

E01-SAA09ft06-009
SHEET 3 OF 3SAA09FT06-009
REV. A
OCT 10 1990S040244
ATTACHMENT -
Page 34 of 68**CRITICAL ITEM:** Circuit Breaker**Find Number:** CB-5**System:** I&CS**Criticality Category:** IS**SAA No.:** 09FT06-009A**NASA Part No.:** N/A**PMN/Name:** H70-0832/I&CS**Mfg/Heineman****Drawing/B000020****Part No:** Set 1: JA1-A3-5-2A**Sheet No.:** SH. 1, EO-2

Set 2: JA-1-A3-A-5-2

Function: Provides overload protection for ac power feeding the smoke detector and canister hazard logic power supplies, the hypergol sensors and the fire detectors.**Critical Failure Mode:** Premature trip (FMN 09FT06-009.002)**Cause:** Set point drift; vibration; manufacturing defect**Failure Effect:** Loss of power to canister smoke, fire and hypergol sensors and canister hazard logic power supply. Inability to detect hazardous conditions within the canister. Possible loss of life or payload due to hypergol vapors or fire/explosion.**ACCEPTANCE RATIONALE:****Design:**

- o Standard commercial item, 115 VAC, 5 ampere, single pole.
- o Breaker nominally loaded at 0.6 amperes (1.2 amperes initial transient).

Test:

- o I&CS File VI OMRS requirements, implemented by OMI E7007, include:
 - Annual verification of CB-5 operation,
 - Annual insulation resistance testing,
 - Time-current trip test upon replacement

Inspection:

- o File VI OMRS requirement of an annual terminal inspection is implemented by OMI E7007
- o Output of the hazard logic power supply is monitored by the PCM subsystem.
- o AC voltage to the sensors (fire detectors) can be verified by self-test.

Failure History:

- o A review of the MDAC PRACA data base for I&CS, Sets 1 & 2, (starting in May 80 and Mar 84 respectively) disclosed one failure of CB-5 (10/82) in the critical failure mode. No other CB failures were recorded.

Operational Use:

- o Not applicable.