

USA Ground Operations CIL Sheet

Critical Item: CPU Tower

Criticality Category: 1

NASA Part No: None

Total Quantity: 7

Mfg/Part No: Gateway Computers / GP6-400

System: Checkout and Launch Control System

Find No.	Qty	Area	PMN	Baseline	Drawing / Sheet
52400A3A3A14	1	HMF	L72-4500	090.10	84K09908-002 / 17, 18
52401A3A3A14	1	HMF	L72-4500	090.10	84K09908-002 / 17, 18
52402A3A3A14	1	HMF	L72-4500	090.10	84K09908-002 / 17, 18
52403A3A3A14	1	HMF	L72-4500	090.10	84K09908-002 / 17, 18
52404A3A3A14	1	HMF	L72-4500	090.10	84K09908-002 / 17, 18
52405A3A3A1	1	HMF	L72-4500	090.10	84K09908-002 / 17, 18
52406A3A3A1	1	HMF	L72-4500	090.10	84K09908-002 / 17, 18

Function:

CPU that facilitates requests for data from the SDC or from outside data sources and flow of that data to the flat panel display.

Failure Mode No. Failure Mode	Failure Cause Failure Effect	Detection Method Time to Effect	Crit Cat
01IT03-002.001	Internal Component or Software Failure	None	1
Corruption of Data	Invalid data would be presented to the console operator. Making a critical decision based on invalid data could result in loss of life and/or vehicle.	Seconds	

ACCEPTANCE RATIONALE

Design:

- Worldwide Standards Compliance
 - International
 - International Electrotechnical Commission (IEC) 60825, Safety of Laser Products
 - United States
 - Federal Communications Commission (FCC) Part 15, Class B, Electromagnetic Compatibility (EMC)
 - Underwriters Laboratory (UL) Listed UL-1950, Low Voltage Safety
 - US Department of Health and Human Services (DHHS) Radiation Performance Standard, Class 1 Laser Products
 - Canada
 - Industry Canada ICES-003, Class B, EMC
 - Europe
 - European Norm EN50081-1 and EN50082-1, EMC Emissions and Immunity respectively (CE Mark)
 - European Norm EN60950, Low Voltage Safety (CE Mark)
 - Japan
 - Voluntary Control Council for Interference (VCCI) from Information Technology Equipment compatibl

Class B, 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 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:
 - 84K06622-001-02 "Test Specification, Receiving Inspection Test (RIT) Procedure for Support Workstations (SWS)" - a unit test.
 - 84K02503 "Hardware Specification and Design Verification Test (DVT), Support Workstations (SWS) - 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.