INDEPENDENT ORBITER ASSESSMENT

CIL ISSUES
RESOLUTION REPORT
VOLUME 1 OF 3

16 SEPTEMBER 1988
INDEPENDENT ORBITER ASSESSMENT
CIL ISSUES RESOLUTION REPORT

16 SEPTEMBER 1988

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1.0 EXECUTIVE SUMMARY

The McDonnell Douglas Astronautics Company (MDAC) was selected in June, 1986 to perform an Independent Orbiter Assessment (IOA) of the Failure Modes and Effects Analysis (FMEA) and Critical Items List (CIL). Direction was provided by the Orbiter and GFE Projects Office to perform the hardware analysis and assessment using the instructions and ground rules defined in NSTS 22206, Instructions for Preparation of FMEA and CIL.

Subsystem FMEA/CIL assessments were completed as revised NASA and prime contractor FMEA/CIL documentation became available. The MDAC IOA task was brought to an interim conclusion in March, 1988. This resulted in several subsystem assessment reports being published with open issues. Subsequent task authority was received that allowed for the resolution of all remaining open issues involving the critical items list.

This report contains IOA assessment worksheets showing resolution of outstanding IOA CIL issues that were summarized in the IOA FMEA/CIL Assessment Interim Report, dated 9 March 1988 (reference 70). Each assessment worksheet has been updated with CIL issue resolution and rationale.

2.0 INTRODUCTION

The 51-L Challenger accident prompted NASA to readdress safety policies, concepts, and rationale being used in the National Space Transportation System (NSTS). MDAC is providing an independent assessment of the proposed post 51-L Orbiter FMEA/CIL for completeness and technical accuracy.

The MDAC was initially tasked in June 1986 to conduct an independent analysis and assessment on twenty subsystems. Subsequently, in April 1987, eight additional subsystems were added which provided complete coverage of all standard Orbiter equipment. Table 2-1 provides a listing of the Orbiter and GFE subsystems identified by NASA to the National Research Council, Shuttle Criticality Review and Hazard Analysis Audit Committee.
<table>
<thead>
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<th>Original Twelve Subsystems (June 1986)</th>
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<tr>
<td>Guidance, Navigation and Control (GN&amp;C)</td>
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<td>Data Processing System (DPS)</td>
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<td>Backup Flight System (BFS)</td>
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<td>Nose Wheel Steering (NWS)</td>
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<td>Instrumentation (INST)</td>
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<td>Electrical Power, Distribution &amp; Control (EPD&amp;C)</td>
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<td>Main Propulsion System (MPS)</td>
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<tr>
<td>Fuel Cell Powerplant (FCP)</td>
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<td>Power Reactant Supply &amp; Distribution System (PRS&amp;D)</td>
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<tr>
<td>Orbital Maneuvering System (OMS)</td>
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<tr>
<td>Hydraulics &amp; Water Spray Boiler (HYD &amp; WSB)</td>
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<td>Atmospheric Revitalization System (ARS)</td>
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<td>Landing &amp; Deceleration (L&amp;D)</td>
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<td>Hydraulic Actuators (HA)</td>
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<td>Remote Manipulator System (RMS)</td>
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<th>Additional Eight Subsystems (April 1987)</th>
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<td>Communications and Tracking (C&amp;T)</td>
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<tr>
<td>Displays and Controls (D&amp;C)</td>
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<td>Crew Equipment (CE)</td>
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The IOA analysis approach is summarized in the following steps 1.0 through 3.0. Step 4.0 summarizes the assessment of the NASA and Prime Contractor FMEA/CIL.

Step 1.0 Subsystem Familiarization
1.1 Define subsystem functions
1.2 Define subsystem components
1.3 Define subsystem specific ground rules and assumptions

Step 2.0 Define Subsystem Analysis Diagram
2.1 Define subsystem
2.2 Define major assemblies
2.3 Develop detailed subsystem representations

Step 3.0 Failure Events Definition
3.1 Construct matrix of failure modes
3.2 Document IOA analysis results

Step 4.0 Compare IOA Analysis Data to NASA FMEA/CIL
4.1 Resolve differences
4.2 Review in-house
4.3 Document assessment issues
4.4 Forward findings to Project Manager

As a result of the preceding steps, general project assumptions and ground rules (Appendix B) were developed to amplify and clarify instructions in NSTS 22206. Also, subsystem specific assumptions and ground rules were defined.

3.0 CIL ISSUES RESOLUTION WORKSHEETS SUMMARY

The IOA analysis process produced an initial total of 10,735 independently derived failure modes and 4,513 potential critical items. As of 9 March 1988, when the Interim Report was published (reference 70), a total of 3,193 FMEA issues and 1,637 CIL assessment issues remained open due to a lack of revised subsystem FMEA/CIL documentation to be assessed. Several subsystems were still in the Rockwell FMEA/CIL revision process during the first quarter of 1988. The IOA assessment results were fully documented in separate subsystem reports (references 36 through 69) and summarized in the Interim Report. Subsequently, MDAC received revised CIL documentation and was able to resolve all CIL issues. Out of 1,693 CIL issues, NASA accepted 304 recommendations and IOA withdrew 1,369 issues. As a result, all issues with safety and mission implications were resolved.

Appendix C includes the revised IOA assessment worksheets reflecting the resolution of the open CIL issues. Resolution rationale is presented in the "Remarks" section at the bottom of each assessment worksheet.
The number of assessment worksheets differs in many cases from the number of CIL issues shown in the FMEA/CIL Assessment Interim Report. This difference stems from the fact that there is not always a one-to-one correspondence of IOA failure modes to NASA failure modes.

The following subsystems have been excluded from this report since they had no outstanding CIL issues remaining at the time of publication of the interim report.

- Fuel Cell Powerplant
- Hydraulic Actuators
- Displays and Controls
- Guidance, Navigation and Control
- Orbiter Experiments
- Auxiliary Power Unit
- Backup Flight System
- Electrical Power Distribution and Control

In addition, the Manned Maneuvering Unit was omitted. This was due to NASA indefinitely deferring its review of the Manned Maneuvering Unit FMEA/CIL.

4.0 CONCLUSIONS

This report, as a companion volume to the Independent Orbiter Assessment Final Report, MDAC Working Paper 1.0-WP-VA88003-47, dated 16 September 1988, is intended to provide resolution and rationale closing all open CIL assessment issues. In summary, the NASA and Prime Contractor post 51-L FMEA/CIL documentation assessed is believed to be technically accurate and complete. No assessment issues remain that have safety implications.

5.0 REFERENCES

NSTS 22206 AND RI 100-2G REVIEW

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64. Grasmeder, R. F.: Assessment of the Remote Manipulator Subsystem FMEA/CIL, 1.0-WP-VA88003-16, 26 February 1988


70. Independent Orbiter Assessment FMEA/CIL Assessment Interim Report, 1.0-WP-VA88003-40, 9 March 1988

71. Independent Orbiter Assessment FMEA/CIL Assessment Final Report, 1.0-WP-VA88003-47, 16 September 1988
ACRONYMS

ABS - Ammonia Boiler System
ACA - Annunciator Control Assembly
ACIP - Aerodynamic Coefficient Instrumentation Package
ADI - Attitude Direction Indicator
ADP - Air Data Probe
ADS - Audio Distribution System
ADTA - Air Data Transducer Assembly
ALCA - Aft Load Control Assembly
AMCA - Aft Motor Control Assembly
AOA - Abort-Once-Around
AOS - Acquisition of Signal
APC - Aft Power Controller
APU - Auxiliary Power Unit
ARCS - Aft Reaction Control System (Subsystem)
ARPCS - Atmospheric Revitalization Pressure Control System
ARS - Atmospheric Revitalization System
ASA - Aerosurface Servo Amplifier
ATCS - Active Thermal Control Subsystem
ATO - Abort-To-Orbit
ATVC - Ascent Thrust Vector Control
B&AS - Brakes and Antiskid
BF - Body Flap
BFC - Backup Flight Control
BFS - Backup Flight System
BITE - Built-In Test Equipment
C&W - Caution and Warning
CCB - Change Control Board
CCC - Contaminant Control Cartridge
CCTV - Closed-Circuit Television
CCU - Crew Communications Umbilical
CIL - Critical Items List
CIU - Communications Interface Unit
CNTLR - Controller
COAS - Crew Optical Alignment Sight
COMM - Communication
CPU - Central Processing Unit
CRIT - Criticality
CWS - Caution and Warning System
D&C - Displays and Controls
DAP - Digital Autopilot
DCM - Display and Control Module
DCN - Document Change Notice
DDU - Display Driver Unit
DEU - Display Electronic Unit
DFI - Development Flight Instrumentation
DHE - Data-Handling Electronics
DMA - Deployed Mechanical Assembly
DOD - Department of Defense
DPS - Data Processing System (Subsystem)
DSC - Dedicated Signal Conditioner
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<td>Environmental Control and Life Support System (Subsystem)</td>
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<td>ICM</td>
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<tr>
<td>NSI</td>
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ACRONYMS

NSP - Network Signal Processor
NSTS - National Space Transportation System
NWS - Nose-Wheel Steering
OBS - Operational Bioinstrumentation System
OEX - Orbiter Experiments
OI - Operational Instrumentation
OMRS D - Operational Maintenance Requirements & Specifications Document
OMS - Orbital Maneuvering System
OTB - Orbiter Timing Buffer
OWDA - Operational Water Dispenser Assembly
P/L - Payload
PASS - Primary Avionics Software System
PBI - Push-Button Indicator
PBM - Payload Bay Mechanical
PCA - Power Control Assembly
PCI - Potential Critical Item
PCM - Pulse Code Modulation
PCMMU - Pulse Code Modulation Master Unit
PCN - Page Change Notice
PCS - Pressure Control System
PDU - Power Drive Unit
PFR - Portable Foot Restraint
PHS - Personal Hygiene Station
PI - Payload Interrogater
PIC - Pyro Initiator Controller
PLB - Payload Bay
PLBD - Payload Bay Door
PLS - Primary Landing Site
PLSS - Portable Life Support Subsystem
PMS - Propellant Management Subsystem
PRCB - Program Requirements Control Board
PRCBD - Program Requirements Control Board Directive
PRCS - Primary Reaction Control System (jet)
PRD - Payload Retention Device
PROM - Programmable Read-Only Memory
PRSD - Power Reactant Storage and Distribution
PRSDS - Power Reactant Storage and Distribution System
PSA - Power Section Assembly
PSA - Provision Stowage Assembly
PSP - Payload Signal Processor
PTT - Push-to-talk
PV&D - Purge, Vent & Drain
QD - Quick Disconnect
R/BPA - Rudder/Pedal Brake Assembly
RAM - Random Access Memory
RCS - Reaction Control System
RFCA - Radiator and Flow Control Assembly
RFI - Radio Frequency Interference
RGA - Rate Gyro Assembly
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<td>TVC</td>
<td>Thrust Vector Control</td>
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</table>
ACRONYMS

UCD - Urine Collection Device
UEA - Unitized Electrode Assembly
UHF - Ultra High Frequency
VDM - Vent Door Mechanism
VRCS - Vernier Reaction Control System (jet)
WBSC - Wide-Band Signal Conditioner
WCCS - Window Cavity Conditioning System
WCCU - Wireless Crew Communications Umbilical
WMS - Waste Management System
WP - Working Paper
WRS - Water Removal Subsystem
WSB - Water Spray Boiler
APPENDIX B

DEFINITIONS, GROUND RULES, AND ASSUMPTIONS

B.1 Definitions
B.2 Project Level Ground Rules and Assumptions
APPENDIX B
DEFINITIONS, GROUND RULES, AND ASSUMPTIONS

B.1 Definitions

Definitions contained in NSTS 22206, Instructions For Preparation of FMEA/CIL, were used with the following amplifications and additions.

INTACT ABORT DEFINITIONS:

RTLS - begins at transition to OPS 6 and ends at transition to OPS 9, post-flight

TAL - begins at declaration of the abort and ends at transition to OPS 9, post-flight

AOA - begins at declaration of the abort and ends at transition to OPS 9, post-flight

ATO - begins at declaration of the abort and ends at transition to OPS 9, post-flight

CREDIBLE (CAUSE) - an event that can be predicted or expected in anticipated operational environmental conditions. Excludes an event where multiple failures must first occur to result in environmental extremes

CONTINGENCY CREW PROCEDURES - procedures that are utilized beyond the standard malfunction procedures, pocket checklists, and cue cards

EARLY MISSION TERMINATION - termination of onorbit phase prior to planned end of mission

EFFECTS/RATIONALE - description of the case which generated the highest criticality

HIGHEST CRITICALITY - the highest functional criticality determined in the phase-by-phase analysis

MAJOR MODE (MM) - major sub-mode of software operational sequence (OPS)

MC - Memory Configuration of Primary Avionics Software System (PASS)

MISSION - assigned performance of a specific Orbiter flight with payload/objective accomplishments including orbit phasing and altitude (excludes secondary payloads such as GAS cans, middeck P/L, etc.)
MULTIPLE ORDER FAILURE - describes the failure due to a single cause or event of all units which perform a necessary (critical) function

OFF-NOMINAL CREW PROCEDURES - procedures that are utilized beyond the standard malfunction procedures, pocket checklists, and cue cards

OPS - software operational sequence

PRIMARY MISSION OBJECTIVES - worst case primary mission objectives are equal to mission objectives

PHASE DEFINITIONS:

PRELAUNCH PHASE - begins at launch count-down Orbiter power-up and ends at moding to OPS Major Mode 102 (liftoff)

LIFTOFF MISSION PHASE - begins at SRB ignition (MM 102) and ends at transition out of OPS 1 (Synonymous with ASCENT)

ONORBIT PHASE - begins at transition to OPS 2 or OPS 8 and ends at transition out of OPS 2 or OPS 8

DEORBIT PHASE - begins at transition to OPS Major Mode 301 and ends at first main landing gear touchdown

LANDING/SAFING PHASE - begins at first main gear touchdown and ends with the completion of post-landing safing operations
B.2 IOA Project Level Ground Rules and Assumptions

The philosophy embodied in NSTS 22206, Instructions for Preparation of FMEA/CIL, was employed with the following amplifications and additions.

1. The operational flight software is an accurate implementation of the Flight System Software Requirements (FSSRs).

   RATIONALE: Software verification is out-of-scope of this task.

2. After liftoff, any parameter which is monitored by system management (SM) or which drives any part of the Caution and Warning System (C&W) will support passage of Redundancy Screen B for its corresponding hardware item.

   RATIONALE: Analysis of on-board parameter availability and/or the actual monitoring by the crew is beyond the scope of this task.

3. Any data employed with flight software is assumed to be functional for the specific vehicle and specific mission being flown.

   RATIONALE: Mission data verification is out-of-scope of this task.

4. All hardware (including firmware) is manufactured and assembled to the design specifications/drawings.

   RATIONALE: Acceptance and verification testing is designed to detect and identify problems before the item is approved for use.

5. All Flight Data File crew procedures will be assumed performed as written, and will not include human error in their performance.

   RATIONALE: Failures caused by human operational error are out-of-scope of this task.
6. All hardware analyses will, as a minimum, be performed at the level of analysis existent within NASA/Prime Contractor Orbiter FMEA/CILs, and will be permitted to go to greater hardware detail levels but not lesser.

RATIONALE: Comparison of IOA analysis results with other analyses requires that both analyses be performed to a comparable level of detail.

7. Verification that a telemetry parameter is actually monitored during AOS by ground-based personnel is not required.

RATIONALE: Analysis of mission-dependent telemetry availability and/or the actual monitoring of applicable data by ground-based personnel is beyond the scope of this task.

8. The determination of criticalities per phase is based on the worst case effect of a failure for the phase being analyzed. The failure can occur in the phase being analyzed or in any previous phase, whichever produces the worst case effects for the phase of interest.

RATIONALE: Assigning phase criticalities ensures a thorough and complete analysis.

9. Analysis of wire harnesses, cables, and electrical connectors to determine if FMEAs are warranted will not be performed nor FMEAs assessed.

RATIONALE: Analysis was substantially complete prior to NSTS 22206 ground rule redirection.

10. Analysis of welds or brazed joints that cannot be inspected will not be performed nor FMEAs assessed.

RATIONALE: Analysis was substantially complete prior to NSTS 22206 ground rule redirection.

11. Emergency system or hardware will include burst discs and will exclude the EMU Secondary Oxygen Pack (SOP), pressure relief valves and the landing gear pyrotechnics.

RATIONALE: Clarify definition of emergency systems to ensure consistency throughout IOA project.
SECTION C-1

LANDING AND DECELERATION SUBSYSTEM
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/15/86
ASSESSMENT ID: LDGDEC-10205
NASA FMEA #: 02-1-079-1
NASA DATA:
BASELINE [ X ]
NEW [ ]

SUBSYSTEM: LANDING/DECELERATION SYSTEMS
MDAC ID: 10205
ITEM: DOWNLOCK BUNGEE

LEAD ANALYST: W. WEISSINGER

ASSESSMENT:

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<th>CRITICALITY</th>
<th>REDUNDANCY SCREENS</th>
<th>CIL</th>
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<tr>
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<td>HDW/FUNC</td>
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<tr>
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<td>B</td>
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NASA [ 3 /1R ] [ P ] [ NA] [ P ] [ ] *
IOA [ 1 /1 ] [ NA] [ NA] [ NA] [ X ]
COMPARE [ N /N ] [ N ] [ ] [ N ] [ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

ALSO SEE 10206
THE DOWNLOCK BUNGEE IS A MECHANICAL DEVICE THAT IF BENT OR JAMMED IN THE EXTENDED POSITION COULD CAUSE A FORCE THAT WOULD UNLOCK THE LOCK BRACE.

HYDRAULICS - THE EXTEND/RETRACT HYD ACTUATOR IS THE ONLY REDUNDANT ITEM. WHEN THE VEHICLE IS SHUT DOWN POST LANDING THERE IS NO REDUNDANCY. THE NASA FMEA/CIL DOES NOT CONSIDER APU SHUTDOWN OCCURRING BEFORE CREW EGRESS.

NASA/RI UPGRADED THE CRITICALITY OF NLG OVERCENTER DOWNLOCK BUNGEE STRUCTURAL FAILURE FROM 3/1R TO 2/1R. UPON FURTHER ANALYSIS THE IOA AGREES THAT PHYSICAL BINDING/JAMMING (A RESULT OF STRUCTURAL FAILURE) IS NOT A SINGLE FAILURE POINT; THEREFORE, THE IOA CRITICALITY SHOULD BE DOWNGRADED FROM 1/1 TO 2/1R.

REPORT DATE 19 JUNE 1988 C.1-2
**APPENDIX C**

**ASSESSMENT WORKSHEET**

**ASSESSMENT DATE:** 12/15/86  
**ASSESSMENT ID:** LDGDEC-10206  
**NASA FMEA #:** 02-1-079-1  
**SUBSYSTEM:** LANDING/DECELERATION SYSTEMS  
**MDAC ID:** 10206  
**ITEM:** DOWNLOCK BUNGEE  
**LEAD ANALYST:** W. WEISSINGER

**ASSESSMENT:**

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**RECOMMENDATIONS:** (If different from NASA)

[ ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

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

ADEQUATE [ ]  
INADEQUATE [ ]

**REMARKS:**

SEE 10205. THERE WILL BE NO COMPLICATIONS THROUGHOUT THE LANDING UNTIL AFTER THE VEHICLE IS SHUTDOWN. ONCE THE HYDRAULICS SYSTEM IS DEACTIVATED THERE IS NO SYSTEM TO HOLD THE LOCK BRACE IN POSITION, AND A GUST OF WIND, AN IMPACT FROM APPROACHING VEHICLES OR MOVEMENT INSIDE THE VEHICLE COULD CAUSE NLG COLLAPSE. A COLLAPSE OF THE NLG WOULD CAUSE STRUCTURAL DAMAGE AND A POSSIBLE LOSS OF LIFE. THIS SITUATION CAN BE BYPASHED BY INSTALLING THE LANDING GEAR SAFETY PINS IN THE LOCK BRACE PRIOR TO HYDRAULICS SYSTEM 1 SHUTDOWN.

NASA/RI UPGRADED THE CRITICALITY OF NLG OVERCENTER DOWNLOCK BUNGEE STRUCTURAL FAILURE FROM 3/1R TO 2/1R. UPON FURTHER ANALYSIS THE IOA AGREED THAT STRUCTURAL FAILURE IS NOT A SINGLE FAILURE POINT; THEREFORE, THE IOA CRITICALITY SHOULD BE DOWNGRADED FROM 1/1 TO 2/1R.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/15/86
ASSESSMENT ID: LDGDEC-10210
NASA FMEA #: NONE

SUBSYSTEM: LANDING/DECELERATION SYSTEMS
MDAC ID: 10210
ITEM: STEERING DISCONNECT LOCK

LEAD ANALYST: W. WEISSINGER

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ X ]

REMARKS:

NOT CONSIDERED BY THE NASA FMEA/CIL

NASA FMEA 02-1A-076-1 ADDRESSES STRUCTURAL FAILURE OF THE NOSE LANDING GEAR TORQUE ARMS. THE IOA CONSIDERS THE STRUCTURAL FAILURE OF THE STEERING DISCONNECT LOCK TO BE COVERED BY THE NASA FMEA. THE IOA AND NASA/RI AGREE ON A 1/1 CRITICALITY.

REPORT DATE 19 JUNE 1988 C.1-4
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/15/86
ASSESSMENT ID: LDGDEC-10211
NASA FMEA #: 02-1-076-1

SUBSYSTEM: LANDING/DECELERATION SYSTEMS
MDAC ID: 10211
ITEM: TORQUE ARM ASSEMBLY

LEAD ANALYST: W. WEISSINGER

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ X ]

REMARKS:
A NOSE WHEEL SLAPDOWN WHERE THE NOSE WHEEL ROTATES BEYOND A SAFE ANGLE OF ATTACK WILL CAUSE AN IMMEDIATE COLLAPSE OF THE NLG.
NASA/RI UPGRADED THE CRITICALITY OF FMEA 02-1A-076-1 FROM 2/1R TO 1/1; THEREFORE, THE IOA AND NASA/RI ASSESSMENTS ARE IN COMPLETE AGREEMENT.

REPORT DATE 19 JUNE 1988 C.1-5
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/15/86
ASSESSMENT ID: LDGDEC-10212
NASA FMEA #: NONE
NASA DATA:
BASELINE [ ]
NEW [ ]

SUBSYSTEM: LANDING/DECELERATION SYSTEMS
MDAC ID: 10212
ITEM: NOSE WHEEL RETAINING BOLT

LEAD ANALYST: W. WEISSINGER

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

REMARKS:
ADDITIONAL DATA UNCOVERED AFTER STUDY COMPLETION ELIMINATES THIS IOA EVALUATION REPORT

REPORT DATE 19 JUNE 1988 C.1-6
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/15/86
ASSESSMENT ID: LDGDEC-10213
NASA FMEA #: NONE
SUBSYSTEM: LANDING/DECELERATION SYSTEMS
MDAC ID: 10213
ITEM: AXLE
LEAD ANALYST: W. WEISSINGER

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NOT EVALUATED BY NASA
NASA FMEA 02-1A-075-1 ADDRESSES STRUCTURAL FAILURE OF THE NOSE LANDING GEAR SHOCK STRUT AND OUTER CYLINDER AND LOAD CARRYING MEMBERS. FROM FURTHER ANALYSIS THE IOA CONCLUDES THAT THE NOSE LANDING GEAR AXLE IS PART OF THE NOSE LANDING GEAR SHOCK STRUT ASSEMBLY AND THEREFORE CAN BE CONSIDERED TO BE COVERED BY THE FMEA. THERE IS AGREEMENT BETWEEN THE IOA AND NASA/RI THAT THE CRITICALITY IS 1/1 AND THE HARDWARE FAILURE MODE IS A CIL ITEM.

REPORT DATE 19 JUNE 1988  C.1-7
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/15/86
ASSESSMENT ID: LDGDEC-10220
NASA FMEA #: NONE

NASA DATA:
BASELINE [ ]
NEW [ ]

SUBSYSTEM: LANDING/DECELERATION SYSTEMS
MDAC ID: 10220
ITEM: TORQUE TUBE ASSEMBLY

LEAD ANALYST: W. WEISSINGER

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

THE WORST CASE SCENARIO FOR A BROKEN TORQUE TUBE ASSEMBLY WOULD BE A FAILURE THAT WOULD PREVENT THE NLG FROM LOCKING IN THE EXTENDED POSITION. SIMILAR TO MLG TORQUE TUBE ASSY REF 02-1-010-1.

NASA/RI CREATED A NEW FMEA (02-1A-111-1) FOR THE NOSE LANDING GEAR TORQUE TUBE ASSEMBLY FAILURE MODE. THE IOA AND NASA/RI ARE IN AGREEMENT THAT THE CRITICALITY IS 1/1.

REPORT DATE 19 JUNE 1988 C.1-8
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/15/86
ASSESSMENT ID: LDGDEC-10221
NASA FMEA #: 02-1-077-1

SUBSYSTEM: LANDING/DECELERATION SYSTEMS
MDAC ID: 10221
ITEM: DRAG BRACE
LEAD ANALYST: W. WEISSINGER

NASA DATA:
BASELINE [ X ]
NEW [ ]

ITEM

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

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

REMARKS:
ALSO SEE 10202, 10203

FMEA 02-1-077-1 COVERS THE NLG DRAG BRACE ASSEMBLY BUT IT DOES NOT COVER THE CRITICAL PARTS INDIVIDUALLY. IOA AGREES WITH CRITICALITY.

REPORT DATE 19 JUNE 1988
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/15/86
ASSESSMENT ID: LDGDEC-10402
NASA FMEA #: 02-6-H01-A02

SUBSYSTEM: LANDING/DECELERATION SYSTEMS
MDAC ID: 10402
ITEM: NLG EXTEND / RETRACT HYD STRUT ACT

LEAD ANALYST: J. COMPTON

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

POSSIBLE LOSS OF HYDRAULICS SYSTEM 1. IF THE SYSTEM FAILS, THEN THE ORBITER IS ONE FAILURE AWAY FROM LOSS OF LIFE OR VEHICLE. THE GEAR HAS A PYRO BACKUP TO UNLOCK THE GEAR. IF IT FAILS, THE GEAR WILL NOT DEPLOY. NASA INCORPORATED THIS FMEA/CIL INTO-AO1 WHICH IS A HIGHER CRITICALITY. AN EXTERNAL LEAK IS STILL A LEAK REGARDLESS OF THE FAILURE MODE. ISSUE RESOLVED; IOA ACCEPTS HIGHER CRITICALITY.
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/15/86
ASSESSMENT ID: LDGDEC-10416
NASA FMEA #: 02-6-H01-A04

NASA DATA:
BASELINE [ X ]
NEW [ ]

SUBSYSTEM: LANDING/DECELERATION SYSTEMS
MDAC ID: 10416
ITEM: NLG EXTEND / RETRACT HYD STRUT ACTUATOR

LEAD ANALYST: J. COMPTON

ASSESSMENT:

CRITICALITY

FLIGHT HDW/FUNC

REDUNDANCY SCREENS

CIL
ITEM

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:
REDUNDANCY SCREEN B BECAUSE HYD SYS 1 FLUID IS NOT CIRCULATED TO THIS ACTUATOR ON ORBIT, THUS THE FAILURE IS NOT DETECTED. HOWEVER, FAILURE IS DETECTED WHEN SYSTEM ACTIVATED, THUS PASSING SCREEN. NASA INCORPORATED THIS FMEA/CIL INTO A01, WHICH IS A HIGHER CRITICALITY-1/1.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/15/86
ASSESSMENT ID: LDGDEC-11003
NASA FMEA #: 02-6-H03-2
SUBSYSTEM: LANDING/DECELERATION SYSTEMS
MDAC ID: 11003
ITEM: NLG UPLOCK ACTUATOR
LEAD ANALYST: J. COMPTON

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

POSSIBLE LOSS OF HYDRAULICS SYSTEM 1. IF SYSTEM FAILS, THEN THE ORBITER IS ONE FAILURE AWAY FROM LOSS OF LIFE OR VEHICLE. PYRO BACKUP. HYDRAULIC FLUID IS NOT CIRCULATED TO THIS ACTUATOR ON ORBIT, THUS FAILURE CANNOT BE DETECTED - FAILS REDUNDANCY SCREEN B.

WITHDRAW. THIS FAILURE IS INCORPORATED INTO-H03-1. A LEAK IS A LEAK REGARDLESS OF THE FAILURE MODE.

NASA DATA:
BASELINE [ X ]
NEW [ ]

LANDING/DECELERATION SYSTEMS

REMARKS:

POSSIBLE LOSS OF HYDRAULICS SYSTEM 1. IF SYSTEM FAILS, THEN THE ORBITER IS ONE FAILURE AWAY FROM LOSS OF LIFE OR VEHICLE. PYRO BACKUP. HYDRAULIC FLUID IS NOT CIRCULATED TO THIS ACTUATOR ON ORBIT, THUS FAILURE CANNOT BE DETECTED - FAILS REDUNDANCY SCREEN B.

WITHDRAW. THIS FAILURE IS INCORPORATED INTO-H03-1. A LEAK IS A LEAK REGARDLESS OF THE FAILURE MODE.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/15/86
ASSESSMENT ID: LDGDEC-11004
NASA FMEA #: NONE

NASA DATA:
BASELINE [ ]
NEW [ ]

SUBSYSTEM: LANDING/DECELERATION SYSTEMS
MDAC ID: 11004
ITEM: NLG UPLOCK ACTUATOR

LEAD ANALYST: J. COMPTON

ASSESSMENT:

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NASA [ ] [ ] [ ] [ ] [ ] *
IOA [ 2 /1R ] [ P ] [ F ] [ P ] [ X ]
COMPARE [ N /N ] [ N ] [ N ] [ N ] [ N ]

RECOMMENDATIONS: (If different from NASA)

[ ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

GEAR WILL NOT RELEASE HYDRAULICALLY. THE PYRO BACKUP WILL RELEASE THE GEAR ONE SECOND AFTER THE COMMAND TO DEPLOY IF THE LANDING GEAR HOOK IS NOT OPEN. THIS FAILURE IS THE SAME AS AN "EXTERNAL HYDRAULIC LEAK" FOR CRITICALITY. THEREFORE, IT CAN BE COMBINED WITH MDAC 11005.

REPORT DATE 19 JUNE 1988 C.1-13
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/15/86
ASSESSMENT ID: LDGDEC-11005
NASA FMEA #: 02-6-H03-1
NASA DATA: BASELINE [ X ]
NEW [ ]

SUBSYSTEM: LANDING/DECELERATION SYSTEMS
MDAC ID: 11005
ITEM: NLG UPLOCK ACTUATOR

LEAD ANALYST: J. COMPTON

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
REDUNDANCY SCREEN B FAILS BECAUSE HYD SYS. 1 FLUID IS NOT CIRCULATED TO THIS ACTUATOR ON ORBIT, THUS FAILURE NOT DETECTED. HOWEVER, FAILURE IS DETECTED WHEN SYSTEM ACTIVATED, THUS PASSING SCREEN.

REPORT DATE 19 JUNE 1988 C.1-14
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/15/86
ASSESSMENT ID: LDGDEC-11102
NASA FMEA #: 02-1-097-1

NASA DATA:
BASELINE [ X ]
NEW [ ]

SUBSYSTEM: LANDING/DECELERATION SYSTEMS
MDAC ID: 11102
ITEM: NLG B/U PYRO UPLOCK RELEASE MECH

LEAD ANALYST: J. COMPTON

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
INADEQUATE [ X ]

REMARKS:
SYSTEM IS NOT USED UNLESS HYDRAULIC UPLOCK RELEASE SYSTEM FAILS. IF THIS SYSTEM FAILS WHEN CALLED ON TO FUNCTION, THERE IS NO OTHER BACKUP.

ACCORDING TO THE REDUNDANCY RULES IN 22206, THIS SYSTEM IS A 2/1R CRITICALITY BUT, A FAILED HYDRAULICS SYSTEM ACTIVATES THIS SYSTEM. THIS SYSTEMS FAILURE WILL NOT ACTIVATE THE HYDRAULICS. THERE IS A LINEAR OPERATION HERE THAT WILL NOT ALLOW REVERSAL OF THE ROLES.

THE CRITICALITY DIFFERENCE IS ATTRIBUTED TO DIFFERENT INTERPRETATIONS OF THE REDUNDANCY RULES IN NSTS 22206. FROM ADDITIONAL ANALYSIS THE IOA AGREES WITH THE NASA/RI ASSIGNMENT OF CRITICALITY 2/1R AND THE RETENTION OF THE FAILURE MODE AS A CIL ITEM.

REPORT DATE 19 JUNE 1988   C.1-15
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/15/86
ASSESSMENT ID: LDGDEC-11302
NASA FMEA #: NONE
SUBSYSTEM: LANDING/DECELERATION SYSTEMS
MDAC ID: 11302
ITEM: NLG DOOR BUNGEE ASSIST ASSY
LEAD ANALYST: W.WEISSINGER

NASA DATA:
BASELINE [ ]
NEW [ ]

CRITICALITY REDUNDANCY SCREENS CIL
FLIGHT HDW/FUNC A B C ITEM

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RECOMMENDATIONS: (If different from NASA)

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

REMARKS:
BUNGEE COULD POSSIBLY INADVERTENTLY RELEASE CAUSING THE NLG DOOR TO CRACK OPEN.
NASA/RI CREATED A NEW FMEA (02-1A-102-2) WHICH ADDRESSES PREMATURE RELEASE OF THE NOSE LANDING GEAR BOOSTER BUNGEE-DOOR EXTENSION ASSIST. THE ASSIGNED CRITICALITY IS 1/1 WHICH IS IN AGREEMENT WITH THE IOA ASSESSMENT.

REPORT DATE 19 JUNE 1988 C.1-16
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/15/86
ASSESSMENT ID: LDGDEC-20202
NASA FMEA #: 02-1-001-2

NASA DATA:
BASELINE [ X ]
NEW [ ]

NASA FMEA #: 02-1-001-2

SUBSYSTEM: LANDING/DECELERATION SYSTEMS
MDAC ID: 20202
ITEM: SHOCK STRUT PISTON ASSEMBLY

LEAD ANALYST: W. WEISSINGER

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

THE NASA FMEA COVERS ONLY THE LOSS OF NITROGEN.
NASA/RI PREPARED A NEW FMEA, 02-1A-001-3, TO ADDRESS THE LOSS OF MLG SHOCK STRUT HYDRAULIC FLUID. THE 1/1 CRITICALITY IS IN AGREEMENT WITH THE IOA CRITICALITY.

REPORT DATE 19 JUNE 1988 C.1-17
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/15/86
ASSESSMENT ID: LDGDEC-20203
NASA FMEA #: 02-1-001-2

NASA DATA:
BASELINE [ X ]
NEW [ ]

SUBSYSTEM: LANDING/DECELERATION SYSTEMS
MDAC ID: 20203
ITEM: SHOCK STRUT PISTON ASSEMBLY

LEAD ANALYST: W. WEISSINGER

ASSESSMENT:

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

COMPARE [ /N ] [ ] [ ] [ ] [ ] [ ] [ N ]

RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NASA FMEA ASSUMES LOSS OF NITROGEN ELASTIC MEDIUM ONLY.
HYD FLUID IS CONSIDERED AS CAPABLE OF ABSORBING A LANDING SHOCK PER MC621-0011.
IOA AGREES WITH THE NASA/RI 3/3 CRITICALITY FOR LOSS OF NITROGEN PRESSURE IN THE MLG SHOCK STRUT. LOSS OF HYDRAULIC FLUID IS A DIFFERENT FAILURE MODE AND IS COVERED BY SEPARATE FMEA.

REPORT DATE 19 JUNE 1988 C.1-18
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/15/86
ASSESSMENT ID: LDGDEC-20205
NASA FMEA #: NONE

NASA DATA:
BASELINE [ ]
NEW [ ]

SUBSYSTEM: LANDING/DECELERATION SYSTEMS
MDAC ID: 20205
ITEM: AXLE KIT - MLG

LEAD ANALYST: W. WEISSINGER

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NASA FMEA 02-1A-001-1 ADDRESSES STRUCTURAL FAILURE OF THE MAIN LANDING GEAR SHOCK STRUT INNER AND OUTER CYLINDER AND LOAD CARRING MEMBERS. FROM FURTHER ANALYSIS THE IOA CONCLUDES THAT THE MAIN LANDING GEAR AXLE IS PART OF THE MAIN LANDING GEAR SHOCK STRUT ASSEMBLY AND THEREFORE CAN BE CONSIDERED TO BE COVERED BY THE FMEA. THERE IS AGREEMENT BETWEEN THE IOA AND NASA/RI THAT THE CRITICALITY IS 1/1 AND THE HARDWARE FAILURE MODE IS A CIL ITEM.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/15/86
ASSESSMENT ID: LDGDEC-20209
NASA FMEA #: 02-1-008-1

NASA DATA:
BASELINE [ X ]
NEW [ ]

SUBSYSTEM: LANDING/DECELERATION SYSTEMS
MDAC ID: 20209
ITEM: DOWN LOCK BUNGEE

LEAD ANALYST: W. WEISSINGER

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

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

REMARKS:
UNTIL THE SAFETY PIN IS INSTALLED IN THE LOCK BRACE THERE IS A MAJOR PROBLEM. FROM THE TIME THE HYD SYS 1 IS SHUTDOWN UNTIL THE SAFETY IS INSTALLED THERE IS AN IMMINENT THREAT OF COLLAPSE. NASA/RI UPGRADED THE CRITICALITY OF MLG OVERCENTER DOWNLOCK BUNGEE STRUCTURAL FAILURE FROM 3/IR TO 2/IR. UPON FURTHER ANALYSIS THE IOA AGREES THAT THE DOWNLOCK BUNGEE IS NOT A SINGLE FAILURE POINT; THEREFORE, THE IOA, CRITICALITY SHOULD BE DOWNGRADED FROM 1/1 TO 2/1R.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/15/86
ASSESSMENT ID: LDGDEC-20210
NASA FMEA #: 02-1-008-1
NASA DATA:
BASELINE [ X ]
NEW [ ]

SUBSYSTEM: LANDING/DECELERATION SYSTEMS
MDAC ID: 20210
ITEM: DOWN LOCK BUNGEE

LEAD ANALYST: W. WEISSINGER

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

SEE IOA EFFECTS/RATIONALE.

NASA/RI UPGRADED THE CRITICALITY OF MLG OVERCENTER DOWNLOCK BUNGEE STRUCTURAL FAILURE FROM 3/1R TO 2/1R. UPON FURTHER ANALYSIS THE IOA AGREES THAT THE DOWNLOCK BUNGEE IS NOT A SINGLE FAILURE POINT; THEREFORE, THE IOA CRITICALITY SHOULD BE DOWNGRADED FROM 1/1 TO 2/1R.

REPORT DATE 19 JUNE 1988 C.1-21
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/15/86  NASA DATA:
ASSESSMENT ID: LDGDEC-20402  BASELINE [ X ]
NASA FMEA #: 02-6-G09-A02  NEW [ ]

SUBSYSTEM: LANDING/DECELERATION SYSTEMS
MDAC ID: 20402
ITEM: MLG EXTEND / RETRACT HYD STRUT ACT

LEAD ANALYST: J. COMPTON

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

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

REMARKS:
POSSIBLE LOSS OF HYDRAULICS SYSTEM 1. IF SYSTEM FAILS, THEN
THE ORBITER IS ONE FAILURE AWAY FROM LOSS OF LIFE OR VEHICLE.
THE GEAR HAS A PYRO BACKUP TO UNLOCK THE GEAR. IF IT FAILS, THE
GEAR WILL NOT DEPLOY. NASA INCORPORATED THIS FMEA/CIL
WITH-A01 WHICH IS A HIGHER CRITICALITY (I/I). AN EXTERNAL LEAK
IS A LEAK REGARDLESS OF THE FAILURE MODE. ISSUE RESOLVED; IOA
ACCEPTS HIGHER CRITICALITY.

REPORT DATE 19 JUNE 1988  C.1-22
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/15/86
ASSESSMENT ID: LGDDEC-20416
NASA FMEA #: 02-6-G09-A04

NASA DATA:
BASELINE [ X ]
NEW [ ]

SUBSYSTEM: LANDING/DECELERATION SYSTEMS
MDAC ID: 20416
ITEM: MLG EXTEND / RETRACT HYD STRUT ACT

LEAD ANALYST: J. COMPTON

ASSESSMENT:

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

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

REMARKS:
REDUNDANCY SCREEN B FAILS BECAUSE HYD SYS 1 FLUID IS NOT CIRCULATED TO THIS ACTUATOR ON ORBIT, THUS, THE FAILURE IS NOT DETECTED. HOWEVER, FAILURE IS DETECTED WHEN SYSTEM ACTIVATED, THUS PASSING SCREEN. NASA INCORPORATED THIS FAILURE INTO A01 WHICH IS A 1/1.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/15/86
ASSESSMENT ID: LDGDEC-21003
NASA FMEA #: 02-6-G08-A02

SUBSYSTEM: LANDING/DECELERATION SYSTEMS
MDAC ID: 21003
ITEM: MLG UPLOCK ACTUATOR
LEAD ANALYST: J. COMPTON

ASSESSMENT:

CRITICALITY

FLIGHT
HDW/FUNC
A B C

NASA [ 2 ] [ P ] [ P ] [ P ] [ X ] *
IOA [ 2 ] [ P ] [ F ] [ P ] [ X ]

RECOMMENDATIONS: (If different from NASA)

[ ] [ ] [ ] [ ] [ ]

* CIL RETENTION RATIONALE: (If applicable)

Adequate [ ]
Inadequate [ ]

REMARKS:
POSSIBLE LOSS OF HYDRAULICS SYSTEM 1. IF SYSTEM FAILS, THEN
THE ORBITER IS ONE FAILURE AWAY FROM LOSS OF LIFE OR VEHICLE.
PYRO BACKUP. HYDRAULIC FLUID IS NOT CIRCULATED TO THIS ACTUATOR
ON ORBIT, THUS FAILURE CANNOT BE DETECTED – FAILS REDUNDANCY
SCREEN B. HOWEVER, FAILURE IS DETECTED WHEN SYSTEM ACTIVATED,
THUS PASSING SCREEN.

REPORT DATE 19 JUNE 1988 C.1-24
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/15/86  NASA DATA:  
ASSESSMENT ID: LDGDEC-21004  BASELINE [ ]  
NASA FMEA #: NONE  NEW [ ]  

SUBSYSTEM: LANDING/DECELERATION SYSTEMS  
MDAC ID: 21004  
ITEM: MLG UPLOCK ACTUATOR  

LEAD ANALYST: J. COMPTON  

ASSESSMENT:

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

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

REMARKS:  
GEAR WILL NOT RELEASE HYDRAULICALLY. THE PYRO BACKUP WILL RELEASE THE GEAR ONE SECOND AFTER THE COMMAND TO DEPLOY IF THE LANDING GEAR HOOK IS NOT OPEN. THIS FAILURE IS THE SAME AS AN "EXTERNAL HYDRAULIC LEAK" FOR CRITICALITY. THEREFORE, IT CAN BE COMBINED WITH MDAC 21003. WITHDRAW.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/15/86
ASSESSMENT ID: LGDDEC-21005
NASA FMEA #: 02-6-G08-A01

NASA DATA:
BASELINE [X]
NEW [ ]

SUBSYSTEM: LANDING/DECELERATION SYSTEMS
MDAC ID: 21005
ITEM: MLG UPLOCK ACTUATOR

LEAD ANALYST: J. COMPTON

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RECOMMENDATIONS: (If different from NASA)

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

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

REMARKS:
REDUNDANCY SCREEN B FAILS BECAUSE HYD. SYS. 1 FLUID IS NOT CIRCULATED TO THIS ACTUATOR ON ORBIT, THUS FAILURE NOT DETECTED. HOWEVER, FAILURE IS DETECTED WHEN SYSTEM ACTIVATED, THUS PASSING SCREEN.

REPORT DATE 19 JUNE 1988 C.1-26
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/15/86
ASSESSMENT ID: LGGDEC-30104
NASA FMEA #: NONE
SUBSYSTEM: LANDING/DECELERATION SYSTEMS
MDAC ID: 30104
ITEM: BRAKE PEDAL TRANSDUCER
LEAD ANALYST: J. COMPTON

NASA DATA:
BASELINE [ ]
NEW [ ]

SUBSYSTEM: LANDING/DECELERATION SYSTEMS
MDAC ID: 30104
ITEM: BRAKE PEDAL TRANSDUCER
LEAD ANALYST: J. COMPTON

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RECOMMENDATIONS: (If different from NASA)

[ ] [ ] [ ] [ ] [ ]

ADD/DELETE

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

CLOSED LVDT WILL RESULT IN HALF-WHEEL LOCKUP ON LANDING WITH ANTISKID OFF, CAUSING POSSIBLE LOSS OF VEHICLE. ANTISKID WILL PROVIDE PROTECTION IF ON.

FROM FURTHER ANALYSIS THE IOA WITHDRAWS THIS FAILURE MODE AS A CIL ISSUE. A SHORT CIRCUIT WILL ONLY CAUSE LOSS OF BRAKING CAPABILITY FROM ONE OF FOUR CHANNELS TO ONE WHEEL. AFTER THE FIRST FAILURE, TWO SUCCESS PATHS REMAIN. THE ANTISKID CIRCUIT IS A NON LIKE SYSTEM THAT OFFERS PROTECTION AGAINST BRAKE SYSTEM CONTROL FAILURES. A FAILURE OF THE ANTISKID SYSTEM SHOULD NOT BE CONSIDERED IN CONJUNCTION WITH A BRAKE PEDAL TRANSDUCER FAILURE.

REPORT DATE 19 JUNE 1988  C.1-27
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/15/86
ASSESSMENT ID: LDGDEC-30105
NASA FMEA #: 02-1-025-2

SUBSYSTEM: LANDING/DECELERATION SYSTEMS
MDAC ID: 30105
ITEM: BRAKE CIRCUIT
LEAD ANALYST: J. COMPTON

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

WITH BRAKE PRESSURE BEING APPLIED AT TOUCHDOWN, TIRE ON THAT WHEEL WILL PROBABLY BLOW RIGHT AFTER TOUCHDOWN CAUSING POSSIBLE LOSS OF VEHICLE.

NASA/RI UPGRADED THE CRITICALITY OF THE BRAKE CIRCUIT FAILURE FROM 2/IR TO 1/1. THIS RESULTS IN AGREEMENT WITH THE IOA ASSIGNED CRITICALITY.

REPORT DATE 19 JUNE 1988 C.1-28
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/15/86
ASSESSMENT ID: LDGDEC-30111
NASA FMEA #: 02-1-033-2

SUBSYSTEM: LANDING/DECELERATION SYSTEMS
MDAC ID: 30111
ITEM: HYD PRESS REG (SYS 2 & 3)

LEAD ANALYST: J. COMPTON

ASSESSMENT:

CRITICALITY
FLIGHT
HDW/FUNC REDUNDANCY SCREENS CIL
A B C ITEM

NASA [ 3 /1R ] [ P ] [ P ] [ P ] [ ] *
IOA [ 2 /1R ] [ P ] [ P ] [ P ] [ X ]

COMPARE [ N / ] [ ] [ ] [ ] [ ] [ N ]

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

SEE 30129. SHOULD BE A 2 BECAUSE IF STANDBY SYSTEM HAD SOME
FAILURE VERY LITTLE BRAKING WOULD BE AVAILABLE - ONLY FROM LAST
REMAINING SYSTEM.

FROM ADDITIONAL ANALYSIS, THE IOA CONCLUDES THAT THE
CRITICALITY OF THIS FAILURE MODE SHOULD BE 3/1R AND THAT THERE IS
NO METHOD TO READILY DETECT THE FAILURE (FAILS B SCREEN);
THEREFORE, THE HARDWARE FAILURE REMAINS AS A CIL ITEM. THIS IS
IN AGREEMENT WITH THE REVISED NASA/RI EVALUATION OF FMEA
02-1B-033-2.

REPORT DATE 19 JUNE 1988 C.1-29
APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/15/86  
ASSESSMENT ID: LDGDEC-30112  
NASA FMEA #: 02-1-030-1

SUBSYSTEM: LANDING/DECELERATION SYSTEMS
MDAC ID: 30112
ITEM: INLET FILTER, HYD MODULE ASSY

LEAD ANALYST: J. COMPTON

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

NO CIL AVAILABLE. SHOULD BE 2/1R BECAUSE IF STANDBY FILTER GETS CLOGGED, HALF BRAKING CAPABILITY TO BRAKES IN THAT WHEEL WELL WILL BE LOST. SEE 30130.

ISSUE RESOLUTION:

FROM ADDITIONAL ANALYSIS, THE IOA CONCLUDES THE CRITICALITY OF THIS FAILURE MODE SHOULD BE 3/1R AND THAT THERE IS NO METHOD TO READILY DETECT THE FAILURE (FAILS B SCREEN); THEREFORE, THE HARDWARE FAILURE REMAINS AS A CIL ITEM. THIS IS IN AGREEMENT WITH THE REVISED NASA/RI EVALUATION OF FMEA 02-1B-030-1.

REPORT DATE 19 JUNE 1988  C.1-30
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/15/86
ASSESSMENT ID: LDGDEC-30116
NASA FMEA #: 02-1-029-2

SUBSYSTEM: LANDING/DECELERATION SYSTEMS
MDAC ID: 30116
ITEM: BY-PASS VALVE, HYD MODULE ASSY

LEAD ANALYST: J. COMPTON

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

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REMARKS:

THIS VALVE HAS VERY LITTLE VALUE SINCE HYD. SYS. 1 IS SHUTDOWN AND LINE CLOSED OFF DURING FLIGHT. FLUID NOT AVAILABLE TO VALVE UNTIL JUST PRIOR TO LANDING. IF BOTH PRIMARY AND STANDBY SYSTEMS FAIL TO OPEN BOTH SYSTEMS MUST BE SO SLUGGISH THAT THE BRAKES ON THIS CONTROL MODULE WON'T FUNCTION. ALSO SEE 30131.

FROM ADDITIONAL ANALYSIS, THE IOA CONCLUDES THAT THE CRITICALITY FOR THIS FAILURE SHOULD BE 3/3 WHICH AGREES WITH THE NASA/RI EVALUATION. THERE ARE TWO BYPASS VALVES IN EACH MODULE ASSEMBLY. THEY ALLOW FLUID TO CIRCULATE AND WARMUP THE RETURN LINE. EVEN IF BOTH VALVES FAIL TO OPEN, THERE WILL STILL BE ADEQUATE BRAKING.

REPORT DATE 19 JUNE 1988 C.1-31
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/15/86
ASSESSMENT ID: LDGDEC-30124
NASA FMEA #: 02-1-066-2

NASA DATA:
BASELINE [ X ]
NEW [ ]

SUBSYSTEM: LANDING/DECELERATION SYSTEMS
MDAC ID: 30124
ITEM: STATORS, ROTORS, CLIPS

LEAD ANALYST: J. COMPTON

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RECOMMENDATIONS: (If different from NASA)

[ ] [ ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

IF LOCKUP OCCURS AT HIGH SPEED, TIRE WILL BLOW CAUSING POSSIBLE LOSS OF CREW AND VEHICLE.

FROM ADDITIONAL ANALYSIS, THE IOA CONCLUDES THAT THE CRITICALITY OF THIS FAILURE MODE SHOULD BE DOWNGRADED FROM 1/1 TO 2/1R. LOSS OF BRAKING CAPABILITY ON ONE WHEEL (25% OF TOTAL) IS PROBABLE EFFECT RATHER THAN A BLOWN TIRE WHICH COULD CAUSE DIRECTIONAL CONTROL PROBLEMS. THIS IS IN AGREEMENT WITH THE REVISED NASA/RI EVALUATION OF FMEA 02-1E-066-2.

REPORT DATE 19 JUNE 1988 C.1-32
**APPENDIX C**

**ASSESSMENT WORKSHEET**

**ASSESSMENT DATE:** 12/15/86  
**ASSESSMENT ID:** LDGDEC-30129  
**NASA FMEA #:** 02-1-033-2

**NASA DATA:**  
- BASELINE [ X ]  
- NEW [ ]

**SUBSYSTEM:** LANDING/DECELERATION SYSTEMS  
**MDAC ID:** 30129  
**ITEM:** HYD PRESS REG (SYS 1)

**LEAD ANALYST:** J. COMPTON

**ASSESSMENT:**

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**COMPARE** [ N / ] [ ] [ N ] [ ] [ ]

**RECOMMENDATIONS:** (If different from NASA)

- [ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

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

**REMARKS:**

SEE 30111 - DIFFERENT BECAUSE THIS DOESN'T PASS REDUNDANCY SCREEN B.

FROM ADDITIONAL ANALYSIS, THE IOA CONCLUDES THAT THE CRITICALITY OF THIS FAILURE MODE SHOULD BE 3/1R AND THAT THERE IS NO METHOD TO READILY DETECT THE FAILURE (FAILS B SCREEN); THEREFORE, THE HARDWARE FAILURE REMAINS AS A CIL ITEM. THIS IS IN AGREEMENT WITH THE REVISED NASA/RI EVALUATION OF FMEA 02-1B-033-2.

**REPORT DATE** 19 JUNE 1988 C.1-33
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/15/86
ASSESSMENT ID: LDGDEC-30130
NASA FMEA #: 02-1-030-1

NASA DATA:
BASELINE [ x ]
NEW [ ]

SUBSYSTEM: LANDING/DECELERATION SYSTEMS
MDAC ID: 30130
ITEM: INLET FILTER, HYD MODULE ASSY (SYS 1)

LEAD ANALYST: J. COMPTON

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

SEE 30112 - SYS 1 DOES NOT PASS REDUNDANCY SCREEN B.
FROM ADDITIONAL ANALYSIS, THE IOA CONCLUDES THE CRITICALITY
OF THIS FAILURE MODE SHOULD BE 3/1R AND THAT THERE IS NO METHOD
TO READILY DETECT THE FAILURE (FAILS B SCREEN); THEREFORE, THE
HARDWARE FAILURE REMAINS AS A CIL ITEM. THIS IS IN AGREEMENT
WITH THE REVISED NASA/RI EVALUATION OF FMEA 02-1B-030-2.

REPORT DATE 19 JUNE 1988 C.1-34
**APPENDIX C**

**ASSESSMENT WORKSHEET**

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**SUBSYSTEM:** LANDING/DECELERATION SYSTEMS  
**MDAC ID:** 30131  
**ITEM:** BY - PASS VALVE, HYD MODULE ASSY (SYS 2&3)  
**LEAD ANALYST:** J. COMPTON

**ASSESSMENT:**

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**RECOMMENDATIONS:** (If different from NASA)

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

| ADEQUATE [ ] |
| INADEQUATE [ ] |

**REMARKS:**

SEE 30116. SINCE CIRC PUMPS ARE ON FOR THESE SYSTEMS ON ORBIT, THIS FAILURE COULD BE DETECTED INFLIGHT. FROM ADDITIONAL ANALYSIS, THE IOA CONCLUDES THAT THE CRITICALITY FOR THIS FAILURE SHOULD BE 3/3 WHICH AGREES WITH THE NASA/RI EVALUATION. THERE ARE TWO BYPASS VALVES IN EACH MODULE ASSEMBLY. THEY ALLOW FLUID TO CIRCULATE AND WARMUP THE RETURN LINE. EVEN IF BOTH VALVES FAIL TO OPEN, THERE WILL STILL BE ADEQUATE BRAKING.

**REPORT DATE** 19 JUNE 1988  
**C.1-35**
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/23/87
ASSESSMENT ID: LDGDEC-31105A
NASA FMEA #: 05-6BA-2205-2

NASA DATA:
BASELINE [ X ]
NEW [ ]

SUBSYSTEM: EPD&C
MDAC ID: 31105
ITEM: TRANSIENT SUPPRESSOR DIODE (4), 3 AMPS

LEAD ANALYST: G. BEAIRD

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA DOES NOT CONCUR WITH NASA'S EVALUATION AND IOA RECOMMENDS DOWNGRADING THE CRITICALITY AND REMOVING THIS ITEM FROM CIL. LOSS OF TWO DIODES IS LOSS OF A HYDRAULIC SYSTEM WHICH THEN RESULTS IN 3/1R CRITICALITY.
IOA ACCEPTS THE MORE SEVERE NASA CRITICALITY WHICH IS DUE TO A MORE CONSERVATIVE INTERPRETATION OF REDUNDANCY GROUNDRULES.

REPORT DATE 19 JUNE 1988
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/23/87
ASSESSMENT ID: LDGDEC-31114
NASA FMEA #: 05-6BA-2115-3

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NASA FMEA #: 05-6BA-2115-3

SUBSYSTEM: EPD&C
MDAC ID: 31114
ITEM: PUSHBUTTON SWITCH (2), LANDING GEAR DOWN

LEAD ANALYST: G. BEAIRD

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

PROVIDES REDUNDANT MANUAL "ON" CONTROL FROM CONTROL BUS TO LATCHING RELAYS FOR LANDING GEAR DOWN CIRCUIT.

IOA ACCEPTS THE MORE SEVERE NASA CRITICALITY WHICH IS DUE TO A MORE CONSERVATIVE INTERPRETATION OF REDUNDANCY GROUNDRULES.

REPORT DATE 19 JUNE 1988 C.1-37
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/23/87
ASSESSMENT ID: LDGDEC-31115B
NASA FMEA #: 05-6BA-2116-3

SUBSYSTEM: EPD&C
MDAC ID: 31115
ITEM: LANDING GEAR TOGGLE SWITCH, S13
LEAD ANALYST: G. BEAIRD

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

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

REMARKS:
IOA DOES NOT CONCUR WITH NASA'S EVALUATION, FAILURE HAS NO EFFECT ON SUBSYSTEM. CB60 REMAINS "OFF" UNTIL NEEDED. HOWEVER, IOA ACCEPTS THE MORE SEVERE NASA CRITICALITY WHICH IS DUE TO A MORE CONSERVATIVE INTERPRETATION OF REDUNDANCY GROUNDRULES.

REPORT DATE 19 JUNE 1988 C.1-38
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/23/87
ASSESSMENT ID: LDGDEC-31117
NASA FMEA #: 05-6BA-2117-1

NASA DATA:
BASELINE [ X ]
NEW [ ]

SUBSYSTEM: EPD&C
MDAC ID: 31117
ITEM: PUSHBUTTON SWITCH, LDG GR ARM, 4PDT, ILLUMINATED

LEAD ANALYST: G. BEAIRD

ASSESSMENT:

CRITICALLY REDUNDANCY SCREENS CIL
FLIGHT HDW/FUNC A B C ITEM

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

Adequate [ ]
Inadequate [ ]

REMARKS:
PROVIDES REDUNDANT MANUAL "ON" CONTROL FROM CONTROL BUS TO LATCHING RELAYS FOR LANDING GEAR ARM CIRCUIT. IOA DOES NOT CONCUR FULLY WITH NASA'S EVALUATION AND IOA RECOMMENDS: (1) CHANGING THE REDUNDANCY SCREENS, IT FAILS REDUNDANCY SCREEN B, AND LOWERING THE CRITICALITY TO 3/1R. HOWEVER, IOA ACCEPTS THE MORE SEVERE NASA CRITICALITY WHICH IS DUE TO A MORE CONSERVATIVE INTERPRETATION OF REDUNDANCY GROUNDRULES.

REPORT DATE 19 JUNE 1988 C.1-39
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/23/87
ASSESSMENT ID: LDGDEC-31125
NASA FMEA #: 05-6BA-2302-1
SUBSYSTEM: EPD&C
MDAC ID: 31125
ITEM: GENERAL PURPOSE FUSE (5 AMP)
LEAD ANALYST: G. BEAIRD

NASA DATA:
BASELINE [ X ]
NEW [ ]

ASSESMENT:
CRITICALITY REDUNDANCY SCREENS CIL
FLIGHT HDW/FUNC A B C ITEM

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:
IOA DOES NOT CONCUR FULLY WITH NASA'S EVALUATION AND IOA RECOMMENDS: CHANGING THE REDUNDANCY SCREENS SINCE IT FAILS REDUNDANCY SCREEN B, AND DOWNGRADING THE CRITICALITY TO 3/1R.

TRANSFERRED OUT OF LANDING/DECEL. IOA ACCEPTS THE MORE SEVERE NASA CRITICALITY WHICH IS DUE TO A MORE CONSERVATIVE INTERPRETATION OF REDUNDANCY GROUNDRULES.

REPORT DATE 19 JUNE 1988 C.1-40
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/23/87
ASSESSMENT ID: LDGDEC-31137
NASA FMEA #: 05-6BA-2303-1

SUBSYSTEM: EPD&C
MDAC ID: 31137
ITEM: GENERAL PURPOSE FUSE (2), 5 AMP

LEAD ANALYST: G. BEAIRD

ASSESSMENT:

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| IOA      | [ 2 /1R ] | [ P ] | [ F ] | [ P ] | [ X ] |
| COMPARE  | /      | /      | [ N ] | /      | /      |

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA DOES NOT CONCUR FULLY WITH NASA'S EVALUATION OF FMEA 2303-1 AND IOA RECOMMENDS CHANGING THE REDUNDANCY SCREEN B TO CONFORM TO NSTS 22206.
FURTHER ANALYSIS INDICATES DOWNLIST PARAMETERS ARE AVAILABLE TO DETERMINE STATUS OF THIS STRING, THUS INDICATING FUSE IS FUNCTIONING

REPORT DATE 19 JUNE 1988 C.1-41
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/23/87
ASSESSMENT ID: LDGDEC-31145
NASA FMEA #: 05-6BA-2406-1

NASA DATA:
BASELINE [ X ]
NEW [ ]

SUBSYSTEM: EPD&C
MDAC ID: 31145
ITEM: HYBRID DRIVER CONTROLLER (TYPE 1)

LEAD ANALYST: G. BEAIRD

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ 3 /3 ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

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

REMARKS:
IOA DOES NOT CONCUR FULLY WITH NASA'S EVALUATION OF THE TYPE 1 HDC, IOA RECOMMENDS: DOWNGRADING CRITICALITY TO 3/3 AND COMBINING FMEA'S 2406-1 AN 2406-2 TOGETHER TO CONFORM TO NSTS 22206.

IOA ACCEPTS THE MORE SEVERE NASA CRITICALITY WHICH IS DUE TO A MORE CONSERVATIVE INTERPRETATION OF REDUNDANCY GROUNDRULES.

REPORT DATE 19 JUNE 1988 C.1-42
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/23/87
ASSESSMENT ID: LDGDEC-31154
NASA FMEA #: 05-6BA-2409-1

NASA DATA:
BASELINE [ X ]
NEW [ ]

SUBSYSTEM: EPD&C
MDAC ID: 31154
ITEM: HYBRID DRIVER CONTROLLER (TYPE 3)

LEAD ANALYST: G. BEAIRD

ASSESSMENT:

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| IOA         | [ 3 /1R ] | [ P ]   | [ F ]     | [ P ] | [ X ] |

COMPARE [ / ] [ ] [ N ] [ ] [ N ]

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

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

REMARKS:
IOA DOES NOT CONCUR WITH NASA'S EVALUATION OF THE TYPE 3 HDC'S.
IOA RECOMMENDS ADDING THE FMEA TO THE CIL BECAUSE IT FAILS REDUNDANCY SCREEN B.
FURTHER ANALYSIS INDICATES DOWNLIST PARAMETERS ARE AVAILABLE TO DETERMINE STATUS OF THIS FUNCTION.

REPORT DATE 19 JUNE 1988 C.1-43
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/23/87
ASSESSMENT ID: LDGDEC-31161
NASA FMEA #: NONE
SUBSYSTEM: EPD&C
MDAC ID: 31161
ITEM: HYBRID DRIVER CONTROLLER (TYPE I)
LEAD ANALYST: G. BEAIRD

NASA DATA:
BASELINE [ ]
NEW [ ]

ASSESSMENT:

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| COMPARE | [ N /N ] | [ N ] | [ N ] | [ N ] | [ N ] |

RECOMMENDATIONS: (If different from NASA)

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

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

REMARKS:
IOA RECOMMENDS ADDING THE UNCOVERED TYPE 1 HDC TO NASA'S FMEA/CIL. THE HDC CONNECTS MAIN BUS DC POWER TO THE "WOW2" CIRCUITS WITHIN BRAKE/SKID CONTROL BOX A. MOVED TO NOSE WHEEL STEERING EPD&C.

REPORT DATE 19 JUNE 1988  C.1-44
**APPENDIX C**

**ASSESSMENT WORKSHEET**

**ASSESSMENT DATE:** 1/23/87  
**ASSESSMENT ID:** LDGDEC-31166  
**NASA FMEA #:** 05-6BA-200200-1  

**NASA DATA:**  
BASELINE [ X ]  
NEW [ ]

**SUBSYSTEM:**  
**MDAC ID:**  
**ITEM:**  
**LEAD ANALYST:** G. BEAIRD

**ASSESSMENT:**

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**RECOMMENDATIONS:** (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

AD Equate [ ]

IN Adequate [ ]

**REMARKS:**

NASA INCORPORATED FMEA INTO OTHER FMEAS. SEE ASSESSMENT LDGDEC-31164.

NASA HAS NOW GENERATED SEPARATE FMEAS AND THIS IS NOW COVERED BY 05-6BA-2410-2. NASA CONCURS WITH SCREEN B FAILING.

**REPORT DATE** 19 JUNE 1988  
C.1-45
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/23/87
ASSESSMENT ID: LDGDEC-31168A
NASA FMEA #: 05-6BA-2501-2

NASA DATA:
BASELINE [ X ]
NEW [ ]

SUBSYSTEM: EPD&C
MDAC ID: 31168
ITEM: LATCHING RELAY (6), LDG GR 'ARM' CONTROL
CIRCUITS

LEAD ANALYST: G. BEAIRD

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)

REMARKS:
FMEA 2501-2 HAS A NONCREDIBLE FAILURE MODE (SHORTS TO GROUND) AND
IOA RECOMMENDS THAT THE FMEA AND ITS CIL BE DELETED. NASA
INCORPORATED 2501-2 INTO 2501-1.
NASA HAS DELETED FMEA.

REPORT DATE 19 JUNE 1988 C.1-46
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/23/87
ASSESSMENT ID: LDGDEC-31170A
NASA FMEA #: 05-6BA-2502-2

NASA DATA:
BASELINE [ X ]
NEW [ ]

SUBSYSTEM: MDAC ID:
ITEM: CIRCUITS LATCHING RELAY (6), LDG GR 'DOWN' CONTROL

LEAD ANALYST: G. BEAIRD

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ X ]

REMARKS:
IOA RECOMMENDS THAT FMEA 2502-2 AND ITS CIL BE DELETED, BECAUSE IT HAS A NONCREDIBLE FAILURE MODE: SHORTS TO GROUND. NASA INCORPORATED 2502-2 INTO 2502-1.
NASA HAS DELETED FMEA.

REPORT DATE 19 JUNE 1988 C.1-47
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/23/87
ASSESSMENT ID: LDGDEC-31183
NASA FMEA #: 05-6BA-2578-1
SUBSYSTEM: EPD&C
MDAC ID: 31183
ITEM: DIODE, 12 AMP
LEAD ANALYST: G. BEAIRD

ASSESSMENT:

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NASA [3/IR] [P] [P] [P] [ ] [*]

IOA [2/IR] [P] [F] [P] [X]

COMPARE [N/] [ ] [N] [ ] [N]

RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA recommends adding the isolation diode to NASA's CIL. The diode isolates the K6 & K7 arm relays from the K8 down relays; diode is also in the circuit supplying power to the LDG gear control valve and the LDG gear dump control valve. Possible loss of crew/vehicle because of loss of power to operate these valves if the diode fails open.
Further analysis indicates downlink parameters are available to determine status of this string, thus indicating if diode fails open, passing the screen. NASA upgraded this failure.

REPORT DATE 19 JUNE 1988 C.1-48
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/23/87
ASSESSMENT ID: LDGDEC-31205
NASA FMEA #: 05-6BB-2241-1

NASA DATA:
BASELINE [ X ]
NEW [ ]

SUBSYSTEM: EPD&C
MDAC ID: 31205
ITEM: GENERAL PURPOSE FUSE (8), 2 AMP

LEAD ANALYST: G. BEAIRD

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA DOES NOT CONCUR FULLY WITH NASA'S EVALUATION OF THE GENERAL PURPOSE FUSES. IOA RECOMMENDS: CHANGING THE REDUNDANCY SCREENS SINCE IT FAILS REDUNDANCY SCREEN B, AND DOWNGRADING FMEA TO A 3/1R. HOWEVER, IOA ACCEPTS THE MORE SEVERE NASA CRITICALITY WHICH IS DUE TO A MORE CONSERVATIVE INTERPRETATION OF REDUNDANCY GROUND RULES.

REPORT DATE 19 JUNE 1988 C.1-49
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/23/87
ASSESSMENT ID: LDGDEC-31210
NASA FMEA #: 05-6BB-2249-1

NASA DATA:
BASELINE [ X ]
NEW [ ]

SUBSYSTEM: EPD&C
MDAC ID: 31210
ITEM: CURRENT LIMITING RESISTOR (4), 1.21K, 2W

LEAD ANALYST: G. BEAIRD

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

IOA DOES NOT CONCUR FULLY WITH NASA'S EVALUATION OF THE RPC CONTROL CIRCUIT CURRENT LIMITING RESISTORS. IOA RECOMMENDS (1) CHANGING THE REDUNDANCY SCREENS (2) ADDING FMEA 2249-1 TO THE CIL SINCE IT FAILS REDUNDANCY SCREEN B. FURTHER ANALYSIS INDICATES DOWNLIST PARAMETERS ARE AVAILABLE TO DETERMINE STATUS OF STRING, THUS INDICATING THAT RESISTOR MUST BE FUNCTIONING.

