

USA Ground Operations CIL Sheet**Critical Item:** Front End Data Server (FREDS)**Criticality Category:** 1**NASA Part No:** 84K06002-009**Total Quantity:** 5**Mfg/Part No:** None / None**System:** Shuttle Data Center

Find No.	Qty	Area	PMN	Baseline	Drawing / Sheet
51797A10	1	LCC	L72-6010	091.10	84K06003 / 2
51797A27	1	LCC	L72-6010	091.10	84K06003 / 2
51798A10	1	LCC	L72-6010	091.10	84K06003 / 2
51798A27	1	LCC	L72-6010	091.10	84K06003 / 2
51799A10	1	LCC	L72-6010	091.10	84K06003 / 2

Function:

SDC's interface to the LPS Common Data Buffer Switcher for recording of LPS data stream. Converts data format to be compatible with SDC equipment.

Failure Mode No. Failure Mode	Failure Cause Failure Effect	Detection Method Time to Effect	Crit Cat
09IT09-010.005 Corruption of data	Electrical failure / product defect / software error Possible presentation of invalid data upon user retrieval. Making a critical decision based on invalid data could result in loss of life/vehicle.	None Seconds	1

ACCEPTANCE RATIONALE**Design:**

- The equipment consists of integrated components that have been designed to industry standards.
- Software ensures incoming data is not corrupt by using time stamp checks, parity checks and normal TCP/IP security protocols.
- Utilizes Dual Ring, Dual Homed network configuration for superior reliability and robustness, Token Passing for preventing data corruption due to data transmission collisions and multiple layers of error checking to detect corrupt data packets. Reference document number 84K06007, Shuttle Data Center (SDC) DCR White Paper, for additional SDC network communication attributes and features.

Test:

- Validation testing performed prior to operational use.

Inspection:

- There are no inspections performed.

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.