INDEPENDENT ORBITER ASSESSMENT

ASSESSMENT OF THE
COMMUNICATION
AND TRACKING
SUBSYSTEM
VOLUME 1 OF 3

18 MARCH 1988
INDEPENDENT ORBITER ASSESSMENT
ANALYSIS OF THE COMMUNICATION AND TRACKING SUBSYSTEM

18 MARCH 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 given by the STS Orbiter and GFE Projects Office to perform the hardware analysis using the instructions and ground rules defined in NSTS 22206, Instructions for Preparation of FMEA and CIL, 10 October 1986, with changes 1, 2, 3, and 4.

The IOA effort first completed and analysis of the Communication and Tracking hardware, generating draft failure modes and potential critical items. To preserve independence, this analysis was accomplished without reliance upon the results contained within the NASA FMEA/CIL documentation. The IOA results were then compared to the NASA FMEA/CIL baseline. A resolution of each discrepancy from the comparison is provided through additional analysis as required. This report documents the results of that comparison for the Orbiter Communication and Tracking hardware.

The IOA product for the Communication and Tracking consisted of 1,108 failure mode "worksheets" that resulted in 298 critical items being identified. Comparison was made to the NASA baseline (as of 1 January, 1988) which consist of 697 FMEAs and 239 CIL items. The comparison determined if there were any results which had been found by IOA but were not in the NASA baseline. This comparison produced agreement on all but 407 FMEAs which caused differences in 294 CIL items. Reference Figure 1.1a.

Figure 1.1a contains a summary of the quantity of IOA and NASA FMEA/CIL assessments and resulting issues.
COMMUNICATIONS AND TRACKING FMEA/CIL ASSESSMENT OVERVIEW SUMMARY

<table>
<thead>
<tr>
<th>COMMUNICATIONS &amp; TRACKING SUBSYSTEM</th>
</tr>
</thead>
<tbody>
<tr>
<td>IOA</td>
</tr>
<tr>
<td>------</td>
</tr>
<tr>
<td>FMEA</td>
</tr>
<tr>
<td>CIL</td>
</tr>
</tbody>
</table>

NOTE: CIL COUNT CONTAINED IN FMEA COUNT

COMMUNICATIONS

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</tr>
<tr>
<td>FMEA</td>
</tr>
<tr>
<td>CIL</td>
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</tbody>
</table>

EXPANDED IN
FIGURE 1.1B

TRACKING (NAVAIDS)

<p>| |</p>
<table>
<thead>
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<td>FMEA</td>
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<tr>
<td>CIL</td>
</tr>
</tbody>
</table>

EXPANDED IN
FIGURE 1.1C
COMMUNICATIONS FMEA/CIL ASSESSMENT SUMMARY - EXPANDED

Figure 1.1b - COMMUNICATIONS FMEA/CIL ASSESSMENT SUMMARY - EXPANDED

F = FMEA
C = CIL

* DASHED LINES ARE INTENDED TO SHOW THAT THE GCIL IS ASSOCIATED WITH THE FIVE INDICATED SYSTEMS

NOTE: CIL COUNT CONTAINED IN FMEA COUNT.
Figure 1.1c - TRACKING FMEA/CIL ASSESSMENT OVERVIEW SUMMARY - EXPANDED
2.0 INTRODUCTION

2.1 Purpose

The 51-L Challenger accident prompted the NASA to readdress safety policies, concepts, and rationale being used in the National Space Transportation System (NSTS). The NSTS Office has undertaken the task of reevaluating the FMEA/CIL for the Space Shuttle design. The MDAC is providing an independent assessment of the Orbiter FMEA/CIL reevaluation results for completeness and technical accuracy.

2.2 Scope

The scope of the independent FMEA/CIL assessment activity encompasses those Shuttle Orbiter subsystems and GFE hardware identified in the Space Shuttle Independent FMEA/CIL Assessment Contractor Statement of Work. Each subsystem analysis addresses hardware, functions, internal and external interfaces, and operational requirements for all mission phases.

2.3 Analysis Approach

The independent analysis approach was a top-down analysis utilizing as-built drawings to breakdown the respective subsystem into components and low-level hardware items. Each hardware item was evaluated for failure mode, effects, and criticality. These data were documented in the respective subsystem analysis report, and used to assess the NASA and Prime Contractor FMEA/CIL reevaluation results. The IOA analysis approach is summarized in the following Steps 1.0 through 3.0. Step 4.0 summarizes the approach used in assessment of the NASA and Prime Contractor FMEAs/CILs.

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

Step 2.0 Defined subsystem analysis diagram
  2.1 Defined subsystem
  2.2 Defined major assemblies
  2.3 Developed detailed subsystem representations

Step 3.0 Failure events definition
  3.1 Constructed matrix of failure modes
  3.2 Documented IOA analysis results
Step 4.0 Compared IOA analysis data to NASA FMEA/CIL
  4.1 Differences were not resolved
  4.2 Reviewed in-house
  4.3 Documented assessment issues
  4.4 Forward findings to Project Manager

2.4 Communication and Tracking Ground Rules and Assumptions

The Communication and Tracking ground rules and assumptions used in
the IOA are defined in Appendix B. In addition, analysis/assessments
were performed on Orbiter equipment only; no ground equipment or
satellite equipment was included in this document. Assessments were
performed using FMEAs available as of 1/1/88.
Figure 3.1 - COMMUNICATIONS AND TRACKING SUBSYSTEM PICTORIAL
3.0 SUBSYSTEM DESCRIPTION

3.1 Design and Function

The Communication and Tracking Subsystem consists of all hardware required for ground communication, crew station communication, attached and detached payload communication, Ground Command Interface Logic (GCIL) commands, video, audio, and coded telemetry transmission and reception, and state vector updates. See figure 3.1. Electrical power distribution has been included where it meets the criteria established in NSTS 22206 for evaluation of each individual subsystem. Refer to Figures 3.2 through 3.21 for the location of each ORBITER subsystem and related Block Diagram. The following specific subsystem functions are included:

1. S-band Phase Modulation (PM) RF links provide two-way communication either direct with NASA or DOD ground stations or via the Tracking and Data Relay Satellite (TDRS), for the following: commands, real-time telemetry data, two-way voice communication, teleprinter data, tone ranging (direct links only), and doppler tracking. Network Signal Precessor functions are included in the S-Band PM system analysis. See Figure 3.5.

2. The S-band Frequency Modulation (FM) system provides for data transmission direct to ground. This FM signal can be modulated by selectable (one at a time): real-time main engine (ME) data during launch, real-time or playback Closed Circuit Television (CCTV) video, real-time attached payload data, playback of Operations Recorder (telemetry and/or voice data), or playback of payload recorder digital data. See Figure 3.6.

3. Detached Payload two-way communication is via S-band payload system. This system provides a forward link (to the payload) for commands and a return link (from the payload) for telemetry. See Figure 3.7.

4. The Ku-band system is used for either two-way communications via the Tracking and Data Relay Satellite (TDRS) or for radar operations, but not simultaneously. The Ku-band forward link can transmit commands, voice, and forward data link either for text and graphics (TAGS) or for DOD commands via the communications interface unit (CIU). The return link provides capability for transmission of voice, telemetry, and TV video. The Ku-band system can be used only with payload bay doors open, during on-orbit operations. See Figures 3.8 and 3.18.

5. The UHF communication system provides voice communication between the Orbiter and ground stations, between the Orbiter and Astronauts on EVA, and distress (Guard) function on the international distress frequency. In the EVA mode, it can be used for duplex voice between Orbiter and up to two EVA
crewmen, and for transmission of biomedical data to the Orbiter which can be interleaved with operational data downlinked to ground. UHF is also used for communication with Air Traffic Control (ATC) and chase aircraft during landing operations. The UHF amplitude modulation (AM) transceiver is capable of operation in four major modes and on four different frequencies. By selecting or bypassing the power amplifier, it will operate at 10 watts or 0.25 watts. See Figure 3.9.

6. The Audio Distribution System (ADS) gathers audio signals from multiple sources and routes them throughout the Orbiter. Through these eight audio loops, the crew-members are able to communicate with each other, with Ground through access with external rf link equipment, with payloads or other spacecraft, or astronauts on EVA. Caution and Warning audio signals are passed through the audio system, as are TACAN ground station coded signals. Equipment included in the ADS are the Audio Central Control Unit (ACCU), Audio Terminal Units (ATU), Speaker Microphone Units (SMU), Audio Center, and Crew Communications Umbilical (CCU) jack. See Figures 3.10 through 3.13.

7. Navigation Aids include three Tactical Air Navigation (TACAN) receivers operating in a redundant set mode, two independent Radar Altimeters (RA) for low altitude terrain tracking and altitude sensing, and the Microwave Scan Beam Landing System (MSBLS), which is a Ku-band receiver-transmitter landing and navigation aid with decoding and computational capabilities. The Ku-band system can be used in its radar mode for rendezvous operations. See Figures 3.14 through 3.20.

8. Closed Circuit Television (CCTV) is provided to support on-orbit activities. Monitors are provided for the Orbiter crew to observe select activities. Cameras may be controlled by ground control or by panel controls. TV video can be downlinked by either Ku-band or S-band FM.

9. Crew Equipment/Government Furnished Equipment (GFE) includes the following items which have been included in this analysis: Comm Carrier Electronics Module, Interim Teleprinter, Interim Video Tape Recorder (VTR), Headset Interface Unit (HIU), Headset Cables, Wireless Crew Communication System (WCCS), Audio Central Control Unit (ACCU) bypass, Very Lightweight Headset, handheld microphone, multiple headset adapter, PRC-90 hand-held beacon/voice transceiver, and AN/URT-33 RF beacon transmitter.

10. EMU TV provides video scenes selected by the EVA helmet mounted camera. The scenes are transmitted by S-band FM transmissions to the Orbiter for distribution in the Orbiter CCTV system.
11. The GCIL controller provides the capability of controlling selected subsystem functions in either the PANEL or COMMAND mode. In the PANEL mode, selected subsystems are under control of the manual Displays and Controls (D&C) panel switches; in the COMMAND mode these subsystems are controlled by uplinked ground commands or commands entered via the Orbiter keyboards. There are five PANEL/COMMAND mode switches to control given functions of the following systems: S-band PM, S-band FM, CCTV, Ku-band, and S-band Payload. See Figure 3.21.
<table>
<thead>
<tr>
<th>COMMUNICATIONS</th>
<th>NOMENCLATURE</th>
<th>USE/INSTALLED LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>S-Band PM System</td>
<td>Transponder</td>
<td>Avionics Bay 3A</td>
</tr>
<tr>
<td></td>
<td>Power Amplifier (2, one encl)</td>
<td>Avionics Bay 3A</td>
</tr>
<tr>
<td></td>
<td>Preamplifier (2, one encl)</td>
<td>Avionics Bay 3A</td>
</tr>
<tr>
<td></td>
<td>Panel Control Switches</td>
<td>Panel A1</td>
</tr>
<tr>
<td></td>
<td>GCIL Command/Panel Switch</td>
<td>Panel C3</td>
</tr>
<tr>
<td></td>
<td>Antenna Switch/Beam Switch</td>
<td>Avionics Bay 3A</td>
</tr>
<tr>
<td></td>
<td>Manual Quad Antenna Switch</td>
<td>Panel C3</td>
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<tr>
<td></td>
<td>Quad Antennas (4)</td>
<td>Forward Fuselage</td>
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<tr>
<td></td>
<td>Network Signal Processor (2)</td>
<td>Avionics Bay 3A</td>
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<tr>
<td>S-Band PM System</td>
<td>Transmitter (2)</td>
<td>Avionics Bay 3A</td>
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<td>Signal Processor (2, one encl)</td>
<td>Avionics Bay 3A</td>
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<td>Panel Control Switches</td>
<td>Avionics Bay 3A</td>
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<td>RF Transfer Switch</td>
<td>Panel A1</td>
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<td>Antenna Switch</td>
<td>Avionics Bay 3A</td>
</tr>
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<td></td>
<td>Hemi Antennas (2)</td>
<td>Upper, Lower Centerline, Cabin Area</td>
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<td>S-Band Payload System</td>
<td>Payload Interrogater (2)</td>
<td>Avionics Bay 2</td>
</tr>
<tr>
<td></td>
<td>Signal Processor (2)</td>
<td>Avionics Bay 2</td>
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<td></td>
<td>Panel Control Switches</td>
<td>Panel A1</td>
</tr>
<tr>
<td></td>
<td>Antenna</td>
<td>Upper Centerline, Cabin Area</td>
</tr>
<tr>
<td>Ku-Band Communications System</td>
<td>EA1-Comm Data Processor, Antenna Control</td>
<td>Avionics Bay 3A</td>
</tr>
<tr>
<td></td>
<td>EA2-Radar Data Processor</td>
<td>Avionics Bay 3A</td>
</tr>
<tr>
<td></td>
<td>Signal Processor Assembly</td>
<td>Avionics Bay 3A</td>
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<tr>
<td></td>
<td>Deployed Assembly (RF, Antenna Gimbals, Gyro Assembly)</td>
<td>Right Sill Longeron, behind cabin</td>
</tr>
<tr>
<td></td>
<td>Panel Control Switches</td>
<td>Panel A1, Panel ML86B, Panel R13</td>
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<td></td>
<td>Jettison Controls</td>
<td>Panel ML86B, Panel A14</td>
</tr>
<tr>
<td>Audio System</td>
<td>Audio Control Unit (2, one encl)</td>
<td>Avionics Bay 1</td>
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<tr>
<td></td>
<td>Audio 1/2 Power Switch</td>
<td>Panel C3</td>
</tr>
<tr>
<td></td>
<td>Audio Termination Units, Panel Controls</td>
<td>Various Crew Stations</td>
</tr>
<tr>
<td></td>
<td>Crew Equipment (Headsets, etc.)</td>
<td>Various Orbiter Locations</td>
</tr>
</tbody>
</table>
UHF EVA/ATC System
- Transceiver
- EVA Transceivers
- Panel Controls
- UHF Antenna, External
- UHF Antenna, Internal

Avionics Bay 3A
- Payload Bay EVA Locations
  - Panel 06, Panel A1
  - Lower Centerline, Cabin Area
  - Airlock

GCIL
- Logic Modules, Drivers
- GCIL Panel/Command Switches

Avionics Bay 3A
- Panel C3 (S-Band PM/NSP)
  - Panel A1 (S-Band FM, Payload, Ku-Band)

CCTV
- CCTV Monitors
- Panel Control Switches

Aft Flight Deck
- Panel A7, Panel L12,
  - Panel R11, Payload
  - Bay, Various
  - Locations in Orbiter

EMU TV
- EMU TV Camera/S-Band Transmtr,
  - Antenna, Battery Pack
- EMU TV Receiver, Video
  - Processing Unit, RF Cables

Crewman Helmet/Suit,
- Various EVA Locations
  - Middeck

Text and Graphics System (TAGS)
- TAGS Hard Copier

Avionics Bay 3B
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<tr>
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<td>Avionics Bay 1 (one)</td>
</tr>
<tr>
<td></td>
<td>Bay 2 (one)</td>
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<tr>
<td></td>
<td>Bay 3A (one)</td>
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<tr>
<td>TACAN Panel Control Switches</td>
<td>Panel 07</td>
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<td>TACAN Antenna (3)</td>
<td>Upper Fuselage, Nose</td>
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<tr>
<td>TACAN Antenna (3)</td>
<td>Lower Fuselage, Nose</td>
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<td>MSBLS RF Assembly (3)</td>
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<td>Avionics Bay 2</td>
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<td>Panel Control Switches</td>
<td>Panel 08</td>
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<tr>
<td>Antenna</td>
<td>Lower Forward Fuselage</td>
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<td><strong>Ku-BAND RADAR System</strong></td>
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</tr>
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<td>EA1- Comm data processor, ant control</td>
<td>Avionics Bay 3A</td>
</tr>
<tr>
<td>EA2- Radar data processor</td>
<td>Avionics Bay 3A</td>
</tr>
<tr>
<td>Deployed Assembly (RF, Antenna, Gimbals, Gyro Assembly)</td>
<td>Right Sill Longeron, behind cabin</td>
</tr>
<tr>
<td>Panel Control Switches</td>
<td>Panel A1, Panel ML86B,</td>
</tr>
<tr>
<td></td>
<td>Panel R13</td>
</tr>
<tr>
<td>Jettison Controls</td>
<td>Panel ML86B, Panel A14</td>
</tr>
</tbody>
</table>
3.2 Interfaces and Locations

Various parts of the Communication and Tracking Subsystem are located throughout the Orbiter. S-band quad antennae are positioned on the forward upper and lower fuselage on the starboard and port sides. S-band hemi antennae are centered directly above and below the flight deck, with the payload antenna behind the upper hemi antenna. (Figure 3.20) The Ku-band antenna is mounted at the forward starboard sill longeron. (Figure 3.18) The three TACAN LRUs each have an upper and lower antenna, mounted in front of the flight deck windows and directly below that location on the lower fuselage. (Figure 3.19) MSBLS antennae are on the upper forward nose, in front of the TACAN antennae location. (Figure 3.17) The Radar Altimeter antennae is mounted on the lower nose, close to the nose wheel bay. (Figure 3.17)

Avionics bays 1, 2, 3A, and 3B contain the individual LRUs for each of the systems analyzed herein. Panel controls for each of the systems are located on the various panels on the Flight Deck, Aft Station, Mid-deck, and other locations for mission specific panels. See Tables I and II for equipment locations.

3.3 Hierarchy

Figures 3.2 through 3.4 illustrate the hierarchy of the Communication and Tracking Subsystem hardware and the corresponding subcomponents.
Figure 3.2 - COMMUNICATIONS AND TRACKING SUBSYSTEM OVERVIEW
Figure 3.4 - TRACKING SYSTEM HIERARCHY
Figure 3.5 - S-BAND PM COMMUNICATIONS
Figure 3.6 - S-BAND FM SYSTEM BLOCK DIAGRAM
Figure 3.7 - S-BAND PAYLOAD COMMUNICATIONS
Figure 3.8 - KU-BAND COMMUNICATIONS SYSTEM BLOCK DIAGRAM
Figure 3.9 - UHF/AUDIO INTERFACE BLOCK DIAGRAM
Figure 3.10 - AUDIO DISTRIBUTION SYSTEM BLOCK DIAGRAM
Figure 3.11 - TYPICAL CREW STATION AUDIO BLOCK DIAGRAM

*COMMANDER, PILOT & AIRLOCK CONTROL PANELS ONLY

<table>
<thead>
<tr>
<th>CREW STATION</th>
<th>CONTROL PANEL</th>
<th>COMM. PANEL</th>
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</thead>
<tbody>
<tr>
<td>LEFT AUDIO</td>
<td>05</td>
<td>L6</td>
</tr>
<tr>
<td>RIGHT AUDIO</td>
<td>09</td>
<td>R6</td>
</tr>
<tr>
<td>MISSION STATION AUDIO</td>
<td>R10</td>
<td>A11</td>
</tr>
<tr>
<td>OS AUDIO</td>
<td>A13</td>
<td>A11 (SMU-A2)</td>
</tr>
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<td>PAYLOAD STATION AUDIO</td>
<td>L9</td>
<td>A15</td>
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<tr>
<td>MID-DECK CCU AUDIO</td>
<td>M058F</td>
<td>M039M</td>
</tr>
<tr>
<td>MIS DECK SPEAKER AUDIO</td>
<td>M042F</td>
<td>(SMU-M029J)</td>
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<tr>
<td>AIRLOCK AUDIO</td>
<td>AW18W</td>
<td>AW82D</td>
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</table>
Figure 3.12 - SELECTED DATA SOURCES FUNCTIONAL BLOCK DIAGRAM
Figure 3.13 - AUDIO LOOPS AND SYSTEM INTERFACE
Figure 3.14 - MSBLS FUNCTIONAL BLOCK DIAGRAM
Figure 3.15 - TACAN FUNCTIONAL BLOCK DIAGRAM
Figure 3.16 - RADAR ALTIMETER FUNCTIONAL BLOCK DIAGRAM
Figure 3.17 - NAVIGATIONAL ANTENNA LOCATIONS
Figure 3.18 - DEPLOYED KU-BAND ANTENNA ASSEMBLY LOCATION
Figure 3.19 - TACAN ANTENNA LOCATION

Figure 3.20 - S-BAND ANTENNA LOCATIONS
Figure 3.21 - GCIL BLOCK DIAGRAM
4.0 ASSESSMENT RESULTS

The IOA analysis of the Communication and Tracking hardware and functions resulted initially in generation of 1,039 failure mode and effects analysis (FMEA) worksheets with 269 being assigned as Potential Critical Items (PCIs). An IOA and NASA assessment was made by comparing 697 NASA FMEA worksheets and 239 Critical Items. Discrepancies between the number of IOA and NASA FMEAs and CILs prevented a one to one comparison which required generation of additional FMEA worksheets to facilitate collation. The final IOA count equaled 1,108 FMEAs with 298 PCIs.

Discrepancies noted between the IOA and NASA FMEA and PCI counts were attributed to the following factors: different failure modes employed by IOA and NASA, different definition of electronic unit and function configurations and component levels, based criticality assignments on a certain element of subjectivity and interpretation of the NSTS 22206 instructions, there were omissions, levels of unlike redundancy were different, determinations as to the extent of units function or effects on system level function were different and contract revision requiring early submittal missed revised and new FMEA/CILs.

Many of the FMEA and PCI analysis differences and issues could no doubt have been resolved through discussions with Subsystem Managers had the contract not been prematurely cancelled. Also many NASA FMEA worksheets were upgraded after the January 1, 1988 freeze so that much of the assessment was made on initial baseline FMEA's that did not reflect the latest thinking. The most prominent number of PCIs pertained to loss of output and loss of all capability to: obtain State Vector Updates, monitor movement of the RMS, verify payload bay door closure through observation that payload bay door latches did indeed latch, perform Ku-band antenna boom stow and verification, maintain mission support and obtain NAVAIDS data during night time abort landings at unequipped emergency landing sites.

No analyses were performed on the Orbiter audio system or on the UHF extra-vehicular communications system (EVCS). Because of the contract revision requiring earlier submittal of the Assessment Report, and because no NASA FMEA's on the EVCS were received by 1 January 1988, no post-analysis assessment was done on the EVCS.
4.1 Assessment Results - S-band PM

The S-band PM assessment considered 247 IOA and 120 NASA failure modes, of which 50 IOA and 23 NASA modes were found to potentially cause loss of mission, or loss of redundancy to potentially cause loss of life or vehicle. Issues resulted on 17 FMEAs with 8 CILs.

4.2 Assessment Results - S-band FM

The S-band FM assessment considered 28 IOA and 17 NASA failure modes resulting in zero (0) CILs and only 2 issues.

4.3 Assessment Results - S-band Payload

The S-band Payload assessment considered 60 IOA and 30 NASA failure modes, of which 24 IOA and 9 NASA modes were found to potentially cause loss of mission. No issues resulted.

4.4 Analysis Results - Ku-band Comm

The Ku-band Comm assessment considered 109 IOA and 42 NASA failure modes, of which 22 IOA and 27 NASA modes were found to potentially cause a loss of life or vehicle, loss of mission. Issues resulted on 47 FMEAs with 35 CILs.

4.5 Assessment Results - UHF

The UHF communication system assessment considered 31 IOA and 20 NASA failure modes, of which 15 IOA and 13 NASA modes were found to potentially cause a loss of mission or loss of redundancy to cause a potential loss of life or vehicle. Issues resulted for 8 FMEAs with 3 CILs.

4.6 Assessment Results - Audio

The Audio system assessment was not completed, but considered 86 IOA and 109 NASA failure modes, of which 9 IOA and 7 NASA modes were found to potentially cause a loss of mission, or loss of redundancy to cause a potential loss of life or vehicle. Issues resulted for 5 FMEAs and zero CILs.

4.7 Assessment Results - Tracking

The Tracking assessment considered 71 IOA and 54 NASA failure modes, of which 25 IOA and 18 NASA modes were found to potentially cause a loss of mission. Issues resulted for 13 FMEAs and 8 CILs.
4.8 Assessment Results - CCTV

The CCTV assessment considered 455 IOA and 293 NASA failure modes, of which 150 IOA and 140 NASA modes were found to potentially cause a loss of mission, or with a loss of redundancy to potentially cause a loss of life or vehicle. Issues resulted for 310 FMEAs and 238 CILs.

4.9 Assessment Results - GCIL

The GCIL assessment considered 12 IOA and 6 NASA failure modes, of which 2 IOA and 2 NASA modes were found to potentially cause a loss of mission, or with a loss of redundancy to potentially cause a loss of life or vehicle. Issues resulted for 2 FMEAs with 1 CIL.

4.10 Assessment Results - EMU-TV

The EMU-TV assessment considered 9 IOA and 6 NASA failure modes, of which one IOA was found to potentially cause loss of life or vehicle. Issues resulted in 3 FMEAs with 1 CIL.

4.11 Assessment Results - TAGS

The TAGS assessment was combined with Ku-band assessment. No FMEA was found to potentially cause loss of mission or loss of life or vehicle.

4.12 Assessment Results - GFE

The GFE assessment was combined with pertinent systems which employed these items.
5.0 REFERENCES

Reference documentation available from NASA and Rockwell was used in the analysis. The documentation used included the following:

1. RI Integrated Schematics: VS70-740249 (Audio), VS70-740300 (Comm & Tracking Block Diagram), VS70-740269 (FMSIC Processor), VS70-740279, (FM XMTR), VS70-740299 (GCIL), VS70-740109 (Ku-Band), VS70-740569 (MSBLS RCVR), VS70-740129 (NTWK S-Band XPDR), VS70-740400 (Power Block Diagram), VS70-740159 (Radar Altimeter), VS70-740259 (S-Band Antenna Switch), VS70-740229 (S-Band NTK SIG Proc), VS70-740139 (S-Band PWR AMPL), VS70-740179 (TACAN), VS70-740189 (Television), VS70-740199 (Text and Graphics), VS70-740119 (UHF ATC/EVA XCVR)

2. Comm/Instrumentation Workbook, COM/IN 2102, Feb 1985
5. KU-Band Radar Workbook 2102, Nov 1985
7. INCO/Comm Systems Brief, Rev. C, PCN-3, Aug 1983
10. Audio Systems UHF SFOM, Mar 1985
11. CCTV SFOM, Vol. 4D, Rev. A, PCN-2, Sep 1985
12. OMRSD NSTS 08171 File III
13. JSC-12820 FLT Rules Sect II
14. NSTS 22206, with Revisions 1, 2, 3, and 4.

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APPENDIX A
ACRONYMS

A/A  - Air-to-Air
A/G 1 - Air-to-Ground 1
A/G 2 - Air-to-Ground 2
ACCU  - Audio Central Control Unit
ADS  - Audio Distribution System
AOS  - Acquisition of Signal
ATC  - Air Traffic Control
ATU  - Audio Terminal Unit
C&W  - Caution and Warning
Cb  - Circuit Breaker
CCA  - Communications Carrier Assembly
CCTV  - Closed-Circuit Television
CCU  - Crew Communications Umbilical
CDR  - Commander
CIU  - Communications Interface Unit
CMD  - Command
comm  - Communication
cont  - Controller
CPLT  - Complete
D&C  - Displays and Controls
DA  - Deployed Assembly
DAM  - Driver Amplifier Module
DEA  - Deployed Electronic Assembly
DMA  - Deployed Mechanical Assembly
DOD  - Department of Defense
EMU  - Extravehicular Mobility Unit
EVA  - Extravehicular Activity
FM  - Frequency Modulated (or Modulation)
FMD  - Frequency Division Multiplexer
GCIL  - Ground Command Interface Logic
GPC  - General Purpose Computer
GSE  - Ground Support Equipment
GSTDN  - Ground Spaceflight Tracking and Data Network
HIU  - Headset Interface Unit
ICMS  - Intercom Master Station
ICOM  - Intercommunications
ICOM A  - Intercom A
ICOM B  - Intercom B
ICRS  - Intercom Remote Station
ind  - Indicator
JSC  - Johnson Space Center
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<thead>
<tr>
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<tbody>
<tr>
<td>LCC</td>
<td>Launch Control Center</td>
</tr>
<tr>
<td>LEH</td>
<td>Launch/Entry Helmet</td>
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<tr>
<td>LRU</td>
<td>Line Replaceable Unit</td>
</tr>
<tr>
<td>It</td>
<td>Light</td>
</tr>
<tr>
<td>MADS</td>
<td>Modular Auxiliary Data System</td>
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<tr>
<td>MCA</td>
<td>Motor Control Assembly</td>
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<tr>
<td>MCC</td>
<td>Mission Control Center (JSC)</td>
</tr>
<tr>
<td>MDM</td>
<td>Multiplexer/Demultiplexer</td>
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<tr>
<td>ME</td>
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<td>Megahertz</td>
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<td>MMU</td>
<td>Mass Memory Unit</td>
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<td>Main A</td>
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<tr>
<td>MS</td>
<td>Mission Specialist</td>
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<td>MSBLIS</td>
<td>Microwave Scanning Beam Landing System</td>
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<tr>
<td>NSP</td>
<td>Network Signal Processor</td>
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<tr>
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<tr>
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<td>Orbiter Timing Buffer</td>
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<td>Quadrature Phase Shift Keying</td>
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<td>Random Access Memory</td>
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<td>rot</td>
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<td>SA</td>
<td>Single Access</td>
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<td>SGSC</td>
<td>Strain Gage Signal Conditioner</td>
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<td>SPA</td>
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### ACRONYMS

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<tbody>
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<td>Solid Rocket Booster</td>
</tr>
<tr>
<td>SSO</td>
<td>Space Shuttle Orbiter</td>
</tr>
<tr>
<td>STDN</td>
<td>Spaceflight Tracking and Data Network</td>
</tr>
<tr>
<td>SW</td>
<td>Switch</td>
</tr>
<tr>
<td>TACAN</td>
<td>Tactical Air Navigation</td>
</tr>
<tr>
<td>TAGS</td>
<td>Text and Graphics</td>
</tr>
<tr>
<td>TDRS</td>
<td>Tracking and Data Relay Satellite</td>
</tr>
<tr>
<td>TLM</td>
<td>Telemetry</td>
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<td>TV</td>
<td>Television</td>
</tr>
<tr>
<td>tw</td>
<td>Thumbwheel</td>
</tr>
<tr>
<td>UHF</td>
<td>Ultra High Frequency</td>
</tr>
<tr>
<td>UL</td>
<td>Uplink</td>
</tr>
<tr>
<td>VCO</td>
<td>Voltage Controlled Oscillator</td>
</tr>
<tr>
<td>VOX</td>
<td>Voice Operated Transmit</td>
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<tr>
<td>VSU</td>
<td>Video Switching Unit</td>
</tr>
<tr>
<td>VTR</td>
<td>Video Tape Recorder</td>
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<tr>
<td>WBSC</td>
<td>Wide-Band Signal Condition</td>
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<tr>
<td>WCCU</td>
<td>Wireless Crew Communications Umbilical</td>
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<tr>
<td>XMIT</td>
<td>Transmit</td>
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<td>XPNDR</td>
<td>Transponder</td>
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APPENDIX B

DEFINITIONS, GROUND RULES, AND ASSUMPTIONS

B.1 Definitions
B.2 Project Level Ground Rules and Assumptions
B.3 Subsystem-Specific 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, 10 October 1986, 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
APPENDIX B
DEFINITIONS, GROUND RULES, AND ASSUMPTIONS

B.2 IOA Project Level Ground Rules and Assumptions

The philosophy embodied in NSTS 22206, Instructions for Preparation of FMEA/CIL, 10 October 1986, 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.
APPENDIX B
DEFINITIONS, GROUND RULES, AND ASSUMPTIONS

B.3 Communications and Tracking Subsystems—Specific Ground Rules and Assumptions

The IOA analysis was performed to the component or assembly level of the Communications and Tracking subsystem. The analysis considered the worst case effects of the hardware or functional failure on the subsystem, mission, and crew and vehicle safety.

1. Human error (e.g., system misconfiguration by crew or ground) will not be considered.

   Rationale: Possible misconfigurations are out of scope for this analysis.

2. Inadvertent misconfigurations (e.g., accidental body contact by a crew member with a switch in zero-g operations) will not be considered.

   Rationale: Most critical switches have guards, or are lever-lock type. Possible inadvertent misconfigurations are out of scope for this analysis.

3. Hardware items have been properly qualified, have passed applicable acceptance testing, and have been properly installed in the orbiter. Exception: if analysis of failure history of a part, subassembly, or LRU in the subsystem discloses multiple failures, that item will be flagged for special attention.

   Rationale: Baseline assumption is that Program controls have resulted in hardware that is properly qualified and installed.

4. The criticality of a Communications and Tracking Subsystem hardware item will be assigned on the basis of the highest criticality function it performs.

   Rationale: The Communications and Tracking Subsystem exists to process and route information for use by the crew and by ground controllers to facilitate the accomplishment of mission objectives and to ensure the safety of crew and vehicle. Worst-case effect from the loss of capability by a hardware item to perform a function determines its criticality.
5. Loss of all capability to update Orbiter State Vector can cause loss of crew/vehicle.

Rationale: GN&C hardware and Master Timing Unit drifts/errors can cause vehicle location errors in de-orbit and landing operations that could result in loss of crew/vehicle.

6. Interconnecting cables will not be evaluated.

Rationale: Baseline assumption is that the program controls require hardware that is properly installed, and cables are beyond the scope of this analysis.
APPENDIX C
DETAILED ASSESSMENT

This section contains the IOA assessment worksheets generated during the assessment of this subsystem. The information on these worksheets facilitates the comparison of the NASA FMEA/CIL (Pre and Post 51-L) to the IOA detailed analysis worksheets included in Appendix E. Each of these worksheets identifies the NASA FMEA being assessed, corresponding MDAC Analysis Worksheet ID (Appendix E), hardware item, criticality, redundancy screens, and recommendations. For each failure mode, the highest assessed hardware and functional criticality is compared and discrepancies noted as "N" in the compare row under the column where the discrepancy occurred.

LEGEND FOR IOA ASSESSMENT WORKSHEETS

Hardware Criticalities:
1 = Loss of life or vehicle
2 = Loss of mission or next failure of any redundant item (like or unlike) could cause loss of life/vehicle
3 = All others

Functional Criticalities:
1R = Redundant hardware items (like or unlike) all of which, if failed, could cause loss of life or vehicle
2R = Redundant hardware items (like or unlike) all of which, if failed, could cause loss of mission

Redundancy Screens A, B and C:
P = Passed Screen
F = Failed Screen
NA = Not Applicable

NASA Data:
Baseline = NASA FMEA/CIL
New = Baseline with Proposed Post 51-L Changes

CIL Item:
X = Included in CIL

Compare Row:
N = Non compare for that column (deviation)
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/13/88
NASA DATA: BASELINE [ ]
ASSESSMENT ID: COMTRK-1001 NEW [ X ]
NASA FMEA #: 05-2G-22800-1
SUBSYSTEM: COMM & TRACK
MDAC ID: 1001
ITEM: S-BAND QUAD ANTENNAS
LEAD ANALYST: A.W. ADDIS

ASSESSMENT:

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<th>REDUNDANCY SCREENS</th>
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<td>FIGHT HDW/FUNC</td>
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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:

IOA CRIT 3/1R CONSIDERS OTHER 3 QUADS AS REDUNDANT WHEREAS NASA FMEA/CIL DOES NOT ON PREMISE VEHICLE ATTITUDE CHANGE TO USE ANOTHER QUAD IS NOT PERMISSIBLE, AND ASSIGN CRIT 2/2. (HOWEVER, AT PRESENT OPERATIONAL REDUNDANCY ALSO EXISTS IN THAT S-BAND PM SYSTEM CAN USE EITHER TDRs OR DIRECT (STDN OR SGLS) MODE, ALLEVIATING NEED TO CHANGE VEHICLE ATTITUDE). CIL RETENTION RATIONALE ADEQUATE IF CRIT 2/2 IS VALID. AGREE WITH NASA FMEA BECAUSE 2/2 CRITICALITY IS A CIL ENTRY WHEREAS IOA ASSIGNMENT IS NOT.

REPORT DATE 03/18/88 C-2
## APPENDIX C
### ASSESSMENT WORKSHEET

**ASSESSMENT DATE:** 2/12/88  
**ASSESSMENT ID:** COMTRK-1001A  
**NASA FMEA #:** 05-2G-22600-1

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<td><strong>ITEM:</strong></td>
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**LEAD ANALYST:** A.W. ADDIS

**ASSESSMENT:** CRITICALITY

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

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

**REMARKS:**

AGREE WITH FMEA SCREEN B ASSIGNMENT.

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**REPORT DATE 03/18/88 C-3**
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/14/88
NASA DATA:
BASELINE [ ]
NEW [ X ]

ASSESSMENT ID: COMTRK-1002
NASA FMEA #: 05-2G-22800-1

SUBSYSTEM: COMM & TRACK
MDAC ID: 1002
ITEM: S-BAND QUAD ANTENNAS

LEAD ANALYST: A.W. ADDIS

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<td>COMPARE [ N /N ]</td>
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RECOMMENDATIONS: (If different from NASA)
[ / ] [ ] [ ] [ ] (ADD/DELETE)

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

REMARKS:
CLOSEST NASA COUNTERPART IS 05-2G-22800-1. IOA CRIT 3/1R CONSIDERS OTHER 3 QUADS AS REDUNDANT WHEREAS NASA FMEA/CIL DOES NOT ON PREMISE VEHICLE ATTITUDE CHANGE TO USE ANOTHER QUAD IS NOT PERMISSIBLE, AND ASSIGN CRIT 2/2. (HOWEVER, AT PRESENT OPERATIONAL REDUNDANCY ALSO EXISTS IN THAT S-BAND PM SYSTEM CAN USE EITHER TDRs OR DIRECT (STDN OR SGLS) MODE, ALLEVIATING NEED TO CHANGE VEHICLE ATTITUDE). CIL RETENTION RATIONALE ADEQUATE IF CRIT 2/2 IS VALID. AGREE WITH NASA FMEA BECAUSE 2/2 CRITICALITY IS A CIL ENTRY WHEREAS IOA ASSIGNMENT IS NOT.

