

SAA09FY093-023
Rev. A

NOV 14 1997

5050234HP
Attachment
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Critical Item: Electromagnetic Brake
Total Quantity: 2
Find Number: B1
Criticality Category: 2

SAA No: 09FY093-023**System/Area:** Orbiter Antenna Hats and Cou-
plers Access Platform/OPF 1
and 2**NASA
Part No:** None**PMN/
Name:** A70-0886-01
Orbiter Antenna Hats and Cou-
plers Access Platform/OPF 1
and 2**Mfg/
Part No:** Reliance Electric
A51A327**Drawing/
Sheet No:** 79K16117
E-31**Function:** Stop and hold the load of the platform.**Critical Failure Mode/Failure Mode No:** Fails to set 09FY093-023.001**Failure Cause:** Failure of spring or excessive wear or glazing of brake disc plates.**Failure Effect:** The failure would cause the platform to backdrive resulting in possible loss (damage) to a vehicle system. **Detection Method:** Visual. **Time to Effect:** Seconds.

ACCEPTANCE RATIONALE

Design:

- Brakes are an off-the-shelf item factory tested to more than 1 million cycles with only normal adjustments for wear.
- The torque produced by the platform as seen by the brake is 20 in-lb. The rated torque is 36 in-lb resulting in an operational safety factor of 1.8 to 1.

Test:

- OMRS File VI requires annual performance of operational test, which includes raising, lowering, extending and retracting the platform per OMI V6E47.

Inspection:

- The gearmotor and brakes are checked for damage or corrosion per OMI V6E47.

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Failure History:

- Current data on test failures, unexplained anomalies, and other failures experienced during ground processing activities can be found in the 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 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.