REPORT DATE 19 JUNE 1988 C.1-50
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/23/87
ASSESSMENT ID: LDGDEC-31213A
NASA FMEA #: 05-6BB-2096-2

NASA DATA:
BASELINE [ X ]
NEW [ ]

SUBSYSTEM: EPD&C
MDAC ID: 31213
ITEM: GENERAL PURPOSE RELAY, NONLATCHING (2)

LEAD ANALYST: G. BEAIRD

ASSESSMENT:

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

ADD/DELETE

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

REMARKS:
IOA RECOMMENDS THAT FMEA 2096-2 BE DELETED, BECAUSE IT IS A NON-CREDIBLE FAILURE MODE (SHORTS TO GROUND) FOR THE NONLATCHING RELAYS. NASA INCORPORATED FMEA 2096-2 INTO 2096-3. THIS FMEA DELETED.

REPORT DATE 19 JUNE 1988  C.1-51
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/23/87
ASSESSMENT ID: LDGDEC-31221
NASA FMEA #: 05-6BB-2107-3

NASA DATA:
BASELINE [ X ]
NEW [ ]

SUBSYSTEM: EPD&C
MDAC ID: 31221
ITEM: TOGGLE SWITCH, DPST

LEAD ANALYST: G. BEAIRD

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CRITICALITY
FLIGHT HDW/FUNC

NASA [ 3 /1R ] [ P ] [ P ] [ P ] [ ] *

IOA [ 3 /3 ] [ ] [ ] [ ] [ ]

COMPARE [ /N ] [ N ] [ N ] [ N ] [ ]

RECOMMENDATIONS: (If different from NASA)
[ 3 /3 ] [ ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA DOES NOT CONCUR WITH NASA'S EVALUATION AND RECOMMENDS DOWN-GRADING FMEA 2107-3 TO CRITICALITY 3/3.

REPORT DATE 19 JUNE 1988 C.1-52
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/23/87
ASSESSMENT ID: LDGDEC-31225
NASA FMEA #: 05-6BB-2106-3
SUBSYSTEM: EPD&C
MDAC ID: 31225
ITEM: TOGGLE SWITCH, DPST
LEAD ANALYST: G. BEAIRD

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

SECTION C.2
PURGE, VENT AND DRAIN SUBSYSTEM
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/07/87  NASA DATA:
ASSESSMENT ID: PV&D-9035A  BASELINE [ X ]
NASA FMEA #: 01-5-332404-6  NEW [ ]

SUBSYSTEM: PV&D
MDAC ID: 9035
ITEM: DESICCANT/FILTER OUTER CAVITY

LEAD ANALYST: P. BYNUM

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA CONCURS WITH NASA CRITICALITY, BASED ON DISCUSSION WITH SUBSYSTEM MANAGER (J. JANNEY/ES3) ON 3/31/88. FORWARD/MID WINDOWS DO NOT EXCEED DESIGN MARGINS FOR THIS FAILURE MODE, ACCORDING TO ROCKWELL INT. ANALYSIS.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/07/87
ASSESSMENT ID: PV&D-9036
NASA FMEA #: NASA DATA:
SUBSYSTEM: PV&D BASELINE [ ]
MDAC ID: 9036 NEW [ ]
ITEM: TUBING

LEAD ANALYST: P. BYNUM

ASSESSMENT:

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NASA [ ] / [ ] [ ] [ ] [ ] [ ] [ X ] *
IOA [ 1 / 1 ] [ ] [ ] [ ] [ ] [ ] [ X ]
COMPARE [ N / N ] [ ] [ ] [ ] [ ] [ N ]

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

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

REMARKS:
A PV&D FMEA/CIL WAS NOT FOUND FOR THE FAILURE MODE, WCCS OUTER TUBING CLOGS. TUBING CLOGS WOULD DEGRADE WCCS DEPRESSURIZATION AND REPRESSURIZATION CAPABILITY WITH POSSIBLE THERMAL PANE RUPTURE.

IOA CONCURS WITH NASA THAT THIS FAILURE MODE IS NOT CREDIBLE, EXCLUDING HUMAN ERRORS DURING REFURBISHMENT, AS DISCUSSED WITH NASA SUBSYSTEM MANAGER (J. JANNEY/ES3) ON 3/31/88 AND 4/4/88. PORTS ARE PROTECTED BY DEBRIS SCREENS. LINE IS CHECKED FOR FREE FLOW DURING VEHICLE TURNAROUND.

REPORT DATE 19 JULY 1988 C.2-3
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/07/87
ASSESSMENT ID: PV&D-9037A
NASA FMEA #: 01-5-332406-5

SUBSYSTEM: PV&D
MDAC ID: 9037
ITEM: TUBING

LEAD ANALYST: P. BYNUM

NASA DATA:
BASELINE [ X ]
NEW [ ]

NASA FMEA #: 01-5-332406-5

ASSOCIEMENT:
CRITICALITY REDUNDANCY SCREENS
FLIGHT HDW/FUNC CIL ITEM

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA CONCURS WITH NASA CRITICALITY, BASED ON DISCUSSION WITH SUBSYSTEM MANAGER (J. JANNEY/ES3) ON 3/31/88. FORWARD/MID WINDOWS DO NOT EXCEED DESIGN MARGINS FOR THIS FAILURE MODE, ACCORDING TO ROCKWELL INT. ANALYSIS.
SECTION C.3
PYROTECHNICS SUBSYSTEM
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: PYRO-4702
NASA FMEA #: 02-4-R103-2
NASA DATA:
BASELINE [ X ]
NEW [ ]

SUBSYSTEM: PYROTECHNICS
MDAC ID: 4702
ITEM: GUILLOTINE ASSY, PYROTECHNIC

LEAD ANALYST: W. W. ROBINSON

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
THIS FMEA/CIL HAS BEEN DELETED BY NASA. IOA CONCURS WITH DELETION.

REPORT DATE 19 JULY 1988  C.3-2
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: PYRO-4703
NASA FMEA #: NONE
SUBSYSTEM: PYROTECHNICS
MDAC ID: 4703
ITEM: PRESSURE CARTRIDGE (2)
LEAD ANALYST: W. W. ROBINSON

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NEW NASA FMEA # P2-4H-R105-1 HAS BEEN GENERATED FOR THIS ASSESSMENT, CRITICALITY 2/1R NNP. IOA CONCURS WITH THIS CRITICALITY.

REPORT DATE 19 JULY 1988 C.3-3
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: PYRO-4704
NASA FMEA #: NONE

SUBSYSTEM: PYROTECHNICS
MDAC ID: 4704
ITEM: PRESSURE CARTRIDGE (2)

LEAD ANALYST: W. W. ROBINSON

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]

INADEQUATE [ ]

REMARKS:
RECOMMEND THAT CRITICALITY BE UPGRADED.
NEW NASA FMEA # P2-4H-R106-1 HAS BEEN GENERATED FOR THIS ASSESSMENT, CRITICALITY 3/1R NNP. IOA CONCURS WITH THIS CRITICALITY.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: PYRO-4706
NASA FMEA #: 02-4-R104-2

SUBSYSTEM: PYROTECHNICS
MDAC ID: 4706
ITEM: RELEASE NUT

LEAD ANALYST: W. W. ROBINSON

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
THIS FMEA/CIL HAS BEEN DELETED BY NASA. IOA CONCURS WITH DELETION.

REPORT DATE 19 JULY 1988 C.3-5
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: PYRO-4707
NASA FMEA #: NONE

SUBSYSTEM: PYROTECHNICS
MDAC ID: 4707
ITEM: PRESSURE CARTRIDGE (2)

LEAD ANALYST: W. W. ROBINSON

ASSESSMENT:

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**NASA DATA:**
BASELINE [ ]
NEW [ ]

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

**RECOMMENDATIONS:** (If different from NASA)

| / | [ ] [ ] [ ] [ ] |

(ADD/DELETE)

**REMARKS:**
NEW NASA FMEA # P2-4H-R105-1 HAS BEEN GENERATED FOR THIS ASSESSMENT, CRITICALITY 2/1R NNP. IOA CONCURS WITH THIS CRITICALITY.

REPORT DATE 19 JULY 1988 C.3-6
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: PYRO-4708
NASA FMEA #: NONE

SUBSYSTEM: PYROTECHNICS
MDAC ID: 4708
ITEM: PRESSURE CARTRIDGE (2)

LEAD ANALYST: W. W. ROBINSON

NASA DATA:

BASELINE [ ]
NEW [ ]

SUBSYSTEM:

NASA FMEA #: NONE

MDAC ID: 4708
ITEM: PRESSURE CARTRIDGE (2)

LEAD ANALYST: W. W. ROBINSON

ASSESSMENT:

CRITICALITY REDUNDANCY SCREENS CIL ITEM
FLIGHT HDW/FUNC A B C

NASA [ / ] [ ] [ ] [ ] [ ] [ ] *[ ]
IOA [ 1/1 ] [ NA] [ NA] [ NA] [ X ]
COMPARE [ N /N ] [ N ] [ N ] [ N ] [ N ] [ N ]

RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NEW NASA FMEA # P2-4H-R107-1 HAS BEEN GENERATED FOR THIS
ASSESSMENT, CRITICALITY 1/1 NNN. IOA CONCURS WITH THIS
CRITICALITY.
SECTION C.4

ACTIVE THERMAL CONTROL SYSTEM
AND LIFE SUPPORT SUBSYSTEM
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/28/87
ASSESSMENT ID: LS-1100
NASA FMEA #: 06-2-1101-1
SUBSYSTEM: LIFE SUPPORT
MDAC ID: 1100
ITEM: H2 SEPARATOR (2)
LEAD ANALYST: M.J. SAIDI

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] [ ] [ ]

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

THE CAPABILITY TO REMOVE H2 FROM THE WATER IS LOST, AND THERE IS NO OTHER WAY TO PROVIDE FOR THIS LOSS. THE PRESENCE OF H2 IN THE WATER MAY CAUSE PROBLEMS WITH FES AND DUMP OPERATIONS, AND CREATE CREW ILLNESS. THIS MAY HAVE POTENTIAL MISSION IMPACT SPECIALLY FOR THE EMU/EVA MISSION - RECHARGING THE EMU WATER TANKS WITH THE H2/H2O MIXTURE IS HAZARDOUS AND SHOULD NOT BE DONE. ALTERNATE WATER LINE PLUS FCP RELIEF LINE ARE AVAILABLE TO EXPEL WATER. LOSS OF ALL REDUNDANCIES WITH THIS FAILURE WILL DEAD-HEAD FUEL CELLS, THUS POTENTIAL LOSS OF LIFE/VEHICLE. WITHDREW ISSUE.

H2 SEPARATOR PROBLEMS ON PREVIOUS MISSIONS (H2 IN SUPPLY H2O) WERE CONCERNS BUT BY PROCEDURAL MANAGEMENT THE MISSIONS WERE NOT TERMINATED. MAJOR PROBLEM (WORST CASE) H2O FLOODING THE FUEL CELL LIST CRIT REFLECTING HARDWARE CRITICALITY OF 3.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/28/87
ASSESSMENT ID: LS-1100A
NASA FMEA #: 06-2-1132-1
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 1100
ITEM: H2 SEPARATOR (2)

LEAD ANALYST: M.J. SAIIDI

ASSESSMENT:

CRITICALITY

REdundancy Screens

CIL

ITEM

FLIGHT
HDW/FUNC

A
B
C

NASA [ 3 /1R ]
[ P ]
[ P ]
[ P ]
[ ] *

IOA [ 2 /2 ]
[ ]
[ ]
[ ]
[ X ]

COMPARE [ N /N ]
[ N ]
[ N ]
[ N ]
[ N ]

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

* CIL RETENTION RATIONALE: (If applicable)
Adequate [ ]
Inadequate [ ]

REMARKS:
The capability to remove H2 from the water is lost, and there is no other way to provide for this loss. The presence of H2 in the water may cause problems with FES and dump operations, and create crew illness. This may have potential mission impact specially for the EMU/EVA mission - recharging the EMU water tanks with the H2/H2O mixture is hazardous and should not be done. Alternate water line plus FCP relief line are available to expel water. Loss of all redundancies with this failure will dead-head fuel cells, thus potential loss of life/vehicle. This FMEA was considered same as 06-2-1101-1 for the failure mode studied, and may therefor be combined. Withdraw issue. H2 separator problems on previous missions (H2 in supply H2O) were concerns but by procedural management the missions were not terminated. Major problem (worst case) is H2O flooding cell list CRIT reflecting hardware criticality of 3.

REPORT DATE 29 JUNE 1988 C.4-3
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/28/87
ASSESSMENT ID: LS-1101
NASA FMEA #: 06-2-1101-2
SUBSYSTEM: LIFE SUPPORT
MDAC ID: 1101
ITEM: H2 SEPARATORS (2)
LEAD ANALYST: M.J. SAIDI

ASSESSMENT:

CRITICALITY
FLIGHT
HDW/FUNC

REDUNDANCY SCREENS
A   B   C   CIL
ITEM

NASA [ 2 /1R ] [ P ] [ P ] [ P ] [ X ] *
IOA [ 2 /2 ] [ ] [ ] [ ] [ X ]
COMPARE [ /N ] [ N ] [ N ] [ N ] [ ]

RECOMMENDATIONS: (If different from NASA)

[ 1 /1 ] [ ] [ ] [ ] [ ] [ ]

* CIL RETENTION RATIONALE: (If applicable)

Adequate [ X ]
Inadequate [ ]

REMARKS:

IOA does not see how the failure of this item will have any effect on the operation of the radiators or ammonia boiler in order to lose total cooling capability. Loss of water to replenish the tanks, will force mission to be shortened (Flight Rule 9-24). Since additional water will not be available for on-orbit FES use and crew requirement, Fuel Cells will not be dead-headed since this failure will always relieve the water out.

Update to new criticality.
Based upon discussions between IOA personnel and the NASA subsystem manager a new criticality was agreed upon. The criticality is derived upon a scenario where H2O leakage to the vacuum vent duct can cause uncontrollable buildup of ice at the outlet port which can severly damage vehicle structure during entry. Even if the formation were freed from the vehicle via RMS or EVA the buildup could not be controlled while preparing for entry since the fuel cells must continue to operate.

REPORT DATE 29 JUNE 1988   C.4-4
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/28/87
ASSESSMENT ID: LS-1102
NASA FMEA #: 06-2-1101-3
SUBSYSTEM: LIFE SUPPORT
MDAC ID: 1102
ITEM: H2 SEPARATORS (2)
LEAD ANALYST: M.J. SAIIDI

NASA DATA:
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CRITICALITY

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

- ADEQUATE [ ]
- INADEQUATE [ ]

REMARKS:
IOA ASSESSMENT IS BASED ON ASSUMPTION THAT: - WATER WILL FLOW THROUGH TO THE TANKS; - LOSS OF ONE SEPARATOR IS SIGNIFICANT. THE BACKUP SEPARATOR IS NOT ADEQUATE TO REMOVE ALL OF THE HYDROGEN (WORST CASE). THE INABILITY TO REMOVE H2 (WITH WATER FLOWING) WILL HAVE POTENTIAL MISSION IMPACT AS EXPLAINED IN MDAC-1100. WITHDRAW ISSUES. LIST CRITICALITY REFLECTING POSSIBLE LOSS OF CREW/VEHICLE. THE GREATEST CONCERN IS H2 IN EMU H2O. FIRST FAILURE MEANS THE H2 CONCENTRATION WILL INCREASE. SECOND FAILURE (2ND SEPARATOR) MEANS FURTHER PROBLEMS. IF WATER MANAGEMENT PROCEDURALLY ALLOWS H2 INTO THE EMU SOURCE TANK C, PROBLEMS CAN BE EXPECTED AND LOSS OF CREWMAN IS POSSIBLE.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/28/87
ASSESSMENT ID: LS-1105
NASA FMEA #: 06-2-1132-2

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 1105
ITEM: MICROBIAL FILTER (1)

LEAD ANALYST: M.J. SAIIDI

ASSESSMENT:

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| IOA [ 2 /2 ] | [ ] | [ ] | [ ] | [ X ]
| COMPARE [ /N ] | [ N ] | [ N ] | [ N ] | [ ] |

RECOMMENDATIONS: (If different from NASA)

[ 2 /2 ] [ ] [ ] [ ] [ ] [ ]

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
SEE MDAC-1233. THIS FMEA COVERS SEVERAL ITEMS AS LINES AND FITTINGS.
INCORPORATE MDAC IOA CRITICALITY BASED UPON DISCUSSIONS BETWEEN IOA PERSONNEL AND THE NASA SUBSYSTEM MANAGER THE IOA CRITICALITY WAS DETERMINED TO BE CORRECT. A LEAK IN THE INLET SIDE OF THE SUPPLY H2O SYSTEM RESULTS IN FREE H2O IN THE CABIN. THE DEPLETION OF FES WATER WOULD NOT BE A RESULT OF THE DESIGN BUT POOR WATER MANAGEMENT DECISIONS. FREE WATER IN THE CABIN SHOULD DICTATE MISSION TERMINATION.

REPORT DATE 29 JUNE 1988  C.4-6
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/28/87
ASSESSMENT ID: LS-1106
NASA FMEA #: 06-2-1132-2
NASA DATA:
BASELINE [ ]
NEW [ x ]

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 1106
ITEM: MICROBIAL FILTER QUICK DISCONNECT (2)

LEAD ANALYST: M.J. SAIIDI

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ 2 /2 ] [ ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ x ]
INADEQUATE [ ]

REMARKS:
SEE MDAC-1233. THIS FMEA COVERS SEVERAL ITEMS AS LINES AND FITTINGS.
INCORPORATE MDAC IOA CRITICALITY BASED UPON DISCUSSIONS BETWEEN IOA PERSONNEL AND THE NASA SUBSYSTEM MANAGER THE IOA CRITICALITY WAS DETERMINED TO BE CORRECT. A LEAK IN THE INLET SIDE OF THE SUPPLY H2O SYSTEM RESULTS IN FREE H2O IN THE CABIN. THE DEPLETION OF FES WATER WOULD NOT BE A RESULT OF THE DESIGN BUT POOR WATER MANAGEMENT DECISIONS. FREE WATER IN THE CABIN SHOULD DICTATE MISSION TERMINATION.

REPORT DATE 29 JUNE 1988 C.4-7
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/28/87
ASSESSMENT ID: LS-1110
NASA FMEA #: 06-2-1132-2

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 1110
ITEM: TANKS INLET ISOLATION VALVE (4)

LEAD ANALYST: M.J. SAIIDI

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ 2 /2 ] [ ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
SEE MDAC-1233. THIS FMEA COVERS SEVERAL ITEMS AS LINES AND FITTINGS.
INCORPORATE MDAC IOA CRITICALITY
BASED UPON DISCUSSIONS BETWEEN IOA PERSONNEL AND THE NASA
SUBSYSTEM MANAGER THE IOA CRITICALITY WAS DETERMINED TO BE
CORRECT. A LEAK IN THE INLET SIDE OF THE SUPPLY H2O SYSTEM
RESULTS IN FREE H2O IN THE CABIN. THE DEPLETION OF FES WATER
WOULD NOT BE A RESULT OF THE DESIGN BUT POOR WATER MANAGEMENT
DECISIONS. FREE WATER IN THE CABIN SHOULD DICTATE MISSION
TERMINATION.

REPORT DATE 29 JUNE 1988 C.4-8
ASSESSMENT DATE: 12/28/87
ASSESSMENT ID: LS-1113
NASA FMEA #: 06-2-1165-2

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 1113
ITEM: TANKS OUTLET ISOLATION VALVE (4)

LEAD ANALYST: M.J. SAIIDI

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)

REMARKS:
SEE MDAC-1235. THIS FMEA COVERS SEVERAL ITEMS AS LINES AND FITTINGS.
WITHDRAW ISSUE. 1R IS THE MOST CRITICAL FAILURE.
LEAKS IN THE OUTLET SIDE OF THE SUPPLY H2O SYSTEM (i.e. FES INLET) CAN WITH A SECOND FAILURE CAUSE LOSS OF THE FES WHICH LEAVES NO REDUNDANCY FOR ENTRY COOLING, SINCE ONLY THE ABS AND RADIATORS ARE THEN AVAILABLE. THE CROSSOVER VALVE PROVIDES ISOLATION SUCH THAT TWO FAILURES ARE REQUIRED TO LOOSE THE FES.

REPORT DATE 29 JUNE 1988 C.4-9
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/28/87
ASSESSMENT ID: LS-1135
NASA FMEA #: 06-2-1123-1

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 1135
ITEM: RELIEF VALVE, 1.5 PSID (2)

LEAD ANALYST: M.J. SAIIDI

ASSESSMENT:

CRITICALLY REDUNDANCY SCREENS CIL
FLIGHT HDW/FUNC A B C ITEM

NASA [ 3 /1R ] [ P ] [ NA ] [ P ] [ ] *
IOA [ 2 /2 ] [ ] [ ] [ ] [ X ]
COMPARE [ N /N ] [ N ] [ N ] [ N ] [ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

LOSS OF LIKE AND UNLIKE REDUNDANCIES (FCP WATER LINES) WITH THIS FAILURE WILL STILL PROVIDE TANK A ULLAGE TO MANAGE THE WATER.
MISSION TERMINATION IS EMINENT, RETURN ON TANKS C AND D, OR JUST TANK A. ALTERNATE FCP LINE WILL NOT PROVIDE HYDROGEN REMOVAL. IOA CONSIDERED BOTH RELIEF VALVES IN ONE ANALYSIS—SEE FMEA 06-2-1141 (LS-1135A).
WITHDRAW ISSUE. LIST CRITICALITY REFLECTING DANGER TO CREW/VEHICLE.

REPORT DATE 29 JUNE 1988 C.4-10
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/28/87
ASSESSMENT ID: LS-1135A
NASA FMEA #: 06-2-1141-1

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 1135
ITEM: RELIEF VALVE, 1.5 PSID (2)

LEAD ANALYST: M.J. SAIIDI

ASSESSMENT:

CRITICALITY
FLIGHT
HDW/FUNC

REDUNDANCY SCREENS
A     B     C

NASA [3 /1R] [P] [NA] [P] [ ] *

IOA [2 /2 ] [ ] [ ] [ ] [ ] [X]

COMPARE [N /N ] [N ] [N ] [N ] [N ]

NASA DATA:
BASELINE [ ]
NEW [ X ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
LOSS OF LIKE AND UNLIKE REDUNDANCIES (FCP WATER LINES) WITH THIS
FAILURE WILL STILL PROVIDE TANK A ULLAGE TO MANAGE THE WATER.
MISSION TERMINATION IS EMMINENT, RETURN ON TANKS C AND D, OR JUST
TANK A. ALTERNATE FCP LINE WILL NOT PROVIDE HYDROGEN
REMOVAL. IOA CONSIDERED BOTH RELIEF VALVES IN ONE ANALYSIS—SEE
FMEA 06-2-1123-1 (LS-1135).
WITHDRAW ISSUE. LIST CRITICALITY REFLECTING DANGER TO
CREW/VEHICLE.
THE NASA ANALYSIS CONSIDERS THE FAILURE OF THE CAPABILITY TO
REMOVE H2O FROM THE FUEL CELLS WHICH requires FOUR FAILURES
BEFORE THE FUEL CELLS FLOOD. THIS FAILURE SHOULD HAVE MISSION
EFFECTS BEFORE THE CREW/VEHICLE LOSS EFFECTS CAN OCCUR. IN THE
STRICTEST SENSE, THE FAILURE SHOULD BE A 2R, BUT THE NASA
CONSERVATIVE APPROACH IS UNDERSTOOD.

REPORT DATE 29 JUNE 1988  C.4-11
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/28/87
ASSESSMENT ID: LS-1135B
NASA FMEA #: 06-2-1156-1

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 1135
ITEM: RELIEF VALVE, 1.5 PSID (2)

LEAD ANALYST: M.J. SAIIDI

ASSESSMENT:

CRITICALITY REDUNDANCY SCREENS CIL
FLIGHT HDW/FUNC A B C ITEM

NASA [ 3 /1R ] [ P ] [ P ] [ P ] [ ] *
IOA [ 2 /2 ] [ ] [ ] [ ] [ ] [ X ]
COMPARE [ N /N ] [ N ] [ N ] [ N ] [ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
LOSS OF LIKE AND UNLIKE REDUNDANCIES (FCP WATER LINES) WITH THIS FAILURE WILL STILL PROVIDE TANK A ULLAGE TO MANAGE THE WATER. MISSION TERMINATION IS EMINENT, RETURN ON TANKS C AND D, OR JUST TANK A. ALTERNATE FCP LINE WILL NOT PROVIDE HYDROGEN REMOVAL. THE FMEA COVERS SEVERAL ITEMS AS ONE LINES & FITTINGS ANALYSIS. WITHDRAW ISSUE. LIST CRITICALITY REFLECTING DANGER TO CREW/VEHICLE.

REPORT DATE 29 JUNE 1988 C.4-12
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/28/87
ASSESSMENT ID: LS-1136
NASA FMEA #: 06-2-1123-2
SUBSYSTEM: LIFE SUPPORT
MDAC ID: 1136
ITEM: RELIEF VALVE, 1.5 PSID (2)
LEAD ANALYST: M.J. SAIIDI

ASSESSMENT:

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

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

REMARKS:
IOA DOES NOT AGREE WITH THE STATEMENT THAT THE FUEL CELLS WILL BE DEAD HEADED AFTER R. VALVE FAILURE. CHECK VALVES IN THE FCP WATER LINE WILL PREVENT BACK FLOW TO THE CELLS. FES OPERATION WILL BE MAINTAINED BY COMBINED WATER IN TANKS A AND B DRAWING APPROXIMATELY 80 LB/HR OF WATER. FAILURE OF THE RELIEF VALVES IN THE FCP LINE ARE CONSIDERED UNASSOCIATED WITH THE FAILURE OF 1.5 PSID VALVE. NO PROBLEM IS ANTICIPATED POST MECO. FUNCTIONAL LOSS (NO C.V.) WILL RESULT IN FLOW OF WATER THRU THE FCP VENT LINE FOR 8-10 MINUTES DURING PRE-MECO. IOA CONSIDERED BOTH VALVES IN ONE ANALYSIS-SEE FMEA 06-2-1141-2 (LS-1136A). WITHDRAW ISSUE. LIST CRITICALITY REFLECTING HARDWARE CRITICALITY OF 2. EVEN THOUGH THE CHECK VALVES WILL KEEP BACKFLOW FROM ENTERING THE FUEL CELLS THE HEAD PRESSURE CREATED FROM THE ASCENT ACCELERATIONS CAN KEEP H2O FROM EXITING THE FUEL CELL BY THE NORMAL H2O LINES. IF THIS OCCURS AND THE FUEL CELL RELIEF IS PLUGGED THE 2/1R SITUATION EXISTS.

REPORT DATE 29 JUNE 1988  C.4-13
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/28/87
ASSESSMENT ID: LS-1137
NASA FMEA #: 06-2-1132-2
SUBSYSTEM: LIFE SUPPORT
MDAC ID: 1137
ITEM: RELIEF VALVE, 1.5 PSID (2)
LEAD ANALYST: M.J. SAIIDI

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
SEE MDAC-1233. THE FMEA CONSIDERED SEVERAL ITEMS IN ONE LINES AND FITTINGS ANALYSIS.
INCORPORATE MDAC IOA CRITICALITY BASED UPON DISCUSSIONS BETWEEN IOA PERSONNEL AND THE NASA SUBSYSTEM MANAGER THE IOA CRITICALITY WAS DETERMINED TO BE CORRECT. A LEAK IN THE INLET SIDE OF THE SUPPLY H2O SYSTEM RESULTS IN FREE H2O IN THE CABIN. THE DEPLETION OF FES WATER WOULD NOT BE A RESULT OF THE DESIGN BUT POOR WATER MANAGEMENT DECISIONS. FREE WATER IN THE CABIN SHOULD DICTATE MISSION TERMINATION.

REPORT DATE 29 JUNE 1988 C.4-14
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/28/87
ASSESSMENT ID: LS-II40
NASA FMEA #: 06-2-1130-2

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 1140
ITEM: QD, GSE FILL/DRAIN (2)
LEAD ANALYST: M.J. SAIIDI

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA CONSIDERED LOSS OF REDUNDANCIES TO BE LOSS OF FIRST O-RING (QD) AND SECOND O-RING (CAP) WITH NO OTHER REDUNDANCIES. THE MOST SEVERE EFFECT IS TO LOSE CAPABILITY TO REPLENISH SUPPLY TANKS FOR CONTINUOUS FES USAGE. OPERATIONALLY, TANKS C AND D ARE ISOLATED FOR CONTINGENCY PURPOSES OR UNTIL NOMINAL DEORB. THEREFORE, FES IS ONLY PARTIALLY LOST DURING ON-ORBIT WHICH MAY IMPACT MISSION (P/L REQUIREMENT, MISSION REQUIREMENT). FAILURE OF RADIATOR OR ABS ARE NON-REDUNDANT ITEMS AND UNASSOCIATED WITH THE QD/CAP. IOA CONSIDERED QD & CAP SEPARATELY, BUT AGREES TO STUDY THEM AS ONE UNIT.
WITHDRAW ISSUE. THE ABOVE ASSESSMENT IS RIGHT. FURTHER RECONFIGURATIONS AND PROPER MANAGEMENT WILL PRECLUDE FES PROBLEMS; BUT FORMATION OF ICE EXTERIOR TO THE PORTS IS A MAJOR THREAT DURING THE ENTRY PHASE. CRITICALITY SHOULD REFLECT POSSIBLE LOSS OF CREW/VEHICLE BUT ONLY AFTER 3 FAILURES IS THE DANGER OF ICE DAMAGE TO VEHICLE POSSIBLE. QD & CAP MUST LEAK & ICE MUST EXIT THE AREA WHERE THE QD IS LOCATED. MOST LIKELY RESULT IS THAT BUILD UP WILL STOP LEAK WITH NO ILL EFFECTS.

REPORT DATE 30 JUNE 1988 C.4-15
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/28/87
ASSESSMENT ID: LS-1140A
NASA FMEA #: 06-2-1131-2

ASSESSMENT WORKSHEET

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 1140
ITEM: QD, GSE FILL/DRAIN (2)

LEAD ANALYST: M.J. SAIDI

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA considered loss of redundancies to be loss of first O-ring (QD) and second O-ring (CAP) with no other redundancies. The most severe effect is to lose capability to replenish supply tanks for continuous FES usage. Operationally, tanks C and D are isolated for contingency purposes or until nominal deorbit. Therefore, FES is only partially lost during on-orbit which may impact mission (P/L requirement, mission requirement). Failure of radiator or ABS are non-redundant items and unassociated with the QD/CAP. IOA considered QD & CAP separately, but agrees to study them as one unit.

Withdraw issue. The above assessment is right. Further reconfigurations and proper management will preclude FES problems; but formation of ice exterior to the ports is a major threat during the entry phase. Criticality should reflect possible loss of crew/vehicle but only after 3 failures is the danger of ice damage to vehicle possible. QD & CAP must leak & ice must exit the area where the QD is located. Most likely result is that build up will stop leak with no ill effects.

REPORT DATE 30 JUNE 1988 C.4-16
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/28/87
ASSESSMENT ID: LS-1142
NASA FMEA #: 06-2-1130-2

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 1142
ITEM: QD, GSE FILL/DRAIN (2)

LEAD ANALYST: M.J. SAIIDI

ASSESSMENT:

CRITICALITY REDUNDANCY SCREENS CIL ITEM
FLIGHT HDW/FUNC A B C

NASA [ 3 /1R ] [ F ] [ F ] [ P ] [ X ] *
IOA [ 3 /2R ] [ P ] [ P ] [ P ] [ ]
COMPARE [ /N ] [ N ] [ N ] [ ] [ N ]

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

(ADD/DELETE)

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

REMARKS:
IOA considered loss of redundancies to be loss of first O-ring (QD) and second O-ring (CAP) with no other redundancies. The most severe effect is to lose capability to replenish supply tanks for continuous FES usage. Operationally, tanks C and D are isolated for contingency purposes or until nominal deorbit. Therefore, FES is only partially lost during on-orbit which may impact mission (P/L requirement, mission requirement). Failure of radiator or ABS are non-redundant items and unassociated with the QD/CAP. IOA considered QD & CAP separately, but agrees to study them as one unit.
Withdraw issue. The above assessment is right. Further reconfigurations and proper management will preclude FES problems; but formation of ice exterior to the ports is a major threat during the entry phase. Criticality should reflect possible loss of crew/vehicle but only after 3 failures is the danger of ice damage to vehicle possible. QD & CAP must leak & ice must exit the area where the QD is located. Most likely result is that build up will stop leak with no ill effects.

REPORT DATE 30 JUNE 1988 C.4-17
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/28/87
ASSESSMENT ID: LS-1142A
NASA FMEA #: 06-2-1131-2

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 1142
ITEM: QD, GSE FILL/DRAIN (2)

LEAD ANALYST: M.J. SAIIDI

ASSESSMENT:

| CRITICALLY | REDUNDANCY SCREENS | CIL |
| FLIGHT | HDW/FUNC | A | B | C |
| NASA | [3 /1R] | [F] | [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 [X]
INADEQUATE [ ]

REMARKS:

IOA CONSIDERED LOSS OF REDUNDANCIES TO BE LOSS OF FIRST O-RING (QD) AND SECOND O-RING (CAP) WITH NO OTHER REDUNDANCIES. THE MOST SEVERE EFFECT IS TO LOSE CAPABILITY TO REPLENISH SUPPLY TANKS FOR CONTINUOUS FES USAGE. OPERATIONALLY, TANKS C AND D ARE ISOLATED FOR CONTINGENCY PURPOSES OR UNTIL NOMINAL DEORBIT. THEREFORE, FES IS ONLY PARTIALLY LOST DURING ON-ORBIT WHICH MAY IMPACT MISSION (P/L REQUIREMENT, MISSION REQUIREMENT). FAILURE OF RADIATOR OR ABS ARE NON-REDUNDANT ITEMS AND UNASSOCIATED WITH THE QD/CAP. IOA CONSIDERED QD & CAP SEPARATELY, BUT AGREES TO STUDY THEM AS ONE UNIT.

WITHDRAW ISSUE. THE ABOVE ASSESSMENT IS RIGHT. FURTHER RECONFIGURATIONS AND PROPER MANAGEMENT WILL PRECLUDE FES PROBLEMS; BUT FORMATION OF ICE EXTERIOR TO THE PORTS IS A MAJOR THREAT DURING THE ENTRY PHASE. CRITICALITY SHOULD REFLECT POSSIBLE LOSS OF CREW/VEHICLE BUT ONLY AFTER 3 FAILURES IS THE DANGER OF ICE DAMAGE TO VEHICLE POSSIBLE. QD & CAP MUST LEAK & ICE MUST EXIT THE AREA WHERE THE QD IS LOCATED. MOST LIKELY RESULT IS THAT BUILD UP WILL STOP LEAK WITH NO ILL EFFECTS.

REPORT DATE 30 JUNE 1988 C.4-18
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/28/87
ASSESSMENT ID: LS-1144
NASA FMEA #: 06-2-1130-2
SUBSYSTEM: LIFE SUPPORT
MDAC ID: 1144
ITEM: CAP, GSE QD (2)
LEAD ANALYST: M.J. SAIIDI

ASSESSMENT:

CRITICALITY REDUNDANCY SCREENS CIL ITEM
FLIGHT HDW/FUNC A B C ITEM

NASA [ 3 /1R ] [ F ] [ F ] [ P ] [ X ] *
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:
IOA CONSIDERED LOSS OF REDUNDANCIES TO BE LOSS OF FIRST O-RING (QD) AND SECOND O-RING (CAP) WITH NO OTHER REDUNDANCIES. THE MOST SEVERE EFFECT IS TO LOSE CAPABILITY TO REPLENISH SUPPLY TANKS FOR CONTINUOUS FES USAGE. OPERATIONALLY, TANKS C AND D ARE ISOLATED FOR CONTINGENCY PURPOSES OR UNTIL NOMINAL DEORBIT. THEREFORE, FES IS ONLY PARTIALLY LOST DURING ON-ORBIT WHICH MAY IMPACT MISSION (P/L REQUIREMENT, MISSION REQUIREMENT). FAILURE OF RADIATOR OR ABS ARE NON-REDUNDANT ITEMS AND UNASSOCIATED WITH THE QD/CAP. IOA CONSIDERED QD & CAP SEPARATELY, BUT AGREES TO STUDY THEM AS ONE UNIT. WITHDRAW ISSUE. THE ABOVE ASSESSMENT IS RIGHT. FURTHER RECONFIGURATIONS AND PROPER MANAGEMENT WILL PRECLUDE FES PROBLEMS; BUT FORMATION OF ICE EXTERIOR TO THE PORTS IS A MAJOR THREAT DURING THE ENTRY PHASE. CRITICALITY SHOULD REFLECT POSSIBLE LOSS OF CREW/VEHICLE BUT ONLY AFTER 3 FAILURES IS THE DANGER OF ICE DAMAGE TO VEHICLE POSSIBLE. QD & CAP MUST LEAK & ICE MUST EXIT THE AREA WHERE THE QD IS LOCATED. MOST LIKELY RESULT IS THAT BUILD UP WILL STOP LEAK WITH NO ILL EFFECTS.

REPORT DATE 30 JUNE 1988 C.4-19
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/28/87
ASSESSMENT ID: LS-1144A
NASA FMEA #: 06-2-1131-2
SUBSYSTEM: LIFE SUPPORT
MDAC ID: 1144
ITEM: CAP, GSE QD (2)
LEAD ANALYST: M.J. SAIIDI

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

IOA considered loss of redundancies to be loss of first O-ring (QD) and second O-ring (CAP) with no other redundancies. The most severe effect is to lose capability to replenish supply tanks for continuous FES usage. Operationally, tanks C and D are isolated for contingency purposes or until nominal deorbit. Therefore, FES is only partially lost during on-orbit which may impact mission (P/L requirement, mission requirement). Failure of radiator or abs are non-redundant items and unassociated with the QD/CAP. IOA considered QD & CAP separately, but agrees to study them as one unit.

Withdraw issue. The above assessment is right. Further reconfigurations and proper management will preclude FES problems; but formation of ice exterior to the ports is a major threat during the entry phase. Criticality should reflect possible loss of crew/vehicle but only after 3 failures is the danger of ice damage to vehicle possible. QD & CAP must leak & ice must exit the area where the QD is located. Most likely result is that build up will stop leak with no ill effects.

REPORT DATE 30 JUNE 1988 C.4-20
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/28/87
ASSESSMENT ID: LS-1154
NASA FMEA #: 06-2-1165-2

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 1154
ITEM: CROSSOVER VALVE (1)

LEAD ANALYST: M.J. SAIIDI

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
SEE MDAC-1235 FOR REMARKS. THE FMEA CONSIDERED SEVERAL ITEMS IN ONE LINES AND FITTINGS ANALYSIS.
WITHDRAW ISSUE. IR IS THE MOST CRITICAL FAILURE.
LEAKS IN THE OUTLET SIDE OF THE SUPPLY H2O SYSTEM (i.e. FES INLET) CAN WITH A SECOND FAILURE CAUSE LOSS OF THE FES WHICH LEAVES NO REDUNDANCY FOR ENTRY COOLING SINCE ONLY THE ABS AND RADIATORS ARE THEN AVAILABLE. THE CROSSOVER VALVE PROVIDES ISOLATION SUCH THAT TWO FAILURES ARE REQUIRED TO LOOSE THE FES. THE VALVE CONSTRUCTION IS SUCH THAT TWO FAILURES WOULD HAVE TO TAKE PLACE TO GIVE A LEAK THAT AFFECTS BOTH SIDES OF OUTLET SYSTEM AND THUS CAUSE A FES LOSS.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/28/87
ASSESSMENT ID: LS-1167
NASA FMEA #: 06-2-1165-2

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 1167
ITEM: ISOL VALVE, FES B LINE (1)

LEAD ANALYST: M.J. SAIIDI

ASSESSMENT:

CRITICALITY
FLIGHT
HDW/FUNC

REDUNDANCY SCREENS
A    B    C

CIL ITEM

NASA [ 3 /1R ] [ P ] [ P ] [ P ] [ X ] *
IOA [ 2 /2 ] [ ] [ ] [ ] [ X ]
COMPARE [ N /N ] [ N ] [ N ] [ N ] [ N ]

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

(ADD/DELETE)

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

REMARKS:
SEE MDAC-1235 FOR REMARKS. THE FMEA COVERED SEVERAL ITEMS INTO ONE ANALYSIS FOR LINES AND FITTINGS.
WITHDRAW ISSUE. IR IS THE MOST CRITICAL FAILURE.
LEAKS IN THE OUTLET SIDE OF THE SUPPLY H2O SYSTEM (i.e. FES INLET) CAN WITH A SECOND FAILURE CAUSE LOSS OF THE FES WHICH LEAVES NO REDUNDANCY FOR ENTRY COOLING, SINCE ONLY THE ABS AND RADIATORS ARE THEN AVAILABLE. THE CROSSOVER VALVE PROVIDES ISOLATION SUCH THAT TWO FAILURES ARE REQUIRED TO LOOSE THE FES.

REPORT DATE 29 JUNE 1988 C.4-22
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/28/87
ASSESSMENT ID: LS-1183A
NASA FMEA #: 05-6VD-2033-2
SUBSYSTEM: LIFE SUPPORT
MDAC ID: 1183
ITEM: SWITCH, GALLEY VALVE (1)
LEAD ANALYST: M.J. SAIIDI

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[3/2R] [P] [NA] [P] [ ]

(ADD/DELETE)

*CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
BASED ON VERY LIMITED FMEA-EPD&C DATA (ONLY A CRIT SUMMARY WAS AVAILABLE), NO DETAIL ASSESSMENT OF THIS WAS ATTEMPTED.
UPDATE TO NEW CRITICALITY.
BASED UPON DISCUSSIONS BETWEEN IOA PERSONNEL AND THE SUBSYSTEM MANAGER A NEW CRITICALITY WAS AGREED UPON. THE CRITICALITY IS DERIVED FROM THE INLET SIDE H2O SYSTEMS LEAKS RESULTING IN FREE H2O IN THE CABIN WHICH IS A 2/2 CRITICALITY. IN THE CASE OF THE GALLY THE LINE IF LEAKING CAN BE ISOLATED VIA A QUICK DISCONNECT WHICH IS CONSIDERED AS REDUNDANCY IN ISOLATING THE LEAK.

REPORT DATE 29 JUNE 1988  C.4-23
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/28/87
ASSESSMENT ID: LS-1184
NASA FMEA #: 05-6VD-2033-2

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 1184
ITEM: SWITCH, GALLEY VALVE (1)

LEAD ANALYST: M.J. SAIIDI

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ 3 /2R ] [ P ] [ NA] [ P ] [ ] (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

BASED ON VERY LIMITED FMEA-EPD&C DATA (ONLY A CRIT SUMMARY WAS AVAILABLE), NO DETAIL ASSESSMENT OF THIS ITEM WAS ATTEMPTED. UPDATE TO NEW CRITICALITY.

BASED UPON DISCUSSIONS BETWEEN IOA PERSONNEL AND THE SUBSYSTEM MANAGER A NEW CRITICALITY WAS AGREED UPON. THE CRITICALITY IS DERIVED FROM THE INLET SIDE H2O SYSTEMS LEAKS RESULTING IN FREE H2O IN THE CABIN WHICH IS A 2/2 CRITICALITY. IN THE CASE OF THE GALLY THE LINE IF LEAKING CAN BE ISOLATED VIA A QUICK DISCONNECT WHICH IS CONSIDERED AS REDUNDANCY IN ISOLATING THE LEAK.

REPORT DATE 29 JUNE 1988 C.4-24
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/28/87
ASSESSMENT ID: LS-1189
NASA FMEA #: 05-6VD-2005-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 1189
ITEM: CIRCUIT BREAKER, GALLEY VALVE (1)

LEAD ANALYST: M.J. SAIIDI

ASSESSMENT:

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| IOA [ 2 /2 ] | [ ] | [ ] | [ ] | [ ] |
| COMPARE [ N /N ] | [ N ] | [ N ] | [ N ] | [ ] |

RECOMMENDATIONS: (If different from NASA)
[ 3 /2R ] [ P ] [ P ] [ P ] [ ]

(ADD/DELETE)

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

REMARKS:
BASED ON VERY LIMITED FMEA-EPD&C DATA (ONLY A CRIT SUMMARY WAS AVAILABLE), NO DETAIL ASSESSMENT OF THIS ITEM WAS ATTEMPTED.
UPDATE TO NEW CRITICALITY.
BASED UPON DISCUSSIONS BETWEEN IOA PERSONNEL AND THE SUBSYSTEM MANAGER A NEW CRITICALITY WAS AGREED UPON. THE CRITICALITY IS DERIVED FROM THE INLET SIDE H2O SYSTEMS LEAKS RESULTING IN FREE H2O IN THE CABIN WHICH IS A 2/2 CRITICALITY. IN THE CASE OF THE GALLY THE LINE IF LEAKING CAN BE ISOLATED VIA A QUICK DISCONNECT WHICH IS CONSIDERED AS REDUNDANCY IN ISOLATING THE LEAK.

REPORT DATE 29 JUNE 1988 C.4-25
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/28/87
ASSESSMENT ID: LS-1193
NASA FMEA #: 06-2-1165-2

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 1193
ITEM: DUMP ISOL VALVE (1)

LEAD ANALYST: M.J. SAIIDI

ASSESSMENT:

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COMPARE [ N / ] [ ] [ ] [ N ] [ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
CONTINUOUS FLOW OF WATER INTO THE CREW MODULE OR OUTSIDE TO THE MIDBODY UNLESS THE LEAK IS STOPPED BY SHUTTING OFF THE TANKS A AND B OUTLET VALVES AND X-OVER VALVE. IN THIS CASE, THE USE OF A/L SUPPORT (EVA MISSION) AND TWO TANKS ARE LOST FROM THE WATER MANAGEMENT - MISSION IMPACT. NO REDUNDANCY EXISTS TO COMPENSATE FOR THE LOSS. ALSO, LOSS OF LIKE AND UNLIKE REDUNDANCIES (FESB, FCP RELIEF) WITH THIS FAILURE RESULTS IN CONTINUOUS FLOW OF WATER INTO CABIN - FCP OPERATING. THIS FMEA INCLUDES SEVERAL ITEMS INTO ONE ANALYSIS FOR LINES AND FITTINGS. WITHDRAW ISSUE. IR IS THE MOST CRITICAL FAILURE. LEAKS IN THE OUTLET SIDE OF THE SUPPLY H2O SYSTEM (i.e. FES INLET) CAN WITH A SECOND FAILURE CAUSE LOSS OF THE FES WHICH LEAVES NO REDUNDANCY FOR ENTRY COOLING, SINCE ONLY THE ABS AND RADIATORS ARE THEN AVAILABLE. THE CROSSOVER VALVE PROVIDES ISOLATION SUCH THAT TWO FAILURES ARE REQUIRED TO LOOSE THE FES.

REPORT DATE 29 JUNE 1988 C.4-26
**APPENDIX C**

**ASSESSMENT WORKSHEET**

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**ASSESSMENT:****

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**RECOMMENDATIONS:** (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

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**REMARKS:**

Based on very limited FMEA-EFDC data (only a crit summary was available), no detail assessment of this item was attempted. Withdraw issue.

Dump may be controlled via dump isolation valve and the contingency collection device is available for subsequent waste water management.

**REPORT DATE 29 JUNE 1988 C.4-27**
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/28/87
ASSESSMENT ID: LS-1228
NASA FMEA #: 06-2-1135-2
SUBSYSTEM: LIFE SUPPORT
MDAC ID: 1228
ITEM: QD, CONTINGENCY CROSS-TIE (1)
LEAD ANALYST: M.J. SAIIDI

ASSESSMENT:

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| NASA | F | F | P | X | * |
| IOA | 2 /2 | [ ] | [ ] | [ ] | [ X ] |
| COMPARE | N /N | [ N ] | [ N ] | [ N ] | [ ] |

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
IOA DID NOT KNOW OF THE CAP. BASED ON THE SAME RATIONING AS 06-2-1124-2, HYDROPHOBIC FILTER, FOR WHICH THE WATER WILL LEAK INTO THE CABIN, THIS SHOULD BE 3/2R. LOSS OF FUNCTION WITH NO CREW INTERVENTION WILL RESULT IN CONTINUOUS FLOW OF WATER (TANK B ONLY) INTO THE CABIN. ALSO, THE DUMP WITH X-TIE CAN STILL BE ACHIEVED.

WITHDRAW ISSUE. IR IS THE MOST CRITICAL FAILURE.
LEAKS IN THE OUTLET SIDE OF THE SUPPLY H2O SYSTEM (i.e. FES INLET) CAN WITH A SECOND FAILURE CAUSE LOSS OF THE FES WHICH LEAVES NO REDUNDANCY FOR ENTRY COOLING, SINCE ONLY THE ABS AND RADIATORS ARE THEN AVAILABLE. THE CROSSOVER VALVE PROVIDES ISOLATION SUCH THAT TWO FAILURES ARE REQUIRED TO LOOSE THE FES.

REPORT DATE 29 JUNE 1988 C.4-28
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/28/87
ASSESSMENT ID: LS-1228A
NASA FMEA #: 06-2-1162-2
SUBSYSTEM: LIFE SUPPORT
MDAC ID: 1228
ITEM: QD, CONTINGENCY CROSS-TIE (1)
LEAD ANALYST: M.J. SAIIDI

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
THIS ASSESSMENT WAS MISTAKENLY MADE BETWEEN THE CONTINGENCY CROSS-TIE BETWEEN THE SUPPLY & WASTE H2O SYSTEMS AND THE FOUR-WAY CROSS-FITTING ON THE SUPPLY WATER INLET LINES.

REPORT DATE 29 JUNE 1988 C.4-29
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/28/87
ASSESSMENT ID: LS-1233
NASA FMEA #: 06-2-1132-2

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 1233
ITEM: LINES AND FITTINGS

LEAD ANALYST: M.J. SAIIDI

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:

IOA does not agree with the FMEA about the failures of the radiator and abs. These items are not associated with the item being studied. Continuous flow of water into the mid-body or crew module - leak cannot be isolated without shutting down the FCP.

Incorporate MDAC IOA criticality based upon discussions between IOA personnel and the NASA subsystem manager. The IOA criticality was determined to be correct. A leak in the inlet side if the supply H2O system results in free H2O in the cabin. The depletion of FES water would not be a result of the design but poor water management decisions. Free water in the cabin should dictate mission termination.

REPORT DATE 29 JUNE 1988 C.4-30
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/28/87
ASSESSMENT ID: LS-1233A
NASA FMEA #: 06-2-1162-2

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 1233
ITEM: LINES AND FITTINGS

LEAD ANALYST: M.J. SAIIDI

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:

IOA DOES NOT AGREE WITH THE FMEA, ABOUT THE FAILURES OF THE RADIATOR AND ABS. THESE ITEMS ARE NOT ASSOCIATED WITH THE ITEM BEING STUDIED. CONTINUOUS FLOW OF WATER INTO THE MID-BODY OR CREW MODULE - LEAK CANNOT BE ISOLATED WITHOUT SHUTTING DOWN THE FCP.

INCORPORATE MDAC IOA CRITICALITY BASED UPON DISCUSSIONS BETWEEN IOA PERSONNEL AND THE NASA SUBSYSTEM MANAGER THE IOA CRITICALITY WAS DETERMINED TO BE CORRECT. A LEAK IN THE INLET SIDE IF THE SUPPLY H2O SYSTEM RESULTS IN FREE H2O IN THE CABIN. THE DEPLETION OF FES WATER WOULD NOT BE A RESULT OF THE DESIGN BUT POOR WATER MANAGEMENT DECISIONS. FREE WATER IN THE CABIN SHOULD DICTATE MISSION TERMINATION.

REPORT DATE 29 JUNE 1988 C.4-31
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/28/87
ASSESSMENT ID: LS-1234
NASA FMEA #: 06-2-1156-2
NASA DATA: BASELINE [ ] NEW [ X ]

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 1234
ITEM: LINES AND FITTINGS
LEAD ANALYST: M.J. SAIIIDI

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
FOR LEAKAGE BETWEEN THE A/B AND B/C RELIEF VALVES: 1) CONTINUOUS FLOW OF FCP (PRIME/ALTER) TO CREW CABIN - NO WAY TO ISOLATE LEAK WITHOUT SHUTTING DOWN THE FUEL CELLS, 2) TANKS C/D AVAILABLE FOR RETURN WITH EXISTING LEAK.
FOR LEAKAGE DOWNSTREAM OF THE B/C RELIEF VALVE: - TANKS C AND D COULD BE ISOLATED, AND TANK B KEPT LOW IN ORDER TO ISOLATE THE LEAKAGE - LESS SEVERE THAN PREVIOUS CASE.
WITHDRAW ISSUE. IR IS THE MOST CRITICAL FAILURE.
LEAKS IN THE OUTLET SIDE OF THE SUPPLY H2O SYSTEM (i.e. FES INLET) CAN WITH A SECOND FAILURE CAUSE LOSS OF THE FES WHICH LEAVES NO REDUNDANCY FOR ENTRY COOLING, SINCE ONLY THE ABS AND RADIATORS ARE THEN AVAILABLE. THE CROSSOVER VALVE PROVIDES ISOLATION SUCH THAT TWO FAILURES ARE REQUIRED TO LOSE THE FES.

REPORT DATE 30 JUNE 1988 C.4-32
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/28/87
ASSESSMENT ID: LS-1235
NASA FMEA #: 06-2-1165-2
SUBSYSTEM: LIFE SUPPORT
MDAC ID: 1235
ITEM: LINES AND FITTINGS
LEAD ANALYST: M.J. SAIIDI

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
LEAKAGE UPSTREAM OF THE X-OVER VALVE: - TANKS C/D TO BE SHUT DOWN IN ORDER TO STOP THE LEAK; - LOSS OF FES FEEDLINE B, AND TWO TANKS RESERVE; - TANKS A AND B AND FES FEEDLINE A AVAILABLE.
LEAKAGE DOWNSTREAM OF THE X-OVER VALVE: - TANKS A AND B TO BE SHUTDOWN IN ORDER TO STOP THE LEAK; - LOSS OF FES FEEDLINE A, PRIMARY DUMP, X-TIE FUNCTION, AND A/L SUPPORT; - ONLY TWO TANKS AVAILABLE PLUS FES FEEDLINE B.
WITHDRAW ISSUE. IR IS THE MOST CRITICAL FAILURE.
LEAKS IN THE OUTLET SIDE OF THE SUPPLY H2O SYSTEM (i.e. FES INLET) CAN WITH A SECOND FAILURE CAUSE LOSS OF THE FES WHICH LEAVES NO REDUNDANCY FOR ENTRY COOLING, SINCE ONLY THE ABS AND RADIATORS ARE THEN AVAILABLE. THE CROSSOVER VALVE PROVIDES ISOLATION SUCH THAT TWO FAILURES ARE REQUIRED TO LOSE THE FES.

REPORT DATE 30 JUNE 1988 C.4-33
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/28/87
ASSESSMENT ID: LS-1235A
NASA FMEA #: 06-2-1164-2
SUBSYSTEM: LIFE SUPPORT
MDAC ID: 1235
ITEM: LINES AND FITTINGS
LEAD ANALYST: M.J. SAIIDI

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
LEAKAGE UPSTREAM OF THE X-OVER VALVE: - TANKS C/D TO BE SHUT DOWN IN ORDER TO STOP THE LEAK; - LOSS OF FES FEEDLINE B, AND TWO TANKS RESERVE; - TANKS A AND B AND FES FEEDLINE A AVAILABLE.
LEAKAGE DOWNSTREAM OF THE X-OVER VALVE: - TANKS A AND B TO BE SHUT DOWN IN ORDER TO STOP THE LEAK; - LOSS OF FES FEEDLINE A, PRIMARY DUMP, X-TIE FUNCTION, AND A/L SUPPORT; - ONLY TWO TANKS AVAILABLE PLUS FES FEEDLINE B.
WITHDRAW ISSUE. IR IS THE MOST CRITICAL FAILURE.
LEAKS IN THE OUTLET SIDE OF THE SUPPLY H2O SYSTEM (i.e. FES INLET) CAN WITH A SECOND FAILURE CAUSE LOSS OF THE FES WHICH LEAVES NO REDUNDANCY FOR ENTRY COOLING, SINCE ONLY THE ABS AND RADIATORS ARE THEN AVAILABLE. THE CROSSOVER VALVE PROVIDES ISOLATION SUCH THAT TWO FAILURES ARE REQUIRED TO LOSE THE FES.

REPORT DATE 30 JUNE 1988 C.4-34
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/28/87
ASSESSMENT ID: LS-1255X
NASA FMEA #: 06-2-1103-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 1255
ITEM: LINES AND FITTINGS, H2 VENT

LEAD ANALYST: M.J. SAIIDI

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
THE LOSS OF FUNCTION PLUS THIS FAILURE WILL ONLY RESULT IN INABILITY TO REMOVE H2 FROM WATER - WATER FROM FCP STILL FLOWS TO THE TANKS.
WITHDRAW ISSUE. LIST CRITICALITY REFLECTING POSSIBLE LOSS OF CREW/VEHICLE.
THE GREATEST CONCERN IS H2 IN EMU H2O. FIRST FAILURE MEANS THE H2 CONCENTRATION WILL INCREASE. SECOND FAILURE (2ND SEPARATOR) MEANS FURTHER PROBLEMS. IF WATER MANAGEMENT PROCEDURALLY ALLOWS H2 INTO THE EMU SOURCE TANK C, PROBLEMS CAN BE EXPECTED AND LOSS OF CREWMAN IS POSSIBLE.

REPORT DATE 29 JUNE 1988 C.4-35
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/22/87
ASSESSMENT ID: LS-2040
NASA FMEA #: 06-2-0435-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 2040
ITEM: WCS TO WWS QD (1)

LEAD ANALYST: K. BARICKMAN

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

IOA FM: RESTRICTED FLOW
NASA FM: RESTRICTED FLOW BUT ALSO INCLUDES ARS LINES.

IOA COMMENT: THE LOSS OF THE QD BY RESTRICTED FLOW ONLY
RESTRICTS THE USE OF THE WCS, IN WHICH CASE THE FCB AND UCD
SUPPLIES MUST BE USED. THE FCB AND UCD SUPPLIES MAY BE
INSUFFICIENT FOR MISSION DURATION, THUS CREATING A MISSION LOSS
CRITICALITY 3/2R PNP. THOSE NASA FMEA WHICH INCLUDE A COLLECTION
OF HARDWARE ITEMS MAY NOT MATCH THE IOA ANALYSIS. THE IOA
ANALYSES PROVIDED SEPARATE ANALYSES FOR EACH PIECE OF EQUIPMENT.
THE BASIC PREMISE OF THE NASA FMEA DID AGREE WITH THE IOA
ANALYSIS. WITHDRAW ISSUE. LIST THE NASA CRITICALITY. THE FCB
AND UCD ARE ONLY A ONE DAY SUPPLY AND ARE NOT CONSIDERED AS
REDUNDANCY IN THE STRICKEST SENSE.

REPORT DATE 29 JUNE 1988 C.4-36
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/22/87
ASSESSMENT ID: LS-2040A
NASA FMEA #: 06-2-0443-1
SUBSYSTEM: LIFE SUPPORT
MDAC ID: 2040
ITEM: WCS TO WWS QD (1)
LEAD ANALYST: K. BARICKMAN

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RECOMMENDATIONS: (If different from NASA)

[ 3 /2R ] [ P ] [ NA ] [ P ] [ ]
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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/NASA FM: RESTRICTED FLOW
IOA COMMENT: THE LOSS OF THE QD BY RESTRICTED FLOW ONLY
RESTRICTS THE USE OF THE WCS, IN WHICH CASE THE FCB AND UCD
SUPPLIES MUST BE USED. THE FCB AND UCD SUPPLIES MAY BE
INSUFFICIENT FOR MISSION DURATION, THUS CREATING A MISSION LOSS
CRITICALITY 3/2R PNP. THOSE NASA FMEA WHICH INCLUDE A COLLECTION
OF HARDWARE ITEMS MAY NOT MATCH THE IOA ANALYSIS. THE IOA
ANALYSES PROVIDED SEPARATE ANALYSES FOR EACH PIECE OF EQUIPMENT.
THE BASIC PREMISE OF THE NASA FMEA DID AGREE WITH THE IOA
ANALYSIS. WITHDRAW ISSUE. LIST THE NASA CRITICALITY. THE FCB
AND UCD ARE ONLY A ONE DAY SUPPLY AND ARE NOT CONSIDERED AS
REDUNDANCY IN THE STRICKEST SENSE.

REPORT DATE  29 JUNE 1988  C.4-37
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/22/87
ASSESSMENT ID: LS-2044
NASA FMEA #: 06-2-0435-1
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 2044
ITEM: WCS TO WWS DYNATUBE (1)

LEAD ANALYST: K. BARICKMAN

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/NASA FM: RESTRICTED FLOW
IOA COMMENT: THE LOSS OF THE DYNATUBE BY RESTRICTED FLOW ONLY
RESTRICTS THE USE OF THE WCS, IN WHICH CASE THE FCB AND UCD
SUPPLIES MUST BE USED. THE FCB AND UCD SUPPLIES MAY BE
INSUFFICIENT FOR MISSION DURATION, THUS CREATING A MISSION LOSS
CRITICALITY 3/2R PNP. THOSE NASA FMEA WHICH INCLUDE A COLLECTION
OF HARDWARE ITEMS MAY NOT MATCH THE IOA ANALYSIS. THE IOA
ANALYSES PROVIDED SEPARATE ANALYSES FOR EACH PIECE OF EQUIPMENT.
THE BASIC PREMISE OF THE NASA FMEA DID AGREE WITH THE IOA
ANALYSIS. WITHDRAW ISSUE. LIST THE NASA CRITICALITY. THE FCB
AND UCD ARE ONLY A ONE DAY SUPPLY AND ARE NOT CONSIDERED AS
REDUNDANCY IN THE STRICKEST SENSE.

REPORT DATE 29 JUNE 1988   C.4-38
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/22/87
ASSESSMENT ID: LS-2044A
NASA FMEA #: 06-2-0443-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 2044
ITEM: WCS TO WWS DYNATUBE (1)

LEAD ANALYST: K. BARICKMAN

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)

Adequate [ ]
Inadequate [ ]

REMARKS:
IOA/NASA FM: RESTRICTED FLOW
IOA COMMENT: THE LOSS OF THE DYNATUBE BY RESTRICTED FLOW ONLY
RESTRICTS THE USE OF THE WCS, IN WHICH CASE THE FCB AND UCD
SUPPLIES MUST BE USED. THE FCB AND UCD SUPPLIES MAY BE
INSUFFICIENT FOR MISSION DURATION, THUS CREATING A MISSION LOSS
CRITICALITY 3/2R PNP. THOSE NASA FMEA WHICH INCLUDE A COLLECTION
OF HARDWARE ITEMS MAY NOT MATCH THE IOA ANALYSIS. THE IOA
ANALYSES PROVIDED SEPARATE ANALYSES FOR EACH PIECE OF EQUIPMENT.
THE BASIC PREMISE OF THE NASA FMEA DID AGREE WITH THE IOA
ANALYSIS. WITHDRAW ISSUE. LIST THE NASA CRITICALITY. THE FCB
AND UCD ARE ONLY A ONE DAY SUPPLY AND ARE NOT CONSIDERED AS
REDUNDANCY IN THE STRICKEST SENSE.

REPORT DATE 29 JUNE 1988 C.4-39
ASSESSMENT DATE: 12/22/87
ASSESSMENT ID: LS-2048
NASA FMEA #: 06-2-0401-4
SUBSYSTEM: LIFE SUPPORT
MDAC ID: 2048
ITEM: MANUAL VENT VALVE (1)
LEAD ANALYST: K. BARICKMAN

ASAASSESSMENT:

CRITICALITY
FLIGHT
HDW/FUNC

REdundancy Screens

CIL
ITEM

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:

IOA/NASA FM: EXTERNAL LEAKAGE
IOA COMMENT: IF THE VALVE EXTERNAL LEAKAGE DEVELOPS SUCH THAT
THE AIR FLOW IS DOWNSTREAM OF THE VALVE CONTROLLER (PAST 2 SEALS)
THEN A POTENTIAL LOSS OF LIFE WOULD BE POSSIBLE DUE TO
UNCONTROLLED CABIN PRESSURE LOSS IF THE VACUUM VENT ISOLATION
VALVE DID NOT FUNCTION TO RESTRICT THE AIR FLOW. THE RECOMMENDED
CRITICALITY WOULD BE 3/1R PNP.
THE IOA ANALYSIS VIEWED THE FIRST FAILURE TO BE A NON-MISSION
ESSENTIAL CRITICALITY, HOWEVER SECONDARY FAILURES COULD CREATE
MAJOR PROBLEMS. THE NASA FMEA CRITICALITY VIEWED THE FIRST
FAILURE TO BE AT LEAST A MISSION LOSS, IF NOT A LIFE THREATENING
CONDITION. WITHDRAW ISSUE. NASA CRITICALITY IS CORRECT. IF THE
VALVE LEAKS THE ONLY REDUNDANCY LEFT IS THE VACUUM VENT ISOLATION
VALVE. THUS CRITICALITY IS 2/1R.

REPORT DATE 29 JUNE 1988 C.4-40
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/22/87
ASSESSMENT ID: LS-2126
NASA FMEA #: 06-2-0314-2

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 2126
ITEM: WASTE TANK N2 HYDROPHOBIC FILTER (1)

LEAD ANALYST: K. BARICKMAN

NASA DATA:
BASELINE [ ]
NEW [ X ]

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/NASA FM: INTERNAL LEAKAGE
THE DISAGREEMENT IN THE REDUNDANCY SCREENS WAS DUE TO NO DETAILED DISCUSSION WITH THE NASA SUBSYSTEM MANAGERS REGARDING THE REDUNDANT PATHS.
WITHDRAW ISSUE. NASA CRITICALITY IS CORRECT, AS STATED IN PREVIOUS IOA REMARKS.

REPORT DATE 29 JUNE 1988  C.4-41
APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/22/87  
ASSESSMENT ID: LS-2131  
NASA FMEA #: 06-2-0420-2  
NASA DATA:  
BASELINE [ ]  
NEW [ X ]

SUBSYSTEM: LIFE SUPPORT  
MDAC ID: 2131  
ITEM: GSE FILL AND PLUG (1)  
LEAD ANALYST: K. BARICKMAN

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
INADEQUATE [ ]

REMARKS:

IOA/NASA FM: FAILS TO CLOSE

IOA COMMENT: IF THE LEAKAGE DEVELOPS AFTER GROUND SERVICING AND THE CAP, AS SECONDARY SEAL, ALSO FAILS, THEN A POTENTIAL FOR LOSS OF LIFE OCCURS DUE TO CABIN PRESSURE LOSS FOR A CRITICALITY OF 3/IR FFP.

THE IOA ANALYSIS VIEWED THE CONDITION OF A POTENTIAL CABIN ATMOSPHERE LEAK, IF A SECOND FAILURE OCCURRED IN THE REDUNDANCY STREAM, TO BE A LIFE CRITICAL CONDITION.

WITHDRAW ISSUE. NASA CRITICALITY CORRECT. IF THE IOA FAILURE OCCURS THE LEAK RATE WOULD BE SUCH THAT THE CABIN PRESSURE COULD BE MAINTAINED EASILY, BASED UPON LINE SIZE AND CONSTRUCTION OF THE QD AND CAP SEALING CAPABILITIES. THUS MISSION LOSS SHOULD BE WORST CASE.

REPORT DATE 29 JUNE 1988  C.4-42
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/22/87
ASSESSMENT ID: LS-2136
NASA FMEA #: 06-2-0438-2

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 2136
ITEM: DUMP LINES, FITTINGS, JOINTS AND UNIONS

LEAD ANALYST: K. BARICKMAN

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ 2 /2 ] [ ] [ ] [ ] [ A ] (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/NASA FM: EXTERNAL LEAKAGE
IOA COMMENT: THE EXTERNAL LEAKAGE OF THE DUMP LINE PRODUCES A LOSS OF MISSION WITH NO CHANGE IN CRITICAL EVENTS.
THE IOA ANALYSIS TEAM COULD NOT DETERMINE ANY APPARENT REDUNDANT PATHS FOR THIS HARDWARE OR FUNCTION
INCORPORATE MDAC IOA CRITICALITY FOR THE WASTE WATER DUMP CONSIDERATIONS AND ADD 3/1R PPP CRITICALITY FOR SUPPLY WATER DUMP CONSIDERATIONS. THIS IS CONSISTENT WITH ALL OTHER WASTE WATER DUMP COMPONENTS DOWNSTREAM OF THE DUMP ISOLATION VALVE.

REPORT DATE 29 JUNE 1988  C.4-43
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/22/87
ASSESSMENT ID: LS-2137
NASA FMEA #: 06-2-0438-1
SUBSYSTEM: LIFE SUPPORT
MDAC ID: 2137
ITEM: DUMP LINES, FITTINGS AND CONNECTIONS
LEAD ANALYST: K. BARICKMAN

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

| [2/2] | [ ] | [ ] | [ ] | [A] |

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADECQUATE [ ]
INADEQUATE [ ]

REMARKS:

IOA/NASA FM: RESTRICTED/BLOCKED FLOW.