REPORT DATE 03/18/88
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/14/88
ASSESSMENT ID: COMTRK-1003
NASA FMEA #: 05-2G-22800-2

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM & TRACK
MDAC ID: 1003
ITEM: S-BAND QUAD ANTENNAS

LEAD ANALYST: A.W. ADDIS

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 CRIT 3/1R CONSIDERS OTHER 3 QUADS AS REDUNDANT WHEREAS NASA FMEA/CIL DOES NOT ON PREMISE VEHICLE ATTITUDE CHANGE TO USE ANOTHER QUAD IS NOT PERMISSIBLE, AND ASSIGNS CRIT 2/2. (HOWEVER, AT PRESENT OPERATIONAL REDUNDANCY ALSO EXISTS IN THAT S-BAND PM SYSTEM CAN USE EITHER TDRs OR DIRECT (STDN OR SGLS) MODE, ALLEVIATING NEED TO CHANGE VEHICLE ATTITUDE). CIL RETENTION RATIONALE ADEQUATE IF CRIT 2/2 IS VALID. AGREE WITH NASA FMEA BECAUSE 2/2 CRITICALITY IS A CIL ENTRY WHEREAS IOA ASSIGNMENT IS NOT.

REPORT DATE 03/18/88  C-5
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/14/88
ASSESSMENT ID: COMTRK-1004
NASA FMEA #: 05-2G-22800-2

SUBSYSTEM: COMM & TRACK
MDAC ID: 1004
ITEM: S-BAND QUAD ANTENNAS

LEAD ANALYST: A.W. ADDIS

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:

IOA CRIT 3/1R CONSIDERS OTHER 3 QUADS AS REDUNDANT WHEREAS NASA FMEA/CIL DOES NOT ON PREMISE VEHICLE ATTITUDE CHANGE TO USE ANOTHER QUAD IS NOT PERMISSIBLE, AND ASSIGN CRIT 2/2. (HOWEVER, AT PRESENT OPERATIONAL REDUNDANCY ALSO EXISTS IN THAT S-BAND PM SYSTEM CAN USE EITHER TDRs OR DIRECT (STDN OR SGLS) MODE, ALLEVIATING NEED TO CHANGE VEHICLE ATTITUDE). CIL RETENTION RATIONALE ADEQUATE IF CRIT 2/2 IS VALID. AGREE WITH NASA FMEA BECAUSE 2/2 CRITICALITY IS A CIL ENTRY WHEREAS IOA ASSIGNMENT IS NOT.

REPORT DATE 03/18/88 C-6
ASSESSMENT DATE: 1/14/88
ASSESSMENT ID: COMTRK-1005
NASA FMEA #: 05-2G-23500-3
SUBSYSTEM: COMM & TRACK
MDAC ID: 1005
ITEM: SWITCH BEAM CONTROL ELECTRONICS
LEAD ANALYST: A.W. ADDIS

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADVERSE [ X ]
INADEQUATE [ ]

REMARKS:

IOA CRIT 3/2R CONSIDERS OTHER 7 POSSIBLE ANTENNA DIRECTIVITY SELECTIONS AS REDUNDANT WHEREAS NASA FMEA/CIL DOES NOT ON PREMISE VEHICLE ATTITUDE CHANGE TO USE ANOTHER BEAM SELECTION IS NOT PERMISSIBLE, AND ASSIGN CRIT 2/2. AGREE WITH NASA FMEA BECAUSE 2/2 IS A CIL ENTRY WHEREAS IOA ASSIGNMENT IS NOT.

REPORT DATE 03/18/88 C-7
**APPENDIX C**  
**ASSESSMENT WORKSHEET**

**ASSESSMENT DATE:** 1/14/88  
**ASSESSMENT ID:** COMTRK-1006  
**NASA FMEA #:** 05-2G-23500-4  

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

**SUBSYSTEM:** COMM & TRACK  
**MDAC ID:** 1006  
**ITEM:** SWITCH BEAM CONTROL ELECTRONICS  

**LEAD ANALYST:** A.W. ADDIS  

**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 CRIT 3/2R CONSIDERS OTHER 7 POSSIBLE ANTENNA DIRECTIVITY SELECTIONS AS REDUNDANT WHEREAS NASA FMEA/CIL DOES NOT ON PREMISE VEHICLE ATTITUDE CHANGE TO USE ANOTHER BEAM SELECTION IS NOT PERMISSIBLE, AND ASSIGNS CRIT 2/2. AGREE WITH NASA FMEA BECAUSE 2/2 IS A CIL ENTRY WHEREAS IOA ASSIGNMENT IS NOT.

**REPORT DATE** 03/18/88  
**C-8**
### APPENDIX C
#### ASSESSMENT WORKSHEET

**ASSESSMENT DATE:** 2/08/88  
**NASA DATA:**  
**ASSESSMENT ID:** COMTRK-1007  
**NASA FMEA #:** 05-2G-23500-4  
**SUBSYSTEM:** COMM & TRACK  
**MDAC ID:** 1007  
**ITEM:** SWITCH BEAM CONTROL ELECTRONICS  
**LEAD ANALYST:** A.W. ADDIS

#### 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 CRIT 3/2R CONSIDERS OTHER 7 POSSIBLE ANTENNA DIRECTIVITY SELECTIONS AS REDUNDANT WHEREAS NASA FMEA/CIL DOES NOT ON PREMISE VEHICLE ATTITUDE CHANGE TO USE ANOTHER BEAM SELECTION IS NOT PERMISSIBLE, AND ASSIGNS CRIT 2/2. AGREE WITH NASA FMEA BECAUSE 2/2 IS A CIL ENTRY WHEREAS IOA ASSIGNMENT IS NOT.

**REPORT DATE 03/18/88**

C-9
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/14/88
ASSESSMENT ID: COMTRK-1008
NASA FMEA #: 05-2G-23500-3

SUBSYSTEM: COMM & TRACK
MDAC ID: 1008
ITEM: ANTENNA SWITCH ASSEMBLY

LEAD ANALYST: A.W. ADDIS

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 CRIT 3/2R CONSIDERED OTHER SWITCH CONFIGURATIONS COULD BE
USED TO SELECT ALTERNATE ANTENNA. HOWEVER, SOME REED SWITCH
FAILURES COULD PRECLUDE PROPER ALTERNATE, BECAUSE VEHICLE
ATTITUDE CHANGE REQUIRED FOR COMM MAY CAUSE LOSS OF MISSION
OBJECTIVES.
AGREE WITH NASA FMEA.

REPORT DATE 03/18/88  C-10
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/14/88
ASSESSMENT ID: COMTRK-1008A
NASA FMEA #: 05-2G-23500-4
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM & TRACK
MDAC ID: 1008
ITEM: ANTENNA SWITCH ASSEMBLY

LEAD ANALYST: A.W. ADDIS

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:

IOA CRIT 3/2R CONSIDERED OTHER SWITCH CONFIGURATIONS COULD BE USED TO SELECT ALTERNATE ANTENNA. HOWEVER, SOME REED SWITCH FAILURES COULD PRECLUDE PROPER ALTERNATE, BECAUSE VEHICLE ATTITUDE CHANGE REQUIRED FOR COMM MAY CAUSE LOSS OF MISSION OBJECTIVES.

AGREE WITH NASA FMEA.

REPORT DATE 03/18/88 C-11
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
NASA DATA:
ASSESSMENT ID: COMTRK-1009
NASA FMEA #: 05-2G-23500-1
BASELINE [ ]
NEW [ x ]

SUBSYSTEM: COMM & TRACK
MDAC ID: 1009
ITEM: ANTENNA SWITCH ASSEMBLY

LEAD ANALYST: A.W. ADDIS

ASSESSMENT:

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

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AGREE WITH FMEA SCREEN ASSIGNMENT.

REPORT DATE 03/18/88 C-12
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: COMTRK-1010
NASA FMEA #: 05-2G-23500-4

NASA DATA:
BASELINE [  ]
NEW [ X ]

SUBSYSTEM: COMM & TRACK
MDAC ID: 1010
ITEM: ANTENNA SWITCH ASSEMBLY

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 [ X ]
INADEQUATE [ ]

REMARKS:

IOA CRIT 3/2R CONSIDERED OTHER SWITCH CONFIGURATIONS COULD BE USED TO SELECT ALTERNATE ANTENNA. HOWEVER, SOME REED SWITCH FAILURES COULD PRECLUDE PROPER ALTERNATE, BECAUSE VEHICLE ATTITUDE CHANGE REQUIRED FOR COMM MAY CAUSE LOSS OF MISSION OBJECTIVES.

AGREE WITH NASA FMEA.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
ASSESSMENT ID: COMTRK-1011
NASA FMEA #: NONE

SUBSYSTEM: COMM & TRACK
MDAC ID: 1011
ITEM: ANTENNA SWITCH ASSEMBLY

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:
NO DIRECT COUNTERPART NASA FMEA. CREDIBLE FAILURE MODE THAT SHOULD BE DOCUMENTED.

REPORT DATE 03/18/88 C-14
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
ASSESSMENT ID: COMTRK-1012
NASA FMEA #: 05-2G-23500-1

SUBSYSTEM: COMM & TRACK
MDAC ID: 1012
ITEM: ANTENNA SWITCH ASSEMBLY

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:
AGREE WITH NASA FMEA SCREEN B ASSIGNMENT.

REPORT DATE 03/18/88 C-15
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/14/88
ASSESSMENT ID: COMTRK-1013
NASA FMEA #: 05-2G-21210-2

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

SUBSYSTEM: COMM & TRACK
MDAC ID: 1013
ITEM: S-BAND PREAMPLIFIER

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 [ X ]
INADEQUATE [ ]

REMARKS:
RF SWITCH THAT SELECTS XPNDR 1 OR 2 RECEIVE IS POTENTIAL SPF, AS POINTED OUT IN NASA FMEA. ANOTHER SPF IS IN THE SERIES RELAY SWITCH CONTACTS ROUTING POWER TO THE REDUNDANT PREAMP LOGIC MODULES. AGREE WITH NASA FMEA.

REPORT DATE 03/18/88 C-16
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: COMTRK-1013A
NASA FMEA #: 05-2G-21210-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM & TRACK
MDAC ID: 1013
ITEM: S-BAND PREAMPLIFIER

LEAD ANALYST: A.W. ADDIS

ASSESSMENT:

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

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AGREE WITH NASA FMEA SCREEN B ASSIGNMENT.

REPORT DATE 03/18/88 C-17
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: COMTRK-1013B
NASA FMEA #: 05-2G-21210-3

SUBSYSTEM: COMM & TRACK
MDAC ID: 1013
ITEM: S-BAND PREAMPLIFIER

LEAD ANALYST: A.W. ADDIS

ASSESSMENT:

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
CLOSEST MATCH IS FMEA 05-2G-1013-3. AGREE WITH FMEA CRITICALITY ASSIGNMENT.

REPORT DATE 03/18/88 C-18
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88  
ASSESSMENT ID: COMTRK-1014  
NASA FMEA #: 05-2G-21210-1

NASI DATA:
BASELINE [ ]  
NEW [ X ]

SUBSYSTEM: COMM & TRACK
MDAC ID: 1014
ITEM: S-BAND PREAMPLIFIER

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:

REPORT DATE 03/18/88 C-19
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/05/88
ASSESSMENT ID: COMTRK-1015
NASA FMEA #: NONE

SUBSYSTEM: COMM & TRACK
MDAC ID: 1015
ITEM: S-BAND PREAMPLIFIER

LEAD ANALYST: A.W. ADDIS

ASSESSMENT:

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IOA [ 3 /2R ] [ P ] [ P ] [ P ] [ ]

COMPARE [ 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:
CREDIBLE FAILURE MODE THAT SHOULD BE DOCUMENTED. REFERENCE CAR'S AB8808 (DEGRADED BER, KSC), AC7765 (LOW OUTPUT AT LOW FREQUENCY, ADL) FOR EXAMPLE.

REPORT DATE 03/18/88 C-20
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
ASSESSMENT ID: COMTRK-1016
NASA FMEA #: 05-2G-21220-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM & TRACK
MDAC ID: 1016
ITEM: S-BAND POWER AMPLIFIER

LEAD ANALYST: A.W. ADDIS

ASSESSMENT:

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

RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AGREE WITH FMEA SCREEN B ASSIGNMENT.

REPORT DATE 03/18/88 C-21
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
ASSESSMENT ID: COMTRK-1017
NASA FMEA #: 05-2G-21220-1

SUBSYSTEM: COMM & TRACK
MDAC ID: 1017
ITEM: S-BAND POWER AMPLIFIER

LEAD ANALYST: A.W. ADDIS

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ ] * CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AGREE WITH FMEA SCREEN B ASSIGNMENT.

REPORT DATE 03/18/88 C-22
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
ASSESSMENT ID: COMTRK-1018
NASA FMEA #: 05-2G-21220-1
SUBSYSTEM: COMM & TRACK
MDAC ID: 1018
ITEM: S-BAND POWER AMPLIFIER
LEAD ANALYST: A.W. ADDIS

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS: AGREE WITH FMEA SCREEN B ASSIGNMENT.

REPORT DATE 03/18/88 C-23
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
ASSESSMENT ID: COMTRK-1019
NASA FMEA #: 05-2G-21215-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM & TRACK
MDAC ID: 1019
ITEM: PREAMP PANEL POWER SWITCH

LEAD ANALYST: A.W. ADDIS

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88  C-24
APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88  
ASSESSMENT ID: COMTRK-1020  
NASA FMEA #: 05-2G-21215-1

SUBSYSTEM: COMM & TRACK  
MDAC ID: 1020  
ITEM: PREAMP PANEL POWER SWITCH

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:
AGREE WITH NASA FMEA SCREEN B ASSIGNMENT.

REPORT DATE 03/18/88  C-25
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
ASSESSMENT ID: COMTRK-1021
NASA FMEA #: 05-2G-21215-2

SUBSYSTEM: COMM & TRACK
MDAC ID: 1021
ITEM: PREAMP PANEL POWER SWITCH
LEAD ANALYST: A.W. ADDIS

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NASA DATA:
BASELINE [ ]
NEW [ X ]

RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AGREE WITH NASA FMEA SCREEN B ASSIGNMENT.

REPORT DATE 03/18/88
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
ASSESSMENT ID: COMTRK-1022
NASA FMEA #: 05-2G-21215-1
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM & TRACK
MDAC ID: 1022
ITEM: PA OPERATE SWITCH

LEAD ANALYST: A.W. ADDIS

ASSESSMENT:

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

NASA [ 3 /2R ] [ P ] [ NA] [ P ] [ ] *
IOA [ 3 /2R ] [ P ] [ P ] [ P ] [ ]

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

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

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

REMARKS:
AGREE WITH NASA FMEA SCREEN B ASSIGNMENT.

REPORT DATE 03/18/88 C-27
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
ASSESSMENT ID: COMTRK-1023
NASA FMEA #: 05-2G-21215-1

SUBSYSTEM: COMM & TRACK
MDAC ID: 1023
ITEM: PA OPERATE SWITCH
LEAD ANALYST: A.W. ADDIS

NASA DATA:
BASELINE [ ]
NEW [ X ]

CRITICALITY
FLIGHT
HDW/FUNC
REDUNDANCY SCREENS
CIL
ITEM

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

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

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

REMARKS:
AGREE WITH NASA FMEA SCREEN B ASSIGNMENT.

REPORT DATE 03/18/88 C-28
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
ASSESSMENT ID: COMTRK-1024
NASA FMEA #: 05-2G-21215-2
SUBSYSTEM: COMM & TRACK
MDAC ID: 1024
ITEM: PA OPERATE SWITCH
LEAD ANALYST: A.W. ADDIS

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADÉQUATE [ ]
INÀDEQUATE [ ]

REMARKS:
AGREE WITH NASA FMEA SCREEN B ASSIGNMENT.

REPORT DATE 03/18/88 C-29
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
ASSESSMENT ID: COMTRK-1025
NASA FMEA #: 05-2G-21227-2

SUBSYSTEM: COMM & TRACK
MDAC ID: 1025
ITEM: POWER AMPLIFIER STANDBY SWITCH

LEAD ANALYST: A.W. ADDIS

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AFTER LOSS OF SWITCH FUNCTION, LOSS OF GCIL CAPABILITY TO CONTROL PA COULD CAUSE LOSS OF TDRS COMM AND RESULT IN LOSS OF MISSION. AGREE WITH NASA FMEA.

REPORT DATE 03/18/88 C-30
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
ASSESSMENT ID: COMTRK-1026
NASA FMEA #: 05-2G-21227-2

SUBSYSTEM: COMM & TRACK
MDAC ID: 1026
ITEM: PA STANDBY SWITCH
LEAD ANALYST: A.W. ADDIS

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

NO DIFFERENCES.

REPORT DATE 03/18/88  C-31
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
ASSESSMENT ID: COMTRK-1027
NASA FMEA #: 05-2G-21200-1

SUBSYSTEM: COMM & TRACK
MDAC ID: 1027
ITEM: S-BAND PM TRANSPONDER
LEAD ANALYST: A.W. ADDIS

NASA DATA:
BASELINE [ ]
NEW [ X ]

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

REMARKS:
AGREE WITH FMEA SCREEN B ASSIGNMENT.

REPORT DATE 03/18/88 C-32
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
ASSESSMENT ID: COMTRK-1028
NASA FMEA #: 05-2G-21200-1

SUBSYSTEM: COMM & TRACK
MDAC ID: 1028
ITEM: S-BAND PM TRANSPONDER

LEAD ANALYST: A.W. ADDIS

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AGREE WITH FMEA SCREEN B ASSIGNMENT.

REPORT DATE 03/18/88 C-33
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
ASSESSMENT ID: COMTRK-1029
NASA FMEA #: 05-2G-21200-1

SUBSYSTEM: COMM & TRACK
MDAC ID: 1029
ITEM: S-BAND PM TRANSPONDER

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:
AGREE WITH FMEA SCREEN B ASSIGNMENT.

REPORT DATE 03/18/88  C-34
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
ASSESSMENT ID: COMTRK-1030
NASA FMEA #: 05-2G-21200-1

SUBSYSTEM: COMM & TRACK
MDAC ID: 1030
ITEM: S-BAND PM TRANSPONDER

LEAD ANALYST: A.W. ADDIS

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

*CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

AGREE WITH FMEA SCREEN B ASSIGNMENT.

REPORT DATE 03/18/88 C-35
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
ASSESSMENT ID: COMTRK-1031
NASA FMEA #: 05-2G-21200-1

SUBSYSTEM: COMM & TRACK
MDAC ID: 1031
ITEM: S-BAND PM TRANSPONDER
LEAD ANALYST: A.W. ADDIS

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

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

REMARKS:
AGREE WITH FMEA SCREEN B ASSIGNMENT.

REPORT DATE 03/18/88
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
ASSESSMENT ID: COMTRK-1032
NASA FMEA #: 05-2G-21200-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM & TRACK
MDAC ID: 1032
ITEM: S-BAND PM TRANSPONDER

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:
AGREE WITH FMEA SCREEN B ASSIGNMENT.

REPORT DATE 03/18/88 C-37
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
ASSESSMENT ID: COMTRK-1033
NASA FMEA #: 05-2PG-21200-1
SUBSYSTEM: COMM & TRACK
MDAC ID: 1033
ITEM: S-BAND PM TRANSPONDER POWER SWITCH
LEAD ANALYST: A.W. ADDIS

ASSESSMENT:

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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
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REMARKS:
AGREE WITH FMEA SCREEN B ASSIGNMENT.

REPORT DATE 03/18/88
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
ASSESSMENT ID: COMTRK-1034
NASA FMEA #: 05-2PG-21200-2
ASSESSMENT ID: COMTRK-1034
NASA FMEA #: 05-2PG-21200-2

SUBSYSTEM: COMM & TRACK
MDAC ID: 1034
ITEM: S-BAND PM TRANSPONDER POWER SWITCH

LEAD ANALYST: A.W. ADDIS

ASSESSMENT:

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

AGREE WITH FMEA SCREEN B ASSIGNMENT.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: COMTRK-1035
NASA FMEA #: 05-2G-21204-1
SUBSYSTEM: COMM & TRACK
MDAC ID: 1035
ITEM: S-BAND PM SYSTEM MODE SELECTOR
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:
AGREE WITH FMEA SCREEN B ASSIGNMENT.

REPORT DATE 03/18/88 C-40
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: COMTRK-1035A
NASA FMEA #: 05-2G-21204-2

SUBSYSTEM: COMM & TRACK
MDAC ID: 1035
ITEM: S-BAND PM SYSTEM MODE SELECTOR

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:
AGREE WITH FMEA SCREEN B ASSIGNMENT.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: COMTRK-1036
NASA FMEA #: 05-2G-21204-3
SUBSYSTEM: COMM & TRACK
MDAC ID: 1036
ITEM: S-BAND PM SYSTEM MODE SELECTOR
LEAD ANALYST: A.W. ADDIS

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [X]
INADEQUATE []

REMARKS:

LOSS OF NPS1, NPSP2 DATA XMIT SIGNAL TO TRANSPONDERS IN PANEL MODE COULD CAUSE LOSS OF SECURE MISSION REQUIRING CLASSIFIED COMMANDS AND DATA. AGREE WITH NASA FMEA. NASA FMEA ALSO RECOGNIZES THE POSSIBLE LOSS OF STATE VECTOR UPDATE CAPABILITY WITH ATTENDANT THREAT TO CREW/VEHICLE (WHICH WOULD BE 3/1R), BUT CLASSIFIES FAILURE MODE CRITICALITY AS WORSE CASE 2/2 (CIL).

REPORT DATE 03/18/88 C-42
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/04/88
ASSESSMENT ID: COMTRK-1036A
NASA FMEA #: 05-2G-21204-4
SUBSYSTEM: COMM & TRACK
MDAC ID: 1036
ITEM: S-BAND PM SYSTEM MODE SELECTOR
LEAD ANALYST: A.W. ADDIS

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

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

REMARKS:
FAILURE MODE COULD RESULT IN PLACING SYSTEM IN SGLS MODE, MAKING S-BAND PM SYSTEM USABLE ONLY WHEN ORBITER IS OVER SGLS STATION. LOSS OF COMM WITH ALL GSTDN STATIONS AND TDRS COULD CAUSE LOSS OF MISSION. NOTE: IOA CRITICALITY WAS BASED ON WORSE CASE LOSS OF CAPABILITY FOR STATE VECTOR UPDATES. AGREE WITH FMEA SCREEN B ASSIGNMENT, AND ALSO WITH FMEA CRITICALITY. MISSION WOULD BE TERMINATED WITH SEVERELY RESTRICTED TWO-WAY ORBITER-GROUND COMMUNICATIONS.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
ASSESSMENT ID: COMTRK-1037
NASA FMEA #: 05-2G-21207-1

SUBSYSTEM: COMM & TRACK
MDAC ID: 1037
ITEM: S-BAND PM SIGNAL STRENGTH SELECTOR SWITCH

LEAD ANALYST: A.W. ADDIS

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DIFFERENCES. (FMEA REVERSES LOCATIONS OF THE METER/SELECTOR CIRCUITS).

REPORT DATE 03/18/88 C-44
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
ASSESSMENT ID: COMTRK-1038
NASA FMEA #: 05-2G-21207-1

SUBSYSTEM: COMM & TRACK
MDAC ID: 1038
ITEM: S-BAND PM SIGNAL STRENGTH SELECTOR

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:
NO DIFFERENCES. (FMEA REVERSES LOCATIONS OF THE METER/SELECTOR CIRCUITS).

REPORT DATE 03/18/88  C-45
APPENDIX C

ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
ASSESSMENT ID: COMTRK-1039
NASA FMEA #: 05-2G-21207-1
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM & TRACK
MDAC ID: 1039
ITEM: SIGNAL STRENGTH METER SELECTOR SWITCH AND CIRCUIT

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:
NO DIFFERENCES. (FMEA REVERSES LOCATIONS OF THE METER/SELECTOR CIRCUITS).

REPORT DATE 03/18/88 C-46
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
ASSESSMENT ID: COMTRK-1040
NASA FMEA #: 05-2G-21207-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM & TRACK
MDAC ID: 1040
ITEM: SIGNAL STRENGTH METER SELECTOR SWITCH AND CIRCUIT

LEAD ANALYST: A.W. ADDIS

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DIFFERENCES. (FMEA REVERSES LOCATIONS OF THE METER/SELECTOR CIRCUITS).

REPORT DATE 03/18/88 C-47
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
ASSESSMENT ID: COMTRK-1041
NASA FMEA #: 05-6PH-24805-1

SUBSYSTEM: COMM & TRACK
MDAC ID: 1041
ITEM: S-BAND PM SYSTEM PANEL/COMMAND GCIL SWITCH

LEAD ANALYST: A.W. ADDIS

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

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NASA FMEA CONSIDERS LOSS OF ALL S-BAND PM CAPABILITY PLUS LOSS OF UHF VOICE, AND RESULTANT LOSS OF CAPABILITY TO UPDATE STATE VECTOR. AGREE WITH FMEA.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
ASSESSMENT ID: COMTRK-1042
NASA FMEA #: 05-6PH-24805-2
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM & TRACK
MDAC ID: 1042
ITEM: S-BAND PM/NSP SYSTEM PNL/CMD GCIL SWITCH

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:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-49
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
ASSESSMENT ID: COMTRK-1043
NASA FMEA #: 05-2G-21500-1

SUBSYSTEM: COMM & TRACK
MDAC ID: 1043
ITEM: NETWORK SIGNAL PROCESSOR, UL SECTION
LEAD ANALYST: A.W. ADDIS

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

AGREE WITH FMEA SCREEN B ASSIGNMENT. IOA BROKE NSP INTO TWO SETS OF ANALYSES - ONE FOR UPLINK, ONE FOR DOWNLINK. NASA ONLY CREATED ONE FMEA, EVEN THOUGH THERE ARE DISTINCT FUNCTIONS FOR WHICH CRITICALITIES ARE NOT NECESSARILY THE SAME. AGREE WITH 3/1R FOR UPLINK. SEE IOA 1045, 1046, HOWEVER, FOR DOWNLINK FUNCTION.

REPORT DATE 03/18/88 C-50
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88
ASSESSMENT ID: COMTRK-1044
NASA FMEA #: 05-2G-21500-1

SUBSYSTEM: COMM & TRACK
MDAC ID: 1044
ITEM: NETWORK SIGNAL PROCESSOR, UL SECTION

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:
CLOSEST MATCH IS FMEA 05-2G-21500-1. AGREE WITH FMEA SCREEN B ASSIGNMENT. IOA BROKE NSP INTO TWO SETS OF ANALYSES - ONE FOR UPLINK, ONE FOR DOWNLINK. NASA ONLY CREATED ONE FMEA, EVEN THOUGH THERE ARE DISTINCT FUNCTIONS FOR WHICH CRITICALITIES ARE NOT NECESSARILY THE SAME. AGREE WITH 3/1R FOR UPLINK. SEE IOA 1045, 1046, HOWEVER, FOR DOWNLINK FUNCTION.

REPORT DATE 03/18/88 C-51
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88
ASSESSMENT ID: COMTRK-1045
NASA FMEA #: 05-2G-21500-1

SUBSYSTEM: COMM & TRACK
MDAC ID: 1045
ITEM: NETWORK SIGNAL PROCESSOR, DL SECTION
LEAD ANALYST: A.W. ADDIS

NASA DATA:
BASELINE [   ]
NEW [ X ]

ASSESSMENT:

CRITICALITY RECOMMENDATIONS: (If different from NASA)

FLIGHT (ADD/DELETE)
HDW/FUNC A B C

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IOA [ 2 /1R] [ P ] [ P ] [ P ] [ X ] [ ]

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

CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [   ]
INADEQUATE [   ]

REMARKS:
LOSS OF ACTIVE NSP DOWNLINK COULD CAUSE MINIMUM DURATION FLIGHT
BECAUSE ONLY ONE NSP PATH WOULD REMAIN FOR INSIGHT INTO VEHICLE
SYSTEMS VIA TELEMETRY. RECOMMEND FMEA UPGRADE TO 2/1R, CIL
STATUS.

REPORT DATE 03/18/88 C-52
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88
ASSESSMENT ID: COMTRK-1046
NASA FMEA #: 05-2G-21500-1
NASA DATA:
BASELINE [ ]  NEW [ X ]

SUBSYSTEM: COMM & TRACK
MDAC ID: 1046
ITEM: NETWORK SIGNAL PROCESSOR, DL SECTION
LEAD ANALYST: A.W. ADDIS

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
LOSS OF ACTIVE NSP DOWNLINK COULD CAUSE MINIMUM DURATION FLIGHT BECAUSE ONLY ONE NSP PATH WOULD REMAIN FOR INSIGHT INTO VEHICLE SYSTEMS VIA TELEMETRY. RECOMMEND FMEA UPGRADE TO 2/1R, CIL STATUS.
**APPENDIX C**

**ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 2/09/88  
ASSESSMENT ID: COMTRK-1047  
NASA FMEA #: 05-2G-21800-1  
SUBSYSTEM: COMM & TRACK  
MDAC ID: 1047  
ITEM: COMSEC  
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:  
AGREE WITH FEMA SCREEN B ASSIGNMENT.

REPORT DATE 03/18/88  
C-54
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88
ASSESSMENT ID: COMTRK-1048
NASA FMEA #: 05-2G-21800-2
SUBSYSTEM: COMM & TRACK
MDAC ID: 1048
ITEM: COMSEC
LEAD ANALYST: A.W. ADDIS

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IOA [ 3 /2R ] [ P ] [ P ] [ P ] [ ]

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

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]

INADEQUATE [ ]

REMARKS:
AGREE WITH FMEA SCREEN B ASSIGNMENT. NASA FMEA ASSIGNS CRITICALITY 3/1R BECAUSE WITH LOSS OF DECRYPTION CAPABILITY A HOSTILE COMM STATION COULD COMPROMISE CREW/VEHICLE SAFETY WITH SPURIOUS COMMANDS. AGREE WITH FMEA CRITICALITY ASSIGNMENT.

REPORT DATE 03/18/88 C-55
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88
ASSESSMENT ID: COMTRK-1049
NASA FMEA #: NONE
SUBSYSTEM: COMM & TRACK
MDAC ID: 1049
ITEM: NSP ENCRYPTION POWER ON-OFF SWITCH
LEAD ANALYST: A.W. ADDIS

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
POSSIBLE LAUNCH DELAY. FAILURE MODES SHOULD BE DOCUMENTED.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88
NASA DATA:
ASSESSMENT ID: COMTRK-1050
NASA FMEA #: 05-6PG-21804-1
SUBSYSTEM: COMM & TRACK
MDAC ID: 1050
ITEM: NSP ENCRYPTION POWER ON-OFF SWITCH
LEAD ANALYST: A.W. ADDIS

ASSESSMENT:

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

RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-57
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88
ASSESSMENT ID: COMTRK-1051
NASA FMEA #: 05-2G-21801-1

SUBSYSTEM: COMM & TRACK
MDAC ID: 1051
ITEM: NSP ENCRYPTION MODE SWITCH

LEAD ANALYST: A.W. ADDIS

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

SAME FAILURE MODES (e.g., FAIL MID-TRAVEL) COULD PREVENT
SELECTION OF "NSP ENCRYPTION SELECT" FUNCTIONS FOR SELECTION OF
"T/R" OR "REV" ENCRYPTION/DECRYPTION OF NSP DATA. THERE IS NO
HARDWARE OR COMMAND REDUNDANCY FOR THE SWITCH'S FUNCTION.
RECOMMEND
FMEA UPGRADE TO 2/2.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88
ASSESSMENT ID: COMTRK-1052
NASA FMEA #: 05-2G-21801-2

SUBSYSTEM: COMM & TRACK
MDAC ID: 1052
ITEM: NSP ENCRYPTION MODE SWITCH

LEAD ANALYST: A.W. ADDIS

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 FAILURE MODES COULD PREVENT PROPER SELECTION OF "NSP ENCRYPTION SELECT" FUNCTIONS "T/R" OR "REV" ENCRYPTION/DECRYPTION OF NSP DATA. THERE IS NOT HARDWARE OR COMMAND REDUNDANCY FOR THE SWITCH'S FUNCTION. RECOMMEND FMEA UPGRADE TO 2/2 (CIL STATUS).
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88
ASSESSMENT ID: COMTRK-1053
NASA FMEA #: 05-2G-21802-1

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SUBSYSTEM: COMM & TRACK
MDAC ID: 1053
ITEM: NSP ENCRYPTION SELECT SWITCH

LEAD ANALYST: A.W. ADDIS

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
SAME FAILURE MODES (e.g., FAIL MID-TRAVEL) COULD PREVENT SELECTION OF "NSP ENCRYPTION SELECT" FUNCTIONS FOR SELECTION OF "T/R" OR "REV" ENCRYPTION/DECRYPTION OF NSP DATA. THERE IS NO HARDWARE OR COMMAND REDUNDANCY FOR THE SWITCH'S FUNCTION. RECOMMEND FMEA UPGRADE TO 2/2.

REPORT DATE 03/18/88 C-60
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
ASSESSMENT ID: COMTRK-1054
NASA FMEA #: 05-2G-21802-2

SUBSYSTEM: COMM & TRACK
MDAC ID: 1054
ITEM: NSP ENCRYPTION SELECT SWITCH

LEAD ANALYST: A.W. ADDIS

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
SAME FAILURE MODES COULD PREVENT PROPER SELECTION OF "NSP ENCRYPTION SELECT" FUNCTIONS "T/R" OR "REV" ENCRYPTION/DECRYPTION OF NSP DATA. THERE IS NOT HARDWARE OR COMMAND REDUNDANCY FOR THE SWITCH'S FUNCTION. RECOMMEND FMEA UPGRADE TO 2/2 (CIL STATUS).

REPORT DATE 03/18/88 C-61
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88
ASSESSMENT ID: COMTRK-1055
NASA FMEA #: 05-2G-21803-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM & TRACK
MDAC ID: 1055
ITEM: ENCRYPTION ZEROIZE/NORMAL SWITCH

LEAD ANALYST: A.W. ADDIS

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
SWITCH FAILURE BEFORE LAUNCH COULD CAUSE LAUNCH DELAY, BUT CRITICALITY IS 3/3. FAILURE AT ANY OTHER TIME WOULD NOT IN AND OF ITSELF CAUSE MISSION LOSS (IT COULD COMPROMISE SECURITY, BUT THAT IS NOT MISSION LOSS). NOTE: KEY CAN BE ZEROIZED BY REMOVING POWER WITH THE NSP ENCRYPTION POWER SWITCH.

REPORT DATE 03/18/88 C-62
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88
ASSESSMENT ID: COMTRK-1056
NASA FMEA #: 05-2G-21803-2

SUBSYSTEM: COMM & TRACK
MDAC ID: 1056
ITEM: ENCRYPTION ZEROIZE/NORMAL SWITCH

LEAD ANALYST: A.W. ADDIS

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
BRIDGING SHORT IN SWITCH COULD CAUSE INADVERTENT ZEROIZING OF THE KEY, CAUSING LOSS OF ENCRYPTION/DECRYPTION CAPABILITY AND LOSS OF MISSION. RECOMMEND FMEA UPGRADE TO 2/2.

REPORT DATE 03/18/88 C-63
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88
ASSESSMENT ID: COMTRK-1057
NASA FMEA #: 05-2G-21533-1
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM & TRACK
MDAC ID: 1057
ITEM: NSP UPLINK DATA SOURCE SWITCH
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:
AGREE WITH FMEA SCREEN B ASSIGNMENT.

REPORT DATE 03/18/88 C-64
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
ASSESSMENT ID: COMTRK-1058
NASA FMEA #: 05-2G-21533-2
SUBSYSTEM: COMM & TRACK
MDAC ID: 1058
ITEM: NSP UPLINK DATA SOURCE SWITCH
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:
WORST CASE SHORT TO GROUND COULD CAUSE LOSS OF "NSPI, 2 ON" SIGNALS AND RESULT IN LOSS OF CLASSIFIED MISSION (LOSS OF SECURITY FOR CLASSIFIED DATA). AGREE WITH NASA FMEA CRITICALITY ASSIGNMENT.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
ASSESSMENT ID: COMTRK-1059
NASA FMEA #: 05-2G-21531-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM & TRACK
MDAC ID: 1059
ITEM: NSP DATA RATE XMIT SWITCH

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:
AGREE WITH FMEA SCREEN B ASSIGNMENT.

REPORT DATE 03/18/88 C-66
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
ASSESSMENT ID: COMTRK-1060
NASA FMEA #: 05-2G-21531-2

SUBSYSTEM: COMM & TRACK
MDAC ID: 1060
ITEM: NSP DATA RATE XMIT SWITCH

LEAD ANALYST: A.W. ADDIS

ASSESSMENT:

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

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

REMARKS:
WORST CASE SHORT TO GROUND COULD CAUSE LOSS OF "NSP1, 2 ON" SIGNALS AND RESULT IN LOSS OF CLASSIFIED MISSION (LOSS OF SECURITY FOR CLASSIFIED DATA). AGREE WITH NASA FMEA CRITICALITY ASSIGNMENT.

REPORT DATE 03/18/88 C-67
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88
ASSESSMENT ID: COMTRK-1061
NASA FMEA #: 05-2G-21532-1

NASA DATA:
BASELINE [ ]
NEW [ x ]

SUBSYSTEM: COMM & TRACK
MDAC ID: 1061
ITEM: NSP DATA RATE RCV SWITCH

LEAD ANALYST: A.W. ADDIS

ASSESSMENT:

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

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

REMARKS:
AGREE WITH FMEA SCREEN B ASSIGNMENT. SOME POSSIBLE FAILURE MODES (e.g., FAIL MID-TRAVEL) COULD AFFECT BOTH DATA RATE CAPABILITIES AND PREVENT RECEIPT OF UPLINK DATA INCLUDING STATE VECTOR UPDATE. RECOMMEND CRITICALITY UPGRADE TO 3/1R.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88
ASSESSMENT ID: COMTRK-1062
NASA FMEA #: 05-2G-21532-2
SUBSYSTEM: COMM & TRACK
MDAC ID: 1062
ITEM: NSP DATA RATE RCV SWITCH
LEAD ANALYST: A.W. ADDIS

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

REMARKS:
AGREE WITH FMEA SCREEN B ASSIGNMENT. SOME POSSIBLE FAILURE MODES (e.g., FAIL MID-TRAVEL) COULD AFFECT BOTH DATA RATE CAPABILITIES AND PREVENT RECEIPT OF UPLINK DATA INCLUDING STATE VECTOR UPDATE. RECOMMEND CRITICALITY UPGRADE TO 3/IR.

