.	✓		mej
23	Obtain empty 55 gallon drum with lid and band clamp.	Verify drum with lid and band clamp is available.	✓		mej
24	Place 55 gallon drum in 85 gallon overpack drum. mej 2-13-98	Verify drum is placed in overpack drum.	✓		mej
25	Mate 55 gallon drum to Entry/Exit Port (DO-07-301)	Verify drum is mated to port.	✓		mej
26	Open Entry/Exit Port (DO-07-301).	Verify port is open.	✓		mej
27	Transfer 55 gallon drum to sphincter port (DO-07-302) position.	Verify that the drum is centered over the sphincter port.	✓		mej
28	NOTE: Repeat steps 1-6 above in any order required or as needed to complete testing.		✓		mej
ALARMS					

Step #	TEST PROCEDURE STEPS (13021A-86)	EXPECTED OUTPUT	Pass ✓	Fail ✓	WITNESS (initial)
29	Verify "Sphincter Port Failed to Close" alarm is active when the port is closing, but the port closed signal is not received. In maintenance mode, deflate seal and open port. Force ZSC805 not activated. Continuously close port for over 31 seconds. Verify alarm is active. Unforce switch.	Verify "Sphincter Port Failed to Close" alarm is active.	✓		mg
30	Verify "Sphincter Port Loss of Pressure" alarm is active after the Drum Transfer Port (DO-07-302) is closed and seal is inflated. With port closed and seal inflated, force switch PSL800 not activated. Verify alarm is active. Unforce switch.	Verify "Sphincter Port Loss of Pressure" alarm is active.	✓		mg
31	Verify "Upper Grab Failed to Close" alarm is active during transfer sequence. Force PLS-395A not activated, close grabs continuously for 31 seconds and verify alarm is generated. Unforce switch.	Verify "Upper Grab Failed to Close" alarm is active.	✓		mg
32	Verify "Upper Grab Failed to Open" alarm is active during transfer sequence. Force PLS-395A not activated, close grabs continuously for 31 seconds and verify alarm is generated. Unforce switch.	Verify "Upper Grab Failed to Open" alarm is active.	✓		mg
33	Verify "Upper Grab Loss of Pressure" alarm is active after drum grabs are closed. Force PLS-395A not activated, verify alarm is generated. Unforce switch.	Verify "Upper Grab Loss of Pressure" alarm is active.	✓		mg
34	Verify "Lower Grab Loss of Pressure" alarm is active after drum grabs are closed. Force PLS-395B not activated, verify alarm is generated. Unforce switch.	Verify "Lower Grab Loss of Pressure" alarm is active.	✓		mg
35	Verify "Clutch Tripped Motor 1" alarm remains active after clutch tripped switch ZS302 temporarily Forced activated. Force ZS302 activated, unforce switch and verify that alarm remains.	Verify "Clutch Tripped Motor 1" alarm is active.	✓		mg
36	If clutch is tripped, Transfer Device arms should not raise or lower. Verify ladder logic prevents raise and lower when "Clutch Tripped Motor 1" alarm is active. <i>5765</i> <i>YA</i>	Verify ladder logic interlocks are present. <i>mg 2-25-98</i>			
37	Verify "Clutch Tripped Motor 2" alarm remains active after clutch tripped switch ZS302 temporarily Forced activated. Force ZS303 activated, unforce switch and verify that alarm remains.	Verify "Clutch Tripped Motor 2" alarm is active.	✓		mg
INTERLOCKS					
38	If clutch is tripped, Transfer Device arms should not raise or lower. Verify ladder logic prevents raise and lower when "Clutch Tripped Motor 2" alarm is active.	Verify ladder logic interlocks are present. (Only in Auto) <i>mg 2-25-98</i>	✓		mg
39	Reset Drum Transfer Device with drum held in lower grab arms, fully raised. Upper grab arms should be fully open and raised with no drum present.	Verify Drum Transfer Device is reset.	✓		mg
40	Verify that the upper grab arms will not lower when drum lifter is not open. Force ZSO804 not activated. In maintenance mode, attempt to lower Drum Transfer Device upper grabs. Verify ladder logic that only ZSO805 prevents lowering. Repeat verification for "Lower Drum to Car" sequence. Unforce switch.	Verify Drum Transfer Device will not lower unless drum lifter is open.	✓		mg
41	Verify that the upper grab arms will not lower when Drum Transfer Port is closed. Force ZSO805 not activated. In maintenance mode, attempt to lower Drum Transfer Device upper grabs. Verify ladder logic that only ZSO804 prevents lowering. Repeat verification for "Lower Drum to Car" sequence. Unforce switch.	Verify Drum Transfer Device will not lower unless Drum Transfer Port is open.	✓		mg

[illegible]

TEST CASE 13021A-86.09 - TRU ENTRY GLOVEBOX 301 EMERGENCY STOP OPERATION	2
TRU Entry Glovebox Automatic Mode Local Emergency Stop	2
TRU Entry Glovebox Maintenance Mode Local Emergency Stop.....	8
TRU Entry Glovebox Automatic Mode Emergency Stop.....	13
TRU Entry Glovebox Maintenance Mode Emergency Stop	18

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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TEST CASE 13021A-86.09 - TRU ENTRY GLOVEBOX 301 EMERGENCY STOP OPERATION

TRU 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.	✓		<i>RLW</i>
2.	NOTE: Emergency Stop is abbreviated as E-Stop in this test procedure.	Verify that the test procedure conventions have been reviewed.	✓		<i>RLW</i>
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.			<i>N/A</i> <i>RLW 7/30/97</i>
4.	Place all items in the TRU Entry Glovebox (GB-07-301) 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>RLW</i>
5.	Place the TRU Entry Glovebox in Automatic Mode. Although test step setup may require maintenance mode operation, all test case steps must be performed with the TRU Entry Glovebox in Automatic Mode.	Verify that the TRU Entry Glovebox is in Automatic Mode.	✓		<i>RLW</i>
6.	Activation of the E-Stop (HS-07-301A) should disable the following items until the E-Stop is reset: Entry/Exit Port (DO-07-301) Hoist/Trolley (CR-07-301A) Drum Transfer Port (DO-07-302) Drum Lifter (DH-07-301) Drum Entry Transfer Assembly (DH-07-302)	Verify that activating the E-stop disables all operations for the items listed until the E-Stop is reset.	✓		<i>RLW</i>
7.	Activation of the E-Stop (HS-07-301B) should disable the following items until the E-Stop is reset: Entry/Exit Port (DO-07-301) Hoist/Trolley (CR-07-301A) Drum Transfer Port (DO-07-302) Drum Lifter (DH-07-301) Drum Entry Transfer Assembly (DH-07-302)	Verify that activating the E-stop disables all operations for the items listed until the E-Stop is reset.	✓		<i>RLW</i>

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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Entry/Exit Port (DO-07-301)					
8.	Activation of the E-Stop (HS-07-301A) when the port is rotating open must cause the Entry/Exit Port (DO-07-301) 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.	✓		R/W
9.	Activation of the E-Stop (HS-07-301B) when the port is rotating open must cause the Entry/Exit Port (DO-07-301) 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.	✓		R/W
10.	Activation of the E-Stop (HS-07-301A) when the port is rotating closed must cause the Entry/Exit Port (DO-07-301) 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.	✓ N/A 1/30/22	✓	R/W
11.	Activation of the E-Stop (HS-07-301B) when the port is rotating closed must cause the Entry/Exit Port (DO-07-301) 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.	✓ N/A 1/30/22	✓	R/W
12.	The Entry/Exit Port must retain drum lid vacuum even during activation and reset of the E-Stop (HS-07-301A).	Verify port vacuum is retained against a drum lid during E-Stop activation and during E-Stop reset.	✓		R/W
13.	The Entry/Exit Port must retain drum lid vacuum even during activation and reset of the E-Stop (HS-07-301B).	Verify port vacuum is retained against a drum lid during E-Stop activation and during E-Stop reset.	✓		R/W
Drum Transfer Port (DO-07-302)					
14.	Activation of the E-Stop (HS-07-301A) when the port is opening must cause the Drum Transfer Port (DO-07-302) 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.	✓		R/W

10, 11 see TE 232

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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15.	Activation of the E-Stop (HS-07-301B) when the port is opening must cause the Drum Transfer Port (DO-07-302) 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.	✓		R/W
16.	Activation of the E-Stop (HS-07-301A) when the port is closing must cause the Drum Transfer Port (DO-07-302) 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.	✓		R/W
17.	Activation of the E-Stop (HS-07-301B) when the port is closing must cause the Drum Transfer Port (DO-07-302) 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.	✓		R/W

Hoist (CR-07-301A)

18.	Activation of the E-Stop (HS-07-301A) when the Hoist (CR-07-301A) 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.	✓		R/W
19.	Activation of the E-Stop (HS-07-301B) when the Hoist (CR-07-301A) 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.	✓		R/W
20.	Activation of the E-Stop (HS-07-301A) when the Hoist (CR-07-301A) 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.	✓		R/W
21.	Activation of the E-Stop (HS-07-301B) when the Hoist (CR-07-301A) 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.	✓		R/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
22.	Activation of the E-Stop (HS-07-301A) when the Hoist (CR-07-301A) 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.	✓		R/W
23.	Activation of the E-Stop (HS-07-301B) when the Hoist (CR-07-301A) 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.	✓		R/W
24.	Activation of the E-Stop (HS-07-301A) when the Hoist (CR-07-301A) 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.	✓		R/W
25.	Activation of the E-Stop (HS-07-301B) when the Hoist (CR-07-301A) 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.	✓		R/W
Drum Lifter (DH-07-301)					
26.	Activation of the E-Stop (HS-07-301A) when the Drum Lifter (DH-07-301) 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.	✓		R/W
27.	Activation of the E-Stop (HS-07-301B) when the Drum Lifter (DH-07-301) 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.	✓		R/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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28.	Activation of the E-Stop (HS-07-301A) when the Drum Lifter (DH-07-301) 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.	✓		R/W
29.	Activation of the E-Stop (HS-07-301B) when the Drum Lifter (DH-07-301) 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.		✓		
Drum Entry Transfer Assembly (DH-07-302)					
30.	Activation of the E-Stop (HS-07-301A) when the Drum Entry Transfer Assembly (DH-07-302) is opening must stop the Drum Transfer Assembly, hold in place, and disable further drum lifter movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Drum Entry Transfer Assembly to stop, hold in place, and disables Drum Entry Transfer Assembly operations until the E-Stop is reset.	✓		R/W
31.	Activation of the E-Stop (HS-07-301B) when the Drum Entry Transfer Assembly (DH-07-302) is opening must stop the Drum Transfer Assembly, hold in place, and disable further drum lifter movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Drum Entry Transfer Assembly to stop, hold in place, and disables Drum Entry Transfer Assembly operations until the E-Stop is reset.	✓		R/W
32.	Activation of the E-Stop (HS-07-301A) when the Drum Entry Transfer Assembly (DH-07-302) is closing must stop the Drum Transfer Assembly, hold in place, and disable further drum lifter movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Drum Entry Transfer Assembly to stop, hold in place, and disables Drum Entry Transfer Assembly operations until the E-Stop is reset.	✓		R/W
33.	Activation of the E-Stop (HS-07-301B) when the Drum Entry Transfer Assembly (DH-07-302) is closing must stop the Drum Transfer Assembly, hold in place, and disable further drum lifter movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Drum Entry Transfer Assembly to stop, hold in place, and disables Drum Entry Transfer Assembly operations until the E-Stop is reset.	✓		R/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
34.	Activation of the E-Stop (HS-07-301A) when the Drum Entry Transfer Assembly (DH-07-302) is raising must stop the Drum Transfer Assembly, hold in place, and disable further drum lifter movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Drum Entry Transfer Assembly to stop, hold in place, and disables Drum Entry Transfer Assembly operations until the E-Stop is reset.	✓		AW
35.	Activation of the E-Stop (HS-07-301B) when the Drum Entry Transfer Assembly (DH-07-302) is raising must stop the Drum Transfer Assembly, hold in place, and disable further drum lifter movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Drum Entry Transfer Assembly to stop, hold in place, and disables Drum Entry Transfer Assembly operations until the E-Stop is reset.	✓		R/W
36.	Activation of the E-Stop (HS-07-301A) when the Drum Entry Transfer Assembly (DH-07-302) is lowering must stop the Drum Transfer Assembly, hold in place, and disable further drum lifter movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Drum Entry Transfer Assembly to stop, hold in place, and disables Drum Entry Transfer Assembly operations until the E-Stop is reset.	✓		R/W
37.	Activation of the E-Stop (HS-07-301B) when the Drum Entry Transfer Assembly (DH-07-302) is lowering must stop the Drum Transfer Assembly, hold in place, and disable further drum lifter movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Drum Entry Transfer Assembly to stop, hold in place, and disables Drum Entry Transfer Assembly operations until the E-Stop is reset.	✓		AW
38.	The TRU Entry Glovebox must be in Automatic Mode during execution of the preceding Automatic Mode test case steps.	Verify that the TRU Entry Glovebox was in Automatic Mode during all Automatic Mode test case steps.	✓		R/W
39. ✗	Resetting the Local E-Stops (HS-07-301A, HS-07-301B), 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
40.	Place all items in the TRU Entry Glovebox (GB-07-301) in initialized, parked	Verify that all glovebox items are	✓		R/W

✗ 39 Host/Trolley travel - Failed to reach position alarm
 TEST PROCEDURE 13021A-86 Page 9-7 TRU ENTRY GLOVEBOX 301

see TE 233

see TE AW 9/18/97

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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	condition. Please refer to the "Setup" section of this test procedure for additional details.	parked and initialized.			
TRU Entry Glovebox Maintenance Mode Local Emergency Stop					
41.	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
42.	NOTE: Emergency Stop is abbreviated as E-Stop in this test procedure.	Verify that the test procedure conventions have been reviewed.	✓		R/W
43.	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
44.	Place all items in the TRU Entry Glovebox (GB-07-301) 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
45.	Place the TRU Entry Glovebox in Maintenance Mode. All test case steps must be performed with the TRU Entry Glovebox in Maintenance Mode.	Verify that the TRU Entry Glovebox is in Maintenance Mode.	✓		R/W
46.	Activation of the E-Stop (HS-07-301A) should disable the following items until the E-Stop is reset: Entry/Exit Port (DO-07-301) Hoist/Trolley (CR-07-301A) Drum Transfer Port (DO-07-302) Drum Lifter (DH-07-301)	Verify that activating the E-stop disables all operations for the items listed until the E-Stop is reset.	✓		R/W
47.	Activation of the E-Stop (HS-07-301B) should disable the following items until the E-Stop is reset: Entry/Exit Port (DO-07-301) Hoist/Trolley (CR-07-301A) Drum Transfer Port (DO-07-302) Drum Lifter (DH-07-301)	Verify that activating the E-stop disables all operations for the items listed until the E-Stop is reset.	✓		R/W
Entry/Exit Port (DO-07-301)					
48.	Activation of the E-Stop (HS-07-301A) when the port is rotating open must cause the Entry/Exit Port (DO-07-301) 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	✓		R/W

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49.	Activation of the E-Stop (HS-07-301B) when the port is rotating open must cause the Entry/Exit Port (DO-07-301) to stop, hold in place, and disable further port movement until the E-Stop is reset.	operations 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.	✓		R/V
50.	Activation of the E-Stop (HS-07-301A) when the port is rotating closed must cause the Entry/Exit Port (DO-07-301) 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.	✓		R/V
51.	Activation of the E-Stop (HS-07-301B) when the port is rotating closed must cause the Entry/Exit Port (DO-07-301) 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.	✓		R/V

Drum Transfer Port (DO-07-302)

52.	Activation of the E-Stop (HS-07-301A) when the port is opening must cause the Drum Transfer Port (DO-07-302) 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.	✓		R/V
53.	The Entry/Exit Port must retain drum lid vacuum even during activation and reset of the E-Stop (HS-07-301A).	Verify port vacuum is retained against a drum lid during E-Stop activation and during E-Stop reset.	✓		R/V
54.	The Entry/Exit Port must retain drum lid vacuum even during activation and reset of the E-Stop (HS-07-301B).	Verify port vacuum is retained against a drum lid during E-Stop activation and during E-Stop reset.	✓		R/V
55.	Activation of the E-Stop (HS-07-301B) when the port is opening must cause the Drum Transfer Port (DO-07-302) 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.	✓		R/V
56.	Activation of the E-Stop (HS-07-301A) when the port is closing must cause the Drum	Verify that activating the E-stop	✓		R/V

X See TE 232

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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	Transfer Port (DO-07-302) to stop, hold in place, and disable further port movement until the E-Stop is reset.	causes the port door to stop closing, hold in place, and disables port operations until the E-Stop is reset.			
57.	Activation of the E-Stop (HS-07-301B) when the port is closing must cause the Drum Transfer Port (DO-07-302) 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.	✓		P/W

Hoist (CR-07-301A)

58.	Activation of the E-Stop (HS-07-301A) when the Hoist (CR-07-301A) 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.	✓		P/W
59.	Activation of the E-Stop (HS-07-301B) when the Hoist (CR-07-301A) 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.	✓		P/W
60.	Activation of the E-Stop (HS-07-301A) when the Hoist (CR-07-301A) 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.	✓		P/W
61.	Activation of the E-Stop (HS-07-301B) when the Hoist (CR-07-301A) 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.	✓		P/W
62.	Activation of the E-Stop (HS-07-301A) when the Hoist (CR-07-301A) 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.	✓		P/W
63.	Activation of the E-Stop (HS-07-301B) when the Hoist (CR-07-301A) chain is lowering must cause the Hoist chain to stop, hold in place, and disable further hoist	Verify that activating the E-Stop causes the Hoist chain to stop	✓		P/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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	trolley and hoist chain movement until the E-Stop is reset.	moving, hold in place, and disables port operations until the E-Stop is reset.	✓		<i>PAC</i>
64.	Activation of the E-Stop (HS-07-301A) when the Hoist (CR-07-301A) 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.	✓		<i>R/W</i>
65.	Activation of the E-Stop (HS-07-301B) when the Hoist (CR-07-301A) 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.	✓		<i>R/W</i>

Drum Lifter (DH-07-301)

66.	Activation of the E-Stop (HS-07-301A) when the Drum Lifter (DH-07-301) 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.	✓		<i>R/W</i>
67.	Activation of the E-Stop (HS-07-301B) when the Drum Lifter (DH-07-301) 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.	✓		<i>R/W</i>
68.	Activation of the E-Stop (HS-07-301A) when the Drum Lifter (DH-07-301) 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.	✓		<i>R/W</i>
69.	Activation of the E-Stop (HS-07-301B) when the Drum Lifter (DH-07-301) 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>new 11/2/09</i>	Verify that activating the E-Stop causes the Drum Lifter to continue opening, hold in place, and disables	✓		<i>R/W</i>

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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		Drum Lifter operations until the E-Stop is reset.			
Drum Entry Transfer Assembly (DH-07-302)					
70.	Activation of the E-Stop (HS-07-301A) when the Drum Entry Transfer Assembly (DH-07-302) is opening must stop the Drum Transfer Assembly, hold in place, and disable further drum lifter movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Drum Entry Transfer Assembly to stop, hold in place, and disables Drum Entry Transfer Assembly operations until the E-Stop is reset.	✓		<i>RLW</i>
71.	Activation of the E-Stop (HS-07-301B) when the Drum Entry Transfer Assembly (DH-07-302) is opening must stop the Drum Transfer Assembly, hold in place, and disable further drum lifter movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Drum Entry Transfer Assembly to stop, hold in place, and disables Drum Entry Transfer Assembly operations until the E-Stop is reset.	✓		<i>RLW</i>
72.	Activation of the E-Stop (HS-07-301A) when the Drum Entry Transfer Assembly (DH-07-302) is closing must stop the Drum Transfer Assembly, hold in place, and disable further drum lifter movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Drum Entry Transfer Assembly to stop, hold in place, and disables Drum Entry Transfer Assembly operations until the E-Stop is reset.	✓		<i>RLW</i>
73.	Activation of the E-Stop (HS-07-301B) when the Drum Entry Transfer Assembly (DH-07-302) is closing must stop the Drum Transfer Assembly, hold in place, and disable further drum lifter movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Drum Entry Transfer Assembly to stop, hold in place, and disables Drum Entry Transfer Assembly operations until the E-Stop is reset.	✓		<i>RLW</i>
74.	Activation of the E-Stop (HS-07-301A) when the Drum Entry Transfer Assembly (DH-07-302) is raising must stop the Drum Transfer Assembly, hold in place, and disable further drum lifter movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Drum Entry Transfer Assembly to stop, hold in place, and disables Drum Entry Transfer Assembly operations until the E-Stop is reset.	✓		<i>RLW</i>
75.	Activation of the E-Stop (HS-07-301B) when the Drum Entry Transfer Assembly	Verify that activating the E-Stop	✓		<i>RLW</i>

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	(DH-07-302)is raising must stop the Drum Transfer Assembly, hold in place, and disable further drum lifter movement until the E-Stop is reset.	causes the Drum Entry Transfer Assembly to stop, hold in place, and disables Drum Entry Transfer Assembly operations until the E-Stop is reset.	✓		R/W
76.	Activation of the E-Stop (HS-07-301A) when the Drum Entry Transfer Assembly (DH-07-302)is lowering must stop the Drum Transfer Assembly, hold in place, and disable further drum lifter movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Drum Entry Transfer Assembly to stop, hold in place, and disables Drum Entry Transfer Assembly operations until the E-Stop is reset.	✓		R/W
77.	Activation of the E-Stop (HS-07-301B) when the Drum Entry Transfer Assembly (DH-07-302)is lowering must stop the Drum Transfer Assembly, hold in place, and disable further drum lifter movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Drum Entry Transfer Assembly to stop, hold in place, and disables Drum Entry Transfer Assembly operations until the E-Stop is reset.	✓		R/W
78.	All preceding Maintenance Mode test case steps must be performed with the TRU Entry Glovebox in Maintenance Mode.	Verify that the TRU Entry Glovebox is in Maintenance Mode during all Maintenance Mode test steps.	✓		R/W
79.	Place all items in the TRU Entry Glovebox (GB-07-301) 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

TRU Entry Glovebox Automatic Mode Emergency Stop

80.	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
81.	NOTE: Emergency Stop is abbreviated as E-Stop in this test procedure.	Verify that the test procedure conventions have been reviewed.	✓		R/W
82.	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
83.	Place all items in the TRU Entry Glovebox (GB-07-301) in initialized, parked	Verify that all glovebox items are	✓		R/W 9/19/02 R/W

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	condition. Please refer to the "Setup" section of this test procedure for additional details.	parked and initialized.			
84.	Place the TRU Entry Glovebox in Automatic Mode. Although test step setup may require maintenance mode operation, all test case steps must be performed with the TRU Entry Glovebox in Automatic Mode.	Verify that the TRU Entry Glovebox is in Automatic Mode.	✓		RW
85.	Activation of the E-Stop (HS-07-315) should disable the following items until the E-Stop is reset: Entry/Exit Port (DO-07-301) Hoist/Trolley (CR-07-301A) Drum Transfer Port (DO-07-302) Drum Lifter (DH-07-301)	Verify that activating the E-stop disables all operations for the items listed until the E-Stop is reset.	✓		RW

Entry/Exit Port (DO-07-301)

86.	Activation of the E-Stop (HS-07-315) when the port is rotating open must cause the Entry/Exit Port (DO-07-301) 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.	✓		RW
87.	Activation of the E-Stop (HS-07-315) when the port is rotating closed must cause the Entry/Exit Port (DO-07-301) 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.	✓ RWC/30/01	✓	RW
88.	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.	✓		RW

Drum Transfer Port (DO-07-302)

89.	Activation of the E-Stop (HS-07-315) when the port is opening must cause the Drum Transfer Port (DO-07-302) 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.	✓		RW
90.	Activation of the E-Stop (HS-07-315) when the port is closing must cause the Drum Transfer Port (DO-07-302) 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	✓		RW

* #87 see TE 232

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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		operations until the E-Stop is reset.			
Hoist (CR-07-301A)					
91.	Activation of the E-Stop (HS-07-315) when the Hoist (CR-07-301A) 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.	✓		RW
92.	Activation of the E-Stop (HS-07-315) when the Hoist (CR-07-301A) 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.	✓		RW
93.	Activation of the E-Stop (HS-07-315) when the Hoist (CR-07-301A) 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.	✓		RW
94.	Activation of the E-Stop (HS-07-315) when the Hoist (CR-07-301A) 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.	✓		RW
95.	Activation of the E-Stop (HS-07-315) when the Hoist (CR-07-301A) 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.	✓		RW
96.	Activation of the E-Stop (HS-07-315) when the Hoist (CR-07-301A) 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.	✓		RW

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
97.	Activation of the E-Stop (HS-07-315) when the Hoist (CR-07-301A) 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.	✓		DW
Drum Lifter (DH-07-301)					
98.	Activation of the E-Stop (HS-07-315) when the Drum Lifter (DH-07-301) 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.	✓		DW
99.	Activation of the E-Stop (HS-07-315) when the Drum Lifter (DH-07-301) 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.	✓		DW
100.	Activation of the E-Stop (HS-07-315) when the Drum Lifter (DH-07-301) 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.	✓		DW
101.	Activation of the E-Stop (HS-07-315) when the Drum Lifter (DH-07-301) 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.			N/A D/W 7/30/23
Drum Entry Transfer Assembly (DH-07-302)					
102.	Activation of the E-Stop (HS-07-301A) when the Drum Entry Transfer Assembly (DH-07-302) is opening must stop the Drum Transfer Assembly, hold in place, and disable further drum lifter movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Drum Entry Transfer Assembly to stop, hold in place, and disables Drum Entry Transfer Assembly operations until the E-Stop	✓		DW

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
103.	Activation of the E-Stop (HS-07-301B) when the Drum Entry Transfer Assembly (DH-07-302) is opening must stop the Drum Transfer Assembly, hold in place, and disable further drum lifter movement until the E-Stop is reset.	is reset. Verify that activating the E-Stop causes the Drum Entry Transfer Assembly to stop, hold in place, and disables Drum Entry Transfer Assembly operations until the E-Stop is reset.	✓		P/C
104.	Activation of the E-Stop (HS-07-301A) when the Drum Entry Transfer Assembly (DH-07-302) is closing must stop the Drum Transfer Assembly, hold in place, and disable further drum lifter movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Drum Entry Transfer Assembly to stop, hold in place, and disables Drum Entry Transfer Assembly operations until the E-Stop is reset.	✓		P/C
105.	Activation of the E-Stop (HS-07-301B) when the Drum Entry Transfer Assembly (DH-07-302) is closing must stop the Drum Transfer Assembly, hold in place, and disable further drum lifter movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Drum Entry Transfer Assembly to stop, hold in place, and disables Drum Entry Transfer Assembly operations until the E-Stop is reset.	✓		P/C
106.	Activation of the E-Stop (HS-07-301A) when the Drum Entry Transfer Assembly (DH-07-302) is raising must stop the Drum Transfer Assembly, hold in place, and disable further drum lifter movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Drum Entry Transfer Assembly to stop, hold in place, and disables Drum Entry Transfer Assembly operations until the E-Stop is reset.	✓		P/C
107.	Activation of the E-Stop (HS-07-301B) when the Drum Entry Transfer Assembly (DH-07-302) is raising must stop the Drum Transfer Assembly, hold in place, and disable further drum lifter movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Drum Entry Transfer Assembly to stop, hold in place, and disables Drum Entry Transfer Assembly operations until the E-Stop is reset.	✓		P/C
108.	Activation of the E-Stop (HS-07-301A) when the Drum Entry Transfer Assembly (DH-07-302) is lowering must stop the Drum Transfer Assembly, hold in place, and disable further drum lifter movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Drum Entry Transfer Assembly to stop, hold in place, and disables Drum Entry Transfer	✓		P/C

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		Assembly operations until the E-Stop is reset.			
109.	Activation of the E-Stop (HS-07-301B) when the Drum Entry Transfer Assembly (DH-07-302) is lowering must stop the Drum Transfer Assembly, hold in place, and disable further drum lifter movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Drum Entry Transfer Assembly to stop, hold in place, and disables Drum Entry Transfer Assembly operations until the E-Stop is reset.	✓		R/V
110.	The TRU Entry Glovebox must be in Automatic Mode during execution of the preceding Automatic Mode test case steps.	Verify that the TRU Entry Glovebox was in Automatic Mode during all Automatic Mode test case steps.	✓		R/V
111.	Place all items in the TRU Entry Glovebox (GB-07-301) 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/V

TRU Entry Glovebox Maintenance Mode Emergency Stop

112.	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/V
113.	NOTE: Emergency Stop is abbreviated as E-Stop in this test procedure.	Verify that the test procedure conventions have been reviewed.	✓		R/V
114.	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
115.	Place all items in the TRU Entry Glovebox (GB-07-301) 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/V
116.	Place the TRU Entry Glovebox in Maintenance Mode. All test case steps must be performed with the TRU Entry Glovebox in Maintenance Mode.	Verify that the TRU Entry Glovebox is in Maintenance Mode.	✓		R/V
117.	Activation of the E-Stop (HS-07-315) should disable the following items until the E-Stop is reset: Entry/Exit Port (DO-07-301) Hoist/Trolley (CR-07-301A) Drum Transfer Port (DO-07-302)	Verify that activating the E-stop disables all operations for the items listed until the E-Stop is reset.	✓		R/V

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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	Drum Lifter (DH-07-301)				
Entry/Exit Port (DO-07-301)					
118.	Activation of the E-Stop (HS-07-315) when the port is rotating open must cause the Entry/Exit Port (DO-07-301) 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.	✓		R/V
119.	Activation of the E-Stop (HS-07-315) when the port is rotating closed must cause the Entry/Exit Port (DO-07-301) 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.		✓	R/V
120.	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.	✓		R/V
Drum Transfer Port (DO-07-302)					
121.	Activation of the E-Stop (HS-07-315) when the port is opening must cause the Drum Transfer Port (DO-07-302) 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.	✓		R/V
122.	Activation of the E-Stop (HS-07-315) when the port is closing must cause the Drum Transfer Port (DO-07-302) 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.	✓		R/V
Hoist (CR-07-301A)					
123.	Activation of the E-Stop (HS-07-315) when the Hoist (CR-07-301A) 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.	✓		R/V
124.	Activation of the E-Stop (HS-07-315) when the Hoist (CR-07-301A) 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	✓		R/V

#119 see TE 232

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
125.	Activation of the E-Stop (HS-07-315) when the Hoist (CR-07-301A) 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.	operations 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.	✓		R/W
126.	Activation of the E-Stop (HS-07-315) when the Hoist (CR-07-301A) 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.	✓		R/W
Drum Lifter (DH-07-301)					
127.	Activation of the E-Stop (HS-07-315) when the Drum Lifter (DH-07-301) 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.	✓		R/W
128.	Activation of the E-Stop (HS-07-315) when the Drum Lifter (DH-07-301) 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.	✓		R/W
Drum Entry Transfer Assembly (DH-07-302)					
129.	Activation of the E-Stop (HS-07-301A) when the Drum Entry Transfer Assembly (DH-07-302) is opening must stop the Drum Transfer Assembly, hold in place, and disable further drum lifter movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Drum Entry Transfer Assembly to stop, hold in place, and disables Drum Entry Transfer Assembly operations until the E-Stop is reset.	✓		R/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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130.	Activation of the E-Stop (HS-07-301B) when the Drum Entry Transfer Assembly (DH-07-302) is opening must stop the Drum Transfer Assembly, hold in place, and disable further drum lifter movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Drum Entry Transfer Assembly to stop, hold in place, and disables Drum Entry Transfer Assembly operations until the E-Stop is reset.	✓		RLV
131.	Activation of the E-Stop (HS-07-301A) when the Drum Entry Transfer Assembly (DH-07-302) is closing must stop the Drum Transfer Assembly, hold in place, and disable further drum lifter movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Drum Entry Transfer Assembly to stop, hold in place, and disables Drum Entry Transfer Assembly operations until the E-Stop is reset.	C		RLV
132.	Activation of the E-Stop (HS-07-301B) when the Drum Entry Transfer Assembly (DH-07-302) is closing must stop the Drum Transfer Assembly, hold in place, and disable further drum lifter movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Drum Entry Transfer Assembly to stop, hold in place, and disables Drum Entry Transfer Assembly operations until the E-Stop is reset.	✓		RLV
133.	Activation of the E-Stop (HS-07-301A) when the Drum Entry Transfer Assembly (DH-07-302) is raising must stop the Drum Transfer Assembly, hold in place, and disable further drum lifter movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Drum Entry Transfer Assembly to stop, hold in place, and disables Drum Entry Transfer Assembly operations until the E-Stop is reset.	✓		RLV
134.	Activation of the E-Stop (HS-07-301B) when the Drum Entry Transfer Assembly (DH-07-302) is raising must stop the Drum Transfer Assembly, hold in place, and disable further drum lifter movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Drum Entry Transfer Assembly to stop, hold in place, and disables Drum Entry Transfer Assembly operations until the E-Stop is reset.	✓		RLV

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
135.	Activation of the E-Stop (HS-07-301A) when the Drum Entry Transfer Assembly (DH-07-302) is lowering must stop the Drum Transfer Assembly, hold in place, and disable further drum lifter movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Drum Entry Transfer Assembly to stop, hold in place, and disables Drum Entry Transfer Assembly operations until the E-Stop is reset.	✓		P/V
136.	Activation of the E-Stop (HS-07-301B) when the Drum Entry Transfer Assembly (DH-07-302) is lowering must stop the Drum Transfer Assembly, hold in place, and disable further drum lifter movement until the E-Stop is reset.	Verify that activating the E-Stop causes the Drum Entry Transfer Assembly to stop, hold in place, and disables Drum Entry Transfer Assembly operations until the E-Stop is reset.	✓		P/V
137.	All preceding Maintenance Mode test case steps must be performed with the TRU Entry Glovebox in Maintenance Mode.	Verify that the TRU Entry Glovebox is in Maintenance Mode during all Maintenance Mode test steps.	✓		P/V
138.	Place all items in the TRU Entry Glovebox (GB-07-301) 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
TEST CASE 13021A-86.09 COMPLETE					

TEST CASE 13021A-86.10 DRUM PROCESSING	2
PROCESS 140 POUND DRUM WITHOUT LINER	2
PROCESS 140 POUND DRUM WITH LINER.....	2
PROCESS 140 POUND DRUM WITHOUT LINER	2
PROCESS 140 POUND DRUM WITH LINER.....	2
PROCESS 140 POUND DRUM WITHOUT LINER	2
PROCESS 1000 POUND DRUM WITHOUT LINER	2
PROCESS 1000 POUND DRUM WITH LINER.....	3
PROCESS 1000 POUND DRUM WITHOUT LINER	3
PROCESS 1000 POUND DRUM WITH LINER.....	3
PROCESS 1000 POUND DRUM WITHOUT LINER	3

