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System Design Description for Portable 1,000 CFM Exhauster Skids POR-007/Skid E and POR- 008/Skid F

OD Nelson

NHC, Richland, WA 99352

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Abstract: Provides the system design description for the 1,000 CFM Portable Exhauster skids. The different control modes are described: flow, fan inlet pressure, and high vacuum.

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7/25/98
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Approved for Public Release

SYSTEM DESIGN DESCRIPTION

FOR

PORTABLE 1,000 CFM EXHAUSTER SKIDS

POR-007-SKID E

AND

POR-008-SKID F

Document Identifier (DI): HNF-2934

Revision 0

July 23, 1998

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APPENDIX A - ALLEN-BRADLEY (A-B) SLC500 PLC PROGRAM PRINTOUT

1 INTRODUCTION

1.1 PURPOSE

The primary purpose of the two 1,000 SCFM Exhauster Skids, POR-007-SKID E and POR-008-SKID F is to provide backup to the waste tank primary ventilation systems for tanks 241-C-106 and 241-AY-102, and the AY-102 annulus in the event of a failure during the sluicing of tank 241-C-106 and subsequent transfer of sluiced waste to 241-AY-102. This redundancy is required since both of the tank ventilation systems have been declared as Safety Class systems.

1.2 SCOPE

One Exhauster Skid will provide the tank ventilation backup function for the first year of sluicing, at which time it will be returned to the Salt Well pumping group provided it has not actually been put into service.

1.3 PROCESS OVERVIEW

The exhauster skids E and F are identical and so the following discussions will speak of only one skid. The exhauster skid may be used in one of two modes: tank dome space ventilation or tank annulus ventilation. The difference lies primarily in the process variable used to control speed of the fan. For tank dome space ventilation (Flow Control Mode), the exhauster skid stack flow is used as the process variable. For tank annulus ventilation (Pressure Control), the exhauster skid fan inlet pressure (vacuum) is used. The instrumentation and controls for the skid operations will be discussed in more detail in later sections of this document.

1.3.1 TANK DOME SPACE VENTILATION

For tank C-106 dome space ventilation, the exhauster skid suction is connected to tank riser 19B and pulls air out of the tank dome space through the skid-mounted equipment in the following order:

- Manual flow control valve (VTP-V-135)
- 1st transition piece
- Demister (VTP-HX-001)
- Pre-filter section (VTP-FLT-001)
- Test section 1
- HEPA section 1 (VTP-FLT-002)
- Test section 2
- HEPA section 2 (VTP-FLT-003)
- 2nd transition piece
- Flow control valve (VTP-V-136)
- Expansion joint
- Exhaust fan (VTP-EF-001)
- Skid stack

See drawing H-14-102610, sheet 1, for the skid P&ID.

A glycol heater (VTP-HTR-001) is used to heat the tank air after it travels through the demister. The glycol recirc pump (VTP-P-001) is used to recirculate the glycol through the heater and the heater coil in the demister.

Any condensate from any of the skid sections, including the exhaust fan, drains into the seal pot (VTP-SP-001). A seal pot pump (VTP-P-004) is used to pump the condensate out of the seal pot.

1.3.2 TANK ANNULUS VENTILATION

For tank annulus ventilation, the exhauster skid suction is connected to a suitable tank annulus riser and pulls air out of the tank annulus and through the skid-mounted equipment described in the previous section.

1.4 DEFINITIONS

Acronym or Abbreviation	Description
HMI	Human-Machine Interface is a PC running HMI application software (e.g., Wonderware, Intellution or Citect) (JCB 7/25/98)
PLC	Programmable Logic Controller is a microprocessor based machine which executes user-defined logic in order to control a work process (e.g., Allen-Bradley SLC500, Modicon Quantum or TI545) (JCB 7/25/98)
ROC	Rate of Change

2 GENERAL DESCRIPTION

The exhauster skid, in addition to the mechanical equipment described above, is provided with several instrumentation and control devices. There are transmitters used to measure several process variables, panel mounted indicators to display the process variables, panel mounted control switches, message view displays for alarm indication and a heat-trace cabinet which houses alarm trips for plenum pressures and flows.

The process instrumentation and control devices provide input and output (I/O) signals to the PLC mounted inside the control panel. The PLC is programmed to use either exhaust flow or fan inlet vacuum as its process variable input to be controlled, for use with primary tank or annulus ventilation, respectively. It is programmed to provide safety interlocks, as well as, alarm messages which are shown on the message view displays. An unacknowledged alarm on the PLC will cause the alarm beacon mounted high on the skid to rotate and flash. Acknowledgment of alarms is done at the message view displays.

Electrical equipment includes a main skid disconnect switch and disconnect switches for the exhaust fan and glycol heater. There is a variable speed drive mounted inside the control panel for controlling the exhaust fan speed. A mini-power center provides for instrument and control power.

INSTRUMENTATION

The following table describes the skid instrumentation and lists each instrument by tagname along with any alarms associated with the process variable.

TABLE 2.1 - SKID INSTRUMENTATION¹

Item	Tagname	Description	Manufacturer & Model No.	Range Or Setpoint	Alarms	Alarm Setpoints
1	VTP-PDT-170A	Plenum Pressure Transmitter (Mounted on Exhaust Fan Suction)	Yokogawa EJA-110A	0 to -20" WC (0" = 4mA) (-20" = 20mA)	PAH-170A (V) PAH-170A (HV) PAL-170A	-12.75" W.C./ -19.5" W.C. -6.0" W.C.
2	VTP-PDT-170B	Plenum Pressure Transmitter (Mounted on Skid Inlet)	Yokogawa EJA-110	-5" to +5" WC (-5" = 4mA) (+5" = 20mA)	PAH-170B PAL-170B	+5.0" W.C. -3.5" W.C.
3	VTP-PDT-177	Heater/Demister Differential Pressure Transmitter	Yokogawa EJA-120	0-2" WC (0" = 4mA) (2" = 20mA)	N/A	N/A
4	VTP-TE-176	Inlet Temperature Thermocouple	Omega (Model No. not visible)	Type J	N/A	N/A
5	VTP-PDT-178	Prefilter Differential Pressure Transmitter	Yokogawa EJA-120	0-2" WC (0" = 4mA) (2" = 20mA)	PDAH-178	1" W.C.
6	VTP-TE-179	HEPA Filter #1 Inlet Temperature Thermocouple	Omega (Model No. not visible)	Type J	TAH-179 TAL-179	190° F 40° F
7	VTP-PDT-180	HEPA Filter #1 Differential Pressure Transmitter	Yokogawa EJA-110	0-10" WC (0" = 4mA) (10" = 20mA)	PDAHH-180 PDAH-180 PDAL-180 ROC-180	5.4" W.C. 4.5" W.C. 0.1" W.C. 0.5" W.C.

¹Alarm tags from P&ID H-14-102610. Alarm Setpoints from System Variables drawing H-14-102608. Descriptions match nameplates and steel tags on skid.

Title: Portable 1,000 CFM Exhausters
System Design Description (SDD)

DI: HNF-2934
Rev. 0

Item	Tagname	Description	Manufacturer & Model No.	Range Or Setpoint	Alarms	Alarm Setpoints
8	VTP-PDT-181	Filter Train Differential Pressure Transmitter	Yokogawa EJA-110	0-6" WC (0" = 4mA) (6" = 20mA)	PDAHH-181 PDAL-181	5.4" W.C. 0.1" W.C.
9	VTP-PDT-182	HEPA Filter #2 Differential Pressure Transmitter	Yokogawa EJA-110	0-6" WC (0" = 4mA) (6" = 20mA)	PDAHH-182 PDAH-182 PDAL-182 ROC-182	3.7" W.C. 3.2" W.C. 0.1" W.C. 0.5" W.C.
10	VTP-TE-183	Stack Temperature Thermocouple	Omega (Model No. not visible)	Type J	N/A	N/A
11	VTP-FT-184	Stack Flow Transmitter (Calculated from Differential Pressure)	Yokogawa EJA-120	0-1194 SCFM (0-4" WC)	FAH-184 FAH-184 (V/HV) FAL-184 FAL-184 (V/HV)	1100 SCFM 1000 SCFM 470 SCFM 675 SCFM
12	VTP-LT-205	Glycol Expansion Tank Level Transmitter	Drexelbrook Xmtr: 408-8202-001 Probe: 270-1-968	0-100%	LAL-205	50%
13	VTP-LT-185	Seal Pot Level Transmitter	Drexelbrook Xmtr: 408-8232-001 Probe:	0-100%	LAH-185 LAL-185	80% 30%
14	VTP-TS-206	Glycol Temperature Switch		70° F	N/A	N/A
15	VTP-TI-176	Inlet Temperature Indicator	Wilkerson DIS474	Type J	N/A	N/A
16	VTP-PDI-177	Heater/Demister Differential Pressure Indicator	Wilkerson DIS471	0-2" WC	N/A	N/A
17	VTP-PDI-178	Prefilter Differential Pressure Indicator	Wilkerson DIS471	0-2" WC	N/A	N/A
18	VTP-TI-179	HEPA Filter #1 Inlet Temperature Indicator	Wilkerson DIS474	Type J	N/A	N/A
19	VTP-PDI-180	HEPA Filter #1 Differential Pressure Indicator	Wilkerson DIS471	0-10" WC	N/A	N/A

Item	Tagname	Description	Manufacturer & Model No.	Range Or Setpoint	Alarms	Alarm Setpoints
20	VTP-PDI-181	Filter Train Differential Pressure Indicator	Wilkerson DIS471	0-6" WC	N/A	N/A
21	VTP-PDI-182	HEPA Filter #2 Differential Pressure Indicator	Wilkerson DIS471	0-6" WC	N/A	N/A
22	VTP-TI-183	Stack Temperature Indicator	Wilkerson DIS474	Type J	N/A	N/A
23	VTP-FI-184	Stack Flow Indicator	Wilkerson DIS471	0-1194 SCFM	N/A	N/A
24	VTP-LI-205	Glycol Expansion Tank Level Indicator	Wilkerson DIS471	0-100%	N/A	N/A
25	VTP-LI-185	Seal Pot Level Indicator	Wilkerson DIS471	0-100%	N/A	N/A

2.1 CONTROLS

The following table describes the skid controls and lists each device by tagname.

TABLE 2.2 - SKID CONTROLS

Item	Tagname	Description
1	VTP-PB-101	Exhaust Fan Start Pushbutton
2	VTP-PB-102	Exhaust Fan Stop Pushbutton
3	VTP-HS-103	Exhaust Fan Off/Enable Selector Switch
4	VTP-HS-101	Seal Pot Pump Hand/Auto Key Switch
5	VTP-HS-102	Glycol Pump On/Off Selector Switch
6	VTP-SS-102	Auto Pump ½ Control Selector Switch
7	VTP-PB-104	CAM Bypass Pushbutton

2.2 USER CHARACTERISTICS

The exhaust skid, while in the primary tank ventilation system backup role for C-106 and AY-102, is intended to be controlled locally by an operator. The operator will start and stop the exhaust fan under administrative control. An instrument technician or engineer will be required to change values in the PLC's data tables depending upon the desired mode of operation. This will be done locally by connecting a laptop loaded with the appropriate PLC programming software to the skid PLC. The technician or engineer will then make the appropriate data table changes and verify that the appropriate mode of operation has been selected. This will also require the examination of certain data table fields.

Since an HMI is not being utilized for control purposes, passwords are not required and all security access issues must be addressed in the administrative procedures.

3 SPECIFIC REQUIREMENTS

3.1 PROCESS REQUIREMENTS

The exhauster skid shall be able to exhaust 1000 SCFM from the waste tank dome space on a continuous basis. The High Efficiency Mist Eliminator is provided to remove any entrained moisture immediately upon reaching the exhauster. The glycol heater is provided to raise the relative humidity of the air by heating it before it is introduced to the HEPA filters. The HEPA filters trap any airborne contamination before the tank air is exhausted to the atmosphere.

3.2 INTERFACE REQUIREMENTS

For the W-320 backup function, the exhauster skid will operate as a stand-alone unit and is not required to interface remotely with any of the tank farm SCADA systems, such as, TMACS, CASS or the MPSS.

A local operator interface is required to allow the operator to operate the exhauster skid, including changing operational parameters and acknowledging alarms.

4 REFERENCES

4.1 "HNF-2686 ATP For A Continuous Use, Portable 1000 CFM Exhauster POR-007-SKID E"

4.2 "HNF-2687 ATP For A Continuous Use, Portable 1000 CFM Exhauster POR-008-SKID F"

5 DESCRIPTION OF PLC CONTROL AND PROGRAM

5.1 GENERAL

The PLC program controlling exhauster operation has three operational modes. These modes differ in the process variable that is used to provide feedback to the variable speed drive for the fan motor. Changing modes is accomplished by changing the value of two digital values in the processor. When a new mode is selected, portions of the PLC program that are required for the mode are enabled and the appropriate values are copied to alarm setpoint registers.

There are two basic modes of control for the skid: Flow Control Mode (see Section 5.2) and Pressure Control Mode (see Section 5.3). If Flow Control Mode is to be used then PDT-170B, mounted on the exhauster inlet, must be connected to the appropriate transmitter connection port. If the Pressure Control Mode is to be used then PDT-170A, mounted on the exhauster fan inlet, is connected to the same port instead. This way only one of these two transmitters is connected to the PLC at any one time. Verification that the correct one is plugged in must be done as part of the setup procedure for the skid depending on the desired mode of operation.

Following are descriptions of each mode of control and the PLC register changes required to start each mode.

5.2 FLOW CONTROL MODE

Flow Control mode should be used when the exhauster is connected to a primary tank space where it is desired to maintain a relatively high flow under a light vacuum load.

In this mode, the fan speed is controlled to maintain the flow rate at the value specified in the PLC floating register F8:6. This value is entered in SCFM and is currently set to 1000. PID control is utilized to modulate the control signal to the variable speed drive in order to achieve the desired setpoint. A deadband is used to avoid oscillation around the setpoint.

Enter the Flow Control Mode of operation by setting bits B3/0 and B3/1 to zero (0). PDT-170B must be installed and connected to the PLC instead of PDT-170A for this mode to operate. PDT-170B is mounted on the exhauster inlet.

5.3 PRESSURE CONTROL MODE

Pressure Control mode should be used when the exhauster is connected to a double-shell tank annulus ("Dry Annulus Operation"). (CAUTION: The Pressure Control Mode is not intended and should never be used for ventilating the primary tank space.)

This mode uses the fan inlet pressure from transmitter PDT-170A as feedback to the control routine. The pressure/vacuum setpoint is entered in PLC floating register F8:7. The value is entered in inches of water column, and is currently set to 12" WC. (CAUTION: Values greater than 13.75" WC will cause the seal pot contents to flow into the plenum.) PID control is utilized to modulate the control signal to the variable speed drive in order to achieve the desired setpoint. A deadband is used to avoid oscillation around the setpoint.

Enter this mode of operation by setting bits B3/0 to one (1) and B3/1 to zero (0). PDT-170A must be installed and connected to the PLC instead of PDT-170B for this mode to operate. Some alarm setpoints are adjusted to take account for the change in instrumentation and operating conditions. Alarm setpoints used with this mode are marked with (V) in Table 2.1.

5.4 HIGH-VACUUM MODE

High-Vacuum mode should be used only when the seal pot drains inside the filter housing have been suitably plugged, when it is intended to operate the exhauster at a maximum vacuum to increase throughput.

High-vacuum mode is designed to maximize exhauster throughput and inlet vacuum by setting the variable speed drive at a maximum output value. PID control is bypassed, and the normal output register of the PID instruction is set to 16384 (maximum).

Enter this mode of operation by setting bits B3/0 and B3/1 to one (1). PDT-170A must be installed and connected for this mode to operate. Some alarm setpoints are adjusted to take account for the change in instrumentation and operating conditions. Alarm setpoints used with this mode are marked with (HV) in Table 2.1.

5.5 OPERATIONAL INTERLOCKS

Fan operation interlocks are a subset of the alarms list in Table 2.1. Some alarms shut down the system immediately, while others shut down the system only after the interlock alarm is true for a preset amount of time. Usually only one interlock alarm is required to shut down the system, but in some cases a combination of interlock alarms is required.

Interlock alarm tags and applicable time delays are shown in Table 5.1.