IOA COMMENT: THE RESTRICTED FLOW OF THE DUMP LINE PRODUCES A LOSS OF MISSION WITH NO CHANGE IN CRITICAL EVENTS. THE IOA ANALYSIS TEAM COULD NOT DETERMINE ANY APPARENT REDUNDANT PATHS FOR THIS HARDWARE OR FUNCTION. INCORPORATE MDAC IOA CRITICALITY FOR THE WASTE WATER DUMP CONSIDERATIONS AND ADD 3/1R PPP CRITICALITY FOR SUPPLY WATER DUMP CONSIDERATIONS. THIS IS CONSISTENT WITH ALL OTHER WASTE WATER DUMP COMPONENTS DOWNSTREAM OF THE DUMP ISOLATION VALVE.

REPORT DATE 29 JUNE 1988 C.4-44
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/22/87
ASSESSMENT ID: LS-2141
NASA FMEA #: 06-2-0438-2

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM:
LIFE SUPPORT

MDAC ID:
2141

ITEM:
QD AND TP @ HIGH CAP. FILTER (2)

LEAD ANALYST:
K. BARICKMAN

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)
[ 2 /2 ] [ ] [ ] [ ] [ ] [ A ]
(ADD/DELETE)

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

REMARKS:

IOA/NASA PM: EXTERNAL LEAKAGE

IOA COMMENT: LOSS OF DUMP LINE AND WCS FUNCTION REQUIRES USE OF CONTINGENCY WASTE COLLECTION METHODS AND A LOSS OF MISSION DUE TO LOSS OF ARS CONDENSATE STORAGE CAPABILITY.

THE IOA ANALYSIS TEAM COULD NOT DETERMINE ANY APPARENT REDUNDANT PATHS FOR THIS HARDWARE OR FUNCTION INCORPORATE MDAC IOA CRITICALITY FOR THE WASTE WATER DUMP CONSIDERATIONS AND ADD 3/1R PPP CRITICALITY FOR SUPPLY WATER DUMP CONSIDERATIONS. THIS IS CONSISTENT WITH ALL OTHER WASTE WATER DUMP COMPONENTS DOWNSTREAM OF THE DUMP ISOLATION VALVE.

REPORT DATE 29 JUNE 1988 C.4-45
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/22/87  NASA DATA: BASELINE [ ]
ASSESSMENT ID: LS-2142A  NEW [ X ]
NASA FMEA #: 06-2-0438-1

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 2142
ITEM: HIGH CAPACITY FILTER (1)

LEAD ANALYST: K. BARICKMAN

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ 2 /2 ] [ ] [ ] [ ] [ ] [ A ]
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/NASA FM: RESTRICTED/BLOCKED FLOW
NOTE TO NASA: WHY ARE 06-2-0423-1 AND 06-2-0438-1 NOT CONSISTENT FOR CRITICALITY?
THE IOA ANALYSIS TEAM COULD NOT DETERMINE ANY APPARENT REDUNDANT PATHS FOR THIS HARDWARE OR FUNCTION
INCORPORATE MDAC IOA CRITICALITY FOR THE WASTE WATER DUMP CONSIDERATIONS AND ADD 3/1R PPP CRITICALITY FOR SUPPLY WATER DUMP CONSIDERATIONS. THIS IS CONSISTENT WITH ALL OTHER WASTE WATER DUMP COMPONENTS DOWNSTREAM OF THE DUMP ISOLATION VALVE.

REPORT DATE 29 JUNE 1988 C.4-46
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/22/87
ASSESSMENT ID: LS-2144
NASA FMEA #: 06-2-0431-3

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 2144
ITEM: CONTINGENCY H2O CROSS-TIE QD AND PLUG (1)

LEAD ANALYST: K. BARICKMAN

ASSESSMENT:

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

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

REMARKS:

IOA FM: INABILITY TO MATE/DE-MATE, FAILS TO OPEN, RESTRICTED FLOW
NASA FM: FAILS CLOSED, RESTRICTED FLOW
IOA COMMENT: LOSS OF DUMP LINE AND WCS FUNCTION REQUIRES USE OF CONTINGENCY WASTE COLLECTION METHODS AND A LOSS OF MISSION DUE TO LOSS OF ARS CONDENSATE STORAGE CAPABILITY. THE IOA ANALYSIS TEAM COULD NOT DETERMINE ANY APPARENT REDUNDANT PATHS FOR THIS HARDWARE OR FUNCTION WITHDRAW ISSUE. IN THE STRICTEST SENSE THIS SHOULD HAVE A DUAL CRITICALITY OF 2/2 FOR WASTE H2O AND 3/1R FOR SUPPLY H2O. THE SUBSYSTEM MANAGER HAS FOREGONE WASTE CRITICALITY SAYING ONLY SUPPLY TO WASTE FLOW WILL BE ALLOWED.

REPORT DATE 29 JUNE 1988 C.4-47
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/22/87
ASSESSMENT ID: LS-2189
NASA FMEA #: 05-6VF-2001-1
SUBSYSTEM: LIFE SUPPORT
MDAC ID: 2189
ITEM: DUMP VALVE/NOZZLE HEATER CIRCUIT BREAKER (1)
LEAD ANALYST: K. BARICKMAN

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ 3 /1R ] [ P ] [ NA ] [ P ] [ ]

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

IOA/NASA FM: FAILS TO REMAIN CLOSED
IOA COMMENT: THE LOSS OF THE WASTE WATER DUMP REQUIRES USE OF THE CWC FOR FLUID STORAGE THUS 3/2R CRITICALITY, NOT LOSS OF LIFE.

THE NASA VIEWED ANY LOSS OF WATER DUMP CAPABILITY, EITHER SUPPLY OR WASTE WATER, AS A LOSS OF LIFE OR VEHICLE CONDITION. HOWEVER THE IOA ANALYSIS DID NOT RECOGNIZE THIS LIMITATION AND VIEWED THE LOSS OF WASTE WATER DUMP CAPABILITY TO BE ONLY A LOSS OF MISSION CONDITION.

INCORPORATE REVISED CRITICALITY AS RECOMMENDED. IN THE STRICTEST SENSE THIS SHOULD HAVE A DUAL CRITICALITY OF 2/2 FOR WASTE H2O AND 3/1R FOR SUPPLY H2O, THUS THE 3/1R APPLIES.

REPORT DATE 29 JUNE 1988 C.4-48
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/22/87
ASSESSMENT ID: LS-2191
NASA FMEA #: 05-6VE-2002-1

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 2191
ITEM: DUMP VALVE ENABLE/NOZZLE HEATER SWITCH (1)

LEAD ANALYST: K. BARICKMAN

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RECOMMENDATIONS: (If different from NASA)

[ 3 /1R ] [ P ] [ NA] [ P ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA FM: SHORTED TO GROUND
NASA FM: OPEN, SHORTED TO GROUND

REPORT DATE 29 JUNE 1988 C.4-49
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/22/87
ASSESSMENT ID: LS-2192
NASA FMEA #: 05-6VE-2024-1

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 2192
ITEM: DUMP VALVE ENABLE/NOZZLE HEATER SWITCH (1)

LEAD ANALYST: K. BARICKMAN

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RECOMMENDATIONS: (If different from NASA)
[ 3 /1R ] [ P ] [ NA ] [ P ] [ ]
(ADD/DELETE)

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

REMARKS:
IOA FM: PHYSICAL BINDING/JAMMING
NASA FM: OPEN, SHORTED TO GROUND
IOA COMMENT: LOSS OF SWITCH ELIMINATES WASTE WATER DUMP
CAPABILITY THRU THE NORMAL CHANNELS, BUT DUMP CAN STILL BE DONE
THRU THE SUPPLY WATER SYSTEM. IF THE FAILURE OCCURS DURING A
VALVE OPEN PHASE, THEN A POTENTIAL LOSS OF LIFE CAN OCCUR IF THE
DUMP ISOLATION VALVE ALSO FAILS - THUS A CRITICALITY OF 3/1R PNP.
THE IOA ANALYSIS VIEWED THE FIRST FAILURE TO BE A NON-MISSION
ESSENTIAL CRITICALITY, HOWEVER SECONDARY FAILURES COULD CREATE
MAJOR PROBLEMS. THE NASA FMEA CRITICALITY VIEWED
THE FIRST FAILURE TO BE AT LEAST A MISSION LOSS, IF NOT A LIFE
THREATENING CONDITION. INCORPORATE MDAC IOA CRITICALITY. IN THE
STRICTEST SENSE THIS SHOULD HAVE A DUAL CRITICALITY OF 2/2 FOR
WASTE H2O AND 3/1R FOR SUPPLY H2O, THUS THE 3/1R APPLIES.

REPORT DATE 29 JUNE 1988 C.4-50
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/22/87
ASSESSMENT ID: LS-2193
NASA FMEA #: 05-6VC-2024-1
SUBSYSTEM: LIFE SUPPORT
MDAC ID: 2193
ITEM: DUMP VALVE ENABLE/NOZZLE HEATER SWITCH (1)
LEAD ANALYST: K. BARICKMAN

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NASA [ 2 /1R ] [ P ] [ P ] [ P ] [ P ] *
IOA [ 3 /2R ] [ P ] [ P ] [ P ] [ ]
COMPARE [ N /N ] [ ] [ ] [ ] [ ] [ N ]

RECOMMENDATIONS: (If different from NASA)

[ 3 /1R ] [ P ] [ NA] [ P ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA FM: OPEN (ELECTRICAL)
NASA FM: OPEN, SHORT TO GROUND WHILE VALVE CLOSED.
IOA COMMENT: LOSS OF SWITCH ELIMINATES WASTE WATER DUMP
CAPABILITY THRU NORMAL CHANNELS. IF THE FAILURE OCCURS DURING A
VALVE CLOSED PHASE, THEN A POTENTIAL LOSS OF LIFE CAN OCCUR IF
THE DUMP ISOLATION VALVE ALSO FAILS—THUS A CRITICALITY OF 3/1R
PNP.

THE IOA ANALYSIS VIEWED THE FIRST FAILURE TO BE A NON-MISSION
ESSENTIAL CRITICALITY, HOWEVER SECONDARY FAILURES COULD CREATE
MAJOR PROBLEMS. THE NASA FMEA CRITICALITY VIEWED THE FIRST
FAILURE TO BE AT LEAST A MISSION LOSS, IF NOT A LIFE THREATENING
CONDITION. INCORPORATE MDAC IOA CRITICALITY. IN THE STRICTEST
SENSE THIS SHOULD HAVE A DUAL CRITICALITY OF 2/2 FOR WASTE H2O
AND 3/1R FOR SUPPLY H2O, THUS THE 3/1R APPLIES.

REPORT DATE 29 JUNE 1988  C.4-51
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/22/87
ASSESSMENT ID: LS-2211
NASA FMEA #: 06-2-0418-1
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 2211
ITEM: VACUUM VENT NOZZLE (1)

LEAD ANALYST: K. BARICKMAN

ASSESSMENT:

CRITICALITY REDUNDANCY SCREENS CIL
FLIGHT HDW/FUNC A B C ITEM

NASA [ 2 /1R ] [ P ] [ P ] [ P ] [ X ] *
IOA [ 1 /1 ] [ ] [ ] [ ] [ ] [ X ]
COMPARE [ N /N ] [ N ] [ N ] [ N ] [ ]

RECOMMENDATIONS: (If different from NASA)
[ 1 /1 ] [ ] [ ] [ ] [ ] [ A ]
(ADD/DELETE)

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

REMARKS:
IOA/NASA FM: RESTRICTED/BLOCKED FLOW
IOA COMMENT: THIS MAY BE DETERMINED TO BE A "NON-CREDIBLE"
CONDITION OF BLOCKED FLOW IN THE VACUUM VENT LINE, HOWEVER IF
PLAUSIBLE A POTENTIALLY EXPLOSIVE ENVIRONMENT DUE TO HYDROGEN GAS
CONCENTRATIONS WOULD BE POSSIBLE, HENCE THE 1/1 CRITICALITY.
THE IOA ANALYSIS VIEWED THE LOSS OF THE VACUUM VENT DUMP LINE BY
BLOCKAGE OR LOSS OF THE HEATERS AS A POTENTIAL LOSS OF
LIFE/VEHICLE CONDITION. A POTENTIALLY HAZARDOUS ATMOSPHERE OF
HYDROGEN AND OXYGEN COULD OCCUR IF THE LINE WERE BLOCKED.
WITHDRAW ISSUE. NASA CRITICALITY IS CORRECT. A SECOND FAILURE
WHICH INDUCES O2 INTO THE ENVIRONMENT IS REQUIRED TO PRODUCE AN
EXPLOSIVE ENVIRONMENT.

REPORT DATE 29 JUNE 1988 C.4-52
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/22/87
ASSESSMENT ID: LS-2213
NASA FMEA #: 
NASA DATA: BASELINE [ ] NEW [ ]

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 2213
ITEM: VACUUM VENT LINE HEATER THERMOSTAT (2)

LEAD ANALYST: K. BARICKMAN

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ 3 /3 ] [ ] [ ] [ ] [ ] [ ] [ A ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA FM: FAILS TO REMAIN CLOSED
THERE WAS NO NASA WMS FMEA WHICH MATCHED THE IOA DESCRIPTION.
THE NASA ANALYSIS MAY BE COMBINED WITH SOME OTHER HARDWARE OR
REALLOCATED TO ANOTHER SUBSYSTEM.
REVISE CRITICALITY TO 3/3. THIS SHOULD HAVE BEEN ASSESSED
AGAINST 06-2E-0424 & 0425. THE FAILURE OF THE THERMOSTAT EITHER
CLOSED OR OPEN DOES NOT CREATE A PROBLEM. WHEN CLOSED THE
WATTAGE IS NOT SUFFICIENT ENOUGH TO OVER TEMP THE LINE AND IF
OPEN THE
REDUNDANT HEATER IS AVAILABLE ALTHOUGH THE GAS FLOWING THROUGH
THIS 2 INCH LINE ACTUALLY DOES NOT REQUIRE HEATING. IF H2O IS
INDUCED IN THE LINE (i.e. H2 SEPARATOR FAILURE) THE HEATER IS TO
SMALL TO STOP FREEZING.

REPORT DATE 29 JUNE 1988 C.4-53
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/22/87
ASSESSMENT ID: LS-2218
NASA FMEA #: 05-6VC-2006-1

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 2218
ITEM: NOZZLE HEATER CIRCUIT BREAKER (1)

LEAD ANALYST: K. BARICKMAN

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ 3 /3 ] [ ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

IOA/NASA FM: FAILS TO REMAIN CLOSED

IOA COMMENT: IF THE POSSIBILITY FOR LINE FREEZING IS ACCEPTED, DUE TO THE PRESENCE OF THE VACUUM VENT HEATERS, THEN LOSS OF THE HEATERS COULD CAUSE LINE FREEZING AND A POTENTIALLY DANGEROUS GAS ENVIRONMENT.

THE IOA ANALYSIS VIEWED THE LOSS OF THE VACUUM VENT DUMP LINE BY BLOCKAGE OR LOSS OF THE HEATERS AS A POTENTIAL LOSS OF LIFE/VEHICLE CONDITION. A POTENTIALLY HAZARDOUS ATMOSPHERE OF HYDROGEN AND OXYGEN COULD OCCUR IF THE LINE WERE BLOCKED.

WITHDRAW ISSUE. NASA CRITICALITY IS CORRECT. THE HEATER IS SIZED TO KEEP ANY FROST FROM BUILDING UP IN THE DUCT. THE MOISTURE (VERY LOW LEVEL) IS VENTED OVERBOARD FROM THE COMMODE OR THE AIRLOCK DEPRESS VALVE. ANY FREEZING IN THIS CASE WOULD NOT COMPLETELY BLOCK FLOW NOR WOULD THE ICE BUILD UP BE SIGNIFICANT.

REPORT DATE 29 JUNE 1988  C.4-54
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/22/87
ASSESSMENT ID: LS-2219
NASA FMEA #: 

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 2219
ITEM: NOZZLE HEATER SWITCH (1)

LEAD ANALYST: K. BARICKMAN

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ 3 /3 ] [ ] [ ] [ ] [ ] [ A ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

IOA FM: ELECTRICAL OPEN
THERE WAS NO NASA WMS FMEA WHICH MATCHED THE IOA DESCRIPTION.
THE NASA ANALYSIS MAY BE COMBINED WITH SOME OTHER HARDWARE OR
REALLOCATED TO ANOTHER SUBSYSTEM.
WITHDRAW ISSUE. NASA CRITICALITY IS CORRECT. THE HEATER IS
SIZED TO KEEP ANY FROST FROM BUILDING UP IN THE DUCT. THE
MOISTURE (VERY LOW LEVEL) IS VENTED OVERBOARD FROM THE COMMODE OR
THE AIRLOCK DEPRESS VALVE. ANY FREEZING IN THIS CASE WOULD NOT
COMPLETELY BLOCK FLOW NOR WOULD THE ICE BUILD UP BE SIGNIFICANT.

REPORT DATE 29 JUNE 1988 C.4-55
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/22/87
ASSESSMENT ID: LS-2220
NASA FMEA #: 05-6VE-2411-1

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 2220
ITEM: NOZZLE HEATER SWITCH (1)

LEAD ANALYST: K. BARICKMAN

ASSESSMENT:

CRITICALLY
FLIGHT
HDW/FUNC

NASA [ 3 /3 ] [ ] [ ] [ ] [ ] [ ]
IOA [ 1 /1 ] [ ] [ ] [ ] [ ] [ X ]
COMPARE [ N /N ] [ ] [ ] [ ] [ ] [ N ]

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

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

REMARKS:
IOA FM: SHORTED. NASA FM: OPEN, SHORTED TO GROUND.
IOA COMMENT: IF THE POSSIBILITY FOR LINE FREEZING IS ACCEPTED,
DUE TO THE PRESENCE OF THE VACUUM VENT HEATERS, THEN LOSS OF THE
HEATERS COULD CAUSE LINE FREEZING AND A POTENTIALLY DANGEROUS GAS
ENVIRONMENT.
THE IOA ANALYSTS VIEWED THE LOSS OF THE VACUUM VENT DUMP LINE BY
BLOCKAGE OR LOSS OF THE HEATERS AS A POTENTIAL LOSS OF
LIFE/VEHICLE CONDITION. A POTENTIALLY HAZARDOUS ATMOSPHERE OF
HYDROGEN AND OXYGEN COULD OCCUR IF THE LINE WERE BLOCKED.
WITHDRAW ISSUE. NASA CRITICALITY IS CORRECT. THE HEATER IS
SIZED TO KEEP ANY FROST FROM BUILDING UP IN THE DUCT. THE
MOISTURE (VERY LOW LEVEL) IS VENTED OVERBOARD FROM THE COMMODE
OR THE AIRLOCK DEPRESS VALVE. ANY FREEZING IN THIS CASE WOULD NOT
COMPLETELY BLOCK FLOW NOR WOULD THE ICE BUILD UP BE SIGNIFICANT.

REPORT DATE 29 JUNE 1988 C.4-56
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/22/87
ASSESSMENT ID: LS-2220A
NASA FMEA #: 05-6VC-2025-2

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 2220
ITEM: NOZZLE HEATER SWITCH (1)

LEAD ANALYST: K. BARICKMAN

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ 3 /3 ] [ ] [ ] [ ] [ ] [ A ] (ADD/DELETE)

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

REMARKS:
IOA FM: SHORTED. NASA FM: OPEN, SHORTED TO GROUND.
IOA COMMENT: IF THE POSSIBILITY FOR LINE FREEZING IS ACCEPTED, DUE TO THE PRESENCE OF THE VACUUM VENT HEATERS, THEN LOSS OF THE HEATERS COULD CAUSE LINE FREEZING AND A POTENTIALLY DANGEROUS GAS ENVIRONMENT.
THE IOA ANALYSIS VIEWED THE LOSS OF THE VACUUM VENT DUMP LINE BY BLOCKAGE OR LOSS OF THE HEATERS AS A POTENTIAL LOSS OF LIFE/VEHICLE CONDITION. A POTENTIALLY HAZARDOUS ATMOSPHERE OF HYDROGEN AND OXYGEN COULD OCCUR IF THE LINE WERE BLOCKED.
WITHDRAW ISSUE. NASA CRITICALITY IS CORRECT. THE HEATER IS SIZED TO KEEP ANY FROST FROM BUILDING UP IN THE DUCT. THE MOISTURE (VERY LOW LEVEL) IS VENTED OVERBOARD FROM THE COMMODE OR THE AIRLOCK DEPRESS VALVE. ANY FREEZING IN THIS CASE WOULD NOT COMPLETELY BLOCK FLOW NOR WOULD THE ICE BUILD UP BE SIGNIFICANT.

REPORT DATE 29 JUNE 1988 C.4-57
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/22/87
ASSESSMENT ID: LS-2222
NASA FMEA #: 06-2-0425-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 2222
ITEM: VACUUM VENT NOZZLE HEATER (1)

LEAD ANALYST: K. BARICKMAN

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)
[ 3 /3 ] [ ] [ ] [ ] [ ] [ A ] (ADD/DELETE)

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

REMARKS:
IOA COMMENT: IF THE POSSIBILITY FOR LINE FREEZING IS ACCEPTED, DUE TO THE PRESENCE OF THE VACUUM VENT HEATERS, THEN LOSS OF THE HEATERS COULD CAUSE LINE FREEZING AND A POTENTIALLY DANGEROUS GAS ENVIRONMENT.
THE IOA ANALYSIS VIEWED THE LOSS OF THE VACUUM VENT DUMP LINE BY BLOCKAGE OR LOSS OF THE HEATERS AS A POTENTIAL LOSS OF LIFE/VEHICLE CONDITION. A POTENTIALLY HAZARDOUS ATMOSPHERE OF HYDROGEN AND OXYGEN COULD OCCUR IF THE LINE WERE BLOCKED.
WITHDRAW ISSUE. NASA CRITICALITY IS CORRECT. THE HEATER IS SIZED TO KEEP ANY FROST FROM BUILDING UP IN THE DUCT. THE MOISTURE (VERY LOW LEVEL) IS VENTED OVERBOARD FROM THE COMMODE OR THE AIRLOCK DEPRESS VALVE. ANY FREEZING IN THIS CASE WOULD NOT COMPLETELY BLOCK FLOW NOR WOULD THE ICE BUILD UP BE SIGNIFICANT.

REPORT DATE 29 JUNE 1988 C.4-58
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/22/87
ASSESSMENT ID: LS-2233X
NASA FMEA #: 06-2-0443-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 2233
ITEM: WCS CHECK VALVE LINES TO WWS QD

LEAD ANALYST: K. BARICKMAN

ASSESSMENT:

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

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

REMARKS:
IOA/NASA FM: RESTRICTED FLOW
THOSE NASA FMEA WHICH INCLUDE A COLLECTION OF HARDWARE ITEMS MAY
NOT MATCH THE IOA ANALYSIS. THE IOA ANALYSES PROVIDED SEPARATE
ANALYSES FOR EACH PIECE OF EQUIPMENT. THE BASIC PREMISE OF THE
NASA FMEA DID AGREE WITH THE IOA ANALYSIS.
WITHDRAW ISSUE. LIST THE NASA CRITICALITY. THE FCB AND UCD ARE
ONLY A ONE DAY SUPPLY AND ARE NOT CONSIDERED AS REDUNDANCY IN THE
STRICKEST SENSE.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/22/87
ASSESSMENT ID: LS-2236X
NASA FMEA #: 06-2-0445-1
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 2236
ITEM: FAN/SEPARATOR MUFFLER HOUSING INLET DUCT

LEAD ANALYST: K. BARICKMAN

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]
INADEQUATE [   ]

REMARKS:

IOA/NASA FM: RESTRICTED FLOW
IOA COMMENT: NOT VIEWED AS IMMEDIATE MISSION CRITICAL BECAUSE OF FCB AND UCD SUPPLIES. THE FCB AND UCD SUPPLY USAGE MAY CREATE A LOSS OF MISSION DEPENDING ON MISSION DURATION DUE TO LACK OF SUPPLIES.
THE IOA ANALYSIS VIEWED THE FIRST FAILURE TO BE A NON-MISSION ESSENTIAL CRITICALITY, HOWEVER SECONDARY FAILURES COULD CREATE MAJOR PROBLEMS. THE NASA FMEA CRITICALITY VIEWED THE FIRST FAILURE TO BE AT LEAST A MISSION LOSS, IF NOT A LIFE THREATENING CONDITION.
WITHDRAW ISSUE. LIST THE NASA CRITICALITY. THE FCB AND UCD ARE ONLY A ONE DAY SUPPLY AND ARE NOT CONSIDERED AS REDUNDANCY IN THE STRICTEST SENSE.

REPORT DATE 29 JUNE 1988  C.4-60
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/22/87
ASSESSMENT ID: LS-2237X
NASA FMEA #: 06-2-0445-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 2237
ITEM: MUFFLER HOUSING ASSEMBLY (1)

LEAD ANALYST: K. BARICKMAN

ASSESSMENT:

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

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

REMARKS:
IOA/NASA FM: RESTRICTED/BLOCKED FLOW
IOA COMMENT: NOT VIEWED AS IMMEDIATE MISSION CRITICAL BECAUSE OF FCB AND UCD SUPPLIES. THE FCB AND UCD SUPPLY USAGE MAY CREATE A LOSS OF MISSION DEPENDING ON MISSION DURATION DUE TO LACK OF SUPPLIES.
THE IOA ANALYSIS VIEWED THE FIRST FAILURE TO BE A NON-MISSION ESSENTIAL CRITICALITY, HOWEVER SECONDARY FAILURES COULD CREATE MAJOR PROBLEMS. THE NASA FMEA CRITICALITY VIEWED THE FIRST FAILURE TO BE AT LEAST A MISSION LOSS, IF NOT A LIFE THREATENING CONDITION.
WITHDRAW ISSUE. LIST THE NASA CRITICALITY. THE FCB AND UCD ARE ONLY A ONE DAY SUPPLY AND ARE NOT CONSIDERED AS REDUNDANCY IN THE STRICKEST SENSE.

REPORT DATE 29 JUNE 1988 C.4-61
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/22/87
ASSESSMENT ID: LS-2252X
NASA FMEA #: 05-6VC-2037-2

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 2252
ITEM: WASTE DUMP VALVE SWITCH

LEAD ANALYST: K. BARICKMAN

ASSESSMENT:

CRITICALLY REDUNDANCY SCREENS CIL ITEM
FLIGHT HDW/FUNC A B C

NASA [2 /1R] [P] [P] [P] [X] *
IOA [2 /1R] [P] [NA] [P] [X] 

COMPARE [ / ] [ ] [ N ] [ ] [ ]

RECOMMENDATIONS: (If different from NASA)
[2 /2 ] [ ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/NASA FM: SHORTED TO GROUND
IOA COMMENT: THE FIRST FAILURE IS POTENTIAL PROBLEM IF VALVE OPEN AT FAILURE BECAUSE OF LOST CONTINGENCY DUMP CAPABILITY.
POTENTIAL LOSS OF LIFE IF DUMP ISOLATION VALVE FAILS TO CLOSE IF DUMP VALVE IS OPEN AT FAILURE, THEREFORE CRITICALLY 2/1R PNP.
THE DISAGREEMENT IN THE REDUNDANCY SCREENS WAS DUE TO NO DETAILED DISCUSSION WITH THE NASA SUBSYSTEM MANAGERS REGARDING THE REDUNDANT PATHS.
INCORPORATE REVISED CRITICALLY AS RECOMMENDED FOR THE WASTE WATER DUMP CONSIDERATIONS AND ADD 3/1R PPP CRITICALLY FOR SUPPLY WATER DUMP CONSIDERATIONS. CONSISTENT WITH ALL OTHER WASTE WATER DUMP COMPONENTS DOWNSTREAM OF THE DUMP ISOLATION VALVE.

REPORT DATE 29 JUNE 1988 C.4-62
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/05/88
ASSESSMENT ID: LS-3001
NASA FMEA #: 05-6V-2000-1

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 3001
ITEM: CB-SMOKE DETN BAY 2A/3B, 1B/3A, 1A/2B (CB8, 7, 7)

LEAD ANALYST: J.D. ARBET

NASA DATA:
BASELINE
NEW

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 3001
ITEM: CB-SMOKE DETN BAY 2A/3B, 1B/3A, 1A/2B (CB8, 7, 7)

LEAD ANALYST: J.D. ARBET

RECOMMENDATIONS: (If different from NASA)
[ 2 /1R ] [ P ] [ P ] [ P ] [ X ]

* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE
INADEQUATE

REMARKS:
PER NSTS-222006 (CN 4) PARAGRAPH 2.3.5A SCREEN B FAILS BECAUSE THE SENSORS ARE OPERATING DURING LOS. VISUAL OPEN STATE OF CIRCUIT BREAKERS IS NOT CONSIDERED DETECTABLE. A POSSIBLE ADDITION TO THE SMOKE CONCENTRATION OUTPUT WOULD BE TO TRIGGER FDA IF THE OUTPUT FAILS TO ZERO, INDICATING LOSS OF POWER TO THE SENSOR.
WITHDRAW THE IOA ISSUE.
THE DETERMINATION OF ON-ORBIT DETECTABILITY IS AT QUESTION. SINCE DETECTABILITY IS AVAILABLE WITH STATION COVERAGE AND THE ITEM IS ALREADY A CIL IT APPEARS THE ITEM HAS BEEN GIVEN SUFFICIENT VISIBILITY WITHIN THE CCB AND PRCB.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/05/88
ASSESSMENT ID: LS-3003
NASA FMEA #: 05-6V-2000-1
NASA DATA: BASELINE [ ] NEW [ X ]

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 3003
ITEM: CB-SMOKE DETN L/R FLT DECK (CB7)

LEAD ANALYST: J.D. ARBET

ASSESSMENT:

CRITICALITY
FLIGHT
HDW/FUNC

REDUNDANCY SCREENS
A        B        C

ITEM

NASA [ 2 /1R ] [ P ] [ P ] [ P ] [ X ] *
IOA [ 2 /1R ] [ P ] [ NA] [ P ] [ X ]
COMPARE [ / ] [ ] [ N ] [ ] [ ]

RECOMMENDATIONS: (If different from NASA)
[ 2 /1R ] [ P ] [ P ] [ P ] [ ]
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

REMARKS:
PER NSTS-22206 (CN 4) PARAGRAPH 2.3.5A SCREEN B FAILS BECAUSE THE SENSORS ARE OPERATING DURING LOS. VISUAL OPEN STATE OF CIRCUIT BREAKERS IS NOT CONSIDERED DETECTABLE. A POSSIBLE ADDITION TO THE SMOKE CONCENTRATION OUTPUT WOULD BE TO TRIGGER FDA IF THE OUTPUT FAILS TO ZERO, INDICATING LOSS OF POWER TO SENSOR. WITHDRAW THE IOA ISSUE.
THE DETERMINATION OF ON-ORBIT DETECTABILITY IS AT QUESTION. SINCE DETECTABILITY IS AVAILABLE WITH STATION COVERAGE AND THE ITEM IS ALREADY A CIL IT APPEARS THE ITEM HAS BEEN GIVEN SUFFICIENT VISIBILITY WITHIN THE CCB AND PRCB.

REPORT DATE 29 JUNE 1988 C.4-64
### APPENDIX C
### ASSESSMENT WORKSHEET

**ASSESSMENT DATE:** 1/05/88  
**ASSESSMENT ID:** LS-3005  
**NASA FMEA #:** 05-6V-2000-1  

**SUBSYSTEM:** LIFE SUPPORT  
**MDAC ID:** 3005  
**ITEM:** CB-SMOKE DETN CABIN (CB6)  
**LEAD ANALYST:** J.D. ARBET  

**ASSESSMENT:**  
CRITICALITY REDUNDANCY SCREENS  

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**RECOMMENDATIONS:** (If different from NASA)  
[ 2 /1R ] [ P ] [ P ] [ P ] [ ] (ADD/DELETE)  

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

**REMARKS:**  
PER NSTS-22206 (CN 4) PARAGRAPH 2.3.5A SCREEN B FAILS BECAUSE THE SENSORS ARE OPERATING DURING LOS. VISUAL OPEN STATE OF CIRCUIT BREAKERS IS NOT CONSIDERED DETECTABLE. A POSSIBLE ADDITION TO THE SMOKE CONCENTRATION OUTPUT WOULD BE TO TRIGGER FDA IF THE OUTPUT FAILS TO ZERO, INDICATING LOSS OF POWER TO THE SENSOR. WITHDRAW THE IOA ISSUE.  
THE DETERMINATION OF ON-ORBIT DETECTABILITY IS AT QUESTION. SINCE DETECTABILITY IS AVAILABLE WITH STATION COVERAGE AND THE ITEM IS ALREADY A CIL IT APPEARS THE ITEM HAS BEEN GIVEN SUFFICIENT VISABILITY WITHIN THE CCB AND PRCB.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88
ASSESSMENT ID: LS-3027
NASA FMEA #: 05-6V-2075-2

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 3027
ITEM: RESISTOR A1R1, R2, R3, R4, R5, R8, R9, R10, R11 (1.2K)

LEAD ANALYST: J.D. ARBET

RECOMMENDATIONS: (If different from NASA)
[ 3 /1R ] [ P ] [ P ] [ P ] [ X ] * (ADD/DELETE)

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

REMARKS:
The alarm still will be issued via the smoke concentration FDA parameter and the appropriate fire light will illuminate.
NASA criticality changed to agree with IOA criticality (B screen, P). The accumulated results table (smoke) dated 3/14/88 indicates the latest NASA analysis agrees with the IOA analysis.

REPORT DATE 29 JUNE 1988  C.4-66
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
ASSESSMENT ID: LS-3030
NASA FMEA #: 05-6V-2251-1

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 3030
ITEM: DIODE AICRI, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11

LEAD ANALYST: J.D. ARBET

ASSESSMENT:

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COMPARE [ / ] [ ] [ N ] [ ] [ N ]

RECOMMENDATIONS: (If different from NASA)
[ 3/1R ] [ P ] [ F ] [ P ] [ D ]
(ADD/DELETE)

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

REMARKS:
THE FAILURE IS DETECTED BY THE SMOKE DETECTOR CONCENTRATION FDA ALERT AND SUBSEQUENT ANALYSIS.
WITHDRAW THE IOA ISSUE.

REPORT DATE 29 JUNE 1988 C.4-67
ASSESSMENT DATE: 2/08/88
ASSESSMENT ID: LS-3033
NASA FMEA #: 05-6V-2075-2
SUBSYSTEM: LIFE SUPPORT
MDAC ID: 3033
ITEM: RESISTOR A6R11, R12 (1.2K)
LEAD ANALYST: J.D. ARBET
ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ 3 /1R ] [ P ] [ P ] [ P ] [ D ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
THESE RESISTORS ONLY EFFECT THE PAYLOAD SMOKE DETECTION. ALL OTHER ALARMS WORK TO INDICATE THE FIRE. BUT THE LOSS OF ALL LIKE AND UNLIKE REDUNDANCY (ALL ALARM OUTPUTS) COULD POSSIBLY RESULT IN LOSS OF THE CREW/VEHICLE.

NASA CRITICALITY CHANGED TO AGREE WITH IOA CRITICALITY (B SCREEN, P). THE ACCUMULATED RESULTS TABLE (SMOKE) DATED 3/14/88 INDICATES THE LATEST NASA ANALYSIS AGREES WITH THE IOA ANALYSIS.

REPORT DATE 29 JUNE 1988 C.4-68
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88
ASSESSMENT ID: LS-3036
NASA FMEA #: 05-6V-2251-1
SUBSYSTEM: LIFE SUPPORT
MDAC ID: 3036
ITEM: DIODE A6CR1, CR2
LEAD ANALYST: J.D. ARBET

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

3/1R | P | F | P | D (ADD/DELETE)

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

REMARKS:
ALL OTHER ALARMS WORK TO INDICATE THE FIRE AND THE SOURCE CAN BE IDENTIFIED BY SUBSEQUENT ANALYSIS.
WITHDRAW THE IOA ISSUE.

REPORT DATE 29 JUNE 1988 C.4-69
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88
ASSESSMENT ID: LS-3042
NASA FMEA #: 05-6V-2311-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 3042
ITEM: SMOKE DETECTION LIGHT MATRIX-LAMPS

LEAD ANALYST: J.D. ARBET

ASSESSMENT:

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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:
FAILURE CAN BE DETECTED INFLIGHT WHEN ALARMS ANNUNCIATE THE FIRE BUT LIGHT DOES NOT. SOFTWARE FDA PROVIDES SOURCE OF FIRE. NASA CRITICALITY CHANGED TO AGREE WITH IOA CRITICALITY (B SCREEN, P). THE ACCUMULATED RESULTS TABLE (SMOKE) DATED 3/14/88 INDICATES THE LATEST NASA ANALYSIS WITH THE IOA ANALYSIS.

REPORT DATE 29 JUNE 1988  C.4-70
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/09/88
ASSESSMENT ID: LS-3054
NASA FMEA #: 05-6V-2253-1
SUBSYSTEM: LIFE SUPPORT
MDAC ID: 3054
ITEM: DIODE-NO IDENTIFIER
LEAD ANALYST: J.D. ARBET

ASSESSMENT:

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NASA [ 2 /1R ] [ P ] [ N ] [ P ] [ X ] *
IOA [ 3 /3 ] [ ] [ ] [ ] [ ]
COMPARE [ N /N ] [ N ] [ N ] [ N ] [ N ]

RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
POST LAUNCH, OPEN ACTUALLY ISOLATES THE GROUND CIRCUIT BETTER THAN ANY OTHER CONDITION AND DOES NOT EFFECT THE FLIGHT CIRCUIT. PRE-LAUNCH THE CIRCUIT PROVIDES CAPABILITY TO FIGHT A FIRE THROUGH GROUND COMMAND CAPABILITIES. THIS DIODE, THE ON BOARD CIRCUIT, AND THE PORTABLE BOTTLES MUST FAILS TO RESULT IN LOSS OF CREW/VEHICLE. CONSIDERATIONS OF PREMATURE FIRING ARE ACTUALLY A FAIL SAFE CONDITION. WITHDRAW THE IOA ISSUE.
THE IOA ASSESSMENT RATIONALE THAT CONSIDERED USE OF THE PORTABLE EXTINGUISHER AS ANOTHER BACKUP IS SUSPECT. IN THE VERTICAL POSITION THE REACH FROM THE AFT AREA TO THE AV BAY FIRE PORTS IS RATHER DIFFICULT.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/06/88
ASSESSMENT ID: LS-3055
NASA FMEA #: 05-6V-2073-1

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 3055
ITEM: RESISTOR-NO IDENTIFIER (5.11K)

LEAD ANALYST: J.D. ARBET

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
The failure has no effect on the flight circuit thus the only consideration is on the launch pad. Failure of the ground systems to discharge the suppressant container is backed up by the flight system, portable bottles, and launch tower fire systems.

Withdraw the IOA issue.
The IOA assessment rationale that considered use of the portable extinguisher as another backup is suspect. In the vertical position the reach from the aft area to the av bay fire ports is rather difficult.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/05/88
ASSESSMENT ID: LS-3057
NASA FMEA #: 05-6V-2302-2

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 3057
ITEM: PYRO CONTROLLER NO. 1, 2, 3

LEAD ANALYST: J.D. ARBET

ASSESSMENT:

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COMPARE [ N /N ] [ N ] [ N ] [ N ] [ N ]

RECOMMENDATIONS: (If different from NASA)
[ 1 /1 ] [ ] [ ] [ ] [ A ]
(ADD/DELETE)

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

REMARKS:
A PREMATURE OPERATION OF THIS CIRCUIT (SHORT INTERNAL) CAN INHIBIT THE ACTUAL FIRE VOLTAGE BY NOT ALLOWING THE CAPACITOR VOLTAGE TO BUILD UP. THUS THE WORST CASE CRITICALITY IS 1/1. IF THE NSI CAN FIRE AT A LOWER VOLTAGE OR IF THE FAILURE FIRES THE NSI PRIOR TO THE ACTUAL FIRE COMMAND THE FAILURE WOULD BE A CRITICALITY 3/3 SINCE THE DESIRE RESULTS ARE ACHIEVED. NASA CRITICALITY CHANGED TO AGREE WITH IOA RECOMMENDED CRITICALITY. IOA REMARKS WERE SUBSTANTIATED BY NASA SUBSYSTEM MANAGER FOR THE BASIC EPD&C COMPONENTS.

REPORT DATE 29 JUNE 1988 C.4-73
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/10/88
ASSESSMENT ID: LS-3059
NASA FMEA #: 06-2-330001-2
SUBSYSTEM: LIFE SUPPORT
MDAC ID: 3059
ITEM: FIRE SUPPRESSANT ASSEMBLY (9)
LEAD ANALYST: R.E. DUFFY

NASA DATA:
BASELINE [ ] NEW [ X ]

CRITICALITY REDUNDANCY SCREENS

ITEM
NASA [ 1 ] [ ] [ ] [ ] [ ] [ X ] *
IOA [ 2 ] [ ] [ ] [ ] [ ] [ X ]
COMPARE [ N ] [ ] [ ] [ ] [ ] [ ]

RECOMMENDATIONS: (If different from NASA)

[ ] [ ] [ ] [ ] [ ] [ ]

* CIL RETENTION RATIONALE: (If applicable)

Adequate [ ]
Inadequate [ ]

REMARKS:
THIS FAILURE REQUIRES MORE THOUGHT THAN ONE FMEA/CIL: 1) THE FAILURE BY ITSELF SHOULD BE INDICATED BY ILLUMINATION OF THE AGENT DISCHARGE LIGHT. UPON DISCHARGE (ASSUMING A HIGH LEAD RATE) THE AV BAY WOULD BE PROTECTED FOR UP TO 50 HRS. THUS THE FAILURE ONLY HAS MISSION TERMINATION EFFECTS AND LOSS OF CREW/VEHICLE ARE NOT THE CONCERN; 2) THE FAILURE ASSUMING A SLOW LEAK WOULD REDUCE THIS AV BAY PROTECTION TIME BUT DETECTION WOULD STILL BE INDICATED VIA THE AGENT DISCHARGE LIGHT. IF THE RATE IS SLOW ENOUGH IT WILL BE DETECTED BY GROUND CHECKOUT BETWEEN MISSION; 3) THE MAJOR PROBLEM IS IF FOLLOWING GROUND CHECKOUT THE RESISTOR THAT PROVIDES CURRENT LIMITING FOR THE CIRCUIT FAILS OPEN OR THE PRESSURE SWITCH CONTACT FAILS CLOSED, OR THE CIRCUIT IS SHORTED TO GROUND NO AGENT DISCHARGE LIGHT ILLUMINATION CAN TAKE PLACE AND THEN THIS FAILURE CAN BE CATASTROPHIC IF THE LEAK IS UNDETECTED AND COMPLETE PRIOR TO LIFT-OFF. THUS THE FAILURE WOULD APPEAR AS A 1R/2. WITHDRAW THE IOA ISSUE. SINCE THE LEAK OF THE BOTTLE COULD RESULT IN NO SUPPRESSANT TO FIGHT A SUBSEQUENT FIRE AND CREW/VEHICLE ARE AT RISK. IOA ACCEPTS THE HIGHER CRITICALITY BASED ON GREATER VISABILITY.

REPORT DATE 29 JUNE 1988 C.4-74
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: LS-3062
NASA FMEA #: 06-2-371000-1

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 3062
ITEM: PORTABLE FIRE SUPPRESSANT ASSEMBLY

LEAD ANALYST: R.E. Duffy

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
A JAMMED ACTUATOR WILL BE KNOWN IMMEDIATELY UPON USAGE.
WITHDRAW THE IOA ISSUE. SINCE THE DIFFERENCE IN SCREEN B HAS NO EFFECT ON THE ANALYSIS OUTCOME THE NASA ANALYSIS IS CONSIDERED GOOD.

REPORT DATE 29 JUNE 1988 C.4-75
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: LS-3063
NASA FMEA #: 05-6V-2204-1
SUBSYSTEM: LIFE SUPPORT
MDAC ID: 3063
ITEM: HYBRID DRIVER (TYPE III) (3)
LEAD ANALYST: R.E. DUFFY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

*CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
THE FAILURE HAS NO EFFECT ON THE FLIGHT CIRCUIT THUS THE ONLY CONSIDERATION IS ON THE LAUNCH PAD. FAILURE OF THE GROUND SYSTEMS TO DISCHARGE THE SUPPRESSANT CONTAINER IS BACKED UP BY THE FLIGHT SYSTEM, PORTABLE BOTTLES, AND LAUNCH TOWER FIRE SYSTEMS.
WITHDRAW THE ISSUE.
THE IOA ASSESSMENT RATIONALE THAT CONSIDERED USE OF THE PORTABLE EXTINGUISHER AS ANOTHER BACKUP IS SUSPECT. IN THE VERTICAL POSITION THE REACH FROM THE AFT AREA TO THE AV BAY FIRE PORTS IS RATHER DIFFICULT.

REPORT DATE 29 JUNE 1988 C.4-76
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/07/88
ASSESSMENT ID: LS-3064
NASA FMEA #: 05-6V-2203-1
SUBSYSTEM: LIFE SUPPORT
MDAC ID: 3064
ITEM: HYBRID DRIVER (TYPE I) (3)
LEAD ANALYST: R.E. DUFFY

NASA DATA:
BASELINE [ ]
NEW [ X ]

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ 2 /1R ] [ P ] [ N ] [ P ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
The failure has no effect on the flight circuit thus the only consideration is on the launch pad. Failure of the ground systems to discharge the suppressant container is backed up by the flight system, portable bottles, and launch tower fire systems.
Withdraw the issue.
The IOA assessment rationale that considered use of the portable extinguisher as another backup is suspect. In the vertical position the reach from the aft area to the av bay fire ports is rather difficult.

REPORT DATE 29 JUNE 1988  C.4-77
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/06/88
ASSESSMENT ID: LS-3148X
NASA FMEA #: 05-6V-2028-3
NASA DATA: BASELINE [ ]
NEW [ X ]

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 3148
ITEM: SW-FIRE SUPPRESSION AV BAY 1, 2, 3 AGENT DISCH

LEAD ANALYST: J.D. ARBET

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ A ]
INADEQUATE [ ]

REMARKS:
The failure coupled with a failure of the one second time delay can inhibit the discharge of the fire suppressant container.
Worst case is during ascent and deorbit.
Withdraw the IOA issue.
The failure of the one second time delay is not considered a credible failure for that device. Thus the circuit is such that the capacitor bank will charge up and discharge even with this failure. The difference in operation is that the agent disch sw does not need to be depressed.

REPORT DATE 29 JUNE 1988 C.4-78
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/09/88
ASSESSMENT ID: LS-3154X
NASA FMEA #: 05-6V-2253-2
SUBSYSTEM: LIFE SUPPORT
MDAC ID: 3154
ITEM: DIODE-NO IDENTIFIER
LEAD ANALYST: J.D. ARBET

NASA DATA:
BASELINE [ ]
NEW [ X ]

ASSESSMENT:

CRITICALITY
FLIGHT
HDW/FUNC

REDUNDANCY SCREENS
A B C

ITEM

NASA [ 2 /1R ] [ P ] [ NA] [ P ] [ X ] *
IOA [ 2 /1R ] [ F ] [ P ] [ P ] [ X ]
COMPARE [ / ] [ N ] [ N ] [ ] [ ]

RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

Adequate [ ]
Inadequate [ ]

REMARKS:
The AS RUN GROUND TURNAROUND TEST UNDER MOST CONDITIONS WILL NOT
DETECT THE FAILURE.
NASA CRITICALITY CHANGED TO AGREE WITH IOA CRITICALITY (A SCREEN,
F). THE ACCUMULATED RESULTS TABLE (SMOKE) DATED 3/14/88
INDICATES THE LATEST NASA ANALYSIS AGREES WITH THE IOA ANALYSIS.

REPORT DATE 29 JUNE 1988 C.4-79
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: LS-3164X
NASA FMEA #: 05-6V-2203-2
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 3164
ITEM: HYBRID DRIVER (TYPE I) (3)

LEAD ANALYST: J.D. ARBET

ASAAMED:

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RECOMMENDATIONS: (If different from NASA)

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

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

REMARKS:
PRELAUNCH PORTABLE BOTTLES ARE AVAILABLE TO DISCHARGE SUPPRESSANT INTO THE BAY. THIS IS ALSO TRUE FOR ONORBIT AND LANDING/SAFINING. DURING LIFT OFF AND DEORBIT, A FAILURE OF THE PRE-FLIGHT BUS WOULD BE REQUIRED TO ISSUE THE COMMAND VIA THIS FAILURE. WITHDRAW THE IOA ISSUE.

THE IOA ASSESSMENT RATIONALE THAT CONSIDERED USE OF THE PORTABLE EXTINGUISHER AS ANOTHER BACKUP IS SUSPECT. IN THE VERTICAL POSITION THE REACH FROM THE AFT AREA TO THE AV BAY FIRE PORTS IS RATHER DIFFICULT.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/07/88
ASSESSMENT ID: LS-3166X
NASA FMEA #: 05-6V-2201-1

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 3166
ITEM: HYBRID DRIVER (TYPE I) - SMOKE DETECTOR GROUND
RESET

LEAD ANALYST: J.D. ARBET

ASSESSMENT:

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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:
THE FAILURE IS DETECTABLE THROUGH THE REDUNDANT SENSING CAPABILITY.
WITHDRAW THE IOA ISSUE.

REPORT DATE 29 JUNE 1988 C.4-81
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/15/88
ASSESSMENT ID: LS-3258X
NASA FMEA #: 06-2-311000-03

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 3258
ITEM: SMOKE DETECTOR (9)

LEAD ANALYST: J.D. ARBET

ASSESSMENT:

CRITICALITY REDUNDANCY SCREENS CIL ITEM
FLIGHT HDW/FUNC A B C

NASA [2 /1R] [P] [P] [P] [X] *
IOA [3 /1R] [F] [F] [P] [X]

COMPARE [N /] [N] [N] [ ] [ ]

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

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

REMARKS:
DURING GROUND TURNAROUND TEST THE ONLY TRUE TEST OF THE
CONCENTRATION PARAMETER WOULD BE TO VERIFY A KNOWN CONCENTRATION
LEVEL WHICH THE PROCEDURES DO NOT ATTEMPT. SIMILAR LOGIC APPLIES
TO THE INFLIGHT CASE.

WITHDRAW THE IOA ISSUE.
THE ISSUE AS DEFINED IS BASED ON A MIS-MATCH OF FAILURES. THE
NASA FAILURE IS AN ABSOLUTE FAILURE OF THE CONCENTRATION OUTPUT
(i.e. THE SIGNAL THAT IS THE CONCENTRATION LEVEL SENSED INTERNAL
TO THE SENSOR). THE IOA FAILURE CONSIDERED THE SENSOR COULD
NOT DETECT CHANGES IN CONCENTRATION LEVEL AND ONLY OUTPUT A
CONSTANT VALUE WHICH INDICATION WOULD BE GIVEN. BASED UPON THE
CONFUSION AND HIGHER CRITICALITY THE NASA CRITICALITY IS
ACCEPTED.

REPORT DATE 30 JUNE 1988 C.4-82
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: LS-5003
NASA FMEA #: 06-1-1206-1

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 5003
ITEM: EMU WATER SUPPLY VALVE (2)

LEAD ANALYST: R.E. DUFFY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
FUNCTIONAL LOSS IS LOSS OF MISSION. THE AIRLOCK IS NOT AN EMERGENCY PIECE OF EQUIPMENT. ASSUMING AN EMERGENCY EVA LOSS DUE TO THIS FAILURE IS NOT CORRECT BECAUSE THE LATTER IS A SECOND FAILURE WHICH VIOLATES SPECIFICATION NSTS 22206. FOR WORST CASE ANALYSIS SEE IOA ANALYSIS #5003.


REPORT DATE 29 JUNE 1988 C.4-83
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: LS-5005
NASA FMEA #: 06-1-1206-3
SUBSYSTEM: LIFE SUPPORT
MDAC ID: 5005
ITEM: EMU WATER SUPPLY VALVE (2)
LEAD ANALYST: R.E. DUFFY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
SEE IOA ANALYSIS #5005. LOSS OF THE FUNCTION TO SEAL THE WATER ON THE LINE DOES NOT LEAD TO LOSS OF FES. A REVALVING OF THE SUPPLY WATER SYSTEM WILL CORRECT THE FAILURE; HOWEVER EVA MISSIONS ARE STILL LOST.

ISSUE RESOLUTION: WITHDRAW ISSUE AND LIST THE NASA CRITICALITY. BOTH NASA/RI AND IOA ANALYSIS AGREE THAT THE HARDWARE FAILURE MODE SHOULD BE INCLUDED AS A CIL ITEM. THE IOA CONCURS WITH THE IR FUNCTIONAL CRITICALITY ASSIGNED BY NASA/RI IF THE FAILURE EFFECT IS CONSIDERED TO BE LOSS OF CONTINGENCY EVA CAPABILITY.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: LS-5006
NASA FMEA #: 05-6UA-2008-1
SUBSYSTEM: LIFE SUPPORT
MDAC ID: 5006
ITEM: EMU WATER SUPPLY SWITCH (2)
LEAD ANALYST: R.E. DUFFY

NASA DATA:
BASELINE [ ]
NEW [ X ]

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
SEE IOA ANALYSIS #5006. FUNCTIONAL LOSS IS LOSS OF MISSION. THE AIRLOCK IS NOT AN EMERGENCY PIECE OF EQUIPMENT. ASSUMING AN EMERGENCY EVA LOSS OF DUE TO THIS FAILURE IS NOT CORRECT BECAUSE THE LATTER IS A SECOND FAILURE WHICH VIOLATES SPECIFICATION NSTS 22206. FOR WORST CASE ANALYSIS SEE IOA ANALYSIS #5003. ISSUE RESOLUTION: WITHDRAW ISSUE AND LIST NASA CRITICALITY. FROM FURTHER REVIEW AND TO BE CONSISTENT WITH IOA ASSESSMENT #5003, THE IOA CONCURS WITH THE NASA/RI 3/1R EVALUATION, PASSAGE OF SCREENS A AND C, AND EXCLUSION OF THIS FAILURE MODE AS A CIL ITEM.

REPORT DATE 29 JUNE 1988 C.4-85
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: LS-5006A
NASA FMEA #: 05-6UA-2008-2

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 5006
ITEM: EMU WATER SUPPLY SWITCH (2)

LEAD ANALYST: R.E. DUFFY

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

* CIL RETENTION RATIONALE: (If applicable)

AD Equate [ ]
IN Adequate [ ]

REMARKS:
SEE IOA ANALYSIS #5006. FUNCTIONAL LOSS IS LOSS OF MISSION. THE AIRLOCK IS NOT AN EMERGENCY PIECE OF EQUIPMENT. ASSUMING AN EMERGENCY EVA LOSS DUE TO THIS FAILURE IS NOT CORRECT BECAUSE THE LATTER IS A SECOND FAILURE WHICH VIOLATES SPECIFICATION NSTS 22206. FOR WORST CASE ANALYSIS SEE IOA ANALYSIS #5003. ISSUE RESOLUTION: WITHDRAW ISSUE AND LIST NASA CRITICALITY. FROM FURTHER REVIEW AND TO BE CONSISTENT WITH IOA ASSESSMENT #5003, THE IOA CONCURS WITH THE NASA/RI 3/1R EVALUATION, PASSAGE OF SCREENS A AND C, AND EXCLUSION OF THIS FAILURE MODE AS A CIL ITEM.

REPORT DATE 29 JUNE 1988  C.4-86
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: LS-5009
NASA FMEA #: 05-6UA-2000-1
SUBSYSTEM: LIFE SUPPORT
MDAC ID: 5009
ITEM: EMU WATER SUPPLY CIRCUIT BREAKER (2)
LEAD ANALYST: R.E. DUFFY

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM:
ITEM:

LEAD ANALYST:

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
SAME SCENARIO (WORST CASE) AS FOR VALVE FAILED CLOSED (#5003). NASA DATA IS NOT AVAILABLE, BUT IOA & NASA'A CRITICALITIES ARE CONSISTENT WITH #5003 & 06-1A-1206-1 THUS, THE ISSUE FOLLOWS THE LOGIC OF ASSESSMENT #5003.
ISSUE RESOLUTION: WITHDRAW ISSUE AND LIST NASA CRITICALITY. FROM FURTHER REVIEW AND TO BE CONSISTENT WITH IOA ASSESSMENT #5003, THE IOA CONCURS WITH THE NASA/RI 3/1R EVALUATION, PASSAGE OF SCREENS A AND C, AND EXCLUSION OF THIS FAILURE MODE AS A CIL ITEM.

REPORT DATE 29 JUNE 1988 C.4-87
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: LS-5011
NASA FMEA #: 06-1-1212-1
SUBSYSTEM: LIFE SUPPORT
MDAC ID: 5011
ITEM: EMU WASTE WATER VALVE (2)
LEAD ANALYST: R.E. DUFFY

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
SEE IOA ANALYSIS #5011. PRE 51-L ANALYSIS SAYS LOSS OF REDUNDANCY. HOWEVER, WITH TWO SUITED CREWMAN, THERE IS NO REDUNDANCY, THUS LOSS OF MISSION.


REPORT DATE 29 JUNE 1988 C.4-88
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: LS-5014
NASA FMEA #: 05-6UA-2009-1

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 5014
ITEM: EMU WASTE WATER SWITCH (2)

LEAD ANALYST: R.E. DUFFY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
SAME SCENARIO (WORST CASE) AS FOR VALVE FAILED CLOSED (#5011), (NASA 06-1-1212-1). WITH TWO SUITED CREWMAN THERE IS NO REDUNDANCY THUS LOSS OF MISSION.
ISSUE RESOLUTION: WITHDRAW ISSUE AND LIST NASA CRITICALITY.
FROM FURTHER REVIEW, AND TO BE CONSISTENT WITH ASSESSMENT #50011, THE IOA_ACKNOWLEDGES THAT THE NASA/RI EVALUATION IS ACCEPTABLE AND THAT THE FAILURE SHOULD BE EXCLUDED AS A CIL ITEM.

REPORT DATE 29 JUNE 1988 C.4-89
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: LS-5014A
NASA FMEA #: 05-6UA-2009-2
SUBSYSTEM: LIFE SUPPORT
MDAC ID: 5014
ITEM: EMU WASTE WATER SWITCH (2)
LEAD ANALYST: R.E. DUFFY

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
SAME SCENARIO (WORST CASE) AS FOR VALVE FAILED CLOSED (#5011),
(NASA 06-1-1212-1). WITH TWO SUITED CREWMAN THERE IS NO
REDUNDANCY, THUS MISSION LOSS.
ISSUE RESOLUTION: WITHDRAW ISSUE AND LIST NASA CRITICALITY.
FROM FURTHER REVIEW, AND TO BE CONSISTENT WITH ASSESSMENT #50011,
THE IOA ACKNOWLEDGES THAT THE NASA/RI EVALUATION IS ACCEPTABLE
AND THAT THE FAILURE SHOULD BE EXCLUDED AS A CIL ITEM.

REPORT DATE 29 JUNE 1988  C.4-90
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: LS-5017
NASA FMEA #: 05-6UA-2001-I

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 5017
ITEM: EMU WASTE WATER CIRCUIT BREAKER (2)

LEAD ANALYST: R.E. DUFFY

ASSESSMENT:

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

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

* CIL RETENTION RATIONALE: (If applicable)
Adequate [ ]
Inadequate [ ]

REMARKS:
SEE IOA ANALYSIS #5017. ASSUMING TWO CREWMEN THERE IS NO REDUNDANCY FOR EACH CREWMEN. THUS LOSS OF CB FORCES THE VALVE TO REMAIN CLOSED AND LOSS OF MISSION.
ISSUE RESOLUTION: WITHDRAW ISSUE AND LIST NASA CRITICALITY. FROM FURTHER REVIEW, AND TO BE CONSISTENT WITH ASSESSMENT #50011, THE IOA ACKNOWLEDGES THAT THE NASA/RI EVALUATION IS ACCEPTABLE AND THAT THE FAILURE SHOULD BE EXCLUDED AS A CIL ITEM.

REPORT DATE 29 JUNE 1988 C.4-91
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: LS-5020
NASA FMEA #: 06-1-1208-1
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 5020
ITEM: EMU WATER SUPPLY LINES AND FITTING

LEAD ANALYST: R.E. DUFFY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
SEE IOA ANALYSIS #5020. FUNCTIONAL LOSS LEADS TO INABILITY TO SERVICE THE EMU'S. HOWEVER, AIRLOCK IS NOT AN EMERGENCY ITEM. FOR FURTHER EXPLANATION SEE ASSESSMENT #5003.

ISSUE RESOLUTION: WITHDRAW ISSUE AND LIST NASA CRITICALITY. FROM FURTHER REVIEW AND TO BE CONSISTENT WITH ASSESSMENT #5003, THE IOA CONCURS WITH THE NASA/RI 3/1R EVALUATION, PASSAGE OF ALL SCREENS, AND EXCLUSION OF THIS FAILURE MODE AS A CIL ITEM.

REPORT DATE 29 JUNE 1988  C.4-92
# APPENDIX C
## ASSESSMENT WORKSHEET

**ASSESSMENT DATE:** 3/08/88  
**ASSESSMENT ID:** LS-5022  
**NASA FMEA #:**  
**NASA DATA:**  
**BASELINE [ ]  
**NEW [ ]**

**SUBSYSTEM:** LIFE SUPPORT  
**MDAC ID:** 5022  
**ITEM:** O2 SUPPLY LINES AND FITTINGS

**LEAD ANALYST:** R.E. Duffy

### ASSESSMENT:

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**RECOMMENDATIONS:** (If different from NASA)

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

ADEQUATE [ ]  
INADEQUATE [ ]

**REMARKS:**

NO EXISTING EQUIVALENT NASA FMEA WAS FOUND FOR THIS FAILURE (SEE IOA ANALYSIS #5022).

ISSUE RESOLUTION: WITHDRAW ISSUE.

THIS SHOULD HAVE REFERENCED NASA FMEA # 06-1C-1510-1 WHICH SHOWS A CRITICALITY OF 1/1. SINCE IT COMBINES ALL LINES & FITTINGS THAT IS THE WORST CASE CRITICALITY. WHEN THE AIRLOCK IS CONSIDERED BY ITSELF THE CRITICALITY IS 2/1R DUE TO ISOLATION CAPABILITIES. THUS THE IOA ANALYSIS WAS TO A FINER LEVEL AND BOTH THE NASA AND IOA CRITICALITIES ARE CORRECT.

**REPORT DATE** 29 JUNE 1988 C.4-93
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: LS-5025
NASA FMEA #: 06-1-1201-1
SUBSYSTEM: LIFE SUPPORT
MDAC ID: 5025
ITEM: EMU O2 SUPPLY VALVE (2)
LEAD ANALYST: R.E. DUFFY

ASSESSMENT:

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

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

REMARKS:
SEE IOA ANALYSIS #5025. ASSUMING A BASELINE OF TWO SUITED CREWMEMBERS AND NO CREW ACTION (RULE 2.3.3.f OF NSTS 22206). TWO CREWMEMBERS SHARING ONE SCU IS NOT A "NOMINAL CREW ACTION", THUS LOSS OF MISSION.
ISSUE RESOLUTION: WITHDRAW ISSUE AND LIST NASA CRITICALITY. FROM FURTHER REVIEW, THE IOA CONCLUDES THIS FAILURE IS ANALOGOUS TO THE EMU WATER SUPPLY VALVE FAILURE ADDRESSED IN ASSESSMENT # 5003. IT SHOULD BE ASSIGNED A 3/2R CRITICALITY AND EXCLUDED AS A CIL ITEM SINCE ALL REDUNDANCY SCREENS ARE PASSED. THIS FAILURE IS SIMILAR TO THAT LISTED IN LS-5017.

REPORT DATE 29 JUNE 1988 C.4-94
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: LS-5026
NASA FMEA #: 06-1-1201-2
SUBSYSTEM: LIFE SUPPORT
MDAC ID: 5026
ITEM: EMU O2 SUPPLY VALVE (2)
LEAD ANALYST: R.E. DUFFY

NASA DATA:
BASELINE [ ]
NEW [ X ]

LEAD ANALYST: R.E. DUFFY

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RECOMMENDATIONS: (If different from NASA)

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
SEE IOA ANALYSIS #5026. LOSS OF O2 ISOLATION FUNCTION LEADS TO LOSS OF EVA AND SHUTTLE MISSION. THIS IS BECAUSE LV3 AND LV4 WOULD BE CLOSED, AND THIS ACTION ISOLATES THE LEH'S. THUS, UPON FUNCTION LOSS, THE MISSION IS TERMINATED AND DEORBIT PLANNED FOR THE NEXT PLS.

ISSUE RESOLUTION: WITHDRAW ISSUE AND LIST NASA CRITICALITY.
The IOA ACKNOWLEDGES THAT THE NASA/RI ANALYSIS OF THIS FAILURE MODE REPRESENTS A MORE CONSERVATIVE INTERPRETATION AND APPLICATION OF INSTRUCTIONS CONTAINED IN NSTS 22206. THEREFORE, THE NASA EVALUATION IS ACCEPTABLE AND THE INCLUSION OF THE EMU O2 SUPPLY VALVE INTERNAL LEAKAGE FAILURE MODE AS A CIL ITEM IS APPROPRIATE.

REPORT DATE 29 JUNE 1988 C.4-95
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: LS-5029
NASA FMEA #: 06-1-1128-2

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 5029
ITEM: DEPRESS CAP VENT (1)

LEAD ANALYST: R.E. DUFFY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

FUNCTIONAL LOSS IS LOSS OF MISSION. THE AIRLOCK IS NOT AN EMERGENCY PIECE OF EQUIPMENT. ASSUMING AN EMERGENCY EVA LOSS DUE TO THIS FAILURE IS NOT CORRECT BECAUSE THE LATTER IS A SECOND FAILURE WHICH VIOLATES SPECIFICATION NSTS 22206. FOR WORST CASE ANALYSIS SEE IOA ANALYSIS #5003.

ISSUE RESOLUTION: WITHDRAW ISSUE AND LIST NASA CRITICALITY.

FROM FURTHER REVIEW, THE IOA CONCLUDES THAT THE TWO EQUALIZATION VALVES ON THE AIRLOCK HATCH LEADING TO THE PAYLOAD BAY PROVIDE REDUNDANCY TO THE AIRLOCK DEPRESS VALVE. THE WORST CASE SCENARIO IS LOSS OF CAPABILITY TO PERFORM CONTINGENCY EVA; THEREFORE, THE IOA ACKNOWLEDGES THE NASA/RI 3/1R EVALUATION, PASSAGE OF ALL SCREENS AND EXCLUSION OF THIS FAILURE MODE AS A CIL ITEM.

REPORT DATE 29 JUNE 1988 C.4-96
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: LS-5030
NASA FMEA #: 06-1-1127-1
SUBSYSTEM: LIFE SUPPORT
MDAC ID: 5030
ITEM: CAP VENT DEBRIS SCREEN (1)
LEAD ANALYST: R.E. DUFFY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)

REMARKS:
FUNCTIONAL LOSS IS LOSS OF MISSION. THE AIRLOCK IS NOT AN EMERGENCY PIECE OF EQUIPMENT. ASSUMING AN EMERGENCY EVA LOSS DUE TO THIS FAILURE IS NOT CORRECT BECAUSE THE LATTER IS A SECOND FAILURE WHICH VIOLATES SPECIFICATION NSTS 22206. FOR WORST CASE ANALYSIS SEE IOA ANALYSIS #5003.

ISSUE RESOLUTION: WITHDRAW ISSUE AND LIST NASA CRITICALITY. FROM FURTHER REVIEW, THE IOA CONCLUDES THAT THE TWO EQUALIZATION VALVES ON THE AIRLOCK HATCH LEADING TO THE PAYLOAD BAY PROVIDE REDUNDANCY TO THE AIRLOCK DEPRESS VALVE. THE WORST CASE SCENARIO IS LOSS OF CAPABILITY TO PERFORM CONTINGENCY EVA; THEREFORE, THE IOA ACKNOWLEDGES THE NASA/RI 3/1R EVALUATION, PASSAGE OF ALL SCREENS AND EXCLUSION OF THIS FAILURE MODE AS A CIL ITEM.

REPORT DATE 29 JUNE 1988 C.4-97
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: LS-5031
NASA FMEA #: 06-1-1127-1

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 5031
ITEM: CAP VENT DEBRIS SCREEN (1)

LEAD ANALYST: R.E. DUFFY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
FUNCTIONAL LOSS IS LOSS OF MISSION. THE AIRLOCK IS NOT AN EMERGENCY PIECE OF EQUIPMENT. ASSUMING AN EMERGENCY EVA LOSS DUE TO THIS FAILURE IS NOT CORRECT BECAUSE THE LATTER IS A SECOND FAILURE WHICH VIOLATES SPECIFICATION NSTS 22206. FOR WORST CASE ANALYSIS SEE IOA ANALYSIS #5003.

ISSUE RESOLUTION: WITHDRAW ISSUE AND LIST NASA CRITICALITY. FROM FURTHER REVIEW, THE IOA CONCLUDES THAT THE TWO EQUALIZATION VALVES ON THE AIRLOCK HATCH LEADING TO THE PAYLOAD BAY PROVIDE REDUNDANCY TO THE AIRLOCK DEPRESS VALVE. THE WORST CASE SCENARIO IS LOSS OF CAPABILITY TO PERFORM CONTINGENCY EVA; THEREFORE, THE IOA ACKNOWLEDGES THE NASA/RI 3/1R EVALUATION, PASSAGE OF ALL SCREENS AND EXCLUSION OF THIS FAILURE MODE AS A CIL ITEM.