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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TEST CASE 13021A-86.10 DRUM PROCESSING

PROCESS 140 POUND DRUM WITHOUT LINER

1.	Perform Test Case 86.03 (Full Automatic Cycle - Drum Entry) using a 140 lb drum without liner. Record the results of each step on the appropriate portion of the following data sheet.	Verify that Test Case 86.03 has been completed and test results recorded on data sheet.	✓		R/W
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PROCESS 140 POUND DRUM WITH LINER

2.	Perform Test Case 86.03 (Full Automatic Cycle - Drum Entry) using a 140 lb drum with liner. Record the results of each step on the appropriate portion of the following data sheet.	Verify that Test Case 86.03 has been completed and test results recorded on data sheet.	✓		R/W
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PROCESS 140 POUND DRUM WITHOUT LINER

3.	Perform Test Case 86.03 (Full Automatic Cycle - Drum Entry) using a 140 lb drum without liner. Record the results of each step on the appropriate portion of the following data sheet.	Verify that Test Case 86.03 has been completed and test results recorded on data sheet.	✓		R/W
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PROCESS 140 POUND DRUM WITH LINER

4.	Perform Test Case 86.03 (Full Automatic Cycle - Drum Entry) using a 140 lb drum with liner. Record the results of each step on the appropriate portion of the following data sheet.	Verify that Test Case 86.03 has been completed and test results recorded on data sheet.	✓		R/W
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PROCESS 140 POUND DRUM WITHOUT LINER

5.	Perform Test Case 86.03 (Full Automatic Cycle - Drum Entry) using a 140 lb drum without liner. Record the results of each step on the appropriate portion of the following data sheet.	Verify that Test Case 86.03 has been completed and test results recorded on data sheet.	✓		R/W
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PROCESS 1000 POUND DRUM WITHOUT LINER

6.	Perform Test Case 86.03 (Full Automatic Cycle - Drum Entry) using a 1000 lb drum without liner. Record the results of each step on the appropriate portion of the following data sheet.	Verify that Test Case 86.03 has been completed and test results recorded on data sheet.			
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see item 6 on page 10-4 R/W 2/10/98

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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PROCESS 1000 POUND DRUM WITH LINER

7.	Perform Test Case 86.03 (Full Automatic Cycle - Drum Entry) using a 140 lb drum with liner. Record the results of each step on the appropriate portion of the following data sheet.	Verify that Test Case 86.03 has been completed and test results recorded on data sheet.	see		
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PROCESS 1000 POUND DRUM WITHOUT LINER

8.	Perform Test Case 86.03 (Full Automatic Cycle - Drum Entry) using a 1000 lb drum without liner. Record the results of each step on the appropriate portion of the following PROCESS 1000 POUND DRUM WITH LINER data sheet.	Verify that Test Case 86.03 has been completed and test results recorded on data sheet.			
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PROCESS 1000 POUND DRUM WITH LINER

9.	Perform Test Case 86.03 (Full Automatic Cycle - Drum Entry) using a 140 lb drum with liner. Record the results of each step on the appropriate portion of the following data sheet.	Verify that Test Case 86.03 has been completed and test results recorded on data sheet.			
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PROCESS 1000 POUND DRUM WITHOUT LINER

10.	Perform Test Case 86.03 (Full Automatic Cycle - Drum Entry) using a 1000 lb drum without liner. Record the results of each step on the appropriate portion of the following PROCESS 1000 POUND DRUM WITH LINER data sheet.	Verify that Test Case 86.03 has been completed and test results recorded on data sheet.			
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TEST CASE 13021A-86.10 COMPLETE

Step #	TEST PROCEDURE STEPS (13021A-86)	EXPECTED OUTPUT	Pass ✓	Fail ✓	WITNESS (Initial)
13021A-86.10 DRUM PROCESSING 1000# DRUM WITHOUT LINER					
6	Perform the Generic Instructions test steps. Record test results on the corresponding data sheet.	Verify that the Generic Instructions test steps have been completed and results recorded.	✓		Law 2-6-98
13021A-86.10 DRUM PROCESSING 1000# DRUM WITH LINER					
7	Perform the Generic Instructions test steps. Record test results on the corresponding data sheet.	Verify that the Generic Instructions test steps have been completed and results recorded.	✓		Law 2-6-98
1					
??					
Test Case Setup					
1	NOTE: Perform the Setup steps once, prior to processing the first drum. For all other drums to be processed, start with Step 5.		N/A	N/A	N/A
2	Unforce all LCU 103 registers.	Verify that all LCU registers are unforced.	N/A	N/A	N/A
3	Use OIU-12-104B (TRU Sorting G.B. OIU) to return the Drum Transfer Car (107-TC-07-301) to the Relid Position.	Verify that the Transfer Car is not positioned at the Sphincter Entry Port.	N/A	N/A	N/A
4	Confirm that the "TRU ENTRY GLOVEBOX MAIN MENU" screen is displayed at OIU-12-104A. If a sub-menu screen is displayed, select the "MAIN MENU" menu choice to return to the "TRU ENTRY GLOVEBOX MAIN MENU".	Verify that the "TRU ENTRY GLOVEBOX MAIN MENU" screen is displayed at OIU-12-104A.	N/A	N/A	N/A
Mate Drum to 322 Liter (85 Gallon) Entry/Exit Port					
5	Place the overpack drum on the TRU Entry Glovebox Entry/Exit Port Lift Table, (107-LT-09-202B). The drum should be placed at the AGV end of the Lift Table and the Lift Table should be at AGV height.	Verify that the drum has been placed at the AGV end of the Lift Table and the Lift Table is at AGV height .	N/A	N/A	N/A
6	The "AGV END" indicator (09-ZL-235A) on the Lift Table Control Pedestal (107-PC-09-202B) should be illuminated, indicating that a drum is positioned at the AGV end of the Lift Table. 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-12-104A.	Verify that the "AGV END" indicator (09-ZL-235A) is illuminated. Verify that a "DRUM AT LIFT TABLE" message is displayed at OIU-12-104A.	N/A	N/A	N/A
7	Press the "OVERPACK DRUM ENTRY MENU" button from the "TRU ENTRY GLOVEBOX MAIN MENU" screen at OIU-12-104A.	Verify that the "OVERPACK DRUM ENTRY MENU" screen is displayed.	N/A	N/A	N/A
8	Press the "START DRUM ENTRY" button from the currently displayed drum entry menu at OIU-12-104A.	Verify that the "START DRUM ENTRY" button has been pressed.	N/A	N/A	N/A

Step #	TEST PROCEDURE STEPS (13021A-86)	EXPECTED OUTPUT	Pass ✓	Fail ✓	WITNESS (Initial)
9	The "DRUM ENTRY IN PROGRESS..." message should be displayed at OIU-12-104A.	Verify that the "DRUM ENTRY IN PROGRESS..." message is displayed.	N/A	N/A	N/A
10	The PCS should energize the Lift Table conveyor motor forward (107-LT-09-202B/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.	N/A	N/A	N/A
11	The "DRUM UNDER PORT" indicator at the Lift Table Local Control Pedestal (107-PC-09-202B) should be illuminated, indicating the a drum is centered under the glovebox port (107-DO-07-301).	Verify that the "DRUM UNDER PORT" indicator is illuminated.	N/A	N/A	N/A
12	The PCS should then automatically energize the Lift Table motor (107-LT-09-202B/M1) to raise the drum to "Drum Centering" position.	Verify that the Lift Table raises the drum to the "Drum Centering" position.	N/A	N/A	N/A
13	The "DRUM CENTERING" indicator (09-ZL-235D) at the Lift Table Local Control Pedestal (107-PC- 09-202B) should be illuminated, indicating that the drum has been raised to the "Drum Centering" position.	Verify that the "DRUM CENTERING" indicator is illuminated.	N/A	N/A	N/A
14	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-12-104A.	Verify that the "DRUM ENTRY COMPLETE" message is displayed at OIU-12-104A.	N/A	N/A	N/A
15	Press the "OPEN PORT" button from the currently displayed drum entry screen at OIU-12-104A.	Verify that the "OPEN PORT" button has been pressed.	N/A	N/A	N/A
16	The PCS should display a "PORT OPENING..." message at OIU-12-104A while the port is opening.	Verify that a "PORT OPENING..." message is displayed.	N/A	N/A	N/A
17	The PCS should automatically, 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 automatically performs the steps listed in the order provided.	N/A	N/A	N/A
18	The PCS should automatically energize the Hoist Trolley motor (107-CR-07-301A/M1) (Trolley Traverse Drive) forward so that the trolley SLOWLY travels to, and is positioned over the 322 liter (85 gallon) Entry/Exit Port (107-DO-07-301).	Verify that the Hoist Trolley is centered over the Entry/Exit Port.	N/A	N/A	N/A
19	Because the port opening sequence is complete, the "PORT OPEN" message should be displayed at OIU-12-104A.	Verify that the "PORT OPEN" message is displayed at OIU-12-104A.	N/A	N/A	N/A
20					
20	The PCS should enable the Hoist/Trolley/Lifter Pendant (107-PC-07-006).	Verify that the pendant "ENABLED" indicator is illuminated.	N/A	N/A	N/A

Step #	TEST PROCEDURE STEPS (13021A-86)	EXPECTED OUTPUT	Pass ✓	Fail ✓	WITNESS (initial)
21	Activate the Hoist/Trolley/Lifter pendant (107-PC-07-006) "LOWER" pushbutton 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 208 liter (55 gallon) drum.	N/A	N/A	N/A
22	Manually 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.	N/A	N/A	N/A
23	Activate the Hoist/Trolley/Lifter pendant 107-PC-07-006 "CLOSE" pushbutton as needed until the Drum Lifter is closed, securing the drum.	Verify that the Drum Lifter is closed, securing the drum.	N/A	N/A	N/A
24	The Hoist/Trolley/Lifter "CLOSED" indicator should be illuminated, indicating that the Drum Lifter is closed.	Verify that the "CLOSED" indicator is illuminated.	N/A	N/A	N/A
25	Activate the Hoist/Trolley/Lifter pendant (107-PC-07-006) "RAISE" pushbutton 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.	N/A	N/A	N/A
26	Activate the Hoist/Trolley/Lifter pendant (107-PC-07-006) "RAISE" pushbutton as needed until the Hoist is fully raised.	Verify that the Hoist is fully raised.	N/A	N/A	N/A
27	The Hoist "RAISED LIMIT" indicator on the Hoist/Trolley/Lifter pendant (107-PC-07-006) should be illuminated, indicating that the hoist is fully raised.	Verify that the "RAISED LIMIT" indicator is illuminated.	N/A	N/A	N/A
28	The PCS should disable the Hoist/Trolley/Lifter Pendant (107-PC-07-006).	Verify that the "Enabled" indicator is not illuminated.	N/A	N/A	N/A
29	Press the "MAIN MENU" button to return to the "TRU ENTRY GLOVEBOX MAIN MENU" and then press the "TROLLEY MENU" button from the "TRU ENTRY GLOVEBOX MAIN MENU" at OIU-12-104A to display the "TROLLEY MENU".	Verify that the "TROLLEY MENU" screen is displayed.	N/A	N/A	N/A
30	Press the "SWAB POSITION" button on the "TROLLEY MENU" at OIU-12-104A.	Verify that the "SWAB POSITION" button has been pressed.	N/A	N/A	N/A
31	The PCS should automatically energize the Hoist Trolley motor (107-CR-07-301A/M1) (Trolley Traverse Drive) forward so that the trolley SLOWLY travels to the "Swab" position.	Verify that the Hoist Trolley travels to, and is positioned at the "Swab" position.	N/A	N/A	N/A
32	The "MIDWAY" indicator on the Hoist/Trolley/Lifter pendant (107-PC-07-006) should be illuminated, indicating that the hoist trolley is located at the "Swab" position.	Verify that the "MIDWAY" indicator is illuminated.	N/A	N/A	N/A
33	<p>The Plant Control System should send a "Container Location" update message to the DMS, containing the overpack ID and requesting the inner drum identifier. Record the "Container Location" message contents below:</p> <p>Message Contents: <u>N/A msg 2-21-98</u></p>	<p>Verify that the PCS sends a "Container Location" message to the DMS.</p> <p>Verify that the message contents are recorded.</p>	N/A	N/A	N/A

Step #	TEST PROCEDURE STEPS (13021A-86)	EXPECTED OUTPUT	Pass ✓	Fail ✓	WITNESS (initial)
34	The Data Management System should send a "Container Location" update message to the PCS, including the inner drum identifier. Record the "Container Location" message contents below: Message Contents: <u>N/A</u> <i>2218MPJ</i>	Verify that the DMS sends a "Container Location" message to the PCS. Verify that the message contents are recorded.	N/A	N/A	N/A
35	The inner drum identifier should be displayed at OIU-12-104A. 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.	N/A	N/A	N/A
36	Press the "INNER DRUM ID VERIFIED" button on the "OVERPACK DRUM ENTRY MENU" screen at OIU-12-104A to acknowledge that the correct drum identifier is displayed.	Verify that the "INNER DRUM ID VERIFIED" button has been pressed.	N/A	N/A	N/A
37	Press the "MAIN MENU" button to return to the "TRU ENTRY GLOVEBOX MAIN MENU" and then press the "OVERPACK DRUM ENTRY MENU" button from the "TRU ENTRY GLOVEBOX MAIN MENU" at OIU-12-104A to display the "OVERPACK DRUM ENTRY MENU".	Verify that the "OVERPACK DRUM ENTRY MENU" screen is displayed.	N/A	N/A	N/A
38	Press the "CLOSE PORT" button from the currently displayed drum entry screen at OIU-12-104A.	Verify that the "CLOSE PORT" button has been pressed.	N/A	N/A	N/A
39	The PCS should display a "PORT CLOSING..." message at OIU-12-104A while the port is opening.	Verify that a "PORT CLOSING..." message is displayed.	N/A	N/A	N/A
40	If an overpack drum is used: The PCS should automatically, in order, complete the following steps: 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.	If an overpack drum is used: Verify that the PCS automatically performs the steps listed in the order provided.	N/A	N/A	N/A
41	The PCS should display a "PORT CLOSED" message at OIU-12-104A when the port is closed.	Verify that a "PORT CLOSED" message is displayed.	N/A	N/A	N/A

Step #	TEST PROCEDURE STEPS (13021A-86)	EXPECTED OUTPUT	Pass ✓	Fail ✓	WITNESS (initial)
42	<p>If a 1000 pound overpack drum is used:</p> <p>Press the "CONTAMIN. DRUM READY FOR PICKUP" button from the "OVERPACK DRUM ENTRY MENU" screen at OIU-12-104A to begin the Entry/Exit Port closing sequence.</p> <p>The Plant Control System should send a "Drum Contamination Status" update message to the DMS, indicating that the overpack drum is contaminated. Record the "Drum Contamination Status" message contents below:</p> <p>Message Contents: <u>N/A 2-21-98</u></p>	<p>If a 1000 pound overpack drum is used:</p> <p>Verify that the "CONTAMIN. DRUM READY FOR PICKUP" button has been pressed.</p> <p>Verify that the PCS sends a "Drum Contamination Status" message to the DMS.</p> <p>Verify that the message contents are recorded.</p>	N/A	N/A	N/A
43	<p>The "[CLEAN/CONTAMINATED] DRUM EXIT SEQUENCE IN PROGRESS" message should be displayed at OIU-12-104A.</p> <p>The actual message wording depends on whether or not clean or contaminated exit was selected.</p>	<p>Verify that the "[CLEAN/CONTAMINATED] DRUM EXIT SEQUENCE IN PROGRESS" message is displayed at OIU-12-104A.</p>	N/A	N/A	N/A
44	<p>The PCS should automatically, in order, complete the following steps:</p> <ol style="list-style-type: none"> Lower the Lift Table to its lowered position below AGV height. Energize the Lift Table conveyor to move the drum to the AGV end of the Lift Table. 	<p>Verify that the PCS automatically performs the steps listed in the order provided.</p>	N/A	N/A	N/A
45	<p>The "DRUM EXIT COMPLETE" message should be displayed at OIU-12-104A.</p>	<p>Verify that the "DRUM EXIT COMPLETE" message is displayed at OIU-12-104A.</p>	N/A	N/A	N/A
-865- <u>NW 2/2/98</u>					
46	<p>Press the "MAIN MENU" button to return to the "TRU ENTRY GLOVEBOX MAIN MENU" and then press the "TROLLEY MENU" button from the "TRU ENTRY GLOVEBOX MAIN MENU" at OIU-12-104A to display the "TROLLEY MENU".</p>	<p>Verify that the "TROLLEY MENU" screen is displayed.</p>	N/A	N/A	N/A
47	<p>Press the "TRANSFER PORT" button from the "TROLLEY MENU" to move the Hoist with Drum to the Sphincter Entry Port position.</p>	<p>Verify that the "TRANSFER PORT" button has been pressed.</p>	N/A	N/A	N/A
48	<p>The "TROLLEY MOVING TO TRANSFER PORT..." message should be displayed at OIU-12-104A.</p>	<p>Verify that the "TROLLEY MOVING TO TRANSFER PORT..." message is displayed at OIU-12-104A.</p>	N/A	N/A	N/A
49	<p>The PCS should energize the Hoist Trolley motor (107-CR-07-301A/M1) (Trolley Traverse Drive) forward so that the Trolley (with drum) SLOWLY travels to, and is positioned over the Sphincter Entry Port (107-DO-07-302).</p>	<p>Verify that the Hoist Trolley is centered over the Sphincter Entry Port.</p>	N/A	N/A	N/A

Step #	TEST PROCEDURE STEPS (13021A-86)	EXPECTED OUTPUT	Pass ✓	Fail ✓	WITNESS (initial)
50	The "TROLLEY AT TRANSFER PORT" message should be displayed on the "TROLLEY MENU" at OIU-12-104A.	Verify that the "TROLLEY AT TRANSFER PORT" message is displayed.	N/A	N/A	N/A
51	Press the "MAIN MENU" button to return to the "TRU ENTRY GLOVEBOX MAIN MENU" and then press the "TRANSFER ASSEMBLY MENU" button from the "TRU ENTRY GLOVEBOX MAIN MENU" at OIU-12-104A to display the "TROLLEY MENU".	Verify that the "TRANSFER ASSEMBLY MENU" screen is displayed.	N/A	N/A	N/A
52	Press the "CLOSE UPPER GRAB" button from the "TROLLEY MENU" to close the Drum Transfer Device upper grab. The grab should fully close, causing the "CLOSE UPPER GRAB" button to change state to display "UPPER GRAB CLOSED".	Verify that the "UPPER GRAB CLOSED" button indicator is illuminated.	N/A	N/A	N/A
53	Using the "LOWER" pushbutton on Pendant 107-PC-07-006, lower the hoist until sufficient slack in the hoist chain will allow Drum Lifter (107-DH-07-301) to be opened.	Visually verify that the hoist is lowered with sufficient slack in the hoist chain.	N/A	N/A	N/A
54	Using the "OPEN" pushbutton on Pendant 107-PC-07-006, open the Drum Lifter jaws. The "OPENED" indicator on the Hoist/Trolley/Lifter pendant (107-PC-07-006) should be illuminated, indicating that the Drum Lifter jaws are opened.	Visually verify that the Drum Lifter jaws are open. Verify that the "OPENED" indicator is illuminated.	N/A	N/A	N/A
55	Using the "RAISE" pushbutton on Pendant 107-PC-07-006, raise Drum Lifter (107-DH-07-301). The "RAISED LIMIT" indicator on the Hoist/Trolley/Lifter pendant (107-PC-07-006) should be illuminated, indicating that the Drum Lifter is fully raised.	Verify that the Drum Lifter is raised. Verify that the "RAISED LIMIT" indicator is illuminated.	N/A	N/A	N/A
56	The PCS should disable Trolley/Hoist/Lifter Pendant 107-PC-07-006. The "ENABLED" indicator on the Hoist/Trolley/Lifter pendant (107-PC-07-006) should be turned off, indicating that the pendant is disabled.	Verify that the "ENABLED" LED is turned off.	N/A	N/A	N/A
Position Transfer Car at Entry Glovebox					
57	Note: The following steps to position the Transfer Car at the Entry Glovebox should be performed only for the first drum processed. For all other drums processed, these steps should be skipped.		N/A	N/A	N/A
58	At OIU-12-104B (TRU Sorting G.B. OIU): Press the "MAIN MENU" button to return to the "TRU SORTING GLOVEBOX MAIN MENU" and then press the "TRANSFER CAR MENU" button display the "TRANSFER CAR MENU".	Verify that the "TRANSFER CAR MENU" is displayed at OIU-12-104B.	N/A	N/A	N/A

Step #	TEST PROCEDURE STEPS (13021A-86)	EXPECTED OUTPUT	Pass ✓	Fail ✓	WITNESS (Initial)
59	At OIU-12-104B (TRU Sorting G.B. OIU): Press the "ENTRY GLOVEBOX" button to move the Transfer Car (107-TC-07-301) to the TRU Entry Glovebox position. A "TRANSFER CAR MOVING TO ENTRY GLOVEBOX..." message should be displayed while the Transfer Car is moving to the Entry position.	Verify that a "TRANSFER CAR MOVING TO ENTRY GLOVEBOX..." message is displayed at OIU-12-104B.	N/A	N/A	N/A
60	The Transfer Car should activate position switch 07-ZS-810, indicating that the Transfer Car is at the Entry Glovebox Position. A "TRANSFER CAR AT ENTRY GLOVEBOX" message should be displayed at OIU-12-104B after the Transfer Car reaches the Entry position (07-ZS-810 activated).	Verify that position switch 07-ZS-810 is activated. Verify that a "TRANSFER CAR AT ENTRY GLOVEBOX" message is displayed at OIU-12-104B.	N/A	N/A	N/A
61	Because position switch 07-ZS-810 is activated, the "TRANSFER CAR AT ENTRY GLOVEBOX" message should be displayed on the "TRANSFER CAR MENU" at OIU-12-104B.	Verify that the "TRANSFER CAR AT ENTRY GLOVEBOX" message is displayed.	N/A	N/A	N/A
881 <i>N/A 2/1/96</i>					
62	Press the "MAIN MENU" button to return to the "TRU ENTRY GLOVEBOX MAIN MENU" and then press the "TRANSFER ASSEMBLY MENU" button from the "TRU ENTRY GLOVEBOX MAIN MENU" at OIU-12-104A to display the "TRANSFER ASSEMBLY MENU".	Verify that the "TRANSFER ASSEMBLY MENU" screen is displayed.	N/A	N/A	N/A
63	Select "OPEN PORT AND LOWER DRUM" from "TRANSFER ASSEMBLY MENU" at OIU-12-104A. The PCS should deflate the sphincter door seal.	Verify that the "OPEN PORT AND LOWER DRUM" at OIU-12-104A is displayed. Verify that the sphincter door seal is deflated.	N/A	N/A	N/A
64	A "PORT OPENING..." message should be displayed at OIU-12-104A. PCS should open Sphincter Door (107-DO-07-302).	Verify that the "PORT OPENING..." message is displayed at OIU-12-104A. Verify that Sphincter Door (107-DO-07-302) is open.	N/A	N/A	N/A
65	The PCS should lower the Drum Transfer Assembly Upper Slide Drive.	Verify that the Drum Transfer Assembly Upper Slide Drive is lowered.	N/A	N/A	N/A
66	PCS should lower Drum Transfer Assembly Upper Slide Drive and Lower Slide Drive.	Verify that the Drum Transfer Assembly Upper Slide Drive and Lower Slide Drive are lowered.	N/A	N/A	N/A
67	PCS should open the Drum Transfer Assembly lower drum grab.	Verify that the Drum Transfer Assembly lower drum grab is open.	N/A	N/A	N/A

Step #	TEST PROCEDURE STEPS (13021A-86)	EXPECTED OUTPUT	Pass ✓	Fail ✓	WITNESS (Initial)
68	The "DRUM LOWERED TO CAR" message should be displayed at OIU-12-104A after the drum has been "Passed Through" the sphincter. The "previous" drum should be lowered onto the Transfer Car. Note: For the first drum processed, unless a "previous" drum has been loaded into the Sphincter Entry Port, this sequence is performed primarily to open the Sphincter Entry Port.	Verify that the "DRUM LOWERED TO CAR" message is displayed at OIU-12-104A after the drum has been "Passed Through" the sphincter. Verify that the "previous" drum (if present) is lowered onto the Transfer Car.	N/A	N/A	N/A
69	Position switch 07-ZS-305 should be activated, indicating that the "previous" drum (if present) is positioned on the Transfer Car.	Verify that position switch 07-ZS-305 is activated (if a "previous" drum is present).	N/A	N/A	N/A
70	Note: Normally the operator moves Drum Transfer Car (107-TC-07-301) to the Sorting Glovebox at this time. Remove the empty drum from the Transfer Car.	Verify that the empty waste drum has been removed.	N/A	N/A	N/A
890 <i>NW 2/9/98</i>					
71	Press the "HANDOVER" button from the "TRANSFER ASSEMBLY MENU" screen at OIU-12-104A.	Verify that the "HANDOVER" button has been pressed.	N/A	N/A	N/A
72	The PCS should display the "DRUM HANDOVER IN PROGRESS" message at OIU-12-104A.	Verify that the "DRUM HANDOVER IN PROGRESS" message is displayed.	N/A	N/A	N/A
73	The PCS should raise Drum Transfer Assembly (107-DH-07-302) Lower Slide Drive.	Verify that the Drum Transfer Assembly Lower Slide Drive is raised.	N/A	N/A	N/A
74	The PCS should lower the Drum Transfer Assembly Upper Slide Drive.	Verify that the Drum Transfer Assembly Upper Slide Drive is lowered.	N/A	N/A	N/A
75	The PCS should close the Drum Transfer Assembly lower drum grab.	Verify that the Drum Transfer Assembly lower drum grab is closed.	N/A	N/A	N/A
76	The PCS should open the Drum Transfer Assembly upper drum grab.	Verify that the Drum Transfer Assembly upper drum grab is open.	N/A	N/A	N/A
77	The PCS should raise the Drum Transfer Assembly Upper Slide Drive.	Verify that the Drum Transfer Assembly Upper Slide Drive is raised.	N/A	N/A	N/A
78	The PCS should lower the Drum Transfer Assembly Lower Slide Drive.	Verify that the Drum Transfer Assembly Lower Slide Drive is lowered.	N/A	N/A	N/A
79	The PCS should close the Sphincter Port Door.	Verify that the Sphincter Port Door is closed.	N/A	N/A	N/A

Step #	TEST PROCEDURE STEPS (13021A-86)	EXPECTED OUTPUT	Pass ✓	Fail ✓	WITNESS (initial)
80	The PCS should inflate the Sphincter Door seal.	Verify that the Sphincter Door seal is inflated.	N/A	N/A	N/A
81	The "DRUM HANDOVER COMPLETE" message should be displayed at OIU-12-104A. The drum should now be held in the "sphincter position".	Verify that the "DRUM HANDOVER COMPLETE" message is displayed at OIU-12-104A. Verify that the drum is held in the "sphincter position".	N/A	N/A	N/A
82	The "TRU ENTRY GLOVEBOX MAIN MENU" screen should be displayed at OIU-12-104A. If a sub-menu screen is displayed, select the "MAIN MENU" menu choice to return to the "TRU ENTRY GLOVEBOX MAIN MENU".	Verify that the "TRU ENTRY GLOVEBOX MAIN MENU" screen is displayed at OIU-12-104A.	N/A	N/A	N/A
83	Because all glovebox items should be initialized, OIU-12-104A should display a "SYSTEM INITIALIZED" message.	Verify that OIU-12-104A displays the "SYSTEM INITIALIZED" message.	N/A	N/A	N/A
84	For all but the last drum processed, go to the next drum processing test case. For the last drum processed, proceed to the following test case.	Verify that either another drum will be processed next or the following test case will be performed.	N/A	N/A	N/A
24,004 <i>AW 2/7/98</i>					

301-DSI40-1

TEST 13021A-86 DATA SHEET

TRU ENTRY GLOVEBOX DATA SHEET- 140 LB DRUMS

Step #	140 lb Drum Without Liner			140 lb Drum With Liner			140 lb Drum Without Liner			140 lb Drum With Liner			140 lb Drum Without Liner		
	Pass	Fail	Witness	Pass	Fail	Witness	Pass	Fail	Witness	Pass	Fail	Witness	Pass	Fail	Witness
31.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
32.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
33.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
34.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
35.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
36.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
37.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
38.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
39.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
40.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
41.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
42.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
43.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
44.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
45.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
46.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
47.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
48.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
49.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
50.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
51.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
52.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
53.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
54.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
55.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
56.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
57.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
58.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
59.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
60.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W

48a ✓ R/W ✓
 54a ✓ R/W ✓
 54b ✓ R/W ✓
 54c ✓ R/W ✓
 54d ✓ R/W ✓

TEST 13021A-86 DATA SHEET

301-DS140 -

TRU ENTRY GLOVEBOX

TRU ENTRY GLOVEBOX DATA SHEET- 140 LB DRUMS

Step #	140 lb Drum Without Liner			140 lb Drum With Liner			140 lb Drum Without Liner			140 lb Drum With Liner			140 lb Drum Without Liner		
	Pass	Fail	Witness	Pass	Fail	Witness	Pass	Fail	Witness	Pass	Fail	Witness	Pass	Fail	Witness
61.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
62.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
63.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
64.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
65.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
66.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
67.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
68.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
69.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
70.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
71.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
72.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
73.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
74.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
75.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
76.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
77.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
78.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
79.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
80.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
81.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
82.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
83.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
84.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
85.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
86.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
87.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
88.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
89.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
90.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W

TRU ENTRY GLOVEBOX DATA SHEET - 140 LB DRUMS															
Step #	140 lb Drum Without Liner			140 lb Drum With Liner			140 lb Drum Without Liner			140 lb Drum With Liner			140 lb Drum Without Liner		
	Pass	Fail	Witness	Pass	Fail	Witness	Pass	Fail	Witness	Pass	Fail	Witness	Pass	Fail	Witness
91.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
92.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W
93.	✓		R/W	✓		R/W	✓		R/W	✓		R/W	✓		R/W

TRU ENTRY GLOVEBOX DATA SHEET- 1000 LB DRUMS

Step#	1000 lb Drum W/out Liner			1000 lb Drum With Liner			1000 lb Drum W/out Liner			1000 lb Drum With Liner			1000 lb Drum W/out Liner		
	Pass	Fail	Witness	Pass	Fail	Witness	Pass	Fail	Witness	Pass	Fail	Witness	Pass	Fail	Witness
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TRU ENTRY GLOVEBOX DATA SHEET- 1000 LB DRUMS

Step	1000 lb Drum W/out Liner			1000 lb Drum With Liner			1000 lb Drum W/out Liner			1000 lb Drum With Liner			1000 lb Drum W/out Liner		
	Pass	Fail	Witness	Pass	Fail	Witness	Pass	Fail	Witness	Pass	Fail	Witness	Pass	Fail	Witness
31.															
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NA

See

Attached
A/W19
2/17/98

10-4 through 10-12

48a
54a
54b
54c
54d

TEST 13021A-86 DATA SHEET

301-DS1000 - 2

TRU ENTRY GLOVEBOX 301

TRU ENTRY GLOVEBOX DATA SHEET- 1000 LB DRUMS															
Step#	1000 lb Drum W/out Liner			1000 lb Drum With Liner			1000 lb Drum W/out Liner			1000 lb Drum With Liner			1000 lb Drum W/out Liner		
	Pass	Fail	Witness	Pass	Fail	Witness	Pass	Fail	Witness	Pass	Fail	Witness	Pass	Fail	Witness
61.															
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Handwritten notes on the sheet:

- 10-11
- 10-11
- 10-11
- AW 2/1/98
- see page
- NA

TRU ENTRY GLOVEBOX DATA SHEET - 1000 LB DRUMS																
Step#	1000 lb Drum W/out Liner			1000 lb Drum With Liner			1000 lb Drum W/out Liner			1000 lb Drum With Liner			1000 lb Drum W/out Liner			
	Pass	Fail	Witness	Pass	Fail	Witness	Pass	Fail	Witness	Pass	Fail	Witness	Pass	Fail	Witness	
91.																
92.																
93.																