REPORT DATE 03/18/88 C-69
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88
ASSESSMENT ID: COMTRK-1063
NASA FMEA #: 05-2G-21534-1

SUBSYSTEM: COMM & TRACK
MDAC ID: 1063
ITEM: NSP CODING XMIT SWITCH

LEAD ANALYST: A.W. ADDIS

ASSESSMENT:

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

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REMARKS:
AGREE WITH FMEA SCREEN B ASSIGNMENT.
APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88  
ASSESSMENT ID: COMTRK-1064  
NASA FMEA #: 05-2G-21534-2  

NASA DATA:  
BASELINE [ ]  
NEW [ X ]

SUBSYSTEM: COMM & TRACK  
MDAC ID: 1064  
ITEM: NSP CODING XMIT SWITCH  
LEAD ANALYST: A.W. ADDIS

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 SHORT TO GROUND COULD CAUSE LOSS OF "NSP1, 2 ON" SIGNALS AND RESULT IN LOSS OF CLASSIFIED MISSION (LOSS OF SECURITY FOR CLASSIFIED DATA). AGREE WITH NASA FMEA CRITICALITY ASSIGNMENT.

REPORT DATE 03/18/88  
C-71
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
ASSESSMENT ID: COMTRK-1065
NASA FMEA #: 

SUBSYSTEM: COMM & TRACK
MDAC ID: 1065
ITEM: NSP CODING RCV SWITCH

LEAD ANALYST: A.W. ADDIS

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AGREE WITH FMEA SCREEN B ASSIGNMENT.

REPORT DATE 03/18/88 C-72
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
ASSESSMENT ID: COMTRK-1066
NASA FMEA #: 05-2G-21535-2

SUBSYSTEM: COMM & TRACK
MDAC ID: 1066
ITEM: NSP CODING RCV SWITCH

LEAD ANALYST: A.W. ADDIS

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:
WORST CASE SHORT TO GROUND COULD CAUSE LOSS OF "NSP1, 2 ON" SIGNALS AND RESULT IN LOSS OF CLASSIFIED MISSION (LOSS OF SECURITY FOR CLASSIFIED DATA). AGREE WITH NASA FMEA CRITICALITY ASSIGNMENT.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88
ASSESSMENT ID: COMTRK-1067
NASA FMEA #: 05-6PG-22000-3

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM & TRACK
MDAC ID: 1067
ITEM: UPLINK BLOCK SWITCH

LEAD ANALYST: A.W. ADDIS

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-74
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88
ASSESSMENT ID: COMTRK-1068
NASA FMEA #: 05-6PG-22000-2

SUBSYSTEM: COMM & TRACK
MDAC ID: 1068
ITEM: UPLINK BLOCK SWITCH

LEAD ANALYST: A.W. ADDIS

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:

IOA 1068 ASSIGNS 2/1R FOR ORBIT OPS - LOSS OF MISSION PLUS POSSIBLE LOSS OF CREW/VEHICLE FOR FAILURE OF ALL PATHS FOR STATE VECTOR UPDATE. (NASA FMEA WRITEUP ACKNOWLEDGES THE 1R FUNCTIONAL CRITICALITY BUT FMEA ASSIGNS FUNCTIONAL CRITICALITY 2).

REPORT DATE 03/18/88 C-75
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88
ASSESSMENT ID: COMTRK-1068A
NASA FMEA #: 05-6PG-22000-1

SUBSYSTEM: COMM & TRACK
MDAC ID: 1068
ITEM: UPLINK BLOCK SWITCH

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:
The 3/1R CRITICALITY IS ENCOMPASSED IN IOA 1068, WHICH ALSO COVERS ANOTHER NASA FMEA (05-6PG-22000-2).

REPORT DATE 03/18/88 C-76
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88
ASSESSMENT ID: COMTRK-1069
NASA FMEA #: 05-6PG-21501-1

SUBSYSTEM: COMM & TRACK
MDAC ID: 1069
ITEM: NSP POWER SWITCH
LEAD ANALYST: A.W. ADDIS

ASSESSMENT:
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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

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REMARKS:
AGREE WITH FMEA SCREEN B ASSIGNMENT.

REPORT DATE 03/18/88 C-77
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88
ASSESSMENT ID: COMTRK-1070
NASA FMEA #: 05-6PG-21501-2

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM & TRACK
MDAC ID: 1070
ITEM: NSP POWER SWITCH
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:
AGREE WITH FMEA SCREEN B ASSIGNMENT.

REPORT DATE 03/18/88 C-78
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
ASSESSMENT ID: COMTRK-1501
NASA FMEA #: 05-6PG-21229-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1501
ITEM: FUSE, 1A

LEAD ANALYST: E.S. DALEY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

Adequate [ ]
Inadequate [ ]

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-79
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
ASSESSMENT ID: COMTRK-1502
NASA FMEA #: 05-6PG-21229-I

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1502
ITEM: FUSE, 1A

LEAD ANALYST: E.S. DALEY

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

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-80
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
ASSESSMENT ID: COMTRK-1503
NASA FMEA #: 05-6PG-21230-1
SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1503
ITEM: RESISTOR, 1.2K
LEAD ANALYST: E.S. DALEY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-81
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
ASSESSMENT ID: COMTRK-1504
NASA FMEA #: 05-6PG-21230-1

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1504
ITEM: RESISTOR, 1.2K

LEAD ANALYST: E.S. DALEY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

  ADEQUATE [ ]
  INADEQUATE [ ]

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-82
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
ASSESSMENT ID: COMTRK-1505
NASA FMEA #: 05-6PG-21228-1
SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1505
ITEM: DIODE
LEAD ANALYST: E.S. DALEY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-83
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
ASSESSMENT ID: COMTRK-1506
NASA FMEA #: 05-6PG-21228-1
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1506
ITEM: DIODE
LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

NO DIFFERENCES.

REPORT DATE 03/18/88
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
NASA DATA:  
BASELINE [ ]  
NEW [ X ]

SUBSYSTEM: COMM AND TRACK/EPD&C  
MDAC ID: 1507  
ITEM: DIODE  
LEAD ANALYST: E.S. DALEY  

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COMPARE [ / ] [ ] [ N ] [ ]  

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

REMARKS:  
NO DIFFERENCES.

REPORT DATE 03/18/88  C-85
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
ASSESSMENT ID: COMTRK-1508
NASA FMEA #: 05-6PG-21228-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1508
ITEM: DIODE

LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-86
APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88  
ASSESSMENT ID: COMTRK-1509  
NASA FMEA #: 05-6PG-21217-1  
SUBSYSTEM: COMM AND TRACK/EPD&C  
MDAC ID: 1509  
ITEM: FUSE, 1A  
LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]

INADEQUATE [ ]

REMARKS:

NO DIFFERENCES.

REPORT DATE 03/18/88  C-87
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
ASSESSMENT ID: COMTRK-1510
NASA FMEA #: 05-6PG-21217-1

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1510
ITEM: FUSE, 1A
LEAD ANALYST: E. S. DALEY

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

RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-88
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88

ASSESSMENT ID: COMTRK-1511
NASA FMEA #: 05-6PG-21214-1

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1511
ITEM: RESISTOR, 1.2K

LEAD ANALYST: E.S. DALEY

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

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-89
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
ASSESSMENT ID: COMTRK-1512
NASA FMEA #: 05-6PG-21214-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1512
ITEM: RESISTOR, 1.2K

LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)

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

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-90
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
ASSESSMENT ID: COMTRK-1513
NASA FMEA #: 05-6PG-21212-1
SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1513
ITEM: FUSE, 10A
LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-91
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
ASSESSMENT ID: COMTRK-1514
NASA FMEA #: 05-6PG-21212-1
SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1514
ITEM: FUSE, 10A
LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)

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

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-92
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
ASSESSMENT ID: COMTRK-1515
NASA FMEA #: 05-6PG-21212-1
SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1515
ITEM: FUSE, 10A
LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-93
### APPENDIX C
#### ASSESSMENT WORKSHEET

**ASSESSMENT DATE:** 1/29/88  
**ASSESSMENT ID:** COMTRK-1516  
**NASA FMEA #:** 05-6PG-21212-1

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

**SUBSYSTEM:** COMM AND TRACK/EPD&C  
**MDAC ID:** 1516  
**ITEM:** FUSE, 10A

**LEAD ANALYST:** E.S. DALEY

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

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

* (ADD/DELETE)

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

- ADEQUATE [ ]
- INADEQUATE [ ]

**REMARKS:**  
NO DIFFERENCES.

**REPORT DATE 03/18/88**

C-94
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
ASSESSMENT ID: COMTRK-1517
NASA FMEA #: 05-6PG-21216-1

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1517
ITEM: DIODE

LEAD ANALYST: E.S. DALEY

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NEW [ X ]

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

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-95
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
ASSESSMENT ID: COMTRK-1518
NASA FMEA #: 05-6PG-21216-1

NASA DATA: BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1518
ITEM: DIODE

LEAD ANALYST: E.S. DALEY

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

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

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-96
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: COMTRK-1519
NASA FMEA #: 05-6PG-21200-1

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1519
ITEM: SWITCH, 4-POLE, 3-POS, S16

LEAD ANALYST: W.W. ROBINSON

NASA DATA:
BASELINE [ ]
NEW [ X ]

CRITICALITY
FLIGHT
HDW/FUNC

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

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

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

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-97
**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:**

NO DIFFERENCES.

REPORT DATE 03/18/88 C-98
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: COMTRK-1521
NASA FMEA #: 6PG-21201-1
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1521
ITEM: DIODE, A16CR1
LEAD ANALYST: W.W. ROBINSON

ASSESSMENT:

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

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

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

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

REMARKS:
AGREE WITH FMEA SCREEN 1, 2 ASSIGNMENTS.

REPORT DATE 03/18/88 C-99
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/12/88
ASSESSMENT ID: COMTRK-1522
NASA FMEA #: 6PG-21201-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1522
ITEM: DIODE, A16CR2
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:
AGREE WITH FMEA SCREEN A, B ASSIGNMENTS.

REPORT DATE 03/18/88 C-100
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/12/88
ASSESSMENT ID: COMTRK-1523
NASA FMEA #: 05-6PG-21201-2
SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1523
ITEM: DIODE, A16CR1
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:
IOA ANALYSIS INCORRECT - AGREE WITH FMEA.

REPORT DATE 03/18/88 C-101
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/12/88
ASSESSMENT ID: COMTRK-1524
NASA FMEA #: NASA DATA:
SUBSYSTEM: C&T/EPD&C/S-BAND BASELINE [ ]
MDAC ID: 1524 NEW [X]
ITEM: DIODE, A16CR2
LEAD ANALYST: W.W. ROBINSON

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [X]
INADEQUATE [

REMARKS:
IOA ANALYSIS INCORRECT - AGREE WITH FMEA.

REPORT DATE 03/18/88 C-102
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: COMTRK-1525
NASA FMEA #: 05-6PG-21202-1
SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1525
ITEM: FUSE, 1AMP, A2F8
LEAD ANALYST: W.W. ROBINSON

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NASA FAILURE MODE: OPEN; INADVERTENT CIRCUIT.
IOA FAILURE MODE: FAILS OPEN.
NO DIFFERENCES.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/12/88
ASSESSMENT ID: COMTRK-1526
NASA FMEA #: 05-6PG-21201-1
SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1526
ITEM: FUSE, 1AMP, A2F15
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:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-104
**APPENDIX C**

**ASSESSMENT WORKSHEET**

**ASSESSMENT DATE:** 2/11/88  
**ASSESSMENT ID:** COMTRK-1527  
**NASA FMEA #:** 05-6PG-21203-1  
**SUBSYSTEM:** C&T/EPD&C/S-BAND  
**MDAC ID:** 1527  
**ITEM:** HYBRID DRIVER, TYPE I, A17(J4-45)  
**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:**

NASA FAILURE MODE; FAILS OPEN.

IOA FAILURE MODE; LOSS OF OUTPUT.

LOSS OF OUTPUT TO THE DRIVER RESULTS IN LOSS OF POWER TO THE TRANSPONDER. THE RESULTS ARE THE SAME. NO DIFFERENCES.

**REPORT DATE 03/18/88**

C-105
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: COMTRK-1528
NASA FMEA #: 05-6PG-21203-1
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1528
ITEM: HYBRID DRIVER, TYPE I, A18(J4-45)

LEAD ANALYST: W.W. ROBINSON

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

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NASA FAILURE MODE; FAILS OPEN.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: COMTRK-1529
NASA FMEA #: 05-6PG-21203-2

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1529
ITEM: HYBRID DRIVER, TYPE I, A17(J4-45)

LEAD ANALYST: W.W. ROBINSON

ASSESSMENT:

CRITICALITY FLIGHT HDW/FUNC

REDUNDANCY SCREENS A B C

NASA [ 3 /3 ] [ ] [ ] [ ] [ ] [ ] [ ] *

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

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

RECOMMENDATIONS: (If different from NASA)

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

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]

INADEQUATE [ ]

REMARKS:
NASA FAILURE MODE: FAILS OPEN; INADVERTENT OUTPUT.
IOA FAILURE MODE: INADVERTENT OUTPUT.
NO DIFFERENCES.

REPORT DATE 03/18/88 C-107
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: COMTRK-1530
NASA FMEA #: 05-6PG-21203-2

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1530
ITEM: HYBRID DRIVER, TYPE I, A18(J4-45)
LEAD ANALYST: W.W. ROBINSON

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NASA FAILURE MODE: FAILS OPEN; INADVERTENT OUTPUT.
IOA FAILURE MODE: INADVERTENT OUTPUT.
NO DIFFERENCES.

REPORT DATE 03/18/88
C-108
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: COMTRK-1531
NASA FMEA #: 05-6PG-21204-1

NASA DATA:
BASELINE [ ]
NEW [ x ]

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1531
ITEM: RESISTOR, 1.2K OHM, 2W, A14R3

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:
NASA FAILURE MODE: OPEN CIRCUIT; FAIL OPEN CIRCUIT.
IOA FAILURE MODE: FAILS OPEN.
NO DIFFERENCES.

REPORT DATE 03/18/88   C-109
## APPENDIX C
### ASSESSMENT WORKSHEET

**ASSESSMENT DATE:** 2/11/88  
**ASSESSMENT ID:** COMTRK-1532  
**NASA FMEA #:** 05-6PG-21204-1

**SUBSYSTEM:** C&T/EPD&C/S-BAND  
**MDAC ID:** 1532  
**ITEM:** RESISTOR, 1.2K OHM, 2W, A14R4

**LEAD ANALYST:** W.W. ROBINSON

### ASSESSMENT:

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### RECOMMENDATIONS:

(If different from NASA)

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

(ADD/DELETE)

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

ADEQUATE [ ]  
INADEQUATE [ ]

### REMARKS:

NASA FAILURE MODE: OPEN CIRCUIT; FAIL OPEN CIRCUIT.  
IOA FAILURE MODE: FAILS OPEN.  
NO DIFFERENCES.

**REPORT DATE 03/18/88**  
C-110
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: COMTRK-1533
NASA FMEA #: 05-6PG-21205-1

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1533
ITEM: HYBRID DRIVER, TYPE III, A17(J5-Z)
LEAD ANALYST: W.W. ROBINSON

NASA DATA:
BASELINE [ ]
NEW [ X ]

ASSESSMENT:

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| IOA [ 3 /1R ]  | [ P ] | [ NA ] | [ P ] | [ ]  |
| COMPARE [ / ]  | [ ]   | [ ]   | [ ]   | [ ]  |

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

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

REMARKS:
NASA FAILURE MODE: LOSS OF OUTPUT; OPEN IN CIRCUIT.
IOA FAILURE MODE: LOSS OF OUTPUT.
NO DIFFERENCES.

REPORT DATE 03/18/88 C-111
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: COMTRK-1534
NASA FMEA #: 05-6PG-21205-1

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1534
ITEM: HYBRID DRIVER, TYPE III, A18(J5-P)
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:
NASA FAILURE MODE: LOSS OF OUTPUT; OPEN IN CIRCUIT.
IOA FAILURE MODE: LOSS OF OUTPUT.
NO DIFFERENCES.

REPORT DATE 03/18/88
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: COMTRK-1535
NASA FMEA #: 05-6PG-21205-2

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1535
ITEM: HYBRID DRIVER, TYPE III, (J5-Z)

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:
NASA FAILURE MODE: INADVERTENT OUTPUT; DRIVER CANNOT BE TURNED OFF.

IOA FAILURE MODE: INADVERTENT OUTPUT.

NO DIFFERENCES.

REPORT DATE 03/18/88 , C-113
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: COMTRK-1536
NASA FMEA #: 05-6PG-21205-2

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1536
ITEM: HYBRID DRIVER, TYPE III, A18(J5-P)

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:

NASA FAILURE MODE: INADVERTENT OUTPUT; DRIVER CANNOT BE TURNED OFF.

IOA FAILURE MODE: INADVERTENT OUTPUT.

NO DIFFERENCES.

REPORT DATE 03/18/88 C-114
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/12/88
ASSESSMENT ID: COMTRK-1537
NASA FMEA #: 05-6PG-21211-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1537
ITEM: HYBRID DRIVER, TYPE III, A17(J5-T)

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:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-115
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/12/88
ASSESSMENT ID: COMTRK-1538
NASA FMEA #: 05-6PG-21211-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1538
ITEM: HYBRID DRIVER, TYPE III, A18(J5-T)

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:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-116
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/12/88
ASSESSMENT ID: COMTRK-1539
NASA FMEA #: 05-6PG-21211-2

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1539
ITEM: HYBRID DRIVER, TYPE III, A17(J5-T)

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:
AGREE WITH FMEA SCREEN B ASSIGNMENT.

REPORT DATE 03/18/88 C-117
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/12/88
ASSESSMENT ID: COMTRK-1540
NASA FMEA #: 05-6PG-21211-2

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1540
ITEM: HYBRID DRIVER, TYPE III, A18(J5-T)

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:
AGREE WITH FMEA SCREEN B ASSIGNMENT.

REPORT DATE 03/18/88 C-118
**APPENDIX C**

**ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 2/12/88

ASSESSMENT ID: COMTRK-1541

NASA FMEA #: 05-6PG-21212-1

NASA DATA:

BASELINE [ ]

NEW [X]

**SUBSYSTEM:**

C&T/EPD&C/S-BAND

MDAC ID: 1541

ITEM: HYBRID DRIVER, TYPE III, A17(J5-D)

LEAD ANALYST: W.W. ROBINSON

**ASSESSMENT:**

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

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

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]

INADEQUATE [ ]

**REMARKS:**

AGREE WITH FMEA SCREEN B ASSIGNMENT.

---

REPORT DATE 03/18/88 C-119
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/12/88
ASSESSMENT ID: COMTRK-1542
NASA FMEA #: 05-6PG-21212-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1542
ITEM: HYBRID DRIVER, TYPE III, A18(J5-D)

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:
AGREE WITH FMEA SCREEN B ASSIGNMENT.

REPORT DATE 03/18/88  C-120
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/12/88
ASSESSMENT ID: COMTRK-1543
NASA FMEA #: 05-6PG-21212-2

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1543
ITEM: HYBRID DRIVER, TYPE III, A17(J5-D)

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:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-121
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/12/88
ASSESSMENT ID: COMTRK-1544
NASA FMEA #: 05-6PG-21212-2

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1544
ITEM: HYBRID DRIVER, TYPE III, A18(J5-D)

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:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-122
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/12/88
ASSESSMENT ID: COMTRK-1545
NASA FMEA #: 05-6PG-21213-1
SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1545
ITEM: DIODE, A17CR
LEAD ANALYST: W.W. ROBINSON

NASA DATA:
BASELINE [ ]
NEW [ X ]

CRITICALITY

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

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-123
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/12/88
ASSESSMENT ID: COMTRK-1546
NASA FMEA #: 05-6PG-21213-1
SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1546
ITEM: DIODE, A18CR
LEAD ANALYST: W.W. ROBINSON

NASA DATA:
BASELINE [ ]
NEW [X]

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

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88   C-124
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/12/88
ASSESSMENT ID: COMTRK-1547
NASA FMEA #: 05-6PG-21213-1
SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1547
ITEM: DIODE, A17CR
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:
AGREE WITH FMEA SCREEN B ASSIGNMENT.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/18/88
ASSESSMENT ID: COMTRK-1548
NASA FMEA #: 05-6PG-21213-1

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1548
ITEM: DIODE, A18CR

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:
AGREE WITH FMEA SCREEN B ASSIGNMENT.

REPORT DATE 03/18/88 C-126
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/12/88
ASSESSMENT ID: COMTRK-1549
NASA FMEA #: 05-6PG-21214-1

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1549
ITEM: RESISTOR, 1.2K OHM, 2W, A15R1

LEAD ANALYST: W.W. ROBINSON

ASAessment:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]

INADEQUATE [ ]

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-127
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/18/88
ASSESSMENT ID: COMTRK-1550
NASA FMEA #: 05-6PG-21214-1
NASA DATA:
BASELINE [ ]
NEW [X ]

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1550
ITEM: RESISTOR, 1.2K OHM, 2W, A15R2

LEAD ANALYST: W.W. ROBINSON

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COMPARE [ / ]

RECOMMENDATIONS: (If different from NASA)

[ / ]

* CIL RETENTION RATIONALE: (If applicable)

Adequate [ ]

Inadequate [ ]

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-128
## APPENDIX C
### ASSESSMENT WORKSHEET

**ASSESSMENT DATE:** 2/12/88  
**ASSESSMENT ID:** COMTRK-1551  
**NASA FMEA #:** 05-6PG-21215-1

**SUBSYSTEM:** C&T/EPD&C/S-BAND  
**MDAC ID:** 1551  
**ITEM:** SWITCH, 4-POLE, 3-POS, A2SI0

**LEAD ANALYST:** W.W. ROBINSON

**ASSESSMENT:**

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**COMPARE** [ / ]

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

[ / ]

*(ADD/DELETE)*

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

ADEQUATE [ ]

INADEQUATE [ ]

**REMARKS:**

NO DIFFERENCES.

---

**REPORT DATE** 03/18/88  
C-129
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/12/88  NASA DATA: ..........
ASSESSMENT ID: COMTRK-1552  BASELINE [ ]
NASA FMEA #: 05-6PG-21215-2  NEW [ X ]

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1552
ITEM: SWITCH, 4-POLE, 3-POS, A2S10

LEAD ANALYST: W.W. ROBINSON

ASSESSMENT:

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

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

NO DIFFERENCES.

REPORT DATE 03/18/88  C-130
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/12/88
ASSESSMENT ID: COMTRK-1553
NASA FMEA #: 05-6PG-21215-3
NASA DATA:
NASA [ 3 /3 ] [ ] [ ] [ ] [ ] [ ] [ ]
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1553
ITEM: SWITCH, 4-POLE, 3-POS, A2S10

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:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-131
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/18/88
ASSESSMENT ID: COMTRK-1554
NASA FMEA #: 05-6PG-21216-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1554
ITEM: DIODE, A18CR11
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:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-132
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/18/88       NASA DATA:
ASSESSMENT ID: COMTRK-1555      BASELINE [   ]
NASA FMEA #: 05-6PG-21216-1     NEW [ X ]
SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1555
ITEM: DIODE, A18CR12
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:

IOA 1555 SHOULD BE IDENTICAL WITH IOA 1554, WHICH IS CORRECT.
AGREE WITH NASA FMEA SCREEN A, B, ASSIGNMENTS.

REPORT DATE 03/18/88 C-133
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/18/88
ASSESSMENT ID: COMTRK-1556
NASA FMEA #: 05-6PG-21216-2

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1556
ITEM: DIODE, A18CR11

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:
AGREE WITH FMEA ASSIGNMENTS FOR CRITICALITY AND SCREENS A AND B.

REPORT DATE 03/18/88 C-134
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/18/88
ASSESSMENT ID: COMTRK-1557
NASA FMEA #: 05-6PG-21216-2

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1557
ITEM: DIODE, A18CR12
LEAD ANALYST: W.W. ROBINSON

NASA DATA:
BASELINE [ ]
NEW [ X ]

CRITICALITY REDUNDANCY SCREENS

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AGREE WITH FMEA ASSIGNMENTS FOR CRITICALITY AND SCREENS A AND B.

REPORT DATE 03/18/88 C-135
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/18/88
ASSESSMENT ID: COMTRK-1558
NASA FMEA #: 05-6PG-21217-1

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1558
ITEM: FUSE, 1AMP, A2F6

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:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-136
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/18/88
ASSESSMENT ID: COMTRK-1559
NASA FMEA #: 05-6PG-21217-1
SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1559
ITEM: FUSE, 1AMP, A2F13
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:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-137
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
ASSESSMENT ID: COMTRK-1560
NASA FMEA #: 05-6PG-21221-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1560
ITEM: REMOTE POWER CONTROLLER, 20 AMP, RPC35

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:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-138
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
ASSESSMENT ID: COMTRK-1561
NASA FMEA #: 05-6PG-21221-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1561
ITEM: REMOTE POWER CONTROLLER, 20 AMP, RPC44

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:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-139
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/12/88
ASSESSMENT ID: COMTRK-1562
NASA FMEA #: 05-6PG-21221-2

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1562
ITEM: REMOTE POWER CONTROLLER, 20 AMP, RPC35

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:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-140
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/12/88
ASSESSMENT ID: COMTRK-1563
NASA FMEA #: 05-6PG-21221-2

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1563
ITEM: REMOTE POWER CONTROLLER, 20 AMP, RPC44

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:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-141
# APPENDIX C
## ASSESSMENT WORKSHEET

**ASSESSMENT DATE:** 2/12/88  
**ASSESSMENT ID:** COMTRK-1564  
**NASA FMEA #:** 05-6PG-21223-1  
**SUBSYSTEM:** C&T/EPD&C/S-BAND  
**MDAC ID:** 1564  
**ITEM:** HYBRID DRIVER, TYPE II, A17(J4-127)  
**LEAD ANALYST:** W.W. ROBINSON

### ASSESSMENT:

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### RECOMMENDATIONS:

(If different from NASA)

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]

INADEQUATE [ ]

### REMARKS:

NO DIFFERENCES.

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**REPORT DATE 03/18/88**  
**C-142**
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/12/88
ASSESSMENT ID: COMTRK-1565
NASA FMEA #: 05-6PG-21223-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1565
ITEM: HYBRID DRIVER, TYPE II, A18(J4-127)

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:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-143
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
ASSESSMENT ID: COMTRK-1566
NASA FMEA #: 05-6PG-21223-2
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1566
ITEM: HYBRID DRIVER, TYPE II, A17(J4-127)

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:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-144
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
ASSESSMENT ID: COMTRK-1567
NASA FMEA #: 05-6PG-21223-2

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1567
ITEM: HYBRID DRIVER, TYPE II, A18(J4-127)

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:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-145
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
ASSESSMENT ID: COMTRK-1568
NASA FMEA #: 05-6PG-21224-1

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1568
ITEM: FUSE, 1 AMP, A2F31

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:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-146
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
ASSESSMENT ID: COMTRK-1569
NASA FMEA #: 05-6PG-21224-1

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1569
ITEM: FUSE, 1AMP, A2F11

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:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-147
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/12/88
ASSESSMENT ID: COMTRK-1570
NASA FMEA #: 05-6PG-21225-1

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1570
ITEM: SWITCH, 4-POLE, 3-POS, A3S12
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 [ ]
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REMARKS:
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REPORT DATE 03/18/88 C-148
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:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-149
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
ASSESSMENT ID: COMTRK-1572
NASA FMEA #: 05-6PG-21226-1

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1572
ITEM: HYBRID DRIVER, TYPE I, A17(J4-49)

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:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-150
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
ASSESSMENT ID: COMTRK-1573
NASA FMEA #: 05-6PG-21226-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1573
ITEM: HYBRID DRIVER, TYPE I, A18(J4-49)

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:
NO DIFFERENCES.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/12/88
ASSESSMENT ID: COMTRK-1574
NASA FMEA #: 05-6PG-21226-2

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1574
ITEM: HYBRID DRIVER, TYPE I, A17(J4-49)

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:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-152
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/12/88
ASSESSMENT ID: COMTRK-1575
NASA FMEA #: 05-6PG-21226-2

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1575
ITEM: HYBRID DRIVER, TYPE I, A18(J4-49)

LEAD ANALYST: W.W. ROBINSON

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

RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88  C-153
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
ASSESSMENT ID: COMTRK-1576
NASA FMEA #: 05-6PG-21227-1
NASA DATA: BASELINE [ ] NEW [ X ]

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1576
ITEM: SWITCH, 2-POLE, 3-POS, A2S11

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:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-154
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
ASSESSMENT ID: COMTRK-1577
NASA FMEA #: 05-6PG-21227-2
SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1577
ITEM: SWITCH, 2-POLE, 3-POS, A2S11
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:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-155
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/08/88
ASSESSMENT ID: COMTRK-1578
NASA FMEA #: 05-6PG-21228-1

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1578
ITEM: DIODE, A18CR13

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:

NO DIFFERENCES.

REPORT DATE 03/18/88 C-156
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/12/88
ASSESSMENT ID: COMTRK-1579
NASA FMEA #: 05-6PG-21228-1
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1579
ITEM: DIODE, A18CR14

LEAD ANALYST: W.W. ROBINSON

ASSESSMENT:

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

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

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

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-157
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/12/88
ASSESSMENT ID: COMTRK-1580
NASA FMEA #: 05-6PG-21228-1

NASA DATA: BASELINE [ ] NEW [ X ]
SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1580
ITEM: DIODE, A18CR15
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:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-158
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/12/88
ASSESSMENT ID: COMTRK-1581
NASA FMEA #: 05-6PG-21228-1
SUBSYSTEM: C&T/EPD&C/S-BAND
ITEM: DIODE, A16CR16
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:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-159
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/15/88
ASSESSMENT ID: COMTRK-1582
NASA FMEA #: 05-6PG-21228-2
SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1582
ITEM: DIODE, A18CR13
LEAD ANALYST: W.W. ROBINSON

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM:
C&T/EPD&C/S-BAND
MDAC ID: 1582
ITEM: DIODE, A18CR13
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 [ X ]
INADEQUATE [ ]

REMARKS:
AGREE WITH FMEA ASSIGNMENTS FOR CRITICALITY AND FOR SCREENS A AND B.

REPORT DATE 03/18/88  C-160
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/15/88
ASSESSMENT ID: COMTRK-1583
NASA FMEA #: 05-6PG-21228-2
SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1583
ITEM: DIODE, A18CR14
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 [ X ]
INADEQUATE [ ]

REMARKS:
AGREE WITH FMEA ASSIGNMENTS FOR CRITICALITY AND FOR SCREENS A AND B.

REPORT DATE 03/18/88 C-161
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/15/88
ASSESSMENT ID: COMTRK-1584
NASA FMEA #: 05-6PG-21228-2

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1584
ITEM: DIODE, A18CR15

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 [ X ]
INADEQUATE [ ]

REMARKS:
AGREE WITH FMEA ASSIGNMENTS FOR CRITICALITY AND FOR SCREENS A AND B.

REPORT DATE 03/18/88 C-162
APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/15/88  
ASSESSMENT ID: COMTRK-1585  
NASA FMEA #: 05-6PG-21228-2  

SUBSYSTEM: C&T/EPD&C/S-BAND  
MDAC ID: 1585  
ITEM: DIODE, A18CR16  

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 [X]
INADEQUATE [ ]

REMARKS:

AGREE WITH FMEA ASSIGNMENTS FOR CRITICALITY AND FOR SCREENS A AND B.

REPORT DATE 03/18/88  C-163
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/15/88
ASSESSMENT ID: COMTRK-1586
NASA FMEA #: 05-6PG-21229-1
NASA FMEA #: 05-6PG-21229-1

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1586
ITEM: FUSE, 1AMP, A2F7

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:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-164
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/15/88
ASSESSMENT ID: COMTRK-1587
NASA FMEA #: 05-6PG-21229-1

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1587
ITEM: FUSE, 1AMP, A2F14

LEAD ANALYST: W.W. ROBINSON

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:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-165
**APPENDIX C**
**ASSESSMENT WORKSHEET**

**ASSESSMENT DATE:** 2/15/88  
**ASSESSMENT ID:** COMTRK-1588  
**NASA FMEA #:** 05-6PG-21230-1  

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

**SUBSYSTEM:** C&T/EPD&C/S-BAND  
**MDAC ID:** 1588  
**ITEM:** RESISTOR, 1.2K OHM, 2-W, A15R3  

**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:**

NO DIFFERENCES.

**REPORT DATE 03/18/88**  
**C-166**
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/15/88
ASSESSMENT ID: COMTRK-1589
NASA FMEA #: 05-6FG-21230-1
NASA DATA:
BASELINE [   ]
NEW [ X ]

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1589
ITEM: RESISTOR, 1.2K OHM, 2-W, A15R4

LEAD ANALYST: W.W. ROBINSON

ASSESSMENT:

CRITICALITY
FLIGHT
HDW/FUNC

REDUNDANCY SCREENS
A     B     C

NASA [ 3 /2R ] [ P ] [ NA] [ P ] [ ] *
IOA [ 3 /2R ] [ P ] [ NA] [ P ] [ ]

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

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

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

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88    C-167
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: COMTRK-1590
NASA FMEA #: 05-6PG-23501-1

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1590
ITEM: HYBRID DRIVER, TYPE III, A17(J4-117)

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:
NASA FAILURE MODE: LOSS OF OUTPUT; FAILS OPEN CIRCUIT.
IOA FAILURE MODE: LOSS OF OUTPUT.
NO DIFFERENCES.

REPORT DATE 03/18/88  C-168
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: COMTRK-1591
NASA FMEA #: 05-6PG-23501-1
SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1591
ITEM: HYBRID DRIVER, TYPE III, A18(J4-117)
LEAD ANALYST: W.W. ROBINSON

NASA DATA:
BASELINE [ ]
NEW [ X ]

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NASA FAILURE MODE: LOSS OF OUTPUT; FAILS OPEN CIRCUIT.
IOA FAILURE MODE: LOSS OF OUTPUT.
NO DIFFERENCES.

REPORT DATE 03/18/88
C-169
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: COMTRK-1592
NASA FMEA #: 05-6PG-23501-2

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1592
ITEM: HYBRID DRIVER, TYPE III, A17(J4-117)
LEAD ANALYST: W.W. ROBINSON

.nasa.

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NASA FAILURE MODE: INADVERTENT OUTPUT; DRIVER CANNOT BE TURNED OFF.
IOA FAILURE MODE: INADVERTENT OUTPUT.
EFFECTS ARE POWER CONSUMPTION,. NOT MISSION OF CREW/VEHICLE CRITICAL.

REPORT DATE 03/18/88 C-170
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: COMTRK-1593
NASA FMEA #: 05-6PG-23501-2

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1593
ITEM: HYBRID DRIVER, TYPE III, A18(J4-117)

LEAD ANALYST: W.W. ROBINSON

ASSESSMENT:

CRITICALITY

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COMPARE [ /N ]

ITEM

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]

INADEQUATE [ ]

REMARKS:

NASA FAILURE MODE: INADVERTENT OUTPUT; DRIVER CANNOT BE TURNED OFF.

IOA FAILURE MODE: INADVERTENT OUTPUT.

EFFECTS ARE POWER CONSUMPTION, NOT MISSION OF CREW/VEHICLE CRITICAL.

REPORT DATE 03/18/88 C-171
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: COMTRK-1594
NASA FMEA #: 05-6PG-23502-1
SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1594
ITEM: FUSE, 5 AMP, A17(J4-117)
LEAD ANALYST: W.W. ROBINSON

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NASA FAILURE MODE; FAIL OPEN.
IOA FAILURE MODE; FAIL OPEN.
NO DIFFERENCES.

REPORT DATE 03/18/88 C-172
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: COMTRK-1595
NASA FMEA #: 05-6PG-23502-1
SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1595
ITEM: FUSE, 5 AMP, A18(J4-117)
LEAD ANALYST: W.W. ROBINSON

NASA DATA:
BASELINE [ ]
NEW [ X ]

ASSESSMENT:

CRITICALLY
FLIGHT
HDW/FUNC

REDUNDANCY SCREENS
A  B  C

NASA [ 3 /2R ] [ P ] [ NA] [ P ] [ ] *
IOA [ 3 /2R ] [ P ] [ NA] [ P ] [ ]

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

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

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

REMARKS:
NASA FAILURE MODE; FAIL OPEN.
IOA FAILURE MODE; FAIL OPEN.
NO DIFFERENCES.

REPORT DATE 03/18/88 C-173
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/15/88
ASSESSMENT ID: COMTRK-1596
NASA FMEA #: [ ]
SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1596
ITEM: SWITCH, 2-POLE, 3-POS, A2S5
LEAD ANALYST: W.W. ROBINSON

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:
NO DIFFERENCES.

REPORT DATE 03/18/88   C-174
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/15/88
ASSESSMENT ID: COMTRK-1597
NASA FMEA #: 05-6PG-23528-1
NASA DATA: BASELINE [ ] NEW [ X ]

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1597
ITEM: SWITCH, 2-POLE, 3-POS, A2S5
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:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-175
APPENDIX C
ASSESSMENT WORKSHEET

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| SUBSYSTEM: C&T/EPD&C/S-BAND | |
| MDAC ID: 1598 | |
| ITEM: DIODE, A19CR1 | |
| LEAD ANALYST: W.W. ROBINSON | |

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

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REPORT DATE 03/18/88 C-176
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: COMTRK-1599
NASA FMEA #: 05-6PG-23529-1
SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1599
ITEM: DIODE, A19CR2
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:

NASA FAILURE MODE: OPEN; DIODE FAILS OPEN.
IOA FAILURE MODE: FAILS OPEN.
NO DIFFERENCES.

REPORT DATE 03/18/88 C-177
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: COMTRK-1600
NASA FMEA #: 05-6PG-23529-2
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1600
ITEM: DIODE, A19CRI

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 [ X ]
INADEQUATE [ ]

REMARKS:
SHORTED DIODES CANNOT BE DETECTED IN TURNAROUND OR IN FLIGHT - FAILS SCREENS A AND B. AGREE WITH CRITICALITY ASSIGNMENT AND WITH SCREEN A AND B ASSIGNMENTS.