TABLE 5.1 - INTERLOCKS

Item	Alarm Tag	Description	Delay (sec)
1	ROC-180	FILTER 1 DP ROC	3
2	PAL-170B	PLENUM 1 PRESS LO	0
3	FAL-184	STACK FLOW LO	30
4	FAH-184	STACK FLOW HI	15
5	PDAL-180	FILTER 1 DP LO	N/A
6	PDAHH-180	FILTER 1 DP HI HI	N/A
7	PDAL-182	FILTER 2 DP LO	N/A
8	PDAHH-182	FILTER 2 DP HI HI	N/A
9	PDAL-181	FILTER 1&2 DP LO	N/A
10	PDAHH-181	FILTER 1&2 DP HI HI	N/A
11	PAH-170A	INLET VACUUM HI	5
12	LAH-185	SEAL POT LEVEL HI	N/A
13	LAL-185	SEAL POT LEVEL LO	N/A
14	PAH-170B	PLENUM 1 PRESS HI	10
15	ROC-182	FILTER 2 DP ROC	3

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APPENDIX A - ALLEN-BRADLEY (A-B) SLC500 PLC PROGRAM PRINTOUT

Number of Program Files:21

Name	File	Sub-Program Description
	0	[SYSTEM DATA STORAGE HEADER]
	1	[RESERVED AREA]
MAIN	2	MANAGES THE EXECUTION OF SUBROUTINES
STARTUP	3	RUN ON POWER-UP TO INITIALIZE BIT/WORD STATUS
INPUTDATA	4	INPUT FILE TRANSFER TO DATAGRAM (NGO) + WW TRANS?
INTRLK5	5	FAN CONTROL INTERLOCKS
FANCNTRL	6	AIR FLOW PID FAN CNTRL
MSGVIEW	7	HANDLES I/O BETWEEN MESSAGE VIEW TERMINALS AND SLC
SYSSSTAT	8	RETURNS UNACK ALM STATUS AND MOTOR CONTACT ON/OFF
SIMULATE	9	SETS FAN ON BITS AND TURNS OFF DATAGRAM TRANSFER
GLYCOLPMP	10	GLYCOL PUMP CONTROLS AND INTERLOCKS
ERRSTAT	11	SHUTS DOWN MOTOR ON MAJOR FAULT
COUNTER	12	COUNTERS FOR SYSTEM STATUS CHANGES?
FIFO	13	ENABLES AND LOADS FIFO BUFFERS
COUNTER	14	SYSTEM STATUS COUNTERS
CLRFAULT	15	CLEAR ERRORS ON POWER-UP
INLK	16	MORE INTERLOCKS FOR FILE 5
COPY_OUT	17	COPY DATA TO OUTPUT MODULES
FIFOBUFFER	18	LOADS FIFO BUFFERS USED IN RATE OF CHANGE CALCS
SEALFOTMP	19	SEAL FOT PUMP CONTROL
FANCNTRL	20	INLET PRESSURE FAN CNTRL

N20:35/6 - (L)- - File #5 INTRKAS - 14 - (U)- - File #5 INTRKAS - 76 - / - - File #5 INTRKAS - 15 N20:35/7 - (L)- - File #5 INTRKAS - 16 - (U)- - File #5 INTRKAS - 77 N20:35/8 - (L)- - File #5 INTRKAS - 17 - (U)- - File #5 INTRKAS - 45, 78 N20:35/9 - (L)- - File #5 INTRKAS - 19 - (U)- - File #5 INTRKAS - 79 - / - - File #5 INTRKAS - 20 N20:35/10 - (L)- - File #5 INTRKAS - 21 - (U)- - File #5 INTRKAS - 80 N20:35/11 - (L)- - File #5 INTRKAS - 22 - (U)- - File #5 INTRKAS - 46, 81 N20:35/12 - (L)- - File #5 INTRKAS - 24 - (U)- - File #5 INTRKAS - 82 - / - - File #5 INTRKAS - 25 N20:35/13 - (L)- - File #5 INTRKAS - 26 - (U)- - File #5 INTRKAS - 83 N20:35/14 - (U)- - File #5 INTRKAS - 84 N20:35/15 - (L)- - File #5 INTRKAS - 27 - (U)- - File #5 INTRKAS - 85 - / - - File #10 GLYCOLAMP - 0, 1 FILE N20:35 LEN:100 - FFL - File #13 FIFO - 10 FILE N20:35 LEN:30 - FFL - File #18 FIFOBUFFER - 1 FILE N20:35 LEN:3 - FLL - File #3 STARTUP - 5 COP - File #5 INTRKAS - 116 N13:0 - NOT - File #3 STARTUP - 2 FLL - File #2 MAIN - 20 File #3 STARTUP - 5 MMM - File #3 STARTUP - 11 File #7 MESSAGEVIEW - 1 File #16 INTRK - 18, 23 N13:0/0 - - - File #13 FIFO - 0, 1, 2, 3 File #14 COUNTER - 0 FILE N13:0 LEN:110 - FLL - File #2 MAIN - 20 File #3 STARTUP - 5 FILE N13:0 LEN:7 - FLL - File #2 MAIN - 20 File #3 STARTUP - 5 N14:36 - FLL - File #2 MAIN - 20 File #3 STARTUP - 5 N35:0 - FLL - File #2 MAIN - 20 File #3 STARTUP - 5	CS:0 [RES] CS:0 - RES - File #3 STARTUP - 6 CS:0.NCC - LES - File #15 CLRAFAULT - 1 CS:0.CU - (U)- - File #15 CLRAFAULT - 0 N20:25 (U) 5 N20:42 (U) 12	CS:0 - CTU - File #15 CLRAFAULT B 0 RES - File #3 STARTUP - . N20:25/5 - (L)- - File #6 FANXE 13 File #20 FANE N20:42/12 - (L)- - File #16 INE 16 - (U)- - File #3 STAR
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6	MIL Multiply Source A I:7.0 9 Source B 64 Dest N16:7 576	N16:7 - MM - File #4 INPUTDATA 11 MIL - File #4 INPUTDATA 6
7	MIL Multiply Source A I:8.0 0 Source B 64 Dest N16:8 0	N16:8 - MM - File #4 INPUTDATA 12 MIL - File #4 INPUTDATA 7
8	MIL Multiply Source A I:9.0 0 Source B 64 Dest N16:9 0	N16:9 - MM - File #4 INPUTDATA 13 MIL - File #4 INPUTDATA 8
9	MIL Multiply Source A I:10.0 0 Source B 64 Dest N16:10 0	N16:10 - MM - File #4 INPUTDATA 14 MIL - File #4 INPUTDATA 9
10	MODULE 11 DIAGRAM COP Copy File Source #I:11.0 Dest #N20:28 Length 4	FILE N20:28 LEN:100 - FFL - File #13 FIFO - 10 FILE N20:28 LEN:30 - FFL - File #18 FIFOBUFFER 8 1 FILE N20:28 LEN:30 - ...
	N20:28 - FFL - File #18 FIFOBUFFER - 1 FILE N20:28 LEN:30 - FFL - File #18 FIFOBUFFER - 1	
11	MM WORD? Masked Move Source N16:7 576 Mask 0FC0h Dest N20:24 616	N20:24 - MM - File #4 INPUTDATA 11 File #17 COPY_OUT 2 N20:24/2 - -() - File #6 FANCL N16:7 - MM - File #4 INPUTDATA 11 MIL - File #4 INPUTDATA 6
	N20:24/2 - -() - File #6 FANCL - 5 File #20 FANCL - 7 - - File #2 MAIN - 18 N20:24/3 - -() - File #6 FANCL - 4 File #20 FANCL - 6 -(L) - File #11 ERGSTAT - 3 N20:24/5 - -() - File #6 FANCL - 6 File #20 FANCL - 8 N20:24/6 - - - File #6 FANCL - 4 File #20 FANCL - 6 N20:24/7 - - - File #6 FANCL - 5 File #20 FANCL - 7 N20:24/9 - - - File #6 FANCL - 8 File #20 FANCL - 8 FILE N20:24 LEN:100 - FFL - File #13 FIFO - 10 FILE N20:24 LEN:30 - FFL - File #18 FIFOBUFFER - 1 FILE N20:24 LEN:30 - FFL - File #18 FIFOBUFFER - 1 FILE N20:24 LEN:30 - FFL - File #18 FIFOBUFFER - 1	

12	<p>N20:25/0 --()-- File #10 GLYCOLPMP - 0 -- -- File #10 GLYCOLPMP - 1 N20:25/1 --()-- File #8 SYSSTAT - 2 N20:25/2 --(L)-- File #19 SEALFOOTMP - 0 --(U)-- File #19 SEALFOOTMP - 1 N20:25/3 --()-- File #8 SYSSTAT - 1 N20:25/4 --()-- File #8 SYSSTAT - 0 N20:25/5 --(L)-- File #6 FANCTRL - 13 File #20 FANCTRL - 16 --(U)-- File #3 STARTUP - 7 N20:25/6 -- -- File #10 GLYCOLPMP - 0 -- -- File #5 INTRLS - 32 N20:25/7 --(L)-- File #9 SIMULATE - 0 --(U)-- File #9 SIMULATE - 1 -- -- File #5 INTRLS - 3, 7, 14, 16, 17, 19, 21, 22, 24, 52, 53, 58, 62, 66 File #6 FANCTRL - 0 File #8 SYSSTAT - 1 File #14 COUNTER - 3 File #16 INTRK - 0, 6, 22, 24 File #20 FANCTRL - 0 -- -- File #5 INTRLS - 15, 20, 25, 55, 57 File #6 FANCTRL - 1, 12 File #8 SYSSTAT - 2 File #16 INTRK - 23 File #20 FANCTRL - 1, 15 N20:25/9 -- -- File #16 INTRK - 12, 37 -- -- File #5 INTRLS - 43 N20:25/10 -- -- File #16 INTRK - 12, 38 -- -- File #5 INTRLS - 44 FILE N20:25 LEN:100 - FFL - File #13 FIFO - 10 FILE N20:25 LEN:30 - FFL - File #18 FIFOBUFFER - 1 FILE N20:25 LEN:30 - FFL - File #18 FIFOBUFFER - 1 FILE N20:25 LEN:30 - FFL - File #18 FIFOBUFFER - 1</p>	<p>MM TRANSFER WORD? MM Masked Move Source N16:8 0 Mask OFC0h Dest N20:25 2</p>	<p>N20:25 - MM - File #4 INPUTDATA 12 File #17 COPY_OUT 3 N20:25/0 --()-- File #10 GLYCOLPMP - 0 N16:8 - MM - File #4 INPUTDATA 12 MUL - File #4 INPUTDATA 7</p>
13	<p>N20:26 - MM - File #17 COPY_OUT - 4 N20:26/1 --()-- File #10 GLYCOLPMP - 1 N20:26/4 --()-- File #16 INTRK - 37 N20:26/5 --()-- File #16 INTRK - 38 N20:26/6 -- -- File #16 INTRK - 12 N20:26/7 -- -- File #16 INTRK - 12 N20:26/8 -- -- File #16 INTRK - 16 N20:26/10 -- -- File #16 INTRK - 19 N20:26/11 -- -- File #16 INTRK - 19 FILE N20:26 LEN:100 - FFL - File #13 FIFO - 10 FILE N20:26 LEN:30 - FFL - File #18 FIFOBUFFER - 1 FILE N20:26 LEN:30 - FFL - File #18 FIFOBUFFER - 1 FILE N20:26 LEN:30 - FFL - File #18 FIFOBUFFER - 1</p>	<p>MM TRANSFER WORD? MM Masked Move Source N16:9 0 Mask OFC0h Dest N20:26 0</p>	<p>N20:26 - MM - File #4 INPUTDATA 13 File #16 INTRK - 22, 23 File #17 COPY_OUT N16:9 - MM - File #4 INPUTDATA 13 MUL - File #4 INPUTDATA 8</p>

Rev 0
A-15

N20:35 - FLL - File #3 STARTUP - 5 COP - File #5 INTRLKS - 116 NEQ - File #5 INTRLKS - 113 File #8 SYSSTAT - 0 FILE N20:35/4 LEN:100 - FFL - File #13 FIFO - 10 FILE N20:35/4 LEN:30 - FFL - File #18 FIFOBUFFER - 1 FILE N20:35/4 LEN:3 - FLL - File #3 STARTUP - 5 COP - File #5 INTRLKS - 116			
		STACK FLOW HI LATCH ALARM	
75	N12:0 5	N20:35 5	N20:35/5 - (L)- - File #5 INIRE 11 -(U)- - File #5 INIRE 75 ...
[7:4] N20:35 - FLL - File #3 STARTUP - 5 COP - File #5 INTRLKS - 116 NEQ - File #5 INTRLKS - 113 File #8 SYSSTAT - 0 FILE N20:35/5 LEN:100 - FFL - File #13 FIFO - 10 FILE N20:35/5 LEN:30 - FFL - File #18 FIFOBUFFER - 1 FILE N20:35/5 LEN:3 - FLL - File #3 STARTUP - 5 COP - File #5 INTRLKS - 116			
		FILTER 1 DP LO	
76	N12:0 6	N20:35 6	N20:35/6 - (L)- - File #5 INIRE 14 -(U)- - File #5 INIRE 76 ...
[7:4] N20:35/6 - -/ - - File #5 INTRLKS - 15 FLL - File #3 STARTUP - 5 COP - File #5 INTRLKS - 116 NEQ - File #5 INTRLKS - 113 File #8 SYSSTAT - 0 FILE N20:35/6 LEN:100 - FFL - File #13 FIFO - 10 FILE N20:35/6 LEN:30 - FFL - File #18 FIFOBUFFER - 1 FILE N20:35/6 LEN:3 - FLL - File #3 STARTUP - 5 COP - File #5 INTRLKS - 116			
		FILTER 1 DP HI HI HI	
77	N12:0 7	N20:35 7	N20:35/7 - (L)- - File #5 INIRE 16 -(U)- - File #5 INIRE 77 ...
[7:4] N20:35 - FLL - File #3 STARTUP - 5 COP - File #5 INTRLKS - 116 NEQ - File #5 INTRLKS - 113 File #8 SYSSTAT - 0 FILE N20:35/7 LEN:100 - FFL - File #13 FIFO - 10 FILE N20:35/7 LEN:30 - FFL - File #18 FIFOBUFFER - 1 FILE N20:35/7 LEN:3 - FLL - File #3 STARTUP - 5 COP - File #5 INTRLKS - 116			
		FILTER 1 DP HI	
78	N12:0 8	N20:35 8	N20:35/8 - (L)- - File #5 INIRE 17 -(U)- - File #5 INIRE 45, 78 ...
[7:4] N20:35 - FLL - File #3 STARTUP - 5 COP - File #5 INTRLKS - 116 NEQ - File #5 INTRLKS - 113 File #8 SYSSTAT - 0 FILE N20:35/8 LEN:100 - FFL - File #13 FIFO - 10 FILE N20:35/8 LEN:30 - FFL - File #18 FIFOBUFFER - 1 FILE N20:35/8 LEN:3 - FLL - File #3 STARTUP - 5 COP - File #5 INTRLKS - 116			
		FILTER 2 DP LO	
79	N12:0 9	N20:35 9	N20:35/9 - (L)- - File #5 INIRE 19 -(U)- - File #5 INIRE 79 ...
[7:4] N20:35/9 - -/ - - File #5 INTRLKS - 20 FLL - File #3 STARTUP - 5 COP - File #5 INTRLKS - 116 NEQ - File #5 INTRLKS - 113 File #8 SYSSTAT - 0			