N/A
 see 1072 10-4 Hough 10/13
 A/W 2/11/98

TEST CASE 13021A-86.30 - SORTING GLOVEBOX INITIALIZATION CONDITIONS	2
Bagless Transfer Port Initialization.....	2
"DO-07-305 BAGLESS TRANSFER PORT CLOSED" Condition.....	2
Drum Tipper and Sorting Table Initialization	4
"ST-07-302 SORT TABLE AT ASSAY POSITION" Condition.....	4
"DH-07-303 TIPPER RAISED" Condition.....	5
"DH-07-303 TIPPER IN VERTICAL POSITION" Condition.....	6
"DH-07-303 DRUM GRAB OPEN" Condition	8
Packet Door and Tray Initialization	9
"DO-07-303 X-RAY DOOR CLOSED" Condition	9
"XX-07-301B ASSAY TRAY RETRACTED" Condition	10
Drum Lid/Delid Fixture Initialization.....	12
"RT-07-301 FIXTURE AT PARK/RELID POSITION" Condition.....	12
"RT-07-301 FIXTURE RAISED" Condition.....	14
"RT-07-301 FIXTURE ROTATION HEAD PARKED" Condition.....	15
"RT-07-301 SAW RETRACTED" Condition.....	17
"RT-07-301 SAW NOT RUNNING" Condition.....	18
"RT-07-301 CRIMP HEAD BACK" Condition	20
"RT-07-301 CRIMP JAWS OPEN" Condition	21
"Other Initialization"	22
"TC-07-301 TRANSFER CAR AT ENTRY" Condition.....	22
"LT-09-203B M/O/N SWITCH IN NORMAL" Condition	24
"EM-07-301 MANIPULATOR PARKED" Condition	25
Test Case Shutdown	27

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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Tested 8/6/07 R/W & MS

TEST CASE 13021A-86.30 - SORTING GLOVEBOX INITIALIZATION CONDITIONS

1.	Place the TRU Sorting Glovebox in "Maintenance" mode. "Maintenance" mode is selected by placing the Data Management System (DMS) Terminal "AUTO/MAINTENANCE" mode switch to the "MAINTENANCE" position.	Verify that the TRU Sorting Glovebox has been placed in "Maintenance" mode.	✓		RW
2.	Place the TRU Sorting Glovebox in "Automatic" mode to allow the TRU Sorting glovebox to re-initialize. Review the "TRU SORTING GLOVEBOX MAIN MENU" screen at OIU-12-104B. The PCS should automatically check the status of glovebox devices to ensure that they are initialized.	Verify that the TRU Sorting Glovebox has been placed in "Automatic" mode. Verify that OIU-12-104B displays the "SYSTEM INITIALIZED" message.	✓		RW
3.	Place the TRU Sorting Glovebox in "Maintenance" mode.	Verify that the TRU Sorting Glovebox has been placed in "Maintenance" mode.	✓		RW

Bagless Transfer Port Initialization

"DO-07-305 BAGLESS TRANSFER PORT CLOSED" Condition

4.	Force LCU 103 digital input register DO305/CS "not activated" to simulate the "Bagless Transfer Port (107-DO-07-305) Not Closed" condition. Record the forced register status below: <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> DO305/CS 0 I:27/07	Verify that register DO305/CS is forced "not activated". Verify that the register status is recorded in the space provided.	✓		RW
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Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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5.	Place the TRU Sorting Glovebox in "Automatic" mode. Because register DO305/CS is forced "not activated" to simulate the Bagless Transfer Port Is not closed, OIU-12-104B should display the "SYSTEM NOT INITIALIZED" message on the "TRU SORTING GLOVEBOX MAIN MENU".	Verify that the TRU Sorting Glovebox has been placed in "Automatic" mode. Verify that OIU-12-104B displays the "SYSTEM NOT INITIALIZED" message.	✓		R/W
6.	Press the " INITIAL DIAGNOSTICS" button from the "TRU SORTING GLOVEBOX MAIN MENU" at OIU-12-104B. <i>TRANSFER</i> R/W 8/16/97	Verify that the " INITIALIZATION DIAGNOSTICS MENU" is displayed.	✓		R/W
7.	The " DO-07-305 BAGLESS XFER PORT NOT CLOSED " message should be displayed RED on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104B. <i>R/W 8/16/97</i>	Verify that the " DO-07-305 BAGLESS XFER PORT NOT CLOSED " message is displayed RED.	✓		R/W
8.	Unforce LCU 103 register DO305/CS. Record the unforced register status below: Unforced DO305/CS Status: <u>1</u>	Verify that register DO305/CS is unforced.	✓		R/W
9.	Because the Bagless Transfer Port should be closed and all other glovebox items should be initialized, the "DO-07-305 BAGLESS XFER PORT CLOSED" message should be displayed GREEN on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104B.	Verify that the "DO-07-305 BAGLESS XFER PORT CLOSED" message is displayed GREEN.	✓		R/W
10.	Press the "MAIN MENU" button from the "INITIALIZATION DIAGNOSTICS MENU" to return to the "TRU SORTING GLOVEBOX MAIN MENU".	Verify that the "TRU SORTING GLOVEBOX MAIN MENU" is displayed.	✓		R/W
11.	Because all glovebox items should be initialized, OIU-12-104B should display a "SYSTEM INITIALIZED" message.	Verify that OIU-12-104B displays the "SYSTEM INITIALIZED" message.	✓		R/W
12.	Place the TRU Sorting Glovebox in "Maintenance" mode.	Verify that the TRU Sorting Glovebox has been placed in "Maintenance" mode.	✓		R/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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Drum Tipper and Sorting Table Initialization					
"ST-07-302 SORT TABLE AT ASSAY POSITION" Condition					
13.	Move the Sorting Table to any position other than the Assay position. <i>R/V 8/16/96 RWM RWM</i>	Verify that the Sorting Table is moved to any position other than the Assay position.	✓		<i>R/V</i>
14.	Place the TRU Sorting Glovebox in "Automatic" mode. Because the Sorting Table is not in the Assay position, OIU-12-104B should display the "SYSTEM NOT INITIALIZED" message.	Verify that the TRU Sorting Glovebox has been placed in "Automatic" mode. Verify that OIU-12-104B displays the "SYSTEM NOT INITIALIZED" message.	✓		<i>R/V</i>
15.	Press the "INITIAL DIAGNOSTICS" button from the "TRU SORTING GLOVEBOX MAIN MENU" at OIU-12-104B to display the "INITIALIZATION DIAGNOSTICS MENU". <i>INS RWM R/W 8/16/97</i> A "ST-07-302 SORT TABLE NOT AT ASSAY POSITION" message should be displayed RED on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104B.	Verify that the "INITIALIZATION DIAGNOSTICS MENU" is displayed. Verify that the "SORT TABLE NOT AT ASSAY POSITION" message is displayed RED. <i>INS R/W</i>	✓		<i>R/V</i>
16.	Move the Sorting Table to the Assay position. <i>R/V 8/16/97 RWM</i>	Verify that the Sorting Table is at the Assay position.	✓		<i>R/V</i>
17.	Because the Sorting Table servo motor controller input message ST-07-302/AS should indicate that the Sorting Table is in the "assay" position and all other glovebox items should be initialized, the message "ST-07-302 SORT TABLE AT ASSAY POSITION" should be displayed GREEN on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104B. <i>INS R/W R/W 8/16/97</i>	Verify that OIU-12-104B displays GREEN the "SORT TABLE AT ASSAY POSITION" message.	✓		<i>R/V</i>
18.	Press the "MAIN MENU" button from the "INITIALIZATION DIAGNOSTICS MENU" to return to the "TRU SORTING GLOVEBOX MAIN MENU".	Verify that the "TRU SORTING GLOVEBOX MAIN MENU" is displayed.	✓		<i>R/V</i>

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
19.	Because all glovebox items should be initialized, OIU-12-104B should display a "SYSTEM INITIALIZED" message.	Verify that OIU-12-104B displays the "SYSTEM INITIALIZED" message.	✓		RW
20.	Place the TRU Sorting Glovebox in "Maintenance" mode.	Verify that the TRU Sorting Glovebox has been placed in "Maintenance" mode.	✓		RW
"DH-07-303 TIPPER RAISED" Condition					
21.	Force LCU 103 register ZS328A to indicate that the "Drum Tipper Raised" position switch (07-ZS-328A) is "activated" to simulate the "Drum Tipper Not Raised" condition. Record the forced register status below: <div> <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS328A <u>1</u> <u>I: 22/06</u> </div>	Verify that register ZS328A is forced "activated". Verify that the forced register status is recorded in the space provided.	✓		RW
22.	Place the TRU Sorting Glovebox in "Automatic" mode. Because the "Drum Tipper Raised" register ZS328A is forced "activated" to simulate the Drum Tipper not raised, OIU-12-104B should display the "SYSTEM NOT INITIALIZED" message.	Verify that the TRU Sorting Glovebox has been placed in "Automatic" mode. Verify that OIU-12-104B displays the "SYSTEM NOT INITIALIZED" message.	✓		RW
23.	Press the "INITIAL DIAGNOSTICS" button from the "TRU SORTING GLOVEBOX MAIN MENU" at OIU-12-104B to display the "INITIALIZATION DIAGNOSTICS MENU". A "DH-07-303 TIPPER NOT RAISED" message should be displayed RED on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104B.	Verify that the "INITIALIZATION DIAGNOSTICS MENU" is displayed. Verify that the "DH-07-303 TIPPER NOT RAISED" message is displayed RED.	✓		RW
24.	Unforce LCU 103 register ZS328A. Record the unforced register status below: Unforced ZS328A Status: <u>0</u>	Verify that register ZS328A is unforced.	✓		RW

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)					
25.	Because the Drum Tipper Raised position switch (07-ZS-328A) should indicate that the Drum Tipper is fully raised, and all other glovebox items should be initialized, the message "DH-07-303 TIPPER RAISED" should be displayed GREEN on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104B.	Verify that OIU-12-104B displays GREEN the "DH-07-303 TIPPER RAISED" message.	✓		R/W					
26.	Press the "MAIN MENU" button from the "INITIALIZATION DIAGNOSTICS MENU" to return to the "TRU SORTING GLOVEBOX MAIN MENU".	Verify that the "TRU SORTING GLOVEBOX MAIN MENU" is displayed.	✓		R/W					
27.	Because all glovebox items should be initialized, OIU-12-104B should display a "SYSTEM INITIALIZED" message.	Verify that OIU-12-104B displays the "SYSTEM INITIALIZED" message.	✓		R/W					
28.	Place the TRU Sorting Glovebox in "Maintenance" mode.	Verify that the TRU Sorting Glovebox has been placed in "Maintenance" mode.	✓		R/W					
"DH-07-303 TIPPER IN VERTICAL POSITION" Condition										
29.	Force LCU 103 register ZS329 to indicate "Drum Tipper Vertical" position switch (07-ZS-329) is "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>ZS329</td><td>1</td><td>1; 22110</td></tr></table>	Register	Forced Status	Method of Confirmation	ZS329	1	1; 22110	Verify that register ZS329 is forced "activated". Verify that the forced register status is recorded in the space provided.	✓	R/W
Register	Forced Status	Method of Confirmation								
ZS329	1	1; 22110								
30.	Place the TRU Sorting Glovebox in "Automatic" mode. Because the "Drum Tipper Vertical" register ZS329 is forced "activated" to simulate the Drum Tipper not in the vertical position, OIU-12-104B should display the "SYSTEM NOT INITIALIZED" message.	Verify that the TRU Sorting Glovebox has been placed in "Automatic" mode. Verify that OIU-12-104B displays the "SYSTEM NOT INITIALIZED" message.	✓		R/W					

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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31.	<p>Press the "INITIAL DIAGNOSTICS" button from the "TRU SORTING GLOVEBOX MAIN MENU" at OIU-12-104B to display the "INITIALIZATION DIAGNOSTICS MENU".</p> <p style="text-align: center;"><i>RW 8/14/22</i></p> <p>A "DH-07-303 TIPPER NOT IN VERTICAL POSITION" message should be displayed RED on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104B.</p>	<p>Verify that the "INITIALIZATION DIAGNOSTICS MENU" is displayed.</p> <p>Verify that the message "DH-07-303 TIPPER NOT IN VERTICAL POSITION" is displayed RED.</p>	✓		<i>RW</i>
32.	<p>Unforce LCU 103 register ZS329. Record the unforced register status below:</p> <p>Unforced ZS329 Status: <u>0</u></p>	<p>Verify that register ZS329A is unforced.</p>	✓		<i>RW</i>
33.	<p>Because the Drum Tipper Vertical position switch (07-ZS-329) should indicate that the Drum Tipper is vertical and all other glovebox items should be initialized, the message "DH-07-303 TIPPER IN VERTICAL POSITION" should be displayed GREEN on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104B.</p>	<p>Verify that the message "DH-07-303 TIPPER IN VERTICAL POSITION" is displayed GREEN.</p>	✓		<i>RW</i>
34.	<p>Press the "MAIN MENU" button from the "INITIALIZATION DIAGNOSTICS MENU" to return to the "TRU SORTING GLOVEBOX MAIN MENU".</p>	<p>Verify that the "TRU SORTING GLOVEBOX MAIN MENU" is displayed.</p>	✓		<i>RW</i>
35.	<p>Because all glovebox items should be initialized, OIU-12-104B should display a "SYSTEM INITIALIZED" message.</p>	<p>Verify that OIU-12-104B displays the "SYSTEM INITIALIZED" message.</p>	✓		<i>RW</i>
36.	<p>Place the TRU Sorting Glovebox in "Maintenance" mode.</p>	<p>Verify that the TRU Sorting Glovebox has been placed in "Maintenance" mode.</p>	✓		<i>RW</i>

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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"DH-07-303 DRUM GRAB OPEN" Condition					
37.	Force LCU 103 "Drum Grab Open" position switch register ZS820B "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> ZS820B <u>0</u> <u>I 122112</u>	Verify that register ZS820B is forced "not activated". Verify that the forced register status is recorded in the spaces provided.	✓		R/W
38.	Place the TRU Sorting Glovebox in "Automatic" mode. Because the Drum Tipper Grab Open register (ZS820B) is forced "not activated" to simulate the "Drum Tipper Grab Not Open" condition, OIU-12-104B should display the "SYSTEM NOT INITIALIZED" message.	Verify that the TRU Sorting Glovebox has been placed in "Automatic" mode. Verify that OIU-12-104B displays the "SYSTEM NOT INITIALIZED" message.	✓		R/W
39.	Press the " INITIAL DIAGNOSTICS" button from the "TRU SORTING GLOVEBOX MAIN MENU" at OIU-12-104B to display the "INITIALIZATION DIAGNOSTICS MENU". A "DH-07-303 DRUM GRAB NOT OPEN" message should be displayed RED on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104B. <i>R/W 8/16/97</i>	Verify that the "INITIALIZATION DIAGNOSTICS MENU" is displayed. Verify that the "DH-07-303 DRUM GRAB NOT OPEN" message is displayed RED.	✓		R/W
40.	Unforce LCU 103 register ZS820B. Record the unforced register status below: Unforced ZS820B Status: <u>1</u>	Verify that register ZS820B is unforced.	✓		R/W
41.	Because the "Drum Grab Open" position switch (07-ZS-820B) should indicate that the Drum Tipper Grab is open and all other glovebox items should be initialized, the message "DH-07-303 DRUM GRAB OPEN" should be displayed GREEN on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104B.	Verify that OIU-12-104B displays GREEN the "DH-07-303 DRUM GRAB OPEN" message.	✓		R/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
42.	Press the "MAIN MENU" button from the "INITIALIZATION DIAGNOSTICS MENU" to return to the "TRU SORTING GLOVEBOX MAIN MENU".	Verify that the "TRU SORTING GLOVEBOX MAIN MENU" is displayed.	✓		R/W
43.	Because all glovebox items should be initialized, OIU-12-104B should display a "SYSTEM INITIALIZED" message.	Verify that OIU-12-104B displays the "SYSTEM INITIALIZED" message.	✓		R/W
44.	Place the TRU Sorting Glovebox in "Maintenance" mode.	Verify that the TRU Sorting Glovebox has been placed in "Maintenance" mode.	✓		R/W
Packet Door and Tray Initialization					
"DO-07-303 X-RAY DOOR CLOSED" Condition					
45.	Force LCU 103 "Packet X-Ray Door Closed" position switch register ZS327B "not activated" to simulate the "Packet X-Ray Door Not Closed" condition. Record the forced register status below: <div> <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS327B <u>0</u> <u>I: 22/15</u> </div>	Verify that register ZS327B is forced "not activated". Verify that the forced register status is recorded in the spaces provided.	✓		R/W
46.	Place the TRU Sorting Glovebox in "Automatic" mode. Because the "Packet X-Ray Door Closed" register (ZS327B) is forced "not activated" to simulate the "Packet X-Ray Door Not Closed" condition, OIU-12-104B should display the "SYSTEM NOT INITIALIZED" message.	Verify that the TRU Sorting Glovebox has been placed in "Automatic" mode. Verify that OIU-12-104B displays the "SYSTEM NOT INITIALIZED" message.	✓		R/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
47.	Press the "INITIAL. DIAGNOSTICS" button from the "TRU SORTING GLOVEBOX MAIN MENU" at OIU-12-104B to display the "INITIALIZATION DIAGNOSTICS MENU". A "DO-07-303 X-RAY DOOR NOT CLOSED" message should be displayed RED on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104B.	Verify that the "INITIALIZATION DIAGNOSTICS MENU" is displayed. Verify that the "DO-07-303 X-RAY DOOR NOT CLOSED" message is displayed RED.	✓		R/V
48.	Unforce LCU 103 register ZS327B. Record the unforced register status below: Unforced ZS327B Status: <u>1</u>	Verify that register ZS327B is unforced.	✓		R/V
49.	Because the "Packet X-Ray Door Closed" position switch (07-ZS-327B) should indicate that the Packet X-Ray Door is closed and all other glovebox items should be initialized, the message "DO-07-303 X-RAY DOOR CLOSED" should be displayed GREEN on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104B.	Verify that OIU-12-104B displays GREEN the "DO-07-303 X-RAY DOOR CLOSED" message.	✓		R/V
50.	Press the "MAIN MENU" button from the "INITIALIZATION DIAGNOSTICS MENU" to return to the "TRU SORTING GLOVEBOX MAIN MENU".	Verify that the "TRU SORTING GLOVEBOX MAIN MENU" is displayed.	✓		R/V
51.	Because all glovebox items should be initialized, OIU-12-104B should display a "SYSTEM INITIALIZED" message.	Verify that OIU-12-104B displays the "SYSTEM INITIALIZED" message.	✓		R/V
52.	Place the TRU Sorting Glovebox in "Maintenance" mode.	Verify that the TRU Sorting Glovebox has been placed in "Maintenance" mode.	✓		R/V
"XX-07-301B ASSAY TRAY RETRACTED" Condition					
53.	Before proceeding with this initialization check, the Packet Assay door should be open (Packet X-Ray door Closed).	Verify that the Packet Assay door is open.	✓		R/V

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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54.	Force LCU 103 "Assay Tray Extend" position solenoid register FEV837G/E "activated" to extend the Packet Assay Tray. Record the forced register status below: <i>On Extended Tray in Retract Mode</i> <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> FEV837G/E <i>R/W 8/16/99</i>	Verify that register FEV837G/E is forced "activated" and the Packet Assay Tray is extended. Verify that the forced register status is recorded in the spaces provided.	✓		<i>R/W</i>
55.	Place the TRU Sorting Glovebox in "Automatic" mode. Because the "Packet Assay Tray Extend" register (FEV837G/E) is forced "activated" to extend the "Packet Assay Tray", OIU-12-104B should display the "SYSTEM NOT INITIALIZED" message.	Verify that the TRU Sorting Glovebox has been placed in "Automatic" mode. Verify that OIU-12-104B displays the "SYSTEM NOT INITIALIZED" message.		✓	<i>R/W</i>
56.	Press the "INITIAL DIAGNOSTICS" button from the "TRU SORTING GLOVEBOX MAIN MENU" at OIU-12-104B to display the "INITIALIZATION DIAGNOSTICS MENU". A "XX-07-301B ASSAY TRAY NOT RETRACTED" message should be displayed RED on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104B.	Verify that the "INITIALIZATION DIAGNOSTICS MENU" is displayed. Verify that the "XX-07-301B ASSAY TRAY NOT RETRACTED" message is displayed RED.		✓	<i>R/W</i>
57.	Unforce LCU 103 register FEV837G/E (Packet assay Tray Extend) and force register FEV837G/R (Packet assay Tray Retract). Record the unforced register status below: Unforced FEV837G/E Status: _____ Forced FEV837G/R Status: _____	Verify that register FEV837G/E is unforced and register FEV837G/R is forced.		✓	<i>R/W</i>
58.	Because the "Packet Assay Tray" solenoid (07-FEV-837G) should retract the Assay tray and all other glovebox items should be initialized, the message "XX-07-301B ASSAY TRAY RETRACTED" should be displayed GREEN on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104B.	Verify that OIU-12-104B displays GREEN the "XX-07-301B ASSAY TRAY RETRACTED" message.		✓	<i>R/W</i>

* SEE TEST 335

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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59.	Press the "MAIN MENU" button from the "INITIALIZATION DIAGNOSTICS MENU" to return to the "TRU SORTING GLOVEBOX MAIN MENU".	Verify that the "TRU SORTING GLOVEBOX MAIN MENU" is displayed.	✓		R/E
60.	Because all glovebox items should be initialized, OIU-12-104B should display a "SYSTEM INITIALIZED" message.	Verify that OIU-12-104B displays the "SYSTEM INITIALIZED" message.	✓		R/E
61.	Place the TRU Sorting Glovebox in "Maintenance" mode.	Verify that the TRU Sorting Glovebox has been placed in "Maintenance" mode.	✓		R/E

Drum Lid/Delid Fixture Initialization

"RT-07-301 FIXTURE AT PARK/RELID POSITION" Condition

62.	Force LCU 103 register ZS828A to indicate that the "Park/Relid" position switch (07-ZS-828A) is "not activated" to simulate the "Lid/Delid Fixture Not at Park/Relid Position" condition. Record the forced register status below: <div> <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS828A <u>0</u> <u>I: 23/14</u> </div>	Verify that register ZS828A is forced "not activated". Verify that the forced register status is recorded in the spaces provided.	✓		R/E
63.	Place the TRU Sorting Glovebox in "Automatic" mode. Because the "Lid/Delid Fixture Parked" register ZS828A is forced "not activated" to simulate the Lid/Delid Fixture not parked at the Park/Relid position, OIU-12-104B should display the "SYSTEM NOT INITIALIZED" message.	Verify that the TRU Sorting Glovebox has been placed in "Automatic" mode. Verify that OIU-12-104B displays the "SYSTEM NOT INITIALIZED" message.	✓		R/E

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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64.	<p>Press the "INITIAL. DIAGNOSTICS" button from the "TRU SORTING GLOVEBOX MAIN MENU" at OIU-12-104B to display the "INITIALIZATION DIAGNOSTICS MENU".</p> <p style="text-align: right;"><i>R/W 12/21/97</i></p> <p>A "RT-07-301 FIXTURE NOT AT PARK/RELID POSITION" message should be displayed RED on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104B.</p>	<p>Verify that the "INITIALIZATION DIAGNOSTICS MENU" is displayed.</p> <p>Verify that the "RT-07-301 FIXTURE NOT AT PARK/RELID POSITION" message is displayed RED.</p>	✓		<i>R/W</i>
65.	<p>Unforce LCU 103 register ZS828A. Record the unforced register status below:</p> <p>Unforced ZS828A Status: <u>1</u></p>	<p>Verify that register ZS828A is unforced.</p>	✓		<i>R/W</i>
66.	<p>Because the Lid/Delid Fixture Parked position switch (07-ZS-828A) should indicate that the Lid/Delid Fixture is parked, positioned at the Relid position, and all other glovebox items should be initialized, the message "RT-07-301 FIXTURE AT PARK/RELID POSITION" should be displayed GREEN on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104B.</p> <p style="text-align: right;"><i>R/W 12/21/97</i></p>	<p>Verify that OIU-12-104B displays GREEN the "RT-07-301 FIXTURE AT PARK/RELID POSITION" message.</p>	✓		<i>R/W</i>
67.	<p>Press the "MAIN MENU" button from the "INITIALIZATION DIAGNOSTICS MENU" to return to the "TRU SORTING GLOVEBOX MAIN MENU".</p>	<p>Verify that the "TRU SORTING GLOVEBOX MAIN MENU" is displayed.</p>	✓		<i>R/W</i>
68.	<p>Because all glovebox items should be initialized, OIU-12-104B should display a "SYSTEM INITIALIZED" message.</p>	<p>Verify that OIU-12-104B displays the "SYSTEM INITIALIZED" message.</p>	✓		<i>R/W</i>
69.	<p>Place the TRU Sorting Glovebox in "Maintenance" mode.</p>	<p>Verify that the TRU Sorting Glovebox has been placed in "Maintenance" mode.</p>	✓		<i>R/W</i>

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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"RT-07-301 FIXTURE RAISED" Condition					
70.	Force LCU 103 "Lid/Delid Fixture Raised" position switch register ZS826A "not activated" to simulate the "Lid/Delid Fixture Not Raised" condition. Record the forced register status below: <div> <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS826A 0 I: 23/10 </div>	Verify that register ZS826A is forced "not activated". Verify that the forced register status is recorded in the spaces provided.	✓		R/V
71.	Place the TRU Sorting Glovebox in "Automatic" mode. Because the Lid/Delid Fixture position switch register ZS826A is forced "not activated" to simulate the "Lid/Delid Fixture Not Raised" condition, OIU-12-104B should display the "SYSTEM NOT INITIALIZED" message.	Verify that the TRU Sorting Glovebox has been placed in "Automatic" mode. Verify that OIU-12-104B displays the "SYSTEM NOT INITIALIZED" message.	✓		R/V
72.	Press the " INITIAL DIAGNOSTICS" button from the "TRU SORTING GLOVEBOX MAIN MENU" at OIU-12-104B to display the "INITIALIZATION DIAGNOSTICS MENU". A "RT-07-301 FIXTURE NOT RAISED" message should be displayed RED on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104B.	Verify that the " INITIALIZATION DIAGNOSTICS MENU" is displayed. Verify that the "RT-07-301 FIXTURE NOT RAISED" message is displayed RED.	✓		R/V
73.	Unforce LCU 103 register ZS826A. Record the unforced register status below: Unforced ZS826A Status: 1	Verify that register ZS826A is unforced.	✓		R/V
74.	Because the Lid/Delid Fixture position switch (07-ZS-826A) should indicate that the Lid/Delid Fixture is raised, and all other glovebox items should be initialized, the message "RT-07-301 FIXTURE RAISED" should be displayed GREEN on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104B.	Verify that OIU-12-104B displays GREEN the "RT-07-301 FIXTURE RAISED" message.	✓		R/V

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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75.	Press the "MAIN MENU" button from the "INITIALIZATION DIAGNOSTICS MENU" to return to the "TRU SORTING GLOVEBOX MAIN MENU".	Verify that the "TRU SORTING GLOVEBOX MAIN MENU" is displayed.	✓		R/W
76.	Because all glovebox items should be initialized, OIU-12-104B should display a "SYSTEM INITIALIZED" message.	Verify that OIU-12-104B displays the "SYSTEM INITIALIZED" message.	✓		R/W
77.	Place the TRU Sorting Glovebox in "Maintenance" mode.	Verify that the TRU Sorting Glovebox has been placed in "Maintenance" mode.	✓		R/W

"RT-07-301 FIXTURE ROTATION HEAD PARKED" Condition

78.	Force LCU 103 register ZS827A to indicate that the Lid/Delid Fixture Rotation Head Parked position switch (07-ZS827A) is "not activated" to simulate the "Lid/Delid Fixture Not Rotated Parked" condition. Record the forced register status below: <div> <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS827A 0 I: 23 / 13 </div>	Verify that register ZS827A is forced "not activated". R/W 8/10/27 Verify that the forced register status is recorded in the spaces provided.	✓		R/W
79.	Place the TRU Sorting Glovebox in "Automatic" mode. Because the Lid/Delid Fixture Rotated Parked register ZS827A is forced "not activated" to simulate the "Not Rotated Parked" condition, OIU-12-104B should display the "SYSTEM NOT INITIALIZED" message.	Verify that the TRU Sorting Glovebox has been placed in "Automatic" mode. Verify that OIU-12-104B displays the "SYSTEM NOT INITIALIZED" message.	✓		R/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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80.	Press the "INITIAL DIAGNOSTICS" button from the "TRU SORTING GLOVEBOX MAIN MENU" at OIU-12-104B to display the "INITIALIZATION DIAGNOSTICS MENU" . <i>R/W 8/16/97</i> A "RT-07-301 FIXTURE ROTATION HEAD NOT PARKED" message should be displayed RED on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104B.	Verify that the "INITIALIZATION DIAGNOSTICS MENU" is displayed. Verify that the "RT-07-301 FIXTURE ROTATION HEAD NOT PARKED" message is displayed RED .	✓		<i>R/W</i>
81.	Unforce LCU 103 register ZS827A. Record the unforced register status below: <i>R/W 8/16/97</i> Unforced ZS827A Status: <u>1</u>	Verify that register ZS827A is unforced.	✓		<i>R/W</i>
82.	Because the Lid/Delid Fixture Parked position switch (07-ZS-827A) should indicate that the Lid/Delid Fixture Rotation Head is parked and all other glovebox items should be initialized, the message "RT-07-301 FIXTURE ROTATION HEAD PARKED" should be displayed GREEN on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104B.	Verify that OIU-12-104B displays GREEN the "RT-07-301 FIXTURE ROTATION HEAD PARKED" message.	✓		<i>R/W</i>
83.	Press the "MAIN MENU" button from the "INITIALIZATION DIAGNOSTICS MENU" to return to the "TRU SORTING GLOVEBOX MAIN MENU" .	Verify that the "TRU SORTING GLOVEBOX MAIN MENU" is displayed.	✓		<i>R/W</i>
84.	Because all glovebox items should be initialized, OIU-12-104B should display a "SYSTEM INITIALIZED" message.	Verify that OIU-12-104B displays the "SYSTEM INITIALIZED" message.	✓		<i>R/W</i>
85.	Place the TRU Sorting Glovebox in "Maintenance" mode.	Verify that the TRU Sorting Glovebox has been placed in "Maintenance" mode.	✓		<i>R/W</i>

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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"RT-07-301 SAW RETRACTED" Condition					
86.	Force the "Lid/Delid Fixture Saw Retracted" position switch register ZS824B "not activated" to simulate the "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> ZS824B 0 I: 23 107	Verify that register ZS824B is forced "not activated". Verify that the forced register status is recorded in the spaces provided.	✓		R/W
87.	Place the TRU Sorting Glovebox in "Automatic" mode. Because the "Lid/Delid Fixture Saw Retracted" register ZS824B is forced "not activated" to simulate the "Saw Not Retracted" condition, OIU-12-104B should display the "SYSTEM NOT INITIALIZED" message.	Verify that the TRU Sorting Glovebox has been placed in "Automatic" mode. Verify that OIU-12-104B displays the "SYSTEM NOT INITIALIZED" message.	✓		R/W
88.	Press the "INITIAL. DIAGNOSTICS" button from the "TRU SORTING GLOVEBOX MAIN MENU" at OIU-12-104B to display the "INITIALIZATION DIAGNOSTICS MENU". A "RT-07-301 SAW NOT RETRACTED" message should be displayed RED on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104B.	Verify that the "INITIALIZATION DIAGNOSTICS MENU" is displayed. Verify that the "RT-07-301 SAW NOT RETRACTED" message is displayed RED.	✓		R/W
89.	Unforce LCU 103 register ZS824B. Record the unforced register status below: Unforced ZS824B Status: 1	Verify that register ZS824B is unforced.	✓		R/W
90.	Because the Saw Retracted position switch (07-ZS-824B) should indicate that the Lid/Delid Fixture Saw is retracted and all other glovebox items should be initialized, the message "RT-07-301 SAW RETRACTED" should be displayed GREEN on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104B.	Verify that OIU-12-104B displays GREEN the "RT-07-301 SAW RETRACTED" message.	✓		R/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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91.	Press the "MAIN MENU" button from the "INITIALIZATION DIAGNOSTICS MENU" to return to the "TRU SORTING GLOVEBOX MAIN MENU".	Verify that the "TRU SORTING GLOVEBOX MAIN MENU" is displayed.	✓		R/W
92.	Because all glovebox items should be initialized, OIU-12-104B should display a "SYSTEM INITIALIZED" message.	Verify that OIU-12-104B displays the "SYSTEM INITIALIZED" message.	✓		R/W
93.	Place the TRU Sorting Glovebox in "Maintenance" mode.	Verify that the TRU Sorting Glovebox has been placed in "Maintenance" mode.	✓		R/W
"RT-07-301 SAW NOT RUNNING" Condition					
94.	WARNING: Inadvertent activation of the 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 solenoid valve 07-FEV-332A is temporarily disabled so that the Lid/Delid Fixture saw cannot be activated.			N/A
	Temporarily Disable Solenoid Valve 07-FEV-332A so that the Lid/Delid Fixture Saw cannot be activated.				R/W 8/16/97
95.	Force LCU 103 "Lid/Delid Fixture Saw Motor" solenoid valve register FEV332A "activated" to simulate the Lid/Delid Fixture "Saw Motor On" condition. Record the forced register status below: Register _____ Forced Status <u>Installed Bypass at Run 51:216</u> Method of Confirmation <u>Per [signature] 9/2/98</u> FEV332A _____	Verify that register FEV332A is forced "activated". Verify that the forced register status is recorded in the spaces provided.	✓		R/W
96.	Place the TRU Sorting Glovebox in "Automatic" mode. Because the "Lid/Delid Fixture Saw Motor" register FEV332A is forced "activated" to simulate the "Saw Motor On" condition, OIU-12-104B should display the "SYSTEM NOT INITIALIZED" message.	Verify that the TRU Sorting Glovebox has been placed in "Automatic" mode. Verify that OIU-12-104B displays the "SYSTEM NOT INITIALIZED" message.	✓		R/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
97.	Press the "INITIAL. DIAGNOSTICS" button from the "TRU SORTING GLOVEBOX MAIN MENU" at OIU-12-104B to display the "INITIALIZATION DIAGNOSTICS MENU". <i>NOT TURNED OFF</i> A "RT-07-301 SAW MOTOR RUNNING" message should be displayed RED on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104B. <i>AW 8/16/92</i>	Verify that the "INITIALIZATION DIAGNOSTICS MENU" is displayed. Verify that the "RT-07-301 SAW MOTOR RUNNING" message is displayed RED.	✓		AW
98.	Unforce LCU 103 register FEV332A. Record the unforced register status below: <i>Remove Bypass at runy 5/1/216 AW 8/16/92</i> Unforced FEV332A Status: <i>status 9/3/96</i>	Verify that register FEV332A is unforced.	✓		AW
99.	Because the Lid/Delid Fixture Saw Motor solenoid (07-FEV-332A) should indicate that the Lid/Delid Fixture Saw is de-energized and all other glovebox items should be initialized, the message "RT-07-301 SAW MOTOR NOT RUNNING" should be displayed GREEN on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104B. <i>AW 8/16/92</i>	Verify that OIU-12-104B displays GREEN the "RT-07-301 SAW MOTOR NOT RUNNING" message. <i>TURNED OFF</i>	✓		AW
100.	Press the "MAIN MENU" button from the "INITIALIZATION DIAGNOSTICS MENU" to return to the "TRU SORTING GLOVEBOX MAIN MENU".	Verify that the "TRU SORTING GLOVEBOX MAIN MENU" is displayed.	✓		AW
101.	Because all glovebox items should be initialized, OIU-12-104B should display a "SYSTEM INITIALIZED" message.	Verify that OIU-12-104B displays the "SYSTEM INITIALIZED" message.	✓		AW
102.	Place the TRU Sorting Glovebox in "Maintenance" mode.	Verify that the TRU Sorting Glovebox has been placed in "Maintenance" mode.	✓		AW

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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"RT-07-301 CRIMP HEAD BACK" Condition					
103.	Force the "Lid/Delid Fixture Crimp Head Retracted" position switch (07-ZS-819A) register ZS819A "not activated" to simulate the "Crimp Head Not Retracted" condition. Record the forced register status below:		Verify that register ZS819A is forced "not activated".		N/A
	<u>Register</u>	<u>Forced Status</u>	<u>Method of Confirmation</u>	Verify that the forced register status is recorded in the spaces provided.	
	ZS819A				
104.	Place the TRU Sorting Glovebox in "Automatic" mode.		Verify that the TRU Sorting Glovebox has been placed in "Automatic" mode.		
	Because the "Lid/Delid Fixture Crimp Head Retracted" register ZS819A is forced "not activated" to simulate the "Crimp Head Not Retracted" condition, OIU-12-104B should display the "SYSTEM NOT INITIALIZED" message.		Verify that OIU-12-104B displays the "SYSTEM NOT INITIALIZED" message.		N/A
105.	Press the "INITIAL DIAGNOSTICS" button from the "TRU SORTING GLOVEBOX MAIN MENU" at OIU-12-104B to display the "INITIALIZATION DIAGNOSTICS MENU".		Verify that the "INITIALIZATION DIAGNOSTICS MENU" is displayed.		
	A "RT-07-301 CRIMP HEAD IS NOT BACK" message should be displayed RED on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104B.		Verify that the "RT-07-301 CRIMP HEAD IS NOT BACK" message is displayed RED.		N/A
106.	Unforce LCU 103 register ZS819A. Record the unforced register status below:		Verify that register ZS819A is unforced.		N/A
	Unforced ZS819A Status: _____				
107.	Because the Crimp Head Retracted position switch (07-ZS-819A) should indicate that the Lid/Delid Fixture Crimp Head is retracted, and all other glovebox items should be initialized, the message "RT-07-301 CRIMP HEAD BACK" should be displayed GREEN on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104B.		Verify that OIU-12-104B displays GREEN the "RT-07-301 CRIMP HEAD BACK" message.		N/A

