

Document Title		Upgrade to use 4 Groove Capstans			
Document #	Rev	Type	Reason	Recommendation	Original Release Date
ZSB-015	E	Service Bulletin	Performance Enhance	Optional	2015/05/07



Upgrade to use 4 Groove Capstans



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Serving Helicopter Rescue Hoist Users Worldwide

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Purpose	Performance Enhance	
Recommendation is Mandatory or Optional	Optional	

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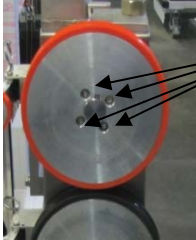

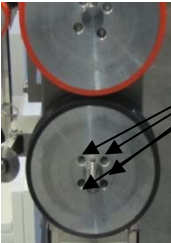
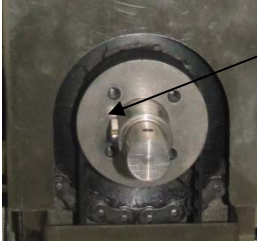
Purpose: To alert the Hydraulic RHGSE Users of an Upgrade that extends the service life of the capstans.


Reason: The Hydraulic RHGSE was originally intended to be used for Preflight, Post flight, and daily maintenance of the rescue hoist cable. The user community has various technical criteria from the hoist OEMs maintenance manuals that has resulted in the RHGSE being used at higher loads, and at higher speeds on a regular basis then was originally envisioned. At the higher loads and speeds the capstans wear faster and the slippage between the cable and the capstan increases.

The result of the excessive wear is excessive slip on the capstans and increased twist on the cable between the capstans and the Rotatub. By increasing the number of turns on the capstan, slippage is reduced considerably. Therefore, by making the first groove stainless steel the wear on the first groove due to higher constant loading is eliminated.

Procedure:

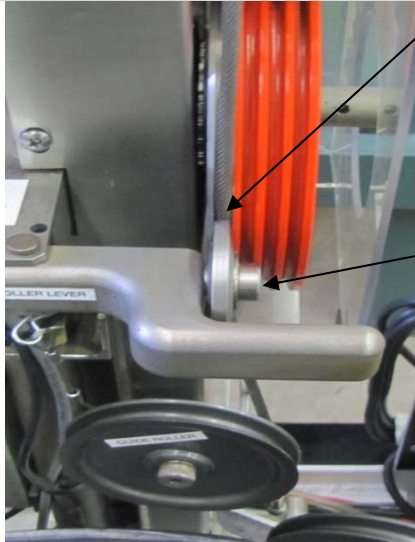
Remove Old Capstans

1		<p>Remove (4) 10-32 x 1-1/4 screws (Retain for assembly) Upper Capstan (Orange) And remove old Capstan</p>
2		<p>Verify the .7 Key is still in place</p>
3		<p>Remove (4) 10-32 x 1-1/4 screws (Retain for assembly) from the Lower Capstan (Black) And remove old Capstan</p>
4		<p>Verify the .8 Key is still in place</p>

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Install New ZGS-10506-1 Lower Capstan (In Box noted as Lower) This will also be Orange
Alignment of Pressure Roller to First Groove of Lower 4 Groove Capstan

1



Alignment of pressure roller to the center of the first groove in the lower capstan should be adjusted if found to be 'off center'.

Alignment of pressure roller can be accomplished by shifting the roller on its bearing in the direction desired to achieve center alignment.

Remove pressure roller by unscrewing shoulder screw.
 Place pressure roller with its bearing in a press.
 Support bearing.

Shift roller in the proper direction on its bearing to achieve alignment.

In most cases shifting of roller on its bearing has been .015" - .020".

Remount pressure roller on shoulder screw and attach to arm using Loctite to secure the shoulder screw.

