

USA Ground Operations CIL Sheet

Critical Item: PMC Carrier Module
NASA Part No: None
Mfg/Part No: Motorola Inc. / PMCSPAN-001
System: Checkout and Launch Control System

Criticality Category: 1
Total Quantity: 1

Find No.	Qty	Area	PMN	Baseline	Drawing / Sheet
52473A23A1A4	1	HMF	L72-4900	090.10	84K09908-002 / 8

Function:

Provides additional connectivity between the RTCN and the FEPC.

Failure Mode No. Failure Mode	Failure Cause Failure Effect	Detection Method Time to Effect	Crit Cat
01IT03-002.005 Corruption of Data	Internal Component or Software Failure Invalid RTCN data would be sent to the FEPC. Invalid data would be recorded to the SDC and locally. Making a critical decision based on invalid data could result in loss of life and/or vehicle.	None Seconds	1

ACCEPTANCE RATIONALE

Design:

- Worldwide Standards Compliance
 - International
 - American National Standards Institute/VMEbus International Trade Association ANSI/VITA 1-1994, VME64 Standard
 - Institute of Electrical and Electronics Engineers (IEEE) Std 1014-1987, Standard for a versatile backplane bus: VMEbus
 - United States
 - Federal Communications Commission (FCC) Part 15, Class A, Electromagnetic Compatibility (EMC)
 - Underwriters Laboratory (UL) Listed UL-1950, Low Voltage Safety
 - Canada
 - Industry Canada ICES-003, Class A, EMC
 - Europe
 - European Norm EN50081-1 and EN50082-1, EMC Emissions and Immunity respectively (CE Mark)
 - European Norm EN60950, Low Voltage Safety (CE Mark)
- Designed to industry standards.
- All input power is delivered to the hardware through CLCS Power Distribution Chassis (PDCs) which employ Electromagnetic Interference (EMI)/Radio Frequency Interference (RFI) filtering and Transient Voltage Surge Suppression (TVSS).

Test:

- Under the provisions set forth in 84K00071 "CLCS Hardware Development Plan" the following tests were performed:
 - A Manufacturer Unit Test (MUT) is performed on each Gateway assembly prior to going to spares or being installed in the field.
 - 84K02901 "Hardware Specification and Design Verification Test (DVT), VME Data Processing Hardware and Operating System Software" - a unit design test.

- 84K07210-010-02 "Hypergolic Maintenance Facility (HMF) Hardware Installation Test (HIT)" - an integrated connectivity test.
- 84K07211 "Hypergolic Maintenance Facility (HMF) Hardware Validation Test (HVT)" - an integrated functionality test.
- CLCS HMF Level 5 User Acceptance Testing as outlined in 84K00190, "CLCS Certification Plan".

Inspection:

- No inspections or preventative maintenance is accomplished on this item.

Failure History:

- Current data on test failures, unexplained anomalies, and other failures experienced during ground processing activities can be found in the PRACA database. The PRACA database was researched and no data was found on this component in the critical failure mode.

Operational Use:

Correcting Action	Timeframe
There is no action which can be taken to mitigate the failure effect.	Since no correcting action is available, timeframe does not apply.