REPORT DATE 29 JUNE 1988 C.4-98
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: LS-5032A
NASA FMEA #: 06-1-1126-4

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 5032
ITEM: DEPRESS VALVE/CAP (1 EACH)

LEAD ANALYST: R.E. DUFFY

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

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

REMARKS:
DUE TO LIMITED FMEA DATA (ONLY A CRITICALITY SUMMARY WAS AVAILABLE FOR THE POST 51-L NASA ANALYSIS), NO DETAIL ASSESSMENT OF THIS ITEM WAS ATTEMPTED.

ISSUE RESOLUTION: WITHDRAW ISSUE AND LIST NASA CRITICALITY.
THE IOA ACKNOWLEDGES THE MORE CONSERVATIVE EVALUATION OF THIS FAILURE MODE BY NASA/RI AND THE INCLUSION OF THE FAILURE MODE AS A CIL ITEM.

REPORT DATE 29 JUNE 1988 C.4-99
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: LS-5033
NASA FMEA #: 06-1-1126-1
SUBSYSTEM: LIFE SUPPORT
MDAC ID: 5033
ITEM: DEPRESS VALVE (1)
LEAD ANALYST: R.E. DUFFY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
FUNCTIONAL LOSS IS LOSS OF MISSION. THE AIRLOCK IS NOT AN EMERGENCY PIECE OF EQUIPMENT. ASSUMING AN EMERGENCY EVA LOSS DUE TO THIS FAILURE IS NOT CORRECT BECAUSE THE LATTER IS A SECOND FAILURE WHICH VIOLATES SPECIFICATION NSTS 22206. FOR WORST CASE ANALYSIS SEE IOA ANALYSIS #5003.

ISSUE RESOLUTION: WITHDRAW ISSUE AND LIST NASA CRITICALITY. FROM FURTHER REVIEW, THE IOA CONCLUDES THAT THE TWO EQUALIZATION VALVES ON THE AIRLOCK HATCH LEADING TO THE PAYLOAD BAY PROVIDE REDUNDANCY TO THE AIRLOCK DEPRESS VALVE. THE WORST CASE SCENARIO IS LOSS OF CAPABILITY TO PERFORM CONTINGENCY EVA; THEREFORE, THE IOA ACKNOWLEDGES THE NASA/RI 3/1R EVALUATION, PASSAGE OF ALL SCREENS AND EXCLUSION OF THIS FAILURE MODE AS A CIL ITEM.

REPORT DATE 29 JUNE 1988 C.4-100
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: LS-5035
NASA FMEA #: 06-1-1603-2

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 5035
ITEM: AIRLOCK TO CABIN VENT CAP (2)

LEAD ANALYST: R.E. DUFFY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
SEE IOA ANALYSIS #5035. NASA FMEA NOT AVAILABLE. HOWEVER, THERE ARE ONLY TWO EQUALIZATION VALVES, THUS ONLY TWO PIECES OF HARDWARE THAT CAN ALLOW REPRESSURIZATION OF THE AIRLOCK AFTER AN EVA.
ISSUE RESOLUTION: WITHDRAW ISSUE AND LIST NASA CRITICALITY.
FROM FURTHER REVIEW, THE IOA CONCURS WITH THE NASA/RI EVALUATION.
THE EQUALIZATION CAPS ARE REMOVED PRIOR TO THE START OF AN EVA. THEREFORE THE WORST CASE EFFECT OF AN INABILITY TO REMOVE THE CAPS ON THE AIRLOCK TO CABIN HATCH WOULD BE LOSS OF CAPABILITY TO PERFORM A CONTINGENCY EVA. THREE PATHS EXIST, THE DEPRESS VALVE AND TWO EQUALIZATION VALVE/CAPS.

REPORT DATE 29 JUNE 1988 C.4-101
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: LS-5035A
NASA FMEA #: 06-1-1603-3
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 5035
ITEM: AIRLOCK TO CABIN VENT CAP (2)

LEAD ANALYST: R.E. DUFFY

ASSESSMENT:

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COMPARE [ N / ] [ ] [ ] [ ] [ ] [ N ]

RECOMMENDATIONS: (If different from NASA)
[ / ] [ ] [ ] [ ] [ ] [ ]
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
SEE IOA ANALYSIS #5035. NASA FMEA NOT AVAILABLE. HOWEVER, THERE ARE ONLY TWO EQUALIZATION VALVES, THUS ONLY TWO PIECES OF HARDWARE THAT CAN ALLOW REPRESSURIZATION OF THE AIRLOCK AFTER AN EVA.
ISSUE RESOLUTION: WITHDRAW ISSUE AND LIST NASA CRITICALITY. FROM FURTHER REVIEW, THE IOA CONCURS WITH THE NASA/RI EVALUATION. THE EQUALIZATION CAPS ARE REMOVED PRIOR TO THE START OF AN EVA, THEREFORE THE WORST CASE EFFECT OF AN INABILITY TO REMOVE THE CAPS ON THE AIRLOCK TO CABIN HATCH WOULD BE LOSS OF CAPABILITY TO PERFORM A CONTINGENCY EVA. THREE PATHS EXIST, THE DEPRESS VALVE AND TWO EQUALIZATION VALVE/CAPS.

REPORT DATE 29 JUNE 1988 C.4-102
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: LS-5036
NASA FMEA #: 06-1-1603-1

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 5036
ITEM: AIRLOCK TO CABIN VENT CAP (2)

LEAD ANALYST: R.E. DUFFY

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
FUNCTIONAL LOSS IS LOSS OF MISSION SINCE THE VALVE IS AN UNLIKE REDUNDANCY TO THE CAP. HOWEVER THE AIRLOCK IS NOT AN EMERGENCY PIECE OF EQUIPMENT. FOR FURTHER CLARIFICATION SEE ASSESSMENT #LS-5003.


REPORT DATE 29 JUNE 1988 C.4-103
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: LS-5040
NASA FMEA #: 06-1-1601-2
SUBSYSTEM: LIFE SUPPORT
MDAC ID: 5040
ITEM: AIRLOCK TO CABIN EQUALIZATION VALVE (2)
LEAD ANALYST: R.E. DUFFY

NASA DATA:
BASELINE [ ]
NEW [ X ]

NASA FMEA #: 06-1-1601-2
SUBSYSTEM: LIFE SUPPORT
MDAC ID: 5040
ITEM: AIRLOCK TO CABIN EQUALIZATION VALVE (2)
LEAD ANALYST: R.E. DUFFY

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
WORST CASE SCENARIO HARDWARE LOSS IS VALVE OPEN, CAP DOES NOT MATE. EVA MISSION IS CALLED SHORT/OFF AND FURTHER MISSIONS ARE CANCELLED. THUS FUNCTION LOSS IS LOSS OF EVA MISSION.
ISSUE RESOLUTION: WITHDRAW ISSUE AND LIST NASA CRITICALITY.
FROM FURTHER REVIEW, THE IOA AGREES THE WORST SCENARIO WOULD BE LOSS OF CONTINGENCY EVA CAPABILITY (IR FUNCTIONAL CRITICALITY).
TO BE CONSISTENT WITH OTHER ANALOGOUS AIRLOCK COMPONENT FAILURES, THE IOA WOULD ASSIGN A LEVEL 3 CRITICALITY TO THE HARDWARE FAILURE. HOWEVER, SINCE THE NASA/RI EVALUATION REPRESENTS A MORE CONSERVATIVE INTERPRETATION AND APPLICATION OF GROUNDRULES CONTAINED IN NSTS 22206, THE IOA ACKNOWLEDGES THE 2/IR CRITICALITY AND INCLUSION OF THE HARDWARE FAILURE MODE AS A CIL ITEM.

REPORT DATE 29 JUNE 1988 C.4-104
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: LS-5041
NASA FMEA #: 06-1-1601-4

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 5041
ITEM: AIRLOCK TO CABIN EQUALIZATION VALVE (2)

LEAD ANALYST: R.E. DUFFY

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IOA [ 2/2 ] [ ] [ ] [ ] [ ] [ X ]
COMPARE [ N/N ] [ ] [ ] [ ] [ ] [ ]

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

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

REMARKS:
AIRLOCK IS NOT AN EMERGENCY PIECE OF EQUIPMENT. ASSUMING AN EMERGENCY EVA LOSS DUE TO THIS FAILURE IS NOT CORRECT BECAUSE THE LATTER IS A SECOND FAILURE WHICH VIOLATES NSTS 22206. FOR IOA ANALYSIS SEE THE LIFE SUPPORT ID# 5041.

REPORT DATE 29 JUNE 1988 C.4-105
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: LS-5043
NASA ID #: 06-1-1604-3
NASA FMEA #: 06-1-1604-3

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 5043
ITEM: AIRLOCK TO CABIN PRESSURE DIFFERENTIAL (2)

LEAD ANALYST: R.E. DUFFY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
WORST CASE SCENARIO HARDWARE LOSS IS VALVE OPEN, CAP DOES NOT MATE. EVA MISSION IS CALLED SHORT/OFF AND FURTHER MISSIONS ARE CANCELLED. THUS FUNCTION LOSS IS LOSS OF EVA MISSION.
ISSUE RESOLUTION: WITHDRAW ISSUE AND LIST NASA CRITICALITY.
FROM FURTHER REVIEW, THE IOA AGREES WITH THE NASA/RI EVALUATION THAT THIS FAILURE MODE COULD RESULT IN LOSS OF CAPABILITY TO PERFORM A CONTINGENCY EVA WHICH PER OPERATIONS GROUND RULES IS FUNCTIONAL CRITICALITY I.

REPORT DATE 29 JUNE 1988 C.4-106
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: LS-5043A
NASA FMEA #: 06-1-1605-3

NASA DATA:
BASELINE [ ]
NEW [ x ]

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 5043
ITEM: AIRLOCK TO CABIN PRESSURE DIFFERENTIAL (2)

LEAD ANALYST: R.E. DUFFY

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RECOMMENDATIONS: (If different from NASA)

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

REMARKS:
WORST CASE SCENARIO HARDWARE LOSS IS VALVE OPEN, CAP DOES NOT MATE. EVA MISSION IS CALLED SHORT/OFF AND FURTHER MISSIONS ARE CANCELLED. THUS FUNCTION LOSS IS LOSS OF EVA MISSION.
ISSUE RESOLUTION: WITHDRAW ISSUE AND LIST NASA CRITICALITY.
FROM FURTHER REVIEW, THE IOA AGREES WITH THE NASA/RI EVALUATION THAT THIS FAILURE MODE COULD RESULT IN LOSS OF CAPABILITY TO PERFORM A CONTINGENCY EVA WHICH PER OPERATIONS GROUND RULES IS FUNCTIONAL CRITICALITY 1.

REPORT DATE 29 JUNE 1988 C.4-107
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: LS-5047
NASA FMEA #: 06-1-1124-1

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 5047
ITEM: AIRLOCK TO AMBIENT VENT CAP (2)
LEAD ANALYST: R.E. DUFFY

ASSESSMENT:

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

RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONAL: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
DUE TO LIMITED NASA FMEA DATA (ONLY A CRITICALITY SUMMARY WAS AVAILABLE FOR THE POST 51-L NASA ANALYSIS), NO DETAIL ASSESSMENT OF THIS ITEM WAS ATTEMPTED.

ISSUE RESOLUTION: WITHDRAW ISSUE AND INCORPORATE NASA CRITICALITY. FROM FURTHER REVIEW, THE IOA CONCLUDES THE POSSIBILITY OF THE FAILURE OCCURRING IS INDEPENDENT OF WHETHER THE TUNNEL ADAPTER IS ATTACHED AND THAT THE EFFECT OF THIS FAILURE MODE AND ASSOCIATED REDUNDANCY (i.e. LOSS OF AIRLOCK REPRESS CAPABILITY) IS POTENTIALLY CATASTROPHIC. THEREFORE, THE IOA CONCURS WITH THE NASA/RI EVALUATION.

REPORT DATE 29 JUNE 1988 C.4-108
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: LS-5051
NASA FMEA #: 06-1-1122-2

NASA DATA:
BASELINE [ ]
NEW [ x ]

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 5051
ITEM: AIRLOCK TO AMBIENT EQUALIZATION VALVE (2)

LEAD ANALYST: R.E. DUFFY

ASSessment:

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NASA  [ 2 /1R ]  [ P ]  [ NA ]  [ P ]  [ x ] *
IOA  [ 3 /3 ]  [ ]  [ ]  [ ]  [ ]

COMPARE  [ N /N ]  [ N ]  [ N ]  [ N ]  [ N ]

RECOMMENDATIONS:  (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE:  (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA ANALYSIS #5041 ASSUMED THE TUNNEL ADAPTER WAS ATTACHED. WITHOUT THIS THE AIRLOCK WOULD LEAK TO SPACE FORCING EVALUATION BY THE AIRLOCK CREW. THE LEAK CANNOT BE GREATER THAN TWO EQUALIZATION VALVES WIDE OPEN ON THE CABIN SIDE. EACH VALVE ALSO HAS A THREATED CAP WHICH IS CAPABLE OF A PRESSURE SEAL. WORST CASE SCENARIO IS LOSS OF FURTHER MISSIONS.

ISSUE RESOLUTION: WITHDRAW ISSUE AND INCORPORATE NASA CRITICALITY. FROM FURTHER REVIEW, THE IOA CONCLUDES THE POSSIBILITY OF THE FAILURE OCCURRING IS INDEPENDENT OF WHETHER THE TUNNEL ADAPTER IS ATTACHED AND THAT THE EFFECT OF THIS FAILURE MODE AND ASSOCIATED REDUNDANCY (i.e. LOSS OF AIRLOCK REPRESS CAPABILITY) IS POTENTIALLY CATASTROPHIC. THEREFORE, THE IOA CONCURS WITH THE NASA/RI EVALUATION.

REPORT DATE 29 JUNE 1988  C.4-109
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: LS-5052
NASA FMEA #: 06-1-1122-4
SUBSYSTEM: LIFE SUPPORT
MDAC ID: 5052
ITEM: AIRLOCK TO AMBIENT EQUALIZATION VALVE (2)
LEAD ANALYST: R.E. DUFFY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AIRLOCK IS NOT AN EMERGENCY PIECE OF EQUIPMENT. ASSUMING AN EMERGENCY EVA LOSS DUE TO THIS FAILURE IS NOT CORRECT BECAUSE THE LATTER IS A SECOND FAILURE WHICH VIOLATES NSTS 22206. FOR IOA ANALYSIS SEE THE LIFE SUPPORT ID# 5041.
ISSUE RESOLUTION: WITHDRAW ISSUE AND LIST NASA CRITICALITY.
FROM FURTHER REVIEW THE IOA CONCLUDES THAT THE INABILITY TO PRESSURIZE THE AIRLOCK BECAUSE OF EXTERNAL LEAKAGE THROUGH THE EQUALIZATION VALVE IS POTENTIALLY CATASTROPHIC (IF FAILURE OCCURS WHILE EVA IS UNDERWAY). THEREFORE, THE IOA CONCURS WITH THE NASA/RI EVALUATION.

REPORT DATE 29 JUNE 1988  C.4-110
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: LS-5054
NASA FMEA #: 06-1-1120-4
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 5054
ITEM: AIRLOCK TO AMBIENT PRESSURE DIFFERENTIAL (2)

LEAD ANALYST: R.E. DUFFY

ASSESSMENT:

CRITICALLY REDUNDANCY SCREENS CIL
FLIGHT HDW/FUNC A B C ITEM

| NASA | [ 2 /2 ] | [ ] | [ ] | [ ] | [ X ] * |
| IOA  | [ 3 /2R ] | [ P ] | [ P ] | [ P ] | [ ] |
| COMPARE | [ N /N ] | [ N ] | [ N ] | [ N ] | [ N ] |

RECOMMENDATIONS: (If different from NASA)
[ 2 /1R ] [ P ] [ P ] [ P ] [ ]
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

REMARKS:
DUE TO LIMITED NASA FMEA DATA (ONLY A CRITICALITY SUMMARY WAS AVAILABLE FOR THE POST 51-L NASA ANALYSIS), NO DETAIL ASSESSMENT OF THIS ITEM WAS ATTEMPTED.

ISSUE RESOLUTION: WITHDRAW ISSUE AND LIST CORRECT NASA CRITICALITY.

FROM FURTHER REVIEW THE IOA CONCLUDES THAT THE INABILITY TO PRESSURIZE THE AIRLOCK BECAUSE OF EXTERNAL LEAKAGE THROUGH THE EQUALIZATION VALVE IS POTENTIALLY CATASTROPHIC (IF FAILURE OCCURS WHILE EVA IS UNDERWAY). THEREFORE, THE IOA CONCURS WITH THE NASA/RI EVALUATION.

NOTE: THE NASA CRITICALITY ASSIGNED TO THIS FAILURE MODE IS 2/1R VS. 2/2 ERRONEOUSLY SHOWN ON THE ORIGINAL ASSESSMENT WORKSHEET. (REDUNDANCY SCREENS ARE PPP).

REPORT DATE 29 JUNE 1988 C.4-111
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: LS-5054A
NASA FMEA #: 06-1-1121-4

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 5054
ITEM: AIRLOCK TO AMBIENT PRESSURE DIFFERENTIAL (2)

LEAD ANALYST: R.E. DUFFY

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
DUE TO LIMITED NASA FMEA DATA (ONLY A CRITICALITY SUMMARY WAS AVAILABLE FOR THE POST 51-L NASA ANALYSIS), NO DETAIL ASSESSMENT OF THIS ITEM WAS ATTEMPTED.
ISSUE RESOLUTION: WITHDRAW ISSUE AND LIST CORRECT NASA CRITICALITY.
FROM FURTHER REVIEW THE IOA CONCLUDES THAT THE INABILITY TO PRESSURIZE THE AIRLOCK BECAUSE OF EXTERNAL LEAKAGE THROUGH THE EQUALIZATION VALVE IS POTENTIALLY CATASTROPHIC (IF FAILURE OCCURS WHILE EVA IS UNDERWAY). THEREFORE, THE IOA CONCURS WITH THE NASA/RI EVALUATION.
NOTE: THE NASA CRITICALITY ASSIGNED TO THIS FAILURE MODE IS 2/1R VS. 2/2 ERRONEOUSLY SHOWN ON THE ORIGINAL ASSESSMENT WORKSHEET. (REDUNDANCY SCREENS ARE PPP).

REPORT DATE 29 JUNE 1988 C.4-112
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: LS-5055
NASA FMEA #: 05-6UA-2008-1
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 5055
ITEM: EMU POWER/BATTERY CHARGER BUS SELECT SWITCH (2)

LEAD ANALYST: R.E. DUFFY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ 3 /2R ] [ P ] [ P ] [ P ] [ ] (ADD/DELETE)

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

REMARKS:
DUE TO LIMITED NASA FMEA DATA (ONLY A CRITICALITY SUMMARY WAS AVAILABLE FOR THE POST 51-L NASA ANALYSIS), NO DETAIL ASSESSMENT OF THIS ITEM WAS ATTEMPTED. THERE IS NO REDUNDANCY TO EACH OF THE SWITCH/SYSTEMS.


REPORT DATE 29 JUNE 1988  C.4-113
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: LS-5055A
NASA FMEA #: 05-6UA-2008-2
SUBSYSTEM: LIFE SUPPORT
MDAC ID: 5055
ITEM: EMU POWER/BATTERY CHARGER BUS SELECT SWITCH (2)
LEAD ANALYST: R.E. DUFFY

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COMPARE [ N /N ] [ N ] [ N ] [ N ] [ N ]

RECOMMENDATIONS: (If different from NASA)
[ 3 /2R ] [ P ] [ P ] [ P ] [ ]

(ADD/DELETE)

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

REMARKS:
DUE TO LIMITED NASA FMEA DATA (ONLY A CRITICALITY SUMMARY WAS AVAILABLE FOR THE POST 51-L NASA ANALYSIS), NO DETAIL ASSESSMENT OF THIS ITEM WAS ATTEMPTED. THERE IS NO REDUNDANCY TO EACH OF THE SWITCH/SYSTEMS.

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: LS-5056
NASA FMEA #: NASA DATA:

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 5056
ITEM: EMU POWER/BATTERY CHARGER RPC (4)

LEAD ANALYST: R.E. DUFFY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ 3 /2R ] [ P ] [ NA] [ P ] [ ]
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

THERE WAS NO NASA ALSS FMEA WHICH MATCHED THE IOA DESCRIPTION. THE NASA ANALYSIS MAY BE COMBINED WITH SOME OTHER HARDWARE OR REALLOCATED TO ANOTHER SUBSYSTEM.

ISSUE RESOLUTION: WITHDRAW ISSUE AND LIST PROPER NASA CRITICALITY.

FROM FURTHER REVIEW THE IOA EVALUATION OF THIS FAILURE MODE IS DOWNGRADED FROM 2/2 TO 3/2R. THE A AND C SCREENS PASS AND B SCREEN IS N/A. THEREFORE, THE FAILURE MODE SHOULD BE EXCLUDED AS A CIL ITEM.

REPORT DATE 29 JUNE 1988 C.4-115
ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: LS-5059
NASA FMEA #: NASA
NASA DATA: BASELINE [ ] NEW [ ]
SUBSYSTEM: LIFE SUPPORT
MDAC ID: 5059
ITEM: EMU POWER/BATTERY CHARGER POWER SUPPLY (2)
LEAD ANALYST: R.E. DUFFY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ 3 /2R ] [ P ] [ NA] [ P ] [ ]
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ] INADEQUATE [ ]

REMARKS:
THERE WAS NO NASA ALSS FMEA WHICH MATCHED THE IOA DESCRIPTION.
The NASA ANALYSIS MAY BE COMBINED WITH SOME OTHER HARDWARE OR
REALLOCATED TO ANOTHER SUBSYSTEM.
ISSUE RESOLUTION: WITHDRAW ISSUE AND LIST PROPER NASA
CRITICALITY.
FROM FURTHER REVIEW THE IOA EVALUATION OF THIS FAILURE MODE IS
DOWNGRADED FROM 2/2 TO 3/2R. THE A AND C SCREENS PASS AND B
SCREEN IS N/A. THEREFORE, THE FAILURE MODE SHOULD BE EXCLUDED AS
A CIL ITEM.

REPORT DATE 29 JUNE 1988 C.4-116
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: LS-5060
NASA FMEA #: NASA DATA:
BASELINE [ ]
NEW [ ]

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 5060
ITEM: EMU POWER/BATTERY CHARGER POWER SUPPLY (2)

LEAD ANALYST: R.E. DUFFY

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RECOMMENDATIONS: (If different from NASA)

[ 3 /2R ] [ P ] [ NA] [ P ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]

INADEQUATE [ ]

REMARKS:

THERE WAS NO NASA ALSS FMEA WHICH MATCHED THE IOA DESCRIPTION.
THE NASA ANALYSIS MAY BE COMBINED WITH SOME OTHER HARDWARE OR
REALLOCATED TO ANOTHER SUBSYSTEM.
ISSUE RESOLUTION: WITHDRAW ISSUE AND LIST PROPER NASA
CRITICLITY.
FROM FURTHER REVIEW THE IOA EVALUATION OF THIS FAILURE MODE IS
DOWNGRADED FROM 2/2 TO 3/2R. THE A AND C SCREENS PASS AND B
SCREEN IS N/A. THEREFORE, THE FAILURE MODE SHOULD BE EXCLUDED AS
A CIL ITEM.

REPORT DATE 29 JUNE 1988 C.4-117
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: LS-5066
NASA FMEA #: 06-1-1631-1

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 5066
ITEM: VACUUM VENT ISOLATION VALVE (1)

LEAD ANALYST: R.E. DUFFY

ASSESSMENT:

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

* CIL RETENTION RATIONALE: (If applicable)

REMARKS:

ISSUE RESOLUTION: WITHDRAW ISSUE AND LIST NASA CRITICALITY. FROM FURTHER REVIEW, THE IOA CONCLUDES THAT THE CREW CAN DETECT THE VALVE FAIL TO CLOSE FROM THE POSITION TALKBACK; THEREFORE, SCREEN B PASSES WHICH AGREES WITH THE NASA EVALUATION.

REPORT DATE 29 JUNE 1988 C.4-118
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: LS-5067
NASA FMEA #: 05-6VC-2026-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 5067
ITEM: VACUUM VENT ISOL. VLV. CNTRL. SWITCH (1)

LEAD ANALYST: R.E. DUFFY

ASSESSMENT:

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| IOA [ 3 /1R ] | [ P ] | [ F ] | [ P ] | [ ]
| COMPARE [ N / ] | [ ] | [ N ] | [ ] | [ N ] |

RECOMMENDATIONS: (If different from NASA)

| [ / ] | [ ] | [ ] | [ ] | [ ] |

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
DUE TO LIMITED NASA FMEA DATA (ONLY A CRITICALITY SUMMARY WAS AVAILABLE FOR THE POST 51-L NASA ANALYSIS), NO DETAIL ASSESSMENT OF THIS ITEM WAS ATTEMPTED.

IOA COMMENT: THE LOSS OF THE VACUUM VENT ISOLATION VALVE CONTROLS WAS NOT CONSIDERED BY THE IOA TO BE AN IMMEDIATE LOSS OF MISSION, AS IT WAS FOR THE NASA FMEA, BUT A NON-MISSION ESSENTIAL EFFECT FOR THE FIRST FAILURE IN THE IOA ANALYSIS.


REPORT DATE 29 JUNE 1988  C.4-119
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: LS-5068
NASA FMEA #: 05-6VC-2026-1

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 5068
ITEM: VACUUM VENT ISOL. VLV. CNTRL. SWITCH (1)

LEAD ANALYST: R.E. DUFFY

NASA DATA:
BASELINE [ ]
NEW [ X ]

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
DUE TO LIMITED NASA FMEA DATA (ONLY A CRITICALITY SUMMARY WAS AVAILABLE FOR THE POST 51-L NASA ANALYSIS), NO DETAIL ASSESSMENT OF THIS ITEM WAS ATTEMPTED.

IOA COMMENT: THE LOSS OF THE VACUUM VENT ISOLATION VALVE CONTROLS WAS NOT CONSIDERED BY THE IOA TO BE AN IMMEDIATE LOSS OF MISSION, AS IT WAS FOR THE NASA FMEA, BUT A NON-MISSION ESSENTIAL EFFECT FOR THE FIRST FAILURE IN THE IOA ANALYSIS.


REPORT DATE 29 JUNE 1988 C.4-120
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: LS-5068A
NASA FMEA #: 05-6VC-2026-2

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM:
LIFE SUPPORT
MDAC ID:
5068
ITEM:
VACUUM VENT ISOL. VLV. CNTRL. SWITCH (1)

LEAD ANALYST: R.E. DUFFY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
DUE TO LIMITED NASA FMEA DATA (ONLY A CRITICALITY SUMMARY WAS AVAILABLE FOR THE POST 51-L NASA ANALYSIS), NO DETAIL ASSESSMENT OF THIS ITEM WAS ATTEMPTED.

IOA COMMENT: THE LOSS OF THE VACUUM VENT ISOLATION VALVE CONTROLS WAS NOT CONSIDERED BY THE IOA TO BE AN IMMEDIATE LOSS OF MISSION, AS IT WAS FOR THE NASA FMEA, BUT A NON-MISSION ESSENTIAL EFFECT FOR THE FIRST FAILURE IN THE IOA ANALYSIS.


REPORT DATE 29 JUNE 1988 C.4-121
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: LS-5069
NASA FMEA #: 05-6VC-2027-1

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 5069
ITEM: VACUUM VENT ISOL. VLV. BUS SELECT SWITCH (1)

LEAD ANALYST: R.E. DUFFY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
DUE TO LIMITED NASA FMEA DATA (ONLY A CRITICALITY SUMMARY WAS AVAILABLE FOR THE POST 51-L NASA ANALYSIS), NO DETAIL ASSESSMENT OF THIS ITEM WAS ATTEMPTED.

IOA COMMENT: THE LOSS OF THE VACUUM VENT ISOLATION VALVE CONTROLS WAS NOT CONSIDERED BY THE IOA TO BE AN IMMEDIATE LOSS OF MISSION, AS IT WAS FOR THE NASA FMEA, BUT A NON-MISSION ESSENTIAL EFFECT FOR THE FIRST FAILURE IN THE IOA ANALYSIS.


REPORT DATE 30 JUNE 1988 C.4-122
## APPENDIX C
### ASSESSMENT WORKSHEET

**ASSESSMENT DATE:** 3/08/88  
**NASA DATA:**
- **BASELINE:** [ ]  
- **NEW:** [ X ]  

**SUBSYSTEM:** LIFE SUPPORT  
**MDAC ID:** 5081  
**ITEM:** ISOL. VALVE SENSOR POWER RESISTOR (A8R3 & 4)  
**LEAD ANALYST:** R.E. DUFFY

**ASSESSMENT:**

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**RECOMMENDATIONS:**

(If different from NASA)

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
INADEQUATE [ ]

**REMARKS:**

The integrated schematic resistor values are in error. The value should be 1.2K ohm, instead of the 5.1K ohm shown for the schematic. Due to limited NASA FMEA data (only a criticality summary was available for the post 51-L NASA analysis), no detail assessment of this item was attempted.

**ISSUE RESOLUTION:** Withdraw issue and list NASA criticality. From review of the FMEA, the IOA agrees with the NASA/RI evaluation. End-to-end shorts of both resistors result in a loss of control over the vacuum vent isolation valve. Regardless of the position in which the valve sticks (open or closed) a similar failure of the depress valve would result in the loss of capability to perform a contingency EVA.

**REPORT DATE** 29 JUNE 1988  
**C.4-123**
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: LS-5085X
NASA FMEA #: 05-6UA-2012-1
NASA DATA:
BASELINE [   ]
NEW [ X ]
SUBSYSTEM: LIFE SUPPORT
MDAC ID: 5085
ITEM: EMU WATER SUPPLY STATUS INDICATOR (2)
LEAD ANALYST: R. DUFFY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

(WITH LINE SHORTED TO GROUND, AS THE SWITCH IS MADE, THE BREAKER WILL OPEN DUE TO HIGH DEMAND AND THE VALVE WILL NOT ACTUATE. EMU SUIT CANNOT BE SERVICED, THUS LOSS OF MISSION. FURTHER ASSESSMENT CANNOT BE MADE DUE TO LACK OF NASA FMEA DATA.

ISSUE RESOLUTION: WITHDRAW ISSUE AND LIST NASA CRITICALITY. FROM FURTHER REVIEW AND TO BE CONSISTENT WITH IOA ASSESSMENT # 5003 APPROACH, THE IOA CONCURS WITH THE NASA/RI 3/1R EVALUATION, PACKAGE OF SCREEN A AND C, AND EXCLUSION OF THIS FAILURE MODE AS A CIL ITEM.

REPORT DATE 29 JUNE 1988 C.4-124
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: LS-5086X
NASA FMEA #: 05-6UA-2013-1
SUBSYSTEM: LIFE SUPPORT
MDAC ID: 5086
ITEM: EMU WASTE WATER STATUS INDICATOR
LEAD ANALYST: R. DUFFY

ASSESSMENT:

CRITICALITY
FLIGHT
HDW/FUNC

REDUNDANCY SCREENS
A  B  C

CIL ITEM

NASA  [ 3 /1R ]  [ P ]  [ NA]  [ P ]  [ ]  *
IOA  [ 2 /2 ]  [ ]  [ ]  [ ]  [ ]  [ X ]
COMPARE  [ N /N ]  [ N ]  [ N ]  [ N ]  [ N ]

RECOMMENDATIONS: (If different from NASA)

[ 3 /2R ]  [ P ]  [ NA]  [ P ]  [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
(SHORTS TO GROUND)
WITH THE LINE SHORTED TO GROUND, AS THE SWITCH IS MADE, THE BREAKER WILL OPEN DUE TO HIGH DEMAND, AND THE VALVE WILL NOT ACTUATE. EMU SUIT CANNOT BE SERVICED, THUS LOSS OF MISSION. FURTHER ASSESSMENT CANNOT BE MADE DUE TO LACK IF NASA FMEA DATA. ISSUE RESOLUTION: INCORPORATE REVISED CRITICALITY. FROM FURTHER AND TO BE CONSISTENT WITH IOA ASSESSMENT # 5011 APPROACH, THE IOA ACKNOWLEDGES THAT THE FAILURE SHOULD BE MISSION CRITICAL BUT BE EXCLUDED AS A CIL ITEM.

REPORT DATE 29 JUNE 1988  C.4-125
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
NASA DATA:
ASSESSMENT ID: LS-5087X
NASA FMEA #: 06-1-1208-2

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 5087
ITEM: EMU WATER SUPPLY LINES & FITTINGS
LEAD ANALYST: R. DUFFY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]

INADEQUATE [ ]

REMARKS:

RESTRICTED FLOW
FUNCTIONAL LOSS LEADS TO INABILITY TO SERVICE THE EMU'S. HOWEVER, THE AIRLOCK IS NOT AN EMERGENCY ITEM. ASSUMING AN EMERGENCY EVA LOSS DUE TO THIS FAILURE IS NOT CORRECT BECAUSE THE LATTER IS A SECOND FAILURE WHICH VIOLATES SPECIFICATION NSTS 22206.

ISSUE RESOLUTION: WITHDRAW ISSUE AND LIST NASA CRITICALITY. FROM FURTHER REVIEW AND TO BE CONSISTENT WITH IOA ASSESSMENT # 5003 APPROACH, THE IOA CONCURS WITH THE NASA/RI 3/1R EVALUATION, PASSAGE OF ALL SCREENS, AND EXCLUSION OF THIS FAILURE MODE AS A CIL ITEM.

REPORT DATE 29 JUNE 1988 C.4-126
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88  
ASSESSMENT ID:  LS-5088X  
NASA FMEA #: 06-1-1402-1  
SUBSYSTEM: LIFE SUPPORT  
MDAC ID: 5088  
ITEM: LCG SUPPLY & RETURN, LINES & FITTINGS  
LEAD ANALYST: R. DUFFY

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
INADEQUATE [ ]  

REMARKS:

(EXTERNAL LEAK)  
LOSS OF MISSION DUE TO INABILITY TO PERFORM FUNCTION. ASSUMING A TWO MAN CREW (BASELINE MISSION), RECOVERY CANNOT BE PERFORMED  
since each SCU connection has no redundancy and sharing one SCU  
would be crew action which is against SPEC NSTS 22206.  
THE AIRLOCK IS NOT AN EMERGENCY ITEM. FOR FURTHER CLARIFICATION  
SEE ASSESSMENT #5003.  
ISSUE RESOLUTION: WITHDRAW ISSUE AND LIST NASA CRITICALITY.  
THE IOA ACKNOWLEDGES THE HIGHER LEVEL FUNCTIONAL CRITICALITY  
ASSIGNED BY NASA/RI. EXTERNAL LEAKAGE COULD DEPLETE THE EMU  
WATER SUPPLY, CONTAMINATE THE AIRLOCK WITH FREE WATER, AND CAUSE  
LOSS OF CAPABILITY TO PERFORM A CONTINGENCY EVA.

REPORT DATE 29 JUNE 1988  
C.4-127
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: LS-5089X
NASA FMEA #: 06-1-1402-2

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 5089
ITEM: LCG SUPPLY & RETURN, LINES & FITTINGS

LEAD ANALYST: R. DUFFY

ASSESSMENT:

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

RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
(RESTRICTED FLOW) LOSS OF MISSION DUE TO INABILITY TO PERFORM FUNCTION. ASSUMING A TWO MAN CREW (BASELINE MISSION), RECOVERY CANNOT BE PERFORMED SINCE EACH SCU CONNECTION HAS NO REDUNDANCY AND SHARING ONE SCU WOULD BE CREW ACTION WHICH IS AGAINST SPEC NSTS 22206. THE AIRLOCK IS NOT AN EMERGENCY ITEM. FOR FURTHER CLARIFICATION SEE ASSESSMENT #5003.

ISSUE RESOLUTION: WITHDRAW ISSUE AND LIST NASA CRITICALITY.

FROM FURTHER REVIEW, THE IOA CONCLUDES THE WORST CASE SCENARIO FOR RESTRICTED FLOW THROUGH THE LCVG LINES & FITTINGS WOULD BE INADEQUATE COOLING TO A STANDBY CREWMAN CONNECTED TO AN SCU DURING A SCHEDULED OR UNSCHEDULED EVA. THEREFORE, THE IOA CONCURS WITH THE NASA/RI EVALUATION, PASSAGE OF ALL SCREENS, AND EXCLUSION OF THIS FAILURE MODE AS A CIL ITEM. EVEN THOUGH MISSION CAPABILITY IS LOST, IT WOULD STILL BE POSSIBLE FOR ONE CREWMAN TO PERFORM A CONTINGENCY EVA.

REPORT DATE 29 JUNE 1988 C.4-128
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: LS-5090X
NASA FMEA #: 06-1-1209-2

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 5090
ITEM: EMU WASTE WATER LINE & FITTINGS

LEAD ANALYST: R. DUFFY

ASSESSMENT:

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

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

REMARKS:
(RESTRICTED FLOW)
ASSUMING A TWO MAN CREW, THE FAILURE CAUSES LOSS OF MISSION SINCE THERE IS NO REDUNDANCY FOR EACH CREWMAN.


REPORT DATE 29 JUNE 1988 C.4-129
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: LS-5091X
NASA FMEA #: 06-1-1205-1

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 5091
ITEM: O2 QUICK COUPLINGS (NOT USED FOR SCU) AND CAP
LEAD ANALYST: R. DUFFY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
(INABILITY TO CLOSE, INTERNAL LEAKAGE). THE HARDWARE ITEMS TO PREVENT LEAKS ARE THE VALVE, COUPLING AND CAP. FUNCTIONALLY THIS FAILURE IS NOT IMPORTANT SINCE BY DEFINITION THIS LEAK IS "INTERNAL". THUS THE CREW IS NOT EVEN AWARE OF THIS FAILURE. THAT IS, BY DEFINITION "INTERNAL LEAK" MEANS NOT ALL THE SEALS CAN FAIL (THIS WOULD BE EXTERNAL LEAKAGE). INABILITY TO CLOSE IS MOOT SINCE THE CAP WOULD NEVER BE TAKEN OFF DURING FLIGHT (CREW USES THE SCU).


REPORT DATE 29 JUNE 1988 C.4-130
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: LS-5094X
NASA FMEA #: 06-1-1124-3
SUBSYSTEM: LIFE SUPPORT
MDAC ID: 5094
ITEM: AIRLOCK TO AMBIENT CAP
LEAD ANALYST: R. DUFFY

ASSESSMENT:

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

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

(EXTERNAL LEAK)
THIS FAILURE IS NOT REALISTIC SINCE THIS VALVE WOULD NOT BE USED DURING A NORMAL MISSION.

ISSUE RESOLUTION: WITHDRAW ISSUE AND LIST NASA CRITICLAIY. FROM FURTHER REVIEW THE IOA CONCLUDES THAT IF THE OUTER HATCH EQUALIZATION VALVES AND CAPS LEAK, IT MAY NOT BE POSSIBLE TO REPRESSURIZE THE AIRLOCK AFTER AN EVA. THIS COULD CAUSE LOSS OF CREW. THE FAILURE COULD ALSO CAUSE THE LOSS OF CAPABILITY TO PERFORM A CONTINGENCY EVA. THEREFORE, THE IOA AGREES WITH THE NASA/RI EVALUATION OF THIS FAILURE MODE.

REPORT DATE 29 JUNE 1988 C.4-131
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: LS-5095X
NASA FMEA #: 06-1-1631-3

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 5095
ITEM: VACUUM VENT ISOLATION VALVE (1)

LEAD ANALYST: R. DUFFY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

(EXTERNAL LEAK) THE FAILURE IS QUESTIONABLE. PER NSTS 22206 THE LEAK CANNOT BE THROUGH THE PACKING IN THE VALVES PENETRATION. THE ONLY OTHER PLACES COULD BE THE CASING ITSELF WHICH IS UNREALISTIC OR THE O-RING WHICH SEALS THE VALVE TO THE BULKHEAD. THE O-RING (LACK OF) IS NOT BIG ENOUGH TO DRAIN THE CABIN FASTER THAN CONSUMMABLES FLOW. HOWEVER, ASSUMING CREW INABILITY TO CORRECT THE FAILURE LEADS TO THE ASSIGNMENT OF AN IMMEDIATE LOSS OF MISSION DUE TO AN UNCONTROLLABLE LEAK.


REPORT DATE 29 JUNE 1988  C.4-132
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: LS-5096X
NASA FMEA #: 06-1-1630-1
NASA DATA:
BASELINE [ ]
NEW [ X ]
SUBSYSTEM: LIFE SUPPORT
MDAC ID: 5096
ITEM: LINES & FITTINGS, 2 INCH DEPRESSURIZATION
LEAD ANALYST: R. DUFFY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
(EXTERNAL LEAKAGE)
THE LEAK CAN BE CONTROLLED WITH THE VACUUM VENT ISOLATION VALVE.
LOSS OF FUNCTION CREATES A LEAK IN THE CABIN WITH POTENTIAL LOSS
OF LIFE/VEHICLE. EVEN THOUGH THE VACUUM ISOLATION VALVE HAS A
DRAIN ORIFICE, THERE IS A POTENTIAL BUILD UP OF H2 IF THE
LEAK IS DOWNSTREAM OF THE INTERFACE, WHICH ALSO HAS THE POTENTIAL
FOR LOSS OF LIFE/VEHICLE IF H2 IGNITES. THUS, MISSION IS
TERMINATED ON FIRST FAILURE.
ISSUE RESOLUTION: WITHDRAW ISSUE.
FROM FURTHER REVIEW, THE IOA CONCLUDES THE WORST CASE EFFECT OF
THIS FAILURE MODE COULD BE LOSS OF CREW/VEHICLE. THEREFORE, THE
NASA/RI EVALUATION IS APPROPRIATE.

REPORT DATE 29 JUNE 1988 C.4-133
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: LS-5097X
NASA FMEA #: 06-1-1630-2
SUBSYSTEM: LIFE SUPPORT
MDAC ID: 5097
ITEM: LINES & FITTINGS, 2 INCH DEPRESSURIZATION
LEAD ANALYST: R. DUFFY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

(RESTRICTED FLOW). NO CRITICALITY HAS BEEN ASSIGNED BECAUSE THIS FAILURE IS NOT CREDIBLE. THE LINE IS 2 INCHES IN DIAMETER AND WOULD REQUIRE LARGE SIZE DEBRIS FOR EFFECTIVE PLUGGING. ON THE OTHER HAND, HYDROGEN IS A VERY LIGHT MOLECULE AND CAN PERMEATE THROUGH ANY SIZE CRACK. IF IOA HAD TO ASSIGN A CRITICALITY, IT WOULD BE A 2/2 (LOSS OF MISSION) SINCE THE AIRLOCK WOULD BE UNABLE TO DEPRESSURIZE.

ISSUE RESOLUTION: WITHDRAW ISSUE AND LIST NASA CRITICALITY. FROM FURTHER REVIEW THE IOA CONCLUDES THAT IF FLOW THROUGH THE TWO - INCH DEPRESSURIZATION LINES AND FITTINGS WAS RESTRICTED, THE OUTER HATCH EQUALIZATION VALVES COULD BE USED TO DEPRESSURIZE AIRLOCK. SINCE THIS CAPABILITY EXISTS, THE IOA WOULD ASSIGN A 3/1R CRITICALITY TO THIS FAILURE MODE FOR THE WORST CASE SCENARIO OF LOSS OF ALL FUNCTIONAL REDUNDANCY WHICH PREVENTS BEING ABLE TO PERFORM A CONTINGENCY EVA, BUT THE MORE CONSERVATIVE NASA APPROACH IS ACCEPTED.

REPORT DATE 29 JUNE 1988 C.4-134
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: LS-5098X
NASA FMEA #: 06-1-1128-1
NASA DATA:
BASELINE [ ]
NEW [ ]

SUBSYSTEM: LIFE SUPPORT
MDAC ID: 5098
ITEM: AIRLOCK DEPRESSURIZATION CAP

LEAD ANALYST: K. BARICKMAN

ASSESSMENT:

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

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

REMARKS:
IOA/NASA FM: INABILITY TO REMOVE.
IOA COMMENT: FUNCTIONAL LOSS IS LOSS OF MISSION AND THERE IS NO REDUNDANCY AVAILABLE.
ISSUE RESOLUTION: WITHDRAW ISSUE AND LIST NASA CRITICALITY.
FROM FURTHER REVIEW THE IOA DETERMINED THE FAILURE MODE UNDER REVIEW IS INABILITY TO MATE RATHER THAN INABILITY TO REMOVE. IN ADDITION TO THE CAP, THE DEPRESS VALVE AND VACUUM VENT VALVE PROVIDE REDUNDANT LEAKAGE PROTECTION. THE IOA AGREES WITH THE NASA/RI 3/1R EVALUATION, PASSAGE OF ALL SCREENS, AND EXCLUSION OF THIS FAILURE MODE AS A CIL ITEM.

REPORT DATE 29 JUNE 1988  C.4-135
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/06/88
ASSESSMENT ID: ATCS-1004
NASA FMEA #: 06-3-0102-2
SUBSYSTEM: ATCS
MDAC ID: 1004
ITEM: INLET FILTER (ACCUMULATOR)
LEAD ANALYST: S.K. SINCLAIR

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
THE ISSUE WAS DISCUSSED WITH THE SUBSYSTEM MANAGER, HANK ROTTER, ON 5/5/88. HANK'S DATA INDICATES THAT A RUPTURE OF THIS FILTER WILL RESULT IN THE FILTER ELEMENTS ACCUMULATING ON THE FILTER OF THE WORKING PUMP ONLY - LEAVING THE SECOND PUMP CLEAR AND OPERATIONAL. THIS WILL MAKE THE CRITICALITY 3/1R. IOA AGREES WITH THIS ANALYSIS AND WITHDRAWS THE ISSUE.

REPORT DATE 29 JUNE 1988 C.4-136
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/06/88
ASSESSMENT ID: ATCS-1006
NASA FMEA #: 06-3-0112-2
NASA DATA:
BASELINE [ ]
NEW [ X ]
SUBSYSTEM: ATCS
MDAC ID: 1006
ITEM: SELF-SEALING DISCONNECT
LEAD ANALYST: S.K. SINCLAIR

ASSESSMENT:

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

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

REMARKS:
NASA COMBINES ALL DISCONNECTS ASSOCIATED WITH THE PUMP PACKAGE INTO ONE FMEA EVALUATED AT THE WORST CASE CRITICALITY. FOR BETTER CLARITY, EACH DISCONNECT SHOULD BE EVALUATED SEPARATELY. HOWEVER, SINCE THE NASA FMEA DOES CARRY THE WORST CASE CRITICALITY, IOA WILL AGREE WITH THE FMEA AND WITHDRAW THE ISSUE.

REPORT DATE 29 JUNE 1988 C.4-137
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/05/88
ASSESSMENT ID: ATCS-1025
NASA FMEA #: 06-3-0301-3

SUBSYSTEM: ATCS
MDAC ID: 1025
ITEM: HYDRAULIC HEAT EXCHANGER

LEAD ANALYST: S.K. SINCLAIR

NASA DATA:
BASELINE [ ]
NEW [ X ]

CRITICALITY REDUNDANCY SCREENS

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RECOMMENDATIONS: (If different from NASA)

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

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

REMARKS:
NASA'S RE-EVALUATION OF THE FMEA CRITICALITY HAS RESULTED IN AGREEMENT WITH IOA. ISSUE IS CLOSED.

REPORT DATE 29 JUNE 1988 C.4-138
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/06/88
ASSESSMENT ID: ATCS-1027
NASA FMEA #: 
SUBSYSTEM: ATCS
MDAC ID: 1027
ITEM: HYDRAULIC HEAT EXCHANGERS
LEAD ANALYST: S.K. SINCLAIR

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
UPON RE-EVALUATION, IOA FEELS THAT THIS FAILURE IS A PART OF NASA FMEA 06-3-0301-3. IOA WITHDRAWS THE ISSUE.

REPORT DATE 29 JUNE 1988 C.4-139
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/06/88
ASSESSMENT ID: ATCS-1035
NASA FMEA #: 06-3-0304-5
SUBSYSTEM: ATCS
MDAC ID: 1035
ITEM: GSE HEAT EXCHANGER
LEAD ANALYST: S.K. SINCLAIR

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

NASA UTILIZED A MORE CONSERVATIVE DEFINITION OF FUNCTION AND REDUNDANCY DURING THEIR ANALYSIS OF THIS ITEM. IOA CONCURS WITH THIS CONSERVATIVE APPROACH AND WITHDRAWS THE ISSUE.

REPORT DATE 29 JUNE 1988 C.4-140
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/06/88
ASSESSMENT ID: ATCS-1037
NASA FMEA #:

SUBSYSTEM: ATCS
MDAC ID: 1037
ITEM: 02 RESTRICTOR

LEAD ANALYST: S.K. SINCLAIR

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ /       ] [ ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

NASA DEEMED THIS TO BE A NON-CREDIBLE FAILURE MODE REQUIRING TWO SEPARATE FAILURES (06-3-0250-1). UPON RE-EXAMINATION OF AVAILABLE DATA, IOA AGREES WITH NASA AND WITHDRAWS THE ISSUE.

REPORT DATE 29 JUNE 1988 C.4-141
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/05/88
NASA DATA:
ASSESSMENT ID: ATCS-1038
NASA FMEA #:
BASELINE [ ]
NEW [ ]

SUBSYSTEM: ATCS
MDAC ID: 1038
ITEM: 02 RESTRICTOR

LEAD ANALYST: S.K. SINCLAIR

ASSESSMENT:

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

* CIL RETENTION RATIONALE: (If applicable)
Adequate [ ]
Inadequate [ ]

REMARKS:
NASA DEEMED THIS TO BE A NON-CREDIBLE FAILURE MODE REQUIRING TWO SEPARATE FAILURES (06-3-0250-1). UPON RE-EXAMINATION OF AVAILABLE DATA, IOA AGREES WITH NASA AND WITHDRAWS THE ISSUE.

REPORT DATE 29 JUNE 1988 C.4-142
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/06/88
ASSESSMENT ID: ATCS-1043
NASA FMEA #: NASA DATA:

BASELINE [ ] NEW [ ]

SUBSYSTEM: ATCS
MDAC ID: 1043
ITEM: ARS INTERCHANGER HEAT EXCHANGER

LEAD ANALYST: S.K. SINCLAIR

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
THIS FMEA WAS COVERED BY NASA IN THEIR ASSESSMENT OF THE ARS, NASA FMEA 06-1-0505-1 WITH CRIT 2/1R IS THE EQUIVALENT ITEM. MDAC WITHDRAW THE ISSUE.

REPORT DATE 29 JUNE 1988  C.4-143
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/06/88
ASSESSMENT ID: ATCS-1045
NASA FMEA #:

SUBSYSTEM: ATCS
MDAC ID: 1045
ITEM: ARS INTERCHANGER HEAT EXCHANGER

LEAD ANALYST: S.K. SINCLAIR

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
THIS FAILURE WAS COVERED BY NASA DURING THEIR ASSESSMENT OF THE ARS, NASA FMEA 06-1-0505-2 IS THE EQUIVALENT FAILURE. MDAC WITHDRAWS THE ISSUE.

REPORT DATE 29 JUNE 1988 C.4-144
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/06/88
ASSESSMENT ID: ATCS-1053
NASA FMEA #: 06-3-0223-2

SUBSYSTEM: ATCS
MDAC ID: 1053
ITEM: PAYLOAD HEAT EXCHANGER

LEAD ANALYST: S.K. SINCLAIR

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
THIS FAILURE WAS DISCUSSED WITH THE SUBSYSTEM MANAGER, HANK ROTTER, ON 5/5/88. ANALYSIS HAS SHOWN THAT SUFFICIENT FLOW CAPACITY EXISTS IN THE OTHER PORTION OF THE LOOP TO COMPENSATE FOR A COMPLETELY BLOCKED PAYLOAD LOOP. THIS WILL LOWER THE CRITICALITY TO 2/2. IOA AGREES WITH THIS ANALYSIS AND WITHDRAWS THE ISSUE.

REPORT DATE 29 JUNE 1988 C.4-145
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/12/88
ASSESSMENT ID: ATCS-2003
NASA FMEA #: 06-3-0502-3
SUBSYSTEM: ATCS
MDAC ID: 2003
ITEM: FLOW CONTROL VALVE
LEAD ANALYST: S.K. SINCLAIR

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ 2 /2 ] [ ] [ ] [ ] [ ] [ A ]
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
DURING THE INITIAL ASSESSMENT, IOA ERRONEOUSLY CHANGED THE CRITICALITY OF THIS ITEM TO A HIGHER THAN REQUIRED VALUE. ADDITIONAL DATA AND CLOSER EXAMINATION HAVE CONVINCED IOA THAT THE LOWER CRITICALITY IS MORE APPROPRIATE. IOA WITHDRAWS THE ISSUE.

REPORT DATE 29 JUNE 1988 C.4-146
**APPENDIX C**

**ASSESSMENT WORKSHEET**

**ASSESSMENT DATE:** 1/13/88  
**ASSESSMENT ID:** ATCS-2007A  
**NASA FMEA #:** 06-3-0504-4  

**SUBSYSTEM:** ATCS  
**MDAC ID:** 2007  
**ITEM:** BYPASS VALVE  

**LEAD ANALYST:** S.K. SINCLAIR

**ASSESSMENT:**

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- **IOA**  
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- **COMPARE**  
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**RECOMMENDATIONS:** (If different from NASA)

- [2 /2]  
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- [ ]  
- [ ]  
- [A]  

**ADD/DELETE**

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

- ADEQUATE [ ]  
- INADEQUATE [ ]

**REMARKS:**

During the initial assessment, IOA erroneously changed the criticality of this item to a higher than required value. Additional data and closer examination have convinced IOA that the lower criticality is more appropriate. MDAC withdraws the issue.

**REPORT DATE** 29 JUNE 1988  
**C.4-147**
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/13/88
ASSESSMENT ID: ATCS-2008A
NASA FMEA #: 06-3-0504-2
SUBSYSTEM: ATCS
MDAC ID: 2008
ITEM: BYPASS VALVE
LEAD ANALYST: S.K. SINCLAIR

ASSESSMENT:

CRITICALITY REDUNDANCY SCREENS CIL ITEM
FLIGHT HDW/FUNC 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)
[ 2 /1R ] [ P ] [ F ] [ P ] [ A ]
(ADD/DELETE)

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

REMARKS:
DURING THE INITIAL ASSESSMENT, IOA ERRONEOUSLY CHANGED THE CRITICALITY OF THIS ITEM TO A HIGHER THAN REQUIRED VALUE. ADDITIONAL DATA AND CLOSER EXAMINATION HAVE CONVINCED IOA THAT THE LOWER CRITICALITY IS MORE APPROPRIATE. MDAC WITHDRAWS THE ISSUE.

REPORT DATE 29 JUNE 1988 C.4-148
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/13/88
ASSESSMENT ID: ATCS-2010
NASA FMEA #: 06-3-0504-2

SUBSYSTEM: ATCS
MDAC ID: 2010
ITEM: MOTOR (BYPASS VALVE)

LEAD ANALYST: S.K. SINCLAIR

ASSESSMENT:

CRITICALITY REDUNDANCY SCREENS CIL ITEM
FLIGHT HDW/FUNC A B C ITEM

NASA [3 /1R] [P] [F] [P] [X] *

IOA [2 /1R] [P] [P] [P] [P] [X]

COMPARE [N /] [ ] [N] [ ] [ ] [ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]

INADEQUATE [ ]

REMARKS:
DISCUSSION WITH THE SUBSYSTEM MANAGER, HANK ROTTER ON 5/8/88, HAS
REVEALED SUFFICIENT LEVELS OF REDUNDANCY TO LOWER THE CRITICALITY
TO 3/1R. IOA AGREES WITH THE SUBSYSTEM MANAGER'S ANALYSIS AND
WITHDRAWS THE ISSUE.

REPORT DATE 29 JUNE 1988 C.4-149
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/12/88
ASSESSMENT ID: ATCS-2017
NASA DATA:
BASELINE [ ]
NEW [ X ]

NASA FMEA #: 05-6W-2034-1

SUBSYSTEM: ATCS
MDAC ID: 2017
ITEM: SWITCH 26 (RADIATOR CONTROL LOOP)
LEAD ANALYST: S.K. SINCLAIR

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NASA UTILIZED A MORE CONSERVATIVE DEFINITION OF FUNCTION AND REDUNDANCY DURING THEIR ANALYSIS. IOA ACCEPTS THIS CONSERVATIVE APPROACH AND AGREES WITH THE ASSIGNED CRITICALITIES. MDAC WITHDRAWS THE ISSUE. (NEW FMEA NO. 05-6WC-1002-1 WITH CRIT. 2/2).

REPORT DATE 29 JUNE 1988 C.4-150
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/12/88
ASSESSMENT ID: ATCS-2028
NASA FMEA #: 05-6W-2036-2

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: ATCS
MDAC ID: 2028
ITEM: SWITCH 29 (RADIATOR MANUAL SELECT)

LEAD ANALYST: S.K. SINCLAIR

ASSESSMENT:

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

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

REMARKS:
NASA'S RE-EVALUATION OF THE CRITICALITY ASSIGNED TO THIS ITEM HAS REMOVED IT FROM THE CIL BY GIVING IT A NON-CIL RANKING. THEREFORE, THE ISSUE NO LONGER EXISTS. (NEW FMEA NO. 05-6WC-1005-1 WITH CRIT 3/1R).

REPORT DATE 29 JUNE 1988    C.4-151
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/16/87
ASSESSMENT ID: ATCS-3018
NASA FMEA #: 06-3-0311-1
SUBSYSTEM: ATCS
MDAC ID: 3018
ITEM: HI LOAD ANTI-CARRYOVER DEVICE
LEAD ANALYST: S.K. SINCLAIR

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
The NASA FMEAs do not distinguish between restricted freon flow in the body of the evaporator and restricted freon flow in places such as the ACOD. A restricted flow through the ACOD will have no significant effect on evaporator operations and should be a 3/3 criticality. However, since the NASA FMEA does correctly carry the criticality of a worst case restricted flow, MDAC will withdraw the issue.

REPORT DATE 29 JUNE 1988  C.4-152
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/16/87
ASSESSMENT ID: ATCS-3019
NASA FMEA #:

SUBSYSTEM: ATCS
MDAC ID: 3019
ITEM: HI LOAD EXIT DUCT
LEAD ANALYST: S.K. SINCLAIR

ASSESSMENT:

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

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

REMARKS:
THIS FAILURE WAS DISCUSSED WITH THE SUBSYSTEM MANAGER, HANK ROTTER, ON 5/5/88. HANK INDICATES THAT EXTERNAL LEAKAGE OF STEAM/WATER FROM THE EXIT DUCT OCCURS DURING NORMAL OPERATIONS AND HAS NO EFFECT. MDAC WITHDRAWS THE ISSUE.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/16/87
ASSESSMENT ID: ATCS-3030
NASA FMEA #: 

SUBSYSTEM: ATCS
MDAC ID: 3030
ITEM: HI LOAD NOZZLE

LEAD ANALYST: S.K. SINCLAIR

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

THIS FAILURE WAS DISCUSSED WITH THE SUBSYSTEM MANAGER, HANK ROTTER, ON 5/5/88. HANK INDICATES THAT EXTERNAL LEAKAGE OF STEAM/WATER FROM THE NOZZLE OCCURS DURING NORMAL OPERATIONS AND HAS NO EFFECT. MDAC WITHDRAWS THE ISSUE.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/18/87
ASSESSMENT ID: ATCS-3036
NASA FMEA #: 06-3-0323-4

NASA DATA:
BASELINE [   ]
NEW [   X   ]

SUBSYSTEM: ATCS
MDAC ID: 3036
ITEM: TOPPING EVAPORATOR ISOLATION VALVE

LEAD ANALYST: S.K. SINCLAIR

ASSESSMENT:

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

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

REMARKS:
NASA UTILIZED A MORE CONSERVATIVE DEFINITION OF REDUNDANCY DURING THEIR ANALYSIS. IOA AGREES WITH THIS CONSERVATIVE APPROACH AND CONCURS WITH THE HIGHER CRITICALITIES. MDAC WITHDRAWS THE ISSUE.

REPORT DATE 29 JUNE 1988 C.4-155
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/18/87
ASSESSMENT ID: ATCS-3040
NASA FMEA #: 06-3-0327-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: ATCS
MDAC ID: 3040
ITEM: TOPPING EVAPORATOR INTEGRAL PULSER/SHUTOFF VALVE/NOZZLE

LEAD ANALYST: S.K. SINCLAIR

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

NASA UTILIZED A MORE CONSERVATIVE DEFINITION OF REDUNDANCY DURING THEIR ANALYSIS. IOA ACCEPTS THE CONSERVATIVE APPROACH AND CONCURS WITH THE HIGHER CRITICALITIES. MDAC WITHDRAWS THE ISSUE.

REPORT DATE 29 JUNE 1988 C.4-156
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/16/87
ASSESSMENT ID: ATCS-3046
NASA FMEA #: 06-3-0311-5

SUBSYSTEM: ATCS
MDAC ID: 3046
ITEM: TOPPING EVAPORATOR WATER VALVE/NOZZLE MOUNTING PLATE

LEAD ANALYST: S.K. SINCLAIR

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:


REPORT DATE 29 JUNE 1988 C.4-157
ASSESSMENT DATE: 12/16/87
ASSESSMENT ID: ATCS-3048
NASA FMEA #: 06-3-0311-5

SUBSYSTEM: ATCS
MDAC ID: 3048
ITEM: TOPPING EVAPORATOR CORE

LEAD ANALYST: S.K. SINCLAIR

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/22/87
ASSESSMENT ID: ATCS-3049
NASA FMEA #: 06-3-0323-5
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: ATCS
MDAC ID: 3049
ITEM: TOPPING EVAPORATOR CORE

LEAD ANALYST: S.K. SINCLAIR

ASSESSMENT:

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

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

REMARKS:
NASA UTILIZED A MORE CONSERVATIVE DEFINITION OF REDUNDANCY DURING THEIR ANALYSIS. IOA ACCEPTS THE HIGHER CRITICALITY AND WITHDRAWS THE ISSUE BASED ON THIS CONSERVATISM.

REPORT DATE 29 JUNE 1988 C.4-159
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/16/87
ASSESSMENT ID: ATCS-3050
NASA FMEA #: 06-3-0311-1

SUBSYSTEM: ATCS
MDAC ID: 3050
ITEM: TOPPING EVAPORATOR ANTI CARRYOVER DEVICE

LEAD ANALYST: S.K. SINCLAIR

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NASA GROUPS ALL FMEAs INVOLVING A RESTRICTED FLOW OF FREON INTO ONE FAILURE. WHEN THE RESTRICTION IS IN THE ACOD, THERE IS NO AFFECT ON THE EVAPORATOR OR FREON LOOP OPERATION. ALTHOUGH IOA WOULD ORDINARILY RECOMMEND A SEPARATION OF THE FAILURES, THE NASA FMEA DOES CORRECTLY CARRY THE WORST CASE CRITICALITY. IOA ACCEPTS THIS APPROACH AND WITHDRAWS THE ISSUE.

REPORT DATE 29 JUNE 1988 C.4-160
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/16/87
ASSESSMENT ID: ATCS-3051
NASA FMEA #: 06-3-0311-5
SUBSYSTEM: ATCS
MDAC ID: 3051
ITEM: TOPPING EVAPORATOR ANTI CARRYOVER DEVICE
LEAD ANALYST: S.K. SINCLAIR

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM:
MDAC ID:
ITEM:

LEAD ANALYST: S.K. SINCLAIR
ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

REPORT DATE 29 JUNE 1988  C.4-161
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/22/87
NASA DATA:
ASSESSMENT ID: ATCS-3052       NASA FMEA #: 06-3-0311-5
NASA FMEA #:          BASELINE [ ]       NEW [ X ]

SUBSYSTEM: ATCS
MDAC ID: 3052
ITEM: TOPPING EVAPORATOR ANTI CARRYOVER DEVICE

LEAD ANALYST: S.K. SINCLAIR

ASSESSMENT:

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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: 12/18/87  
ASSESSMENT ID: ATCS-3053  
NASA FMEA #: 06-3-0327-1

SUBSYSTEM: ATCS  
MDAC ID: 3053  
ITEM: TOPPING EVAPORATOR EXIT DUCT

LEAD ANALYST: S.K. SINCLAIR

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]

INADEQUATE [ ]

REMARKS:

NASA UTILIZED A MORE CONSERVATIVE DEFINITION OF REDUNDANCY DURING THEIR ANALYSIS. IOA ACCEPTS THE MORE CONSERVATIVE APPROACH AND AGREES WITH THE HIGHER CRITICALITY. MDAC WITHDRAWS THE ISSUE.

REPORT DATE 29 JUNE 1988 C.4-163
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/18/87
ASSESSMENT ID: ATCS-3055
NASA FMEA #: 06-3-0327-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: ATCS
MDAC ID: 3055
ITEM: TOPPING EVAPORATOR - EXIT DUCT - ZONE D, E, F,
AND H HEATERS

LEAD ANALYST: S.K. SINCLAIR

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ ] / [ ] / [ ] / [ ] / [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

NASA UTILIZED A MORE CONSERVATIVE DEFINITION OF FUNCTION AND REDUNDANCY DURING THEIR ANALYSIS. IOA ACCEPTS THE MORE CONSERVATIVE APPROACH AND AGREES WITH THE HIGHER CRITICALITY. MDAC WITHDRAWS THE ISSUE.

REPORT DATE 29 JUNE 1988 C.4-164
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/18/87
ASSESSMENT ID: ATCS-3057
NASA FMEA #: 06-3-0327-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: ATCS
MDAC ID: 3057
ITEM: TOPPING EVAPORATOR - EXIT DUCT - ZONE D, E, F, AND H THERMOSTATS
LEAD ANALYST: S.K. SINCLAIR

ASSESSMENT:

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

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

REMARKS:
NASA UTILIZED A MORE CONSERVATIVE DEFINITION OF FUNCTION AND REDUNDANCY DURING THEIR ANALYSIS. IOA CONCURS WITH THE MORE CONSERVATIVE APPROACH AND AGREES WITH THE HIGHER CRITICALITIES. MDAC WITHDRAWS THE ISSUE.

REPORT DATE 29 JUNE 1988 C.4-165
ASSESSMENT DATE: 12/16/87
ASSESSMENT ID: ATCS-3060
NASA FMEA #: 06-3-0313-1

SUBSYSTEM: ATCS
MDAC ID: 3060
ITEM: TOPPING EVAPORATOR - RH AND LH SONIC NOZZLES
LEAD ANALYST: S.K. SINCLAIR

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NASA UTILIZED A MORE CONSERVATIVE DEFINITION OF REDUNDANCY DURING THEIR ANALYSIS. IOA CONCURS WITH THE CONSERVATIVE APPROACH AND ACCEPTS THE HIGHER CRITICALITIES. MDAC WITHDRAWS THE ISSUE.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/18/87
ASSESSMENT ID: ATCS-3067
NASA FMEA #: 06-3-0330-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: ATCS
MDAC ID: 3067
ITEM: FES FEEDLINE A/B FROM WATER SUPPLY TO WATER/VALVE NOZZLE ASSEMBLIES

LEAD ANALYST: S.K. SINCLAIR

ASSESSMENT:

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

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

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

REMARKS:
THIS FAILURE WAS DISCUSSED WITH THE SUBSYSTEM MANAGER, HANK ROTTER, ON 5/5/88. THE ISSUES RAISED BY MDAC WILL BE USED BY THE SSM TO PUSH FOR A DESIGN CHANGE IN THE SYSTEM. HOWEVER, LEVEL II DIRECTION HAS DICTATED THAT THE CRITICALITY REMAIN A 3/1R. BASED ON THIS DATA, MDAC WILL WITHDRAW THE ISSUE.

REPORT DATE 29 JUNE 1988 C.4-167
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/30/87
ASSESSMENT ID: ATCS-3076A
NASA FMEA #: 06-3-0330-3

SUBSYSTEM: ATCS
MDAC ID: 3076
ITEM: FES FEEDLINE ACCUMULATOR STATUS MONITOR

LEAD ANALYST: S.K. SINCLAIR

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

*CIL RETENTION RATIONALE: (If applicable)*

ADEQUATE [ ]

INADEQUATE [ ]

REMARKS:

NASA UTILIZED A MORE CONSERVATIVE DEFINITION OF FUNCTION AND REDUNDANCY DURING THEIR ANALYSIS. IOA CONCURS WITH THE CONSERVATIVE APPROACH AND ACCEPTS THE HIGHER CRITICALITIES. MDAC WITHDRAWS THE ISSUE.

REPORT DATE 29 JUNE 1988 C.4-168
ASSESSMENT DATE: 12/22/87
ASSESSMENT ID: ATCS-3079
NASA FMEA #: 05-6W-2028-3

SUBSYSTEM: ATCS
MDAC ID: 3079
ITEM: FES CONTROLLER - SWITCH
LEAD ANALYST: S.K. SINCLAIR

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

| [ / ] | [ ] | [ ] | [ ] | [ ] |

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
THIS FAILURE WAS DISCUSSED WITH THE SSM, HANK ROTTER, ON 5/5/88 WHO AGREED, IN THEORY WITH THE MDAC CRITICALITIES OF 2/1R. HOWEVER, LEVEL II DIRECTION HAS DICTATED THAT THE FAILURE REMAIN AT THE CURRENT CRITICALITY. THEREFORE, MDAC WILL WITHDRAW THE ISSUE. (NEW FMEA NO. 05-6WE-1002-3).
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/22/87
ASSESSMENT ID: ATCS-3079A
NASA FMEA #: 05-6W-2030-3
SUBSYSTEM: ATCS
MDAC ID: 3079
ITEM: FES CONTROLLER - SWITCH
LEAD ANALYST: S.K. SINCLAIR

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
THIS FAILURE WAS DISCUSSED WITH THE SSM, HANK ROTTER, ON 5/5/88
WHO AGREED, IN THEORY WITH THE MDAC CRITICALITIES OF 2/1R.
HOWEVER, LEVEL II DIRECTION HAS DICTATED THAT THE FAILURE REMAIN
AT THE CURRENT CRITICALITY. THEREFORE, MDAC WILL WITHDRAW THE
ISSUE. (NEW FMEA NO. 05-6WE-1002-3, CRIT 3/1R).