#103-118 - Crimp Head Deleted From Fixture

R/V 8/16/99

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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108.	Press the "MAIN MENU" button from the "INITIALIZATION DIAGNOSTICS MENU" to return to the "TRU SORTING GLOVEBOX MAIN MENU".	Verify that the "TRU SORTING GLOVEBOX MAIN MENU" is displayed.		N/A	
109.	Because all glovebox items should be initialized, OIU-12-104B should display a "SYSTEM INITIALIZED" message.	Verify that OIU-12-104B displays the "SYSTEM INITIALIZED" message.		N/A	
110.	Place the TRU Sorting Glovebox in "Maintenance" mode.	Verify that the TRU Sorting Glovebox has been placed in "Maintenance" mode.		N/A	

"RT-07-301 CRIMP JAWS OPEN" Condition

111.	Force LCU 103 "Lid/Delid Fixture Crimp Jaw Open" position switch (07-ZS-821) register ZS821 "not activated" to simulate the Lid/Delid Fixture "Crimp Jaw Not Open" condition. Record the forced register status below:	Verify that register ZS821 is forced "not activated" .		N/A						
	<table><tr><td><u>Register</u></td><td><u>Forced Status</u></td><td><u>Method of Confirmation</u></td></tr><tr><td>ZS821</td><td></td><td></td></tr></table>	<u>Register</u>	<u>Forced Status</u>	<u>Method of Confirmation</u>	ZS821			Verify that the forced register status is recorded in the space provided.		
<u>Register</u>	<u>Forced Status</u>	<u>Method of Confirmation</u>								
ZS821										
112.	Place the TRU Sorting Glovebox in "Automatic" mode.	Verify that the TRU Sorting Glovebox has been placed in "Automatic" mode.		N/A						
	Because the "Lid/Delid Fixture Crimp Jaw Open" register ZS821 is forced "not activated" to simulate the "Crimp Jaw Not Open" condition, OIU-12-104B should display the "SYSTEM NOT INITIALIZED" message.	Verify that OIU-12-104B displays the "SYSTEM NOT INITIALIZED" message.								
113.	Press the "INITIAL DIAGNOSTICS" button from the "TRU SORTING GLOVEBOX MAIN MENU" at OIU-12-104B to display the "INITIALIZATION DIAGNOSTICS MENU" .	Verify that the "INITIALIZATION DIAGNOSTICS MENU" is displayed.		N/A						
	A "RT-07-301 CRIMP JAWS NOT OPEN" message should be displayed RED on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104B.	Verify that the message "RT-07-301 CRIMP JAWS NOT OPEN" is displayed RED .								

see Note page 30-20 R/W 12/21/97

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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114.	Unforce LCU 103 register ZS821. Record the unforced register status below: Unforced ZS821 Status: _____	Verify that register ZS821 is unforced.			N/A
115.	Because the Lid/Delid Fixture Crimp Jaw Open position switch (07-ZS-821) should indicate that the Lid/Delid Fixture Crimp Jaw is open and all other glovebox items should be initialized, the message "RT-07-301 CRIMP JAWS OPEN" should be displayed GREEN on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104B.	Verify that OIU-12-104B displays GREEN the "RT-07-301 CRIMP JAWS OPEN" message.			N/A
116.	Press the "MAIN MENU" button from the "INITIALIZATION DIAGNOSTICS MENU" to return to the "TRU SORTING GLOVEBOX MAIN MENU"	Verify that the "TRU SORTING GLOVEBOX MAIN MENU" is displayed.			N/A
117.	Because all glovebox items should be initialized, OIU-12-104B should display a "SYSTEM INITIALIZED" message.	Verify that OIU-12-104B displays the "SYSTEM INITIALIZED" message.			N/A
118.	Place the TRU Sorting Glovebox in "Maintenance" mode.	Verify that the TRU Sorting Glovebox has been placed in "Maintenance" mode.			N/A

"Other Initialization"

"TC-07-301 TRANSFER CAR AT ENTRY" Condition

119.	Force LCU 103 position switch 07-ZS-810 register ZS810 "not activated" to to simulate the Transfer Car not at the TRU Entry Glovebox position. Record the forced register status below: <div> <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> ZS810 0 I 1/22/03 </div>	Verify that register ZS810 is forced "not activated". Verify that the forced register status is recorded in the space provided.	✓		N/A
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see note page 30-20 R/W 1/22/03

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
120.	Place the TRU Sorting Glovebox in "Automatic" mode. Because register ZS810 is forced "not activated", simulating the Transfer Car not at TRU Entry Glovebox position, OIU-12-104B should display a "SYSTEM NOT INITIALIZED" message.	Verify that the TRU Sorting Glovebox has been placed in "Automatic" mode. Verify that OIU-12-104B displays the "SYSTEM NOT INITIALIZED" message.	✓		R/V
121.	Press the "INITIAL DIAGNOSTICS" button from the "TRU SORTING GLOVEBOX MAIN MENU" at OIU-12-104B to display the "INITIALIZATION DIAGNOSTICS MENU". A "TC-07-301 TRANSFER CAR NOT AT ENTRY" message should be displayed RED on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104B. <i>R/V 12/21/91</i>	Verify that the "INITIALIZATION DIAGNOSTICS MENU" is displayed. Verify that the "TC-07-301 TRANSFER CAR NOT AT ENTRY" message is displayed RED.	✓		R/V
122.	Unforce LCU 103 register ZS810. Record the unforced register status below: Unforced ZS810 Status: <u>1</u>	Verify that register ZS810 is unforced.	✓		R/V
123.	Because the Transfer Car is positioned at the TRU Entry Glovebox and all other glovebox items should be initialized, the message "TC-07-301 TRANSFER CAR AT ENTRY" should be displayed GREEN on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104B.	Verify that OIU-12-104B displays GREEN the "TC-07-301 TRANSFER CAR AT ENTRY" message.	✓		R/V
124.	Press the "MAIN MENU" button from the "INITIALIZATION DIAGNOSTICS MENU" to return to the "TRU SORTING GLOVEBOX MAIN MENU".	Verify that the "TRU SORTING GLOVEBOX MAIN MENU" is displayed.	✓		R/V
125.	Because all glovebox items should be initialized, OIU-12-104B should display a "SYSTEM INITIALIZED" message.	Verify that OIU-12-104B displays the "SYSTEM INITIALIZED" message.	✓		R/V
126.	Place the TRU Sorting Glovebox in "Maintenance" mode.	Verify that the TRU Sorting Glovebox has been placed in "Maintenance" mode.	✓		R/V

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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"LT-09-203B M/O/N SWITCH IN NORMAL" Condition

127.	Turn the Lift Table Pedestal 107-PC-09-203B M/O/N switch 09-HS-243A to the "OFF" position to deactivate the Lift Table.	Verify that switch 09-HS-243A is turned to the "OFF" position.	✓		R/W
128.	Place the TRU Sorting Glovebox in "Automatic" mode. Because the M/O/N switch is not turned to "NORMAL" for normal operation controlled by PCS, the system should not initialize and OIU-12-104B should display a "SYSTEM NOT INITIALIZED" message.	Verify that the TRU Sorting Glovebox has been placed in "Automatic" mode. Verify that OIU-12-104B displays the "SYSTEM NOT INITIALIZED" message.	✓		R/W
129.	Press the "INITIAL DIAGNOSTICS" button from the "TRU SORTING GLOVEBOX MAIN MENU" at OIU-12-104B to display the "INITIALIZATION DIAGNOSTICS MENU". A "LT-09-203B M/O/N SWITCH NOT IN NORMAL" message should be displayed RED on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104B.	Verify that the "INITIALIZATION DIAGNOSTICS MENU" is displayed. Verify that the message "LT-09-203B M/O/N SWITCH NOT IN NORMAL" is displayed RED.	✓		R/W
130.	Turn the Lift Table Pedestal 107-PC-09-203B M/O/N switch 09-HS-243A to the "MAINTENANCE" position.	Verify that switch 09-HS-243A is turned to the "MAINTENANCE" position.	✓		R/W
131.	Because the M/O/N switch is not turned to "NORMAL" for normal operation controlled by PCS, the system should not initialize and OIU-12-104B should continue to display RED a "LT-09-203B M/O/N SWITCH NOT IN NORMAL" message.	Verify that OIU-12-104B displays RED the "LT-09-203B M/O/N SWITCH NOT IN NORMAL" message.	✓		R/W
132.	Return the Lift Table Pedestal 107-PC-09-203B M/O/N switch 09-HS-243A to the "NORMAL" position to allow the PCS to control the Lift Table.	Verify that switch 09-HS-243A is turned to "NORMAL".	✓		R/W
133.	Because the Lift Table M/O/N switch is turned to the "NORMAL" position for normal operation and all other glovebox items should be initialized, the message "LT-09-203B M/O/N SWITCH IN NORMAL" should be displayed GREEN on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104B.	Verify that OIU-12-104B displays GREEN the "LT-09-203B M/O/N SWITCH IN NORMAL" message.	✓		R/W

R/W 8/16/97

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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134.	Press the "MAIN MENU" button from the "INITIALIZATION DIAGNOSTICS MENU" to return to the "TRU SORTING GLOVEBOX MAIN MENU".	Verify that the "TRU SORTING GLOVEBOX MAIN MENU" is displayed.	✓		R/W
135.	Because all glovebox items should be initialized, OIU-12-104B should display a "SYSTEM INITIALIZED" message.	Verify that OIU-12-104B displays the "SYSTEM INITIALIZED" message.	✓		R/W
136.	Place the TRU Sorting Glovebox in "Maintenance" mode.	Verify that the TRU Sorting Glovebox has been placed in "Maintenance" mode.	✓		R/W

"EM-07-301 MANIPULATOR PARKED" Condition

137.	Position the Manipulator in "Park Position 1".	Verify that the Manipulator is in "Park Position 1".	✓		R/W														
138.	<p>Force the TRU Sorting Glovebox Waste Manipulator (107-EM-07-301) position switch registers (ZS823A, ZS823B, ZS823C, ZS823D) "not activated" to indicate that the manipulator is not at "Park Position 1" or at "Park Position 2" and that the manipulator arms are not parked.</p> <p>Record the forced register status in the spaces provided below:</p> <table><tr><td>Register</td><td>Forced Status</td><td>Method of Confirmation</td></tr><tr><td>ZS823A</td><td><u>0</u></td><td><u>I: 22116</u></td></tr><tr><td>ZS823B</td><td><u>0</u></td><td><u>I: 22117</u></td></tr><tr><td>ZS823C</td><td><u>0</u></td><td><u>I: 23100</u></td></tr><tr><td>ZS823D</td><td><u>0</u></td><td><u>I: 23101</u></td></tr></table>	Register	Forced Status	Method of Confirmation	ZS823A	<u>0</u>	<u>I: 22116</u>	ZS823B	<u>0</u>	<u>I: 22117</u>	ZS823C	<u>0</u>	<u>I: 23100</u>	ZS823D	<u>0</u>	<u>I: 23101</u>	<p>Verify that registers ZS823A, ZS823B, ZS823C, and ZS823D are forced "not activated".</p> <p>Verify that the register status is recorded in the spaces provided.</p>	✓	R/W
Register	Forced Status	Method of Confirmation																	
ZS823A	<u>0</u>	<u>I: 22116</u>																	
ZS823B	<u>0</u>	<u>I: 22117</u>																	
ZS823C	<u>0</u>	<u>I: 23100</u>																	
ZS823D	<u>0</u>	<u>I: 23101</u>																	

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139.	Place the TRU Sorting Glovebox in "Automatic" mode.	Verify that the TRU Sorting Glovebox has been placed in "Automatic" mode.	✓		<i>AW</i>
140.	Because registers ZS2823A and ZS823B are forced "not activated" to indicate that the manipulator is not parked and registers ZS2823C and ZS823D are forced "not activated" to indicate that the manipulator arms are not parked, OIU-12-104B should display the "SYSTEM NOT INITIALIZED" message.	Verify that OIU-12-104B displays the "SYSTEM NOT INITIALIZED" message.	✓		<i>RW</i>
141.	Press the "INITIAL. DIAGNOSTICS" button from the "TRU SORTING GLOVEBOX MAIN MENU" at OIU-12-104B to display the "INITIALIZATION DIAGNOSTICS MENU". <i>EM-07-301 LEFT ARM NOT RAISED</i>	Verify that the "INITIALIZATION DIAGNOSTICS MENU" is displayed. <i>8/16/97</i> Verify that the message "EM-07-301B MANIPULATOR NOT PARKED" is displayed RED.	✓		<i>RW</i>
142.	Unforce registers ZS823C and ZS823D. Record the unforced register status below: Unforced ZS823C Status: <u>1</u> Unforced ZS823D Status: <u>1</u>	Verify that registers ZS823C and ZS823D are unforced. <i>EM-07-301 LEFT ARM RAISED IS GREEN</i> <i>EM-07-301 RIGHT ARM RAISED IS GREEN</i>	✓		<i>AW</i>
143.	Because registers ZS823A and ZS823B (Manipulator parked positions) remain forced "not activated", the message "EM-07-301B MANIPULATOR NOT PARKED" should continue to be displayed on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104B.	Verify that OIU-12-104B displays the "EM-07-301B MANIPULATOR NOT PARKED" message.	✓		<i>AW</i>
144.	Unforce register ZS823A. Record the unforced register status below: Unforced ZS823A Status: <u>1</u>	Verify that register ZS823A is unforced.	✓		<i>RW</i>
145.	Because the Manipulator is parked in "Park Position 1" and the Manipulator arms are parked, and all other glovebox items should be initialized, the message "EM-07-301B MANIPULATOR PARKED" should be displayed GREEN on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104B.	Verify that OIU-12-104B displays GREEN the "EM-07-301B MANIPULATOR PARKED" message.	✓		<i>RW</i>

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146.	Position the Manipulator in "Park Position 2".	Verify that the Manipulator is in Park "Park Position 2".	✓		R/W
147.	Unforce register ZS823B and return register ZS823A to the "not activated" state. Record the unforced register status below: Unforced ZS823B Status: <u>1</u> Forced ZS823A Status: <u>0</u>	Verify that register ZS823B is unforced and register ZS823A is forced.	✓		R/W
148.	Because the Manipulator is parked in "Park Position 2" and the Manipulator arms are parked, and all other glovebox items should be initialized, the message "EM-07-301B MANIPULATOR PARKED" should continue to be displayed GREEN on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104B.	Verify that OIU-12-104B displays GREEN the "EM-07-301B MANIPULATOR PARKED" message.	✓		R/W
149.	Because the glovebox should be initialized, the "PASS" indicator should be illuminated on the "INITIALIZATION DIAGNOSTICS MENU" at OIU-12-104B.	Verify that the "PASS" indicator is illuminated.			N/A R/W 8/16/97
150.	Press the "MAIN MENU" button from the "INITIALIZATION DIAGNOSTICS MENU" to return to the "TRU SORTING GLOVEBOX MAIN MENU".	Verify that the "TRU SORTING GLOVEBOX MAIN MENU" is displayed.	✓		R/W
151.	Because all glovebox items should be initialized, OIU-12-104B should display a "SYSTEM INITIALIZED" message.	Verify that OIU-12-104B displays the "SYSTEM INITIALIZED" message.	✓		R/W

Test Case Shutdown

152.	Return all TRU Sorting Glovebox items to a safe and stable condition.	Verify that all TRU Sorting Glovebox items are safely positioned.	✓		R/W
153.	Unforce all LCU 103 registers using the Allen Bradley PLC Software.	Verify that all LCU 103 registers are unforced.	✓		R/W

TEST CASE 13021A-86.30 COMPLETE

TEST CASE 13021A-86.31 TRU SORTING GLOVEBOX (GB-07-302) MAINTENANCE MENU FUNCTIONS	2
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TEST CASE 13021A-86.31 TRU SORTING GLOVEBOX (GB-07-302) 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-301) on the Data Management System Pedestal (PC-07-104) to "MAINTENANCE MODE".	Verify that "MAINTENANCE MODE" has been selected for the LLW Sorting Glovebox.	✓		R/W
2.	The "MAINTENANCE ACCESS MENU" should be displayed at OIU-12-104B.	Verify that the "MAINTENANCE ACCESS MENU" is displayed.	✓		R/W
3.	The "ENTER ACCESS CODE:" message should be displayed on the "MAINTENANCE ACCESS MENU" at OIU-12-104B.	Verify that the "ENTER ACCESS CODE:" message is displayed.	✓		R/W
4.	Enter "333" and press the "ENTER" button.	Verify that "333" is entered.	✓		R/W
5.	The "ACCESS DENIED" message should be displayed on the "MAINTENANCE ACCESS MENU" at OIU-12-104B.	Verify that the "ACCESS DENIED" message is displayed.	✓		R/W
6.	Press the "CANCEL OPERATION" button to cancel maintenance menu access.	Verify that the "CANCEL OPERATION" button has been pressed.	✓		R/W

Cancel Password Change

7.	The "ENTER ACCESS CODE:" message should be displayed on the "MAINTENANCE ACCESS MENU" at OIU-12-104B.	Verify that the "ENTER ACCESS CODE:" message is displayed.	✓		R/W
8.	Press the "CHANGE PASSWORD" button from the "MAINTENANCE ACCESS MENU" at OIU-12-104B.	Verify that the "CHANGE PASSWORD" button has been pressed.	✓		R/W
9.	The "ENTER OLD PASSWORD:" message should be displayed on the "MAINTENANCE ACCESS MENU" at OIU-12-104B.	Verify that the "ENTER OLD PASSWORD:" message is displayed.	✓		R/W
10.	Enter "1111" and press the "ENTER" button.	Verify that "1111" is entered.	✓		R/W

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11.	The "ENTER NEW PASSWORD:" message should be displayed on the "MAINTENANCE ACCESS MENU" at OIU-12-104B.	Verify that the "ENTER NEW PASSWORD:" message is displayed.	✓		R/W
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.	✓		R/W
13.	The "OPERATION CANCELED" message should be displayed on the "MAINTENANCE ACCESS MENU" at OIU-12-104B.	Verify that the "OPERATION CANCELED" message is displayed.	✓		R/W

Change OIU Password

14.	Press the "CHANGE PASSWORD" button from the "MAINTENANCE ACCESS MENU" at OIU-12-104B.	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-12-104B.	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-12-104B.	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

Enter New Password and Access Maintenance Menus

21.	The "MAINTENANCE ACCESS MENU" should be displayed at OIU-12-104B.	Verify that the "MAINTENANCE ACCESS MENU" is displayed.	✓		R/W
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Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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22.	The "ENTER ACCESS CODE:" message should be displayed on the "MAINTENANCE ACCESS MENU" at OIU-12-104B.	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-12-104B.	Verify that the "SORTING GLOVEBOX MAINTENANCE MAIN MENU" is displayed.	✓		R/W

Review Sorting Table Operations

NOTE: The following operations will be performed on the "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" at OIU-12-104B.

25.	Place all LLW Sorting Glovebox (GB-07-302) 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-12-104B.	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 "MOVE TABLE LEFT" button.	Verify that the Sorting Table moves LEFT.	✓		R/W
28.	Press briefly and then release the Sorting Table "STOP TABLE" button.	Verify that the Sorting Table stops.	✓		R/W
29.	Press briefly and then release the Sorting Table "MOVE TABLE RIGHT" button.	Verify that the Sorting Table moves RIGHT.	✓		R/W
30.	Press briefly and then release the Sorting Table "STOP TABLE" button.	Verify that the Sorting Table stops.	✓		R/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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31.	<p>Press briefly and then release the Sorting Table "MOVE TABLE LEFT" button. <i>LOADOUT POSITION #2</i></p> <p>The Sorting Table should move to the "LOADOUT #2 POSITION" and then stop.</p> <p>"LOADOUT #2 POSITION" should be illuminated on the OIU.</p>	<p><i>R/W 8/6/97</i></p> <p>Verify that the Sorting Table has moved to the "LOADOUT #2 POSITION" position and stopped.</p> <p>Verify that "LOADOUT #2 POSITION" is illuminated on the OIU.</p>	✓		<i>R/W</i>
32.	<p>Press briefly and then release the Sorting Table "MOVE TABLE RIGHT" button. <i>TIPPER POSITION</i></p> <p>The Sorting Table should move to the "TIPPER POSITION" and then stop.</p> <p>"TIPPER POSITION" should be illuminated on the OIU.</p>	<p><i>N/W 8/10/97</i></p> <p>Verify that the Sorting Table moves RIGHT.</p> <p>Verify that the Sorting Table has moved to the "TIPPER POSITION" and stopped.</p> <p>Verify that "TIPPER POSITION" is illuminated on the OIU.</p>	✓		<i>R/W</i>
33.	<p>Press briefly and then release the Sorting Table "HOME" button.</p> <p>"HOME" should be illuminated on the OIU.</p>	<p>Verify that the Sorting Table moves to the "HOME" position.</p> <p>Verify that "HOME" is illuminated on the OIU.</p>		✓	<i>R/W</i>
34.	<p>Press briefly and then release the Sorting Table "LOADOUT #2 POSITION" button.</p> <p>"LOADOUT #2 POSITION" should be illuminated on the OIU.</p>	<p>Verify that the Sorting Table moves to the "LOADOUT #2 POSITION" position.</p> <p>Verify that "LOADOUT #2 POSITION" is illuminated on the OIU.</p>	✓		<i>R/W</i>

* see TE 331

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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35.	Press briefly and then release the Sorting Table "LOADOUT #1 POSITION" button. "LOADOUT #1 POSITION" should be illuminated on the OIU.	Verify that the Sorting Table moves to the "LOADOUT #1 POSITION" position. Verify that "LOADOUT #1 POSITION" is illuminated on the OIU.	✓		A/V
36.	Press briefly and then release the Sorting Table "RWM POSITION" button. "RWM POSITION" should be illuminated on the OIU.	Verify that the Sorting Table moves to the "RWM POSITION" position. Verify that "RWM POSITION" is illuminated on the OIU.	✓		A/V
37.	Press briefly and then release the Sorting Table "TIPPER" button. "TIPPER POSITION" should be illuminated on the OIU.	Verify that the Sorting Table moves to the "TIPPER" position. Verify that "TIPPER POSITION" is illuminated on the OIU.	✓		A/V
38.	Press briefly and then release the Sorting Table "ASSAY" button. "ASSAY POSITION" should be illuminated on the OIU.	Verify that the Sorting Table moves to the "ASSAY" position. Verify that "ASSAY POSITION" is illuminated on the OIU.	✓		A/V
39.	Press "MAINT MAIN MENU" to return to the "SORTING GLOVEBOX MAINTENANCE MAIN MENU".	Verify that the "SORTING GLOVEBOX MAINTENANCE MAIN MENU" is displayed.	✓		R/V

Review Packet X-Ray Operations

40.	The following test will produce X-Rays. An RCT should be present to monitor radiation levels outside the sorting glovebox.	Verify an HPT tech is present.	✓		N/A 8/16/99
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Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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41.	The "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" should be displayed at OIU-12-104B.	Verify that the "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" is displayed.	✓		R/W
42.	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-12-104B. 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 "OPEN X-RAY DOOR" button has been pressed. Verify that the Packet X-Ray Door translates open while the "OPEN X-RAY DOOR" button is pressed.	✓		R/W ✓
43.	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-12-104B. 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 "CLOSE X-RAY DOOR" button has been pressed. Verify that the Packet X-Ray Door translates closed while the "CLOSE X-RAY DOOR" button is pressed.	✓		R/W ✓
44.	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-12-104B, until the Packet X-Ray Door is fully translated open. The Packet X-Ray Door (DO-07-103) should translate completely open, uncovering the X-ray bulge.	Verify that the "OPEN X-RAY DOOR" button has been pressed. Verify that the Packet X-Ray Door is fully translated open.	✓		R/W ✓

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
45.	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-12-104B. The Packet X-Ray Tray should smoothly extend without erratic motion while the "EXTEND X-RAY TRAY" button is pressed.	Verify that the "EXTEND X-RAY TRAY" button has been pressed. Verify that the Packet X-Ray Tray extends open while the "EXTEND X-RAY TRAY" button is pressed.	✓		R/W
46.	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-12-104B. The Packet X-Ray Tray should smoothly retract without erratic motion while the "RETRACT X-RAY TRAY" button is pressed.	Verify that the "RETRACT X-RAY TRAY" button has been pressed. Verify that the Packet X-Ray Tray retracts while the "RETRACT X-RAY TRAY" button is pressed.	✓		R/W
47.	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-12-104B, until the Packet X-Ray Tray is fully extended. The Packet X-Ray Tray should fully extend.	Verify that the "EXTEND X-RAY TRAY" button has been pressed. Verify that the Packet X-Ray Tray is fully extended.	✓		R/W
48.	Set the following parameter on the X-Ray Control Panel: Key Switch: ON Power Level: 25%	Verify that the parameters are set.			N/A
49.	Press and then release the "START" button X-Ray Control Panel. Because the Packet X-Ray door is open, the Packet X-Ray should not generate X-Rays.	Verify that the "START" button has been pressed. Verify that pressing the "START" does not generate X-Rays.			N/A

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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50.	Press and continue to press the Packet X-Ray "RETRACT X-RAY TRAY" button until the Packet X-Ray Tray is fully retracted. The Packet X-Ray Tray should fully retract so that the Packet X-Ray door can be closed.	Verify that the "RETRACT X-RAY TRAY" button has been pressed. Verify that the Packet X-Ray Tray is fully retracted.	✓		P/W
51.	Press and then release the "START" button X-RAY Control Panel. Because the Packet X-Ray door is open, the Packet X-Ray should not be enabled.	Verify that the "START" button has been pressed. Verify that pressing the "START" does not generate X-Rays.		N/A P/W 8/16/97	
52.	Press and continue to press the Packet X-Ray "CLOSE X-RAY DOOR" button until the Packet X-Ray door is translated closed. The Packet X-Ray Door (DO-07-103) should translate completely closed, covering the X-ray bulge.	Verify that the "CLOSE X-RAY DOOR" button has been pressed. Verify that the Packet X-Ray Door is fully translated closed.	✓		P/W
53.	Press and then release the "START" button X-RAY Control Panel. Because the Packet X-Ray door is closed, the Packet X-Ray should be generating X-Rays.	Verify that the "START" button has been pressed. Verify that pressing the "START" does generate X-Rays.		N/A P/W 8/16/97	
54.	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-12-104B, until the Packet X-Ray Door is fully translated open. The Packet X-Ray Door (DO-07-103) should translate completely open, uncovering the X-ray bulge.	Verify that the "OPEN X-RAY DOOR" button has been pressed. Verify that the Packet X-Ray Door is fully translated open.	✓		P/W
55.	Because the X-RAY DOOR is no longer fully closed, X-Rays should not be generated.	Verify that X-Rays are not generated.		N/A P/W 8/16/97	

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56.	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-12-104B. 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 "CLOSE X-RAY DOOR" button has been pressed. Verify that the Packet X-Ray Door translates closed while the "CLOSE X-RAY DOOR" button is pressed.	✓		RI ✓
57.	X-Rays should not be generated.	Verify that X Rays are not generated.			RI ✓
58.	Shutdown the X-Ray Control Panel as follows: Reduce power level to 0% Turn off and remove the key switch.	Verify the X-Ray Control Panel is shutdown.			N/A RI ✓ 2/16/97

Review Drum Tipper and Drum Grab Operations

59.	The Drum Tipper should be parked; raised with Drum Grab open and vertical.	Verify that the Drum Tipper is parked.	✓		RI ✓
60.	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.	✓		RI ✓
61.	The "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" should be displayed at OIU-12-104B.	Verify that the "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" is displayed.	✓		RI ✓
62.	Press briefly and then release the Drum Tipper "CLOSE GRAB" button from the "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" at OIU-12-104B.	Verify that the "CLOSE GRAB" button has been pressed.	✓		RI ✓
63. X	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.	RI ✓ ✓	RI ✓	RI ✓

X see TE 330

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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64.	Press briefly and then release the Drum Tipper "OPEN GRAB" button from the "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" at OIU-12-104B. <i>not with the tipper RAISED</i>	Verify that the "OPEN GRAB" button has been pressed.	✓		R/W
65.	The Drum Tipper grab should smoothly <i>not</i> open without erratic <i>not</i> motion while the "OPEN GRAB" button is pressed. <i>RA 9/16/99</i>	Verify that the Drum Tipper Grab opens while the "OPEN GRAB" button is pressed. <i>does not open</i>	✓		R/W
66. 95a	Press and continue to press the Drum Tipper "CLOSE GRAB" button from the "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" at OIU-12-104B, until the Drum Tipper grab is fully closed.	Verify that the "CLOSE GRAB" button has been pressed.	✓		R/W
67. 95b	The Drum Tipper grab should completely close.	Verify that the Drum Tipper grab is fully closed.	✓		R/W
68. 95c	Press and continue to press the Drum Tipper "OPEN GRAB" button from the "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" at OIU-12-104B, until the Drum Tipper grab is fully open.	Verify that the "OPEN GRAB" button has been pressed.	✓		R/W
69. 95d	The Drum Tipper grab should completely open.	Verify that the Drum Tipper grab is fully open.		✓	R/W
70.	Briefly press the Drum Tipper Rotate Joystick fully right and then release.	Verify that the joystick has been pushed fully right.	✓		R/W
71.	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
72.	Briefly press the Drum Tipper Rotate Joystick fully left and then release.	Verify that the joystick has been pushed fully left.	✓		R/W
73.	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
74.	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-12-104B.	Verify that the "ENABLE ROTATE JOYSTICK" button has been pressed.	✓		R/W

* see TE 329

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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75.	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
76.	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
77.	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
78.	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
79.	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
80.	The Drum Tipper grab should rotate completely clockwise and stop.	Verify that the Drum Tipper grab is fully rotated clockwise.	✓		R/W
81.	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
82.	The Drum Tipper grab should rotate completely counterclockwise and stop.	Verify that the Drum Tipper grab is fully rotated counterclockwise.	✓		R/W
83.	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
84.	The Drum Tipper grab should rotate to its upright, vertical position and stop.	Verify that the Drum Tipper grab is vertical.	✓		R/W
85.	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-12-104B.	Verify that the "DISABLE ROTATE JOYSTICK" button has been pressed.	✓		R/W
86.	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

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
87.	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.	✓		RJZ
88.	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.	✓		RW
89.	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.	✓		RJZ
90.	Press briefly and then release the Drum Tipper "LOWER TIPPER" button from the "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" at OIU-12-104B.	Verify that the "LOWER TIPPER" button has been pressed.	✓		RJZ
91. X	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.		✓	RJZ
92.	Press briefly and then release the Drum Tipper "RAISE TIPPER" button from the "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" at OIU-12-104B.	Verify that the "RAISE TIPPER" button has been pressed.	✓		RJZ
93.	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.	✓		RJZ
94.	Press and continue to press the Drum Tipper "LOWER TIPPER" button from the "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" at OIU-12-104B, 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.	✓		RJZ
95.	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.	✓		RJZ
96.	Press the "MAINT MAIN MENU" button from the "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" at OIU-12-104B.	Verify that the "MAINT MAIN MENU" button has been pressed.	✓		RJZ

* See TE 342

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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97.	The "SORTING GLOVEBOX MAINTENANCE MAIN MENU" should be displayed at OIU-12-104B.	Verify that the "SORTING GLOVEBOX MAINTENANCE MAIN MENU" is displayed.	✓		RW
Review Drum Lid/Delid Fixture Operations					
98.	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 6. Vacuum off <div style="position: absolute; left: 350px; top: 330px;">RW 8/16/92</div>	Verify that the Drum Lid/Delid Fixture is parked.	✓		RW
99.	Press the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" button from the "SORTING GLOVEBOX MAINTENANCE MAIN MENU" at OIU-12-104B.	Verify that the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" button has been pressed.	✓		RW
100.	The "DRUM LID/DELID FIXTURE MAINTENANCE MENU" should be displayed at OIU-12-104B.	Verify that the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" is displayed.	✓		RW
101.	Press briefly and then release the Fixture Direction "MOVE LEFT" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-104B.	Verify that the "MOVE LEFT" button has been pressed.	✓		RW
102.	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.	✓		RW
103.	Press briefly and then release the Fixture Direction "MOVE RIGHT" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-104B.	Verify that the "MOVE RIGHT" button has been pressed.	✓		RW
104.	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.	✓		RW

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
105.	Press and continue to press the Fixture Direction "MOVE LEFT" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-104B, until the Drum Lid/Delid Fixture has translated to the Delid position.	Verify that the "MOVE LEFT" button has been pressed.	✓		R/W
106.	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
107.	Press and continue to press the Fixture Direction "MOVE RIGHT" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-104B, until the Drum Lid/Delid Fixture has translated to the Relid position.	Verify that the "MOVE RIGHT" button has been pressed.	✓		R/W
108.	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
109.	Press and continue to press the Fixture Direction "MOVE LEFT" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-104B, until the Drum Lid/Delid Fixture has translated to the Delid position.	Verify that the "MOVE LEFT" button has been pressed.	✓		R/W ✓
110.	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
111.	Press briefly and then release the Fixture Direction "LOWER FIXTURE" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-104B.	Verify that the "LOWER FIXTURE" button has been pressed.	✓		R/W
112.	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
113.	Press briefly and then release the Fixture Direction "RAISE FIXTURE" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-104B.	Verify that the "RAISE FIXTURE" button has been pressed.	✓		R/W
114.	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

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
115.	Press and continue to press the Fixture Direction "LOWER FIXTURE" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-104B, until the Drum Lid/Delid Fixture is fully lowered.	Verify that the "LOWER FIXTURE" button has been pressed.	✓		R/W
116.	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
117.	Press and continue to press the Fixture Direction "RAISE FIXTURE" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-104B, until the Drum Lid/Delid Fixture is fully raised.	Verify that the "RAISE FIXTURE" button has been pressed.	✓		R/W
118.	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
119.	Press and continue to press the Fixture Direction "LOWER FIXTURE" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-104B, until the Drum Lid/Delid Fixture is fully lowered.	Verify that the "LOWER FIXTURE" button has been pressed.	✓		R/W
120.	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
121.	Press briefly and then release the Fixture Direction "ROTATE CLOCKWISE" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-104B. <i>SAW LEFT</i>	Verify that the "ROTATE CLOCKWISE" button has been pressed. <i>SAW LEFT</i>	✓		R/W
122.	The Drum Lid/Delid Fixture should rotate clockwise without erratic motion while the "ROTATE CLOCKWISE" button is pressed. <i>to the left (sew)</i>	Verify that the Drum Lid/Delid Fixture rotates clockwise. <i>SAW RIGHT</i>	✓		R/W
123.	Press briefly and then release the Fixture Direction "ROTATE COUNTER-CW" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-104B. <i>to the right (sew)</i>	Verify that the "ROTATE COUNTER-CW" button has been pressed. <i>SAW RIGHT</i>	✓		R/W
124.	The Drum Lid/Delid Fixture should rotate counterclockwise without erratic motion while the "ROTATE COUNTER-CW" button is pressed. <i>to the right (sew)</i>	Verify that the Drum Lid/Delid Fixture rotates counterclockwise. <i>to the right (sew)</i>	✓		R/W
125.	Press and continue to press the Fixture Direction "ROTATE CLOCKWISE" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-104B, until the Drum Lid/Delid Fixture rotates clockwise through two rotation indents. <i>8/16/97</i>	Verify that the "ROTATE CLOCKWISE" button has been pressed.			R/W <i>8/16/97</i>

8/16/97
120a Raise Fixture

✓ R/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
126.	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 R/W 8/16/97
127.	Press and continue to press the Fixture Direction "ROTATE COUNTER-CW" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-104B, until the Drum Lid/Delid Fixture rotates counterclockwise through two rotation indents.	Verify that the "ROTATE COUNTER-CW" button has been pressed.			N/A R/W 8/16/97
128.	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 R/W 8/16/97
129.	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). R/W 1/4/97	Verify that the Drum Lid/Delid Fixture is rotated parked.	✓		R/W ✓
130.	Press and continue to press the Fixture Direction "RAISE FIXTURE" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-104B, until the Drum Lid/Delid Fixture is fully raised.	Verify that the "RAISE FIXTURE" button has been pressed.			N/A
131.	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.			N/A
132.	Press briefly and then release the Fixture Crimper "EXTEND CRIMPER" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-104B.	Verify that the "EXTEND CRIMPER" button has been pressed.			N/A
133.	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
134.	Press briefly and then release the Fixture Crimper "RETRACT CRIMPER" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-104B.	Verify that the "RETRACT CRIMPER" button has been pressed.			N/A
135.	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.			N/A

131-147 N/A - Crimp Head Deleted R/W 9/8/97

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
136.	Press and continue to press the Fixture Crimper "EXTEND CRIMPER" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-104B, until the C-Clip Crimper is fully rotated down.	Verify that the "EXTEND CRIMPER" button has been pressed.			
137.	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.			
138.	Press briefly and then release the C-Clip "TURN ON MAGAZINE" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-104B.	Verify that the "TURN ON MAGAZINE" button has been pressed.			
139.	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.			
140.	Press briefly and then release the C-Clip "TURN OFF MAGAZINE" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-104B.	Verify that the "TURN OFF MAGAZINE" button has been pressed.			
141.	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.			
142.	Press and continue to press the Fixture Crimper "CLOSE JAW" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-104B, until the C-Clip Crimper jaw is fully extended closed.	Verify that the "CLOSE JAW" button has been pressed.			
143.	The Drum Lid/Delid Fixture C-Clip Crimper jaw should extend without erratic motion.	Verify that the Crimper jaw is fully extended closed.			
144.	Press and continue to press the Fixture Crimper "OPEN JAW" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-104B, until the C-Clip Crimper jaw is fully retracted open.	Verify that the "OPEN JAW" button has been pressed.			
145.	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.			
146.	Press and continue to press the Fixture Crimper "RETRACT CRIMPER" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-104B, until the C-Clip Crimper is fully rotated up.	Verify that the "RETRACT CRIMPER" button has been pressed.			
147.	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.			

