

INDEPENDENT ORBITER ASSESSMENT

**ASSESSMENT OF THE
MAIN PROPULSION
SUBSYSTEM
FMEA/CIL
VOLUME 3 OF 4**

26 FEBRUARY 1988

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 2/11/88
 ASSESSMENT ID: MPS-5000AA
 NASA FMEA #: NA

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5000
 ITEM: LO2 PREVALVE CONTROL CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[N / N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

THE ORIGINAL ASSESSMENT SHEET #5000 LISTED 72 DIODES. THIS SHOULD HAVE BEEN 66 DIODES. DELETE 6 DIODES. SIX REMAINING DIODES ASSESSED ON THIS SHEET WERE MISCOUNTED.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
 ASSESSMENT ID: MPS-5000B
 NASA FMEA #: 2184-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5000
 ITEM: LO2 PREVALVE CONTROL CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /3]	[NA]	[NA]	[NA]	[]
COMPARE	[/N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 12 MAINSTAGE MDM BLOCKING DIODES.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: MPS-5000C
NASA FMEA #: 2184-2

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5000
ITEM: LO2 PREVALVE CONTROL CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /3]	[NA]	[NA]	[NA]	[]
COMPARE	[/N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

12 MAINSTAGE MDM BLOCKING DIODES. FAILS B-SCREEN BECAUSE
MAINSTAGE COMMANDS ARE NOT INSTRUMENTED. FUNCTIONAL CRITICALITY
DETERMINED BY LIKE AND UNLIKE REDUNDANCY. NASA REVISED THEIR
FUNCTION AND SCREEN CRITICALITY.

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 2/11/88
 ASSESSMENT ID: MPS-5000D
 NASA FMEA #: 2187-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5000
 ITEM: LO2 PREVALVE CONTROL CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 12 OPEN SWITCH BLOCKING DIODES.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: MPS-5000E
NASA FMEA #: 2187-2

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5000
ITEM: LO2 PREVALVE CONTROL CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /3]	[NA]	[NA]	[NA]	[]
COMPARE	[/N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:
12 OPEN SWITCH BLOCKING DIODES.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: MPS-5000F
NASA FMEA #: 2189-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5000
ITEM: LO2 PREVALVE CONTROL CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

12 OPEN SWITCH BLOCKING DIODES.

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 2/11/88
 ASSESSMENT ID: MPS-5000G
 NASA FMEA #: 2189-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5000
 ITEM: LO2 PREVALVE CONTROL CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /3]	[NA]	[NA]	[NA]	[]
COMPARE	[/N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

12 OPEN SWITCH BLOCKING DIODES. SHORT IN SWITCH CIRCUIT, PASSED ON THROUGH THE SHORTED BLOCKING DIODE, WOULD REMOVE THE INHIBIT FROM THE HYBRID DRIVER. THIS DECREASE IN REDUNDANCY COULD RESULT IN PREMATURE CLOSING OF LO2 PREVALVE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
 ASSESSMENT ID: MPS-5000J
 NASA FMEA #: 2191-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5000
 ITEM: LO2 PREVALVE CONTROL CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[F]	[F]	[P]	[X] *
IOA	[3 /3]	[NA]	[NA]	[NA]	[]
COMPARE	[/N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

12 SWITCH CLOSE GROUND DIODES. FUNCTIONAL CRITICALITY DETERMINED
 BY LIKE AND UNLIKE REDUNDANCY. FAILS B-SCREEN BECAUSE REDUNDANCY
 MASKS THE FAILURE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
 ASSESSMENT ID: MPS-5000K
 NASA FMEA #: 2191-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5000
 ITEM: LO2 PREVALVE CONTROL CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

12 SWITCH CLOSE GROUND DIODES. DIODES FAIL SHORTED WILL NOT
 NORMALLY AFFECT THE OPERATION OF THE CIRCUIT.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88	NASA DATA:
ASSESSMENT ID: MPS-5000L	BASELINE []
NASA FMEA #: 2192-1	NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5000
 ITEM: LO2 PREVALVE CONTROL CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[F]	[F]	[P]	[X] *
IOA	[3 /3]	[NA]	[NA]	[NA]	[]
COMPARE	[/N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

12 SWITCH OPEN GROUND DIODES. FUNCTIONAL CRITICALITY DETERMINED BY LIKE AND UNLIKE REDUNDANCY. FAILS B-SCREEN BECAUSE REDUNDANCY MASKS THE FAILURE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: MPS-5000M
NASA FMEA #: 2192-2

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5000
ITEM: LO2 PREVALVE CONTROL CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

12 SWITCH OPEN GROUND DIODES. DIODES FAIL SHORTED WILL NOT NORMALLY AFFECT THE OPERATION OF THE CIRCUIT.

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 2/11/88
 ASSESSMENT ID: MPS-5000N
 NASA FMEA #: 2193-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5000
 ITEM: LO2 PREVALVE CONTROL CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

6 TRANSIENT SUPPRESSOR DIODES. DIODE FAILURE WILL NOT NORMALLY AFFECT THE CIRCUIT OPERATION.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
 ASSESSMENT ID: MPS-50000
 NASA FMEA #: 2193-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5000
 ITEM: LO2 PREVALVE CONTROL CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

6 ZENER TRANSIENT SUPPRESSOR DIODES. DIODE FAILURE WILL NOT
 NORMALLY AFFECT THE CIRCUIT OPERATION.

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: MPS-5000P
NASA FMEA #: 2194-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5000
ITEM: LO2 PREVALVE CONTROL CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

		CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
			A	B	C	
	NASA	[3 /3]	[NA]	[NA]	[NA]	[] *
	IOA	[3 /3]	[NA]	[NA]	[NA]	[]
COMPARE		[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

*** CIL RETENTION RATIONALE:** (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

48 INSTRUMENTATION RESISTORS. LOSS OF THE MEASUREMENT ON THE TELEMETRY DOWNLINK.

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 2/11/88
 ASSESSMENT ID: MPS-5000Q
 NASA FMEA #: 2195-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5000
 ITEM: LO2 PREVALVE CONTROL CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

12 CLOSE SWITCH SCAN DIODES. DIODE FAILS OPEN. LOSS OF THE MEASUREMENT ON THE TELEMETRY DOWN LINK.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
 ASSESSMENT ID: MPS-5000R
 NASA FMEA #: 2195-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5000
 ITEM: LO2 PREVALVE CONTROL CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /3]	[NA]	[NA]	[NA]	[]
COMPARE	[/N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

12 CLOSE SWITCH SCAN DIODES. DIODE SHORTS. FAILS B-SCREEN
 BECAUSE REDUNDANCY MASKS THE FAILURE. LOSS OF MANUAL SWITCH
 CLOSE COMMAND ISOLATION. FUNCTIONAL CRITICALITY DETERMINED BY
 LIKE AND UNLIKE REDUNDANCY.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
 ASSESSMENT ID: MPS-5000S
 NASA FMEA #: 2196-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5000
 ITEM: LO2 PREVALVE CONTROL CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] [] (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

12 OPEN SWITCH SCAN DIODES. DIODE FAILS OPEN. LOSS OF THE MEASUREMENT ON THE TELEMETRY DOWN LINK.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: MPS-5000T
NASA FMEA #: 2196-2

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5000
ITEM: LO2 PREVALVE CONTROL CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /3]	[NA]	[NA]	[NA]	[]
COMPARE	[/N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

6 OPEN SWITCH SCAN DIODES. DIODE SHORTS. FAILS B-SCREEN BECAUSE REDUNDANCY MASKS THE FAILURE. LOSS OF MANUAL SWITCH OPEN COMMAND ISOLATION. FUNCTIONAL CRITICALITY DETERMINED BY LIKE AND UNLIKE REDUNDANCY.

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 2/11/88
 ASSESSMENT ID: MPS-5000U
 NASA FMEA #: 2389-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5000
 ITEM: LO2 PREVALVE CONTROL CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

30 BLEED RESISTORS. POSSIBLE ERRONEOUS MEASUREMENT ON THE
 TELEMETRY DOWNLINK.

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 2/11/88
 ASSESSMENT ID: MPS-5000V
 NASA FMEA #: 2390-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5000
 ITEM: LO2 PREVALVE CONTROL CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 3 OPEN SWITCH SCAN DIODES

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: MPS-5000W
NASA FMEA #: 2390-2

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5000
ITEM: LO2 PREVALVE CONTROL CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[F]	[F]	[P]	[X] *
IOA	[3 /3]	[NA]	[NA]	[NA]	[]
COMPARE	[/N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

3 OPEN SWITCH SCAN DIODES. DIODE SHORTS. FUNCTIONAL CRITICALITY
DETERMINED BY LIKE AND UNLIKE REDUNDANCY. FAILS B-SCREEN BECAUSE
REDUNDANCY MASKS THE FAILURE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: MPS-5000Y
NASA FMEA #: 2391-1
NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5000
ITEM: LO2 PREVALVE CONTROL CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:
3 CLOSE SWITCH SCAN DIODES.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
 ASSESSMENT ID: MPS-5000Z
 NASA FMEA #: 2391-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5000
 ITEM: LO2 PREVALVE CONTROL CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[F]	[F]	[P]	[X] *
IOA	[3 /3]	[NA]	[NA]	[NA]	[]
COMPARE	[/N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

3 CLOSE SWITCH SCAN DIODES. DIODE SHORTS. FUNCTIONAL
 CRITICALITY DETERMINED BY LIKE AND UNLIKE REDUNDANCY. FAILS B-
 SCREEN BECAUSE REDUNDANCY MASKS THE FAILURE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
 ASSESSMENT ID: MPS-5001
 NASA FMEA #: 2071-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5001
 ITEM: LO2 PREVALVE TOGGLE SWITCH

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [F] [P] [A]
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

3 TOGGLE SWITCHES. INADVERTENT COMMAND TO REOPEN PREVALVE DURING MECO SEQUENCE. FAILS B-SCREEN BECAUSE REDUNDANCY MASKS THE FAILURE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: MPS-5002
NASA FMEA #: 2071-2

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5002
ITEM: LO2 PREVALVE TOGGLE SWITCH

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [F] [P] [A]
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

3 TOGGLE SWITCHES. INADVERTENT COMMAND TO CLOSE SOLENOID, MAY CLOSE PREVALVE PREMATURELY DURING THE BURN. ONE SWITCH SCAN MEASUREMENT FOR 4 SWITCH CONTACTS DOES NOT SATISFY THE B-SCREEN. FAILS B-SCREEN BECAUSE REDUNDANCY MASKS THE FAILURE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
 ASSESSMENT ID: MPS-5003
 NASA FMEA #: 2070-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5003
 ITEM: FUSE (1A) (4 PER CIRCUIT)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /3]	[NA]	[NA]	[NA]	[] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [F] [P] [A]
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

12 FUSES. LOSS OF ALL REDUNDANCY (GPC AND MANUAL) IN
 LO2 PREVALVE COULD POSSIBLY CAUSE THE LOSS OF VEHICLE/CREW.
 REFERENCE NSTS 22206, PARA 2.3.3.C, AND ASSESSMENT MPS-4160
 REMARKS.

THE

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: MPS-5004
NASA FMEA #: 2070-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5004
ITEM: FUSE (1A) (4 PER CIRCUIT)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /3]	[NA]	[NA]	[NA]	[] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

12 FUSES. OPEN FUSES REMOVE POWER FROM THE LO2 PREVALVE CONTROL SWITCH. OPEN SWITCH INITIATES REDUNDANT ON-ORBIT VACUUM VENTING FUNCTION AFTER MECO. VENTING FUNCTION NOT CRITICAL FOR MISSION. REFERENCE ASSESSEMENT MPS-4150 REMARKS.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: MPS-5011
NASA FMEA #: NA

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5011
ITEM: MDM (FA1)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[N /N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[2 /1R] [P] [P] [P] [A]
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

1 MDM. REFERENCE DATA PROCESSING SYSTEM FMEA 05-5-B03-1-1,
CRITICALITY 2/1R, LOSS OF OUTPUT FROM AFT MDM'S FA1-4.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: MPS-5012
NASA FMEA #: NA

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5012
ITEM: MDM (FA2)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[N /N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[2 /1R] [P] [P] [P] [A]
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

1 MDM. REFERENCE DATA PROCESSING SYSTEM FMEA 05-5-B03-1-1,
CRITICALITY 2/1R, LOSS OF OUTPUT FROM AFT MDM'S FA1-4.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: MPS-5013
NASA FMEA #: NA

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5013
ITEM: MDM (FA3)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[N /N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[2 /1R] [P] [P] [P] [A]
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

1 MDM. REFERENCE DATA PROCESSING SYSTEM FMEA 05-5-B03-1-1,
CRITICALITY 2/1R, LOSS OF OUTPUT FROM AFT MDM'S FA1-4.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
 ASSESSMENT ID: MPS-5014
 NASA FMEA #: NA

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5014
 ITEM: MDM (FA4)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[N /N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[2 /1R] [P] [P] [P] [A]
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

1 MDM. REFERENCE DATA PROCESSING SYSTEM FMEA 05-5-B03-1-1,
 CRITICALITY 2/1R, LOSS OF OUTPUT FROM AFT MDM'S FA1-4.

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 2/11/88
 ASSESSMENT ID: MPS-5015
 NASA FMEA #: NA

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5015
 ITEM: MDM (FA1)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[N /N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [P] [P] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

1 MDM. REFERENCE DATA PROCESSING SYSTEM FMEA 05-5-B03-1-1,
 CRITICALITY 2/1R, LOSS OF OUTPUT FROM AFT MDM'S FA1-4.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: MPS-5016
NASA FMEA #: NA

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5016
ITEM: MDM (FA2)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	*
IOA	[3 /1R]	[P]	[P]	[P]	
COMPARE	[N /N]	[N]	[N]	[N]	

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [P] [P] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

1 MDM. REFERENCE DATA PROCESSING SYSTEM FMEA 05-5-B03-1-1,
CRITICALITY 2/1R, LOSS OF OUTPUT FROM AFT MDM'S FA1-4.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88	NASA DATA:
ASSESSMENT ID: MPS-5017	BASELINE []
NASA FMEA #: NA	NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5017
ITEM: MDM (FA3)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY	SCREENS	CIL ITEM
		A	B	C
NASA	[/]	[]	[]	[] *
IOA	[3 /1R]	[P]	[P]	[P]
COMPARE	[N /N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[3 /1R]	[P]	[P]	[P]	[]
				(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE	[]
INADEQUATE	[]

REMARKS:

1 MDM. REFERENCE DATA PROCESSING SYSTEM FMEA 05-5-B03-1-1,
CRITICALITY 2/1R, LOSS OF OUTPUT FROM AFT MDM'S FA1-4.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
 ASSESSMENT ID: MPS-5018
 NASA FMEA #: NA

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5018
 ITEM: MDM (FA4)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[N /N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [P] [P] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

1 MDM. REFERENCE DATA PROCESSING SYSTEM FMEA 05-5-B03-1-1,
 CRITICALITY 2/1R, LOSS OF OUTPUT FROM AFT MDM'S FA1-4.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: MPS-5019
NASA FMEA #: NA

NASA DAT:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5019
ITEM: MDM (FA1)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[N /N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [P] [P] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

1 MDM. REFERENCE DATA PROCESSING SYSTEM FMEA 05-5-B03-1-2,
CRITICALITY 1/1, LOSS OF OUTPUT FROM AFT MDM'S FA1-4.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
 ASSESSMENT ID: MPS-5020
 NASA FMEA #: NA

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5020
 ITEM: MDM (FA2)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[N /N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [P] [P] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

1 MDM. REFERENCE DATA PROCESSING SYSTEM FMEA 05-5-B03-1-2,
 CRITICALITY 1/1, LOSS OF OUTPUT FROM AFT MDM'S FA1-4.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
 ASSESSMENT ID: MPS-5021
 NASA FMEA #: NA

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5021
 ITEM: MDM (FA3)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[N /N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [P] [P] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

1 MDM. REFERENCE DATA PROCESSING SYSTEM FMEA 05-5-B03-1-2,
 CRITICALITY 1/1, LOSS OF OUTPUT FROM AFT MDM'S FA1-4.

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 2/11/88
 ASSESSMENT ID: MPS-5022
 NASA FMEA #: NA

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5022
 ITEM: MM (FA4)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[N /N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [P] [P] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

1 MDM. REFERENCE DATA PROCESSING SYSTEM FMEA 05-5-B03-1-2,
 CRITICALITY 1/1, LOSS OF OUTPUT FROM AFT MDM'S FA1-4.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
 ASSESSMENT ID: MPS-5031
 NASA FMEA #: 2078-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5031
 ITEM: HYBRID DRIVER, TYPE 3 (2 PER CIRCUIT)

LEADANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[N /]	[]	[N]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

6 OPEN HDC IIIs. B-SCREEN FAILS BECAUSE OF SERIES/PARALLEL REDUNDANCY MASKS THE FAILURE. FUNCTIONAL CRITICALITY DETERMINED BY LIKE AND UNLIKE REDUNDANCY.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
 ASSESSMENT ID: MPS-5032
 NASA FMEA #: 2078-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5032
 ITEM: HYBRID DRIVER, TYPE 3 (2 PER CIRCUIT)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[/]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

6 OPEN HDC IIIs. FAILS B-SCREEN BECAUSE REDUNDANT (PARALLEL)
 DRIVER MASKS THE FAILURE.

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 2/11/88
 ASSESSMENT ID: MPS-5033
 NASA FMEA #: 2079-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5033
 ITEM: HYBRID DRIVER, TYPE 1

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 3 OPEN HDC Is.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
 ASSESSMENT ID: MPS-5034
 NASA FMEA #: 2076-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5034
 ITEM: REMOTE POWER CONTROLLER (2 PER CIRCUIT)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 6 OPEN RPCs.

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: MPS-5035
NASA FMEA #: 2077-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5035
ITEM: DIODE, ISOLATION (12A) (2 PER CIRCUIT)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:
6 OPEN RPC OUTPUT DIODES.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: MPS-5041
NASA FMEA #: 2074-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5041
ITEM: HYBRID DRIVER, TYPE 3 (2 PER CIRCUIT)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[N /]	[]	[N]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

6 CLOSE HDC IIIs. FUNCTIONAL CRITICALITY DETERMINED BY LIKE AND UNLIKE REDUNDANCY.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
 ASSESSMENT ID: MPS-5042
 NASA FMEA #: 2075-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5042
 ITEM: HYBRID DRIVER, TYPE 1

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[2 /1R]	[P]	[F]	[P]	[X]
COMPARE	[N /]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

3 CLOSE HDC I'S. FUNCTIONAL CRITICALITY DETERMINED BY LIKE AND UNLIKE REDUNDANCY.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: MPS-5043
NASA FMEA #: 2072-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5043
ITEM: REMOTE POWER CONTROLLER (2 PER CIRCUIT)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[N /]	[]	[]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

6 CLOSE RPC'S. FUNCTIONAL CRITICALITY DETERMINED BY LIKE AND UNLIKE REDUNDANCY.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: MPS-5044
NASA FMEA #: 2073-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5044
ITEM: DIODE, ISOLATION (12A) (2 PER CIRCUIT)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[2 /1R]	[P]	[F]	[P]	[X]
COMPARE	[N /]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

6 CLOSE RPC OUTPUT DIODES. FUNCTIONAL CRITICALITY DETERMINED BY
LIKE AND UNLIKE REDUNDANCY.

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 2/11/88
 ASSESSMENT ID: MPS-5051
 NASA FMEA #: 2074-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5051
 ITEM: HYBRID DRIVER, TYPE 3 (2 PER CIRCUIT)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[N /]	[]	[N]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

6 CLOSE HDC III'S. FUNCTIONAL CRITICALITY DETERMINED BY LIKE AND UNLIKE REDUNDANCY..

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
 ASSESSMENT ID: MPS-5052
 NASA FMEA #: 2072-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5052
 ITEM: REMOTE POWER CONTROLLER (2 PER CIRCUIT)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[N /]	[]	[]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

6 CLOSE RPC'S. FUNCTIONAL CRITICALITY DETERMINED BY LIKE AND UNLIKE REDUNDANCY.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
 ASSESSMENT ID: MPS-5053
 NASA FMEA #: 2073-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5053
 ITEM: DIODE, ISOLATION (12A) (2 PER CIRCUIT)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[2 /1R]	[P]	[F]	[P]	[X]
COMPARE	[N /]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

6 CLOSE RPC OUTPUT DIODES. FUNCTIONAL CRITICALITY DETERMINED BY
 LIKE AND UNLIKE REDUNDANCY.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: MPS-5061
NASA FMEA #: 2078-2

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5061
ITEM: HYBRID DRIVER, TYPE 3 (2 PER CIRCUIT)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[N /]	[]	[N]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

6 OPEN HDC III'S. B-SCREEN FAILS BECAUSE OF SERIES/PARALLEL REDUNDANCY MASKS THE FAILURES. FUNCTIONAL CRITICALITY DETERMINED BY LIKE AND UNLIKE REDUNDANCY.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: MPS-5062
NASA FMEA #: 2078-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5062
ITEM: HYBRID DRIVER, TYPE 3 (2 PER CIRCUIT)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[/]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

6 OPEN HDC III'S. FAILS B-SCREEN BECAUSE REDUNDANT (PARALLEL)
DRIVER MASKS THE FAILURE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
 ASSESSMENT ID: MPS-5063
 NASA FMEA #: 2076-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5063
 ITEM: REMOTE POWER CONTROLLER (2 PER CIRCUIT)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 6 OPEN RPC'S.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
 ASSESSMENT ID: MPS-5064
 NASA FMEA #: 2077-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5064
 ITEM: DIODE, ISOLATION (12A) (2 PER CIRCUIT)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 6 OPEN RPC OUTPUT DIODES.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
 ASSESSMENT ID: MPS-5071
 NASA FMEA #: 2182-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5071
 ITEM: DIODE (10 PER CIRCUIT)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 9 OPEN MDM BLOCKING DIODES.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
 ASSESSMENT ID: MPS-5071A
 NASA FMEA #: 2180-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5071
 ITEM: DIODE (10 PER CIRCUIT)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [F] [P] [A]
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

6 OPEN MDM BLOCKING DIODES. FAILS B-SCREEN BECAUSE REDUNDANCY MASKS THE FAILURE. FUNCTIONAL CRITICALITY DETERMINED BY LIKE AND UNLIKE REDUNDANCY.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
 ASSESSMENT ID: MPS-5071B
 NASA FMEA #: 2185-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5071
 ITEM: DIODE (10 PER CIRCUIT)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 1R]	[P]	[F]	[P]	[X]
COMPARE	[/ N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

6 OPEN SWITCH BLOCKING DIODES. DIODE FAIL OPEN WILL INHIBIT
 MAUAL CAPABILITY TO OPEN PREVALE AFTER MECO. FEEDLINE VENTING
 NOT CRITICAL AFTER MECO. REFERENCE ASSESSMENT MPS-4150 REMARKS.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: MPS-5071C
NASA FMEA #: 2187-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5071
ITEM: DIODE (10 PER CIRCUIT)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /3]	[NA]	[NA]	[NA]	[] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

6 OPEN SWITCH BLOCKING DIODES. LOSS OF ALL REDUNDANCY (GPC AND MANUAL) IN OPENING THE LO2 PREVALVE AFTER MECO. FEEDLINE VENTING NOT CRITICAL. REFERENCE ASSESSMENT MPS-4150 REMARKS. FAILS B-SCREEN BECAUSE REDUNDANCY MASKS THE FAILURE.

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 2/11/88
 ASSESSMENT ID: MPS-5072
 NASA FMEA #: 2180-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5072
 ITEM: DIODE (2 PER CIRCUIT)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [F] [P] [A]
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

6 OPEN MDM BLOCKING DIODES. FAILS B-SCREEN BECAUSE REDUNDANCY MASKS THE FAILURE. FUNCTIONAL CRITICALITY DETERMINED BY LIKE AND UNLIKE REDUNDANCY.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
 ASSESSMENT ID: MPS-5072A
 NASA FMEA #: 2185-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5072
 ITEM: DIODE (2 PER CIRCUIT)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /3]	[NA]	[NA]	[NA]	[] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

6 OPEN SWITCH BLOCKING DIODES. DIODE FAIL OPEN WILL INHIBIT
 MANUAL CAPABILITY OF OPENING PREVALVE AFTER MECO. FAILS B-SCREEN
 BECAUSE REDUNDANCY MASKS THE FAILURE. AFTER MECO, FEEDLINE
 VENTING NOT CRITICAL. REFERANCE ASSESSMENT MPS-4150 REMARKS.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: MPS-5073
NASA FMEA #: 2182-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5073
ITEM: DIODE (3 PER CIRCUIT)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

9 OPEN MDM BLOCKING DIODES.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: MPS-5073A
NASA FMEA #: 2187-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5073
ITEM: DIODE (3 PER CIRCUIT)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /3]	[NA]	[NA]	[NA]	[] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

6 OPEN SWITCH BLOCKING DIODES. LOSS OF ALL REDUNDANCY (GPC AND MANUAL) IN OPENING THE LO2 PREVALVE AFTER MECO. FEEDLINE VENTING NOT CRITICAL. FAILS B-SCREEN BECAUSE REDUNDANCY MASKS THE FAILURE. REFERENCE ASSESSMENT MPS- 4150.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: MPS-5074
NASA FMEA #: 2183-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5074
ITEM: DIODE (10 PER CIRCUIT)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:
9 CLOSE MDM BLOCKING DIODES.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
 ASSESSMENT ID: MPS-5074A
 NASA FMEA #: 2181-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5074
 ITEM: DIODE (10 PER CIRCUIT)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [F] [P] [A]
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

6 CLOSE MDM BLOCKING DIODES. FAILS B-SCREEN BECAUSE REDUNDANCY MASKS THE FAILURE. FUNCTIONAL CRITICALITY DETERMINED BY LIKE AND UNLIKE REDUNDANCY.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: MPS-5074B
NASA FMEA #: 2184-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5074
ITEM: DIODE (10 PER CIRCUIT)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

6 MAINSTAGE MDM BLOCKING DIODES.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
 ASSESSMENT ID: MPS-5074C
 NASA FMEA #: 2186-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5074
 ITEM: DIODE (10 PER CIRCUIT)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /3]	[NA]	[NA]	[NA]	[] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [F] [P] [A]
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

6 CLOSE SWITCH BLOCKING DIODES. LOSS OF ALL REDUNDANCY (GPC AND MANUAL) IN CLOSING THE LO2 PREVALVE COULD POSSIBLY CAUSE LOSS OF VEHICLE/CREW. FAILS B-SCREEN BECAUSE REDUNDANCY MASKS THE FAILURE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
 ASSESSMENT ID: MPS-5074D
 NASA FMEA #: 2189-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5074
 ITEM: DIODE (10 PER CIRCUIT)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /3]	[NA]	[NA]	[NA]	[] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] [] (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

6 OPEN SWITCH BLOCKING DIODES. THE DIODE FAILING OPEN, AND FAILURES IN THE CLOSE SOLENOID CIRCUITS COULD INHIBIT THE OPENING OF THE PREVAVES AFTER MECO. OPENING OF THE PREVAVES TO VENT THE FEEDLINE IS NOT CRITICAL BECAUSE OF LEAKAGE THROUGH ENGINE. REFERENCE ASSESSMENT MPS-4150 REMARKS.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
 ASSESSMENT ID: MPS-5074E
 NASA FMEA #: 2188-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5074
 ITEM: DIODE (10 PER CIRCUIT)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /3]	[NA]	[NA]	[NA]	[] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [F] [P] [A]
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

6 CLOSE SWITCH BLOCKING DIODES. LOSS OF ALL REDUNDANCY (GPC AND MANUAL) IN CLOSING THE LO2 PREVALVE COULD POSSIBLY CAUSE LOSS OF VEHICLE/CREW. FAILS B-SCREEN BECAUSE REDUNDANCY MASKS THE FAILURE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: MPS-5075
NASA FMEA #: 2181-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5075
ITEM: DIODE (6 PER CIRCUIT)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [F] [P] [A]
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

6 CLOSE MDM BLOCKING DIODES. FAILS B-SCREEN BECAUSE REDUNDANCY MASKS THE FAILURE. FUNCTIONAL CRITICALITY DETERMINED BY LIKE AND UNLIKE REDUNDANCY.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: MPS-5075A
NASA FMEA #: 2186-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5075
ITEM: DIODE (6 PER CIRCUIT)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /3]	[NA]	[NA]	[NA]	[] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [F] [P] [A]
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

6 CLOSE SWITCH BLOCKING DIODES. LOSS OF ALL REDUNDANCY (GPC AND MANUAL) IN CLOSING THE LO2 PREVALVE COULD POSSIBLY CAUSE LOSS OF VEHICLE/CREW. FAILS B-SCREEN BECAUSE REDUNDANCY MASKS THE FAILURE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
 ASSESSMENT ID: MPS-5076
 NASA FMEA #: 2183-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5076
 ITEM: DIODE (7 PER CIRCUIT)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 9 CLOSE MDM BLOCKING DIODES.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
 ASSESSMENT ID: MPS-5076A
 NASA FMEA #: 2184-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5076
 ITEM: DIODE (7 PER CIRCUIT)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 6 MAINSTAGE MDM BLOCK DIODES.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: MPS-5076B
NASA FMEA #: 2188-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5076
ITEM: DIODE (7 PER CIRCUIT)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /3]	[NA]	[NA]	[NA]	[] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [F] [P] [A]
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

6 CLOSE SWITCH BLOCKING DIODES. LOSS OF ALL REDUNDANCY (GPC AND MANUAL) IN CLOSING THE LO2 PREVALVE COULD POSSIBLY CAUSE LOSS OF VEHICLE/CREW. FAILS B-SCREEN BECAUSE REDUNDANCY MASKS THE FAILURE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
 ASSESSMENT ID: MPS-5076C
 NASA FMEA #: 2189-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5076
 ITEM: DIODE (7 PER CIRCUIT)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /3]	[NA]	[NA]	[NA]	[] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

6 OPEN SWITCH BLOCKING DIODES. THE DIODE FAILING OPEN, AND FAILURES IN THE CLOSE SOLENOID CIRCUITS COULD INHIBIT THE OPENING OF THE PREVALVES AFTER MECO. OPENING OF THE PREVALVES TO VENT THE FEEDLINE IS NOT CRITICAL BECAUSE OF LEAKAGE THROUGH ENGINE. REFERENCE ASSESSMENT MPS-4150 REMARKS.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/28/88
 ASSESSMENT ID: MPS-5120
 NASA FMEA #: 2012-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5120
 ITEM: LO2 FEEDLINE RELIEF SHUTOFF VALVE CONTROL
 CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

3 CLOSE SW SCAN DIODES.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/28/88
ASSESSMENT ID: MPS-5120A
NASA FMEA #: 2012B-2

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5120
ITEM: LO2 FEEDLINE RELIEF SHUTOFF VALVE CONTROL
CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[NA]	[P]	[] *
IOA	[3 /3]	[NA]	[NA]	[NA]	[]
COMPARE	[/N]	[N]	[]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [F] [P] [A]
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

3 CLOSE SW SCAN DIODES. THE FAILURE ERODES REDUNDANCY BY TYING PARALLEL PATHS TOGETHER. LOSS OF ALL REDUNDANCY COULD RESULT IN A RUPTURE OF THE MPS. THE BLOCKING PROTECTION IS NOT STANDBY REDUNDANT AND IS NOT READILY DETECTABLE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/28/88
 ASSESSMENT ID: MPS-5120B
 NASA FMEA #: 2237-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5120
 ITEM: LO2 FEEDLINE RELIEF SHUTOFF VALVE CONTROL
 CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 2 OPEN SW SCAN DIODES.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/28/88
ASSESSMENT ID: MPS-5120C
NASA FMEA #: 2237-2

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5120
ITEM: LO2 FEEDLINE RELIEF SHUTOFF VALVE CONTROL
CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[NA]	[P]	[] *
IOA	[3 /3]	[NA]	[NA]	[NA]	[]
COMPARE	[/N]	[N]	[]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [F] [P] [A]
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

2 OPEN SW SCAN DIODES. THE FAILURE ERODES REDUNDANCY BY CONNECTING PARALLEL PATHS TOGETHER. LOSS OF ALL REDUNDANCY COULD RESULT IN A RUPTURE OF THE MPS. THE BLOCKING PROTECTION IS NOT STANDBY REDUNDANT AND IS NOT READILY DETECTABLE.

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 1/29/88
 ASSESSMENT ID: MPS-5120D
 NASA FMEA #: 2014-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5120
 ITEM: LO2 FEEDLINE RELIEF SHUTOFF VALVE CONTROL
 CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
 ASSESSMENT ID: MPS-5120E
 NASA FMEA #: 2015-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5120
 ITEM: LO2 FEEDLINE RELIEF SHUTOFF VALVE CONTROL
 CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
ASSESSMENT ID: MPS-5120F
NASA FMEA #: 2016-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5120
ITEM: LO2 FEEDLINE RELIEF SHUTOFF VALVE CONTROL
CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
ASSESSMENT ID: MPS-5120G
NASA FMEA #: NA

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5120
ITEM: LO2 FEEDLINE RELIEF SHUTOFF VALVE CONTROL
CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[N / N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

THERE WERE 3 DIODES TOO MANY ON THE MDAC ANALYSIS WORKSHEET 5120.
DELETE 3 DIODES FROM WORKSHEET 5120.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/28/88
ASSESSMENT ID: MPS-5121
NASA FMEA #: NA

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5121
ITEM: LO2 FEEDLINE RELIEF SHUTOFF VALVE TOGGLE SWITCH

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[N /N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [NA] [P] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

THE ORIGINAL IOA ANALYSIS WAS ERRONEOUS BECAUSE IT INDICATES THAT A PREMATURE OPEN-TO-BUS WOULD ACTIVATE THE HELIUM CLOSING SOLENOID LV24. THIS WOULD CLOSE THE RELIEF SHUTOFF VALVE. HOWEVER, A PREMATURE OPEN-TO-BUS ON THE TOGGLE SWITCH WOULD INHIBIT THE GPC'S CLOSE COMMAND, DEACTIVATE THE LV24 SOLENOID, AND OPEN THE SHUTOFF VALVE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/28/88
ASSESSMENT ID: MPS-5122
NASA FMEA #: 2011-3

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5122
ITEM: LO2 FEEDLINE RELIEF SHUTOFF VALVE TOGGLE SWITCH

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[NA]	[P]	[X] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[/]	[]	[N]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

THE SWITCH IS A STANDBY REDUNDANT SYSTEM.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/28/88
 ASSESSMENT ID: MPS-5123
 NASA FMEA #: 2310-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5123
 ITEM: RESISTER, LIMIT (1.2K)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[NA]	[P]	[] *
IOA	[3 /2R]	[P]	[P]	[P]	[]
COMPARE	[/N]	[]	[N]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

THE VENTING OF O2 INTO THE ATMOSPHERE IS CRITICALITY 1.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/28/88
 ASSESSMENT ID: MPS-5124
 NASA FMEA #: 2017-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5124
 ITEM: HYBRID DRIVER, TYPE 3 (AR42)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /2R]	[P]	[P]	[P]	[]
COMPARE	[/N]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

THE VENTING OF O2 INTO THE ATMOSPHERE IS CRITICALITY 1.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/28/88
 ASSESSMENT ID: MPS-5125
 NASA FMEA #: 2017-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5125
 ITEM: HYBRID DRIVER, TYPE 3 (AR42)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[N /]	[]	[N]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

THE FIRST FAILURE WILL NOT CLOSE (PV7).

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 1/28/88
 ASSESSMENT ID: MPS-5126
 NASA FMEA #: 2017-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5126
 ITEM: HYBRID DRIVER, TYPE 3 (AR30)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /2R]	[P]	[P]	[P]	[]
COMPARE	[/N]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 THE VENTING OF O2 INTO THE ATMOSPHERE IS CRITICALITY 1.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/28/88
 ASSESSMENT ID: MPS-5127
 NASA FMEA #: 2017-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5127
 ITEM: HYBRID DRIVER, TYPE 3 (AR30)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[N /]	[]	[N]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

THE FIRST FAILURE WILL NOT CLOSE (PV7).