REPORT DATE 29 JUNE 1988 C.4-170
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/22/87
ASSESSMENT ID: ATCS-3118
NASA FMEA #: 05-6W-2052-1

SUBSYSTEM: ATCS
MDAC ID: 3118
ITEM: TOPPING EVAPORATOR HEATER SELECT SWITCH

LEAD ANALYST: S.K. SINCLAIR

NASA DATA:
BASELINE [ ]
NEW [ X ]

CRITICALITY REDUNDANCY SCREENS CIL ITEM

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

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

REMARKS:
RE-EVALUATION OF THIS FMEA BY NASA RESULTED IN A MODIFIED CRITICALITY. ISSUE HAS BEEN RESOLVED. (NEW FMEA NO. 05-6WE-2001-1, WITH CRIT 2/2).

REPORT DATE 29 JUNE 1988 C.4-171
APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/04/88  
ASSESSMENT ID: ATCS-4006  
NASA FMEA #: 06-3-0411-2

SUBSYSTEM: ATCS  
MDAC ID: 4006  
ITEM: AMMONIA CONTROLLER A  
LEAD ANALYST: S.K. SINCLAIR  
ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
INADEQUATE [ ]

REMARKS:
IN ORDER FOR THE PREMATURE OPERATION OF THE CONTROLLER TO OCCUR, A SECOND FAILURE MUST HAPPEN. IOA WITHDRAWS THE ISSUE. (NOTES BASED ON DISCUSSION WITH SUBSYSTEM MANAGER).

REPORT DATE 29 JUNE 1988  C.4-172
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/04/88
ASSESSMENT ID: ATCS-4007
NASA FMEA #: 06-3-0410-1

SUBSYSTEM: ATCS
MDAC ID: 4007
ITEM: FLOW CONTROL VALVE (N.O.)

LEAD ANALYST: S.K. SINCLAIR

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

REPORT DATE 29 JUNE 1988  C.4-173
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/04/88
ASSESSMENT ID: ATCS-4008
NASA FMEA #: 06-3-0410-2

SUBSYSTEM: ATCS
MDAC ID: 4008
ITEM: FLOW CONTROL VALVE (N.O.)

LEAD ANALYST: S.K. SINCLAIR

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

NASA UTILIZED A MORE CONSERVATIVE DEFINITION OF REDUNDANCY DURING THEIR ANALYSIS. IOA ACCEPTS THE MORE CONSERVATIVE APPROACH AND AGREES WITH THE HIGHER CRITICALITY. MDAC WITHDRAWS THE ISSUE.

REPORT DATE 29 JUNE 1988 C.4-174
ASSESSMENT DATE: 1/04/88
ASSESSMENT ID: ATCS-4012
NASA FMEA #: 06-3-0408-4
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: ATCS
MDAC ID: 4012
ITEM: TANK ISOLATION VALVE (N.C.)

LEAD ANALYST: S.K. SINCLAIR

ASSESSMENT:

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HDW/FUNC  | A | B | C | ITEM |
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| IOA [ 3 /3 ] | [ P ] | [ NA ] | [ P ] | [ X ] | |
| COMPARE [ N /N ] | [ ] | [ ] | [ ] | [ ] | |

RECOMMENDATIONS: (If different from NASA)
[ ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

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

REMARKS:
THIS FAILURE WAS DISCUSSED WITH THE SSM, HANK ROTTER, ON 5/5/88. THE DESIGN OF THE VALVE IS SUCH THAT IT CANNOT FAIL OPEN WHEN IT IS CLOSED TO START, BUT IF OPEN IT CAN FAIL TO CLOSE. THIS OCCURS ONLY DURING POST LANDING OPERATIONS. THEREFORE, MDAC WITHDRAWS THE ORIGINAL ISSUE AND NASA WILL CHANGE THE FMEA TO A 2/2 CRITICALITY FOR POST LANDING COOLING CONCERNS.

REPORT DATE 29 JUNE 1988 C.4-175
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/04/88
ASSESSMENT ID: ATCS-4027
NASA FMEA #: 05-6W-2201-4
SUBSYSTEM: ATCS
MDAC ID: 4027
ITEM: HYBRID DRIVER (POWER-PRI/GPC)
LEAD ANALYST: S.K. SINCLAIR

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
RE-EVALUATION BY IOA WILL PERMIT AGREEMENT WITH NASA CRITICALITIES.

REPORT DATE 29 JUNE 1988 C.4-176
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/06/88
ASSESSMENT ID: ATCS-11115X
NASA FMEA #: 06-3-0304-4
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: ATCS
MDAC ID: 11115
ITEM: GSE HEAT EXchanger

LEAD ANALYST: S.K. SINCLAIR

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NASA UTILIZED A MORE CONSERVATIVE DEFINITION OF FUNCTION AND REDUNDANCY DURING THEIR ANALYSIS OF THIS ITEM. IOA AGREES WITH THE CONSERVATIVE APPROACH AND WITHDRAWS THE ISSUE.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/06/88
ASSESSMENT ID: ATCS-11116X
NASA FMEA #: 06-3-0305-1

SUBSYSTEM: ATCS
MDAC ID: 11116
ITEM: GSE HEAT EXCHANGER, FLUID CONNECTOR

LEAD ANALYST: S.K. SINCLAIR

ASSESSMENT:

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| IOA | [3/3] | [ ] [ ] [ ] [ ] | [ ]
| COMPARE | [N/N] | [ ] [ ] [ ] [ ] | [N] |

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NASA UTILIZED A MORE CONSERVATIVE DEFINITION OF FUNCTION AND REDUNDANCY DURING THEIR ANALYSIS OF THIS ITEM. IOA AGREES WITH THE CONSERVATIVE APPROACH AND WITHDRAWS THE ISSUE.

REPORT DATE 29 JUNE 1988 C.4-178
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/06/88
ASSESSMENT ID: ATCS-11118X
NASA FMEA #: 06-3-0305-3

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: ATCS
MDAC ID: 11118
ITEM: GSE HEAT EXCHANGER, FLUID CONNECTOR

LEAD ANALYST: S.K. SINCLAIR

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

NASA UTILIZED A MORE CONSERVATIVE DEFINITION FOR FUNCTION AND REDUNDANCY DURING THEIR ANALYSIS OF THIS ITEM. IOA AGREES WITH THIS CONSERVATIVE APPROACH AND WITHDRAWS THE ISSUE.

REPORT DATE 29 JUNE 1988 C.4-179
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/07/88
ASSESSMENT ID: ATCS-11121X
NASA FMEA #: 05-6W-2041-2
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: ATCS
MDAC ID: 11121
ITEM: SW10, 11 (FREON SIGNAL CONDITIONER)

LEAD ANALYST: S.K. SINCLAIR

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NASA UTILIZED A MORE CONSERVATIVE DEFINITION OF FUNCTION AND REDUNDANCY DURING THEIR ANALYSIS. IOA AGREES WITH THIS CONSERVATIVE APPROACH AND ACCEPTS THE HIGHER CRITICALITIES. MDAC WITHDRAWS THE ISSUE.

REPORT DATE 29 JUNE 1988   C.4-180
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/04/88
ASSESSMENT ID: ATCS-14032X
NASA FMEA #: 06-3-0408-1

SUBSYSTEM: ATCS
MDAC ID: 14032
ITEM: TANK ISOLATION VALVE (NC)

LEAD ANALYST: S.K. SINCLAIR

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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*CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

IOA ORIGINALLY ASSIGNED HIGHER THAN REQUIRED CRITICALITIES OF THIS FMEA. RE-EVALUATION WILL PUT IOA IN AGREEMENT WITH NASA CRITICALITIES.

REPORT DATE 29 JUNE 1988  C.4-181
SECTION C.5
CREW EQUIPMENT SUBSYSTEM
ASSESSMENT DATE: 11/18/87
ASSESSMENT ID: CRWEQP-2201
NASA FMEA #: JSC17067B-1A
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: CREW EQUIPMENT
MDAC ID: 2201
ITEM: EXTENDED RANGE CREWMEMBER SAFETY TETHER-SMALL HOOK

LEAD ANALYST: S.K. SINCLAIR

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NASA FMEA HAS LUMPED THE FAILURE TO CLOSE INTO THE "HOOK BREAKS OR JAMS OPEN" FAILURE. NASA, THEREFORE, UTILIZES A MORE CONSERVATIVE DEFINITION OF FAILURE AND FUNCTION DURING THEIR ANALYSIS. IOA ACCEPTS THIS CONSERVATIVE APPROACH AND WITHDRAWS THE ISSUE.

REPORT DATE 20 JULY 1988 C.5-2
ASSESSMENT DATE: 11/18/87
ASSESSMENT ID: CRWEQP-2301
NASA FMEA #: JSC17067B-2A

SUBSYSTEM: CREW EQUIPMENT
MDAC ID: 2301
ITEM: WAIST TETHER-HOOKS

LEAD ANALYST: S.K. SINCLAIR

ASSESSMENT:

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

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

REMARKS:
THIS FAILURE IS UNDER NASA FMEA FAILURE "EITHER HOOK LATCH JAMS OPEN". NASA, THEREFORE, UTILIZES A MORE CONSERVATIVE DEFINITION OF FAILURE AND FUNCTION DURING THEIR ANALYSIS. IOA ACCEPTS THIS CONSERVATIVE APPROACH AND WITHDRAWS THE ISSUE.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/02/87  NASA DATA:
ASSESSMENT ID: CRWEQP-3301  BASELINE [ ]
NASA FMEA #:  NEW [ ]

SUBSYSTEM: CREW EQUIPMENT
MDAC ID: 3301
ITEM: 3-POINT LATCH TOOL HOOK

LEAD ANALYST: L. GRAHAM, S. SINCLAIR

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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| (ADD/DELETE) |

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
UPON RE-EXAMINATION OF AVAILABLE DATA, IOA AGREES THAT THIS FAILURE IS COVERED IMPLICITLY IN THE NASA FMEA PACKAGE. IOA WITHDRAWS THE ISSUE.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 11/22/87
ASSESSMENT ID: CRWEQP-3413
NASA FMEA #: NASA DATA:
BASELINE [ ] NEW [ ]

SUBSYSTEM: CREW EQUIPMENT
MDAC ID: 3413
ITEM: EVA WINCH AND MOUNT ASSEMBLY MOUNTING PLATE ASSEMBLY

LEAD ANALYST: L. GRAHAM, S. SINCLAIR

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REPORT DATE 20 JULY 1988

REMARKS:
UPON RE-EXAMINATION OF AVAILABLE DATA, IOA AGREES THAT THIS FAILURE IS COVERED IMPLICITLY IN THE NASA FMEA PACKAGE. IOA WITHDRAWS THE ISSUE.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/07/87
ASSESSMENT ID: CRWEQP-6408
NASA FMEA #: TREADMILL 1A

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: CREW EQUIPMENT
MDAC ID: 6408
ITEM: TREADMILL EXERCISER ASSEMBLY ATTACHMENT FITTINGS

LEAD ANALYST: L. GRAHAM, S. SINCLAIR

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

REMARKS:
NASA UTILIZED A MORE CONSERVATIVE DEFINITION OF FUNCTION AND REDUNDANCY DURING THEIR ANALYSIS. MDAC CONCURS AND WITHDRAWS THE ISSUE.

REPORT DATE 20 JULY 1988 C.5-6
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 11/19/87
ASSESSMENT ID: CRWEQP-13809X
NASA FMEA #: SNATCH BLOCK 2B

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: CREW EQUIPMENT
MDAC ID: 13809
ITEM: SNATCH BLOCK ASSEMBLY Hook Latch

LEAD ANALYST: S.K. SINCLAIR

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)
  ADEQUATE [ ]
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REMARKS:
NASA UTILIZED A MORE CONSERVATIVE DEFINITION OF FUNCTION AND REDUNDANCY DURING THEIR ANALYSIS. IOA ACCEPTS THE MORE CONSERVATIVE APPROACH AND WITHDRAWS THE ISSUE.

REPORT DATE 20 JULY 1988 C.5-7
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 12/10/87
ASSESSMENT ID: CRWEQP-16409X
NASA FMEA #: TREADMILL 1B
SUBSYSTEM: CREW EQUIPMENT
MDAC ID: 16409
ITEM: TREADMILL QUICK DISCONNECT
LEAD ANALYST: S.K. SINCLAIR

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NASA UTILIZED A MORE CONSERVATIVE DEFINITION OF FUNCTION AND REDUNDANCY DURING THEIR ANALYSIS. IOA CONCURS AND WITHdraws THE ISSUE.

REPORT DATE 20 JULY 1988 C.5-8
SECTION C.6

INSTRUMENTATION SUBSYSTEM
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
ASSESSMENT ID: INSTR-305X
NASA FMEA #: 05-5-B03-7-1

SUBSYSTEM: INSTRUMENTATION
MDAC ID: 305
ITEM: MDM OF4, OA1, OA2, OA3

LEAD ANALYST: A.W. ADDIS

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:

IOA 111 WAS INADVERTENTLY OVERWRITTEN BY IOA EPD&C 111 AND IS BEING RESTORED AS IOA INSTR-305X. THESE MDM's PROCESS/ROUTE CRITICAL APU STATUS DATA. ERRONEOUS OUTPUT FALSELY INDICATING A HEATER STUCK ON COULD PROMPT MANUAL SHUTDOWN OF AN APU, REQUIRING ABORT. FAILS SCREEN B BECAUSE FAILED MDM CHANNEL COULD NOT BE DETECTED. NOTE: NASA FMEA WRITEUP IS INCONSISTENT WITH 2/2 CRIT AND ASSIGNS SCREENS FOR THAT 2/2 CRIT.

CIL ISSUE RESOLUTION:
A. ACCEPT NASA'S CRITICALITY PER IOA GROUNDRULES. ISSUE WITHDRAWN.

REPORT DATE 20 JULY 1988 C.6-2
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
ASSESSMENT ID: INSTR-306X
NASA FMEA #: NONE
SUBSYSTEM: INSTRUMENTATION
MDAC ID: 306
ITEM: MDM OF3
LEAD ANALYST: A.W. ADDIS

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA 116 WAS INADVERTENTLY OVERWRITTEN BY IOA EPD&C 116 AND IS BEING RESTORED AS IOA INSTR-306X. FOR PRESENT FUEL CELLS, MDM OF3 HANDLES CRITICAL FUEL CELL MEASUREMENTS FOR WHICH THERE IS NO REDUNDANT PATH (SEE IOA 306X). LOSS OF THESE MEASUREMENTS WOULD REQUIRE MISSION TERMINATION.

CIL ISSUE RESOLUTION:
A. MDM'S ASSESSED BY DPS. NO CIL ISSUES ON OF1, OF2 OR OF3 MDM'S. NOT CARRIED BECAUSE FUEL CELL SUBSYSTEM ANALYSIS SHOWED THAT REDUNDANCY FOR ALL MEASUREMENTS EXIST. MCR PRESENTED TO RE-CHANNEL EACH FUEL CELL TO DIFFERENT MDM. MCR NOT APPROVED. DPS HAS NOT WRITTEN FMEA YET. IOA CONCURS WITH NASA. ISSUE WITHDRAWN.

REPORT DATE 20 JULY 1988 C.6-3
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
ASSESSMENT ID: INSTR-307X
NASA FMEA #: NONE
SUBSYSTEM: INSTRUMENTATION
MDAC ID: 307
ITEM: MDM OF3
LEAD ANALYST: A.W. ADDIS

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA 117 WAS INADVERTENTLY OVERWRITTEN BY IOA EPD&C 117 AND IS BEING RESTORED AS IOA INSTR-307X. FOR PRESENT FUEL CELLS, MDM OF3 HANDLES CRITICAL FUEL CELL MEASUREMENTS FOR WHICH THERE IS NO REDUNDANT PATH (SE IOA 307X). ERRONEOUS MEASUREMENTS COULD CAUSE IMPROPER MANUAL SHUTDOWN OF A FUEL CELL, REQUIRING UNNECESSARY MISSION TERMINATION.

CIL ISSUE RESOLUTION:
A. MDM'S ASSESSED BY DPS. NO CIL ISSUES ON OF1, OF2, OR OF3 MDM'S. NOT CARRIED BECAUSE FUEL CELL SUBSYSTEM ANALYSIS REVEALED THAT REDUNDANCY FOR ALL MEASUREMENTS EXIST. MCR PRESENTED TO RE-CHANNEL EACH FUEL CELL TO DIFFERENT MDM'S. MCR NOT APPROVED. DPS HAS NOT WRITTEN THE FMEA YET. IOA CONCURS WITH NASA. ISSUE WITHDRAWN.

REPORT DATE 20 JULY 1988 C.6-4
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
ASSESSMENT ID: INSTR-308X
NASA FMEA #: NONE
SUBSYSTEM: INSTRUMENTATION
MDAC ID: 308
ITEM: MDM OF1, OF2
LEAD ANALYST: A.W. ADDIS

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA 118 WAS INADVERTENTLY OVERWRITTEN BY IOA EPD&C 118 AND IS BEING RESTORED AS INSTR-308X. FOR PRESENT FUEL CELLS SYSTEM MDM's OF1 AND OF2 HANDLE CRITICAL FUEL CELL DELTA VOLTAGE MEASUREMENTS (SEE IOA 308). LOSS OF THESE MEASUREMENTS WOULD CAUSE MISSION TERMINATION.

CIL ISSUE RESOLUTION:
A. MDM'S ASSESSED BY DPS. NO CIL ISSUES ON OF1, OF2, OR OF3 MDM'S. NOT CARRIED BECAUSE FUEL CELL SUBSYSTEM ANALYSIS REVEALED THAT REDUNDANCY FOR ALL MEASUREMENTS EXIST. MCR PRESENTED TO RE-CHANNEL EACH FUEL CELL TO DIFFERENT MDM'S. MCR NOT APPROVED. DPS HAS NOT WRITTEN THE FMEA YET. IOA CONCURS WITH NASA. ISSUE WITHDRAWN.

REPORT DATE 20 JULY 1988 C.6-5
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
ASSESSMENT ID: INSTR-309X
NASA FMEA #: NONE
SUBSYSTEM: INSTRUMENTATION
MDAC ID: 309
ITEM: MDM OF1, OF2
LEAD ANALYST: A.W. ADDIS

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA 119 WAS INADVERTENTLY OVERWRITTEN BY IOA EPD&C 119 AND IS BEING RESTORED AS INSTR-309X. FOR PRESENT FUEL CELLS SYSTEM MDMs OF1 AND OF2 HANDLE CRITICAL FUEL CELL DELTA VOLTAGE MEASUREMENTS (SEE IOA 309). ERRONEOUS MDM OUTPUT COULD CAUSE A FALSE INDICATION OF FUEL CELL MALFUNCTION AND COULD PROMPT A MANUAL FUEL CELL SHUT DOWN THAT COULD CAUSE MISSION LOSS.

CIL ISSUE RESOLUTION:
A. MDM's ASSESSED BY DPS. NO CIL ISSUES ON OF1, OF2, OR OF3 MDMs. NOT CARRIED BECAUSE FUEL CELL SUBSYSTEM FEELS THAT REDUNDANCY FOR ALL MEASUREMENTS EXIST. MCR PRESENTED TO RE-CHANNEL EACH FUEL CELL TO DIFFERENT MDMs. MCR NOT APPROVED. DPS HAS NOT WRITTEN THE FMEA YET. IOA CONCURS WITH NASA. ISSUE WITHDRAWN.

REPORT DATE 20 JULY 1988  C.6-6
SECTION C.7
DATA PROCESSING SUBSYSTEM
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 10/06/86
ASSESSMENT ID: DPS-100
NASA FMEA #: 05-5-B03-2-1
SUBSYSTEM: DPS
MDAC ID: 100
ITEM: MDM FFI, FF2, FF3, FF4
LEAD ANALYST: W. A. Haufler

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
SIMULTANEOUS DISSIMILAR FAILURES WERE EXCLUDED FROM THE IOA, MULTIPLE FAILURES ARE INCONSISTENT WITH THE NSTS 22206.
IOA RECOMMENDS REPLACING THIS PHRASE IN THIS NASA/RI FMEA'S EFFECTS FIELD "COUPLED WITH AND UNDETECTED FCS FAILURE (IN THE NULL POSITION)," WITH "COUPLED WITH A LIKE FAILURE IN ANOTHER MDM". IOA DID NOT CONSIDER DEGRADED STATE VECTORS.
IOA DOES NOT BELIEVE THE LOSS OF TWO STATE VECTORS WILL CAUSE LOSS OF CREW OR VEHICLE. IN THE WORST CASE ON ENTRY, THE LOSS OF THE SECOND STATE VECTOR WILL PERMIT THE ORBITER TO FLY WITH ONE REMAINING STATE VECTOR.
IOA DOES NOT CONCUR WITH NASA'S REEVALUATION AND RATIONALE. IOA RECOMMENDS DOWNGRADING HARDWARE CRITICALITY TO 3, THEREBY REMOVING THE FMEA FROM THE CIL. NASA/RI DOWNGRADED FMEA 05-5-B03-2-1 FROM 2/1R TO 3/1R. THIS REVISED CRITICALITY AGREES WITH IOA CRITICALITY.

REPORT DATE 20 JULY 1988 C.7-2
### APPENDIX C
#### ASSESSMENT WORKSHEET

**ASSESSMENT DATE:** 10/06/86
**ASSESSMENT ID:** DPS-101
**NASA FMEA #:** 05-5-B03-2-1
**SUBSYSTEM:** DPS
**MDAC ID:** 101
**ITEM:** MDM FFI, FF2, FF3, FF4
**LEAD ANALYST:** W. A. Haufler

**ASSESSMENT:**

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**COMPARE** [ N / ] [ ] [ ] [ ] [ ] [ N ]

**RECOMMENDATIONS:** (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

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

ADEQUATE [ ] INADEQUATE [ ]

**REMARKS:**

THIS FAILURE MODE "LOSS OF OUTPUT TO LRU" IS CONSIDERED TO BE COVERED BY THIS ROCKWELL FMEA WITH FAILURE MODE "NO OUTPUT: FAILED MDM PORT - SCU, MIA, A/D, POWER SUPPLIES, OR I/O CARD/CHANNEL FAILURE".

SIMULTANEOUS DISSIMILAR FAILURES WERE EXCLUDED FROM THE IOA. MULTIPLE FAILURES ARE INCONSISTENT WITH THE NSTS 22206.

IOA RECOMMENDS REPLACING THIS PHRASE IN THIS NASA/RI FMEA'S EFFECTS FIELD, "COUPLED WITH AND UNDETECTED FCS FAILURE (IN THE NULL POSITION)", WITH "COUPLED WITH A LIKE FAILURE IN ANOTHER MDM".

IOA DID NOT CONSIDER DEGRADED STATE VECTORS.

IOA DOES NOT BELIEVE THE LOSS OF TWO STATE VECTORS WILL CAUSE LOSS OF CREW OR VEHICLE. IN THE WORST CASE ON ENTRY, THE LOSS OF THE SECOND STATE VECTOR WILL PERMIT THE ORBITER TO FLY WITH ONE REMAINING STATE VECTOR.

IOA RECOMMENDS DOWNGRADING HARDWARE CRITICALITY TO 3, THEREBY REMOVING THE FMEA FROM THE CIL. NASA/RI DOWNGRADED FMEA 05-5-B03-2-1 FROM 2/1R TO 3/1R. THIS REVISED CRITICALITY AGREES WITH IOA CRITICALITY.

**REPORT DATE** 20 JULY 1988 C.7-3
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 10/06/86  NASA DATA:
ASSESSMENT ID: DPS-108  BASELINE [ X ]
NASA FMEA #: 05-5-B03-2-1  NEW [ ]

SUBSYSTEM: DPS
MDAC ID: 108
ITEM: MDM FF1,FF2,FF3,FF4
LEAD ANALYST: W. A. Haufler

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| IOA [ 3 /1R ] | [ P ] | [ P ] | [ P ] | [ ] |
| COMPARE [ N / ] | [ ] | [ ] | [ ] | [ ] | [ N ] |

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
THIS FAILURE MODE "FALSELY STUCK ON BUSY MODE" IS CONSIDERED TO BE COVERED BY THIS ROCKWELL FMEA WITH FAILURE MODE "NO OUTPUT: FAILED MDM PORT - SCU, MIA, A/D, POWER SUPPLIES, OR I/O CARD/CHANNEL FAILURE".
SIMULTANEOUS DISSIMILAR FAILURES WERE EXCLUDED FROM THE IOA.
MULTIPLE FAILURES ARE INCONSISTENT WITH THE NSTS 22206.
IOA RECOMMENDS REPLACING THIS PHRASE IN THE NASA/RI FMEA'S EFFECTS FIELD, "COUPLED WITH AN UNDETECTED FCS FAILURE (IN THE NULL POSITION)"), WITH "COUPLED WITH A LIKE FAILURE IN ANOTHER MDM". IOA DID NOT CONSIDER DEGRADED STATE VECTORS.
IOA DOES NOT BELIEVE THE LOSS OF TWO STATE VECTORS WILL CAUSE LOSS OF CREW OR VEHICLE. IN THE WORST CASE ON ENTRY, THE LOSS OF THE SECOND STATE VECTOR WILL PERMIT THE ORBITER TO FLY WITH ONE REMAINING STATE VECTOR.
IOA RECOMMENDS DOWNGRADE HARDWARE CRITICALITY TO 3, THEREBY REMOVING THE FMEA FROM THE CIL. NASA/RI DOWNGRADED FMEA 05-5-B03-2-1 FROM 2/1R TO 3/1R. THIS REVISED CRITICALITY AGREES WITH IOA CRITICALITY.

REPORT DATE 20 JULY 1988  C.7-4
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 10/06/86
ASSESSMENT ID: DPS-120
NASA FMEA #: 05-5-B03-1-1

SUBSYSTEM: DPS
MDAC ID: 120
ITEM: MDM FA1, FA2, FA3, FA4

LEAD ANALYST: W. A. Haufler

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IOA [ 3 /1R ] [ P ] [ P ] [ P ] [ ]
COMPARE [ N / ] [ ] [ ] [ ] [ ]

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

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

REMARKS:
SIMULTANEOUS DISSIMILAR FAILURES WERE EXCLUDED FROM THE IOA.
MULTIPLE FAILURES ARE INCONSISTENT WITH THE NSTS 22206.
IOA RECOMMENDS REPLACING THIS PHRASE IN THIS NASA/RI FMEA'S
EFFECTS FIELD, "COUPLED WITH AN UNDETECTED FCS FAILURE (IN THE
NULL POSITION)" , WITH "COUPLED WITH A LIKE FAILURE IN ANOTHER
MDM".
IOA DOES NOT CONCUR WITH NASA'S REEVALUATION AND RATIONALE.
IOA RECOMMENDS DOWNGRADING THE HARDWARE CRITICALITY TO 3, THEREBY
REMOVING THE FMEA FROM THE CIL.
The IOA WITHDRAWS CRITICALITY DIFFERENCE AND DIFFERENT
APPLICATIONS OF NSTS 22206 AS ASSESSMENT ISSUES SINCE THEY RESULT
IN A MORE CONSERVATIVE NASA/RI EVALUATION OF THE FAILURE MODE
THAN THE IOA ANALYSIS.

REPORT DATE 20 JULY 1988 C.7-5
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 10/06/86
ASSESSMENT ID: DPS-121
NASA FMEA #: 05-5-B03-1-1
SUBSYSTEM: DPS
MDAC ID: 121
ITEM: MDM FA1, FA2, FA3, FA4
LEAD ANALYST: W. A. Haufler

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
THIS FAILURE MODE "NO OUTPUT TO LRU" IS CONSIDERED TO BE COVERED BY THE ROCKWELL FMEA WITH FAILURE MODE "NO OUTPUT: FAILED MDM PORT - SCU, MIA, A/D, POWER SUPPLIES, OR I/O CARD/CHANNEL FAILURE".
SIMULTANEOUS DISSIMILAR FAILURES WERE EXCLUDED FROM THE IOA.
MULTIPLE FAILURES ARE INCONSISTENT WITH THE NSTS 22206.
IOA RECOMMENDS REPLACING THIS PHRASE IN THIS NASA/RI FMEA'S EFFECTS FIELD, "COUPLED WITH AN UNDETECTED FCS FAILURE (IN THE NULL POSITION)", WITH "COUPLED WITH A LIKE FAILURE IN ANOTHER MDM".
IOA DOES NOT CONCUR WITH NASA'S REEVALUATION AND RATIONALE. IOA DOES NOT CONCUR WITH NASA'S REEVALUATION AND RATIONALE. IOA RECOMMENDS DOWNGRADING THE HARDWARE CRITICALITY TO 3, THEREBY REMOVING THE FMEA FROM THE CIL.
The IOA WITHSTANDS CRITICALITY DIFFERENCE AND DIFFERENT APPLICATIONS OF NSTS 22206 AS ASSESSMENT ISSUES SINCE THEY RESULT IN A MORE CONSERVATIVE NASA/RI EVALUATION OF THE FAILURE MODE THAN THE IOA ANALYSIS.

REPORT DATE 20 JULY 1988 C.7-6
APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 10/06/86  NASA DATA:  
ASSESSMENT ID: DPS-128  BASELINE [ X ]  
NASA FMEA #: 05-5-B03-1-1  NEW [ ]  
SUBSYSTEM: DPS  
MDAC ID: 128  
ITEM: MDM FA1, FA2, FA3, FA4  
LEAD ANALYST: W. A. Haufler

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

*CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:

THIS FAILURE MODE "FALSELY STUCK ON BUSY MODE" IS CONSIDERED TO BE COVERED BY THIS ROCKWELL FMEA WITH FAILURE MODE "NO OUTPUT: FAILED MDM PORT-SCU, MIA, A/D, POWER SUPPLIES, OR I/O CARD/CHANNEL FAILURE". SIMULTANEOUS DISSIMILAR FAILURES WERE EXCLUDED FROM THE IOA. MULTIPLE FAILURES ARE INCONSISTENT WITH THE NSTS 22206. IOA RECOMMENDS REPLACING THIS PHRASE IN THIS NASA/RI FMEA'S EFFECTS FIELD, "COUPLED WITH AN UNDETECTED FCS FAILURE (IN THE NULL POSITION)", WITH "COUPLED WITH A LIKE FAILURE IN ANOTHER MDM."

IOA DOES NOT CONCUR WITH NASA'S REEVALUATION AND RATIONALE. THE IOA WITHDRAWS CRITICALITY DIFFERENCE AND DIFFERENT APPLICATIONS OF NSTS 22206 AS ASSESSMENT ISSUES SINCE THEY RESULT IN A MORE CONSERVATIVE NASA/RI EVALUATION OF THE FAILURE MODE THAN THE IOA ANALYSIS.

REPORT DATE 20 JULY 1988  C.7-7
SECTION C.8

ATMOSPHERE REVITALIZATION PRESSURE CONTROL SUBSYSTEM
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: ARPCS-128
NASA FMEA #: 06-1-0109-3

SUBSYSTEM: ARPCS
MDAC ID: 128
ITEM: PRESSURE REGULATOR/300 PSIG (1)

LEAD ANALYST: M.J. SAIIDI

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COMPARE [ N /N ] [ N ] [ N ] [ N ] [ ]

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

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

REMARKS:
THE FAILURE MODE MAY BE CLARIFIED TO REFER TO EITHER 1ST OR 2ND STAGES OF THE REGULATOR. AFTER FURTHER REVIEW AND REMOVAL OF THE AUXILIARY O2 TANK, IOA WOULD HAVE RECOMMENDED 3/1R CRITICALITY. COMPARED TO THIS RECOMMENDATION NASA UTILIZED A MORE CONSERVATIVE DEFINITION OF FUNCTION REDUNDANCY DURING THEIR ANALYSIS. IOA ACCEPTS THIS MORE CONSERVATIVE APPROACH AND AGREES WITH THE HIGHER CRITICALITIES. MDAC WITHDRAWS THE ISSUE.

REPORT DATE 20 JULY 1988 C.8-2
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: ARPCS-129
NASA FMEA #: 06-1-0110-2
SUBSYSTEM: ARPCS
MDAC ID: 129
ITEM: RELIEF VALVE, 1250 PSIG.
LEAD ANALYST: M.J. SAIIDI

NASA DATA:
BASELINE [ ]
NEW [ X ]

CRITICALITY REDUNDANCY SCREENS

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

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

REMARKS:
AFTER FURTHER REVIEW AND REMOVAL OF THE AUXILIARY 02 TANK, THE IOA CRITICALITY WAS CHANGED TO 3/1R. NASA UTILIZED A MORE CONSERVATIVE DEFINITION OF FUNCTION AND REDUNDANCY DURING THEIR ANALYSIS. IOA ACCEPTS THIS MORE CONSERVATIVE APPROACH AND AGREES WITH THE HIGHER CRITICALITIES. MDAC WITHDRAWS THE ISSUE.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: ARPCS-131
NASA FMEA #: 06-1-0110-2
SUBSYSTEM: ARPCS
MDAC ID: 131
ITEM: RELIEF VALVE, 1250 PSIG.
LEAD ANALYST: M.J. SAIIDI

ASSESSMENT:

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

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

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

REMARKS:

REPORT DATE 20 JULY 1988 C.8-4
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: ARPCS-132A
NASA FMEA #: 06-1-0114-4
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: ARPCS
MDAC ID: 132
ITEM: ISOLATION VALVE (1)

LEAD ANALYST: M.J. SAIIDI

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NASA UTILIZED A MORE CONSERVATIVE DEFINITION OF FUNCTION AND
REDUNDANCY DURING THEIR ANALYSIS. IOA ACCEPTS THE MORE
CONSERVATIVE APPROACH AND AGREES WITH THE HIGHER CRITICALITIES.
MDAC WITHdraws THE ISSUE.

REPORT DATE 20 JULY 1988 C.8-5
Appendix C
Assessment Worksheet

Assessment Date: 2/19/88
Assessment ID: ARPCS-137
NASA FMEA #: 06-1-0111-1

Subsystem: ARPCS
MDAC ID: 137
Item: CROSSOVER VALVE-LV3 AND LV4 (2)

Lead Analyst: M.J. Saiidi

Assessment:

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Recommendations: (If different from NASA)

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(Add/Delete)

* CIL Retention Rationale: (If applicable)

Adequate [ ]
Inadequate [ ]

Remarks:

NASA utilized a more conservative definition of function and redundancy during their analysis. IOA accepts the more conservative approach and agrees with the higher criticalities. MDAC withdraws the issue.

Report Date 20 July 1988 C.8-6
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: ARPCS-139
NASA FMEA #: 06-1-0111-3

SUBSYSTEM: ARPCS
MDAC ID: 139
ITEM: CROSSOVER VALVE-LV3 AND LV4 (2)

LEAD ANALYST: M.J. SAIIDI

ASSESSMENT:

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

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

REMARKS:
NASA UTILIZED A MORE CONSERVATIVE DEFINITION OF FUNCTION AND REDUNDANCY DURING THEIR ANALYSIS. IOA ACCEPTS THE MORE CONSERVATIVE APPROACH AND AGREES WITH THE HIGHER CRITICALITIES. MDAC WITHDRAWS THE ISSUE.

REPORT DATE 20 JULY 1988 C.8-7
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: ARPCS-140
NASA FMEA #: 05-6VA-2011-1

SUBSYSTEM: ARPCS
MDAC ID: 140
ITEM: SWITCH-S15 AND S18 (2)

LEAD ANALYST: M.J. SAIIDI

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
RE-EVALUATION OF THE FAILURE BY NASA HAS RESULTED IN A DIFFERENT FMEA NUMBER (05-6UC-201-02) AND A REVISED CRITICALITY (3/3) WHICH NOW AGREES WITH MDAC. ISSUE IS CLOSED.

REPORT DATE 20 JULY 1988 C.8-8
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: ARPCS-141
NASA FMEA #: 05-6VA-2011-2

SUBSYSTEM: ARPCS
MDAC ID: 141
ITEM: SWITCH-S15 AND S18 (2)
LEAD ANALYST: M.J. SAIDI

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
THIS FMEA WAS RE-EVALUATED BY NASA AND ASSIGNED A CRITICALITY
(2/1R) WHICH AGREES WITH IOAs ASSESSMENT. ISSUE IS CLOSED. (NEW
NASA FMEA NO. 05-6UC-201-1).

REPORT DATE 20 JULY 1988 C.8-9
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: ARPCS-148
NASA FMEA #: 06-1-0116-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: ARPCS
MDAC ID: 148
ITEM: ORIFICE-(ONE 20 LBM/HR IN LOOP1, TWO 10 LBM/HR IN LOOP2)

LEAD ANALYST: M.J. SAIIDI

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

NASA UTILIZED A MORE CONSERVATIVE DEFINITION OF FUNCTION AND REDUNDANCY DURING THEIR ANALYSIS. IOA ACCEPTS THE MORE CONSERVATIVE APPROACH AND CONCURS WITH THE HIGHER CRITICALITIES. MDAC WITHDRAWS THE ISSUE.

REPORT DATE 20 JULY 1988 C.8-10
**APPENDIX C**

**ASSESSMENT WORKSHEET**

**ASSESSMENT DATE:** 2/19/88

**ASSESSMENT ID:** ARPCS-151

**NASA FMEA #:** 06-1-0120-2

**SUBSYSTEM:** ARPCS

**MDAC ID:** 151

**ITEM:** LEH 02 SUPPLY VALVE (2)

**LEAD ANALYST:** M.J. SAIDI

**ASSESSMENT:**

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- IOA [ 3 /3 ] [ ] [ ] [ ] [ ]

**COMPARE** [ N /N ] [ N ] [ N ] [ N ] [ N ]

**RECOMMENDATIONS:** (If different from NASA)

[ ] [ ] [ ] [ ] [ ]

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]

INADEQUATE [ ]

**REMARKS:**

NASA UTILIZED A MORE CONSERVATIVE DEFINITION OF FUNCTION AND REDUNDANCY DURING THEIR ANALYSIS. IOA ACCEPTS THE MORE CONSERVATIVE APPROACH AND CONCURS WITH THE HIGHER CRITICALITIES. MDAC WITHDRAWS THE ISSUE.

**REPORT DATE** 20 JULY 1988 C.8-11
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: ARPCS-158
NASA FMEA #: 06-1-0122-2

SUBSYSTEM: ARPCS
MDAC ID: 158
ITEM: RELIEF VALVE-245 PSIG (2)

LEAD ANALYST: M.J. SAIIDI

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NASA UTILIZED A MORE CONSERVATIVE DEFINITION OF FUNCTION AND REDUNDANCY DURING THEIR ANALYSIS. IOA ACCEPTS THE MORE CONSERVATIVE APPROACH AND CONCURS WITH THE HIGHER CRITICALITIES. MDAC WITHDRAWS THE ISSUE.

REPORT DATE 20 JULY 1988 C.8-12
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: ARPCS-159
NASA FMEA #: ARPCS-159

SUBSYSTEM: ARPCS
MDAC ID: 159
ITEM: FILTER-10 MICRONS (2)

LEAD ANALYST: M.J. SAIIDI

ASSESSMENT:

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COMPARE [ N /N ] [ N ] [ N ] [ N ] [ N ]

RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

REPORT DATE 20 JULY 1988 C.8-13
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: ARPCS-161
NASA FMEA #: 06-1-0123-2

SUBSYSTEM: ARPCS
MDAC ID: 161
ITEM: CHECK VALVE (2)

LEAD ANALYST: M.J. SAIIDI

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
NASA UTILIZED A MORE CONSERVATIVE DEFINITION FOR FUNCTION AND REDUNDANCY DURING THEIR ANALYSIS. IOA ACCEPTS THE MORE CONSERVATIVE APPROACH AND CONCURS WITH THE HIGHER CRITICALITIES. MDAC WITHDRAWS THE ISSUE.

REPORT DATE 20 JULY 1988

C.8-14
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: ARPCS-163
NASA FMEA #: 06-1-1501-2

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: ARPCS
MDAC ID: 163
ITEM: LEH 02 SHUTOFF VALVE/CREW + PASSENGER (8)

LEAD ANALYST: M.J. SAIIDI

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
NASA UTILIZED A MORE CONSERVATIVE DEFINITION FOR FUNCTION AND REDUNDANCY DURING THEIR ANALYSIS. IOA ACCEPTS THE MORE CONSERVATIVE APPROACH AND CONCURS WITH THE HIGHER CRITICALITIES. MDAC WITHDRAWS THE ISSUE.

REPORT DATE 20 JULY 1988 C.8-15
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
NASA DATA:
ASSESSMENT ID: ARPCS-164
NASA FMEA #: 06-1-1501-1
SUBSYSTEM: ARPCS
MDAC ID: 164
ITEM: LEH 02 SHUTOFF VALVE/CREW + PASSENGER (8)
LEAD ANALYST: M.J. SAIIDI

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

Adequate [ ]
INADEQUATE [ ]

REMARKS:
DISCUSSION WITH THE NASA SSM, JOHN WHELAN, ON 23 MAY 1988, REVEALED THE EXISTENCE OF AN ADDITIONAL PIECE OF EQUIPMENT, A "Y" CONNECTION FOR THE LEH QUICK DISCONNECTS. THIS MEANS THAT THERE WILL ALWAYS BE AT LEAST ONE MORE OUTLET THAN CREW MEMBERS AND THE CRITICALITY CAN BE REDUCED TO A IR/2. IOA WITHDRAWS THE ISSUE.

REPORT DATE 20 JULY 1988 C.8-16
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: ARPCS-166
NASA FMEA #: 06-1-1502-2

SUBSYSTEM: ARPCS
MDAC ID: 166
ITEM: QUICK DISCONNECTS (8)

LEAD ANALYST: M.J. SAIIDI

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

DISCUSSION WITH THE NASA SSM, JOHN WHELAN, ON 23 MAY 1988, REVEALED THE EXISTENCE OF AN ADDITIONAL PIECE OF EQUIPMENT, A "Y" CONNECTION FOR THE LEH QUICK DISCONNECTS. THIS MEANS THAT THERE WILL ALWAYS BE AT LEAST ONE MORE OUTLET THAN CREW MEMBERS AND THE CRITICALITY CAN BE REDUCED TO A 1R/2. IOA WITHDRAWS THE ISSUE.

REPORT DATE 20 JULY 1988 C.8-17
ASSessment DATE: 2/19/88

ASSessment ID: ARPCS-167

NASA FMEA #: 06-1-1502-1

SUBSYSTEM: ARPCS

MDAC ID: 167

ITEM: QUICK DISCONNECTS (8)

LEAD ANALYST: M.J. SAIIDI

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]

INADEQUATE [ ]

REMARKS:

NASA UTILIZED A MORE CONSERVATIVE DEFINITION FOR FUNCTION AND REDUNDANCY DURING THEIR ANALYSIS. IOA ACCEPTS THE MORE CONSERVATIVE APPROACH AND CONCURS WITH THE HIGHER CRITICALITIES. MDAC WITHDRAWS THE ISSUE.

REPORT DATE 20 JULY 1988 C.8-18
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: ARPCS-168
NASA FMEA #: 06-1-1502-1
SUBSYSTEM: ARPCS
MDAC ID: 168
ITEM: QUICK DISCONNECTS (8)
LEAD ANALYST: M.J. SAIIDI

ASSESSMENT:

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

RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
DISCUSSIONS WITH THE NASA SSM, JOHN WHELAN, ON 23 MAY 1988, REVEALED THE EXISTENCE OF AN ADDITIONAL PIECE OF EQUIPMENT, A "Y" CONNECTION FOR THE LEH QUICK DISCONNECTS. THIS MEANS THAT THERE WILL ALWAYS BE AT LEAST ONE MORE OUTLET THAN CREW MEMBERS AND THE CRITICITY CAN BE REDUCED TO A 1R/2. IOA WITHDRAWS THE ISSUE.

REPORT DATE 20 JULY 1988 C.8-19
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: ARPCS-169
NASA FMEA #: 06-1-1502-1

SUBSYSTEM: ARPCS
MDAC ID: 169
ITEM: QUICK DISCONNECTS (8)

LEAD ANALYST: M.J. SAIIDI

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

NASA UTILIZED A MORE CONSERVATIVE DEFINITION FOR FUNCTION AND REDUNDANCY DURING THEIR ANALYSIS. IOA ACCEPTS THE MORE CONSERVATIVE APPROACH AND CONCURS WITH THE HIGHER CRITICALITIES. MDAC WITHDRAWS THE ISSUE.

REPORT DATE 20 JULY 1988 C.8-20
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: ARPCS-174A
NASA FMEA #: 06-1-1512-3
NASA DATA: BASELINE [ ] NEW [ X ]

SUBSYSTEM: ARPCS
MDAC ID: 174
ITEM: SHUTOFF VALVE/DIRECT OXYGEN (1)

LEAD ANALYST: M.J. SAIIDI

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

REMARKS:
THIS ISSUE WAS DISCUSSED WITH THE NASA SSM, JOHN WHALAN, ON 23 MAY 1988. THIS FAILURE CAUSES THE LEAK TO GO THROUGH THE VALVE AND THRU THE DIRECT OXYGEN OUTLET INTO THE CABIN. THERE IS A FLOW RESTRICTER WHICH LIMITS THE LEAK TO 10LBS/HR. AT THIS LEVEL, THE LEHS WILL STILL PROVIDE OXYGEN TO THE CREW AND NO IMMEDIATE LOSS OF LIFE OCCURS. GIVEN THIS KNOWLEDGE, IOA WITHDRAWS THE ISSUE.

REPORT DATE 20 JULY 1988 C.8-21
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: ARPCS-212
NASA FMEA #: 06-1-0161-1
SUBSYSTEM: ARPCS
MDAC ID: 212
ITEM: N2 TANKS (4)
LEAD ANALYST: M.J. SAIIDI

ASSESSMENT:

CRITICALITY REDUNDANCY SCREENS

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| IOA [ 2 /IR ] | [ P ] | [ P ] | [ F ] | [ X ] |
| COMPARE [ N / ] | [ ] | [ ] | [ N ] | [ N ] |

RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
DURING THEIR ANALYSIS OF THE N2 SYSTEM, NASA UTILIZED A GROUNDRULE WHICH LET THE SECOND N2 SYSTEM AND THE CABIN INTEGRITY ACT AS BACKUP TO THE FAILED SYSTEM. THE FLIGHT RULES WILL ALWAYS MAINTAIN A MINIMUM AMOUNT OF 110 LBS OF USABLE NITROGEN, BUT ABOVE THIS LEVEL, A FAILED N2 SYSTEM DOES NOT AUTOMATICALLY MEAN A MISSION TERMINATION. THIS PHILOSOPHY AGREES WITH A 3/IR CRITICALITY. AFTER THIS DISCUSSION WITH JOHN WHELAN 23 MAY 1988, IOA AGREES WITH THE APPROACH AND WITHDRAWS THE ISSUE.

REPORT DATE 20 JULY 1988 C.8-22
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: ARPCS-214
NASA FMEA #: 06-1-0191-1

SUBSYSTEM: ARPCS
MDAC ID: 214
ITEM: LINES & FITTINGS - TP27 & TP28

LEAD ANALYST: M.J. SAIIDI

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
RE-EVALUATION OF SYSTEM AND CONTROLS WILL PERMIT IOA TO AGREE WITH NASA CRITICALITIES. ISSUE IS WITHDRAWN.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: ARPCS-223A
NASA FMEA #: 06-1-0230-3
SUBSYSTEM: ARPCS
MDAC ID: 223
ITEM: ISOLATION VALVE (2)
LEAD ANALYST: M.J. SAIIDI

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:

NASA UTILIZED A MORE CONSERVATIVE DEFINITION FOR FUNCTION AND REDUNDANCY DURING THEIR ANALYSIS. IOA ACCEPTS THE MORE CONSERVATIVE APPROACH AND CONCURS WITH THE HIGHER CRITICALITIES. MDAC WITHDRAWS THE ISSUE.

REPORT DATE 20 JULY 1988 C.8-24
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: ARPCS-224
NASA FMEA #: 06-1-0230-4
SUBSYSTEM: ARPCS
MDAC ID: 224
ITEM: ISOLATION VALVE (2)
LEAD ANALYST: M.J. SAIIDI

NASA DATA:
BASELINE [ ]
NEW [ X ]

ASSESSMENT:
CRITICALITY
REDUNDANCY SCREENS
CIL
FLIGHT HDW/FUNC A B C ITEM

NASA [ 3 /1R ] [ P ] [ P ] [ 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:
DURING THEIR ANALYSIS OF THE N2 SYSTEM, NASA UTILIZED A GROUNDRULE WHICH LET THE SECOND N2 SYSTEM AND THE CABIN INTEGRITY ACT AS BACKUP TO THE FAILED SYSTEM. THE FLIGHT RULES WILL ALWAYS MAINTAIN A MINIMUM AMOUNT OF 110 LBS OF USABLE NITROGEN, BUT ABOVE THIS LEVEL, A FAILED N2 SYSTEM DOES NOT AUTOMATICALLY MEAN A MISSION TERMINATION. THIS PHILOSOPHY AGREES WITH A 3/1R CRITICALITY. AFTER THIS DISCUSSION WITH JOHN WHelan ON 23 MAY 1988, IOA AGREES WITH THE APPROACH AND WITHDRAWS THE ISSUE.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: ARPCS-232
NASA FMEA #: 06-1-0231-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: ARPCS
MDAC ID: 232
ITEM: LINES & FITTINGS

LEAD ANALYST: M.J. SAIDI

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
MMU CAN NOT BE CONSIDERED TO BE MISSION CRITICAL. THEREFORE, IOA WILL AGREE WITH NASAs LOWER CRITICALITIES AND WITHDRAW THE ISSUE.

REPORT DATE 20 JULY 1988 C.8-26
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: ARPCS-234
NASA FMEA #: 06-1-0165-1

SUBSYSTEM: ARPCS
MDAC ID: 234
ITEM: N2 SYSTEM SUPPLY ISOL. VLV-LV3&LV4 (2)

LEAD ANALYST: M.J. SAIIDI

NASA DATA:
BASELINE [ ]
NEW [ X ]

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
DURING THEIR ANALYSIS OF THE N2 SYSTEM, NASA UTILIZED A GROUNDRULE WHICH LET THE SECOND N2 SYSTEM AND THE CABIN INTEGRITY ACT AS BACKUP TO THE FAILED SYSTEM. THE FLIGHT RULES WILL ALWAYS MAINTAIN A MINIMUM AMOUNT OF 110 LBS OF USABLE NITROGEN, BUT ABOVE THIS LEVEL, A FAILED N2 SYSTEM DOES NOT AUTOMATICALLY MEAN A MISSION TERMINATION. THIS PHILOSOPHY AGREES WITH A 3/1R CRITICALITY. AFTER THIS DISCUSSION WITH JOHN WHELAN ON 23 MAY 1988, IOA AGREES WITH THE APPROACH AND WITHDRAWS THE ISSUE.

REPORT DATE 20 JULY 1988 C.8-27
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: ARPCS-235
NASA FMEA #: 06-1-0165-2

NASA DATA:
BASELINE
NEW [ X ]

SUBSYSTEM: ARPCS
MDAC ID: 235
ITEM: N2 SYSTEM SUPPLY ISOL. VLV-LV3&LV4 (2)

LEAD ANALYST: M.J. SAIIDI

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
DURING THEIR ANALYSIS OF THE N2 SYSTEM, NASA UTILIZED A GROUNDRULE WHICH LET THE SECOND N2 SYSTEM AND THE CABIN INTEGRITY ACT AS BACKUP TO THE FAILED SYSTEM. THE FLIGHT RULES WILL ALWAYS MAINTAIN A MINIMUM AMOUNT OF 110 LBS OF USABLE NITROGEN, BUT ABOVE THIS LEVEL, A FAILED N2 SYSTEM DOES NOT AUTOMATICALLY MEAN A MISSION TERMINATION. THIS PHILOSOPHY AGREES WITH A 3/1R CRITICALITY. AFTER THIS DISCUSSION WITH JOHN WHELAN ON 23 MAY 1988, IOA AGREES WITH THE APPROACH AND WITHDRAWS THE ISSUE.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: ARPCS-237
NASA FMEA #: 06-1-0165-1

ASSESSMENT ID: ARPCS-237
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: ARPCS
MDAC ID: 237
ITEM: SINGLE PHASE MOTOR/N2-SYSTEM ISOL. VLV (2)
LEAD ANALYST: M.J. SAIIDI

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA STUDIED THE ELECTRICAL MOTOR SEPARATELY FROM THE VALVE, AND THIS COMPARISON WAS MADE BASED ON THE FMEA ANALYSIS FOR THE VALVE.
DURING THEIR ANALYSIS OF THE N2 SYSTEM, NASA UTILIZED A GROUNDRULE WHICH LET THE SECOND N2 SYSTEM AND THE CABIN INTEGRITY ACT AS BACKUP TO THE FAILED SYSTEM. THE FLIGHT RULES WILL ALWAYS MAINTAIN A MINIMUM AMOUNT OF 110 LBS OF USABLE NITROGEN, BUT ABOVE THIS LEVEL, A FAILED N2 SYSTEM DOES NOT AUTOMATICALLY MEAN A MISSION TERMINATION. THIS PHILOSOPHY AGREES WITH A 3/1R CRITICALITY. AFTER THIS DISCUSSION WITH JOHN WHELAN ON 23 MAY 1988, IOA AGREES WITH THE APPROACH AND WITHDRAWS THE ISSUE.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: ARPCS-241
NASA FMEA #: 05-6VA-2013-2

SUBSYSTEM: ARPCS
MDAC ID: 241
ITEM: SWITCH, S13&S21/N2-SYSTEM ISOL VLV (2)
LEAD ANALYST: M.J. SAIIDI

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: ARPCS
MDAC ID: 241
ITEM: SWITCH, S13&S21/N2-SYSTEM ISOL VLV (2)
LEAD ANALYST: M.J. SAIIDI

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

* CIL RETENTION RATIONALE: (If applicable)

REPORT DATE 20 JULY 1988 C.8-30

REMARKS:
DURING THEIR ANALYSIS OF THE N2 SYSTEM, NASA UTILIZED A GROUNDRULE WHICH LET THE SECOND N2 SYSTEM AND THE CABIN INTEGRITY ACT AS BACKUP TO THE FAILED SYSTEM. THE FLIGHT RULES WILL ALWAYS MAINTAIN A MINIMUM AMOUNT OF 110 LBS OF USABLE NITROGEN, BUT ABOVE THIS LEVEL, A FAILED N2 SYSTEM DOES NOT AUTOMATICALLY MEAN A MISSION TERMINATION. THIS PHILOSOPHY AGREES WITH A 3/1R CRITICALITY. AFTER THIS DISCUSSION WITH JOHN WHelan ON 23 MAY 1988, IOA AGREES WITH THE APPROACH AND WITHDRAWS THE ISSUE.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: ARPCS-271
NASA FMEA #: 06-1-0152-3

SUBSYSTEM: ARPCS
MDAC ID: 271
ITEM: SHUTOFF VALVE (2)

LEAD ANALYST: M.J. SAIDI

ASSESSMENT:

CRITICALITY REDUNDANCY SCREENS

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
DURING THEIR ANALYSIS OF THE N2 SYSTEM, NASA UTILIZED A GROUNDRULE WHICH LET THE SECOND N2 SYSTEM AND THE CABIN INTEGRITY ACT AS BACKUP TO THE FAILED SYSTEM. THE FLIGHT RULES WILL ALWAYS MAINTAIN A MINIMUM AMOUNT OF 110 LBS OF USABLE NITROGEN, BUT ABOVE THIS LEVEL, A FAILED N2 SYSTEM DOES NOT AUTOMATICALLY MEAN A MISSION TERMINATION. THIS PHILOSOPHY AGREES WITH A 3/1R CRITICALITY. AFTER THIS DISCUSSION WITH JOHN WHELAN ON 23 MAY 1988, IOA AGREES WITH THE APPROACH AND WITHDRAWS THE ISSUE.

REPORT DATE 20 JULY 1988  C.8-31
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: ARPCS-276
NASA FMEA #: 06-1-0178-3

SUBSYSTEM: ARPCS
MDAC ID: 276
ITEM: CROSSOVER VALVE (1)

LEAD ANALYST: M.J. SAIIDI

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ 2 /2 ] [ ] [ ] [ ] [ ] [ ] [ A ] (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
DURING THEIR ANALYSIS OF THE N2 SYSTEM, NASA UTILIZED A GROUNDRULE WHICH LET THE SECOND N2 SYSTEM AND THE CABIN INTEGRITY ACT AS BACKUP TO THE FAILED SYSTEM. THE FLIGHT RULES WILL ALWAYS MAINTAIN A MINIMUM AMOUNT OF 110 LBS OF USABLE NITROGEN, BUT ABOVE THIS LEVEL, A FAILED N2 SYSTEM DOES NOT AUTOMATICALLY MEAN A MISSION TERMINATION. THIS PHILOSOPHY AGREES WITH A 3/IR CRITICALITY. AFTER THIS DISCUSSION WITH JOHN WHELAN ON 23 MAY 1988, IOA AGREES WITH THE APPROACH AND WITHDRAWS THE ISSUE. ADDITIONAL DISCUSSION REVEALED THAT THE DESIGN OF THIS VALVE IS SUCH THAT IT IS FLOWN NORMALLY CLOSED. SHOULD A LEAK OCCUR, THE OPERATING LEG CAN BE CHANGED AND THE LEAK ISOLATED. IT SHOULD ALSO BE NOTED THAT EVEN WITH A LEAK, N2 IS STILL AVAILABLE TO THE CABIN ATMOSPHERE.

REPORT DATE 20 JULY 1988 C.8-32
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: ARPCS-312
NASA FMEA #: 06-1-0146-1

SUBSYSTEM: ARPCS
MDAC ID: 312
ITEM: PPO2 SENSOR-C (1)

LEAD ANALYST: M.J. SAIIDI

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

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

REMARKS:
RE-EVALUATION ALLOWS IOA TO AGREE WITH NASA CRITICALITIES. ISSUE IS WITHDRAWN.

REPORT DATE 20 JULY 1988 C.8-33
**APPENDIX C**

**ASSESSMENT WORKSHEET**

**ASSESSMENT DATE:** 2/19/88  
**ASSESSMENT ID:** ARPCS-322  
**NASA FMEA #:** 06-1-0214-1

**SUBSYSTEM:** ARPCS  
**MDAC ID:** 322  
**ITEM:** CABIN PRESSURE SENSOR (1)

**LEAD ANALYST:** M.J. SAIDI

**ASSESSMENT:**

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| 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:**

NASA UTILIZED A MORE CONSERVATIVE DEFINITION FOR FUNCTION AND REDUNDANCY DURING THEIR ANALYSIS. IOA ACCEPTS THE MORE CONSERVATIVE APPROACH AND CONCURS WITH THE HIGHER CRITICALITIES. MDAC WITHDRAWS THE ISSUE.

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**REPORT DATE 20 JULY 1988**  
**C.8-34**
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: ARPCS-324
NASA FMEA #: 06-1-0211-1

SUBSYSTEM: ARPCS
MDAC ID: 324
ITEM: CABIN DP/DT SENSOR (1)

LEAD ANALYST: M.J. SAIIDI

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
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REMARKS:
NASA UTILIZED A MORE CONSERVATIVE DEFINITION FOR FUNCTION AND REDUNDANCY DURING THEIR ANALYSIS. IOA ACCEPTS THE MORE CONSERVATIVE APPROACH AND CONCURS WITH THE HIGHER CRITICALITIES. MDAC WITHDRAWS THE ISSUE.

REPORT DATE 20 JULY 1988 C.8-35
### APPENDIX C

#### ASSESSMENT WORKSHEET

**ASSESSMENT DATE:** 2/19/88  
**ASSESSMENT ID:** ARPCS-327  
**NASA FMEA #:** 05-6VA-2022-1  

**SUBSYSTEM:** ARPCS  
**MDAC ID:** 327  
**ITEM:** CIRCUIT BREAKER, CB16/DP/DT (1)  

**LEAD ANALYST:** M.J. SAIIDI

### ASSESSMENT:

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**LEAD ANALYST:** M.J. SAIIDI  

**ASSESSMENT:**

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(If different from NASA)

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**CIL RETENTION RATIONALE:**  
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**REMARKS:**

NASA UTILIZED A MORE CONSERVATIVE DEFINITION OF REDUNDANCY DURING THEIR ANALYSIS. IOA ACCEPTS THE MORE CONSERVATIVE APPROACH AND CONCURS WITH THE HIGHER CRITICALITIES. MDAC WITHDRAWS THE ISSUE.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88  NASA DATA:
ASSESSMENT ID: ARPCS-344  BASELINE [ ]
NASA FMEA #:  NEW [ X ]

SUBSYSTEM: ARPCS
MDAC ID: 344
ITEM: FILTER (2)

LEAD ANALYST: M.J. SAIIDI

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
DISCUSSION WITH JOHN WHELAN, NASA, SSM, ON 23 MAY 1988, PLUS EXAMINATION OF PART DRAWINGS REVEALED THAT THIS FILTERS DESIGN PRECLUDES THE CREDIBILITY OF RESTRICTED FLOW. IOA INCREASES THE ISSUE.

REPORT DATE 20 JULY 1988  C.8-37
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: ARPCS-350
NASA FMEA #: 06-1-0203-1
SUBSYSTEM: ARPCS
MDAC ID: 350
ITEM: SINGLE PHASE MOTOR (2)
LEAD ANALYST: M.J. SAIIDI

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

NASA UTILIZED A MORE CONSERVATIVE DEFINITION FOR FUNCTION AND REDUNDANCY DURING THEIR ANALYSIS. IOA ACCEPTS THE MORE CONSERVATIVE APPROACH AND CONCURS WITH THE HIGHER CRITICALITIES. MDAC WITHDRAWS THE ISSUE.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: ARPCS-358
NASA FMEA #: 05-6VA-200100-1
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: ARPCS
MDAC ID: 358
ITEM: CIRCUIT BREAKER, CB22 & CB34 (2)

LEAD ANALYST: M.J. SAIIDI

ASSESSMENT:

CRITICALITY
FLIGHT HDW/FUNC

REdundancy Screens      CIL
                               A             B             C       Item

NASA [ 2 /1R ]           [ P ]           [ P ]           [ P ]           [ X ] *
IOA [ 3 /3 ]              [ ]            [ ]            [ ]           [ ]
COMPARE [ N /N ]          [ N ]          [ N ]          [ N ]          [ N ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
RE-EVALUATION BY NASA HAS RESULTED IN A DIFFERENT FMEA NUMBER (05-6UC-90X) AND A MODIFIED CRITICALITY (3/3) WHICH MATCHES IOA'S RECOMMENDATION. ISSUE CLOSED.

REPORT DATE 20 JULY 1988    C.8-39
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: ARPCS-359
NASA FMEA #: 05-6VA-200100-1

SUBSYSTEM: ARPCS
MDAC ID: 359
ITEM: CIRCUIT BREAKER, CB22 & CB34 (2)

LEAD ANALYST: M.J. SAIIDI

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
RE-EVALUATION BY NASA HAS RESULTED IN A DIFFERENT FMEA NUMBER (05-6UC-100X) AND A MODIFIED CRITICALITY (3/3) WHICH MATCHES IOA'S RECOMMENDATION. ISSUE CLOSED.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: ARPCS-362
NASA FMEA #: 06-1-0207-1
SUBSYSTEM: ARPCS
MDAC ID: 362
ITEM: CAP (2)
LEAD ANALYST: M.J. SAIIDI

NASA DATA:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER RE-EVALUATION, IOA HAS DETERMINED THAT THE FAILURE OF SCREEN B IS NO LONGER AN ISSUE.

REPORT DATE 20 JULY 1988  C.8-41
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: ARPCS-364
NASA FMEA #: ARPCS-364
SUBSYSTEM: ARPCS
MDAC ID: 364
ITEM: DEBRIS SCREEN (2)
LEAD ANALYST: M.J. SAIDI

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RECOMMENDATIONS: (If different from NASA)

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(CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

THIS DEBRIS SCREEN IS COVERED AS A PART OF THE NASA FMEA 06-1C-0206-1 WHICH IS WRITTEN AGAINST THE VALVE. SINCE THE CRITICALITY MATCHES IOAs, THE ISSUE IS WITHDRAWN.
**APPENDIX C**

**ASSESSMENT WORKSHEET**

**ASSESSMENT DATE:** 2/19/88
**ASSESSMENT ID:** ARPCS-367X
**NASA FMEA #:** 06-1-0229-1

**SUBSYSTEM:** ARPCS
**MDAC ID:** 367
**ITEM:** QUICK DISCONNECT

**LEAD ANALYST:** M.J. SAIIDI

**ASSESSMENT:**

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

**REMARKS:**

NASA UTILIZED A MORE CONSERVATIVE DEFINITION FOR REDUNDANCY DURING THEIR ANALYSIS. IOA ACCEPTS THE MORE CONSERVATIVE APPROACH AND AGREES WITH THE HIGHER CRITICALITIES. MDAC WITHDRAWS THE ISSUE.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: ARPCS-368X
NASA FMEA #: 06-1-0229-2
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: ARPCS
MDAC ID: 368
ITEM: QUICK DISCONNECT
LEAD ANALYST: M.J. SAIIDI

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

NASA UTILIZED A MORE CONSERVATIVE DEFINITION FOR REDUNDANCY DURING THEIR ANALYSIS. IOA ACCEPTS THE MORE CONSERVATIVE APPROACH AND AGREES WITH THE HIGHER CRITICALITIES. MDAC WITHDRAWS THE ISSUE.

REPORT DATE 20 JULY 1988 C.8-44
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88  NASA DATA:  BASELINE [ ]   NEW [ X ]
ASSESSMENT ID: ARPCS-1131X  NASA FMEA #: 05-6VA-2017-2
NASA SUBSYSTEM: ARPCS  MDAC ID: 1131
MDAC ITEM: SWITCH-S12
ITEM: SWITCH-S12
LEAD ANALYST: M.J. SAIIDI

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NASA UTILIZED A MORE CONSERVATIVE DEFINITION FOR REDUNDANCY DURING THEIR ANALYSIS. IOA ACCEPTS THE MORE CONSERVATIVE APPROACH AND AGREES WITH THE HIGHER CRITICALITIES. MDAC WITHDRAWS THE ISSUE.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: ARPCS-1461X
NASA FMEA #: 06-1-0115-3

SUBSYSTEM: ARPCS
MDAC ID: 1461
ITEM: FILTER, 10 MICRON (2)

LEAD ANALYST: M.J. SAIDI

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

*CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA considered external leakage of the filter under the lines and fittings analysis. The external leakage for the filter alone was not considered credible. However, by defining this as a possible failure mode, NASA utilized a more conservative definition of failure modes. IOA accepts this more conservative approach and withdraws the issue.

REPORT DATE 20 JULY 1988 C.8-46
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: ARPCS-1501X
NASA FMEA #: 06-1-1510-2

SUBSYSTEM: ARPCS
MDAC ID: 1501
ITEM: LINES AND FITTINGS

LEAD ANALYST: M.J. SAIIDI

ASSESSMENT:

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COMPARE [ N/N ] [ ] [ ] [ ] [ ] [ N ]

RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
NASA UTILIZED A MORE CONSERVATIVE DEFINITION OF CREDIBLE FAILURE MODES DURING THEIR ANALYSIS. IOA ACCEPTS THIS MORE CONSERVATIVE APPROACH AND WITHDRAWS THE ISSUE.

REPORT DATE 20 JULY 1988  C.8-47
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: ARPCS-1761X
NASA FMEA #: 06-1-1511-2
SUBSYSTEM: ARPCS
MDAC ID: 1761
ITEM: ORIFICE, DIRECT BLEED (1)
LEAD ANALYST: M.J. SAIIDI

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

NASA UTILIZED A MORE CONSERVATIVE DEFINITION OF CREDIBLE FAILURE MODES DURING THEIR ANALYSIS. IOA ACCEPTS THIS MORE CONSERVATIVE APPROACH AND WITHDRAWS THE ISSUE.