FILE N20:35/9 LEN:100 - FFL - File #13 FIFO - 10 FILE N20:35/9 LEN:30 - FFL - File #18 FIFOBUFFER - 1 FILE N20:35/9 LEN:3 - FLL - File #3 STARTUP - 5 COP - File #5 INTRKLS - 116			
		FILTER 2 DP HI HI	
80	N12:0 10 [7:4]	N20:35 (U) 10	N20:35/10 --(L)-- File #5 INTE 21 --(U)-- File #5 INTE 80 ...
N20:35 - FLL - File #3 STARTUP - 5 COP - File #5 INTRKLS - 116 NEQ - File #5 INTRKLS - 113 File #8 SYSSTAT - 0 FILE N20:35/10 LEN:100 - FFL - File #13 FIFO - 10 FILE N20:35/10 LEN:30 - FFL - File #18 FIFOBUFFER - 1 FILE N20:35/10 LEN:3 - FLL - File #3 STARTUP - 5 COP - File #5 INTRKLS - 116			
		FILTER 2 DP HI	
81	N12:0 11 [7:4]	N20:35 (U) 11	N20:35/11 --(L)-- File #5 INTE 22 --(U)-- File #5 INTE 46, 81 ...
N20:35 - FLL - File #3 STARTUP - 5 COP - File #5 INTRKLS - 116 NEQ - File #5 INTRKLS - 113 File #8 SYSSTAT - 0 FILE N20:35/11 LEN:100 - FFL - File #13 FIFO - 10 FILE N20:35/11 LEN:30 - FFL - File #18 FIFOBUFFER - 1 FILE N20:35/11 LEN:3 - FLL - File #3 STARTUP - 5 COP - File #5 INTRKLS - 116			
		FILTER 1&2 DP LO	
82	N12:0 12 [7:4]	N20:35 (U) 12	N20:35/12 --(L)-- File #5 INTE 24 --(U)-- File #5 INTE 82 ...
N20:35/12 - - /- File #5 INTRKLS - 25 FLL - File #3 STARTUP - 5 COP - File #5 INTRKLS - 116 NEQ - File #5 INTRKLS - 113 File #8 SYSSTAT - 0 FILE N20:35/12 LEN:100 - FFL - File #13 FIFO - 10 FILE N20:35/12 LEN:30 - FFL - File #18 FIFOBUFFER - 1 FILE N20:35/12 LEN:3 - FLL - File #3 STARTUP - 5 COP - File #5 INTRKLS - 116			
83	N12:0 13 [7:4]	N20:35 (U) 13	N20:35/13 --(L)-- File #5 INTE 26 --(U)-- File #5 INTE 83 ...
N20:35 - FLL - File #3 STARTUP - 5 COP - File #5 INTRKLS - 116 NEQ - File #5 INTRKLS - 113 File #8 SYSSTAT - 0 FILE N20:35/13 LEN:100 - FFL - File #13 FIFO - 10 FILE N20:35/13 LEN:30 - FFL - File #18 FIFOBUFFER - 1 FILE N20:35/13 LEN:3 - FLL - File #3 STARTUP - 5 COP - File #5 INTRKLS - 116			
84	N12:0 14 [7:4]	N20:35 (U) 14	N20:35 - FLL - File #3 STARTUP E 5 COP - File #5 INTRKLS E 116 ...
N20:35 - NEQ - File #5 INTRKLS - 113 File #8 SYSSTAT - 0 FILE N20:35/14 LEN:100 - FFL - File #13 FIFO - 10 FILE N20:35/14 LEN:30 - FFL - File #18 FIFOBUFFER - 1 FILE N20:35/14 LEN:3 - FLL - File #3 STARTUP - 5 COP - File #5 INTRKLS - 116			
		GLXCOL LEVEL LOW UNACK ALM	
85	N12:0 15 [7:4]	N20:35 (U) 15	N20:35/15 --(L)-- File #5 INTE 27 --(U)-- File #5 INTE 85 ...

<p>N20:35/15 - - /- - File #10 GLXCOLUMNP - 0, 1 FLL - File #3 STARTUP - 5 COP - File #5 INTRLKS - 116 NEQ - File #5 INTRLKS - 113 File #8 SYSSTAT - 0 FILE N20:35/15 LEN:100 - PFL - File #13 FIFO - 10 FILE N20:35/15 LEN:30 - PFL - File #18 FIFOBUFFER - 1 FILE N20:35/15 LEN:3 - FLL - File #3 STARTUP - 5 COP - File #5 INTRLKS - 116</p>			<p>HIR AIR TEMP HIGH UNACK ALM</p>		
86	N12:1 0 [7:4]	N20:36 (U) 0	N20:36/0 - -(L)- - File #5 INIRE	30	-(U)- - File #5 INIRE
<p>N20:36/0 - - /- - File #10 GLXCOLUMNP - 1 NEQ - File #5 INTRLKS - 113 File #8 SYSSTAT - 0 FILE N20:36/0 LEN:100 - PFL - File #13 FIFO - 10 FILE N20:36/0 LEN:3 - FLL - File #3 STARTUP - 5 COP - File #5 INTRLKS - 116</p>			<p>...</p>		
87	N12:1 1 [7:4]	N20:36 (U) 1	N20:36/1 - -(L)- - File #5 INIRE	32	-(U)- - File #5 INIRE
<p>N20:36 - NEQ - File #5 INTRLKS - 113 File #8 SYSSTAT - 0 FILE N20:36/1 LEN:100 - PFL - File #13 FIFO - 10 FILE N20:36/1 LEN:3 - FLL - File #3 STARTUP - 5 COP - File #5 INTRLKS - 116</p>			<p>...</p>		
88	N12:1 2 [7:4]	N20:36 (U) 2	N20:36/2 - -(L)- - File #5 INIRE	33	-(U)- - File #5 INIRE
<p>N20:36 - NEQ - File #5 INTRLKS - 113 File #8 SYSSTAT - 0 FILE N20:36/2 LEN:100 - PFL - File #13 FIFO - 10 FILE N20:36/2 LEN:3 - FLL - File #3 STARTUP - 5 COP - File #5 INTRLKS - 116</p>			<p>...</p>		
89	N12:1 3 [7:4]	N20:36 (U) 3	N20:36/3 - -(L)- - File #5 INIRE	35	-(U)- - File #5 INIRE
<p>N20:36 - NEQ - File #5 INTRLKS - 113 File #8 SYSSTAT - 0 FILE N20:36/3 LEN:100 - PFL - File #13 FIFO - 10 FILE N20:36/3 LEN:3 - FLL - File #3 STARTUP - 5 COP - File #5 INTRLKS - 116</p>			<p>...</p>		
90	N12:1 4 [7:4]	N20:36 (U) 4	N20:36/4 - -(L)- - File #5 INIRE	37	-(U)- - File #5 INIRE
<p>N20:36 - NEQ - File #5 INTRLKS - 113 File #8 SYSSTAT - 0 FILE N20:36/4 LEN:100 - PFL - File #13 FIFO - 10 FILE N20:36/4 LEN:3 - FLL - File #3 STARTUP - 5 COP - File #5 INTRLKS - 116</p>			<p>...</p>		
91	N12:1 5 [7:4]	N20:36 (U) 5	N20:36/5 - -(L)- - File #16 INIRE	1	-(U)- - File #5 INIRE
<p>N20:36/5 - - /- - File #16 INTRK - 20 - /- - File #16 INTRK - 21 NEQ - File #5 INTRLKS - 113 File #8 SYSSTAT - 0 FILE N20:36/5 LEN:100 - PFL - File #13 FIFO - 10 FILE N20:36/5 LEN:3 - FLL - File #3 STARTUP - 5 COP - File #5 INTRLKS - 116</p>			<p>...</p>		
92	N12:1 6 [7:4]	N20:36 (U) 6	N20:36/6 - -(L)- - File #16 INIRE	4	-(U)- - File #5 INIRE
			<p>...</p>		

<p>N20:36 - NEQ - File #5 INTRLKS - 113 File #8 SYSSTAT - 0 FILE N20:36/6 LEN:100 - FFL - File #13 FIFO - 10 FILE N20:36/6 LEN:3 - FLL - File #3 STARTUP - 5 COP - File #5 INTRLKS - 116</p>	
<p>N12:1 93 7 [7:4] N20:36/7 - - File #16 INTRLK - 20 - / - File #16 INTRLK - 21 NEQ - File #5 INTRLKS - 113 File #8 SYSSTAT - 0 FILE N20:36/7 LEN:100 - FFL - File #13 FIFO - 10 FILE N20:36/7 LEN:3 - FLL - File #3 STARTUP - 5 COP - File #5 INTRLKS - 116</p>	<p>N20:36 N20:36/7 - (U) - File #16 INTR 7 7 (U) - File #5 INTR 93 ...</p>
<p>N12:1 94 8 [7:4] N20:36 - NEQ - File #5 INTRLKS - 113 File #8 SYSSTAT - 0 FILE N20:36/8 LEN:100 - FFL - File #13 FIFO - 10 FILE N20:36/8 LEN:3 - FLL - File #3 STARTUP - 5 COP - File #5 INTRLKS - 116</p>	<p>N20:36 N20:36/8 - (U) - File #16 INTR 8 8 (U) - File #5 INTR 94 ...</p>
<p>N12:1 95 9 [7:4] N20:36 - NEQ - File #5 INTRLKS - 113 File #8 SYSSTAT - 0 FILE N20:36/9 LEN:100 - FFL - File #13 FIFO - 10 FILE N20:36/9 LEN:3 - FLL - File #3 STARTUP - 5 COP - File #5 INTRLKS - 116</p>	<p>N20:36 N20:36/9 - (U) - File #16 INTR 9 9 (U) - File #5 INTR 95 ...</p>
<p>N12:1 96 10 [7:4] N20:36 - NEQ - File #5 INTRLKS - 113 File #8 SYSSTAT - 0 FILE N20:36/10 LEN:100 - FFL - File #13 FIFO - 10 FILE N20:36/10 LEN:3 - FLL - File #3 STARTUP - 5 COP - File #5 INTRLKS - 116</p>	<p>N20:36 N20:36/10 - (U) - File #16 INTR 10 10 (U) - File #5 INTR 96 ...</p>
<p>N12:1 97 11 [7:4] N20:36 - NEQ - File #5 INTRLKS - 113 File #8 SYSSTAT - 0 FILE N20:36/11 LEN:100 - FFL - File #13 FIFO - 10 FILE N20:36/11 LEN:3 - FLL - File #3 STARTUP - 5 COP - File #5 INTRLKS - 116</p>	<p>N20:36 N20:36/11 - (U) - File #5 INTR 11 11 (U) - File #5 INTR 97 ...</p>
<p>N12:1 98 12 [7:4] N20:36/12 - FFL - File #13 FIFO - 10 FILE N20:36/12 LEN:3 - FLL - File #3 STARTUP - 5 COP - File #5 INTRLKS - 116</p>	<p>N20:36 N20:36 - NEQ - File #5 INTRLKS E 12 12 File #8 SYSSTAT E 0 ...</p>
<p>N12:1 99 13 [7:4] N20:36/13 - FFL - File #13 FIFO - 10 FILE N20:36/13 LEN:3 - FLL - File #3 STARTUP - 5 COP - File #5 INTRLKS - 116</p>	<p>N20:36 N20:36 - NEQ - File #5 INTRLKS E 13 13 File #8 SYSSTAT E 0 ...</p>
<p>N12:1 100 14 [7:4] N20:36 - NEQ - File #8 SYSSTAT - 0 FILE N20:36/14 LEN:100 - FFL - File #13 FIFO - 10 FILE N20:36/14 LEN:3 - FLL - File #3 STARTUP - 5</p>	<p>N20:36 N20:36/14 - (U) - File #5 INTR 14 47, 100 NEQ - File #5 INTR 113 ...</p>

COP - File #5 INTRLS - 116			
101	N12:1 15 [7:4] N20:36/15 - FFL - File #13 FIFO - 10 FILE N20:36/15 LEN:3 - FLL - File #3 STARTUP - 5 COP - File #5 INTRLS - 116	N20:36 (U) 15	N20:36 - NEQ - File #5 INTRLS E 113 File #8 SYSSTAT E 0 ...
102	N12:2 0 [7:4] N20:37 - NEQ - File #5 INTRLS - 113 File #8 SYSSTAT - 0 FILE N20:37/0 LEN:100 - FFL - File #13 FIFO - 10 FILE N20:37/0 LEN:3 - FLL - File #3 STARTUP - 5 COP - File #5 INTRLS - 116	N20:37 (U) 0	N20:37/0 - (L) - File #5 INIRE 48 -(U) - File #5 INIRE 102 ...
103	N12:2 1 [7:4] N20:37 - NEQ - File #5 INTRLS - 113 File #8 SYSSTAT - 0 FILE N20:37/1 LEN:100 - FFL - File #13 FIFO - 10 FILE N20:37/1 LEN:3 - FLL - File #3 STARTUP - 5 COP - File #5 INTRLS - 116	N20:37 (U) 1	N20:37/1 - (L) - File #5 INIRE 49 -(U) - File #5 INIRE 103 ...
104	N12:2 2 [7:4] N20:37 - NEQ - File #5 INTRLS - 113 File #8 SYSSTAT - 0 FILE N20:37/2 LEN:100 - FFL - File #13 FIFO - 10 FILE N20:37/2 LEN:3 - FLL - File #3 STARTUP - 5 COP - File #5 INTRLS - 116	N20:37 (U) 2	N20:37/2 - (L) - File #5 INIRE 50 -(U) - File #5 INIRE 104 ...
105	N12:2 3 [7:4] N20:37 - NEQ - File #5 INTRLS - 113 File #8 SYSSTAT - 0 FILE N20:37/3 LEN:100 - FFL - File #13 FIFO - 10 FILE N20:37/3 LEN:3 - FLL - File #3 STARTUP - 5 COP - File #5 INTRLS - 116	N20:37 (U) 3	N20:37/3 - (L) - File #5 INIRE 51 -(U) - File #5 INIRE 105 ...
106	N12:2 4 [7:4] N20:37/4 - -/ - - File #5 INTRLS - 119 NEQ - File #5 INTRLS - 113 File #8 SYSSTAT - 0 FILE N20:37/4 LEN:100 - FFL - File #13 FIFO - 10 FILE N20:37/4 LEN:3 - FLL - File #3 STARTUP - 5 COP - File #5 INTRLS - 116	N20:37 (U) 4	N20:37/4 - (L) - File #5 INIRE 54 -(U) - File #5 INIRE 106 ...
107	N12:2 5 [7:4] N20:37/5 - -/ - - File #5 INTRLS - 119 NEQ - File #5 INTRLS - 113 File #8 SYSSTAT - 0 FILE N20:37/5 LEN:100 - FFL - File #13 FIFO - 10 FILE N20:37/5 LEN:3 - FLL - File #3 STARTUP - 5 COP - File #5 INTRLS - 116	N20:37 (U) 5	N20:37/5 - (L) - File #5 INIRE 56 -(U) - File #5 INIRE 107 ...
108	N12:2 6 [7:4] N20:37/6 - FFL - File #13 FIFO - 10 FILE N20:37/6 LEN:3 - FLL - File #3 STARTUP - 5 COP - File #5 INTRLS - 116	N20:37 (U) 6	N20:37 - NEQ - File #5 INTRLS E 113 File #8 SYSSTAT E 0 ...

	N20:25/5 - -(U) - - File #3 STARTUP - 7	
	MM - File #4 INQUIRY - 12	
	File #17 COPY OUT - 3	
	FILE N20:25/5 LEN:100 - FFL - File #13 FIFO - 10	
	FILE N20:25/5 LEN:30 - FFL - File #18 FIFOBUFFER - 1	
	FILE N20:25/5 LEN:30 - FFL - File #18 FIFOBUFFER - 1	
	FILE N20:25/5 LEN:30 - FFL - File #18 FIFOBUFFER - 1

19	<p>F8:10 - DIV - File #6 FANCTRL - 19 File #20 FANCTRL - 28 N20:30 - FFL - File #13 FIFO - 10 FILE N20:30 LEN:30 - FFL - File #18 FIFOBUFFER - 1 FILE N20:30 LEN:30 - FFL - File #18 FIFOBUFFER - 1 FILE N20:30 LEN:30 - FFL - File #18 FIFOBUFFER - 1 FILE N20:30 LEN:4 - COP - File #4 INPUTDATA - 10</p>	<p>ADD Add Source A N20:30 101 Source B 460.0 Dest F8:10 561.0</p> <p>DIV Divide Source A 528.0 Source B F8:10 561.0 Dest F8:12 0.9411765</p>	<p>F8:10 - ADD - File #6 FANCTRL E 19 File #20 FANCTRL E 28 DIV - File #6 FANCTRL E N20:30 - ADD - File #6 FANCTRL E 14, 19 File #20 FANCTRL E 17, 28 FILE N20:30 LEN:100 - ... F8:12 - DIV - File #6 FANCTRL E 19 File #20 FANCTRL E 28</p>
20	<p>F8:13 - DIV - File #6 FANCTRL - 20 File #20 FANCTRL - 29 N20:13 - FFL - File #13 FIFO - 10 FILE N20:13 LEN:30 - FFL - File #18 FIFOBUFFER - 1 FILE N20:13 LEN:30 - FFL - File #18 FIFOBUFFER - 1 FILE N20:13 LEN:30 - FFL - File #18 FIFOBUFFER - 1 FILE N20:13 LEN:4 - COP - File #4 INPUTDATA - 3 F8:15 - DIV - File #6 FANCTRL - 20 File #20 FANCTRL - 29</p>	<p>DIV Divide Source A N20:13 0 Source B 16383.0 Dest F8:13 0.0</p> <p>DIV Divide Source A F8:14 0.0 Source B 16383.0 Dest F8:15 0.0</p> <p>MUL Multiply Source A F8:13 0.0 Source B F8:15 0.0 Dest F8:16 0.0</p> <p>SUB Subtract Source A 1.0 Source B F8:16 0.0 Dest F8:17 1.0</p>	<p>F8:13 - MUL - File #6 FANCTRL E 20 File #20 FANCTRL E 29 DIV - File #6 FANCTRL E N20:13 - DIV - File #6 FANCTRL E 20 File #20 FANCTRL E 29 FILE N20:13 LEN:100 - ... F8:15 - MUL - File #6 FANCTRL E 20 File #20 FANCTRL E 29 DIV - File #6 FANCTRL E F8:14 - DIV - File #6 FANCTRL E 20 File #20 FANCTRL E 29 F8:16 - SUB - File #6 FANCTRL E 20 File #20 FANCTRL E 29 MUL - File #6 FANCTRL E 20 File #20 FANCTRL E 29 F8:17 - SUB - File #6 FANCTRL E 20 File #20 FANCTRL E 29 MUL - File #6 FANCTRL E 21 File #20 FANCTRL E 30</p>