#136-147 - Crimp Head Deleted

R/W 8/16/97

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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148.	Press briefly and then release the Fixture Saw "TURN ON INERT GAS" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-104B.	Verify that the "TURN ON INERT GAS" button has been pressed.	✓		R/W
149.	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 meter shows gas flow to the saw.	✓		R/W
150.	Press briefly and then release the Fixture Saw "EXTEND SAW" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-104B.	Verify that the "EXTEND SAW" button has been pressed.	✓		R/W
151.	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
152.	Press briefly and then release the Fixture Saw "RETRACT SAW" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-104B.	Verify that the "RETRACT SAW" button has been pressed.	✓		R/W
153.	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
154.	Press and continue to press the Fixture Saw "EXTEND SAW" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-104B, until the Drum Lid/Delid Fixture Saw is fully rotated down.	Verify that the "EXTEND SAW" button has been pressed.	✓		R/W ✓
155.	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
156.	Press briefly and then release the Fixture Saw "TURN ON SAW" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-104B.	Verify that the "TURN ON SAW" button has been pressed.	✓		R/W
157.	The Drum Lid/Delid Fixture Saw should activate after the "TURN ON SAW" button is pressed.	Verify that the Saw activates.	✓		R/W
158.	Press briefly and then release the Fixture Saw "TURN OFF SAW" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-104B.	Verify that the "TURN OFF SAW" button has been pressed.	✓		R/W
159.	The Drum Lid/Delid Fixture Saw should deactivate after the "TURN OFF SAW" button is pressed.	Verify that the Saw deactivates.	✓		R/W
160.	Press and continue to press the Fixture Saw "RETRACT SAW" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-104B, until the Drum Lid/Delid Fixture Saw is fully rotated up.	Verify that the "RETRACT SAW" button has been pressed.	✓		R/W ✓

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
161.	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
162.	Press briefly and then release the Fixture Saw "TURN OFF INERT GAS" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-104B.	Verify that the "TURN OFF INERT GAS" button has been pressed.	✓		R/W
163.	Inert gas should stop flowing to the Drum Lid/Delid Fixture Saw after the "TURN OFF INERT GAS" button is pressed.	Verify that the inert gas meter shows no gas flowing to the saw.	✓		R/W
164.	Press briefly and then release the Lid Lifter "TURN ON VACUUM" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-104B.	Verify that the "TURN ON VACUUM" button has been pressed.	✓		R/W
165.	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. <i>TURN OFF VACUUM</i>	Verify that vacuum is present.	✓		R/W
166.	Press briefly and then release the Lid Lifter " CLOSE ISOLATION VALVE " button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-104B.	Verify that the " CLOSE ISOLATION VALVE " button has been pressed.	✓		R/W
167.	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
168.	Press briefly and then release the Lid Lifter "OPEN ISOLATION VALVE" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-104B.	Verify that the "OPEN ISOLATION VALVE" button has been pressed.	✓		N/A R/W 12/1/99
169.	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.			N/A R/W R/W 12/1/99
170.	Press briefly and then release the Lid Lifter "TURN OFF VACUUM" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-104B.	Verify that the "TURN OFF VACUUM" button has been pressed.	✓		R/W
171.	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
172.	Press the "MAINT MAIN MENU" button from the "DRUM LID/DELID FIXTURE MAINTENANCE MENU" at OIU-12-104B.	Verify that the "MAINT MAIN MENU" button has been pressed.	✓		R/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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173.	The "SORTING GLOVEBOX MAINTENANCE MAIN MENU" should be displayed at OIU-12-104B.	Verify that the "SORTING GLOVEBOX MAINTENANCE MAIN MENU" is displayed.	✓		R/W
Review Drum Transfer Car Operations					
174.	Press the "DRUM TRANSFER CAR AND MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" button from the "SORTING GLOVEBOX MAINTENANCE MAIN MENU" at OIU-12-104B.	Verify that the "DRUM TRANSFER CAR AND MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" button has been pressed.	✓		R/W
175.	The "DRUM TRANSFER CAR AND MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" should be displayed at OIU-12-104B.	Verify that the "DRUM TRANSFER CAR AND MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" is displayed.	✓		R/W
176.	Press briefly and then release the Drum Transfer Car "MOVE RIGHT" button from the "DRUM TRANSFER CAR AND MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-104B.	Verify that the "MOVE RIGHT" button has been pressed.	✓		R/W
177.	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
178.	Press briefly and then release the Drum Transfer Car "MOVE LEFT" button from the "DRUM TRANSFER CAR AND MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-104B.	Verify that the "MOVE LEFT" button has been pressed.	✓		R/W
179.	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
180.	Press and continue to press the Drum Transfer Car "MOVE RIGHT" button from the "DRUM TRANSFER CAR AND MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-104B 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

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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181.	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.	✓		P/V
182.	Press the Drum Transfer Car "DECELERATE" button as needed from the "DRUM TRANSFER CAR AND MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-104B until the Transfer Car Stops at the Delid position.	Verify that the "DECELERATE" button has been pressed.			N/A
183.	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.			N/A
184.	Press the Drum Transfer Car Conveyor "ENGAGE CONVEYOR" button from the "DRUM TRANSFER CAR AND MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-104B.	Verify that the "ENGAGE CONVEYOR" button has been pressed.			N/A
185.	The Drum Transfer Car Conveyor drive should engage.	Verify that the Drum Transfer Car Conveyor drive is engaged.			N/A
186.	Press the Drum Transfer Car Conveyor "TURN CONVEYOR ON" button from the "DRUM TRANSFER CAR AND MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-104B.	Verify that the "TURN CONVEYOR ON" button has been pressed.			N/A
187.	The Drum Transfer Car Conveyor drive should energize.	Verify that the Drum Transfer Car Conveyor drive is energized.			N/A
188.	Press the Drum Transfer Car Conveyor "TURN CONVEYOR OFF" button from the "DRUM TRANSFER CAR AND MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-104B.	Verify that the "TURN CONVEYOR OFF" button has been pressed.			N/A
189.	The Drum Transfer Car Conveyor drive should de-energize.	Verify that the Drum Transfer Car Conveyor drive is de-energized.			N/A
190.	Press the Drum Transfer Car Conveyor "DISENGAGE CONVEYOR" button from the "DRUM TRANSFER CAR AND MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-104B.	Verify that the "DISENGAGE CONVEYOR" button has been pressed.			N/A
191.	The Drum Transfer Car Conveyor drive should disengage.	Verify that the Drum Transfer Car Conveyor drive is disengaged.			N/A

182 - 191 N/A P/V 8/16/99

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
192.	Press and continue to press the Drum Transfer Car "MOVE LEFT" button from the "DRUM TRANSFER CAR AND MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-104B until the Transfer Car is at the Entry Position. <i>RI 6/1/97</i>	Verify that the "MOVE LEFT" button has been pressed. <i>8/16/97</i>	✓		<i>RIW</i>
193.	Press the Drum Transfer Car "ENGAGE TRANSFER CAR STOP" button from the "DRUM TRANSFER CAR AND MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-104B.	Verify that the "ENGAGE TRANSFER CAR STOP" button has been pressed.	✓		<i>RIW</i>
194.	The Transfer Car stops should raise.	Verify that the Transfer Car stops are raised.	✓		<i>RIW</i>
195.	Press the Drum Transfer Car "DISENGAGE TRANSFER CAR STOP" button from the "DRUM TRANSFER CAR AND MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-104B. <i>RIW 8/16/97</i>	Verify that the "DISENGAGE TRANSFER CAR STOP" button has been pressed.	✓		<i>RIW</i>
196.	The Transfer Car stops should lower.	Verify that the Transfer Car stops are lowered.	✓		<i>RIW</i>
197.	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. <i>301 RIW 8/16/97</i>	Verify that all LLW Sorting Glovebox items are parked.	✓		<i>RIW</i>
198.	Press the "TURN OFF SP-07-103 80 PSI AIR" button from the "DRUM TRANSFER CAR AND MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-104B. The air supply to Manifold "A" is controlled by solenoid valve 07-FEV-376A. <i>301 RIW 8/16/97</i>	Verify that the "TURN OFF SP-07-103 80 PSI AIR" button has been pressed.	✓	<i>RIW 8/16/97</i>	<i>RIW</i>
<i>X</i> 199.	The indicator on the Manifold A air regulator should steadily drop and eventually indicate that there is no pressure in the 80 psi line. <i>301 RIW 8/16/97</i>	Verify that pressure has been removed from the Manifold A 80 psi line.	✓		<i>RIW</i>
200.	Press the "TURN ON SP-07-103 80 PSI AIR" button from the "DRUM TRANSFER CAR AND MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-104B. <i>301</i>	Verify that the "TURN ON SP-07-103 80 PSI AIR" button has been pressed.	✓	<i>RIW 8/16/97</i>	<i>RIW</i>
<i>X</i> 201.	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.	✓		<i>RIW</i>

* See TE #341

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
202.	Press the "TURN OFF SP-07- ³⁰³ 104 80 PSI AIR" button from the "DRUM TRANSFER CAR AND MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-104B. The air supply to Manifold "B" is controlled by solenoid valve 07-FEV-376B <i>R/W 8/16/97</i>	Verify that the "TURN OFF SP-07- 104 80 PSI AIR" button has been pressed. <i>303</i>	✓		<i>R/W</i>
<i>X</i> 203.	The indicator on the Manifold B air regulator should steadily drop and eventually indicate that there is no pressure in the 80 psi line. <i>303 R/W 8/16/97</i>	Verify that pressure has been removed from the Manifold B 80 psi line.		✓	<i>R/W</i>
204.	Press the "TURN ON SP-07- ³⁰³ 104 80 PSI AIR" button from the "DRUM TRANSFER CAR AND MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-104B. <i>303</i>	Verify that the "TURN ON SP-07- 104 80 PSI AIR" button has been pressed.	✓		<i>R/W</i>
<i>X</i> 205.	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.		✓	<i>R/W</i>
206.	Press the "TURN OFF BAGLESS TRANSFER PORT AIR" button from the "DRUM TRANSFER CAR AND MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-104B. 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.	✓		<i>R/W</i>
207.	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.	✓		<i>R/W</i>
208.	Press the "TURN ON BAGLESS TRANSFER PORT AIR" button from the "DRUM TRANSFER CAR AND MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-104B.	Verify that the "TURN ON BAGLESS TRANSFER PORT AIR" button has been pressed.	✓		<i>R/W</i>
209.	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.	✓		<i>R/W</i>
210.	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	✓		<i>R/W</i>

** see TE 341*

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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211.	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
212.	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
213.	Press the "REHOME LIFT TABLE LT-09-203A" button from the "DRUM TRANSFER CAR AND MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-104B.	Verify that the "MAINT MAIN MENU" button has been pressed.	✓		R/W
214.	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
215.	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
216.	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
217.	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
218.	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
219.	Press the "REHOME LIFT TABLE LT-09-203A" button from the "DRUM TRANSFER CAR AND MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-104B.	Verify that the "REHOME LIFT TABLE LT-09-203A" button has been pressed.	✓		R/W
220.	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
221.	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
222.	Press the "MAINT MAIN MENU" button from the "DRUM TRANSFER CAR AND MISCELLANEOUS EQUIPMENT MAINTENANCE MENU" at OIU-12-104B.	Verify that the "MAINT MAIN MENU" button has been pressed.	✓		R/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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223.	The "SORTING GLOVEBOX MAINTENANCE MAIN MENU" should be displayed at OIU-12-104B.	Verify that the "SORTING GLOVEBOX MAINTENANCE MAIN MENU" is displayed.	✓		RW
Review "SYSTEM VARIABLES MENU" Operations					
224.	Press the "SYSTEM VARIABLES" button from the "SORTING GLOVEBOX MAINTENANCE MAIN MENU" at OIU-12-104B.	Verify that the "SYSTEM VARIABLES" button has been pressed.	✓		RW
225.	The "SYSTEM VARIABLES MENU" should be displayed at OIU-12-104B.	Verify that the "SYSTEM VARIABLES MENU" is displayed.	✓		RW
226.	Press the "SET SCREEN CONTRAST" button from the "SYSTEM VARIABLES MENU" at OIU-12-104B.	Verify that the "SET SCREEN CONTRAST" button has been pressed.	✓		RW
227.	The "SET SCREEN CONTRAST" screen should be displayed at OIU-12-104B.	Verify that the "SET SCREEN CONTRAST" screen is displayed.	✓		RW
228.	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
229.	Using the keypad, set the System Screen Contrast to "3" and press the "ENTER" key. Press DONE NW 8/16/99	Verify that the System Screen Contrast has been set to "3"	✓		RW
230.	The "SYSTEM VARIABLES MENU" should be displayed at OIU-12-104B.	Verify that the "SYSTEM VARIABLES MENU" is displayed.	✓		RW
231.	The value displayed on the "SET SCREEN CONTRAST" button should be "3"	Verify that the "SET SCREEN CONTRAST" value is "3"	✓		RW
232.	Press the "SET DAY" button from the "SYSTEM VARIABLES MENU" at OIU-12-104B.	Verify that the "SET DAY" button has been pressed.	✓		RW
233.	The "SET DAY" screen should be displayed at OIU-12-104B.	Verify that the "SET DAY" screen is displayed.	✓		RW
234.	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 #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS	FAIL	WITNESS
			✓	✓	(initial)

235.	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
236.	Press the "DONE" key.	Verify that the "DONE" key has been pressed.	✓		R/W
237.	The "SYSTEM VARIABLES MENU" should be displayed at OIU-12-104B.	Verify that the "SYSTEM VARIABLES MENU" is displayed.	✓		R/W
238.	The value displayed on the "SET DAY" button should be "3"	Verify that the "SET DAY" value is "3"	✓		R/W
239.	Press the "SET MONTH" button from the "SYSTEM VARIABLES MENU" at OIU-12-104B.	Verify that the "SET MONTH" button has been pressed.	✓		R/W
240.	The "SET MONTH" screen should be displayed at OIU-12-104B.	Verify that the "SET MONTH" screen is displayed.	✓		R/W
241.	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
242.	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
243.	Press the "DONE" key.	Verify that the "DONE" key has been pressed.	✓		R/W
244.	The "SYSTEM VARIABLES MENU" should be displayed at OIU-12-104B.	Verify that the "SYSTEM VARIABLES MENU" is displayed.	✓		R/W
245.	The value displayed on the "SET MONTH" button should be "3"	Verify that the "SET MONTH" value is "3"	✓		R/W
246.	Press the "SET YEAR" button from the "SYSTEM VARIABLES MENU" at OIU-12-104B.	Verify that the "SET YEAR" button has been pressed.	✓		R/W
247.	The "SET YEAR" screen should be displayed at OIU-12-104B.	Verify that the "SET YEAR" screen is displayed.	✓		R/W
248.	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

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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249.	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
250.	Press the "DONE" key.	Verify that the "DONE" key has been pressed.	✓		R/W
251.	The "SYSTEM VARIABLES MENU" should be displayed at OIU-12-104B.	Verify that the "SYSTEM VARIABLES MENU" is displayed.	✓		R/W
252.	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
253.	Press the "SET HOURS" button from the "SYSTEM VARIABLES MENU" at OIU-12-104B.	Verify that the "SET HOURS" button has been pressed.	✓		R/W
254.	The "SET HOURS" screen should be displayed at OIU-12-104B.	Verify that the "SET HOURS" screen is displayed.	✓		R/W
255.	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
256.	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
257.	Press the "DONE" key.	Verify that the "DONE" key has been pressed.	✓		R/W
258.	The "SYSTEM VARIABLES MENU" should be displayed at OIU-12-104B.	Verify that the "SYSTEM VARIABLES MENU" is displayed.	✓		R/W
259.	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
260.	Press the "SET MINUTES" button from the "SYSTEM VARIABLES MENU" at OIU-12-104B.	Verify that the "SET MINUTES" button has been pressed.	✓		R/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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261.	The "SET MINUTES" screen should be displayed at OIU-12-104B.	Verify that the "SET MINUTES" screen is displayed.	✓		R/W
262.	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
263.	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
264.	Press the "DONE" key.	Verify that the "DONE" key has been pressed.	✓		R/W
265.	The "SYSTEM VARIABLES MENU" should be displayed at OIU-12-104B.	Verify that the "SYSTEM VARIABLES MENU" is displayed.	✓		R/W
266.	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
267.	Press the "SET SECONDS" button from the "SYSTEM VARIABLES MENU" at OIU-12-104B.	Verify that the "SET SECONDS" button has been pressed.	✓		R/W
268.	The "SET SECONDS" screen should be displayed at OIU-12-104B.	Verify that the "SET SECONDS" screen is displayed.	✓		R/W
269.	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
270.	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
271.	Press the "DONE" key.	Verify that the "DONE" key has been pressed.	✓		R/W
272.	The "SYSTEM VARIABLES MENU" should be displayed at OIU-12-104B.	Verify that the "SYSTEM VARIABLES MENU" is displayed.	✓		R/W
273.	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"	✓		R/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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Test Case Shutdown					
274.	Press the "MAINT MAIN MENU" button from the "SYSTEM VARIABLES MENU" at OIU-12-104B.	Verify that the "MAINT MAIN MENU" button has been pressed.	✓		R/W
275.	Press the "SORTING TABLE /PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" button from the "SORTING GLOVEBOX MAINTENANCE MAIN MENU" at OIU-12-104B.	Verify that the "SORTING TABLE /PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" button has been pressed.	✓		R/W
276.	Press and continue to press the Drum Tipper "RAISE TIPPER" button from the "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" at OIU-12-104B, 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
277.	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
278.	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
279.	Press the "MAINT MAIN MENU" button from the "SORTING TABLE/PACKET/DRUM TIPPER/DRUM GRAB MAINTENANCE MENU" at OIU-12-104B.	Verify that the "MAINT MAIN MENU" button has been pressed.	✓		R/W
280.	The "SORTING GLOVEBOX MAINTENANCE MAIN MENU" should be displayed at OIU-12-104B.	Verify that the "SORTING GLOVEBOX MAINTENANCE MAIN MENU" is displayed.	✓		R/W
281.	Return all LLW Sorting Glovebox items to their parked, stable positions.	Verify that all LLW Sorting Glovebox items are parked.	✓		R/W
282.	Turn the "AUTO MODE/MAINTENANCE MODE" keyed selector switch (07-HS-317) on the Data Management System Pedestal (PC-07-104) to "AUTOMATIC MODE".	Verify that "AUTOMATIC MODE" has been selected for the LLW Sorting Glovebox.	✓		R/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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283.	The "LLW SORTING GLOVEBOX MAIN MENU" should be displayed at OIU-12-104B.	Verify that the "LLW SORTING GLOVEBOX MAIN MENU" is displayed.	✓		RLW
	TEST CASE I3021A-86.31 COMPLETE				

TEST CASE 13021A-86.32 - FULL AUTOMATIC CYCLE - PROCESS 140 LB DRUM	2
Transfer Drum to Drum Tipper using Drum Transfer Car	2
Remove Top of Drum Liner using Drum Tipper and Manipulator	4
Remove Clamp Band and Drum Lid	6
Remove Clamp Band and Drum Lid	6
Empty Drum Contents onto Sorting Table	13
Enter Waste Packet into Packet Assay Monitor	17
Enter Waste Packet into Packet X-Ray	19
Open Waste Packet Using Manipulator	22
Remove Non-compliant Items using Non-compliant Item Transfer Stand	23
Move Sorting Table with Compliant Items to Waste Loadout	28
Fasten Lid to Drum	29
Crimp C-Clips onto Drum Lid	32
Remove Drum from Glovebox using Transfer Car	34

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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TEST CASE 13021A-86.32 (OPTIONAL) OPERATION CHECK - PROCESS 140 LB DRUM

NOTE: The intent of this test case is to verify programming and mechanical operation under a normal set of conditions. Since this test case precedes verification of alarms and interlocks, its operation must be closely monitored so the process can be stopped to prevent equipment damage.

Transfer Drum to Drum Tipper using Drum Transfer Car

1.	Select the "TRANSFER CAR MENU" from the "TRU SORTING GLOVEBOX MAIN MENU" at OIU-12-104B.	Verify that an Entry option is displayed after the "TRANSFER CAR MENU" selection is made.	✓		PLW
2.	If the Transfer Car is NOT located at the TRU Entry Glovebox Sphincter Entry Port (DO-07-302): Select the "ENTRY GLOVEBOX" option from the "TRANSFER CAR MENU". The "TRANSFER CAR MOVING TO ENTRY GLOVEBOX" message should be displayed on OIU-12-104B.	Verify that the "TRANSFER CAR MOVING TO ENTRY GLOVEBOX" message is displayed on OIU-12-104B.	✓		PLW
3.	If the Transfer Car is NOT located at the TRU Entry Glovebox Sphincter Entry Port (DO-07-302): The transfer car should smoothly accelerate in reverse, decelerate, and come to a complete stop underneath the TRU Entry Glovebox Sphincter Entry Port (DO-07-302). The "TRANSFER CAR AT ENTRY GLOVEBOX" message should be displayed on OIU-12-104B.	Verify that the transfer car moves in reverse and stops at the "Entry" position. Verify that the "TRANSFER CAR AT ENTRY GLOVEBOX" message is displayed.	✓		PLW
4.	Load the Drum Transfer car with the 140 LB. Drum.	Verify that the drum is loaded.	✓		PLW
5.	Select the Delid Position option from the OIU "TRANSFER CAR MENU". The "TRANSFER CAR MOVING TO DELID POSITION" message should be displayed on OIU-12-104B.	Verify that the "TRANSFER CAR MOVING TO DELID POSITION" message is displayed on OIU-12-104B.	✓		PLW

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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6. *	<p>The transfer car with drum should smoothly accelerate, decelerate, and come to a complete stop at the delid/tipper position.</p> <p>The drum should not slide during acceleration or deceleration.</p> <p>The "TRANSFER CAR AT DELID POSITION" message should be displayed on OIU-12-104B.</p>	<p>Verify that the transfer car moves forward and stops at the delid/tipper position.</p> <p>Verify that the drum does not slide during acceleration or deceleration.</p> <p>Verify that the "TRANSFER CAR AT DELID POSITION" is displayed on OIU-12-104B.</p>		✓	R/W
7. XX	<p>When the transfer car reaches the delid position, the drum should be centered underneath the Drum Tipper. The Drum Tipper grab should be completely open so that when the Drum Tipper is lowered, the grab arms will not hit the drum.</p> <p><i>Forced open output to Fully open grab arms R/W 8/16/97</i></p>	<p>Verify that the drum is correctly centered under the Drum Tipper.</p> <p>Verify that the drum grab will not hit the drum when the Drum Tipper is lowered.</p>		✓	R/W
8.	<p>Return to the "TRU SORTING GLOVEBOX MAIN MENU" at OIU-12-104B.</p> <p>Press the "DRUM TIPPER MENU" button. The "DRUM TIPPER MENU" should be displayed on OIU-12-104B.</p>	<p>Verify that the "TRU SORTING GLOVEBOX MAIN MENU" is displayed on OIU-12-104B.</p> <p>Verify that the "DRUM TIPPER MENU" is displayed on OIU-12-104B.</p>	✓		R/W
9.	<p>Select the "LOWER AND CLOSE GRAB" option from the "DRUM TIPPER MENU" on OIU-12-104B.</p> <p>The "LOWER AND CLOSE GRAB SEQUENCE IN PROGRESS" message should be displayed on OIU-12-104B.</p>	<p>Verify that the "LOWER AND CLOSE GRAB SEQUENCE IN PROGRESS" message is displayed on OIU-12-104B.</p>	✓		R/W

*Forced ZS820B on I: 22/12 R/W 8/16/97
Tipper grab arm open*

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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10. *	Press "LOWER TIPPER". The Drum Tipper should smoothly accelerate, decelerate, and stop at the bottom Drum Tipper position. The drum on the transfer car should be centered between the Drum Tipper grab arms.	Verify that the Drum Tipper moves to the bottom Drum Tipper Position without interference. Verify that the drum is centered between the Drum Tipper grab arms.	✓ N/V 8/16/97	✓	P/V
11. **	The PCS should activate Solenoid 07-FEV-395C/C (Close) until the Drum Tipper grab is completely closed around the drum. The "LOWER AND CLOSE GRAB SEQUENCE COMPLETE" message should be displayed on OIU-12-104B.	Visually verify that the Drum Tipper grab is fully closed. Verify that the "LOWER AND CLOSE GRAB SEQUENCE COMPLETE" message is displayed on OIU-12-104B.	✓ N/V 8/16/97	✓	P/V
12.	The following Test Sequence "Remove Top of Drum Liner Using Drum Tipper and Manipulator" is used only for drums enclosed in bag liners. If the drum for the current test run is not enclosed in a bag liner, skip the following Test Sequence and go directly to Test Sequence "Remove Clamp Band and Drum Lid".	Verify that the next Test Sequence is correctly chosen.			N/A

Remove Top of Drum Liner using Drum Tipper and Manipulator

13.	WARNING: Personal injury and equipment damage could result if the drum is inadvertently released from the Drum Tipper grab. Do not raise the Drum Tipper grab if the drum is not properly secured. Maintain a safe distance from drum during testing.	Verify that the Drum Tipper with drum moves to the top Drum Tipper Position without interference.			N/A
	Activate the Drum Tipper motor DH-07-FEV-303M1/R (Raise) until the Drum Tipper grab with drum is completely raised. The Drum Tipper should smoothly accelerate, decelerate, and stop at the top Drum Tipper position.				

* see TE 328

** see TE 329

#13-21 - Plastic liner will be removed at Bag off/criny position manually

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
14.	Attach Manipulator knife to right Manipulator arm end effector. Briefly activate the knife to confirm that it is supplied with plant air.	Verify that knife is attached to right Manipulator arm end effector.	R/W 8/16/97	N/A	
		Verify that the knife will actuate.			
15.	Move the Manipulator to position #2 over the drum. Lower the Manipulator carriage so that the Manipulator arms can reach the drum. Grab the bag liner "horse-tail" (tied portion of the bag liner) with the left Manipulator arm. Cut the horse-tail off of the liner using the Manipulator knife.	Verify that the top of the PVC bag liner has been cut off, exposing the top of the drum.			
16.	Raise the Manipulator carriage. Visually confirm that no items block the path of Manipulator carriage. Move the Manipulator carriage over the waste Sorting Table. Move the left Manipulator arm down towards the Sorting Table and release the bag liner horse tail on to the Sorting Table.	Verify that the cut piece of bag liner is placed on the Sorting Table.	R/W 8/16/97		
17.	Remove the knife from the right Manipulator arm end effector and return the knife to its designated storage position.	Verify that the Manipulator knife is removed from the right Manipulator arm end effector and correctly stored.			
18.	Return the Manipulator carriage to parked position #1.	Visually verify that the Manipulator carriage returns to parked position #1. Verify that Position switch 07-ZS-823A indicates that the Manipulator is at parked position #1.			
19.	Return the Manipulator knife to its storage position.	Verify that the Manipulator knife is stored.			
20.	Return the Manipulator arms to their parked positions.	Visually verify that the Manipulator arms are parked.			
21.	Activate the Drum Tipper motor DH-07-FEV-303M1/L (Lower) until the Drum Tipper is completely lowered. The Drum Tipper should smoothly accelerate, decelerate, and stop at the bottom Drum Tipper position.	Verify that the Drum Tipper moves to the bottom Drum Tipper Position without interference.			

