USA Ground Operations CIL Sheet

Critical Item: Circuit Breaker, Draw-out type **Criticality Category:** 1S
NASA Part No: None **Total Quantity:** 2
Mfg/Part No: Cutler Hammer / DS-416
System: 60 Hz Low Voltage Power Distribution System

Find No.	Qty	Area	PMN	Baseline	Drawing / Sheet
CB-3D, SS952-A	1	Pad-A	K61-4318	353.20	39K6150018 /
CB-5B, SS952-A	1	Pad-A	K61-4318	353.20	39K6150018 /

Function:

CB-3D: Provides circuit overload protection for Panel PF (PTCR). Panel PF provides power to downstream Panels PF-1 PCF-1, PG, HVAC cooling tower fans, chiller water pumps, and chiller compressor No. 3.

CB-5B: Provides circuit overload protection for Panel CDP.

Failure Mode No. Failure Mode	Failure Cause Failure Effect	Detection Method Time to Effect	Crit Cat
09ELA2-001.022 Premature trip	Internal piece part structural failure CB-3D: Loss of power to downstream Panels PF, PCF-1, PG; HVAC chiller compressor No. 3; cooling tower fans 1, 2, 3, and 4; and loss of chiller water pumps 1, 2, and 3; Loss of cooled air to MLP and PTCR critical system HIMS and safety-critical electronic equipment could allow loss of life or vehicle during hazardous conditions. CB-5B: Loss of power to downstream HVAC chiller compressors No. 1 and 2; Loss of Chiller Water Pumps 4, 5, and 6; Loss of cooled air to MLP and PTCR critical system HIMS and safety-critical electronic equipment could allow loss of life or vehicle during hazardous conditions.	CCS monitors breaker status. 2-4 Hours	1S

ACCEPTANCE RATIONALE

Design:

	Rated	Estimated Operating Load	Operating Voltage
CB-3D:	1600/1600A	575A	480V
CB-5B:	1600/1600A	550A	480V

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

Test:

- OMRSD File VI requires long time and short time pickup and delay tests performed prior to installation or after a fault.

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:

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.