REPORT DATE 03/18/88 C-178
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: COMTRK-1601
NASA FMEA #: 05-6PG-23529-2
SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1601
ITEM: DIODE, CR2A19
LEAD ANALYST: W.W. ROBINSON

NASA DATA:
BASELINE [ ]
NEW [ X ]

CRITICALITY
FLIGHT
HDW/FUNC
NASA [ 3 /2R ]
IOA [ 3 /3 ]
COMPARE [ /N ]

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

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

REMARKS:
SHORTED DIODES CANNOT BE DETECTED IN TURNAROUND OR IN FLIGHT - FAILS SCREENS A AND B. AGREE WITH CRITICALITY ASSIGNMENT AND WITH SCREEN A AND B ASSIGNMENTS.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/15/88
ASSESSMENT ID: COMTRK-1602
NASA FMEA #: 05-6PG-23530-1
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1602
ITEM: RESISTOR, 1.2K OHM, 2W, A19R1

LEAD ANALYST: W.W. ROBINSON

ASSESSMENT:

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

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-180
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/15/88
ASSESSMENT ID: COMTRK-1603
NASA FMEA #: 05-6PG-23530-1

ASSESSMENT ID: COMTRK-1603
NASA FMEA #: 05-6PG-23530-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 1603
ITEM: RESISTOR, 1.2K OHM, 2W, A19R2

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:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-181
**APPENDIX C**
**ASSESSMENT WORKSHEET**

**ASSESSMENT DATE:** 2/15/88  
**ASSESSMENT ID:** COMTRK-1604  
**NASA FMEA #:** 05-6PG-23531-1  
**SUBSYSTEM:** C&T/EPD&C/S-BAND  
**MDAC ID:** 1604  
**ITEM:** FUSE, 1AMP, A2F5  
**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:**

NO DIFFERENCES.

**REPORT DATE 03/18/88 C-182**
APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/15/88  
ASSESSMENT ID: COMTRK-1605  
NASA FMEA #: 05-6PG-23531-1  
SUBSYSTEM: C&T/EPD&C/S-BAND  
MDAC ID: 1605  
ITEM: FUSE, 1AMP, A2F12  
LEAD ANALYST: W.W. ROBINSON

NASA DATA:
BASELINE [ ]  
NEW [ X ]

SUBSYSTEM: C&T/EPD&C/S-BAND  
MDAC ID: 1605  
ITEM: FUSE, 1AMP, A2F12

LEAD ANALYST: W.W. ROBINSON

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:
NO DIFFERENCES.

REPORT DATE 03/18/88  
C-183
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88
ASSESSMENT ID: COMTRK-1606
NASA FMEA #: 05-6PG-21507-1
SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1606
ITEM: FUSE, 1A
LEAD ANALYST: E.S. DALEY

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:
NO DIFFERENCES.

REPORT DATE 03/18/88  C-184
ASSESSMENT DATE: 2/09/88
ASSESSMENT ID: COMTRK-1607
NASA FMEA #: 05-6PG-21507-1
SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1607
ITEM: FUSE, 1A
LEAD ANALYST: E.S. DALEY

ASSESSMENT:

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

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-185
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88
ASSESSMENT ID: COMTRK-1608
NASA FMEA #: 05-6PG-21502-1
NASA DATA: BASELINE [ ] NEW [ X ]
SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1608
ITEM: RESISTOR, 1.2K
LEAD ANALYST: E.S. DALEY

ASSESSMENT:

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

RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-186
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88
ASSESSMENT ID: COMTRK-1609
NASA FMEA #: 05-6PG-21502-1

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1609
ITEM: RESISTOR, 1.2K

LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REPORT DATE 03/18/88 C-187

REMARKS:
NO DIFFERENCES.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88
ASSESSMENT ID: COMTRK-1610
NASA FMEA #: 05-6PG-21500-1
NASA DATA: BASELINE [ ] NEW [ X ]

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1610
ITEM: DIODE

LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-188
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88
ASSESSMENT ID: COMTRK-1611
NASA FMEA #: 05-6PG-21500-2
SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1611
ITEM: DIODE
LEAD ANALYST: E.S. DALEY

NASA DATA:
BASELINE [ ]
NEW [ X ]

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

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

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

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

REMARKS:
NO DISAGREEMENT WITH THE MORE CRITICAL RATING. IOA CONSIDERED
THE DIODE FAILURE MODE (FAILED SHORT) AS A SINGLE FAILURE NOT
AFFECTING MISSION/CREW/VEHICLE.

REPORT DATE 03/18/88 C-189
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88
ASSESSMENT ID: COMTRK-1612
NASA FMEA #: 05-6PG-21500-1
SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1612
ITEM: DIODE
LEAD ANALYST: E.S. DALEY

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

RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-190
### APPENDIX C

**ASSESSMENT WORKSHEET**

**ASSESSMENT DATE:** 2/09/88  
**NASA DATA:**  
**ASSESSMENT ID:** COMTRK-1613  
**NASA FMEA #:** 05-6PG-21500-2  
**SUBSYSTEM:** COMM AND TRACK/EPD&C  
**MDAC ID:** 1613  
**ITEM:** DIODE  
**LEAD ANALYST:** E.S. DALEY

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

**REMARKS:**  
NO DISAGREEMENT WITH THE MORE CRITICAL RATING. IOA CONSIDERED THE DIODE FAILURE MODE (FAILED SHORT) AS A SINGLE FAILURE NOT AFFECTING MISSION/CREW/VEHICLE.

**REPORT DATE 03/18/88 C-191**
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88
ASSESSMENT ID: COMTRK-1614
NASA FMEA #: 05-6PG-21815-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1614
ITEM: RESISTOR, 1.2K
LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DIFFERENCES.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88
ASSESSMENT ID: COMTRK-1615
NASA FMEA #: 05-6PG-21815-1
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1615
ITEM: RESISTOR, 1.2K

LEAD ANALYST: E.S. DALEY

LEAD ANALYST: E.S. DALEY

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:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-193
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88
ASSESSMENT ID: COMTRK-1616
NASA FMEA #: 05-6PG-21825-1
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1616
ITEM: RPC

LEAD ANALYST: E.S. DALEY

ASSESSMENT:

| CRITICALLY | REDUNDANCY SCREENS | CIL |
| FLIGHT | HDW/FUNC | A | B | C |
| NASA | [ 3 /2R ] | [ P ] | [ P ] | [ P ] | [ ] |
| IOA | [ 3 /2R ] | [ P ] | [ P ] | [ P ] | [ ] |

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

RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]

INADEQUATE [ ]

REMARKS:

NO DIFFERENCES.

REPORT DATE 03/18/88 C-194
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88
ASSESSMENT ID: COMTRK-1617
NASA FMEA #: 05-6PG-21825-2

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1617
ITEM: RPC

LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)


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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
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REMARKS:

NO DIFFERENCES.
APPENDIX C
ASSESSMENT WORKSHEET

| ASSESSMENT DATE: | 2/09/88 |
| ASSESSMENT ID:  | COMTRK-1618 |
| NASA FMEA #: | 05-6PG-21825-1 |

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1618
ITEM: RPC
LEAD ANALYST: E.S. DALEY

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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 03/18/88 C-196
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88
ASSESSMENT ID: COMTRK-1619
NASA FMEA #: 05-6PG-21825-2

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1619
ITEM: RPC

LEAD ANALYST: E.S. DALEY

RECOMMENDATIONS: (If different from NASA)

CIL RETENTION RATIONALE: (If applicable)

REPORT DATE 03/18/88 C-197
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88
ASSESSMENT ID: COMTRK-1620
NASA FMEA #: 05-6PG-21825-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1620
ITEM: RPC
LEAD ANALYST: E.S. DALEY

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COMPARE [ ] [ ] [ ] [ ]

RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-198
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88
ASSESSMENT ID: COMTRK-1621
NASA FMEA #: 05-6PG-21825-2
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1621
ITEM: RPC

LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
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REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-199
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88
ASSESSMENT ID: COMTRK-1622
NASA FMEA #: 05-6PG-21825-1

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1622
ITEM: RPC

LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-200
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88
ASSESSMENT ID: COMTRK-1623
NASA FMEA #: 05-6PG-21825-2

NASA DATA:
BASELINE [ ]
NEW [ x ]

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1623
ITEM: RPC

LEAD ANALYST: E.S. DALEY

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

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-201
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88
ASSESSMENT ID: COMTRK-1624
NASA FMEA #: 05-6PG-21835-1
SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1624
ITEM: DIODE
LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-202
**APPENDIX C**

**ASSESSMENT WORKSHEET**

**ASSESSMENT DATE:** 2/09/88

**ASSESSMENT ID:** COMTRK-1625

**NASA FMEA #:** 05-6PG-21835-1

**SUBSYSTEM:** COMM AND TRACK/EPD&C

**MDAC ID:** 1625

**ITEM:** DIODE

**LEAD ANALYST:** E.S. DALEY

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**RECOMMENDATIONS:**

(If different from NASA)

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(ADD/DELETE)

**REMARKS:**

NO DIFFERENCES.

**REPORT DATE 03/18/88**

C-203
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88
ASSESSMENT ID: COMTRK-1626
NASA FMEA #: 05-6PG-21835-1

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1626
ITEM: DIODE

LEAD ANALYST: E.S. DALEY

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

RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DIFFERENCES.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88
ASSESSMENT ID: COMTRK-1627
NASA FMEA #: 05-6PG-21835-1
SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1627
ITEM: DIODE
LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-205
**APPENDIX C**

**ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 2/09/88

ASSESSMENT ID: COMTRK-1628

NASA FMEA #: 05-6PG-21835-2

SUBSYSTEM: COMM AND TRACK/EPD&C

MDAC ID: 1628

ITEM: DIODE(S)

LEAD ANALYST: E.S. DALEY

ASSESSMENT:

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RECOMMENDATIONS: *(If different from NASA)*

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* CIL RETENTION RATIONALE: *(If applicable)*

ADEQUATE [ ]

INADEQUATE [ ]

REMARKS:

NO DIFFERENCES.

REPORT DATE 03/18/88 C-206
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88
ASSESSMENT ID: COMTRK-1629
NASA FMEA #: 05-6PG-21509-1

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1629
ITEM: FUSE, 3A
LEAD ANALYST: E.S. DALEY

ASSESSMENT:

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

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REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-207
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88
ASSESSMENT ID: COMTRK-1630
NASA FMEA #: 05-6PG-21509-1

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1630
ITEM: FUSE, 3A

LEAD ANALYST: E.S. DALEY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-208
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88
ASSESSMENT ID: COMTRK-1631
NASA FMEA #: 05-6PG-21503-1

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1631
ITEM: FUSE

LEAD ANALYST: E.S. DALEY

ASSESSMENT:

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

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

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

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

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

REMARKS:
NO DIFFERENCES. FUSES ARE INTERNAL TO ARI DRIVERS.

REPORT DATE 03/18/88 C-209
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88
ASSESSMENT ID: COMTRK-1632
NASA FMEA #: 05-6PG-21503-1

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1632
ITEM: FUSE

LEAD ANALYST: E.S. DALEY

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

RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DIFFERENCES. FUSES ARE INTERNAL TO ARI DRIVERS.

REPORT DATE 03/18/88 C-210
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88  NASA DATA:
ASSESSMENT ID: COMTRK-1633  BASELINE [ ]
NASA FMEA #: 05-6PG-21505-1  NEW [ X ]

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1633
ITEM: DRIVER

LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DIFFERENCES. FUSES ARE INTERNAL TO ARI DRIVERS.

REPORT DATE 03/18/88  C-211
**ASSESSMENT WORKSHEET**

**ASSESSMENT DATE:** 2/09/88  
**ASSESSMENT ID:** COMTRK-1634  
**NASA FMEA #:** 05-6PG-21505-1  

**SUBSYSTEM:** COMM AND TRACK/EPD&C  
**MDAC ID:** 1634  
**ITEM:** DRIVER  

**LEAD ANALYST:** E.S. DALEY  

**ASSESSMENT:**

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

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

ADEQUATE [ ]  
INADEQUATE [ ]

**REMARKS:**  
NO DIFFERENCES. FUSES ARE INTERNAL TO ARI DRIVERS.

**REPORT DATE 03/18/88**  
**C-212**
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88
ASSESSMENT ID: COMTRK-1635
NASA FMEA #: 05-6PG-21503-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1635
ITEM: DRIVER

LEAD ANALYST: E.S. DALEY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DIFFERENCES. FUSES ARE INTERNAL TO ARI DRIVERS.

REPORT DATE 03/18/88 C-213
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88
ASSESSMENT ID: COMTRK-1636
NASA FMEA #: 05-6PG-21503-1

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1636
ITEM: DRIVER

LEAD ANALYST: E.S. DALEY

ASSESSMENT:

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

REMARKS:
NO DIFFERENCES. FUSES ARE INTERNAL TO ARI DRIVERS.

REPORT DATE 03/18/88 C-214
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: COMTRK-1637
NASA FMEA #: 05-6PH-24803-1
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1637
ITEM: DIODE

LEAD ANALYST: E.S. DALEY

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

RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DIFFERENCES. FUSES ARE INTERNAL TO ARI DRIVERS.

REPORT DATE 03/18/88 C-215
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: COMTRK-1638
NASA FMEA #: 05-6PH-24803-1
SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1638
ITEM: DIODE
LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DIFFERENCES. FUSES ARE INTERNAL TO ARI DRIVERS.

REPORT DATE 03/18/88
C-216
## APPENDIX C
### ASSESSMENT WORKSHEET

**ASSESSMENT DATE:** 2/17/88  
**ASSESSMENT ID:** COMTRK-1639  
**NASA FMEA #:** 05-2G-21543-1  

**SUBSYSTEM:** COMM AND TRACK/EPD&C  
**MDAC ID:** 1639  
**ITEM:** DIODE  

**LEAD ANALYST:** E.S. DALEY

**ASSESSMENT:**

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

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* CIL RETENTION RATIONALE:  
(If applicable)  

ADEQUATE [ ]  
INADEQUATE [ ]

**REMARKS:**  
NO DIFFERENCES. FUSES ARE INTERNAL TO ARI DRIVERS.

**REPORT DATE 03/18/88**  
C-217
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: COMTRK-1640
NASA FMEA #: 05-2G-21543-1
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1640
ITEM: DIODE

LEAD ANALYST: E.S. DALEY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DIFFERENCES. FUSES ARE INTERNAL TO ARI DRIVERS.

REPORT DATE 03/18/88  C-218
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: COMTRK-1641
NASA FMEA #: 05-2G-21543-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1641
ITEM: DIODE

LEAD ANALYST: E.S. DALEY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DIFFERENCES. FUSES ARE INTERNAL TO ARI DRIVERS.

REPORT DATE 03/18/88 C-219
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/17/88
ASSESSMENT ID: COMTRK-1642
NASA FMEA #: 05-2G-21543-1

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1642
ITEM: DIODE
LEAD ANALYST: E.S. DALEY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE
INADEQUATE

REMARKS:
NO DIFFERENCES. FUSES ARE INTERNAL TO ARI DRIVERS.

REPORT DATE 03/18/88 C-220
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/10/88
ASSESSMENT ID: COMTRK-1643
NASA FMEA #: 05-2G-21541-1

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1643
ITEM: DIODE

LEAD ANALYST: E.S. DALEY

ASSESSMENT:

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

REMARKS:
NO DISAGREEMENT WITH 3/2R CRITICALITY. IOA CONSIDERED ABSOLUTE WORST CASE OF LOSING STATE VECTOR UPDATES DUE TO MULTIPLE FAILURES.

REPORT DATE 03/18/88 C-221
### ASSESSMENT WORKSHEET

**ASSESSMENT DATE:** 2/10/88  
**ASSESSMENT ID:** COMTRK-1644  
**NASA FMEA #:** 05-2G-21541-1

**SUBSYSTEM:** COMM AND TRACK/EPD&C  
**MDAC ID:** 1644  
**ITEM:** DIODE  
**LEAD ANALYST:** E.S. DALEY

**ASSESSMENT:**

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

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* CIL RETENTION RATIONALE: (If applicable)

| ADEQUATE [ ] |
| INADEQUATE [ ] |

**REMARKS:**

NO DISAGREEMENT WITH 3/2R CRITICALITY. IOA CONSIDERED ABSOLUTE WORST CASE OF LOSING STATE VECTOR UPDATES DUE TO MULTIPLE FAILURES.

**REPORT DATE 03/18/88**  
C-222
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/10/88
ASSESSMENT ID: COMTRK-1645
NASA FMEA #: 05-2G-21541-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1645
ITEM: DIODE

LEAD ANALYST: E.S. DALEY

ASSESSMENT:

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

* CIL RETENTION RATIONALE: (If applicable)

REMARKS:
NO DISAGREEMENT WITH 3/2R CRITICALITY. IOA CONSIDERED ABSOLUTE WORST CASE OF LOSING STATE VECTOR UPDATES DUE TO MULTIPLE FAILURES.

REPORT DATE 03/18/88   C-223
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/10/88
ASSESSMENT ID: COMTRK-1646
NASA FMEA #: 05-2G-21541-1
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1646
ITEM: DIODE

LEAD ANALYST: E.S. DALEY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DISAGREEMENT WITH 3/2R CRITICALITY. IOA CONSIDERED ABSOLUTE WORST CASE OF LOSING STATE VECTOR UPDATES DUE TO MULTIPLE FAILURES.

REPORT DATE 03/18/88 C-224
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/10/88
ASSESSMENT ID: COMTRK-1647
NASA FMEA #: 05-2G-21541-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1647
ITEM: DIODE

LEAD ANALYST: E.S. DALEY

ASSESSMENT:

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

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

REMARKS:
NO DISAGREEMENT WITH 3/2R CRITICALITY. IOA CONSIDERED ABSOLUTE WORST CASE OF LOSING STATE VECTOR UPDATES DUE TO MULTIPLE FAILURES.

REPORT DATE 03/18/88 C-225
ASSESSMENT DATE: 2/10/88
ASSESSMENT ID: COMTRK-1648
NASA FMEA #: 05-2G-21541-1

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1648
ITEM: DIODE
LEAD ANALYST: E.S. DALEY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DISAGREEMENT WITH 3/2R CRITICALITY. IOA CONSIDERED ABSOLUTE WORST CASE OF LOSING STATE VECTOR UPDATES DUE TO MULTIPLE FAILURES.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/10/88
ASSESSMENT ID: COMTRK-1649
NASA FMEA #: 05-2G-21541-1
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1649
ITEM: DIODE

LEAD ANALYST: E.S. DALEY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DISAGREEMENT WITH 3/2R CRITICALITY. IOA CONSIDERED ABSOLUTE
WORST CASE OF LOSING STATE VECTOR UPDATES DUE TO MULTIPLE
FAILURES.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/10/88
ASSESSMENT ID: COMTRK-1650
NASA FMEA #: 05-2G-21541-1

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1650
ITEM: DIODE
LEAD ANALYST: E.S. DALEY

ASSESSMENT:

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

REMARKS:
NO DISAGREEMENT WITH 3/2R CRITICALITY. IOA CONSIDERED ABSOLUTE WORST CASE OF LOSING STATE VECTOR UPDATES DUE TO MULTIPLE FAILURES.
### APPENDIX C
### ASSESSMENT WORKSHEET

**ASSESSMENT DATE:** 2/10/88  
**ASSESSMENT ID:** COMTRK-1651  
**NASA FMEA #:** 05-2G-21541-1  

**SUBSYSTEM:** COMM AND TRACK/EPD&C  
**MDAC ID:** 1651  
**ITEM:** DIODE  

**LEAD ANALYST:** E.S. DALEY

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

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

**REMARKS:**  
NO DISAGREEMENT WITH 3/2R CRITICALITY. IOA CONSIDERED ABSOLUTE  
WORST CASE OF LOSING STATE VECTOR UPDATES DUE TO MULTIPLE  
FAILURES.

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**REPORT DATE 03/18/88**  
C-229
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/10/88
ASSESSMENT ID: COMTRK-1652
NASA FMEA #: 05-2G-21541-1
NASA DATA: 
  BASELINE [ ] 
  NEW [ X ]

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1652
ITEM: DIODE

LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

NO DISAGREEMENT WITH 3/2R CRITICALITY. IOA CONSIDERED ABSOLUTE WORST CASE OF LOSING STATE VECTOR UPDATES DUE TO MULTIPLE FAILURES.

REPORT DATE 03/18/88 C-230
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/10/88
ASSESSMENT ID: COMTRK-1653
NASA FMEA #: 05-2G-21541-1
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1653
ITEM: DIODE

LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

NO DISAGREEMENT WITH 3/2R CRITICALITY. IOA CONSIDERED ABSOLUTE WORST CASE OF LOSING STATE VECTOR UPDATES DUE TO MULTIPLE FAILURES.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/10/88
ASSESSMENT ID: COMTRK-1654
NASA FMEA #: 05-2G-21541-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1654
ITEM: DIODE

LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DISAGREEMENT WITH 3/2R CRITICALITY. IOA CONSIDERED ABSOLUTE WORST CASE OF LOSING STATE VECTOR UPDATES DUE TO MULTIPLE FAILURES.

REPORT DATE 03/18/88 C-232
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/10/88
ASSESSMENT ID: COMTRK-1655
NASA FMEA #: 05-2G-21544-1

ASSESSMENT ID: COMTRK-1655
NASA FMEA #: 05-2G-21544-1

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1655
ITEM: DIODE

LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DISAGREEMENT WITH 3/2R CRITICALITY. IOA CONSIDERED ABSOLUTE WORST CASE OF LOSING STATE VECTOR UPDATES DUE TO MULTIPLE FAILURES.

REPORT DATE 03/18/88  C-233
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/10/88
ASSESSMENT ID: COMTRK-1656
NASA FMEA #: 05-2G-21544-1

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1656
ITEM: DIODE

LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DISAGREEMENT WITH 3/2R CRITICALITY. IOA CONSIDERED ABSOLUTE WORST CASE OF LOSING STATE VECTOR UPDATES DUE TO MULTIPLE FAILURES.

REPORT DATE 03/18/88 C-234
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/10/88
ASSESSMENT ID: COMTRK-1657
NASA FMEA #: 05-2G-21544-1

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1657
ITEM: DIODE
LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DISAGREEMENT WITH 3/2R CRITICALITY. IOA CONSIDERED ABSOLUTE
WORST CASE OF LOSING STATE VECTOR UPDATES DUE TO MULTIPLE
FAILURES.

REPORT DATE 03/18/88 C-235
**APPENDIX C**

**ASSESSMENT WORKSHEET**

**ASSESSMENT DATE:** 2/10/88  
**ASSESSMENT ID:** COMTRK-1658  
**NASA FMEA #:** 05-2G-21544-1  

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

**SUBSYSTEM:** COMM AND TRACK/EPD&C  
**MDAC ID:** 1658  
**ITEM:** DIODE  
**LEAD ANALYST:** E.S. DALEY

**ASSESSMENT:**

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

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

**REMARKS:**

NO DISAGREEMENT WITH 3/2R CRITICALITY. IOA CONSIDERED ABSOLUTE WORST CASE OF LOSING STATE VECTOR UPDATES DUE TO MULTIPLE FAILURES.

**REPORT DATE 03/18/88**  
**C-236**
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/10/88
ASSESSMENT ID: COMTRK-1659
NASA FMEA #: 05-2G-21544-1

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1659
ITEM: DIODE
LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DISAGREEMENT WITH 3/2R CRITICALITY. IOA CONSIDERED ABSOLUTE WORST CASE OF LOSING STATE VECTOR UPDATES DUE TO MULTIPLE FAILURES.

REPORT DATE 03/18/88 C-237
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/10/88
ASSESSMENT ID: COMTRK-1660
NASA FMEA #: 05-2G-21544-1
SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1660
ITEM: DIODE
LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DISAGREEMENT WITH 3/2R CRITICALITY. IOA CONSIDERED ABSOLUTE WORST CASE OF LOSING STATE VECTOR UPDATES DUE TO MULTIPLE FAILURES.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/10/88
ASSESSMENT ID: COMTRK-1661
NASA FMEA #: 05-2G-21544-1

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1661
ITEM: DIODE

LEAD ANALYST: E.S. DALEY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

NO DISAGREEMENT WITH 3/2R CRITICALITY. IOA CONSIDERED ABSOLUTE
WORST CASE OF LOSING STATE VECTOR UPDATES DUE TO MULTIPLE FAILURES.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/10/88
ASSESSMENT ID: COMTRK-1662
NASA FMEA #: 05-2G-21544-1

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1662
ITEM: DIODE

LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DISAGREEMENT WITH 3/2R CRITICALITY. IOA CONSIDERED ABSOLUTE WORST CASE OF LOSING STATE VECTOR UPDATES DUE TO MULTIPLE FAILURES.

REPORT DATE 03/18/88 C-240

C - C
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/10/88
ASSESSMENT ID: COMTRK-1663
NASA FMEA #: 05-2G-21841-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1663
ITEM: DIODE
LEAD ANALYST: E.S. DALEY

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

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-241
ASSESSMENT DATE: 2/10/88
ASSESSMENT ID: COMTRK-1664
NASA FMEA #: 05-2G-21841-1
SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1664
ITEM: DIODE
LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-242
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/10/88
ASSESSMENT ID: COMTRK-1665
ASSESSMENT ID: COMTRK-1665
NASA FMEA #: 05-2G-21841-1
SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1665
ITEM: DIODE
LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-243
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/10/88
ASSESSMENT ID: COMTRK-1666
NASA FMEA #: 05-2G-21841-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 1666
ITEM: DIODE

LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88  C-244
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: COMTRK-2001
NASA FMEA #: 05-2G-21000-1

SUBSYSTEM: COMM & TRACK
MDAC ID: 2001
ITEM: S-BAND FM TRANSMITTER

LEAD ANALYST: A.W. ADDIS

ASSESSMENT:

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

COMPARE [ ] [ ] [ ] [ ] [ ] [ ] [ ]

RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

NASA FAILURE MODE: LOSS OF OUTPUT.
IOA FAILURE MODE: LOSS OF OUTPUT.
NO DIFFERENCES.

REPORT DATE 03/18/88  C-245
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: COMTRK-2002
NASA FMEA #: NONE
NASA DATA: BASELINE [ ]
NEW [ ]

SUBSYSTEM: COMM & TRACK
MDAC ID: 2002
ITEM: S-BAND FM TRANSMITTER

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:
NO DIRECT FMEA COUNTERPART. CLOSES IS FMEA FOR "LOSS OF OUTPUT."
NOT A CRITICAL ITEM.

REPORT DATE 03/18/88 C-246
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: COMTRK-2003
NASA FMEA #: 05-2G-23522-1
SUBSYSTEM: COMM & TRACK
MDAC ID: 2003
ITEM: S-BAND FM RF TRANSFER SWITCH
LED ANALYST: A.W. ADDIS

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RECOMMENDATIONS: (If different from NASA)

* CIL RETENTION RATIONALE: (If applicable)

REMARKS:
NASA FAILURE MODE: OPEN OR SHORT TO GROUND.
IOA FAILURE MODE: FAIL TO OPEN/CLOSE; FAIL TO SWITCH.
NO DIFFERENCES.

REPORT DATE 03/18/88
C-247
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: COMTRK-2004
NASA FMEA #: 05-2G-23522-2

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM & TRACK
MDAC ID: 2004
ITEM: S-BAND FM RF TRANSFER SWITCH

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:

NASA FAILURE MODE: RF SWITCH JAM.
IOA FAILURE MODE: FAIL MID-TRAVEL, PHYSICAL BINDING/JAMMING.
NO DIFFERENCES.

REPORT DATE 03/18/88  C-248
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: COMTRK-2005
NASA FMEA #: 05-2G-23522-2

SUBSYSTEM: COMM & TRACK
MDAC ID: 2005
ITEM: S-BAND HEMI ANTENNA SWITCH ASSEMBLY

LEAD ANALYST: A.W. ADDIS

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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ADEQUATE [ ]

INADEQUATE [ ]

* CIL RETENTION RATIONALE: (If applicable)

REMARKS:
NASA FAILURE MODE: LOSS OF FUNCTION.
IOA FAILURE MODE: FAIL TO OPEN/CLOSE, FAIL TO SWITCH.
NO DIFFERENCES.

REPORT DATE 03/18/88 C-249
**APPENDIX C**  
**ASSESSMENT WORKSHEET.**

**ASSESSMENT DATE:** 2/11/88  
**ASSESSMENT ID:** COMTRK-2006  
**NASA FMEA #:** 05-2G-23522-2  
**SUBSYSTEM:** COMM & TRACK  
**MDAC ID:** 2006  
**ITEM:** S-BAND HEMI ANTENNA SWITCH ASSEMBLY  
**LEAD ANALYST:** A.W. ADDIS

**ASSESSMENT:** CRITICALITY REDUNDANCY SCREENS

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

**REMARKS:**  
NO DIFFERENCES.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: COMTRK-2007
NASA FMEA #: NONE
SUBSYSTEM: COMM & TRACK
MDAC ID: 2007
ITEM: FM (HEMI) RF SWITCH ELECTRONICS
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:
ELECTRONICS FOR HEMI ANTENNA CONTROL IS REFERRED TO IN NASA FMEA 05-2G-23500-I, BUT THAT FMEA REALLY ONLY DEALS WITH THE QUADS (FOR S-BAND PM), AND IS ASSIGNED CRITICALITY 2R, WITH NO MENTION OF A LESSER CRITICALITY FOR THE HEMI CONTROLS. SHOULD BE DOCUMENTED EVEN THOUGH NOT CRITICAL TO MISSION OR CREW/VEHICLE.

REPORT DATE 03/18/88 C-251
**APPENDIX C**

**ASSESSMENT WORKSHEET**

**ASSESSMENT DATE:** 2/11/88  
**ASSESSMENT ID:** COMTRK-2008  
**NASA FMEA #:** 05-2G-22900-1  
**SUBSYSTEM:** COMM & TRACK  
**MDAC ID:** 2008  
**ITEM:** S-BAND HEMI ANTENNA  
**LEAD ANALYST:** A.W. ADDIS

**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 FAILURE MODE: LOSS OF OUTPUT.  
IOA FAILURE MODE: OPEN (ELECTRICAL), LOSS OF OUTPUT, SHORT.  
NO DIFFERENCES.

**REPORT DATE 03/18/88**  
C-252
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: COMTRK-2009
NASA FMEA #: 05-2G-22900-1

SUBSYSTEM: COMM & TRACK
MDA DC ID: 2009
ITEM: S-BAND HEMI ANTENNA

LEAD ANALYST: A.W. ADDIS

ASSESSMENT:

CRITICALITY
FLIGHT HDW/FUNC

REUNDANCY SCREENS
A B C

NASA [ 3 /3 ] [ ] [ ] [ ] [ ] [ ] *

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

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

RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]

INADEQUATE [ ]

REMARKS:

CLOSEST COUNTERPART IS FMEA 05-2G-22900-1.

REPORT DATE 03/18/88 C-253
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: COMTRK-2010
NASA FMEA #: 05-2G-21050-1

SUBSYSTEM: COMM & TRACK
MDAC ID: 2010
ITEM: S-BAND FM POWER SWITCH

LEAD ANALYST: A.W. ADDIS

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 FAILURE MODE: FAILS TO TRANSFER, OPEN CIRCUIT, SWITCH JAM.
IOA FAILURE MODE: FAILS MID-TRAVEL, PHYSICAL BINDING/JAMMING,
FAIL TO SWITCH.
NO DIFFERENCES.

REPORT DATE 03/18/88 C-254
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: COMTRK-2011
NASA FMEA #: 05-2G-21050-2

SUBSYSTEM: COMM & TRACK
MDAC ID: 2011
ITEM: S-BAND FM POWER SWITCH

LEAD ANALYST: A.W. ADDIS

ASSESSMENT:

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NASA DATA:
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NEW [ X ]

RECOMMENDATIONS: (If different from NASA)
[ ]

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

REMARKS:
NASA FAILURE MODE: SHORT TO GROUND.
IOA FAILURE MODE: SHORTED.
NO DIFFERENCES.

REPORT DATE 03/18/88 C-255
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: COMTRK-2012
NASA FMEA #: 05-6PH-24810-1

NASA DATA:       BASELINE [ ]     NEW [ X ]

SUBSYSTEM:       COMM & TRACK
MDAC ID:         2012
ITEM:            S-BAND FM SYSTEM PANEL/COMMAND GCIL SWITCH

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:
NASA FAILURE MODE: FAILS SHORTED CASE TO GROUND.
IOA FAILURE MODE: SHORTED.
NO DIFFERENCES.

REPORT DATE 03/18/88 C-256
**APPENDIX C
ASSESSMENT WORKSHEET**

**ASSESSMENT DATE:** 2/11/88  
**ASSESSMENT ID:** COMTRK-2013  
**NASA FMEA #:** 05-2G-21110-1  
**SUBSYSTEM:** COMM & TRACK  
**MDAC ID:** 2013  
**ITEM:** S-BAND FM SYSTEM DATA SOURCE SELECTOR  
**LEAD ANALYST:** A.W. ADDIS

**NASA DATA:**

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**ASSESSMENT:**

**SUBSYSTEM:** COMM & TRACK  
**MDAC ID:** 2013  
**ITEM:** S-BAND FM SYSTEM DATA SOURCE SELECTOR  
**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:**

**NASA FAILURE MODE:** LOSS OF OUTPUT.  
**IOA FAILURE MODE:** ALL CREDIBLE MODES.  
**NO DIFFERENCES.**

**REPORT DATE 03/18/88**  
**C-257**
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/12/88
ASSESSMENT ID: COMTRK-2013A
NASA FMEA #: 05-2G-21110-2

SUBSYSTEM: COMM & TRACK
MDAC ID: 2013
ITEM: S-BAND FM SYSTEM DATA SOURCE SELECTOR

LEAD ANALYST: A.W. ADDIS

ASSESSMENT:

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

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

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-258
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/12/88
ASSESSMENT ID: COMTRK-2013B
NASA FMEA #: 05-2G-21110-3

SUBSYSTEM: COMM & TRACK
MDAC ID: 2013
ITEM: S-BAND FM SYSTEM DATA SOURCE SELECTOR

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:
NO DIFFERENCES.

REPORT DATE 03/18/88  C-259
**APPENDIX C**

**ASSESSMENT WORKSHEET**

**ASSESSMENT DATE:** 2/11/88

**ASSESSMENT ID:** COMTRK-2014

**NASA FMEA #:** 05-2G-21110-I

**SUBSYSTEM:** COMM & TRACK

**MDAC ID:** 2014

**ITEM:** S-BAND FM SIGNAL PROCESSOR

**LEAD ANALYST:** A.W. ADDIS

**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 FAILURE MODE: LOSS OF OUTPUT.

IOA FAILURE MODE: ALL CREDIBLE MODES.

NO DIFFERENCES.

**REPORT DATE** 03/18/88 C-260
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: COMTRK-2501
NASA FMEA #: 05-6PG-21001-1
NASA DATA:
BASELINE [ ]
NEW [ X ]
SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 2501
ITEM: HYBRID DRIVER, TYPE III
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:

NASA FAILURE MODE: LOSS OF OUTPUT, OPEN CIRCUIT.
IOA FAILURE MODE: LOSS OF OUTPUT, OPEN CIRCUIT.
NO DIFFERENCES.

REPORT DATE 03/18/88 C-261
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: COMTRK-2502
NASA FMEA #: 05-6PG-21001-1
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 2502
ITEM: HYBRID DRIVER, TYPE III

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:
NASA FAILURE MODE: LOSS OF OUTPUT, OPEN CIRCUIT.
IOA FAILURE MODE: LOSS OF OUTPUT, OPEN CIRCUIT.
NO DIFFERENCES.

REPORT DATE 03/18/88 C-262
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: COMTRK-2503
NASA FMEA #: 05-6PG-21001-2

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 2503
ITEM: HYBRID DRIVER, TYPE III

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:
NASA FAILURE MODE: INADVERTENT OUTPUT, FAILED SHORTED.
IOA FAILURE MODE: FAILED SHORTED, INADVERTENT OUTPUT.
NO DIFFERENCES.

REPORT DATE 03/18/88 C-263
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: COMTRK-2504
NASA FMEA #: 05-6PG-21001-2

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 2504
ITEM: HYBRID DRIVER, TYPE III

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:

NASA FAILURE MODE: INADVERTENT OUTPUT, FAILED SHORTED.
IOA FAILURE MODE: FAILED SHORTED, INADVERTENT OUTPUT.
NO DIFFERENCES.

REPORT DATE 03/18/88 C-264
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: COMTRK-2505
NASA FMEA #: 05-6PG-21002-1

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 2505
ITEM: FUSE, 3 AMP
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:
NASA FAILURE MODE: FAILS OPEN.
IOA FAILURE MODE: FAILS OPEN.
NO DIFFERENCES.

REPORT DATE 03/18/88 C-265
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: COMTRK-2506
NASA FMEA #: 05-6PG-21002-1

ASSESSMENT ID: COMTRK-2506
NASA FMEA #: 05-6PG-21002-1

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 2506
ITEM: FUSE, 3 AMP

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:
NASA FAILURE MODE: FAILS OPEN.
IOA FAILURE MODE: FAILS OPEN.
NO DIFFERENCES.

REPORT DATE 03/18/88 C-266
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: COMTRK-2507
NASA FMEA #: 05-6PG-21050-1

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 2507
ITEM: SWITCH, 4-POLE, 3-POS, S3
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:
NASA FAILURE MODE: FAILS TO TRANSFER, OPEN CIRCUIT, SWITCH JAM.
IOA FAILURE MODE: FAILS OPEN, FAILS TO TRANSFER.
NO DIFFERENCES.

REPORT DATE 03/18/88 C-267
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: COMTRK-2508
NASA FMEA #: 05-6PG-21050-2

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 2508
ITEM: SWITCH, 4-POLE, 3-POS, S3

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:
NASA FAILURE MODE: SHORT TO GROUND.
IOA FAILURE MODE: FAILED SHORTED TO GROUND.
NO DIFFERENCES.

REPORT DATE 03/18/88 C-268
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: COMTRK-2509
NASA FMEA #: 05-6PG-21050-3
SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 2509
ITEM: SWITCH, 4-POLE, 3-POS, S3
LEAD ANALYST: W.W. ROBINSON

ASSESSMENT:

CRITICALITY
FLIGHT HDW/FUNC

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

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

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

REMARKS:
NASA FAILURE MODE: CONTACT TO CONTACT SHORT.
IOA FAILURE MODE: FAILED SHORTED CONTACT TO CONTACT, INADVERTENT OPERATION.
NO DIFFERENCES.

REPORT DATE 03/18/88
C-269
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: COMTRK-2510
NASA FMEA #: 05-6PG-21051-1

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 2510
ITEM: RESISTOR, 1.2K OHM, 2W, A2R8

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:

NASA FAILURE MODE: OPEN CIRCUIT.
IOA FAILURE MODE: FAILS OPEN.
NO DIFFERENCES.

