

SAA09EL18-003
REV. C

B/L: 131.80
SYS: Ball/Bar Lights
- SLF

Critical Item: Adjustable Autotransformer (4 Items Total)
Find Number: AT5, AT6 (1 ea/Runway)
Criticality Category: 1 (Night Landing Only)

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SAA No: 09EL18-003	System/Area: Ball/Bar Lights - SLF
NASA Part No: None	PMN/ Name: U72-1336 Ball/Bar Lights
Mfg/ Part No: Technipower W30	Drawing/ Sheet No: 80K51820 8

Function: Provides controlled voltage to the Ball Lights when S4 is in the "Dawn/Dusk" or "Night" mode.

Critical Failure Mode/Failure Mode No: Fail Open/ 09EL18-003.017, 09EL18-003.036. Fail Short to Ground/09EL18-003.018, 09EL18-003.037

Failure Cause: Structural Failure/Contamination/Corrosion

Failure Effect: Fail Open/loss of power to the Ball Lights. Fail Short to Ground/loss of power to the Ball Lights due to fused safety switch opening. Loss of ability to acquire and maintain the proper inner glideslope during Orbiter landing operations.

ACCEPTANCE RATIONALE

Design:

<u>Rated</u>	<u>AT5 Estimated Operating</u>	<u>AT6 Estimated Operating</u>
Voltage = 120/140 max.	68.0 volts output	72.0 volts output
Current = 25 amps	13.5 amps output	10.5 amps output

Autotransformer is mounted in a NEMA 12 Hoffman Enclosure which is located inside an air conditioned structure.

Test:

- Meets requirements of MIL-S-202, "Test Methods for Electronic and Electrical Components." Tested for vibration, shock, dielectric and operational in accordance with MIL-S-202.

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- OMI I3134 requires verification of proper operation and equipment setup prior to each Shuttle launch and landing flow.

Inspection:

- Visual inspections for corrosion, contamination and/or physical damage are accomplished annually during performance of OMI I3134 system verification.

Failure History:

- 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 was researched and no failure data was found on this component in the critical failure mode.

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.

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