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FILE N20:41 LEN:100 - FLL - File #13 FIFO - 10
N13:0 - NOT - File #3 STARTUP - 2
      FLL - File #2 MAIN - 20
      File #3 STARTUP - 5
      MM - File #3 STARTUP - 11
      File #7 MESGVIEW - 1
      File #16 INTRK - 18, 23
N13:0/0 - | - File #13 FIFO - 0, 1, 2, 3
      File #14 COUNTER - 0
FILE N13:0 LEN:110 - FLL - File #2 MAIN - 20
      File #3 STARTUP - 5
FILE N13:0 LEN:3 - FLL - File #3 STARTUP - 5
FILE N13:0 LEN:4 - FLL - File #3 STARTUP - 5
FILE N13:0 LEN:7 - FLL - File #2 MAIN - 20
      File #3 STARTUP - 5
N12:0 - MM - File #7 MESGVIEW - 5
      NEQ - File #7 MESGVIEW - 2
N12:0/0 - | - File #5 INTRKs - 70
N12:0/1 - | - File #5 INTRKs - 71
N12:0/2 - | - File #5 INTRKs - 72
N12:0/3 - | - File #5 INTRKs - 73
N12:0/4 - | - File #5 INTRKs - 74
N12:0/5 - | - File #5 INTRKs - 75
N12:0/6 - | - File #5 INTRKs - 76
N12:0/7 - | - File #5 INTRKs - 77
N12:0/8 - | - File #5 INTRKs - 78
N12:0/9 - | - File #5 INTRKs - 79
N12:0/10 - | - File #5 INTRKs - 80
N12:0/11 - | - File #5 INTRKs - 81
N12:0/12 - | - File #5 INTRKs - 82
N12:0/13 - | - File #5 INTRKs - 83
N12:0/14 - | - File #5 INTRKs - 84
N12:0/15 - | - File #5 INTRKs - 85
N13:1 - MOV - File #7 MESGVIEW - 1
      MM - File #3 STARTUP - 4, 10
      File #7 MESGVIEW - 5, 6, 7
FILE N13:1 LEN:110 - FLL - File #2 MAIN - 20
      File #3 STARTUP - 5
FILE N13:1 LEN:3 - FLL - File #3 STARTUP - 5
FILE N13:1 LEN:4 - FLL - File #3 STARTUP - 5
FILE N13:1 LEN:7 - FLL - File #2 MAIN - 20
      File #3 STARTUP - 5
N12:1/0 - | - File #5 INTRKs - 86
N12:1/1 - | - File #5 INTRKs - 87
N12:1/2 - | - File #5 INTRKs - 88
N12:1/3 - | - File #5 INTRKs - 89
N12:1/4 - | - File #5 INTRKs - 90
N12:1/5 - | - File #5 INTRKs - 91
N12:1/6 - | - File #5 INTRKs - 92
N12:1/7 - | - File #5 INTRKs - 93
N12:1/8 - | - File #5 INTRKs - 94
N12:1/9 - | - File #5 INTRKs - 95
N12:1/10 - | - File #5 INTRKs - 96
N12:1/11 - | - File #5 INTRKs - 97
N12:1/12 - | - File #5 INTRKs - 98
N12:1/13 - | - File #5 INTRKs - 99
N12:1/14 - | - File #5 INTRKs - 100
N12:1/15 - | - File #5 INTRKs - 101
N12:2 - NEQ - File #7 MESGVIEW - 2
N12:2/0 - | - File #5 INTRKs - 102
N12:2/1 - | - File #5 INTRKs - 103
N12:2/2 - | - File #5 INTRKs - 104
N12:2/3 - | - File #5 INTRKs - 105
N12:2/4 - | - File #5 INTRKs - 106
N12:2/5 - | - File #5 INTRKs - 107
N12:2/6 - | - File #5 INTRKs - 108
N12:2/7 - | - File #5 INTRKs - 109
N12:2/8 - | - File #5 INTRKs - 110
N12:2/9 - | - File #5 INTRKs - 111
N12:2/10 - | - File #5 INTRKs - 112

```

NL2:1/6 - File #5 INTRLKS - 92
 NL2:1/7 - File #5 INTRLKS - 93
 NL2:1/8 - File #5 INTRLKS - 94
 NL2:1/9 - File #5 INTRLKS - 95
 NL2:1/10 - File #5 INTRLKS - 96
 NL2:1/11 - File #5 INTRLKS - 97
 NL2:1/12 - File #5 INTRLKS - 98
 NL2:1/13 - File #5 INTRLKS - 99
 NL2:1/14 - File #5 INTRLKS - 100
 NL2:1/15 - File #5 INTRLKS - 101
 NL2:2 - MM - File #7 MSGSVIEW - 7
 NEQ - File #7 MSGSVIEW - 2
 NL2:2/0 - File #5 INTRLKS - 102
 NL2:2/1 - File #5 INTRLKS - 103
 NL2:2/2 - File #5 INTRLKS - 104
 NL2:2/3 - File #5 INTRLKS - 105
 NL2:2/4 - File #5 INTRLKS - 106
 NL2:2/5 - File #5 INTRLKS - 107
 NL2:2/6 - File #5 INTRLKS - 108
 NL2:2/7 - File #5 INTRLKS - 109
 NL2:2/8 - File #5 INTRLKS - 110
 NL2:2/9 - File #5 INTRLKS - 111
 NL2:2/10 - File #5 INTRLKS - 112
 I:12.5

5 - [8] SN
 NL2:0 - MM - File #7 MSGSVIEW - 5
 NEQ - File #7 MSGSVIEW - 2
 NL2:0/0 - File #5 INTRLKS - 70
 NL2:0/1 - File #5 INTRLKS - 71
 NL2:0/2 - File #5 INTRLKS - 72
 NL2:0/3 - File #5 INTRLKS - 73
 NL2:0/4 - File #5 INTRLKS - 74
 NL2:0/5 - File #5 INTRLKS - 75
 NL2:0/6 - File #5 INTRLKS - 76
 NL2:0/7 - File #5 INTRLKS - 77
 NL2:0/8 - File #5 INTRLKS - 78
 NL2:0/9 - File #5 INTRLKS - 79
 NL2:0/10 - File #5 INTRLKS - 80
 NL2:0/11 - File #5 INTRLKS - 81
 NL2:0/12 - File #5 INTRLKS - 82
 NL2:0/13 - File #5 INTRLKS - 83
 NL2:0/14 - File #5 INTRLKS - 84
 NL2:0/15 - File #5 INTRLKS - 85
 NL3:1 - MM - File #3 STARTUP - 4, 10
 File #7 MSGSVIEW - 5, 6, 7
 FILE NL3:1 LEN:110 - FLL - File #2 MAIN - 20
 File #3 STARTUP - 5
 FILE NL3:1 LEN:3 - FLL - File #3 STARTUP - 5
 FILE NL3:1 LEN:4 - FLL - File #3 STARTUP - 5
 FILE NL3:1 LEN:7 - FLL - File #2 MAIN - 20
 File #3 STARTUP - 5

I:12.6
 6 - [8] SN
 NL2:1 - MM - File #7 MSGSVIEW - 6
 NEQ - File #7 MSGSVIEW - 2
 NL2:1/0 - File #5 INTRLKS - 86
 NL2:1/1 - File #5 INTRLKS - 87
 NL2:1/2 - File #5 INTRLKS - 88
 NL2:1/3 - File #5 INTRLKS - 89

MM	
Masked Move	
Source	NL3:1
	-1
Mask	8000h
Dest	NL2:0
	0

NL2:0 - CLR - File #7 MSGSVIEW E 4
 MOV - File #7 MSGSVIEW E 1, 9 ...
 NL3:1 - NOT - File #2 MAIN - 1
 File #3 STARTUP - 2
 MOV - File #7 MSGSVIEW E 1 ...

MM	
Masked Move	
Source	NL3:1
	-1
Mask	0004h
Dest	NL2:1
	0

NL2:1 - CLR - File #7 MSGSVIEW E 4
 MOV - File #7 MSGSVIEW E 1, 10 ...
 NL3:1 - NOT - File #2 MAIN - 1
 File #3 STARTUP - 2
 MOV - File #7 MSGSVIEW E 1 ...

N13:0	R6:0	R6:0 - FFL - File #13 FIPO - 4
0	()	FFU - File #13 FIPO - 5
[2:0]	EN	FILE R6:0.EN LEN:128 -
	R6:1	FFU - File #13 FIPO - 5
	()	R6:1 - FFL - File #13 FIPO - 6
	EN	FFU - File #13 FIPO - 7
	R6:2	FILE R6:1.EN LEN:128 -
	()	FFU - File #13 FIPO - 5...
	EN	R6:2 - FFL - File #13 FIPO - 8
	R6:3	FFU - File #13 FIPO - 9
	()	FILE R6:2.EN LEN:128 -
	EN	FFU - File #13 FIPO - 5...
	R6:4	R6:3 - FFL - File #13 FIPO - 10
	()	FFU - File #13 FIPO - 11
	EN	FILE R6:3.EN LEN:128 -
	R6:5	FFU - File #13 FIPO - 5...
	()	R6:4 - FFL - File #13 FIPO - 12
	EN	FFU - File #13 FIPO - 13
	R6:6	FILE R6:4.EN LEN:128 -
	()	FFU - File #13 FIPO - 5...
	EN	R6:5 - FFL - File #13 FIPO - 14
	R6:7	FFU - File #13 FIPO - 15
	()	FILE R6:5.EN LEN:128 -
	EN	FFU - File #13 FIPO - 5...
	R6:8	R6:6 - FFL - File #13 FIPO - 16
	()	FFU - File #13 FIPO - 17
	EN	FILE R6:6.EN LEN:128 -
	R6:9	FFU - File #13 FIPO - 5...
	()	R6:7 - FFL - File #13 FIPO - 18
	EN	FFU - File #13 FIPO - 19
	R6:10	FILE R6:7.EN LEN:128 -
	()	FFU - File #13 FIPO - 5...
	EN	R6:8 - FFL - File #13 FIPO - 20
	R6:11	FFU - File #13 FIPO - 21
	()	FILE R6:8.EN LEN:128 -
	EN	FFU - File #13 FIPO - 5...
	R6:12	R6:9 - FFL - File #13 FIPO - 22
	()	FFU - File #13 FIPO - 23
	EN	FILE R6:9.EN LEN:128 -
	R6:13	FFU - File #13 FIPO - 5...
	()	R6:10 - FFL - File #13 FIPO -
	EN	24
	R6:14	FFU - File #13 FIPO -
	()	25
	EN	...
	R6:15	R6:11 - FFL - File #13 FIPO -
	()	26
	EN	FFU - File #13 FIPO - ..
R6:0 - FFL - File #13 FIPO - 4		
FFU - File #13 FIPO - 5		
FILE R6:0.EN LEN:128 - FFU - File #13 FIPO - 5		
R6:3 - FFL - File #13 FIPO - 10		
FFU - File #13 FIPO - 11		
FILE R6:3.EN LEN:128 - FFU - File #13 FIPO - 5		
FILE R6:3.EN LEN:127 - FFU - File #13 FIPO - 7		
FILE R6:3.EN LEN:127 - FFU - File #13 FIPO - 9		
FILE R6:3.EN LEN:100 - FFU - File #13 FIPO - 11		
R6:6 - FFL - File #13 FIPO - 16		
FFU - File #13 FIPO - 17		
FILE R6:6.EN LEN:128 - FFU - File #13 FIPO - 5		
FILE R6:6.EN LEN:127 - FFU - File #13 FIPO - 7		
FILE R6:6.EN LEN:127 - FFU - File #13 FIPO - 9		
FILE R6:6.EN LEN:100 - FFU - File #13 FIPO - 11		
FILE R6:6.EN LEN:128 - FFU - File #13 FIPO - 13		
FILE R6:6.EN LEN:127 - FFU - File #13 FIPO - 15		
FILE R6:6.EN LEN:127 - FFU - File #13 FIPO - 17		
FFU - File #13 FIPO - 15		
FILE R6:9.EN LEN:127 - FFU - File #13 FIPO - 17		
FILE R6:9.EN LEN:100 - FFU - File #13 FIPO - 19		
FILE R6:9.EN LEN:128 - FFU - File #13 FIPO - 21		
FILE R6:9.EN LEN:127 - FFU - File #13 FIPO - 23		
R6:11.EN - FFU - File #13 FIPO - 19		
FILE R6:11.EN LEN:128 - FFU - File #13 FIPO - 21		
FILE R6:11.EN LEN:127 - FFU - File #13 FIPO - 23		

[illegible]

FILE R6:8.EU LEN:100 - FFU - File #13 FIFO - 11			
FILE R6:8.EU LEN:128 - FFU - File #13 FIFO - 13			
FILE R6:8.EU LEN:127 - FFU - File #13 FIFO - 15			
FILE R6:8.EU LEN:127 - FFU - File #13 FIFO - 17			
FILE R6:8.EU LEN:100 - FFU - File #13 FIFO - 19			
FILE R6:8.EU LEN:128 - FFU - File #13 FIFO - 21			
N13:0	R6:12	R6:12 - FFL - File #13 FIFO -	
2 0	()	28	
[2:0]	EN	FFU - File #13 FIFO -	
		29	
	R6:13	FILE R6:12.EN LEN:128 -	...
	()	R6:13 - FFL - File #13 FIFO -	
	EN	30	
		FFU - File #13 FIFO -	
		31	...
	R6:14	R6:14 - FFL - File #13 FIFO -	
	()	32	
	EN	FFU - File #13 FIFO -	
		33	...
	R6:15	R6:15 - FFL - File #13 FIFO -	
	()	34	
	EN	FFU - File #13 FIFO -	
		35	...
	R6:16	R6:16 - FFL - File #13 FIFO -	
	()	36	
	EN	FFU - File #13 FIFO -	
		37	...
	R6:17	R6:17 - FFL - File #13 FIFO -	
	()	38	
	EN	FFU - File #13 FIFO -	
		39	...
	R6:18	R6:18 - FFL - File #13 FIFO -	
	()	40	
	EN	FFU - File #13 FIFO -	
		41	...
	R6:19	R6:19 - FFL - File #13 FIFO -	
	()	42	
	EN	FFU - File #13 FIFO -	
		43	...
	R6:20	R6:20 - FFL - File #13 FIFO -	
	()	44	
	EN	FFU - File #13 FIFO -	
		45	...
	R6:21	R6:21 - FFL - File #13 FIFO -	
	()	46	
	EN	FFU - File #13 FIFO -	
		47	...
	R6:22	R6:22 - FFL - File #13 FIFO -	
	()	48	
	EN	FFU - File #13 FIFO -	
		49	...
	R6:23	R6:23 - FFL - File #13 FIFO -	
	()	50	
	EN	FFU - File #13 FIFO -	..
FFU - File #13 FIFO - 21			
FILE R6:14.EN LEN:127 - FFU - File #13 FIFO - 23			
FILE R6:14.EN LEN:127 - FFU - File #13 FIFO - 25			
FILE R6:14.EN LEN:100 - FFU - File #13 FIFO - 27			
FILE R6:14.EN LEN:128 - FFU - File #13 FIFO - 29			
FILE R6:14.EN LEN:127 - FFU - File #13 FIFO - 31			
FILE R6:14.EN LEN:127 - FFU - File #13 FIFO - 33			
FFU - File #13 FIFO - 13			
FILE R6:15.EN LEN:127 - FFU - File #13 FIFO - 15			
FILE R6:15.EN LEN:127 - FFU - File #13 FIFO - 17			
FILE R6:15.EN LEN:100 - FFU - File #13 FIFO - 19			
FILE R6:15.EN LEN:128 - FFU - File #13 FIFO - 21			
FILE R6:15.EN LEN:127 - FFU - File #13 FIFO - 23			
FILE R6:15.EN LEN:127 - FFU - File #13 FIFO - 25			
FILE R6:15.EN LEN:100 - FFU - File #13 FIFO - 27			
FILE R6:15.EN LEN:128 - FFU - File #13 FIFO - 29			
FILE R6:15.EN LEN:127 - FFU - File #13 FIFO - 31			
FILE R6:15.EN LEN:127 - FFU - File #13 FIFO - 33			
FILE R6:15.EN LEN:100 - FFU - File #13 FIFO - 35			