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/28/88
 ASSESSMENT ID: MPS-5128
 NASA FMEA #: 2040-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5128
 ITEM: REMOTE POWER CONTROLLER (RPC28)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[N /]	[]	[]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 THE FIRST FAILURE WILL NOT CLOSE (PV7).

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/28/88
 ASSESSMENT ID: MPS-5129
 NASA FMEA #: 2040-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5129
 ITEM: REMOTE POWER CONTROLLER (RPC32)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[N /]	[]	[]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 THE FIRST FAILURE WILL NOT CLOSE (PV7)

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 1/28/88
 ASSESSMENT ID: MPS-5130
 NASA FMEA #: 2040-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5130
 ITEM: REMOTE POWER CONTROLLER (RPC32)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /2R]	[P]	[P]	[P]	[]
COMPARE	[/N]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

THE VENTING OF O2 INTO THE ATMOSPHERE IS CRITICALITY 1.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/28/88
ASSESSMENT ID: MPS-5131
NASA FMEA #: 2040-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5131
ITEM: REMOTE POWER CONTROLLER (RPC28)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /2R]	[P]	[P]	[P]	[]
COMPARE	[/N]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

THE VENTING OF O2 INTO THE ATMOSPHERE IS CRITICALITY 1.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
 ASSESSMENT ID: MPS-5132
 NASA FMEA #: NA

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5132
 ITEM: MDM (FA3)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[N /N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [F] [P] [A]
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

A LOSS OF ALL REDUNDANCY WILL CLOSE (PV7). THIS COULD CAUSE A RUPTURE IN THE MPS DUE TO OVERPRESSURIZATION. THE FAILURE IS NOT READILY DETECTABLE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
ASSESSMENT ID: MPS-5133
NASA FMEA #: NA

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5133
ITEM: MDM (FA3)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 /2R]	[P]	[P]	[P]	[]
COMPARE	[N /N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [F] [P] [A]
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

A LOSS OF ALL REDUNDANCY WILL OPEN THE VALVE PREMATURELY. O2
COULD BE RELEASED INTO THE ATMOSPHERE. THE FAILURE IS NOT
READILY DETECTABLE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
ASSESSMENT ID: MPS-5134
NASA FMEA #: NA

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5134
ITEM: MDM (FA1)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[N /N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [F] [P] [A]
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

A LOSS OF ALL REDUNDANCY WILL CLOSE (PV7). THIS COULD CAUSE A RUPTURE IN THE MPS DUE TO OVERPRESSURIZATION. THE FAILURE IS NOT READILY DETECTABLE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
ASSESSMENT ID: MPS-5135
NASA FMEA #: NA

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5135
ITEM: MDM (FA1)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 /2R]	[P]	[P]	[P]	[]
COMPARE	[N /N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [F] [P] [A]
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

A LOSS OF ALL REDUNDANCY WILL OPEN THE VALVE PREMATURELY. O2
COULD BE RELEASED INTO THE ATMOSPHERE. THE FAILURE IS NOT
READILY DETECTABLE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
ASSESSMENT ID: MPS-5136
NASA FMEA #: NA

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5136
ITEM: MDM (FA2)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[N /N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [F] [P] [A]
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

A LOSS OF ALL REDUNDANCY WILL CLOSE (PV7). THIS COULD CAUSE A RUPTURE IN THE MPS DUE TO OVERPRESSURIZATION. THE FAILURE IS NOT READILY DETECTABLE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
ASSESSMENT ID: MPS-5137
NASA FMEA #: NA

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5137
ITEM: MDM (FA2)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 /2R]	[P]	[P]	[P]	[]
COMPARE	[N /N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [F] [P] [A]
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

A LOSS OF ALL REDUNDANCY WILL OPEN THE VALVE PREMATURELY. O2
COULD BE RELEASED INTO THE ATMOSPHERE. THE FAILURE IS NOT
READILY DETECTABLE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/28/88
 ASSESSMENT ID: MPS-5138
 NASA FMEA #: 2239-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5138
 ITEM: DIODE, ISOLATION (1A, 12A)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /2R]	[P]	[P]	[P]	[]
COMPARE	[/N]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [P] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

2 BLOCKING DIODES, MDM TO RPC. VENTING O2 INTO THE ATMOSPHERE IS
 CRITICALITY 1.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/28/88
 ASSESSMENT ID: MPS-5138A
 NASA FMEA #: 2238-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5138
 ITEM: DIODE, ISOLATION (1A, 12A)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /3]	[NA]	[NA]	[NA]	[] *
IOA	[3 /2R]	[P]	[P]	[P]	[]
COMPARE	[/N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [F] [P] [A]
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

FAILURE ELIMINATES THE ABILITY TO MANUALLY CLOSE THE VALVE. O2
 COULD BE VENTED INTO THE ATMOSPHERE. THE FAILURE IS READILY
 DETECTABLE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
 ASSESSMENT ID: MPS-5138B
 NASA FMEA #: 2397-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5138
 ITEM: DIODE, ISOLATION (1A, 12A)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /2R]	[P]	[P]	[P]	[]
COMPARE	[/N]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

1 RPC A OUTPUT DIODE, 12A. THE VENTING OF O2 INTO THE ATMOSPHERE IS CRITICALITY 1. THE FAILURE IS NOT READILY DETECTABLE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/28/88
 ASSESSMENT ID: MPS-5139
 NASA FMEA #: 2238B-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5139
 ITEM: DIODE, ISOLATION (1A, 12A)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[NA]	[P]	[] *
IOA	[3 /2R]	[P]	[P]	[P]	[]
COMPARE	[/N]	[]	[N]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [F] [P] [A]
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR TWO DIODES. THE VENTING OF O2 INTO THE ATMOSPHERE IS CRITICALITY 1. THE BLOCKING PROTECTION IS NOT STANDBY REDUNDANT.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/28/88
 ASSESSMENT ID: MPS-5139A
 NASA FMEA #: 2238-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5139
 ITEM: DIODE, ISOLATION (1A, 12A)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /3]	[NA]	[NA]	[NA]	[] *
IOA	[3 /2R]	[P]	[P]	[P]	[]
COMPARE	[/N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [F] [P] [A]
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

FAILURE ELIMINATES THE ABILITY TO MANUALLY CLOSE THE VALVE. O2
 COULD BE VENTED INTO THE ATMOSPHERE. THE FAILURE IS NOT READILY
 DETECTABLE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
 ASSESSMENT ID: MPS-5139B
 NASA FMEA #: 2039-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5139
 ITEM: DIODE, ISOLATION (1A, 12A)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /2R]	[P]	[P]	[P]	[]
COMPARE	[/N]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

THE VENTING OF O2 INTO THE ATMOSPHERE IS CRITICALITY 1.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
 ASSESSMENT ID: MPS-5139C
 NASA FMEA #: 2039-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5139
 ITEM: DIODE, ISOLATION (1A, 12A)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /2R]	[P]	[P]	[P]	[]
COMPARE	[/N]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 THE VENTING OF O2 INTO THE ATMOSPHERE IS CRITICALITY 1.

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 1/29/88
 ASSESSMENT ID: MPS-5139D
 NASA FMEA #: 2240B-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5139
 ITEM: DIODE, ISOLATION (1A, 12A)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /2R]	[P]	[P]	[P]	[]
COMPARE	[/N]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

THE VENTING OF O2 INTO THE ATMOSPHERE IS CRITICALITY 1.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
 ASSESSMENT ID: MPS-5139E
 NASA FMEA #: 2240B-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5139
 ITEM: DIODE, ISOLATION (1A, 12A)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /2R]	[P]	[P]	[P]	[]
COMPARE	[/N]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

THE VENTING OF O2 INTO THE ATMOSPHERE IS CRITICALITY 1.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
 ASSESSMENT ID: MPS-5139F
 NASA FMEA #: 2241-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5139
 ITEM: DIODE, ISOLATION (1A, 12A)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /2R]	[P]	[P]	[P]	[]
COMPARE	[/N]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

THE VENTING OF O2 INTO THE ATMOSPHERE IS CRITICALITY 1.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
 ASSESSMENT ID: MPS-5139G
 NASA FMEA #: 2241-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5139
 ITEM: DIODE, ISOLATION (1A, 12A)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /3]	[NA]	[NA]	[NA]	[] *
IOA	[3 /2R]	[P]	[P]	[P]	[]
COMPARE	[/N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 THE FAILURE WILL HAVE NO HAZARDOUS EFFECT.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
 ASSESSMENT ID: MPS-5139H
 NASA FMEA #: 2013-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5139
 ITEM: DIODE, ISOLATION (1A, 12A)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /3]	[NA]	[NA]	[NA]	[] *
IOA	[3 /2R]	[P]	[P]	[P]	[]
COMPARE	[/N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [F] [P] [A]
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

1 TRANSIENT SUPPRESSOR DIODE. A SHORT IN THIS DIODE COULD GROUND THE OUTPUT TO THE CLOSE SOLENOID IF ALL REDUNDANCY IS LOST. O2 COULD BE VENTED INTO THE ATMOSPHERE. THE FAILURE IS NOT READILY DETECTABLE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/16/88
ASSESSMENT ID: MPS-5141
NASA FMEA #: 2162-2

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5141
ITEM: LO2 PROPELLANT DUMP SEQUENCE TOGGLE SWITCH

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /3]	[NA]	[NA]	[NA]	[] *
IOA	[2 /2]	[NA]	[NA]	[NA]	[X]
COMPARE	[N /N]	[]	[]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[1 /1] [NA] [NA] [NA] [A]
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

ONLY AVAILABLE REFERENCE: MPS/EPD&C FMEA REVIEW SUMMARY 8-17-87.
PREMATURE TRANSFER TO START COULD VENT PROPELLANT OVERBOARD
DURING BOOST. THIS COULD RESULT IN FIRE/EXPLOSION.
DOCUMENTATION ON ANY SOFTWARE INHIBIT WAS UNAVAILABLE.

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 2/16/88
 ASSESSMENT ID: MPS-5142
 NASA FMEA #: 2162-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5142
 ITEM: LO2 PROPELLENT DUMP SEQUENCE TOGGLE SWITCH

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[F]	[F]	[P]	[X] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[/]	[N]	[N]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[2 /1R] [P] [P] [P] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ONLY AVAILABLE REFERENCE: MPS/EPD&C FMEA REVIEW SUMMARY 8-17-87.
 THE FAILURE WILL BE DETECTED DURING MPS DUMP. DIRECT INSERTION
 MISSION IS THE MOST CRITICAL CASE SINCE IT REQUIRES A MANUAL DUMP
 INITIATE COMMAND.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/16/88
 ASSESSMENT ID: MPS-5143
 NASA FMEA #: 2160-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5143
 ITEM: FUSE (F31, F32)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[F]	[F]	[P]	[X] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[/]	[N]	[N]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [P] [P] [D]
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ONLY AVAILABLE REFERENCE: MPS/EPD&C FMEA REVIEW SUMMARY 8-17-87.
 THE FAILURE WILL BE DETECTED DURING MPS DUMP (WHEN S1 IS NOT IN
 GPC POSITION). DIRECT INSERTION MISSION IS THE MOST CRITICAL
 CASE SINCE IT REQUIRES A MANUAL DUMP INITIATE COMMAND.
 FAILURE OF ONE FUSE, ONLY ELIMINATES ONE POWER PATH.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/15/88
 ASSESSMENT ID: MPS-5160
 NASA FMEA #: 2357B-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5160
 ITEM: DIODE, ISOLATION

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/15/88
 ASSESSMENT ID: MPS-5160A
 NASA FMEA #: 2357B-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5160
 ITEM: DIODE, ISOLATION

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /3]	[NA]	[NA]	[NA]	[]
COMPARE	[/N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

LOSS OF DIODE ERODES REDUNDANCY. SECOND FAILURE - (INADVERTENT CLOSE COMMAND) WOULD ELIMINATE OPEN SOLENOID POWER. THIRD FAILURE - (INADVERTENT CLOSE POWER) WOULD SHUT VALVE DURING LOADING.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/15/88
 ASSESSMENT ID: MPS-5160B
 NASA FMEA #: 2358B-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5160
 ITEM: DIODE, ISOLATION

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /3]	[NA]	[NA]	[NA]	[]
COMPARE	[/N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

FIRST FAILURE WOULD ELIMINATE OPEN SOLENOID INHIBIT. SECOND FAILURE - INADVERTENT OPEN COMMAND. THIRD FAILURE - LOSS OF CLOSE SOLENOID POER CAUSING PREMATURE OPENING OF THE OUTBOARD F/D.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/15/88
 ASSESSMENT ID: MPS-5160C
 NASA FMEA #: 2358B-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5160
 ITEM: DIODE, ISOLATION

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /3]	[NA]	[NA]	[NA]	[] *
IOA	[3 /3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/15/88
 ASSESSMENT ID: MPS-5160D
 NASA FMEA #: 2359B-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5160
 ITEM: LO2 OUTBOARD FILL & DRAIN VALVE CONTROL CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[3 / 1R] [P] [F] [P] [A]
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

1 TRANSIENT SUPPRESSION DIODE. A SHORT IN THIS DIODE COMBINED WITH AN INTERNAL HDC FAILURE WOULD GROUND THE OPEN SOLENOID. INADVERTENT CLOSE SOLENOID POWER WOULD CLOSE THE VALVE DURING LOADING. THE FAILURE IS NOT READILY DETECTABLE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/15/88
 ASSESSMENT ID: MPS-5160E
 NASA FMEA #: 2360B-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5160
 ITEM: LO2 OUTBOARD FILL & DRAIN VALVE CONTROL CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 6 MONITORING RESISTORS.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/15/88
 ASSESSMENT ID: MPS-5160F
 NASA FMEA #: 2372B-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5160
 ITEM: LO2 OUTBOARD FILL & DRAIN VALVE CONTROL CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 2 BLEED RESISTORS.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/15/88
 ASSESSMENT ID: MPS-5161
 NASA FMEA #: 2055B-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5161
 ITEM: LO2 OUTBOARD FILL & DRAIN TOGGLE SWITCH

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /3]	[NA]	[NA]	[NA]	[] *
IOA	[3 /2R]	[P]	[P]	[P]	[]
COMPARE	[/N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/15/88
 ASSESSMENT ID: MPS-5162
 NASA FMEA #: 2055B-3

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5162
 ITEM: LO2 OUTBOARD FILL & DRAIN TOGGLE SWITCH

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
		NASA [2 /1R]	[P]	[P ]		[ P ]	[ ] *
IOA [3 /2R]	[P]	[P]	[P]	[]	
COMPARE [N /N]	[]	[]	[]	[]	

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

NASA SCENARIO IS DIFFERENT AND MORE CRITICAL THAN IOA's.

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 1/15/88
 ASSESSMENT ID: MPS-5163
 NASA FMEA #: 2055B-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5163
 ITEM: LO2 OUTBOARD FILL & DRAIN TOGGLE SWITCH

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/15/88
 ASSESSMENT ID: MPS-5164
 NASA FMEA #: 2055B-4

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5164
 ITEM: LO2 OUTBOARD FILL & DRAIN TOGGLE SWITCH

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[N /]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

FIRST FAILURE WILL ELIMINATE OPEN SOLENOID POWER. PREMATURE
 OUTPUT BY CLOSE SOLENOID HDC WOULD CLOSE OUTBOARD F/D VALVE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/15/88
 ASSESSMENT ID: MPS-5165
 NASA FMEA #: 2054B-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5165
 ITEM: FUSE

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[2 /1R]	[P]	[P]	[P]	[]
COMPARE	[N /]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/15/88
ASSESSMENT ID: MPS-5166
NASA FMEA #: 2057B-2

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5166
ITEM: HYBRID DRIVER, TYPE 3

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /2R]	[P]	[P]	[P]	[]
COMPARE	[/N]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

LOSS OF ALL FUNCTIONAL REDUNDANCY COULD LEAD TO LOSS OF VEHICLE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/15/88
ASSESSMENT ID: MPS-5167
NASA FMEA #: 2057B-2

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5167
ITEM: HYBRID DRIVER, TYPE 3

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /2R]	[P]	[P]	[P]	[]
COMPARE	[/N]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

LOSS OF ALL FUNCTIONAL REDUNDANCY COULD LEAD TO LOSS OF VEHICLE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/15/88
 ASSESSMENT ID: MPS-5168
 NASA FMEA #: 2057B-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5168
 ITEM: HYBRID DRIVER, TYPE 3

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[P]	[P]	[X] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/15/88
ASSESSMENT ID: MPS-5169
NASA FMEA #: 2058B-2

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5169
ITEM: HYBRID DRIVER, TYPE 3

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[P]	[P]	[X] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/15/88
 ASSESSMENT ID: MPS-5170
 NASA FMEA #: 2056B-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5170
 ITEM: DIODE, ISOLATION

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[/]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

FAILS SCREEN B ON THE GROUND DUE TO GROUND OPEN COMMAND MASK.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/15/88
 ASSESSMENT ID: MPS-5170A
 NASA FMEA #: 2356B-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5170
 ITEM: DIODE, ISOLATION

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[/]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

AN OPEN DURING LOADING WOULD NOT BE DETECTED.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/15/88
 ASSESSMENT ID: MPS-5171
 NASA FMEA #: 2355B-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5171
 ITEM: DIODE, ISOLATION

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/15/88
 ASSESSMENT ID: MPS-5171A
 NASA FMEA #: 2354B-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5171
 ITEM: DIODE, ISOLATION

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[P]	[P]	[X] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[N /]	[]	[]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 NASA HAS FOUND A MORE CRITICAL SCENARIO.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/15/88
ASSESSMENT ID: MPS-5172
NASA FMEA #: NA

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5172
ITEM: MDM (FA4)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 /2R]	[P]	[P]	[P]	[]
COMPARE	[N /N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [P] [P] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

LOSS OF PROPELLANT COMBINED WITH ACCELERATION LOADS COULD RUPTURE THE F/D LINE CAUSING A FIRE HAZARD.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/15/88
 ASSESSMENT ID: MPS-5173
 NASA FMEA #: NA

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5173
 ITEM: MDM (FA4)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[N /N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [P] [P] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

IOA SCENARIO IS POSSIBLE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/15/88
 ASSESSMENT ID: MPS-5174
 NASA FMEA #: NA

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5174
 ITEM: MDM (FA4)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[N /N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [P] [P] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 IOA SCENARIO IS POSSIBLE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/15/88
 ASSESSMENT ID: MPS-5175
 NASA FMEA #: NA

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5175
 ITEM: MDM (LA1)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[N /N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 DATA UNAVAILABLE FOR RECOMMENDATIONS.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/15/88
 ASSESSMENT ID: MPS-5176
 NASA FMEA #: NA

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5176
 ITEM: MDM (LA1)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 /2R]	[P]	[P]	[P]	[]
COMPARE	[N /N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 DATA UNAVAILALBE FOR RECOMMENDATION.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/12/88
 ASSESSMENT ID: MPS-5500
 NASA FMEA #: 2280-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5500
 ITEM: LO2 INBOARD FILL & DRAIN VALVE CONTROL CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/12/88
ASSESSMENT ID: MPS-5500A
NASA FMEA #: 2280-2

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5500
ITEM: LO2 INBOARD FILL & DRAIN VALVE CONTROL CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /3]	[NA]	[NA]	[NA]	[]
COMPARE	[N /N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[3 /3] [NA] [NA] [NA] [D]
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

THE FAILURE WILL ERODE BLOCKING PROTECTION. A SECOND FAILURE WILL NOT ACTUATE THE VALVE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/13/88
 ASSESSMENT ID: MPS-5500B
 NASA FMEA #: 2289-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5500
 ITEM: LO2 INBOARD FILL & DRAIN VALVE CONTROL CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)
 [/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/13/88
 ASSESSMENT ID: MPS-5500C
 NASA FMEA #: 2290-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5500
 ITEM: LO2 INBOARD FILL & DRAIN VALVE CONTROL CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/13/88
 ASSESSMENT ID: MPS-5500D
 NASA FMEA #: 2374-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5500
 ITEM: LO2 INBOARD FILL & DRAIN VALVE CONTROL CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 1/13/88
 ASSESSMENT ID: MPS-5501
 NASA FMEA #: 2037-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5501
 ITEM: LO2 INBOARD FILL & DRAIN TOGGLE SWITCH

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /3]	[NA]	[NA]	[NA]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[/N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [P] [P] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

PREMATURE OPENING OF THE FILL DRAIN IS ALL REDUNDANCY IS LOST.
 GAS TRAPPED IN THE LINE WOULD ENTER FEEDLINES RESULTING IN
 POTENTIAL CAVITATION OF ONE OR MORE SSME's. (FAIL SHORTED TO
 BUS) DIFFERENT FROM NASA's FAIL XFER TO CLOSE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/13/88
 ASSESSMENT ID: MPS-5502
 NASA FMEA #: 2037-3

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5502
 ITEM: LO2 INBOARD FILL & DRAIN TOGGLE SWITCH

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[P]	[P]	[X] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[N /]	[]	[]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/ .] [] [] [] [] (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

AFTER THIS FAILURE, A PREMATURE OPEN COMMAND B COULD OPEN FILL DRAIN VALVE. NASA SCENARIO POSSIBLE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/13/88
 ASSESSMENT ID: MPS-5503
 NASA FMEA #: 2037-4

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5503
 ITEM: LO2 INBOARD FILL & DRAIN TOGGLE SWITCH

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[P]	[P]	[X] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[N /]	[]	[]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 NASA SCENARIO IS MORE CRITICAL.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/13/88
ASSESSMENT ID: MPS-5504
NASA FMEA #: 2037-3

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5504
ITEM: LO2 INBOARD FILL & DRAIN TOGGLE SWICH

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[P]	[P]	[X] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[N /]	[]	[]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/ .] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

FAILURE WILL RESULT IN ADVERTENT POWER TO CLOSE SOLENOID AND
TERMINATION OF POWER TO OPEN SOLENOID WITH ONE ADDITIONAL FAILURE
(LOSS OF GND OPEN COMMAND).

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 1/13/88
ASSESSMENT ID: MPS-5505
NASA FMEA #: 2037-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5505
ITEM: LO2 INBOARD FILL & DRAIN TOGGLE SWITCH

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/12/88
 ASSESSMENT ID: MPS-5506
 NASA FMEA #: 2051-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5506
 ITEM: FUSE (2) (1A)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[2 /1R]	[P]	[P]	[P]	[]
COMPARE	[N /]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

THIS FAILURE WILL INHIBIT OPENING SOLENOID (LV30) MANUAL OPEN
 COMMAND, i.e. VACUUM INERT USING F/D VALVE.

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 1/12/88
 ASSESSMENT ID: MPS-5507
 NASA FMEA #: 2051-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5507
 ITEM: FUSE (1A)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[N /]	[]	[]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

THIS FAILURE WILL INHIBIT CLOSE COMMAND TO THE CLOSING SOLENOID (LV31). THE INBOARD FILL DRAIN WILL OPEN IF ALL REDUNDANCY IS LOST. MINIMUM OF 2 MORE FAILURES TO CAUSE CAVITATION OF PUMPS ON ONE OR MORE SSME's AND POSSIBLE FIRE AND EXPLOSION.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/12/88
ASSESSMENT ID: MPS-5511
NASA FMEA #: 2053-2

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5511
ITEM: HYBRID DRIVER, TYPE 3

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[N /]	[]	[N]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

FAILURE WILL GIVE PREMATURE OPEN COMMAND TO HDC IN SERIES WITH OPEN SOLENOID. REDUNDANCY WILL BE REDUCED 2 ADDITIONAL FAILURES NECESSARY FOR LOSS OF VEHICLE. (OTHER SERIES HDC MUST CONDUCT AND TERMINATION OF POWER TO CLOSE SOLENOID).

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/12/88
ASSESSMENT ID: MPS-5512
NASA FMEA #: 2053-2

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5512
ITEM: HYBRID DRIVER, TYPE 3

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[N /]	[]	[N]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

FAILURE WILL GIVE PREMATURE OPEN COMMAND TO HDC IN SERIES WITH OPEN SOLENOID. REDUNDANCY WILL BE REDUCED. TWO ADDITIONAL FAILURES ARE NECESSARY FOR LOSS OF VEHICLE. PREMATURE OPEN COMMAND FROM NEXT SERIES HDC AND TERMINATION OF POWER TO CLOSE SOLENOID.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/12/88
 ASSESSMENT ID: MPS-5513
 NASA FMEA #: 2053-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5513
 ITEM: HYBRID DRIVER, TYPE 3

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[P]	[P]	[X] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 1/12/88
 ASSESSMENT ID: MPS-5514
 NASA FMEA #: 2059-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5514
 ITEM: HYBRID DRIVER, TYPE 3

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[P]	[P]	[X] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/12/88
 ASSESSMENT ID: MPS-5515
 NASA FMEA #: 2059-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5515
 ITEM: HYBRID DRIVER, TYPE 3

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[P]	[P]	[X] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/12/88
 ASSESSMENT ID: MPS-5521
 NASA FMEA #: NA

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5521
 ITEM: MDM (FA1)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[N /N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [P] [P] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

PREMATURE OPEN CMD A. AFTER AT LEAST 2 FAILURES THE FILL DRAIN VALVE COULD OPEN PREMATURELY.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/13/88
 ASSESSMENT ID: MPS-5522
 NASA FMEA #: NA

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5522
 ITEM: MDM (FA4)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[N /N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [P] [P] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

PREMATURE OPEN CMD B. SECOND FAILURE COULD APPLY POWER TO OPEN SOLENOID. THIRD FAILURE TERMINATION OF CLOSE SOLENOID POWER WOULD OPEN F/D VALVE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/13/88
 ASSESSMENT ID: MPS-5523
 NASA FMEA #: NA

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5523
 ITEM: MDM (LA1)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[N /N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [P] [P] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

FAILURE WILL TERMINATE GROUND OPEN SIGNAL. LOSS OF ALL
 REDUNDANCY WILL CAUSE PREMATURE CLOSURE OF F/D VALVE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/13/88
ASSESSMENT ID: MPS-5524
NASA FMEA #: NA

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5524
ITEM: MDM (FA1)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[N /N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [P] [P] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

FAILURE WILL ERODE REDUNDANCY. LOSS OF ALL REDUNDANCY WILL CAUSE CLOSURE OF F/D VALVE.

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 1/13/88
 ASSESSMENT ID: MPS-5525
 NASA FMEA #: NA

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5525
 ITEM: MDM (FA2)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[N /N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [P] [P] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

FAILURE WILL GIVE PREMATURE CLOSE COMMAND (ERODE REDUNDANCY).
 THE INBOARD F/D WILL CLOSE IF ALL REDUNDANCY IS LOST.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/13/88
ASSESSMENT ID: MPS-5526
NASA FMEA #: NA

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5526
ITEM: MDM (FA2)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[N /N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [P] [P] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

FAILURE WILL INHIBIT CLOSE COMMAND (ERODE REDUNDANCY). THE
INBOARD F/D WILL OPEN IF ALL REDUNDANCY IS LOST.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/12/88
 ASSESSMENT ID: MPS-5531
 NASA FMEA #: 2281-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5531
 ITEM: DIODE (2)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/13/88
ASSESSMENT ID: MPS-5531A
NASA FMEA #: 2288-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5531
ITEM: DIODE (2)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[N /]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [P] [P] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

ASSESSMENT FOR ONE DIODE. REDUNDANCY WILL CONTINUE TO KEEP VALVE OPEN. MINIMUM OF 2 ADDITIONAL FAILURES NEED FOR PREMATURE CLOSURE (LOSS OF MDM OPENS AND PREMATURE CLOSE SOLENOID ACTIVATION).

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 1/13/88
 ASSESSMENT ID: MPS-5532
 NASA FMEA #: 2283-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5532
 ITEM: DIODE (3A) (4)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/13/88
 ASSESSMENT ID: MPS-5532A
 NASA FMEA #: 2282-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5532
 ITEM: DIODE (3A) (4)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[/]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/13/88
 ASSESSMENT ID: MPS-5532B
 NASA FMEA #: 2284-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5532
 ITEM: DIODE (3A) (4)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[/]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 PARALLEL PATH WILL MASK FAILURE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/13/88
 ASSESSMENT ID: MPS-5532C
 NASA FMEA #: 2285-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5532
 ITEM: DIODE (3A) (4)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[N /]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

FAILURE WILL ELIMINATE POWER TO OPEN SOLENOID. PREMATURE ACTUATION OF CLOSE SOLENOID WOULD CLOSE F/D DURING LOADING.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/13/88
ASSESSMENT ID: MPS-5533
NASA FMEA #: 2286-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5533
ITEM: DIODES (2) (3A)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /3]	[NA]	[NA]	[NA]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[/N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [P] [P] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

INBOARD FILL DRAIN VALVE (PV10) WILL OPEN IF ALL REDUNDANCY IS LOST. GAS TRAPPED IN THE LINE WOULD ENTER FEEDLINES RESULTING IN POTENTIAL CAVITATION OF PUMPS ON ONE OR MORE SSME's.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/13/88
 ASSESSMENT ID: MPS-5533A
 NASA FMEA #: 2287-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5533
 ITEM: DIODES (2) (3A)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[P]	[P]	[X] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[N /]	[]	[]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

FIRST FAILURE WILL CAUSE LOSS OF POWER TO CLOSE SOLENOID. SECOND FAILURE (PREMATURE ACTUATION OF OPEN SOLENOID) COULD RESULT IN PREMATURE F/D OPEN AND LOSS OF VEHICLE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88	NASA DATA:
ASSESSMENT ID: MPS-5550	BASELINE []
NASA FMEA #: 2097-1	NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5550
 ITEM: LO2 OVERBOARD BLEED VALVE CONTROL CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/]	[]	[]	[]	[]	(ADD/DELETE)
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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE	[]
INADEQUATE	[]

REMARKS:
2 RPC MONITOR RESISTORS.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
 ASSESSMENT ID: MPS-5550A
 NASA FMEA #: 2386-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5550
 ITEM: LO2 OVERBOARD BLEED VALVE CONTROL CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88	NASA DATA:
ASSESSMENT ID: MPS-5550B	BASELINE []
NASA FMEA #: 2387-1	NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5550
ITEM: LO2 OVERBOARD BLEED VALVE CONTROL CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY	REDUNDANCY SCREENS			CIL ITEM
	FLIGHT HDW/FUNC	A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/]	[]	[]	[]	[]	(ADD/DELETE)
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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE	[]
INADEQUATE	[]

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/02/88
 ASSESSMENT ID: MPS-5551
 NASA FMEA #: 2090-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5551
 ITEM: HYBRID DRIVER, TYPE 3

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[F]	[P]	[X] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[/]	[]	[N]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 PARALLEL PATH MASKS THE FAILURE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/02/88
 ASSESSMENT ID: MPS-5552
 NASA FMEA #: 2090-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5552
 ITEM: HYBRID DRIVER, TYPE 3

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[F]	[P]	[X] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[/]	[]	[N]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 PARALLEL PATH MASKS THE FAILURE

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/02/88
 ASSESSMENT ID: MPS-5553
 NASA FMEA #: 2091-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5553
 ITEM: HYBRID DRIVER, TYPE 1

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[F]	[P]	[X] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[/]	[]	[N]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 PARALLEL PATH MASKS THE FAILURE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: MPS-5554
NASA FMEA #: 2092-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5554
ITEM: REMOTE POWER CONTROLLER (RPC24)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[F]	[P]	[X] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[/]	[]	[N]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[2 /1R] [P] [P] [P] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

THE FAILURE WOULD BE DETECTED.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/02/88
 ASSESSMENT ID: MPS-5555
 NASA FMEA #: 2092-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5555
 ITEM: REMOTE POWER CONTROLLER (RPC23)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[P]	[P]	[X] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
 ASSESSMENT ID: MPS-5556
 NASA FMEA #: NA

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5556
 ITEM: MDM (FA2)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[N /N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[2 /1R] [P] [F] [P] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 PARALLEL PATH MASKS THE FAILURE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
 ASSESSMENT ID: MPS-5557
 NASA FMEA #: NA

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5557
 ITEM: MDM (FA3)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[N /N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[2 /1R] [P] [F] [P] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 PARALLEL PATH MASKS THE FAILURE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: MPS-5558
NASA FMEA #: NA

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5558
ITEM: MDM (FA4)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[N /N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[2 /1R] [P] [F] [P] [A]
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:
PARALLEL PATH MASKS THE FAILURE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: MPS-5559
NASA FMEA #: 2094-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5559
ITEM: DIODE (12A)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[F]	[P]	[X] *
IOA	[1 /1]	[NA]	[NA]	[NA]	[X]
COMPARE	[N /N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

THE FIRST FAILURE WILL NOT OPEN THE VALVE DUE TO A REDUNDANT PATH. FAILURE IN THE SECOND PATH COULD LEAD TO LOSS OF VEHICLE.

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: MPS-5559A
NASA FMEA #: 2094-2

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5559
ITEM: DIODE (12A)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[F]	[P]	[X] *
IOA	[1 /1]	[NA]	[NA]	[NA]	[X]
COMPARE	[N /N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

THE FIRST FAILURE WILL NOT OPEN THE VALVE DUE TO A REDUNDANT PATH. FAILURE IN THE SECOND PATH COULD LEAD TO LOSS OF VEHICLE.

