

EO1-SAA09FT06-009  
SHEET 2 OF 3

SAA09FT06-009  
REV. A

OCT 10 1990

S040244  
ATTACHMENT -  
Page 33 of 68

CRITICAL ITEM: Switch, IP3T

Find Number: SW-1

System: I&CS

Criticality Category: 1S

SAA No.:09FT06-009A

NASA Part No.: N/A

PMN/Name: H70-0832/I&CS

Mfg/ELECTROSWITCH

Drawing/B000020

Part No: 123301AA-3, SERIES 3SR

Sheet No.: SH. 1, EO-2

Function: Permits selection of AC power source for critical canister interior sensors. Power selection includes Transporter Electrical Power Subsystem, Uninterruptible Power System and transfer switch output.

Critical Failure Mode: Fails open (FMN 09FT06-009.001)

Cause: Corrosion; 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 Switch is qualified under MIL-S-15291, per QPL-15291-16, dated 12 April 1985.
- o Switch rated at 20,000 electrical operations.
- o Installed May 1988 to eliminate the transfer switch as a Critical Item per ESR M00262/DRA AM-011T01-1008, dated 1 Feb 88.

Test:

- o File VI OMRS, implemented by OMI E2017, requires an operational verification of SW-1 prior to each payload operation

Inspection:

- o SW-1 receives a visual inspection at receipt, with manufacturer's certification of being manufactured to MIL standards
- 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 New item, no MDAC PRACA history in the I&CS

Operational Use:

- o Not applicable.