```
|R6:16 - FFL - File #13 FIFO - 36
|   FPU - File #13 FIFO - 37
|FILE R6:16.EN LEN:128 - FPU - File #13 FIFO - 5
|FILE R6:16.EN LEN:127 - FPU - File #13 FIFO - 7
|FILE R6:16.EN LEN:127 - FPU - File #13 FIFO - 9
|FILE R6:16.EN LEN:100 - FPU - File #13 FIFO - 11
|FILE R6:16.EN LEN:128 - FPU - File #13 FIFO - 13
|FILE R6:16.EN LEN:127 - FPU - File #13 FIFO - 15
|FILE R6:16.EN LEN:127 - FPU - File #13 FIFO - 17
|FILE R6:16.EN LEN:100 - FPU - File #13 FIFO - 19
|FILE R6:16.EN LEN:128 - FPU - File #13 FIFO - 21
|FILE R6:16.EN LEN:127 - FPU - File #13 FIFO - 23
|FILE R6:16.EN LEN:127 - FPU - File #13 FIFO - 25
|FILE R6:16.EN LEN:100 - FPU - File #13 FIFO - 27
|FILE R6:16.EN LEN:128 - FPU - File #13 FIFO - 29
|FILE R6:16.EN LEN:127 - FPU - File #13 FIFO - 31
|FILE R6:16.EN LEN:127 - FPU - File #13 FIFO - 33
|FILE R6:16.EN LEN:100 - FPU - File #13 FIFO - 35
|FILE R6:16.EN LEN:128 - FPU - File #13 FIFO - 37
|   FPU - File #13 FIFO - 27
|FILE R6:17.EN LEN:128 - FPU - File #13 FIFO - 29
|FILE R6:17.EN LEN:127 - FPU - File #13 FIFO - 31
|FILE R6:17.EN LEN:127 - FPU - File #13 FIFO - 33
|FILE R6:17.EN LEN:100 - FPU - File #13 FIFO - 35
|FILE R6:17.EN LEN:128 - FPU - File #13 FIFO - 37
|FILE R6:17.EN LEN:127 - FPU - File #13 FIFO - 39
|R6:21 - FFL - File #13 FIFO - 46
|   FPU - File #13 FIFO - 47
|FILE R6:21.EN LEN:128 - FPU - File #13 FIFO - 5
|FILE R6:21.EN LEN:127 - FPU - File #13 FIFO - 7
|FILE R6:21.EN LEN:127 - FPU - File #13 FIFO - 9
|FILE R6:21.EN LEN:100 - FPU - File #13 FIFO - 11
|FILE R6:21.EN LEN:128 - FPU - File #13 FIFO - 13
|FILE R6:21.EN LEN:127 - FPU - File #13 FIFO - 15
|FILE R6:21.EN LEN:127 - FPU - File #13 FIFO - 17
|FILE R6:21.EN LEN:100 - FPU - File #13 FIFO - 19
|FILE R6:21.EN LEN:128 - FPU - File #13 FIFO - 21
|FILE R6:21.EN LEN:127 - FPU - File #13 FIFO - 23
|FILE R6:21.EN LEN:127 - FPU - File #13 FIFO - 25
|FILE R6:21.EN LEN:100 - FPU - File #13 FIFO - 27
|FILE R6:21.EN LEN:128 - FPU - File #13 FIFO - 29
|FILE R6:21.EN LEN:127 - FPU - File #13 FIFO - 31
|FILE R6:21.EN LEN:127 - FPU - File #13 FIFO - 33
|FILE R6:21.EN LEN:100 - FPU - File #13 FIFO - 35
|FILE R6:21.EN LEN:128 - FPU - File #13 FIFO - 37
|FILE R6:21.EN LEN:127 - FPU - File #13 FIFO - 39
|FILE R6:21.EN LEN:127 - FPU - File #13 FIFO - 41
|FILE R6:21.EN LEN:100 - FPU - File #13 FIFO - 43
|FILE R6:21.EN LEN:128 - FPU - File #13 FIFO - 45
|FILE R6:21.EN LEN:127 - FPU - File #13 FIFO - 47
|   FPU - File #13 FIFO - 11
|FILE R6:23.EN LEN:128 - FPU - File #13 FIFO - 13
|FILE R6:23.EN LEN:127 - FPU - File #13 FIFO - 15
|FILE R6:23.EN LEN:127 - FPU - File #13 FIFO - 17
|FILE R6:23.EN LEN:100 - FPU - File #13 FIFO - 19
|FILE R6:23.EN LEN:128 - FPU - File #13 FIFO - 21
|FILE R6:23.EN LEN:127 - FPU - File #13 FIFO - 23
|FILE R6:23.EN LEN:127 - FPU - File #13 FIFO - 25
|FILE R6:23.EN LEN:100 - FPU - File #13 FIFO - 27
|FILE R6:23.EN LEN:128 - FPU - File #13 FIFO - 29
|FILE R6:23.EN LEN:127 - FPU - File #13 FIFO - 31
|FILE R6:23.EN LEN:127 - FPU - File #13 FIFO - 33
|FILE R6:23.EN LEN:100 - FPU - File #13 FIFO - 35
|FILE R6:23.EN LEN:128 - FPU - File #13 FIFO - 37
|FILE R6:23.EN LEN:127 - FPU - File #13 FIFO - 39
|FILE R6:23.EN LEN:127 - FPU - File #13 FIFO - 41
|FILE R6:23.EN LEN:100 - FPU - File #13 FIFO - 43
|FILE R6:23.EN LEN:128 - FPU - File #13 FIFO - 45
|FILE R6:23.EN LEN:127 - FPU - File #13 FIFO - 47
|FILE R6:23.EN LEN:127 - FPU - File #13 FIFO - 49
|FILE R6:23.EN LEN:100 - FPU - File #13 FIFO - 51
```

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FILE R6:16.EU LEN:128 - FFU - File #13 FIFO - 37
FFU - File #13 FIFO - 23
FILE R6:18.EU LEN:127 - FFU - File #13 FIFO - 25
FILE R6:18.EU LEN:100 - FFU - File #13 FIFO - 27
FILE R6:18.EU LEN:128 - FFU - File #13 FIFO - 29
FILE R6:18.EU LEN:127 - FFU - File #13 FIFO - 31
FILE R6:18.EU LEN:127 - FFU - File #13 FIFO - 33
FILE R6:18.EU LEN:100 - FFU - File #13 FIFO - 35
FILE R6:18.EU LEN:128 - FFU - File #13 FIFO - 37
FILE R6:18.EU LEN:127 - FFU - File #13 FIFO - 39
FILE R6:18.EU LEN:127 - FFU - File #13 FIFO - 41
FFU - File #13 FIFO - 25
FILE R6:20.EU LEN:100 - FFU - File #13 FIFO - 27
FILE R6:20.EU LEN:128 - FFU - File #13 FIFO - 29
FILE R6:20.EU LEN:127 - FFU - File #13 FIFO - 31
FILE R6:20.EU LEN:127 - FFU - File #13 FIFO - 33
FILE R6:20.EU LEN:100 - FFU - File #13 FIFO - 35
FILE R6:20.EU LEN:128 - FFU - File #13 FIFO - 37
FILE R6:20.EU LEN:127 - FFU - File #13 FIFO - 39
FILE R6:20.EU LEN:127 - FFU - File #13 FIFO - 41
FILE R6:20.EU LEN:100 - FFU - File #13 FIFO - 43
FILE R6:20.EU LEN:128 - FFU - File #13 FIFO - 45
R6:23 - FFL - File #13 FIFO - 50
FFU - File #13 FIFO - 51
FILE R6:23.EU LEN:128 - FFU - File #13 FIFO - 5
FILE R6:23.EU LEN:127 - FFU - File #13 FIFO - 7
FILE R6:23.EU LEN:127 - FFU - File #13 FIFO - 9
FILE R6:23.EU LEN:100 - FFU - File #13 FIFO - 11
FILE R6:23.EU LEN:128 - FFU - File #13 FIFO - 13
FILE R6:23.EU LEN:127 - FFU - File #13 FIFO - 15
FILE R6:23.EU LEN:127 - FFU - File #13 FIFO - 17
FILE R6:23.EU LEN:100 - FFU - File #13 FIFO - 19
FILE R6:23.EU LEN:128 - FFU - File #13 FIFO - 21
FILE R6:23.EU LEN:127 - FFU - File #13 FIFO - 23
FILE R6:23.EU LEN:127 - FFU - File #13 FIFO - 25
FILE R6:23.EU LEN:100 - FFU - File #13 FIFO - 27
FILE R6:23.EU LEN:128 - FFU - File #13 FIFO - 29
FILE R6:23.EU LEN:127 - FFU - File #13 FIFO - 31
FILE R6:23.EU LEN:127 - FFU - File #13 FIFO - 33
FILE R6:23.EU LEN:100 - FFU - File #13 FIFO - 35
FILE R6:23.EU LEN:128 - FFU - File #13 FIFO - 37
FILE R6:23.EU LEN:127 - FFU - File #13 FIFO - 39
FILE R6:23.EU LEN:127 - FFU - File #13 FIFO - 41
FILE R6:23.EU LEN:100 - FFU - File #13 FIFO - 43
FILE R6:23.EU LEN:128 - FFU - File #13 FIFO - 45
FILE R6:23.EU LEN:127 - FFU - File #13 FIFO - 47
FILE R6:23.EU LEN:127 - FFU - File #13 FIFO - 49
FILE R6:23.EU LEN:100 - FFU - File #13 FIFO - 51

```

4

```

R6:0.EN - ( ) - File #13 FIFO - 0
R6:0.EU - ( ) - File #13 FIFO - 1
FILE R6:0 LEN:128 - FFU - File #13 FIFO - 5

```

5

```

R6:0.EU - ( ) - File #13 FIFO - 1

```

FFL	
FIPO Load	(EN)
Source N23:128	(IN)
FIPO #N23:0	(EN)
Control R6:0	
Length 128	
Position 127	

```

R6:0 - FFL - File #13 FIFO - 4
FFU - File #13 FIFO - 5.
N23:128 - FFL - File #13 FIFO - 4
FFU - File #13 FIFO - 7
...
N23:0 - FFL - File #13 FIFO - 4
FFU - File #13 FIFO - 5

```

FFU	
FIPO Unload	(EU)
FIPO #N23:0	(IN)
Dest N20:58	(EN)
Control R6:0	
Length 128	
Position 127	

```

R6:0 - FFL - File #13 FIFO - 4
FFU - File #13 FIFO - 5
R6:0.EN - ( ) - File #13 FIFO - 0
...
N23:0 - FFL - File #13 FIFO - 4
FFU - File #13 FIFO - 5
FILE N20:58 LEN:100 -
FFU - File #13 FIFO - 10

```

FILE R6:13 LEN:127 - FFU - File #13 FIFO - 17
 FILE R6:13 LEN:100 - FFU - File #13 FIFO - 19
 FILE R6:13 LEN:128 - FFU - File #13 FIFO - 21
 FILE R6:13 LEN:127 - FFU - File #13 FIFO - 23
 FILE R6:13 LEN:127 - FFU - File #13 FIFO - 25
 FILE R6:13 LEN:100 - FFU - File #13 FIFO - 27
 FILE R6:13 LEN:128 - FFU - File #13 FIFO - 29
 N29:129 - FFU - File #13 FIFO - 31
 FILE N29:129 LEN:128 - FFL - File #13 FIFO - 28
 N29:128 - FFL - File #13 FIFO - 28

32

FFL	
FIFO Load	(LN)
Source	N30:128 (LN)
FIFO	#N30:1 (RM)
Control	R6:14
Length	127
Position	126

R6:14 - FFL - File #13 FIFO - 32 ...
 N30:128 - FFL - File #13 FIFO - 32 ...
 N30:1 - FFL - File #13 FIFO - 32 ...
 FFU - File #13 FIFO - 33 ...

R6:14 - FFU - File #13 FIFO - 33
 R6:14.BN --()-- File #13 FIFO - 2
 R6:14.BU --()-- File #13 FIFO - 3
 FILE R6:14 LEN:128 - FFU - File #13 FIFO - 5
 FILE R6:14 LEN:127 - FFU - File #13 FIFO - 7
 FILE R6:14 LEN:127 - FFU - File #13 FIFO - 9
 FILE R6:14 LEN:100 - FFU - File #13 FIFO - 11
 FILE R6:14 LEN:128 - FFU - File #13 FIFO - 13
 FILE R6:14 LEN:127 - FFU - File #13 FIFO - 15
 FILE R6:14 LEN:127 - FFU - File #13 FIFO - 17
 FILE R6:14 LEN:100 - FFU - File #13 FIFO - 19
 FILE R6:14 LEN:128 - FFU - File #13 FIFO - 21
 FILE R6:14 LEN:127 - FFU - File #13 FIFO - 23
 FILE R6:14 LEN:127 - FFU - File #13 FIFO - 25
 FILE R6:14 LEN:100 - FFU - File #13 FIFO - 27
 FILE R6:14 LEN:128 - FFU - File #13 FIFO - 29
 FILE R6:14 LEN:127 - FFU - File #13 FIFO - 31
 FILE R6:14 LEN:127 - FFU - File #13 FIFO - 33
 N30:128 - FFU - File #13 FIFO - 35
 N30:1 - FFL - File #13 FIFO - 30

33

FFU	
FIFO Unload	(BU)
FIFO	#N30:1 (LN)
Dest	N30:0 (RM)
Control	R6:14
Length	127
Position	126

R6:14 - FFL - File #13 FIFO - 32 ...
 N30:1 - FFL - File #13 FIFO - 32 ...
 N30:0 - FFL - File #13 FIFO - 30 ...
 FFU - File #13 FIFO - 33 ...