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 2/03/88
 ASSESSMENT ID: MPS-5559B
 NASA FMEA #: 2095-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5559
 ITEM: DIODE (12A)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[F]	[P]	[X] *
IOA	[1 /1]	[NA]	[NA]	[NA]	[X]
COMPARE	[N /N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

THE FIRST FAILURE WILL NOT OPEN THE VALVE DUE TO A REDUNDANT PATH. FAILURE IN THE SECOND PATH COULD LEAD TO LOSS OF VEHICLE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
 ASSESSMENT ID: MPS-5559C
 NASA FMEA #: 2095-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5559
 ITEM: DIODE (12A)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[F]	[P]	[X] *
IOA	[1 /1]	[NA]	[NA]	[NA]	[X]
COMPARE	[N /N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

THE FIRST FAILURE WILL NOT OPEN THE VALVE DUE TO A REDUNDANT PATH. FAILURE IN THE SECOND PATH COULD LEAD TO LOSS OF VEHICLE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: MPS-5560
NASA FMEA #: 2093-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5560
ITEM: DIODE (12A)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[F]	[P]	[X] *
IOA	[1 /1]	[NA]	[NA]	[NA]	[X]
COMPARE	[N /N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

THE FIRST FAILURE WILL NOT OPEN THE VALVE DUE TO A REDUNDANT PATH. FAILURE IN THE SECOND PATH COULD LEAD TO LOSS OF VEHICLE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
 ASSESSMENT ID: MPS-5560A
 NASA FMEA #: 2093-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5560
 ITEM: DIODE (12A)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[1 /1]	[NA]	[NA]	[NA]	[X]
COMPARE	[N /N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

THE FIRST FAILURE WILL NOT OPEN THE VALVE DUE TO A REDUNDANT PATH. FAILURE IN THE SECOND PATH COULD LEAD TO LOSS OF VEHICLE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: MPS-5561
NASA FMEA #: 2096-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5561
ITEM: DIODE

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /3]	[NA]	[NA]	[NA]	[] *
IOA	[1 /1]	[NA]	[NA]	[NA]	[X]
COMPARE	[N /N]	[]	[]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[2 /1R] [P] [F] [P] [A]
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

A SHORT IN THE DIODE WILL ERODE REDUNDANCY. A SECOND SHORTED DIODE WITHIN THE SERIES HDC I WILL GROUND THE OUTPUT AND OPEN THE VALVE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
 ASSESSMENT ID: MPS-5561A
 NASA FMEA #: NA

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5561
 ITEM: DIODE

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[1 / 1]	[NA]	[NA]	[NA]	[X]
COMPARE	[N / N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[3 / 3] [NA] [NA] [NA] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

THE FAILURE WILL HAVE NO HAZARDOUS EFFECT.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
 ASSESSMENT ID: MPS-5600
 NASA FMEA #: 2411-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5600
 ITEM: MPS INSTRUMENT POWER CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88	NASA DATA:
ASSESSMENT ID: MPS-5600A	BASELINE []
NASA FMEA #: 2411-2	NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5600
ITEM: MPS INSTRUMENT POWER CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[P]	[P]	[X] *
IOA	[3 /3]	[NA]	[NA]	[NA]	[]
COMPARE	[N /N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[3 /3]	[NA]	[NA]	[NA]	[D] (ADD/DELETE)
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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE	[]
INADEQUATE	[]

REMARKS:

ONLY AVAILABLE REFERENCE: MPS/EPDC FMEA REVIEW SUMMARY 8/17/88.
NASA VIOLATES NTS 22206 2.3.3 F.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
 ASSESSMENT ID: MPS-5600B
 NASA FMEA #: 2412-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5600
 ITEM: MPS INSTRUMENT POWER CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[P]	[P]	[X] *
IOA	[3 /3]	[NA]	[NA]	[NA]	[]
COMPARE	[N /N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[3 /3] [NA] [NA] [NA] [D]
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ONLY AVAILABLE REFERENCE: MPS/EPDC FMEA REVIEW SUMMARY 8/17/88.
 NASA VIOLATES NTS 22206 2.3.3 F.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
 ASSESSMENT ID: MPS-5600C
 NASA FMEA #: 2413-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5600
 ITEM: MPS INSTRUMENT POWER CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[P]	[P]	[X] *
IOA	[3 /3]	[NA]	[NA]	[NA]	[]
COMPARE	[N /N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[3 /3] [NA] [NA] [NA] [D]
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ONLY AVAILABLE REFERENCE: MPS/EPDC FMEA REVIEW SUMMARY 8/17/88.
 NASA VIOLATES NTS 22206 2.3.3 F.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
 ASSESSMENT ID: MPS-5600D
 NASA FMEA #: 2416-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5600
 ITEM: MPS INSTRUMENT POWER CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[X] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
 ASSESSMENT ID: MPS-5650
 NASA FMEA #: 2030-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5650
 ITEM: GO2 PRESSURE FLOW CONTROL VALVE CONTROL CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 3 MONITOR RESISTORS.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MPS-5650A
NASA FMEA #: 2034-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5650
ITEM: GO2 PRESSURE FLOW CONTROL VALVE CONTROL CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /3]	[NA]	[NA]	[NA]	[]
COMPARE	[N /N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [F] [P] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

6 BLOCKING DIODES (XDUCER SEL).
A SECOND FAILURE WILL NOT OVERPRESSURIZE THE ET, BUT A THIRD
FAILURE COULD CAUSE ET OVERPRESSURIZATION.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
 ASSESSMENT ID: MPS-5650B
 NASA FMEA #: 2034-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5650
 ITEM: GO2 PRESSURE FLOW CONTROL VALVE CONTROL CIRCUIT
 LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[F]	[F]	[P]	[X] *
IOA	[3 /3]	[NA]	[NA]	[NA]	[]
COMPARE	[N /N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [F] [P] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

6 BLOCKING DIODES (XDUCER SEL).
 A SECOND FAILURE WILL NOT OVERPRESSURIZE THE ET, BUT A THIRD
 FAILURE COULD CAUSE ET OVERPRESSURIZATION.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MPS-5651
NASA FMEA #: 2063-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5651
ITEM: HYBRID DRIVER, TYPE 3 (1 PER CIRCUIT)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[P]	[P]	[X] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[N /]	[]	[]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

A SECOND FAILURE COULD OVERPRESSURIZE THE ET.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88	NASA DATA:
ASSESSMENT ID: MPS-5652	BASELINE []
NASA FMEA #: 2063-2	NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5652
ITEM: HYBRID DRIVER, TYPE 3 (1 PER CIRCUIT)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[P]	[P]	[X] *
IOA	[3 /2R]	[P]	[P]	[P]	[]
COMPARE	[N /N]	[]	[]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/]	[]	[]	[]	[]	(ADD/DELETE)
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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE	[]
INADEQUATE	[]

REMARKS:

A SECOND AILURE COULD CAUSE LOW ULLAGE PRESSURE IN THE ET AND CAUSE IMPLOSION DUE TO FLIGHT LOADS.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
 ASSESSMENT ID: MPS-5653
 NASA FMEA #: 2063-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5653
 ITEM: HYBRID DRIVER, TYPE 3 (1 PER CIRCUIT)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[P]	[P]	[X] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[N /]	[]	[]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

A SECOND FAILURE COULD OVERPRESSURIZE THE&a3600HET.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MPS-5654
NASA FMEA #: 2063-2

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5654
ITEM: HYBRID DRIVER, TYPE 3 (1 PER CIRCUIT)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[P]	[P]	[X] *
IOA	[3 /2R]	[P]	[P]	[P]	[]
COMPARE	[N /N]	[]	[]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

A SECOND FAILURE COULD CAUSE LOW ULLAGE PRESSURE IN THE ET AND CAUSE IMPLOSION DUE TO FLIGHT LOADS.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88
 ASSESSMENT ID: MPS-5700
 NASA FMEA #: 2385-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5700
 ITEM: LO2 POGO ACCUMULATOR RECIRCULATION VALVE CONTROL
 CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 2 TRANSIENT SUPPRESSION DIODES.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88
 ASSESSMENT ID: MPS-5700A
 NASA FMEA #: 200400-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5700
 ITEM: LO2 POGO ACCUMULATOR RECIRCULATION VALVE CONTROL
 CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 6 RESISTORS.

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 2/09/88
 ASSESSMENT ID: MPS-5700B
 NASA FMEA #: NA

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5700
 ITEM: LO2 POGO ACCUMULATOR RECIRCULATION VALVE CONTROL
 CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[N / N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 / 3] [NA] [NA] [NA] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
 ASSESSMENT ID: MPS-5701
 NASA FMEA #: 2225-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5701
 ITEM: HYBRID DRIVER, TYPE 3 (2 PER CIRCUIT)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[/]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [P] [P] [D]
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

THE FAILURE IS READILY DETECTABLE. ONLY AVAILABLE REFERENCE;
 MPS/EPDC FMEA REVIEW SUMMARY 8-17-87.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88
ASSESSMENT ID: MPS-5702
NASA FMEA #: NA

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5702
ITEM: MDM (FA1)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[N /N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [P] [P] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

PREMATURE OFF CREATES THE FALSE OPEN COMMAND.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88
ASSESSMENT ID: MPS-5703
NASA FMEA #: NA

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5703
ITEM: MDM (FA2)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[N /N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [P] [P] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

PREMATURE OFF CREATES THE FALSE OPEN COMMAND.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88
ASSESSMENT ID: MPS-5704
NASA FMEA #: NA

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5704
ITEM: MDM (FA3)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[N /N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [P] [P] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

PREMATURE OFF CREATES THE FALSE OPEN COMMAND.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
 ASSESSMENT ID: MPS-5705
 NASA FMEA #: NA

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5705
 ITEM: MDM (FA4)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[N /N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [P] [P] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/19/88
ASSESSMENT ID: MPS-5750
NASA FMEA #: 2252-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5750
ITEM: ET/ORBITER DISCONNECT VALVE CONTROL CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /3]	[NA]	[NA]	[NA]	[] *
IOA	[3 /3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [F] [P] [A]
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

2 TRANSIENT SUPPRESSION DIODES. A SHORT IN THE DIODE, PLUS A SHORT IN THE ON INTERNAL HDC DIODE, WILL GROUND A SOLENOID.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/19/88
 ASSESSMENT ID: MPS-5750A
 NASA FMEA #: 2248-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5750
 ITEM: ET/ORBITER DISCONNECT VALVE CONTROL CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /3]	[NA]	[NA]	[NA]	[]
COMPARE	[/N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

1 DIODE OP RPC "B" OUT (12A). FAILURE CAUSES LOSS OF OPEN
 COMMAND B. LOSS OF ALL REDUNDANCY WILL LEAD TO THE LOSS OF OPEN
 SOLENOID POWER AND POSSIBLE PREMATURE VALVE CLOSURE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/19/88
ASSESSMENT ID: MPS-5750B
NASA FMEA #: 2248-2

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5750
ITEM: ET/ORBITER DISCONNECT VALVE CONTROL CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /3]	[NA]	[NA]	[NA]	[]
COMPARE	[/N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

1 DIODE OP RPC "B" OUT (12A). FIRST FAILURE CAUSES LOSS OF REDUNDANT BLOCKING PROTECTION. SECOND FAILURE (SERIES RPC BLOCKING DIODE SHORTS) RESULTS IN PARALLEL RPC HAVING ITS OUTPUT TIED TO GROUND. CURRENT LIMIT WILL TRIP RPC ELIMINATING POWER TO OPEN SOLENOID. PREMATURE CLOSE IS POSSIBLE. PARALLEL PATH MASKS FAILURE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/19/88
 ASSESSMENT ID: MPS-5750C
 NASA FMEA #: 2248-3

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5750
 ITEM: ET/ORBITER DISCONNECT VALVE CONTROL CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /3]	[NA]	[NA]	[NA]	[]
COMPARE	[/N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

1 DIODE OP RPC "B" OUT (12A). P-TERMINAL OF THE DIODE SHORTED TO GROUND. THIS WOULD ELIMINATE A REDUNDANT PATH FOR OPEN SOLENOID POWER.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/19/88	NASA DATA:
ASSESSMENT ID: MPS-5750E	BASELINE []
NASA FMEA #: 2250-2	NEW [X]
SUBSYSTEM: EPD&C/MPS	
MDAC ID: 5750	
ITEM: ET/ORBITER DISCONNECT VALVE CONTROL CIRCUIT	
LEAD ANALYST: HOLDEN/LOWERY	

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /3]	[NA]	[NA]	[NA]	[]
COMPARE	[/N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[/]	[]	[]	[]	[]
				(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE	[]
INADEQUATE	[]

REMARKS:

1 DIODE OP XOVER (12A). LOSS OF VEHICLE IS A POSSIBILITY.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/19/88
 ASSESSMENT ID: MPS-5750F
 NASA FMEA #: 2250-3

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5750
 ITEM: ET/ORBITER DISCONNECT VALVE CONTROL CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[P]	[P]	[X] *
IOA	[3 /3]	[NA]	[NA]	[NA]	[]
COMPARE	[N /N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [P] [P] [D]
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

1 DIODE OP XOVER (12A). FAILURE CAN SHORT ALL OPEN COMMANDS TO GROUND, VENTING OPEN PRESSURE AND ALLOWING VALVE TO CLOSE DURING MAIN ENGINE BURN. BISTABLE FEATURE AND LATCH PROVIDE REDUNDANCY AGAINST PREMATURE CLOSURE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/19/88
 ASSESSMENT ID: MPS-5750H
 NASA FMEA #: 2253-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5750
 ITEM: ET/ORBITER DISCONNECT VALVE CONTROL CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 6 RESISTOR RPC & SOL PWR.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/19/88
 ASSESSMENT ID: MPS-5750G
 NASA FMEA #: NA

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5750
 ITEM: ET/ORBITER DISCONNECT VALVE CONTROL CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[N / N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 / 3] [NA] [NA] [NA] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 2 ZENER DIODES.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/19/88
 ASSESSMENT ID: MPS-5750I
 NASA FMEA #: 2254-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5750
 ITEM: ET/ORBITER DISCONNECT VALVE CONTROL CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

1 RESISTOR OF POS SW MONITOR. REFERENCE: FMEA 05-67-200900-1

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/19/88
ASSESSMENT ID: MPS-5750J
NASA FMEA #: 2255-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5750
ITEM: ET/ORBITER DISCONNECT VALVE CONTROL CIRCUIT

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /3]	[NA]	[NA]	[NA]	[]
COMPARE	[/N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 /3] [NA] [NA] [NA] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

1 RESISTOR CL POS SW MONITOR. LOSS OF MONITORING REDUNDANCY.
ONLY AVAILABLE REFERENCE; MPS/EPDC FMEA REVIEW SUMMARY 8/17/87.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/19/88
 ASSESSMENT ID: MPS-5750K
 NASA FMEA #: 2399-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5750
 ITEM: DIODE (12A)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /3]	[NA]	[NA]	[NA]	[]
COMPARE	[/N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

1 DIODE OP RPC "C" OUT (12A). LOSS OF VEHICLE IS A POSSIBILITY.

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 1/19/88
 ASSESSMENT ID: MPS-5750L
 NASA FMEA #: 2399-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5750
 ITEM: DIODE (12A)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /3]	[NA]	[NA]	[NA]	[]
COMPARE	[/N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

1 DIODE OP RPC "C" OUT (12A). FIRST FAILURE CAUSES LOSS OF REDUNDANT BLOCKING PROTECTION. SECONE FAILURE (SERIES RPC BLOCKING DIODE SHORTS) RESULTS IN PARALLEL RPC HAVING ITS OUTPUT TIED TO GROUND. CURRENT LIMIT WILL TRIP RPC, ELIMINATING POWER TO CLOSE SOLENOID. MECHANICAL LINKAGE PROVIDES REDUNDANCY.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/19/88
 ASSESSMENT ID: MPS-5750M
 NASA FMEA #: 2399-3

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5750
 ITEM: DIODE (12A)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /3]	[NA]	[NA]	[NA]	[]
COMPARE	[/N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

1 DIODE OP RPC "C" OUT (12A). P-TERMINAL OF DIODE SHORTS TO GROUND, ELIMINATING A REDUNDANT PATH FOR THE OPEN SOLENOID POWER. LOSS OF ALL REDUNDANCY COULD RESULT IN THE VALVE CLOSURE WHILE SSME'S ARE RUNNING, CAUSING POSSIBLE MPS RUPTURE AND FIRE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/19/88
 ASSESSMENT ID: MPS-5750N
 NASA FMEA #: 2400-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5750
 ITEM: DIODE (12A)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 4 RPC BLEED RESISTORS.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/19/88
ASSESSMENT ID: MPS-57500
NASA FMEA #: NA

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5750
ITEM: DIODE (12A)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[N / N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 / 3] [NA] [NA] [NA] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:
2 MDM (OA2, OA3).

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/19/88
 ASSESSMENT ID: MPS-5750P
 NASA FMEA #: NA

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5750
 ITEM: DIODE (12A)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[N / N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 / 3] [NA] [NA] [NA] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

1 POSITIVE INDICATOR SWITCH.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/19/88
 ASSESSMENT ID: MPS-5751
 NASA FMEA #: NA

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5751
 ITEM: MDM (FA2)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 /2R]	[P]	[P]	[P]	[]
COMPARE	[N /N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [P] [P] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

FALSE OPEN COMMAND DURING ET SEPERATION COULD RESULT IN ET COLLISION WITH ORBITER DURING SEPERATION IF ALL REDUNDANCY IS LOST.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/19/88
ASSESSMENT ID: MPS-5752
NASA FMEA #: NA

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5752
ITEM: MDM (FA3)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	* []
IOA	[3 /2R]	[P]	[P]	[P]	
COMPARE	[N /N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [P] [P] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

FALSE OPEN COMMAND DURING ET SEPERATION COULD RESULT IN ET COLLISION WITH ORBITER DURING SEPERATION IF ALL REDUNDANCY IS LOST.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/19/88
ASSESSMENT ID: MPS-5753
NASA FMEA #: NA

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5753
ITEM: MDM (FA4)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 /2R]	[P]	[P]	[P]	[]
COMPARE	[N /N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [P] [P] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

FALSE OPEN COMMAND DURING ET SEPERATION COULD RESULT IN ET COLLISION WITH ORBITER DURING SEPERATION IF ALL REDUNDANCY IS LOST.

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 1/19/88
 ASSESSMENT ID: MPS-5754
 NASA FMEA #: NA

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5754
 ITEM: MDM (FA2)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 /2R]	[P]	[P]	[P]	[]
COMPARE	[N /N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [P] [P] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

POSSIBLE PREMATURE CLOSURE OF VALVE WHILE SSME'S ARE RUNNING.
 PRESSURE COULD RUPTURE MPS IF ALL REDUNDANCY IS LOST.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/19/88
ASSESSMENT ID: MPS-5755
NASA FMEA #: NA

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5755
ITEM: MDM (FA3)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 /2R]	[P]	[P]	[P]	[]
COMPARE	[N /N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [P] [P] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

POSSIBLE PREMATURE CLOSURE OF VALVE WHILE SSME'S ARE RUNNING.
PRESSURE COULD RUPTURE MPS IF ALL REDUNDANCY IS LOST.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/19/88
ASSESSMENT ID: MPS-5756
NASA FMEA #: NA

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5756
ITEM: MDM (FA4)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 /2R]	[P]	[P]	[P]	[]
COMPARE	[N /N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [P] [P] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:
POSSIBLE PREMATURE CLOSURE OF VALVE WHILE SSME'S ARE RUNNING.
PRESSURE COULD RUPTURE MPS IF ALL REDUNDANCY IS LOST.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/19/88
 ASSESSMENT ID: MPS-5761
 NASA FMEA #: 2244-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5761
 ITEM: HYBRID DRIVER, TYPE 3

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /2R]	[P]	[P]	[P]	[]
COMPARE	[/N]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

LOSS OF VEHICLE IS A POSSIBILITY. PARALLEL PATH MASKS FAILURE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/19/88
 ASSESSMENT ID: MPS-5762
 NASA FMEA #: 2246-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5762
 ITEM: HYBRID DRIVER, TYPE 1

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /2R]	[P]	[P]	[P]	[]
COMPARE	[/N]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 LOSS OF VEHICLE IS A POSSIBILITY.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/19/88
 ASSESSMENT ID: MPS-5763
 NASA FMEA #: 2244-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5763
 ITEM: HYBRID DRIVER, TYPE 3

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /2R]	[P]	[P]	[P]	[]
COMPARE	[/N]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

LOSS OF VEHICLE IS A POSSIBILITY. PARALLEL PATH MASKS FAILURE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/19/88
 ASSESSMENT ID: MPS-5764
 NASA FMEA #: 2242-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5764
 ITEM: REMOTE POWER CONTROLLER (RPC 19)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /2R]	[P]	[P]	[P]	[]
COMPARE	[/N]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 LOSS OF VEHICLE IS A POSSIBILITY.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/19/88
 ASSESSMENT ID: MPS-5765
 NASA FMEA #: 2242-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5765
 ITEM: REMOTE POWER CONTROLLER (RPC 20)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /2R]	[P]	[P]	[P]	[]
COMPARE	[/N]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 LOSS OF VEHICLE IS A POSSIBILITY.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/19/88
 ASSESSMENT ID: MPS-5766
 NASA FMEA #: 2242-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5766
 ITEM: REMOTE POWER CONTROLLER (RPC 19)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[N /]	[]	[]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

BISTABLE FEATURE, SERIES CONFIGURATION, OR MECHANICAL LINKAGE
 PROVIDE REDUNDANCY.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/19/88
 ASSESSMENT ID: MPS-5767
 NASA FMEA #: 2242-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5767
 ITEM: REMOTE POWER CONTROLLER (RPC 20)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[N /]	[]	[]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] [] (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

BISTABLE FEATURE, SERIES CONFIGURATION, OR MECHANICAL LINKAGE
 PROVIDE REDUNDANCY.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/19/88
ASSESSMENT ID: MPS-5771
NASA FMEA #: 2245-2

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5771
ITEM: HYBRID DRIVER, TYPE 3

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[N /]	[]	[N]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] [] (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

HDC FAILING "ON" CANNOT BE DETECTED DUE TO SERIES RPC POWER.
SECOND FAILURE (PREMATURE RPC POWER) WOULD ENERGIZE CLOSE
SOLENOID, BUT BISTABLE FEATURE WOULD KEEP VALVE OPEN.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/19/88
 ASSESSMENT ID: MPS-5772
 NASA FMEA #: 2247-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5772
 ITEM: HYBRID DRIVER, TYPE 1

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[N /]	[]	[]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

SERIES CONFIGURATION AND BISTABLE FEATURE PREVENT VALVE CLOSURE ON A SECOND FAILURE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/19/88
 ASSESSMENT ID: MPS-5773
 NASA FMEA #: 2245-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5773
 ITEM: HYBRID DRIVER, TYPE 3

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[N /]	[]	[N]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 HDC FAILING "ON" CANNOT BE DETECTED DUE TO SERIES RPC POWER.
 SECOND FAILURE (PREMATURE RPC POWER) WOULD ENERGIZE CLOSE
 SOLENOID, BUT BISTABLE FEATURE WOULD KEEP VALVE OPEN.

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 1/19/88
 ASSESSMENT ID: MPS-5774
 NASA FMEA #: 2243-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5774
 ITEM: REMOTE POWER CONTROLLER (RPC 20)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[N /]	[]	[]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 BISTABLE FEATURE, SERIES COFIGURATION, OR MECHANICAL LINKAGE
 PROVIDE REDUNDANCY.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/19/88
ASSESSMENT ID: MPS-5775
NASA FMEA #: 2243-2

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 5775
ITEM: REMOTE POWER CONTROLLER (RPC 21)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[N /]	[]	[]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

BISTABLE FEATURE, SERIES COFIGURATION, OR MECHANICAL LINKAGE
PROVIDE REDUNDANCY.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/19/88
 ASSESSMENT ID: MPS-5776
 NASA FMEA #: 2243-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5776
 ITEM: REMOTE POWER CONTROLLER (RPC 20)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /2R]	[P]	[P]	[P]	[]
COMPARE	[/N]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 LOSS OF VEHICLE IS A POSSIBILITY.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/19/88
 ASSESSMENT ID: MPS-5777
 NASA FMEA #: 2243-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5777
 ITEM: REMOTE POWER CONTROLLER (RPC 21)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /2R]	[P]	[P]	[P]	[]
COMPARE	[/N]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 LOSS OF VEHICLE IS A POSSIBILITY.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/19/88
 ASSESSMENT ID: MPS-5778
 NASA FMEA #: 2249-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5778
 ITEM: DIODE (12A)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[2 /2]	[NA]	[NA]	[NA]	[X]
COMPARE	[N /N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

FAILURE CAUSES LOSS OF REDUNDANCY. SECOND FAILURE WILL ELIMINATE
 CLOSE SOLENOID POWER, BUT BISTABLE FEATURE IS REDUNDANT.
 PARALLEL PATHS MASK THE FAILURE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/19/88
 ASSESSMENT ID: MPS-5778A
 NASA FMEA #: 2251-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5778
 ITEM: DIODE (12A)

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[2 /2]	[NA]	[NA]	[NA]	[X]
COMPARE	[N /N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 PARALLEL PATHS AND MECHANICAL LINKAGE PROVIDE REDUNDANCY.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/19/88
 ASSESSMENT ID: MPS-5779
 NASA FMEA #: 2398-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 5779
 ITEM:

LEAD ANALYST: HOLDEN/LOWERY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[2 /2]	[NA]	[NA]	[NA]	[X]
COMPARE	[N /N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

FAILURE CAUSES LOSS OF 1 POWER PATH TO CLOSE SOLENOID AND
 REDUNDANT POWER TO OTHER PATH. REDUNDANT PATHS MASK THE FAILURE.
 MECHANICAL LINKAGE PROVIDES REDUNDANCY.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/21/88
 ASSESSMENT ID: MPS-6011
 NASA FMEA #: 2253-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6011
 ITEM: POWER & CONTROL CIRCUITS FOR LH2 FEEDLINE
 DISCONNECT VALVE

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/21/88
 ASSESSMENT ID: MPS-6011A
 NASA FMEA #: NA

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6011
 ITEM: POWER & CONTROL CIRCUITS FOR LH2 FEEDLINE
 DISCONNECT VALVE

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[N / N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 / 3] [NA] [NA] [NA] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 ASSESSMENT IS FOR 2 ZENER DIODES.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/21/88
 ASSESSMENT ID: MPS-6011B
 NASA FMEA #: 2255-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6011
 ITEM: POWER & CONTROL CIRCUITS FOR LH2 FEEDLINE
 DISCONNECT VALVE

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /3]	[NA]	[NA]	[NA]	[]
COMPARE	[/N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 /3] [NA] [NA] [NA] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ONLY AVAIL REF: MPS/EPDC FMEA REVIEW SUMMARY 8-17-87. ASSESSMENT
 IS FOR 2 CLOSE POSITION SWITCH MONITOR RESISTORS.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/21/88
 ASSESSMENT ID: MPS-6011C
 NASA FMEA #: NA

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6011
 ITEM: POWER & CONTROL CIRCUITS FOR LH2 FEEDLINE
 DISCONNECT VALVE

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[N / N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 / 3] [NA] [NA] [NA] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 ASSESSMENT IS FOR 2 MDMs, OA2 & OA3.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MPS-6011D
NASA FMEA #: 2252-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 6011
ITEM: POWER & CONTROL CIRCUITS FOR LH2 FEEDLINE
DISCONNECT VALVE

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[3 / 1R] [P] [F] [P] [A]
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

A SHORT IN THE TRANSIENT SUPPRESSION DIODE COMBINED WITH A SHORT IN AN INTERNAL HDC DIODE WILL GROUND A SOLENOID. LOSS OF ALL REDUNDANCY COULD CAUSE LOSS OF CREW OR VEHICLE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/21/88
 ASSESSMENT ID: MPS-6011E
 NASA FMEA #: 2254-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6011
 ITEM: POWER & CONTROL CIRCUITS FOR LH2 FEEDLINE
 DISCONNECT VALVE

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/21/88
 ASSESSMENT ID: MPS-6011F
 NASA FMEA #: 2400-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6011
 ITEM: POWER & CONTROL CIRCUITS FOR LH2 FEEDLINE
 DISCONNECT VALVE

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/20/88
 ASSESSMENT ID: MPS-6012
 NASA FMEA #: 2247-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6012
 ITEM: HYBRID DRIVER CONTROLLER (6)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[2 /1R]	[P]	[F]	[P]	[X]
COMPARE	[N /]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

THE SERIES CONFIGURATION AND BISTABLE FEATURE PREVENT VALVE
 OPENING DUE TO A SECOND FAILURE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/20/88
 ASSESSMENT ID: MPS-6012A
 NASA FMEA #: 2246-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6012
 ITEM: HYBRID DRIVER CONTROLLER (6)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[2 /1R]	[P]	[F]	[P]	[X]
COMPARE	[N /]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 1 OPEN HDC, TYPE I. THE SERIES CONFIGURATION AND BISTABLE FEATURE PREVENT VALVE CLOSURE DUE TO A SECOND FAILURE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/20/88
 ASSESSMENT ID: MPS-6012B
 NASA FMEA #: 2245-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6012
 ITEM: HYBRID DRIVER CONTROLLER (6)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[2 /1R]	[P]	[F]	[P]	[X]
COMPARE	[N /]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 2 CLOSE HDC'S, TYPE III. SERIES CONFIGURATION,
 BISTABLE FEATURE, OR MECHANICAL LINKAGE PROVIDE REDUNDANCY.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/21/88
 ASSESSMENT ID: MPS-6012C
 NASA FMEA #: 2244-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6012
 ITEM: HYBRID DRIVER CONTROLLER (6)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[2 /1R]	[P]	[F]	[P]	[X]
COMPARE	[N /]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] [] (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 SERIES CONFIGURATION, BISTABLE FEATURE, OR MECHANICAL LINKAGE
 PROVIDE REDUNDANCY.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/21/88
 ASSESSMENT ID: MPS-6013
 NASA FMEA #: 2243-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6013
 ITEM: REMOTE POWER CONTROLLER (4)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[N /]	[]	[]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

SERIES CONFIGURATION, BISTABLE FEATURE, OR MECHANICAL LINKAGE
 PROVIDE REDUNDANCY.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/20/88
 ASSESSMENT ID: MPS-6013A
 NASA FMEA #: 2243-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6013
 ITEM: REMOTE POWER CONTROLLER (4)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[N /]	[]	[]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 2 CLOSE RPC'S. SERIES CONFIGURATION, BISTABLE FEATURE, OR MECHANICAL LINKAGE PROVIDE REDUNDANCY.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/20/88
ASSESSMENT ID: MPS-6013B
NASA FMEA #: 2242-1
NASA DATA:
BASELINE []
NEW [X]
SUBSYSTEM: EPD&C/MPS
MDAC ID: 6013
ITEM: REMOTE POWER CONTROLLER (4)
LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[N /]	[]	[]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 2 OPEN RPC'S. SERIES CONFIGURATION, BISTABLE FEATURE, OR MECHANICAL LINKAGE PROVIDE REDUNDANCY.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/20/88
 ASSESSMENT ID: MPS-6013C
 NASA FMEA #: 2242-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6013
 ITEM: REMOTE POWER CONTROLLER (4)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[N /]	[]	[]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 2 OPEN RPC'S. SERIES CONFIGURATION, BISTABLE FEATURE, OR MECHANICAL LINKAGE PROVIDE REDUNDANCY.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/21/88
 ASSESSMENT ID: MPS-6014A
 NASA FMEA #: 2251-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6014
 ITEM: ISOLATION AND BLOCKING DIODES (6)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[2 /1R]	[P]	[F]	[P]	[X]
COMPARE	[N /]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] [] (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 1 CLOSE CROSSOVER DIODE, 12A. PARALLEL PATHS AND MECHANICAL LINKAGE PROVIDE REDUNDANCY.

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 1/21/88
 ASSESSMENT ID: MPS-6014C
 NASA FMEA #: 2250-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6014
 ITEM: ISOLATION AND BLOCKING DIODES (6)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[2 /1R]	[P]	[F]	[P]	[X]
COMPARE	[N /]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 1 OPEN CROSSOVER DIODE, 12A. BISTABLE FEATURE,
 SERIES CONFIGURATION, OR MECHANICAL LINKAGE PROVIDE REDUNDANCY.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/21/88
 ASSESSMENT ID: MPS-6014D
 NASA FMEA #: 2398-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6014
 ITEM: ISOLATION AND BLOCKING DIODES (6)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[2 /1R]	[P]	[F]	[P]	[X]
COMPARE	[N /]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 1 CLOSE RPC C OUTPUT DIODE, 12A. FAILURE CAUSES THE LOSS OF ONE POWER PATH TO THE CLOSE SOLENOID AND REDUNDANT POWER TO THE OTHER PATH. PARALLEL PATHS MASK THE FAILURE. MECHANICAL LINKAGE PROVIDES REDUNDANCY.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/21/88
 ASSESSMENT ID: MPS-6014E
 NASA FMEA #: 2399-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6014
 ITEM: ISOLATION AND BLOCKING DIODES (6)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[2 /1R]	[P]	[F]	[P]	[X]
COMPARE	[N /]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 ASSESSMENT IS FOR 1 RPC C OUTPUT DIODE, 12A. SECOND FAILURE
 WOULD INHIBIT OPEN POWER AND ERODE REDUNDANCY AGAINST A PREMATURE
 CLOSURE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/21/88
 ASSESSMENT ID: MPS-6015
 NASA FMEA #: NA

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6015
 ITEM: FLIGHT CRITICAL AFT MDM (3)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[N /N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [P] [P] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

BISTABLE VALVE AND MECHANICAL LINKAGE PROVIDE REDUNDANCY.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/21/88
ASSESSMENT ID: MPS-6016
NASA FMEA #: NA

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 6016
ITEM: INDICATOR SWITCH (PD2)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[1 /1]	[P]	[P]	[P]	[X]
COMPARE	[N /N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[2 /1R] [P] [F] [P] [A]
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

MECHANICAL LINKAGE WILL PROVIDE REDUNDANCY. LOSS OF MECHANICAL REDUNDANCY COULD RESULT IN LOSS OF VEHICLE.

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 2/08/88
 ASSESSMENT ID: MPS-6021
 NASA FMEA #: 2005-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6021
 ITEM: POWER & CONTROL CIRCUITS FOR LH2 RTLS DUMP
 VALVES (2)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88
 ASSESSMENT ID: MPS-6021A
 NASA FMEA #: NA

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6021
 ITEM: POWER & CONTROL CIRCUITS FOR LH2 RTLS DUMP
 VALVES (2)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[N / N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 / 3] [NA] [NA] [NA] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 ASSESSMENT FOR 2 MDMS, OA1 AND OA3.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88
 ASSESSMENT ID: MPS-6021B
 NASA FMEA #: NA

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6021
 ITEM: POWER & CONTROL CIRCUITS FOR LH2 RTLS DUMP
 VALVES (2)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[N / N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 / 3] [NA] [NA] [NA] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 ASSESSMENT FOR 2 POSITION INDICATOR SWITCHES.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
ASSESSMENT ID: MPS-6021C
NASA FMEA #: 2009-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 6021
ITEM: POWER & CONTROL CIRCUITS FOR LH2 RTLS DUMP VALVES (2)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[3 / 1R] [P] [F] [P] [A]
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

A SHORT IN A TRANSIENT DIODE WILL ERODE BLOCKING REDUNDANCY. A SHORT IN AN INTERNAL HDC DIODE WILL GROUND OPEN SOLENOID POWER AND CLOSE THE VALVE. FAILURE OF THE RELIEF VALVE COULD CAUSE OVERPRESSURIZATION AND RUPTURE DUE TO LH2 BOIL OFF.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88	NASA DATA:
ASSESSMENT ID: MPS-6021D	BASELINE []
NASA FMEA #: 2006-1	NEW [X]
SUBSYSTEM: EPD&C/MPS	
MDAC ID: 6021	
ITEM: POWER & CONTROL CIRCUITS FOR LH2 RTLS DUMP VALVES (2)	
LEAD ANALYST: MCNICOLL/EMMONS	

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/]	[]	[]	[]	[]	(ADD/DELETE)
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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE	[]
INADEQUATE	[]

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
 ASSESSMENT ID: MPS-6021E
 NASA FMEA #: 2007-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6021
 ITEM: POWER & CONTROL CIRCUITS FOR LH2 RTLS DUMP
 VALVES (2)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
 ASSESSMENT ID: MPS-6021F
 NASA FMEA #: 2008-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6021
 ITEM: POWER & CONTROL CIRCUITS FOR LH2 RTLS DUMP
 VALVES (2)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
ASSESSMENT ID: MPS-6022
NASA FMEA #: 2003-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 6022
ITEM: HYBRID DRIVER CONTROLLER (6)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /3]	[P]	[P]	[P]	[]
COMPARE	[/N]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] [] (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

ASSESSMENT FOR 2 HDCs, TYPE I. ONLY AVAIL REF: MPS/EPDC FMEA REVIEW SUMMARY 8-17-87. LOSS OF ALL REDUNDANCY WILL PRECLUDE LH2 MANIFOLD VENT AFTER MECO. OVERPRESSURIZATION AND RUPTURE COULD RESULT.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
 ASSESSMENT ID: MPS-6022A
 NASA FMEA #: 2004-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6022
 ITEM: HYBRID DRIVER CONTROLLER (6)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /3]	[P]	[P]	[P]	[]
COMPARE	[/N]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT FOR 4 HDCs, TYPE III. ONLY AVAIL REF: MPS/EPDC FMEA REVIEW SUMMARY 8-17-87. LOSS OF ALL REDUNDANCY WILL PRECLUDE LH2 MANIFOLD VENT AFTER MECO. OVERPRESSURIZATION AND RUPTURE COULD RESULT.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
 ASSESSMENT ID: MPS-6023
 NASA FMEA #: 2000-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6023
 ITEM: REMOTE POWER CONTROLLER (4)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /3]	[P]	[P]	[P]	[]
COMPARE	[/N]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ONLY AVAIL REF: MPS/EPDC FMEA REVIEW SUMMARY 8-17-87. LOSS OF ALL REDUNDANCY WILL PRECLUDE LH2 MANIFOLD VENT AFTER MECO. OVERPRESSURIZATION AND RUPTURE COULD RESULT.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
 ASSESSMENT ID: MPS-6024
 NASA FMEA #: 2001-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6024
 ITEM: BLOCKING DIODE (4)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /3]	[P]	[F]	[P]	[]
COMPARE	[/N]	[]	[]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT FOR 2 DIODES, A4CR7 AND A4CR8. ONLY AVAIL REF:
 MPS/EPDC FMEA REVIEW SUMMARY 8-17-87. LOSS OF ALL REDUNDANCY
 WILL PRECLUDE LH2 MANIFOLD VENT AFTER MECO. OVERPRESSURIZATION
 AND RUPTURE COULD RESULT.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
 ASSESSMENT ID: MPS-6024A
 NASA FMEA #: 2381-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6024
 ITEM: BLOCKING DIODE (4)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /3]	[P]	[F]	[P]	[]
COMPARE	[/N]	[]	[]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT FOR 2 DIODES, A3CR3 AND A3CR9. ONLY AVAIL REF:
 MPS/EPDC FMEA REVIEW SUMMARY 8-17-87. LOSS OF ALL REDUNDANCY
 WILL PRECLUDE LH2 MANIFOLD VENT AFTER MECO. OVERPRESSURIZATION
 AND RUPTURE COULD RESULT.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
ASSESSMENT ID: MPS-6025
NASA FMEA #: 2202-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 6025
ITEM: ISOLATION DIODE (2)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /3]	[P]	[F]	[P]	[]
COMPARE	[/N]	[]	[]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] [] (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

ONLY AVAIL REF: MPS/EPDC FMEA REVIEW SUMMARY 8-17-87. LOSS OF ALL REDUNDANCY WILL PRECLUDE LH2 MANIFOLD VENT AFTER MECO. OVERPRESSURIZATION AND RUPTURE COULD RESULT.

