

E01-SAA09FT06-030
SHEET 8 OF 16

SAA09FT06-030
OCT 10 1990

S040244
ATTACHMENT -
Page 23 of 27

CRITICAL ITEM: Return air vent/pneumatic actuator (8 places)

Find Number: RV1-RV8

System: Environmental Control Subsystem
for the Payload Canister, Set 2

Failure Category: IS

SAA No.: 09FT06-030

NASA Part No.: None

PNN/Name: H70-1326

Mfr's Part No.: Johnson Controls Co.
Model D-251-3,
Superseded by D-3073

Drawing/Sheet No.: 79K15392, Sheet 3

Function: Operates the canister return air vents (normally open). Upon receiving a 20 psig pressure signal from the ECS control panel, the vents close.

Critical Failure Mode: Fail open (FMN 09FT06-030.010)

Cause: Internal part failure

Failure Effect: Loss of smother mode capability. Loss of ability to contain a fire or payload hypergol leak. Possible loss of life or payload.

ACCEPTANCE RATIONALE:

Design:

- o Materials: Body - die cast aluminum
Diaphragm - synthetic elastomer
- o Specifications:

	Rated	Actual
Pressure (psig)	25 (max)	20
Temperature (°F)	-20 to +150	Ambient

Test:

Operational checks will be made at validation test, semiannually, at component replacement, and prior to each critical operation as outlined in OMI E3005 and OMI E6405.

Inspection:

When testing vent operation, per File VI OMRSD requirements, visual inspection will detect actuator failure.

Failure History:

There is no MDAC PRACA failure history in the critical mode. Data on Set 1 from 1981 to present; data on Set 2 from 1984 to present.

Operational Use:

Systems are secured and personnel are evacuated in accordance with OMI E5506 (vertical) and OMI L5050 (horizontal), Appendix Z.