R6:14 - FFU - File #13 FIFO - 33
 R6:14.BN --()-- File #13 FIFO - 2
 R6:14.BU --()-- File #13 FIFO - 3
 FILE R6:14 LEN:128 - FFU - File #13 FIFO - 5
 FILE R6:14 LEN:127 - FFU - File #13 FIFO - 7
 FILE R6:14 LEN:127 - FFU - File #13 FIFO - 9
 FILE R6:14 LEN:100 - FFU - File #13 FIFO - 11
 FILE R6:14 LEN:128 - FFU - File #13 FIFO - 13
 FILE R6:14 LEN:127 - FFU - File #13 FIFO - 15
 FILE R6:14 LEN:127 - FFU - File #13 FIFO - 17
 FILE R6:14 LEN:100 - FFU - File #13 FIFO - 19
 FILE R6:14 LEN:128 - FFU - File #13 FIFO - 21
 FILE R6:14 LEN:127 - FFU - File #13 FIFO - 23
 FILE R6:14 LEN:127 - FFU - File #13 FIFO - 25
 FILE R6:14 LEN:100 - FFU - File #13 FIFO - 27
 FILE R6:14 LEN:128 - FFU - File #13 FIFO - 29
 FILE R6:14 LEN:127 - FFU - File #13 FIFO - 31
 N30:1 - FFU - File #13 FIFO - 33
 FILE N30:1 LEN:127 - FFL - File #13 FIFO - 30
 N30:0 - FFL - File #13 FIFO - 30

34

FFL	
FIFO Load	(LN)
Source	S:40 (LN)
FIFO	#N30:129 (RM)
Control	R6:15
Length	100
Position	99

R6:15 - FFL - File #13 FIFO - 34 ...
 FILE S:40 LEN:100 - FFL - File #13 FIFO - 18 ...
 N30:129 - FFL - File #13 FIFO - 34 ...
 FFU - File #13 FIFO - 35 ...

```

R6:15 - FPU - File #13 FIFO - 35
R6:15.EN --( )-- File #13 FIFO - 2
R6:15.BJ --( )-- File #13 FIFO - 3
FILE R6:15 LEN:128 - FPU - File #13 FIFO - 5
FILE R6:15 LEN:127 - FPU - File #13 FIFO - 7
FILE R6:15 LEN:127 - FPU - File #13 FIFO - 9
FILE R6:15 LEN:100 - FPU - File #13 FIFO - 11
FILE R6:15 LEN:128 - FPU - File #13 FIFO - 13
FILE R6:15 LEN:127 - FPU - File #13 FIFO - 15
FILE R6:15 LEN:127 - FPU - File #13 FIFO - 17
FILE R6:15 LEN:100 - FPU - File #13 FIFO - 19
FILE R6:15 LEN:128 - FPU - File #13 FIFO - 21
FILE R6:15 LEN:127 - FPU - File #13 FIFO - 23
FILE R6:15 LEN:127 - FPU - File #13 FIFO - 25
FILE R6:15 LEN:100 - FPU - File #13 FIFO - 27
FILE R6:15 LEN:128 - FPU - File #13 FIFO - 29
FILE R6:15 LEN:127 - FPU - File #13 FIFO - 31
FILE R6:15 LEN:127 - FPU - File #13 FIFO - 33
FILE R6:15 LEN:100 - FPU - File #13 FIFO - 35
S:40 - FFL - File #13 FIFO - 26
N30:129 - FFL - File #13 FIFO - 32

R6:15 - FPU - File #13 FIFO - 35
R6:15.EN --( )-- File #13 FIFO - 2
R6:15.BJ --( )-- File #13 FIFO - 3
FILE R6:15 LEN:128 - FPU - File #13 FIFO - 5
FILE R6:15 LEN:127 - FPU - File #13 FIFO - 7
FILE R6:15 LEN:127 - FPU - File #13 FIFO - 9
FILE R6:15 LEN:100 - FPU - File #13 FIFO - 11
FILE R6:15 LEN:128 - FPU - File #13 FIFO - 13
FILE R6:15 LEN:127 - FPU - File #13 FIFO - 15
FILE R6:15 LEN:127 - FPU - File #13 FIFO - 17
FILE R6:15 LEN:100 - FPU - File #13 FIFO - 19
FILE R6:15 LEN:128 - FPU - File #13 FIFO - 21
FILE R6:15 LEN:127 - FPU - File #13 FIFO - 23
FILE R6:15 LEN:127 - FPU - File #13 FIFO - 25
FILE R6:15 LEN:100 - FPU - File #13 FIFO - 27
FILE R6:15 LEN:128 - FPU - File #13 FIFO - 29
FILE R6:15 LEN:127 - FPU - File #13 FIFO - 31
FILE R6:15 LEN:127 - FPU - File #13 FIFO - 33
N30:129 - FPU - File #13 FIFO - 35
FILE N30:129 LEN:127 - FFL - File #13 FIFO - 32
N30:128 - FFL - File #13 FIFO - 32

```

35

FPU	
FIFO Unload	(BJ)
FIFO #N30:129	(DN)
Dest N30:128	(DM)
Control R6:15	
Length 100	
Position 99	

```

R6:15 - FFL - File #13 FIFO - 34 ...
N30:129 - FFL - File #13 FIFO - 34 ...
N30:128 - FFL - File #13 FIFO - 32
FFU - File #13 FIFO - 35 ...

```

36

FFL	
FIFO Load	(DN)
Source N31:128	(DN)
FIFO #N31:0	(DM)
Control R6:16	
Length 128	
Position 127	

```

R6:16 - FFL - File #13 FIFO - 36 ...
N31:128 - FFL - File #13 FIFO - 36 ...
N31:0 - FFL - File #13 FIFO - 36
FFU - File #13 FIFO - 37

```

```

R6:16 - FPU - File #13 FIFO - 37
R6:16.EN --( )-- File #13 FIFO - 2
R6:16.BJ --( )-- File #13 FIFO - 3
FILE R6:16 LEN:128 - FPU - File #13 FIFO - 5
FILE R6:16 LEN:127 - FPU - File #13 FIFO - 7
FILE R6:16 LEN:127 - FPU - File #13 FIFO - 9
FILE R6:16 LEN:100 - FPU - File #13 FIFO - 11
FILE R6:16 LEN:128 - FPU - File #13 FIFO - 13
FILE R6:16 LEN:127 - FPU - File #13 FIFO - 15
FILE R6:16 LEN:127 - FPU - File #13 FIFO - 17
FILE R6:16 LEN:100 - FPU - File #13 FIFO - 19
FILE R6:16 LEN:128 - FPU - File #13 FIFO - 21
FILE R6:16 LEN:127 - FPU - File #13 FIFO - 23
FILE R6:16 LEN:127 - FPU - File #13 FIFO - 25
FILE R6:16 LEN:100 - FPU - File #13 FIFO - 27

```

File #13 FIFO Proj:EXHAUST

```

R6:17 - FFU - File #13 FIFO - 39
R6:17.EN - ( ) - File #13 FIFO - 2
R6:17.EU - ( ) - File #13 FIFO - 3
FILE R6:17 LEN:128 - FFU - File #13 FIFO - 5
FILE R6:17 LEN:127 - FFU - File #13 FIFO - 7
FILE R6:17 LEN:127 - FFU - File #13 FIFO - 9
FILE R6:17 LEN:100 - FFU - File #13 FIFO - 11
FILE R6:17 LEN:128 - FFU - File #13 FIFO - 13
FILE R6:17 LEN:127 - FFU - File #13 FIFO - 15
FILE R6:17 LEN:127 - FFU - File #13 FIFO - 17
FILE R6:17 LEN:100 - FFU - File #13 FIFO - 19
FILE R6:17 LEN:128 - FFU - File #13 FIFO - 21
FILE R6:17 LEN:127 - FFU - File #13 FIFO - 23
FILE R6:17 LEN:127 - FFU - File #13 FIFO - 25
FILE R6:17 LEN:100 - FFU - File #13 FIFO - 27
FILE R6:17 LEN:128 - FFU - File #13 FIFO - 29
FILE R6:17 LEN:127 - FFU - File #13 FIFO - 31
FILE R6:17 LEN:127 - FFU - File #13 FIFO - 33
FILE R6:17 LEN:100 - FFU - File #13 FIFO - 35
FILE R6:17 LEN:128 - FFU - File #13 FIFO - 37
N31:129 - FFU - File #13 FIFO - 39
FILE N31:129 LEN:128 - FFL - File #13 FIFO - 36
N31:128 - FFL - File #13 FIFO - 36

```

40

FFL	
FIFO Load	(EN)
Source	N32:128 (IN)
FIFO	#N32:1 (EN)
Control	R6:18
Length	127
Position	126

```

R6:18 - FFL - File #13 FIFO -
40 ...
N32:128 - FFL - File #13 FIFO -
40 ...
N32:1 - FFL - File #13 FIFO -
40 ...
FFU - File #13 FIFO -
41 ...

```

```

R6:18 - FFU - File #13 FIFO - 41
R6:18.EN - ( ) - File #13 FIFO - 2
R6:18.EU - ( ) - File #13 FIFO - 3
FILE R6:18 LEN:128 - FFU - File #13 FIFO - 5
FILE R6:18 LEN:127 - FFU - File #13 FIFO - 7
FILE R6:18 LEN:127 - FFU - File #13 FIFO - 9
FILE R6:18 LEN:100 - FFU - File #13 FIFO - 11
FILE R6:18 LEN:128 - FFU - File #13 FIFO - 13
FILE R6:18 LEN:127 - FFU - File #13 FIFO - 15
FILE R6:18 LEN:127 - FFU - File #13 FIFO - 17
FILE R6:18 LEN:100 - FFU - File #13 FIFO - 19
FILE R6:18 LEN:128 - FFU - File #13 FIFO - 21
FILE R6:18 LEN:127 - FFU - File #13 FIFO - 23
FILE R6:18 LEN:127 - FFU - File #13 FIFO - 25
FILE R6:18 LEN:100 - FFU - File #13 FIFO - 27
FILE R6:18 LEN:128 - FFU - File #13 FIFO - 29
FILE R6:18 LEN:127 - FFU - File #13 FIFO - 31
FILE R6:18 LEN:127 - FFU - File #13 FIFO - 33
FILE R6:18 LEN:100 - FFU - File #13 FIFO - 35
FILE R6:18 LEN:128 - FFU - File #13 FIFO - 37
FILE R6:18 LEN:127 - FFU - File #13 FIFO - 39
FILE R6:18 LEN:127 - FFU - File #13 FIFO - 41
N32:128 - FFU - File #13 FIFO - 43
N32:1 - FFL - File #13 FIFO - 38

```

41

FFU	
FIFO Unload	(EU)
FIFO	#N32:1 (IN)
Dest	N32:0 (EN)
Control	R6:18
Length	127
Position	126

```

R6:18 - FFL - File #13 FIFO -
40 ...
N32:1 - FFL - File #13 FIFO -
40 ...
N32:0 - FFL - File #13 FIFO -
38 ...
FFU - File #13 FIFO -
41 ...

```

```

R6:18 - FFU - File #13 FIFO - 41
R6:18.EN - ( ) - File #13 FIFO - 2
R6:18.EU - ( ) - File #13 FIFO - 3
FILE R6:18 LEN:128 - FFU - File #13 FIFO - 5
FILE R6:18 LEN:127 - FFU - File #13 FIFO - 7
FILE R6:18 LEN:127 - FFU - File #13 FIFO - 9
FILE R6:18 LEN:100 - FFU - File #13 FIFO - 11
FILE R6:18 LEN:128 - FFU - File #13 FIFO - 13
FILE R6:18 LEN:127 - FFU - File #13 FIFO - 15
FILE R6:18 LEN:127 - FFU - File #13 FIFO - 17

```

File #13 FIPO Proj:EXHNT

```

FILE R6:18 LEN:100 - FFU - File #13 FIPO - 19
FILE R6:18 LEN:128 - FFU - File #13 FIPO - 21
FILE R6:18 LEN:127 - FFU - File #13 FIPO - 23
FILE R6:18 LEN:127 - FFU - File #13 FIPO - 25
FILE R6:18 LEN:100 - FFU - File #13 FIPO - 27
FILE R6:18 LEN:128 - FFU - File #13 FIPO - 29
FILE R6:18 LEN:127 - FFU - File #13 FIPO - 31
FILE R6:18 LEN:127 - FFU - File #13 FIPO - 33
FILE R6:18 LEN:100 - FFU - File #13 FIPO - 35
FILE R6:18 LEN:128 - FFU - File #13 FIPO - 37
FILE R6:18 LEN:127 - FFU - File #13 FIPO - 39
NG2:1 - FFU - File #13 FIPO - 41
FILE NG2:1 LEN:127 - FFL - File #13 FIPO - 38
NG2:0 - FFL - File #13 FIPO - 38

```

42

FFL	
FIPO Load	(EN)
Source	S:41 (EN)
FIPO	#NG2:129 (EN)
Control	R6:19
Length	100
Position	99

```

R6:19 - FFL - File #13 FIPO - 42
...
FILE S:41 LEN:100 -
FFL - File #13 FIPO - 18..
NG2:129 - FFL - File #13 FIPO - 42
FFU - File #13 FIPO - 43
...

```

```

R6:19 - FFU - File #13 FIPO - 43
R6:19.EN - ( ) - File #13 FIPO - 2
R6:19.EU - ( ) - File #13 FIPO - 3
FILE R6:19 LEN:128 - FFU - File #13 FIPO - 5
FILE R6:19 LEN:127 - FFU - File #13 FIPO - 7
FILE R6:19 LEN:127 - FFU - File #13 FIPO - 9
FILE R6:19 LEN:100 - FFU - File #13 FIPO - 11
FILE R6:19 LEN:128 - FFU - File #13 FIPO - 13
FILE R6:19 LEN:127 - FFU - File #13 FIPO - 15
FILE R6:19 LEN:127 - FFU - File #13 FIPO - 17
FILE R6:19 LEN:100 - FFU - File #13 FIPO - 19
FILE R6:19 LEN:128 - FFU - File #13 FIPO - 21
FILE R6:19 LEN:127 - FFU - File #13 FIPO - 23
FILE R6:19 LEN:127 - FFU - File #13 FIPO - 25
FILE R6:19 LEN:100 - FFU - File #13 FIPO - 27
FILE R6:19 LEN:128 - FFU - File #13 FIPO - 29
FILE R6:19 LEN:127 - FFU - File #13 FIPO - 31
FILE R6:19 LEN:127 - FFU - File #13 FIPO - 33
FILE R6:19 LEN:100 - FFU - File #13 FIPO - 35
FILE R6:19 LEN:128 - FFU - File #13 FIPO - 37
FILE R6:19 LEN:127 - FFU - File #13 FIPO - 39
FILE R6:19 LEN:127 - FFU - File #13 FIPO - 41
FILE R6:19 LEN:100 - FFU - File #13 FIPO - 43
S:41 - FFL - File #13 FIPO - 26
FILE S:41 LEN:100 - FFL - File #13 FIPO - 34
NG2:129 - FFL - File #13 FIPO - 40

```

43

FFU	
FIPO Unload	(EU)
FIPO	#NG2:129 (EN)
Dest	NG2:128 (EN)
Control	R6:19
Length	100
Position	99

```

R6:19 - FFL - File #13 FIPO - 42
...
NG2:129 - FFL - File #13 FIPO - 42
...
NG2:128 - FFL - File #13 FIPO - 40
FFU - File #13 FIPO - 43
...

```

```

R6:19 - FFU - File #13 FIPO - 43
R6:19.EN - ( ) - File #13 FIPO - 2
R6:19.EU - ( ) - File #13 FIPO - 3
FILE R6:19 LEN:128 - FFU - File #13 FIPO - 5
FILE R6:19 LEN:127 - FFU - File #13 FIPO - 7
FILE R6:19 LEN:127 - FFU - File #13 FIPO - 9
FILE R6:19 LEN:100 - FFU - File #13 FIPO - 11
FILE R6:19 LEN:128 - FFU - File #13 FIPO - 13
FILE R6:19 LEN:127 - FFU - File #13 FIPO - 15
FILE R6:19 LEN:127 - FFU - File #13 FIPO - 17
FILE R6:19 LEN:100 - FFU - File #13 FIPO - 19
FILE R6:19 LEN:128 - FFU - File #13 FIPO - 21
FILE R6:19 LEN:127 - FFU - File #13 FIPO - 23
FILE R6:19 LEN:127 - FFU - File #13 FIPO - 25
FILE R6:19 LEN:100 - FFU - File #13 FIPO - 27
FILE R6:19 LEN:128 - FFU - File #13 FIPO - 29
FILE R6:19 LEN:127 - FFU - File #13 FIPO - 31

```

File #13 FIFO Proj:EGRECT

FILE R6:23 LEN:127 - FFU - File #13 FIFO - 49
N04:129 - FFU - File #13 FIFO - 51
FILE N04:129 LEN:127 - FFL - File #13 FIFO - 48
N04:128 - FFL - File #13 FIFO - 48

File #18 FIFOBUFFER Proj:EGHNT

THIS SUB RUNS ONLY WHEN THE FAN IS ON (B3/34)

FIFO LOAD TIMER

0	TON		T4:37 - TON - File #18 FIFOBUFE
	Timer On Delay	(EN)	
	Timer	T4:37 (IN)	
	Time Base	0.01	
	Preset	100	
	Accum	80	T4:37.IN - File #18 FIFE
			1

FFL - File #13 FIPO - 10
FILE N20:5 LEN:4 - COP - File #4 INPUTDATA - 1
1
FILE N14:37 LEN:7 - FFL - File #2 MAIN - 20
File #3 STARTUP - 5

```

|N14:41 - GEQ - File #5 INTRINS - 53
|FILE N14:41 LEN:7 - FLL - File #2 MAIN - 20
|           File #3 STARTUP - 5
|N14:37 - FFU - File #18 FIFOBUFFER - 1
|FILE N14:37 LEN:7 - FLL - File #2 MAIN - 20
|           File #3 STARTUP - 5
|N20:5 - LEQ - File #5 INTRINS - 19, 23
|           FFL - File #18 FIFOBUFFER - 1
|FILE N20:5 LEN:100 - FFL - File #13 FIPO - 10
|FILE N20:5 LEN:30 - FFL - File #18 FIFOBUFFER - 1
|FILE N20:5 LEN:4 - COP - File #4 INPUTDATA - 1
|FILE N20:5 LEN:30 - FFL - File #18 FIFOBUFFER - 1
|N14:38 - FFU - File #18 FIFOBUFFER - 1
|FILE N14:38 LEN:7 - FLL - File #2 MAIN - 20
|           File #3 STARTUP - 5
|N20:6 - GEQ - File #5 INTRINS - 26
|           LEQ - File #5 INTRINS - 24
|           FFL - File #18 FIFOBUFFER - 1
|FILE N20:6 LEN:100 - FFL - File #13 FIPO - 10
|FILE N20:6 LEN:30 - FFL - File #18 FIFOBUFFER - 1
|FILE N20:6 LEN:4 - COP - File #4 INPUTDATA - 1
|FILE N20:6 LEN:30 - FFL - File #18 FIFOBUFFER - 1
|FILE N20:6 LEN:30 - FFL - File #18 FIFOBUFFER - 1
|
|-----RET-----
|3-----Return-----
|
|4-----[END]-----