REPORT DATE 03/18/88 C-270
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: COMTRK-2511
NASA FMEA #: 05-6PG-21051-1
SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 2511
ITEM: RESISTOR, 1.2K OHM, 2W, A2R9
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:
NASA FAILURE MODE: OPEN CIRCUIT.
IOA FAILURE MODE: FAILS OPEN.
NO DIFFERENCES.

REPORT DATE 03/18/88 C-271
APPENDIX C
ASSESSMENT WORKSHEET

ASSSESSMENT DATE: 2/11/88
ASSSESSMENT ID: COMTRK-2512
NASA FMEA #: 05-6PG-21051-1

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 2512
ITEM: RESISTOR, 1.2K OHM, 2W, A2R10

LEAD ANALYST: W.W. ROBINSON

ASSSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NASA FAILURE MODE: OPEN CIRCUIT.
IOA FAILURE MODE: FAILS OPEN.
NO DIFFERENCES.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/11/88
ASSESSMENT ID: COMTRK-2513
NASA FMEA #: 05-6PG-21051-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: C&T/EPD&C/S-BAND
MDAC ID: 2513
ITEM: RESISTOR, 1.2K OHM, 2W, A2R11

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:

NASA FAILURE MODE: OPEN CIRCUIT.
IOA FAILURE MODE: FAILS OPEN.
NO DIFFERENCES.

REPORT DATE 03/18/88 C-273
## APPENDIX C
### ASSESSMENT WORKSHEET

**ASSESSMENT DATE:** 2/03/88  
**ASSESSMENT ID:** COMTRK-3001  
**NASA FMEA #:** 05-2J-25500-1

**SUBSYSTEM:** COMM & TRACK  
**MDAC ID:** 3001  
**ITEM:** PAYLOAD ANTENNA  
**LEAD ANALYST:** A.W. ADDIS

**ASSESSMENT:** CRITICALITY REDUNDANCY SCREENS CIL ITEM  

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

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

**REMARKS:**  
NO DIFFERENCES.

**REPORT DATE 03/18/88**  
C-274
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/02/88
ASSESSMENT ID: COMTRK-3002
NASA FMEA #: NONE
SUBSYSTEM: COMM & TRACK
MDAC ID: 3002
ITEM: PAYLOAD RF TRANSFER SWITCH
LEAD ANALYST: A.W. ADDIS

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:
NO NASA FMEA FOR THIS PARTICULAR FAILURE MODE. IT IS SPECIFIC TO THE TWO INDIVIDUAL RF SWITCH LINKS WHICH ARE INDEPENDENT AND IN THAT SENSE REDUNDANT. REFER TO IOA 3002. FAILURE MODE SHOULD ADDED FOR COMPLETENESS.

REPORT DATE 03/18/88   C-275
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/02/88
ASSESSMENT ID: COMTRK-3003
NASA FMEA #: 05-2J-23600-1

NASA DATA: BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM & TRACK
MDAC ID: 3003
ITEM: PAYLOAD RF TRANSFER SWITCH

LEAD ANALYST: A.W. ADDIS

ASSESSMENT:

CRITICALITY

REduNDANCY SCREENS

HDW/FUNC

A
B
C

NASA [ 2 /2 ] [ ] [ ] [ ] [ ] [ X ] *
IOA [ 2 /2 ] [ ] [ ] [ ] [ ] [ X ]

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

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
IOA 3003 COVERS FAILURE TO SWITCH, FAILS MID-TRAVEL, ETC.
(EQUIVALENT TO OPEN). NASA FMEA 05-2J-23600-1 COVERS BOTH OPE
AND SHORT.

REPORT DATE 03/18/88 C-276
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/02/88
ASSESSMENT ID: COMTRK-3004
NASA FMEA #: 05-2J-23600-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM & TRACK
MDAC ID: 3004
ITEM: PAYLOAD RF TRANSFER SWITCH

LEAD ANALYST: A.W. ADDIS

ASSESSMENT:

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

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

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

REMARKS:
IOA 3004 COVERS ELECTRICAL SHORT, NASA FMEA COVERS BOTH SHORT AND OPEN.

REPORT DATE 03/18/88 C-277
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/02/88
ASSESSMENT ID: COMTRK-3005
NASA FMEA #: 05-2J-21300-1

SUBSYSTEM: COMM & TRACK
MDAC ID: 3005
ITEM: PAYLOAD INTERROGATOR FORWARD LINK

LEAD ANALYST: A.W. ADDIS

ASSESSMENT:

CRITICALITY
FLIGHT
HDW/FUNC

REDUNDANCY SCREENS
A   B   C

CIL ITEM

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

IOA [ 3 /2R ] [ P ] [ P ] [ P ] [ ]

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

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]

INADEQUATE [ ]

REMARKS:

AGREE WITH NASA FMEA SCREEN B ASSIGNMENT. IOA 3005 PERTAINS TO FORWARD LINK ONLY, NASA FMEA COVERS LOSS OF OUTPUT FOR BOTH FORWARD AND RETURN LINKS.

REPORT DATE 03/18/88 C-278
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/02/88
ASSESSMENT ID: COMTRK-3006
NASA FMEA #: 05-2J-21300-1

SUBSYSTEM: COMM & TRACK
MDAC ID: 3006
ITEM: PAYLOAD INTERROGATOR FORWARD LINK

LEAD ANALYST: A.W. ADDIS

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DIRECT COUNTERPART NASA FMEA, BUT EXTREME CASE COULD BE COVERED BY INDICATED FMEA. AGREE WITH NASA SCREEN B ASSIGNMENT.

REPORT DATE 03/18/88 C-279
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/02/88
ASSESSMENT ID: COMTRK-3007
NASA FMEA #: 05-2J-21300-1
SUBSYSTEM: COMM & TRACK
MDAC ID: 3007
ITEM: PAYLOAD INTERROGATOR FORWARD LINK
LEAD ANALYST: A.W. ADDIS

NASA DATA:
BASELINE [ ]
NEW [ X ]

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

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

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

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

REMARKS:
NO DIRECT NASA COUNTERPART FMEA, BUT EXTREME CASE COULD CORRESPOND TO FMEA 05-2J-21300-1. AGREE WITH FMEA SCREEN B ASSIGNMENT.

REPORT DATE 03/18/88 C-280
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/02/88
ASSESSMENT ID: COMTRK-3008
NASA FMEA #: 05-2J-21300-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM & TRACK
MDAC ID: 3008
ITEM: PAYLOAD INTERROGATOR RETURN LINK

LEAD ANALYST: A.W. ADDIS

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
IOA 3008 PERTAINS TO FORWARD LINK ONLY, NASA FMEA COVERS LOSS OF OUTPUT FOR BOTH FORWARD AND RETURN LINKS. AGREE WITH NASA FMEA SCREEN B ASSIGNMENT.

REPORT DATE 03/18/88 C-281
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/02/88
ASSESSMENT ID: COMTRK-3009
NASA FMEA #: 05-2J-21300-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM & TRACK
MDAC ID: 3009
ITEM: PAYLOAD INTERROGATOR RETURN LINK

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:
NO DIRECT NASA COUNTERPART, BUT EXTREME CASE COULD BE EQUIVALENT TO NASA 05-2J-21300-1. AGREE WITH FMEA SCREEN B ASSIGNMENT.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/02/88
ASSESSMENT ID: COMTRK-3010
NASA FMEA #: 05-2J-21300-1

SUBSYSTEM: COMM & TRACK
MDAC ID: 3010
ITEM: PAYLOAD INTERROGATOR RETURN LINK

LEAD ANALYST: A.W. ADDIS

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

REPORT DATE 03/18/88

REMARKS:
NO DIRECT NASA COUNTERPART, BUT EXTREME CASE COULD BE EQUIVALENT TO NASA 05-2J-21300-1. AGREE WITH FMEA SCREEN B ASSIGNMENT.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: COMTRK-3011
NASA FMEA #: 05-2J-21600-1
SUBSYSTEM: COMM & TRACK
MDAC ID: 3011
ITEM: PAYLOAD SIGNAL PROCESSOR FORWARD LINK
LEAD ANALYST: A.W. ADDIS

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

| ADEQUATE    | [ ]    |
| INADEQUATE  | [ ]    |

REMARKS:
AGREE WITH FMEA SCREEN B ASSIGNMENT.

REPORT DATE 03/18/88 C-284
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88
ASSESSMENT ID: COMTRK-3012
NASA FMEA #: 05-2J-21600-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM & TRACK
MDAC ID: 3012
ITEM: PAYLOAD SIGNAL PROCESSOR FORWARD LINK

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:
AGREE WITH FMEA SCREEN B ASSIGNMENT.

REPORT DATE 03/18/88 C-285
### APPENDIX C
### ASSESSMENT WORKSHEET

**ASSESSMENT DATE:** 2/09/88  
**ASSESSMENT ID:** COMTRK-3013  
**NASA FMEA #:** 05-2J-21600-1  
**SUBSYSTEM:** COMM & TRACK  
**MDAC ID:** 3013  
**ITEM:** PAYLOAD SIGNAL PROCESSOR RETURN LINK  
**LEAD ANALYST:** A.W. ADDIS

**ASSESSMENT:**

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

**REMARKS:**  
AGREE WITH FMEA SCREEN B ASSIGNMENT.

**REPORT DATE 03/18/88  C-286**
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/09/88
ASSESSMENT ID: COMTRK-3014
NASA FMEA #: 05-2J-21600-1

SUBSYSTEM: COMM & TRACK
MDAC ID: 3014
ITEM: PAYLOAD SIGNAL PROCESSOR RETURN LINK

LEAD ANALYST: A.W. ADDIS

ASSESSMENT:

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

* CIL RETENTION RATIONALE: (If applicable)

REMARKS:
AGREE WITH FMEA SCREEN B ASSIGNMENT.

REPORT DATE 03/18/88 C-287
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: COMTRK-3015
NASA FMEA #: 05-6PH-24830-3
NASA DATA: BASELINE [ ] NEW [ X ]

SUBSYSTEM: COMM & TRACK
MDAC ID: 3015
ITEM: S-BAND PAYLOAD SYSTEM PNL/CMD GCIL SWITCH
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:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-288
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: COMTRK-3016
NASA FMEA #: 
SUBSYSTEM: COMM & TRACK
MDAC ID: 3016
ITEM: S-BAND PAYLOAD SYSTEM SELECT SWITCH, S13
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:

REPORT DATE 03/18/88 C-289
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: COMTRK-3017
NASA FMEA #: 05-2J-213013-1
SUBSYSTEM: COMM & TRACK
ITEM: S-BAND PAYLOAD SYSTEM SELECT SWITCH, S13
LEAD ANALYST: A.W. ADDIS
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM & TRACK
MDAC ID: 3017
ITEM: S-BAND PAYLOAD SYSTEM SELECT SWITCH, S13
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 [ X ]
INADEQUATE [ ]

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-290
APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: COMTRK-3018
NASA FMEA #: 05-2J-213014-2
SUBSYSTEM: COMM & TRACK
MDAC ID: 3018
ITEM: S-BAND PL PI/PSP POWER SWITCH, S14
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:

REPORT DATE 03/18/88 C-291
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
NASA DATA:
ASSESSMENT ID: COMTRK-3019
BASELINE [ ]
NASA FMEA #: 05-2J-213014-1
NEW [ X ]

SUBSYSTEM: COMM & TRACK
MDAC ID: 3019
ITEM: S-BAND PL PI/PSP POWER SWITCH, S14

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 [ X ]
INADEQUATE [ ]

REMARKS:

REPORT DATE 03/18/88 C-292
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: COMTRK-3020
NASA FMEA #: 05-6PJ-236002-2

SUBSYSTEM: COMM & TRACK
MDAC ID: 3020
ITEM: S-BAND PL ANTENNA POLARIZATION SWITCH,S2

LEAD ANALYST: A.W. ADDIS

ASSESSMENT:

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

RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
AGREE WITH FMEA SCREEN B ASSIGNMENT.

REPORT DATE 03/18/88 C-293
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: COMTRK-3021
NASA FMEA #: 05-6PJ-236002-1

SUBSYSTEM: COMM & TRACK
MDAC ID: 3021
ITEM: S-BAND PL ANTENNA POLARIZATION SWITCH, S2
LEAD ANALYST: A.W. ADDIS

ASSESSMENT:

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

RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

| ADEQUATE | INADEQUATE |
| [ X ]    |            |

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-294
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: COMTRK-3022
NASA FMEA #: 05-2J-21304-1

SUBSYSTEM: COMM & TRACK
MDAC ID: 3022
ITEM: PI TRANSMITTER RF PWR LEVEL SELECT SWITCH, S4

LEAD ANALYST: A.W. ADDIS

NASA DATA:
BASELINE [ ]
NEW [ X ]

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

NASA [ 3 /2R ] [ P ] [ NA] [ P ] [ ] *
IOA [ 3 /2R ] [ P ] [ P ] [ P ] [ ]

COMPARE [ / ] [ ] [ N ] [ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

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

REMARKS:

REPORT DATE 03/18/88 C-295
## APPENDIX C
### ASSESSMENT WORKSHEET

**ASSESSMENT DATE:** 2/03/88

**ASSESSMENT ID:** COMTRK-3023

**MDAC ID:** 3023

**ITEM:** PI TRANSMITTER RF PWR LEVEL SELECT SWITCH, S4

**LEAD ANALYST:** A.W. ADDIS

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

**SUBSYSTEM:** COMM & TRACK

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

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**REPORT DATE 03/18/88 C-296**
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: COMTRK-3024
NASA FMEA #: 05-2J-21309-1
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM & TRACK
MDAC ID: 3024
ITEM: PL SYSTEM XMTR MODULATION ON/OFF SWITCH, S9

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:

REPORT DATE 03/18/88 C-297
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSessment ID: COMTRK-3025
NASA FMEA #: 05-2J-21309-2

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM & TRACK
MDAC ID: 3025
ITEM: PL SYSTEM XMTR MODULATION ON/OFF SWITCH, S9

LEAD ANALYST: A.W. ADDIS

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:

REPORT DATE 03/18/88 C-298
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: COMTRK-3026
NASA FMEA #: 05-2J-21308-1

SUBSYSTEM: COMM & TRACK
MDAC ID: 3026
ITEM: S-BAND PL FREQUENCY SWEEP ON/OFF SWITCH, S8

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:

REPORT DATE 03/18/88 C-299
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: COMTRK-3027
NASA FMEA #: 05-2J-21308-2

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM & TRACK
MDAC ID: 3027
ITEM: S-BAND FREQUENCY SWEEP ON/OFF SWITCH, S8

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 [ X ]
INADEQUATE [ ]

REMARKS:

REPORT DATE 03/18/88 C-300
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: COMTRK-3028
NASA FMEA #: 05-2J-21615-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM & TRACK
MDAC ID: 3028
ITEM: S-BAND PL PSP COMMAND OUTPUT SELECTOR SWITCH, S15

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:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-301
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: COMTRK-3029
NASA FMEA #: 05-2J-21615-2

SUBSYSTEM: COMM & TRACK
MDAC ID: 3029
ITEM: S-BAND PL PSP COMMAND OUTPUT SELECTOR SWITCH, S15

LEAD ANALYST: A.W. ADDIS

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ X ]
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REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-302
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: COMTRK-3030
NASA FMEA #: 05-2J-21307-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM & TRACK
MDAC ID: 3030
ITEM: S-BAND PL SYSTEM PI RF CHANNEL SELECT SWITCHES, S7

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:

REPORT DATE 03/18/88 C-303
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: COMTRK-3031
NASA FMEA #: 05-2J-21307-2
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM & TRACK
MDAC ID: 3031
ITEM: S-BAND PL SYSTEM PI RF CHANNEL SELECT SWITCHES

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:

REPORT DATE 03/18/88 C-304
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
ASSESSMENT ID: COMTRK-3501
NASA FMEA #:
SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 3501
ITEM: FUSE, 3A
LEAD ANALYST: E.S. DALEY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
N/A. SEE MDAC ID 3509.

REPORT DATE 03/18/88
C-305
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
ASSESSMENT ID: COMTRK-3502
NASA FMEA #: 05-6PJ-213015-1

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 3502
ITEM: FUSE, IA

LEAD ANALYST: E.S. DALEY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-306
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
ASSESSMENT ID: COMTRK-3503
NASA FMEA #: 05-6PJ-213015-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 3503
ITEM: FUSE, 1A

LEAD ANALYST: E.S. DALEY

ASSessment:

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

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-307
# APPENDIX C
## ASSESSMENT WORKSHEET

**ASSESSMENT DATE:** 1/29/88  
**ASSESSMENT ID:** COMTRK-3504  
**NASA FMEA #:** 05-6PJ-213016-1  
**NASA DATA:**  
- BASELINE [ ]  
- NEW [ X ]  
**SUBSYSTEM:** COMM AND TRACK/EPD&C  
**MDAC ID:** 3504  
**ITEM:** FUSE, 1A  
**LEAD ANALYST:** E.S. DALEY

### ASSESSMENT:

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### RECOMMENDATIONS:  
(If different from NASA)

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* CIL RETENTION RATIONALE:  
(If applicable)

- ADEQUATE [ ]
- INADEQUATE [ ]

### REMARKS:

- NO DIFFERENCES.

**REPORT DATE** 03/18/88  
**C-308**
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
ASSESSMENT ID: COMTRK-3505
NASA FMEA #: 05-6PJ-213016-1
SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 3505
ITEM: FUSE, 1A
LEAD ANALYST: E.S. DALEY

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

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88   C-309
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
ASSESSMENT ID: COMTRK-3506
NASA FMEA #: 05-6PJ-213020-1
SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 3506
ITEM: FUSE, 10A
LEAD ANALYST: E.S. DALEY

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

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

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-310
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
ASSESSMENT ID: COMTRK-3507
NASA FMEA #: 05-6PJ-213020-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 3507
ITEM: FUSE, 10A

LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

*CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-311
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
ASSESSMENT ID: COMTRK-3508
NASA FMEA #: 05-6PJ-213019-1
SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 3508
ITEM: FUSE, 3A
LEAD ANALYST: E.S. DALEY

NASA DATA:
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NEW [ X ]

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(ADD/DELETE)

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

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-312
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
ASSESSMENT ID: COMTRK-3509
NASA FMEA #: 05-6PJ-213019-1
SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 3509
ITEM: FUSE, 3A
LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
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REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88  C-313
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: COMTRK-3510
NASA FMEA #: 05-6PJ-236005-1

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 3510
ITEM: FUSE, 10A
LEAD ANALYST: E.S. DALEY

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* CIL RETENTION RATIONALE: (If applicable)

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-314
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: COMTRK-3511
NASA FMEA #: 05-6PJ-236005-1

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 3511
ITEM: FUSE, 10A

LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
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REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-315
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: COMTRK-3512
NASA FMEA #: 05-6PJ-236005-1

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 3512
ITEM: Fuse, 10A
LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-316
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: COMTRK-3513
NASA FMEA #: 05-6PJ-236005-1

SUBSYSTEM: COMM AND TRACK/EP&D&C
MDAC ID: 3513
ITEM: FUSE, 10A

LEAD ANALYST: E.S. DALEY

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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
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REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-317
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: COMTRK-3514
NASA FMEA #: 05-6PJ-236006-1

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 3514
ITEM: DIODE

LEAD ANALYST: E.S. DALEY

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* CIL RETENTION RATIONALE: (If applicable)
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REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-318
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: COMTRK-3515
NASA FMEA #: 05-6PJ-236006-I

ASSESSMENT ID: COMTRK-3515
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NEW [ X ]

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 3515
ITEM: DIODE

LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-319
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: COMTRK-3516
NASA FMEA #: 05-6PJ-236006-1

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 3516
ITEM: DIODE

LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
ADEQUATE [ ]
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REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-320
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: COMTRK-3517
NASA FMEA #: 05-6PJ-236006-1

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 3517
ITEM: DIODE

LEAD ANALYST: E.S. DALEY

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REPORT DATE 03/18/88 C-321
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: COMTRK-3518
NASA FMEA #: 05-6PJ-213018-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 3518
ITEM: FUSE, 3A
LEAD ANALYST: E.S. DALEY

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

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-322
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: COMTRK-3519
NASA FMEA #: 05-6PJ-213018-1

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 3519
ITEM: FUSE, 3A

LEAD ANALYST: E.S. DALEY

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

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-323
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: COMTRK-3520
NASA FMEA #: 05-6PJ-213021-1

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 3520
ITEM: DRIVER

LEAD ANALYST: E.S. DALEY

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| IOA         | [ 3 /2R ]          | [ P ] | [ P ] | [ P ] | [ ] |
| COMPARE     | [ / ]              | [ ]  | [ N ] | [ ]  | [ ] |

RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-324
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/03/88
ASSESSMENT ID: COMTRK-3521
MDAC ID: 3521
ITEM: DRIVER

NASA FMEA #: 05-6PJ-213021-1
SUBSYSTEM: COMM AND TRACK/EPD&C
LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-325
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
ASSESSMENT ID: COMTRK-3522
NASA FMEA #: 05-6PJ-213020-1
SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 3522
ITEM: DRIVER
LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-326
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
ASSESSMENT ID: COMTRK-3523
NASA FMEA #: 05-6PJ-213020-1
SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 3523
ITEM: DRIVER
LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-327
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
ASSESSMENT ID: COMTRK-3524
NASA FMEA #: 05-6PJ-236005-1

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 3524
ITEM: DRIVER

LEAD ANALYST: E.S. DALEY

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

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88
### APPENDIX C
#### ASSESSMENT WORKSHEET

**ASSESSMENT DATE:** 1/29/88  
**NASA DATA:**  
**ASSESSMENT ID:** COMTRK-3525  
**MDAC ID:** 05-6PJ-236005-1  
**NASA FMEA #:** COMTRK-3525  
**ITEM:**  
**LEAD ANALYST:** E.S. DALEY  

**ASSESSMENT:**  

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

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* CIL RETENTION RATIONALE: (If applicable)  

**REMARKS:**  

NO DIFFERENCES.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
ASSESSMENT ID: COMTRK-3526
NASA FMEA #: 05-6PJ-236005-1

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 3526
ITEM: DRIVER

LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

| ADEQUATE [ ] |
| INADEQUATE [ ] |

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-330
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/29/88
ASSESSMENT ID: COMTRK-3527
NASA FMEA #: 05-6PJ-236005-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 3527
ITEM: DRIVER

LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-331
## APPENDIX C
### ASSESSMENT WORKSHEET

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**SUBSYSTEM:** COMM AND TRACK  
**MDAC ID:** 4001  
**ITEM:** KU BD EA-1 (INTERFACE AND CONTROL UNIT)  
**LEAD ANALYST:** W.C. LONG

### ASSESSMENT:

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### RECOMMENDATIONS:
(If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]  
INADEQUATE [ ]

### REMARKS:

ANALYSIS ONLY COVERED COMM FUNCTION. WHEN INCLUDING BOTH RADAR AND COMM FUNCTIONS CRITICALITY IS IN AGREEMENT. RADAR FUNCTION COVERED UNDER SEPARATE FMEA, 7000 SERIES.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4001A
NASA FMEA #: 05-2R-5100-2

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK
MDAC ID: 4001
ITEM: KU BD EA-1 (INTERFACE AND CONTROL UNIT)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

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

RECOMMENDATIONS: (If different from NASA)

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

(ADD/DELETE)

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

REMARKS:
CRITICALITIES ARE IN AGREEMENT. STOWED ANTENNA WOULD RESULT IN LOSS OF KUCOMM OUTPUT.

REPORT DATE 03/18/88 C-333
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4002
NASA FMEA #: 05-2R-5200-1

SUBSYSTEM: COMM AND TRACK
MDAC ID: 4002
ITEM: KU BD EA-2 (RADAR SIGNAL PROCESSOR)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADECATE [ ]
INADEQUATE [ X ]

REMARKS:
ANALYSIS ONLY COVERED COMM FUNCTION. WHEN INCLUDING BOTH RADAR AND COMM FUNCTIONS CRITICALITY IS IN AGREEMENT. RADAR FUNCTION COVERED UNDER SEPARATE FMEA, 7000 SERIES.

REPORT DATE 03/18/88 C-334
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4002A
NASA FMEA #: 05-2R-5200-2

SUBSYSTEM: COMM AND TRACK
MDAC ID: 4002
ITEM: KU BD EA-2 (RADAR SIGNAL PROCESSOR)

LEAD ANALYST: W.C. LONG

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

REMARKS:
ANALYSIS ONLY COVERED COMM FUNCTION. WHEN INCLUDING BOTH RADAR AND COMM FUNCTIONS CRITICALITY IS IN AGREEMENT. RADAR FUNCTION COVERED UNDER SEPARATE FMEA, 7000 SERIES.

REPORT DATE 03/18/88 C-335
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4003
NASA FMEA #: 05-2R-5400-1

SUBSYSTEM: COMM AND TRACK
MDAC ID: 4003
ITEM: KU BD SPA (SIGNAL PROCESSOR ASSY)

LEAD ANALYST: W.C. LONG

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ X ]

REMARKS:
ANALYSIS ONLY COVERED COMM FUNCTION. WHEN INCLUDING BOTH RADAR AND COMM FUNCTIONS CRITICALITY IS IN AGREEMENT. RADAR FUNCTION COVERED UNDER SEPARATE FMEA, 7000 SERIES.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4003A
NASA FMEA #: 05-2R-5400-2

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK
MDAC ID: 4003
ITEM: KU BD SPA (SIGNAL PROCESSOR ASSY)

LEAD ANALYST: W.C. LONG

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

REMARKS:
ANALYSIS ONLY COVERED COMM FUNCTION. WHEN INCLUDING BOTH RADAR AND COMM FUNCTIONS CRITICALITY IS IN AGREEMENT. RADAR FUNCTION COVERED UNDER SEPARATE FMEA, 7000 SERIES.

REPORT DATE 03/18/88 C-337
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4004
NASA FMEA #: NASA DATA:
BASELINE [ ] NEW [ X ]
SUBSYSTEM: COMM AND TRACK MDAC ID: 4004
ITEM: NSP (NETWORK SIGNAL PROCESSOR)
LEAD ANALYST: W.C. LONG

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ] INADEQUATE [ ]

REMARKS:
NO COUNTERPART NASA KUCOMM FMEA. NSP IS CRITICAL COMPONENT TO KUCOMM FUNCTION.

REPORT DATE 03/18/88 C-338
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4005
NASA FMEA #: 05-2R-5300-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK
MDAC ID: 4005
ITEM: KU BD DEA (DEPLOYED ELECTRONIC ASSY)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

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RECOMMENDATIONS:  (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ X ]

REMARKS:
ANALYSIS ONLY COVERED COMM FUNCTION. WHEN INCLUDING BOTH RADAR AND COMM FUNCTIONS CRITICALITY IS IN AGREEMENT. RADAR FUNCTION COVERED UNDER SEPARATE FMEA, 7000 SERIES.

REPORT DATE 03/18/88    C-339
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4005A
NASA FMEA #: 05-2R-5300-2
SUBSYSTEM: COMM AND TRACK
MDAC ID: 4005
ITEM: KU BD DEA (DEPLOYED ELECTRONIC ASSY)
LEAD ANALYST: W.C. LONG

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

(ADD/DELETE)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
CRITICALITIES IN AGREEMENT.

REPORT DATE 03/18/88 C-340
### APPENDIX C
#### ASSESSMENT WORKSHEET

**ASSESSMENT DATE:** 3/03/88  
**ASSESSMENT ID:** COMTRK-4005B  
**NASA FMEA #:** 05-2R-5300-3

**SUBSYSTEM:** COMM AND TRACK  
**MDAC ID:** 4005  
**ITEM:** KU BD DEA (DEPLOYED ELECTRONIC ASSY)

**LEAD ANALYST:** W.C. LONG

**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 [ X ]

**REMARKS:**

Analysis only covered comm function. When including both radar and comm functions criticality is in agreement. Radar function covered under separate FMEA, 7000 series.

**REPORT DATE 03/18/88**  
**C-341**
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4006
NASA FMEA #: 05-2R-5300-1
SUBSYSTEM: COMM AND TRACK
ITEM: 05-2R-5300-I
MDAC ID: 4006
ITEM: KU BD DEA (DEPLOYED ELECTRONIC ASSY)
LEAD ANALYST: W.C. LONG

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 [  X  ]

REMARKS:
ANALYSIS ONLY COVERED COMM FUNCTION. WHEN INCLUDING BOTH RADAR AND COMM FUNCTIONS CRITICALITY IS IN AGREEMENT. RADAR FUNCTION COVERED UNDER SEPARATE FMEA, 7000 SERIES.

REPORT DATE 03/18/88   C-342
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4007
NASA FMEA #: 05-2R-5300-1

SUBSYSTEM: COMM AND TRACK
MDAC ID: 4007
ITEM: KU BD DMA (DEPLOYED MECHANICAL ASSY)

LEAD ANALYST: W.C. LONG

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 [X]

REMARKS:
ANALYSIS ONLY COVERED COMM FUNCTION. WHEN INCLUDING BOTH RADAR AND COMM FUNCTIONS CRITICALITY IS IN AGREEMENT. RADAR FUNCTION COVERED UNDER SEPARATE FMEA, 7000 SERIES.

REPORT DATE 03/18/88 C-343
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4008
NASA FMEA #: COMTRK-4008

NASA DATA:
BASELINE [ ]
NEW [ ]

SUBSYSTEM: COMM AND TRACK
MDAC ID: 4008
ITEM: KU BD DMA (DEPLOYED MECHANICAL ASSY)
LEAD ANALYST: W.C. LONG

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:
NO COUNTERPART NASA KUCOMM FMEA. FAILURE TO START/STOP WOULD CAUSE LOSS KUCOMM FUNCTION RESULTING IN LOSS OF OUTPUT. MIGHT CONSIDER ADDING FOR COMPLETENESS.

REPORT DATE 03/18/88   C-344
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4009
NASA FMEA #: 05-2R-5300-1

SUBSYSTEM: COMM AND TRACK
MDAC ID: 4009
ITEM: KU BD DMA (DEPLOYED MECHANICAL ASSY)
LEAD ANALYST: W.C. LONG

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 [ X ]

REMARKS:
ANALYSIS ONLY COVERED COMM FUNCTION. WHEN INCLUDING BOTH RADAR AND COMM FUNCTIONS CRITICALITY IS IN AGREEMENT. RADAR FUNCTION COVERED UNDER SEPARATE FMEA, 7000 SERIES.

REPORT DATE 03/18/88 C-345
### APPENDIX C
**ASSESSMENT WORKSHEET**

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**SUBSYSTEM:** COMM AND TRACK
**MDAC ID:** 4010
**ITEM:** KU BD DMA (DEPLOYED MECHANICAL ASSY)

**LEAD ANALYST:** W.C. LONG

**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 [ X ]

**REMARKS:**
ANALYSIS ONLY COVERED COMM FUNCTION. WHEN INCLUDING BOTH RADAR AND COMM FUNCTIONS CRITICALITY IS IN AGREEMENT. RADAR FUNCTION COVERED UNDER SEPARATE FMEA, 7000 SERIES.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4011
NASA FMEA #: 05-2R-5100-1

SUBSYSTEM: COMM AND TRACK
MDAC ID: 4011
ITEM: KU BD COMM UP/FORWARD LINK MODE 1
LEAD ANALYST: W.C. LONG

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

* CIL RETENTION RATIONALE: (If applicable)

REMARKS:
ANALYSIS ONLY COVERED COMM FUNCTION. WHEN INCLUDING BOTH RADAR AND COMM FUNCTIONS CRITICALITY IS IN AGREEMENT. RADAR FUNCTION COVERED UNDER SEPARATE FMEA, 7000 SERIES.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4011A
NASA FMEA #: 05-2R-5100-2

NASA DATA:  
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK
MDAC ID: 4011
ITEM: KU BD COMM UP/FORWARD LINK MODE 1

LEAD ANALYST: W.C. LONG

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:
CRITICALITIES IN AGREEMENT. BOOM STOW WOULD RESULT IN LOSS OF KU-BAND FUNCTION.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4012
NASA FMEA #: 05-2R-5100-1

DATE: 3/03/88
ASSESSMENT ID: COMTRK-4012
NASA FMEA #: 05-2R-5100-1

SUBSYSTEM: COMM AND TRACK
MDAC ID: 4012
ITEM: KU BD COMM UP/FORWARD LINK MODE 1

LEAD ANALYST: W.C. LONG

ASSESSMENT

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NASA [ 2 /IR ] [ P ] [ P ] [ P ] [ X ] *
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RECOMMENDATIONS: (If different from NASA)

[ 3 /IR ] [ P ] [ P ] [ P ] [ ] [ D ]
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ X ]

REMARKS:

ANALYSIS ONLY COVERED COMM FUNCTION. WHEN INCLUDING BOTH RADAR AND COMM FUNCTIONS CRITICALITY IS IN AGREEMENT. RADAR FUNCTION COVERED UNDER SEPARATE FMEA, 7000 SERIES.

REPORT DATE 03/18/88 C-349
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4012A
NASA FMEA #: 05-2R-5100-2

SUBSYSTEM: COMM AND TRACK
MDAC ID: 4012
ITEM: KU BD COMM UP/FORWARD LINK MODE 1

LEAD ANALYST: W.C. LONG

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

REMARKS:
CRITICALITIES IN AGREEMENT. BOOM STOW WOULD RESULT IN LOSS OF KU-BAND FUNCTION.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4013
NASA FMEA #: 05-2R-5100-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK
MDAC ID: 4013
ITEM: KU BD COMM UP/FORWARD LINK MODE 1

LEAD ANALYST: W.C. LONG

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

RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ X ]

REMARKS:
ANALYSIS ONLY COVERED COMM FUNCTION. WHEN INCLUDING BOTH RADAR AND COMM FUNCTIONS CRITICALITY IS IN AGREEMENT. RADAR FUNCTION COVERED UNDER SEPARATE FMEA, 7000 SERIES.
### APPENDIX C
#### ASSESSMENT WORKSHEET

**ASSESSMENT DATE:** 3/03/88  
**ASSESSMENT ID:** COMTRK-4013A  
**NASA FMEA #:** 05-2R-5100-2

**SUBSYSTEM:** COMM AND TRACK  
**MDAC ID:** 4013  
**ITEM:** KU BD COMM UP/FORWARD LINK MODE 1

**LEAD ANALYST:** W.C. LONG

**ASSESSMENT:**

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**RECOMMENDATIONS:** (If different from NASA)  
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* CIL RETENTION RATIONALE: (If applicable)  
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**REMARKS:**  
CRITICALITIES IN AGREEMENT. BOOM STOW WOULD RESULT IN LOSS OF KU-BAND FUNCTION.

---

**REPORT DATE** 03/18/88  
**C-352**
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4014A
NASA FMEA #: 05-2R-5100-2

SUBSYSTEM: COMM AND TRACK
MDAC ID: 4014
ITEM: KU BD COMM UP/FORWARD LINK MODE 2

LEAD ANALYST: W.C. LONG

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
CRITICALITIES IN AGREEMENT. BOOM STOW WOULD RESULT IN LOSS OF KU-BAND FUNCTION.

REPORT DATE 03/18/88 C-353
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88  NASA DATA:
ASSESSMENT ID: COMTRK-4014  BASELINE [ ]
NASA FMEA #: 05-2R-5100-1  NEW [ X ]

SUBSYSTEM: COMM AND TRACK
MDAC ID: 4014
ITEM: KU BD COMM UP/FORWARD LINK MODE 2

LEAD ANALYST: W.C. LONG

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ X ]

REMARKS:

ANALYSIS ONLY COVERED COMM FUNCTION. WHEN INCLUDING BOTH RADAR AND COMM FUNCTIONS CRITICALITY IS IN AGREEMENT. RADAR FUNCTION COVERED UNDER SEPARATE FMEA, 7000 SERIES.

REPORT DATE 03/18/88  C-354
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4015
NASA FMEA #: 05-2R-5100-1

SUBSYSTEM: COMM AND TRACK
MDAC ID: 4015
ITEM: KU BD COMM UP/forward LINK MODE 2

LEAD ANALYST: W.C. LONG

ASSESSMENT:

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| IOA [3 /1R] | [P] | [P] | [P] | |
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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

}| ADEQUATE [ ] |
| INADEQUATE [X ] |

REMARKS:
ANALYSIS ONLY COVERED COMM FUNCTION. WHEN INCLUDING BOTH RADAR AND COMM FUNCTIONS CRITICALITY IS IN AGREEMENT. RADAR FUNCTION COVERED UNDER SEPARATE FMEA, 7000 SERIES.

REPORT DATE 03/18/88 C-355
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4015A
NASA FMEA #: 05-2R-5100-2

SUBSYSTEM: COMM AND TRACK
MDAC ID: 4015
ITEM: KU BD COMM UP/FORWARD LINK MODE 2

LEAD ANALYST: W.C. LONG

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
CRITICALITIES IN AGREEMENT. BOOM STOW WOULD RESULT IN LOSS OF KU-BAND FUNCTION.

REPORT DATE 03/18/88 C-356
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4016A
NASA FMEA #: 05-2R-5100-2

SUBSYSTEM: COMM AND TRACK
MDAC ID: 4016
ITEM: KU BD COMM UP/FORWARD LINK MODE 2
LEAD ANALYST: W.C. LONG

ASSESSMENT:

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

REMARKS:
CRITICALITIES IN AGREEMENT. BOOM STOW WOULD RESULT IN LOSS OF KU-BAND FUNCTION.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4016
NASA FMEA #: 05-2R-5100-1
SUBSYSTEM: COMM AND TRACK
MDAC ID: 4016
ITEM: KU BD COMM UP/FORWARD LINK MODE 2
LEAD ANALYST: W.C. LONG

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ X ]

REMARKS:
ANALYSIS ONLY COVERED COMM FUNCTION. WHEN INCLUDING BOTH RADAR
AND COMM FUNCTIONS CRITICALITY IS IN AGREEMENT. RADAR FUNCTION
COVERED UNDER SEPARATE FMEA, 7000 SERIES.

REPORT DATE 03/18/88 C-358
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88  
ASSESSMENT ID: COMTRK-4017  
NASA FMEA #: 05-2R-5100-1

NASA DATA:  
BASELINE [ ]  
NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
MDAC ID: 4017  
ITEM: KU BD COMM DOWN/RETURN LINK MODE 1

LEAD ANALYST: W.C. LONG

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

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

REMARKS:  
ANALYSIS ONLY COVERED COMM FUNCTION. WHEN INCLUDING BOTH RADAR AND COMM FUNCTIONS CRITICALITY IS IN AGREEMENT. RADAR FUNCTION COVERED UNDER SEPARATE FMEA, 7000 SERIES.