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 2/08/88
 ASSESSMENT ID: MPS-6026
 NASA FMEA #: N/A

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6026
 ITEM: FLIGHT CRITICAL AFT MDM (FA1,FA3,FA4)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[N /N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [F] [P] [A]
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
 ASSESSMENT ID: MPS-6027
 NASA FMEA #: N/A

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6027
 ITEM: FLIGHT CRITICAL AFT MDM (FA1, FA3, FA4)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 /3]	[P]	[F]	[P]	[]
COMPARE	[N /N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [F] [P] [A]
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

LOSS OF ALL REDUNDANCY WILL PRECLUDE LH2 MANIFOLD VENT AFTER MECO. OVERPRESSURIZATION AND RUPTURE COULD RESULT. FAILURE OF FA1 MAY NOT BE DETECTED.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MPS-6051
NASA FMEA #: 200300-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 6051
ITEM: LH2 RECIRCULATION PUMP VALVE OPENING SOLENOID
ENERGIZING CIRCUITRY

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:
ASSESSMENT IS FOR 7 RESISTORS.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
 ASSESSMENT ID: MPS-6051A
 NASA FMEA #: 2224-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6051
 ITEM: LH2 RECIRCULATION PUMP VALVE OPENING SOLENOID
 ENERGIZING CIRCUITRY

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 ASSESSMENT IS FOR 1 HDC, TYPE III.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MPS-6051B
NASA FMEA #: 2224-2

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 6051
ITEM: LH2 RECIRCULATION PUMP VALVE OPENING SOLENOID
ENERGIZING CIRCUITRY

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /3]	[NA]	[NA]	[NA]	[]
COMPARE	[/N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[3 /3] [NA] [NA] [NA] [D]
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 1 HDC, TYPE III. PRELAUNCH FAILURE WILL CAUSE LAUNCH DELAY. IF LAUNCH OCCURS, THIS FAILURE WILL HAVE NO EFFECT ON THE MISSION.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MPS-6051C
NASA FMEA #: 2384-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 6051
ITEM: LH2 RECIRCULATION PUMP VALVE OPENING SOLENOID
ENERGIZING CIRCUITRY

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:
ASSESSMENT IS FOR 1 DIODE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
 ASSESSMENT ID: MPS-6051D
 NASA FMEA #: NA

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6051
 ITEM: LH2 RECIRCULATION PUMP VALVE OPENING SOLENOID
 ENERGIZING CIRCUITRY

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[N / N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 / 3] [NA] [NA] [NA] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 3 POSITION INDICATOR SWITCHES.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
 ASSESSMENT ID: MPS-6051E
 NASA FMEA #: NA

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6051
 ITEM: LH2 RECIRCULATION PUMP VALVE OPENING SOLENOID
 ENERGIZING CIRCUITRY

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[N / N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 / 3] [NA] [NA] [NA] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 3 MDMS, LA1, OA1 AND OA2.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MPS-6061
NASA FMEA #: NA

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 6061
ITEM: LH2 RECIRCULATION PUMP CONTROL CIRCUITRY

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 /3]	[NA]	[NA]	[NA]	[]
COMPARE	[N /N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 /3] [NA] [NA] [NA] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

ASSESSMENT IS FOR MDM OA3, 3 SIGNAL CONDITIONERS AND 3 PUMP MOTORS.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
 ASSESSMENT ID: MPS-6071
 NASA FMEA #: 2264-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6071
 ITEM: FUSE, 1A (3)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[P]	[P]	[X] *
IOA	[2 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/]	[]	[N]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[2 /1R] [P] [F] [P] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

PARALLEL PATHS MASK THE FAILURE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/21/88
 ASSESSMENT ID: MPS-6072
 NASA FMEA #: 2038-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6072
 ITEM: TOGGLE SWITCH

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /3]	[NA]	[NA]	[NA]	[] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[N /N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[2 /1R] [P] [P] [P] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

THE FAILURES UNDER ANALYSIS ARE DIFFERENT. THE RECOMMENDATION
 CORRESPONDS TO THE MORE CRITICAL FAILURE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/22/88
 ASSESSMENT ID: MPS-6072A
 NASA FMEA #: 2038-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6072
 ITEM: TOGGLE SWITCH

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[P]	[P]	[X] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/21/88
ASSESSMENT ID: MPS-6073
NASA FMEA #: 2038-3

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 6073
ITEM: TOGGLE SWITCH

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[1 /1]	[NA]	[NA]	[NA]	[X] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[N /N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

NASA'S SCENARIO IS POSSIBLE, BUT IT IS QUESTIONABLE WHETHER THREE WIPERS SHORTING TO GROUND CAN BE CLASSIFIED AS A SINGLE FAILURE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/21/88
 ASSESSMENT ID: MPS-6073A
 NASA FMEA #: 2038-4

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6073
 ITEM: TOGGLE SWITCH

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[P]	[P]	[X] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/21/88
ASSESSMENT ID: MPS-6074
NASA FMEA #: 2260-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 6074
ITEM: HYBRID DRIVER CONTROLLER (4)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[P]	[P]	[X] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[N /]	[]	[]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

ASSESSMENT FOR 2 FILL AND DRAIN OPEN HDCs ONLY. A SECOND FAILURE
COULD CLOSE THE INBD FILL/DRAIN VALVE DURING LOADING.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/21/88
 ASSESSMENT ID: MPS-6074A
 NASA FMEA #: 2261-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6074
 ITEM: HYBRID DRIVER CONTROLLER (4)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[P]	[P]	[X] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[N /]	[]	[]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 1 FILL AND DRAIN CLOSE HDC ONLY. FIRST FAILURE CAUSES A LOSS OF REDUNDANCY. A SECOND FAILURE COULD OPEN THE VALVE IN FLIGHT.

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 1/22/88
 ASSESSMENT ID: MPS-6074B
 NASA FMEA #: 2262-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6074
 ITEM: HYBRID DRIVER CONTROLLER (4)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[P]	[P]	[X] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[N /]	[]	[]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 1 TOPPING VALVE OPEN HDC. PRELAUNCH SCENARIO IS MORE CRITICAL THAN THE DEORBIT SCENARIO.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/21/88
 ASSESSMENT ID: MPS-6075
 NASA FMEA #: 2260-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6075
 ITEM: HYBRID DRIVER CONTROLLER

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[2 /1R]	[P]	[F]	[P]	[X]
COMPARE	[N /]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 2 FILL AND DRAIN OPEN HDCs. A SECOND FAILURE WILL NOT CLOSE THE VALVE DURING LOADING (BISTABLE FEATURE).

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/21/88
 ASSESSMENT ID: MPS-6075A
 NASA FMEA #: 2261-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6075
 ITEM: HYBRID DRIVER CONTROLLER

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[P]	[P]	[X] *
IOA	[2 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/]	[]	[N]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 1 FILL AND DRAIN CLOSE HDC. LOSS OF OUTPUT
 DETECTED BY V41X1458E.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/21/88
 ASSESSMENT ID: MPS-6075B
 NASA FMEA #: 2262-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6075
 ITEM: HYBRID DRIVER CONTROLLER

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[P]	[P]	[X] *
IOA	[2 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/]	[]	[N]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[2 /1R] [P] [F] [P] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 1 TOPPING VALVE OPEN HDC. FAILURE IS DETECTED BY V41X1458E.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
 ASSESSMENT ID: MPS-6076
 NASA FMEA #: 2265-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6076
 ITEM: ISOLATION DIODES (16)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /3]	[NA]	[NA]	[NA]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[/N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 3 OPEN SWITCH SCAN DIODES. LOSS OF MONITORING CAPABILITY FOR THE OPEN SWITCH IS THE RESULT OF THE FAILURE.

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 1/25/88
 ASSESSMENT ID: MPS-6076A
 NASA FMEA #: 2265-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6076
 ITEM: ISOLATION DIODES (16)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[N /]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[3 /3] [NA] [NA] [NA] [D]
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 3 OPEN SWITCH SCAN DIODES. NASA FAILURE SCENARIO WOULD CAUSE LOSS OF VEHICLE EVEN WITHOUT THIS DIODE FAILURE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
 ASSESSMENT ID: MPS-6076B
 NASA FMEA #: 2266-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6076
 ITEM: ISOLATION DIODES (16)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 1R]	[P]	[P]	[P]	[]
COMPARE	[/N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 ASSESSMENT IS FOR 2 CLOSE SWITCH SCAN DIODES. FAILURE CAUSES
 LOSS OF MONITORING.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
ASSESSMENT ID: MPS-6076C
NASA FMEA #: 2266-2

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 6076
ITEM: ISOLATION DIODES (16)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[N /]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[3 /3] [NA] [NA] [NA] [D]
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 2 CLOSE SWITCH SCAN DIODES. NASA FAILURE SCENARIO WOULD CAUSE A LOSS OF VEHICLE EVEN WITHOUT THIS DIODE FAILURE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
 ASSESSMENT ID: MPS-6076D
 NASA FMEA #: 2268-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6076
 ITEM: ISOLATION DIODES (16)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[P]	[P]	[X] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[N /]	[]	[]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 1 FILL AND DRAIN OPEN SWITCH BLOCKING DIODE (J360). FIRST FAILURE WILL MAKE THE MANUAL OPEN COMMAND TO THE INBOARD FILL AND DRAIN VALVE INOPERABLE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
 ASSESSMENT ID: MPS-6076E
 NASA FMEA #: 2268-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6076
 ITEM: ISOLATION DIODES (16)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[/]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 1 FILL AND DRAIN OPEN SWITCH BLOCKING DIODE (J360). THIS FAILURE IS NOT DETECTABLE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
 ASSESSMENT ID: MPS-6076F
 NASA FMEA #: 2269-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6076
 ITEM: ISOLATION DIODES (16)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[N /]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (if applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 1 FILL AND DRAIN OPEN SWITCH BLOCKING DIODE (J359). FIRST FAILURE CAUSES LOSS OF THE MANUAL OPEN COMMAND.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
 ASSESSMENT ID: MPS-6076G
 NASA FMEA #: 2269-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6076
 ITEM: ISOLATION DIODES (16)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[P]	[P]	[X] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[N /]	[]	[]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 1 FILL AND DRAIN OPEN SWITCH BLOCKING DODE (J359).

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
 ASSESSMENT ID: MPS-6076H
 NASA FMEA #: 2270-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6076
 ITEM: ISOLATION DIODES (16)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /3]	[NA]	[NA]	[NA]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[/N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [F] [P] [A]
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 1 CLOSE SWITCH BLOCKING DIODE. A LOSS OF ALL REDUNDANCY COULD VENT H2 INTO THE ATMOSPHERE DURING BOOST. THE FAILURE IS NOT READILY DETECTABLE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
 ASSESSMENT ID: MPS-6076I
 NASA FMEA #: 2270-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6076
 ITEM: ISOLATION DIODES (16)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[/]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 1 CLOSE SWITCH BLOCKING DIODE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
 ASSESSMENT ID: MPS-6076J
 NASA FMEA #: 2271-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6076
 ITEM: ISOLATION DIODES (16)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /3]	[NA]	[NA]	[NA]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[/N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 1 TOPPING OPEN SWITCH BLOCKING DIODE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
 ASSESSMENT ID: MPS-6076K
 NASA FMEA #: 2271-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6076
 ITEM: ISOLATION DIODES (16)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[/]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 1 TOPPING OPEN SWITCH BLOCKING DIODE. THE
 FAILURE NOT DETECTABLE DURING ALL PHASES OF FLIGHT.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/22/88
ASSESSMENT ID: MPS-6076L
NASA FMEA #: 2273-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 6076
ITEM: ISOLATION DIODES (16)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[/]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:
ASSESSMENT IS FOR 1 FA2 MDM BLOCKING DIODE. THE FAILURE IS NOT
READILY DETECTABLE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
 ASSESSMENT ID: MPS-6076M
 NASA FMEA #: 2273-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6076
 ITEM: ISOLATION DIODES (16)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 1R]	[P]	[P]	[P]	[]
COMPARE	[/ N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 1 FA2 MDM BLOCKING DIODE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
ASSESSMENT ID: MPS-6076N
NASA FMEA #: 2274-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 6076
ITEM: ISOLATION DIODES (16)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[P]	[P]	[X] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[N /]	[]	[]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 1 FA3 MDM BLOCKING DIODE. THE FIRST FAILURE CAUSES A LOSS OF OPEN SOLENOID POWER TO THE INBD FILL/DRAIN VALVE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
 ASSESSMENT ID: MPS-60760
 NASA FMEA #: 2274-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6076
 ITEM: ISOLATION DIODES (16)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /3]	[NA]	[NA]	[NA]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[/N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 1 FA3 MDM BLOCKING DIODE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
 ASSESSMENT ID: MPS-6076P
 NASA FMEA #: 2276-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6076
 ITEM: ISOLATION DIODES (16)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[P]	[P]	[X] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[N /]	[]	[]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 1 FILL AND DRAIN FA1 MDM BLOCKING DIODE. FIRST
 FAILURE CAUSES LOSS OF INBOARD F/D CLOSE SOLENOID POWER.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
 ASSESSMENT ID: MPS-6076Q
 NASA FMEA #: 2276-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6076
 ITEM: ISOLATION DIODES (16)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /3]	[NA]	[NA]	[NA]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[/N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 1 FILL AND DRAIN FA1 MDM BLOCKING DIODE. THE FAILURE HAS NO EFFECT.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
 ASSESSMENT ID: MPS-6076R
 NASA FMEA #: 2277-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6076
 ITEM: ISOLATION DIODES (16)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[N /]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 1 TOPPING FA1 MDM BLOCKING DIODE. THE FIRST FAILURE CAUSES LOSS OF OPEN COMMAND FOR THE TOPPING CAUSING IT TO CLOSE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
 ASSESSMENT ID: MPS-6076S
 NASA FMEA #: 2277-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6076
 ITEM: ISOLATION DIODES (16)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /3]	[NA]	[NA]	[NA]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[/N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 1 TOPPING FA1 MDM BLOCKING DIODE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
 ASSESSMENT ID: MPS-6076T
 NASA FMEA #: 2279-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6076
 ITEM: ISOLATION DIODES (16)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /3]	[NA]	[NA]	[NA]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[/N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [F] [P] [A]
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 3 TRANSIENT SUPPRESSION DIODES. CRITICALITY 3/1R FOR SHORT AND IS NOT READILY DETECTABLE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
 ASSESSMENT ID: MPS-6077
 NASA FMEA #: 2372-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6077
 ITEM: CURRENT LIMITING RESISTORS (9) AND BLEED
 RESISTORS (2)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 2 1.8K SWITCH SCAN BLEED RESISTORS.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
 ASSESSMENT ID: MPS-6077A
 NASA FMEA #: 202600-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6077
 ITEM: CURRENT LIMITING RESISTORS (9) AND BLEED
 RESISTORS (2)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 ASSESSMENT IS FOR 9 MONITOR RESISTORS.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
 ASSESSMENT ID: MPS-6078
 NASA FMEA #: NA

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6078
 ITEM: MDM (FA1, 2, LA1)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[N /N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [F] [P] [A]
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

A LOSS OF ALL REDUNDANCY WILL CAUSE THE VALVE TO OPEN
 PREMATURELY.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
 ASSESSMENT ID: MPS-6079
 NASA FMEA #: NA

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6079
 ITEM: VALVE SWITCH INDICATOR

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[N / N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 / 3] [NA] [NA] [NA] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 THERE ARE 3 INDICATORS.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
 ASSESSMENT ID: MPS-6081
 NASA FMEA #: 2054A-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6081
 ITEM: 1A FUSE

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[P]	[P]	[X] *
IOA	[2 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/]	[]	[N]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

FAILURE WILL BE DETECTED B THE LH2 OTBD F/D SW SCAN.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
ASSESSMENT ID: MPS-6082
NASA FMEA #: 2055A-2

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 6082
ITEM: TOGGLE SWITCH, 32V73A438

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /3]	[NA]	[NA]	[NA]	[] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[N /N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

IOA AND NASA SCENARIOS ARE DIFFERENT. NASA DEFINES THE FAILURE AS FAILS TO XFER TO CLOSE. IOA DEFINES THE FAILURE AS FAILURE TO XFER TO OPEN OR CLOSE. NASA'S ANALYSIS FOR THEIR DEFINITION IS CORRECT.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
 ASSESSMENT ID: MPS-6082A
 NASA FMEA #: 2055A-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6082
 ITEM: TOGGLE SWITCH, 32V73A438

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[P]	[P]	[X] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
 ASSESSMENT ID: MPS-6083
 NASA FMEA #: 2055A-3

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6083
 ITEM: TOGGLE SWITCH

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[P]	[P]	[X] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[N /]	[]	[]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

FAILURE WILL OPEN THE OUTBOARD F/D VALVE. FAILURE OF THE INBOARD F/D VALVE WILL VENT H2 OVERBOARD DURING BOOST.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
ASSESSMENT ID: MPS-6083A
NASA FMEA #: 2055A-4

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 6083
ITEM: TOGGLE SWITCH

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[P]	[P]	[X] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[N /]	[]	[]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[1 /1] [NA] [NA] [NA] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

PREMATURE SWITCH TRANSFER WILL CLOSE O/B F&D VALVE AND CAUSE LINE RUPTURE DURING TANK FILL. TYPO ON IOA ANALYSIS SHEET 6083. FLIGHT CRITICALITY WAS INTENDED TO BE 1/1R FOR SHORT ACROSS CLOSE CONTACTS, HERE CHANGED TO 1/1.
ONLY AVAIL REF: MPS/EPDC FMEA REVIEW SUMMARY 8-17-87.

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 1/25/88
 ASSESSMENT ID: MPS-6084
 NASA FMEA #: 2057A-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6084
 ITEM: HYBRID DRIVER CONTROLLER (2)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[P]	[P]	[X] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[N /]	[]	[]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR OPEN HDC ONLY. FILL AND DRAIN VALVE COULD
 CLOSE DURING LOADING AFTER A SECOND FAILURE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
 ASSESSMENT ID: MPS-6084A
 NASA FMEA #: 2058A-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6084
 ITEM: HYBRID DRIVER CONTROLLER (2)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 ASSESSMENT IS FOR CLOSE HDC ONLY.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
 ASSESSMENT ID: MPS-6085
 NASA FMEA #: 2057A-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6085
 ITEM: HYBRID DRIVER CONTROLLER

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[N /]	[]	[]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 ASSESSMENT IS FOR OPEN HDC ONLY. THE BISTABLE FEATURE AND THE INBOARD FILL AND DRAIN VALVE OFFER REDUNDANCY AGAINST PREMATURE OPENING.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
 ASSESSMENT ID: MPS-6085A
 NASA FMEA #: 2058A-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6085
 ITEM: HYBRID DRIVER CONTROLLER

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[P]	[P]	[X] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 ASSESSMENT IS FOR CLOSE HDC ONLY.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
 ASSESSMENT ID: MPS-6086
 NASA FMEA #: 2056A-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6086
 ITEM: ISOLATION DIODE (4)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[P]	[P]	[X] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[N /]	[]	[N]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 ASSESSMENT FOR OPEN SWITCH BLOCKING DIODE ONLY. FIRST FAILURE
 ELIMINATES THE MANUAL OPEN COMMAND TO THE OUTBOARD FILL/DRAIN
 VALVE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
 ASSESSMENT ID: MPS-6086A
 NASA FMEA #: 2356A-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6086
 ITEM: ISOLATION DIODE (4)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR ONE OPEN MDM ISOLATION DIODE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
 ASSESSMENT ID: MPS-6086B
 NASA FMEA #: 2357A-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6086
 ITEM: ISOLATION DIODE (4)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 1R]	[P]	[F]	[P]	[X]
COMPARE	[/ N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR ONE CLOSE SWITCH ISOLATION DIODE. FAILURE
 COULD CAUSE CONTAMINATION OF THE MPS SYSTEM DURING ENTRY, BUT IS
 NOT CRITICAL.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
 ASSESSMENT ID: MPS-6086C
 NASA FMEA #: 2358A-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6086
 ITEM: ISOLATION DIODE (4)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [F] [P] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR ONE CLOSE MDM ISOLATION DIODE. FAILURE IS NOT
 DETECTABLE DURING ALL PHASES OF FLIGHT.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
 ASSESSMENT ID: MPS-6087
 NASA FMEA #: 2360A-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6087
 ITEM: CURRENT LIMITING RESISTOR (4)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 ASSESSMENT IS FOR 5.1K MONITORING RESISTORS.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
 ASSESSMENT ID: MPS-6088
 NASA FMEA #: NA

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6088
 ITEM: MDM

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[N /N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [F] [P] [A]
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 MDM FA2 ONLY.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
 ASSESSMENT ID: MPS-6089
 NASA FMEA #: NA

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6089
 ITEM: VALVE SWITCH INDICATOR

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[N / N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 / 3] [NA] [NA] [NA] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
 ASSESSMENT ID: MPS-6101
 NASA FMEA #: 2013-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6101
 ITEM: LH2 FEEDLINE RELIEF ISOLATION VALVE POWER AND CONTROL CIRCUITS

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[3 / 1R] [P] [F] [P] [A]
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 2 TRANSIENT SUPPRESSION DIODES. A SHORT COULD SHORT THE SOLENOID TO GROUND WITH ANOTHER FAILURE.

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 1/26/88
 ASSESSMENT ID: MPS-6101A
 NASA FMEA #: 2014-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6101
 ITEM: LH2 FEEDLINE RELIEF ISOLATION VALVE POWER AND
 CONTROL CIRCUITS

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 1 MONITOR RESISTOR, 5.1K.

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 1/26/88
 ASSESSMENT ID: MPS-6101B
 NASA FMEA #: 2015-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6101
 ITEM: LH2 FEEDLINE RELIEF ISOLATION VALVE POWER AND
 CONTROL CIRCUITS

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 ASSESSMENT IS FOR 2 RPC BLEED RESISTORS, 1.8K.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
 ASSESSMENT ID: MPS-6101C
 NASA FMEA #: 2016-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6101
 ITEM: LH2 FEEDLINE RELIEF ISOLATION VALVE POWER AND
 CONTROL CIRCUITS

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 ASSESSMENT IS FOR 2 RPC LIMIT RESISTORS, 2.2K.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
 ASSESSMENT ID: MPS-6101D
 NASA FMEA #: NA

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6101
 ITEM: LH2 FEEDLINE RELIEF ISOLATION VALVE POWER AND
 CONTROL CIRCUITS

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY	REDUNDANCY SCREENS			CIL ITEM
	FLIGHT HDW/FUNC	A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[N / N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 / 3] [NA] [NA] [NA] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 ASSESSMENT IS FOR 2 MDMS.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/27/88
 ASSESSMENT ID: MPS-6102
 NASA FMEA #: 2061-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6102
 ITEM: REMOTE POWER CONTROLLER (2)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] [] (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 INSTRUMENTATION WILL DETECT THE FAILURE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/27/88
 ASSESSMENT ID: MPS-6102A
 NASA FMEA #: 2061-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6102
 ITEM: REMOTE POWER CONTROLLER (2)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[P]	[P]	[X] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[N /]	[]	[N]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

A SECOND FAILURE COULD CLOSE THE VALVE PREMATURELY. THE FAILURE IS DETECTABLE.

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 1/27/88
 ASSESSMENT ID: MPS-6103
 NASA FMEA #: 2062-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6103
 ITEM: HYBRID DRIVER CONTROLLER

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[2 /1R]	[P]	[F]	[P]	[X]
COMPARE	[N /]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

THE LH2 FEEDLINE RELIEF VALVE OFFERS REDUNDANCY AFTER A PREMATURE OPENING OF THE RELIEF ISOLATION VALVE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/27/88
 ASSESSMENT ID: MPS-6104
 NASA FMEA #: 2060-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6104
 ITEM: TOGGLE SWITCH

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[NA]	[P]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[/]	[]	[N]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

NO NOMINAL USE OF SWITCH. THE ITEM IS STANDBY REDUNDANT.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/27/88
 ASSESSMENT ID: MPS-6104A
 NASA FMEA #: 2060-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6104
 ITEM: TOGGLE SWITCH

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[NA]	[P]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[/]	[]	[N]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] [] (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

NO NOMINAL USE OF SWITCH. THE ITEM IS STANDBY REDUNDANT.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/27/88
 ASSESSMENT ID: MPS-6105
 NASA FMEA #: 2060-3

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6105
 ITEM: TOGGLE SWITCH

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[P]	[P]	[X] *
IOA	[1 /1R]	[P]	[P]	[P]	[X]
COMPARE	[N /]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

THE LH2 FEEDLINE RELIEF VALVE PROVIDES REDUNDANCY.

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 1/27/88
 ASSESSMENT ID: MPS-6105A
 NASA FMEA #: 2060-4

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6105
 ITEM: TOGGLE SWITCH

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[1 /1]	[NA]	[NA]	[NA]	[X] *
IOA	[1 /1R]	[P]	[P]	[P]	[X]
COMPARE	[/N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] [] (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 POSSIBLE MANIFOLD RUPTURE.

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 1/27/88
 ASSESSMENT ID: MPS-6106
 NASA FMEA #: 2010-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6106
 ITEM: CURRENT LIMITING RESISTOR (3)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[NA]	[P]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[/]	[]	[N]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 THE ITEM IS STANDBY REDUNDANT.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/27/88
ASSESSMENT ID: MPS-6107
NASA FMEA #: 2012-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 6107
ITEM: ISOLATION DIODE (11)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /3]	[NA]	[NA]	[NA]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[/N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 3 CLOSE SWITCH SCAN DIODES. FAILURE CAUSES
LOSS OF CLOSED SWITCH SCAN.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/27/88
 ASSESSMENT ID: MPS-6107A
 NASA FMEA #: 2012-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6107
 ITEM: ISOLATION DIODE (11)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 3 CLOSE SWITCH SCAN DIODES.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/27/88
 ASSESSMENT ID: MPS-6107B
 NASA FMEA #: 2237-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6107
 ITEM: ISOLATION DIODE (11)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /3]	[NA]	[NA]	[NA]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[/N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[/ .] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 ASSESSMENT IS FOR 2 OPEN SWITCH SCAN DIODES. FAILURE CAUSES LOSS
 OF OPEN SWITCH SCAN.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/27/88
 ASSESSMENT ID: MPS-6107C
 NASA FMEA #: 2237-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6107
 ITEM: ISOLATION DIODE (11)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 2 OPEN SWITCH SCAN DIODES.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/27/88
 ASSESSMENT ID: MPS-6107D
 NASA FMEA #: 2238-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6107
 ITEM: ISOLATION DIODE (11)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /3]	[NA]	[NA]	[NA]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[/N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [P] [P] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 ASSESSMENT IS FOR 3 SWITCH BLOCKING DIODES.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/27/88
 ASSESSMENT ID: MPS-6107E
 NASA FMEA #: 2238A-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6107
 ITEM: ISOLATION DIODE (11)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 3 SWITCH BLOCKING DIODES.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/27/88
 ASSESSMENT ID: MPS-6107F
 NASA FMEA #: 2239-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6107
 ITEM: ISOLATION DIODE (11)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 2 MDM TO RPC BLOCKING DIODES.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/27/88
 ASSESSMENT ID: MPS-6107G
 NASA FMEA #: 2239-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6107
 ITEM: ISOLATION DIODE (11)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 1R]	[P]	[P]	[P]	[]
COMPARE	[/ N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 2 MDM TO RPC BLOCKING DIODES. A SHORT WILL NOT CAUSE A HAZARD TO CREW, VEHICLE, OR MISSION.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/28/88
 ASSESSMENT ID: MPS-6107H
 NASA FMEA #: 2241-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6107
 ITEM: ISOLATION DIODE (11)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[/]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 ASSESSMENT IS FOR 1 MDM TO HDC BLOCKING DIODE. PARALLEL PATHS
 MASK THE FAILURE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/27/88
 ASSESSMENT ID: MPS-6107I
 NASA FMEA #: 2241-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6107
 ITEM: ISOLATION DIODE (11)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /3]	[NA]	[NA]	[NA]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[/N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 1 MDM TO HDC BLOCKING DIODE. FAILURE CREATES NO HAZRDOUS EFFECT ON CREW, VEHICLE, OR MISSION.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/27/88
 ASSESSMENT ID: MPS-6108
 NASA FMEA #: 2039-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6108
 ITEM: ISOLATION DIODE (3)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[2 /1R]	[P]	[F]	[P]	[X]
COMPARE	[N /]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

THE FEEDLINE RELIEF VALVE PROVIDES REDUNDANCY AGAINST H2 ESCAPING INTO THE ATMOSPHERE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/27/88
 ASSESSMENT ID: MPS-6108A
 NASA FMEA #: 2240-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6108
 ITEM: ISOLATION DIODE (3)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[2 /1R]	[P]	[F]	[P]	[X]
COMPARE	[N /]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 1 RPC CROSSOVER DIODE. THE FEEDLINE RELIEF VALVE OFFERS ADDITIONAL REDUNDANCY AGAINST ALLOWING H2 TO ESCAPE INTO THE ATMOSPHERE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/27/88
 ASSESSMENT ID: MPS-6108B
 NASA FMEA #: 2397-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6108
 ITEM: ISOLATION DIODE (3)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[] *
IOA	[2 /1R]	[P]	[F]	[P]	[X]
COMPARE	[N /]	[]	[]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] [] (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 ASSESSMENT IS FOR 1 RPC A OUTPUT DIODE. THE LH2 RELIEF VALVE PROVIDES REDUNDANCY.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/28/88
 ASSESSMENT ID: MPS-6109
 NASA FMEA #: NA

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6109
 ITEM: MDM (FA1, FA3, FA4)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[N /N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [F] [P] [A]
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/27/88
ASSESSMENT ID: MPS-6121
NASA FMEA #: 2029-2

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 6121
ITEM: HYBRID DRIVER CONTROLLER

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[N /]	[]	[N]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

THE PARALLEL CONFIGURATION WILL NOT ALLOW A SECOND FAILURE TO CLOSE TWO VALVES.

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 1/26/88
 ASSESSMENT ID: MPS-6122
 NASA FMEA #: 2029-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6122
 ITEM: HYBRID DRIVER CONTROLLER

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[P]	[P]	[X] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/27/88
ASSESSMENT ID: MPS-6123
NASA FMEA #: 2041-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 6123
ITEM: FUSE (3)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[NA]	[P]	[] *
IOA	[2 /1R]	[P]	[P]	[P]	[X]
COMPARE	[N /]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

A SECOND FAILURE WILL NOT CLOSE TWO FLOW CONTROL VALVES.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
 ASSESSMENT ID: MPS-6131
 NASA FMEA #: 201100-1

NASA DATA:
 BASELINE []
 NEW [x]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6131
 ITEM: GH2 PRESSURIZATION LINE VENT VALVE SOLENOID
 ENERGIZING CIRCUITRY

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
 ASSESSMENT ID: MPS-6131A
 NASA FMEA #: 2405-1

NASA DATA:
 BASELINE []
 NEW [x]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6131
 ITEM: GH2 PRESSURIZATION LINE VENT VALVE SOLENOID
 ENERGIZING CIRCUITRY

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 2/08/88
 ASSESSMENT ID: MPS-6131B
 NASA FMEA #: 2406-1

NASA DATA:
 BASELINE []
 NEW [x]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6131
 ITEM: GH2 PRESSURIZATION LINE VENT VALVE SOLENOID
 ENERGIZING CIRCUITRY

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
 ASSESSMENT ID: MPS-6141
 NASA FMEA #: NA

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6141
 ITEM: MDM (FA4)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[1 / 1]	[NA]	[NA]	[NA]	[]
COMPARE	[N / N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[2 / 1R] [P] [P] [P] [A]
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

THE IOA ANALYSIS IS CORRECT EXCEPT THAT MECHANICAL BACKUP ADDS AN ADDITIONAL LAYER OF REDUNDANCY.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
ASSESSMENT ID: MPS-6142
NASA FMEA #: 2100-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 6142
ITEM: HYBRID DRIVER CONTROLLER (2)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[1 /1]	[NA]	[NA]	[NA]	[]
COMPARE	[N /N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

ASSESSMENT FOR OPEN HDC ONLY. IOA ANALYSIS CONSIDERED CLOSE HDC AND IGNORED THE MECHANICAL BACKUP.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
 ASSESSMENT ID: MPS-6142A
 NASA FMEA #: 2101-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6142
 ITEM: HYBRID DRIVER CONTROLLER (2)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[P]	[P]	[X] *
IOA	[1 /1]	[NA]	[NA]	[NA]	[X]
COMPARE	[N /N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

REF: FMEA NO. 05-6J-2101-1 REV. 10/10/87 ANALYZES BOTH THE
 NOMINAL AND ABORT CASES. THIS ASSESSMENT IS FOR THE NOMINAL
 CASE. THE CRITICALITY 1/1 FOR AN ENGINE OUT ABORT IS CORRECT.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
 ASSESSMENT ID: MPS-6143
 NASA FMEA #: 2103-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6143
 ITEM: CURRENT LIMITING RESISTOR, 5.1K (4)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
ASSESSMENT ID: MPS-6144
NASA FMEA #: 2102-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 6144
ITEM: ISOLATION DIODES (4)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[3 / 1R] [P] [F] [P] [A]
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 2 TRANSIENT SUPPRESSION DIODES. A SHORT IN THE TRANSIENT SUPPRESSION DIODES COMBINED WITH A SHORT IN AN INTERNAL HDC DIODE WILL ELIMINATE SOLENOID POWER. A FAILURE OF MECHANICAL BACKUP TO CLOSE THE DISCONNECT VALVE DURING ET SEPARATION COULD RESULT IN LOSS OF CREW/VEHICLE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
 ASSESSMENT ID: MPS-6144A
 NASA FMEA #: NA

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6144
 ITEM: ZENER DIODES (2)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[N / N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 / 3] [NA] [NA] [NA] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
 ASSESSMENT ID: MPS-6145
 NASA FMEA #: NA

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6145
 ITEM: POSITION INDICATOR SWITCH

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[N / N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 / 3] [NA] [NA] [NA] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/01/88
 ASSESSMENT ID: MPS-6151
 NASA FMEA #: 2222-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6151
 ITEM: LH2 PREVALVE POWER & CONTROL CIRCUITS

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/01/88
 ASSESSMENT ID: MPS-6151A
 NASA FMEA #: NA

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6151
 ITEM: LH2 PREVALVE POWER & CONTROL CIRCUITS

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[N / N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 / 3] [NA] [NA] [NA] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 ASSESSMENT IS FOR MDM OA1.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/01/88
 ASSESSMENT ID: MPS-6151B
 NASA FMEA #: 2223-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6151
 ITEM: LH2 PREVALVE POWER & CONTROL CIRCUITS

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/01/88
 ASSESSMENT ID: MPS-6151C
 NASA FMEA #: 2394-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6151
 ITEM: LH2 PREVALVE POWER & CONTROL CIRCUITS

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
 ASSESSMENT ID: MPS-6152
 NASA FMEA #: 2197-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6152
 ITEM: FUSE

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /3]	[NA]	[NA]	[NA]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[/N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

THE SWITCH IS NOT USED DURING NOMINAL OPERATIONS.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
 ASSESSMENT ID: MPS-6153
 NASA FMEA #: 2198-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6153
 ITEM: TOGGLE SWITCH

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /3]	[NA]	[NA]	[NA]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[/N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 THE SWITCH IS NOT USED DURING NOMINAL OPERATIONS.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
 ASSESSMENT ID: MPS-6153A
 NASA FMEA #: 2198-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6153
 ITEM: TOGGLE SWITCH

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[P]	[P]	[X] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[N /]	[]	[]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 THE NASA SCENARIO IS MORE CRITICAL.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
 ASSESSMENT ID: MPS-6153B
 NASA FMEA #: 2198-3

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6153
 ITEM: TOGGLE SWITCH

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[1 /1]	[NA]	[NA]	[NA]	[X] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[N /N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 THE NASA SCENARIO IS MORE CRITICAL.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
ASSESSMENT ID: MPS-6154
NASA FMEA #: 2199-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 6154
ITEM: REMOTE POWER CONTROLLER, 3A

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE).

