USA Ground Operations CIL Sheet

Critical Item: BIN Switch
Criticality Category: 1
NASA Part No: None
Total Quantity: 2
Mfg/Part No: 3 Com Corporation / 3C16980
System: Checkout and Launch Control System

Find No.	Qty	Area	PMN	Baseline	Drawing / Sheet
52452A11	1	HMF	L72-5300	090.10	84K09908-002 / 17
52452A16	1	HMF	L72-5300	090.10	84K09908-002 / 18

Function:

Provides routing of data frames between the SWS and DRP and the ATM-FE Bridge.

Failure Mode No. Failure Mode	Failure Cause Failure Effect	Detection Method Time to Effect	Crit Cat
01IT03-002.010 Corruption of Data	Internal Component or Software Failure Invalid data would be recorded to the SDC and/or be presented to the console operator. 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
    - International Electrotechnical Commission IEC 950, Safety of Information Technology Equipment
    - International Electrotechnical Commission IEC 68, Environmental Testing
  - United States
    - Federal Communications Commission (FCC) Part 15, Class B, Electromagnetic Compatibility (EMC)
    - Underwriters Laboratory (UL) Listed UL-1950, Low Voltage Safety
  - Canada
    - Industry Canada ICES-003, Class B, EMC
    - Canadian Standards Association CSA C22.2 No. 60950, Safety of Information Technology Equipmer
  - Europe
    - European Norm EN50081-1 and EN50082-1, EMC (CE Mark)
    - European Norm EN60950, Low Voltage Safety (CE Mark)
    - European Norm EN60068, Environmental Testing (CE Mark)
  - Japan
    - Voluntary Control Council for Interference (VCCI) from Information Technology Equipment compatibl Class B, EMC
  - China
    - Chinese National Standards CNS 13438, EMC
  - Australia/New Zealand
    - Australian Communications Authority and Radio Spectrum Management Agency, AS/NZS 3548, Class B, EMC

- Designed to industry standards.

- Employs multiple levels of error checking utilizing Cyclic Redundancy Checks (CRCs) and checksums to reduce the likelihood of corruption of data during transmission between endstations.

• All input power is delivered to the hardware through CLCS Power Distribution Chassis (PDCs) which emplo
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:

- 84K06548-008-02 "Test Specification, Receiving Inspection Test (RIT) Procedure for 3Com SuperStack 3300 Ethernet Switch" - a unit test.

- 84K03504 "Hardware Specification and Design Verification Test (DVT), Network Switches" - 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 processi
activities can be found in the PRACA database. The PRACA database was researched and no data was foun
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.