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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Remove Clamp Band and Drum Lid					
22.	Press the "MAIN MENU" button on OIU-12-104B to return to the "TRU SORTING GLOVEBOX MAIN MENU". <i>SAL R/W 8/16/97</i>	Verify that the "TRU SORTING GLOVEBOX MAIN MENU" is displayed. <i>SAL</i>	✓		<i>R/W</i>
23.	Select the " LID/DELID MENU" option from the "TRU SORTING GLOVEBOX MAIN MENU" on OIU-12-104B. The "LID/DELID MENU" should be displayed on OIU-12-104B.	Verify that the " LID/DELID MENU" is displayed on OIU-12-104B.	✓		<i>R/W</i>
24.	Select the " MOVE FIXTURE TO DELID POSITION " option from the "LID/DELID MENU" on OIU-12-104B. The "FIXTURE MOVING TO DELID POSITION" message should be displayed on OIU-12-104B.	Verify that the Lid/Delid Fixture moves horizontally towards the Delid position. Verify that the "FIXTURE MOVING TO DELID POSITION" message is displayed on OIU-12-104B.	✓		<i>R/W</i>
25.	When the fixture reaches the Delid position, it trips switch ZS828B causing the PCS to de-energize Lid/Delid Fixture horizontal movement solenoid 07-FEV-837A/F (forward) stopping the fixture. Because the Lid/Delid Fixture is positioned at the Delid Position, a "FIXTURE AT DELID POSITION" message should be displayed on the "LID/DELID MENU" screen at OIU-12-104B.	Verify that the fixture trips switch ZS828B causing the PCS to stop the fixture at the Delid Position. Verify that a "FIXTURE AT DELID POSITION" message is displayed.	✓		<i>R/W</i>
26.	Press the " MAIN MENU " button on OIU-12-104B to return to the "TRU SORTING GLOVEBOX MAIN MENU".	Verify that the "TRU SORTING GLOVEBOX MAIN MENU" is displayed.		<i>N/A</i> <i>R/W 8/16/97</i>	
27.	Select the "SAW OPERATIONS MENU" option from the "TRU SORTING GLOVEBOX MAIN MENU" on OIU-12-104B. The "SAW OPERATIONS MENU" should be displayed on OIU-12-104B.	Verify that the "SAW OPERATIONS MENU" is displayed on OIU-12-104B.		<i>N/A</i> <i>R/W 8/16/97</i>	

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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28.	<p>NOTE: The Drum Lid/Delid Fixture saw is designed to saw through band clamps at Lid/Delid Fixture indent positions #2 and #5 to cut the band clamps in half. The Drum Lid/Delid Fixture saw should not saw through the band clamp bolt.</p> <p>If the band clamp bolt is located at either saw position #2 or #5, the saw should cut the band clamp in half at alternate indent positions #3 and #6.</p> <p>Examine the position of the drum clamp band bolt with respect to indent positions 2 and 5 and indent positions 3 and 6. Select which indent positions (2&5 or 3&6) will be used to saw through band clamp.</p>	<p>Verify that the Lid/Delid Fixture saw will not cut through the band clamp bolt using the indent positions selected.</p> <p>Check the indent position chosen:</p> <p>G Indents 2 and 5</p> <p>G Indents 3 and 6</p>			<p><i>R/W 8/16/99</i> <i>N/A</i></p>
29.	<p>If indents #2 and #5 are chosen:</p> <p>Press the "C2 & C5 SAW ORIENTATION" button on OIU-12-104B.</p> <p>The PCS should activate solenoid 07-FEV-836B/C Clockwise until the Lid/Delid Fixture rotates clockwise to indent 2. Switch 07-ZS-827B should pulse twice going from indent #4 (parked position) to indent #2.</p> <p>The "C2 & C5 SAW ORIENTATION READY" message should be displayed on OIU-12-104B.</p>	<p>Verify that the Lid/Delid Fixture saw is positioned at the correct indent.</p> <p>Verify that the "C2 & C5 SAW ORIENTATION READY" message is displayed on OIU-12-104B.</p>			<p><i>R/W 8/16/99</i> <i>N/A</i></p>
30.	<p>If indents #3 and #6 are chosen:</p> <p>Press the "C3 & C6 SAW ORIENTATION" button on OIU-12-104B.</p> <p>The PCS should activate solenoid 07-FEV-836B/C Clockwise until Lid/Delid Fixture rotates clockwise to indent 3. Switch 07-ZS-827B should pulse once going from indent #4 (parked position) to indent #3.</p> <p>The "C3 & C6 SAW ORIENTATION READY" message should be displayed on OIU-12-104B.</p>	<p>Verify that the Lid/Delid Fixture saw is positioned at the correct indent.</p> <p>Verify that the "C3 & C6 SAW ORIENTATION READY" message is displayed on OIU-12-104B.</p>			<p><i>R/W 8/16/99</i> <i>N/A</i></p>

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATQ-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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31.	<p>WARNING: Inspect the area near the saw to confirm that no unexpected equipment items are in the path of the saw blade. Inspect the area near the Lid/Delid Fixture to confirm that no equipment items are in the path of the Lid/Delid Fixture when it is lowered onto the drum. Do not initiate the Saw Sequence if equipment damage or personal injury will result.</p> <p>Press the "START SAW SEQUENCE" button on OIU-12-104B.</p> <p>The PCS should activate solenoid 07-FEV-836A/L (Lower) until the Lid/Delid Fixture is completely lowered onto the drum. Position switch 07-ZS-826B should indicate that the Lid/Delid Fixture is in the lowered position.</p>	<p>Visually verify that the Lid/Delid Fixture is completely lowered onto the drum.</p> <p>Verify that Position switch 07-ZS-826B indicates that the Lid/Delid Fixture is at the lowered position.</p>	✓		R/V
32.	<p>After the Lid/Delid Fixture is lowered, the PCS should energize solenoid 07-FEV-332B to start inert gas flow to the Lid/Delid Fixture. Solenoid 07-FEV-332B must remain energized to allow gas flow.</p> <p>Pressure switch 07-PSL-332 should indicate that inert gas is flowing to the Lid/Delid Fixture.</p> <p>The "SAW SEQUENCE IN PROGRESS" message should be displayed on OIU-12-104B.</p>	<p>Verify that pressure switch 07-FSL-332 indicates that inert gas is flowing to the Lid/Delid Fixture.</p> <p>Verify that the "SAW SEQUENCE IN PROGRESS" message is displayed on OIU-12-104B.</p>	✓		R/V
33.	The PCS should energize solenoid 07-FEV-332A to start the Lid/Delid Fixture saw.	Verify that the saw is energized.	✓		R/V
34.	The PCS should energize solenoid 07-FEV-836D/E (Extend) until the Lid/Delid Fixture saw is fully extended downward to saw through the drum band clamp.	Visually verify that the Lid/Delid Fixture saws through the drum clamp band.	✓		R/V
35.	The PCS should energize solenoid 07-FEV-836D/R (Retract) until the Lid/Delid Fixture saw is fully retracted. The saw should continue to run during retraction.	Visually verify that the Lid/Delid Fixture saw is completely retracted.	✓		R/V
36.	<p>The PCS should de-energize solenoid 07-FEV-332A to stop the Lid/Delid Fixture saw.</p> <p>Inert gas should continue to flow ^{stop} around the saw as indicated by pressure switch 07-FSL-332.</p>	<p>Verify that the saw stops.</p> <p>Verify that inert gas flow is indicated by pressure switch 07-FSL-332.</p>	✓		R/V

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATQ-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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37.	The PCS should de-energize solenoid 07-FEV-332B to stop inert gas flow to the Lid/Delid Fixture. <i>Flow</i> Pressure switch 07-FSL-332 should indicate that inert gas flow has stopped. <i>R/W 8/16/97</i>	Verify that pressure <i>flow</i> switch 07-FSL-332 indicates that inert gas flow has stopped.	✓		<i>R/W</i>
38.	The PCS should energize solenoid 07-FEV-836A/R (Raise) until the Lid/Delid Fixture is completely raised.	Visually verify that the Lid/Delid Fixture is completely raised.	✓		<i>R/W</i>
39.	The PCS should energize solenoid 07-FEV-836B/CC (Counterclockwise) until Lid/Delid Fixture rotates counterclockwise <i>to saw cut position</i> through three indents. Position switch 07-ZS-827B should pulse three times while the Lid/Delid Fixture rotates to the third indent. <i>R/W 8/16/97</i> This should place the Lid/Delid Fixture saw at indent position #6 if indent position #3 was the initial saw position. This should place the Lid/Delid Fixture saw at indent position #5 if indent position #2 was the initial saw position.	Verify that the saw is at the correct indent position.	✓		<i>R/W</i>
40.	The PCS should energize fixture raise/lower solenoid 07-FEV-836A/L (lower) causing the fixture to lower onto the drum for the second cut until lower limit switch ZS826B is activated. The "OPERATOR ACTION VIA MANIPULATOR CONTROLS REQUIRED" message should be displayed on OIU-12-104B.	Visually verify that the fixture is completely lowered onto the drum for the second cut. Verify that the "OPERATOR ACTION VIA MANIPULATOR CONTROLS REQUIRED" message is displayed on OIU-12-104B.	<i>R/W 8/16/97</i> <i>N/A</i>		
41.	Move the Manipulator to position #2 over the drum. Lower the Manipulator carriage so that the Manipulator arms can reach the drum.	Verify that the Manipulator carriage moves to position #2 over the drum.	<i>R/W 8/16/97</i> <i>N/A</i>		

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
42.	<p>WARNING: Contact between the Manipulator arms and the Lid/Delid Fixture saw can cause personal injury and equipment damage. The Manipulator arms must be positioned so that no contact between the Manipulator arms and the Lid/Delid Fixture saw is possible. Do not perform this step if injury or damage will result.</p> <p>Grab each end of the drum band clamp with the Manipulator arms. This will prevent the drum band clamp from falling to the glovebox floor when sawing is completed.</p>	Verify that the Manipulator arms will not contact the Lid/Delid Fixture saw at any point in the saw travel path.			N/A
43.	<p>Press the "CLAMP BAND HELD" button on OIU-12-104B.</p> <p>The PCS should energize solenoid 07-FEV-332B to start inert gas flow to the Lid/Delid Fixture. Solenoid 07-FEV-332B must remain energized to allow gas flow.</p>	Verify that pressure switch 07-PSL-332 indicates that inert gas is flowing to the Lid/Delid Fixture.			RW 8/16/99
44.	The PCS should energize solenoid 07-FEV-332A to start the Lid/Delid Fixture saw.	Verify that the saw is energized.	✓		RW
45.	The PCS should energize solenoid 07-FEV-836D/E (Extend) until the Lid/Delid Fixture saw is fully extended downward to saw through the drum band clamp.	Visually verify that the Lid/Delid Fixture saws through the drum clamp band.	✓		RW
46.	The PCS should energize solenoid 07-FEV-836D/R (Retract) until the Lid/Delid Fixture saw is fully retracted. The saw should continue to run during retraction.	Visually verify that the Lid/Delid Fixture saw is completely retracted.	✓		RW
47.	<p>The PCS should de-energize solenoid 07-FEV-332A to stop the Lid/Delid Fixture saw.</p> <p>Inert gas should continue to flow around the saw as indicated by pressure switch 07-FSL-332.</p>	<p>Verify that the saw stops.</p> <p>Verify that inert gas flow is indicated by pressure switch 07-FSL-332.</p>	✓		RW
48.	<p>The PCS should de-energize solenoid 07-FEV-332B to stop inert gas flow to the Lid/Delid Fixture.</p> <p>Pressure switch 07-FSL-332 should indicate that inert gas flow has stopped.</p> <p>The "OPERATOR ACTION VIA MANIPULATOR CONTROLS REQUIRED" message should be displayed on OIU-12-104B.</p>	<p>Verify that pressure switch 07-FSL-332 indicates that inert gas flow has stopped.</p> <p>Verify that the "OPERATOR ACTION VIA MANIPULATOR CONTROLS REQUIRED" message is displayed on OIU-12-104B.</p>	✓		RW

43a Verify message "OPERATOR! SAW CUT #1 COMPLETE" -- PRESS "START SAW SEQUENCE" TO START SAW CUT #2
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43b Press "START SAW SEQUENCE" ✓ RW

43c Verify message "SAW CUT #2 IN PROGRESS" ✓ RW

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
49.	Use the Manipulator to remove the two drum clamp band pieces from the drum. Raise Manipulator arms to move away from the drum and the Lid/Delid Fixture.	Verify that the Manipulator grips both drum clamp band pieces securely.			R/W 8/16/97 N/A
50.	Visually confirm that no items block the path of Manipulator carriage. Raise the Manipulator carriage if needed. Move the Manipulator carriage over the waste Sorting Table.	Verify that the Manipulator carriage moves over to the Sorting Table.			R/W 8/16/97 N/A
51.	Move the left Manipulator arm down towards the Sorting Table and release the drum clamp band piece on to the Sorting Table.	Verify that the drum clamp band held by the left Manipulator arm is placed on the Sorting Table.			R/W 8/16/97 N/A
52.	Return the left Manipulator arm to the parked position.	Verify that the left Manipulator arm returns to the parked position.			R/W 8/16/97 N/A
53.	Move the right Manipulator arm down towards the Sorting Table and release the drum clamp band piece on to the Sorting Table.	Verify that the drum clamp band held by the right Manipulator arm is placed on the Sorting Table.			R/W 8/16/97 N/A
54.	Return the right Manipulator arm to the parked position.	Verify that the right Manipulator arm returns to the parked position.			R/W 8/16/97 N/A
55.	Return the Manipulator carriage to parked position #1.	Visually verify that the Manipulator carriage returns to parked position #1.			R/W 8/16/97 N/A
56.	Press the "CLAMP BAND HELD" button on OIU-12-104B. The PCS should energize solenoid 07-FEV-836A/R (Raise) until the Lid/Delid Fixture is completely raised.	Visually verify that the Lid/Delid Fixture is raised.			R/W 8/16/97 N/A
57.	The PCS should energize solenoid 07-FEV-836B/C (Clockwise) until Lid/Delid Fixture rotates clockwise until it reaches the Parked Position. Position switch 07-ZS-827B should pulse once if the Lid/Delid Fixture was in indent position #5 or twice if it was in indent position #6. The "SAW SEQUENCE COMPLETE" message should be displayed on OIU-12-104B.	Verify that the Lid/Delid Fixture rotates clockwise to the Parked Position, indent #4. Verify that the "SAW SEQUENCE COMPLETE" message is displayed on OIU-12-104B.			R/W 8/16/97 N/A

57 OPERATOR: SAW OUT #2 COMPLETE -- PRESS "REMOVE LID" TO REMOVE DRUM LID...

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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Test 8/19/09 M/W

58.	Press the "MAIN MENU" button on OIU-12-104B to return to the "TRU SORTING GLOVEBOX MAIN MENU".	Verify that the "TRU SORTING GLOVEBOX MAIN MENU" is displayed.	✓		R/V
59.	Select the "LID/DELID MENU" option from the "TRU SORTING GLOVEBOX MAIN MENU" on OIU-12-104B. The "LID/DELID MENU" should be displayed on OIU-12-104B.	Verify that the "LID/DELID MENU" is displayed on OIU-12-104B.			N/A M/W 8/16/07
60.	Push the " START DELID SEQUENCE " on OIU-12-104A. <i>"REMOVE LID"</i> The PCS should energize solenoid 07-FEV-836A/L (Lower) until the Lid/Delid Fixture is completely lowered. <i>"DRUM LID REMOVAL IN PROGRESS"</i> The " DELID SEQUENCE IN PROGRESS " message should be displayed on OIU-12-104B.	Visually verify that the Lid/Delid Fixture is completely lowered onto the drum. Verify that the " DELID SEQUENCE IN PROGRESS " message is displayed.	✓		R/V
61.	The PCS should energize (pulse) the Vacuum Generator Solenoid 07-FEV-836E/V (Vacuum) to attach the drum lid to the Lid/Delid Fixture. Allow vacuum generation for five seconds.	Verify that the drum lid is attached to the Lid/Delid Fixture.	✓ R/V 8/16/07	✓	R/V
62.	The PCS should energize (pulse) Vacuum Generator Solenoid 07-FEV-836E/R (Vacuum Off) to turn off vacuum generation. Because vacuum has been isolated in the previous step, the drum lid should remain attached to the Lid/Delid Fixture.	Verify that the vacuum generator is turned off. Verify that the drum lid remains attached to the Lid/Delid Fixture.	✓		R/V R/V
63.	The PCS should energize solenoid 07-FEV-836A/R (Raise) until the Lid/Delid Fixture is completely raised.	Visually verify that the Lid/Delid Fixture is completely raised.	✓		R/V

* See TE 325

63a Verify message "~~DELID SE~~" *"DRUM LID REMOVAL COMPLETE"*

✓

R/V

#62 Forced PS 816 activated to simulate vacuum present

63b Press "Move to PARK POSITION"

✓

R/V

63c Verify message "~~FIXTURE MOVING TO PARK POSITION~~"

✓

R/V

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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64.	<p>The PCS should energize solenoid 07-FEV-836A/R (Reverse) to move the Lid/Delid Fixture with drum lid to the Reid ^{Park} position. The Lid/Delid Fixture should smoothly accelerate, decelerate, and stop at the Reid ^{Park} position.</p> <p><i>gwr R A✓ 8/19/97</i></p> <p>The "DELID SEQUENCE COMPLETE" message should be displayed on OIU-12-104B.</p>	<p>Verify that the Lid/Delid Fixture moves to the Reid ^{Park} (park) Position without interference.</p> <p><i>✓</i></p> <p>Verify that the "DELID SEQUENCE COMPLETE" message is displayed on OIU-12-104B.</p>	<i>✓</i>		<i>R✓</i>
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Empty Drum Contents onto Sorting Table

65.	<p>Return to the "TRU SORTING GLOVEBOX MAIN MENU" at OIU-12-104B.</p> <p>Press the "DRUM TIPPER MENU" button. The "DRUM TIPPER MENU" should be displayed on OIU-12-104B.</p>	<p>Verify that the "TRU SORTING GLOVEBOX MAIN MENU" is displayed on OIU-12-104B.</p> <p>Verify that the "DRUM TIPPER MENU" is displayed on OIU-12-104B.</p>	<i>✓</i>		<i>R✓</i>
66.	<p>WARNING: Personal injury and equipment damage could result if the drum is inadvertently released from the Drum Tipper grab. Do not raise the Drum Tipper grab if the drum is not properly secured. Maintain a safe distance from drum during testing.</p> <p>Press the "RAISE WITH GRAB CLOSED" button on OIU-12-104B. The PCS should energize Drum Tipper motor DH-07-FEV-303M1/R (Raise).</p> <p><i>A✓ 8/19/97</i></p> <p>The "RAISE WITH GRAB CLOSED SEQUENCE IN PROGRESS" message should be displayed on OIU-12-104B.</p>	<p>Verify that the Drum Tipper with drum starts to move to the top Drum Tipper Position without interference.</p> <p><i>A✓ 8/19/97</i></p> <p>Verify that the "RAISE WITH GRAB CLOSED SEQUENCE IN PROGRESS" message is displayed on OIU-12-104B.</p>	<i>✓</i>		<i>R✓</i>
67.	<p>The Drum Tipper should smoothly accelerate, decelerate, and stop at the top Drum Tipper position.</p>	<p>Verify that the Drum Tipper is at the top Drum Tipper Position.</p>	<i>✓</i>		<i>R✓</i>

64a Verify message "FIXTURE AT PARK POSITION"

✓

R✓

66a Press "RAISE TIPPER"

✓

R✓

~~66b Verify message "~~

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
68.	Return to the "TRU SORTING GLOVEBOX MAIN MENU" at OIU-12-104B. Press the "SORTING TABLE MENU" button. The "SORTING TABLE MENU" should be displayed on OIU-12-104B.	Verify that the "TRU SORTING GLOVEBOX MAIN MENU" is displayed on OIU-12-104B. Verify that the "SORTING TABLE MENU" is displayed on OIU-12-104B.	<i>RIW 8/12/99</i>	NSA	
69.	Press the "TIPPER POSITION" button on OIU-12-104B. The PCS issues command ST-07-302/T to the Sorting Table servo motor controller to move the Sorting Table to the Tipper position. <i>part of grab RAISE sequence</i> The "SORTING TABLE MOVING TO TIPPER POSITION" message should be displayed on OIU-12-104B.	Visually verify that the Sorting Table moves to the Tipper position. Verify that the "SORTING TABLE MOVING TO TIPPER POSITION" message is displayed on OIU-12-104B.	<i>RIW 8/12/99</i>	<i>LD</i>	
70.	The Sorting Table servo motor controller should return message ST-07-302/TS to indicate that the Sorting Table has reached the Tipper position. <i>RAISE WITH GRAB CLOSED COMPLETE ROTATE JOYSTICK ENABLED</i> The "SORTING TABLE AT TIPPER POSITION" message should be displayed on OIU-12-104B. <i>RIW 8/12/99</i>	Visually verify that the Sorting Table is at the Tipper position. Verify that the "SORTING TABLE AT TIPPER POSITION" message is displayed on OIU-12-104B.	<i>✓</i>	<i>✓</i>	<i>RIW</i>
71.	The PCS should send output permissive 107-HU-07-301/RF to the HPU enabling Drum Tipper Joy Stick Control.	Verify that the PCS sends output permissive 107-HU-07-301/RF to the HPU.	<i>✓</i>		<i>RIW</i>
72.	Return to the "TRU SORTING GLOVEBOX MAIN MENU" at OIU-12-104B. Press the "DRUM TIPPER MENU" button. The "DRUM TIPPER MENU" should be displayed on OIU-12-104B. The "RAISED WITH GRAB CLOSED SEQUENCE COMPLETE - ROTATION ENABLED" message should be displayed on OIU-12-104B.	Verify that the "DRUM TIPPER MENU" is displayed on OIU-12-104B. Verify that the "RAISED WITH GRAB CLOSED SEQUENCE COMPLETE - ROTATION ENABLED" message is displayed.	<i>✓</i>		<i>RIW</i>

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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73.	<p>WARNING: The Drum Tipper must be rotated very slowly. Personal injury and equipment damage could result if the drum is tipped too quickly. Test operators performing this step must be familiar with the operation of the Drum Tipper joystick controls.</p> <p>Activate solenoid 07-FEV-397/L (Rotate Left) using the Drum Tipper Joystick to slowly rotate the drum counterclockwise to place drum contents on the Sorting Table.</p>	Verify that drum rotates counterclockwise and the drum's contents are placed on the Sorting Table.	✓		RG
74.	<p>Activate solenoid 07-FEV-397/R (Rotate Right) using the Drum Tipper Joystick until the Drum Tipper is vertically positioned. The Drum Tipper should smoothly rotate clockwise without interference.</p> <p>The "TIPPER AT VERTICAL" message should be displayed on OIU-12-104B.</p>	<p>Visually verify that the Drum Tipper moves clockwise and returns to the vertical position.</p> <p>Verify that the "TIPPER AT VERTICAL" message is displayed on OIU-12-104B.</p>	✓		RG
75.	<p>Return to the "TRU SORTING GLOVEBOX MAIN MENU" at OIU-12-104B.</p> <p>Press the "SORTING TABLE MENU" button. The "SORTING TABLE MENU" should be displayed on OIU-12-104B.</p>	Verify that the "SORTING TABLE MENU" is displayed on OIU-12-104B.	✓		RG
76.	<p>Press the "ASSAY POSITION" button on OIU-12-104B.</p> <p>The PCS should issue command ST-07-302/A to the Sorting Table servo motor controller to move to the Assay position.</p> <p>The "SORTING TABLE MOVING TO ASSAY POSITION" message should be displayed on OIU-12-104B.</p>	<p>Verify that the Sorting Table starts to move to the Assay position.</p> <p>Verify that the "SORTING TABLE MOVING TO ASSAY POSITION" message is displayed on OIU-12-104B.</p>	✓		RG
77.	<p>The Sorting Table servo motor controller should return the ST-07-302/AS message to the PCS when the Sorting Table reaches the Assay position.</p> <p>The "SORTING TABLE AT ASSAY POSITION" message should be displayed on OIU-12-104B.</p>	<p>Visually verify that the Sorting Table is now at the Assay position.</p> <p>Verify that the "SORTING TABLE AT ASSAY POSITION" message is displayed on OIU-12-104B.</p>	✓		RG

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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78.	Return to the "TRU SORTING GLOVEBOX MAIN MENU" at OIU-12-104B. Press the "DRUM TIPPER MENU" button. The "DRUM TIPPER MENU" should be displayed on OIU-12-104B.	Verify that the "DRUM TIPPER MENU" is displayed on OIU-12-104B.	✓		R/V
79.	Press the "LOWER WITH GRAB CLOSED" button on OIU-12-104B. The "LOWER WITH GRAB CLOSED SEQUENCE IN PROGRESS" message should be displayed on OIU-12-104B.	Verify that the "LOWER WITH GRAB CLOSED SEQUENCE IN PROGRESS" message is displayed on OIU-12-104B.	✓		R/V
80.	Press "LOWER TIPPER". The Drum Tipper should smoothly accelerate, decelerate, and stop at the bottom Drum Tipper position. The "LOWER WITH GRAB CLOSED SEQUENCE COMPLETE" message should be displayed on OIU-12-104B.	Verify that the Drum Tipper smoothly accelerates, decelerates, and stops at the bottom Drum Tipper position. Verify that the "LOWER WITH GRAB CLOSED SEQUENCE COMPLETE" message is displayed on OIU-12-104B.	✓		R/V
81.	Press the "OPEN GRAB AND PARK" button on OIU-12-104B. The "OPEN GRAB AND PARK SEQUENCE IN PROGRESS" message should be displayed on OIU-12-104B.	Verify that the "OPEN GRAB AND PARK SEQUENCE IN PROGRESS" message is displayed on OIU-12-104B.	✓		R/V
82.	The PCS should energize solenoid 07-FEV-395C/O (Open) opening the drum grab until position switch 07-ZS-820B is activated. The drum should now be resting on the Transfer Car.	Verify that the drum grab is open. Verify that the drum is now resting on the Transfer Car.	✓	✓	R/V

see TE 329

Select sorting Table menu and press
RWM LOADOUT

Verify sorting Table moves to RWM Loadout
position

TEST PROCEDURE 13021A-86

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TRU SORTING GLOVEBOX 302

82 Forced ZS 820 B ON

8/17/99

79a Relid Sequence

Pass

- 79a From the SAW menu select "MOVE TO DELID" ✓ R/V
POSITION" ✓
- 79b Verify the delid fixture moves to the ✓ R/V
delid/tipper position. ✓
- 79c Verify message "FIXTURE AT DELID POSITION", ✓ R/V
✓
- 79d From the SAW menu select "START RELID SEQUENCE" ✓ R/V
✓
- 79e Verify the fixture lowers the drum lid back ✓
on the drum, the vacuum generator is isolated, and
air is supplied to the vacuum line. Message "✓
"DRUM RELID IN PROGRESS." ✓
- 79f Verify the fixture raises and the drum lid ✓
remains on the drum. ✓ R/V
- 79g Verify message "DRUM RELID COMPLETE", ✓ R/V
✓
- 79h From SAW menu select "move to PARK POSITION." ✓ R/V
✓
- 79i Verify the fixture moves to the Park position. ✓ R/V
✓

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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83.	<p>The PCS should energize Drum Tipper Motor 107-DH-07-303M1/R (Raise) until position switch 07-ZS-328A is activated indicating that the Drum Tipper is at the Park position.</p> <p><i>R/V 8/12/97</i></p> <p>The "OPEN GRAB AND PARK SEQUENCE COMPLETE" message should be displayed on OIU-12-104B.</p>	<p>Verify that the drum grab is open and the Drum Tipper is at the Park position.</p> <p>Verify that the "OPEN GRAB AND PARK SEQUENCE COMPLETE" message is displayed on OIU-12-104B.</p>	✓		<i>R/V</i>
Enter Waste Packet into Packet Assay Monitor					
84.	<p>Return to the "TRU SORTING GLOVEBOX MAIN MENU" at OIU-12-104B.</p> <p>Press the "PACKET ASSAY MENU" button. The "PACKET ASSAY MENU" should be displayed on OIU-12-104B.</p> <p>The Packet Door should be parked at the X-Ray position indicated by switch 07-ZS-327B activated.</p>	<p>Verify that the "PACKET ASSAY MENU" is displayed on OIU-12-104B.</p> <p>Verify that the Packet Door is at the X-Ray position and switch 07-ZS-327B is activated.</p>	✓		<i>R/V</i>
85.	<p>Press the "OPEN PACKET ASSAY" button on OIU-12-104B.</p> <p>The PCS should energize (pulse) solenoid 07-FEV-837G/E (Extend) to move the Packet Assay Tray to the extended position.</p> <p><i>OPENING</i></p> <p>The "OPEN PACKET ASSAY SEQUENCE IN PROGRESS" message should be displayed on OIU-12-104B.</p> <p><i>R/V 8/12/97</i></p>	<p>Verify that the Packet Assay Tray starts to move to the extended position.</p> <p>Verify that the "OPEN PACKET ASSAY SEQUENCE IN PROGRESS" message is displayed on OIU-12-104B.</p> <p><i>OPENING</i></p>	✓		<i>R/V</i>
86.	<p>The Packet Assay Tray should move smoothly to the fully extended position.</p> <p>The "OPEN PACKET ASSAY SEQUENCE COMPLETE" message should be displayed on OIU-12-104B.</p> <p><i>R/V 8/12/97</i></p>	<p>Verify that the Packet Assay Tray moves smoothly to the fully extended position.</p> <p>Verify that the "OPEN PACKET ASSAY SEQUENCE COMPLETE" message is displayed on OIU-12-104B.</p>	✓		<i>R/V</i>

NO 8/12/97
83a Move the sorting table to the Assay position

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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87.	<p>Place the waste packet on the Packet Assay Tray.</p> <p>Press the "CLOSE PACKET ASSAY" button on OIU-12-104B.</p> <p>The PCS should energize (pulse) solenoid 07-FEV-837G/R (Retract) to move the Packet Assay Tray to the retracted position.</p> <p>The "CLOSE PACKET ASSAY SEQUENCE IN PROGRESS" message should be displayed on OIU-12-104B.</p> <p><i>CLOSING R/W 8/17/99</i></p>	<p>Verify that the Packet Assay Tray containing the waste packet moves to the retracted position.</p> <p>Verify that the "CLOSE PACKET ASSAY SEQUENCE IN PROGRESS" message is displayed on OIU-12-104B.</p> <p><i>CLOSING</i></p>	✓		<i>R/W</i>
88.	<p>The PCS should energize (pulse) solenoid 07-FEV-837E/F (Forward) to move the Packet Door to the Assay position.</p> <p>The "CLOSE PACKET ASSAY SEQUENCE COMPLETE" message should be displayed on OIU-12-104B.</p> <p><i>CLOSED R/W by [signature] 9/3/98</i></p>	<p>Verify that the Packet Door moves to the Assay position.</p> <p>Verify that the "CLOSE PACKET ASSAY SEQUENCE COMPLETE" message is displayed on OIU-12-104B.</p> <p><i>CLOSED</i></p>	✓		<i>R/W</i>
89.	<p>NOTE: It is not within the scope of this test procedure to test the Packet Assay System. Testing of the Packet Assay Tray, Packet Assay Tray Door, and their interface to the PCS are the only tests required for this procedure. Other tests will be performed to verify Packet Assay system operation including its PCS interface.</p> <p>At this time, the PCS would normally issue instruction ND-07-302/EN to the Packet Assay Monitor to enable it. The Packet Assay Monitor would then be operated from local dedicated controls, and issue a Packet Assay in Progress message ND-07-302/ES to the PCS, followed by a PAM Assay Complete message.</p>	<p>Verification of PAM operation is not required for this test procedure.</p>	✓		<i>R/W</i>

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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90.	<p>Press the "OPEN PACKET ASSAY" button on OIU-12-104B.</p> <p>The PCS energizes solenoid 07-FEV-837E/R (Reverse) to move the Packet Door to the X-Ray position as indicated by position switch 07-ZS-327B activated.</p> <p>The "OPEN PACKET ASSAY SEQUENCE IN PROGRESS" message should be displayed on OIU-12-104B.</p> <p><i>OPENING</i> <i>R/W 8/17/99</i></p>	<p>Verify that the Packet Door is moved to the X-Ray position.</p> <p>Verify that position switch 07-ZS-327B is activated.</p> <p>Verify that the "OPEN PACKET ASSAY SEQUENCE IN PROGRESS" message is displayed on OIU-12-104B.</p> <p><i>OPENING</i></p>	✓		<i>R/W</i>
91.	<p>The Packet Assay Tray should again move to the fully extended position.</p> <p>The "OPEN PACKET ASSAY SEQUENCE COMPLETE" message should be displayed on OIU-12-104B.</p> <p><i>- OPEN</i> <i>R/W 8/17/99</i></p>	<p>Verify that the Packet Assay Tray moves to the fully extended position.</p> <p>Verify that the "OPEN PACKET ASSAY SEQUENCE COMPLETE" message is displayed on OIU-12-104B.</p> <p><i>OPEN</i></p>	✓		<i>R/W</i>
92.	<p>Remove the waste packet from the Packet Assay Tray and place it on the Sorting Table.</p> <p>Press the "CLOSE PACKET ASSAY" button on OIU-12-104B. The Packet Assay Tray should again move to the fully retracted position.</p> <p>The "CLOSE PACKET ASSAY SEQUENCE COMPLETE" message should be displayed on OIU-12-104B.</p> <p><i>CLOSED</i> <i>R/W 8/17/99</i></p>	<p>Verify that the waste packet is placed on the Sorting Table.</p> <p>Verify that the Packet Assay Tray moves to the fully retracted position.</p> <p>Verify that the "CLOSE PACKET ASSAY SEQUENCE COMPLETE" message is displayed on OIU-12-104B.</p> <p><i>CLOSED</i></p>	✓		<i>R/W</i>

Enter Waste Packet into Packet X-Ray

93.	<p>Return to the "TRU SORTING GLOVEBOX MAIN MENU" at OIU-12-104B.</p> <p>Press the "PACKET X-RAY MENU" button. The "PACKET X-RAY MENU" should be displayed on OIU-12-104B.</p> <p><i>8/17/99</i></p>	<p>Verify that the "PACKET X-RAY MENU" is displayed on OIU-12-104B.</p>	✓		<i>R/W</i>
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92a After the Packet Assay Tray retracts - verify message "PACKET ASSAY CLOSING"

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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94.	<p>Press the "OPEN PACKET X-RAY" button on OIU-12-104B.</p> <p>The PCS energizes solenoid 07-FEV-837E/F (Forward) to move the Packet Door to the Assay position.</p> <p><i>OPENING R/W 8/14/97</i></p> <p>The "OPEN PACKET X-RAY SEQUENCE IN PROGRESS" message should be displayed on OIU-12-104B.</p>	<p>Verify that the Packet Door is moved to the Assay position.</p> <p>Verify that the "OPEN PACKET X-RAY SEQUENCE IN PROGRESS" message is displayed on OIU-12-104B.</p>	✓		<i>R/W</i>
95.	<p>The PCS should energize (pulse) solenoid 07-FEV-837H/E (Extend) to move the Packet X-Ray Tray to the extended position.</p>	<p>Verify that the Packet X-Ray Tray starts to move to the extended position.</p>	✓		<i>R/W</i>
96.	<p>The Packet X-Ray Tray should move smoothly to the fully extended position.</p> <p><i>OPEN</i></p> <p>The "OPEN PACKET X-RAY SEQUENCE COMPLETE" message should be displayed on OIU-12-104B.</p> <p><i>R/W 8/17/97</i></p>	<p>Verify that the Packet X-Ray Tray moves smoothly to the fully extended position.</p> <p>Verify that the "OPEN PACKET X-RAY SEQUENCE COMPLETE" message is displayed on OIU-12-104B.</p>	✓		<i>R/W</i>
97.	<p>Place the waste packet on the Packet X-Ray Tray.</p> <p>Press the "CLOSE PACKET X-RAY" button on OIU-12-104B.</p> <p>The PCS should energize (pulse) solenoid 07-FEV-837H/R (Retract) to move the Packet X-Ray Tray to the retracted position.</p> <p><i>CLOSING R/W 8/19/97</i></p> <p>The "CLOSE PACKET X-RAY SEQUENCE IN PROGRESS" message should be displayed on OIU-12-104B.</p>	<p>Verify that the Packet X-Ray Tray moves smoothly to the fully retracted position.</p> <p>Verify that the "CLOSE PACKET X-RAY SEQUENCE IN PROGRESS" message is displayed on OIU-12-104B.</p>	✓		<i>R/W</i>

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
98.	<p>The PCS should energize (pulse) solenoid 07-FEV-837E/R (Reverse) to move the Packet Door to the X-Ray position as indicated by position switch 07-ZS-327B activated.</p> <p><i>RW by JG on 8/12/98 CLOSED</i></p> <p>The "CLOSE PACKET X-RAY SEQUENCE COMPLETE" message should be displayed on OIU-12-104B.</p>	<p>Verify that the the Packet Door moves to the X-Ray position.</p> <p>Verify that position switch 07-ZS-327B is activated.</p> <p><i>RW by JG on 8/12/98</i></p> <p>Verify that the "CLOSE PACKET X-RAY SEQUENCE COMPLETE" message is displayed on OIU-12-104B.</p>	✓		<i>RW</i>
99.	<p>NOTE: It is not within the scope of this test procedure to test the Packet X-Ray System. Testing of the Packet X-Ray Tray, Packet X-Ray Tray Door, and their interface to the PCS are the only tests required for this procedure. Other tests will be performed to verify Packet X-Ray system operation including its PCS interface.</p> <p>At this time, the PCS would normally issue instruction ND-07-301/EN to the Packet X-Ray to enable it. The Packet X-Ray would then be operated from local dedicated controls, and issue a Packet X-Ray in Progress message ND-07-301/ES to the PCS, followed by a Packet X-Ray Complete message.</p>	<p>Verification of Packet X-Ray operation is not required for this test procedure.</p>	✓		<i>AW</i>
100.	<p>Press the "OPEN PACKET X-RAY" button on OIU-12-104B. The Packet Door should move to the Assay position and the Packet X-Ray Tray should again move to the fully extended position.</p> <p><i>OPEN</i></p> <p>The "OPEN PACKET X-RAY SEQUENCE COMPLETE" message should be displayed on OIU-12-104B.</p> <p><i>RW 8/17/98</i></p>	<p>Verify that the Packet Door moves to the Assay position.</p> <p>Verify that the Packet X-Ray Tray moves to the fully extended position.</p> <p><i>RW by JG on 8/12/98</i></p> <p>Verify that the "OPEN PACKET X-RAY SEQUENCE COMPLETE" message is displayed on OIU-12-104B.</p> <p><i>OPEN</i></p>	✓		<i>RW</i>