```

WARNING: DESCRIPTION XREF REPORT WILL ONLY PRINT ADDRESSES THAT HAVE DESCRIPTIONS ENTERED INTO THE DATA BASE AND ARE USED IN THE LADDER PROGRAM!

```

N20:41 - [7]1, {1}, [5]52, 53, 121, [6]2, 5, [9]1, [20]2, 7, {2}, [6]5, [9]0
        [20]7, {1}, [6]1, [9]0, [20]6, [5]1, [5]48, [6]10, [1]4, 16, [17]
        20, 0, 1, 6, 26, [27]7, [5]49, [8]16, [13]20, [16]9, [5]50, [10]
        7, 0, {11}, [5]51, [12]67, 121, [13]113, [14]114, [15]69, 120, [13]
        f10
N20:38 - [5]114, [7]12, [12]1, {2}, [5]2, [119]3, 5, 6, {4}9, [119]5, [10]
        12, [13]119, [6]14, [15]119, [16]16, 18, 45, [119]8, [17]17, [18]
        45, [9]19, 20, [119]10, 21, [21]23, 46, [120]11, 22, [22]23, 46
        [12]24, 25, [120]13, 26, 47, [120]15, 27, [27]28, [10]0, [1]1, [13]
        f10, [7]f12
N20:39 - [5]114, [12]2, {0}, [5]29, 30, 31, [10]1, {1}, [5]32, {2}33, [33]34
        [3]35, 36, [120]4, [37]37, 38, [121]5, [16]16, [3]45, [7]7
        [8]9, 10, 11, [9]5, [121]11, [12]10, [5]121, [16]12, 5, [11]
        41, [121]12, [42]16, [12]13, [5]43, [14]44, 47, [13]f10, [7]f12
N16:7 - [4]6, 11
B3/128 - [5]4
N12:2 - [7]1, 2, 4, 7, 11, {0}, [5]102, [1]103, [2]104, [3]105, [4]106, [5]107
        [6]108, [7]109, [8]110, [9]111, [10]112
B3/126 - [5]63
N20:38/2 - [5]2, [119]w114, w[7]w12, w[12]w1, [13]wf10, [7]wf12
N16:10 - [4]9, 14
N16:9 - [4]8, 13
N16:8 - [4]7, 12
N20:40 - [5]114, [12]13, {0}, [5]48, [69]1, 49, [69]2, 50, [69]3, 51, [69]
        [4]54, 55, [67]5, 56, 57, [67]6, [67]7, 60, 61, [67]8, 66, [67]
        [10]14, [11]64, 65, [120]13, [f10]f10, [7]f12
B3/129 - [6]7, [120]9
N20:41/15 - [5]69, 120, [7]w1, [13]wf10
N20:42/1 - [5]48, 49, 50, 51, [120]13, [wf10]wf10
N20:42/6 - [5]120, 121, [13]wf10
N20:42/3 - [5]119, 120, [13]wf10
N20:38/13 - [5]26, 47, [120]w114, w[7]w12, w[12]w1, [13]wf10, [7]wf12
N20:39/3 - [5]35, 36, [120]w114, w[12]w2, [13]wf10, [7]wf12
B3/130 - [5]35
T4:5.DN - [5]9, 8
B3/73 - [5]59
C5:0 - [3]6, [15]0, {ACC}1, {CU}0
N19:21 - [5]10
B3:2 - [3]11, [32], [5]119, [33]121, [34], [2]18, 19, [20]5, 1, 58, [6]4
        [20]16
T4:4.DN - [5]8, 7
B3/16 - [5]55
B3/17 - [5]57
B3/109 - [5]19
B3/106 - [5]14
B3/112 - [5]24
B3/0 - OFFLOW/VAC CTRL BIT (OFF=FLOW, ON=VAC)
        [6]7, [5]2, 3, [58]62, [119]
I:9.0 - 120 VAC GEM HIGH BETA
        [4]8
N20:24/6 - 120 VAC STOP
        [6]4, [20]6, [4]w11, w[17]w2, [13]wf10, [18]wf1, wf1, wf1
I:7.0 - 120 VAC STOP COMMAND
        [4]6
N20:24/3 - 5 VDC STOP
        [6]4, [11]3, [20]6, [4]w11, w[17]w2, [13]wf10, [18]wf1, wf1, wf1
N20:24/2 - 5 VDC FAN START
        [18]3, [6]5, [20]7, [4]w11, w[17]w2, [13]wf10, [18]wf1, wf1, wf1
I:10.0 - [4]9
N12:2/10 - ACK INLET VAC HI ALARM
        [5]112, [7]w1, w2, w4, w7, w11
N12:2/9 - ACK INLET VAC LO ALARM
        [5]111, [7]w1, w2, w4, w7, w11
N13:0 - ALL BITS OFF FOR MASKING
        0, [20]3, 1, 2, 5, 11, [7]11, [16]18, 23, {0}, [13]0, 1, 2, 3, [14]0, [2]
        f20, f[3]f5, f5, f5, [2]f20, f[3]f5
N13:1 - ALL BITS ON
        1, [3]2, 4, 10, [7]1, 5, 6, 7, [2]f20, f[3]f5, f5, f5, [2]f20, f[3]f5

```

B3/2 - BYPASS
 [6]15
 N20:9 - CALC FLOW OUTPUT VALUE (SCFM)
 [5]7,10,[6]8,14,15,[20]25,[13]f10,[18]f1,f1,f1,[17]f0
 F8:4 - CALCULATED FLOW (SCFM)
 [6]14,[20]23,24
 O:10.0 - CAM BEACON?
 [17]5
 N36:53 - CAM PIC OUTPUT
 [20]15
 N14:0 - CORRECTED TEMPERATURE VALUE
 [6]14,[20]17,21
 S:39 - Clock Calendar Day
 [13]26,f18,f26
 S:40 - Clock Calendar Hours
 [13]34,f18,f26,f34
 S:41 - Clock Calendar Minutes
 [13]42,f18,f26,f34,f42
 S:38 - Clock Calendar Month
 [13]18,f18
 S:42 - Clock Calendar Seconds
 [13]50,f18,f26,f34,f42,f50
 U:6 - EXHAUST FAN CTRL ON STACK FLOW
 6
 U:20 - EXHAUST FAN CTRL ON SUCTION PRESSURE
 7
 O:9.0 - EXHAUSTER RUNNING STATUS
 [17]4
 N20:41/6 - FAN AUTO/MAN
 [6]0,1,4,16,/17,[20]0,1,6,26,/27,[7]w1,[13]wf10
 N10:0 - FAN CTRL PID BIT SETTINGS
 [6]7,f1,[20]9,12,{1},[6]17,[20]27,[6]f7,f[20]f9,[6]f10
 f[20]f12
 U:5 - FAN INTERLOCKS AND ALARMS
 5
 N20:41/1 - FAN INTLKS
 [5]52,53,121,[6]/2,5,[9]/1,[20]/2,7,[7]w1,[13]wf10
 N10:13 - FAN PID CALC INTERVAL /100s
 [6]7,[20]9,[6]f10,f[20]f12,[6]f7,f[20]f9
 N10:28 - FAN PID PV
 [6]8,10,[20]10,12
 N10:9 - FAN PID DEADBAND
 [6]7,[20]9,[6]f10,f[20]f12,[6]f7,f[20]f9
 T4:20 - FAN STARTUP TIMER ALARM BYPASS
 [5]1,{DN}3,7,14,19,24,58
 B3/34 - FAN ENABLED
 18,19,/20,[5]1,58,[6]4,[20]6,[3]w11
 T4:37 - FIFO LOAD TIMER
 [18]0,1,{DN}1
 T4:2 - FILTER #1 ROC TIMER
 [5]52,{DN}54
 N20:38/11 - FILTER #2 DP HI
 [5]22,/22,23,46,w114,w[7]w12,w[12]w1,[13]wf10,[7]wf12
 N20:38/10 - FILTER #2 DP HI HI
 [5]21,/21,23,46,/120,w114,w[7]w12,w[12]w1,[13]wf10,[7]wf12
 T4:3 - FILTER #2 ROC TIMER
 [5]53,{DN}56
 N20:38/8 - FILTER 1 DP HI
 [5]17,/17,18,45,w114,w[7]w12,w[12]w1,[13]wf10,[7]wf12
 N20:35/8 - FILTER 1 DP HI
 [5]17,45,78,[3]w5,w[5]w113,w116,w[8]w0,[13]wf10,[18]wf1,[3]
 wf5,wf[5]wf116
 N20:38/6 - FILTER 1 DP LO
 [5]14,15,/119,w114,w[7]w12,w[12]w1,[13]wf10,[7]wf12
 N20:35/6 - FILTER 1 DP LO
 [5]14,/15,76,[3]w5,w[5]w113,w116,w[8]w0,[13]wf10,[18]wf1
 [3]wf5,wf[5]wf116
 R6:35 - FILTER 1 DP ROC FIFO CONTROL
 [18]1,[13]f5,f7,f9,f11,f13,f15,f17,f19,f21,f23,f25,f27,f29
 f31,f33,f35,f37,f39,f41,f43,f45,f47,f49,f51,[18]f1
 N20:4 - FILTER 1 DP DATA
 [4]1,[5]14,16,17,18,[18]1,2,[13]f10,[18]f1,[4]f1
 N35:0 - FILTER 1 DP FIFO BUFFER
 20,[3]5,[18]1,[2]f20,f[3]f5

N20:38/7 - FILTER 1 DP HI HI
 [5]16,16,18,45,119,w114,w[7]w12,w[12]w1,[13]wf10,[7]wf12
 N20:35/7 - FILTER 1 DP HI HI
 [5]16,71,[3]w5,w[5]w113,w116,w[8]w0,[13]wf10,[18]wf1,[3]wf5
 N20:40/4 - FILTER 1 ROC INTERLOCK
 [5]54,55,67,w114,w[12]w3,[13]wf10,[7]wf12
 N35:80 - FILTER 1&2 DP FIFO BUFFER
 [18]1,[2]f20,f[3]f5
 R6:37 - FILTER 1&2 DP ROC FIFO CTRL
 [18]1,[13]f5,f7,f9,f11,f13,f15,f17,f19,f21,f23,f25,f27,f29
 f31,f33,f35,f37,f39,f41,f43,f45,f47,f49,f51,[18]f1,f1,f1
 N20:38/12 - FILTER 1&2 DP LO
 [5]24,25,120,w114,w[7]w12,w[12]w1,[13]wf10,[7]wf12
 N20:35/12 - FILTER 1&2 DP LO
 [5]24,25,82,[3]w5,w[5]w113,w116,w[8]w0,[13]wf10,[18]wf1
 [3]wf5,wf[5]wf116
 N20:35/11 - FILTER 2 DP HI
 [5]22,46,81,[3]w5,w[5]w113,w116,w[8]w0,[13]wf10,[18]wf1
 [3]wf5,wf[5]wf116
 N20:38/9 - FILTER 2 DP LO
 [5]19,20,119,w114,w[7]w12,w[12]w1,[13]wf10,[7]wf12
 N20:35/9 - FILTER 2 DP LO
 [5]19,20,79,[3]w5,w[5]w113,w116,w[8]w0,[13]wf10,[18]wf1
 [3]wf5,wf[5]wf116
 R6:36 - FILTER 2 DP ROC FIFO CONTROL
 [18]1,[13]f5,f7,f9,f11,f13,f15,f17,f19,f21,f23,f25,f27,f29
 f31,f33,f35,f37,f39,f41,f43,f45,f47,f49,f51,[18]f1,f1,f1
 N20:5 - FILTER 2 DP DATA
 [5]19,21,22,23,[18]1,2,[13]f10,[18]f1,[4]f1,[18]f1
 N35:40 - FILTER 2 DP FIFO BUFFER
 [18]1,[2]f20,f[3]f5
 N20:35/10 - FILTER 2 DP HI HI
 [5]21,80,[3]w5,w[5]w113,w116,w[8]w0,[13]wf10,[18]wf1,[3]
 wf5,wf[5]wf116
 N20:40/5 - FILTER 2 ROC INTERLOCK
 [5]56,57,67,w114,w[12]w3,[13]wf10,[7]wf12
 N20:6 - FILTERS 1&2 DP DATA
 [5]24,26,[18]1,2,[13]f10,[18]f1,[4]f1,[18]f1,f1
 C5:0.ACC - FIRST 10 PROCESSOR SCANS
 [15]1,[3]6,[15]0
 F8:5 - FLOW CALC INTERMEDIATE
 [6]14,[20]24,25
 F8:1 - FLOW CALC INTERMEDIATE VALUE
 [6]14,[20]20,21
 F8:2 - FLOW CALC INTERMEDIATE VALUE
 [6]14,[20]21,22
 F8:3 - FLOW CALC INTERMEDIATE VALUE
 [6]14,[20]22,23
 N36:10 - FLOW CTRL PID BIT SETTINGS (WORD 0)
 [6]7,f7
 N36:12 - FLOW CTRL PID CALC PERIOD /100s (WORD 13)
 [6]7,f7
 N36:13 - FLOW CTRL PID PROPORTIONAL GAIN
 [6]7,18,f7,f18
 N36:11 - FLOW PID CTRL DEADBAND (WORD 9)
 [6]7,f7
 S:1/15 - First Pass
 2,[11]w2,w[15]w1
 N20:10 - GLYCOL LEVEL DATA
 [4]2,[5]27,28,[13]f10,[18]f1,f1,f1,[4]f2
 N20:38/15 - GLYCOL LEVEL LOW CURR ALM
 [5]27,27,28,[10]0,0,1,[5]w114,w[7]w12,w[12]w1,[13]wf10
 [7]wf12
 N20:35/15 - GLYCOL LEVEL LOW UNACK ALM
 [5]27,85,[10]0,0,1,[3]w5,w[5]w113,w116,w[8]w0,[13]wf10
 [18]wf1,[3]wf5,wf[5]wf116
 O:8.0 - GLYCOL PUMP 120 VAC OUT
 [17]3
 U:10 - GLYCOL PUMP CTRLS AND INTLK
 10
 N20:25/6 - GLYCOL PUMP ON/OFF
 [5]32,[10]0,[4]w12,w[17]w3,[13]wf10,[18]wf1,wf1,wf1

