

AUG 11 1988

Critical Item: Temperature Switch

Find Number: A125592

Criticality Category: 15

SAA No: 09GS05-003

System/Area: ECS/SLF/SLS

NASA
Part No:

PMN/ 570-0534/
Name: Portable Purge Unit

Mfg/ Dunham Bush/Penn Controls
Part No: CNT 231
A19AAF

Drawing/
Sheet No: 79K06061/1

Function: Operates liquid refrigerant solenoid valve when oil temperature is above predetermined setting.

Critical Failure Mode: Contacts fail open. FM No. 09GS05-003.010

Failure Cause: Structural failure/contamination.

Failure Effect: Compressor shuts down on high oil temperature. Blower/compressor interlock disables blower causing loss of purge to Orbiter compartments. Loss of ability to monitor purge air for leaks. Possible loss of life or vehicle during a hazardous condition such as leakage of hazardous fluids or gases.

Acceptance Rationale

Design:

- o Designed for use with refrigerant-12 environment.
- o Cutout Temperature: Switch activates when oil temperature exceeds 150°F.
- o "Trip-Free" manual reset.
- o Single-pole/single-throw contacts which open on temperature increase.

88072EjpM3-296

Temperature Switch A125592 (Continued)

Test:

- o The OMRSD, File VI will require that operation of the purge unit is verified prior to each use.
- o The purge unit is powered up and verified operational approximately three hours prior to Orbiter landing per OMI S0028 and S0026.

Inspection:

- o The contact points are inspected monthly for electrical overheating or arcing (OMI No. V6C72).

Failure History:

- o No PRACA failure history identified.
- o No GIDEP failure history identified.

Operational Use:

- o The purge unit is monitored for any indication of malfunction if found defective. The switch can be repaired locally.