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:
ASSESSMENT IS FOR 6 OPEN RPCs (36 & 40).

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 1/29/88
 ASSESSMENT ID: MPS-6154A
 NASA FMEA #: 2199-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6154
 ITEM: REMOTE POWER CONTROLLER, 3A

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 ASSESSMENT IS FOR 6 OPEN RPCs (36 & 40).

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
 ASSESSMENT ID: MPS-6154B
 NASA FMEA #: 2200-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6154
 ITEM: REMOTE POWER CONTROLLER, 3A

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 ASSESSMENT IS FOR 6 CLOSE RPCs (#35 & 39).

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
 ASSESSMENT ID: MPS-6154C
 NASA FMEA #: 2200-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6154
 ITEM: REMOTE POWER CONTROLLER, 3A

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 ASSESSMENT IS FOR 6 CLOSE RPCs (#35 & 39).

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
 ASSESSMENT ID: MPS-6155
 NASA FMEA #: 2201-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6155
 ITEM: HYBRID DRIVER CONTROLLER, TYPE I (6)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 3 OPEN HDCs. TELEMETRY FROM THE SERIES RPC
 WOULD DETECT THE FAILURE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
 ASSESSMENT ID: MPS-6155A
 NASA FMEA #: 2201-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6155
 ITEM: HYBRID DRIVER CONTROLLER, TYPE I (6)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 ASSESSMENT IS FOR 3 OPEN HDCs. TELEMETRY FROM THE SERIES RPC
 WOULD DETECT THE FAILURE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
ASSESSMENT ID: MPS-6155B
NASA FMEA #: 2203-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 6155
ITEM: HYBRID DRIVER CONTROLLER, TYPE I (6)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 3 CLOSE HDCs. TELEMETRY FROM THE SERIES RPC
WOULD DETECT THE FAILURE.

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 1/29/88
 ASSESSMENT ID: MPS-6155C
 NASA FMEA #: 2203-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6155
 ITEM: HYBRID DRIVER CONTROLLER, TYPE I (6)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 3 CLOSE HDCs. TELEMETRY FROM THE SERIES RPC
 WOULD DETECT THE FAILURE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
 ASSESSMENT ID: MPS-6156
 NASA FMEA #: 2202-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6156
 ITEM: HYBRID DRIVER CONTROLLER, TYPE III (12)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 ASSESSMENT IS FOR 6 OPEN HDCs.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
 ASSESSMENT ID: MPS-6156A
 NASA FMEA #: 2202-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6156
 ITEM: HYBRID DRIVER CONTROLLER, TYPE III (12)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 ASSESSMENT IS FOR 6 OPEN HDCs.

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 1/29/88
 ASSESSMENT ID: MPS-6156B
 NASA FMEA #: 2204-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6156
 ITEM: HYBRID DRIVER CONTROLLER, TYPE III (12)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 ASSESSMENT IS FOR 6 CLOSE HDCs.

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 1/29/88
 ASSESSMENT ID: MPS-6156C
 NASA FMEA #: 2204-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6156
 ITEM: HYBRID DRIVER CONTROLLER, TYPE III (12)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] [] (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 ASSESSMENT IS FOR 6 CLOSE HDCs.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
ASSESSMENT ID: MPS-6157
NASA FMEA #:

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 6157
ITEM: ISOLATION DIODES, 12A (18)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 3 OPEN COMMAND B RPC OUTPUT DIODES.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
 ASSESSMENT ID: MPS-6157A
 NASA FMEA #: 2206-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6157
 ITEM: ISOLATION DIODES, 12A (18)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 ASSESSMENT IS FOR 3 OPEN RPC CROSSOVER DIODES.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
 ASSESSMENT ID: MPS-6157B
 NASA FMEA #: 2207-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6157
 ITEM: ISOLATION DIODES, 12A (18)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 3 CLOSE COMMAND A RPC OUTOUT DIODES.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
 ASSESSMENT ID: MPS-6157C
 NASA FMEA #: 2208-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6157
 ITEM: ISOLATION DIODES, 12A (18)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 ASSESSMENT IS FOR 3 CLOSE RPC CROSSOVER DIODES.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/01/88
 ASSESSMENT ID: MPS-6157D
 NASA FMEA #: 2392-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6157
 ITEM: ISOLATION DIODES, 12A (18)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 3 OPEN COMMAND A RPC OUTPUT DIODES.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/01/88
 ASSESSMENT ID: MPS-6157E
 NASA FMEA #: 2393-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6157
 ITEM: ISOLATION DIODES, 12A (18)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/]	[]	[]	[]	[]

from RECOMMENDATIONS: (If different NASA)
 [/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)
 ADEQUATE []
 INADEQUATE []

REMARKS:
 ASSESSMENT IS FOR 3 CLOSE COMMAND B RPC OUTPUT DIODES.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
ASSESSMENT ID: MPS-6158
NASA FMEA #: 2209-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 6158
ITEM: ISOLATION DIODES, 4.2A (3)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 3 OPEN MDM BLOCKING DIODES. TYPO IN ITEM NAME:
MDAC 6158 COVERED 30 DIODES, NOT 3. INSTRUMENTATION FOR THE
SERIES RPC WILL DETECT THE FAILURE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
 ASSESSMENT ID: MPS-6158A
 NASA FMEA #: 2210-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6158
 ITEM: ISOLATION DIODES, 4.2A (3)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 3 CLOSE MDM BLOCKING DIODES. TELEMETRY FROM THE SERIES RPC CAN DETECT THE FAILURE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
 ASSESSMENT ID: MPS-6158B
 NASA FMEA #: 2214-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6158
 ITEM: ISOLATION DIODES, 4.2A (3)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /3]	[NA]	[NA]	[NA]	[] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [F] [P] [A]
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

THE DIODE PROVIDES REDUNDANT BLOCKING PROTECTION. LOSS OF ALL REDUNDANCY COULD PREMATURELY CLOSE THE PREVALVE.

ADEQUATE []

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/01/88
ASSESSMENT ID: MPS-6158C
NASA FMEA #: 2215-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 6158
ITEM: ISOLATION DIODES, 4.2A (3)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /3]	[NA]	[NA]	[NA]	[] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] [] (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

INADEQUATE []

REMARKS:
ASSESSMENT IS FOR 3 CLOSE SWITCH COMMAND A BLOCKING DIODES. THE
FAILURE ERODES THE REDUNDANCY OF AN UNUSED SWITCH.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/01/88
 ASSESSMENT ID: MPS-6158D
 NASA FMEA #: 2220-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6158
 ITEM: ISOLATION DIODES, 4.2A (3)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 1R]	[P]	[F]	[P]	[X]
COMPARE	[/N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 9 OPEN SWITCH SCAN DIODES. FAILURE CAUSES A LOSS IN MONITORING CAPABILITIES.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/01/88
 ASSESSMENT ID: MPS-6158E
 NASA FMEA #: 2221-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6158
 ITEM: ISOLATION DIODES, 4.2A (3)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /3]	[NA]	[NA]	[NA]	[] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 9 CLOSE SWITCH SCAN DIODES. THE FAILURE CAUSES
 A LOSS OF MONITORING CAPABILITIES.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
 ASSESSMENT ID: MPS-6159
 NASA FMEA #: 2211-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6159
 ITEM: ISOLATION DIODE (36)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 3 OPEN MDM BLOCKING DIODES.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
ASSESSMENT ID: MPS-6159A
NASA FMEA #: 2212-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 6159
ITEM: ISOLATION DIODE (36)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:
ASSESSMENT IS FOR 3 CLOSE MDM BLOCKING DIODES.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
 ASSESSMENT ID: MPS-6159B
 NASA FMEA #: 2213-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6159
 ITEM: ISOLATION DIODE (36)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 6 MAINSTAGE BLOCKING DIODES.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/01/88
 ASSESSMENT ID: MPS-6159C
 NASA FMEA #: 2216-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6159
 ITEM: ISOLATION DIODE (36)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /3]	[NA]	[NA]	[NA]	[X] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 3 OPEN SWITCH COMMAND C BLOCKING DIODES.
 FAILURE CAUSES A LOSS IN REDUNDANCY FOR THE MANUAL OPEN COMMAND.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/01/88
 ASSESSMENT ID: MPS-6159D
 NASA FMEA #: 2217-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6159
 ITEM: ISOLATION DIODE (36)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /3]	[NA]	[NA]	[NA]	[] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 3 OPEN SWITCH COMMAND B BLOCKING DIODES.
 FAILURE CAUSES A LOSS OF REDUNDANCY FOR THE MANUAL OPEN COMMAND.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/01/88
 ASSESSMENT ID: MPS-6159E
 NASA FMEA #: 2218-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6159
 ITEM: ISOLATION DIODE (36)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 1R]	[P]	[F]	[P]	[X]
COMPARE	[/ N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 6 CLOSE SWITCH B&C BLOCKING DIODES. THE
 FAILURE CAUSES LOSS IN REDUNDANCY FOR THE MANUAL CLOSE COMMAND.

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 2/01/88
 ASSESSMENT ID: MPS-6159F
 NASA FMEA #: 2219-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6159
 ITEM: ISOLATION DIODE (36)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /3]	[NA]	[NA]	[NA]	[] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 6 OPEN SWITCH BLOCKING DIODES. THE FAILURE CAUSES A LOSS OF REDUNDANCY FOR THE MANUAL CLOSE COMMAND.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/01/88
ASSESSMENT ID: MPS-6159G
NASA FMEA #: 2222-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 6159
ITEM: ISOLATION DIODE (36)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /3]	[NA]	[NA]	[NA]	[] *
IOA	[3 /1R]	[P]	[F]	[P]	[X]
COMPARE	[/N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [F] [P] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 6 TRANSIENT SUPPRESSION DIODES. A SHORT IN THE DIODE COULD CAUSE LOSS OF OPEN SOLENOID POWER. A LOSS OF ALL REDUNDANCY WOULD CLOSE THE PREVALVE DURING ENGINE BURN RESULTING IN AN EXPLOSION.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/01/88
 ASSESSMENT ID: MPS-6160
 NASA FMEA #: NA

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 6160
 ITEM: MODULATOR DEMODULATOR (4)

LEAD ANALYST: MCNICOLL/EMMONS

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[2 /1R]	[P]	[F]	[P]	[X]
COMPARE	[N /N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [F] [P] [A]
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR MDM FA1, 2, 3, 4.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/02/88
 ASSESSMENT ID: MPS-7100
 NASA FMEA #: 2121-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7100
 ITEM: VALVE POWER & CONTROL CIRCUITS FOR HELIUM
 ISOLATION VALVES

LEAD ANALYST: EMMONS/MCNEELY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/01/88
 ASSESSMENT ID: MPS-7100A
 NASA FMEA #: 2113-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7100
 ITEM: VALVE POWER & CONTROL CIRCUITS FOR HELIUM
 ISOLATION VALVES

LEAD ANALYST: EMMONS/MCNEELY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /3]	[NA]	[NA]	[NA]	[]
COMPARE	[/N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 6 "B" VALVE RPC'S. LOSS OF ALL REDUNDANCY
 COULD RESULT IN AN EXPLOSION DUE TO LACK OF HELIUM PURGE IN AN
 SSME.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/01/88
ASSESSMENT ID: MPS-7100B
NASA FMEA #: 2113-2

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 7100
ITEM: VALVE POWER & CONTROL CIRCUITS FOR HELIUM ISOLATION VALVES

LEAD ANALYST: EMMONS/MCNEELY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /3]	[NA]	[NA]	[NA]	[]
COMPARE	[/N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] [] (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:
ASSESSMENT IS FOR 6 "B" VALVE RPC'S. A LOSS OF REDUNDANCY COULD MAKE HELIUM LEAK ISOLATION IMPOSSIBLE. THIS COULD OVERPRESSURIZE THE AFT COMPARTMENT AND CAUSE DAMAGE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/02/88
 ASSESSMENT ID: MPS-7100C
 NASA FMEA #: 2375-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7100
 ITEM: VALVE POWER & CONTROL CIRCUITS FOR HELIUM
 ISOLATION VALVES

LEAD ANALYST: EMMONS/MCNEELY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/02/88
 ASSESSMENT ID: MPS-7100D
 NASA FMEA #: 2379-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7100
 ITEM: VALVE POWER & CONTROL CIRCUITS FOR HELIUM
 ISOLATION VALVES

LEAD ANALYST: EMMONS/MCNEELY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/02/88
ASSESSMENT ID: MPS-7100E
NASA FMEA #: 2379-2

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 7100
ITEM: VALVE POWER & CONTROL CIRCUITS FOR HELIUM
ISOLATION VALVES

LEAD ANALYST: EMMONS/MCNEELY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/02/88
 ASSESSMENT ID: MPS-7100F
 NASA FMEA #: 2414-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7100
 ITEM: VALVE POWER & CONTROL CIRCUITS FOR HELIUM
 ISOLATION VALVES

LEAD ANALYST: EMMONS/MCNEELY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/01/88
ASSESSMENT ID: MPS-7110
NASA FMEA #: 2110-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 7110
ITEM: FUSE, 1AMP (9)

LEAD ANALYST: EMMONS/MCNEELY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /2R]	[P]	[F]	[P]	[X]
COMPARE	[/N]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [F] [P] [A]
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 6 "B" VALVE FUSES. IOA SHOWS 3/1R FOR ABORT ONLY. LOSS OF ALL REDUNDANCY COULD RESULT IN AN EXPLOSION DUE TO LACK OF HELIUM PURGE IN AN SSME. THE FAILURE IS MASKED BY PARALLEL PATHS.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/02/88
ASSESSMENT ID: MPS-7110A
NASA FMEA #: 2116-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 7110
ITEM: FUSE, 1AMP (9)

LEAD ANALYST: EMMONS/MCNEELY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /2R]	[P]	[F]	[P]	[X]
COMPARE	[/N]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 3 "A" VALVE FUSES. IOA INDICATES 3/1R FOR ABORTS ONLY. ONLY AVAIL REF: MPS/EPDC FMEA REVIEW SUMMARY 8/17/87. LOSS OF ALL REDUNDANCY COULD RESULT IN AN EXPLOSION DUE TO LACK OF HELIUM PURGE IN AN SSME.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/02/88
 ASSESSMENT ID: MPS-7120
 NASA FMEA #: 2117-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7120
 ITEM: TOGGLE SWITCH, 1P3T (3)

LEAD ANALYST: EMMONS/MCNEELY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /2R]	[P]	[F]	[P]	[X]
COMPARE	[/N]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ONLY AVAILABLE REF: MPS/EPDC FMEA REVIEW SUMMARY 8/17/87. LOSS OF ALL REDUNDANCY COULD RESULT IN AN EXPLOSION DUE TO LACK OF HELIUM PURGE IN AN SSME.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/02/88
ASSESSMENT ID: MPS-7120A
NASA FMEA #: 2117-3

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 7120
ITEM: TOGGLE SWITCH, 1P3T (3)

LEAD ANALYST: EMMONS/MCNEELY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /2R]	[P]	[F]	[P]	[X]
COMPARE	[/N]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:
ONLY AVAILABLE REF; MPS/EPDC FMEA REVIEW SUMMARY 8/17/87. LOSS
OF ALL REDUNDANCY COULD RESULT IN AN EXPLOSION DUE TO LACK OF
HELIUM PURGE IN AN SSME.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/02/88
ASSESSMENT ID: MPS-7120B
NASA FMEA #: 2117-4

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 7120
ITEM: TOGGLE SWITCH, 1P3T (3)

LEAD ANALYST: EMMONS/MCNEELY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /2R]	[P]	[F]	[P]	[X]
COMPARE	[/N]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

ONLY AVAILABLE REF; MPS/EPDC FMEA REVIEW SUMMARY 8/17/87. LOSS OF ALL REDUNDANCY COULD RESULT IN AN EXPLOSION DUE TO LACK OF HELIUM PURGE IN AN SSME.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/01/88
ASSESSMENT ID: MPS-7130
NASA FMEA #: 2111-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 7130
ITEM: TOGGLE SWITCH, 2P3T (3)

LEAD ANALYST: EMMONS/MCNEELY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /2R]	[P]	[F]	[P]	[X]
COMPARE	[/N]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

LOSS OF ALL REDUNDANCY COULD RESULT IN AN EXPLOSION DUE TO LACK OF HELIUM PURGE IN AN SSME.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/01/88
ASSESSMENT ID: MPS-7130A
NASA FMEA #: 2111-3

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 7130
ITEM: TOGGLE SWITCH, 2P3T (3)

LEAD ANALYST: EMMONS/MCNEELY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /2R]	[P]	[F]	[P]	[X]
COMPARE	[/N]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [F] [P] [A]
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

LOSS OF ALL REDUNDANCY COULD RESULT IN AN EXPLOSION DUE TO LACK OF HELIUM PURGE IN AN SSME. THE FAILURE MAY NOT BE DETECTED.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/01/88
ASSESSMENT ID: MPS-7130B
NASA FMEA #: 2111-4

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 7130
ITEM: TOGGLE SWITCH, 2P3T (3)

LEAD ANALYST: EMMONS/MCNEELY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /2R]	[P]	[F]	[P]	[X]
COMPARE	[/N]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

A LOSS OF ALL REDUNDANCY COULD MAKE HELIUM LEAK ISOLATION IMPOSSIBLE. THIS COULD OVERPRESSURIZE THE AFT COMPARTMENT AND CAUSE DAMAGE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/01/88
ASSESSMENT ID: MPS-7140
NASA FMEA #: 2118-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 7140
ITEM: HYBRID DRIVER, TYPE III (3)

LEAD ANALYST: EMMONS/MCNEELY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /2R]	[P]	[P]	[P]	[]
COMPARE	[/N]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

ONLY AVAILABLE REF: MPS/EPDC FMEA REVIEW SUMMARY 8/17/87. LOSS OF ALL REDUNDANCY COULD RESULT IN AN EXPLOSION DUE TO LACK OF HELIUM PURGE IN AN SSME.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/02/88
 ASSESSMENT ID: MPS-7140A
 NASA FMEA #: 2118-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7140
 ITEM: HYBRID DRIVER, TYPE III (3)

LEAD ANALYST: EMMONS/MCNEELY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /2R]	[P]	[P]	[P]	[]
COMPARE	[/N]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 ONLY AVAILABLE REF: MPS/EPDC FMEA REVIEW SUMMARY 8/17/87. LOSS
 OF ALL REDUNDANCY COULD MAKE HELIUM LEAK ISOLATION IMPOSSIBLE.
 THIS COULD OVERPRESSURIZE THE AFT COMPARTMENT AND CAUSE DAMAGE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/01/88
 ASSESSMENT ID: MPS-7150
 NASA FMEA #: 2112-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7150
 ITEM: HYBRID DRIVER, TYPE I (6)

LEAD ANALYST: EMMONS/MCNEELY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /2R]	[P]	[P]	[P]	[]
COMPARE	[/N]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

LOSS OF ALL REDUNDANCY COULD RESULT IN AN EXPLOSION DUE TO LACK OF HELIUM PURGE IN AN SSME.

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 2/01/88
 ASSESSMENT ID: MPS-7160
 NASA FMEA #: 2115-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7160
 ITEM: ISOLATION DIODES (6)

LEAD ANALYST: EMMONS/MCNEELY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /2R]	[P]	[F]	[P]	[X]
COMPARE	[/N]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 6 "B" VALVE RPC OUTPUT DIODES. LOSS OF ALL REDUNDANCY COULD RESULT IN AN EXPLOSION DUE TO LACK OF HELIUM PURGE IN AN SSME.

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 2/01/88
 ASSESSMENT ID: MPS-7160A
 NASA FMEA #: 2115-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7160
 ITEM: ISOLATION DIODES (6)

LEAD ANALYST: EMMONS/MCNEELY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /2R]	[P]	[F]	[P]	[X]
COMPARE	[/N]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 6 "B" VALVE RPC OUTPUT DIODES. LOSS OF ALL REDUNDANCY COULD RESULT IN AN EXPLOSION DUE TO LACK OF HELIUM PURGE IN AN SSME.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/01/88
ASSESSMENT ID: MPS-7170
NASA FMEA #: 2114-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 7170
ITEM: ISOLATION DIODES (9)

LEAD ANALYST: EMMONS/MCNEELY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /2R]	[P]	[F]	[P]	[X]
COMPARE	[/N]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 6 "B" VALVE SWITCH BLOCKING DIODES. IOA INDICATES 3/1R FOR ABORTS ONLY. LOSS OF ALL REDUNDANCY COULD RESULT IN AN EXPLOSION DUE TO LACK OF HELIUM PURGE IN AN SSME.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/02/88
ASSESSMENT ID: MPS-7170A
NASA FMEA #: 2119-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 7170
ITEM: ISOLATION DIODES (9)

LEAD ANALYST: EMMONS/MCNEELY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /2R]	[P]	[F]	[P]	[X]
COMPARE	[/N]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 3 "A" VALVE SWITCH BLOCKING DIODES. ONLY AVAILABLE REF: MPS/EPDC FMEA REVIEW SUMMARY 8/17/87. LOSS OF ALL REDUNDANCY COULD RESULT IN AN EXPLOSION DUE TO LACK OF HELIUM PURGE IN AN SSME.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/02/88
ASSESSMENT ID: MPS-7180
NASA FMEA #: 2119-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 7180
ITEM: ISOLATION DIODES (3)

LEAD ANALYST: EMMONS/MCNEELY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /2R]	[P]	[F]	[P]	[X]
COMPARE	[/N]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] [] (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 3 "A" VALVE SWITCH BLOCKING DIODES. ONLY AVAILABLE REF: MPS/EPDC FMEA REVIEW SUMMARY 8/17/87. LOSS OF ALL REDUNDANCY COULD RESULT IN AN EXPLOSION DUE TO LACK OF HELIUM PURGE IN AN SSME.

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 2/02/88
 ASSESSMENT ID: MPS-7190
 NASA FMEA #: N/A

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7190
 ITEM: MDM, FLIGHT AFT 1,2,3,4

LEAD ANALYST: EMMONS/MCNEELY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 /2R]	[P]	[F]	[P]	[X]
COMPARE	[N /N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [P] [P] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/01/88
 ASSESSMENT ID: MPS-7191
 NASA FMEA #: N/A

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7191
 ITEM: MDM, FLIGHT AFT 1,2,3,4

LEAD ANALYST: EMMONS/MCNEELY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[N / N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 / 3] [NA] [NA] [NA] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
 ASSESSMENT ID: MPS-7200
 NASA FMEA #: 2147-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7200
 ITEM: VALVE POWER AND CONTROL CIRCUITS FOR HELIUM
 INTERCONNECT INLET VALVES

LEAD ANALYST: EMMONS/MCNEELY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
 ASSESSMENT ID: MPS-7200A
 NASA FMEA #: 2148-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7200
 ITEM: VALVE POWER AND CONTROL CIRCUITS FOR HELIUM
 INTERCONNECT INLET VALVES

LEAD ANALYST: EMMONS/MCNEELY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
 ASSESSMENT ID: MPS-7200B
 NASA FMEA #: 2149-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7200
 ITEM: VALVE POWER AND CONTROL CIRCUITS FOR HELIUM
 INTERCONNECT INLET VALVES

LEAD ANALYST: EMMONS/MCNEELY

ASSESSMENT:

	CRITICALITY		REDUNDANCY SCREENS			CIL ITEM
	FLIGHT	HDW/FUNC	A	B	C	
NASA	[3	/3]	[NA]	[NA]	[NA]	[] *
IOA	[3	/3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MPS-7200C
NASA FMEA #: 2147-2

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 7200
ITEM: VALVE POWER AND CONTROL CIRCUITS FOR HELIUM
INTERCONNECT INLET VALVES

LEAD ANALYST: EMMONS/MCNEELY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /3]	[NA]	[NA]	[NA]	[]
COMPARE	[/N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] [] (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

ASSESSMENT FOR 9 DIODES. A LOSS OF ALL REDUNDANCY COULD CAUSE THE LOSS OF ONE ENGINE, RESULTING IN LOSS OF MISSION (INTACT ABORT). NSTS 22206 2.3.3L REQUIRES ASSIGNMENT OF 3/1R.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MPS-7200D
NASA FMEA #: 2148-2

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 7200
ITEM: VALVE POWER AND CONTROL CIRCUITS FOR HELIUM
INTERCONNECT INLET VALVES

LEAD ANALYST: EMMONS/MCNEELY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /3]	[NA]	[NA]	[NA]	[]
COMPARE	[/N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

ASSESSMENT FOR 9 DIODES. A LOSS OF ALL REDUNDANCY COULD CAUSE THE LOSS OF ONE ENGINE, RESULTING IN LOSS OF MISSION (INTACT ABORT). NSTS 22206 2.3.3L REQUIRES ASSIGNMENT OF 3/1R.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
 ASSESSMENT ID: MPS-7210
 NASA FMEA #: 2140-1

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7210
 ITEM: FUSE, 1AMP (6)

LEAD ANALYST: EMMONS/MCNEELY

NASA DATA:
 BASELINE []
 NEW [X]

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[NA]	[P]	[] *
IOA	[3 /2R]	[P]	[F]	[P]	[X]
COMPARE	[/N]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] [] (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

THE FAILURE WOULD RESULT IN THE LOSS OF ONE ENGINE (LOSS OF MISSION) IF ALL REDUNDANCY WERE LOST. NSTS 22206 2.3.3L REQUIRES ASSIGNMENT OF 3/1R. THE FAILURE WOULD BE CRITICALITY 1R FOR AN ABORT. ONLY AVAIL. REF.: MPS/EPDC FMEA REVIEW SUMMARY 8/17/87.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
 ASSESSMENT ID: MPS-7220
 NASA FMEA #: 2141-4

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7220
 ITEM: TOGGLE SWITCH, 2P3T (3)

LEAD ANALYST: EMMONS/MCNEELY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[NA]	[P]	[] *
IOA	[2 /2R]	[P]	[F]	[P]	[X]
COMPARE	[N /N]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[3 /3] [NA] [NA] [NA] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

THE FAILURE WILL INHIBIT THE ABILITY TO CLOSE THE VALVE. THIS
 WILL CREATE NO HAZARDOUS EFFECT. ONLY AVAILABLE REFERENCE:
 MPS/EPDC FMEA REVIEW SUMMARY 8-17-87.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
 ASSESSMENT ID: MPS-7220A
 NASA FMEA #: 2141-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7220
 ITEM: TOGGLE SWITCH, 2P3T (3)

LEAD ANALYST: EMMONS/MCNEELY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[NA]	[P]	[] *
IOA	[2 /2R]	[P]	[F]	[P]	[X]
COMPARE	[N /N]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (if applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

THE FAILURE WOULD RESULT IN THE LOSS OF ONE ENGINE (LOSS OF MISSION) IF ALL REDUNDANCY WERE LOST. THE SWITCH IS STANDBY REDUNDANT. NSTS 22206 2.3.3L REQUIRES ASSIGNMENT OF 3/1R. ONLY AVAIL REF: MPS/EPDC FMEA REVIEW SUMMARY 8-17-87.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
 ASSESSMENT ID: MPS-7220B
 NASA FMEA #: 2141-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7220
 ITEM: TOGGLE SWITCH, 2P3T (3)

LEAD ANALYST: EMMONS/MCNEELY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[NA]	[P]	[] *
IOA	[2 /2R]	[P]	[F]	[P]	[X]
COMPARE	[N /N]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[3 /3] [NA] [NA] [NA] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

THE FAILURE WILL INHIBIT THE ABILITY TO CLOSE THE VALVE. THIS WILL CREATE NO HAZARDOUS EFFECT. ONLY AVAIL REF: MPS/EPDC FMEA REVIEW SUMMARY 8-17-87.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
 ASSESSMENT ID: MPS-7220C
 NASA FMEA #: 2141-3

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7220
 ITEM: TOGGLE SWITCH, 2P3T (3)

LEAD ANALYST: EMMONS/MCNEELY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[NA]	[P]	[] *
IOA	[2 /2R]	[P]	[F]	[P]	[X]
COMPARE	[N /N]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

THE FAILURE WOULD RESULT IN THE LOSS OF ONE ENGINE (LOSS OF MISSION) IF ALL REDUNDANCY WERE LOST. NSTS 22206 2.3.3L REQUIRES ASSIGNMENT OF 3/1R. THE SWITCH IS STANDBY REDUNDANT. ONLY AVAIL REF: MPS/EPDC FMEA REVIEW SUMMARY 8-17-87.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MPS-7230
NASA FMEA #: 2144-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 7230
ITEM: ISOLATION DIODES (6)

LEAD ANALYST: EMMONS/MCNEELY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /2R]	[P]	[P]	[P]	[X]
COMPARE	[/N]	[]	[N]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

THE FAILURE WOULD RESULT IN THE LOSS OF ONE ENGINE (LOSS OF MISSION) IF ALL REDUNDANCY WERE LOST. NSTS 22206 2.3.3L REQUIRES ASSIGNMENT OF 3/1R. THE FAILURE WOULD BE CRITICALITY 1R FOR AN ABORT. ONLY AVAIL REF: MPS/EPDC FMEA REVIEW SUMMARY 8-17-87.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MPS-7231
NASA FMEA #: 2144-2

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 7231
ITEM: ISOLATION DIODES (6)

LEAD ANALYST: EMMONS/MCNEELY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[2 /1R]	[P]	[F]	[P]	[X]
COMPARE	[N /]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
[]

INADEQUATE

REMARKS:

THE FAILURE WOULD RESULT IN THE LOSS OF ONE ENGINE (LOSS OF MISSION) IF ALL REDUNDANCY WERE LOST. NSTS 22206 2.3.3L REQUIRES ASSIGNMENT OF 3/1R. THE CRITICALITY WOULD BE 1R FOR AN ABORT. ONLY AVAIL REF: MPS/EPDC FMEA REVIEW SUMMARY 8-17-87.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
 ASSESSMENT ID: MPS-7240
 NASA FMEA #: 2143-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7240
 ITEM: REMOTE POWER CONTROLLER (6)

LEAD ANALYST: EMMONS/MCNEELY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /2R]	[P]	[P]	[P]	[]
COMPARE	[/N]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[3 /2R] [P] [P] [P] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

NASA CALLS LOSS OF AN UNRELATED ENGINE A REDUNDANT FAILURE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
 ASSESSMENT ID: MPS-7250
 NASA FMEA #: 2142-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7250
 ITEM: HYBRID DRIVER, TYPE I (6)

LEAD ANALYST: EMMONS/MCNEELY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /2R]	[P]	[P]	[P]	[]
COMPARE	[/N]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[3 /2R] [P] [P] [P] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

NASA CALLS THE LOSS OF AN UNRELATED ENGINE A REDUNDANT FAILURE.
 ONLY AVAIL REF: MPS/EPDC FMEA REVIEW SUMAMRY 8-17-87.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MPS-7260
NASA FMEA #: 2145-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 7260
ITEM: ISOLATION DIODES (12)

LEAD ANALYST: EMMONS/MCNEELY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /2R]	[P]	[F]	[P]	[X]
COMPARE	[/N]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [F] [P] [A]
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 6 DIODES. ONLY AVAIL REF: FMEA REVIEW SUMMARY 8-17-87. THE FAILURE WILL ERODE REDUNDANCY TO OPEN THE VALVE. LOSS OF ALL REDUNDANCY WILL CAUSE THE LOSS OF ONE ENGINE. THE FAILURE WILL NOT BE DETECTED. RESULTS IN LOSS OF MISSION (INTACT ABORT). NSTS 22206 REQUIRES ASSIGNMENT OF 3/1R.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
 ASSESSMENT ID: MPS-7260A
 NASA FMEA #: 2146-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7260
 ITEM: ISOLATION DIODES (12)

LEAD ANALYST: EMMONS/MCNEELY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /2R]	[P]	[F]	[P]	[X]
COMPARE	[/N]	[]	[N]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ONLY AVAIL REF: MPS/EPDC FMEA REVIEW SUMMARY 8-17-87. THE LOSS OF ALL REDUNDANCY WOULD RESULT IN THE LOSS OF ONE ENGINE. THE FAILURE WILL BE DETECTED. RESULTS IN LOSS OF MISSION (INTACT ABORT). NSTS 22206 REQUIRES ASSIGNMENT OF 3/1R.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MPS-7270
NASA FMEA #:

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 7270
ITEM: MDM, FLIGHT AFT 1,2,3

LEAD ANALYST: EMMONS/MCNEELY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 / 3]	[P]	[F]	[P]	[]
COMPARE	[N / N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 / 1R] [P] [F] [P] [A]
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

SECOND FAILURE CAN CAUSE AN ENGINE SHUTDOWN AND LOSS OF MISSION
(INTACT ABORT). NSTS 22206 2.3.3L REQUIRES ASSIGNMENT OF 3/1R.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MPS-7271
NASA FMEA #:

NASA DATA:
BASELINE []
NEW []

SUBSYSTEM: EPD&C/MPS
MDAC ID: 7271
ITEM: MDM, FLIGHT AFT 1,2,3

LEAD ANALYST: EMMONS/MCNEELY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[N / N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 / 3] [NA] [NA] [NA] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
 ASSESSMENT ID: MPS-7300
 NASA FMEA #: 2153-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7300
 ITEM: VALVE POWER AND CONTROL CIRCUITS FOR HELIUM
 INTERCONNECT OUTLET VALVES

LEAD ANALYST: EMMONS/MCNEELY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
 ASSESSMENT ID: MPS-7300A
 NASA FMEA #: 2403-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7300
 ITEM: VALVE POWER AND CONTROL CIRCUITS FOR HELIUM
 INTERCONNECT OUTLET VALVES

LEAD ANALYST: EMMONS/MCNEELY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
 ASSESSMENT ID: MPS-7300B
 NASA FMEA #: 2404-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7300
 ITEM: VALVE POWER AND CONTROL CIRCUITS FOR HELIUM
 INTERCONNECT OUTLET VALVES

LEAD ANALYST: EMMONS/MCNEELY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
 ASSESSMENT ID: MPS-7300C
 NASA FMEA #: 2151-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7300
 ITEM: VALVE POWER AND CONTROL CIRCUITS FOR HELIUM
 INTERCONNECT OUTLET VALVES

LEAD ANALYST: EMMONS/MCNEELY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MPS-7300D
NASA FMEA #: 2150-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 7300
ITEM: VALVE POWER AND CONTROL CIRCUITS FOR HELIUM
INTERCONNECT OUTLET VALVES

LEAD ANALYST: EMMONS/MCNEELY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /3]	[NA]	[NA]	[NA]	[]
COMPARE	[/N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

