

SAA09FY091-005
B/L: 380.00
SYS: One Ton Forward
Jib Crane

NOV 20 1995

Critical Item: Hoist Assembly

Find Number: NA

Criticality Category: 2

SAA No: 09FY091-005 System/Area: One Ton Jib Crane, OPF HB1

NASA Part No: NA PMN/Name: H70-1381
One Ton Fwd Jib Crane

Mfg/Part No: Yale LH, 2-Ton (or 824-02100) Drawing/Sheet No: 79K06191
9, 49, E0-85, E0-94

Function:

- o The Yale LH One Ton hoist is used to handle (raise or lower) GSE and flight hardware from the platform 1 east jib crane.

Critical Failure Mode:

- o Gearbox failure due to the loss of mechanical linkage between gearbox components. (FM No. 09FY091-005.001)
- o Brake failure due to the loss of mechanical linkage between brake assembly and gearbox. (FM No. 09FY091-005.002)

Failure Effect:

- o The load will drop damaging flight hardware.

Acceptance Rationale

Design:

- o The hoist has a manufacturer's rating of two tons and has been derated to a one ton which produces a safety factor of 8:1.
- o The Yale Hoist design is in accordance with Hoist Manufacturers Institute (HMI) standards.

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Hoist Assembly (Continued)

Test:

- o OMRS File VI requires the annual performance of a rated load test.

Inspection:

- o PMOMI V6C46 performs hoist inspection (visual and magnetic particle or dye penetrant) following annual load test (100% of rated load).

Failure History:

- o No failure history for this hoist.

Operational Use:

- o The One Ton Forward Jib Crane is used to support operations by lifting GSE and flight hardware.