2




Install new ZGS-10506-1
 attach using the

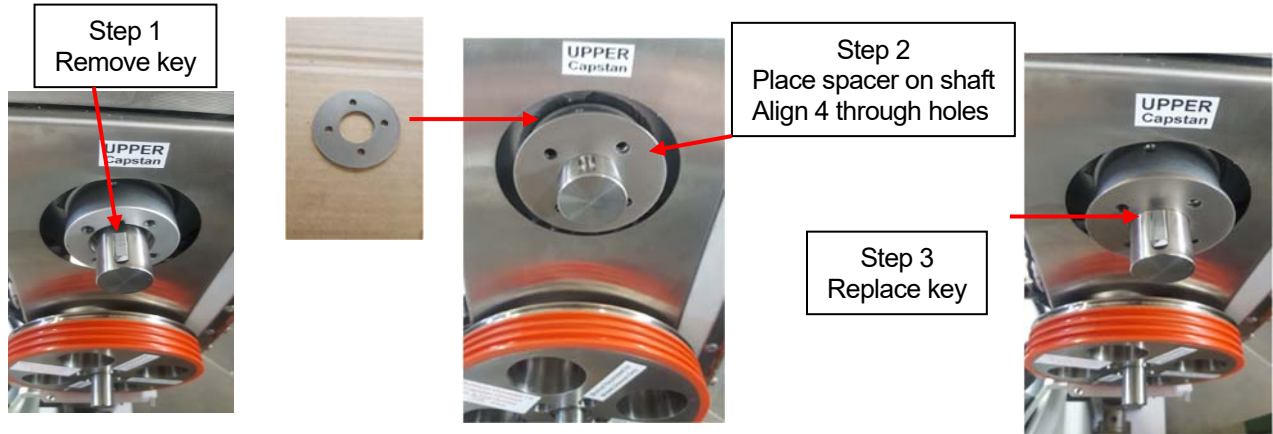
(4) 10-32 x 1-1/4 screws that
 were removed

**Use Anti-Seize compound
 on Capstan Hardware**



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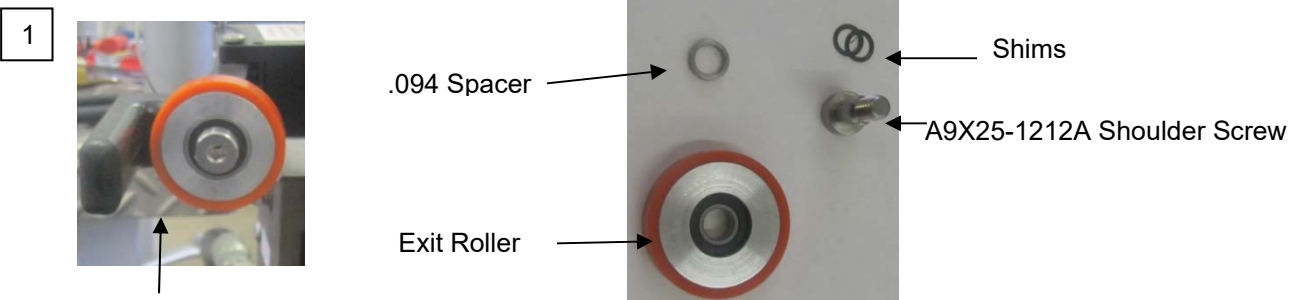
**Install New ZGS-10506-1 Upper Capstan (In Box noted as Upper)
Addition of ZGS-10096-1 Spacer for Upper Capstan**




Install New ZGS-10506-1 Upper Capstan (In Box noted as Upper)




Exit Roller Spacer Change for Upper Capstan



Remove Exit Roller Assembly.
Retain the .094 spacer for reassembly.
The A9X25-1212A Shoulder Screw
(and any shims that may be present) can be discarded

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2 #90298A622 Shoulder Screw

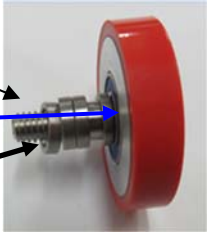


(3) .125 spacers

Assemble Exit Roller using Supplied 90298A622 Shoulder Screw


Add first the retained .094 spacer

Then add (3) Supplied .125 spacers

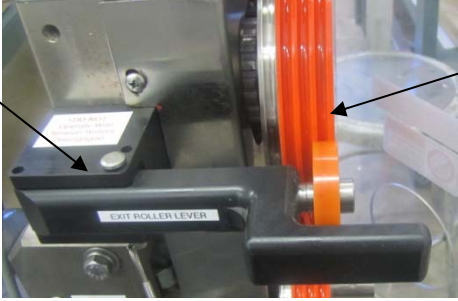


Attach Exit Roller Assembly and Verify location to Capstan

1 Attach Exit Roller Assembly



2 Engage Exit Roller Lever



Verify Exit Roller locates in the center of the first Groove on the new Capstan

Assembly Complete

Price / Availability: Contact Zephyr International for information.