

ATTACHMENT
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SAAD9VED4-012
REV. A

SFP Item: Hoist, Motor Brake (2 items)

Find Numbers: None

Criticality Category: 1R

SAA No: 09VED4-012 Rev. A

System/Area: 2-Ton APU Monorail Hoists
at the Rotating Service
Structure (RSS) Pad B, 125
Foot Level Sides 2 & 4

NASA
Part No: None

PMM/
Name: None Assigned

Mfg/
Part No: Yale Industries
6AN631101

Drawing/
Sheet No: None

Function: Hoist motor brake suspends the load when the hoist is deactivated.

Critical Failure Mode: Fails to set.

FMM: 09VED4-012.003
(Pad)

Failure Effect: Load will drop resulting in possible loss of life or vehicle. Failure to set properly would require binding of the piston, failure of engaging springs, or excessive wear or glazing of the brake disc. Fails redundancy screen b. Requires failure of both the mechanical load brake and the motor brake to lose all control of load.

ACCEPTANCE RATIONALE

Design:

- Hoist motor brake is pneumatically released and reset by multiple (6) spring pressure and is self-adjusting.
- The hoist motor brake torque is rated at 150% of the rated load.

Test:

- An annual operational check of the hoist is performed in accordance with File VI UMRSD. Verifies mechanical load brake only.
- Load test at 100% of rated load is performed annually and verified prior to each use. Verifies mechanical load brake only.

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Inspection:

- The motor brake is visually inspected, annually, for wear and glazing per OMI Q6326.

Failure History:

- The PRACA data base was queried, and there was no failure data found for this component in this failure mode.
- The GIOEP failure data interchange system has been researched, and no data on this component was found.

Operational Use:

- The hoists are rated at 4000 lbs. A fully loaded APU servicing cart weighs a maximum of 2400 lbs.
- These hoists are subjected to an extremely limited annual duty cycle compared to commercial use. Approximately 2 lifts per hoist per flow.