

SAA09FY22-003
REV. B

MAY 18 1995

B/L: 393.00
SYS: ET C/O Cell
Platforme

Critical Item: Double Worm Gear Drive (6 Items Total)
Find Number: None
Criticality Category: 2

SAA No: 09FY22-003

System/Area: ET Checkout Cell Platforme,
VAB High Bays 2 and 4

**NASA
Part No:** None

**PMN/
Name:** K60-0550
Model 61F Winch

**Mfg/
Part No:** All American Engineering
Corp./61870-1

**Drawing/
Sheet No:** 79K09165/79K05424
14-29/111-115

Function: Transmits power to the winch drive for drum operation.

Critical Failure Mode/Failure Mode No: Disengages. FM No. 09FY22-003.003

Failure Cause: Structural failure due to broken teeth, shaft separation or clutch failure to disengage

Failure Effect: Platform section could fall with sufficient force to break the hinges resulting in loss/damage to an ET.

ACCEPTANCE RATIONALE

Design:

- Design is in accordance with American Gear Manufacturers Association and Hoist Manufacturers Institute Standards with a minimum safety factor of 5 to 1.
- Gears and pinions are press-fitted, keyed, and locked on shafts.
- These hoists are subjected to an extremely limited annual duty cycle compared to commercial use.

Test:

- Hoists are proof tested to 125 percent of rated load prior to initial use and after load sustaining parts have been modified or replaced (OMRSD 79K20911).
- An annual operational check of hoists is performed in accordance with OMI Q6258.
- An operational test of controls is made before beginning an operation. If the controls do not operate properly, adjustments or repairs are made before operations begin (OMI T5144).
- OMRSD File VI requires performance of an operational load test of the platform(s)/hoist annually.

WORKSHEET 5312-013
940927bkPS0163

*Attachment
505023420
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- Preventive maintenance will be performed per OMI Q6258.

Inspection:

- A visual inspection of the hoist gearbox for signs of the following conditions is performed annually, OMI Q6258 requirement:
 - corrosion
 - loose fasteners
 - oil level/leakage

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.

Hoist Schedule**High Bay #2**

<u>Level</u>	<u>Panel</u>	<u>Hoist</u>	<u>Capacity (lbs)</u>	<u>Avg. Load (lbs)</u>
8	1	All American Eng. Co.	4,500	3,862
8	2	All American Eng. Co.	4,500	3,535
8	4	All American Eng. Co.	4,500	2,018
7	1	All American Eng. Co.	4,500	2,460
6	1	All American Eng. Co.	4,500	3,007

High Bay #4

6	6	All American Eng. Co.	4,500	2,663
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Attachment
505023426
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