ONLY AVAIL REF: MPS/EPDC FMEA REVIEW SUMMARY 8/17/87. THE
FAILURE WILL RESULT IN THE LOSS OF ONE ENGINE (LOSS OF MISSION)
IF ALL REDUNDANCY WERE LOST. NSTS 22206 2.3.3L REQUIRES
ASSIGNMENT OF 3/1R.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
 ASSESSMENT ID: MPS-7300E
 NASA FMEA #: 2150-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7300
 ITEM: VALVE POWER AND CONTROL CIRCUITS FOR HELIUM
 INTERCONNECT OUTLET VALVES

LEAD ANALYST: EMMONS/MCNEELY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /3]	[NA]	[NA]	[NA]	[]
COMPARE	[/N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 /3] [NA] [NA] [NA] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ONLY AVAIL REF: MPS/EPDC FMEA REVIEW SUMMARY 8-17-87. NO
 HAZARDOUS EFFECT ON CREW, VEHICLE, OR MISSION.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
 ASSESSMENT ID: MPS-7300F
 NASA FMEA #: 2151-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7300
 ITEM: VALVE POWER AND CONTROL CIRCUITS FOR HELIUM
 INTERCONNECT OUTLET VALVES

LEAD ANALYST: EMMONS/MCNEELY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /3]	[NA]	[NA]	[NA]	[]
COMPARE	[/N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ONLY AVAIL REF: MPS/EPDC FMEA REVIEW SUMMARY 8/17/87. THE
 FAILURE WILL RESULT IN THE LOSS OF ONE ENGINE (LOSS OF MISSION)
 IF ALL REDUNDANCY WERE LOST. NSTS 22206 2.3.3L REQUIRES
 ASSIGNMENT OF 3/1R.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MPS-7300G
NASA FMEA #: 2404-2

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 7300
ITEM: VALVE POWER AND CONTROL CIRCUITS FOR HELIUM
INTERCONNECT OUTLET VALVES

LEAD ANALYST: EMMONS/MCNEELY

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[3 / 1R] [P] [F] [P] [A]
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

IDENTICAL FAILURE SCENARIO AS NASA FMEA 2148-2, BUT NASA'S TWO FMEAs DISAGREE. THE FAILURE WILL RESULT IN THE LOSS OF ONE ENGINE (LOSS OF MISSION) IF ALL REDUNDANCY IS LOST. NSTS 22206 2.3.3L REQUIRES ASSIGNMENT OF 3/1R.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/02/88
 ASSESSMENT ID: MPS-7400
 NASA FMEA #: 2303-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7400
 ITEM: PNEUMATIC HELIUM SUPPLY ISOLATION VALVE POWER
 AND CONTROL CIRCUIT

LEAD ANALYST: W.J. MCNICOLL

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 2 SWITCH (OPEN) SCAN DIODES.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/02/88
 ASSESSMENT ID: MPS-7400A
 NASA FMEA #: 2304-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7400
 ITEM: PNEUMATIC HELIUM SUPPLY ISOLATION VALVE POWER
 AND CONTROL CIRCUIT

LEAD ANALYST: W.J. MCNICOLL

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 2 SWITCH (CLOSED) SCAN DIODES.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/02/88
ASSESSMENT ID: MPS-7400B
NASA FMEA #: 2304-2

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 7400
ITEM: PNEUMATIC HELIUM SUPPLY ISOLATION VALVE POWER
AND CONTROL CIRCUIT

LEAD ANALYST: W.J. MCNICOLL

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /3]	[NA]	[NA]	[NA]	[]
COMPARE	[/N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[3 /3]	[NA]	[NA]	[NA]	[D]
				(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 2 SWITCH (CLOSED) SCAN DIODES. THE FAILURE OF THE ITEMS WILL NOT AFFECT CREW, VEHICLE, OR MISSION.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/02/88
ASSESSMENT ID: MPS-7400C
NASA FMEA #: 2305-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 7400
ITEM: PNEUMATIC HELIUM SUPPLY ISOLATION VALVE POWER
AND CONTROL CIRCUIT

LEAD ANALYST: W.J. MCNICOLL

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /3]	[NA]	[NA]	[NA]	[]
COMPARE	[/N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[3 /3]	[NA]	[NA]	[NA]	[D]
				(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 2 MDM BLOCKING DIODES. THE FAILURE OF THE ITEMS WILL NOT AFFECT CREW, VEHICLE, OR MISSION.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/02/88
ASSESSMENT ID: MPS-7400D
NASA FMEA #: 2305-2

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 7400
ITEM: PNEUMATIC HELIUM SUPPLY ISOLATION VALVE POWER AND CONTROL CIRCUIT

LEAD ANALYST: W.J. MCNICOLL

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 2 MDM BLOCKING DIODES.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/02/88
ASSESSMENT ID: MPS-7400E
NASA FMEA #: 2306-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 7400
ITEM: PNEUMATIC HELIUM SUPPLY ISOLATION VALVE POWER
AND CONTROL CIRCUIT

LEAD ANALYST: W.J. MCNICOLL

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /3]	[NA]	[NA]	[NA]	[]
COMPARE	[/N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[3 /3]	[NA]	[NA]	[NA]	[]
				(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 2 SWITCH BLOCKING DIODES. FAILURE TO OPEN VALVES IS NON-CRITICAL TO A NOMINAL FLIGHT. THE CRITICALITY IS 2/1R FOR AN ABORT.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/02/88
ASSESSMENT ID: MPS-7400F
NASA FMEA #: 2306-2

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 7400
ITEM: PNEUMATIC HELIUM SUPPLY ISOLATION VALVE POWER
AND CONTROL CIRCUIT

LEAD ANALYST: W.J. MCNICOLL

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /3]	[NA]	[NA]	[NA]	[]
COMPARE	[/N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[3 /3] [NA] [NA] [NA] [D]
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 2 SWITCH BLOCKING DIODES. FAILURE TO OPEN VALVES IS NON-CRITICAL TO A NOMINAL FLIGHT. THE CRITICALITY IS 3/1R FOR AN ABORT.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/02/88
ASSESSMENT ID: MPS-7400G
NASA FMEA #: 2307-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 7400
ITEM: PNEUMATIC HELIUM SUPPLY ISOLATION VALVE POWER
AND CONTROL CIRCUIT

LEAD ANALYST: W.J. MCNICOLL

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[3 / 1R] [P] [F] [P] [A]
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 2 TRANSIENT SUPPRESSION DIODES. THE
CRITICALITY FOR A SHORT IS 3/1R.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/02/88
 ASSESSMENT ID: MPS-7400H
 NASA FMEA #: 2308-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7400
 ITEM: PNEUMATIC HELIUM SUPPLY ISOLATION VALVE POWER
 AND CONTROL CIRCUIT

LEAD ANALYST: W.J. MCNICOLL

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 ASSESSMENT IS FOR 4 MONITOR RESISTORS.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/02/88
 ASSESSMENT ID: MPS-7400I
 NASA FMEA #: 2414-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7400
 ITEM: PNEUMATIC HELIUM SUPPLY ISOLATION VALVE POWER
 AND CONTROL CIRCUIT

LEAD ANALYST: W.J. MCNICOLL

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 ASSESSMENT IS FOR 1 BLEED RESISTOR.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: MPS-7420
NASA FMEA #: 2134-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 7420
ITEM: PNEUMATIC HELIUM CROSSOVER SOLENOID VALVE POWER
AND CONTROL CIRCUIT

LEAD ANALYST: A.J. MARINO

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 2/03/88
 ASSESSMENT ID: MPS-7420A
 NASA FMEA #: 2134-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7420
 ITEM: PNEUMATIC HELIUM CROSSOVER SOLENOID VALVE POWER
 AND CONTROL CIRCUIT

LEAD ANALYST: A.J. MARINO

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
 ASSESSMENT ID: MPS-7420B
 NASA FMEA #: 2136-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7420
 ITEM: PNEUMATIC HELIUM CROSSOVER SOLENOID VALVE POWER
 AND CONTROL CIRCUIT

LEAD ANALYST: A.J. MARINO

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
 ASSESSMENT ID: MPS-7420C
 NASA FMEA #: 2137-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7420
 ITEM: PNEUMATIC HELIUM CROSSOVER SOLENOID VALVE POWER
 AND CONTROL CIRCUIT

LEAD ANALYST: A.J. MARINO

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: MPS-7420D
NASA FMEA #: 2138-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 7420
ITEM: PNEUMATIC HELIUM CROSSOVER SOLENOID VALVE POWER
AND CONTROL CIRCUIT

LEAD ANALYST: A.J. MARINO

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
 ASSESSMENT ID: MPS-7420E
 NASA FMEA #: 2139-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7420
 ITEM: PNEUMATIC HELIUM CROSSOVER SOLENOID VALVE POWER
 AND CONTROL CIRCUIT

LEAD ANALYST: A.J. MARINO

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: MPS-7430
NASA FMEA #: 2131-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 7430
ITEM: PNEUMATIC HELIUM CROSSOVER SOLENOID VALVE
CONTROL CIRCUIT SWITCH

LEAD ANALYST: W.J. MCNICOLL

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /3]	[P]	[P]	[P]	[]
COMPARE	[/N]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [NA] [P] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

THE SWITCH IS A STANDBY REDUNDANT ITEM.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
 ASSESSMENT ID: MPS-7430A
 NASA FMEA #: 2131-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7430
 ITEM: PNEUMATIC HELIUM CROSSOVER SOLENOID VALVE
 CONTROL CIRCUIT SWITCH

LEAD ANALYST: W.J. MCNICOLL

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /3]	[P]	[P]	[P]	[]
COMPARE	[/N]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [NA] [P] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ONLY AVAIL REF: MPS/EPDC FMEA REVIEW SUMMARY 8/17/87. THE
 SWITCH IS A STANDBY REDUNDANT ITEM.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: MPS-7440
NASA FMEA #: 2130-1

NASA DATA:
BASELINE []
NEW [x]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 7440
ITEM: PNEUMATIC HELIUM CROSSOVER SOLENOID VALVE
CONTROL CIRCUIT FUSE

LEAD ANALYST: W.J. MCNICOLL

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[NA]	[P]	[] *
IOA	[3 /3]	[P]	[P]	[P]	[]
COMPARE	[/N]	[]	[N]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

ONLY AVAIL REF: MPS/EPDC FMEA REVIEW SUMMARY 8-17-87.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: MPS-7450
NASA FMEA #:

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 7450
ITEM: PNEUMATIC HELIUM CROSSOVER SOLENOID VALVE
CONTROL CIRCUIT ISOLATION DIODES

LEAD ANALYST: W.J. MCNICOLL

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[NA]	[P]	[] *
IOA	[3 /3]	[P]	[P]	[P]	[]
COMPARE	[/N]	[]	[N]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[3 /2R] [P] [NA] [P] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

ONLY AVAIL REF: MPS/EPDC FMEA REVIEW SUMMARY 8-17-87. FAILURE OF THE BLOCKING DIODE FOR THE SWITCH WOULD NOT BE DETECTED.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: MPS-7460
NASA FMEA #: 2132-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 7460
ITEM: PNEUMATIC HELIUM CROSSOVER SOLENOID VALVE
CONTROL CIRCUIT HYBRID DRIVER CONTROLLER

LEAD ANALYST: W.J. MCNICOLL

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /3]	[P]	[P]	[P]	[]
COMPARE	[/N]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

ONLY AVAIL REF: MPS/EPDC FMEA REVIEW SUMMARY 8-17-87. THE
FAILURE WOULD PREVENT VALVE OPENING.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/02/88
ASSESSMENT ID: MPS-7470
NASA FMEA #: 2370-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 7470
ITEM: HELIUM SUPPLY BLOWDOWN VALVES POWER AND CONTROL
CIRCUIT

LEAD ANALYST: A.J. MARINO

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 2 TRANSIENT SUPPRESSION DIODES AND 2 MONITORING RESISTORS. CRITICALITY FOR THE TRANSIENT SUPPRESSION DIODES FOR A SHORT DURING AN ABORT IS 3/1R.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/02/88
 ASSESSMENT ID: MPS-7470A
 NASA FMEA #: 2371-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7470
 ITEM: HELIUM SUPPLY BLOWDOWN VALVES POWER AND CONTROL
 CIRCUIT

LEAD ANALYST: A.J. MARINO

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 2 TRANSIENT SUPPRESSION DIODES AND 2 MONITORING RESISTORS. CRITICALITY FOR THE TRANSIENT SUPPRESSION DIODES FOR A SHORT DURING AN ABORT IS 3/1R.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/02/88
ASSESSMENT ID: MPS-7480
NASA FMEA #: 2050-2

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 7480
ITEM: HELIUM SUPPLY BLOWDOWN VALVES CONTROL CIRCUIT
HYBRID DRIVER CONTROLLER

LEAD ANALYST: A.J. MARINO

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[P]	[P]	[X] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[N /]	[]	[]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

THE SECOND FAILURE WILL RESULT IN LOSS OF HELIUM AVAILABLE FOR
LO2 DUMP.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/02/88
 ASSESSMENT ID: MPS-7490
 NASA FMEA #: NA

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7490
 ITEM: HELIUM SUPPLY BLOWDOWN VALVES CONTROL CIRCUIT
 MDM COMMANDS

LEAD ANALYST: A.J. MARINO

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[N /N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[2 /1R] [P] [P] [P] [A]
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR MDMs FA3 AND FA4. THE SECOND FAILURE WILL
 RESULT IN LOSS OF HELIUM AVAILABLE FOR LO2 DUMP.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
 ASSESSMENT ID: MPS-7500
 NASA FMEA #: 2317-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7500
 ITEM: LO2 MANIFOLD REPRESS VALVES POWER AND CONTROL
 CIRCUIT

LEAD ANALYST: A.J. MARINO

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 6 DIODES AND 5 RESISTORS.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
 ASSESSMENT ID: MPS-7500A
 NASA FMEA #: 2314-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7500
 ITEM: LO2 MANIFOLD REPRESS VALVES POWER AND CONTROL
 CIRCUIT

LEAD ANALYST: A.J. MARINO

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 2 OPEN SWITCH SCAN DIODES.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
 ASSESSMENT ID: MPS-7500B
 NASA FMEA #: 2314-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7500
 ITEM: LO2 MANIFOLD REPRESS VALVES POWER AND CONTROL
 CIRCUIT

LEAD ANALYST: A.J. MARINO

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[F]	[P]	[] *
IOA	[3 /3]	[NA]	[NA]	[NA]	[]
COMPARE	[N /N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 2 OPEN SWITCH SCAN DIODES. THE FAILURE DOES
 ELIMINATE BLOCKING PROTECTION ALLOWING THE NASA SCENARIO TO
 OCCUR.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
 ASSESSMENT ID: MPS-7500C
 NASA FMEA #: 2316-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7500
 ITEM: LO2 MANIFOLD REPRESS VALVES POWER AND CONTROL
 CIRCUIT

LEAD ANALYST: A.J. MARINO

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 2 OPEN SWITCH BLOCKING DIODES.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MPS-7500D
NASA FMEA #: 2316-2

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 7500
ITEM: LO2 MANIFOLD REPRESS VALVES POWER AND CONTROL
CIRCUIT

LEAD ANALYST: A.J. MARINO

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /3]	[NA]	[NA]	[NA]	[]
COMPARE	[/N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 2 OPEN SWITCH BLOCKING DIODES. THE FAILURE DOES ELIMINATE BLOCKING REDUNDANCY ALLOWING THE NASA SCENARIO TO OCCUR.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
 ASSESSMENT ID: MPS-7500E
 NASA FMEA #: 2317-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7500
 ITEM: LO2 MANIFOLD REPRESS VALVES POWER AND CONTROL
 CIRCUIT

LEAD ANALYST: A.J. MARINO

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
 ASSESSMENT ID: MPS-7500F
 NASA FMEA #: 2315-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7500
 ITEM: LO2 MANIFOLD REPRESS VALVES POWER AND CONTROL
 CIRCUIT

LEAD ANALYST: A.J. MARINO

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
 ASSESSMENT ID: MPS-7500G
 NASA FMEA #: 2318-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7500
 ITEM: LO2 MANIFOLD REPRESS VALVES POWER AND CONTROL
 CIRCUIT

LEAD ANALYST: A.J. MARINO

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
 ASSESSMENT ID: MPS-7500H
 NASA FMEA #: 2324-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7500
 ITEM: LO2 MANIFOLD REPRESS VALVES POWER AND CONTROL
 CIRCUIT

LEAD ANALYST: A.J. MARINO

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
 ASSESSMENT ID: MPS-7500I
 NASA FMEA #: 2401-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7500
 ITEM: LO2 MANIFOLD REPRESS VALVES POWER AND CONTROL
 CIRCUIT

LEAD ANALYST: A.J. MARINO

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
 ASSESSMENT ID: MPS-7510
 NASA FMEA #: 2313-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7510
 ITEM: LO2 MANIFOLD REPRESS VALVES CONTROL CIRCUIT
 HYBRID DRIVER CONTROLLER

LEAD ANALYST: A.J. MARINO

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 1R]	[P]	[P]	[P]	[]
COMPARE	[/ N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

THE FAILURE WILL PREVENT REPRESSURIZATION FOR LANDING, BUT COULD NOT CAUSE LOSS OF LIFE/VEHICLE.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
 ASSESSMENT ID: MPS-7520
 NASA FMEA #: N/A

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7520
 ITEM: LO2 MANIFOLD REPRESS VALVES CONTROL CIRCUIT MDM
 COMMANDS

LEAD ANALYST: A.J. MARINO

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[N /N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [P] [P] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR MDM FA3 AND FA4. ASSESSMENT FOR FAILS ON
 RATHER THAN FAILS OFF.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MPS-7530
NASA FMEA #: 2312-1

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 7530
ITEM: LO2 MANIFOLD REPRESS VALVES CONTROL CIRCUIT SWITCH

LEAD ANALYST: A.J. MARINO

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /3]	[NA]	[NA]	[NA]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[/N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:
FAILURE WILL NOT PRECLUDE LO2 DUMP.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
 ASSESSMENT ID: MPS-7540
 NASA FMEA #: 2322-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7540
 ITEM: LH2 MANIFOLD REPRESS VALVES POWER AND CONTROL
 CIRCUIT

LEAD ANALYST: A.J. MARINO

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
 ASSESSMENT ID: MPS-7540A
 NASA FMEA #: 2319-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7540
 ITEM: LH2 MANIFOLD REPRESS VALVES POWER AND CONTROL
 CIRCUIT

LEAD ANALYST: A.J. MARINO

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
 ASSESSMENT ID: MPS-7540B
 NASA FMEA #: 2319-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7540
 ITEM: LH2 MANIFOLD REPRESS VALVES POWER AND CONTROL
 CIRCUIT

LEAD ANALYST: A.J. MARINO

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /3]	[NA]	[NA]	[NA]	[]
COMPARE	[N /N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [F] [P] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 2 OPEN SWITCH SCAN DIODES. ONLY AVAIL REF:
 MPS/EPDC FMEA REVIEW SUMMARY 8-17-87. A SECOND FAILURE WOULD NOT
 ALLOW HELIUM INGESTION INTO THE SSME's, BUT A THIRD FAILURE
 WOULD.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
 ASSESSMENT ID: MPS-7540C
 NASA FMEA #: 2321-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7540
 ITEM: LH2 MANIFOLD REPRESS VALVES POWER AND CONTROL
 CIRCUIT

LEAD ANALYST: A.J. MARINO

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:
 ASSESSMENT IS FOR 2 OPEN SWITCH BLOCKING DIODES.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
 ASSESSMENT ID: MPS-7540D
 NASA FMEA #: 2321-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7540
 ITEM: LH2 MANIFOLD REPRESS VALVES POWER AND CONTROL
 CIRCUIT

LEAD ANALYST: A.J. MARINO

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[F]	[P]	[X] *
IOA	[3 /3]	[NA]	[NA]	[NA]	[]
COMPARE	[/N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ASSESSMENT IS FOR 2 OPEN SWITCH BLOCKING DIODES. ONLY AVAIL REF:
 MPS/EPDC FMEA REVIEW SUMMARY 8-17-87. THE FAILURE WILL ERODE
 BLOCKING PROTECTION IN THE OPEN SOLENOID POWER MATH. A LOSS OF
 ALL REDUNDANCY COULD CAUSE HELIUM INGESTION INTO THE SSME'S.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
 ASSESSMENT ID: MPS-7540E
 NASA FMEA #: 2322-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7540
 ITEM: LH2 MANIFOLD REPRESS VALVES POWER AND CONTROL
 CIRCUIT

LEAD ANALYST: A.J. MARINO

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 2/04/88
 ASSESSMENT ID: MPS-7540F
 NASA FMEA #: 2320-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7540
 ITEM: LH2 MANIFOLD REPRESS VALVES POWER AND CONTROL
 CIRCUIT

LEAD ANALYST: A.J. MARINO

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
 ASSESSMENT ID: MPS-7540G
 NASA FMEA #: 2323-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7540
 ITEM: LH2 MANIFOLD REPRESS VALVES POWER AND CONTROL
 CIRCUIT

LEAD ANALYST: A.J. MARINO

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
 ASSESSMENT ID: MPS-7540H
 NASA FMEA #: 2325-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7540
 ITEM: LH2 MANIFOLD REPRESS VALVES POWER AND CONTROL
 CIRCUIT

LEAD ANALYST: A.J. MARINO

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /3]	[NA]	[NA]	[NA]	[] *
IOA	[3 /3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
 ASSESSMENT ID: MPS-7540I
 NASA FMEA #: 2402-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7540
 ITEM: LH2 MANIFOLD REPRESS VALVES POWER AND CONTROL
 CIRCUIT

LEAD ANALYST: A.J. MARINO

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 2/04/88
 ASSESSMENT ID: MPS-7550
 NASA FMEA #: 2065-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7550
 ITEM: LH2 MANIFOLD REPRESS VALVES CONTROL CIRCUIT
 HYBRID DRIVER CONTROLLER

LEAD ANALYST: A.J. MARINO

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[2 /1R]	[P]	[P]	[P]	[X] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[N /]	[]	[]	[]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

A SECOND FAILURE COULD CAUSE HELIUM INGESTION INTO THE SSME's DURING BURN.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MPS-7560
NASA FMEA #: N/A

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 7560
ITEM: LH2 MANIFOLD REPRESS VALVES CONTROL CIRCUIT MDM
COMMANDS

LEAD ANALYST: A.J. MARINO

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[N /N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [P] [P] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MPS-7570
NASA FMEA #: 2064-2

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 7570
ITEM: LH2 MANIFOLD REPRESS VALVES CONTROL CIRCUIT SWITCH

LEAD ANALYST: A.J. MARINO

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[1 /1]	[NA]	[NA]	[NA]	[X] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[N /N]	[N]	[N]	[N]	[N]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:
THE FIRST FAILURE WILL OPEN BOTH SOLENOIDS CAUSING HELIUM INGESTION INTO THE SSME's.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/01/88
 ASSESSMENT ID: MPS-7580
 NASA FMEA #: 2019-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7580
 ITEM: LH2 FEED MANIFOLD RTLS PRESS VALVES POWER AND
 CONTROL CIRCUIT

LEAD ANALYST: A.J. MARINO

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/01/88
 ASSESSMENT ID: MPS-7580A
 NASA FMEA #: 2019-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7580
 ITEM: LH2 FEED MANIFOLD RTLS PRESS VALVES POWER AND CONTROL CIRCUIT

LEAD ANALYST: A.J. MARINO

ASSESSMENT:

	CRITICALITY		REDUNDANCY SCREENS			CIL ITEM
	FLIGHT	HDW/FUNC	A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/01/88
 ASSESSMENT ID: MPS-7580B
 NASA FMEA #: 2020-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7580
 ITEM: LH2 FEED MANIFOLD RTLS PRESS VALVES POWER AND
 CONTROL CIRCUIT

LEAD ANALYST: A.J. MARINO

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/01/88
 ASSESSMENT ID: MPS-7580C
 NASA FMEA #: 2021-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7580
 ITEM: LH2 FEED MANIFOLD RTLS PRESS VALVES POWER AND CONTROL CIRCUIT

LEAD ANALYST: A.J. MARINO

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/01/88
 ASSESSMENT ID: MPS-7580D
 NASA FMEA #: 2022-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7580
 ITEM: LH2 FEED MANIFOLD RTLS PRESS VALVES POWER AND
 CONTROL CIRCUIT

LEAD ANALYST: A.J. MARINO

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

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 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/01/88
 ASSESSMENT ID: MPS-7580E
 NASA FMEA #: 2049-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7580
 ITEM: LH2 FEED MANIFOLD RTLS PRESS VALVES POWER AND
 CONTROL CIRCUIT

LEAD ANALYST: A.J. MARINO

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

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 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/01/88
 ASSESSMENT ID: MPS-7580F
 NASA FMEA #: 2382-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7580
 ITEM: LH2 FEED MANIFOLD RTLS PRESS VALVES POWER AND
 CONTROL CIRCUIT

LEAD ANALYST: A.J. MARINO

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

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 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 2/01/88
 ASSESSMENT ID: MPS-7580G
 NASA FMEA #: 2382-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7580
 ITEM: LH2 FEED MANIFOLD RTLS PRESS VALVES POWER AND CONTROL CIRCUIT

LEAD ANALYST: A.J. MARINO

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

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 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/01/88
 ASSESSMENT ID: MPS-7580H
 NASA FMEA #: 2383-1

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7580
 ITEM: LH2 FEED MANIFOLD RTLS PRESS VALVES POWER AND
 CONTROL CIRCUIT

LEAD ANALYST: A.J. MARINO

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/01/88
ASSESSMENT ID: MPS-7580I
NASA FMEA #: 2383-2

NASA DATA:
BASELINE []
NEW [X]

SUBSYSTEM: EPD&C/MPS
MDAC ID: 7580
ITEM: LH2 FEED MANIFOLD RTLS PRESS VALVES POWER AND CONTROL CIRCUIT

LEAD ANALYST: A.J. MARINO

ASSESSMENT:

	CRITICALITY	REDUNDANCY SCREENS			CIL ITEM
	FLIGHT HDW/FUNC	A	B	C	
NASA	[3 / 3]	[NA]	[NA]	[NA]	[] *
IOA	[3 / 3]	[NA]	[NA]	[NA]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
INADEQUATE []

REMARKS:

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 2/01/88
 ASSESSMENT ID: MPS-7590
 NASA FMEA #: 2018-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7590
 ITEM: LH2 FEED MANIFOLD RTLS PRESS VALVES REMOTE POWER
 CONTROLLER

LEAD ANALYST: A.J. MARINO

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] [] (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ONLY AVAIL REF: MPS/EPDC FMEA REVIEW SUMMARY 8-17-87.

**APPENDIX C
ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 2/01/88
 ASSESSMENT ID: MPS-7600
 NASA FMEA #: 2048-2

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7600
 ITEM: LH2 FEED MANIFOLD RTLS PRESS VALVES HYBRID
 DRIVER CONTROLLER

LEAD ANALYST: A.J. MARINO

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[3 /1R]	[P]	[P]	[P]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[/]	[]	[]	[]	[]

RECOMMENDATIONS: (If different from NASA)

[/] [] [] [] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:

ONLY AVAIL REF: MPS/EPDC FMEA REVIEW SUMMARY 8-17-87.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/01/88
 ASSESSMENT ID: MPS-7610
 NASA FMEA #: NA

NASA DATA:
 BASELINE []
 NEW [X]

SUBSYSTEM: EPD&C/MPS
 MDAC ID: 7610
 ITEM: LH2 FEED MANIFOLD RTLS PRESS VALVES MDM COMMANDS

LEAD ANALYST: A.J. MARINO

ASSESSMENT:

	CRITICALITY FLIGHT HDW/FUNC	REDUNDANCY SCREENS			CIL ITEM
		A	B	C	
NASA	[/]	[]	[]	[]	[] *
IOA	[3 /1R]	[P]	[P]	[P]	[]
COMPARE	[N /N]	[N]	[N]	[N]	[]

RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [P] [P] []
 (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE []
 INADEQUATE []

REMARKS:



APPENDIX D

CRITICAL ITEMS

APPENDIX D
POTENTIAL CRITICAL ITEMS

NASA FMEA	MDAC-ID	ITEM	FAILURE MODE
	6157	ISOLATION DIODES, 12A	FAIL OPEN
	7270	MDM, FLIGHT AFT 1,2,3	FAILS OPEN, ERRON
0110-1	4630	PNEUMATIC HE PRESSURE	STRUCTURAL FAILUR
0111-1	908	ENGINE HELIUM SUPPLY	RUPTURE/LEAKAGE
0113-1	4630	PNEUMATIC HE PRESSURE	STRUCTURAL FAILUR
0114-1	4630	PNEUMATIC HE PRESSURE	STRUCTURAL FAILUR
0115-1	910	HELIUM INTERCONNECT I	RUPTURE/LEAKAGE
0116-1	911	HELIUM INTERCONNECT O	RUPTURE/LEAKAGE
0119-1	4640	PNEUMATIC HE PRESS VA	STRUCTURAL FAILUR
0122-1	4640	PNEUMATIC HE PRESS VA	STRUCTURAL FAILUR
0143-1	4630	PNEUMATIC HE PRESSURE	STRUCTURAL FAILUR
0144-1	4630	PNEUMATIC HE PRESSURE	STRUCTURAL FAILUR
0145-1	4610	PNEU HE SUPPLY FILTER	RESTRICTED FLOW
0145-2	905	PNEUMATIC HELIUM SUPP	RUPTURE/LEAKAGE
0190-1	4630	PNEUMATIC HE PRESSURE	STRUCTURAL FAILUR
0190-1	4640	PNEUMATIC HE PRESS VA	STRUCTURAL FAILUR
0191-1	4640	PNEUMATIC HE PRESS VA	STRUCTURAL FAILUR
0192-1	4640	PNEUMATIC HE PRESS VA	STRUCTURAL FAILUR
0193-1	4640	PNEUMATIC HE PRESS VA	STRUCTURAL FAILUR
0194-1	4640	PNEUMATIC HE PRESS VA	STRUCTURAL FAILUR
0194-1	4640	PNEUMATIC HE PRESS VA	STRUCTURAL FAILUR
0201-2	3020	HELIUM SUPPLY DISCONN	FAILS TO CLOSE, O
0201-3	3021	HELIUM SUPPLY DISCONN	EXTERNAL LEAKAGE
0201-4	3021	HELIUM SUPPLY DISCONN	EXTERNAL LEAKAGE
0202-1	3010	ENGINE HELIUM SUPPLY	FAILS TO CLOSE, O
0202-3	366	ENGINE HELIUM SUPPLY	RUPTURE/LEAKAGE
0202-3	375	PNEUMATIC HELIUM SUPP	RUPTURE/LEAKAGE
0203-1	3050	4.7 CU. FT. HELIUM SU	RAPID LEAK
0203-2	3050	4.7 CU. FT. HELIUM SU	RAPID LEAK
0204-4	3092	ENGINE HELIUM SUPPLY	EXTERNAL LEAKAGE
0204-5	3092	ENGINE HELIUM SUPPLY	EXTERNAL LEAKAGE
0205-2	3111	ENGINE HELIUM PRESSUR	FAILS OUT OF TOLE
0205-4	3112	ENGINE HELIUM PRESSUR	EXTERNAL LEAKAGE
0206-1	3120	ENGINE HE RELIEF VALV	FAILS TO CLOSE (R
0206-1	3121	ENGINE HE RELIEF VALV	INTERNAL LEAKAGE
0206-2	3122	ENGINE HE RELIEF VALV	FAILS TO OPEN
0206-3	3120	ENGINE HE RELIEF VALV	FAILS TO CLOSE (R
0206-4	3123	ENGINE HE RELIEF VALV	EXTERNAL LEAKAGE
0207-3	371	ENGINE REGULATOR OUTL	RUPTURE/LEAKAGE
0208-1	4140	PNEU HE CROSSOVER SOL	FAILS TO OPEN, EX
0208-3	4140	PNEU HE CROSSOVER SOL	FAILS TO OPEN, EX
0209-1	4030	PNEU VALVE HE ISOLATI	FAILS TO OPEN, EX
0209-3	4030	PNEU VALVE HE ISOLATI	FAILS TO OPEN, EX
0210-2	4580	LH2 PREVALVE PNEU ACC	EXTERNAL LEAKAGE,
0210-2	4590	LH2 PREVALVE PNEU ACC	EXTERNAL LEAKAGE,
0215-2	4322	LH2 RECIRC DISCONNECT	FAILS TO CLOSE, F
0215-4	391	LH2 RECIRCULATION DIS	PREMATURE ACTUATI
0215-5	4321	LH2 RECIRC DISCONNECT	FAILS TO REMAIN O
0216-1	4330	LH2 RECIRC DISCONNECT	FAILS TO OPEN, EX

APPENDIX D
POTENTIAL CRITICAL ITEMS

NASA FMEA	MDAC-ID	ITEM	FAILURE MODE
0216-4	4332	LH2 RECIRC DISCONNECT	FAILS TO CLOSE, F
0216-5	4331	LH2 RECIRC DISCONNECT	FAILS TO REMAIN O
0217-2	4302	LH2 FEED DISCONNECT V	FAILS TO CLOSE, F
0217-4	4301	LH2 FEED DISCONNECT V	FAILS TO REMAIN O
0217-5	4302	LH2 FEED DISCONNECT V	FAILS TO CLOSE, F
0218-1	4310	LH2 FEED DISCONNECT V	FAILS TO OPEN
0218-4	4312	LH2 FEED DISCONNECT V	FAILS TO CLOSE, F
0218-5	4311	LH2 FEED DISCONNECT V	FAILS TO REMAIN O
0219-2	4282	LO2 FEED DISCONNECT V	FAILS TO CLOSE, F
0219-4	4281	LO2 FEED DISCONNECT V	FAILS TO REMAIN O
0219-5	4282	LO2 FEED DISCONNECT V	FAILS TO CLOSE, F
0220-1	4290	LO2 FEED DISCONNECT V	FAILS TO OPEN
0220-4	4292	LO2 FEED DISCONNECT V	FAILS TO CLOSE, F
0220-5	4291	LO2 FEED DISCONNECT V	FAILS TO REMAIN O
0221-1	4200	LO2 OUTBOARD FILL VAL	FAILS TO OPEN
0221-2	4202	LO2 OUTBOARD FILL VAL	FAILS TO CLOSE, F
0221-4	4201	LO2 OUTBOARD FILL VAL	FAILS TO REMAIN O
0221-5	4202	LO2 OUTBOARD FILL VAL	FAILS TO CLOSE, F
0222-1	4210	LO2 OUTBOARD FILL VAL	FAILS TO OPEN
0222-4	4212	LO2 OUTBOARD FILL VAL	FAILS TO CLOSE, F
0222-5	4211	LO2 OUTBOARD FILL VAL	FAILS TO REMAIN O
0223-4	4222	LO2 INBOARD FILL VALV	FAILS TO CLOSE, F
0223-5	4221	LO2 INBOARD FILL VALV	FAILS TO REMAIN O
0224-4	4224	LO2 INBOARD FILL VALV	FAILS TO REMAIN O
0224-5	4225	LO2 INBOARD FILL VALV	FAILS TO CLOSE, F
0225-2	4152	LO2 PREVALVE OPENING	FAILS TO CLOSE, F
0225-2	4412	LO2 PREVALVE REDUNDAN	FAILS TO CLOSE, F
0225-4	4151	LO2 PREVALVE OPENING	FAILS TO REMAIN O
0225-4	4411	LO2 PREVALVE REDUNDAN	FAILS TO REMAIN O
0225-5	4152	LO2 PREVALVE OPENING	FAILS TO CLOSE, F
0225-5	4412	LO2 PREVALVE REDUNDAN	FAILS TO CLOSE, F
0226-1	4160	LO2 PREVALVE OPENING	FAILS TO OPEN, EX
0226-1	4400	LO2 PREVALVE REDUNDAN	FAILS TO OPEN, EX
0226-4	4162	LO2 PREVALVE CLOSING	FAILS TO CLOSE, F
0226-4	4402	LO2 PREVALVE REDUNDAN	FAILS TO CLOSE, F
0226-5	4161	LO2 PREVALVE CLOSING	FAILS TO REMAIN O
0226-5	4401	LO2 PREVALVE REDUNDAN	FAILS TO REMAIN O
0227-1	4164	LH2 PREVALVE OPENING	FAILS TO OPEN
0227-4	4165	LH2 PREVALVE OPENING	FAILS TO REMAIN O
0228-2	4169	LH2 PREVALVE CLOSING	FAILS TO CLOSE, F
0228-4	4169	LH2 PREVALVE CLOSING	FAILS TO CLOSE, F
0230-1	4250	LH2 REPLENISH VALVE O	FAILS TO OPEN
0230-4	4252	LH2 REPLENISH VALVE O	FAILS TO CLOSE, F
0230-5	4251	LH2 REPLENISH VALVE O	FAILS TO REMAIN O
0231-4	4171	LO2 FEEDLINE RELIEF S	FAILS TO REMAIN O
0232-2	4182	LH2 FEEDLINE RELIEF S	FAILS TO CLOSE, F
0232-4	4181	LH2 FEEDLINE RELIEF S	FAILS TO REMAIN O
0232-5	4182	LH2 FEEDLINE RELIEF S	FAILS TO CLOSE, F
0233-3	4190	HE SUPPLY BLOWDOWN VA	FAILS TO OPEN, EX