REPORT DATE 20 JULY 1988 C.8-48
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: ARPCS-2632X
NASA FMEA #: 06-1-0193-2
SUBSYSTEM: ARPCS
MDAC ID: 2632
ITEM: LINES AND FITTINGS
LEAD ANALYST: M.J. SAIIDI

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NASA UTILIZED A MORE CONSERVATIVE DEFINITION OF CREDIBLE FAILURE MODES DURING THEIR ANALYSIS. IOA ACCEPTS THIS MORE CONSERVATIVE APPROACH AND WITHDRAWS THE ISSUE.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: ARPCS-3291X
NASA FMEA #: 06-1-0191-2

SUBSYSTEM: ARPCS
MDAC ID: 3291
ITEM: LINES & FITTINGS
LEAD ANALYST: M.J. SAIIDI

NASA DATA:
BASELINE [ ]
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CRITICALITY REDUNDANCY SCREENS

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RECOMMENDATIONS: (If different from NASA)

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*CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
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REMARKS:
NASA UTILIZED A MORE CONSERVATIVE DEFINITION OF CREDIBLE FAILURE MODES DURING THEIR ANALYSIS. IOA ACCEPTS THIS MORE CONSERVATIVE APPROACH AND WITHDRAWS THE ISSUE.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: ARPCS-3431X
NASA FMEA #: 06-1-0201-3

SUBSYSTEM: ARPCS
MDAC ID: 3431
ITEM: RELIEF VALVE, 16 PSIA

LEAD ANALYST: M.J. SAIIDI

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
NASA UTILIZED A MORE CONSERVATIVE DEFINITION OF CREDIBLE FAILURE MODES DURING THEIR ANALYSIS. IOA ACCEPTS THIS MORE CONSERVATIVE APPROACH AND WITHDRAWS THE ISSUE.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: ARPCS-3611X
NASA FMEA #: 06-1-0206-3

SUBSYSTEM: ARPCS
MDAC ID: 3611
ITEM: RELIEF VALVE (2)

LEAD ANALYST: M.J. SAİİDI

ASSESSMENT:

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COMPARE [ N /N ] [ ] [ ] [ ] [ N ]

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

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

REMARKS:
NASA UTILIZED A MORE CONSERVATIVE DEFINITION OF CREDIBLE FAILURE MODES DURING THEIR ANALYSIS. IOA ACCEPTS THIS MORE CONSERVATIVE APPROACH AND WITHDRAWS THE ISSUE.
SECTION C.9

HYDRAULICS AND WATER SPRAY
BOILER SUBSYSTEM
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/87
ASSESSMENT ID: HYDWSB-110
NASA FMEA #: NASA DATA:
SUBSYSTEM: HYD/WSB
MDAC ID: 110
ITEM: SPRAY VALVE (WATER SUPPLY)
LEAD ANALYST: J. DUVAL

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [   ]

REMARKS:
THIS FAILURE IS INCORPORATED AS A "CAUSE" IN FMEA 06-3A-0605-2. ELECTRICAL OPEN OR SHORT CIRCUIT MUST INVOLVE BOTH REDUNDANT SOLENOID COILS. INDIVIDUAL ELECTRICAL FAILURES ARE COVERED IN WSB EPDC FMEA.

REPORT DATE 22 JULY 1988 C.9-2
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/87
ASSESSMENT ID: HYDWSB-117
NASA FMEA #: 06-3A-0604-1

SUBSYSTEM: HYD/WSB
MDAC ID: 117
ITEM: STEAM DUMP NOZZLE

LEAD ANALYST: J. DUVAL

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:

NASA FMEA CONSIDERS BLOCKAGE OF NOZZLE FOR ANY REASON. FREEZING IMPLIES BOTH HEATERS LOST. SINGLE HEATER FAILURE IS COVERED BY FMEA 06-3A-0622-1. IOA ACCEPTS NASA APPROACH TO CRITICALITY.

REPORT DATE 22 JULY 1988 C.9-3
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/87  NASA DATA:
ASSESSMENT ID: HYDWSB-118  BASELINE [ ]
NASA FMEA #:  NEW [ X ]

SUBSYSTEM: HYD/WSB
MDAC ID: 118
ITEM: HYDRAULIC/LUBE OIL WATER FILTERS
LEAD ANALYST: J. DUVAL

ASSESSMENT:

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IOA [ 2 /1R ] [ P ] [ P ] [ P ] [ X ]
COMPARE [ N /N ] [ N ] [ N ] [ N ] [ N ]

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

* CIL RETENTION RATIONALE: (If applicable)

REMARKS:

IOA RECOMMENDED ADDING "OR RESTRICTED FLOW" TO FAILURE MODE DESCRIPTION OF FMEA 06-3A-0605-2 TO COVER BLOCKAGE OF WATER VALVE FILTER. SUBSYSTEM MANAGER WALLACE TUTHILL ACCEPTED THIS RECOMMENDATION DURING IOA/NASA CIL ISSUES REVIEW MEETING ON 4/26/88.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/87
ASSESSMENT ID: HYDWSB-131
NASA FMEA #: 06-3-0629-2
SUBSYSTEM: HYD/WSB
MDAC ID: 131
ITEM: LUBE OIL TEMP SENSOR
LEAD ANALYST: J. DUVAL

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)
Adequate [ ]
Inadequate [ ]

REMARKS:
NASA FMEA SHOWS SCREEN A=P IN NSTS LEVEL I/II REVIEW BOARD PRESENTATION, 3/30/88. IOA ACCEPTS SCREEN PASSED, RATHER THAN NA, AS THIS DOES NOT AFFECT CIL STATUS OR WAIVER STATUS. THIS FMEA IS NO LONGER ON THE CIL.

REPORT DATE 22 JULY 1988  C.9-5
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/87
ASSESSMENT ID: HYDWSB-143
NASA FMEA #: HYD/WSB-143
SUBSYSTEM: HYD/WSB
MDAC ID: 143
ITEM: GN2 TANK
LEAD ANALYST: J. DUVAL

ASSESSMENT:

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| IOA | [ 2 /1R ] | [ P ] |
| COMPARE | [ N /N ] | [ N ] |

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
FMEA 06-3-0609-2 DELETED BY NASA. COMBINED WITH 06-3-0609-1. NASA APPROACH TAKES RUPTURE OF GN2 TANK AS WORST CASE FAILURE MODE. IOA ACCEPTS THIS APPROACH. NO SEPARATE FMEA FOR LEAKAGE IS NECESSARY.

REPORT DATE 22 JULY 1988 C.9-6
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/87
ASSESSMENT ID: HYDWSB-149
NASA FMEA #: 06-3A-0606-2
SUBSYSTEM: HYD/WSB
MDAC ID: 149
ITEM: GN2 SHUTOFF VALVE
LEAD ANALYST: J. DUVAL

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADoquate [X]
INADoquate [ ]

REMARKS:
GN2 REGULATOR VALVE IN SERIES WOULD REGULATE PRESSURE TO H2O TANK - REQUIRES SECOND FAILURE TO CAUSE POSSIBLE LOSS OF ONE HYDRAULIC SYSTEM. IOA ACCEPTS NASA APPROACH TO CRITICALITY: THIRD FAILURE IN REDUNDANCY CHAIN IS LOSS OF A SECOND HYDRAULIC SYSTEM, FOR ANY REASON.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/87
ASSESSMENT ID: HYDWSB-164
NASA FMEA #: NASA DATA:
SUBSYSTEM: HYD/WSB BASELINE [ ]
MDAC ID: 164 NEW [ X ]
ITEM: GN2 FILTER
LEAD ANALYST: J. DUVAL

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

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

REMARKS:
NASA FMEA 06-3A-0606-1 COVERS FILTER BLOCKAGE AS PART OF GN2 SHUTOFF VALVE FAILURE MODE-FILTER IN QUESTION IS PART OF GN2 SHUTOFF VALVE. IOA ACCEPTS THIS APPROACH.

REPORT DATE 22 JULY 1988 C.9-8
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/87
ASSESSMENT ID: HYDWSB-197
NASA FMEA #: NASA DATA:
BASELINE [ X ]
NEW [ ]

SUBSYSTEM: HYD/WSB
MDAC ID: 197
ITEM: HYBRID DRIVER CIRCUIT (CONTROLLER)

LEAD ANALYST: J. DUVAL

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

THIS FAILURE MODE (FMEA 05-6W-2208-1B) IS 3/1R, PPP BY NASA
BASELINE PRESENTED TO NSTS LEVEL I/II REVIEW BOARD ON 3/30/88.
IOA CONCURS WITH THIS CRITICALITY-SWITCHING CONTROLLERS WILL
REGAIN GN2 SHUTOFF VALVE CONTROL. SCREEN B IS ACCEPTABLE AS P,
RATHER THAN NA. THIS CHANGE DOES NOT AFFECT CIL OR WAIVER
STATUS.

REPORT DATE 22 JULY 1988  C.9-9
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/87
ASSESSMENT ID: HYDWSB-431
NASA FMEA #: NASA DATA:

BASELINE [ ]
NEW [ X ]

SUBSYSTEM: HYD/WSB
MDAC ID: 431
ITEM: PRESS ACTIVATED RELIEF VALVE

LEAD ANALYST: W. DAVIDSON

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

THIS VALVE FUNCTION IS NOT REQUIRED UNLESS HYD LINE IS BLOCKED. IN THAT CASE, LINE BLOCKAGE IS THE CAUSE OF HYDRAULIC LOSS, AND THE CIRC PUMP IS IRRELEVANT. IOA CONCURS WITH NASA DECISION TO OMIT THIS FAILURE MODE. CRITICALITY WOULD BE 3/3, IF IT WERE INCLUDED.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/87
ASSESSMENT ID: HYDWSB-439
NASA FMEA #: 02-6-E27

SUBSYSTEM: HYD/WSB
MDAC ID: 439
ITEM: FILTER

LEAD ANALYST: W. DAVIDSON

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NASA [ ] [ ] [ ] [ ] [ ] [ ] *
IOA [ ] [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:
NASA DOES NOT CONSIDER THIS A CREDIBLE FAILURE MODE, ACCORDING TO HYDRAULIC SUBSYSTEM MANAGER WALLACE TUTHILL (IOA/NASA CIL ISSUES REVIEW MEETING, 4/26/88). IOA CONCURS.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/87
ASSESSMENT ID: HYDWSB-451
NASA FMEA #: 02-6-A02-2
SUBSYSTEM: HYD/WSB
MDAC ID: 451
ITEM: QUICK DISCONNECT-HYD/SSME (SUPPLY)
LEAD ANALYST: W. DAVIDSON

NAS DATA:
BASELINE [ ]
NEW [ X ]

CRITICALITY REDUNDANCY SCREENS CIL ITEM
FLIGHT HDW/FUNC A B C

| NASA | [ 3 /1R ] | [ P ] | [ P ] | [ P ] | [ X ] |
| IOA  | [ 2 /1R ] | [ P ] | [ P ] | [ P ] | [ X ] |

COMPARE [ N / ] [ ] [ ] [ ] [ ]

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

* CIL RETENTION RATIONALE: (If applicable)

REMARKS:
IOA CONCURS WITH NASA CRITICALITY. LOSS OF TWO Q. D.'S ON TWO HYDRAULIC SYSTEMS STILL ALLOWS RTLS ABORT, IN WORST CASE. FMEA 02-6-A02-1 IS 1/1 BECAUSE ENGINE VALVES DO NOT LOCK UP IN THIS CASE-UNCONTROLLED FUEL/OXIDIZER MIXTURE CAN LEAD TO SSME CATASTROPHIC FAILURE. THIS ISSUE WAS WITHDRAWN AS A RESULT OF MEETING WITH NASA SUBSYSTEM MANAGER WALLACE TUTHILL ON 4/26/88.

REPORT DATE 22 JULY 1988 C.9-12
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/87
ASSESSMENT ID: HYDWSB-455
NASA FMEA #: 02-6-A07-1
SUBSYSTEM: HYD/WSB
MDAC ID: 455
ITEM: CHECK VALVE—RETURN LINE FROM ENG'S/ACT'S
LEAD ANALYST: W. DAVIDSON

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
IOA ACCEPTS NASA APPROACH TO CRITICALITY. SECOND FAILURE IS HYD LINE LEAK UPSTREAM OF VALVE. THIRD FAILURE IS LOSS OF A SECOND HYDRAULIC SYSTEM, FOR ANY REASON.

REPORT DATE 22 JULY 1988 C.9-13
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/87
ASSESSMENT ID: HYDWSB-465
NASA FMEA #: 02-6-SYSTEM-3
NASA DATA: BASELINE [ ] NEW [ X ]

SUBSYSTEM: HYD/WSB
MDAC ID: 465
ITEM: HYDRAULIC LINE (SUPPLY) SYSTEM 1

LEAD ANALYST: W. DAVIDSON

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
LINE RUPTURE IS DETECTIBLE WHEN L. G. ISOL VALVE 1 IS OPENED. FLIGHT CREW CAN TAKE ACTION TO MANAGE LEAK. THIS IS JUSTIFICATION FOR PASSING SCREEN B, ACCORDING TO SUBSYSTEM MANAGER WALLACE TUTHILL (IOA/NASA CIL ISSUES REVIEW MEETING, 4/26/88). IOA CONCURS WITH THIS REASONING.

REPORT DATE 22 JULY 1988 C.9-14
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/87
ASSESSMENT ID: HYDWSB-466
NASA FMEA #: 02-6-SYSTEM-3

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: HYD/WSB
MDAC ID: 466
ITEM: HYDRAULIC LINE (RETURN) SYSTEM 1

LEAD ANALYST: W. DAVIDSON

ASSessment:

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RECOMMENDATIONS: (If different from NASA)

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

REMARKS:
NASA CRITICALITY IS BASED ON WORST CASE CONSEQUENCES OF A HYDRAULIC LINE RUPTURE. IOA ACCEPTS THIS APPROACH. THERE IS NO NEED TO CONSIDER SEPARATE FMEA'S FOR LINE SEGMENTS WITH LESS SERIOUS CONSEQUENCES.

REPORT DATE 22 JULY 1988   C.9-15
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/87
ASSESSMENT ID: HYDWSB-469
NASA FMEA #: 02-6-G04-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: HYD/WSB
MDAC ID: 469
ITEM: REDUNDANT SHUTOFF VALVE (N.O.)

LEAD ANALYST: W. DAVIDSON

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
The IOA original criticality was based on the understanding that the pyro unlock mechanism cannot override hydraulic pressure lockup. In actuality, there is no hydraulic pressure lockup. IOA concurs with NASA criticality. Screen B is passed, according to NASA baseline documented in NSTS Level I/II Review Board presentation, 3/30/88. IOA concurs-redundancy (pyro system) is activated by automatic detection and switchover, per NSTS-22206, Section 2.3.5.a.

REPORT DATE 22 JULY 1988 C.9-16
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/87        NASA DATA:
ASSESSMENT ID: HYDWSB-471       BASELINE [ ]
NASA FMEA #: 02-6-SYSTEM-2       NEW [ X ]
SUBSYSTEM: HYD/WSB
MDAC ID: 471
ITEM: REDUNDANT SHUTOFF VALVE (N.O.)
LEAD ANALYST: W. DAVIDSON

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IOA [ 2 /1R ] [ P ] [ F ] [ P ] [ X ]

COMPARE [ / ] [ ] [ N ] [ ] [ ]

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

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

REMARKS:
VALVE LEAK IS DETECTIBLE WHEN L. G. ISOL VALVE 1 IS OPENED. FLIGHT CREW CAN TAKE ACTION TO MANAGE LEAK. THIS IS JUSTIFICATION FOR PASSING SCREEN B, ACCORDING TO SUBSYSTEM MANAGER WALLACE TUTHILL (IOA/NASA CIL ISSUES REVIEW MEETING, 4/26/88). IOA CONCURS WITH THIS REASONING.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/87
NASA DATA:
ASSESSMENT ID: HYDWSB-486
NASA FMEA #: 02-6-G13-2
SUBSYSTEM: HYD/WSB
MDAC ID: 486
ITEM: LANDING GEAR CONTROL UP/CIRC. SOLENOID VALVE
LEAD ANALYST: W. DAVIDSON

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
THE ORIGINAL IOA CRITICALITY WAS BASED ON THE UNDERSTANDING THAT THE PYRO UNLOCK MECHANISM CANNOT OVERRIDE HYDRAULIC PRESSURE LOCKUP. IN ACTUALITY, THERE IS NO HYDRAULIC PRESSURE LOCKUP. IOA CONCURS WITH NASA 3/1R CRITICALITY. SCREEN B IS PASSED, ACCORDING TO NASA BASELINE DOCUMENTED IN NTS LEVEL I/II REVIEW BOARD PRESENTATION, 3/30/88. IOA CONCURS; VALVE FAILURE IS DETECTIBLE AT L. G. ISOL VALVE OPEN, DUE TO CLOSURE OF SHUTTLE VALVES (ON TELEMETRY). DETECTION AT L. G. ISOL VALVE OPEN IS SUFFICIENT TO PASS SCREEN B, ACCORDING TO SSM WALLACE TUTHILL (IOA/NASA CIL ISSUES REVIEW MEETING, 4/26/88).

REPORT DATE 22 JULY 1988 C.9-18
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/87
ASSESSMENT ID: HYDWSB-487
NASA FMEA #: 
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: HYD/WSB
MDAC ID: 487
ITEM: LANDING GEAR CONTROL UP/CIRC. SOLENOID VALVE

LEAD ANALYST: W. DAVIDSON

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

NASA DELETED FMEA 02-6-G13-3. IOA CONCURS WITH THIS DECISION. THIS VALVE REMAINS CLOSED THROUGHOUT THE ENTIRE FLIGHT, SO IT CANNOT FAIL TO CLOSE.

REPORT DATE 22 JULY 1988 C.9-19
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/87
ASSESSMENT ID: HYDWSB-489
NASA FMEA #: 02-6-SYSTEM-2

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: HYD/WSB
MDAC ID: 489
ITEM: LANDING GEAR CONTROL UP/CIRC SOLENOID VALVE

LEAD ANALYST: W. DAVIDSON

ASSESSMENT:

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COMPARE [ / ] [ ] [ N ] [ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] [ ]

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:

VALVE LEAK IS DETECTIBLE WHEN L. G. ISOL VALVE 1 IS OPENED. FLIGHT CREW CAN TAKE ACTION TO MANAGE LEAK. THIS IS JUSTIFICATION FOR PASSING SCREEN B, (ACCORDING TO SUBSYSTEM MANAGER WALLACE TUTHILL (IOA/NASA CIL ISSUES REVIEW MEETING, 4/26/88). IOA CONCURS WITH THIS REASONING.

REPORT DATE 22 JULY 1988 C.9-20
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/87
ASSESSMENT ID: HYDWSB-494
NASA FMEA #: 02-6-SYSTEM-2

SUBSYSTEM: HYD/WSB
MDAC ID: 494
ITEM: LANDING GEAR CONTROL VALVE - 2 POS, 3 WAY, SOLENOID

LEAD ANALYST: W. DAVIDSON

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
VALVE LEAK IS DETECTIBLE WHEN L. G. ISOL VALVE 1 IS OPENED. FLIGHT CREW CAN TAKE ACTION TO MANAGE LEAK. THIS IS JUSTIFICATION FOR PASSING SCREEN B, (ACCORDING TO SUBSYSTEM MANAGER WALLACE TUTHILL (IOA/NASA CIL ISSUES REVIEW MEETING, 4/26/88). IOA CONCURS WITH THIS REASONING.

REPORT DATE 22 JULY 1988 C.9-21
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/87
ASSESSMENT ID: HYDWSB-671
NASA FMEA #: 02-6-C10-2
SUBSYSTEM: HYD/WSB
MDAC ID: 671
ITEM: CHECK VALVE
LEAD ANALYST: W. E. PARKMAN

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:

NASA CRITICALITY IS BASED ON POSSIBILITY THAT LOSS OF 2 ACTUATORS COULD CAUSE E. T. UMBILICAL PLATE TO BECOME MISALIGNED AND FAIL TO RETRACT PROPERLY, RESULTING IN LOSS OF VEHICLE. IOA CONCURS.

REPORT DATE 22 JULY 1988 C.9-22
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/87
ASSESSMENT ID: HYDWSB-672
NASA FMEA #: 02-6-C10-1
SUBSYSTEM: HYD/WSB
MDAC ID: 672
ITEM: CHECK VALVE
LEAD ANALYST: W. E. PARKMAN

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:

IOA ACCEPTS NASA APPROACH TO CRITICALITY. SECOND FAILURE IS HYDRAULIC LEAK UPSTREAM OF CHECK VALVE. THIRD FAILURE IS LOSS OF ANOTHER HYDRAULIC SYSTEM FOR ANY REASON. IOA CONCURS WITH SCREEN B INAPPLICABILITY, PER NSTS-22206, SECTION 2.3.4.b.2(b). SYSTEM IS NOT OPERATIVE DURING ANY NORMAL MISSION PHASE.

REPORT DATE 22 JULY 1988 C.9-23
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/87
ASSESSMENT ID: HYDWSB-724
NASA FMEA #: 

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: HYD/WSB
MDAC ID: 724
ITEM: FREON/OIL HEAT EXCHANGER

LEAD ANALYST: W. E. PARKMAN

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
THIS FAILURE IS COVERED IN ATCS SUBSYSTEM, FMEA 06-3-0301-3.

REPORT DATE 22 JULY 1988 C.9-24
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/87
ASSESSMENT ID: HYDWSB-817
NASA FMEA #: 05-6G-2114-2
SUBSYSTEM: HYD/WSB
MDAC ID: 817
ITEM: POWER CONTACTOR (K3, K4)
LEAD ANALYST: W. E. PARKMAN

ASSESSMENT:

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

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

REMARKS:
THE FUNCTION OF THIS ITEM IS TO CONTROL POWER TO ONE CIRC PUMP. LOSS OF ALL REDUNDANCY MEANS POSSIBLE LOSS OF ONE CIRC PUMP AT APU START OR DURING APU OPERATION. THIRD FAILURE IS LOSS OF ANOTHER CIRC PUMP FOR ANY REASON, WHICH CAN LEAD TO LOSS OF VEHICLE. IOA ACCEPTS NASA APPROACH TO CRITICALITY.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/87
ASSESSMENT ID: HYDWSB-818
NASA FMEA #: 05-6G-2110-2

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: HYD/WSB
MDAC ID: 818
ITEM: HYBRID DRIVER (K3), AR TYPE III

LEAD ANALYST: W. E. PARKMAN

ASSESSMENT:

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

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

REMARKS:
THE FUNCTION OF THIS ITEM IS TO PROVIDE POWER TO ONE CIRC PUMP. LOSS OF REDUNDANT DRIVERS MEANS LOSS OF ONE CIRC PUMP AT APU START OR DURING APU OPERATION. NEXT FAILURE IS LOSS OF A SECOND CIRC PUMP FOR ANY REASON, WITH POSSIBLE LOSS OF VEHICLE AS A CONSEQUENCE. IOA ACCEPTS NASA APPROACH TO CRITICALITY.

REPORT DATE 22 JULY 1988 C.9-26
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/87
ASSESSMENT ID: HYDWSB-821
NASA FMEA #: 05-6G-2110-2

SUBSYSTEM: HYD/WSB
MDAC ID: 821
ITEM: HYBRID DRIVER (K4), AR TYPE III

LEAD ANALYST: W. E. PARKMAN

ASSESSMENT:
CRITICALITY
FLIGHT
HDW/FUNC
REUNDANCY SCREENS
CIL
ITEM

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 [ X ]
INADEQUATE [ ]

REMARKS:
THE FUNCTION OF THIS ITEM IS TO PROVIDE POWER TO ONE CIRC PUMP.
LOSS OF REDUNDANT DRIVERS MEANS LOSS OF ONE CIRC PUMP AT APU
START OR DURING APU OPERATION. NEXT FAILURE IS LOSS OF A SECOND
CIRC PUMP FOR ANY REASON, WITH POSSIBLE LOSS OF VEHICLE AS A
CONSEQUENCE. IOA ACCEPTS NASA APPROACH TO CRITICALITY.

REPORT DATE 22 JULY 1988 C.9-27
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/87
ASSESSMENT ID: HYDWSB-850
NASA FMEA #: 05-6G-200100-1E

SUBSYSTEM: HYD/WSB
MDAC ID: 350
ITEM: RPC

LEAD ANALYST: J. DUVAL

ASSESSMENT:

CRITICALITY FLIGHT
HDW/FUNC

REDUNDANCY SCREENS
A B C

NASA [ 3 /1R ] [ P ] [ P ] [ 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:

IOA CONCURS WITH NASA ASSESSMENT. THIS FAILURE MODE IS NOT A CIL ITEM IN THE NASA BASELINE AS DOCUMENTED IN THE NSTS LEVEL I/II REVIEW BOARD PRESENTATION OF 3/30/88.

REPORT DATE 22 JULY 1988 C.9-28
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: HYDWSB-1771X
NASA FMEA #: 05-6W-2051-2

SUBSYSTEM: HYD/WSB
MDAC ID: 1771
ITEM: BOILER CONTROL POWER/HEATER SWITCH
LEAD ANALYST: W. DAVIDSON

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NASA CRITICALITY FOR THIS FAILURE MODE IS 3/3 AS DOCUMENTED IN THE NSTS LEVEL I/II REVIEW BOARD PRESENTATION OF 3/30/88, AND IT IS NOT LISTED AS A CIL ITEM. IOA CONCURS WITH NASA ASSESSMENT.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: HYDWSB-5001X
NASA FMEA #: 02-6-C06-2

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: HYD/WSB
MDAC ID: 5001
ITEM: VALVE, CHECK, L.G. HYD. CKT. FUSELAGE RETURN LINE

LEAD ANALYST: W. DAVIDSON

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

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

REMARKS:

IOA ACCEPTS NASA APPROACH TO REDUNDANCY: THIRD FAILURE IS LOSS OF ANOTHER HYDRAULIC SYSTEM, FOR ANY REASON.

REPORT DATE 22 JULY 1988 C.9-30
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/10/88
ASSESSMENT ID: HYDWSB-8005X
NASA FMEA #: 05-6G-00100-1B

SUBSYSTEM: HYD/WSB
MDAC ID: 8005
ITEM: DIODE, HYD MN PUMP DEPRESS VLV SOL CKT.

LEAD ANALYST: P. BYNUM

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:

THIS FAILURE MODE IS INCLUDED IN THE NASA FMEA/CIL BASELINE AS DOCUMENTED IN THE NSTS LEVEL I/II REVIEW BOARD PRESENTATION OF 3/30/88, WITH CRITICALITY 3/1R P P P. IOA CONCURS WITH THE NASA ASSESSMENT.

REPORT DATE 22 JULY 1988 C.9-31
SECTION C.10

MECHANICAL ACTUATION SUBSYSTEM
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/05/88
ASSESSMENT ID: MECH/ADP-1102
NASA FMEA #: 02-4-052000-2
SUBSYSTEM: MECH/ADP
MDAC ID: 1102
ITEM: GEARBOX
LEAD ANALYST: A.D. MONTGOMERY

NASA DATA:
BASELINE [ ]
NEW [ X ]

ITEM
NASA [ 2 /IR ] [ P ] [ P ] [ P ] [ X ] *
IOA [ 3 /IR ] [ P ] [ F ] [ P ] [ X ]
COMPARE [ N / ] [ ] [ N ] [ ] [ ]

RECOMMENDATIONS: (If different from NASA)
[ 2 /IR ] [ P ] [ F ] [ P ] [ X ]
(ADD/DELETE)

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988   C.10-2
ASSESSMENT DATE: 1/05/88
ASSESSMENT ID: MECH/ADP-1102A
NASA FMEA #: 02-4-052000-5
SUBSYSTEM: MECH/ADP
MDAC ID: 1102
ITEM: GEARBOX
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

CRITICALITY REDUNDANCY SCREENS CIL
FLIGHT HDW/FUNC A B C ITEM

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COMPARE N / N / N / 

RECOMMENDATIONS: (If different from NASA)

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*CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/05/88  
ASSESSMENT ID:  MECH/ADP-1102B  
NASA FMEA #:  02-4-052000-6  
SUBSYSTEM:  MECH/ADP  
MDAC ID:  1102  
ITEM:  GEARBOX  
LEAD ANALYST:  A.D. MONTGOMERY

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RECOMMENDATIONS:  (If different from NASA)

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* CIL RETENTION RATIONALE:  (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE  22 JULY 1988  C.10-4
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/05/88
ASSESSMENT ID: MECH/ADP-1103
NASA FMEA #: 02-4-052000-2
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: MECH/ADP
MDAC ID: 1103
ITEM: GEARBOX
LEAD ANALYST: A.D. MONTGOMERY

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COMPARE [ N / ] [ ] [ N ] [ ] [ ]

RECOMMENDATIONS:
(If different from NASA)

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

* CIL RETENTION RATIONALE:
(If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-5
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/05/88
ASSESSMENT ID: MECH/ADP-1103A
NASA FMEA #: 02-4-052000-5
SUBSYSTEM: MECH/ADP
MDAC ID: 1103
ITEM: GEARBOX
LEAD ANALYST: A.D. MONTGOMERY

NASA DATA:
BASELINE [ ]
NEW [ X ]

ITEM

CRITICALLY REDUNDANCY SCREENS CIL

NASA [ 2 /1R ] [ P ] [ P ] [ P ] [ X ] *
IOA [ 3 /1R ] [ P ] [ F ] [ P ] [ X ]

COMPARE [ N / ] [ ] [ N ] [ ] [ ]

RECOMMENDATIONS: (If different from NASA)
[ 2 /1R ] [ P ] [ F ] [ P ] [ X ]
(ADD/DELETE)

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY
IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-6
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/05/88
ASSESSMENT ID: MECH/ADP-1103B
NASA FMEA #: 02-4-052000-6
SUBSYSTEM: MECH/ADP
MDAC ID: 1103
ITEM: GEARBOX
LEAD ANALYST: A.D. MONTGOMERY

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-7
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/05/88
ASSESSMENT ID: MECH/ADP-1104
NASA FMEA #: 02-4-054000-1

SUBSYSTEM: MECH/ADP
MDAC ID: 1104
ITEM: PRESSURE LINE

LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ 3 /1R ] [ P ] [ F ] [ P ] [ A ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-8
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/05/88
ASSESSMENT ID: MECH/ADP-1105
NASA FMEA #: 

SUBSYSTEM: MECH/ADP
MDAC ID: 1105
ITEM: PROBE

LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/05/88
ASSESSMENT ID: MECH/ADP-1106
NASA FMEA #: NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: MECH/ADP
MDAC ID: 1106
ITEM: PROBE

LEAD ANALYST: A.D. MONTGOMERY

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| IOA | [ 3 /1R ] | [ P ] | [ F ] | [ P ] | [ ] |
| COMPARE | [ N /N ] | [ N ] | [ N ] | [ N ] | [ N ] |

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

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

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-10
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/06/88
ASSESSMENT ID: MECH/ADP-1107
NASA FMEA #: NASA DATA: BASELINE [ X ]

SUBSYSTEM: MECH/ADP
MDAC ID: 1107
ITEM: SHAFT
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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NASA [ / ] [ ] [ ] [ X ] *
IOA [ 3/1R ] [ P ] [ F ] [ P ] [ X ]
COMPARE [ N /N ] [ N ] [ N ] [ N ] [ N ]

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

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

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-11
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/06/88
ASSESSMENT ID: MECH/ADP-1108
NASA FMEA #: NASA/IOA
NASA DATA:
BASELINE [ X ]
NEW [ ]

SUBSYSTEM: MECH/ADP
MDAC ID: 1108
ITEM: SHAFT

LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATtributed TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-12
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/06/88
ASSESSMENT ID: MECH/ADP-1109
NASA FMEA #: [ ]
SUBSYSTEM: MECH/ADP
MDAC ID: 1109
ITEM: DEPLOY MICROSWITCH
LEAD ANALYST: A.D. MONTGOMERY

NASA DATA:

BASELINE [ ]
NEW [ ]

CRITICALITY REDUNDANCY SCREENS CIL ITEM

FLIGHT HDW/FUNC A B C ITEM

NASA [ ] [ ] [ ] [ ] [ ] [ ] *

IOA [ 3 /3 ] [ ] [ ] [ ] [ ] [ ] [ ]

COMPARE [ N /N ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]

RECOMMENDATIONS: (If different from NASA)

[ ] [ ] [ ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

THE ISSUE AROSE DUE TO DIFFERENCES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-13
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/06/88
ASSESSMENT ID: MECH/ADP-1110
NASA FMEA #: NASA DATA:
SUBSYSTEM: MECH/ADP BASELINE [ ]
MDAC ID: 1110 NEW [ ]
ITEM: DEPLOY MICROSWITCH

LEAD ANALYST: A.D. MONTGOMERY

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| IOA  | [ 3 /3] | [ ] | [ ] | [ ] | [ ] | [ ] |

COMPARE [ N /N ] [ ] [ ] [ ] [ ] [ ] [ ]

RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
THE ISSUE AROSE DUE TO DIFFERENCES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-14
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/06/88
ASSESSMENT ID: MECH/ADP-1111
NASA FMEA #: 
SUBSYSTEM: MECH/ADP
MDAC ID: 1111
ITEM: STOW MICROSWITCH
LEAD ANALYST: A.D. MONTGOMERY

NASA DATA:
BASELINE [ ]
NEW [ ]

CRITICALITY REDUNDANCY SCREENS

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
The issue arose due to differences between the NASA and IOA FMEA/CIL interpretation and implementation of NSTS 22206. The issue is withdrawn by IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-15
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/06/88
ASSESSMENT ID: MECH/ADP-1112
NASA FMEA #: NASA DATA:
SUBSYSTEM: MECH/ADP BASELINE [ ]
MDAC ID: 1112 NEW [ ]
ITEM: STOW MICROSWITCH
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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

RECOMMENDATIONS: (If different from NASA)

[ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

THE ISSUE AROSE DUE TO DIFFERENCES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-16
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1500A
NASA FMEA #: 05-6EE-2002-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1500
ITEM: +28V CONTACT #1

LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-17
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1500
NASA FMEA #: 05-6EE-2002-2

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1500
ITEM: +28V CONTACT #1

LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-18
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1501A
NASA FMEA #: 05-6EE-2002-1
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1501
ITEM: +28V CONTACT #1

LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)
[ 2 /1R ] [ P ] [ F ] [ P ] [ A ] (ADD/DELETE)

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-19
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1501
NASA FMEA #: 05-6EE-2002-2

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1501
ITEM: +28V CONTACT #1

LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

| CRITICALITY REDUNDANCY SCREENS | CIL ITEM |
| FLIGHT HDW/FUNC | A | B | C | |
| NASA [ 1 /1 ] | [ ] | [ ] | [ ] | [ X ] * |
| IOA [ 3 /1R ] | [ P ] | [ F ] | [ P ] | [ X ] |
| COMPARE [ 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:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-20
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1502A
NASA FMEA #: 05-6EE-2002-1
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1502
ITEM: +28V CONTACT #2
LEAD ANALYST: A.D. MONTGOMERY

NASA DATA:
BASELINE [ ]
NEW [ X ]

ASSESSMENT:

CRITICALITY REDUNDANCY SCREENS CIL
FLIGHT HDW/FUNC A B C ITEM

NASA [ 1 /1 ] [ ] [ ] [ ] [ ] [ X ] *
IOA [ 3 /1R ] [ P ] [ F ] [ P ] [ X ]
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RECOMMENDATIONS: (If different from NASA)
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(ADD/DELETE)

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY
IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-21
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1502
NASA FMEA #: 05-6EE-2002-2

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1502
ITEM: +28V CONTACT #2

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-22
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1503A
NASA FMEA #: 05-6EE-2002-1

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1503
ITEM: +28V CONTACT #2

LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

CRITICALITY REDUNDANCY SCREENS CIL ITEM
FLIGHT HDW/FUNC A B C

NASA [ 1 /1 ] [ ] [ ] [ ] [ X ] *
IOA [ 3 /1R ] [ P ] [ F ] [ P ] [ X ]
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RECOMMENDATIONS: (If different from NASA)
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(ADD/DELETE)

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY
IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-23
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1503
NASA FMEA #: 05-6EE-2002-2
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1503
ITEM: +28V CONTACT #2
LEAD ANALYST: A.D. MONTGOMERY

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-24
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1504A
NASA FMEA #: 05-6EE-2002-1

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1504
ITEM: +28V CONTACT #3

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [    ]
INADEQUATE [    ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-25
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1504
NASA FMEA #: 05-6EE-2002-2

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1504
ITEM: +28V CONTACT #3

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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*CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988   C.10-26
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1505A
NASA FMEA #: 05-6EE-2002-1
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1505
ITEM: +28V CONTACT #3
LEAD ANALYST: A.D. MONTGOMERY

NASA DATA:
BASELINE [ ]
NEW [ X ]

ASSESSMENT:

| CRITICALITY | REDUNDANCY SCREENS | CIL |
| FLIGHT HDW/FUNC | A | B | C | ITEM |
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RECOMMENDATIONS: (If different from NASA)
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(ADD/DELETE)

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-27
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1505
NASA FMEA #: 05-6EE-2002-2
NASA DATA:
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NEW [ X ]
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1505
ITEM: +28V CONTACT #3
LEAD ANALYST: A.D. MONTGOMERY

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ADEQUATE [ ]
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REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1506A
NASA FMEA #: 05-6EE-2002-1

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1506
ITEM: +28V CONTACT #4

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988
C.10-29
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1506
NASA FMEA #: 05-6EE-2002-2
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1506
ITEM: +28V CONTACT #4
LEAD ANALYST: A.D. MONTGOMERY

NASA DATA:
BASELINE [ ]
NEW [ X ]

ASSESSMENT:
CRITICALLY REDUNDANCY CIL
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COMPARE [ N /N ] [ N ] [ N ] [ N ] [ ]

RECOMMENDATIONS: (If different from NASA)
[ 2 /1R ] [ P ] [ F ] [ P ] [ A ]
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-30
### APPENDIX C

**ASSESSMENT WORKSHEET**

**ASSESSMENT DATE:** 1/08/88  
**ASSESSMENT ID:** MECH/ADP-1507A  
**NASA FMEA #:** 05-6EE-2002-1

**SUBSYSTEM:**  
**MDAC ID:** MECH/ADP/EPD&C  
**ITEM:** +28V CONTACT #4  
**LEAD ANALYST:** A.D. MONTGOMERY

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

**REMARKS:**  
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

**REPORT DATE** 22 JULY 1988  
**C.10-31**
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
NASA DATA:
ASSESSMENT ID: MECH/ADP-1507 BASELINE [ ]
NASA FMEA #: 05-6EE-2002-2 NEW [ X ]
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1507
ITEM: +28V CONTACT #4
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-32
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1508A
NASA FMEA #: 05-6EE-2002-1

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1508
ITEM: +28V CONTACT #1

LEAD ANALYST: A.D. MONTGOMERY

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988   C.10-33
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
NASA DATA: BASELINE [ ] NEW [ X ]
ASSESSMENT ID: MECH/ADP-1508
NASA FMEA #: 05-6EE-2002-2
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1508
ITEM: +28V CONTACT #1
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-34
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1509A
NASA FMEA #: 05-6EE-2002-1

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1509
ITEM: +28V CONTACT #1

LEAD ANALYST: A.D. MONTGOMERY

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-35
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1509
NASA FMEA #: 05-6EE-2002-2

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1509
ITEM: +28V CONTACT #1

LEAD ANALYST: A.D. MONTGOMERY

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-36
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1510A
NASA FMEA #: 05-6EE-2002-1

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1510
ITEM: +28V CONTACT #2

LEAD ANALYST: A.D. MONTGOMERY

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*CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1510
NASA FMEA #: 05-6EE-2002-2

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1510
ITEM: +28V CONTACT #2

LEAD ANALYST: A.D. MONTGOMERY

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-38
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88  NASA DATA:
ASSESSMENT ID: MECH/ADP-1511A  BASELINE [ ]
NASA FMEA #: 05-6EE-2002-1  NEW [ X ]

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1511
ITEM: +28V CONTACT #2

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-39
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1511
NASA FMEA #: 05-6EE-2002-2
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1511
ITEM: +28V CONTACT #2
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-40
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1512A
NASA FMEA #: 05-6EE-2002-1

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1512
ITEM: +28V CONTACT #3

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

[ 2 /1R ] [ P ] [ F ] [ P ] [ A ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-41
ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1512
NASA FMEA #: 05-6EE-2002-2
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1512
ITEM: +28V CONTACT #3
LEAD ANALYST: A.D. MONTGOMERY
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RECOMMENDATIONS: (If different from NASA)

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ADD/DELETE

CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-42
**APPENDIX C**

**ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 1/08/88  
ASSESSMENT ID: MECH/ADP-1513A  
NASA FMEA #: 05-6EE-2002-1

**SUBSYSTEM:**  
**MDAC ID:**  
**ITEM:**

+28V CONTACT #3

LEAD ANALYST: A.D. MONTGOMERY

**ASSESSMENT:**

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**RECOMMENDATIONS:**  
(If different from NASA)

[ 2 /1R ] [ P ] [ F ] [ P ] [ A ]

(ADD/DELETE)

**REMARKS:**

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

**REPORT DATE** 22 JULY 1988 C.10-43
ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1513
NASA FMEA #: 05-6EE-2002-2

SUBSYSTEM: MECH/ADP/EP&D&C
MDAC ID: 1513
ITEM: +28V CONTACT #3

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-44
ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1514A
NASA FMEA #: 05-6EE-2002-1
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1514
ITEM: +28V CONTACT #4
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-45
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1514
NASA FMEA #: 05-6EE-2002-2

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1514
ITEM: +28V CONTACT #4

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY
IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-46
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1515A
NASA FMEA #: 05-6EE-2002-1

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1515
ITEM: +28V CONTACT #4

LEAD ANALYST: A.D. MONTGOMERY

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

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-47
APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88  
ASSESSMENT ID: MECH/ADP-1515  
NASA FMEA #: 05-6EE-2002-2  
SUBSYSTEM: MECH/ADP/EPD&C  
MDAC ID: 1515  
ITEM: +28V CONTACT #4  
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)  
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REMARKS:  
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  
C.10-48
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1516A
NASA FMEA #: 05-6EE-2002-1

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1516
ITEM: +28V CONTACT #1

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

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REMARKS:

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-49
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1516
NASA FMEA #: 05-6EE-2002-2

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1516
ITEM: +28V CONTACT #1

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-50
ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1517A
NASA FMEA #: 05-6EE-2002-1

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1517
ITEM: +28V CONTACT #1

LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

CRITICALITY REDUNDANCY SCREENS CIL ITEM
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RECOMMENDATIONS: (If different from NASA)

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-51
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1517
NASA FMEA #: 05-6EE-2002-2
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1517
ITEM: +28V CONTACT #1
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)
[ 2 /1R ] [ P ] [ F ] [ P ] [ A ]
(ADD/DELETE)

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-52
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1518A
NASA FMEA #: 05-6EE-2002-1
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1518
ITEM: +28V CONTACT #2
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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

*CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1518
NASA FMEA #: 05-6EE-2002-2

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1518
ITEM: +28V CONTACT #2

LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

CRITICALITY
FLIGHT
HDW/FUNC

REDUNDANCY SCREENS
A     B     C

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COMPARE  [ N /N ]  [ N ]  [ N ]  [ N ]  [ ]

RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-54
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1519A
NASA FMEA #: 05-6EE-2002-1
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1519
ITEM: +28V CONTACT #2
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-55
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1519
NASA FMEA #: 05-6EE-2002-2

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1519
ITEM: +28V CONTACT #2

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-56
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1520A
NASA FMEA #: 05-6EE-2002-1
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1520
ITEM: +28V CONTACT #3
LEAD ANALYST: A.D. MONTGOMERY

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

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-57
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1520
NASA FMEA #: 05-6EE-2002-2

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1520
ITEM: +28V CONTACT #3

LEAD ANALYST: A.D. MONTGOMERY

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* CIL RETENTION RATIONALE: (If applicable)
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REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988    C.10-58
APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1521A
NASA FMEA #: 05-6EE-2002-1
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1521
ITEM: +28V CONTACT #3
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-59
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1521
NASA FMEA #: 05-6EE-2002-2
ASSESSMENT DATE: 1/08/88
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MDAC ID: 1521
ITEM: +28V CONTACT #3
LEAD ANALYST: A.D. MONTGOMERY

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* CIL RETENTION RATIONALE: (If applicable)

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REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY
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REPORT DATE 22 JULY 1988 C.10-60
**APPENDIX C**

**ASSESSMENT WORKSHEET**

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**REMARKS:**

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

**REPORT DATE** 22 JULY 1988  C.10-61
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1522
NASA FMEA #: 05-6EE-2002-2

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1522
ITEM: +28V CONTACT #4

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-62
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1523A
NASA FMEA #: 05-6EE-2002-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1523
ITEM: +28V CONTACT #4

LEAD ANALYST: A.D. MONTGOMERY

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

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-63
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1523
NASA FMEA #: 05-6EE-2002-2

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1523
ITEM: +28V CONTACT #4

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

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REMARKS:

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-64
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1532A
NASA FMEA #: 05-6EE-2002-1

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1532
ITEM: +28V CONTACT #1

LEAD ANALYST: A.D. MONTGOMERY

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* CIL RETENTION RATIONALE: (If applicable)

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Inadequate [ ]

REMARKS:

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-65
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1532
NASA FMEA #: 05-6EE-2002-2

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1532
ITEM: +28V CONTACT #1

LEAD ANALYST: A.D. MONTGOMERY

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*CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-66
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1533
NASA FMEA #: 05-6EE-2002-2

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1533
ITEM: +28V CONTACT #1

LEAD ANALYST: A.D. MONTGOMERY

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REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-67
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1533A
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NEW [ X ]

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1534
ITEM: +28V CONTACT #1

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
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REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-68
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1534A
NASA FMEA #: 05-6EE-2002-1
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1534
ITEM: +28V CONTACT #2
LEAD ANALYST: A.D. MONTGOMERY

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* CIL RETENTION RATIONALE: (If applicable)
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REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-69
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
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NASA DATA:
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SUBSYSTEM: MECH/ADP/EPD&C
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LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-70
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1535A
NASA FMEA #: 05-6EE-2002-1
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1535
ITEM: +28V CONTACT #2
LEAD ANALYST: A.D. MONTGOMERY
NASA DATA:
BASELINE [ ]
NEW [ X ]

CRITICALITY REDUNDANCY SCREENS CIL ITEM
FLIGHT HDW/FUNC A B C ITEM

NASA [ 1 /1 ] [ ] [ ] [ ] [ ] [ X ] *
IOA [ 3 /1R ] [ P ] [ F ] [ P ] [ X ]
COMPARE [ 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:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-71
**APPENDIX C**

**ASSESSMENT WORKSHEET**

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**RECOMMENDATIONS:** (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

**REMARKS:**

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1536A
NASA FMEA #: 05-6EE-2002-1

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1536
ITEM: +28V CONTACT #3
LEAD ANALYST: A.D. MONTGOMERY

NASA DATA:
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NEW [ X ]

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY
IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-73
**ASSESSMENT WORKSHEET**

**ASSESSMENT DATE:** 1/08/88  
**ASSESSMENT ID:** MECH/ADP-1536  
**NASA FMEA #:** 05-6EE-2002-2  
**LEAD ANALYST:** A.D. MONTGOMERY

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- **IOA:** [3/1R] [P] [F] [P] [X]
- **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:**  
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

**REPORT DATE** 22 JULY 1988   
**C.10-74**
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1537A
NASA FMEA #: 05-6EE-2002-1

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1537
ITEM: +28V CONTACT #3

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-75
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1537
NASA FMEA #: 05-6EE-2002-2

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1537
ITEM: +28V CONTACT #3

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-76
APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88  
ASSESSMENT ID: MECH/ADP-1538A  
NASA FMEA #: 05-6EE-2002-1  

SUBSYSTEM: MECH/ADP/EPD&C  
MDAC ID: 1538  
ITEM: +28V CONTACT #4  

LEAD ANALYST: A.D. MONTGOMERY  

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
INADEQUATE [ ]

REMARKS:

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-77
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1538
NASA FMEA #: 05-6EE-2002-2
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1538
ITEM: +28V CONTACT #4
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

CRITICALITY
FLIGHT
HDW/FUNC

NASA [ 1 /1 ] [ ] [ ] [ ] [ X ] *
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COMPARE [ N /N ] [ N ] [ N ] [ N ] [ ]

RECOMMENDATIONS: (If different from NASA)
[ 2 /1R ] [ P ] [ F ] [ P ] [ A ]

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-78
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1539A
NASA FMEA #: 05-6EE-2002-1

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1539
ITEM: +28V CONTACT #4

LEAD ANALYST: A.D. MONTGOMERY

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REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-79
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1539
NASA FMEA #: 05-6EE-2002-2
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1539
ITEM: +28V CONTACT #4

LEAD ANALYST: A.D. MONTGOMERY

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
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REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-80
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1540A
NASA FMEA #: 05-6EE-2002-1

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1540
ITEM: +28V CONTACT #1

LEAD ANALYST: A.D. MONTGOMERY

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
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REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
**APPENDIX C**  
**ASSESSMENT WORKSHEET**

**ASSESSMENT DATE:** 1/08/88  
**ASSESSMENT ID:** MECH/ADP-1540  
**NASA FMEA #:** 05-6EE-2002-2  
**SUBSYSTEM:** MECH/ADP/EPD&C  
**MDAC ID:** 1540  
**ITEM:** +28V CONTACT #1  
**LEAD ANALYST:** A.D. MONTGOMERY

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* CIL RETENTION RATIONALE: (If applicable)  
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**REMARKS:**  
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

**REPORT DATE** 22 JULY 1988  
**C.10-82**
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1541A
NASA FMEA #: 05-6EE-2002-1

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1541
ITEM: +28V CONTACT #1

LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

CRITICALITY
FLIGHT
HDW/FUNC

REDUNDANCY SCREENS
A    B    C

CIL
ITEM

NASA [ 1 / 1 ] [ ] [ ] [ ] [ X ] *

IOA [ 3 / 1R ] [ P ] [ F ] [ P ] [ X ]

COMPARE [ N / N ] [ N ] [ N ] [ N ] [ ]

RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]

INADEQUATE [ ]

REMARKS:

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-83
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1541
NASA FMEA #: 05-6EE-2002-2
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1541
ITEM: +28V CONTACT #1
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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*CIL RETENTION RATIONALE: (If applicable)
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REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1542A
NASA FMEA #: 05-6EE-2002-1

ASSESSMENT ID: MECH/ADP-1542A
MDAC ID: 1542
ITEM: +28V CONTACT #2

LEAD ANALYST: A.D. MONTGOMERY

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-85
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1542
NASA FMEA #: 05-6EE-2002-2

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1542
ITEM: +28V CONTACT #2
LEAD ANALYST: A.D. MONTGOMERY

NASA DATA:
BASELINE [ ]
NEW [ x ]

CRITICALITY REDUNDANCY SCREENS CIL
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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
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INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-86
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1543A
NASA FMEA #: 05-6EE-2002-1

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1543
ITEM: +28V CONTACT #2

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-87
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1543
NASA FMEA #: 05-6EE-2002-2

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1543
ITEM: +28V CONTACT #2

LEAD ANALYST: A.D. MONTGOMERY

NASA DATA:
BASELINE [ ]
NEW [ X ]

CRITICALITY REDUNDANCY SCREENS
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IOA [ 3 /1R ] [ P ] [ F ] [ P ] [ X ]
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RECOMMENDATIONS: (If different from NASA)
[ 2 /1R ] [ P ] [ F ] [ P ] [ A ]
(ADD/DELETE)

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY
IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-88
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1544A
NASA FMEA #: 05-6EE-2002-1
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1544
ITEM: +28V CONTACT #3
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-89
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1544
NASA FMEA #: 05-6EE-2002-2

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1544
ITEM: +28V CONTACT #3
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

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INADEQUATE [ ]

REMARKS:

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-90
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1545A
NASA FMEA #: 05-6EE-2002-1
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1545
ITEM: +28V CONTACT #3
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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*CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1545
NASA FMEA #: 05-6EE-2002-2
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1545
ITEM: +28V CONTACT #3
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-92
ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1546A
NASA FMEA #: 05-6EE-2002-1
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1546
ITEM: +28V CONTACT #4
LEAD ANALYST: A.D. MONTGOMERY

NASA DATA:
BASELINE [ ]
NEW [ X ]

ASSESSMENT:
CRITICALITY REDUNDANCY SCREENS CIL ITEM
FLIGHT HDW/FUNC A B C
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IOA [ 3 /3 ] [ ] [ ] [ ] [ ] [ X ]
COMPARE [ N /N ] [ ] [ ] [ ] [ ]

RECOMMENDATIONS: (If different from NASA)
[ 2 /1R ] [ P ] [ F ] [ P ] [ A ]
(ADD/DELETE)

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-93
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1546
NASA FMEA #: 05-6EE-2002-2

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1546
ITEM: +28V CONTACT #4

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

[ 2 /1R ] [ P ] [ F ] [ P ] [ A ]
(add/delete)

*CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-94
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1547A
NASA FMEA #: 05-6EE-2002-1
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1547
ITEM: +28V CONTACT #4
LEAD ANALYST: A.D. MONTGOMERY

NASA DATA:
BASELINE [ ]
NEW [ X ]

CRITICALITY REDUNDANCY SCREENS

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

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-95
### ASSESSMENT WORKSHEET

**ASSESSMENT DATE:** 1/08/88  
**NASO DATA:**  
**BASELINE** [ ]  
**NEW** [ X ]

**SUBSYSTEM:** MECH/ADP/EPD&C  
**MDAC ID:** 1547  
**ITEM:** +28V CONTACT #4  
**LEAD ANALYST:** A.D. MONTGOMERY

**ASSESSMENT:**  
**CRITICALITY**  
**REDUNDANCY SCREENS**  
**CIL**

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**RECOMMENDATIONS:** (If different from NASA)

| 2 /IR | P | F | P | A |

*(ADD/DELETE)*

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

**ADEQUATE** [ ]  
**INADEQUATE** [ ]

**REMARKS:**  
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

**REPORT DATE** 22 JULY 1988  
**C.10-96**
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1548A
NASA FMEA #: 05-6EE-2002-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1548
ITEM: +28V CONTACT #1

LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

CRITICALITY

REdundancy Screens

CIL

FLIGHT

HDW/FUNC

A

B

C

ITEM

NASA [ 1 /1 ] [ ] [ ] [ ] [ ] [ X ] *

IOA [ 3 /1R ] [ P ] [ F ] [ P ] [ X ]

COMPARE [ 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:

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-97
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1548
NASA FMEA #: 05-6EE-2002-2

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1548
ITEM: +28V CONTACT #1

LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

CRITICALITY

FLIGHT
HDW/FUNC

REDUNDANCY SCREENS
A  B  C

CIL
ITEM

NASA [ 1 /1 ] [ ] [ ] [ ] [ ] [ X ] *

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RECOMMENDATIONS: (If different from NASA)

[ 2 /1R ] [ P ] [ F ] [ P ] [ A ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

AD EQUATE [ ]

INADEQUATE [ ]

REMARKS:

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1549A
NASA FMEA #: 05-6EE-2002-1

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1549
ITEM: +28V CONTACT #1

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-99
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1549
NASA FMEA #: 05-6EE-2002-2

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1549
ITEM: +28V CONTACT #1

LEAD ANALYST: A.D. MONTGOMERY

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-100
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1550A
NASA FMEA #: 05-6EE-2002-1

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1550
ITEM: +28V CONTACT #2

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RECOMMENDATIONS:  (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
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REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-101
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1550
NASA FMEA #: 05-6EE-2002-2
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1550
ITEM: +28V CONTACT #2
LEAD ANALYST: A.D. MONTGOMERY

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* CIL RETENTION RATIONALE: (If applicable)
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REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-102
## APPENDIX C
### ASSESSMENT WORKSHEET

**ASSESSMENT DATE:** 1/08/88

**ASSESSMENT ID:** MECH/ADP-1551A

**NASA FMEA #:** 05-6EE-2002-1

**SUBSYSTEM:** MECH/ADP/EPD&C

**MDAC ID:** 1551

**ITEM:** +28V CONTACT #2

**LEAD ANALYST:** A.D. MONTGOMERY

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**REMARKS:**

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

**REPORT DATE** 22 JULY 1988   C.10-103
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1551
NASA FMEA #: 05-6EE-2002-2

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1551
ITEM: +28V CONTACT #2

LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

CRITICALITY REDUNDANCY SCREENS CIL
FLIGHT HDW/FUNC A B C ITEM

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IOA [ 3 /3 ] [ ] [ ] [ ] [ ] [ X ]
COMPARE [ N / N ] [ ] [ ] [ ] [ ] [ ]

RECOMMENDATIONS: (If different from NASA)
[ 2 /1R ] [ P ] [ F ] [ P ] [ A ]
(ADD/DELETE)

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY
IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-104
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1552A
NASA FMEA #: 05-6EE-2002-I

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1552
ITEM: +28V CONTACT #3

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-105
## APPENDIX C
### ASSESSMENT WORKSHEET

**ASSESSMENT DATE:** 1/08/88  
**ASSESSMENT ID:** MECH/ADP-1552  
**NASA FMEA #:** 05-6EE-2002-2  
**NASA DATA:**  
- BASELINE [ ]  
- NEW [ X ]  

**SUBSYSTEM:** MECH/ADP/EPD&C  
**MDAC ID:** 1552  
**ITEM:** +28V CONTACT #3  
**LEAD ANALYST:** A.D. MONTGOMERY  

### ASSESSMENT:

#### CRITICALITY REDUNDANCY SCREENS

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**RECOMMENDATIONS:** (If different from NASA)  
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  - [ F ]  
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  - [ A ]  
  - ADD/DELETE

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

**REMARKS:**  
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

---

**REPORT DATE 22 JULY 1988**  
**C.10-106**
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1553A
NASA FMEA #: 05-6EE-2002-1
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1553
ITEM: +28V CONTACT #3
LEAD ANALYST: A.D. MONTGOMERY

NASA DATA:
BASELINE [  ]
NEW [ X ]

RECOMMENDATIONS: (If different from NASA)
[ 2 /1R ] [ P ] [ F ] [ P ] [ A ]
(ADD/DELETE)

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-107
ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1553
NASA FMEA #: 05-6EE-2002-2
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1553
ITEM: +28V CONTACT #3
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

[ 2 /IR ] [ P ] [ F ] [ P ] [ A ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988   C.10-108
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1554A
NASA FMEA #: 05-6EE-2002-1

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1554
ITEM: +28V CONTACT #4

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-109
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1554
NASA FMEA #: 05-6EE-2002-2
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1554
ITEM: +28V CONTACT #4
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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| ADD/DELETE|

* CIL RETENTION RATIONALE: (If applicable)

| ADEQUATE [ ] |
| INADEQUATE [ ] |

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988   C.10-110
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1555A
NASA FMEA #: 05-6EE-2002-1

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1555
ITEM: +28V CONTACT #4

LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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CIL ITEM

[ X ] *

RECOMMENDATIONS: (If different from NASA)

[ 2 /1R ] [ P ] [ F ] [ P ] [ A ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]
INADEQUATE [   ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-111
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1555
NASA FMEA #: 05-6EE-2002-2
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1555
ITEM: +28V CONTACT #4
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

[ 2 /IR ] [ P ] [ F ] [ P ] [ A ]
(ADD/DELETE)

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-112
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1556
NASA FMEA #: 
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1556
ITEM: +28V CONTACT #1
LEAD ANALYST: A.D. MONTGOMERY

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COMPARE [ N / N ] [ N ] [ N ] [ N ] [ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]

INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT
ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE
ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS
WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-113
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1557
NASA FMEA #: [ ]
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1557
ITEM: +28V CONTACT #1
LEAD ANALYST: A.D. MONTGOMERY

NASA DATA:
BASELINE [ ]
NEW [ ]

CRITICALITY REDUNDANCY SCREENS CIL ITEM
FLIGHT HDW/FUNC A B C

NASA [ ] [ ] [ ] [ ] [ ] [ ] [ ] *
IOA [ ] [ ] [ ] [ ] [ ] [ ]
COMPARE [ ] [ ] [ ] [ ] [ ] [ ]

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

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

REMARKS:
THE ISSUE AROSE DUE TO DIFFERENCES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-114
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1558
NASA FMEA #: BASELINE [ ]
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1558
ITEM: +28V CONTACT #2
LEAD ANALYST: A.D. MONTGOMERY

NASA FMEA #:
ASSESSMENT ID: MECH/ADP-1558
MDAC ID: 1558
ITEM: +28V CONTACT #2
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT
ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE
ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS
WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-115
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1559
NASA FMEA #: 

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1559
ITEM: +28V CONTACT #2

LEAD ANALYST: A.D. MONTGOMERY

NASA DATA:
BASELINE
NEW

CRITICALITY SCREENS

FLIGHT HDW/FUNC

REDUNDANCY A B C

NASA [ / ] [ ] [ ] [ ] [ ] [ ]

IOA [ 3 /3 ] [ ] [ ] [ ] [ ] [ ]

COMPARE [ N /N ] [ ] [ ] [ ] [ ] [ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]

INADEQUATE [ ]

REMARKS:

THE ISSUE AROSE DUE TO DIFFERENCES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-116
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1560
NASA FMEA #: 
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1560
ITEM: CONTACT #1
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

THE ISSUE AROSE DUE TO DIFFERENCES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1561
NASA FMEA #: NASA DATA:
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1561
ITEM: CONTACT #1
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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

REMARKS:
The issue arose due to differences between the NASA and IOA FMEA/CIL interpretation and implementation of NSTS 22206. The issue is withdrawn by IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-118
ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1562
NASA FMEA #: NASA DATA:

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1562
ITEM: CONTACT #2

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
THE ISSUE AROSE DUE TO DIFFERENCES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/08/88
ASSESSMENT ID: MECH/ADP-1563
NASA FMEA #: MECH/ADP/EPD&C1563
ASSESSMENT ID:
NASA FMEA #:
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1563
ITEM: CONTACT #2
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
THE ISSUE AROSE DUE TO DIFFERENCES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-120
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/19/88
ASSESSMENT ID: MECH/ADP-1589
NASA FMEA #: 05-6EE-2017-1

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1589
ITEM: AND GATE

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY
IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-121
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/19/88
ASSESSMENT ID: MECH/ADP-1591
NASA FMEA #: 05-6EE-2017-1

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1591
ITEM: TIME DELAY

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-122
## APPENDIX C
### ASSESSMENT WORKSHEET

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**RECOMMENDATIONS:** (If different from NASA)

[ 3 /1R ] [ P ] [ F ] [ P ] [ A ]

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]

INADEQUATE [ ]

**REMARKS:**

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/21/88
ASSESSMENT ID: MECH/ADP-1595
NASA FMEA #: 05-6EE-2016-1

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1595
ITEM: REMOTE POWER CONTROLLER
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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COMPARE [ / ] [ ] [ N ] [ ] [ N ]

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

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-124
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/21/88
ASSESSMENT ID: MECH/ADP-1597
NASA FMEA #: 05-6EE-2016-1
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1597
ITEM: REMOTE POWER CONTROLLER
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

CRITICALITY
FLIGHT
HDW/FUNC

REDUNDANCY SCREENS
A       B       C

CIL
ITEM

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:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY
IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-125
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/22/88
ASSESSMENT ID: MECH/ADP-1600
NASA FMEA #: 05-6EE-2015-2

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1600
ITEM: SWITCH RELAY

LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

CRITICALITY REDUNDANCY SCREENS CIL
FLIGHT HDW/FUNC A B C ITEM

NASA [ 3 /1R ] [ P ] [ F ] [ P ] [ X ] *
IOA [ 3 /3 ] [ ] [ ] [ ] [ ]
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/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-126
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/22/88
ASSESSMENT ID: MECH/ADP-1602
NASA FMEA #: 05-6EE-2015-2
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1602
ITEM: LATCH RELAY
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

*CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-127
APPENDIX C
ASSessment Worksheet

Assessment Date: 1/25/88
Assessment ID: MECH/ADP-1604
NASA FMEA #: MECH/ADP-1604

Subsystem: MECH/ADP/EPD&C
MDAC ID: 1604
Item: EMI FILTER

Lead Analyst: A.D. Montgomery

Assessment:

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Recommendations: (If different from NASA)

[ / ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL Retention Rationale: (If applicable)

Adequate [ ]

Inadequate [ ]

Remarks:
The issue arose due to differences between the NASA and IOA FMEA/CIL interpretation and implementation of NSTS 22206. The issue is withdrawn by IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
ASSESSMENT ID: MECH/ADP-1605
NASDAQ FMEA #: NASA

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1605
ITEM: EMI FILTER

LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-129
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
ASSESSMENT ID: MECH/ADP-1606
NASA FMEA #: NASA DATA:
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1606
ITEM: OP AMP
LEAD ANALYST: A.D. MONTGOMERY

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IOA [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ X ] *

COMPARE [ ] [ ] [ ] [ ] [ ] [ N ]

RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

THE ISSUE AROSE DUE TO DIFFERENCES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-130
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
ASSESSMENT ID: MECH/ADP-1607
NASA FMEA #:  
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1607
ITEM: OP AMP
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
ASSESSMENT ID: MECH/ADP-1608
NASA FMEA #: NASA DATA:
SUBSYSTEM: MECH/ADP/EPD&C BASELINE [ ]
MDAC ID: 1608 NEW [ X ]
ITEM: REGULATOR
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

THE ISSUE AROSE DUE TO DIFFERENCES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-132
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
ASSESSMENT ID: MECH/ADP-1609
NASA FMEA #: NASA DATA:
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1609
ITEM: REGULATOR
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-133
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
ASSESSMENT ID: MECH/ADP-1610
NASA FMEA #: MECH/ADP/EPD&C
NASA ID: MECH/ADP/EPD&C
MDAC ID: 1610
ITEM: GENERATOR
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT
ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE
ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS
WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-134
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
ASSESSMENT ID: MECH/ADP-1611
NASA FMEA #: NASA DATA:
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1611
ITEM: GENERATOR
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
ASSESSMENT ID: MECH/ADP-1612
NASA FMEA #: BASELINE [ ]
NASA DATA: NEW [ x ]

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1612
ITEM: CLOCK

LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-136
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
ASSESSMENT ID: MECH/ADP-1613
NASA FMEA #: 
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1613
ITEM: CLOCK
LEAD ANALYST: A.D. MONTGOMERY

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NEW [ X ]

ITEM C

RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-137
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
ASSESSMENT ID: MECH/ADP-1614
NASA FMEA #: MECH/ADP/EPD&C
SUBSYSTEM: MECH/ADP/ADP
MDAC ID: 1614
ITEM: +Q TRANSISTOR
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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

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

REMARKS:
The issue arose due to differences between the NASA and IOA FMEA/CIL interpretation and implementation of NSTS 22206. The issue is withdrawn by IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-138
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
ASSESSMENT ID: MECH/ADP-1615
NASA FMEA #: NASA DATA:
SUBSYSTEM: MECH/ADP/EPD&C BASELINE [ ]
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ITEM: +Q TRANSISTOR

LEAD ANALYST: A.D. MONTGOMERY
ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-139
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
ASSESSMENT ID: MECH/ADP-1616
NASA FMEA #: NASA DATA:
SUBSYSTEM: MECH/ADP/EPD&C BASELINE [ ]
MDAC ID: 1616 NEW [ X ]
ITEM: -Q TRANSISTOR
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
THE ISSUE AROSE DUE TO DIFFERENCES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
ASSESSMENT ID: MECH/ADP-1617
NASA FMEA #: MECH/ADP/EPD&C
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1617
ITEM: -Q TRANSISTOR
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS:  (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-141
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
ASSESSMENT ID: MECH/ADP-1618
NASA FMEA #: NASA DATA:
SUBSYSTEM: MECH/ADP/EPD&C ASSESSMENT ID:
MDAC ID: 1618 NASA
ITEM: TRANSFORMER FMEA/EPD&C
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

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REMARKS:
THE ISSUE AROSE DUE TO DIFFERENCES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-142
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
ASSESSMENT ID: MECH/ADP-1619
NASA FMEA #: NASA FMEA #:
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1619
ITEM: TRANSFORMER
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-143
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
ASSESSMENT ID: MECH/ADP-1620
NASA FMEA #:  

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1620
ITEM: +10V AMP

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

THE ISSUE AROSE DUE TO DIFFERENCES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-144
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88  NASA DATA:
ASSESSMENT ID:  MECH/ADP-1621  BASELINE [ ]
NASA FMEA #:  MECH/ADP-EPD&C  NEW [ X ]
SUBSYSTEM:  MECH/ADP/EPD&C
MDAC ID:  1621
ITEM:  +10V AMP
LEAD ANALYST:  A.D. MONTGOMERY

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RECOMMENDATIONS:  (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
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REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88  ASSESSMENT ID: MECH/ADP-1622
NASA FMEA #: NASA DATA:

SUBSYSTEM: MECH/ADP/EPD&C  BASELINE [ ]
MDAC ID: 1622  NEW [ X ]
ITEM: -10V AMP

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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ADD/DELETE

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

THE ISSUE AROSE DUE TO DIFFERENCES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
ASSESSMENT ID: MECH/ADP-1623
NASA FMEA #: 

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1623
ITEM: -10V AMP

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
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REMARKS:
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REPORT DATE 22 JULY 1988 C.10-147
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
ASSESSMENT ID: MECH/ADP-1624
NASA FMEA #: BASELINE [ ]

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1624
ITEM: +10V TRANSISTOR

LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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

RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
THE ISSUE AROSE DUE TO DIFFERENCES BETWEEN THE NASA AND IOA
FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THE
ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-148
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
ASSESSMENT ID: MECH/ADP-1625
NASA FMEA #: NASA DATA:
SUBSYSTEM: MECH/ADP/EPD&C BASELINE [ ]
MDAC ID: 1625 NEW [ X ]
ITEM: +10V TRANSISTOR
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
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REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-149
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
ASSESSMENT ID: MECH/ADP-1626
NASA FMEA #: NASA DATA:
SUBSYSTEM: MECH/ADP/EPD&C BASELINE [ ]
MDAC ID: 1626 NEW [ X ]
ITEM: -10V TRANSISTOR
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
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REMARKS:

THE ISSUE AROSE DUE TO DIFFERENCES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-150
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/25/88
ASSESSMENT ID: MECH/ADP-1627
NASA FMEA #: NASA

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1627
ITEM: -10V TRANSISTOR
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-151
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1628
NASA FMEA #: 05-6EE-2014-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1628
ITEM: POWER SUPPLY TEST AMP