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I:8.0      - GLYCOL PUMP ON/OFF
            [4]7
N20:26/1   - Glycol Heater Contactor
            [10]1, [4]w13, w[16]w22, w23, w[17]w4, [13]wf10, [18]wf1, wf1, wf1
N20:25/0    - Glycol Pump
            [10]0, 1, [4]w12, w[17]w3, [13]wf10, [18]wf1, wf1, wf1
B3/1       - HI VACUUM MODE (SEAL POT PLUG) SELECTED
            [5]35, [37]119, [20]4, 5, /12, 13
N20:36/0    - HTR AIR TEMP HIGH UNACK ALM
            [5]30, 186, [10]1, [5]w113, w[8]w0, [13]wf10, [3]wf5, wf[5]wf116
N20:39/0    - HTR AIR TEMP HIGH CURR ALM
            [5]29, 30, 31, [10]1, [5]w114, w[12]w2, [13]wf10, [7]wf12
N20:40/11   - INLET VAC HI
            [5]64, 65, /120, w114, w[12]w3, [13]wf10, [7]wf12
N20:37/11   - INLET VAC HI
            [5]63, 112, w113, w[8]w0, [13]wf10, [3]wf5, wf[5]wf116
T4:13       - INLET VAC HI INITIAL DELAY
            [5]62, [DN]63
T4:14       - INLET VAC HI SHUTDN INTLK TIMER
            [5]63, [DN]64
N20:40/10   - INLET VAC LO
            [5]4, w114, w[12]w3, [13]wf10, [7]wf12
N20:37/10   - INLET VAC LO
            [5]4, 111, w113, w[8]w0, [13]wf10, [3]wf5, wf[5]wf116
T4:10       - INLET VAC LO TIMER
            [5]3, [DN]4
T4:13.DN    - INLET VACUUM HI INITIAL DELAY TIMER DONE
            [5]63, 62
N19:26      - INLET VACUUM HIGH
            [5]62, 65, [20]f4, f5
N19:25      - INLET VACUUM LOW
            [5]13, [20]4, 5, f4, f5
N20:43      - LAST PID RESULT
            [6]12, 16, 17, [20]26, 27, [13]f10, [6]f16, f17, f[20]f26, f27
N36:38      - LO VAC SPT FOR HI-VAC MODE
            [20]5, f5
N36:28      - LO VAC SPT FOR VAC CTRL
            [20]4, f4
T4:37.DN    - LOAD FIFO ONCE PER SECOND
            [18]1, 0, 1
N20:42/13   - LOW INPUT INTLK
            [5]121, [16]12, [13]wf10
I:11.0      - MODULE 11 INPUT FILE
            [4]10, f10
N20:28      - MODULE 11 DATAGRAM
            [4]10, [13]f10, [18]f1, f1, f1, [4]f10
N20:12      - MODULE 4 DATAGRAM
            [4]3, [13]f10, [18]f1, f1, f1, [4]f3
I:4.0       - MODULE 4 INPUT FILE
            [4]3, f3
I:5.0       - MODULE 5 INPUT FILE
            [4]4, f4
N20:16      - MODULE 5 DATAGRAM
            [4]4, [5]48, [13]f10, [18]f1, f1, f1, [4]f4
N20:22      - MODULE 6 5 VDC RC ANALOG INPUT
            [4]5, [16]0, 3, 5, 25, 26, 29, [13]f10, [18]f1, f1, f1, [4]f5
I:6.0       - MODULE 6 INPUT FILE
            [4]5, f5
N20:25/1    - MOTOR CONTACTOR OFF - SEE RUNG 4:12 - FOR WW?)
            [8]2, [4]w12, w[17]w3, [13]wf10, [18]wf1, wf1, wf1
N20:25/3    - MOTOR CONTACTOR ON (SEE LADDER 4:12 - FOR WW?)
            [8]1, [4]w12, w[17]w3, [13]wf10, [18]wf1, wf1, wf1
N20:25/7    - MOTOR CONTACT
            [5]13, 7, 14, /15, 16, 17, 19, /20, 21, 22, 24, /25, 52, 53, /55, /57, 58, 62
            66, [6]0, /1, /12, [8]1, /2, [9]0, 1, [14]3, [16]0, 6, 22, /23, 24, [20]0
            1, /15, [4]w12, w[17]w3, [13]wf10, [18]wf1, wf1, wf1
S:6         - Major Error Fault Code
            [1]10
S:1/13      - Major Error Halted
            [1]13, w2, w[15]w1
U:4         - NORMAL MODE - TRANSFERS TO I/O IMAGES ARE ENABLED
            3
S:15       - Node Address/ Baud Rate
            [3]9

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B3/105 - OSR ON STACK FLOW HI LATCH
 N10:0/1 - PID AUTO/MAN STATUS
 N10:29 - PID OUTPUT TO FAN VFD
 N10:2 - PID SETPOINT (RAW UNITS, IN CONTROL BLOCK)
 F8:6 - PID SETPOINT FOR FLOW
 F8:7 - PID SETPOINT FOR VACUUM (FAN INLET PRESSURE)
 N20:37/7 - PLENUM 1 PRESS HI (ACK ALM)
 N20:40/7 - PLENUM 1 PRESS HI (CURR ALM)
 T4:15 - PLENUM 1 PRESS HI ALARM TMR
 T4:17 - PLENUM 1 PRESS HI SHUTDOWN TMR
 PDI-170 - PLENUM 1 PRESSURE DATA
 N20:7 - PLENUM 2 PRESSURE DATA
 N20:2 - PRE-FILTER DATA
 N10:3 - PROPORTIONAL GAIN
 N20:42/9 - PUMP COUNT BIT
 S:1 - Processor Mode Status/ Control
 N36:48 - RECORD SAMPLER PIC OUTPUT
 T4:28 - RESET ACK WORDS ON TIMEOUT
 U:3 - RUN ONCE TO INIT DATA TABLE
 F8:0 - SCALED DP VALUE (IN W.C.)
 LT185 - SEAL POT LEVEL PUMP ON AT 70%
 U:19 - SEAL POT PUMP CONTROL
 N20:25/2 - SEAL POT PUMP RELAY
 N20:42/2 - SIMULATE MODE IF BIT IS TRUE
 U:9 - SIMULATE MODE ON (NO TRANSFER TO I/O IMAGE FILES)
 N20:3 - STACK DP FROM INPUT IMAGE FILE
 N14:1 - STACK DP IN ARBITRARY UNITS
 N20:38/5 - STACK FLOW HI INTLK
 N20:35/5 - STACK FLOW HI LATCH ALARM
 T4:8 - STACK FLOW HI SHUTDOWN TIMER
 T4:7 - STACK FLOW HI TIMER
 N20:38/4 - STACK FLOW LO
 T4:5 - STACK FLOW LO SHUTDOWN INTLK TIMER
 T4:4 - STACK FLOW LO TIMER
 N19:4 - STACK FLOW LOW SETPOINT
 N36:16 - STACK FLOW LOW SETPOINT FOR FLOW CTRL

N36:26 - STACK FLOW LOW SETPOINT FOR VAC CTRL
 [20]3, f3
 N36:43 - STACK PIC OUT
 [20]15
 N20:30 - STACK TEMP
 [6]14, [19], [20]17, 28, [13]f10, [18]f1, f1, f1, [4]f10
 N20:24/7 - START PBUTTON
 [6]5, [20]7, [4]w11, w[17]w2, [13]wf10, [18]wf1, wf1, wf1
 N20:25/4 - UNACKED ALARMS STATUS
 [8]0, [4]w12, w[17]w3, [13]wf10, [18]wf1, wf1, wf1
 N20:35 - UNACKED ALARMS WORD 1/3 STATUS
 [3]5, [5]113, [16]1, [8]0, [1]70, [1]71, [2]2, 72, [3]5, 73, [4]8
 74, [5]11, 75, [16]14, [15]76, [17]16, 77, [8]17, 45, 78, [9]19, [20]79
 [10]21, 80, [11]22, 46, 81, [12]24, [25]82, [13]26, 83, [14]84, [15]
 27, 85, [10]0, [1]13, f10, [18]f1, [3]f5, f[5]f116
 N20:36 - UNACKED ALARMS WORD 2/3 STATUS
 [5]113, [8]0, [0]5130, 86, [10]1, [1]1, [5]32, 87, [2]33, 88, [3]35
 89, [14]37, 90, [5]91, [16]1, 20, [21]16, [5]92, [16]14, [7]15, [93]
 [16]17, 20, [11]21, [8]1, [5]94, [16]10, [9]15, 95, [16]12, [10]15, 96
 [16]12, [11]1, [14]1, 97, [12]98, [13]99, [14]47, 100, [15]101, [13]
 f10, [3]f5, f[5]f116
 N20:37 - UNACKED ALARMS WORD 3/3 STATUS
 [5]113, [8]0, [0]5148, 102, [1]49, 103, [2]50, 104, [3]51, 105, [4]
 54, 106, [11]9, [5]56, 107, [119]6, [108]7, 59, 109, [8]66, 110, [10]4
 111, [11]63, 112, [13]f10, [3]f5, f[5]f116
 N36:20 - VAC CTRL PID BIT SETTINGS (WORD 0)
 [20]9, f9
 N36:22 - VAC CTRL PID CALC PERIOD /100s (WORD 13)
 [20]9, f9
 N36:23 - VAC CTRL PID PROPORTIONAL GAIN
 [20]9, f9
 N36:21 - VAC PID CTRL DEADBAND (WORD 9)
 [20]9, f9
 N20:8 - VFD INPUT DATA
 [6]11, [17]0, [20]14, [13]f10, [18]f1, f1, f1, [17]f0
 N20:41/2 - WW START
 [6]5, [9]0, [20]7, [7]w1, [13]wf10
 N20:41/3 - WW STOP
 [6]4, [9]0, 1, [20]6, [7]w1, [13]wf10
 N20:25 - WW TRANSFER WORD?
 [4]12, [17]3, [0]1010, 1, [1]812, [2]1910, 1, [3]811, [4]0
 [5]1317, [16]13, [20]16, [6]15132, [10]0, [7]1513, 7, 14, [15]16
 17, 19, [20]21, 22, 24, [25]52, 53, [55]57, 58, 62, 66, [16]0, [1]712
 [8]1, [2]910, 1, [14]3, [16]0, 6, 22, [23]24, [20]0, [1]15, [9]15
 [43]16, [12]37, [10]1, [5]744, [16]12, 38, [13]f10, [18]f1, f1, f1
 N20:26 - WW TRANSFER WORD?
 [4]13, [16]22, 23, [17]4, [1]1011, [4]16137, [5]38, [6]12, [7]
 [12]8, [16]10, [19]11, [19]13, f10, [18]f1, f1, f1
 N20:24 - WW TRANSFER WORD?
 [4]11, [17]2, [2]2118, [6]5, [20]7, [3]614, [11]3, [20]6, [5]
 [6]6, [20]8, [6]14, [20]6, [7]1615, [20]7, [9]1616, [20]8
 [13]f10, [18]f1, f1, f1
 N20:27 - WW TRANSFER WORD?
 [4]14, [17]5, [0]1612, [13]f10, [18]f1, f1, f1

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```

      1 1 1 1 1 1 1 1 1 2 2 2 2 2 2 2 2 2 2 3 3 3 3 3 3 3 3 3 4 4 4 4 4 4 4 4 4
Address 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9
-----
N23:0   X
N23:50
N23:100
N23:150 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
N23:200 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
N23:250 XXXXXXX
  
```

Data File #24 Type:N Integer Elements:256 Words:256

```

      1 1 1 1 1 1 1 1 1 2 2 2 2 2 2 2 2 2 2 2 3 3 3 3 3 3 3 3 3 3 4 4 4 4 4 4 4 4 4 4
Address 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9
-----
N24:0   XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
N24:50 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
N24:100 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
N24:150 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
N24:200 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
N24:250 XXXXXXX
  
```

Data File #25 Type:N Integer Elements:256 Words:256

```

      1 1 1 1 1 1 1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 3 3 3 3 3 3 3 3 3 3 4 4 4 4 4 4 4 4 4 4
Address 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9
-----
N25:0   X
N25:50
N25:100
N25:150 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
N25:200 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
N25:250 XXXXXXX
  
```

Data File #26 Type:N Integer Elements:256 Words:256

```

      1 1 1 1 1 1 1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 3 3 3 3 3 3 3 3 3 3 4 4 4 4 4 4 4 4 4 4
Address 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9
-----
N26:0   XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
N26:50 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
N26:100 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
N26:150 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
N26:200 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
N26:250 XXXXXXX
  
```

Data File #27 Type:N Integer Elements:256 Words:256

```

      1 1 1 1 1 1 1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 3 3 3 3 3 3 3 3 3 3 4 4 4 4 4 4 4 4 4 4
Address 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9
-----
N27:0   X
N27:50
N27:100
N27:150 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
N27:200 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
N27:250 XXXXXXX
  
```

Data File #28 Type:N Integer Elements:229 Words:229

```

      1 1 1 1 1 1 1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 3 3 3 3 3 3 3 3 3 3 4 4 4 4 4 4 4 4 4 4
Address 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9
-----
N28:0   XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
N28:50 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
N28:100 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
N28:150 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
N28:200
  
```

Data File #29 Type:N Integer Elements:256 Words:256

```

      1 1 1 1 1 1 1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 3 3 3 3 3 3 3 3 3 3 4 4 4 4 4 4 4 4 4 4
Address 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9
-----
  
```



```

1 1 1 1 1 1 1 1 1 1 2 2 2 2 2 2 2 2 2 2 3 3 3 3 3 3 3 3 3 3 4 4 4 4 4 4 4 4 4
Address 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9
-----
N29:0    X
N29:50   X
N29:100  XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
N29:150  XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
N29:200  XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
N29:250  XXXXXXXX
  
```

Data File #30 Type:N Integer Elements:229 Words:229

```

1 1 1 1 1 1 1 1 1 1 2 2 2 2 2 2 2 2 2 2 3 3 3 3 3 3 3 3 3 3 4 4 4 4 4 4 4 4 4
Address 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9
-----
N30:0    XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
N30:50   XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
N30:100  XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
N30:150  XXXXXXXX
N30:200  XXXXXXXX
  
```

Data File #31 Type:N Integer Elements:256 Words:256

```

1 1 1 1 1 1 1 1 1 1 2 2 2 2 2 2 2 2 2 2 3 3 3 3 3 3 3 3 3 3 4 4 4 4 4 4 4 4 4
Address 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9
-----
N31:0    X
N31:50   X
N31:100  XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
N31:150  XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
N31:200  XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
N31:250  XXXXXXXX
  
```

Data File #32 Type:N Integer Elements:229 Words:229

```

1 1 1 1 1 1 1 1 1 1 2 2 2 2 2 2 2 2 2 2 3 3 3 3 3 3 3 3 3 3 4 4 4 4 4 4 4 4 4
Address 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9
-----
N32:0    XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
N32:50   XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
N32:100  XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
N32:150  XXXXXXXX
N32:200  XXXXXXXX
  
```

Data File #33 Type:N Integer Elements:256 Words:256

```

1 1 1 1 1 1 1 1 1 1 2 2 2 2 2 2 2 2 2 2 3 3 3 3 3 3 3 3 3 3 4 4 4 4 4 4 4 4 4
Address 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9
-----
N33:0    X
N33:50   X
N33:100  XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
N33:150  XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
N33:200  XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
N33:250  XXXXXXXX
  
```

Data File #34 Type:N Integer Elements:229 Words:229

```

1 1 1 1 1 1 1 1 1 1 2 2 2 2 2 2 2 2 2 2 3 3 3 3 3 3 3 3 3 3 4 4 4 4 4 4 4 4 4
Address 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9
-----
N34:0    XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
N34:50   XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
N34:100  XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
N34:150  XXXXXXXX
N34:200  XXXXXXXX
  
```

Data File #35 Type:N Integer Elements:140 Words:140

```

1 1 1 1 1 1 1 1 1 1 2 2 2 2 2 2 2 2 2 2 3 3 3 3 3 3 3 3 3 3 4 4 4 4 4 4 4 4 4
Address 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9
-----
N35:0    XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
  
```

```

      1 1 1 1 1 1 1 1 1 1 2 2 2 2 2 2 2 2 2 2 3 3 3 3 3 3 3 3 3 3 3 3 4 4 4 4 4 4 4 4 4 4
Address 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9
-----
N35:50  X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X
N35:100 X X X X X X X X X X

```

Data File #36 Type:N Integer Elements:93 Words:93

```

      1 1 1 1 1 1 1 1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 3 3 3 3 3 3 3 3 3 3 4 4 4 4 4 4 4 4 4 4 4 4
Address 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9
-----
N36:0   X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X X
N36:50   X

```

Data File #40 Type:N Integer Elements:43 Words:43

```

      1 1 1 1 1 1 1 1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 3 3 3 3 3 3 3 3 3 3 4 4 4 4 4 4 4 4 4 4 4 4
Address 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9
-----
M40:0

```

Slot	Part #	Card Description
0	1747-LE32	5/03 CPU - 12K Memory - OS301
1	1746-NI4	4 Channel Analog Input Module
2	1746-NI4	4 Channel Analog Input Module
3	1746-NIO4I	2/2 Channel Analog I/O Module
4	1746-NI4	4 Channel Analog Input Module
5	1746-NI4	4 Channel Analog Input Module
6	1746-NIO4V	2/2 Channel Analog I/O Module
7	1746-IO12	6-Input 100/120 VAC, 6-Output (RLY)
8	1746-IO12	6-Input 100/120 VAC, 6-Output (RLY)
9	1746-IO12	6-Input 100/120 VAC, 6-Output (RLY)
10	1746-IO12	6-Input 100/120 VAC, 6-Output (RLY)
11	1746-NI4	4 Ch. Thermocouple Input Module
12	1747-SN	RIO Scanner

Quantity Part # Card Description

4	1746-IO12	6-Input 100/120 VAC, 6-Output (RLY)
4	1746-NI4	4 Channel Analog Input Module
1	1746-NIO4I	2/2 Channel Analog I/O Module
1	1746-NIO4V	2/2 Channel Analog I/O Module
1	1747-SN	RIO Scanner
1	1746-NI4	4 Ch. Thermocouple Input Module

I/O Point	I/O (Symbol)	Description	Device Description	Upper DES	Lower DES
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