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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101.	<p>Remove the waste packet from the Packet X-Ray Tray and place it on the Sorting Table.</p> <p>Press the "CLOSE PACKET X-RAY" button on OIU-12-104B. The Packet X-Ray Tray should again move to the fully retracted position and the Packet Door should move to the X-Ray position.</p> <p>The "CLOSE PACKET X-RAY SEQUENCE COMPLETE" message should be displayed on OIU-12-104B.</p> <p style="text-align: center;"><i>CLOSED</i> <i>R/V 8/14/97</i></p>	<p>Verify that the waste packet is placed on the Sorting Table.</p> <p>Verify that the Packet X-Ray Tray moves to the fully retracted position.</p> <p>Verify that the Packet Door moves to the X-Ray position.</p> <p>Verify that the "CLOSE PACKET X-RAY SEQUENCE <i>CLOSED</i> COMPLETE" message is displayed on OIU-12-104B.</p>	✓		<i>R/V</i>
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Open Waste Packet Using Manipulator

102.	Visually scan waste packets placed on the Sorting Table. Visually locate and identify the packet labeled "Noncompliant".	Verify that a "non-compliant" packet is on the Sorting Table.	✓		<i>R/V</i>
103.	Move the Manipulator carriage above the noncompliant 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.	✓		<i>R/V</i>
104.	Carefully open the non-compliant packet using the Manipulator.	Verify that the non-compliant packet is opened using the Manipulator.	✓		<i>R/V</i>
105.	Return to the "TRU SORTING GLOVEBOX MAIN MENU" at OIU-12-104B. Press the "SORTING TABLE MENU" button.	Verify that the "SORTING TABLE MENU" is displayed on OIU-12-104B.	✓		<i>R/V</i>
106.	<p>Press the "RWM LOADOUT POSITION" button on OIU-12-104B.</p> <p>The PCS should issue command ST-07-302/RW to the Sorting Table servo motor controller to move to the RWM loadout position.</p> <p>The "SORTING TABLE MOVING TO RWM LOADOUT POSITION" message should be displayed on OIU-12-104B.</p>	<p>Verify that the Sorting Table starts to move to the RWM loadout position.</p> <p>Verify that the "SORTING TABLE MOVING TO RWM LOADOUT POSITION" message is displayed on OIU-12-104B.</p>	✓		<i>R/V</i>

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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107.	The Sorting Table servo motor controller should return the ST-07-302/RWS message to the PCS when the Sorting Table reaches the RWM loadout position. The "SORTING TABLE AT RWM POSITION" message should be displayed on OIU-12-104B.	Visually verify that the Sorting Table is now at the RWM loadout position. Verify that the "SORTING TABLE AT RWM POSITION" message is displayed on OIU-12-104B.	✓		R/V
Remove Non-compliant Items using Non-compliant Item Transfer Stand					
108.	The Drath and Schrader drum should be mated to the bagless transfer port. Select the "RWM PORT MENU" from the "TRU SORTING GLOVEBOX MAIN MENU" at OIU-12-104B.	Verify that the Drath and Schrader drum is mated to the bagless transfer port. Verify that the "RWM PORT MENU" is displayed.	✓		R/V
109.	Press the "OPEN PORT" button from the "RWM PORT MENU" at OIU-12-104B to open the port. The PCS should display a "PORT OPEN ^{IN P} SEQUENCE IN PROGRESS" message at OIU-12-104B while the port is opening.	Verify that a "PORT OPENING SEQUENCE IN PROGRESS" message is displayed at OIU-12-104B while the port is opening.	✓		R/V
110.	The Bagless Transfer Port should open and send a signal (DO-07-305/OS) to the PCS indicating that the port is open and drum attached. The PCS should then display a "PORT OPEN SEQUENCE COMPLETE-PORT OPEN" message at OIU-12-104B.	Verify that the Bagless Transfer Port is opened with drum attached. Verify that a "PORT OPEN SEQUENCE COMPLETE-PORT OPEN" message is displayed at OIU-12-104B.	✓		R/V
111.	Enable trolley/hoist pendant 107-PC-07-008B located at the RWM Take-Off Bulge by turning the selector switch located on hoist pendant 107-PC-008A to "PEND B".	Verify that trolley/hoist pendant 107-PC-07-008B is enabled.	✓		R/V
112.	Energize hoist motor 107-CR-07-301C/M1 (Hoist Lower) using the trolley hoist pendant (107-PC-07-008B) "LOWER" pushbutton. Attach the Non-Compliant item transfer stand to the hoist hook.	Verify that the Non-Compliant item transfer stand is attached to the hoist hook.	✓		R/V

108 a Force ABV status bit N32: 256 85/12

108 b Force Bar Code bit N32: 210

108 c message "Drum at LIFT TABLE" Page 32-23

108 d Press "Start Entry"

108 e message "DRUM ENTRY IN PROGRESS"

108 f message "DRUM ENTRY COMPLETE"

TRU SORTING GLOVEBOX 302

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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113.	<p>Energize motor 107-CR-07-301C/M2 (Hoist Raise) to raise the Non-Compliant Item Transfer Stand to the fully raised position using trolley hoist pendant (107-PC-07-008B) "RAISE" pushbutton.</p> <p>Trolley hoist pendant (107-PC-07-008B) "RAISED" indicator should light indicating that the hoist is fully raised.</p>	<p>Visually verify that the hoist is fully raised.</p> <p>Verify that Trolley hoist pendant (107-PC-07-008B) "RAISED" indicator is illuminated.</p>	✓		Riv
114.	<p>WARNING: The test operator must be familiar with the operation of the hoist before testing the hoist. The trolley speed is controlled via the five position Left/Right pushbuttons on the hoist pendant. Operator must judge Trolley travel speed to ensure smooth operation and avoid equipment damage.</p> <p>Using Trolley hoist pendant (107-PC-07-008B) "FWD" pushbutton, activate trolley motor 107-CR-07-301C/M1 (Trolley Traverse Drive) forward until the trolley is at the transfer stand tray loading position.</p> <p>Trolley hoist pendant (107-PC-07-008B) "LOAD" indicator should light indicating that the hoist is at the tray loading position.</p>	<p>Visually verify that the trolley is at the tray loading position.</p> <p>Verify that Trolley hoist pendant (107-PC-07-008B) "LOAD" indicator is illuminated.</p>	✓		Riv
115.	<p>Enable Hoist Pendant 107-PC-07-008A (Located on the operating face of the sorting glovebox) by moving selector switch located on hoist pendant 107-PC-07-008A to "PEND A".</p> <p>Using Trolley hoist pendant (107-PC-07-008A) (located on the operating face of the sorting glovebox) "LOWER" pushbutton, lower the Non-Compliant Item Transfer Stand to a height that allows the Non-Compliant Item Transfer Stand to be loaded.</p>	<p>Verify that Hoist Pendant 107-PC-07-008A is enabled.</p> <p>Verify that the Non-Compliant Item Transfer Stand is at an appropriate position for loading.</p>	✓		Riv
116.	<p>Use the Manipulator arms to affix a pre-printed barcode label from the barcode label dispenser to each item contained in the non-compliant packet.</p>	<p>Verify that a barcode label is affixed to each item contained in the non-compliant packet.</p>			N/A 2/28/16
117.	<p>Scan each barcode using the TRU Sorting Glovebox fixed barcode scanner 107-NT-12-300. The barcode scanner should provide an audible "beep" when the barcode has been correctly read.</p>	<p>Verify that the barcode label is correctly scanned.</p>			N/A 2/28/16

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
118.	Use the Manipulator arms to load each item contained in the non-compliant packet onto the top tray of the Non-Compliant Item Transfer Stand. NOTE: The top tray of the stand is selected to facilitate later manual removal of packet items from the drum during testing.	Verify that each item contained in the non-compliant packet is loaded onto the Non-Compliant Item Transfer Stand.	✓		RW
119.	Energize motor 107-CR-07-301C/M2 (Hoist Raise) to raise the Non-Compliant Item Transfer Stand to the fully raised position using trolley hoist pendant (107-PC-07-008A) "RAISE" pushbutton. Trolley hoist pendant (107-PC-07-008A) "RAISED" indicator should light indicating that the hoist is fully raised.	Visually verify that the hoist is fully raised. Verify that trolley hoist pendant (107-PC-07-008A) "RAISED" indicator is illuminated.	✓		RW
120.	Enable trolley/hoist pendant 107-PC-07-008B located at the RWM Take-Off Bulge by turning the selector switch "PEND B" located on hoist pendant 107-PC-07-008A.	Verify that trolley/hoist pendant 107-PC-07-008B is enabled.	✓		RW
121.	WARNING: The test operator must be familiar with the operation of the hoist before testing the hoist. The trolley speed is controlled via the five position Left/Right pushbuttons on the hoist pendant. Operator must judge Trolley travel speed to ensure smooth operation and avoid equipment damage. Using trolley/hoist pendant 107-PC-07-008B "REV" pushbutton, activate trolley motor 107-CR-07-301C/M1 (Trolley Traverse Drive) reverse until the trolley is at the transfer stand tray loading position. <i>Port position RW 8/17/17</i> Trolley/hoist pendant 107-PC-07-008B "PORT" indicator should light, indicating that the trolley is at the tray load out/in position.	Visually verify that the trolley is at the tray load out/in position. Verify that trolley hoist pendant (107-PC-07-008B) "PORT" indicator is illuminated.	✓		RW
122.	Energize hoist motor 107-CR-07-301C/M1 (Hoist Lower) using trolley hoist pendant (107-PC-07-008B) "LOWER" pushbutton to lower the Non-Compliant Item Transfer stand into the Drath and Schrader drum mated to the bagless transfer port.	Verify that the Non-Compliant item transfer stand is placed in the Drath and Schrader drum.	✓		RW
123.	Disconnect hoist hook from the Non-Compliant Item Transfer Stand.	Verify that the hoist hook is disconnected from the Non-Compliant Item Transfer Stand.	✓		RW

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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124.	Energize motor 107-CR-07-301C/M2 (Hoist Raise) using trolley hoist pendant (107-PC-07-008B) "RAISE" pushbutton to raise the hoist to the fully raised position. Trolley hoist pendant (107-PC-07-008B) "RAISED" indicator should light, indicating that the hoist is fully raised.	Visually verify that the hoist is fully raised. Verify that trolley hoist pendant (107-PC-07-008B) "RAISED" indicator is illuminated.	✓		RIV
125.	Press the "CLOSE PORT" button from the "RWM PORT MENU" at OIU-12-104B to close the port. The PCS should display a "PORT CLOSE SEQUENCE IN PROGRESS " message at OIU-12-104B while the port is closing.	Verify that a "PORT CLOSE IN PROGRESS " message is displayed at OIU-12-104B while the port is closing.	✓		RIV
126.	The PCS should give an output (DO-07-305/C) to the Bagless Transfer Port (107-DO-07-305), which signals the Bagless Transfer Port to close. The Bagless Transfer Port should close and lock and send a signal (DO-07-305/CS) to the PCS indicating that the port is closed. The PCS should then display a "PORT CLOSE SEQUENCE COMPLETE - PORT CLOSED " message at OIU-12-104B.	Verify that the Bagless Transfer Port door is closed and locked. Verify that a "PORT CLOSED SEQUENCE COMPLETE - PORT CLOSED " message is displayed at OIU-12-104B after the port is closed.	✓		RIV
127.	Press the "START EXIT" button from the "RWM PORT MENU" at OIU-12-104B to move the drum to the end of the conveyor. The PCS should display a "EXIT SEQUENCE IN PROGRESS " message at OIU-12-104B while the port is opening.	Verify that a "EXIT SEQUENCE IN PROGRESS " message is displayed at OIU-12-104B.	✓		RIV
128.	Motor 107-LT-09-203B/M1 should be activated to lower the Lift Table (107-LT-07-203B) until the table is at AGV height.	Verify that the lift table is at AGV height.	✓		RIV
129.	Lift table motor 107-LT-09-203B/M2 (Conveyor Drive) reverse should be activated until the drum is near the end of the conveyor. The PCS should then display a "EXIT SEQUENCE COMPLETE " message at OIU-12-104B.	Verify that the drum is near the end of the conveyor. Verify that a "EXIT SEQUENCE COMPLETE " message is displayed at OIU-12-104B.	✓		RIV

8/12/97 124 u Move Hoist 301C to Load Out Position

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
130.	Manually remove Drath and Schrader drum inner lid. Manually remove all test "Non-Compliant" items from drum.	Verify that all test "Non-Compliant" items have been removed from the Drath and Schrader drum.	✓		RIC
131.	Replace the inner drum lid on the Drath and Schrader drum.	Verify that the drum lid is replaced.	✓		RIC
132.	Because a drum is positioned at the AGV end of the Lift Table and the Lift Table is at AGV height, OIU-12-104B should display a "DRUM AT LIFT TABLE" message.	Verify that the "DRUM AT LIFT TABLE" message is displayed at OIU-12-104B. <i>DRUM</i>		<i>N/A</i> <i>8/19/19</i>	
133.	Press the "START ENTRY" button from the "RWM PORT MENU" at OIU-12-104B. <i>DRUM</i> The "ENTRY SEQUENCE IN PROGRESS" message should be displayed at OIU-12-104B. <i>RIC 8/19/19</i>	Verify that the "ENTRY SEQUENCE IN PROGRESS" message is displayed at OIU-12-104B.	✓		RIC
134.	The PCS should energize the Lift Table conveyor motor forward (107-LT-09-203B/M2) to move the drum under the Bagless Transfer Port. The drum should move forward until the "Drum Under Glovebox Port" position switch (07-ZS-243F) is activated. The "DRUM UNDER PORT" indicator at the Lift Table Local Control Pedestal (107-PC-09-203B) should be illuminated, indicating the a drum is centered under the glovebox port (107-DO-07-305).	Verify that the drum moves forward until it is centered beneath the Bagless Transfer Port. Verify that the "Drum Under Glovebox Port" position switch (07-ZS-243F) is activated. Verify that the "DRUM UNDER PORT" indicator is illuminated.	✓		RIC
135.	The PCS should raise the lift table at slow speed until the drum contacts the port. Because the drum has been mated to the port, the Drum Entry Sequence is complete and the "ENTRY SEQUENCE COMPLETE" message should be displayed at OIU-12-104B. <i>DRUM</i> <i>RIC 8/19/19</i>	Verify that the lift table raises the drum to contact the Bagless Transfer Port. <i>DRUM</i> Verify that the "ENTRY SEQUENCE COMPLETE" message is displayed at OIU-12-104B.	✓		RIC
136.	Return the Manipulator arms to their parked positions.	Visually verify that the Manipulator arms are parked.	✓		RIC

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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137.	Visually confirm that no items block the path of Manipulator carriage. Raise the Manipulator carriage.	Verify that the Manipulator carriage is fully raised.	✓		Riv
138.	Return the Manipulator carriage to parked position #1 (nearest to Sorting Table).	Visually verify that the Manipulator carriage returns to parked position #1. Verify that Position switch 07-ZS-823A indicates that the Manipulator is at parked position #1.	✓		Riv

Move Sorting Table with Compliant Items to Waste Loadout

139.	Return to the the "TRU SORTING GLOVEBOX MAIN MENU" and select the "SORTING TABLE MENU" at OIU-12-104B.	Verify that the "SORTING TABLE MENU" is displayed on OIU-12-104B.	✓		Riv
140.	Push the "WASTE LOADOUT POSITION 1" button on OIU-12-104B. The PCS should issue comand ST-07-302/W1 to the Sorting Table servo motor controller to move to waste loadout position 1. A "SORTING TABLE MOVING TO WASTE LOADOUT POSITION 1" message should be displayed at OIU-12-104B.	Verify that the PCS issues comand ST-07-302/W1 to the Sorting Table servo motor controller. A "SORTING TABLE MOVING TO WASTE LOADOUT POSITION 1" message should be displayed at OIU-12-104B.	✓		Riv

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
141.	<p>The servo motor controller returns message ST-07-302/WIS to the PCS to indicate that the Sorting Table is at waste loadout position 1.</p> <p>A "SORTING TABLE AT WASTE LOADOUT POSITION 1" message should be displayed at OIU-12-104B.</p>	<p>Verify that the servo motor controller returns message ST-07-302/WIS to the PCS.</p> <p>Verify that the Sorting Table is at waste loadout position 1.</p> <p>Verify that a "SORTING TABLE AT WASTE LOADOUT POSITION 1" message is displayed at OIU-12-104B.</p>	✓		R/C
142.	<p>Remove all compliant items from the Sorting Table and return to the compliant item packets for the next test.</p>	<p>Verify that all compliant items are removed from the Sorting Table.</p>	✓		R/C
143.	<p>Push the "HOME POSITION" button on OIU-12-104B. <i>ASSAY R/C 8/19/97</i></p> <p>The PCS should issue comand ST-07-302/H to the Sorting Table servo motor controller to move to the home position.</p> <p>A "SORTING TABLE MOVING TO ASSAY POSITION" message should be displayed at OIU-12-104B.</p>	<p>Verify that the PCS issues comand ST-07-302/H to the Sorting Table servo motor controller.</p> <p>Verify that a "SORTING TABLE MOVING TO ASSAY POSITION" message is displayed.</p>	✓		R/C
144.	<p>The Sorting Table Table servo motor controller should move the Sorting Table to the home position indicated by position switch 07-ZS-870 activated. <i>R/C 8/17/97</i></p> <p>A "SORTING TABLE AT ASSAY POSITION" message should be displayed at OIU-12-104B.</p>	<p>Verify that the Sorting Table Table is at the home position.</p> <p>Verify that a "SORTING TABLE AT ASSAY POSITION" message is displayed.</p>	✓		R/C
Fasten Lid to Drum					
145.	<p>Return to the the "TRU SORTING GLOVEBOX MAIN MENU" and select the "TRANSFER CAR MENU" at OIU-12-104B.</p>	<p>Verify that the "TRANSFER CAR MENU" is displayed on OIU-12-104B.</p>	✓		R/C

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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146.	Select the "RELID" option from the OIU "TRANSFER CAR MENU" . <i>BAB OFF/CRIMP</i> A "TRANSFER CAR MOVING TO RELID POSITION" message should be displayed at OIU-12-104B. <i>BAB OFF/CRIMP</i>	Verify that a "TRANSFER CAR MOVING TO RELID POSITION" message is displayed at OIU-12-104B. <i>RIW 8/17/97</i>	✓		<i>P/W</i>
147.	The transfer car should smoothly accelerate, decelerate, and come to a complete stop at the relid position. The drum should not slide during acceleration or deceleration. <i>BAB OFF/CRIMP</i> A "TRANSFER CAR AT RELID POSITION" message should be displayed at OIU-12-104B. <i>RCR 8/19/97</i>	Verify that the drum does not slide during acceleration or deceleration and the transfer car moves forward, stopping at the relid position. Verify that a "TRANSFER CAR AT RELID POSITION" message is displayed at OIU-12-104B.	✓		<i>RIW</i>
148.	Return to the "TRU SORTING GLOVEBOX MAIN MENU" and select the "LID/DELID MENU" at OIU-12-104B.	Verify that the "LID/DELID MENU" is displayed on OIU-12-104B.			
149.	Select the "MOVE FIXTURE TO LID POSITION" option from the OIU "LID/DELID MENU" . The PCS should energize solenoid 07-FEV-836A/R (Raise) to raise the Lid/Delid Fixture to the Park position. A "FIXTURE MOVING TO RELID POSITION" message should be displayed at OIU-12-104B. <i>U/A</i>	Verify that the Lid/Delid Fixture starts to raise to the Park position. Verify that a "FIXTURE MOVING TO RELID POSITION" message is displayed at OIU-12-104B.			
150.	The Lid/Delid Fixture should move to park position indicated by position switch 07-ZS-828A activated. A "FIXTURE AT RELID/PARK POSITION" message should be displayed at OIU-12-104B.	Verify that the Lid/Delid Fixture is at the park position. Verify that a "FIXTURE AT RELID/PARK POSITION" message is displayed at OIU-12-104B.			

148 - 169 - Crimp head deleted from mechanism. *RIW 8/17/97*

RIW 8/17/97
 148. Using hand held crimper at *Buy OFF/Coing position*
 * 149 a crimp 3 clips onto drum lid at 300 interval,
 TEST PROCEDURE 13021A-86
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 TRU SORTING GLOVEBOX 302
 ✓ *RIW*

* see TE *RIW 9/19/97*

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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151.	Select the "START RELID SEQUENCE" option from the OIU "LID/DELID MENU". A "RELID SEQUENCE IN PROGRESS" message should be displayed at OIU-12-104B.	Verify that a "RELID SEQUENCE IN PROGRESS" message is displayed at OIU-12-104B.			
152.	The PCS should activate solenoid 07-FEV-836A/L (Lower) until the Lid/Delid Fixture is completely lowered. NOTE: The drum should be centered on the transfer car.	Visually verify that the Lid/Delid Fixture is completely lowered onto the drum.			
153.	The PCS should energize (pulse) Vacuum Isolation Solenoid 07-PEV-816 to remove vacuum from the drum lid.	Verify that Vacuum Isolation Solenoid 07-PEV-816 is activated. Verify that the drum lid is centered on the drum, not attached to the Lid/Delid Fixture.			
154.	The PCS should energize solenoid 07-FEV-836A/R (Raise) until the Lid/Delid Fixture is completely raised. Position switch 07-ZS-826A should indicate that the Lid/Delid Fixture is in the raised position.	Visually verify that the Lid/Delid Fixture is completely raised. Verify that Position switch 07-ZS-826A indicates that the Lid/Delid Fixture is at the raised position.			
155.	After every twelve (12) clip crimps (two drums relidged), the PCS should issue an "OPERATOR ACTION: LOAD CLIPS" message at OIU-12-104B. If the C-Clip magazine was filled prior to the start of this test case, the message should appear during execution of this test case for the third drum. When the message appears, reload the C-Clip magazine.	Verify that after every twelve (12) clip crimps, the "OPERATOR ACTION: LOAD CLIPS" message is displayed at OIU-12-104B. Verify that the C-Clip magazine is reloaded after the message is displayed.			

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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156.	The PCS should energize solenoid 07-FEV-836B/C (Clockwise) until Lid/Delid Fixture rotates clockwise for 3 indents. Position switch 07-ZS-827B should pulse 3 times while the Lid/Delid Fixture rotates to the #1 crimp position.	Verify that Lid/Delid Fixture rotates counterclockwise for three indents. Verify that the C-Clip crimper is at the indent #1 crimp position.			
Crimp C-Clips onto Drum Lid					
157.	The PCS should halt the sequence at this time, awaiting re-initiation of the Relid sequence. Re-initiate the Relid Sequence by pushing the "START RELID SEQUENCE" button from the OIU "LID/DELID MENU".	Verify that the PCS halts the sequence. Verify that a "START RELID SEQUENCE" button is pushed a second time at OIU-12-104B.			
158.	The PCS should energize solenoid 07-FEV-836A/L (Lower) until the Lid/Delid fixture is lowered.	Visually verify that the Lid/Delid Fixture is completely lowered.			
159.	The PCS should energize solenoid 07-FEV-836G for 2 seconds (field adjustable) to engage the Crimper magazine drive. The Crimper magazine drive should force the C-Clips firmly against the C-Clip stop-plate so that a C-Clip is in place under the crimp head, ready for use.	Verify that the Crimper magazine drive is engaged. Verify that a single C-Clip is positioned beneath the Crimper head.			
160.	The PCS should energize solenoid 07-FEV-836F/F (Forward) to move the crimper head forward. The crimper head should be centered around the top edge of the drum so that when the crimper jaws are engaged, the C-Clip will bind the drum lid to the drum.	Visually verify that the Crimper is completely extended. Verify that the crimper head is centered around the top edge of the drum.			

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
161.	<p>The PCS should energize (pulse) solenoid 07-FEV-836C/C (Close) to close the crimper jaws, attaching a C-Clip to the drum lid, firmly binding the drum lid to the drum.</p> <p>Position switch 07-ZS-821 should indicate that the Crimper jaws are retracted.</p>	<p>Verify that the crimper jaws close and a C-Clip is attached to the drum lid.</p> <p>Verify that crimper jaws open.</p> <p>Verify that the crimped C-Clip binds the drum lid to the drum.</p>	<div> <p><i>Handwritten:</i> PW 8/17/97</p> </div>		
162.	<p>The PCS should energize solenoid 07-FEV-836F/B (Retract Back) to move the crimper head back. The crimper head should move away from the drum, leaving the C-Clip in place.</p> <p>Position switch 07-ZS-819A should indicate that the Crimper is fully retracted.</p>	<p>Verify that the crimper is fully retracted.</p> <p>Verify that the C-Clip remains in place after the crimper is removed.</p>			
163.	<p>The PCS should energize solenoid 07-FEV-836A/R (Raise) until the Lid/Delid Fixture is completely raised.</p> <p>Position switch 07-ZS-826A should indicate that the Lid/Delid Fixture is in the raised position.</p>	<p>Visually verify that the Lid/Delid Fixture is completely raised.</p> <p>Verify that Position switch 07-ZS-826A indicates that the Lid/Delid Fixture is at the raised position.</p>			
164.	<p>The PCS should repeat this test sequence "Crimp C-Clips to Drum Lid" to crimp a C-Clip onto the drum at indent crimp position #2.</p>	<p>Verify that this test sequence is successfully repeated for the second C-Clip.</p>			
165.	<p>The PCS should repeat this test sequence "Crimp C-Clips to Drum Lid" to crimp a C-Clip onto the drum at indent crimp position #3.</p>	<p>Verify that this test sequence is successfully repeated for the third C-Clip.</p>			
166.	<p>The PCS should repeat this test sequence "Crimp C-Clips to Drum Lid" to crimp a C-Clip onto the drum at indent crimp position #4.</p>	<p>Verify that this test sequence is successfully repeated for the fourth C-Clip.</p>			
167.	<p>The PCS should repeat this test sequence "Crimp C-Clips to Drum Lid" to crimp a C-Clip onto the drum at indent crimp position #5.</p>	<p>Verify that this test sequence is successfully repeated for the fifth C-Clip.</p>			

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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168.	The PCS should repeat this test sequence "Crimp C-Clips to Drum Lid" to crimp a C-Clip onto the drum at indent crimp position #6.	Verify that this test sequence is successfully repeated for the sixth C-Clip.			
169.	The PCS should energize solenoid 07-FEV-836B/C (Clockwise) until the Lid/Delid Fixture rotates clockwise two indents to park position indent #4. Position switch 07-ZS-827B should pulse 2 times while the Lid/Delid Fixture rotates to the fourth indent. A "RELID SEQUENCE COMPLETE" message should be displayed at OIU-12-104B.	Verify that Lid/Delid Fixture rotates clockwise two indents. Verify that the Lid/Delid Fixture is at the park position. Verify that a "RELID SEQUENCE COMPLETE" message is displayed at OIU-12-104B.			

Remove Drum from Glovebox using Transfer Car

170.	Return to the "TRU SORTING GLOVEBOX MAIN MENU" and select the "TRANSFER CAR MENU" from the OIU-12-104B.	Verify that the "TRANSFER CAR MENU" is displayed.	✓		
171.	Select the "COMPACTOR GLOVEBOX" option from the OIU "TRANSFER CAR MENU". The PCS should energize solenoid 07-FEV-837L/R (Reverse) to move the transfer car to the compactor position. A "TRANSFER CAR MOVING TO COMPACTOR POSITION" message should be displayed at OIU-12-104B.	Verify that the transfer car starts to move to the compactor glovebox position. Verify that a "TRANSFER CAR MOVING TO COMPACTOR POSITION" message is displayed at OIU-12-104B.	✓		

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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172.	<p>The transfer car should smoothly accelerate, decelerate, and come to a complete stop at the compactor glovebox position. The drum should not slide during acceleration or deceleration.</p> <p>Position switch 07-ZS-818A should indicate that the transfer car is at the compactor glovebox position.</p> <p>A "TRANSFER CAR AT COMPACTOR POSITION" message should be displayed at OIU-12-104B.</p>	<p>Verify that the transfer car moves forward and stops at the compactor glovebox position.</p> <p>Verify that position switch 07-ZS-818A indicates that the transfer car is at the compactor glovebox position.</p> <p>Verify that the drum does not slide during acceleration or deceleration.</p> <p>Verify that a "TRANSFER CAR AT COMPACTOR POSITION" message is displayed at OIU-12-104B.</p>	✓		PV
173.	<p>Select the "EMPTY DRUM LOADOUT GLOVEBOX" option from the OIU "TRANSFER CAR MENU".</p> <p>The PCS should energize solenoid 07-FEV-837L/R (Reverse) to move the transfer car to the Empty Drum Loadout Glovebox.</p> <p>A "TRANSFER CAR MOVING TO EMPTY DRUM LOADOUT" message should be displayed at OIU-12-104B.</p>	<p>Verify that the transfer car starts moving to the Empty Drum Loadout Glovebox.</p> <p>Verify that a "TRANSFER CAR MOVING TO EMPTY DRUM LOADOUT" message is displayed at OIU-12-104B.</p>	✓		RV
174.	<p>The transfer car should smoothly accelerate, decelerate, and come to a complete stop at the Empty Drum Loadout Glovebox.</p> <p>Position switch 07-ZS-816 should indicate that the transfer car is at the Empty Drum Loadout Glovebox.</p> <p>A "TRANSFER CAR AT EMPTY DRUM LOADOUT" message should be displayed at OIU-12-104B.</p>	<p>Verify that the transfer car is at the Empty Drum Loadout Glovebox.</p> <p>Verify that a "TRANSFER CAR AT EMPTY DRUM LOADOUT" message is displayed at OIU-12-104B.</p>	✓		RV

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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175.	<p>Select the "ENTRY GLOVEBOX" option from the OIU "TRANSFER CAR MENU".</p> <p>The PCS should energize solenoid 07-FEV-837 to move the transfer car to the Entry Glovebox position.</p> <p>A "TRANSFER CAR MOVING TO ENTRY GLOVEBOX" message should be displayed at OIU-12-104B.</p> <p><i>POSITION</i> <i>RV 8/12/99</i></p>	<p>Verify that the transfer car starts to move to the Entry Glovebox.</p> <p>A "TRANSFER CAR MOVING TO ENTRY GLOVEBOX" message is displayed at OIU-12-104B.</p> <p><i>POSITION</i></p>	✓		<i>RV</i>
176.	<p>The transfer car should smoothly accelerate, decelerate, and come to a complete stop at the Entry Glovebox under the sphincter port.</p> <p>The drum should not slide during acceleration or deceleration.</p> <p>A "TRANSFER CAR AT ENTRY GLOVEBOX" message should be displayed at OIU-12-104B.</p> <p><i>POSITION</i> <i>RV 8/17/99</i></p>	<p>Verify that the transfer car is at the Entry Glovebox.</p> <p>Verify that the drum does not slide during acceleration or deceleration.</p> <p>Verify that a "TRANSFER CAR AT ENTRY GLOVEBOX" message is displayed.</p> <p><i>POSITION</i></p>	✓		<i>RV</i>
177.	<p>Remove the drum from the transfer car at the Entry Glovebox.</p>	<p>Verify that the drum is removed and stored to allow testing to be completed.</p>	✓		<i>RV</i>

TEST CASE 13021A-86.32 COMPLETE

TEST CASE 13021A-86.33 LIFT TABLE OPERATION AND INTERLOCKS; MATE DRUM TO BAGLESS

TRANSFER PORT	2
Attempt to Open Bagless Transfer Port without Drum Present.....	2
"No Drum At Lift Table" Interlock.....	3
Lift Table "Down Overtravel" Alarm	3
Lift Table "Up Overtravel" Alarm.....	4
Lift Table "Rope Switch Pulled" Alarm	5
Lift Table "Conveyor Forward Failed" Alarm	5
Lift Table "Raise" Interlock.....	6
Complete Drum Entry Sequence	6
Lift Table Weight/Pressure Changes with Bagless Transfer Port Opened and Closed.....	9
Open Bagless Transfer Port.....	11
Move Transfer Stand to Tray Loading Position and Return	11
Close Bagless Transfer Port.....	13
Lift Table "Fails to Lower" Alarm	14
Lift Table "Conveyor Reverse Failed" Alarm.....	14
Return Drum to Bagless Transfer Port.....	15

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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TEST CASE 13021A-86.33 LIFT TABLE OPERATION AND INTERLOCKS; MATE DRUM TO BAGLESS TRANSFER PORT

1.	Unforce all LCU 103 registers using the Allen Bradley PLC Software.	Verify that all LCU 103 registers are unforced.	✓		RW
2.	Confirm that the "TRU SORTING GLOVEBOX MAIN MENU" screen is displayed at OIU-12-104B. If a sub-menu screen is displayed, select the "MAIN MENU" menu choice to return to the "TRU SORTING GLOVEBOX MAIN MENU". A "SYSTEM INITIALIZED" message should be displayed.	Verify that the "TRU SORTING GLOVEBOX MAIN MENU" screen is displayed at OIU-12-104B. Verify that a "SYSTEM INITIALIZED" message is displayed.	✓		RW
Attempt to Open Bagless Transfer Port without Drum Present					
3.	Turn on the Bagless Transfer Port control panel and in the "Full Automatic" Mode, attempt to initiate the "DOUBLE LID OPEN AUTOMATIC" sequence by pressing the "START" button. Because a drum is not mated to the port, the port should not open.	Verify that the Bagless Transfer Port does not open.	✓		RW
4.	Press the "RWM PORT MENU" button from the "TRU SORTING GLOVEBOX MAIN MENU" at OIU-12-104B. OIU-12-104B should display a "NO DRUM AT LIFT TABLE" message.	Verify that the "RWM PORT MENU" screen is displayed. Verify that OIU-12-104B displays the "NO DRUM AT LIFT TABLE" message.	✓		RW
5.	Press the "OPEN PORT" button from the "RWM PORT MENU" at OIU 107-OIU-12-104B to attempt to open the Bagless Transfer Port. Because a drum is not mated to the port, the port should not open.	Verify that the Bagless Transfer Port does not open.	✓		RW