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-152
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1629
NASA FMEA #: 05-6EE-2014-1
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1629
ITEM: POWER SUPPLY TEST AMP
LEAD ANALYST: A.D. MONTGOMERY

NASA DATA:
BASELINE [ ]
NEW [ X ]

CRITICALITY REDUNDANCY SCREENS CIL ITEM
FLIGHT HDW/FUNC A B C ITEM

NASA [ 3 /3 ] [ ] [ ] [ ] [ ] [ X ]*
IOA [ 3 /1R ] [ P ] [ F ] [ P ] [ X ]
COMPARE [ /N ] [ N ] [ N ] [ N ] [ N ]

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

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-153
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1630
NASA FMEA #: 05-6EE-2014-1
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1630
ITEM: AMP
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1631
NASA FMEA #: 05-6EE-2014-1

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1631
ITEM: AMP

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-155
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1632
NASA FMEA #: 05-6EE-2014-1
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1632
ITEM: AMP

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1633
NASA FMEA #: 05-6EE-2014-1
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1633
ITEM: AMP
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-157
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1634
NASA FMEA #: 05-6EE-2014-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1634
ITEM: THERMISTER THERMOMETER

LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-158
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1635
NASA FMEA #: 05-6EE-2014-1
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1635
ITEM: THERMISTER THERMOMETER
LEAD ANALYST: A.D. MONTGOMERY

NASA DATA:
BASELINE [ ]
NEW [ X ]

ITEM CRITICALITY REDUNDANCY SCREENS CIL
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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-159
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1636
NASA FMEA #: 05-6EE-2014-1
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1636
ITEM: FIELD EFFECT TRANSISTOR
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-160
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1637
NASA FMEA #: 05-6EE-2014-1

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1637
ITEM: FIELD EFFECT TRANSISTOR

LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-161
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1638
NASA FMEA #: 05-6EE-2014-1
NASA DATA:
BASELINE [ ]
NEW [ X ]
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1638
ITEM: CONTROL CIRCUIT
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-162
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1639
NASA FMEA #: 05-6EE-2014-1

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1639
ITEM: CONTROL CIRCUIT

LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-163
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1640
NASA FMEA #: 05-6EE-2014-1

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1640
ITEM: READ ONLY MEMORY

LEAD ANALYST: A.D. MONTGOMERY

NASA DATA:
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NEW [ X ]

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-164
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1641
NASA FMEA #: 05-6EE-2014-1

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1641
ITEM: READ ONLY MEMORY
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

CRITICALITY
FLIGHT
HDW/FUNC

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COMPARE [ / N ] [ N ] [ N ] [ N ] [ N ]

RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY
IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-165
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1642
NASA FMEA #: 05-6EE-2014-1

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1642
ITEM: TRANSDUCER TEMP AMP
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
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REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1643
NASA FMEA #: 05-6EE-2014-1
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1643
ITEM: TRANSDUCER TEMP AMP

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988   C.10-167
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1644
NASA FMEA #: 05-6EE-2014-1
NASA DATA: BASELINE [ ] NEW [ X ]

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1644
ITEM: AMP

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988   C.10-168
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
NASA DATA:
ASSESSMENT ID: MECH/ADP-1645 NASA FMEA #: 05-6EE-2014-1
NASA ID: MECH/ADP/EPD&C
MDAC ID: 1645
ITEM: AMP

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-169
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1646
NASA FMEA #: 05-6EE-2014-1

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1646
ITEM: TRANSISTOR

LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-170
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1647
NASA FMEA #: 05-6EE-2014-1
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1647
ITEM: TRANSISTOR
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)
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*CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1648
NASA FMEA #: 05-6EE-2014-1
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1648
ITEM: AND GATE
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-172
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1649
NASA FMEA #: 05-6EE-2014-1
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1649
ITEM: AND GATE
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1650
NASA FMEA #: 05-6EE-2014-1

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1650
ITEM: SERIAL SHIFT REGISTER

LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-174
APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1651
NASA FMEA #: 05-6EE-2014-1

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1651
ITEM: SERIAL SHIFT REGISTER

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-175
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1652
NASA FMEA #: 05-6EE-2014-1
SUBSYSTEM: MECH/ADP/EP&D&C
MDAC ID: 1652
ITEM: BINARY COUNTER
LEAD ANALYST: A.D. MONTGOMERY

NASA DATA:
BASELINE [ ]
NEW [ X ]

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-176
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
NASA DATA:

ASSESSMENT ID: MECH/ADP-1653
NASA FMEA #: 05-6EE-2014-1

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1653
ITEM: BINARY COUNTER

LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]

INADEQUATE [ ]

REMARKS:

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-177
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1654
NASA FMEA #: 05-6EE-2014-1
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1654
ITEM: ADDRESSABLE SWITCH
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-178
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1655
NASA FMEA #: 05-6EE-2014-1
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1655
ITEM: ADDRESSABLE SWITCH
LEAD ANALYST: A.D. MONTGOMERY

NASA DATA:
BASELINE [ ]
NEW [ X ]

CRITICALITY
FLIGHT
HDW/FUNC

REDUNDANCY SCREENS
A B C

ITEM

NASA [ 3 /3 ] [ ] [ ] [ ] [ ] [ ] *
IOA [ 3 /1R ] [ P ] [ F ] [ P ] [ X ]

RECOMMENDATIONS: (If different from NASA)
[ 3 /1R ] [ P ] [ P ] [ P ] [ ]

(ADD/DELETE)

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-179
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1656
NASA FMEA #: 05-6EE-2014-1
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1656
ITEM: AMP
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-180
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1657
NASA FMEA #: 05-6EE-2014-1
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1657
ITEM: AMP
LEAD ANALYST: A.D. MONTGOMERY

NASA DATA:

BASELINE [ ]
NEW [ X ]

ASSESSMENT:

CRITICALITY REDUNDANCY SCREENS CIL
FLIGHT HDW/FUNC A B C ITEM

NASA [ 3 /3 ] [ ] [ ] [ ] [ ] [ ] *

IOA [ 3 /1R ] [ P ] [ F ] [ P ] [ X ]

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/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-181
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1658
NASA FMEA #: 05-6EE-2014-1
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1658
ITEM: SWITCHING LADDER

LEAD ANALYST: A.D. MONTGOMERY

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- IOA [ 3 /1R ]
- COMPARE [ /N ]

RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

- ADEQUATE [ ]
- INADEQUATE [ ]

REMARKS:

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1659
NASA FMEA #: 05-6EE-2014-1
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1659
ITEM: SWITCHING LADDER
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
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INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-183
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1660
NASA FMEA #: 05-6EE-2014-1

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1660
ITEM: POLARITY DETECTOR
LEAD ANALYST: A.D. MONTGOMERY

NASA DATA:
BASELINE [ ]
NEW [ x ]

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-184
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1661
NASA FMEA #: 05-6EE-2014-1
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1661
ITEM: POLARITY DETECTOR
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-185
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1662
NASA FMEA #: 05-6EE-2014-1
NASA DATA:
BASELINE [   ]
NEW [ X ]

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1662
ITEM: CONTROL LOGIC

LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-186
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1663
NASA FMEA #: 05-6EE-2014-1
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1663
ITEM: CONTROL LOGIC
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-187
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1664
NASA FMEA #: 05-6EE-2014-1
NASA DATA: BASELINE [ ] NEW [ X ]

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1664
ITEM: REGISTER

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-188
# APPENDIX C
## ASSESSMENT WORKSHEET

**ASSESSMENT DATE:** 1/26/88  
**ASSESSMENT ID:** MECH/ADP-1665  
**NASA FMEA #:** 05-6EE-2014-1

**SUBSYSTEM:** MECH/ADP/EPD&C  
**MDAC ID:** 1665  
**ITEM:** REGISTER

**LEAD ANALYST:** A.D. MONTGOMERY

**NASA DATA:**  
- BASELINE [ ]  
- NEW [ X ]

**ASSESSMENT:**

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**RECOMMENDATIONS:** (If different from NASA)  
- [ 3 /1R ] [ P ] [ P ] [ P ] [ ] (ADD/DELETE)

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

**REMARKS:**  
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

**REPORT DATE** 22 JULY 1988  
**C.10-189**
**APPENDIX C**  
**ASSESSMENT WORKSHEET**

**ASSESSMENT DATE:** 1/26/88  
**ASSESSMENT ID:** MECH/ADP-1666  
**NASA FMEA #:** 05-6EE-2014-1  

**NASA DATA:**  
**BASELINE [ ]**  
**NEW [ X ]**

**SUBSYSTEM:** MECH/ADP/EPD&C  
**MDAC ID:** 1666  
**ITEM:** DISCREET INPUT BUFFER

**LEAD ANALYST:** A.D. MONTGOMERY

**ASSESSMENT:**

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**RECOMMENDATIONS:** (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

**REMARKS:**

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

---

**REPORT DATE** 22 JULY 1988  
**C.10-190**
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1667
NASA FMEA #: 05-6EE-2014-1
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1667
ITEM: DISCREET INPUT BUFFER
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)
[ 3/1R ] [ P ] [ P ] [ P ] [ ] (ADD/DELETE)

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-191
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1668
NASA FMEA #: 05-6EE-2014-1
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1668
ITEM: SERIAL/PARALLEL CONVERTER
LEAD ANALYST: A.D. MONTGOMERY

NASA DATA:
BASELINE [   ]
NEW [ X ]

ASSESSMENT:

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| 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/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-192
**APPENDIX C**  
**ASSESSMENT WORKSHEET**

**ASSESSMENT DATE:** 1/26/88  
**ASSESSMENT ID:** MECH/ADP-1669  
**NASA FMEA #:** 05-6EE-2014-1  
**NASA DATA:**  
- BASELINE [ ]  
- NEW [ X ]

**SUBSYSTEM:** MECH/ADP/EPD&C  
**MDAC ID:** 1669  
**ITEM:** SERIAL/PARALLEL CONVERTER  
**LEAD ANALYST:** A.D. MONTGOMERY

**ASSESSMENT:**

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**RECOMMENDATIONS:** (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
INADEQUATE [ ]

**REMARKS:**  
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

**REPORT DATE** 22 JULY 1988  
C.10-193
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1670
NASA FMEA #: 05-6EE-2014-1

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1670
ITEM: OSCILLATOR

LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-194
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1671
NASA FMEA #: 05-6EE-2014-1
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1671
ITEM: OSCILLATOR
LEAD ANALYST: A.D. MONTGOMERY

NASA DATA:
BASELINE [ ]
NEW [ X ]

CRITICALITY:
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HDW/FUNC

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-195
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1672
NASA FMEA #: 05-6EE-2014-1
NASA DATA:
BASELINE [ ]
NEW [ x ]

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1672
ITEM: 2 MH2 CLOCK

LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-196
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1673
NASA FMEA #: 05-6EE-2014-1
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1673
ITEM: 2 MH2 CLOCK
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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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/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-197
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1674
NASA FMEA #: 05-6EE-2014-1
NASA DATA: BASELINE [ ]
NEW [ X ]

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1674
ITEM: 1 MH2 CLOCK

LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1675
NASA FMEA #: 05-6EE-2014-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1675
ITEM: 1 MH2 CLOCK

LEAD ANALYST: A.D. MONTGOMERY

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-199
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1676
NASA FMEA #: 05-6EE-2014-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1676
ITEM: 500 MH2 CLOCK

LEAD ANALYST: A.D. MONTGOMERY

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-200
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1677
NASA FMEA #: 05-6EE-2014-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1677
ITEM: 500 MH2 CLOCK

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
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INADEQUATE [ ]

REMARKS:
IOA/MDAC AGrees WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-201
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1678
NASA FMEA #: 05-6EE-2014-1

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1678
ITEM: COUNTER

LEAD ANALYST: A.D. MONTGOMERY

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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/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-202
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1679
NASA FMEA #: 05-6EE-2014-1
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1679
ITEM: COUNTER
LEAD ANALYST: A.D. MONTGOMERY

NASA DATA:
BASELINE [ ]
NEW [ X ]

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RECOMMENDATIONS: (If different from NASA)

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*(ADD/DELETE)*

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-203
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1680
NASA FMEA #: 05-6EE-2014-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1680
ITEM: OR GATE

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-204
**APPENDIX C**

**ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 1/26/88  
ASSESSMENT ID: MECH/ADP-1681  
NASA FMEA #: 05-6EE-2014-1  

NASA DATA:  
BASELINE [ ]  
NEW [ X ]

SUBSYSTEM: MECH/ADP/EPD&C  
MDAC ID: 1681  
ITEM: OR GATE

LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-205
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1682
NASA FMEA #: 05-6EE-2014-1
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1682
ITEM: SENSOR WINDOW GENERATOR

LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1683
NASA FMEA #: 05-6EE-2014-1

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1683
ITEM: SENSOR WINDOW GENERATOR

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-207
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1684
NASA FMEA #: 05-6EE-2014-1
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1684
ITEM: BUFFER
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-208
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1685
NASA FMEA #: 05-6EE-2014-1
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1685
ITEM: BUFFER
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-209
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1686
NASA FMEA #: 05-6EE-2014-1

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1686
ITEM: OUTPUT CONTROL
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
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INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-210
APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88  
ASSESSMENT ID: MECH/ADP-1687  
NASA FMEA #: 05-6EE-2014-1  
NASA DATA: 
BASELINE [ ]  
NEW [ X ]

SUBSYSTEM: MECH/ADP/EPD&C  
MDAC ID: 1687  
ITEM: OUTPUT CONTROL  
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)  
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REMARKS:  
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988    C.10-211
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
NASA DATA:
ASSESSMENT ID: MECH/ADP-1688
NASA FMEA #: 05-6EE-2014-1
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1688
ITEM: ENCODER
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-212
**APPENDIX C**

**ASSESSMENT WORKSHEET**

**ASSESSMENT DATE:** 1/26/88  
**ASSESSMENT ID:** MECH/ADP-1689  
**NASA FMEA #:** 05-6EE-2014-1

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**SUBSYSTEM:** MECH/ADP/EPD&C  
**MDAC ID:** 1689  
**ITEM:** ENCODER  
**LEAD ANALYST:** A.D. MONTGOMERY

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| COMPARE|[ /N]   | [ N ]  | [ N ]  | [ N ]  | [ N ]  |

**RECOMMENDATIONS:** (If different from NASA)

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

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**REMARKS:**

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

**REPORT DATE** 22 JULY 1988  
**C.10-213**
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1690
NASA FMEA #: 05-6EE-2014-1
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1690
ITEM: AMP

LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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HDW/FUNC
NASA [ 3 /3 ]
IOA [ 3 /1R ]
COMPARE [ /N ]

REDUNDANCY SCREENS
A
B
C
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CIL ITEM
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RECOMMENDATIONS: (If different from NASA)
[ 3 /1R ] [ P ] [ P ] [ P ]

(ADD/DELETE)

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-214
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1691
NASA FMEA #: 05-6EE-2014-1
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1691
ITEM: AMP
LEAD ANALYST: A.D. MONTGOMERY

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1691
ITEM: AMP
LEAD ANALYST: A.D. MONTGOMORY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
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REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1692
NASA FMEA #: 05-6EE-2014-1
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1692
ITEM: CPU

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-216
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
NASA DATA:
ASSESSMENT ID: MECH/ADP-1693 BASELINE [ ]
NASA FMEA #: 05-6EE-2014-1 NEW [ X ]
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1693
ITEM: CPU
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-217
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1694
NASA FMEA #: 05-6EE-2014-1
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1694
ITEM: SELECTOR LOGIC
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-218
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1695
NASA FMEA #: 05-6EE-2014-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1695
ITEM: SELECTOR LOGIC

LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-219
ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1696
NASA FMEA #: 05-6EE-2014-1
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1696
ITEM: READ ONLY MEMORY
LEAD ANALYST: A.D. MONTGOMERY

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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/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-220
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1697
NASA FMEA #: 05-6EE-2014-1
SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1697
ITEM: ROM
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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| 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:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-221
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1698
NASA FMEA #: 05-6EE-2014-1

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1698
ITEM: READ/WRITE MEMORY

LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[3/1R] [ P ] [ P ] [ P ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-222
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/26/88
ASSESSMENT ID: MECH/ADP-1699
NASA FMEA #: 05-6EE-2014-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: MECH/ADP/EPD&C
MDAC ID: 1699
ITEM: READ/WRITE MEMORY

LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-223
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/ESP-2106
NASA FMEA #: NASA DATA:
BASELINE [ ] NEW [ ]
NASA FMEA #:

SUBSYSTEM: MECH/ESP
MDAC ID: 2106
ITEM: ALL ITEMS NOT SHOWN ON MDAC ID 100-105 (WASHER,
BUSHING, NUT, CotTER PIN, SAFETY WIRE, ETC)

LEAD ANALYST: H.J. LOWERY

ASSESSMENT:

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| IOA         | 3 / 3    |    /     |    /     |
| COMPARE     |    /     |    /     |    /     |

RECOMMENDATIONS: (If different from NASA)

[ / ] [ / ] [ / ] [ / ] [ / ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
THE ISSUE AROSE DUE TO DIFFERENCES BETWEEN THE NASA AND IOA
FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THE
ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-224
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: [ ]
ASSESSMENT ID: MECH/OS-2500
NASA FMEA #: 01-4-CS12-1
NASA DATA: BASELINE [ ]
NEW [ X ]
SUBSYSTEM: MAS/CMS (CREW MODULE SEALS)
MDAC ID: 2500
ITEM: ENVIRONMENTAL BARRIER
LEAD ANALYST: H. J. LOWERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
THE ISSUE AROSE DUE TO DIFFERENCES IN GROUND RULES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THIS FAILURE WAS NOT INITIALLY ANALYZED OR ASSESSED BY IOA. HOWEVER, IOA HAS NO ISSUE WITH THE NASA FMEA/CIL.

REPORT DATE 22 JULY 1988 C.10-225
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: [ ]
ASSESSMENT ID: MECH/OS-2501
NASA FMEA #: 01-4-CS1-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: MAS/CMS (CREW MODULE SEALS)
MDAC ID: 2501
ITEM: SEALS, WINDOW PANE ASSEMBLY

LEAD ANALYST: H. J. LOWERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
The issue arose due to differences in ground rules between the NASA and IOA FMEA/CIL interpretation and implementation of NSTS 22206. This failure was not initially analyzed or assessed by IOA. However, IOA has no issue with the NASA FMEA/CIL.

REPORT DATE 22 JULY 1988 C.10-226
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: NASA DATA:
ASSESSMENT ID: MECH/OS-2502 BASELINE [ ]
NASA FMEA #: 01-4-CS3-1 NEW [ X ]

SUBSYSTEM: MDAC ID:
MAS/CMS (CREW MODULE SEALS) 2502
ITEM:
SEALS, WINDOW ASSEMBLY SPACER/RETAINER

LEAD ANALYST: H. J. LOWERY

ASSESSMENT:

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COMPARE [ N /N ] [ N ] [ N ] [ N ] [ N ]

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

(ADD/DELETE)

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

REMARKS:
THE ISSUE AROSE DUE TO DIFFERENCES IN GROUND RULES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THIS FAILURE WAS NOT INITIALLY ANALYZED OR ASSESSED BY IOA. HOWEVER, IOA HAS NO ISSUE WITH THE NASA FMEA/CIL.

REPORT DATE 22 JULY 1988 C.10-227
ASSESSMENT DATE: NASA DATA:
ASSESSMENT ID: MECH/OS-2503 BASELINE [ ]
NASA FMEA #: 01-4-CS4-1 NEW [ X ]
SUBSYSTEM: MAS/CMS (CREW MODULE SEALS)
MDAC ID: 2503
ITEM: SEALS, WINDOW ASSEMBLY INSTALLATION
LEAD ANALYST: H. J. LOWERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:

THE ISSUE AROSE DUE TO DIFFERENCES IN GROUND RULES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THIS FAILURE WAS NOT INITIALLY ANALYZED OR ASSESSED BY IOA. HOWEVER, IOA HAS NO ISSUE WITH THE NASA FMEA/CIL.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE:

ASSESSMENT ID: MECH/OS-2504
NASA FMEA #: 01-4-CS13-1

SUBSYSTEM: MAS/CMS (CREW MODULE SEALS)
MDAC ID: 2504
ITEM: SEALS, MANUFACTURING ACCESS PANEL

LEAD ANALYST: H. J. LOWERY

ASSESSMENT:

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COMPARE [ N /N ] [ N ] [ N ] [ N ] [ N ]

RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
THE ISSUE AROSE DUE TO DIFFERENCES IN GROUND RULES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THIS FAILURE WAS NOT INITIALLY ANALYZED OR ASSESSED BY IOA. HOWEVER, IOA HAS NO ISSUE WITH THE NASA FMEA/CIL.

REPORT DATE 22 JULY 1988 C.10-229
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: NASA DATA:
ASSESSMENT ID: MECH/OS-2505 BASELINE [ ]
NASA FMEA #: 01-4-CS15-1 NEW [ X ]

SUBSYSTEM: MAS/CMS (CREW MODULE SEALS)
MDAC ID: 2505
ITEM: SEAL, FEED THROUGH PLATES, BULKHEADS

LEAD ANALYST: H. J. LOWERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] [ ]

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:

THE ISSUE AROSE DUE TO DIFFERENCES IN GROUND RULES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THIS FAILURE WAS NOT INITIALLY ANALYZED OR ASSESSED BY IOA. HOWEVER, IOA HAS NO ISSUE WITH THE NASA FMEA/CIL.

REPORT DATE 22 JULY 1988 C.10-230
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: NASA DATA:
ASSESSMENT ID: MECH/OS-2506 BASELINE [ ]
NASA FMEA #: 01-4-CS17-1 NEW [ X ]

SUBSYSTEM: NASA [ ]
MDAC ID: MECH/OS-2506 IOA [ ]
ITEM: SEAL ELECTRICAL FEEDTHROUGH CONNECTOR COMPARE [ N/N ]
LEAD ANALYST: H. J. LOWERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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*CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:

THE ISSUE AROSE DUE TO DIFFERENCES IN GROUND RULES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THIS FAILURE WAS NOT INITIALLY ANALYZED OR ASSESSED BY IOA. HOWEVER, IOA HAS NO ISSUE WITH THE NASA FMEA/CIL.

REPORT DATE 22 JULY 1988 C.10-231
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: NASA DATA:
ASSESSMENT ID: MECH/OS-2507 BASELINE [ ]
NASA FMEA #: 01-4-CS18-1 NEW [ X ]
NASA FMEA #: 01-4-CS18-1
MDAC ID: 2507
ITEM: SEALS, HARD LINE FEED THROUGH FITTING
LEAD ANALYST: H. J. LOWERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
The issue arose due to differences in ground rules between the NASA and IOA FMEA/CIL interpretation and implementation of NSTS 22206. This failure was not initially analyzed or assessed by IOA. However, IOA has no issue with the NASA FMEA/CIL.

REPORT DATE 22 JULY 1988 C.10-232
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE:  
ASSESSMENT ID: MECH/OS-2508  
NASA FMEA #: 01-4-CS19-1  

NASA DATA:  
BASELINE [ ]  
NEW [ X ]

SUBSYSTEM: 01-4-CS19-1  
MDAC ID: 2508  
ITEM: SEALS, CREW MODULE, ETS FEEDTHROUGH BLANKING PLUGS (OV-102 ONLY)

LEAD ANALYST: H. J. LOWERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:

THE ISSUE AROSE DUE TO DIFFERENCES IN GROUND RULES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THIS FAILURE WAS NOT INITIALLY ANALYZED OR ASSESSED BY IOA. HOWEVER, IOA HAS NO ISSUE WITH THE NASA FMEA/CIL.

REPORT DATE 22 JULY 1988 C.10-233
## APPENDIX C
### ASSESSMENT WORKSHEET

**ASSESSMENT DATE:**

**ASSESSMENT ID:** MECH/OS-2509

**NASA FMEA #:** 01-4-CS20-1

**NASA DATA:**
- **BASELINE** [ ]
- **NEW** [ X ]

**SUBSYSTEM:** MAS/CMS (CREW MODULE SEALS)

**MDAC ID:** 2509

**ITEM:** SEALS, AIRLOCK HATCH "A" AND "B" WINDOWS

**LEAD ANALYST:** H. J. LOWERY

### ASSESSMENT:

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- **COMPARE** [ N /N ]

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**(ADD/DELETE)**

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

**REMARKS:**

THE ISSUE AROSE DUE TO DIFFERENCES IN GROUND RULES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THIS FAILURE WAS NOT INITIALLY ANALYZED OR ASSESSED BY IOA. HOWEVER, IOA HAS NO ISSUE WITH THE NASA FMEA/CIL.

**REPORT DATE** 22 JULY 1988    C.10-234
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE:    NASA DATA:
ASSESSMENT ID:     MECH/OS-2510     BASELINE [  ]
NASA FMEA #:     01-4-CS22-1     NEW [ X ]
SUBSYSTEM:        MAS/CMS (CREW MODULE SEALS)
MDAC ID:          2510
ITEM:             SEALS, INNER PANES, SIDE HATCH WINDOW
LEAD ANALYST:     H. J. LOWERY

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
THE ISSUE AROSE DUE TO DIFFERENCES IN GROUND RULES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THIS FAILURE WAS NOT INITIALLY ANALYZED OR ASSESSED BY IOA. HOWEVER, IOA HAS NO ISSUE WITH THE NASA FMEA/CIL.

REPORT DATE 22 JULY 1988    C.10-235
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 
ASSESSMENT ID: MECH/OS-2511
NASA FMEA #: 01-4-CS24-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM:
MDAC ID: 01-4-CS24-1
2511
ITEM: SEAL, SIDE HATCH WINDOW ASSEMBLY

LEAD ANALYST: H. J. LOWERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
THE ISSUE AROSE DUE TO DIFFERENCES IN GROUND RULES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THIS FAILURE WAS NOT INITIALLY ANALYZED OR ASSESSED BY IOA. HOWEVER, IOA HAS NO ISSUE WITH THE NASA FMEA/CIL.

REPORT DATE 22 JULY 1988 C.10-236
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE:  
ASSESSMENT ID: MECH/OS-2512  
NASA FMEA #: 01-4-CS25-1

NASA DATA: BASELINE [ ] NEW [ X ]

SUBSYSTEM: MAS/CMS (CREW MODULE SEALS)  
MDAC ID: 2512  
ITEM: SEALS, AIRLOCK AND INGRESS/EGRESS HATCHES

LEAD ANALYST: H. J. LOWERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
THE ISSUE AROSE DUE TO DIFFERENCES IN GROUND RULES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THIS FAILURE WAS NOT INITIALLY ANALYZED OR ASSESSED BY IOA. HOWEVER, IOA HAS NO ISSUE WITH THE NASA FMEA/CIL.

REPORT DATE 22 JULY 1988 C.10-237
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 
ASSESSMENT ID: MECH/OS-2513
NASA FMEA #: 01-4-CS28-1
NASA DATA: BASELINE [ ] NEW [ X ]

SUBSYSTEM: MAS/CMS (CREW MODULE SEALS)
MDAC ID: 2513
ITEM: SEALS, TUNNEL/CREW MODULE STRUCTURAL INTERFACE
LEAD ANALYST: H. J. LOWERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
THE ISSUE AROSE DUE TO DIFFERENCES IN GROUND RULES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NTS 22206. THIS FAILURE WAS NOT INITIALLY ANALYZED OR ASSESSED BY IOA. HOWEVER, IOA HAS NO ISSUE WITH THE NASA FMEA/CIL.

REPORT DATE 22 JULY 1988 C.10-238
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: NASA DATA:
ASSESSMENT ID: MECH/OS-2514 BASELINE [ ]
NASA FMEA #: 01-4-CS29-1 NEW [ X ]

SUBSYSTEM: NASA [ 3 ]
MDAC ID: MECH/OS-2514 /IR [ ]
ITEM: IOA [ ]
LEAD ANALYST: COMPARE [ N ]
H. J. LOWERY [N]

ASSESSMENT:

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

RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
The issue arose due to differences in ground rules between the NASA and IOA FMEA/CIL interpretation and implementation of NSTS 22206. This failure was not initially analyzed or assessed by IOA. However, IOA has no issue with the NASA FMEA/CIL.

REPORT DATE 22 JULY 1988  C.10-239
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: NASA DATA:
ASSESSMENT ID: MECH/OS-2515 BASELINE [ ]
NASA FMEA #: 01-4-CS30-1 NEW [ X ]
SUBSYSTEM: NASA FMEA 
FMEA #:
MDAC ID:
ITEM: NASA 
SUBSYSTEM:
LEAD ANALYST: H. J. LOWERY
ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
THE ISSUE AROSE DUE TO DIFFERENCES IN GROUND RULES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THIS FAILURE WAS NOT INITIALLY ANALYZED OR ASSESSED BY IOA. HOWEVER, IOA HAS NO ISSUE WITH THE NASA FMEA/CIL.

REPORT DATE 22 JULY 1988 C.10-240
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE:
ASSESSMENT ID: MECH/OS-2516
NASA FMEA #: 01-4-CS31-1
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: MAS/CMS (CREW MODULE SEALS)
MDAC ID: 2516
ITEM: SEAL, BULKHEAD FEED THROUGH, WCCS LINES

LEAD ANALYST: H. J. LOWERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

REMARKS:
The issue arose due to differences in ground rules between the NASA and IOA FMEA/CIL interpretation and implementation of NSTS 22206. This failure was not initially analyzed or assessed by IOA. However, IOA has no issue with the NASA FMEA/CIL.

REPORT DATE 22 JULY 1988 C.10-241
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: NASA DATA:
ASSESSMENT ID: MECH/OS-2517 BASELINE [ ]
NASA FMEA #: 01-4-CS32-1 NEW [ X ]
SUBSYSTEM: MAS/CMS (CREW MODULE SEALS)
MDAC ID: 2517
ITEM: SEAL, LATCH ACTUATOR TO HATCH STRUCTURE
LEAD ANALYST: H. J. LOWERY

ASSESSMENT:

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| IOA [ / ] | [ ] | [ ] | [ ] | [ ] | |
| COMPARE [ N /N ] | [ N ] | [ N ] | [ N ] | [ N ] | [ N ] |

RECOMMENDATIONS: (If different from NASA)
[ / ] [ ] [ ] [ ] [ ] (ADD/DELETE)
* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
THE ISSUE AROSE DUE TO DIFFERENCES IN GROUND RULES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THIS FAILURE WAS NOT INITIALLY ANALYZED OR ASSESSED BY IOA. HOWEVER, IOA HAS NO ISSUE WITH THE NASA FMEA/CIL.

REPORT DATE 22 JULY 1988 C.10-242
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE:  
ASSESSMENT ID: MECH/OS-2518  
NASA FMEA #: 01-4-CS34-1  
NASA DATA:  
BASELINE [ ]  
NEW [ X ]

SUBSYSTEM: MAS/CMS (CREW MODULE SEALS)  
MDAC ID: 2518  
ITEM: SEAL, CREW MODULE, ETS PYRO LINE FITTINGS  
LEAD ANALYST: H. J. LOWERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:

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REPORT DATE 22 JULY 1988 C.10-243
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 
ASSESSMENT ID: MECH/OS-2519 
NASA FMEA #: 01-4-CS35-1 

NASA DATA: 
BASELINE [ ] 
NEW [ X ]

SUBSYSTEM: MAS/CMS (CREW MODULE SEALS)
MDAC ID: 2519
ITEM: SEAL, CREW MODULE, FLIGHT DECK "BEANIE CAP" OVERHEAD PANEL (OV-102 ONLY)

LEAD ANALYST: H. J. LOWERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:

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REPORT DATE 22 JULY 1988 C.10-244
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 
ASSESSMENT ID: MECH/OS-2520 
NASA FMEA #: 01-4-CS39-1 

NASA DATA: 
BASELINE [ ] 
NEW [ X ]

SUBSYSTEM: MAS/CMS (CREW MODULE SEALS) 
MDAC ID: 2520 
ITEM: SEALS, STAR TRACKER BOOM COLLAR STRUCTURAL ATTACH AND COVER PLATE

LEAD ANALYST: H. J. LOWERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
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REPORT DATE 22 JULY 1988 C.10-245
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: NASA DATA:
ASSESSMENT ID: MECH/OS-2521 BASELINE [ ]
NASA FMEA #: 01-4-CS40-1 NEW [ X ]

SUBSYSTEM: MAS/CMS (CREW MODULE SEALS)
MDAC ID: 2521
ITEM: SEAL, STAR TRACKER BOOM

LEAD ANALYST: H. J. LOWERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
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APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 
ASSESSMENT ID: MECH/OS-2522
NASA FMEA #: 01-4-CS43-1
SUBSYSTEM: MAS/CMS (CREW MODULE SEALS)
MDAC ID: 2522
ITEM: SEAL, STAR TRACKER WELL TO CREW MODULE STRUCTURE
LEAD ANALYST: H. J. LOWERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
The issue arose due to differences in ground rules between the NASA and IOA FMEA/CIL interpretation and implementation of NSTS 22206. This failure was not initially analyzed or assessed by IOA. However, IOA has no issue with the NASA FMEA/CIL.

REPORT DATE 22 JULY 1988 C.10-247
**APPENDIX C**

**ASSESSMENT WORKSHEET**

**ASSESSMENT DATE:**
**ASSESSMENT ID:** MECH/OS-2523
**NASA FMEA #:** 01-4-CS44-1

**NASA DATA:**
**BASELINE [ ]**
**NEW [ X ]**

**SUBSYSTEM:** MAS/CMS (CREW MODULE SEALS)
**MDAC ID:** 2523
**ITEM:** SEAL, AFT BULKHEAD-POSITIVE PRESSURE RELIEF VALVES, BLEED VALVES & LEFT HAND SIDE-NEGATIVE PRESSURE RELIEF VALVES.

**LEAD ANALYST:** H. J. LOWERY

**ASSESSMENT:**

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**RECOMMENDATIONS:** (If different from NASA)

| [ / ] | [ ] | [ ] | [ ] | [ ] |

* CIL RETENTION RATIONALE: (If applicable)

| ADEQUATE [ X ] |
| INADEQUATE [ ] |

**REMARKS:**

THE ISSUE AROSE DUE TO DIFFERENCES IN GROUND RULES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THIS FAILURE WAS NOT INITIALLY ANALYZED OR ASSESSED BY IOA. HOWEVER, IOA HAS NO ISSUE WITH THE NASA FMEA/CIL.

**REPORT DATE** 22 JULY 1988  
**C.10-248**
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: NASA DATA: NASA FMEA #: MECH/OS-2524 01-4-CS46-1
ASSESSMENT ID: BASELINE [ ] NEW [ X ]
SUBSYSTEM: MAS/CMS (CREW MODULE SEALS)
MDAC ID: 2524
ITEM: SEAL, VENT SEVERANCE PANEL
LEAD ANALYST: H. J. LOWERY

ASSESSMENT:

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IOA [ / ] [ ] [ ] [ ] [ ]
COMPARE [ N /N ] [ N ] [ N ] [ N ] [ N ]

RECOMMENDATIONS: (If different from NASA)

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

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

REMARKS:
THE ISSUE AROSE DUE TO DIFFERENCES IN GROUND RULES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THIS FAILURE WAS NOT INITIALLY ANALYZED OR ASSESSED BY IOA. HOWEVER, IOA HAS NO ISSUE WITH THE NASA FMEA/CIL.

REPORT DATE 22 JULY 1988 C.10-249
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: NASA DATA:
ASSessment ID: MECH/OS-2525 BASELINE [ ]
NASA FMEA #: 01-4-CS47-1 NEW [ X ]

SUBSYSTEM: MAS/CMS (CREW MODULE SEALS)
MDAC ID: 2525
ITEM: SEALS, SIDE HATCH CABIN FILL TEST PORT

LEAD ANALYST: H. J. LOWERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:

THE ISSUE AROSE DUE TO DIFFERENCES IN GROUND RULES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THIS FAILURE WAS NOT INITIALLY ANALYZED OR ASSESSED BY IOA. HOWEVER, IOA HAS NO ISSUE WITH THE NASA FMEA/CIL.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 
ASSESSMENT ID: MECH/OS-2526
NASA FMEA #: 01-4-CS48-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: MAS/CMS (CREW MODULE SEALS)
MDAC ID: 2526
ITEM: SEAL, AIR EQUALIZATION VALVES AND PRESSURE GAUGE TO HATCH STRUCTURE, AIRLOCK HATCHES
LEAD ANALYST: H. J. LOWERY

ASSESSMENT:

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

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

REMARKS:
The issue arose due to differences in ground rules between the NASA and IOA FMEA/CIL interpretation and implementation of NSTS 22206. This failure was not initially analyzed or assessed by IOA. However, IOA has no issue with the NASA FMEA/CIL.

REPORT DATE 22 JULY 1988 C.10-251
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: [Redacted]
ASSESSMENT ID: MECH/OS-2527
NASA FMEA #: 01-4-CS49-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: MAS/CMS (CREW MODULE SEALS)
MDAC ID: 2527
ITEM:
SEAL, AFT BULKHEAD-VACUUM VENT ISOLATION VALVE

LEAD ANALYST: H. J. LOWERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
THE ISSUE AROSE DUE TO DIFFERENCES IN GROUND RULES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THIS FAILURE WAS NOT INITIALLY ANALYZED OR ASSESSED BY IOA. HOWEVER, IOA HAS NO ISSUE WITH THE NASA FMEA/CIL.

REPORT DATE 22 JULY 1988 C.10-252
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE:  
ASSESSMENT ID: MECH/OS-2528  
NASA FMEA #: 01-4-CS51-1  
SUBSYSTEM: MAS/CMS (CREW MODULE SEALS)  
MDAC ID: 2528  
ITEM: SEAL, TEST PORT CAP, CABIN FILL, SIDE HATCH  
LEAD ANALYST: H. J. LOWERY  
ASSESSMENT:

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

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

REMARKS:  
THE ISSUE AROSE DUE TO DIFFERENCES IN GROUND RULES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THIS FAILURE WAS NOT INITIALLY ANALYZED OR ASSESSED BY IOA. HOWEVER, IOA HAS NO ISSUE WITH THE NASA FMEA/CIL.

REPORT DATE 22 JULY 1988  C.10-253
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 
ASSESSMENT ID: MECH/OS-2529 
NASA FMEA #: 01-4-CS52-1 
NASA DATA: 
BASELINE [ ] 
NEW [ X ] 

SUBSYSTEM: MAS/CMS (CREW MODULE SEALS) 
MDAC ID: 2529 
ITEM: SEAL, FEED THROUGH PLATE, AIRLOCK 

LEAD ANALYST: H. J. LOWERY 

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
THE ISSUE AROSE DUE TO DIFFERENCES IN GROUND RULES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THIS FAILURE WAS NOT INITIALLY ANALYZED OR ASSESSED BY IOA. HOWEVER, IOA HAS NO ISSUE WITH THE NASA FMEA/CIL.

REPORT DATE 22 JULY 1988  C.10-254
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 6/06/88
ASSESSMENT ID: MECH/MS-2700
NASA FMEA #: 02-3A-A2-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: MECH/SEPARATION, ORBITER/ET
MDAC ID: 2700
ITEM: DEBRIS CONTAINER, AFT ATTACH

LEAD ANALYST: R. O'DONNELL

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:

THIS FAILURE WAS NOT INITIALLY ANALYZED BY IOA DUE TO DIFFERENCES BETWEEN THE NASA/RI AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. ON REVIEW OF THE FMEA/CIL, IOA/MDAC HAS NO ISSUE WITH THE NASA FMEA/CIL.

REPORT DATE 22 JULY 1988 C.10-255
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 6/06/88
ASSESSMENT ID: MECH/MS-2701
NASA FMEA #: 02-3A-U2-1
SUBSYSTEM: MECH/SEPARATION, ORBITER/ET
MDAC ID: 2701
ITEM: DEBRIS CONTAINER, UMBILICAL SEPARATION SYSTEM
LEAD ANALYST: R. O'DONNELL

NASA DATA:
BASELINE [ ]
NEW [ X ]

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
THIS FAILURE WAS NOT INITIALLY ANALYZED BY IOA DUE TO DIFFERENCES BETWEEN THE NASA/RI AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. ON REVIEW OF THE FMEA/CIL, IOA/MDAC HAS NO ISSUE WITH THE NASA FMEA/CIL.

REPORT DATE 22 JULY 1988 C.10-256
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 6/06/88
ASSESSMENT ID: MECH/MS-2702
NASA FMEA #: 02-3A-F4-1
NASA DATA:
BASELINE [ ]
NEW [ X ]
SUBSYSTEM: MECH/SEPARATION, ORBITER/ET
MDAC ID: 2702
ITEM: SPHERICAL BEARING, ORBITER/ET FORWARD ATTACH
LEAD ANALYST: R. O'DONNELL

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
THIS FAILURE WAS NOT INITIALLY ANALYZED BY IOA DUE TO DIFFERENCES BETWEEN THE NASA/RI AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. ON REVIEW OF THE FMEA/CIL, IOA/MDAC HAS NO ISSUE WITH THE NASA FMEA/CIL.

REPORT DATE 22 JULY 1988 C.10-257
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 6/06/88
ASSESSMENT ID: MECH/MS-2703
NASA FMEA #: 02-3A-A5-1
NASA DATA:
BASELINE [  ]
NEW [ X ]

SUBSYSTEM: MECH/SEPARATION, ORBITER/ET
MDAC ID: 2703
ITEM: BOLT, AFT ATTACH

LEAD ANALYST: R. O'DONNELL

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:

THIS FAILURE WAS NOT INITIALLY ANALYZED BY IOA DUE TO DIFFERENCES BETWEEN THE NASA/RI AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. ON REVIEW OF THE FMEA/CIL, IOA/MDAC HAS NO ISSUE WITH THE NASA FMEA/CIL.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 6/06/88
ASSESSMENT ID: MECH/MS-2704
NASA FMEA #: 02-3A-U3-1

SUBSYSTEM: MECH/SEPARATION, ORBITER/ET
MDAC ID: 2704
ITEM: STUD, UMBILICAL ATTACH

LEAD ANALYST: R. O'DONNELL

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
THIS FAILURE WAS NOT INITIALLY ANALYZED BY IOA DUE TO DIFFERENCES BETWEEN THE NASA/RI AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. ON REVIEW OF THE FMEA/CIL, IOA/MDAC HAS NO ISSUE WITH THE NASA FMEA/CIL.

REPORT DATE 22 JULY 1988 C.10-259
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 6/06/88
ASSESSMENT ID: MECH/MS-2705
NASA FMEA #: 02-3A-A7-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: MECH/SEPARATION, ORBITER/ET
MDAC ID: 2705
ITEM: HOLE PLUGGER/Cover ASSY, ORBITER/ET AFT ATTACH

LEAD ANALYST: R. O'DONNELL

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
THIS FAILURE WAS NOT INITIALLY ANALYZED BY IOA DUE TO DIFFERENCES BETWEEN THE NASA/RI AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. ON REVIEW OF THE FMEA/CIL, IOA/MDAC HAS NO ISSUE WITH THE NASA FMEA/CIL.

REPORT DATE 22 JULY 1988 C.10-260
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 6/06/88
ASSESSMENT ID: MECH/MS-2706
NASA FMEA #: 02-3A-U6-1
SUBSYSTEM: MECH/SEPARATION, ORBITER/ET
MDAC ID: 2706
ITEM: UMBILICAL CLOSEOUT CURTAIN
LEAD ANALYST: R. O'DONNELL

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
THIS FAILURE WAS NOT INITIALLY ANALYZED BY IOA DUE TO DIFFERENCES BETWEEN THE NASA/RI AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. ON REVIEW OF THE FMEA/CIL, IOA/MDAC HAS NO ISSUE WITH THE NASA FMEA/CIL.

REPORT DATE 22 JULY 1988 C.10-261
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 6/06/88
NASA DATA:
ASSESSMENT ID: MECH/MS-2707
NASA FMEA #: 02-3A-U8-1

BASELINE [ ]
NEW [ X ]

SUBSYSTEM: MECH/SEPARATION, ORBITER/ET
MDAC ID: 2707
ITEM: ELECTRICAL DISCONNECT ASSEMBLY, UMBILICAL

LEAD ANALYST: R. O'DONNELL

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:

THIS FAILURE WAS NOT INITIALLY ANALYZED BY IOA DUE TO DIFFERENCES BETWEEN THE NASA/RI AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. ON REVIEW OF THE FMEA/CIL, IOA/MDAC HAS NO ISSUE WITH THE NASA FMEA/CIL.

REPORT DATE 22 JULY 1988   C.10-262
APPENDIX C  
ASSESSMENT WORKSHEET  

ASSESSMENT DATE: 6/06/88  
ASSESSMENT ID: MECH/MS-2708  
NASA FMEA #: 02-3A-U8-2  

NASA DATA:  
BASELINE [ ]  
NEW [ X ]  

ASSESSMENT ID: MECH/MS-2708  
MDAC ID: 2708  
ITEM: ELECTRICAL DISCONNECT ASSEMBLY, UMBILICAL  
LEAD ANALYST: R. O’DONNELL  

ASSESSMENT:  
CRITICALITY REDUNDANCY SCREENS CIL ITEM  

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IOA [ / ]  
COMPARE [ N /N ]  

RECOMMENDATIONS: (If different from NASA)  
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* CIL RETENTION RATIONALE: (If applicable)  
ADEQUATE [ X ]  
INADEQUATE [ ]  

REMARKS:  
THIS FAILURE WAS NOT INITIALLY ANALYZED BY IOA DUE TO DIFFERENCES BETWEEN THE NASA/RI AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. ON REVIEW OF THE FMEA/CIL, IOA/MDAC HAS NO ISSUE WITH THE NASA FMEA/CIL.  

REPORT DATE 22 JULY 1988  
C.10-263
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 6/06/88
ASSESSMENT ID: MECH/MS-2709
NASA FMEA #: 02-3A-U7-1
NASA DATA: BASELINE [ ] NEW [ X ]

SUBSYSTEM: MECH/SEPARATION, ORBITER/ET
MDAC ID: 2709
ITEM: SIDE RESTRAINT STRUT, UMBILICAL
LEAD ANALYST: R. O'DONNELL

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:

THIS FAILURE WAS NOT INITIALLY ANALYZED BY IOA DUE TO DIFFERENCES BETWEEN THE NASA/RI AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. ON REVIEW OF THE FMEA/CIL, IOA/MDAC HAS NO ISSUE WITH THE NASA FMEA/CIL.

REPORT DATE 22 JULY 1988 C.10-264
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/ETU-3102
NASA FMEA #: 

SUBSYSTEM: MECH/ETU
MDAC ID: 3102
ITEM: CENTERLINE MOTOR CLUTCH

LEAD ANALYST: J. BACHER

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-265
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/ETU-3110
NASA FMEA #: NASA DATA:

SUBSYSTEM: MECH/ETUD
MDAC ID: 3110
ITEM: CENTERLINE LATCH LIMIT SWITCH
LEAD ANALYST: J. BACHER

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)
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REMARKS:
THE ISSUE AROSE DUE TO DIFFERENCES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988    C.10-266
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/ETU-3112
NASA FMEA #: NASA DATA:
SUBSYSTEM: MECH/ETUD
MDAC ID: 3112
ITEM: DOOR CLOSURE MOTOR CLUTCH
LEAD ANALYST: J. BACHER

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-267
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/ETU-3118
NASA FMEA #: NASA DATA:
SUBSYSTEM: MECH/ETUD
MDAC ID: 3118
ITEM: DOOR LINKAGE ASSEMBLY
LEAD ANALYST: J. BACHER

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]

INADEQUATE [ ]

REMARKS:

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APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/ETU-3125
NASA FMEA #: NASA FMEA

SUBSYSTEM: MECH/ETUD
MDAC ID: 3125
ITEM: DOOR CLOSURE LIMIT SWITCH
LEAD ANALYST: J. BACHER

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
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REMARKS:
THE ISSUE AROSE DUE TO DIFFERENCES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-269
ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/ETU-3144
NASA FMEA #:
SUBSYSTEM: MECH/ETUD
MDAC ID: 3144
ITEM: READY TO LATCH LIMIT SWITCH
LEAD ANALYST: J. BACHER

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

THE ISSUE AROSE DUE TO DIFFERENCES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-270
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/ETU-3504
NASA FMEA #: NASA DATA:
SUBSYSTEM: MECH/ETUD/EPD&C NASA FMEA #: NEW [ ]
MDAC ID: 3504
ITEM: RELAY
LEAD ANALYST: J. BACHER
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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
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REMARKS:
THE ISSUE AROSE DUE TO DIFFERENCES BETWEEN THE NASA AND IOA
FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THE
ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-271
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/ETU-3511
NASA FMEA #:
SUBSYSTEM: MECH/ETUD/EPD&C
MDAC ID: 3511
ITEM: ET UMBILICAL DOOR OPEN–CLOSE SWITCH
LEAD ANALYST: J. BACHER

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)
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REMARKS:
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WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-272
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/ETU-3512
NASA FMEA #: NASA DATA:
NASA Subsystem: MECH/ETUD/EPD&C
MDAC ID: 3512
ITEM: ET UMBILICAL DOOR LATCH-RELEASE SWITCH
LEAD ANALYST: J. BACHER

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)
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REMARKS:
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REPORT DATE 22 JULY 1988 C.10-273
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/ETU-3513
NASA FMEA #: NASA DATA:
BASELINE [ ] NEW [ ]

SUBSYSTEM: MECH/ETUD/EPD&C
MDAC ID: 3513
ITEM: ET UMBILICAL DOOR LATCH-RELEASE SWITCH

LEAD ANALYST: J. BACHER

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
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REMARKS:
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APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/ETU-3514
NASA FMEA #: NASA DATA:
SUBSYSTEM: MECH/ETUD/EPD&C BASELINE [ ]
MDAC ID: 3514 NEW [ ]
ITEM: ET UMBILICAL DOOR LATCH-RELEASE SWITCH

LEAD ANALYST: J. BACHER

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
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APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/ETU-3515
NASA FMEA #: NASA
FME #:
SUBSYSTEM: MECH/ETU/EPD&C
MDAC ID: 3515
ITEM: CONTROL BUS FUSE
LEAD ANALYST: J. BACHER

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
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REMARKS:
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REPORT DATE 22 JULY 1988 C.10-276
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/ETU-3516
NASA FMEA #: NASA

SUBSYSTEM: MECH/ETUD/EPD&C
MDAC ID: 3516
ITEM: MCA AC POWER CIRCUIT BREAKER

LEAD ANALYST: J. BACHER

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ] INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-277
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
NASA DATA:
BASELINE [ ]
NEW [ ]

ASSESSMENT ID: MECH/ETU-3517
NASA FMEA #:

SUBSYSTEM: MECH/ETUD/EPD&C
MDAC ID:
ITEM: MCA RELAY LOGIC POWER SWITCH

LEAD ANALYST: J. BACHER

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
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REMARKS:
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REPORT DATE 22 JULY 1988 C.10-278
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/ETU-3518
NASA FMEA #: NASA DATA:
SUBSYSTEM: MECH/ETUD/EPD&C BASELINE [ ]
MDAC ID: 3518 NEW [ ]
ITEM: MCA RELAY LOGIC POWER SWITCH
LEAD ANALYST: J. BACHER

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ] INADEQUATE [ ]

REMARKS:
THE ISSUE AROSE DUE TO DIFFERENCES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-279
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/ETU-3519
NASA FMEA #: MECH/ETUD/EPD&C
SUBSYSTEM: MECH/ETUD/EPD&C
MDAC ID: 3519
ITEM: REMOTE POWER CONTROLLER
LEAD ANALYST: J. BACHER

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

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REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-280
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/ETU-3520
NASA FMEA #: NASA

SUBSYSTEM: MECH/ETUD/EPD&C
MDAC ID: 3520
ITEM: HYBRID CIRCUIT DRIVER

LEAD ANALYST: J. BACHER

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

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REMARKS:
The issue arose due to differences between the NASA and IOA FMEA/CIL interpretation and implementation of NSTS 22206. The issue is withdrawn by IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-281
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/ETU-3521
NASA FMEA #: NASA DATA:

NASA FMEA #: MECH/ETUD/EPD&C
SUBSYSTEM: BASELINE [ ]
MDAC ID: NEW [ ]
ITEM:

ITEM:

LEAD ANALYST: J. BACHER

ASSESSMENT:

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FLIGHT
HDW/FUNC

REDUNDANCY SCREENS
A  B  C

CIL
ITEM

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IOA [ 3 / 3 ] [ ] [ ] [ ] [ ] [ ]

COMPARE [ N / N ] [ ] [ ] [ ] [ ] [ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

*CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]

INADEQUATE [ ]

REMARKS:
THE ISSUE AROSE DUE TO DIFFERENCES BETWEEN THE NASA AND IOA
FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THE
ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-282
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/ETU-3524
NASA FMEA #: 

NASA DATA:
BASELINE [ ]
NEW [ ]

SUBSYSTEM: MECH/ETUD/EPD&C
MDAC ID: 3524
ITEM: RESISTOR, 5.1K 1/4W

LEAD ANALYST: J. BACHER

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
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REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/ETU-3525
NASA FMEA #: NASA FMEA

NASA DATA:
BASELINE [ ]
NEW [ ]

SUBSYSTEM: MECH/ETUD/EPD&C
MDAC ID: 3525
ITEM: RESISTOR, 5.1K 1/4W

LEAD ANALYST: J. BACHER

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
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REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
**APPENDIX C**

**ASSESSMENT WORKSHEET**

**ASSESSMENT DATE:** 2/17/88  
**ASSESSMENT ID:** MECH/ETU-3526  
**NASA FMEA #:**  
**SUBSYSTEM:** MECH/ETUD/EPD&C  
**MDAC ID:** 3526  
**ITEM:** RESISTOR, 5.1K 1/4W  
**LEAD ANALYST:** J. BACHER

**ASSESSMENT:**

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* **CIL RETENTION RATIONALE:** (If applicable)  
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**REMARKS:**  
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATtributed TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

**REPORT DATE** 22 JULY 1988  
**C.10-285**
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/ETU-3527
NASA FMEA #: BASELINE [ ]
SUBSYSTEM: MECH/ETUD/EPD&C
MDAC ID: 3527
ITEM: FUSE, 1A, TO ACTUATOR STATUS SWITCH
LEAD ANALYST: J. BACHER

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

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REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-286
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/ETU-3528
NASA FMEA #: NASA DATA:
SUBSYSTEM: MECH/ETUD/EPD&C BASELINE [ ]
MDAC ID: 3528 NEW [ ]
ITEM: RESISTOR, 1.2K, TO MCA LOGIC SWITCH
LEAD ANALYST: J. BACHER

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
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REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-287
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/ETU-3529
NASA DATA:
NASA FMEA #:
SUBSYSTEM: MECH/ETUD/EPD&C
MDAC ID: 3529
ITEM: RESISTOR, 1.2K, TO MCA LOGIC SWITCH
LEAD ANALYST: J. BACHER

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

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REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT
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ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS
WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-288
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/KBD-4101
NASA FMEA #: NASA DATA:

SUBSYSTEM: MECH/KBD
MDAC ID: 4101
ITEM: GUILLOTINE/PRESSURE CARTRIDGE

LEAD ANALYST: H.J. LOWERY

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
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REMARKS:
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REPORT DATE 22 JULY 1988 C.10-289
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/KBD-4102
NASA FMEA #: NASA
FMEA #:
SUBSYSTEM: MECH/KBD
MDAC ID: 4102
ITEM: GUILLOTINE/PRESSURE CARTRIDGE
LEAD ANALYST: H.J. LOWERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

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REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/KBD-4103
NASA FMEA #: 
SUBSYSTEM: MECH/KBD
MDAC ID: 4103
ITEM: NUT/BREECH
LEAD ANALYST: H.J. LOWERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)
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REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-291
APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/KBD-4104
NASA FMEA #: NASA

SUBSYSTEM: MECH/KBD
MDAC ID: 4104
ITEM: NUT/BREECH

LEAD ANALYST: H.J. LOWERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

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REMARKS:
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REPORT DATE 22 JULY 1988 C.10-292
**APPENDIX C**  
**ASSESSMENT WORKSHEET**

**ASSESSMENT DATE:** 2/17/88  
**ASSESSMENT ID:** MECH/KBD-4105  
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**SUBSYSTEM:** MECH/KBD  
**MDAC ID:** 4105  
**ITEM:** INPUT/OUTPUT SHAFT - HOUSING  
**LEAD ANALYST:** H.J. LOWERY

**ASSESSMENT:**

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(If different from NASA)

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* CIL RETENTION RATIONALE:  
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**REMARKS:**

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APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/KBD-4106
NASA FMEA #: NASA FMEA
SUBSYSTEM: MECH/KBD
MDAC ID: 4106
ITEM: INPUT/OUTPUT SHAFT - HOUSING
LEAD ANALYST: H.J. LOWERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

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REMARKS:
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APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/KBD-4107
NASA FMEA #: MECH/KBD
MDAC ID: 4107
ITEM: STOW LIMIT SWITCHES (S1 & 2) ACTUATOR
LEAD ANALYST: H.J. LOWERY

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

A D E Q U A T E [ ]
I N A D E Q U A T E [ ]

REMARKS:

AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/KBD-4108
NASA FMEA #: BASELINE [ ]
NASA FMEA #: NEW [ ]

SUBSYSTEM: MECH/KBD
MDAC ID: 4108
ITEM: STOW LIMIT SWITCHES (Sl & 2) ACTUATOR

LEAD ANALYST: H.J. LOWERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
The issue arose due to differences between the NASA and IOA FMEA/CIL interpretation and implementation of NSTS 22206. The issue is withdrawn by IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-296
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/KBD-4109
NASA FMEA #: NASA DATA:
BASELINE [ ]
NEW [ ]

SUBSYSTEM: MECH/KBD
MDAC ID: 4109
ITEM: DEPLOY LIMIT SWITCHES (S5 & 6)

LEAD ANALYST: H.J. LOWERY

ASSESSMENT:

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| IOA [ 2 /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:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/KBD-4110
NASA FMEA #: NASA DATA:
                 BASELINE [ ]
                 NEW [ ]

SUBSYSTEM: MECH/KBD
MDAC ID: 4110
ITEM: DEPLOY LIMIT SWITCHES (S5 & 6)

LEAD ANALYST: H.J. LOWERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT
ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE
ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS
WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-298
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/KBD-4111
NASA FMEA #: NASA DATA:
SUBSYSTEM: MECH/KBD
MDAC ID: 4111
ITEM: GEAR TRAIN ASSEMBLY
NASA FMEA #:
ASSESSMENT ID:
SUBSYSTEM:
MDAC ID:
ITEM:
LEAD ANALYST: H.J. LOWERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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| (ADD/DELETE) |

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/KBD-4112
NASA FMEA #: 

NASA DATA:
BASELINE [ ]
NEW [ ]

SUBSYSTEM: MECH/KBD
MDAC ID: 4112
ITEM: GEAR TRAIN ASSEMBLY

LEAD ANALYST: H.J. LOWERY

ASSESSMENT:

CRITICALITY REDUNDANCY SCREENS CIL
FLIGHT HDW/FUNC A B C ITEM

NASA [ ] [ ] [ ] [ ] [ ] [ ] *
IOA [ 2 /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:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-300
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/KBD-4113
NASA FMEA #:

SUBSYSTEM: MECH/KBD
MDAC ID: 4113
ITEM: ALL ITEMS NOT SHOWN ON MDAC ID 4101 - 4112

LEAD ANALYST: H.J. LOWERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
THE ISSUE AROSE DUE TO DIFFERENCES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-301
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: MECH/KBD-4500
NASA FMEA #: 05-6EH-56060-6

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4500
ITEM: +28V CONTACT #1

LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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| IOA         | [ 3 /3 ]  | [ ]  | [ ] | [ ]  | [ 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:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-302
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: MECH/KBD-4501
NASA FMEA #: 05-6EH-56060-1
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4501
ITEM: +28V CONTACT #1
LEAD ANALYST: A.D. MONTGOMERY

NASA DATA:
BASELINE [ ]
NEW [ X ]

CRITICALITY
FLIGHT
HDW/FUNC

REDUNDANCY SCREENS
A B C

CIL ITEM

NASA [ 2 /1R ] [ P ] [ NA] [ P ] [ X ] *
IOA [ 3 /3 ] [ ] [ ] [ ] [ 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:
FAILURE OF A SINGLE SWITCH POLE/CONTACT SET OPEN WOULD NOT CAUSE LOSS OF VEHICLE/MISSION. FAILURE OF REDUNDANT HARDWARE COULD CAUSE LOSS OF VEHICLE/MISSION AND NOT CONSIDERED READILY APPARENT DURING FLIGHT.

