## USA Ground Operations CIL Sheet

**Critical Item:** Circuit Breaker
**NASA Part No:** None
**Mfg/Part No:** Westinghouse / Type BAB
**System:** 60 Hertz Low Voltage Power System

**Criticality Category:** 1S
**Total Quantity:** 4

| Find No. | Qty | Area | PMN | Baseline | Drawing / Sheet |
|---|---|---|---|---|---|
| Panel P-42/ CB-18 | 1 | Pad-B | K61-1663 | 353.25 | 39K6150023 / 20 |
| Panel P-42/ CB-20 | 1 | Pad-B | K61-1663 | 353.25 | 39K6150023 / 20 |
| Panel P-42/ CB-40 | 1 | Pad-B | K61-1663 | 353.25 | 39K6150023 / 20 |
| Panel P-42/ CB-41 | 1 | Pad-B | K61-1663 | 353.25 | 39K6150023 / 20 |

**Function:**

Provides circuit overload protection for HVDS racks. Each circuit breaker supplies power to one Hypergol Vapor Detection System equipment rack.

| Failure Mode No. Failure Mode | Failure Cause Failure Effect | Detection Method Time to Effect | Crit Cat |
|---|---|---|---|
| 09ELB2-001.021<br><br>Premature Trip | Internal piece part structural failure<br><br>Loss of 60 Hertz Power to associated equipment rack. Loss of Hypergol vapor detection capability at the associated location. Failure could allow loss of life and vehicle during hazardous conditions. | LPS console operator will receive alarm indicating HVDS sensor failure<br><br>Immediate | 1S |

## ACCEPTANCE RATIONALE

**Design:**

- CB-18/20  Rated: 600V/50 Amp, 3P    Estimated Load: 1 Amp    Trip Set: 20 Amp
- CB-40/41  Rated: 600V/50 Amp, 3P    Estimated Load: 1 Amp    Trip Set: 30 Amp
- Environment is normal for application.
- Circuit breaker is used throughout industry.

**Test:**

- OMRSD File VI requires Time/Current trip tests and insulation resistance test performed prior to installation and after a fault per NETA-MTS.

**Inspection:**

- OMRSD File VI requires inspection and maintenance prior to installation and after a fault per NETA-MTS.

**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. |