

AUG 11 1988

Critical Item: Transformer

Find Number: T1

Criticality Category: 15

SAA No: 09GS05-003

System/Area: ECS/SLF/SLS

NASA
Part No: N/A

PMN/
Name: 570-0534/
Portable Purge Unit

Mfg/
Part No: Ellis & Watts/Midwest
2583-131-2/BCT1115

Drawing/
Sheet No: 79K06061/1

Function: *Drapping power Voltage from* Main 480V to 120V ac power transformer for control power.

Critical Failure Mode: Fails open. FM No. 09GS05-003.012

Failure Cause: Corrosion, breakdown of insulation.

Failure Effect: Loss of control power to blower causes loss of air flow, resulting in 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.

Design:

Acceptance Rationale

- | | |
|---------------|----------------------------|
| o Rated | Estimated Operating Load |
| 30 kVA | 100 Amps on secondary side |
| 480V/208-120V | |

Test:

- o The transformer is functionally tested quarterly for proper output per OMI No. V6C72 (Preventive Maintenance, Portable Purge Unit).
- o The OMRSS, 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 S002B and S0026.

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Transformer T1 (Continued)

Inspection:

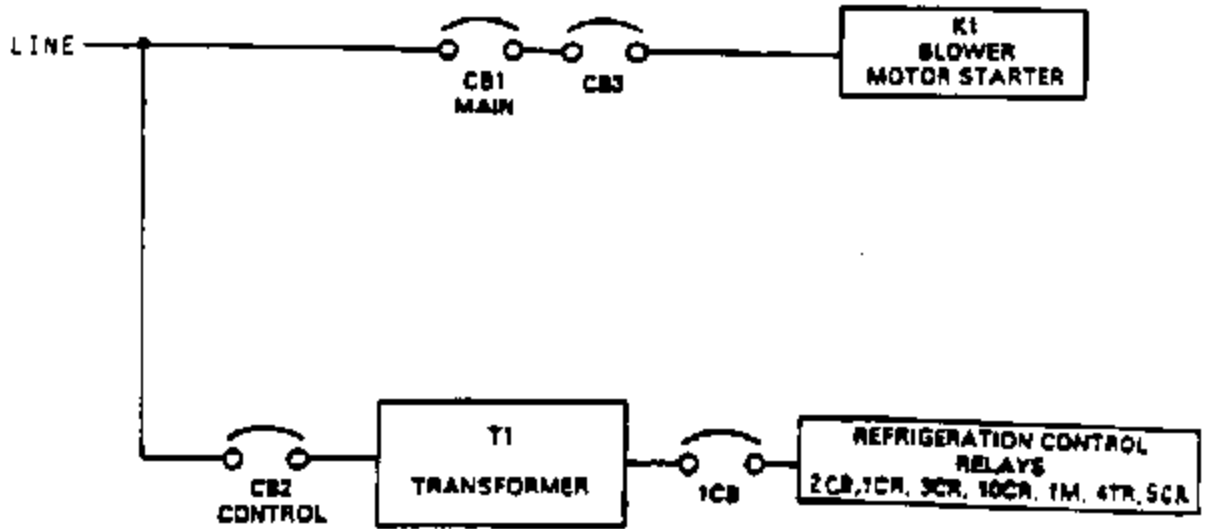
- o The OMRSO, File VI will require that the electrical elements are inspected annually for:
 - corrosion
 - signs of arcing or shorting

Failure History:

- o No PRACA failure history identified in the critical failure mode.
- o No GIOEP failure history identified in the critical failure mode.

Operational Use:

- o There is nothing that can be done immediately to mitigate the effect of the failure.
- o The purge unit is monitored for any indication of malfunction. If any anomalies are observed, appropriate steps are taken to repair or replace the item.



ELECTRICAL CRITICAL ITEMS