REPORT DATE 22 JULY 1988 C.10-303
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
NASA DATA:
ASSESSMENT ID: MECH/KBD-4501A
NASA FMEA #: 05-6EH-56060-3
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4501
ITEM: +28V CONTACT #1

LEAD ANALYST: A.D. MONTGOMERY

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NASA [ 2 /1R ] [ P ] [ NA] [ P ] [ X ] *

IOA [ 3 /3 ] [ ] [ ] [ ] [ 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:
IOA/AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE  22 JULY 1988    C.10-304
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: MECH/KBD-4502
NASA FMEA #: 05-6EH-56060-6

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4502
ITEM: +28V CONTACT #2

LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

| CRITICALLY | REDUNDANCY SCREENS | CIL |
| FLIGHT | HDW/FUNC | A | B | C |
| NASA | [ 2 /IR ] | [ P ] | [ NA ] | [ P ] | [ X ] * |
| IOA | [ 3 /3 ] | [ ] | [ ] | [ ] | [ X ] |
| COMPAR | [ N /N ] | [ N ] | [ N ] | [ N ] | [ ] |

RECOMMENDATIONS: (If different from NASA)

[ 3 /IR ] [ P ] [ F ] [ P ] [ A ]
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: MECH/KBD-4503
NASA FMEA #: 05-6EH-56060-1
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4503
ITEM: +28V CONTACT #2
LEAD ANALYST: A.D. MONTGOMERY

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NASA DATA:
BASELINE [ ]
NEW [ X ]

RECOMMENDATIONS: (If different from NASA)

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

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE  22 JULY 1988   C.10-306
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: MECH/KBD-4503A
NASA FMEA #: 05-6EH-56060-3

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4503
ITEM: +28V CONTACT #2

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: MECH/KBD-4504
NASA FMEA #: 05-6EH-56060-6
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4504
ITEM: +28V CONTACT #3
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-308
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: MECH/KBD-4505
NASA FMEA #: 05-6EH-56060-1

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4505
ITEM: +28V CONTACT #3

LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: MECH/KBD-4505A
NASA FMEA #: 05-6EH-56060-3
NASA DATA:

BASELINE [ ]
NEW [ X ]

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4505
ITEM: +28V CONTACT #3
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-310
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: MECH/KBD-4506
NASA FMEA #: 05-6EH-56060-6
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4506
ITEM: +28V CONTACT #4
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)
[ 3 /1R ] [ P ] [ F ] [ P ] [ A ]
(ADD/DELETE)

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-311
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: MECH/KBD-4507
NASA FMEA #: 05-6EH-56060-1
NASA DATA: BASELINE [ ] NEW [ X ]

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4507
ITEM: +28V CONTACT #4

LEAD ANALYST: A.D. MONTGOMERY

LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

*CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988   C.10-312
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: MECH/KBD-4507A
NASA FMEA #: 05-6EH-56060-3
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4507
ITEM: +28V CONTACT #4
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-313
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: MECH/KBD-4508
NASA FMEA #: 05-6EH-56060-6

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4508
ITEM: +28V CONTACT #1
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-314
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: MECH/KBD-4509
NASA FMEA #: 05-6EH-56060-1

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4509
ITEM: +28V CONTACT #1

LEAD ANALYST: A.D. MONTGOMERY

NASA DATA:
BASELINE [ ]
NEW [ X ]

ASSESSMENT:

CRITICALITY
REDUNDANCY SCREENS
CIL ITEM
FLIGHT HDW/FUNC A B C

NASA [ 2 /1R ] [ P ] [ NA ] [ P ] [ X ] *
IOA [ 3 /1R ] [ P ] [ F ] [ P ] [ X ]
COMPARE [ N / ] [ ] [ N ] [ ] [ ]

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

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-315
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: MECH/KBD-4509A
NASA FMEA #: 05-6EH-56060-3
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4509
ITEM: +28V CONTACT #1

LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-316
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: MECH/KBD-4510
NASA FMEA #: 05-6EH-56060-6
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4510
ITEM: +28V CONTACT #2
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-317
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: MECH/KBD-4511
NASA FMEA #: 05-6EH-56060-1

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4511
ITEM: +28V CONTACT #2

LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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COMPARE [ N / ] [ ] [ N ] [ ] [ ]

RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: MECH/KBD-4511A
NASA FMEA #: 05-6EH-56060-3

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4511
ITEM: +28V CONTACT #2

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-319
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: MECH/KBD-4512
NASA FMEA #: 05-6EH-56060-6

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4512
ITEM: +28V CONTACT #3

LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

| CRITICALLY | REDUNDANCY SCREENS | CIL |
| FLIGHT | HDW/FUNC | A | B | C | ITEM |
| NASA | [ 2 /1R ] | [ P ] | [ NA] | [ P ] | [ X ] * |
| 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:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-320
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: MECH/KBD-4513
NASA FMEA #: 05-6EH-56060-1
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4513
ITEM: +28V CONTACT #3
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

CRITICALITY REDUNDANCY SCREENS CIL
FLIGHT HDW/FUNC A B C ITEM
[ 2 /1R ] [ P ] [ NA] [ P ] [ X ] *
[ 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:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-321
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: MECH/KBD-4513A
NASA FMEA #: 05-6EH-56060-3
NASA DATA: BASELINE [ ] NEW [ X ]

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4513
ITEM: +28V CONTACT #3
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

[ 3 /1R ] [ P ] [ F ] [ P ] [ A ]

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-322
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: MECH/KBD-4514
NASA FMEA #: 05-6EH-56060-6
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4514
ITEM: +28V CONTACT #4
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-323
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: MECH/KBD-4515
NASA FMEA #: 05-6EH-56060-1
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4515
ITEM: +28V CONTACT #4

NASA DATA:
BASELINE [ ]
NEW [ x ]

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4515
ITEM: +28V CONTACT #4
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

CRITICALITY
FLIGHT
HDW/FUNC

REDUNDANCY SCREENS

CIL
ITEM

A
B
C

NASA [ 2 /1R ] [ P ] [ NA] [ P ] [ X ] *
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:

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-324
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: MECH/KBD-4515A
NASA FMEA #: 05-6EH-56060-3
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4515
ITEM: +28V CONTACT #4
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: MECH/KBD-4516
NASA FMEA #: 05-6EH-56000-4

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4516
ITEM: +28V CONTACT #1
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE  22 JULY 1988    C.10-326
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MECH/KBD-4517
NASA FMEA #: 05-6EH-56000-1
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4517
ITEM: +28V CONTACT #1
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
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REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-327
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MECH/KBD-4517A
NASA FMEA #: 05-6EH-56000-3

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4517
ITEM: +28V CONTACT #1

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-328
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: MECH/KBD-4518
NASA FMEA #: 05-6EH-56000-4
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4518
ITEM: +28V CONTACT #2
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-329
ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MECH/KBD-4519
NASA FMEA #: 05-6EH-56000-1
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4519
ITEM: +28V CONTACT #2
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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| 3 /1R | P | P | P | |

(ADD/DELETE)

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-330
APPENDIX C
ASSESSMENT WORKSHEET

| ASSESSMENT DATE: | 2/04/88 |
| ASSESSMENT ID: | MECH/KBD-4519A |
| NASA FMEA #: | 05-6EH-56000-3 |
| NASA DATA: | BASELINE [ ] NEW [ X ] |
| SUBSYSTEM: | MECH/KBD/EPD&C |
| MDAC ID: | 4519 |
| ITEM: | +28V CONTACT #2 |
| LEAD ANALYST: | A.D. MONTGOMERY |

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ] INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88  
ASSESSMENT ID: MECH/KBD-4520  
NASA FMEA #: 05-6EH-56000-4  

NASA DATA:  
BASELINE [ ]  
NEW [ X ]

SUBSYSTEM: MECH/KBD/EPD&C  
MDAC ID: 4520  
ITEM: +28V CONTACT #3  

LEAD ANALYST: A.D. MONTGOMERY  

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IOA [ 3 /1R ]  
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RECOMMENDATIONS:  (If different from NASA)  
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(ADD/DELETE)

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

REMARKS:  
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MECH/KBD-4521
NASA FMEA #: 05-6EH-56000-1
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4521
ITEM: +28V CONTACT #3
LEAD ANALYST: A.D. MONTGOMERY

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NEW [ X ]

CIL ITEM

ITEM

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RECOMMENDATIONS: (If different from NASA)

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MECH/KBD-4521A
NASA FMEA #: 05-6EH-56000-3

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4521
ITEM: +28V CONTACT #3

LEAD ANALYST: A.D. MONTGOMERY

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-334
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: MECH/KBD-4522
NASA FMEA #: 05-6EH-56000-4

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4522
ITEM: +28V CONTACT #4

LEAD ANALYST: A.D. MONTGOMERY

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| REDUNDANCY SCREENS |
| A | B | C |

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| ITEM |

| COMPARE [ N / ] | [ ] | [ N ] | [ ] |

RECOMMENDATIONS: (If different from NASA)

[ 3 /1R ] [ P ] [ P ] [ P ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]

INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-335
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MECH/KBD-4523
NASA FMEA #: 05-6EH-56000-1
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4523
ITEM: +28V CONTACT #4
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-336
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MECH/KBD-4523A
NASA FMEA #: 05-6EH-56000-3

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4523
ITEM: +28V CONTACT #4

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-337
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: MECH/KBD-4524
NASA FMEA #: 05-6EH-56000-4
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4524
ITEM: +28V CONTACT #1

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-338
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MECH/KBD-4525
NASA FMEA #: 05-6EH-56000-1
NASA FMEA #: 05-6EH-56000-1

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4525
ITEM: +28V CONTACT #1

LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

CRITICALITY REDUNDANCY SCREENS CIL ITEM
FLIGHT HDW/FUNC A B C ITEM

NASA [ 2 /1R ] [ P ] [ P ] [ P ] [ X ] *
IOA [ 3 /2R ] [ P ] [ F ] [ P ] [ X ]
COMPARE [ N /N ] [ ] [ N ] [ ] [ ]

RECOMMENDATIONS: (If different from NASA)

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

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY
IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-339
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MECH/KBD-4525A
NASA FMEA #: 05-6EH-56000-3
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4525
ITEM: +28V CONTACT #1

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
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REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88  
ASSESSMENT ID: MECH/KBD-4526  
NASA FMEA #: 05-6EH-56000-4  
SUBSYSTEM: MECH/KBD/EPD&C  
MDAC ID: 4526  
ITEM: +28V CONTACT #2  
LEAD ANALYST: A.D. MONTGOMERY  

NASA DATA: 
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NEW [ X ]

ASSESSMENT:

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
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REMARKS:

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MECH/KBD-4527
NASA FMEA #: 05-6EH-56000-1

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4527
ITEM: +28V CONTACT #2

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-342
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88  
ASSESSMENT ID: MECH/KBD-4527A  
NASA FMEA #: 05-6EH-56000-3  
SUBSYSTEM: MECH/KBD/EPD&C  
MDAC ID: 4527  
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LEAD ANALYST: A.D. MONTGOMERY

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-343
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: MECH/KBD-4528
NASA FMEA #: 05-6EH-56000-4

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4528
ITEM: +28V CONTACT #3

LEAD ANALYST: A.D. MONTGOMERY

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* CIL RETENTION RATIONALE: (If applicable)
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REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MECH/KBD-4529
NASA FMEA #: 05-6EH-56000-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4529
ITEM: +28V CONTACT #3

LEAD ANALYST: A.D. MONTGOMERY

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-345
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MECH/KBD-4529A
NASA FMEA #: 05-6EH-56000-3
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4529
ITEM: +28V CONTACT #3
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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

RECOMMENDATIONS: (If different from NASA)

[ 3 /1R ] [ P ] [ P ] [ P ] [ ]

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-346
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
NASA DATA:
BASELINE
NEW [ X ]

ASSESSMENT ID: MECH/KBD-4530
NASA FMEA #: 05-6EH-56000-4

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4530
ITEM: +28V CONTACT #4

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

[ 3 /1R ] [ P ] [ P ] [ P ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-347
ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MECH/KBD-4531
NASA FMEA #: 05-6EH-56000-1
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4531
ITEM: +28V CONTACT #4
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MECH/KBD-4531A
NASA FMEA #: 05-6EH-56000-3
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4531
ITEM: +28V CONTACT #4
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[3 /1R] [P] [P] [P] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-349
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88  NASA DATA:
ASSESSMENT ID: MECH/KBD-4532  BASELINE [ ]
NASA FMEA #: 05-6EH-56000-4  NEW [ X ]

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4532
ITEM: +28V CONTACT #1

LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-350
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MECH/KBD-4533
NASA FMEA #: 05-6EH-56000-1
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4533
ITEM: +28V CONTACT #1
LEAD ANALYST: A.D. MONTGOMERY

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-351
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MECH/KBD-4533A
NASA FMEA #: 05-6EH-56000-3
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4533
ITEM: +28V CONTACT #1
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]

INADEQUATE [ ]

REMARKS:

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-352
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: MECH/KBD-4534
NASA FMEA #: 05-6EH-56000-4
SUBSYSTEM: MECH/KBD/EP&D&C
MDAC ID: 4534
ITEM: +28V CONTACT #2
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-353
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MECH/KBD-4535
NASA FMEA #: 05-6EH-56000-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4535
ITEM: +28V CONTACT #2

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-354
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MECH/KBD-4535A
NASA FMEA #: 05-6EH-56000-3

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4535
ITEM: +28V CONTACT #2

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
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REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988   C.10-355
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: MECH/KBD-4536
NASA FMEA #: 05-6EH-56000-4

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4536
ITEM: +28V CONTACT #3

LEAD ANALYST: A.D. MONTGOMERY

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988   C.10-356
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MECH/KBD-4537
NASA FMEA #: 05-6EH-56000-1

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4537
ITEM: +28V CONTACT #3

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
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INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-357
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MECH/KBD-4537A
NASA FMEA #: 05-6EH-56000-3
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4537
ITEM: +28V CONTACT #3
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-358
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: MECH/KBD-4538
NASA FMEA #: 05-6EH-56000-4
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4538
ITEM: +28V CONTACT #4
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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NASA DATA:
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NEW [ X ]

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

RECOMMENDATIONS: (If different from NASA)
[ 3 /1R ] [ P ] [ P ] [ P ] [ ] (ADD/DELETE)

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-359
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MECH/KBD-4539
NASA FMEA #: 05-6EH-56000-1

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4539
ITEM: +28V CONTACT #4

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MECH/KBD-4539A
NASA FMEA #: 05-6EH-56000-3
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4539
ITEM: +28V CONTACT #4
LEAD ANALYST: A.D. MONTGOMERY

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(ADD/DELETE)

*CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-361
**APPENDIX C**

**ASSESSMENT WORKSHEET**

**ASSESSMENT DATE:** 2/04/88  
**ASSESSMENT ID:** MECH/KBD-4540  
**NASA FMEA #:** 05-6EH-56000-1

**NASA DATA:**  
**BASELINE [ ]**  
**NEW [ X ]**

**SUBSYSTEM:** MECH/KBD/EPD&C  
**MDAC ID:** 4540  
**ITEM:** TALKBACK

**LEAD ANALYST:** A.D. MONTGOMERY

**ASSESSMENT:**

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**RECOMMENDATIONS:** (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]

INADEQUATE [ ]

**REMARKS:**

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

**REPORT DATE** 22 JULY 1988  
C.10-362
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MECH/KBD-4540A
NASA FMEA #: 05-6EH-56000-3

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4540
ITEM: TALKBACK

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-363
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MECH/KBD-4541
NASA FMEA #: 05-6EH-56000-1
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4541
ITEM: TALKBACK
LEAD ANALYST: A.D. MONTGOMERY

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REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988   C.10-364
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MECH/KBD-4541A
NASA FMEA #: 05-6EH-56000-3
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4541
ITEM: TALKBACK
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988   C.10-365
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MECH/KBD-4542
NASA FMEA #: 05-6EH-56000-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4542
ITEM: TALKBACK

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MECH/KBD-4542A
NASA FMEA #: 05-6EH-56000-3
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4542
ITEM: TALKBACK
LEAD ANALYST: A.D. MONTGOMERY

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ] INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-367
ASSESSMENT DATE: 2/04/88  
ASSESSMENT ID: MECH/KBD-4543  
NASA FMEA #: 05-6EH-56021-2  
SUBSYSTEM: MECH/KBD/EPD&C  
MDAC ID: 4543  
ITEM: AND GATE #1  
LEAD ANALYST: A.D. MONTGOMERY  

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RECOMMENDATIONS: (If different from NASA)

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*CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MECH/KBD-4544
NASA FMEA #: 

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4544
ITEM: AND GATE #1

LEAD ANALYST: A.D. MONTGOMERY

ASSessment:

CRITICALITY
FLIGHT
HDW/FUNC 

REDUNDANCY SCREENS
A  B  C

ITEM

NASA [ ] / ]  [ ] [ ] [ ] [ ] [ ] [ ]*

IOA [ 3 /IR ] [ P ] [ F ] [ P ] [ ]

COMPARE [ N /N ] [ N ] [ N ] [ N ] [ ]

RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT
ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE
ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS
WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MECH/KBD-4545
NASA FMEA #: 05-6EH-56021-2
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: AND GATE #2
ITEM: 4545
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

CRITICALITY REDUNDANCY SCREENS CIL ITEM
FLIGHT HDW/FUNC A B C

NASA [ 2 /1R ] [ P ] [ F ] [ P ] [ X ] *
IOA [ 3 /2R ] [ 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:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-370
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MECH/KBD-4546
NASA FMEA #: NASA DATA:
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4546
ITEM: AND GATE #2
LEAD ANALYST: A.D. MONTGOMERY

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

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

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT
ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE
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WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4548
NASA FMEA #: NASA DATA:
BASELINE [ ] NEW [ ]
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4548
ITEM: AND GATE #1
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
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REMARKS:

AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C  
ASSESSMENT WORKSHEET  

ASSESSMENT DATE: 2/05/88 \hspace{1cm} NASA DATA:  
ASSESSMENT ID: MECH/KBD-4550 \hspace{1cm} BASELINE [ ] NEW [ ]  
NASA FMEA #: \hspace{1cm}  
SUBSYSTEM: MECH/KBD/EPD&C \hspace{1cm}  
MDAC ID: 4550 \hspace{1cm}  
ITEM: AND GATE #2 \hspace{1cm}  
LEAD ANALYST: A.D. MONTGOMERY \hspace{1cm}  

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-373
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MECH/KBD-4551
NASA FMEA #: 05-6EH-56021-2
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4551
ITEM: AMP #1
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-374
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MECH/KBD-4552
NASA FMEA #: NASA FMEA ID:
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4552
ITEM: AMP #1

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MECH/KBD-4553
NASA FMEA #: 05-6EH-56021-2
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4553
ITEM: AMP #2
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

CRITICALITY REDUNDANCY SCREENS CIL
FLIGHT HDW/FUNC A B C ITEM

NASA [2 /1R ] [ P ] [ F ] [ P ] [ X ] *
IOA [3 /2R ] [ P ] [ F ] [ P ] [ X ]
COMPARE [ N /N ] [ ] [ ] [ ] [ ]

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

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-376
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MECH/KBD-4554
NASA FMEA #: MECH/KBD/EPD&C
MDAC ID: MECH/EPD&C
ITEM: AMP #2
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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*CIL RETENTION RATIONALE: (If applicable)

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REMARKS:
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REPORT DATE 22 JULY 1988 C.10-377
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4556

NASA FMEA #: MECH/KBD/EPD&C
MDAC ID: 4556
ITEM: AMP #1

LEAD ANALYST: A.D. MONTGOMERY

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4558
NASA FMEA #: Baseline [ ]

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4558
ITEM: AMP #2

LEAD ANALYST: A.D. MONTGOMERY

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]

INADEQUATE [ ]

REMARKS:

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WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MECH/KBD-4559
NASA FMEA #: 05-6EH-56021-2
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4559
ITEM: K14
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

CRITICALITY REDUNDANCY SCREENS CIL
FLIGHT HDW/FUNC A B C ITEM

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IOA [ 3 /2R ] [ P ] [ F ] [ P ] [ X ]
COMPARE [ N /N ] [ ] [ ] [ ] [ ]

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

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-380
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MECH/KBD-4560
NASA FMEA #: MECH/KBD/EPD&C
MDAC ID: 4560
ITEM: K14
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
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REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES BY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-381
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MECH/KBD-4561
NASA FMEA #: 05-6EH-56021-2

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4561
ITEM: K68

LEAD ANALYST: A.D. MONTGOMERY

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
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REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-382
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MECH/KBD-4562
NASA FMEA #: 
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4562
ITEM: K68
LEAD ANALYST: A.D. MONTGOMERY

NASA DATA:
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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
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WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-383
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4564
NASA FMEA #: NASA
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4564
ITEM: K72
LEAD ANALYST: A.D. MONTGOMERY

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* CIL RETENTION RATIONALE: (If applicable)
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REMARKS:
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ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS
WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-384
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4566
NASA FMEA #: 
NASA DATA:
BASELINE [ ]
NEW [ ]

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4566
ITEM: K70
LEAD ANALYST: A.D. MONTGOMERY

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COMPARE | [ N /N ] | [ N ] | [ N ] | [ N ] | [ ] |

RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
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**APPENDIX C**  
**ASSESSMENT WORKSHEET**

**ASSESSMENT DATE:** 2/04/88  
**ASSESSMENT ID:** MECH/KBD-4567  
**NASA FMEA #:** 05-6EH-56021-2  
**NASA DATA:**  
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**NEW [ X ]**

**SUBSYSTEM:** MECH/KBD/EPD&C  
**MDAC ID:** 4567  
**ITEM:** STOW MICROSWITCH #1

**LEAD ANALYST:** A.D. MONTGOMERY

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**RECOMMENDATIONS:** (If different from NASA)  
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* CIL RETENTION RATIONALE: (If applicable)  
ADEQUATE [ ]  
INADEQUATE [ ]

**REMARKS:**  
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

**REPORT DATE** 22 JULY 1988  
**C.10-386**
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MECH/KBD-4568
NASA FMEA #: NASA DATA:
SUBSYSTEM: MECH/KBD/EPD&C BASLINE [ ]
MDAC ID: 4568 NEW [ ]
ITEM: STOW MICROSWITCH #1

LEAD ANALYST: A.D. MONTGOMERY

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]

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REMARKS:

THE ISSUE AROSE DUE TO DIFFERENCES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
### APPENDIX C
ASSESSMENT WORKSHEET

**ASSESSMENT DATE:** 2/05/88  
**ASSESSMENT ID:** MECH/KBD-4570  
**NASA FMEA #:**  

**SUBSYSTEM:** MECH/KBD/EPD&C  
**MDAC ID:** 4570  
**ITEM:** DEPLOY MICROSWITCH #1  
**LEAD ANALYST:** A.D. MONTGOMERY

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* CIL RETENTION RATIONALE: (If applicable)  

ADEQUATE [ ]  
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**REMARKS:**  
THE ISSUE AROSE DUE TO DIFFERENCES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

**REPORT DATE** 22 JULY 1988  
C.10-388
# APPENDIX C
## ASSESSMENT WORKSHEET

**ASSESSMENT DATE:** 2/04/88  
**ASSESSMENT ID:** MECH/KBD-4571  
**NASA FMEA #:** 05-6EH-56021-2  
**SUBSYSTEM:** MECH/KBD/EPD&C  
**MDAC ID:** 4571  
**ITEM:** AND GATE #1  
**LEAD ANALYST:** A.D. MONTGOMERY  

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**RECOMMENDATIONS:** (If different from NASA)

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* **CIL RETENTION RATIONALE:** (If applicable)
  
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**REMARKS:**  
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

**REPORT DATE** 22 JULY 1988  
**C.10-389**
ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MECH/KBD-4572
NASA FMEA #: 
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4572
ITEM: AND GATE #1
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)
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(* CIL RETENTION RATIONALE: (If applicable)
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REMARKS:
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REPORT DATE 22 JULY 1988 C.10-390
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MECH/KBD-4573
NASA FMEA #: 05-6EH-56021-2
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4573
ITEM: AND GATE #2
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
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WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-391
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MECH/KBD-4573A
NASA FMEA #: 05-6EH-56021-2

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4573
ITEM: AND GATE #2

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4576
NASA FMEA #: BASELINE [ ] NEW [ ]
NASA DATA:
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4576
ITEM: AND GATE #1
LEAD ANALYST: A.D. MONTGOMERY

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* CIL RETENTION RATIONALE: (If applicable)
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REPORT DATE 22 JULY 1988 C.10-393
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4578
NASA FMEA #: NASA
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4578
ITEM: AND GATE #2
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT
ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE
ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS
WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-394
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MECH/KBD-4579
NASA FMEA #: 05-6EH-56021-2
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4579
ITEM: AMP #1
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-395
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MECH/KBD-4580
NASA FMEA #:
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4580
ITEM: AMP #1
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-396
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MECH/KBD-4581
NASA FMEA #: 05-6EH-56021-2
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4581
ITEM: AMP #2
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-397
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MECH/KBD-4582
NASA FMEA #: NASA FMEA #:
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4582
ITEM: AMP #2
LEAD ANALYST: A.D. MONTGOMERY
ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4584
NASA FMEA #:  
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4584
ITEM: AMP #1
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-399
ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4586
NASA FMEA #: BASELINE [ ] NEW [ ]
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4586
ITEM: AMP #2
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

| ADEQUATE [ ] |
| INADEQUATE [ ] |

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-400
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MECH/KBD-4587
NASA FMEA #: 05-6EH-56021-2
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4587
ITEM: K25
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-401
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MECH/KBD-4588
NASA FMEA #: 
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4588
ITEM: K25
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
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REPORT DATE 22 JULY 1988 C.10-402
**APPENDIX C**

**ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MECH/KBD-4589
NASA FMEA #: 05-6EH-56021-2
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4589
ITEM: K2
LEAD ANALYST: A.D. MONTGOMERY

**ASSESSMENT:**

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**RECOMMENDATIONS:** (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

**REMARKS:**

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-403
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MECH/KBD-4591
NASA FMEA #: 

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4591
ITEM: K2

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-404
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4593
NASA FMEA #: NASA DATA:
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4593
ITEM: K27
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4595
NASA FMEA #: NASA/
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4595
ITEM: K37
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-406
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MECH/KBD-4596
NASA FMEA #: 05-6EH-56021-2

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4596
ITEM: STOW MICROSWITCH #2
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-407
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: MECH/KBD-4597
NASA FMEA #: NASA DATA:
SUBSYSTEM: MECH/KBD/EPD&C BASELINE [ ]
MDAC ID: 4597 NEW [ ]
ITEM: STOW MICROSWITCH #2
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

REMARKS:
The issue arose due to discrepancies between the NASA and IOA FMEA/CIL interpretation and implementation of NSTS 22206. The issue is withdrawn by IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-408
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4599
NASA FMEA #: 
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4599
ITEM: DEPLOY MICROSWITCH #2
LEAD ANALYST: A.D. MONTGOMERY
NASA DATA:
BASELINE [ ]
NEW [ ]

ITEM: MECH/KBD/EPD&C 4599
DEPLOY MICROSWITCH #2

CRITICALITY
FLIGHT
HDW/FUNC

REdundancy Screens

CIL
ITEM

NASA [ / ] [ ] [ ] [ ] [ ] [ ]
IOA [ 3 /3 ] [ ] [ ] [ ] [ ] [ ]
COMPARE [ N /N ] [ ] [ ] [ ] [ ] [ ]

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

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

REMARKS:
The issue arose due to discrepancies between the NASA and IOA FMEA/CIL interpretation and implementation of NSTS 22206. The issue is withdrawn by IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-409
APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88  
ASSESSMENT ID: MECH/KBD-4600  
NASA FMEA #:  
SUBSYSTEM: MECH/KBD/EPD&C  
MDAC ID: 4600  
ITEM: +28V CONTACT #1  
LEAD ANALYST: A.D. MONTGOMERY

NASA DATA:  
BASELINE [ ]  
NEW [ ]  

ASSOCIATED NASA DATA:  
CRITICALITY SCREENS  
FLIGHT HDW/FUNC  
REDUNDANCY [ ] [ ] [ ] [ ] [ ]  
A B C [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]  

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

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

REMARDS:  
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUE MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4601
NASA FMEA #: 
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4601
ITEM: +28V CONTACT #1
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUE MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-411
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4602
NASA FMEA #: 
NASA DATA:
BASELINE [ ]
NEW [ ]
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4602
ITEM: +28V CONTACT #2
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUE MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
**APPENDIX C**

**ASSESSMENT WORKSHEET**

**ASSESSMENT DATE:** 2/05/88  
**ASSESSMENT ID:** MECH/KBD-4603  
**NASA FMEA #:**  
**SUBSYSTEM:** MECH/KBD/EPD&C  
**MDAC ID:** 4603  
**ITEM:** +28V CONTACT #2  
**LEAD ANALYST:** A.D. MONTGOMERY  

**ASSESSMENT:**

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**RECOMMENDATIONS:** (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

**REMARKS:**

AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUE MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

**REPORT DATE** 22 JULY 1988  
**C.10-413**
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4604
NASA FMEA #: NASA DATA:
SUBSYSTEM: MECH/KBD/EPD&C BASELINE [ ]
MDAC ID: 4604 NEW [ ]
ITEM: +28V CONTACT #3
LEAD ANALYST: A.D. MONTGOMERY

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IOA [ 3 /1R ] [ P ] [ F ] [ P ] [ ] [ ] |
COMPARE [ N /N ] [ N ] [ N ] [ N ] [ ] [ ]

RECOMMENDATIONS: (If different from NASA)

[ ] [ ] [ ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]

INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUE MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4605
NASA FMEA #: MECH/KBD/EPD&C
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4605
ITEM: +28V CONTACT #3
LEAD ANALYST: A.D. MONTGOMERY

NASA DATA:
BASELINE [ ]
NEW [ ]

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUE MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-415
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4606
NASA FMEA #:
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4606
ITEM: +28V CONTACT #4
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUE MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-416
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4607
NASA FMEA #:

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4607
ITEM: +28V CONTACT #4

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUE MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4608
NASA FMEA #: NASA DATA:
BASELINE [ ] NEW [ ]

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4608
ITEM: +28V CONTACT #1

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]

INADEQUATE [ ]

REMARKS:

THE ISSUE AROSE DUE TO DIFFERENCES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-418
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4609
NASA FMEA #: MECH/KBD/EPD&C
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4609
ITEM: +28V CONTACT #1

LEAD ANALYST: A.D. MONTGOMERY

NASA DATA:
BASELINE [ ]
NEW [ ]

CRITICALITY

FLIGHT
HDW/FUNC

REDUNDANCY SCREENS

CIL
ITEM

A   B   C

NASA [ / ] [ ] [ ] [ ] [ ] [ ] *
IOA [ 3 /3 ] [ ] [ ] [ ] [ ] [ ]

COMPARE [ N /N ] [ ] [ ] [ ] [ ] [ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
The issue arose due to differences between the NASA and IOA FMEA/CIL interpretation and implementation of NSTS 22206. The issue is withdrawn by IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-419
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4610
NASA FMEA #: 

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4610
ITEM: +28V CONTACT #2
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
The issue arose due to differences between the NASA and IOA FMEA/CIL interpretation and implementation of NSTS 22206. The issue is withdrawn by IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-420
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4611
NASA FMEA #: 
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4611
ITEM: +28V CONTACT #2
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

CRITICALITY
FLIGHT
HDW/FUNC
NASA [ / ] [ ] [ ] [ ] [ ] [ ] *
IOA [ 3 /3 ] [ ] [ ] [ ] [ ] [ ]
COMPARE [ N /N ] [ ] [ ] [ ] [ ]

REDUNDANCY SCREENS
A B C

CIL ITEM
[ ] [ ] [ ]

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

(ADD/DELETE)

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

REMARKS:
THE ISSUE AROSE DUE TO DIFFERENCES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-421
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4612
NASA FMEA #: NASA DATA:

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4612
ITEM: +28V CONTACT #3
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
THE ISSUE AROSE DUE TO DIFFERENCES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-422
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4613
NASA FMEA #: SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4613
ITEM: +28V CONTACT #3
LEAD ANALYST: A.D. MONTGOMERY

NASA DATA:
BASELINE [ ]
NEW [ ]

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

RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
THE ISSUE AROSE DUE TO DIFFERENCES BETWEEN THE NASA AND IOA
FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THE
ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-423
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4614
NASA FMEA #: NASA DATA:
SUBSYSTEM: MECH/KBD/EPD&C BASELINE [ ]
MDAC ID: 4614 NEW [ ]
ITEM: +28V CONTACT #4
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

[ ] (ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
THE ISSUE AROSE DUE TO DIFFERENCES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-424
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4615
NASA DATA:
BASELINE [ ]
NEW [ ]

NASA FMEA #: SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4615
ITEM: +28V CONTACT #4

LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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

RECOMMENDATIONS: (If different from NASA)

[ ] [ ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

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

REMARKS:
THE ISSUE AROSE DUE TO DIFFERENCES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-425
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4616
NASA FMEA #: NASA DATA:
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MDAC ID: 4616 NEW [ ]
ITEM: +28V CONTACT #1
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-426
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4617
NASA FMEA #: 

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4617
ITEM: +28V CONTACT #1

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]

INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT
ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE
ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS
WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-427
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4618
NASA FMEA #: NASA DATA:
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4618
ITEM: +28V CONTACT #2
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4619
NASA FMEA #: [ ]

NASA DATA:
BASELINE [ ]
NEW [ ]

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4619
ITEM: +28V CONTACT #2

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-429
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4620
NASA FMEA #: NASA DATA:

NASA FMEA #:
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4620
ITEM: +28V CONTACT #1

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
THE ISSUE AROSE DUE TO DIFFERENCES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-430
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4621
NASA FMEA #: 

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4621
ITEM: +28V CONTACT #1

LEAD ANALYST: A.D. MONTGOMERY

NASA DATA:
BASELINE [ ]
NEW [ ]

CRITICALITY
FLIGHT
HDW/FUNC

REdundancy Screens
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B
C

NASA [ / ] [ ] [ ] [ ] [ ] [ ] *

IOA [ 3 /3 ] [ ] [ ] [ ] [ ] [ ]

COMPARE [ N /N ] [ ] [ ] [ ] [ ] [ ]

RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
THE ISSUE AROSE DUE TO DIFFERENCES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-431
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4622
NASA FMEA #: NASA DATA:
SUBSYSTEM: MECH/KBD/EPD&C BASELINE [ ]
MDAC ID: 4622 NEW [ ]
ITEM: +28V CONTACT #2
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [  ]
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REMARKS:
THE ISSUE AROSE DUE TO DIFFERENCES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-432
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4623
NASA FMEA #: NASA DATA:
SUBSYSTEM: MECH/KBD/EPD&C BASELINE [ ]
MDAC ID: 4623 NEW [ ]
ITEM: +28V CONTACT #2

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]

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REMARKS:

THE ISSUE AROSE DUE TO DIFFERENCES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-433
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4624
NASA FMEA #: NASA DATA:
SUBSYSTEM: MECH/KBD/EPD&C BASELINE [ ]
MDAC ID: 4624 NEW [ ]
ITEM: AND GATE #1
LEAD ANALYST: A.D. MONTGOMERY

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

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

REMARKS:
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REPORT DATE 22 JULY 1988 C.10-434
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4625
NASA FMEA #: NASA/IOA
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4625
ITEM: AND GATE #1
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

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REMARKS:
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APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4626
NASA FMEA #: 
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4626
ITEM: AND GATE #2
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
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REMARKS:
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REPORT DATE 22 JULY 1988  C.10-436
### APPENDIX C

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(If different from NASA)

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(If applicable)

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#### REMARKS:

AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

#### REPORT DATE 22 JULY 1988 C.10-437
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4628
NASA FMEA #: 

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4628
ITEM: 40 MS TIME DELAY
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable) ADEQUATE [ ]
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REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT
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ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS
WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-438
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4629
NASA FMEA #: 
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4629
ITEM: 40 MS TIME DELAY
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ] INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
INADEQUATE [ ]

Remarks:
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REPORT DATE 22 JULY 1988 C.10-440
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4631
NASA FMEA #: 
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4631
ITEM: AMP #1
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-441
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4632
NASA FMEA #: NASA DATA:
BASELINE [ ]
NEW [ ]

NASA FMEA #: MECH/KBD/EPD&C
MDAC ID: 4632
ITEM: AND GATE #3

LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

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

REMARKS:
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REPORT DATE 22 JULY 1988 C.10-442
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4633
NASA FMEA #: [ ]
NASA DATA:
BASELINE [ ]
NEW [ ]

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4633
ITEM: AND GATE #3

LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

CRITICALITY
FLIGHT
HDW/FUNC

REDUNDANCY SCREENS
A      B      C

CIL ITEM

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

REMARKS:
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REPORT DATE 22 JULY 1988  C.10-443
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4634
NASA FMEA #: SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4634
ITEM: 4 SECOND TIME DELAY
LEAD ANALYST: A.D. MONTGOMERY

NASA DATA:
BASELINE [ ]
NEW [ ]

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4634
ITEM: 4 SECOND TIME DELAY

LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
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WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-444
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
NASA FMEA #:  
NASA ID: MECH/KBD-4635
NASA FMEA #:  
ASSESSMENT ID: MECH/KBD-4635
NASA DATA:
BASELINE [ ]
NEW [ ]

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4635
ITEM: 4 SECOND TIME DELAY

LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

CRITICALITY
FLIGHT
HDW/FUNC

REDUNDANCY SCREENS
A  B  C

CIL ITEM

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
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REMARKS:
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REPORT DATE 22 JULY 1988  C.10-445
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4636
NASA FMEA #: BASELINE [ ]
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4636
ITEM: AMP #3
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

| [ ] / [ ] | [ ] | [ ] | [ ] | [ ] |

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-446
**APPENDIX C**

**ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4637
NASA FMEA #: NASA FMEA #:
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4637
ITEM: AMP #3
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
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REPORT DATE 22 JULY 1988 C.10-447
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
NASA DATA:
ASSESSMENT ID: MECH/KBD-4638
NASA FMEA #: BASELINE [ ]
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4638
ITEM: EXPLOSIVE INITIATOR
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
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REMARKS:
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REPORT DATE 22 JULY 1988 C.10-448
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4639
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4640
NASA FMEA #: [ ]

NASA DATA:
BASELINE [ ]
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RECOMMENDATIONS: (If different from NASA)

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CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
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REMARKS:
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REPORT DATE 22 JULY 1988 C.10-450
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4641
NASA FMEA #: N/A

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4641
ITEM: EXPLOSIVE INITIATOR

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
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REPORT DATE 22 JULY 1988 C.10-451
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4642
NASA FMEA #: 
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4642
ITEM: AND GATE #1
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
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REPORT DATE 22 JULY 1988 C.10-452
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4643
NASA FMEA #: BASELINE [ ]
NASA DATA: NEW [ ]
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4643
ITEM: AND GATE #1
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
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REPORT DATE 22 JULY 1988 C.10-453
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
NASA DATA:
ASSESSMENT ID: MECH/KBD-4644
NASA FMEA #:
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4644
ITEM: AND GATE #2
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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*CIL RETENTION RATIONALE: (If applicable)*

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
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REPORT DATE 22 JULY 1988 C.10-454
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4645
NASA FMEA #:
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4645
ITEM: AND GATE #2
LEAD ANALYST: A.D. MONTGOMERY

NASA DATA:
BASELINE [ ]
NEW [ ]

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
INADEQUATE [ ]

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WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-455
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4646
NASA FMEA #: NASA DATA:
SUBSYSTEM: MECH/KBD/EPD&C BASELINE [ ]
MDAC ID: 4646 NEW [ ]
ITEM: 40 MS TIME DELAY
LEAD ANALYST: A.D. MONTGOMERY
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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

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

REMARKS:
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WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-456
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4647
NASA FMEA #: NASA DATA:

| NASA DATA: | BASELINE [ ] | NEW [ ] |
| ASSESSMENT ID: | MECH/KBD-4647 |
| MDAC ID: | 4647 |
| ITEM: | 40 MS TIME DELAY |
| SUBSYSTEM: | MECH/KBD/EPD&C |
| MDAC ID: | 4647 |
| ITEM: | 40 MS TIME DELAY |

LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-457
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4648
NASA FMEA #: NASA DATA:

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SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4648
ITEM: AMP #1
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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* CIL RETENTION RATIONALE: (If applicable)

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REMARKS:

AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-458
ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4649
NASA FMEA #: MECH/KBD/EPD&C
MDAC ID: 4649
ITEM: AMP #1
LEAD ANALYST: A.D. MONTGOMERY

NASA DATA:
BASELINE [ ]
NEW [ ]

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4649
ITEM: AMP #1
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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*CIL RETENTION RATIONALE: (If applicable)
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REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-459
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4650
NASA FMEA #: NASA DATA:
SUBSYSTEM: MECH/KBD/EPD&C BASELINE [ ]
MDAC ID: 4650 NEW [ ]
ITEM: AND GATE #3
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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| COMPARE     | [ N /N ] | [ N ] | [ N ] | [ N ] | [ ] |

RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-460
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4651
NASA DATA: BASELINE [ ] NEW [ ]
NASA FMEA #: [ ]
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4651
ITEM: AND GATE #3
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
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INADEQUATE [ ]

REMARKS:
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REPORT DATE 22 JULY 1988 C.10-461
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4652
NASA FMEA #: NASA DATA:
SUBSYSTEM: MECH/KBD/EPD&C NASA BASELINE [ ]
MDAC ID: 4652 NEW [ ]
ITEM: 4 SECOND TIME DELAY
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

| CRITICALITY | REDUNDANCY SCREENS | CIL ITEM |
| HDW/FUNC | A | B | C |
| NASA | / | / | / | / |
| IOA | 3 | P | F | P |
| COMPARE | N | N | N | N |

RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ] INADEQUATE [ ]

REMARKS:
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APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4653
NASA PMEA #: NASA

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4653
ITEM: 4 SECOND TIME DELAY

LEAD ANALYST: A.D. MONTGOMERY

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* CIL RETENTION RATIONALE: (If applicable)

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REMARKS:
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REPORT DATE 22 JULY 1988 C.10-463
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4654
NASA FMEA #: NASA DATA:
BASELINE [ ]
NEW [ ]

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4654
ITEM: AMP #3

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

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INADEQUATE [ ]

REMARKS:
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REPORT DATE 22 JULY 1988 C.10-464
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4655
NASA FMEA #: [ ]
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4655
ITEM: AMP #3
LEAD ANALYST: A.D. MONTGOMERY

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IOA [ 3 /1R ] [ P ] [ F ] [ P ] [ ]
COMPARE [ N /N ] [ N ] [ N ] [ N ] [ ]

RECOMMENDATIONS: (If different from NASA)
[ ] [ ] [ ] [ ] [ ]

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

REMARKS:
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ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE
ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS
WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-465
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4656
NASA FMEA #: NASA/IOA 3/IR
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4656
ITEM: EXPLOSIVE INITIATOR
LEAD ANALYST: A.D. MONTGOMERY

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IOA
[ 3/1R ] [ P ]  [ F ]  [ P ]  [ ]

COMPARE
[ N/N ]  [ N ]  [ N ]  [ N ]  [ ]

RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]

INADEQUATE [ ]

REMARKS:
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REPORT DATE 22 JULY 1988 C.10-466
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4657
NASA FMEA #: NASA DATA:
BASELINE [ ]
NEW [ ]
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4657
ITEM: EXPLOSIVE INITIATOR
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
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REMARKS:
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REPORT DATE 22 JULY 1988 C.10-467
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4658
NASA FMEA #: NASA FMEA
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4658
ITEM: EXPLOSIVE INITIATOR
LEAD ANALYST: A.D. MONTGOMERY

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* CIL RETENTION RATIONALE: (If applicable)
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REMARKS:
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APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4659
NASA FMEA #: 

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4659
ITEM: EXPLOSIVE INITIATOR

LEAD ANALYST: A.D. MONTGOMERY

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* CIL RETENTION RATIONALE: (If applicable)

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REMARKS:
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APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4660
NASA FMEA #: NASA DATA:
BASELINE [ ]
NEW [ ]

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4660
ITEM: AMP #2

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
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WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4661
NASA FMEA #: NASA DATA:
SUBSYSTEM: MECH/KBD/EPD&C NASA BASELINE [ ] NEW [ ]
MDAC ID: 4661
ITEM: AMP #2
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

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REPORT DATE 22 JULY 1988 C.10-471
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4662
NASA FMEA #: NEW
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4662
ITEM: AMP #2
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

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REMARKS:
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REPORT DATE 22 JULY 1988 C.10-472
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4663
NASA FMEA #: NASA/ MDAC ID: 4663
ITEM: AMP #2

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-473
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4664
NASA FMEA #: NASA DATA:
BASELINE [ ]
NEW [ ]

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4664
ITEM: CONVERTER

LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-474
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4665
NASA FMEA #: NASA DATA:
SUBSYSTEM: MECH/KBD/EPD&C BASELINE [ ]
MDAC ID: 4665 NEW [ ]
ITEM: CONVERTER
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-475
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4666
NASA FMEA #: 

NASA DATA:
BASELINE [ ]
NEW [ ]

SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4666
ITEM: INVERTED AND GATE

LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT
ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE
ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS
WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-476
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4667
NASA FMEA #: NASA DATA:
SUBSYSTEM: MECH/KBD/EPD&C BASELINE [ ]
MDAC ID: 4667 NEW [ ]
ITEM: INVERTED AND GATE
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

CRITICALLY FLIGHT REDUNDANCY SCREENS CIL
HDW/FUNC A B C ITEM

NASA [ ] / [ ] [ ] [ ] [ ] [ ] * [ ]
IOA [ 3 /1R ] [ P ] [ F ] [ P ] [ ] [ ]
COMPARE [ N / N ] [ N ] [ N ] [ N ] [ ]

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

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

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT
ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE
ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS
WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-477
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4668
NASA FMEA #: NASA DATA:
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4668
ITEM: CAPACITOR BANK
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

*CIL RETENTION RATIONALE: (If applicable)*

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT
ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE
ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS
WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-478
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4669
NASA FMEA #:
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4669
ITEM: CAPACITOR BANK
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

CRITICALITY REDUNDANCY SCREENS CIL
FLIGHT HDW/FUNC A B C ITEM

NASA [ / ] [ ] [ ] [ ] [ ]
IOA [ 3 /1R ] [ P ] [ F ] [ P ]
COMPARE [ N /N ] [ N ] [ N ] [ N ]

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

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

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-479
APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88  
NASA DATA:  
ASSESSMENT ID: MECH/KBD-4670  
BASELINE [ ]  
NASA FMEA #:  
NEW [  ]  
SUBSYSTEM: MECH/KBD/EPD&C  
MDAC ID: 4670  
ITEM: AND GATE  
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]  
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REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-480
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4671
NASA FMEA #: N/A
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4671
ITEM: AND GATE
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-481
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4672
NASA FMEA #: NASA DATA:
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4672
ITEM: AMP
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
The issue arose due to differences between the NASA and IOA FMEA/CIL interpretation and implementation of NSTS 22206. The issue is withdrawn by IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-482
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4673
NASA FMEA #: 
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4673
ITEM: AMP
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
The issue arose due to differences between the NASA and IOA FMEA/CIL interpretation and implementation of NSTS 22206. The issue is withdrawn by IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-483
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4674
NASA FMEA #: NASA DATA:
SUBSYSTEM: MECH/KBD/EPD&C BASELINE [ ]
MDAC ID: 4674 NEW [ ]
ITEM: TEST LOGIC
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-484
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4675
NASA FMEA #: 
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4675
ITEM: TEST LOGIC
LEAD ANALYST: A.D. MONTGOMERY

NASA DATA:
BASELINE [ ]
NEW [ ]

ASSESSMENT:

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IOA [ 3 /1R ] [ P ] [ F ] [ P ] [ ]
COMPARE [ N /N ] [ N ] [ N ] [ N ] [ ]

RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-485
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4676
NASA FMEA #: NASA DATA:
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4676
ITEM: CONVERTER
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
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REMARKS:
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REPORT DATE 22 JULY 1988 C.10-486
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4677
NASA FMEA #: NASA DATA:
SUBSYSTEM: MECH/KBD/EPD&C BASELINE [ ]
MDAC ID: 4677 NEW [ ]
ITEM: CONVERTER
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable) ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
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WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-487
APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88  
ASSESSMENT ID: MECH/KBD-4678  
NASA FMEA #:  
NASA DATA: 
BASELINE [ ]  
NEW [ ]  
SUBSYSTEM: MECH/KBD/EPD&C  
MDAC ID: 4678  
ITEM: INVERTED AND GATE  
LEAD ANALYST: A.D. MONTGOMERY  
ASSESSMENT:  

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RECOMMENDATIONS: (If different from NASA)  
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* CIL RETENTION RATIONALE: (If applicable)  
ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:  
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4679
NASA FMEA #: 4679
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: INVERTED AND GATE
ITEM ID: MECH/KBD/EPD&C 4679
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-489
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4680
NASA FMEA #: BASELINE [ ]
NASA DATA: NEW [ ]
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4680
ITEM: CAPACITOR BANK
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT
ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE
ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS
WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-490
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4681
NASA FMEA #: NASA DATA:
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4681 NEW [
ITEM: CAPACITOR BANK
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/Delete)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT
ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE
ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS
WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-491
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4682
NASA FMEA #: NASA DATA: Baseline [ ] New [ ]
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4682
ITEM: AND GATE
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ] [ ]
INADEQUAE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-492
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4683
NASA FMEA #:
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4683
ITEM: AND GATE
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-493
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4684
NASA FMEA #: NASA FMEA #:
MECH/KBD-4684
NASA DATA:
BASELINE [ ]
NEW [ ]
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4684
ITEM: AMP
LEAD ANALYST: A.D. MONTGOMERY
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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
THE ISSUE AROSE DUE TO DIFFERENCES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-494
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4685
NASA FMEA #:
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4685
ITEM: AMP
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

THE ISSUE AROSE DUE TO DIFFERENCES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4686
NASA FMEA #: BASELINE [ ]
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4686
ITEM: TEST LOGIC
ASSESSMENT ID: MECH/KBD-4686
LEAD ANALYST: A.D. MONTGOMERY

NASA DATA:
BASELINE [ ]
NEW [ ]

NASA CRITICALITY REDUNDANCY SCREENS
FLIGHT HDW/FUNC A B C
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IOA [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]
COMPARE [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]

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

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

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT
ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE
ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS
WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-496
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: MECH/KBD-4687
NASA FMEA #:
SUBSYSTEM: MECH/KBD/EPD&C
MDAC ID: 4687
ITEM: TEST LOGIC
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT
ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE
ATTRIBUTE TO DIFFERENCES IN GROUND RULES. THE ISSUE IS
WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-497
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/PBD-5103
NASA FMEA #: NASA DATA:
SUBSYSTEM: MECH/PBD
MDAC ID: 5103
ITEM: CENTERLINE/BULKHEAD LATCH MOTOR CLUTCH
LEAD ANALYST: J. BACHER

ASSESSMENT:

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| IOA  | 3 /3 | [ ] | [ ] | [ ] | [ ] | [ ] |
| COMPARE | N /N | [ ] | [ ] | [ ] | [ ] | [ ] |

RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
THE ISSUE AROSE DUE TO DIFFERENCES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-498
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/PBD-5116
NASA FMEA #: NASA DATA:
BASELINE [ ]
NEW [ ]

SUBSYSTEM: MECH/PBD
MDAC ID: 5116
ITEM: CENTERLINE/BULKHEAD OPEN LIMIT SWITCH

LEAD ANALYST: J. BACHER

ASSESSMENT:

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

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

REMARKS:
THE ISSUE AROSE DUE TO DIFFERENCES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/PBD-5117
NASA FMEA #:

SUBSYSTEM: MECH/PBD
MDAC ID: 5117
ITEM: CENTERLINE/BULKHEAD OPEN LIMIT SWITCH

LEAD ANALYST: J. BACHER

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-500
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/PBD-5118
NASA FMEA #: 

NASA DATA:
BASELINE [ ]
NEW [ ]

SUBSYSTEM: MECH/PBD
MDAC ID: 5118
ITEM: CENTERLINE/BULKHEAD CLOSED LIMIT SWITCH

LEAD ANALYST: J. BACHER

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMKS:
THE ISSUE AROSE DUE TO DIFFERENCES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-501
## APPENDIX C
### ASSESSMENT WORKSHEET

**ASSESSMENT DATE:** 2/17/88  
**ASSESSMENT ID:** MECH/PBD-5141  
**NASA FMEA #:**  
**SUBSYSTEM:** MECH/PBD  
**MDAC ID:** 5141  
**ITEM:** BULKHEAD ROLLER ASSEMBLY  
**LEAD ANALYST:** J. BACHER  

### ASSESSMENT:

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**RECOMMENDATIONS:** (If different from NASA)

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*(ADD/DELETE)*

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

Adequate [ ]  
Inadequate [ ]

### REMARKS:

The issue arose due to differences between the NASA and IOA FMEA/CIL interpretation and implementation of NSTS 22206. The issue is withdrawn by IOA/MDAC.

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**REPORT DATE** 22 JULY 1988  
**C.10-502**
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/PBD-5142
NASA FMEA #: NASA DATA:

BASELINE [ ]
NEW [ ]

SUBSYSTEM: MECH/PBD
MDAC ID: 5142
ITEM: BULKHEAD DOOR CLOSED SWITCH

LEAD ANALYST: J. BACHER

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
The issue arose due to differences between the NASA and IOA FMEA/CIL interpretation and implementation of NSTS 22206. The issue is withdrawn by IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-503
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/PBD-5143
NASA FMEA #:
NASA DATA:
BASELINE [ ]
NEW [ ]

SUBSYSTEM: MECH/PBD
MDAC ID: 5143
ITEM: BULKHEAD DOOR CLOSED SWITCH

LEAD ANALYST: J. BACHER

ASSESSMENT:

| CRITICALLY | REDUNDANCY SCREENS | CIL |
| FLIGHT HDW/FUNC | A | B | C |
| NASA [ / ] | [ ] | [ ] | [ ] |
| IOA [ 2 /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:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-504
### APPENDIX C

#### ASSESSMENT WORKSHEET

**ASSESSMENT DATE:** 2/17/88  
**NASA DATA:**  
**ASSESSMENT ID:** MECH/PBD-5144  
**NASA FMEA #:**  
**BASELINE [ ]**  
**NEW [ ]**

**SUBSYSTEM:** MECH/PBD  
**MDAC ID:** 5144  
**ITEM:** BULKHEAD READY-TO-LATCH SWITCH MODULE

**LEAD ANALYST:** J. BACHER

**ASSESSMENT:**

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**RECOMMENDATIONS:** (If different from NASA)

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*(ADD/DELETE)*

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

| ADEQUATE [ ] |

| INADEQUATE [ ] |

**REMARKS:**

THE ISSUE AROSE DUE TO DIFFERENCES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

**REPORT DATE** 22 JULY 1988  
**C.10-505**
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/PBD-5148
NASA FMEA #: NASA DATA:
BASELINE [ ] NEW [ ]

SUBSYSTEM: MECH/PBD
MDAC ID: 5148
ITEM: PAYLOAD BAY DOOR DRIVE CLUTCH

LEAD ANALYST: J. BACHER

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

REMARKS:
The issue arose due to differences between the NASA and IOA FMEA/CIL interpretation and implementation of NSTS 22206. The issue is withdrawn by IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-506
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/PBD-5160
NASA FMEA #: 
SUBSYSTEM: MECH/PBD
MDAC ID: 5160
ITEM: PAYLOAD BAY DOOR DRIVE SUPPORT BEARING ASSEMBLY
LEAD ANALYST: J. BACHER

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/PBD-5170
NASA FMEA #: MECH/PBD 5170
SUBSYSTEM: MDAC ID: ITEM: PAYLOAD BAY DOOR OPEN LIMIT SWITCH
LEAD ANALYST: J. BACHER
ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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RATIONAL RETENTION (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
THE ISSUE AROSE DUE TO DIFFERENCES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-508
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/PBD-5171
NASA FMEA #: 
SUBSYSTEM: MECH/PBD
MDAC ID: 5171
ITEM: PAYLOAD BAY DOOR OPEN LIMIT SWITCH
LEAD ANALYST: J. BACHER

NASA DATA:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ] INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/PBD-5172
NASA FMEA #: NASA DATA:
BASELINE [ ]
NEW [ ]

SUBSYSTEM: MECH/PBD
MDAC ID: 5172
ITEM: PAYLOAD BAY DOOR 88 DEGREES LIMIT SWITCH

LEAD ANALYST: J. BACHER

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
THE ISSUE AROSE DUE TO DIFFERENCES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-510
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/PBD-5173
NASA FMEA #:

NASA DATA:
BASELINE [ ]
NEW [ ]

SUBSYSTEM: MECH/PBD
MDAC ID: 5173
ITEM: PAYLOAD BAY DOOR 88 DEGREES LIMIT SWITCH

LEAD ANALYST: J. BACHER

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

THE ISSUE AROSE DUE TO DIFFERENCES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-511
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/PBD-5174
NASA FMEA #: BASELINE [ ]
SUBSYSTEM: MECH/PBD
MDAC ID: 5174
ITEM: PAYLOAD BAY DOOR
LEAD ANALYST: J. BACHER

NASA DATA:
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NEW [ ]

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RECOMMENDATIONS: (If different from NASA)

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*CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT
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ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS
WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-512
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/PBD-5175
NASA FMEA #:
SUBSYSTEM: MECH/PBD
MDAC ID: 5175
ITEM: PAYLOAD BAY DOOR
LEAD ANALYST: J. BACHER

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
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REMARKS:
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WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-513
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/PBD-5177
NASA FMEA #: NASA DATA:
BASELINE [ ]
NEW [ ]

SUBSYSTEM: MECH/PBD
MDAC ID: 5177
ITEM: PAYLOAD BAY DOOR ALIGNMENT ROLLER GUIDE

LEAD ANALYST: J. BACHER

ASSESSMENT:

CRITICALLY REDUNDANCY CIL
FLIGHT HDW/FUNC A B C ITEM

NASA [ / ] [ ] [ ] [ ] [ ] *
IOA [ 3 /1R ] [ P ] [ NA] [ P ] [ ]
COMPARE [ N /N ] [ N ] [ N ] [ N ] [ ]

RECOMMENDATIONS: (If different from NASA)

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

REMARKS:
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WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-514
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
NASA DATA:
ASSESSMENT ID: MECH/PBD-5178 NASA FMEA #: BASELINE [ ]
MDAC ID: 5178 SUBSYSTEM: MECH/PBD NEW [ ]
ITEM: PAYLOAD BAY DOOR PASSIVE STOP

LEAD ANALYST: J. BACHER

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
THE ISSUE AROSE DUE TO DIFFERENCES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-515
ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/PBD-5501
NASA FMEA #: 
SUBSYSTEM: MECH/PBD/EPD&C
MDAC ID: 5501
ITEM: CONTROL BUS 1.2K RESISTOR
LEAD ANALYST: J. BACHER

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

REMARKS:
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ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS
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REPORT DATE 22 JULY 1988 C.10-516
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/PBD-5503
NASA FMEA #: [ ]

NASA DATA:
BASELINE [ ]
NEW [ ]

SUBSYSTEM: MECH/PBD/EPD&C
MDAC ID: 5503
ITEM: CONTROL BUS 1.2K RESISTOR

LEAD ANALYST: J. BACHER

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
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REPORT DATE 22 JULY 1988 C.10-517
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/PBD-5506
NASA FMEA #: BASELINE [ ]
NEW [ ]

SUBSYSTEM: MECH/PBD/EPD&C
MDAC ID: 5506
ITEM: PAYLOAD BAY DOOR MECHANICAL POWER SWITCH

LEAD ANALYST: J. BACHER

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
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REPORT DATE 22 JULY 1988 C.10-518
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/PBD-5509
NASA FMEA #: 
SUBSYSTEM: MECH/PBD/EPD&C
MDAC ID: 5509
ITEM: DIODE
LEAD ANALYST: J. BACHER

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
The issue arose due to differences between the NASA and IOA FMEA/CIL Interpretation and Implementation of NSTS 22206. The issue is withdrawn by IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-519
ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/PBD-5510
NASA FMEA #: MECH/PBD/EPD&C
MDAC ID: 5510
ITEM: DIODE
LEAD ANALYST: J. BACHER

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

THE ISSUE AROSE DUE TO DIFFERENCES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-520
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/PBD-5511
NASA FMEA #: 
SUBSYSTEM: MECH/PBD/EPD&C
MDAC ID: 5511
ITEM: SWITCH RESISTOR, 1.2K 2W
LEAD ANALYST: J. BACHER

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

REMARKS:
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APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/PBD-5512
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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
The issue arose due to differences between the NASA and IOA FMEA/CIL interpretation and implementation of NSTS 22206. The issue is withdrawn by IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-522
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/PBD-5513
NASA FMEA #: 

SUBSYSTEM: MECH/PBD/EPD&C
MDAC ID: 5513
ITEM: SWITCH RESISTOR, 1.2K 2W

LEAD ANALYST: J. BACHER

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

* CIL RETENTION RATIONALE: (If applicable)

Adequate [ ]

INADEQUATE [ ]

REMARKS:

AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-523
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/PBD-5514
NASA FMEA #: 

NASA DATA:
BASELINE [ ]
NEW [ ]

SUBSYSTEM: MECH/PBD/EPD&C
MDAC ID: 5514
ITEM: PAYLOAD BAY DOORS AC BUS RELAY

LEAD ANALYST: J. BACHER

ASSESSMENT:

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

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

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

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT
ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE
ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS
WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-524
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/PBD-5515
NASA FMEA #:

NASA DATA:
BASELINE [ ]
NEW [ ]

SUBSYSTEM: MECH/PBD/EPD&C
MDAC ID: 5515
ITEM: PAYLOAD BAY DOORS AC BUS RELAY

LEAD ANALYST: J. BACHER

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT
ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE
ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS
WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-525
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/PBD-5516
NASA FMEA #: NASA DATA:
BASELINE [ ]
NEW [ ]

SUBSYSTEM: MECH/PBD/EPD&C
MDAC ID: 5516
ITEM: MCA AC POWER CIRCUIT BREAKER

LEAD ANALYST: J. BACHER

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-526
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/PBD-5517

NASA FMEA #: BASELINE [ ]
SUBSYSTEM: MECH/PBD/EPD&C
MDAC ID: 5517
ITEM: MCA RELAY LOGIC POWER SWITCH

LEAD ANALYST: J. BACHER

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT
ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE
ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS
WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/PBD-5518
NASA FMEA #: NASA DATA:
SUBSYSTEM: MECH/PBD/EPD&C NASA FMEA #:
MDAC ID: 5518
ITEM: MCA RELAY LOGIC POWER SWITCH
LEAD ANALYST: J. BACHER

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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*CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [  ]
INADEQUATE [  ]

REMARKS:
The issue arose due to differences between the NASA and IOA
FMEA/CIL interpretation and implementation of NSTS 22206. The
issue is withdrawn by IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-528
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/PBD-6101
NASA FMEA #:
NASA DATA:
BASELINE [ ]
NEW [ ]

SUBSYSTEM: MECH/PBD/EPD&C
MDAC ID: 5519
ITEM: REMOTE POWER CONTROLLER
LEAD ANALYST: J. BACHER

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
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REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-529
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/PBD-6102
NASA FMEA #: 
SUBSYSTEM: MECH/PBR
MDAC ID: 6101
ITEM: MOTOR
LEAD ANALYST: W.T. SLAUGHTER

ASSESSMENT:

<p>| CRITICALITY | REDUNDANCY SCREENS | CIL |</p>
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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-530
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/PBD-6103
NASA PMEA #: BASELINE [ ]
 NASA FMEA #: NEW [ ]

SUBSYSTEM: MECH/PBR
MDAC ID: 6102
ITEM: MOTOR BRAKE

LEAD ANALYST: W.T. SLAUGHTER

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT
ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE
ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS
WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-531
**APPENDIX C**

**ASSESSMENT WORKSHEET**

**ASSESSMENT DATE:** 2/19/88  
**ASSESSMENT ID:** MECH/PBR-6105  
**NASA FMEA #:** 02-4G-183-1  
**SUBSYSTEM:** MECH/PBR  
**MDAC ID:** 6105  
**ITEM:** TORQUE LIMITER  
**LEAD ANALYST:** W.T. SLAUGHTER  

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**RECOMMENDATIONS:** (If different from NASA)

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

ADEQUATE [ ]  
INADEQUATE [ X ]

**REMARKS:**

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

**REPORT DATE** 22 JULY 1988  
**C.10-532**
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: MECH/PBR-6106
NASA FMEA #: [ ]
SUBSYSTEM: MECH/PBR
MDAC ID: 6106
ITEM: DIFFERENTIAL ASSEMBLY
LEAD ANALYST: W.T. SLAUGHTER

NASA DATA:
BASELINE [ ]
NEW [ ]

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

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

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT
ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE
ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS
WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-533
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: MECH/PBR-6109
NASA FMEA #: NASA DATA:

SUBSYSTEM: MECH/PBR
MDAC ID: 6109
ITEM: LIMIT SWITCHES, RELEASE (S1), (S3), (S4)
LEAD ANALYST: W.T. SLAUGHTER

ASSESSMENT:

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IOA [ 3 /3 ] [ ] [ ] [ ] [ ] [ ]

COMPARE [ N /N ] [ ] [ ] [ ] [ ] [ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
THE ISSUE AROSE DUE TO DIFFERENCES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-534
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: MECH/PBR-6110
NASA FMEA #: 
SUBSYSTEM: MECH/PBR
MDAC ID: 6110
ITEM: LIMIT SWITCHES, LATCH (S2), (S3), (S4)
LEAD ANALYST: W.T. SLAUGHTER

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
THE ISSUE AROSE DUE TO DIFFERENCES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-535
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: MECH/PBR-6112
NASA FMEA #: 02-4G-181-2
SUBSYSTEM: MECH/PBR
MDAC ID: 6112
ITEM: LATCH ROTARY ACTUATOR
LEAD ANALYST: W.T. SLAUGHTER

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-536
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: MECH/PBR-6112A
NASA FMEA #: 02-4G-182-3

SUBSYSTEM: MECH/PBR
MDAC ID: 6112
ITEM: LATCH ROTARY ACTUATOR

LEAD ANALYST: W.T. SLAUGHTER

NASA DATA:
BASELINE [ ]
NEW [ X ]

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: MECH/PBR-6202
NASA FMEA #: BASELINE [ ] NEW [ ]

SUBSYSTEM: MECH/PBR
MDAC ID: 6202
ITEM: MOTOR BRAKE

LEAD ANALYST: W.T. SLAUGHTER

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ ] [ ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
THE ISSUE AROSE DUE TO DIFFERENCES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-538
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: MECH/PBR-6206
NASA FMEA #:

SUBSYSTEM: MECH/PBR
MDAC ID: 6206
ITEM: DIFFERENTIAL ASSEMBLY

LEAD ANALYST: W.T. SLAUGHTER

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COMPARE [ N / N ] [ N ] [ N ] [ N ] [ ]

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

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

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT
ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE
ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS
WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
NASA DATA: BASELINE [ ]
ASSESSMENT ID: MECH/PBR-6209 NASA FMEA #: 
NASA FMEA #: MECH/PBR-6209 NEW [ ]

SUBSYSTEM: MECH/PBR MDAC ID: 6209
ITEM: LIMIT SWITCHES, DEPLOY (S1, S2, S4)
LEAD ANALYST: W.T. SLAUGHTER

ASSESSMENT:

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COMPARE [ ] [ ] [ ] [ ] [ ] [ ] [ ]

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

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

REMARKS:
The issue arose due to differences between the NASA and IOA FMEA/CIL interpretation and implementation of NSTS 22206. The issue is withdrawn by IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-540
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: MECH/PBR-6210
NASA FMEA #:

SUBSYSTEM: MECH/PBR
MDAC ID: 6210
ITEM: LIMIT SWITCHES, STOW (SI, S2, S3)

LEAD ANALYST: W.T. SLAUGHTER

ASSESSMENT:

CRITICALITY REDUNDANCY SCREENS CIL
FLIGHT HDW/FUNC A B C ITEM

NASA [ / ] [ ] [ ] [ ] [ ] [ ] *
IOA [ 3 / 3 ] [ ] [ ] [ ] [ ] [ ]
COMPARE [ N /N ] [ ] [ ] [ ] [ ] [ ]

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

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

REMARKS:
The issue arose due to differences between the NASA and IOA FMEA/CIL interpretation and implementation of NSTS 22206. The issue is withdrawn by IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-541
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: MECH/PBR-6213
NASA FMEA #: 02-4G-152-3
SUBSYSTEM: MECH/PBR
MDAC ID: 6213
ITEM: DEPLOYMENT CRANK AND LINK
LEAD ANALYST: W.T. SLAUGHTER

ASSESSMENT:

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/16/88
ASSESSMENT ID: MECH/PH-7100
NASA FMEA #: 02-4A-593309-1

SUBSYSTEM: MECH/PH
MDAC ID: 7100
ITEM: PRESSURE PORT

LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-543
ASSESSMENT DATE: 2/16/88
ASSESSMENT ID: MECH/PH-7101
NASA FMEA #: 02-4A-593309-1
NASA DATA:
BASELINE [ ]
NEW [ X ]
SUBSYSTEM: MECH/PH
MDAC ID: 7101
ITEM: PRESSURE PORT
LEAD ANALYST: A.D. MONTGOMERY
ASSESSMENT:

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

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: MECH/PH-7102
NASA FMEA #: 02-4A-593302-2
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: MECH/PH
MDAC ID: 7102
ITEM: O RING
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-545
ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: MECH/PH-7103
NASA FMEA #: 02-4A-593302-2
SUBSYSTEM: MECH/PH
MDAC ID: 7103
ITEM: 0 RING
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-546
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: MECH/PH-7104
NASA FMEA #: MECH/PH
MDAC ID: 7104
ITEM: VIEWPORT
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-547
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: MECH/PH-7105
NASA FMEA #: NASA DATA:

| SUBSYSTEM: MECH/PH | BASELINE | | NEW |
| MDAC ID: 7105 | | |
| ITEM: VIEWPORT | | |

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE |

INADEQUATE |

REMARKS:

AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT
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WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-548
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/12/88
ASSESSMENT ID: MECH/PH-7112
NASA FMEA #: 02-4A-593202-3

SUBSYSTEM: MECH/PH
MDAC ID: 7112
ITEM: O RING

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-549
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/12/88
ASSESSMENT ID: MECH/PH-7113
NASA FMEA #: 02-4A-593202-3

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: MECH/PH
MDAC ID: 7113
ITEM: O RING

LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA/MDAC AGREES WITH THE FMEA. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-550
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/12/88
ASSESSMENT ID: MECH/PH-7114
NASA FMEA #: NASA DATA:

NASA DATA:
BASELINE [ ]
NEW [ ]

SUBSYSTEM: MECH/PH
MDAC ID: 7114
ITEM: VIEWPORT

LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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| COMPARE [ N /N ] | [ N ] | [ N ] | [ N ] | [ ] |

RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-551
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/12/88
ASSESSMENT ID: MECH/PH-7115
NASA FMEA #: NASA DATA:
BASELINE [ ] NEW [ ]

SUBSYSTEM: MECH/PH
MDAC ID: 7115
ITEM: VIEWPORT

LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT
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ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS
WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-552
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/12/88
ASSESSMENT ID: MECH/PH-7116
NASA FMEA #: NASA DATA:
SUBSYSTEM: MECH/PH BASELINE [ ]
MDAC ID: 7116 NEW [ ]
ITEM: VIEWPORT LATCH
LEAD ANALYST: A.D. MONTGOMERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
THE ISSUE AROSE DUE TO DIFFERENCES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988  C.10-553
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/12/88
ASSESSMENT ID: MECH/PH-7117
NASA FMEA #: NASA DATA:
SUBSYSTEM: MECH/PH BASELINE [ ]
MDAC ID: 7117 NEW [ ]
ITEM: VIEWPORT LATCH
LEAD ANALYST: A.D. MONTGOMERY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

THE ISSUE AROSE DUE TO DIFFERENCES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: MECH/VDM-8109
NASA FMEA #: NASA DATA:

BASELINE [ ]
NEW [ ]

SUBSYSTEM: MECH/VDM
MDAC ID: 8109
ITEM: ALL ITEMS NOT SHOWN ON MDAC ID 8100 - 8108

LEAD ANALYST: H.J. LOWERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

THE ISSUE AROSE DUE TO DIFFERENCES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-555
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: MECH/VDM-8501
NASA FMEA #: 
SUBSYSTEM: MECH/VDM/EPD&C
MDAC ID: 8501
ITEM: ACTUATOR MOTOR
LEAD ANALYST: M. BRADWAY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: MECH/VDM-8504
NASA FMEA #:

SUBSYSTEM: MECH/VDM/EPD&C
MDAC ID: 8504
ITEM: MCA PURGE SIGNAL DRIVER

LEAD ANALYST: M. BRADWAY

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RECOMMENDATIONS: (If different from NASA)

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(RECOMMENDATIONS)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-557
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: MECH/VDM-8505
NASA FMEA #: NASA DATA:
SUBSYSTEM: MECH/VDM/EPD&C BASELINE [ ]
MDAC ID: 8505 NEW [ ]
ITEM: MCA DC POWER BUS

LEAD ANALYST: M. BRADWAY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-558
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: MECH/VDM-8506
NASA FMEA #: NASA DATA:

SUBSYSTEM: MECH/VDM/EPD&C
MDAC ID: 8506
ITEM: MCA AC POWER BUS

LEAD ANALYST: M. BRADWAY

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RECOMMENDATIONS: (If different from NASA)

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

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-559
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: MECH/VDM-8509
NASA FMEA #: NASA DATA:
SUBSYSTEM: MECH/VDM/EPD&C
MDAC ID: 8509
ITEM: ELECTRICAL CONNECTORS/PINS
LEAD ANALYST: M. BRADWAY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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*CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
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REMARKS:

AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-560
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: MECH/VDM-8510
NASA FMEA #:

SUBSYSTEM: MECH/VDM/EPD&C
MDAC ID: 8510
ITEM: CABLES/WIRING

LEAD ANALYST: M. BRADWAY

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT
ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE
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WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: MECH/VDM-8514
NASA FMEA #: NASA DATA:
SUBSYSTEM: MECH/VDM/EPD&C
MDAC ID: 8514
ITEM: FUSE
LEAD ANALYST: M. BRADWAY

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RECOMMENDATIONS: (If different from NASA)

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: MECH/VDM-8515
NASA FMEA #: NASA DATA:

BASELINE [ ]
NEW [ ]

SUBSYSTEM: MECH/VDM/EPD&C
MDAC ID: 8515
ITEM: RESISTOR

LEAD ANALYST: M. BRADWAY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
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REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT
ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE
ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS
WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-563
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/19/88
ASSESSMENT ID: MECH/VDM-8516
NASA FMEA #: NASA DATA:

SUBSYSTEM: MECH/VDM/EPD&C
MDAC ID: 8516
ITEM: RESISTOR
LEAD ANALYST: M. BRADWAY

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-564
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/SDM-9102
NASA FMEA #: 
NASA DATA:
BASELINE [ ]
NEW [ ]
SUBSYSTEM: MECH/SDM
MDAC ID: 9102
ITEM: OPEN LIMIT SWITCHES (S1 & 3) ACTUATOR
LEAD ANALYST: H.J. LOWERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT
ALREADY IDENTIFIED BY NASSA, THE REMAINING ISSUES MAY BE
ATTACHED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS
WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/SDM-9103
NASA FMEA #: NASA DATA:
BASELINE [ ]
NEW [ ]

SUBSYSTEM: MECH/SDM
MDAC ID: 9103
ITEM: STOW LIMIT SWITCHES (S1 & 3) ACTUATOR

LEAD ANALYST: H.J. LOWERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
The issue arose due to differences between the NASA and IOA FMEA/CIL interpretation and implementation of NSTS 22206. The issue is withdrawn by IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-566
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/SDM-9104
NASA FMEA #: NASA DATA:
BASELINE [ ]
NEW [ ]

SUBSYSTEM: MECH/SDM
MDAC ID: 9104
ITEM: DEPLOY LIMIT SWITCHES (S2 & 4)

LEAD ANALYST: H.J. LOWERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
THE ISSUE AROSE DUE TO DIFFERENCES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-567
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/SDM-9105
NASA FMEA #: NASA DATA:
BASELINE [ ] NEW [ ]

SUBSYSTEM: MECH/SDM
MDAC ID: 9105
ITEM: DEPLOY LIMIT SWITCHES (S2 & 4)

LEAD ANALYST: H.J. LOWERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
THE ISSUE AROSE DUE TO DIFFERENCES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THE ISSUE IS WITHDRAWN BY IOA/MDAC.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/SDM-9106
NASA FMEA #: NASA DATA:

SUBSYSTEM: MECH/SDM
MDAC ID: 9106
ITEM: GEAR TRAIN ASSEMBLY

LEAD ANALYST: H.J. LOWERY

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-569
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/SDM-9107
NASA FMEA #: NASA DATA:
SUBSYSTEM: MECH/SDM BASELINE [ ]
MDAC ID: 9107 NEW [ ]
ITEM: GEAR TRAIN ASSEMBLY
LEAD ANALYST: H.J. LOWERY

ASSESSMENT:

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<th>CIL ITEM</th>
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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER COMPARISON, THERE WERE NO DISCREPANCIES FOUND THAT WERE NOT ALREADY IDENTIFIED BY NASA, THE REMAINING ISSUES MAY BE ATTRIBUTED TO DIFFERENCES IN GROUND RULES. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-570
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/SDM-9108
NASA FMEA #: NASA DATA:
SUBSYSTEM: MECH/SDM BASELINE [ ]
MDAC ID: 9108 NEW [ ]
ITEM: ALL ITEMS NOT SHOWN ON MDAC ID 9100-9107
LEAD ANALYST: H.J. LOWERY

ASSESSMENT:

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

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

REMARKS:
The issue arose due to differences between the NASA and IOA FMEA/CIL interpretation and implementation of NSTS 22206. The issue is withdrawn by IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-571
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: MECH/SDM-9501
NASA FMEA #: NASA DATA:
BASELINE [ ] NEW [ ]

SUBSYSTEM: MECH/SDM/EPD&C
MDAC ID: 9501
ITEM: ALL ITEMS NOT SHOWN ON MDAC ID 9500

LEAD ANALYST: H.J. LOWERY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
THE ISSUE AROSE DUE TO DIFFERENCES BETWEEN THE NASA AND IOA FMEA/CIL INTERPRETATION AND IMPLEMENTATION OF NSTS 22206. THE ISSUE IS WITHDRAWN BY IOA/MDAC.

REPORT DATE 22 JULY 1988 C.10-572