

OCT 21 1994

SAA29CL01-030

B/L: 554.50,564.75
SYS: TACAN

Critical Item: Power Supply (2 Items Total, one per site)
Find Number: Unit 11
Criticality Category: 1

SAA No: 29CL01-030

System/Area: TACAN/TALS

NASA

PMN/ U72-1317-01/

Part No: None

Name: Power Supply

Mfg/ E-Systems/

Drawing/ T.O.31R4-2TRN26-2/

Part No: 004603-03

Sheet No: 3-35

Function: Provide 28V dc power to the Control Transfer Group Unit 4.

Critical Failure Mode/Failure Mode No:

- 1) No or low output/29CL01-030.001.
- 2) High output/29CL01-030.002.

Failure Cause: Discrete component failure.

Failure Effect:

- 1) Loss of control transfer, monitor and antenna control capabilities. Loss of azimuth and ID to Orbiter. This failure could cause loss of life and/or vehicle. Detection method is visual. Time to effect is immediate from 250 nautical miles to 20 nautical miles.
- 2) This failure could cause damage to unit 4, resulting in loss of control transfer monitor and antenna control capabilities. Loss of azimuth and ID to Orbiter. This failure could cause loss of life and/or vehicle. Detection method is visual. Time to effect is immediate from 250 nautical miles to 20 nautical miles.

ACCEPTANCE RATIONALE

Design:

- All controls are housed in an environmentally controlled enclosure to prevent premature component failure due to heat and corrosion.
- This system has design features that shield against unwanted RF and lightning strikes.
- The design includes a solid state voltage regulator to assure stable voltage.
- The TACAN AN/TRN-26 is a portable tactical air navigation system designed for use at remote landing strips and forward operating areas by the US Air Force.

Attachment
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Test:

- TACAN activation is required T-3 hours before the start of Ground Latching Sequence. This notification will provide assurance that the system is functioning as required.
- OMNS File VI requires a system validation test prior to each use of TACAN for Orbiter landing.
- NSTS 07700, Vol X, requires an annual validation test that verifies proper reception of signal by in flight aircraft to determine ground interference and system alignment quality.

Inspection:

- Prior to TACAN activation a pre-operation checkout (inspection) is performed per OMI Z3109-A.

Failure History:

- Current data on test failures, unexplained anomalies and other failures experienced during ground processing activity can be found in PRACA database. The PRACA database was researched and no failure data was found on this component in the critical failure mode.
- The GIDEP failure data interchange system has been researched and no failure data for this item was found.

Operational Use:

- Correcting Action:
There is no action which can be taken to mitigate the failure effect.
- Timeframe:
Since no correcting action is available, timeframe does not apply.

*Attachment
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