APPENDIX D
POTENTIAL CRITICAL ITEMS

NASA FMEA	MDAC-ID	ITEM	FAILURE MODE
0233-4	4192	HE SUPPLY BLOWDOWN VA	FAILS TO CLOSE, F
0233-5	4190	HE SUPPLY BLOWDOWN VA	FAILS TO OPEN, EX
0234-1	4620	PNEUMATIC HE FILL LIN	STRUCTURAL FAILUR
0235-1	909	ENGINE HELIUM SUPPLY	RUPTURE/LEAKAGE
0236-1	4630	PNEUMATIC HE PRESSURE	STRUCTURAL FAILUR
0236-1	4630	PNEUMATIC HE PRESS VA	STRUCTURAL FAILUR
0237-2	4570	PNEU VALVE HE SUPPLY	EXTERNAL LEAKAGE,
0238-2	4130	PNEU VALVE HE SUPPLY-	FAILS TO OPEN
0238-2	4131	PNEU VALVE HE SUPPLY-	FAILS TO REMAIN O
0238-4	385	PNEUMATIC HELIUM SUPP	RUPTURE/LEAKAGE
0239-1	4530	PNEU VALVE HE SUPPLY	RESTRICTED FLOW,
0239-2	4531	PNEU VALVE HE SUPPLY	FAILS TO CLOSE, F
0239-3	4530	PNEU VALVE HE SUPPLY	RESTRICTED FLOW,
0241-1	4021	PNEU VALVE HE ISOLATI	FAILS TO OPEN, EX
0241-3	4021	PNEU VALVE HE ISOLATI	FAILS TO OPEN, EX
0242-1	3080	ENGINE HELIUM SUPPLY	RESTRICTED FLOW,
0242-2	3081	ENGINE HELIUM SUPPLY	EXTERNAL LEAKAGE
0243-1	4380	LO2 POGO ACCUM RECIRC	FAILS TO OPEN
0243-4	4382	LO2 POGO ACCUM RECIRC	FAILS TO CLOSE, F
0243-5	4381	LO2 POGO ACCUM RECIRC	FAILS TO REMAIN O
0244-1	4370	LO2 OVERBOARD BLEED V	FAILS TO OPEN, EX
0244-2	4372	LO2 OVERBOARD BLEED V	FAILS TO CLOSE, F
0244-4	4371	LO2 OVERBOARD BLEED V	FAILS TO REMAIN O
0244-5	4372	LO2 OVERBOARD BLEED V	FAILS TO CLOSE, F
0245-2	4342	LH2 FEED RTLS INBOARD	FAILS TO CLOSE, F
0245-2	4352	LH2 FEED RTLS OUTBOAR	FAILS TO CLOSE, F
0245-3	4342	LH2 FEED RTLS INBOARD	FAILS TO CLOSE, F
0245-3	4352	LH2 FEED RTLS OUTBOAR	FAILS TO CLOSE, F
0246-1	4360	LH2 FEED MANIFOLD RTL	FAILS TO OPEN
0246-2	4362	LH2 FEED MANIFOLD RTL	FAILS TO CLOSE, F
0246-3	399	LH2 FEED MANIFOLD RTL	RUPTURE, LEAKAGE
0247-1	4600	LH2 FEED MANIF RTLS R	RESTRICTED FLOW
0247-2	904	LH2 FEED MANIFOLD RTL	RUPTURE/LEAKAGE
0248-1	4121	LH2 FEED MANIF RTLS R	FAILS TO OPEN
0248-3	384	LH2 FEED MANIFOLD RTL	RUPTURE/LEAKAGE
0250-2	4392	LH2 HI POINT BLEED VA	FAILS TO CLOSE, F
0250-4	4392	LH2 HI POINT BLEED VA	FAILS TO CLOSE, F
0251-1	903	PNEUMATIC HELIUM SUPP	FAILS TO REMAIN C
0251-2	4560	PNEU VALVE HE SUPPLY	FAILS TO OPEN
0251-4	4561	PNEU VALVE HE SUPPLY	FAILS TO CLOSE, E
0252-1	4620	PNEUMATIC HE FILL LIN	STRUCTURAL FAILUR
0253-1	906	ENGINE HELIUM LINE (C	RUPTURE/LEAKAGE
0254-1	907	ENGINE HELIUM SUPPLY	RUPTURE/LEAKAGE
0255-1	4630	PNEUMATIC HE PRESSURE	STRUCTURAL FAILUR
0256-1	3040	17.3 CU. FT. HELIUM S	RAPID LEAK
0257-1	3050	4.7 CU. FT. HELIUM SU	RAPID LEAK
0258-1	3071	ENGINE HELIUM SUPPLY	FAILS TO OPEN, OR
0258-4	369	ENGINE HELIUM SUPPLY	RUPTURE/LEAKAGE
0259-3	374	ENGINE HELIUM INTERCO	RUPTURE/LEAKAGE

APPENDIX D
POTENTIAL CRITICAL ITEMS

NASA FMEA	MDAC-ID	ITEM	FAILURE MODE
0260-1	3150	ENGINE HELIUM SUPPLY	FAILS TO OPEN OR
0260-2	3151	ENGINE HELIUM SUPPLY	FAILS TO CLOSE: G
0260-3	3152	ENGINE HELIUM SUPPLY	EXTERNAL LEAKAGE
0260-4	3152	ENGINE HELIUM SUPPLY	EXTERNAL LEAKAGE
0261-3	373	ENGINE HELIUM INTERCO	RUPTURE/LEAKAGE
0262-3	3162	ENGINE HELIUM SUPPLY	EXTERNAL LEAKAGE
0262-4	3162	ENGINE HELIUM SUPPLY	EXTERNAL LEAKAGE
0262-6	3162	ENGINE HELIUM SUPPLY	EXTERNAL LEAKAGE
0263-2	393	LATCH LOCKING SOLENOI	PREMATURE DEACTUA
0263-3	394	LATCH HOOK	FAIL TO DEACTUATE
0263-4	395	LATCH LOCK SOLENOID (	PREMATURE DEACTUA
0264-1	396	LATCH UNLOCK SOLENOID	FAIL TO ACTUATE
0264-2	397	LATCH UNLOCK SOLENOID	PREMATURE DEACTUA
0264-4	398	LATCH UNLOCK SOLENOID	PREMATURE ACTUATI
0270-1	4226	LH2 OUTBOARD FILL VAL	FAILS TO OPEN
0270-2	4228	LH2 OUTBOARD FILL VAL	FAILS TO CLOSE, F
0270-4	4227	LH2 OUTBOARD FILL VAL	FAILS TO REMAIN O
0270-5	4228	LH2 OUTBOARD FILL VAL	FAILS TO CLOSE, F
0271-1	4229	LH2 OUTBOARD FILL VAL	FAILS TO OPEN
0271-2	4231	LH2 OUTBOARD FILL VAL	FAILS TO CLOSE, F
0271-4	4230	LH2 OUTBOARD FILL VAL	FAILS TO REMAIN O
0271-5	4231	LH2 OUTBOARD FILL VAL	FAILS TO CLOSE, F
0272-4	4233	LH2 INBOARD FILL VALV	FAILS TO REMAIN O
0272-5	4234	LH2 INBOARD FILL VALV	FAILS TO CLOSE, F
0273-4	4236	LH2 INBOARD FILL VALV	FAILS TO REMAIN O
0273-5	4237	LH2 INBOARD FILL VALV	FAILS TO CLOSE, F
0290-1	386	VALVE ACTUATION SOLEN	EXTERNAL LEAKAGE
0290-1	4160	LO2 PREVALVE OPENING	FAILS TO OPEN, EX
0290-1	4167	LH2 PREVALVE CLOSING	FAILS TO OPEN, EX
0290-1	4170	LO2 FEEDLINE RELIEF S	FAILS TO OPEN, EX
0290-1	4180	LH2 FEEDLINE RELIEF S	FAILS TO OPEN, EX
0290-1	4281	LO2 FEED DISCONNECT V	FAILS TO REMAIN O
0290-1	4301	LH2 FEED DISCONNECT V	FAILS TO REMAIN O
0290-1	4330	LH2 RECIRC DISCONNECT	FAILS TO OPEN, EX
0290-1	4340	LH2 FEED RTLS INBOARD	FAILS TO OPEN, EX
0290-1	4350	LH2 FEED RTLS OUTBOAR	FAILS TO OPEN, EX
0290-1	4370	LO2 OVERBOARD BLEED V	FAILS TO OPEN, EX
0290-1	4400	LO2 PREVALVE REDUNDAN	FAILS TO OPEN, EX
0290-2	387	VALVE ACTUATION SOLEN	RUPTURE, LEAKAGE
0290-2	4160	LO2 PREVALVE CLOSING	FAILS TO OPEN, EX
0290-2	4167	LH2 PREVALVE CLOSING	FAILS TO OPEN, EX
0290-2	4170	LO2 FEEDLINE RELIEF S	FAILS TO OPEN, EX
0290-2	4180	LH2 FEEDLINE RELIEF S	FAILS TO OPEN, EX
0290-2	4281	LO2 FEED DISCONNECT V	FAILS TO REMAIN O
0290-2	4301	LH2 FEED DISCONNECT V	FAILS TO REMAIN O
0290-2	4330	LH2 RECIRC DISCONNECT	FAILS TO OPEN, EX
0290-2	4340	LH2 FEED RTLS INBOARD	FAILS TO OPEN, EX
0290-2	4350	LH2 FEED RTLS OUTBOAR	FAILS TO OPEN, EX
0290-2	4370	LO2 OVERBOARD BLEED V	FAILS TO OPEN, EX

APPENDIX D
POTENTIAL CRITICAL ITEMS

NASA FMEA	MDAC-ID	ITEM	FAILURE MODE
0290-2	4400	LO2 PREVALVE REDUNDAN	FAILS TO OPEN, EX
0291-1	388	VALVE ACTUATION SOLEN	EXTERNAL LEAKAGE
0291-1	4236	LH2 INBOARD FILL VALV	FAILS TO REMAIN O
0291-2	389	VALVE ACTUATION SOLEN	RUPTURE/LEAKAGE T
0291-2	4236	LH2 INBOARD FILL VALV	FAILS TO REMAIN O
0301-10	2007	LH2 INBOARD FILL AND	EXTERNAL LEAKAGE
0301-11	282	LH2 INBOARD FILL AND	RUPTURE/LEAKAGE O
0301-4	2002	LH2 INBOARD FILL AND	FAIL TO REMAIN CL
0301-5	2005	LH2 INBOARD FILL AND	FAIL TO RELIEVE
0301-7	2001	LH2 INBOARD FILL AND	FAIL TO REMAIN OP
0301-9	281	LH2 INBOARD FILL AND	RELIEF VALVE FAIL
0302-10	286	LH2 OUTBOARD FILL & D	RUPTURE/LEAKAGE O
0302-2	2014	LH2 OUTBOARD FILL AND	FAIL TO CLOSE
0302-4	2012	LH2 OUTBOARD FILL AND	FAIL TO REMAIN CL
0302-5	2013	LH2 OUTBOARD FILL AND	FAIL TO OPEN
0302-6	2011	LH2 OUTBOARD FILL AND	FAIL TO REMAIN OP
0302-8	285	LH2 OUTBOARD FILL AND	RELIEF VALVE FAIL
0302-9	2016	LH2 OUTBOARD FILL AND	EXTERNAL LEAKAGE
0303-1	1072	LO2 GROUND FILL & DRA	EXTERNAL LEAKAGE
0303-1	2031	LH2 GROUND FILL AND D	EXTERNAL LEAKAGE
0303-2	218	LO2 FILL AND DRAIN DI	FAIL TO REMAIN OP
0303-2	288	LH2 FILL & DRAIN DISC	FAILS TO REMAIN O
0303-6	1073	LO2 GROUND FILL & DRA	EXTERNAL LEAKAGE
0303-6	2031	LH2 GROUND FILL AND D	EXTERNAL LEAKAGE
0304-1	2051	LH2 REPLENISH VALVE (	FAIL TO OPEN
0304-1	2053	LH2 REPLENISH VALVE (	FAIL TO REMAIN OP
0304-11	296	LH2 REPLENISH VALVE (	RUPTURE/LEAKAGE O
0304-4	2054	LH2 REPLENISH VALVE (	FAIL TO REMAIN CL
0304-7	2055	LH2 REPLENISH VALVE (	EXTERNAL LEAKAGE
0306-1	1252	LO2 FILL & DRAIN LINE	RUPTURE
0306-1	1253	LO2 FILL & DRAIN LINE	EXTERNAL LEAKAGE
0307-2	1253	LO2 FILL & DRAIN LINE	EXTERNAL LEAKAGE
0308-2	2021	LH2 FILL AND DRAIN LI	RUPTURE
0309-2	2111	LH2 PRESTART CONDITIO	RUPTURE
0309-2	2112	LH2 PRESTART CONDITIO	EXTERNAL LEAKAGE
0309-2	2141	LH2 PRESTART CONDITIO	RUPTURE
0309-2	2151	LH2 PRESTART CONDITIO	RUPTURE
0310-10	1152	LO2 INBOARD FILL AND	EXTERIOR LEAKAGE
0310-10	1157	LO2 INBOARD FILL AND	EXTERNAL LEAKAGE
0310-11	236	LO2 INBOARD FILL AND	RUPTURE/LEAKAGE O
0310-4	1155	LO2 INBOARD FILL AND	FAILS TO REMAIN C
0310-5	233	LO2 INBOARD FILL AND	FAILS TO RELIEVE
0310-6	1151	LO2 INBOARD FILL AND	FAILS TO OPEN, FA
0310-7	1154	LO2 INBOARD FILL AND	FAILS TO OPEN, FA
0310-8	234	LO2 INBOARD FILL AND	RELIEF VALVE FAIL
0311-10	231	LO2 OUTBOARD FILL AND	RUPTURE/LEAKAGE O
0311-2	1133	LO2 OUTBOARD FILL AND	FAILS TO CLOSE, F
0311-4	1134	LO2 OUTBOARD FILL AND	FAILS TO REMAIN C
0311-4	1137	LO2 OUTBOARD FILL AND	FAILS TO CLOSE, F

APPENDIX D
POTENTIAL CRITICAL ITEMS

NASA FMEA	MDAC-ID	ITEM	FAILURE MODE
0311-5	1131	LO2 OUTBOARD FILL AND	FAILS TO OPEN, FA
0311-6	1136	LO2 OUTBOARD FILL AND	FAILS TO OPEN, FA
0311-7	229	LO2 OUTBOARD FILL AND	RELIEF VALVE FAIL
0311-9	1132	LO2 OUTBOARD FILL AND	EXTERNAL LEAKAGE
0311-9	1135	LO2 OUTBOARD FILL AND	EXTERIOR LEAKAGE
0401-10	223	LO2 PREVALVE (PV1, 2,	RUPTURE/LEAKAGE O
0401-3	1102	LO2 PREVALVE (PV1, 2,	FAILS TO REMAIN O
0401-3	1107	LO2 PREVALVE (PV1, 2,	FAILS TO REMAIN O
0401-4	1106	LO2 PREVALVE (PV1, 2,	FAILS TO CLOSE, F
0401-4	1108	LO2 PREVALVE (PV1, 2,	FAILS TO CLOSE, F
0401-5	1105	LO2 PREVALVE (PV1, 2,	FAILS TO OPEN, FA
0401-9	1103	LO2 PREVALVE (PV1, 2,	EXTERNAL LEAKAGE
0402-10	2273	LH2 PREVALVE (PV4, PV5	EXTERNAL LEAKAGE
0402-11	325	LH2 PREVALVE (PV4, 5,	RUPTURE/LEAKAGE O
0402-3	2271	LH2 PREVALVE (PV4, PV5	FAIL TO OPEN, FAI
0402-5	2271	LH2 PREVALVE (PV4, PV5	FAIL TO OPEN, FAI
0402-7	324	LH2 PREVALVE (PV4, 5,	ERRONEOUS INDICAT
0402-8	2274	LH2 PREVALVE (PV4, PV5	FAIL TO RELIEVE
0403-2	2102	LH2 RECIRCULATION PUM	FAIL TO CLOSE, FA
0403-4	313	LH2 RECIRCULATION PUM	NOT IDENTIFIED
0403-6	2103	LH2 RECIRCULATION PUM	EXTERNAL LEAKAGE
0403-7	314	LH2 RECIRCULATION PUM	RUPTURE/LEAKAGE O
0404-2	2177	LH2 RECIRCULATION PUM	EXTERNAL LEAKAGE
0405-10	2094	LH2 RECIRCULATION DIS	EXTERNAL LEAKAGE
0405-2	2092	LH2 RECIRCULATION DIS	FAIL TO REMAIN OP
0405-3	2094	LH2 RECIRCULATION DIS	EXTERNAL LEAKAGE
0405-6	2093	LH2 RECIRCULATION DIS	FAIL TO CLOSE, FA
0405-7	308	LH2 RECIRCULATION DIS	ERRONEOUS INDICAT
0405-9	310	LH2 RECIRCULATION DIS	CAVITY FAILS TO R
0406-1	1082	LO2 OVERBOARD BLEED (	EXTERNAL LEAKAGE
0406-2	1084	LO2 OVERBOARD BLEED (	FAILS TO CLOSE, F
0406-2	1085	LO2 OVERBOARD BLEED (	FAILS TO CLOSE, F
0406-3	1081	LO2 OVERBOARD BLEED (	FAILS TO OPEN, FA
0406-5	1083	LO2 OVERBOARD BLEED (	EXTERNAL LEAKAGE
0407-10	321	LH2 FEED DISCONNECT V	ERRONEOUS INDICAT
0407-11	2263	LH2 FEED DISCONNECT V	EXTERNAL LEAKAGE
0407-12	322	LH2 FEED DISCONNECT V	RUPTURE/LEAKAGE O
0407-2	2261	LH2 FEED DISCONNECT V	FAIL TO OPEN, FAI
0407-4	2263	LH2 FEED DISCONNECT V	EXTERNAL LEAKAGE
0407-5	319	LH2 FEED DISCONNECT V	LOSS OF POSITION
0407-6	2262	LH2 FEED DISCONNECT V	FAIL TO CLOSE, FA
0407-7	2262	LH2 FEED DISCONNECT V	FAIL TO CLOSE, FA
0407-9	320	LH2 FEED DISCONNECT V	FAIL TO RELIEVE
0408-11	1042	LO2 FEED (ORB/ET) DIS	EXTERNAL LEAKAGE
0408-12	208	LO2 FEED DISCONNECT (	RUPTURE/LEAKAGE O
0408-2	1041	LO2 FEED (ORB/ET) DIS	FAILS TO OPEN, FA
0408-2	1043	LO2 FEED (ORB/ET) DIS	FAILS TO REMAIN O
0408-4	1042	LO2 FEED (ORB/ET) DIS	EXTERNAL LEAKAGE
0408-4	1045	LO2 FEED (ORB/ET) DIS	EXTERNAL LEAKAGE

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POTENTIAL CRITICAL ITEMS

NASA FMEA	MDAC-ID	ITEM	FAILURE MODE
0408-5	205	LO2 FEED (ORB/ET) DIS	LOSS OF POSITION
0408-6	1046	LO2 FEED (ORB/ET) DIS	FAILS TO CLOSE, F
0408-7	1044	LO2 FEED (ORB/ET) DIS	FAILS TO CLOSE, F
0408-9	206	LO2 FEED (ORB/ET) DIS	FAIL TO RELIEVE
0409-4	922	GN2 PURGE DISCONNECT	RUPTURE/LEAKAGE
0410-3	247	LH2 DELTA-P TRANSDUCE	RUPTURE OF DIAPHR
0410-3	301	LH2 SYSTEM DELTA-P TR	RUPTURE OF DIAPHR
0410-4	1202	LO2 SYSTEM DELTA P TR	EXTERNAL LEAKAGE
0410-4	2071	LH2 SYSTEM DELTA-P TR	EXTERNAL LEAKAGE
0411-1	2161	LH2 RECIRCULATION MAN	FAIL TO OPEN (REL
0411-3	2163	LH2 RECIRCULATION MAN	EXTERNAL LEAKAGE
0412-1	1283	LO2 FEED MANIFOLD REL	FAILS TO RELIEVE
0412-3	1282	LO2 FEED MANIFOLD REL	FAILS TO REMAIN C
0412-4	1281	LO2 FEED MANIFOLD REL	EXTERNAL LEAKAGE
0412-5	1281	LO2 FEED MANIFOLD REL	EXTERNAL LEAKAGE
0414-3	1122	LO2 FEEDLINE RELIEF S	FAILS TO REMAIN C
0414-7	1123	LO2 FEEDLINE RELIEF S	EXTERNAL LEAKAGE
0415-1	2303	LH2 17 INCH FEEDLINE	LOSS OF INSULATIN
0415-2	2301	LH2 17 INCH FEEDLINE	RUPTURE
0416-2	2291	LH2 FEEDLINE MANIFOLD	RUPTURE
0417-2	2311	LH2 12 INCH FEEDLINE	RUPTURE
0418-2	1262	LO2 17 INCH FEEDLINE	RUPTURE
0419-2	1242	LO2 FEEDLINE MANIFOLD	RUPTURE
0419-2	1243	LO2 FEEDLINE MANIFOLD	EXTERNAL LEAKAGE
0420-2	1272	LO2 12 INCH FEEDLINE	RUPTURE
0420-2	1273	LO2 12 INCH FEEDLINE	EXTERNAL LEAKAGE
0421-2	2121	LH2 PRESTART CONDITIO	RUPTURE
0422-1	251	LO2 BLEED LINE, 1.5"	RUPTURE/LEAKAGE
0423-1	340	LH2 RELIEF LINE (FROM	RUPTURE/LEAKAGE
0424-1	252	LO2 RELIEF LINE (PV7	RUPTURE/LEAKAGE
0425-2	2131	LH2 PRESTART CONDITIO	RUPTURE
0425-2	2132	LH2 PRESTART CONDITIO	EXTERNAL LEAKAGE
0426-1	923	GN2 PURGE LINE	RUPTURE/LEAKAGE
0427-2	243	LH2/LO2 PROPELLANT LE	INADVERTENT OUTPU
0427-3	244	LH2/LO2 PROPELLANT LE	LOSS OF OUTPUT
0427-4	1191	LO2 LOW LEVEL LIQUID	ERRONEOUS OUTPUT
0427-5	1192	LO2 LOW LEVEL LIQUID	ERRONEOUS OUTPUT
0428-1	256	LO2 BLEED RECIRC & PO	RUPTURE/LEAKAGE
0429-2	2081	LH2 HI POINT BLEED LI	RUPTURE
0430-1	2081	LH2 HI POINT BLEED LI	RUPTURE
0431-2	2062	LH2 HI POINT BLEED VA	FAIL TO REMAIN CL
0431-5	300	LH2 HI POINT BLEED VA	FAIL TO RELIEVE
0431-6	298	LH2 HI POINT BLEED VA	FAIL TO RELIEVE
0431-8	2063	LH2 HI POINT BLEED VA	EXTERNAL LEAKAGE
0432-1	2041	LH2 HI POINT BLEED (O	EXTERNAL LEAK
0432-2	2042	LH2 HI POINT BLEED (O	FAIL TO CLOSE
0432-2	2043	LH2 HI POINT BLEED (O	FAIL TO REMAIN CL
0432-4	292	LH2 HI POINT BLEED DI	FAILS TO REMAIN O
0432-6	293	LH2 HI POINT BLEED DI	RUPTURE/LEAKAGE

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POTENTIAL CRITICAL ITEMS

NASA FMEA	MDAC-ID	ITEM	FAILURE MODE
0433-1	258	L02 DELTA PRESSURE LI	RUPTURE/LEAKAGE
0433-1	303	LH2 DELTA-P LINE, .25	RUPTURE/LEAKAGE
0434-1	259	L02 FEEDLINE SCREEN	RUPTURE/LEAKAGE
0434-1	327	LH2 FEEDLINE SCREEN	RUPTURE/STRUCTURA
0434-2	260	L02 FEEDLINE SCREEN	RUPTURE/LEAKAGE
0434-2	328	LH2 FEEDLINE SCREEN	CLOGGING/RESTRICT
0435-2	2361	LH2 FEEDLINE RELIEF F	RESTRICTED FLOW
0435-3	332	LH2 FEEDLINE RELIEF F	FAIL TO ARREST
0435-4	333	LH2 FEEDLINE RELIEF F	RUPTURE/LEAKAGE
0436-1	2341	LH2 FEEDLINE MANIFOLD	FAIL TO OPEN (REL
0436-2	2342	LH2 FEEDLINE MANIFOLD	FAIL TO REMAIN CL
0436-3	2342	LH2 FEEDLINE MANIFOLD	FAIL TO REMAIN CL
0436-4	2343	LH2 FEEDLINE MANIFOLD	EXTERNAL LEAKAGE
0436-5	2343	LH2 FEEDLINE MANIFOLD	EXTERNAL LEAKAGE
0437-1	2321	LH2 FEEDLINE RELIEF S	FAIL TO OPEN, FAI
0437-3	2322	LH2 FEEDLINE RELIEF S	FAIL TO CLOSE, FA
0437-5	329	LH2 FEEDLINE RELIEF S	ERRONEOUS INDICAT
0437-7	331	LH2 FEEDLINE RELIEF S	ACTUATOR LEAKAGE
0437-8	2323	LH2 FEEDLINE RELIEF S	EXTERNAL LEAKAGE
0451-1	1021	L02 BLEED CHECK VALVE	FAILS TO OPEN, FA
0451-1	1022	L02 BLEED CHECK VALVE	FAILS TO OPEN, FA
0451-1	1023	L02 BLEED CHECK VALVE	FAILS TO OPEN, FA
0451-1	1026	L02 BLEED CHECK VALVE	FAILS TO OPEN
0451-1	1028	L02 BLEED CHECK VALVE	FAILS TO OPEN, FA
0451-2	1024	L02 BLEED CHECK VALVE	FAILS TO CLOSE, F
0451-2	1025	L02 BLEED CHECK VALVE	FAILS TO CLOSE, F
0451-4	203	L02 BLEED CHECK VALVE	RUPTURE/LEAKAGE
0452-1	1171	L02 BLEED SHUTOFF VAL	FAILS TO OPEN, FA
0452-2	1172	L02 BLEED SHUTOFF VAL	FAILS TO CLOSE, F
0452-3	1175	L02 BLEED SHUTOFF VAL	FAILS TO RELIEVE
0452-4	1173	L02 BLEED SHUTOFF VAL	FAILS TO CLOSE, F
0452-7	1174	L02 BLEED SHUTOFF VAL	EXTERIOR LEAKAGE
0452-8	239	L02 BLEED SHUTOFF VAL	RUPTURE/LEAKAGE O
0453-1	1185	L02 POGO ACCUMULATOR	FAILS TO REMAIN O
0453-2	1181	L02 POGO ACCUMULATOR	FAILS TO CLOSE, F
0453-6	1184	L02 POGO ACCUMULATOR	FAILS TO RELIEVE
0453-7	1183	L02 POGO ACCUMULATOR	EXTERIOR LEAKAGE
0454-2	210	L02 AND LH2 FEED DISC	FAIL TO REMAIN LO
0454-3	211	L02 AND LH2 FEED DISC	FAIL TO UNLOCK PD
0454-4	212	L02 AND LH2 FEED DISC	FAIL TO REMAIN UN
0454-5	213	L02 AND LH2 FEED DISC	LOSS OF POSITION
0454-7	215	L02 AND LH2 FEED DISC	RUPTURE/LEAKAGE O
0454-8	216	L02 AND LH2 FEED DISC	LATCH ROD FAILS T
0455-1	253	L02 RELIEF LINE, 1" D	RUPTURE/LEAKAGE
0456-1	254	L02 RELIEF SENSE LINE	RUPTURE/LEAKAGE
0456-2	255	L02 RELIEF SENSE LINE	RUPTURE/LEAKAGE
0457-1	306	LH2 LINE ASSEMBLY (PD	RUPTURE/LEAKAGE
0458-1	261	L02 LINE ASSEMBLY (PD	RUPTURE/LEAKAGE
0459-2	1262	L02 17 INCH FEEDLINE	RUPTURE

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POTENTIAL CRITICAL ITEMS

NASA FMEA	MDAC-ID	ITEM	FAILURE MODE
0459-2	1263	L02 17 INCH FEEDLINE	EXTERNAL LEAKAGE
0460-2	1272	L02 12 INCH FEEDLINE	RUPTURE
0461-1	341	LH2 RELIEF LINE (RV6	RUPTURE/LEAKAGE
0462-1	342	LH2 RELIEF SENSE LINE	RUPTURE/LEAKAGE
0462-2	343	LH2 RELIEF SENSE LINE	CLOGGED
0501-1	2222	LH2 TANK GROUND PRE-P	FAIL TO CLOSE, FA
0501-2	2222	LH2 TANK GROUND PRE-P	FAIL TO CLOSE, FA
0501-4	2222	LH2 TANK GROUND PRE-P	FAIL TO CLOSE, FA
0502-2	2182	LH2 PRE-PRESS CHECK V	FAIL TO CLOSE (RE
0502-3	2183	LH2 PRE-PRESS CHECK V	EXTERNAL LEAKAGE
0503-1	2211	GH2 PRESSURIZATION DI	FAIL TO OPEN, FAI
0503-3	2213	GH2 PRESSURIZATION DI	EXTERNAL LEAKAGE
0503-5	2212	GH2 PRESSURIZATION DI	FAIL TO CLOSE, FA
0503-7	2213	GH2 PRESSURIZATION DI	EXTERNAL LEAKAGE
0504-1	2201	GH2 PRESSURIZATION FL	FAIL TO OPEN, FAI
0504-2	2202	GH2 PRESSURIZATION FL	FAIL TO CLOSE, FA
0504-3	318	GH2 PRESSURIZATION FL	CLOGGED FLOW PATH
0504-5	2203	GH2 PRESSURIZATION FL	EXTERNAL LEAKAGE
0505-1	2191	GH2 PRESSURIZATION IS	FAIL TO OPEN, FAI
0505-4	2192	GH2 PRESSURIZATION IS	EXTERNAL LEAKAGE
0506-1	344	GH2 PRESSURIZATION SU	RUPTURE/LEAKAGE
0507-1	262	G02 PRESSURIZATION SU	RUPTURE/LEAKAGE
0508-1	345	GH2 PRESSURIZATION SU	RUPTURE/LEAKAGE
0509-1	263	G02 PRESSURIZATION SU	RUPTURE/LEAKAGE
0510-1	264	G02 PRESSURIZATION SU	RUPTURE/LEAKAGE
0511-1	346	GH2 PRESSURIZATION SU	RUPTURE/LEAKAGE
0512-3	2373	LH2 PRESSURIZATION LI	EXTERNAL LEAKAGE
0513-1	1053	G02 PRESSURIZATION (O	EXTERNAL LEAKAGE
0513-2	1056	G02 PRESSURIZATION (O	FAILS TO CLOSE, F
0513-3	1052	G02 PRESSURIZATION (O	FAILS TO REMAIN O
0513-5	1053	G02 PRESSURIZATION (O	EXTERNAL LEAKAGE
0514-1	1005	G02 PRESSURE ISOLATIO	FAILS TO OPEN, FA
0514-2	1002	G02 PRESSURE ISOLATIO	FAILS TO CLOSE, F
0514-4	1003	G02 PRESSURE ISOLATIO	EXTERNAL LEAKAGE
0515-1	265	L02 ULLAGE PRESSURE S	LOSS OF OUTPUT
0515-1	353	LH2 ULLAGE PRESSURE S	LOSS OF OUTPUT
0515-2	354	LH2 ULLAGE PRESSURE S	INADVERTENT OUTPU
0515-3	267	L02 ULLAGE PRESSURE S	ERRONEOUS INDICAT
0515-3	355	LH2 ULLAGE PRESSURE S	ERRONEOUS INDICAT
0516-1	1092	G02 PRESSURIZATION MA	EXTERNAL LEAKAGE
0516-1	2231	GH2 PRESSURIZATION MA	EXTERNAL LEAKAGE
0516-2	1091	G02 PRESSURIZATION MA	EXTERNAL LEAKAGE
0516-2	2231	GH2 PRESSURIZATION MA	EXTERNAL LEAKAGE
0517-1	1062	L02 TANK PRE-PRESS (O	FAILS TO CLOSE, F
0517-1	1063	L02 TANK PRE-PRESS (O	FAILS TO REMAIN C
0517-4	1064	L02 TANK PRE-PRESS (O	EXTERNAL LEAKAGE
0518-2	1012	L02 TANK PRE-PRESS CH	FAILS TO CLOSE, F
0518-3	201	L02 TANK PRE-PRESS CH	EXTERNAL LEAKAGE
0519-1	1032	G02 PRESSURE FLOW CON	FAILS TO OPEN, FA

