

SAA09FT01-006
B/L: 330.00
SYS: LINK-BELT
40-TON
MOBILE CRANE
HSP-8040

Critical Item: Swing Speed Reducer Assembly (1 Item) JAN 23 1995

Find Number: 46F0085

Criticality Category: 2

SAA No: 09FT01-006

System/Area: Link-Belt 40-Ton Mobile
Crane/Multiple Station
Sets

NASA
Part No: N/A

PMN/ H72-1394/
Name: Link-Belt 40-Ton Mobile Crane

Mfg/ Gear Prod. Inc.
Part No: (FN: 46F0085)

Drawing/ Link-Belt
Sheet No: PM 4-10-17.0

Function: Transfers torque from the swing drive hydraulic motor to the turntable assembly.

Critical Failure Mode: Gears disengage. FM No. 09FT01-006.003.

Failure Cause: Structural failure of the gear assembly.

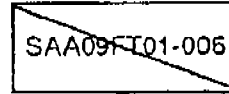
Failure Effect: Torque for controlling the horizontal rotation and holding upper structure in position will be lost. Load may impact flight hardware and/or GSE resulting in damage to flight hardware.

Acceptance Rationale

Design:

- o The Swing Speed Reducer is an off-the-shelf item from Gear Products Inc., Tulsa OK. Its design is in accordance with AGMA and CMAA standards.
- o The Swing Brake is included in the assembly and is actuated by manual force applied through the Swing Brake foot pedal.
- o The gears are splined to the shafts or integrally machined and are retained in place by shoulders within the confines of the gearcase.

*Attachment
505#239 EN
Sheet 6 of 8*



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Swing Speed Reducer Assembly 46F0085 (Continued)

Test:

- In accordance with NASA safety standard for lifting devices and equipment, NSS/GO-1740.9, mobile cranes shall be load tested and operationally tested within 12 months prior to performing a critical lift. The mobile crane will be load tested with a load equal to the rated load at the minimum radius in accordance with the manufacturer's load chart. The swing function will be operationally verified during this test.
- OMRSD File VI requires annual performance of an operational test at rated load to verify system integrity.

Inspection:

- PMI No. HDO requires quarterly inspections to:
 - examine unit for weld cracks and structural damage
 - inspect and maintain gear oil level in the gearcase.

Failure History:

- No failure history was found at the manufacturer, in the GIDEP data base, or the PRACA data base.

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.

*Attachment
5050234 EN
Sheet 7 of 8*