USA Ground Operations CIL Sheet

Critical Item: Circuit Breaker
NASA Part No: None
Mfg/Part No: General Electric / THQB1120
System: 60 Hz Low Voltage Power Distribution System

Criticality Category: 1S
Total Quantity: 4

Find No.	Qty	Area	PMN	Baseline	Drawing / Sheet
CB-14, Panel P-42	1	Pad-A	K61-4318	353.20	39K6150018 /
CB-19, Panel P-42	1	Pad-A	K61-4318	353.20	39K6150018 /
CB-21, Panel P-42	1	Pad-A	K61-4318	353.20	39K6150018 /
CB-22, Panel P-42	1	Pad-A	K61-4318	353.20	39K6150018 /

Function:

Provides circuit overload protection of Hypergol Vapor Detection System (HVDS) cabinets (4) in Panel P-42.

Failure Mode No. Failure Mode	Failure Cause Failure Effect	Detection Method Time to Effect	Crit Cat
09ELA2-001.017 Premature trip	Internal piece part structural failure Loss of power to HVDS cabinets (4). Loss of hypergol vapor detection capabilities. Could allow loss of life during hazardous conditions.	LPS console operator will receive alarm indicating HVDS sensor failures. Immediate	1S

ACCEPTANCE RATIONALE

Design:

Rated	Estimated Operating Load	Operating Voltage
20A	1A	120VAC

- This component is a standard commercial item used throughout industry.

Test:

- OMRSD File VI requires time/current trip test, megger test, and instantaneous trip test prior to installation and after a fault (ref. OMI I2001, Electrical Hardware Testing).

Inspection:

- OMRSD File VI requires annual inspection and maintenance per OMI I2001.

- Operational check and visual inspection of circuit breaker for excessive heat performed annually.

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:

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