REPORT DATE 03/18/88 C-359
ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4017A
NASA FMEA #: 05-2R-5100-2

SUBSYSTEM: COMM AND TRACK
MDAC ID: 4017
ITEM: KU BD COMM DOWN/RETURN LINK MODE 1
LEAD ANALYST: W.C. LONG

ASSESSMENT:

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

REMARKS:
CRITICALITIES IN AGREEMENT. BOOM STOW WOULD RESULT IN LOSS OF KU-BAND FUNCTION.

REPORT DATE 03/18/88 C-360
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4018A
NASA FMEA #: 05-2R-5100-2
SUBSYSTEM: COMM AND TRACK
MDAC ID: 4018
ITEM: KU BD COMM DOWN/RETURN LINK MODE 1 CHANNEL
LEAD ANALYST: W.C. LONG
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 [ X ]
INADEQUATE [ ]

REMARKS:
CRITICALITIES IN AGREEMENT. BOOM STOW WOULD RESULT IN LOSS OF KU-BAND FUNCTION.

REPORT DATE 03/18/88 C-361
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4018
NASA FMEA #: 05-2R-5100-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK
MDAC ID: 4018
ITEM: KU BD COMM DOWN/RETURN LINK MODE 1 CHANNEL1

LEAD ANALYST: W.C. LONG

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

REMARKS:
ANALYSIS ONLY COVERED COMM FUNCTION. WHEN INCLUDING BOTH RADAR AND COMM FUNCTIONS CRITICALITY IS IN AGREEMENT. RADAR FUNCTION COVERED UNDER SEPARATE FMEA, 7000 SERIES.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4019
NASA FMEA #: 05-2R-5100-1

SUBSYSTEM: COMM AND TRACK
MDAC ID: 4019
ITEM: KU BD COMM DOWN/RETURN LINK MODE 1 CHANNEL 2

LEAD ANALYST: W.C. LONG

ASSESSMENT:

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

REMARKS:
ANALYSIS ONLY COVERED COMM FUNCTION. WHEN INCLUDING BOTH RADAR
AND COMM FUNCTIONS CRITICALITY IS IN AGREEMENT. RADAR FUNCTION
COVERED UNDER SEPARATE FMEA, 7000 SERIES.

REPORT DATE 03/18/88 C-363
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4019A
NASA FMEA #: 05-2R-5100-2
SUBSYSTEM: COMM AND TRACK
MDAC ID: 4019
ITEM: KU BD COMM DOWN/RETURN LINK MODE 1 CHANNEL 2
LEAD ANALYST: W.C. LONG

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

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REMARKS:
CRITICALITIES IN AGREEMENT. BOOM STOW WOULD RESULT IN LOSS OF KU-BAND FUNCTION.

REPORT DATE 03/18/88
APPENDIX C
ASSESSMENT WORKSHEET

**ASSESSMENT DATE:** 3/03/88

**ASSESSMENT ID:** COMTRK-4020A

**NASA FMEA #:** 05-2R-5100-2

**SUBSYSTEM:** COMM AND TRACK

**MDAC ID:** 4020

**ITEM:** KU BD COMM DOWN/RETURN LINK MODE 1 CHANNEL 3

**LEAD ANALYST:** W.C. LONG

**NASA DATA:**

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

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]

INADEQUATE [ ]

**REMARKS:**

CRITICALITIES IN AGREEMENT. BOOM STOW WOULD RESULT IN LOSS OF KU-BAND FUNCTION.

**REPORT DATE 03/18/88**

C-365
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4020
NASA FMEA #: 05-2R-5100-1
SUBSYSTEM: COMM AND TRACK
MDAC ID: 4020
ITEM: KU BD COMM DOWN/RETURN LINK MODE 1 CHANNEL 3
LEAD ANALYST: W.C. LONG

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

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

REMARKS:
ANALYSIS ONLY COVERED COMM FUNCTION. WHEN INCLUDING BOTH RADAR AND COMM FUNCTIONS CRITICALITY IS IN AGREEMENT. RADAR FUNCTION COVERED UNDER SEPARATE FMEA, 7000 SERIES.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4021
NASA FMEA #: 05-2R-5100-1

SUBSYSTEM: COMM AND TRACK
MDAC ID: 4021
ITEM: KU BD COMM DOWN/RETURN LINK MODE 2

LEAD ANALYST: W.C. LONG

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ X ]

REMARKS:

ANALYSIS ONLY COVERED COMM FUNCTION. WHEN INCLUDING BOTH RADAR AND COMM FUNCTIONS CRITICALITY IS IN AGREEMENT. RADAR FUNCTION COVERED UNDER SEPARATE FMEA, 7000 SERIES.

REPORT DATE 03/18/88   C-367
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4021A
NASA FMEA #: 05-2R-5100-2
SUBSYSTEM: COMM AND TRACK
MDAC ID: 4021
ITEM: KU BD COMM DOWN/RETURN LINK MODE 2
LEAD ANALYST: W.C. LONG

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

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
CRITICALITIES IN AGREEMENT. BOOM STOW WOULD RESULT IN LOSS OF KU-BAND FUNCTION.

REPORT DATE 03/18/88 C-368
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4022A
NASA FMEA #: 05-2R-5100-2

SUBSYSTEM: COMM AND TRACK
MDAC ID: 4022
ITEM: KU BD COMM DOWN/RETURN LINK MODE 2 CHANNEL 1

LEAD ANALYST: W.C. LONG

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

REMARKS:
CRITICALITIES IN AGREEMENT. BOOM STOW WOULD RESULT IN LOSS OF KU-BAND FUNCTION.

REPORT DATE: 03/18/88 C-369
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4022
NASA FMEA #: 05-2R-5100-1

SUBSYSTEM: COMM AND TRACK
MDAC ID: 4022
ITEM: KU BD COMM DOWN/RETURN LINK MODE 2 CHANNEL 1

LEAD ANALYST: W.C. LONG

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ X ]

REMARKS:
ANALYSIS ONLY COVERED COMM FUNCTION. WHEN INCLUDING BOTH RADAR AND COMM FUNCTIONS CRITICALITY IS IN AGREEMENT. RADAR FUNCTION COVERED UNDER SEPARATE FMEA, 7000 SERIES.

REPORT DATE 03/18/88 C-370
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4023
NASA FMEA #: 05-2R-5100-1
SUBSYSTEM: COMM AND TRACK
MDAC ID: 4023
ITEM: KU BD COMM DOWN/RETURN LINK MODE 2 CHANNEL 2
LEAD ANALYST: W.C. LONG

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [X ]

REMARKS:
ANALYSIS ONLY COVERED COMM FUNCTION. WHEN INCLUDING BOTH RADAR
AND COMM FUNCTIONS CRITICALITY IS IN AGREEMENT. RADAR FUNCTION
COVERED UNDER SEPARATE FMEA, 7000 SERIES.

REPORT DATE 03/18/88 C-371
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4023A
NASA FMEA #: 05-2R-5100-2
SUBSYSTEM: COMM AND TRACK
MDAC ID: 4023
ITEM: KU BD COMM DOWN/RETURN LINK MODE 2 CHANNEL 2
LEAD ANALYST: W.C. LONG

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
CRITICALITIES IN AGREEMENT. BOOM STOW WOULD RESULT IN LOSS OF KU-BAND FUNCTION.

REPORT DATE 03/18/88 C-372
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
NASA DATA:
ASSESSMENT ID: COMTRK-4024A
NASA FMEA #: 05-2R-5100-2
BASELINE [ ]
NEW [ X ]

ASSESSMENT:

SUBSYSTEM: COMM AND TRACK
MDAC ID: 4024
ITEM: KU BD COMM DOWN/RETURN LINK MODE 2 CHANNEL 3

LEAD ANALYST: W.C. LONG

ASSESSMENT:

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

RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
CRITICALITIES IN AGREEMENT. BOOM STOW WOULD RESULT IN LOSS OF KU-BAND FUNCTION.

REPORT DATE 03/18/88 C-373
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4024
NASA FMEA #: 05-2R-5100-1

SUBSYSTEM: COMM AND TRACK
MDAC ID: 4024
ITEM: KU BD COMM DOWN/RETURN LINK MODE 2 CHANNEL 3
LEAD ANALYST: W.C. LONG

### ASSESSMENT:

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### RECOMMENDATIONS:
(If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ X ]

### REMARKS:

ANALYSIS ONLY COVERED COMM FUNCTION. WHEN INCLUDING BOTH RADAR AND COMM FUNCTIONS CRITICALITY IS IN AGREEMENT. RADAR FUNCTION COVERED UNDER SEPARATE FMEA, 7000 SERIES.

REPORT DATE 03/18/88 C-374
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4025
NASA FMEA #: 05-2R-5112-1

SUBSYSTEM: COMM AND TRACK
MDAC ID: 4025
ITEM: KU A PWR SW (REF NAVAIDS RR)

LEAD ANALYST: W.C. LONG

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

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REMARKS:
ANALYSIS ONLY COVERED COMM FUNCTION. WHEN INCLUDING BOTH RADAR AND COMM FUNCTIONS CRITICALITY IS IN AGREEMENT. RADAR FUNCTION COVERED UNDER SEPARATE FMEA, 7000 SERIES.

REPORT DATE 03/18/88 C-375
**APPENDIX C**
**ASSESSMENT WORKSHEET**

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

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ X ]

**REMARKS:**
ANALYSIS ONLY COVERED COMM FUNCTION. WHEN INCLUDING BOTH RADAR AND COMM FUNCTIONS CRITICALITY IS IN AGREEMENT. RADAR FUNCTION COVERED UNDER SEPARATE FMEA, 7000 SERIES.

**REPORT DATE 03/18/88 C-376**
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4027
NASA FMEA #: 05-2R-5113-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK
MDAC ID: 4027
ITEM: KU A MODE SW (REF NAV AIDS RR)

LEAD ANALYST: W.C. LONG

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RECOMMENDATIONS: (If different from NASA)

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

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

REMARKS:
ANALYSIS ONLY COVERED COMM FUNCTION. WHEN INCLUDING BOTH RADAR AND COMM FUNCTIONS CRITICALITY IS IN AGREEMENT. RADAR FUNCTION COVERED UNDER SEPARATE FMEA, 7000 SERIES.

REPORT DATE 03/18/88 C-377
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4028
NASA FMEA #: 05-2R-5113-2

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK
MDAC ID: 4028
ITEM: KU A MODE SW (REF NAVAIDS RR)

LEAD ANALYST: W.C. LONG

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ X ]

REMARKS:
ANALYSIS ONLY COVERED COMM FUNCTION. WHEN INCLUDING BOTH RADAR AND COMM FUNCTIONS CRITICALITY IS IN AGREEMENT. RADAR FUNCTION COVERED UNDER SEPARATE FMEA, 7000 SERIES.

REPORT DATE 03/18/88 C-378
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4029
NASA FMEA #: 05-2R-5411-2
SUBSYSTEM: COMM AND TRACK
MDAC ID: 4029
ITEM: KU BD SIG PROC HDR SW
LEAD ANALYST: W.C. LONG

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
AGREE.

REPORT DATE 03/18/88 C-379
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4030
NASA FMEA #: 05-2R-5411-1
SUBSYSTEM: COMM AND TRACK
MDAC ID: 4030
ITEM: KU BD SIG PROC HDR SW
LEAD ANALYST: W.C. LONG

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [X]
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REMARKS:
AGREE.

REPORT DATE 03/18/88 C-380
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4031
NASA FMEA #: 05-2R-5412-2

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK
MDAC ID: 4031
ITEM: KU BD SIG PROC LDR SW

LEAD ANALYST: W.C. LONG

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* CIL RETENTION RATIONALE: (If applicable)

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REMARKS:
AGREE.

REPORT DATE 03/18/88    C-381
**APPENDIX C**

**ASSESSMENT WORKSHEET**

**ASSESSMENT DATE:** 3/03/88
**ASSESSMENT ID:** COMTRK-4032
**NASA FMEA #:** 05-2R-5412-1
**SUBSYSTEM:** COMM AND TRACK
**MDAC ID:** 4032
**ITEM:** KU BD SIG PROC LDR SW
**LEAD ANALYST:** W.C. LONG

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

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(ADD/DELETE)

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

ADEQUATE [ X ]
INADEQUATE [ ]

**REMARKS:**

AGREE.

**REPORT DATE 03/18/88**

C-382
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4033
NASA FMEA #: COMTRK-4033
SUBSYSTEM: COMM AND TRACK
MDAC ID: 4033
ITEM: NSP GCIL UPLINK DATA SW
LEAD ANALYST: W.C. LONG

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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:
NO COUNTERPART NASA KUCOMM FMEA. FAILURE TO SW COULD RESULT IN LOSS OF KUCOMM CAPABILITY. LOSS OF ALL CAPABILITY TO PROVIDE STATE VECTOR UPDATE COULD RESULT IN LOSS OF VEHICLE AND CREW. MIGHT ADD FMEA FOR COMPLETENESS.

REPORT DATE 03/18/88 C-383
APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4034
NASA FMEA #: 
SUBSYSTEM: COMM AND TRACK
MDAC ID: 4034
ITEM: NSP GCIL UPLINK DATA SW
LEAD ANALYST: W.C. LONG

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

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

**REMARKS:**

NO COUNTERPART NASA KUCOMM FMEA. FAILURE TO SW COULD RESULT IN LOSS OF KUCOMM CAPABILITY. LOSS OF ALL CAPABILITY TO PROVIDE STATE VECTOR UPDATE COULD RESULT IN LOSS OF VEHICLE AND CREW. MIGHT ADD FMEA FOR COMPLETENESS.

REPORT DATE 03/18/88  C-384
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4035
NASA FMEA #: 05-2R-5107-1

SUBSYSTEM: COMM AND TRACK
MDAC ID: 4035
ITEM: KU BD A ANT STEERING SW

LEAD ANALYST: W.C. LONG

ASSESSMENT:

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

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

REMARKS:
FAILURE TO SWITCH WOULD PREVENT SELECTION OF OPTIMUM ANTENNA STEERING MODE. NOT CRITICAL FUNCTION.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88  NASA DATA:
ASSESSMENT ID: COMTRK-4035A  BASELINE [ ]
NASA FMEA #: 05-2R-5107-2  NEW [ X ]

SUBSYSTEM: COMM AND TRACK
MDAC ID: 4035
ITEM: KU BD A ANT STEERING SW

LEAD ANALYST: W.C. LONG

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ X ]

REMARKS:
FAILURE TO SWITCH WOULD PREVENT SELECTION OF OPTIMUM ANTENNA STEERING MODE. NOT CRITICAL FUNCTION.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4036
NASA FMEA #: 05-2R-5107-1

SUBSYSTEM: COMM AND TRACK
MDAC ID: 4036
ITEM: KU BD A ANT STEERING SW

LEAD ANALYST: W.C. LONG

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ X ]

REMARKS:
OPEN/SHORT FAILURE COULD RESULT IN LOSS OF KUCOMM. ANALYSIS ONLY COVERED COMM FUNCTION. WHEN INCLUDING BOTH RADAR AND COMM FUNCTIONS CRITICALITY IS IN AGREEMENT. RADAR FUNCTION COVERED UNDER SEPARATE FMEA, 7000 SERIES.

REPORT DATE 03/18/88 C-387
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4037
NASA FMEA #: COMTRK-4037
SUBSYSTEM: COMM AND TRACK
MDAC ID: 4037
ITEM: KU BD ANT DEPLOY/STOW SW
LEAD ANALYST: W.C. LONG

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO COUNTERPART NASA KUCOMM FMEA. SHOULD BE COVERED IN NASA FMEA.

REPORT DATE 03/18/88 C-388
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4038
NASA FMEA #:

SUBSYSTEM: COMM AND TRACK
MDAC ID: 4038
ITEM: KU BD ANT DEPLOY/STOW SW

LEAD ANALYST: W.C. LONG

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO COUNTERPART NASA KUCOMM FMEA. SHOULD BE COVERED IN NASA FMEA.

REPORT DATE 03/18/88 C-389
ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4039
NASA FMEA #: NASA DATA:

SUBSYSTEM: COMM AND TRACK
MDAC ID: 4039
ITEM: KU BD ANT DIRECT STOW SW
LEAD ANALYST: W.C. LONG

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

*CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO COUNTERPART NASA KUCOMM FMEA. SHOULD BE COVERED IN NASA FMEA.
APPENDIX C
ASSessment Worksheet

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4040
NASA FMEA #: 

SUBSYSTEM: COMM AND TRACK
MDAC ID: 4040
ITEM: KU BD ANT DIRECT STOW SW

LEAD ANALYST: W.C. LONG

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO COUNTERPART NASA KUCOMM FMEA. SHOULD BE COVERED IN NASA FMEA.

REPORT DATE 03/18/88 C-391
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4041
NASA FMEA #: NASA DATA:
SUBSYSTEM: COMM AND TRACK
MDAC ID: 4041
ITEM: KU BD ANT A PYRO ARM/SAFE SW
LEAD ANALYST: W.C. LONG

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(ADD/DELETE)

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

REMARKS:
NO COUNTERPART NASA KUCOMM FMEA. SHOULD BE COVERED IN NASA FMEA.

REPORT DATE 03/18/88 C-392
# APPENDIX C
## ASSESSMENT WORKSHEET

**ASSESSMENT DATE:** 3/03/88  
**NASA DATA:**  
**ASSESSMENT ID:** COMTRK-4042  
**NASA FMEA #:**  
**SUBSYSTEM:** COMM AND TRACK  
**MDAC ID:** 4042  
**ITEM:** KU BD ANT A PYRO ARM/SAFE SW  
**LEAD ANALYST:** W.C. LONG  

### ASSESSMENT:

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

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

**REMARKS:**

NO COUNTERPART NASA KUCOMM FMEA. SHOULD BE COVERED IN NASA FMEA.

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**REPORT DATE** 03/18/88  
**C-393**
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4043
NASA FMEA #:

SUBSYSTEM: COMM AND TRACK
MDAC ID: 4043
ITEM: KU BD ANT A PYRO JETT/SAFE SW
LEAD ANALYST: W.C. LONG

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NASA DATA:
BASELINE [ ]
NEW [ ]

ITEM

LEAD ANALYST: W.C. LONG

ASSESSMENT:

CRITICALITY
FLIGHT

HDW/FUNC

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IOA [ ]

COMPARE [ ]

RECOMMENDATIONS: (If different from NASA)

[ ]

[ A ]
(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

NO COUNTERPART NASA KUCOMM FMEA. SHOULD BE COVERED IN NASA FMEA.

REPORT DATE 03/18/88

C-394
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4044
NASA FMEA #: 

NASA DATA:
BASELINE [ ]
NEW [ ]

SUBSYSTEM: COMM AND TRACK
MDAC ID: 4044
ITEM: KU BD ANT A PYRO JETT/SAFE SW

LEAD ANALYST: W.C. LONG

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO COUNTERPART NASA KUCOMM FMEA. SHOULD BE COVERED IN NASA FMEA.

REPORT DATE 03/18/88 C-395
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4045
NASA FMEA #: 05-6PH-24825-3

NASA DATA:
BASELINE [ X ]
NEW [ ]

SUBSYSTEM: COMM AND TRACK
MDAC ID: 4045
ITEM: KU BD CONTROL SW (CMD/PNL)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

CRITICALITY
FLIGHT
HDW/FUNC

REDUNDANCY SCREENS
A
B
C

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

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

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

REMARKS:
FAILURE TO TRANSFER. NOT CRITICAL FUNCTION. OPEN CIRCUIT CAUSES LOSS OF KU-BAND SYSTEM FUNCTION AND THEREFORE CRITICAL AS INDICATED.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4046
NASA FMEA #: 05-6PH-24825-1

SUBSYSTEM: COMM AND TRACK
MDAC ID: 4046
ITEM: KU BD CONTROL SW (CMD/PNL)

LEAD ANALYST: W.C. LONG

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

Adequate [ X ]
Inadequate [ ]

REMARKS:

CRITICALITIES IN AGREEMENT. SHORT COULD CAUSE LOSS OF GCIL FUNCTION AND CONTROL OF KU-BAND SYSTEM.

REPORT DATE 03/18/88 C-397
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4046A
NASA FMEA #: 05-6PH-24825-2

SUBSYSTEM: COMM AND TRACK
MDAC ID: 4046
ITEM: KU BD CONTROL SW (CMD/PNL)

LEAD ANALYST: W.C. LONG

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
CRITICALITIES IN AGREEMENT. SHORT COULD CAUSE LOSS OF GCIL FUNCTION AND CONTROL OF KU-BAND SYSTEM.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4047
NASA FMEA #: 05-2R-5415

SUBSYSTEM: COMM AND TRACK
MDAC ID: 4047
ITEM: TEXT AND GRAPHICS HARDCOPIER

LEAD ANALYST: W.C. LONG

ASAASMENT:

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

NASA [ 3 /3 ] [ ] [ ] [ ] [ ] [ ] *

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

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

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

(ADD/DELETE)

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

REMARKS:
CRITICALITIES IN AGREEMENT. NASA FAILURE MODES COVER ALL TEXT
AND GRAPHICS SYSTEM LEVEL AND SWITCH LEVEL FAILURES.

REPORT DATE 03/18/88 C-399
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4048
NASA PMEA #: 05-2R-5415

SUBSYSTEM: COMM AND TRACK
MDAC ID: 4048
ITEM: TEXT AND GRAPHICS HARDCOPIER

LEAD ANALYST: W.C. LONG

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
CRITICALITIES IN AGREEMENT. NASA FAILURE MODES COVER ALL TEXT AND GRAPHICS SYSTEM LEVEL AND SWITCH LEVEL FAILURES.

REPORT DATE 03/18/88 C-400
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4049
NASA FMEA #: 05-2R-5415

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK
MDAC ID: 4049
ITEM: TEXT AND GRAPHICS HARDCOPIER

LEAD ANALYST: W.C. LONG

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
CRITICALITIES IN AGREEMENT. NASA FAILURE MODES COVER ALL TEXT AND GRAPHICS SYSTEM LEVEL AND SWITCH LEVEL FAILURES.

REPORT DATE 03/18/88 C-401
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4050
NASA FMEA #: 05-2R-5415

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK
MDAC ID: 4050
ITEM: TEXT AND GRAPHICS MASTER PWR SW

LEAD ANALYST: W.C. LONG

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
CRITICALITIES IN AGREEMENT. NASA FAILURE MODES COVER ALL TEXT AND GRAPHICS SYSTEM LEVEL AND SWITCH LEVEL FAILURES.

REPORT DATE 03/18/88 C-402
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4051
NASA FMEA #: 05-2R-5415

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK
MDAC ID: 4051
ITEM: TEXT AND GRAPHICS MASTER PWR SW
LEAD ANALYST: W.C. LONG

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IOA [ 3 /3 ] [ ] [ ] [ ] [ ] [ ]
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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
CRITICALITIES IN AGREEMENT. NASA FAILURE MODES COVER ALL TEXT AND GRAPHICS SYSTEM LEVEL AND SWITCH LEVEL FAILURES.

REPORT DATE 03/18/88 C-403
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4052
NASA FMEA #: 05-2R-5415

SUBSYSTEM: COMM AND TRACK
MDAC ID: 4052
ITEM: TEXT AND GRAPHICS PAPER ADVANCE SW

LEAD ANALYST: W.C. LONG

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
CRITICALITIES IN AGREEMENT. NASA FAILURE MODES COVER ALL TEXT AND GRAPHICS SYSTEM LEVEL AND SWITCH LEVEL FAILURES.

REPORT DATE 03/18/88 C-404
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4053
NASA FMEA #: 05-2R-5415

ASSESSMENT ID: COMTRK-4053
NASA FMEA #: 05-2R-5415

SUBSYSTEM: COMM AND TRACK
MDAC ID: 4053
ITEM: TEXT AND GRAPHICS PAPER ADVANCE SW

LEAD ANALYST: W.C. LONG

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

REMARKS:
CRITICALITIES IN AGREEMENT. NASA FAILURE MODES COVER ALL TEXT AND GRAPHICS SYSTEM LEVEL AND SWITCH LEVEL FAILURES.

REPORT DATE 03/18/88 C-405
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4054
NASA FMEA #: 05-2R-5415
NASA DATA:
BASELINE [ ]
NEW [ X ]
SUBSYSTEM: COMM AND TRACK
MDAC ID: 4054
ITEM: TEXT AND GRAPHICS LAMP TEST SW
LEAD ANALYST: W.C. LONG

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:
CRITICALITIES IN AGREEMENT. NASA FAILURE MODES COVER ALL TEXT AND GRAPHICS SYSTEM LEVEL AND SWITCH LEVEL FAILURES.

REPORT DATE 03/18/88 C-406
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4055
NASA FMEA #: 05-2R-5415

SUBSYSTEM: COMM AND TRACK
MDAC ID: 4055
ITEM: TEXT AND GRAPHICS LAMP TEST SW

LEAD ANALYST: W.C. LONG

ASSESSMENT:

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

NASA [ 3 /3 ] [ ] [ ] [ ] [ ] [ ] *
IOA [ 3 /3 ] [ ] [ ] [ ] [ ] [ ]

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

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

(ADD/DELETE)

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

REMARKS:
CRITICALITIES IN AGREEMENT. NASA FAILURE MODES COVER ALL TEXT AND GRAPHICS SYSTEM LEVEL AND SWITCH LEVEL FAILURES.

REPORT DATE 03/18/88 C-407
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4056
NASA FMEA #: 05-2R-5415

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK
MDAC ID: 4056
ITEM: TEXT AND GRAPHICS BRIGHTNESS CONTROL

LEAD ANALYST: W.C. LONG

ASSESSMENT:

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

REMARKS:
CRITICALITIES IN AGREEMENT. NASA FAILURE MODES COVER ALL TEXT AND GRAPHICS SYSTEM LEVEL AND SWITCH LEVEL FAILURES.

REPORT DATE 03/18/88  C-408
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4057
NASA FMEA #: 05-2R-5415
SUBSYSTEM: COMM AND TRACK
MDAC ID: 4057
ITEM: TEXT AND GRAPHICS BRIGHTNESS CONTROL
LEAD ANALYST: W.C. LONG

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
CRITICALITIES IN AGREEMENT. NASA FAILURE MODES COVER ALL TEXT AND GRAPHICS SYSTEM LEVEL AND SWITCH LEVEL FAILURES.

REPORT DATE 03/18/88 C-409
### APPENDIX C
### ASSESSMENT WORKSHEET

**ASSESSMENT DATE:** 3/03/88  
**NASA DATA:**  
**ASSESSMENT ID:** COMTRK-4058  
**BASELINE [ ]**  
**NASA FMEA #:** 05-2R-5415  
**NEW [ X ]**  

**SUBSYSTEM:** COMM AND TRACK  
**MDAC ID:** 4058  
**ITEM:** TEXT AND GRAPHICS GAMMA CONTROL  

**LEAD ANALYST:** W.C. LONG  

**ASSESSMENT:**

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

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

ADEQUATE [ X ]  
INADEQUATE [ ]

**REMARKS:**

CRITICALITIES IN AGREEMENT. NASA FAILURE MODES COVER ALL TEXT AND GRAPHICS SYSTEM LEVEL AND SWITCH LEVEL FAILURES.

**REPORT DATE 03/18/88**  
**C-410**
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4059
NASA FMEA #: 05-2R-5415

SUBSYSTEM: COMM AND TRACK
MDAC ID: 4059
ITEM: TEXT AND GRAPHICS GAMMA CONTROL

LEAD ANALYST: W.C. LONG

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
CRITICALITIES IN AGREEMENT. NASA FAILURE MODES COVER ALL TEXT AND GRAPHICS SYSTEM LEVEL AND SWITCH LEVEL FAILURES.

REPORT DATE 03/18/88 C-411
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4060
NASA FMEA #: 05-2R-5415

SUBSYSTEM: COMM AND TRACK
MDAC ID: 4060
ITEM: TEXT AND GRAPHICS CONTRAST CONTROL

LEAD ANALYST: W.C. LONG

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
CRITICALITIES IN AGREEMENT. NASA FAILURE MODES COVER ALL TEXT AND GRAPHICS SYSTEM LEVEL AND SWITCH LEVEL FAILURES.

REPORT DATE 03/18/88 C-412
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-4061
NASA FMEA #: 05-2R-5415

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK
MDAC ID: 4061
ITEM: TEXT AND GRAPHICS CONTRAST CONTROL

LEAD ANALYST: W.C. LONG

ASSESSMENT:

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

REMARKS:
CRITICALITIES IN AGREEMENT. NASA FAILURE MODES COVER ALL TEXT AND GRAPHICS SYSTEM LEVEL AND SWITCH LEVEL FAILURES.

REPORT DATE 03/18/88 C-413
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/28/88
ASSESSMENT ID: COMTRK-4501
NASA FMEA #: 05-6PR-54050-1

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 4501
ITEM: CIRCUIT BREAKER, 5A

LEAD ANALYST: E.S. DALEY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DISAGREEMENT. IOA ASSESSMENT AGREES WITH 2/2 BUT ANALYSIS WAS EXTENDED TO CONSIDER ABSOLUTE WORST CASE OF LOSING STATE VECTOR UPDATES.

REPORT DATE 03/18/88 C-414
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/28/88
ASSESSMENT ID: COMTRK-4502
NASA FMEA #: 05-6PR-54050-2

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 4502
ITEM: CIRCUIT BREAKER, 5A

LEAD ANALYST: E.S. DALEY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-415
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/28/88
ASSESSMENT ID: COMTRK-4503
NASA FMEA #: 05-6PR-51050-1
SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 4503
ITEM: CIRCUIT BREAKER, 15A
LEAD ANALYST: E.S. DALEY

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

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-416
ASSESSMENT DATE: 1/28/88
ASSESSMENT ID: COMTRK-4504
NASA FMEA #: 05-6PR-51050-2
SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 4504
ITEM: CIRCUIT BREAKER, 15A
LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-417
**APPENDIX C**
**ASSESSMENT WORKSHEET**

**ASSESSMENT DATE:** 1/28/88  
**ASSESSMENT ID:** COMTRK-4505  
**NASA FMEA #:** 05-6PR-53024-1  
**SUBSYSTEM:** COMM AND TRACK/EPD&C  
**MDAC ID:** 4505  
**ITEM:** CIRCUIT BREAKER, 7.5A  
**LEAD ANALYST:** E.S. DALEY

**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:**
NO DIFFERENCES.

**REPORT DATE 03/18/88**  
**C-418**
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/28/88
ASSESSMENT ID: COMTRK-4506
NASA FMEA #: 05-6PR-53024-2

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 4506
ITEM: CIRCUIT BREAKER, 7.5A

LEAD ANALYST: E. S. DALEY

ASSESSMENT:

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

RECOMMENDATIONS: (If different from NASA)

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

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]

INADEQUATE [ ]

REMARKS:

ITEM DOES NOT APPEAR ON CIL, ALTHOUGH RATED AS 1R/3. NO REDUNDANCY FOR CB24 APPLYING HEATER POWER. A FAILED CLOSED CONDITION WOULD REPRESENT THE NORMAL ON-ORBIT CONDITION.

REPORT DATE 03/18/88        C-419
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/28/88
ASSESSMENT ID: COMTRK-4507
NASA FMEA #: 05-6PR-53025-1

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 4507
ITEM: CIRCUIT BREAKER, 3A

LEAD ANALYST: E.S. DALEY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)
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(REPORT DATE 03/18/88)

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

REMARKS:
NO DIFFERENCES.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/28/88
ASSESSMENT ID: COMTRK-4508
NASA FMEA #: 05-6PR-51053-1

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 4508
ITEM: RPC, 10A

LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)

* CIL RETENTION RATIONALE: (If applicable)

REMARKS:
NO DISAGREEMENT. ONE ANALYSIS EXTENDED FARTHER.

REPORT DATE 03/18/88 C-421
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/28/88
ASSESSMENT ID: COMTRK-4509
NASA FMEA #: 05-6PR-51053-2

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 4509
ITEM: RPC, 10A

LEAD ANALYST: E.S. DALEY
ASSESSMENT:
CRITICALITY REDUNDANCY SCREENS CIL
FLIGHT HDW/FUNC A B C ITEM
NASA [ 3 /3 ] [ ] [ ] [ ] [ ] [ ] *
IOA [ 3 /3 ] [ ] [ ] [ ] [ ] [ ]
COMPARE [ / ] [ ] [ ] [ ] [ ] [ ]

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

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

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-422
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/28/88
ASSESSMENT ID: COMTRK-4510
NASA FMEA #: 05-6PR-51051-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 4510
ITEM: FUSE, 3A

LEAD ANALYST: E.S. DALEY

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
NO DIFFERENCES. IOA ASSESSMENT AGREES WITH 2/2 BUT ANALYSIS WAS EXTENDED TO CONSIDER ABSOLUTE WORST CASE OF LOSING STATE VECTOR UPDATES.

REPORT DATE 03/18/88 C-423
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/28/88
ASSESSMENT ID: COMTRK-4511
NASA FMEA #: 05-6PR-51052-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 4511
ITEM: FUSE, 3A

LEAD ANALYST: E.S. DALEY

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:
NO DISAGREEMENT.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/28/88
ASSESSMENT ID: COMTRK-4512
NASA FMEA #: 05-6PR-53055-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 4512
ITEM: FUSE, 3A

LEAD ANALYST: E.S. DALEY

ASSESSMENT:

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(ADD/DELETE)

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

REMARKS:
NO DISAGREEMENT WITH THE MORE CRITICAL ANALYSIS.

REPORT DATE 03/18/88 C-425
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/28/88
ASSESSMENT ID: COMTRK-4513
NASA FMEA #: 05-6PR-53067-1
SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 4513
ITEM: FUSE, 3A
LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88  C-426
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/10/88
ASSESSMENT ID: COMTRK-4514
NASA FMEA #: 

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 4514
ITEM: CIRCUIT BREAKER, 3A

LEAD ANALYST: A.W. ADDIS

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO CORRESPONDING FMEA IN FMEA/CIL PACKET.

REPORT DATE 03/18/88 C-427
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/10/88
ASSESSMENT ID: COMTRK-4515
NASA FMEA #: 
NASA DATA: BASELINE [ ] NEW [ ]

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 4515
ITEM: CIRCUIT BREAKER, 3A (PYRO JETT SYS A/B)

LEAD ANALYST: A.W. ADDIS

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO CORRESPONDING FMEA IN FMEA/CIL PACKET.

REPORT DATE 03/18/88 C-428
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/28/88
ASSESSMENT ID: COMTRK-4516
NASA FMEA #: COMTRK-4516
SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 4516
ITEM: CIRCUIT BREAKER, 3A
LEAD ANALYST: E.S. DALEY

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

REMARKS:
N/A. SEE KU-BAND JETTISON SYSTEM.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/28/88
ASSESSMENT ID: COMTRK-4517
NASA FMEA #: 

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 4517
ITEM: CIRCUIT BREAKER, 3A

LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
N/A. SEE KU-BAND JETTISON SYSTEM.

REPORT DATE 03/18/88 C-430
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/28/88
ASSESSMENT ID: COMTRK-4518
NASA FMEA #: COMTRK-4518
SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 4518
ITEM: CIRCUIT BREAKER, 3A
LEAD ANALYST: E.S. DALEY

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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:
N/A. SEE KU-BAND JETTISON SYSTEM.

REPORT DATE 03/18/88 C-431
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/28/88
ASSESSMENT ID: COMTRK-4519
NASA FMEA #: NASA DATA: BASELINE [ ]
SUBSYSTEM: COMM AND TRACK/EPD&C NEW [ ]
MDAC ID: 4519
ITEM: CIRCUIT BREAKER, 3A
LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)

[(ADD/DELETE) |

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

INADEQUATE [ ]

REMARKS:
N/A. SEE KU-BAND JETTISON SYSTEM.

REPORT DATE 03/18/88 C-432
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/28/88
ASSESSMENT ID: COMTRK-4520
NASA FMEA #: 

NASA DATA:
BASELINE [ ]
NEW [ ]

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 4520
ITEM: CIRCUIT BREAKER, 3A

LEAD ANALYST: E.S. DALEY

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IOA [ 3 /2R ] [ 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:
N/A. SEE KU-BAND JETTISON SYSTEM.

REPORT DATE 03/18/88  C-433
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/28/88
ASSESSMENT ID: COMTRK-4521
NASA FMEA #: 

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 4521
ITEM: CIRCUIT BREAKER, 3A

LEAD ANALYST: E.S. DALEY

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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:
N/A. SEE KU-BAND JETTISON SYSTEM.

REPORT DATE 03/18/88 C-434

C - 60
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/28/88
ASSESSMENT ID: COMTRK-4522
NASA FMEA #: 

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 4522
ITEM: RPC, 5A
LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
N/A. SEE KU-BAND JETTISON SYSTEM.

REPORT DATE 03/18/88 C-435
ASSESSMENT DATE: 1/28/88
ASSESSMENT ID: COMTRK-4523
NASA FMEA #: NASA
SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 4523
ITEM: RPC, 5A
LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)

* CIL RETENTION RATIONALE: (If applicable)

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| ADEQUATE | [ ] |
| INADEQUATE | [ ] |

REMARKS:
N/A. SEE KU-BAND JETTISON SYSTEM.

REPORT DATE 03/18/88 C-436
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/28/88
ASSESSMENT ID: COMTRK-4524
NASA FMEA #:

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 4524
ITEM: RPC, 5A

LEAD ANALYST: E.S. DALEY

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

REMARKS:
N/A. SEE KU-BAND JETTISON SYSTEM.

REPORT DATE 03/18/88 C-437
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/28/88
ASSESSMENT ID: COMTRK-4525
NASA FMEA #: NASA DATA:
SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 4525
ITEM: RPC, 5A
LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
N/A. SEE KU-BAND JETTISON SYSTEM.

REPORT DATE 03/18/88 C-438
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/28/88
ASSESSMENT ID: COMTRK-4526
NASA FMEA #: NASA DATA:
BASELINE [ ]
NEW [ ]

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 4526
ITEM: FUSE, 1A

LEAD ANALYST: E.S. DALEY

ASSESSMENT:

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IOA [ 3 /2R ] [ P ] [ P ] [ 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:
N/A. SEE KU-BAND JETTISON SYSTEM.

