

SAA09G505-003
REV. B
B/L: 72.60
SYS: ECS/SLF/SLS
AUG 11 1988

Critical Item: Temperature Switch

Find Number: A125591

Criticality Category: 1S

SAA No: 09G505-003

System/Area: ECS/SLF/SLS

NASA
Part No:

PTN/ 570-0534/
Name: Portable Purge Unit

Mfg/ Dunham Bush/Penn Controls
Part No: CHT 231
A19AA7

Drawing/
Sheet No: 79K06061/1

Function: Disables compressor when seal oil temperature is outside of pre-determined settings.

Critical Failure Mode: Contacts fail open. FM No. 09G505-003.021

Failure Cause: Structural failure/contamination.

Failure Effect: Loss of ability to regulate temperature and pressure of compressor oil. Pressure switch (A107946) disables compressor. Interlock stops blower. Loss of air flow results in loss of purge to Orbiter compartments. Loss of ability to monitor purge air for leaks. Possible loss of life on vehicle during a hazardous condition such as leakage of hazardous fluids or gases.

Acceptance Rationale

Design:

- o Designed for use with refrigerant-12 environment-30°F to 225° design.
- o Cutout Temperature: A125591 > 145°F
- o "Trip-free" manual reset.
- o Single-pole/single-throw contacts which open on temperature fall or increase, depending on application.

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Temperature Switch A125591 (Continued)

Test:

- o The GMRSD, 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 50028 and SOQ26.

Inspection:

- o The contact points are inspected monthly for electrical overheating or arcing (OMI No. VC672).

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.