

Application table

Application:	All Astro Hoist with Overload
Reason:	Mandatory Fatigue Inspection of Overload Shaft
Frequency	Inspection: Annually – Replacement: Every 3 Years
Priority:	Mandatory

Background

There have been a few reports of the Overload Shaft PN 81.116 breaking due to fatigue. If hoist is being operated at the time of breakage, it will only travel in the downward direction. There are no reports of falling hoists or injuries to operators.

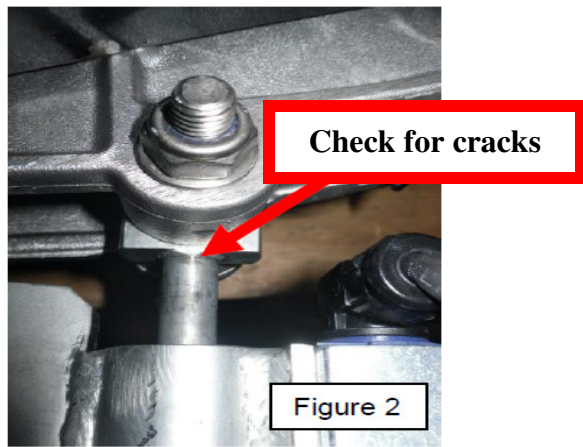
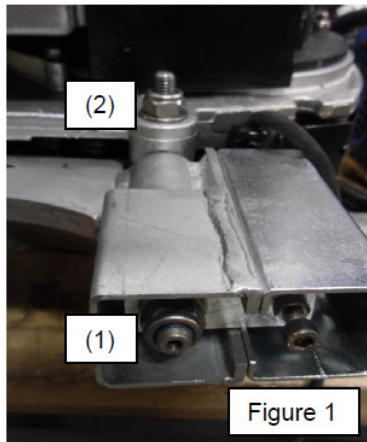
Solution

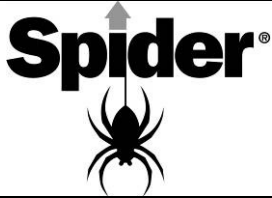
Inspect Overload Shaft p/n: 81.116 annually for signs of fatigue or cracks and replace every 3 years.

Procedure

Inspection:

- 1) Put the hoist with the motor facing upward on a table.
- 2) Loosen and remove nut on position (1) (Figure 1) (wrench 17mm)
- 3) Lower the overload and inspect the shaft on indicated location (Figure 2) for any sign of cracks. If there are signs of cracks continue with replacing the shaft.



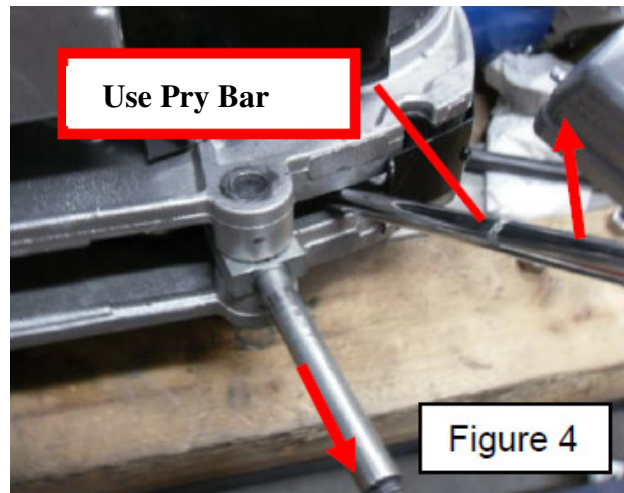
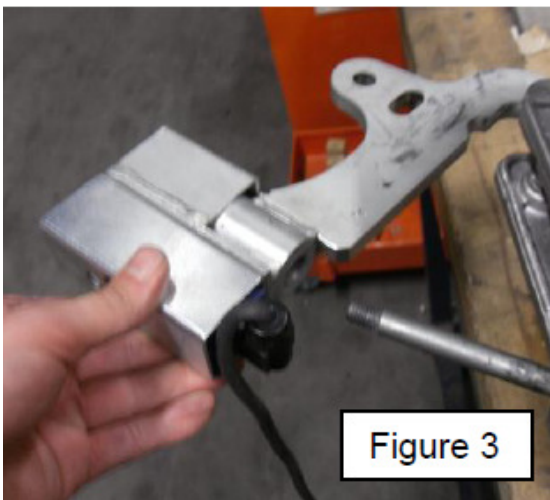
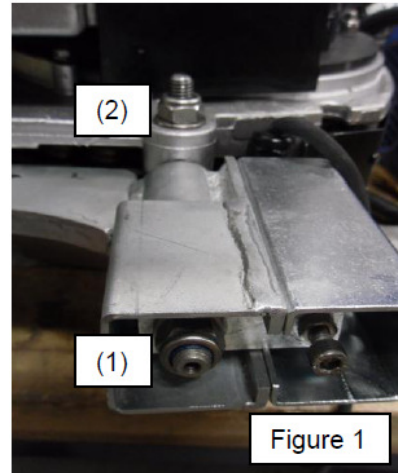