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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"No Drum At Lift Table" Interlock

6.	Force the AGV status bit TRUE.	Verify that the AGV status bit is forced TRUE .	✓		R/E
7.	Examine the "RWM PORT MENU" screen at OIU-12-104B. The PCS should continue to check the status of the "Drum at end of Conveyor" position switch to determine if an empty drum is present at the AGV end of the Lift Table and check the status of the "AGV Mating Height" position switch to determine if the Lift Table is at AGV height. Because a drum is present and the Lift Table is at AGV height, OIU-12-104B should display a " DRUM AT LIFT TABLE " message.	Verify that OIU-12-104B displays a " DRUM AT LIFT TABLE " message.	✓		R/E

Lift Table "Down Overtravel" Alarm

8.	Manually activate the "Down Overtravel" position switch (09-ZS-243C) to simulate that the Lift Table (107-LT-09-203B) has been lowered below its normal travel height. The " DOWN OVERTRAVEL " status indicator (09-ZL-243C) at the Lift Table Local Control Pedestal (107-PC-09-203B) should be illuminated, indicating that the "Down Overtravel" position switch (09-ZS-243C) has been at least momentarily activated.	Verify that the "Down Overtravel" position switch (09-ZS-243C) is briefly activated. Verify that the " DOWN OVERTRAVEL " indicator (09-ZL-243C) remains illuminated after the "Down Overtravel" position switch is briefly activated.	✓		R/E
9.	A "Sequence Failed" alarm should be displayed.	Verify that a " Sequence Failed " alarm is displayed.	✓		R/W
10.	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Lift Table (203B) Down Overtravel" alarm.	Verify that the alarm has been acknowledged.	✓		R/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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11.	<p>Manually reset the "Down Overtravel" position switch (09-ZS-243C) to indicate that the Lift Table (107-LT-09-203B) is positioned within its normal vertical travel range.</p> <p>Resetting the "Down Overtravel" position switch (09-ZS-243C) should cause the "Lift Table (203B) Down Overtravel" alarm to clear.</p> <p>The "DOWN OVERTRAVEL" status indicator (09-ZL-243C) at the Lift Table Local Control Pedestal (107-PC-09-203B) should not be illuminated, indicating that the "Down Overtravel" position switch (09-ZS-243C) is not activated.</p> <p><i>start 8/13/97</i></p>	<p>Verify that the "Down Overtravel" position switch (09-ZS-243C) has been reset.</p> <p>Verify that the "Lift Table (203B) Down Overtravel" alarm is cleared.</p> <p>Verify that the "DOWN OVERTRAVEL" status indicator is not illuminated.</p>	✓		RIV
Lift Table "Up Overtravel" Alarm					
12.	Manually activate the "Up Overtravel" position switch (09-ZS-243D) to simulate that the Lift Table (107-LT-09-203B) has been raised above its normal travel height.	Verify that "Up Overtravel" position switch (09-ZS-243D) has been briefly activated.	✓		RIV
13.	A "Sequence Failed" alarm should be displayed.	Verify that a "Sequence Failed" alarm is displayed.	✓		RIV
14.	<p>ALARM ACKNOWLEDGEMENT SEQUENCE:</p> <p>Acknowledge the "Lift Table 203B Up Overtravel" alarm.</p>	Verify that the alarm has been acknowledged.	✓		RIV
15.	<p>Manually reset the "Up Overtravel" position switch (09-ZS-243D) to indicate that the Lift Table (107-LT-09-203B) is positioned within its normal vertical travel range.</p> <p>Resetting the "Up Overtravel" position switch (09-ZS-243D) should cause the "Lift Table (203B) Up Overtravel" alarm to clear.</p>	<p>Verify that the "Up Overtravel" position switch (09-ZS-243D) has been reset.</p> <p>Verify that the "Lift Table (203B) Up Overtravel" alarm is cleared.</p>	✓		RIV

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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Lift Table "Rope Switch Pulled" Alarm

16.	<p>Pull the Lift Table (107-LT-09-203B) Rope Switch (09-XS-243A/B) to disable all Lift Table operations.</p> <p>Press all pushbuttons on the Lift Table Local Control Pedestal (107-PC-09-203B) in "Maintenance" mode (use Lift Table Local Control Pedestal M/O/N switch to switch between operating modes). Because the rope switch has been pulled, pressing the buttons should have no effect on the Lift Table.</p>	<p>Verify that the rope switch has been pulled.</p> <p>Verify that pressing the Lift Table Local Control Pedestal pushbuttons has no effect on the Lift Table.</p>	✓		P/W
17.	A "Sequence Failed" alarm should be displayed.	Verify that a "Sequence Failed" alarm is displayed.	✓		P/W
18.	<p>ALARM ACKNOWLEDGEMENT SEQUENCE:</p> <p>Acknowledge the "Lift Table (203B) Rope Sw. Pulled" alarm.</p>	Verify that the alarm has been acknowledged.	✓		P/W
19.	<p>Manually reset the Lift Table Rope Switch (09-XS-243A/B) to allow normal Lift Table operation.</p> <p>Resetting the Lift Table Rope switch (09-XS-243A/B) should cause the "Lift Table (203B) Rope Sw. Pulled" alarm to clear.</p>	<p>Verify that the Lift Table Rope Switch has been reset.</p> <p>Verify that the "Lift Table (203B) Rope Sw. Pulled" alarm is cleared.</p>	✓		P/W
20.	Change register T4:138 (Lift Table Failed to Raise Timer) from 2 minutes to 2 sec.	Verify that register T4:138 is changed to 2 sec.	✓		P/W

Lift Table "Conveyor Forward Failed" Alarm

21.	<p>Confirm that the "Drum at End of Conveyor" position switch (07-ZS-243E) remains manually activated to simulate placing the Drath & Schrader drum on the Lift Table. If this switch is not activated, manually activate it (e.g., "Break the beam").</p>	Verify that the "Drum at End of Conveyor" position switch (07-ZS-243E) remains activated.			N/A
	<p>The "DRUM AT AGV END" indicator (09-ZL-243A) on the Lift Table Control Pedestal (107-PC-09-203B) should be illuminated, indicating that a drum is positioned at the AGV end of the Lift Table (Simulated).</p>	Verify that the "DRUM AT AGV END" indicator (09-ZL-243A) is illuminated.			P/W 8/12/99

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
22.	Press the "START ENTRY" button from the "RWM PORT MENU" at OIU-12-104B. Pressing this button should cause the PCS to energize the Lift Table conveyor motor forward (107-LT-09-203B/M2). <i>run</i> The "ENTRY SEQUENCE IN PROGRESS " message should be displayed at OIU-12-104B. <i>Alid 8/17/99</i>	Verify that the Lift Table Roller Conveyor is activated. <i>run</i> Verify that the "ENTRY SEQUENCE IN PROGRESS " message is displayed at OIU-12-104B.	✓		<i>P/W</i>
23.	Open the 480 vac disconnect to Lift Table LT 203B. The conveyor rollers should stop.	Verify that the Lift Table roller conveyors have stopped and remain stopped.	✓		<i>P/W</i>
24.	A "Sequence Failed" alarm should be displayed.	Verify that a "Sequence Failed" alarm is displayed.	✓		<i>P/W</i>
25.	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Lift Table (203B) Conv. For. Failed" alarm.	Verify that the alarm has been acknowledged.	✓		<i>P/W</i>
Lift Table "Raise" Interlock					
26.	Break the beam on the "Drum Under Port" position switch.	Verify that the beam is broken.	✓		<i>P/W</i>
27.	The Lift Table should raise.	Verify that the Lift Table raises.	✓		<i>P/W</i>
28.	A "Sequence Failed" alarm should be displayed.	Verify that a "Sequence Failed" alarm is displayed.	✓		<i>P/W</i>
29.	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Lift Table (203B) Fails to Raise" alarm.	Verify that the alarm has been acknowledged.	✓		<i>P/W</i>
Complete Drum Entry Sequence					
30.	Place the TRU Sorting Glovebox in "Maintenance" mode.	Verify that the TRU Sorting Glovebox has been placed in "Maintenance" mode.	✓		<i>P/W</i>

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
31.	<p>Activate the Lift Table "DOWN" pushbutton at the Lift Table local control pedestal (107-PC-09-203B) to lower the Lift Table to AGV Height.</p> <p>The "AGV LOAD HEIGHT" indicator (09-ZL-243E) on the Lift Table Control Pedestal (107-PC-09-203B) should be illuminated.</p>	<p>Visually Verify that the TRU Sorting Glovebox Lift Table is at AGV height.</p> <p>Verify that the "AGV LOAD HEIGHT" indicator is illuminated.</p>	✓		R/W
32.	Remove the manual activation for the (e.g., "Don't Break the beam") "Drum at End of Conveyor" position switch (07-ZS-243E) and for the "Drum Under Glovebox Port" position switch (07-ZS-243F).	Verify that the manual activation of the "Drum at End of Conveyor" (07-ZS-243E) and the "Drum Under Glovebox Port" position switches has been removed.	✓		R/W
33.	Restore register T4:138 to 2 minutes.	Verify the register is set to 2 min.	✓		R/W
34.	Close the 480 vac disconnect to Lift Table LT-203B.	Verify the 480vac disconnect is closed.	✓		R/W
35.	<p>Place the TRU Sorting Glovebox in "Automatic" mode to allow the TRU Sorting Glovebox to re-initialize.</p> <p>Review the "TRU SORTING GLOVEBOX MAIN MENU" screen at OIU-12-104B. The PCS should automatically check the status of glovebox devices to ensure that they are initialized. Because all glovebox initialization conditions should be satisfied, OIU-12-104B should display a "SYSTEM INITIALIZED" message.</p>	<p>Verify that OIU-12-104B displays the "SYSTEM INITIALIZED" message.</p>	✓		R/W
36.	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 TRU Sorting Glovebox Lift Table, (107-LT-09-203B). The drum should be placed at the AGV end of the Lift Table.	<p>Verify that the Drath & Schrader drum has been placed on the Lift Table (107-LT-09-203B).</p> <p>Verify that there is no band clamp on the drum.</p>	✓		R/W
37.	Force the AGV status bit TRUE.	Verify that the AGV status bit is forced TRUE.	✓		R/W
38.	Press the "RWM PORT MENU" button from the "TRU SORTING GLOVEBOX MAIN MENU" at OIU-12-104B.	Verify that the "RWM PORT MENU" screen is displayed.	✓		R/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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39.	Because a drum is positioned at the AGV end of the Lift Table and the Lift Table is at AGV height, OIU-12-104B should display a "DRUM AT LIFT TABLE" message.	Verify that the "DRUM AT LIFT TABLE" message is displayed at OIU-12-104B.	✓		R/W
40.	Press the "START DRUM ENTRY" button from the "RWM PORT MENU" at OIU-12-104B. The "DRUM ENTRY IN PROGRESS..." message should be displayed at OIU-12-104B.	Verify that the "DRUM ENTRY IN PROGRESS..." message is displayed at OIU-12-104B.	✓		R/W
41.	Pressing the "START DRUM ENTRY" button should cause the PCS to energize the Lift Table conveyor motor forward (107-LT-09-203B/M2) to move the drum under the Bagless Transfer Port. The "DRUM UNDER PORT" indicator at the Lift Table Local Control Pedestal (107-PC-09-203B) should be illuminated, indicating the a drum is centered under the glovebox port (107-DO-07-305).	Verify that the drum moves forward until it is centered beneath the Bagless Transfer Port. Verify that the "DRUM UNDER PORT" indicator is illuminated.	✓		R/W
42.	The PCS should then automatically energize the Lift Table motor (107-LT-09-203B/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
43.	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. Record the "Lift Table Weight" displayed on the "RWM PORT MENU" screen at OIU-12-104B: Lift Table Weight: <u>200</u> kilograms	Verify that the lift table raises the drum to contact the Bagless Transfer Port. Verify that the weight displayed meets meets or exceeds the weight setpoint (established during setup of this procedure) and is recorded in the space provided.	✓		R/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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44.	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-12-104B.	Verify that the "DRUM ENTRY COMPLETE" message is displayed at OIU-12-104B.	✓		R/W
Lift Table Weight/Pressure Changes with Bagless Transfer Port Opened and Closed					
45.	<p>Press the "OPEN PORT" button from the "RWM PORT MENU" at OIU-12-104B to open the port. The Bagless Transfer Port should open.</p> <p>The PCS should display a "PORT OPENING..." message at OIU-12-104B while the port is opening.</p> <p>Reaching the weight setpoint and not actuating a Lift Table overtravel switch should cause the PCS to give an output (DO-07-305/O) to the Bagless Transfer Port (107-DO-07-305), which signals the Bagless Transfer Port to open. Because the manipulator is parked and a drum is mated to the port, the port door should open. The Bagless Transfer Port should send a signal (DO-07-305/OS) to the PCS indicating that the port is open.</p> <p>The PCS should then display a "PORT OPEN" message at OIU-12-104B.</p>	<p>Verify that the Bagless Transfer Port door is opened.</p> <p>Verify that a "PORT OPENING..." message is displayed at OIU-12-104B while the port is opening.</p> <p>Verify that a "PORT OPEN" message is displayed.</p>	✓		R/W
46. X	<p>Record the "Lift Table Weight" and the "Lift Table Weight Setpoint" displayed on the "RWM PORT MENU" screen at OIU-12-104B:</p> <p>Lift Table Weight: <u>550</u> kilograms</p> <p>Lift Table Weight Setpoint: <u>698</u> kilograms</p>	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" screen.		✓	R/W

X see TE # 8

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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47.	<p>Press the "CLOSE PORT" button from the "RWM PORT MENU" at OIU-12-104B to close the port. The Bagless Transfer Port door should close and lock.</p> <p>The PCS should display a "PORT CLOSING..." message at OIU-12-104B while the port is closing.</p> <p>Pressing the "CLOSE PORT" button should cause the PCS to give an output (DO-07-305/C) to the Bagless Transfer Port (107-DO-07-305), which signals the Bagless Transfer Port to close. Because the manipulator is parked and a drum is mated to the port, the port door should close. The Bagless Transfer Port should close and lock and send a signal (DO-07-305/CS) to the PCS indicating that the port is closed. The PCS should then display a "PORT CLOSED" message at OIU-12-104B.</p> <p>Record the "Lift Table Weight" displayed on the "RWM PORT MENU" screen at OIU-12-104B:</p> <p>Lift Table Weight: <u>642</u> kilograms</p>	<p>Verify that the Bagless Transfer Port door is closed and locked.</p> <p>Verify that a "PORT CLOSING" message is displayed at OIU-12-104B while the port is closing.</p> <p>Verify that a "PORT CLOSED" message is displayed at OIU-12-104B after the port is closed.</p> <p>Verify that the "Lift Table Weight" is recorded in the space provided.</p>	✓		R/W
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Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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Open Bagless Transfer Port

48.	<p>Press the "OPEN PORT" button from the "RWM PORT MENU" at OIU-12-104B to open the port. Because the manipulator is at the park position 2, and a drum has been mated to the port, the port should open.</p> <p>The PCS should display a "PORT OPENING" message at OIU-12-104B while the port is opening.</p> <p>Reaching the weight setpoint and not actuating a Lift Table overtravel switch should cause the PCS to give an output (DO-07-305/O) to the Bagless Transfer Port (107-DO-07-305), which signals the Bagless Transfer Port to open. Because the manipulator is parked and a drum is mated to the port, the port door should open. The Bagless Transfer Port should send a signal (DO-07-305/OS) to the PCS indicating that the port is open. The PCS should then display PORT OPEN message at OIU-12-104B.</p>	<p>Verify that the Bagless Transfer is fully rotated open.</p> <p>Verify that a "PORT OPENING" message is displayed at OIU-12-104B while the port is opening.</p> <p>Verify that a "PORT OPEN" message is displayed at OIU-12-104B after the port is open.</p>	✓		R/V
49.	<p>Record the "Lift Table Weight" and the "Lift Table Weight Setpoint" displayed on the "RWM PORT MENU" screen at OIU-12-104B:</p> <p>Lift Table Weight: <u>537</u> kilograms</p> <p>Weight Setpoint: <u>698</u> kilograms</p>	<p>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" screen.</p>		✓	R/V

Move Transfer Stand to Tray Loading Position and Return

50.	<p>NOTE: The hoist pendant 107-PC-07-008A "PENDANT SELECT" switch should have been turned to the "PEND A" position during test procedure setup. This action should disable hoist pendant 107-PC-07-008B.</p>	<p>Verify that the "ENABLED" indicator for hoist pendant 107-PC-07-008B is NOT illuminated.</p>	✓		R/V
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* see TE #8

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
51.	<p>Activate the hoist pendant 107-PC-07-008B "LOWER" pushbutton to attempt to lower the hoist.</p> <p>Because hoist pendant 107-PC-07-008B is not enabled, the hoist should not lower.</p>	<p>Verify that the hoist does not move when the hoist pendant 107-PC-07-008B "LOWER" pushbutton is activated.</p>	✓		R/V
52.	<p>NOTE: The hoist trolley should have been centered over the Bagless Transfer Port (107-DO-07-305), during test procedure setup.</p> <p>Activate the Hoist/Trolley Pendant 107-PC-07-008A "LOWER" pushbutton to lower the hoist hook until it rests on the cake stand and slack is noted in the hoist chain.</p> <p>The "HOIST RAISED LIMIT" indicator on the Hoist/Trolley pendants (107-PC-07-008A and 107-PC-07-008B) should NOT be illuminated, indicating that the hoist is NOT fully raised.</p>	<p>Visually verify that the hoist hook is lowered so that it rests on top of the cake stand.</p> <p>Verify that hoist "RAISED LIMIT" indicator is NOT illuminated on hoist pendants 107-PC-07-008A and 107-PC-07-008B.</p>	✓		R/V
53.	Manually attach the hoist hook to the non-compliant item transfer stand.	Verify that the hoist hook is securely attached to the non-compliant item transfer stand	✓		R/V
54.	<p>Activate the Hoist/Trolley Pendant (107-PC-07-008A) "RAISE" pushbutton to raise the hoist with the non-compliant item transfer stand at least one foot.</p> <p>FWD REV</p>	<p>Visually verify that the hoist with the non-compliant item transfer stand rise approximately one foot.</p> <p>FWD</p>	✓		R/V
55.	<p>Press the "LEFT" and "RIGHT" pushbuttons on the Hoist/Trolley Pendant (107-PC-07-008A) to attempt to move the Hoist Trolley left and right.</p> <p>Because the Hoist is not fully raised, pressing the "LEFT" and "RIGHT" pushbuttons should have no effect on the Hoist Trolley.</p> <p>R/V 8/12/07</p>	<p>Verify that pressing the "LEFT" and "RIGHT" pushbuttons has no effect on the Hoist Trolley.</p> <p>REV</p>	✓		R/V
56.	<p>Activate the Hoist/Trolley Pendant (107-PC-07-008A) "RAISE" pushbutton as needed until the Hoist with non-compliant item transfer stand is fully raised.</p> <p>The Hoist/Trolley Pendant "RAISED LIMIT" indicator should be illuminated, indicating that the Hoist is fully raised.</p>	<p>Visually verify that the Hoist is fully raised.</p> <p>Verify that the "RAISED LIMIT" indicator is illuminated.</p>	✓		R/V

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
57.	<p>Activate the Hoist/Trolley Pendant (107-PC-07-008A) "LEFT" pushbutton as needed to energize the Hoist motor (107-CR-07-301C/M1) left to move the Hoist to the Tray Loading Position.</p> <p><i>REV</i> <i>Riv 8/11/21</i></p> <p>The Hoist position switch 07-ZS-830B should be activated, and the Hoist/Trolley Pendant "LOAD" indicator should be illuminated, indicating that the Hoist is positioned at the Tray Loading Position.</p>	<p>Visually verify that the Hoist is positioned at the Tray Loading Position.</p> <p>Verify that the "LOAD" indicator is illuminated.</p>	✓		<i>Riv</i>
58.	<p>Using Hoist/Trolley Pendant (107-PC-07-008A), return the non-compliant item transfer stand to the drum.</p>	<p>Verify that the non-compliant item transfer stand is placed back in the drum.</p>	✓		<i>Riv</i>
59.	<p>Return the hoist trolley to the centered position over the Bagless Transfer Port.</p> <p>The Hoist/Trolley Pendant "PORT" indicator should be illuminated, indicating that the Hoist is positioned at the Tray Loading Position.</p>	<p>Verify that the hoist trolley is at the Port position centered over the Bagless Transfer Port.</p> <p>Verify that the Hoist/Trolley Pendant "PORT" indicator is illuminated.</p>	✓		<i>Riv</i>
60.	<p>Lower the stand into the drum and release the hook.</p>	<p>Verify that the hook is released.</p>	✓		<i>Riv</i>
61.	<p>Fully raise the hoist.</p>	<p>Verify that the hoist is fully raised.</p>	✓		<i>Riv</i>
Close Bagless Transfer Port					
62.	<p>Press the "CLOSE PORT" button from the "RWM PORT MENU" at OIU-12-104B to close the port. Because the manipulator is at park position 2, the port should close.</p> <p>The PCS should display a "PORT CLOSING..." message at OIU-12-104B while the port is closing.</p> <p>Because the manipulator is parked, the port door should close. The Bagless Transfer Port should send a signal (DO-07-305/CS) to the PCS indicating that the port is closed and drum released. The PCS should then display a "PORT CLOSED" message at OIU-12-104B.</p>	<p>Verify that the Bagless Transfer is closed.</p> <p>Verify that a "PORT CLOSING..." message is displayed at OIU-12-104B while the port is closing.</p> <p>Verify that a "PORT CLOSED" message is displayed at OIU-12-104B after the port is closed.</p>	✓		<i>Riv</i>

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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63.	Press the "MAIN MENU" button at OIU-12-104B to return to the "TRU SORTING GLOVEBOX MAIN MENU" screen.	Verify that the "TRU SORTING GLOVEBOX MAIN MENU" screen is displayed at OIU-12-104B.	✓		R/W
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Lift Table "Fails to Lower" Alarm

64.	Change register T4:137 (Lift Table Fails to Lower Timer) from 2 min to 5 sec. <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> T4:137 5 sec T4:137	Verify that register T4:137 is set for 5 sec.	✓		R/W
65.	Press the "START DRUM EXIT" button from the "RWM PORT MENU" at OIU-12-104B. Pressing this button should cause the PCS to energize the Lift Table motor (107-LT-09-203B/M1) to lower the Lift Table. The "DRUM EXIT IN PROGRESS..." message should be displayed at OIU-12-104B.	Verify that the Lift Table begins to lower. Verify that the "DRUM EXIT IN PROGRESS" message is displayed at OIU-12-104B.	✓		R/W
66.	A "Sequence Failed" alarm should be displayed.	Verify that a "Sequence Failed" alarm is displayed.	✓		R/W
67.	ALARM ACKNOWLEDGEMENT SEQUENCE: Acknowledge the "Lift Table (203B) Fails to Lower" alarm.	Verify that the alarm has been acknowledged.	✓		R/W
68.	Open the 480 vac disconnect to Lift Table LT-203B conveyor motor after the conveyor has started.	Verify that the 480 vac disconnect is open.	✓		R/W

Lift Table "Conveyor Reverse Failed" Alarm

69.	A "Sequence Failed" alarm should be displayed.	Verify that a "Sequence Failed" alarm is displayed.	✓		R/W
70.	ALARM ACKNOWLEDGEMENT SEQUENCE:	Verify that the alarm has been acknowledged.	✓		R/W

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
	Acknowledge the "Lift Table (203B) Conv. Rev. Failed" alarm.				
71.	Restore power to the LT-203B conveyor motor. The drum on the Lift Table conveyor should move and "Drum at End of Conveyor" position switch (09-ZS-243E) should be activated, indicating that the drum is at the AGV end of the conveyor. <i>Not manually break</i>	Visually Verify that the Lift Table is at the AGV end of the conveyor. Verify that the AGV Height "Drum at End of Conveyor" indicator (09-ZL-243E) is illuminated.	✓		R/V
72.	Force the AGV status bit TRUE.	Verify that the AGV bit is TRUE.	✓		R/V
Return Drum to Bagless Transfer Port					
73.	Press the "START DRUM ENTRY" button from the "RWM PORT MENU" at OIU-12-104B to return the drum to the Bagless Transfer Port. A "DRUM ENTRY IN PROGRESS..." message should be displayed at OIU-12-104B.	Verify that a "DRUM ENTRY IN PROGRESS..." message is displayed at OIU-12-104B.	✓		R/V
74.	The drum should move under the Bagless Transfer Port and the PCS should raise the lift table at slow speed until the drum contacts the port. Because the drum has been mated to the port, the Drum Entry Sequence is complete and a "DRUM ENTRY COMPLETE" message should be displayed at OIU-12-104B.	Verify that the drum moves beneath the Bagless Transfer Port and is mated to the port. Verify that a "DRUM ENTRY COMPLETE" message is displayed at OIU-12-104B.	✓		R/V
75.	Unforce all LCU 103 registers using the Allen Bradley PLC Software.	Verify that all LCU 103 registers are unforced.	✓		R/V
76.	Restore register T4:137 to 2 minutes.	Verify that the register is set to 2 minutes.	✓		R/V
77.	Press the "MAIN MENU" button at OIU-12-104B to return to the "TRU SORTING GLOVEBOX MAIN MENU" screen.	Verify that the "TRU SORTING GLOVEBOX MAIN MENU" screen is displayed at OIU-12-104B.	✓		R/V
TEST CASE 13021A-86.33 COMPLETE					

TEST CASE 13021A-86.34 TRANSFER CAR OPERATION AND INTERLOCKS	2
MOVE DRUM TO DELID POSITION	2
Transfer Car Operation, "Drum Tipper Vertical" Interlock	2
Transfer Car Operation, "Drum Tipper Raised" Interlock.....	3
Transfer Car Operation, "Manipulator Parked" Interlock.....	4
Move Drum to Delid Position using Transfer Car.....	5

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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TEST CASE 13021A-86.34 TRANSFER CAR OPERATION AND INTERLOCKS

MOVE DRUM TO DELID POSITION

1.	Unforce all LCU 103 registers using the Allen Bradley PLC Software.	Verify that all LCU 103 registers are unforced.	✓		R/W
2.	Confirm that the "TRU SORTING GLOVEBOX MAIN MENU" screen is displayed at OIU-12-104B. If a sub-menu screen is displayed, select the "MAIN MENU" menu choice to return to the "TRU SORTING GLOVEBOX MAIN MENU". A "SYSTEM INITIALIZED" message should be displayed.	Verify that the "TRU SORTING GLOVEBOX MAIN MENU" screen is displayed at OIU-12-104B. Verify that a "SYSTEM INITIALIZED" message is displayed.	✓		R/W

Transfer Car Operation, "Drum Tipper Vertical" Interlock

3.	Press the "TRANSFER CAR MENU" button from the "TRU SORTING GLOVEBOX MAIN MENU" at OIU-12-104B.	Verify that the "TRANSFER CAR MENU" screen is displayed.	✓		R/W
4.	Force LCU 103 register ZS329 to indicate that the "Drum Tipper Grab Vertical" position switch (07-ZS-329) is activated to simulate the Drum Tipper Grab "Not Vertical" condition. Record the forced register status below: <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <u>Register</u> <u>Forced Status</u> <u>Method of Confirmation</u> </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> ZS329 <u>1</u> <u>FI 22/10</u> </div>	Verify that register ZS329 is forced activated. Verify that the forced register status is recorded in the space provided.	✓		R/W
5.	Press the "DELID/TIPPER" button from the "TRANSFER CAR MENU" at OIU-12-104B.	Verify that the "DELID/TIPPER" button has been pressed.	✓		R/W
6.	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

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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7.	Unforce LCU 103 register ZS329. Because the Drum Tipper Grab is vertically positioned, the "Drum Tipper Grab Vertical" position switch (07-ZS-329) should be activated. <i>not NW 8/17/97</i>	Verify that register ZS329 is unforced. Verify that position switch 07-ZS-329 is activated. <i>Not</i>	✓		<i>R/V</i>
Transfer Car Operation, "Drum Tipper Raised" Interlock <i>728A</i>					
8.	Manually activate the Drum Tipper (DH-07-303) Lowered position switch (ZS-328B) to simulate the Drum Tipper Lowered Condition. <i>Force ZS328A activated to simulate Tipper not raised. F123106 NW 8/17/97</i>	Verify that position switch ZS-328B is manually activated. <i>Forced</i>	✓		<i>R/V</i>
9.	Press the "DELID/TIPPER" button from the "TRANSFER CAR MENU" at OIU-12-104B.	Verify that the "DELID/TIPPER" button has been pressed.	✓		<i>R/V</i>
10.	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.	Verify that the Transfer Car does not move.	✓		<i>R/V</i>
11.	Return position switch (ZS-328B) to normal. <i>UNforce ZS-328A NW 8/17/97</i>	Verify position switch (ZS-328B) is returned to normal. <i>Verify ZS-328A is unforced</i>	✓		<i>R/V</i>

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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Transfer Car Operation, "Manipulator Parked" Interlock																				
12.	<p>Force the TRU Sorting Glovebox Waste Manipulator (107-EM-07-301) position switch registers (ZS823A, ZS823B, ZS823C, ZS823D) not activated to indicate that the manipulator is not at park position 1 or at park position 2 and that the manipulator arms are not parked.</p> <p>Record the forced register status in the spaces provided below:</p> <table border="1"> <thead> <tr> <th>Register</th> <th>Forced Status</th> <th>Method of Confirmation</th> </tr> </thead> <tbody> <tr> <td>ZS823A</td> <td><u>0</u></td> <td><u>F! 22116</u></td> </tr> <tr> <td>ZS823B</td> <td><u>0</u></td> <td><u>F! 22117</u></td> </tr> <tr> <td>ZS823C</td> <td><u>0</u></td> <td><u>F! 23100</u></td> </tr> <tr> <td>ZS823D</td> <td><u>0</u></td> <td><u>F! 23101</u></td> </tr> </tbody> </table>	Register	Forced Status	Method of Confirmation	ZS823A	<u>0</u>	<u>F! 22116</u>	ZS823B	<u>0</u>	<u>F! 22117</u>	ZS823C	<u>0</u>	<u>F! 23100</u>	ZS823D	<u>0</u>	<u>F! 23101</u>	<p>Verify that registers ZS823A, ZS823B, ZS823C, and ZS823D are forced not activated.</p> <p>Verify that the register status is recorded in the spaces provided.</p>	✓		P/W
Register	Forced Status	Method of Confirmation																		
ZS823A	<u>0</u>	<u>F! 22116</u>																		
ZS823B	<u>0</u>	<u>F! 22117</u>																		
ZS823C	<u>0</u>	<u>F! 23100</u>																		
ZS823D	<u>0</u>	<u>F! 23101</u>																		
13.	Press the "DELID/TIPPER" button from the "TRANSFER CAR MENU" at OIU-12-104B.	Verify that the "DELID/TIPPER" button has been pressed.	✓			R/W														
14.	The Manipulator Parked condition functions as an interlock for Transfer Car Operation.	Verify that the Transfer Car does not move.	✓			R/W														
15.	<p>Unforce registers ZS823A and ZS823B.</p> <p>The Manipulator arms parked registers, ZS823C and ZS823D should continue to indicate that the Manipulator arms are not parked.</p>	Verify that registers ZS823A and ZS823B are unforced.	✓			R/W														
16.	Press the "DELID/TIPPER" button from the "TRANSFER CAR MENU" at OIU-12-104B.	Verify that the "DELID/TIPPER" button has been pressed.	✓			R/W														

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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17.	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
18.	Unforce registers ZS823C and ZS823D. The Manipulator arms parked registers, ZS823C and ZS823D should indicate that the Manipulator arms are parked.	Verify that registers ZS823C and ZS823D are unforced.	✓		R/W

Move Drum to Delid Position using Transfer Car

19.	Press the "ENTRY GLOVEBOX" button from the "TRANSFER CAR MENU" at OIU-12-104B. The "TRANSFER CAR MOVING TO ENTRY GLOVEBOX" message should be displayed on the "TRANSFER CAR MENU" at OIU-12-104B while the Transfer Car is in motion.	Verify that the "ENTRY GLOVEBOX" button has been pressed. Verify that the "TRANSFER CAR MOVING TO ENTRY GLOVEBOX" message is displayed while the Transfer Car is moving.		N/A	
20.	The Transfer Car should reach the TRU Entry Glovebox position. The "TRANSFER CAR AT ENTRY GLOVEBOX" message should be displayed on the "TRANSFER CAR MENU" at OIU-12-104B. Verify that the "TRANSFER CAR AT ENTRY GLOVEBOX" message is displayed.	Verify that the Transfer Car is at the Entry position. Verify that the "TRANSFER CAR AT ENTRY GLOVEBOX" message is displayed.		N/A	
21.	Transfer or otherwise position the 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

Step #	TEST PROCEDURE STEPS HNF-SD-W026-ATR-034 Rev. 0	EXPECTED OUTPUT	PASS ✓	FAIL ✓	WITNESS (initial)
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22.	<p>Press the "DELID/TIPPER" button from the "TRANSFER CAR MENU" at OIU-12-104B.</p> <p>The Transfer Car should smoothly accelerate and move towards the Delid position.</p> <p>The "TRANSFER CAR MOVING TO DELID POSITION" message should be displayed on the "TRANSFER CAR MENU" at OIU-12-104B while the Transfer Car is in motion.</p>	<p>Verify that the "DELID/TIPPER" button has been pressed.</p> <p>Verify that the Transfer Car smoothly accelerates and move towards the Delid position.</p> <p>Verify that the "TRANSFER CAR MOVING TO DELID POSITION" message is displayed.</p>	✓		P/V
23.	<p>The Transfer Car should reach the Delid position, smoothly decelerate, and stop.</p> <p>The "TRANSFER CAR AT DELID POSITION" message should be displayed on the "TRANSFER CAR MENU" at OIU-12-104B.</p>	<p>Verify that the Transfer Car is stopped at the Delid position.</p> <p>Verify that the "TRANSFER CAR AT DELID POSITION" message is displayed.</p>		✓	P/V
24.	<p>Press the "MAIN MENU" menu button from the "TRANSFER CAR MENU" at OIU-12-104B to return to the "TRU SORTING GLOVEBOX MAIN MENU".</p>	<p>Verify that the "TRU SORTING GLOVEBOX MAIN MENU" screen is displayed at OIU-12-104B.</p>	✓		P/V
25.	<p>Unforce all LCU 103 registers using the Allen Bradley PLC Software.</p>	<p>Verify that all LCU 103 registers are unforced.</p>	✓		P/V
TEST CASE 13021A-86.34 COMPLETE					

x see TE #339