

USA Ground Operations CIL Sheet

Critical Item: Switch Module
NASA Part No: None
Mfg/Part No: FORE Systems, Inc. / SM-1000
System: ATM Transmission System (ATXS)

Criticality Category: 1
Total Quantity: 1

Find No.	Qty	Area	PMN	Baseline	Drawing / Sheet
3.05A27A1	1	LCC	K61-5526-01	068.25	80K58945 / 11

Function:

Provides buffering of data and an individual switch fabric per chassis slot.

Failure Mode No. Failure Mode	Failure Cause Failure Effect	Detection Method Time to Effect	Crit Cat
00023.007 Corruption of Data	Electrical Failure / Product Defect / Software Error Invalid data would be sent to the CLCS HMF Set and/or the SDC. Making a critical decision based on invalid data could result in loss of life/vehicle.	None Seconds	1

ACCEPTANCE RATIONALE

Design:

- Worldwide Standards Compliance
 - International
 - International Electrotechnical Commission (IEC) IEC 950, Low Voltage Safety
 - International Electrotechnical Commission (IEC) CISPR22, Limits and Methods of Measurement of Radio Disturbance Characteristics of Information Technology Equipment, Class A, EMC
 - United States
 - Underwriters Laboratory (UL) Listed 1950, Low Voltage Safety
 - Federal Communications Commission (FCC) Part 15, Class A, Electromagnetic Compatibility (EMC)
 - Canada
 - Canadian Standards Association (CSA) C22.2, No. 60950, Safety of Information Technology Equipment
 - Europe
 - European Norm EN60950, Low Voltage Safety (CE Mark)
 - European Norm EN50081-1 and EN50082-1, EMC Emissions and Immunity respectively (CE Mark)
 - Australia
 - Australian Communications Authority and Radio Spectrum Management Agency, AS/NZS 3548, Class A, EMC
 - Japan
 - Voluntary Control Council for Interference (VCCI) from Information Technology Equipment compatible, Class A, EMC
- Equipment is designed to industry standards.
- Employs a Header Error Check (HEC) field in the data to increase the likelihood of detection of corrupted data during transmission between endstations.
- The ATXS employs all fiber optic cabling between locations which is resistive to outside forces causing corruption of the data passing through it.

Test:

- None.

Inspection:

- Maximo Job Plan 17630 outlines the quarterly preventative maintenance which inspects the ATXS hardware for any alarm conditions, proper fan operation, and any outside conditions that could effect system performance.

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- Continuous monitoring of system performance by a dedicated console per Job Instruction NETS-TRANS-027.

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.