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Astro Overload Inspection & replacement of overload shaft PN 81.116

Replacement: (First follow points from Inspection)

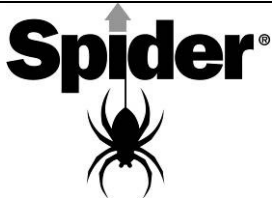
- 1) Loosen and remove nut and bolt on position (2) (Figure 1) (Wrench 17mm and Allen® key 8mm).
- 2) Remove the overload device from the bolt (Figure 3)
- 3) Remove the shaft from the hoist. If needed use a small pry bar to widen the opening to free the shaft with distance bushing (Figure 4)
- 4) Assemble a new shaft with the old distance bushing.
- 5) Tighten nuts (2) and (1) (Figure 1).



- 6) Adjust and test the overload to 125% of Hoist Rated Load

ASTRO OVERLOAD ADJUSTMENT AND TESTING

1. Set test stand with 125% of hoist rated load and install hoist on test stand
2. Attempt to lift Load of 125% rated load with hoist power
 - a. If hoist lifts 1" or so and shuts off in up direction proceed to step 9.
 - b. If hoist fails to lift or does not shut off proceed to step 3.
3. Remove cover shown in figure 5.
4. Release lock nut (1) (figure 5).



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5. Turn Allen® screw (2) (figure 5) clockwise (upwards) to decrease the overload setting. Turn Allen® screw (2) (figure 5) anti-clockwise (downwards) to increase the overload setting.
6. Secure the Allen® screw again by tightening the lock nut.
7. Fit back the cover shown in figure 5.
8. Repeat step 2
9. VERIFY COMPLETION OF SETTING THE OVERLOAD
 - a. **BOTH OF STATEMENTS BELOW MUST BE TRUE**
 - i. Hoist can lift rated load
 - ii. Hoist can **not** lift 125% of rated load.
 - b. **If not true repeat steps 3-8**

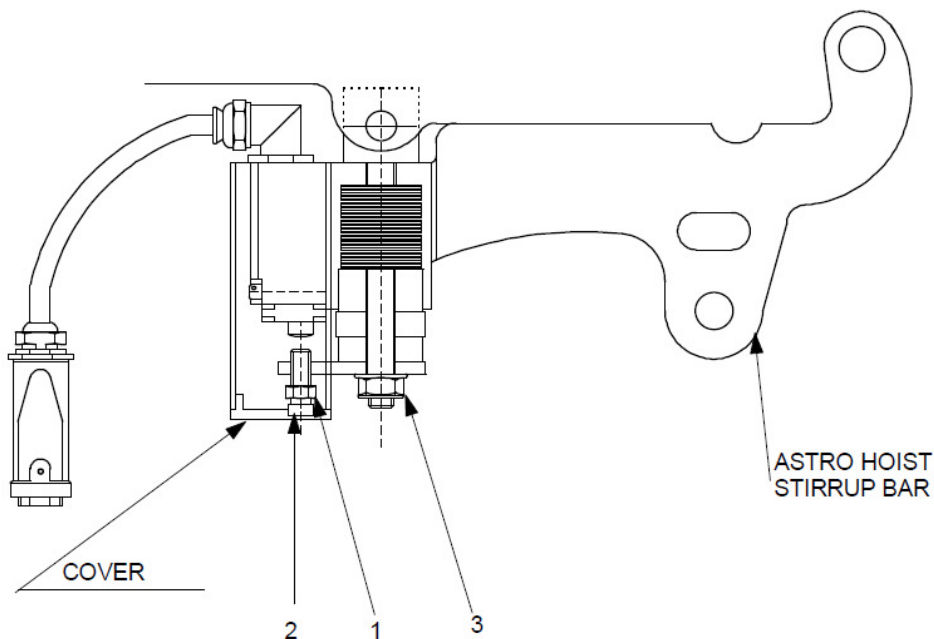


Figure 5

REMARKS:

- Make sure nut (3) (figure 5) on Overload shaft is secure before attempting Overload adjusting and testing.
- Adjustment to the required setting must be done with testing weights in order to be certain of precise overload protection available.
- Setting is recommended at 125% of Hoist Rated Load limit (for one hoist), but must always be checked against local regulations.

As with all Service Instructions, if you are unsure about anything contained in this document, contact Spider Product Support at 1-877-774-3370 or at ProductSupport@SafeWorks.Com