

SAA09FY12-006
REV. BB/L: 389.00
SYS: 175-TON
BRIDGE
CRANE, VABCritical Item: Cable Reel Assembly
Find Number: 79K16830-8 (M-18)
Criticality Category: 2

AUG 20 1993

SAA No:	09FY12-006	System/Area:	175-Ton Bridge Crane/VAB
NASA Part No:	NA	PMN/ Name:	K60-0528/ 175-Ton Bridge Crane/VAB
Mfg/ Part No:	Industrial Electric/ Style #5008	Drawing/ Sheet No:	79K16830/ 2

Function: Provides constant tension on hook swivel motor control cable that provides power from trolley to load block.

Critical Failure Mode/Failure Mode No:

- Fails to provide torque/09FY12-006.002
- Brake solenoid fails to engage/09FY12-006.003

Failure Cause:

- Open/shorted motor winding, chain drive, mechanical failure
- Binding mechanism

Failure Effect:

- Loss of torque to cable reel. Cable will unwind off cable reel when brakes are released possibly falling onto flight hardware. Possible damage to Vehicle System (TPS). Time to effect: seconds.
- Cable will unwind off cable reel when hoist stops, possibly falling onto flight hardware. Possible damage to Vehicle System (TPS). Time to effect: seconds.

ACCEPTANCE RATIONALE**Design:**

- 1 HP torque motor
- 15 ft-lb brake
- This was designed for crane use and selected by the crane manufacturer for this application.

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Test:

- OMRSD file VI requires verification of proper performance of hoist operational test annually.
- OMI Q3008, Operating Instructions, requires all crane systems be operated briefly in all speeds to verify satisfactory operation before lifting operations.

Inspection:

- OMI Q6003, Maintenance Instructions requires following: annual inspection of the cable reel motor, brake and chain drive for wear and deterioration of parts; annual inspection of idler pulley for secureness of shaft; annual inspection of chain drive for tendency to bind; semiannual inspection of motor windings for signs of insulation deterioration from heating, chafing or aging, and for dirt or grease build-up; semiannual inspection of housing for cracks, missing or loose bolts, and obstructions that may interfere with rotation or ventilation.
- OMI Q3008 Pre-Operation Setup Instructions require inspection of main hoist cable reel assembly.

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.