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POTENTIAL CRITICAL ITEMS

NASA FMEA	MDAC-ID	ITEM	FAILURE MODE
0519-2	1033	G02 PRESSURE FLOW CON	FAILS TO CLOSE, F
0519-3	1031	G02 PRESSURE FLOW CON	RESTRICTED FLOW
0519-4	1034	G02 PRESSURE FLOW CON	SPONTANEOUS IGNIT
0519-4	1035	G02 PRESSURE FLOW CON	SPONTANEOUS IGNIT
0519-5	204	G02 PRESSURE FLOW CON	EXTERNAL LEAKAGE
0520-1	347	GH2 PRESSURIZATION SU	RUPTURE/LEAKAGE
0521-1	348	GH2 PRESSURIZATION SU	RUPTURE/LEAKAGE
0522-1	268	G02 PRESSURIZATION SU	RUPTURE/LEAKAGE
0601-2	4262	L02 MANIFOLD REPRESS	FAILS TO CLOSE, F
0601-4	4260	L02 MANIFOLD REPRESS	FAILS TO OPEN, EX
0602-2	4541	L02 MANIF REPRESS REG	FAILS TO CLOSE, F
0602-3	400	L02 MANIFOLD REPRESSU	FAILS TO REMAIN C
0602-4	4540	L02 MANIF REPRESS REG	RESTRICTED FLOW,
0602-5	901	L02 MANIFOLD REPRESS	SENSE PORT CLOGGE
0603-4	377	L02 FEED MANIFOLD REP	EXTERNAL LEAKAGE
0604-1	4640	PNEUMATIC HE PRESS VA	STRUCTURAL FAILUR
0605-4	379	GH2 PRESSURIZATION MA	EXTERNAL LEAKAGE
0605-4	383	GH2 PRESSURIZATION MA	EXTERNAL LEAKAGE
0606-4	390	LH2 MANIFOLD REPRESSU	EXTERNAL LEAKAGE
0607-1	269	L02 SENSE LINE (PD1 T	RUPTURE/LEAKAGE
0607-1	349	LH2 SENSE LINE (PD2 T	RUPTURE/LEAKAGE
0608-1	2351	LH2 DUMP PRESSURIZATI	RESTRICTED FLOW
0608-2	2352	LH2 DUMP PRESSURIZATI	EXTERNAL LEAK
0609-2	250	G02 PRESSURE MANIFOLD	EXTERNAL LEAKAGE
0626-8	915	ENGINE HELIUM SUPPLY	ERRONEOUS INDICAT
0626-9	916	PNEUMATIC HELIUM SUPP	ERRONEOUS INDICAT
0627-1	364	LH2 FEED MANIFOLD DIS	ERRONEOUS INDICAT
0627-3	273	L02 ENGINE INLET TEMP	ERRONEOUS INDICAT
0627-4	274	G02 ENGINE OUTLET TEM	ERRONEOUS INDICAT
0628-1	352	LH2 RTLS DUMP LINE (P	RUPTURE/LEAKAGE
0629-3	4550	LH2 MANIF REPRESS REG	RESTRICTED FLOW,
0630-4	381	LH2 FEED MANIFOLD NOM	EXTERNAL LEAKAGE
0631-4	376	G02 PRESSURIZATION MA	EXTERNAL LEAKAGE
0632-4	380	LH2 RECIRCULATION MAN	EXTERNAL LEAKAGE
0633-1	4640	PNEUMATIC HE PRESS VA	STRUCTURAL FAILUR
0634-1	4640	PNEUMATIC HE PRESS VA	STRUCTURAL FAILUR
0635-1	4630	PNEUMATIC HE PRESSURE	STRUCTURAL FAILUR
0636-1	4630	PNEUMATIC HE PRESSURE	STRUCTURAL FAILUR
0637-1	4630	PNEUMATIC HE PRESSURE	STRUCTURAL FAILUR
0638-1	4630	PNEUMATIC HE PRESSURE	STRUCTURAL FAILUR
0651-2	2382	LH2 FEED RTLS INBOARD	FAIL TO CLOSE, FA
0651-2	2392	LH2 FEED RTLS OUTBOAR	FAIL TO CLOSE, FA
0651-3	2381	LH2 FEED RTLS INBOARD	FAIL TO OPEN, FAI
0651-3	2391	LH2 FEED RTLS OUTBOAR	FAIL TO OPEN, FAI
0651-5	334	LH2 FEED RTLS INBOARD	INBD FAILS TO REL
0651-6	335	LH2 FEED RTLS INBOARD	RELIEF VALVE FAIL
0651-9	2383	LH2 FEED RTLS INBOARD	EXTERNAL LEAKAGE
0651-9	2393	LH2 FEED RTLS OUTBOAR	EXTERNAL LEAKAGE
0652-1	351	LH2 RTLS DUMP LINE (P	RUPTURE/LEAKAGE

APPENDIX D
POTENTIAL CRITICAL ITEMS

NASA FMEA	MDAC-ID	ITEM	FAILURE MODE
0701-1	276	LO2/LH2 NAFLEX FLANGE	RUPTURE/LEAKAGE
0702-1	277	LO2/LH2 METALLIC BOSS	RUPTURE/LEAKAGE
0703-1	278	GO2/GH2 K SEALS	RUPTURE/LEAKAGE
0704-1	912	HELIUM METALLIC BOSS	RUPTURE/LEAKAGE
0705-1	913	NAFLEX HELIUM TANK SE	RUPTURE/LEAKAGE
0706-1	914	COMBINATION HELIUM TA	RUPTURE/LEAKAGE
0707-1	279	GO2/GH2 NAFLEX FLANGE	RUPTURE/LEAKAGE
2001-1	6024	BLOCKING DIODE (4)	FAIL OPEN
2001-2	3	DIODES, 12A (2)	SHORT
2002-2	5	DIODES, 12A (2)	SHORT
2002-3	6	DIODE, 12A (2)	SHORT TO GROUND
2004-1	6022	HYBRID DRIVER CONTROL	FAIL OPEN
2004-2	8	HYBRID DRIVER CONTROL	INADVERTENT OUTPU
2009-1	6021	POWER & CONTROL CIRCU	OPEN, SHORTED, IN
2011-3	5122	LO2 FEEDLINE RELIEF S	FAIL PREMATURE OP
2012B-2	5120	LO2 FEEDLINE RELIEF S	FAIL OPEN/SHORT (
2013-1	5139	DIODE, ISOLATION (1A,	FAIL OPEN/SHORT (
2013-1	6101	LH2 FEEDLINE RELIEF I	LOSS OF OUTPUT, E
2017-1	5124	HYBRID DRIVER, TYPE 3	FUSE FAIL OPEN (I
2017-1	5126	HYBRID DRIVER, TYPE 3	FUSE FAIL OPEN (I
2017-2	5125	HYBRID DRIVER, TYPE 3	FUSE FAIL ON (ACT
2017-2	5127	HYBRID DRIVER, TYPE 3	FUSE FAIL ON (ACT
2026-2	70	HDC - GND C/O COMMAND	PREMATURE OUTPUT
2026-2	457	HDC I-GND C/O CMD PWR	INADVERTENT OUTPU
2027-1	640	BUS 2 AND 3 UPSTREAM	LOSS OF OUTPUT
2028-1	642	BUS 2 AND 3 DOWNSTREA	LOSS OF OUTPUT
2029-1	6122	HYBRID DRIVER CONTROL	FAIL OPEN
2029-2	6121	HYBRID DRIVER CONTROL	FAIL ON, SHORTED,
2031-1	72	TRANSIENT SUPPRESSION	
2031-1	458	TRANSIENT SUPPRESSION	OPENS AND SHORTS
2032-1	74	HDC, RELAY CONTROL PO	LOSS OF OUTPUT
2032-1	460	HDC I-RELAY CONTROL P	LOSS OF OUTPUT
2032-2	75	HDC, RELAY CONTROL PO	
2032-2	461	HDC I-RELAY CONTROL P	INADVERTENT OUTPU
2033-1	76	RELAY (3)	LOSS OF OUTPUT
2033-1	462	RELAY	LOSS OF OUTPUT
2033-2	77	RELAY (3)	INADVERTENT OUTPU
2033-2	463	RELAY	INADVERTENT OUTPU
2034-1	78	BLOCKING DIODE	OPEN
2034-1	5650	GO2 PRESSURE FLOW CON	ALL CREDIBLE MODE
2034-2	79	BLOCKING DIODE	SHORT
2034-2	5650	GO2 PRESSURE FLOW CON	ALL CREDIBLE MODE
2035-2	81	TOGGLE SWITCH	FAILS CLOSED
2037-3	5502	LO2 INBOARD FILL & DR	FAIL PREMATURE OP
2037-3	5504	LO2 INBOARD FILL & DR	
2037-4	5503	LO2 INBOARD FILL & DR	FAIL PREMATURE OF
2037-5	433	LO2 INBOARD FILL & DR	SHORTS TO GROUND,
2038-1	6072	TOGGLE SWITCH	FAIL OPEN
2038-3	6073	TOGGLE SWITCH	FAIL SHORTED

APPENDIX D
POTENTIAL CRITICAL ITEMS

NASA FMEA	MDAC-ID	ITEM	FAILURE MODE
2038-4	6073	TOGGLE SWITCH	FAIL SHORTED
2038-5	11	TOGGLE SWITCH	SHORT TO GROUND
2039-1	5139	DIODE, ISOLATION (1A,	FAIL OPEN/SHORT (
2039-1	6108	ISOLATION DIODE (3)	FAIL OPEN
2039-2	40	RPC C OUTPUT DIODE	SHORT
2039-2	5139	DIODE, ISOLATION (1A,	FAIL OPEN/SHORT (
2050-2	7480	HELIUM SUPPLY BLOWDOW	FAILS ON (PREMATU
2053-1	5513	HYBRID DRIVER, TYPE 3	FAIL PREMATURE OF
2053-2	5511	HYBRID DRIVER, TYPE 3	FAIL ON THE OPEN
2053-2	5512	HYBRID DRIVER, TYPE 3	FAIL PREMATURE/ER
2054A-1	6081	1A FUSE	FAIL OPEN
2055A-1	6082	TOGGLE SWITCH, 32V73A	FAIL OPEN
2055A-3	6083	TOGGLE SWITCH	FAIL SHORTED
2055A-4	6083	TOGGLE SWITCH	FAIL SHORTED
2056A-1	6086	ISOLATION DIODE (4)	FAIL OPEN
2056A-2	24	OPEN SWITCH BLOCKING	SHORT
2056B-1	5170	DIODE, ISOLATION	FAIL OFF (PREMATU
2057A-1	6084	HYBRID DRIVER CONTROL	FAIL OPEN
2057B-1	5168	HYBRID DRIVER, TYPE 3	FAIL OFF (PREMATU
2058A-2	6085	HYBRID DRIVER CONTROL	INADVERTENT OUTPU
2058B-2	5169	HYBRID DRIVER, TYPE 3	FAIL ON (PREMATUR
2059-1	5514	HYBRID DRIVER, TYPE 3	FAIL OPEN/PREMATU
2059-2	5515	HYBRID DRIVER, TYPE 3	FAIL ON (PREMATUR
2060-3	6105	TOGGLE SWITCH	FAIL SHORTED, INA
2060-4	6105	TOGGLE SWITCH	FAIL SHORTED, INA
2061-2	6102	REMOTE POWER CONTROLL	FAIL OPEN, INADVE
2062-1	6103	HYBRID DRIVER CONTROL	FAIL OPEN
2062-2	39	CLOSE HDC (2)	PREMATURE OUTPUT
2063-1	5651	HYBRID DRIVER, TYPE 3	FAIL ON (ACTIVATE
2063-1	5653	HYBRID DRIVER, TYPE 3	PREMATURE/ERRONEO
2063-2	5652	HYBRID DRIVER, TYPE 3	FUSE FAIL OPEN (I
2063-2	5654	HYBRID DRIVER, TYPE 3	PREMATURE/ERRONEO
2064-2	7570	LH2 MANIFOLD REPRESS	FAILS ON (PREMATU
2065-2	7550	LH2 MANIFOLD REPRESS	FAILS ON (PREMATU
2070-1	5003	FUSE (1A) (4 PER CIRC	FAILS OPEN (INHIB
2071-2	5001	L02 PREVALVE TOGGLE S	FAILS (SHORTS) (F
2071-2	5002	L02 PREVALVE TOGGLE S	FAILS (SHORTS) (F
2073-1	5044	DIODE, ISOLATION (12A	FAILS OPEN, FAILS
2073-1	5053	DIODE, ISOLATION (12A	FAILS OPEN, FAILS
2073-2	403	CLOSE RPC OUTPUT DIOD	SHORTS
2074-1	5041	HYBRID DRIVER, TYPE 3	FUSE FAIL OPEN (I
2074-1	5051	HYBRID DRIVER, TYPE 3	FUSE FAIL OPEN (I
2074-2	405	CLOSE HDC III	INADVERTENT OUTPU
2075-1	5042	HYBRID DRIVER, TYPE 1	FAIL OFF (INHIBIT
2075-2	406	CLOSE HDC I	INADVERTENT OUTPU
2077-1	5035	DIODE, ISOLATION (12A	FAILS OPEN, FAILS
2077-1	5064	DIODE, ISOLATION (12A	FAILS OPEN, FAILS
2077-2	408	OPEN RPC OUTPUT DIODE	SHORTS
2078-1	5032	HYBRID DRIVER, TYPE 3	FUSE FAIL OPEN (I

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POTENTIAL CRITICAL ITEMS

NASA FMEA	MDAC-ID	ITEM	FAILURE MODE
2078-1	5062	HYBRID DRIVER, TYPE 3	FUSE FAIL OPEN (I
2078-2	5031	HYBRID DRIVER, TYPE 3	FAIL ON (FALSE OP
2078-2	5061	HYBRID DRIVER, TYPE 3	FAIL ON (FALSE OP
2079-1	5033	HYBRID DRIVER, TYPE 1	FAIL OFF (INHIBIT
2079-2	410	OPEN HDC I	INADVERTENT OUTPU
2090-1	5551	HYBRID DRIVER, TYPE 3	FUSE FAIL OPEN (I
2090-1	5552	HYBRID DRIVER, TYPE 3	FUSE FAIL OPEN (I
2090-2	465	CL HDC III	PREMATURE OUTPUT
2090-2	466	CL HDC III	PREMATURE OUTPUT
2091-1	5553	HYBRID DRIVER, TYPE 1	FUSE FAIL OPEN (I
2091-2	467	CL HDC I	PREMATURE OUTPUT
2092-1	5554	REMOTE POWER CONTROLL	FAIL OPEN (INHIBI
2092-1	5555	REMOTE POWER CONTROLL	FAIL OPEN (INHIBI
2092-2	468	CL RPC	PREMATURE OUTPUT
2092-2	469	CL RPC	PREMATURE OUTPUT
2093-1	5560	DIODE (12A)	FAIL OPEN/SHORT (
2093-2	5560	DIODE (12A)	FAIL OPEN/SHORT (
2093-3	472	CL RPC C OUTPUT DIODE	SHORT TO GROUND
2094-1	5559	DIODE (12A)	FAIL OPEN/SHORT (
2094-2	5559	DIODE (12A)	FAIL OPEN/SHORT (
2095-1	5559	DIODE (12A)	FAIL OPEN/SHORT (
2095-2	5559	DIODE (12A)	FAIL OPEN/SHORT (
2095-3	471	XOVER DIODE	SHORT TO GROUND
2096-1	5561	DIODE	FAIL OPEN/SHORT (
2100-2	64	OPEN HDC	INADVERTENT OUTPU
2100-3	65	OPEN HDC	
2101-1	6142	HYBRID DRIVER CONTROL	FAIL OPEN
2102-1	6144	ISOLATION DIODES (4)	FAIL OPEN
2110-1	7110	FUSE, 1AMP (9)	OPEN, FAILS TO CO
2111-3	7130	TOGGLE SWITCH, 2P3T (	OPEN, FAILS TO TR
2114-1	7170	ISOLATION DIODES (9)	FAILS OPEN
2115-1	7160	ISOLATION DIODES (6)	SHORTED, OPEN
2115-2	7160	ISOLATION DIODES (6)	SHORTED, OPEN
2119-2	811	HELIUM ISOLATION "A"	SHORT
2119-2	812	HELIUM ISOLATION "A"	SHORT
2120-1	813	HELIUM ISOLATION VALV	ALL
2135-1	832	TRANSIENT SUPPRESSION	SHORT
2144-1	7230	ISOLATION DIODES (6)	OPEN
2144-2	7231	ISOLATION DIODES (6)	SHORTED
2145-1	7260	ISOLATION DIODES (12)	FAILS OPEN
2145-2	837	ISOLATION DIODES	SHORT
2147-2	7200	VALVE POWER AND CONTR	OPEN, SHORTED, IN
2148-2	7200	VALVE POWER AND CONTR	OPEN, SHORTED, IN
2162-1	5142	LO2 PROPELLENT DUMP S	FAIL OPEN (DUMP I
2162-2	5141	LO2 PROPELLENT DUMP S	SHORTS (PREMATURE
2162-3	669	DUMP SEQUENCE SWITCH	PREMATURE XFER TO
2163-1	670	BACKUP LH2 VALVE SWIT	FAIL TO XFER TO O
2163-3	672	BACKUP LH2 VALVE SWIT	PREMATURE XFER TO
2163-4	673	BACKUP LH2 VALVE SWIT	PREMATURE XFER TO

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POTENTIAL CRITICAL ITEMS

NASA FMEA	MDAC-ID	ITEM	FAILURE MODE
2165-1	615	TOGGLE SWITCH	PREM XFER TO INHI
2168-2	605	CIRCUIT BREAKER	FAILS OFF
2171-2	622	PUSHBUTTON SWITCH	PREMATURE CLOSURE
2180-1	5071	DIODE (10 PER CIRCUIT	FAILS OPEN (INHIB
2180-1	5072	DIODE (2 PER CIRCUIT)	FAILS OPEN (INHIB
2181-1	5074	DIODE (10 PER CIRCUIT	FAILS OPEN (INHIB
2181-1	5075	DIODE (6 PER CIRCUIT)	FAILS OPEN (INHIB
2182-1	5071	DIODE (10 PER CIRCUIT	FAILS OPEN (INHIB
2182-1	5073	DIODE (3 PER CIRCUIT)	FAILS OPEN (INHIB
2183-1	5074	DIODE (10 PER CIRCUIT	FAILS OPEN (INHIB
2183-1	5076	DIODE (7 PER CIRCUIT)	FAILS OPEN (INHIB
2184-1	5000	LO2 PREVALVE CONTROL	ALL CREDIBLE MODE
2184-1	5074	DIODE (10 PER CIRCUIT	FAILS OPEN (INHIB
2184-1	5076	DIODE (7 PER CIRCUIT)	FAILS OPEN (INHIB
2184-2	5000	LO2 PREVALVE CONTROL	ALL CREDIBLE MODE
2185-2	414	OPEN SWITCH BLOCKING	SHORTS
2186-1	5074	DIODE (10 PER CIRCUIT	FAILS OPEN (INHIB
2186-1	5075	DIODE (6 PER CIRCUIT)	FAILS OPEN (INHIB
2186-2	415	CLOSE SWITCH BLOCKING	SHORTS
2187-2	5000	LO2 PREVALVE CONTROL	ALL CREDIBLE MODE
2188-1	5074	DIODE (10 PER CIRCUIT	FAILS OPEN (INHIB
2188-1	5076	DIODE (7 PER CIRCUIT)	FAILS OPEN (INHIB
2188-2	416	CLOSE SWITCH BLOCKING	SHORTS
2189-2	5000	LO2 PREVALVE CONTROL	ALL CREDIBLE MODE
2191-1	5000	LO2 PREVALVE CONTROL	ALL CREDIBLE MODE
2192-1	5000	LO2 PREVALVE CONTROL	ALL CREDIBLE MODE
2195-2	5000	LO2 PREVALVE CONTROL	ALL CREDIBLE MODE
2196-2	5000	LO2 PREVALVE CONTROL	ALL CREDIBLE MODE
2198-2	6153	TOGGLE SWITCH	FAIL OPEN, FAIL C
2198-3	6153	TOGGLE SWITCH	FAIL OPEN, FAIL C
2198-4	128	LH2 PREVALVE TOGGLE S	OPEN CONTACTS SHO
2198-5	129	LH2 PREVALVE TOGGLE S	CLOSE CONTACTS SH
2202-1	6025	ISOLATION DIODE (2)	FAIL OPEN
2202-1	6156	HYBRID DRIVER CONTROL	FAIL OPEN, FAIL S
2202-2	6156	HYBRID DRIVER CONTROL	FAIL OPEN, FAIL S
2204-1	6156	HYBRID DRIVER CONTROL	FAIL OPEN, FAIL S
2204-2	6156	HYBRID DRIVER CONTROL	FAIL OPEN, FAIL S
2205-2	130	LH2 PREVALVES OPEN CO	SHORT
2205-3	131	LH2 PREVALVES OPEN CO	SHORT TO GROUND
2206-1	6157	ISOLATION DIODES, 12A	FAIL OPEN
2206-2	132	LH2 PREVALVE OPEN RPC	SHORT
2206-3	133	LH2 PREVALVE OPEN RPC	SHORT TO GROUND
2207-1	6157	ISOLATION DIODES, 12A	FAIL OPEN
2207-2	134	LH2 PREVALVE CLOSE CO	SHORT
2208-1	6157	ISOLATION DIODES, 12A	FAIL OPEN
2208-2	136	LH2 PREVALVES CLOSE R	SHORT
2208-3	137	LH2 PREVALVE CLOSE RP	SHORT TO GROUND
2211-1	6159	ISOLATION DIODE (36)	FAIL OPEN
2212-1	6159	ISOLATION DIODE (36)	FAIL OPEN

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NASA FMEA	MDAC-ID	ITEM	FAILURE MODE
2213-1	6159	ISOLATION DIODE (36)	FAIL OPEN
2214-1	6158	ISOLATION DIODES, 4.2	FAIL OPEN
2214-2	143	LH2 PREVALVES BLOCKIN	SHORT
2215-2	144	LH2 PREVALVE CLOSE SW	
2216-1	6159	ISOLATION DIODE (36)	FAIL OPEN
2216-2	145	LH2 PREVALVES OPEN SW	SHORT
2217-2	146	LH2 PREVALVES OPEN SW	SHORT
2218-2	147	LH2 PREVALVES CLOSE S	SHORT
2219-2	148	LH2 PREVALVES OPEN SW	SHORT
2220-2	149	LH2 PREVALVES OPEN SW	SHORT
2221-2	150	LH2 PREVALVES CLOSE S	SHORT
2226-2	626	ALL ECO SIM OPEN CMD	INADVERTENT OUTPU
2227-2	628	ALL ECO SIM DRY CMD H	INADVERTENT OUTPU
2228-2	630	ECO SIM WET CMD 1-4 H	INADVERTENT OUTPU
2230-2	634	LVL SENSOR SIM DRY CM	INADVERTENT OUTPU
2231-2	636	LVL SENSOR SIM WET CM	INADVERTENT OUTPU
2233-1	646	RPC OUTPUT DIODE	OPENS
2233-2	647	RPC OUTPUT DIODE	SHORT
2237-2	5120	LO2 FEEDLINE RELIEF S	FAIL OPEN/SHORT (
2238-1	5138	DIODE, ISOLATION (1A,	FAIL OPEN (INHIBI
2238-1	5139	DIODE, ISOLATION (1A,	FAIL OPEN/SHORT (
2238B-2	421	BLOCKING DIODE, SWITC	SHORT
2238B-2	5139	DIODE, ISOLATION (1A,	FAIL OPEN/SHORT (
2240-1	6108	ISOLATION DIODE (3)	FAIL OPEN
2240-3	43	DIODE, RPC CROSSOVER	SHORT TO GROUND
2240-3	424	DIODE, RPC CROSSOVER,	SHORT TO GROUND
2240A-2	42	DIODE, RPC CROSSOVER	SHORT
2240B-1	5139	DIODE, ISOLATION (1A,	FAIL OPEN/SHORT (
2240B-2	5139	DIODE, ISOLATION (1A,	FAIL OPEN/SHORT (
2241-1	5139	DIODE, ISOLATION (1A,	FAIL OPEN/SHORT (
2241-1	6107	ISOLATION DIODE (11)	FAIL OPEN, FAIL S
2244-1	452	HYBRID DRIVER, TYPE 3	LOSS OF OUTPUT
2244-1	453	HYBRID DRIVER, TYPE 3	LOSS OF OUTPUT
2244-1	6012	HYBRID DRIVER CONTROL	FAIL OPEN
2244-2	59	OPEN HDC, TYPE III (2	INTERNAL SHORT
2244-2	5761	HYBRID DRIVER, TYPE 3	FAIL ON (FALSE OP
2244-2	5763	HYBRID DRIVER, TYPE 3	FAIL ON (FALSE OP
2245-1	444	HYBRID DRIVER, TYPE 3	LOSS OF OUTPUT
2245-1	445	HYBRID DRIVER, TYPE 3	LOSS OF OUTPUT
2245-1	6012	HYBRID DRIVER CONTROL	FAIL OPEN
2245-2	49	CLOSE HDC, TYPE III (	FAIL ON
2245-2	5771	HYBRID DRIVER, TYPE 3	FAIL ON (FALSE CL
2245-2	5773	HYBRID DRIVER, TYPE 3	FAIL ON (FALSE CL
2248-1	5750	ET/ORBITER DISCONNECT	ALL CREDIBLE MODE
2248-1	6014	ISOLATION AND BLOCKIN	FAIL OPEN
2248-2	54	DIODE, OPEN RPC B OUT	SHORT
2248-2	5750	ET/ORBITER DISCONNECT	ALL CREDIBLE MODE
2249-1	5778	DIODE (12A)	FAIL OPEN (INHIBI
2249-1	6014	ISOLATION AND BLOCKIN	FAIL OPEN

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POTENTIAL CRITICAL ITEMS

NASA FMEA	MDAC-ID	ITEM	FAILURE MODE
2249-2	50	DIODE, CLOSE RPC B OU	SHORT
2249-2	446	DIODE (12A), CL RPC "	SHORT
2250-1	5750	ET/ORBITER DISCONNECT	ALL CREDIBLE MODE
2250-1	6014	ISOLATION AND BLOCKIN	FAIL OPEN
2250-2	56	DIODE, OPEN CROSSOVER	SHORT
2250-2	5750	ET/ORBITER DISCONNECT	ALL CREDIBLE MODE
2250-3	57	DIODE, OPEN CROSSOVER	SHORT TO GROUND
2251-1	5778	DIODE (12A)	FAIL OPEN (INHIBI
2251-1	6014	ISOLATION AND BLOCKIN	FAIL OPEN
2251-2	52	DIODE, CLOSING CROSSO	SHORT
2251-2	448	DIODE (12A), CL XOVER	SHORT
2251-3	53	DIODE, CLOSING CROSSO	SHORT TO GROUND
2251-3	449	DIODE (12A), CL XOVER	SHORT TO GROUND
2252-1	5750	ET/ORBITER DISCONNECT	ALL CREDIBLE MODE
2252-1	6011	POWER & CONTROL CIRCU	OPEN, SHORTED, IN
2257-1	657	HDC	LOSS OF OUTPUT
2259-1	660	RPC OUTPUT DIODE	OPEN
2259-2	661	RPC OUTPUT DIODE	SHORT
2260-1	6074	HYBRID DRIVER CONTROL	FAIL OPEN
2260-2	6075	HYBRID DRIVER CONTROL	INADVERTENT OUTPU
2261-1	6074	HYBRID DRIVER CONTROL	FAIL OPEN
2261-2	6075	HYBRID DRIVER CONTROL	INADVERTENT OUTPU
2262-1	6074	HYBRID DRIVER CONTROL	FAIL OPEN
2262-2	6075	HYBRID DRIVER CONTROL	INADVERTENT OUTPU
2263-1	12	HIGH POINT OPEN HDC (	LOSS OF OUTPUT
2263-2	13	HYBRID DRIVER CONTROL	FAIL ON
2264-1	6071	FUSE, 1A (3)	FAIL OPEN
2267-1	14	FILL AND DRAIN OPEN S	
2267-2	15	FILL AND DRAIN OPEN S	SHORT
2268-1	6076	ISOLATION DIODES (16)	FAIL OPEN, FAIL S
2268-2	6076	ISOLATION DIODES (16)	FAIL OPEN, FAIL S
2269-2	6076	ISOLATION DIODES (16)	FAIL OPEN, FAIL S
2270-1	6076	ISOLATION DIODES (16)	FAIL OPEN, FAIL S
2270-2	6076	ISOLATION DIODES (16)	FAIL OPEN, FAIL S
2271-2	6076	ISOLATION DIODES (16)	FAIL OPEN, FAIL S
2272-2	17	HIGH POINT OPEN SWITC	SHORT
2273-1	6076	ISOLATION DIODES (16)	FAIL OPEN, FAIL S
2274-1	6076	ISOLATION DIODES (16)	FAIL OPEN, FAIL S
2276-1	6076	ISOLATION DIODES (16)	FAIL OPEN, FAIL S
2278-1	20	HIGH POINT LA1 MDM BL	OPEN
2279-1	6076	ISOLATION DIODES (16)	FAIL OPEN, FAIL S
2281-2	434	DIODE (2), OPEN SW BL	SHORT
2282-1	5532	DIODE (3A) (4)	FAIL PREMATURE OF
2284-1	5532	DIODE (3A) (4)	FAIL PREMATURE OF
2286-2	439	DIODE (3A), CL SW BLO	SHORTS
2287-1	5533	DIODES (2) (3A)	FAIL OPEN/PREMATU
2300-1	814	FUSES (2)	OPEN
2306-1	7400	PNEUMATIC HELIUM SUPP	OPEN, SHORTED, IN
2307-1	7400	PNEUMATIC HELIUM SUPP	OPEN, SHORTED, IN

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NASA FMEA	MDAC-ID	ITEM	FAILURE MODE
2312-2	825	LO2 MANIFOLD REPRESS	PREM XFER TO OPEN
2313-2	826	LO2 MANIFOLD REPRESS	INADVERTENT OUTPU
2316-2	7500	LO2 MANIFOLD REPRESS	FAILS OPEN, SHORT
2319-2	7540	LH2 MANIFOLD REPRESS	FAILS OPEN, SHORT
2321-2	7540	LH2 MANIFOLD REPRESS	FAILS OPEN, SHORT
2344-1	99	LOCK HDC III (2)	LOSS OF OUTPUT
2344-1	482	LOCK HDC III (2)	LOSS OF OUTPUT
2344-2	100	LOCK HDC III (2)	INADVERTENT OUTPU
2344-2	483	LOCK HDC III (2)	INADVERTENT OUTPU
2345-1	101	UNLOCK HDC III (2)	LOSS OF OUTPUT
2345-1	484	UNLOCK HDC III (2)	LOSS OF OUTPUT
2345-2	102	UNLOCK HDC III (2)	INADVERTENT OUTPU
2345-2	485	UNLOCK HDC III (2)	INADVERTENT OUTPU
2346-1	103	LOCK RPC C OUTPUT DIO	OPEN
2346-1	486	LOCK RPC C OUTPUT DIO	OPEN
2346-2	104	LOCK RPC C OUTPUT DIO	SHORT
2346-2	487	LOCK RPC C OUTPUT DIO	SHORT
2347-1	106	UNLOCK RPC B OUTPUT D	OPEN
2347-1	489	UNLOCK RPC B OUTPUT D	OPEN
2347-2	107	UNLOCK RPC B OUTPUT D	SHORT
2347-2	490	UNLOCK RPC B OUTPUT D	SHORT
2348-1	109	LOCK RPC CROSSOVER DI	OPEN
2348-1	492	LOCK RPC XOVER DIODE	OPEN
2348-2	110	LOCK RPC CROSSOVER DI	SHORT
2348-2	493	LOCK RPC XOVER DIODE	SHORT
2349-1	112	UNLOCK RPC CROSSOVER	SHORT
2349-1	495	UNLOCK RPC XOVER DIOD	SHORT
2349-2	113	UNLOCK RPC CROSSOVER	OPEN
2349-2	496	UNLOCK RPC XOVER DIOD	OPEN
2349-3	114	UNLOCK RPC CROSSOVER	SHORT TO GROUND
2349-3	497	UNLOCK RPC XOVER DIOD	SHORT TO GROUND
2350-1	115	TRANSIENT SUPPRESSION	ALL
2350-1	498	TRANSIENT SUPPRESSOR	ALL
2354A-1	25	LA1 MDM ISOLATION DIO	OPEN
2354B-1	5171	DIODE. ISOLATION	FAIL OFF (PREMATU
2355A-1	27	OPEN SWITCH BLOCKING	OPEN
2356A-1	6086	ISOLATION DIODE (4)	FAIL OPEN
2356B-1	5170	DIODE. ISOLATION	FAIL OFF (PREMATU
2357A-2	30	CLOSE SWITCH ISOLATIO	SHORT
2359A-1	33	TRANSIENT SUPPRESSION	SHORT
2359B-1	5160	LO2 OUTBOARD FILL & D	ALL CREDIBLE MODE
2376-1	119	LOCK RPC B OUTPUT DIO	OPEN
2376-1	502	LOCK RPC B OUTPUT DIO	OPEN
2376-2	120	LOCK RPC B OUTPUT DIO	SHORT
2376-2	503	LOCK RPC B OUTPUT DIO	SHORT
2377-1	122	UNLOCK RPC C OUTPUT D	OPEN
2377-1	505	UNLOCK RPC C OUTPUT D	OPEN
2377-2	123	UNLOCK RPC C OUTPUT D	SHORT
2377-2	506	UNLOCK RPC C OUTPUT D	SHORT

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NASA FMEA	MDAC-ID	ITEM	FAILURE MODE
2381-1	6024	BLOCKING DIODE (4)	FAIL OPEN
2381-2	9	DIODES, 12A (2)	SHORT
2390-2	5000	LO2 PREVALVE CONTROL	ALL CREDIBLE MODE
2391-2	5000	LO2 PREVALVE CONTROL	ALL CREDIBLE MODE
2392-1	6157	ISOLATION DIODES, 12A	FAIL OPEN
2392-2	151	LH2 PREVALVES OPEN CO	SHORT
2393-1	6157	ISOLATION DIODES, 12A	FAIL OPEN
2393-2	153	LH2 PREVALVES CLOSE C	SHORT
2397-1	5138	DIODE, ISOLATION (1A,	FAIL OPEN (INHIBI
2397-2	44	RPC A OUTPUT DIODE	SHORT
2397-2	425	RPC A OUTPUT DIODE, 1	SHORT
2398-1	5779		
2398-1	6014	ISOLATION AND BLOCKIN	FAIL OPEN
2398-2	60	DIODE, CLOSE RPC C OU	SHORT
2398-2	454	DIODE CL RPC "C" OUT	SHORT
2399-1	5750	DIODE (12A)	FAIL OPEN (INHIBI
2399-1	6014	ISOLATION AND BLOCKIN	FAIL OPEN
2399-2	62	DIODE, OPEN RPC C OUT	SHORT
2399-2	5750	DIODE (12A)	FAIL OPEN (INHIBI
2404-2	7300	VALVE POWER AND CONTR	OPEN, SHORTED, IN
2416-2	5600	MPS INSTRUMENT POWER	FAILS OPEN, SHORT
N/A	1014	LO2 TANK PRE-PRESS CH	SPONTANEOUS IGNIT
N/A	6026	FLIGHT CRITICAL AFT M	FAIL ON, INADVERT
N/A	6027	FLIGHT CRITICAL AFT M	FAIL OPEN
NA	37	MDM LA1	OPEN
NA	305	LH2 HI POINT BLEED LI	RUPTURE/LEAKAGE
NA	311	LH2 RECIRCULATION DIS	RUPTURE/LEAKAGE O
NA	1055	GO2 PRESSURIZATION (O	SPONTANEOUS IGNIT
NA	1093	GO2 PRESSURIZATION MA	SPONTANEOUS IGNIT
NA	3082	ENGINE HELIUM SUPPLY	STRUCTURAL FAILUR
NA	3130	ENGINE HELIUM SUPPLY	EXTERNAL LEAKAGE
NA	4141	PNEU HE CROSSOVER SOL	FAILS TO REMAIN O
NA	4191	HE SUPPLY BLOWDOWN VA	FAILS TO REMAIN O
NA	4620	PNEUMATIC HE FILL LIN	STRUCTURAL FAILUR
NA	4650	PNEUMATIC HELIUM INTE	STRUCTURAL FAILUR
NA	5011	MDM (FA1)	PREMATURE/ERRONEO
NA	5012	MDM (FA2)	PREMATURE/ERRONEO
NA	5013	MDM (FA3)	PREMATURE/ERRONEO
NA	5014	MDM (FA4)	PREMATURE/ERRONEO
NA	5132	MDM (FA3)	PREMATURE/ERRONEO
NA	5133	MDM (FA3)	PREMATURE/ERRONEO
NA	5134	MDM (FA1)	PREMATURE/ERRONEO
NA	5135	MDM (FA1)	PREMATURE/ERRONEO
NA	5136	MDM (FA2)	PREMATURE/ERRONEO
NA	5137	MDM (FA2)	PREMATURE/ERRONEO
NA	5558	MDM (FA4)	PREMATURE/ERRONEO
NA	6016	INDICATOR SWITCH (PD2	FAIL OPEN, FAIL T
NA	6078	MDM (FA1, 2, LA1)	FAIL ON, INADVERT
NA	6088	MDM	FAIL OPEN, INADVE

APPENDIX D
POTENTIAL CRITICAL ITEMS

NASA FMEA	MDAC-ID	ITEM	FAILURE MODE
NA	6109	MDM (FA1, FA3, FA4)	FAIL OPEN
NA	6141	MDM (FA4)	FAILS OPEN, INADV
NA	6160	MODULATOR DEMODULATOR	FAIL OPEN, FAIL S
NA	7490	HELIUM SUPPLY BLOWDOWN	FAILS ON (PREMATU
XXXXXX	350	LH2 RTLS DUMP LINE (P	RUPTURE/LEAKAGE