REPORT DATE 03/18/88 C-439
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/28/88
ASSESSMENT ID: COMTRK-4527
NASA DATA:
BASELINE [ ]
NEW [ ]

NASA FMEA #:

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 4527
ITEM: FUSE, 1A

LEAD ANALYST: E.S. DALEY

ASSESSMENT:

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RECOMMENDATIONS:  (If different from NASA)

* CIL RETENTION RATIONALE: (If applicable)

ADERQUATE [ ]
INADEQUATE [ ]

REMARKS:
N/A. SEE KU-BAND JETTISON SYSTEM.

REPORT DATE 03/18/88 C-440
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/28/88
ASSESSMENT ID: COMTRK-4528
MDAC ID: 4528
ITEM: FUSE, 1A
LEAD ANALYST: E.S. DALEY

NASA FMEA #: COMTRK-4528
BASELINE [ ]
NEW [ ]

SUBSYSTEM: COMM AND TRACK/EPD&C

ITEM:

CRITICALITY

FLIGHT HDW/FUNC

REDUNDANCY SCREENS

CIL

ITEM

A B C

NASA [ / ] [ ] [ ] [ ] [ ] *

IOA [ 3 /2R ] [ P ] [ F ] [ P ] [ ]

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

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]

INADEQUATE [ ]

REMARKS:
N/A. SEE KU-BAND JETTISON SYSTEM.

REPORT DATE 03/18/88 C-441
**APPENDIX C**

**ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 1/28/88

ASSESSMENT ID: COMTRK-4529

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

N/A. SEE KU-BAND JETTISON SYSTEM.

REPORT DATE 03/18/88 C-442
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/28/88
ASSESSMENT ID: COMTRK-4530
NASA FMEA #:
SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 4530
ITEM: FUSE, 1A
LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
N/A. SEE KU-BAND JETTISON SYSTEM.

REPORT DATE 03/18/88  C-443
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/28/88
ASSESSMENT ID: COMTRK-4531
NASA FMEA #:

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 4531
ITEM: FUSE, 1A

LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
N/A. SEE KU-BAND JETTISON SYSTEM.

REPORT DATE 03/18/88 C-444
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/28/88
ASSESSMENT ID: COMTRK-4532
NASA FMEA #: 

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 4532
ITEM: FUSE, IA

LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
N/A. SEE KU-BAND JETTISON SYSTEM.

REPORT DATE 03/18/88 C-445
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/28/88
ASSESSMENT ID: COMTRK-4533
NASA FMEA #:

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 4533
ITEM: FUSE, 1A

LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
N/A. SEE KU-BAND JETTISON SYSTEM.

REPORT DATE 03/18/88   C-446
### APPENDIX C
### ASSESSMENT WORKSHEET

**ASSESSMENT DATE:** 1/28/88  
**ASSESSMENT ID:** COMTRK-4534  
**NASA FMEA #:** 
**SUBSYSTEM:** COMM AND TRACK/EPD&C  
**MDAC ID:** 4534  
**ITEM:** FUSE, 1A  
**LEAD ANALYST:** E.S. DALEY

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

**REMARKS:**  
N/A. SEE KU-BAND JETTISON SYSTEM.

**REPORT DATE 03/18/88**  
C-447
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/28/88
ASSESSMENT ID: COMTRK-4535
NASA FMEA #: 
SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 4535
ITEM: FUSE, 1A
LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
N/A. SEE KU-BAND JETTISON SYSTEM.

REPORT DATE 03/18/88   C-448
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/28/88
ASSESSMENT ID: COMTRK-4536
MDAC ID: 4536
ITEM: FUSE, 1A
LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
N/A. SEE KU-BAND JETTISON SYSTEM.

REPORT DATE 03/18/88 C-449
APPENDIX C
ASSessment WORKSHEET

ASSESSMENT DATE: 1/28/88
ASSESSMENT ID: COMTRK-4537
NASA FMEA #: 

NASa DATA: 
BASELINE [ ]
NEW [ ]

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 4537
ITEM: FUSE, 1A

LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)

ADD/DELETE

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
N/A. SEE KU-BAND JETTISON SYSTEM.

REPORT DATE 03/18/88 C-450
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/28/88
ASSESSMENT ID: COMTRK-4538
NASA FMEA #:

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 4538
ITEM: FUSE, 1A

LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
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REMARKS:

N/A. SEE KU-BAND JETTISON SYSTEM.

REPORT DATE 03/18/88 C-451
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/28/88
ASSESSMENT ID: COMTRK-4539
NASA FMEA #:

SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 4539
ITEM: FUSE, 1A

LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)

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*CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
N/A. SEE KU-BAND JETTISON SYSTEM.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/28/88
ASSESSMENT ID: COMTRK-4540
NASA FMEA #: NASA DATA:
SUBSYSTEM: COMM AND TRACK/EPD&C NEW [ ]
MDAC ID: 4540 BASELINE [ ]
ITEM: FUSE, 1A
LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

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REMARKS:

N/A. SEE KU-BAND JETTISON SYSTEM.

REPORT DATE 03/18/88 C-453
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/28/88
ASSESSMENT ID: COMTRK-4541
MDAC ID: 4541
ITEM: FUSE, 1A
LEAD ANALYST: E.S. DALEY

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RECOMMENDATIONS: (If different from NASA)

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*CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
N/A. SEE KU-BAND JETTISON SYSTEM.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/28/88
ASSESSMENT ID: COMTRK-4542
NASA FMEA #: 
SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 4542
ITEM: RESISTOR, 1.2K
LEAD ANALYST: E.S. DALEY

NASA DATA:
BASELINE [ ]
NEW [ ]

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

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

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

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

REMARKS:
N/A. SEE KU-BAND JETTISON SYSTEM.

REPORT DATE 03/18/88 C-455
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/28/88
ASSESSMENT ID: COMTRK-4543
NASA FMEA #: COMTRK-4543
SUBSYSTEM: COMM AND TRACK/EPD&C
MDAC ID: 4543
ITEM: RESISTOR, 1.2K
LEAD ANALYST: E. S. DALEY

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

REMARKS:
N/A. SEE KU-BAND JETTISON SYSTEM.

REPORT DATE 03/18/88
**APPENDIX C**

**ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 1/15/88  
ASSESSMENT ID: COMTRK-5001  
NASA FMEA #: 05-2B-23400-1  
SUBSYSTEM: COMM & TRACK  
MDAC ID: 5001  
ITEM: UHF EVA/ATC EXTERNAL ANTENNA  
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 [ X ] | |
| INADEQUATE [ ] |

**REMARKS:**

IOA ASSIGNED CRIT 3/1R FOR FLIGHT (DEORBIT), 2/2 FOR EVA OPS. NO DIFFERENCES FOR EVA OPS, BUT NASA FMEA UPGRADES CRIT TO 2/1R BECAUSE OF POSSIBLE FAILURE IN KU-BAND SIG PROCESSOR THAT COULD DISABLE BOTH NSP'S, LEAVING UHF AS ONLY PATH FOR STATE VECTOR UPDATES. AGREE WITH NASA CRIT.

REPORT DATE 03/18/88   C-457
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/01/88
ASSESSMENT ID: COMTRK-5002
NASA FMEA #: 05-2B-23401-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM & TRACK
MDAC ID: 5002
ITEM: UHF AIRLOCK ANTENNA

LEAD ANALYST: A.W. ADDIS

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 FMEA UPGRADERS AIRLOCK ANTENNA TO 3/2R BECAUSE OF PRE-EVA CHECKOUT OF EVA COMM BETWEEN ORBITER AND EVA CREWMEMBERS. AGREE WITH NASA FMEA.

REPORT DATE 03/18/88 C-458
ASSESSMENT DATE: 1/15/88
ASSESSMENT ID: COMTRK-5003
NASA FMEA #: 05-2B-22100-1
SUBSYSTEM: COMM & TRACK
MDAC ID: 5003
ITEM: UHF EVA/ATC TRANSEIVER
LEAD ANALYST: A.W. ADDIS

ASSESSMENT:

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

NASA [ 2 /2 ] [ ] [ ] [ ] [ ] [ X ]*
IOA [ 2 /2 ] [ ] [ ] [ ] [ ] [ X ]
COMPARE [ / ] [ ] [ ] [ ] [ ] [ ]

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

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

REMARKS:
NO DIFFERENCES. (THE ASSOCIATED IOA ANALYSIS DEALS ONLY WITH EVA
OPS - FLIGHT OPS COVERED IN IOA 5004. THE SINGLE NASA FMEA
COVERS BOTH EVA AND FLIGHT OPS.)

REPORT DATE 03/18/88 C-459
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/15/88
ASSESSMENT ID: COMTRK-5004
NASA FMEA #: 05-2B-22100-1

ASSESSMENT ID: COMTRK-5004
NASA FMEA #: 05-2B-22100-1

SUBSYSTEM: COMM & TRACK
MDAC ID: 5004
ITEM: UHF EVA/ATC TRANSCEIVER
LEAD ANALYST: A.W. ADDIS

ASSESSMENT:

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

RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:

NASA FMEA Assigns Crit 2/1R for Flight Ops because of possible KU-Band Sig Processor Failure that could disable both NSP's, leaving UHF as only path for State Vector Update. Agree with NASA Crit.

REPORT DATE: 03/18/88 C-460
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/15/88
ASSESSMENT ID: COMTRK-5004A
NASA FMEA #: 05-2B-22100-2
SUBSYSTEM: COMM & TRACK
MDAC ID: 5004
ITEM: UHF EVA/ATC TRANSCEIVER
LEAD ANALYST: A.W. ADDIS

ASSESSMENT:

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

RECOMMENDATIONS: (If different from NASA)

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

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:

NASA FMEA ASSIGNS CRIT 2/1R FOR FLIGHT OPS BECAUSE OF POSSIBLE KU-BAND SIG PROCESSOR FAILURE THAT COULD DISABLE BOTH NSP's, LEAVING UHF AS ONLY PATH FOR STATE VECTOR UPDATE. AGREE WITH NASA CRIT.

REPORT DATE 03/18/88 C-461
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/15/88
ASSESSMENT ID: COMTRK-5005
NASA FMEA #: 05-2B-22100-1

SUBSYSTEM: COMM & TRACK
MDAC ID: 5005
ITEM: UHF EVA/ATC TRANSCEIVER

LEAD ANALYST: A.W. ADDIS

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

COMPARE [ ] [ ] [ ] [ ] [ ]

RECOMMENDATIONS: (If different from NASA)

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

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

REMARKS:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-462
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/15/88
ASSESSMENT ID: COMTRK-5006
NASA FMEA #: 05-2B-22100-1

SUBSYSTEM: COMM & TRACK
MDAC ID: 5006
ITEM: UHF EVA/ATC TRANSCEIVER

LEAD ANALYST: A.W. ADDIS

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

*CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:

NASA FMEA Assigns 2/1R because of potential KU-BAND SIG processor failure that could disable both NSP's, leaving only UHF for state vector updates. Agree with NASA FMEA.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/15/88
ASSESSMENT ID: COMTRK-5006A
NASA FMEA #: 05-2B-22100-2

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM & TRACK
MDAC ID: 5006
ITEM: UHF EVA/ATC TRANSCEIVER

LEAD ANALYST: A.W. ADDIS

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

REMARKS:
NASA FMEA ASSIGNS 2/1R BECAUSE OF POTENTIAL KU-BAND SIG PROCESSOR FAILURE THAT COULD DISABLE BOTH NSP's, LEAVING ONLY UHF FOR STATE VECTOR UPDATES. AGREE WITH NASA FMEA.

REPORT DATE 03/18/88 C-464
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/15/88
ASSESSMENT ID: COMTRK-5007
NASA FMEA #: 05-2B-22104-1
SUBSYSTEM: COMM & TRACK
MDAC ID: 5007
ITEM: UHF SIMPLEX PA PWR SWITCH
LEAD ANALYST: A.W. ADDIS

CRITICALITY 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 [ X ]
INADEQUATE [ ]

REMARKS:
NASA FMEA ASSIGNS CRIT 2/1R BECAUSE OF POSSIBLE KU-BAND SIG PROCESSOR FAILURE THAT COULD DISABLE BOTH NSP's, LEAVING ONLY UHF FOR STATE VECTOR UPDATE. AGREE WITH NASA FMEA.

REPORT DATE 03/18/88 C-465
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/01/88
ASSESSMENT ID: COMTRK-5008
NASA FMEA #: 05-2B-22104-2

SUBSYSTEM: COMM & TRACK
MDAC ID: 5008
ITEM: UHF SIMPLEX PWR SWITCH

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:
NO DIFFERENCES.

REPORT DATE 03/18/88 C-466
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/15/88
ASSESSMENT ID: COMTRK-5009
NASA FMEA #: 05-2B-22104-3

SUBSYSTEM: COMM & TRACK
MDAC ID: 5009
ITEM: UHF SIMPLEX POWER SWITCH

LEAD ANALYST: A.W. ADDIS

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ]

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:

NASA FMEA ASSIGNS CRIT 2/1R BECAUSE OF POSSIBLE KU-BAND SIG PROCESSOR FAILURE THAT COULD CAUSE LOSS OF BOTH NSP's, LEAVING ONLY UHF FOR STATE VECTOR UPDATE. AGREE WITH NASA FMEA.

REPORT DATE 03/18/88 C-467
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/01/88
ASSESSMENT ID: COMTRK-5010
NASA FMEA #: 05-2B-22104-1

SUBSYSTEM: COMM & TRACK
MDAC ID: 5010
ITEM: UHF SIMPLEX POWER SWITCH

LEAD ANALYST: A.W. ADDIS

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:
CONTACT-TO-CONTACT BRIDGING SHORT HOLDING A FAILED PA IN THE UHF RF TRANSMIT CIRCUIT COULDN'T PREVENT UHF USE FOR ATC/LANDING OPS. FAILS SCREEN B BECAUSE FAILURE WOULD NOT BE DETECTABLE.

REPORT DATE 03/18/88 C-468
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 2/01/88
ASSESSMENT ID: COMTRK-5011
NASA FMEA #: NONE

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM & TRACK
MDAC ID: 5011
ITEM: UHF SIMPLEX POWER SWITCH

LEAD ANALYST: A.W. ADDIS

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:
IOA 5011 PERTAINS TO THE SWITCH CONTACTS GIVING TELEMETRY INDICATION. SOME SWITCH FAILURES COULD KILL TELEMETRY MEASUREMENT, OTHERS COULD GIVE FALSE SIGNAL. NOT CRITICAL, BUT FAILURE MODE SHOULD BE COVERED FOR COMPLETENESS.

REPORT DATE 03/18/88  C-469
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/15/88
ASSESSMENT ID: COMTRK-5012
NASA FMEA #: 05-2B-22103-2

SUBSYSTEM: COMM & TRACK
MDAC ID: 5012
ITEM: UHF XMIT FREQUENCY SELECT SWITCH

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:
NASA FMEA ASSIGNS CRIT 3/1R FOR AIR-TO-GROUND FUNCTION AND 2/2 FOR EVA. AGREE WITH BOTH (SEE IOA COMTRK 5013 FOR IOA EVA CASE). SINGLE NASA FMEA, AND NO SCREEN ENTRIES BECAUSE OF NASA DUAL CRIT. NASA FMEA DOES NOT ASSIGN SCREEN RATINGS.

REPORT DATE 03/18/88 C-470
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/15/88
ASSESSMENT ID: COMTRK-5013
NASA FMEA #: 05-2B-22103-2

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM & TRACK
MDAC ID: 5013
ITEM: UHF XMIT FREQUENCY SELECT SWITCH

LEAD ANALYST: A.W. ADDIS

ASSESSMENT:

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

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

* CIL RETENTION RATIONALE: (If applicable)

REMARKS:
NASA FMEA Assigns CRIT 2/2 for EVA and 3/IR (but no screens) for air-to-ground function. Agree with both (see IOA COMTRK-5012 for IOA air-to-ground case), except screens should be covered in FMEA discussion.

REPORT DATE 03/18/88 C-471
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/15/88
ASSESSMENT ID: COMTRK-5014
NASA FMEA #: 05-2B-22103-3

SUBSYSTEM: COMM & TRACK
MDAC ID: 5014
ITEM: UHF XMIT FREQUENCY SELECT SWITCH

LEAD ANALYST: A.W. ADDIS

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:

IF SHORT CAUSED BOTH TRANSMITTERS TO OPERATE ORBITER COULD NOT RECEIVED ON 296.8 AND 259.7 MHZ, SO WOULD LOSE CAPABILITY FOR FULL EVA ODS. AGREE WITH NASA FMEA.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/15/88
ASSESSMENT ID: COMTRK-5501
NASA FMEA #: 05-6PB-22107-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM & TRACK
MDAC ID: 5501
ITEM: CIRCUIT BREAKER, UHF, MNA

LEAD ANALYST: A.W. ADDIS

ASSESSMENT:

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

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

IOA [ 3 /1R ] [ P ] [ P ] [ P ] [ ]

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

RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
NASA FMEA ASSIGN CRIT 2/1R FOR AIR-TO-GROUND FUNCTION BECAUSE A POSSIBLE KU-BAND SIG PROCESSOR FAILURE COULD DISABLE BOTH NSP's, LEAVING ONLY UHF FOR STATE VECTOR UPDATES. AGREE WITH NASA FMEA.

REPORT DATE 03/18/88 C-473
APPENDIX C
ASSESSMENT WORKSHEET

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

BOTH CIRCUIT BREAKERS (CB13, CB18) ARE NORMALLY CLOSED. ONE (CB18) COULD FAIL OPEN AND CONDITION WOULD NOT BE DETECTED IN FLIGHT BECAUSE OTHER (CB13) WOULD BE PROVIDING POWER TO BOTH XCVR AND TO PA, SO FAILS SCREEN B. IOA 5502 COVERS EVA OPS; IOA 5503 COVERS FLIGHT OPS VOICE COMM WITH GROUND.

REPORT DATE 03/18/88 C-474
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 1/15/88
ASSESSMENT ID: COMTRK-5503
NASA FMEA #: 05-6PB-22107-2
SUBSYSTEM: COMM & TRACK
MDAC ID: 5503
ITEM: CIRCUIT BREAKER, UHF, MNC
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 [X]
INADEQUATE [ ]

REMARKS:
BOTH CIRCUIT BREAKERS (CB13, CB18) ARE NORMALLY CLOSED. ONE (CB18) COULD FAIL OPEN AND CONDITION WOULD NOT BE DETECTED IN FLIGHT BECAUSE OTHER (CB13) WOULD BE PROVIDING POWER TO BOTH XCVR AND TO PA, SO FAILS SCREEN B. IOA 5502 COVERS EVA OPS; IOA 5503 COVERS FLIGHT OPS VOICE COMM WITH GROUND.

REPORT DATE 03/18/88 C-475
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: COMTRK-6001
NASA FMEA #:

SUBSYSTEM: COMM AND TRACK
MDAC ID: 6001
ITEM: A/G 1 & 2 CHANNEL SWITCH
LEAD ANALYST: C.G. TATOSIAN

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:

REPORT DATE 03/18/88 C-476
# APPENDIX C

## ASSESSMENT WORKSHEET

**ASSESSMENT DATE:** 3/08/88  
**ASSESSMENT ID:** COMTRK-6002  
**NASA FMEA #:**  
**SUBSYSTEM:** COMM AND TRACK  
**MDAC ID:** 6002  
**ITEM:** A/G 1 & 2 CHANNEL SWITCH  
**LEAD ANALYST:** C.G. TATOSIAN

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(If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]

INADEQUATE [ ]

### REMARKS:

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**REPORT DATE 03/18/88**

C-477
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: COMTRK-6003
NASA FMEA #: 
NASA DATA: BASELINE [ ]
NEW [ ]

SUBSYSTEM: COMM AND TRACK
MDAC ID: 6003
ITEM: A/G 1 & 2 CHANNEL SWITCH
LEAD ANALYST: C.G. TATOSIAN

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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 03/18/88 C-478
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: COMTRK-6004
NASA FMEA #: NASA DATA:
BASELINE [ ] NEW [ ]

SUBSYSTEM: COMM AND TRACK
MDAC ID: 6004
ITEM: A/A CHANNEL SWITCH

LEAD ANALYST: C.G. TATOSIAN

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
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REMARKS:

REPORT DATE 03/18/88 C-479
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: COMTRK-6005
NASA FMEA #: NASA DATA:
BASELINE [ ] NEW [ ]

SUBSYSTEM: COMM AND TRACK
MDAC ID: 6005
ITEM: A/A CHANNEL SWITCH

LEAD ANALYST: C.G. TATOSIAN

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
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REMARKS:

REPORT DATE 03/18/88 C-480
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: COMTRK-6006
NASA FMEA #:

SUBSYSTEM: COMM AND TRACK
MDAC ID: 6006
ITEM: A/A CHANNEL SWITCH

LEAD ANALYST: C.G. TATOSIAN

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

REPORT DATE 03/18/88 C-481
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: COMTRK-6007
NASA FMEA #: 

SUBSYSTEM: COMM AND TRACK
MDAC ID: 6007
ITEM: ICOM A & B SWITCH

LEAD ANALYST: C.G. TATOSIAN

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

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INADEQUATE [ ]

REMARKS:

REPORT DATE 03/18/88 C-482
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: COMTRK-6008
NASA FMEA #: NASA DATA:
NASA ID: COMTRK-6008
BASELINE [ ] NEW [ ]
SUBSYSTEM: COMM AND TRACK
MDAC ID: 6008
ITEM: ICOM A & B SWITCH
LEAD ANALYST: C.G. TATOSIAN

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ] INADEQUATE [ ]

REMARKS:

REPORT DATE 03/18/88 C-483
### APPENDIX C
#### ASSESSMENT WORKSHEET

**ASSESSMENT DATE:** 3/08/88  
**ASSESSMENT ID:** COMTRK-6009  
**NASA FMEA #:**  
**SUBSYSTEM:** COMM AND TRACK  
**MDAC ID:** 6009  
**ITEM:** ICOM A & B SWITCH  
**LEAD ANALYST:** C.G. TATOSIAN

**ASSESSMENT:**

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

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

**REPORT DATE 03/18/88**  
C-484
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: COMTRK-6010
NASA FMEA #:
SUBSYSTEM: COMM AND TRACK
MDAC ID: 6010
ITEM: TACAN ID SWITCH
LEAD ANALYST: C.G. TATOSIAN

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)
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REMARKS:

REPORT DATE 03/18/88 C-485
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: COMMTRK-6011
NASA FMEA #: 
SUBSYSTEM: COMM AND TRACK
MDAC ID: 6011
ITEM: TACAN ID SWITCH
LEAD ANALYST: C.G. TATOSIAN

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
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REMARKS:

REPORT DATE 03/18/88   C-486
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: COMTRK-6012
NASA FMEA #: NASA DATA:

SUBSYSTEM: COMM AND TRACK
MDAC ID: 6012
ITEM: TACAN ID ENABLE SWITCH

LEAD ANALYST: C.G. TATOSIAN

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* CIL RETENTION RATIONALE: (If applicable)
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REMARKS:

REPORT DATE 03/18/88 C-487
APPENDIX C  
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88  
ASSESSMENT ID: COMTRK-6013  
NASA FMEA #:  
SUBSYSTEM: COMM AND TRACK  
MDAC ID: 6013  
ITEM: TACAN ID ENABLE SWITCH  
LEAD ANALYST: C.G. TATOSIAN  

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* CIL RETENTION RATIONALE: (If applicable)  
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REMARKS:

REPORT DATE 03/18/88  C-488
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: COMTRK-6014
NASA FMEA #: NASA
SUBSYSTEM: COMM AND TRACK
MDAC ID: 6014
ITEM: PAGE SWITCH
LEAD ANALYST: C.G. TATOSIAN

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
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REMARKS:

REPORT DATE 03/18/88  C-489
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: COMTRK-6015
NASA FMEA #: [ ]

NASA DATA: [ ]
BASELINE [ ]
NEW [ ]

SUBSYSTEM: COMM AND TRACK
MDAC ID: 6015
ITEM: PAGE SWITCH

LEAD ANALYST: C.G. TATOSIAN

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RECOMMENDATIONS: (If different from NASA)

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

REMARKS:

REPORT DATE 03/18/88  C-490
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: COMTRK-6016
NASA FMEA #: COMTRK-6016

SUBSYSTEM: COMM AND TRACK
MDAC ID: 6016
ITEM: PAGE SWITCH

LEAD ANALYST: C.G. TATOSIAN

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
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REMARKS:

REPORT DATE 03/18/88 C-491
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: COMTRK-6017
NASA FMEA #: NASA DATA:

BASELINE [ ]
NEW [ ]

SUBSYSTEM: COMM AND TRACK
MDAC ID: 6017
ITEM: MASTER VOLUME CONTROL

LEAD ANALYST: C.G. TATOSIAN

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

REPORT DATE 03/18/88 C-492
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: COMTRK-6018
NASA DATA: BASELINE [ ]
NASA FMEA #: NEW [ ]

SUBSYSTEM: COMM AND TRACK
MDAC ID: 6018
ITEM: VOX SENSITIVITY CONTROL

LEAD ANALYST: C.G. TATOSIAN

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* CIL RETENTION RATIONALE: (If applicable)

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REMARKS:

REPORT DATE 03/18/88 C-493
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
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NASA FMEA #: NASA DATA:
SUBSYSTEM: COMM AND TRACK BASELINE [ ]
MDAC ID: 6019 NEW [ ]
ITEM: BUS VOLUME CONTROL
LEAD ANALYST: C.G. TATOSIAN

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
ASSESSMENT ID: COMTRK-6020
NASA FMEA #: NASA DATA:

SUBSYSTEM: COMM AND TRACK
MDAC ID: 6020
ITEM: BUS VOLUME CONTROL

LEAD ANALYST: C.G. TATOSIAN

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:

REPORT DATE 03/18/88 C-495
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/08/88
NASA DATA: BASELINE [ ]
ASSESSMENT ID: COMTRK-6021
NEW [ ]
NASA FMEA #: COMTRK-6021
SUBSYSTEM: COMM AND TRACK
MDAC ID: 6021
ITEM: AUDIO MODE SWITCH
LEAD ANALYST: C.G. TATOSIAN

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:

REPORT DATE 03/18/88 C-496
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7001
NASA FMEA #: 05-2C-22201-1

SUBSYSTEM: COMM AND TRACK
MDAC ID: 7001
ITEM: TACAN

LEAD ANALYST: W.C. LONG

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
CRITICALITIES ARE IN AGREEMENT. LOSS OF OUTPUT, FREQUENCY CHANGE AND NO DATA ARE SYNONYMOUS FAILURES.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7001A
NASA FMEA #: 05-2C-22201-3
SUBSYSTEM: COMM AND TRACK
MDAC ID: 7001
ITEM: TACAN
LEAD ANALYST: W.C. LONG

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
CRITICALITIES ARE IN AGREEMENT. LOSS OF OUTPUT, FREQUENCY CHANGE AND NO DATA ARE SYNONYMOUS FAILURES.

REPORT DATE 03/18/88 C-498
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: CONTRK-7002
NASA FMEA #: 05-2C-22200-2
NASA DATA:
BASELINE [ ]
NEW [ X ]
SUBSYSTEM: COMM AND TRACK
MDAC ID: 7002
ITEM: TACAN
LEAD ANALYST: W.C. LONG

ASSESSMENT:

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

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

REMARKS:
AGREE. BASED ON INABILITY TO DETECT ERRONEOUS DATA AFTER SECOND FAILURE.

REPORT DATE 03/18/88 C-499
**APPENDIX C**
**ASSESSMENT WORKSHEET**

**ASSESSMENT DATE:** 3/03/88  
**ASSESSMENT ID:** COMTRK-7003  
**NASA FMEA #:** 05-2C-22200-2

**SUBSYSTEM:** COMM AND TRACK  
**MDAC ID:** 7003  
**ITEM:** TACAN  
**LEAD ANALYST:** W.C. LONG

**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:**  
AGREE.

**REPORT DATE** 03/18/88  
C-500
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7004
NASA FMEA #: 05-2C-22200-1
SUBSYSTEM: COMM AND TRACK
MDAC ID: 7004
ITEM: MODE SWITCH
LEAD ANALYST: W.C. LONG

ASSESSMENT:

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IOA [ 3 /1R ] [ P ] [ P ] [ P ] [ ]
COMPARE [ / ] [ ] [ ] [ ] [ ]

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

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

REMARKS:
CRITICALITIES ARE IN AGREEMENT. FAILURE TO SWITCH AND JAMMED ARE NEAR SYNONYMOUS FAILURES.

REPORT DATE 03/18/88 C-501
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7005
NASA FMEA #: 05-2C-22202-1

SUBSYSTEM: COMM AND TRACK
MDAC ID: 7005
ITEM: MODE SWITCH

LEAD ANALYST: W.C. LONG

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:
CRITICALITIES ARE IN AGREEMENT. OPEN/SHORT TO GROUND FAILURES RESULT IN LOSS OF DATA.

REPORT DATE 03/18/88
C-502
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7005A
NASA FMEA #: 05-2C-22202-2
SUBSYSTEM: COMM AND TRACK
MDAC ID: 7005
ITEM: MODE SWITCH
LEAD ANALYST: W.C. LONG

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
CRITICALITIES ARE IN AGREEMENT. OPEN/SHORT TO GROUND FAILURES RESULT IN LOSS OF DATA.

REPORT DATE 03/18/88 C-503
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7005B
NASA FMEA #: 05-2C-22212-1

SUBSYSTEM: COMM AND TRACK
MDAC ID: 7005
ITEM: MODE SWITCH
LEAD ANALYST: W.C. LONG

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:
CRITICALITIES ARE IN AGREEMENT. OPEN/SHORT TO GROUND FAILURES RESULT IN LOSS OF DATA.

REPORT DATE 03/18/88 C-504
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7005C
NASA FMEA #: 05-2C-22212-2
SUBSYSTEM: COMM AND TRACK
MDAC ID: 7005
ITEM: MODE SWITCH
LEAD ANALYST: W.C. LONG

ASSESSMENT:

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

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

REMARKS:
CRITICALITIES ARE IN AGREEMENT. OPEN/SHORT TO GROUND FAILURES RESULT IN LOSS OF DATA.

REPORT DATE 03/18/88 C-505
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7006
NASA FMEA #:  
SUBSYSTEM: COMM AND TRACK
MDAC ID: 7006
ITEM: ANTENNA SELECT SWITCH
LEAD ANALYST: W.C. LONG

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO COUNTERPART NASA NAVAIDS FMEA. FAILURE TO SWITCH IS A CREDIBLE FAILURE THAT SHOULD BE CONSIDERED FOR NASA FMEAS.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7007
NASA FMEA #: 05-2C-22214-1
SUBSYSTEM: COMM AND TRACK
MDAC ID: 7007
ITEM: ANTENNA SELECT SWITCH
LEAD ANALYST: W.C. Long

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [X]
INADEQUATE [ ]

REMARKS:
AGREE. OPEN FAILURE REVERTS TO AUTO ANTENNA SELECTION MODE.

REPORT DATE 03/18/88 C-507
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88  
ASSESSMENT ID: COMTRK-7007A  
NASA FMEA #: 05-2C-22214-2  

BASELINE [ ]  
NEW [ X ]

SUBSYSTEM: COMM AND TRACK  
MDAC ID: 7007  
ITEM: ANTENNA SELECT SWITCH  
LEAD ANALYST: W.C. LONG

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:
SHORT TO GROUND FAILURE MODE CRITICALITIES ARE IN AGREEMENT.

REPORT DATE 03/18/88  
C-508
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7008
NASA FMEA #: 05-2C-22204-2

SUBSYSTEM: COMM AND TRACK
MDAC ID: 7008
ITEM: CHANNEL SELECT SWITCH

LEAD ANALYST: W.C. LONG

ASSESSMENT:

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NASA DATA:
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NEW [ X ]

ASSESSMENT:

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IOA [ 3 /IR ] [ P ] [ P ] [ P ] [ ]

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

RECOMMENDATIONS: (If different from NASA)

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

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
CRITICALITIES ARE IN AGREEMENT.

REPORT DATE 03/18/88 C-509
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7008A
NASA FMEA #: 05-2C-22204-2

SUBSYSTEM: COMM AND TRACK
MDAC ID: 7008
ITEM: CHANNEL SELECT SWITCH

LEAD ANALYST: W.C. LONG

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
CRITICALITIES ARE IN AGREEMENT.

REPORT DATE 03/18/88 C-510
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7009
NASA FMEA #: BASELINE [ ] NEW [ ]

SUBSYSTEM: COMM AND TRACK
MDAC ID: 7009
ITEM: CHANNEL SELECT SWITCH

LEAD ANALYST: W.C. LONG

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:
NO COUNTERPART NASA NAVNAIDS FMEA. FAILURE TO SWITCH IS A CREDIBLE FAILURE THAT SHOULD BE CONSIDERED FOR NASA FMEAS.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7010
NASA FMEA #: 05-2F-22400-2

SUBSYSTEM: COMM AND TRACK
MDAC ID: 7010
ITEM: MSBLS

LEAD ANALYST: W.C. LONG

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
CRITICALITIES ARE IN AGREEMENT.

REPORT DATE 03/18/88 C-512
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7010A
NASA FMEA #: 05-2F-22500-2
SUBSYSTEM: COMM AND TRACK
MDAC ID: 7010
ITEM: MSBLS
LEAD ANALYST: W.C. LONG

ASSESSMENT:

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| IOA [ 3 /IR ] | [ P ] | [ P ] | [ P ] | [ ] |
| COMPARE | / | / | / | / |

RECOMMENDATIONS: (If different from NASA)

| / | / | / | / | / | / |

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
CRITICALITIES ARE IN AGREEMENT.

REPORT DATE 03/18/88 C-513
**APPENDIX C**  
**ASSESSMENT WORKSHEET**

**ASSESSMENT DATE:** 3/03/88  
**ASSESSMENT ID:** COMTRK-7011  
**NASA FMEA #:** 05-2F-22500-1  
**DATE:** 3/03/88  
**SUBSYSTEM:** COMM AND TRACK  
**MDAC ID:** 7011  
**ITEM:** MSBLS RF ASSEMBLY  
**LEAD ANALYST:** W.C. LONG  

**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:**

CRITICALITIES ARE IN AGREEMENT.

**REPORT DATE 03/18/88 C-514**
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7012
NASA FMEA #: 05-2F-22500-2
SUBSYSTEM: COMM AND TRACK
MDAC ID: 7012
ITEM: MSBLS RF ASSEMBLY
LEAD ANALYST: W.C. LONG

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
CRITICALITIES ARE IN AGREEMENT.

REPORT DATE 03/18/88 C-515
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7013
NASA FMEA #: 05-2F-22400-1
SUBSYSTEM: COMM AND TRACK
MDAC ID: 7013
ITEM: MSBLS TRACKER/DECODER
LEAD ANALYST: W.C. LONG

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
CRITICALITIES ARE IN AGREEMENT.

REPORT DATE 03/18/88  C-516
### APPENDIX C
**ASSESSMENT WORKSHEET**

**ASSESSMENT DATE:** 3/03/88  
**ASSESSMENT ID:** COMTRK-7014  
**NASA FMEA #:** 05-2F-22400-2

**SUBSYSTEM:** COMM AND TRACK  
**MDAC ID:** 7014  
**ITEM:** MSBLS TRACKER/DECODER

**LEAD ANALYST:** W.C. LONG

**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:**
AGREE.

**REPORT DATE 03/18/88**
C-517
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7015
NASA FMEA #: 05-2F-22401-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK
MDAC ID: 7015
ITEM: MLS POWER SWITCH

LEAD ANALYST: W.C. LONG

ASSESSMENT:

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

*(ADD/DELETE)*

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

REMARKS:
CRITICALITIES ARE IN AGREEMENT. FAILURE TO CLOSE AND FAILED OPEN RESULT IN LOSS OF DATA FAILURES.

REPORT DATE 03/18/88 C-518
**APPENDIX C**

**ASSESSMENT WORKSHEET**

**ASSESSMENT DATE:** 3/03/88

**ASSESSMENT ID:** COMTRK-7016

**NASA FMEA #:**

**SUBSYSTEM:** COMM AND TRACK

**MDAC ID:** 7016

**ITEM:** MLS POWER SWITCH

**LEAD ANALYST:** W.C. LONG

**ASSESSMENT:**

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

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* CIL RETENTION RATIONALE: (If applicable)

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**REMARKS:**

FAILURE TO REMAIN CLOSED IS A CREDIBLE FAILURE WITH SAME CRITICALITY AS FAIL OPEN.

**REPORT DATE 03/18/88 C-519**
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7017
NASA FMEA #: 05-6PF-22401-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK
MDAC ID: 7017
ITEM: MLS POWER SWITCH

LEAD ANALYST: W.C. LONG

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:
CRITICALITIES ARE IN AGREEMENT.

REPORT DATE 03/18/88 C-520
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7018
NASA FMEA #: NASA DATA:
BASELINE [ ] NEW [ ]

SUBSYSTEM: COMM AND TRACK
MDAC ID: 7018
ITEM: MLS CHANNEL SELECT SWITCH
LEAD ANALYST: W.C. LONG

ASSESSMENT:

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NASA [ ] / ] [ ] [ ] [ ] [ ] [ ] *

IOA [ 3 /1R ] [ P ] [ P ] [ P ] [ ]

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

RECOMMENDATIONS: (If different from NASA)

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

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
FAILURE TO SWITCH IS A CREDIBLE FAILURE THAT SHOULD BE CONSIDERED FOR NASA FMEA.

REPORT DATE 03/18/88 C-521
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7019
NASA FMEA #: 05-2F-22403-1

SUBSYSTEM: COMM AND TRACK
MDAC ID: 7019
ITEM: MLS CHANNEL SELECT SWITCH

LEAD ANALYST: W.C. LONG

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
CRITICALITIES ARE IN AGREEMENT.

REPORT DATE 03/18/88 C-522
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7020
NASA FMEA #: 05-2D-22700-1
SUBSYSTEM: COMM AND TRACK
MDAC ID: 7020
ITEM: RADAR ALTIMETER
LEAD ANALYST: W.C. LONG

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:

AGREE.

REPORT DATE 03/18/88 C-523
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7020A
NASA FMEA #: 05-2D-22700-3

SUBSYSTEM: COMM AND TRACK
MDAC ID: 7020
ITEM: RADAR ALTIMETER

LEAD ANALYST: W.C. LONG

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
AGREE.

REPORT DATE 03/18/88 C-524
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7021
NASA FMEA #: 05-2D-22700-2

SUBSYSTEM: COMM AND TRACK
MDAC ID: 7021
ITEM: RADAR ALTIMETER
LEAD ANALYST: W.C. LONG

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
AGREE; CONSIDERING THAT INFORMATION MAY NOT BE VERIFIABLE.

REPORT DATE 03/18/88 C-525
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7021A
NASA FMEA #: 05-2D-22700-4

SUBSYSTEM: COMM AND TRACK
MDAC ID: 7021
ITEM: RADAR ALTIMETER

LEAD ANALYST: W.C. LONG

ASSESSMENT:

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

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

RECOMMENDATIONS: (If different from NASA)

[ ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [X]
INADEQUATE [ ]

REMARKS:
AGREE; CONSIDERING THAT INFORMATION MAY NOT BE VERIFIABLE.

REPORT DATE 03/18/88 C-526
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7022
NASA FMEA #: 05-2D-22700-2

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK
MDAC ID: 7022
ITEM: RADAR ALTIMETER

LEAD ANALYST: W.C. LONG

ASSESSMENT:

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| IOA [ 3/1R ] | [ P ] | [ P ] | [ P ] | [ ] |
| COMPARE [ N/N ] | [ N ] | [ N ] | [ N ] | [ N ] |

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

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

REMARKS:
AGREE; CONSIDERING THAT INFORMATION MAY NOT BE VERIFIABLE.

REPORT DATE 03/18/88 C-527
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7022A
NASA FMEA #: 05-2D-22700-4
SUBSYSTEM: COMM AND TRACK
MDAC ID: 7022
ITEM: RADAR ALTIMETER
LEAD ANALYST: W.C. LONG

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| IOA [3/1R]  | [ P ]     | [ P ]| [ P ]|   |
| COMPARE [N/N]| [ N ]     | [ N ]| [ N ]| N |

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

REMARKS:
AGREE; CONSIDERING THAT INFORMATION MAY NOT BE VERIFIABLE.

REPORT DATE 03/18/88    C-528
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7023
NASA FMEA #: 05-6PD-22701-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK
MDAC ID: 7023
ITEM: RA PWR SWITCH

LEAD ANALYST: W.C. LONG

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

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

REMARKS:
AGREE. FAILURE TO CLOSE AND ELECTRICAL OPEN BOTH RESULT IN LOSS OF DATA.
# APPENDIX C
## ASSESSMENT WORKSHEET

**ASSESSMENT DATE:** 3/03/88  
**ASSESSMENT ID:** COMTRK-7024  
**NASA FMEA #:** 05-6PD-22701-1  
**NASA DATA:** Baseline [ ] New [ X ]

**SUBSYSTEM:** COMM AND TRACK  
**MDAC ID:** 7024  
**ITEM:** RA PWR SWITCH  
**LEAD ANALYST:** W.C. Long

### 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:**  
AGREE.

---

**REPORT DATE** 03/18/88 C-530
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7025
NASA FMEA #: 05-6PD-22701-1

SUBSYSTEM: COMM AND TRACK
MDAC ID: 7025
ITEM: RA PWR SWITCH

LEAD ANALYST: W.C. LONG

NASA DATA:
BASELINE [ ]
NEW [ X ]

ASSESSMENT:

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COMPARE [N/]

RECOMMENDATIONS: (If different from NASA)

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(CADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [X]
INADEQUATE [ ]

REMARKS:
AGREE.

REPORT DATE 03/18/88  C-531
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
NASA DATA:
ASSESSMENT ID: COMTRK-7026
NASA FMEA #: 05-2R-5100-1
SUBSYSTEM: COMM AND TRACK
MDAC ID: 7026
ITEM: RENDEZVOUS RADAR
LEAD ANALYST: W.C. LONG

ASSESSMENT:

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

* CIL RETENTION RATIONALE: (If applicable)


REMARKS:
ANALYSIS ONLY COVERED KU-BAND RADAR FUNCTION. WHEN BOTH RADAR AND COMM FUNCTIONS ARE COMBINED, CRITICALITY IS IN AGREEMENT.
KUCOMM FUNCTIONS COVERED UNDER SEPARATE FMEA, 4000 SERIES.

REPORT DATE 03/18/88    C-532
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7026A
NASA FMEA #: 05-2R-5100-2

SUBSYSTEM: COMM AND TRACK
MDAC ID: 7026
ITEM: RENDEZVOUS RADAR
LEAD ANALYST: W.C. LONG

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

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

REMARKS:
ANALYSIS ONLY COVERED KU-BAND RADAR FUNCTION. WHEN BOTH RADAR AND COMM FUNCTIONS ARE COMBINED, CRITICALITY IS IN AGREEMENT. KUCOMMFUNCTIONS COVERED UNDER SEPARATE FMEA, 4000 SERIES. STOWED ANTENNA CAUSES LOSS OF KUB-BAND RR FUNCTION.

REPORT DATE 03/18/88 C-533
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7027
NASA FMEA #: 05-2R-5100-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK
MDAC ID: 7027
ITEM: RENDEZVOUS RADAR

LEAD ANALYST: W.C. LONG

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
ANALYSIS ONLY COVERED KU-BAND RADAR FUNCTION. WHEN BOTH RADAR AND COMM FUNCTIONS ARE COMBINED, CRITICALITY IS IN AGREEMENT. KU_COMM FUNCTIONS COVERED UNDER SEPARATE FMEA, 4000 SERIES.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7027A
NASA FMEA #: 05-2R-5100-2
SUBSYSTEM: COMM AND TRACK
MDAC ID: 7027
ITEM: RENDEZVOUS RADAR
LEAD ANALYST: W.C. LONG

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

REMARKS:
ANALYSIS ONLY COVERED KU-BAND RADAR FUNCTION. WHEN BOTH RADAR AND COMM FUNCTIONS ARE COMBINED, CRITICALITY IS IN AGREEMENT. KUCOMM FUNCTIONS COVERED UNDER SEPARATE FMEA, 4000 SERIES. STOWED ANTENNA CAUSES LOSS OF KU-BAND RR FUNCTION.
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: CONTRK-7028
NASA FMEA #: 05-2R-5100-1

SUBSYSTEM: COMM AND TRACK
MDAC ID: 7028
ITEM: RR EA-1 (INTERFACE AND CONTROL UNIT) [REF KU COMM]

LEAD ANALYST: W.C. LONG

ASSESSMENT:

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

REMARKS:
ANALYSIS ONLY COVERED KU-BAND RADAR FUNCTION. WHEN BOTH RADAR AND COMM FUNCTIONS ARE COMBINED, CRITICALITY IS IN AGREEMENT. KUCOMM FUNCTIONS COVERED UNDER SEPARATE FMEA, 4000 SERIES.

REPORT DATE 03/18/88 C-536
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7028A
NASA FMEA #: 05-2R-5100-2

SUBSYSTEM: COMM AND TRACK
MDAC ID: 7028
ITEM: RR EA-1 (INTERFACE AND CONTROL UNIT) [REF KU COMM]

LEAD ANALYST: W.C. LONG

ASSESSMENT:

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

RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ X ]

REMARKS:
ANALYSIS ONLY COVERED KU-BAND RADAR FUNCTION. WHEN BOTH RADAR AND COMM FUNCTIONS ARE COMBINED, CRITICALITY IS IN AGREEMENT. KUCOMM FUNCTIONS COVERED UNDER SEPARATE FMEA, 4000 SERIES. STOWED ANTENNA CAUSES LOSS OF KU-BAND RR FUNCTION.

REPORT DATE 03/18/88 C-537
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7029
NASA FMEA #: 05-2R-5200-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK
MDAC ID: 7029
ITEM: RR EA-2 (RADAR SIGNAL PROCESSOR)

LEAD ANALYST: W.C. LONG

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

REMARKS:
CRITICALITIES IN AGREEMENT.

REPORT DATE 03/18/88 C-538
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7030
NASA FMEA #: 05-2R-5300-1

SUBSYSTEM: COMM AND TRACK
MDAC ID: 7030
ITEM: RR DEA (DEPLOYED ELECTRONIC ASSY) [REF KU COMM]

LEAD ANALYST: W.C. LONG

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
ANALYSIS ONLY COVERED KU-BAND RADAR FUNCTION. WHEN BOTH RADAR AND COMM FUNCTIONS ARE COMBINED, CRITICALITY IS IN AGREEMENT. KUCOMM FUNCTIONS COVERED UNDER SEPARATE FMEA, 4000 SERIES. STOWED ANTENNA CAUSES LOSS OF KUB-BAND RR FUNCTION.
**APPENDIX C**

**ASSESSMENT WORKSHEET**

**ASSESSMENT DATE:** 3/03/88

**ASSESSMENT ID:** COMTRK-7030A

**NASA FMEA #:** 05-2R-5300-5

**NASA DATA:**

- BASELINE [ ]
- NEW [ X ]

**SUBSYSTEM:** COMM AND TRACK

**MDAC ID:** 7030

**ITEM:** RR DEA (DEPLOYED ELECTRONIC ASSY) [REF KU COMM]

**LEAD ANALYST:** W.C. LONG

**ASSESSMENT:**

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

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

- ADEQUATE [ X ]
- INADEQUATE [ ]

**REMARKS:**

CRITICALITIES IN AGREEMENT.

**REPORT DATE 03/18/88 C-540**
**APPENDIX C**

**ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 3/03/88

ASSESSMENT ID: COMTRK-7031

NASA FMEA #: 05-2R-5300-1

SUBSYSTEM: COMM AND TRACK

MDAC ID: 7031

ITEM: RR DEA (DEPLOYED ELECTRONIC ASSY) [REF KU COMM]

LEAD ANALYST: W.C. LONG

**ASSESSMENT:**

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

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]

INADEQUATE [ ]

**REMARKS:**

ANALYSIS ONLY COVERED KU-BAND RADAR FUNCTION. WHEN BOTH RADAR AND COMM FUNCTIONS ARE COMBINED, CRITICALITY IS IN AGREEMENT. KUCOMM FUNCTIONS COVERED UNDER SEPARATE FMEA, 4000 SERIES. STOWED ANTENNA CAUSES LOSS OF KUB-BAND RR FUNCTION.

REPORT DATE 03/18/88 C-541
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7032
NASA FMEA #: 05-2R-5300-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK
MDAC ID: 7032
ITEM: RR DMA (DEPLOYED MECHANICAL ASSY) [REF KU COMM]

LEAD ANALYST: W.C. LONG

ASSESSMENT:

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

REMARKS:
ANALYSIS ONLY COVERED KU-BAND RADAR FUNCTION. WHEN BOTH RADAR AND COMM FUNCTIONS ARE COMBINED, CRITICALITY IS IN AGREEMENT. KUCOMM FUNCTIONS COVERED UNDER SEPARATE FMEA, 4000 SERIES. STOWED ANTENNA CAUSES LOSS OF KUB-BAND RR FUNCTION.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7033
NASA FMEA #: 05-2R-5300-4
SUBSYSTEM: COMM AND TRACK
MDAC ID: 7033
ITEM: RR DMA (DEPLOYED MECHANICAL ASSY) [REF KU COMM]
LEAD ANALYST: W.C. LONG

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

| ADEQUATE [ X ] |

REMARKS:
ANALYSIS ONLY COVERED KU-BAND RADAR FUNCTION. WHEN BOTH RADAR AND COMM FUNCTIONS ARE COMBINED, CRITICALITY IS IN AGREEMENT. KUCOMM FUNCTIONS COVERED UNDER SEPARATE FMEA, 4000 SERIES. STOWED ANTENNA CAUSES LOSS OF KUB-BAND RR FUNCTION.

REPORT DATE 03/18/88 C-543
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7034
NASA FMEA #: NASA DATA:
SUBSYSTEM: COMM AND TRACK
MDAC ID: 7034
ITEM: RR DMA (DEPLOYED MECHANICAL ASSY) [REF KU COMM]
LEAD ANALYST: W.C. LONG

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
NO COUNTERPART NASA KU-BAND RADAR FMEA. FAILURE TO START/STOP COULD RESULT IN LOSS OF RADAR FUNCTION.

REPORT DATE 03/18/88
C-544
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7035
NASA FMEA #: 05-2R-5300-1
SUBSYSTEM: COMM AND TRACK
MDAC ID: 7035
ITEM: RR DMA (DEPLOYED MECHANICAL ASSY) [REF KU COMM]
LEAD ANALYST: W.C. LONG

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
ANALYSIS ONLY COVERED KU-BAND RADAR FUNCTION. WHEN BOTH RADAR
AND COMM FUNCTIONS ARE COMBINED, CRITICALITY IS IN AGREEMENT.
KU_COMM FUNCTIONS COVERED UNDER SEPARATE FMEA, 4000 SERIES.
STOWED ANTENNA CAUSES LOSS OF KUB-BAND RR FUNCTION.
APPENDIX C  
ASSESSMENT WORKSHEET  

ASSESSMENT DATE: 3/03/88  
ASSESSMENT ID: COMTRK-7036  
NASA FMEA #: 05-2R-5112-1  

SUBSYSTEM: COMM AND TRACK  
MDAC ID: 7036  
ITEM: KU-BAND POWER SWITCH (REF KU-BAND COMM)  
LEAD ANALYST: W.C. LONG  

ASSESSMENT:  

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

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

REMARKS:  
CRITICALITIES IN AGREEMENT.  

REPORT DATE 03/18/88  
C-546
# APPENDIX C
## ASSESSMENT WORKSHEET

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| LEAD ANALYST:    | W.C. LONG |

**ASSESSMENT:**

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

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

**REMARKS:**

ANALYSIS ONLY COVERED KU-BAND RADAR FUNCTION. WHEN BOTH RADAR AND COMM FUNCTIONS ARE COMBINED, CRITICALITY IS IN AGREEMENT. KUCOMM FUNCTIONS COVERED UNDER SEPARATE FMEA, 4000 SERIES. STOWED ANTENNA CAUSES LOSS OF KUB-BAND RR FUNCTION.

REPORT DATE 03/18/88 C-547
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7038
NASA FMEA #: COMTRK-7038
SUBSYSTEM: COMM AND TRACK
MDAC ID: 7038
ITEM: KU-BAND POWER SWITCH (REF KU-BAND COMM)
LEAD ANALYST: W.C. LONG

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RECOMMENDATIONS: (If different from NASA)

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

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

REMARKS:
NO COUNTERPART NASA KU-BAND RADAR FMEA. FAILURE TO REMAIN CLOSED COULD RESULT IN LOSS OF KU-BAND SYSTEM. LOSS OF RADAR WOULD RESULT IN LOSS OF MISSION.

REPORT DATE 03/18/88 C-548
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7039
NASA FMEA #: 05-2R-5113-1

SUBSYSTEM: COMM AND TRACK
MDAC ID: 7039
ITEM: KU A MODE SWITCH (REF KU-BAND COMM)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
CRITICALITIES IN AGREEMENT.
**APPENDIX C**
**ASSESSMENT WORKSHEET**

**ASSESSMENT DATE:** 3/03/88

**ASSESSMENT ID:** COMTRK-7040

**NASA FMEA #:** 05-2R-5113-2

**SUBSYSTEM:** COMM AND TRACK

**MDAC ID:** 7040

**ITEM:** KU A MODE SWITCH (REF KU-BAND COMM)

**LEAD ANALYST:** W.C. LONG

**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:**

ANALYSIS ONLY COVERED KU-BAND RADAR FUNCTION. WHEN BOTH RADAR AND COMM FUNCTIONS ARE COMBINED, CRITICALITY IS IN AGREEMENT. KUCOMM FUNCTIONS COVERED UNDER SEPARATE FMEA, 4000 SERIES. STOWED ANTENNA CAUSES LOSS OF KUB-BAND RR FUNCTION.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7041
NASA FMEA #: 05-2R-5107-1
NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK
MDAC ID: 7041
ITEM: KU BD A ANT STEERING SW (REF KU BD COMM)
LEAD ANALYST: W.C. LONG

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
FAILURE TO SWITCH WOULD PREVENT SELECTION OF OPTIMUM ANTENNA STEERING MODE. NOT CRITICAL FUNCTION. OPEN/SHORT COULD RESULT IN LOSS OF RADAR FUNCTION.

REPORT DATE 03/18/88 C-551
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7042
NASA FMEA #: 05-2R-5214-1

SUBSYSTEM: COMM AND TRACK
MDAC ID: 7042
ITEM: RADAR OUTPUT SWITCH
LEAD ANALYST: W.C. LONG

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:
CRITICALITIES IN AGREEMENT.

REPORT DATE 03/18/88 C-552
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7043
NASA FMEA #: 05-2R-5214-2

SUBSYSTEM: COMM AND TRACK
MDAC ID: 7043
ITEM: RADAR OUTPUT SWITCH

LEAD ANALYST: W.C. LONG

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

RECOMMENDATIONS: (If different from NASA)

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

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
ANALYSIS ONLY COVERED KU-BAND RADAR FUNCTION. WHEN BOTH RADAR AND COMM FUNCTIONS ARE COMBINED, CRITICALITY IS IN AGREEMENT.
KUCOMM FUNCTIONS COVERED UNDER SEPARATE FMEA, 4000 SERIES.
STOWED ANTENNA CAUSED LOSS OF KUB-BAND RR FUNCTION.

REPORT DATE 03/18/88 C-553
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7044
NASA FMEA #: 05-2R-5104-1

SUBSYSTEM: COMM AND TRACK
MDAC ID: 7044
ITEM: SLEW AZIMUTH CONTROL SWITCH (REF KU-BAND COMM)
LEAD ANALYST: W.C. LONG

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ X ]

REMARKS:
ANALYSIS ONLY COVERED KU-BAND RADAR FUNCTION. WHEN BOTH RADAR AND COMM FUNCTIONS ARE COMBINED, CRITICALITY IS IN AGREEMENT. KUCOMM FUNCTIONS COVERED UNDER SEPARATE FMEA, 4000 SERIES. STOWED ANTENNA CAUSES LOSS OF KUB-BAND RR FUNCTION.

REPORT DATE 03/18/88 C-554
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7045
NASA FMEA #: 05-2R-5104-2

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK
MDAC ID: 7045
ITEM: SLEW AZIMUTH CONTROL SWITCH (REF KU-BAND COMM)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
CRITICALITIES IN AGREEMENT.

REPORT DATE 03/18/88 C-555
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7046
NASA FMEA #: 05-2R-5104-1
SUBSYSTEM: COMM AND TRACK
MDAC ID: 7046
ITEM: SLEW ELEV CONTROL SWITCH (REF KU-BAND COMM)
LEAD ANALYST: W.C. LONG

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RECOMMENDATIONS: (If different from NASA)

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
ANALYSIS ONLY COVERED KU-BAND RADAR FUNCTION. WHEN BOTH RADAR AND COMM FUNCTIONS ARE COMBINED, CRITICALITY IS IN AGREEMENT.
KUCOMM FUNCTIONS COVERED UNDER SEPARATE FMEA, 4000 SERIES.
STOWED ANTENNA CAUSES LOSS OF KUB-BAND RR FUNCTION.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7047
NASA FMEA #: 05-2R-5104-2

SUBSYSTEM: COMM AND TRACK
MDAC ID: 7047
ITEM: SLEW ELEV CONTROL SWITCH (REF KU-BAND COMM)
LEAD ANALYST: W.C. LONG

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
CRITICALITIES AGREE.

REPORT DATE 03/18/88 C-557
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7048
NASA FMEA #: 05-2R-5105-1

SUBSYSTEM: COMM AND TRACK
MDAC ID: 7048
ITEM: SLEW RATE CONTROL SWITCH (REF KU-BAND COMM)

LEAD ANALYST: W.C. LONG

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
FAILURE TO TRANSFER OR SHORTED CONTACTS WOULD ONLY PREVENT SLEW RATE SELECTION. NOT CRITICAL. OPEN COULD CAUSE LOSS OF KU-BAND FUNCTION RESULTING IN CRITICALITY DENOTED.

REPORT DATE 03/18/88 C-558
**APPENDIX C**
**ASSESSMENT WORKSHEET**

ASSESSMENT DATE: 3/03/88  
ASSESSMENT ID: COMTRK-7049  
NASA FMEA #: 05-2R-5105-2

SUBSYSTEM: COMM AND TRACK  
MDAC ID: 7049  
ITEM: SLEW RATE CONTROL SWITCH (REF KU-BAND COMM)

LEAD ANALYST: W.C. LONG

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:  
AGREE WITH NASA FMEA. ERROR MADE ON CRITICALITY ASSIGNMENT OR TYPO.

REPORT DATE 03/18/88  
C-559
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7050
NASA FMEA #: 05-2R-5108-1
SUBSYSTEM: COMM AND TRACK
MDAC ID: 7050
ITEM: ANT SEARCH SELECT SWITCH (REF KU-BAND COMM)
LEAD ANALYST: W.C. LONG

ASSESSMENT:

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

RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [X]
INADEQUATE [ ]

REMARKS:
ERROR MADE ON IOA ASSESSMENT. SHOULD BE 2/2. ONLY WORST CASE CONDITION ANALYZED.

REPORT DATE 03/18/88 C-560
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7050A
NASA FMEA #: 05-2R-5108-2

SUBSYSTEM: COMM AND TRACK
MDAC ID: 7050
ITEM: ANT SEARCH SELECT SWITCH (REF KU-BAND COMM)
LEAD ANALYST: W.C. LONG

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

RECOMMENDATIONS: (If different from NASA)

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

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [X]
INADEQUATE [ ]

REMARKS:
ERROR MADE ON IOA ASSESSMENT. SHOULD BE 2/2. ONLY WORST CASE CONDITION ANALYZED.

REPORT DATE 03/18/88 C-561
### APPENDIX C
#### ASSESSMENT WORKSHEET

**ASSESSMENT DATE:** 3/03/88  
**ASSESSMENT ID:** COMTRK-7051  
**NASA FMEA #:** 05-2R-5108-3

**SUBSYSTEM:** COMM AND TRACK  
**MDAC ID:** 7051  
**ITEM:** ANT SEARCH SELECT SWITCH (REF KU-BAND COMM)

**LEAD ANALYST:** W.C. LONG

**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:**

AGREE. ERROR MADE ON IOA ASSESSMENT. SHOULD BE 2/2. ONLY WORST CASE CONDITION ANALYZED.

**REPORT DATE 03/18/88** C-562
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7501
NASA FMEA #: 05-6PC-22206-1

SUBSYSTEM: COMM AND TRACK
MDAC ID: 7501
ITEM: CIRCUIT BREAKER, 3A (31V73A4CB58, 61 & 64)
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:
CRITICALITIES ARE IN AGREEMENT.

REPORT DATE 03/18/88 C-563
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7501A
NASA FMEA #: 05-6PC-22206-2

SUBSYSTEM: COMM AND TRACK
MDAC ID: 7501
ITEM: CIRCUIT BREAKER, 3A (31V73A4CB58, 61 & 64)
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:
AGREE. ANALYSIS COVERED WORST CASE FAILED OPEN CONDITION. FAILED CLOSED WOULD ALLOW FOR NORMAL OPERATION WITH FUSE PROTECTION STILL AVAILABLE.

REPORT DATE: 03/18/88 C-564
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88  NASA DATA:
ASSESSMENT ID: COMTRK-7502  BASELINE [ ]
NASA FMEA #: 05-6PC-22212-1  NEW [ X ]

SUBSYSTEM: COMM AND TRACK
MDAC ID: 7502
ITEM: ISOLATION RESISTOR, (33V73A7A1R1, 2 & 3)

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:
AGREE. OPEN RESISTOR RESULTS IN LOSS OF SW SCAN CAPABILITY.

REPORT DATE 03/18/88  C-565
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7503
NASA FMEA #: 05-6PF-22402-1
NASA DATA: BASELINE [ ] NEW [ X ]
SUBSYSTEM: COMM AND TRACK
MDAC ID: 7503
ITEM: CIRCUIT BREAKER, 5A (33V73A14CB25, A15CB24 & A16CB18)
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:
CRITICALITIES ARE IN AGREEMENT.

REPORT DATE 03/18/88 C-566
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7503A
NASA FMEA #: 05-6PF-22402-2
SUBSYSTEM: COMM AND TRACK
MDAC ID: 7503
ITEM: CIRCUIT BREAKER, 5A (33V73A14CB25, A15CB24 & A16CB18)
LEAD ANALYST: H.J. LOWERY

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK
MDAC ID: 7503
ITEM: CIRCUIT BREAKER, 5A (33V73A14CB25, A15CB24 & A16CB18)
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:
AGREE. ANALYSIS COVERED WORST CASE "FAILED OPEN" CONDITION.
FAILED CLOSED WOULD ALLOW FOR NORMAL OPERATION WITH MLS PWR SW AVAILABLE FOR ON/OFF CONTROL.

REPORT DATE 03/18/88
C-567
**APPENDIX C**

**ASSESSMENT WORKSHEET**

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**SUBSYSTEM:** COMM AND TRACK  
**MDAC ID:** 7504  
**ITEM:** ISOLATION RESISTOR, (33V73A8A5R1, A6R1 & A7R1)

**LEAD ANALYST:** H.J. LOWERY

**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:**

NO COUNTERPART NASA FMEA. SHORT TO GROUND FAILURE SHOULD BE CONSIDERED DUE TO THESE RESISTORS BEING LOCATED ON LOAD SIDE OF SWITCHES RATHER THAN BUS SIDE. BUSSSES NOT PROTECTED FROM SW SHORTS TO GROUND.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7505
NASA FMEA #: 05-6PF-22403-1

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK
MDAC ID: 7505
ITEM: ISOLATION RESISTOR 33V73A8A5R1, A6R1, A7R1

LEAD ANALYST: A.W. ADDIS

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:
CRITICALITIES ARE IN AGREEMENT.

REPORT DATE 03/18/88 C-569
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7506
NASA FMEA #: 05-6PD-22702-1

SUBSYSTEM: COMM AND TRACK
MDAC ID: 7506
ITEM: CIRCUIT BREAKER, 3A(33V73A14CB24 & A15CB23)

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:
AGREE WHEN MSBLS OR BAROMETRIC ALTIMETER ACCURACIES ARE NOT ADEQUATE OR AVAILABLE.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/03/88
ASSESSMENT ID: COMTRK-7506A
NASA FMEA #: 05-6PD-22702-2

SUBSYSTEM: COMM AND TRACK
MDAC ID: 7506
ITEM: CIRCUIT BREAKER, 3A(33V73A14CB24 & A15CB23)

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:
AGREE. ANALYSIS COVERED OPEN FAILURE REPRESENTING WORST CASE.
FAILED CLOSED ALLOWS FOR NORMAL OPERATION WITH RA POWER SW
PROVIDING ON/OFF CONTROL CAPABILITY.

REPORT DATE 03/18/88 C-571
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/04/88
ASSESSMENT ID: COMTRK-8001
NASA FMEA #: 1.2.2
SUBSYSTEM: COMM AND TRACK
MDAC ID: 8001
ITEM: VIDEO SWITCHING UNIT
LEAD ANALYST: W.C. LONG

ASSESSMENT:

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

REMARKS:
LOSS OF VCU COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPAB.
WINDOW VIEWING, EVA AND COAS FOR CREW USUAL INSPECTION AND RMS JETTISON

REPORT DATE 03/18/88 C-572
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/04/88
ASSESSMENT ID: COMTRK-8001A
NASA FMEA #: 1.2.18
SUBSYSTEM: COMM AND TRACK
MDAC ID: 8001
ITEM: VIDEO SWITCHING UNIT
LEAD ANALYST: W.C. LONG

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
LOSS OF VCU COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW USUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/04/88
ASSESSMENT ID: COMTRK-8001B
NASA FMEA #: 1.2.21

SUBSYSTEM: COMM AND TRACK
MDAC ID: 8001
ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

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:
Loss of VCU could result in loss of CCTV and mission. Loss of all capability to perform CCTV function could prevent RMS stow and monitoring P/L bay door latches resulting in possible loss of vehicle and crew. Unlike CCTV redundancy exists via crew window viewing, EVA and COAS for crew usual inspection and RMS jettison to allow P/L bay door closure. Worst case condition.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/04/88
ASSESSMENT ID: COMTRK-8001C
NASA FMEA #: 1.2.22

SUBSYSTEM: COMM AND TRACK
MDAC ID: 8001
ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

ASSESSMENT:

CRITICALITY

REDUNDANCY SCREENS

CIL

ITEM

NASA [ 2 /2 ] [ ] [ ] [ ] [ X ] *

IOA [ 2 /1R ] [ P ] [ P ] [ P ] [ X ]

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

RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:

LOSS OF VCU COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW USUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.

REPORT DATE 03/18/88 C-575
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/04/88  NASA DATA:
ASSESSMENT ID: COMTRK-8001D  BASELINE [ ]
NASA FMEA #: 1.2.23  NEW [ X ]
SUBSYSTEM: COMM AND TRACK
MDAC ID: 8001
ITEM: VIDEO SWITCHING UNIT
LEAD ANALYST: W.C. LONG

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
LOSS OF VCU COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW WINDOW VIEWING, EVA AND COAS FOR CREW USUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/04/88
ASSESSMENT ID: COMTRK-8001E
NASA FMEA #: 1.2.1
SUBSYSTEM: COMM AND TRACK
MDAC ID: 8001
ITEM: VIDEO SWITCHING UNIT
LEAD ANALYST: W.C. LONG

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

REMARKS:
LOSS OF OUTPUT COVERS ALL VSU FUNCTIONS. ONLY THE WORST CASE FUNCTION WAS ANALYSED.
WINDOW VIEWING, EVA AND COAS FOR CREW USUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.

REPORT DATE 03/18/88 C-577
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88
ASSESSMENT ID: COMTRK-8001F
NASA FMEA #: 1.2.3

SUBSYSTEM: COMM AND TRACK
MDAC ID: 8001
ITEM: VIDEO SWITCHING UNIT
LEAD ANALYST: W.C. LONG

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RECOMMENDATIONS: (If different from NASA)

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* CIL RETENTION RATIONALE: (If applicable)

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REPORT DATE 03/18/88 C-578
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88
ASSESSMENT ID: COMTRK-8001G
NASA FMEA #: 1.2.4

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK
MDAC ID: 8001
ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)
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* CIL RETENTION RATIONALE: (If applicable)
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APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88
ASSESSMENT ID: COMTRK-8001H
NASA FMEA #: 1.2.5
SUBSYSTEM: COMM AND TRACK
MDAC ID: 8001
ITEM: VIDEO SWITCHING UNIT
LEAD ANALYST: W.C. LONG

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RECOMMENDATIONS: (If different from NASA)

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WINDOW VIEWING, EVA AND COAS FOR CREW USUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.

REPORT DATE 03/18/88 C-580
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  NASA DATA:
ASSESSMENT ID: COMTRK-8001I  BASELINE [ ]
NASA FMEA #: 1.2.6  NEW [ X ]

SUBSYSTEM: COMM AND TRACK
MDAC ID: 8001
ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

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APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88
ASSESSMENT ID: COMTRK-8001J
NASA FMEA #: 1.2.7
SUBSYSTEM: COMM AND TRACK
MDAC ID: 8001
ITEM: VIDEO SWITCHING UNIT
LEAD ANALYST: W.C. LONG

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APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88
ASSESSMENT ID: COMTRK-8001K
NASA FMEA #: 1.2.8
SUBSYSTEM: COMM AND TRACK
MDAC ID: 8001
ITEM: VIDEO SWITCHING UNIT
LEAD ANALYST: W.C. LONG

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REPORT DATE 03/18/88 C-583
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88
ASSESSMENT ID: COMTRK-8001L
NASA FMEA #: 1.2.9

SUBSYSTEM: COMM AND TRACK
MDAC ID: 8001
ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

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APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88
ASSESSMENT ID: COMTRK-8001M
NASA FMEA #: 1.2.10
SUBSYSTEM: COMM AND TRACK
MDAC ID: 8001
ITEM: VIDEO SWITCHING UNIT
LEAD ANALYST: W.C. LONG

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RECOMMENDATIONS: (If different from NASA)

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APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88  NASA DATA: BASELINE [ ]
ASSESSMENT ID: COMTRK-8001N  NEW [ X ]
NASA FMEA #: 1.2.11

SUBSYSTEM: COMM AND TRACK
MDAC ID: 8001
ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

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RECOMMENDATIONS: (If different from NASA) 

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WINDOW VIEWING, EVA AND COAS FOR CREW USUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.

REPORT DATE 03/18/88  C-586
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88
ASSESSMENT ID: COMTRK-80010
NASA FMEA #: 1.2.12

SUBSYSTEM: COMM AND TRACK
MDAC ID: 8001
ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

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RECOMMENDATIONS: (If different from NASA)

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REPORT DATE 03/18/88    C-587
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88
ASSESSMENT ID: COMTRK-8001P
NASA FMEA #: 1.2.13
NASA DATA:
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NEW [X]

SUBSYSTEM: COMM AND TRACK
MDAC ID: 8001
ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

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RECOMMENDATIONS: (If different from NASA)

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REPORT DATE 03/18/88 C-588
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88
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NASA FMEA #: 1.2.14
ASSESSMENT ID: COMTRK-8001Q
NASA FMEA #: 1.2.14
SUBSYSTEM: COMM AND TRACK
MDAC ID: 8001
ITEM: VIDEO SWITCHING UNIT
LEAD ANALYST: W.C. LONG

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| LEAD ANALYST: | W.C. LONG |

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REPORT DATE 03/18/88 C-589
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88
ASSESSMENT ID: COMTRK-8001R
NASA FMEA #: 1.2.15
SUBSYSTEM: COMM AND TRACK
MDAC ID: 8001
ITEM: VIDEO SWITCHING UNIT
LEAD ANALYST: W.C. LONG

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RECOMMENDATIONS: (If different from NASA)

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REPORT DATE 03/18/88 C-590
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88
ASSESSMENT ID: COMTRK-8001S
NASA FMEA #: 1.2.16
SUBSYSTEM: COMM AND TRACK
MDAC ID: 8001
ITEM: VIDEO SWITCHING UNIT
LEAD ANALYST: W.C. LONG

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REPORT DATE 03/18/88 C-591
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88
ASSESSMENT ID: COMTRK-8001T
NASA FMEA #: 1.2.17
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SUBSYSTEM: COMM AND TRACK
MDAC ID: 8001
ITEM: VIDEO SWITCHING UNIT
LEAD ANALYST: W.C. LONG

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

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

REMARKS:
LOSS OF OUTPUT COVERS ALL VSU FUNCTIONS. ONLY THE WORST CASE FUNCTION WAS ANALYSED.
WINDOW VIEWING, EVA AND COAS FOR CREW USUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.

REPORT DATE 03/18/88 C-592
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88
ASSESSMENT ID: COMTRK-8001U
NASA FMEA #: 1.2.19

SUBSYSTEM: COMM AND TRACK
MDAC ID: 8001
ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]

INADEQUATE [ ]

REMARKS:
LOSS OF OUTPUT COVERS ALL VSU FUNCTIONS. ONLY THE WORST CASE FUNCTION WAS ANALYSED.
WINDOW VIEWING, EVA AND COAS FOR CREW USUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.
**APPENDIX C**

**ASSESSMENT WORKSHEET**

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

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ ]
INADEQUATE [ ]

**REMARKS:**

LOSS OF OUTPUT COVERS ALL VSU FUNCTIONS. ONLY THE WORST CASE FUNCTION WAS ANALYSED.

WINDOW VIEWING, EVA AND COAS FOR CREW USUAL INSPECTION AND RMS JETTISON TO ALLOW P/L BAY DOOR CLOSURE. WORST CASE CONDITION.
**APPENDIX C**  
**ASSESSMENT WORKSHEET**

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

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(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE  [ X ]
INADEQUATE  [ ]

**REMARKS:**

LOSS OF VCU COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW.

**REPORT DATE 03/18/88**

C-595
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88
ASSESSMENT ID: COMTRK-8002A
NASA FMEA #: 1.2.18

BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK
MDAC ID: 8002
ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W. C. LONG

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

[ 2 /1R ] [ P ] [ P ] [ P ] [ ]
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* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
LOSS OF VCU COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW

REPORT DATE 03/18/88 C-596
## APPENDIX C
### ASSESSMENT WORKSHEET

**ASSESSMENT DATE:** 3/05/88  
**NASA DATA:**  
**ASSESSMENT ID:** COMTRK-8002B  
**NASA FMEA #:** 1.2.21  
**SUBSYSTEM:** COMM AND TRACK  
**MDAC ID:** 8002  
**ITEM:** VIDEO SWITCHING UNIT  
**LEAD ANALYST:** W.C. LONG

**ASSESSMENT:**

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

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [X]  
INADEQUATE [ ]

**REMARKS:**

LOSS OF VCU COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW.
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88
ASSESSMENT ID: COMTRK-8002C
NASA FMEA #: 1.2.22

NASA DATA:
BASELINE [ ]
NEW [ X ]

SUBSYSTEM: COMM AND TRACK
MDAC ID: 8002
ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

ASSESSMENT:

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RECOMMENDATIONS: (If different from NASA)

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

(ADD/DELETE)

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
LOSS OF VCU COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88
ASSESSMENT ID: COMTRK-8002D
NASA FMEA #: 1.2.23

SUBSYSTEM: COMM AND TRACK
MDAC ID: 8002
ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

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RECOMMENDATIONS: (If different from NASA)

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

* CIL RETENTION RATIONALE: (If applicable)

ADEQUATE [ X ]
INADEQUATE [ ]

REMARKS:
LO Os of VCU COULD RESULT IN LOSS OF CCTV AND MISSION. LOSS OF ALL CAPABILITY TO PERFORM CCTV FUNCTION COULD PREVENT RMS STOW AND MONITORING P/L BAY DOOR LATCHES RESULTING IN POSSIBLE LOSS OF VEHICLE AND CREW. UNLIKE CCTV REDUNDANCY EXISTS VIA CREW.

REPORT DATE 03/18/88 C-599
APPENDIX C
ASSESSMENT WORKSHEET

ASSESSMENT DATE: 3/05/88
NASA DATA: BASELINE [ ]
NEW [ X ]

ASSESSMENT ID: COMTRK-8002E
NASA FMEA #: 1.2.1

SUBSYSTEM: COMM AND TRACK
MDAC ID: 8002
ITEM: VIDEO SWITCHING UNIT

LEAD ANALYST: W.C. LONG

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RECOMMENDATIONS: (If different from NASA)

[ / ] [ ] [ ] [ ] [ ]

(ADD/DELETE)

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

REMARKS:
FAILS TO SWITCH RESULTS IN LOSS OF OUTPUT. LOSS OF OUTPUT COVERS ALL VSU FUNCTIONS. ONLY THE WORST CASE FUNCTION WAS ANALYSED.

REPORT DATE 03/18/88 C-600