Trus<T>Lift Maintenance and Inspection Of Drive Nuts and Drive Screw

The bronze drive nuts in the Trus<T>Lift are the main lifting components, working in conjunction with the drive screw, gear reducer and motor. The drive nuts are made up of a low friction bronze bushing composite which is a softer metal than the main drive screw. This makes the drive nuts a wear item and as a result they need to be inspected and maintained on a regular basis and replaced after certain periods of use in order to maintain safe and reliable operation. The following procedure outlines the proper steps for completing a drive screw cleaning and drive nut inspection.

Tools Required:

<table>
<thead>
<tr>
<th>Tool</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Socket Wrench</td>
<td>3/8&quot; Drive</td>
</tr>
<tr>
<td>Sockets</td>
<td>3/8&quot; &quot;Drive- 7/16&quot;, ½&quot;, ¾&quot;</td>
</tr>
<tr>
<td>6&quot; Extension for Socket Wrench</td>
<td></td>
</tr>
<tr>
<td>Multi-Bit Screwdriver</td>
<td></td>
</tr>
<tr>
<td>Wrenches</td>
<td>7/16&quot;, ½&quot;, ¾&quot;</td>
</tr>
<tr>
<td>Tape Measure</td>
<td>30&quot;</td>
</tr>
<tr>
<td>Cleaning Rags</td>
<td></td>
</tr>
<tr>
<td>Jack</td>
<td></td>
</tr>
</tbody>
</table>

- Clean all the grease from the entire drive screw using cleaning rags. Be sure to stop the machine and depress the stop button before cleaning the drive screw- not doing so could cause serious injury
- Run the lift up 30" from the lower landing
- Remove the power source
- Remove front plastic panel and two plastic side panels, the side panels push out from behind
- From underneath the platform loosen the set screw on the lower limit switch. 2 pictures are shown here- if your model is a serial number of TS13219 or lower Fig. 1 is relevant, for models TS13220 and higher Fig. 2 is relevant.

**Fig. 1- Serial Numbers TS13219 and lower**

**Fig. 2- Serial Numbers TS13220 and higher**

- **If the lift does not have the drive nut safety bracket it must be added during this procedure, for the instructions refer to the document titled "Replacement of Drive Nuts in TTL"**
- Loosen the lower limit switch set screw to allow the activation lever to slide back so it clears the drive nuts or slot in the drive nut safety bracket. *(Fig.1 &2)*
- Back off the lower shear pin (10/32 x ½” Screw) *(Fig.1&2)*
Using a jack lift the guide frame up off of the two drive nuts and prop it up using a 2x4 or shoring device (Fig. 3) (Note that figure 3 has the platform removed for ease of photography - it is not necessary to remove the platform but can be done if you need more working space)

- Once the guide frame is securely propped, look at the spacing between the 2 drive nuts. If they are together with no space then both drive nuts must be changed prior to any further use of the machine. For this procedure refer to the document titled “Replacement of Drive Nuts in TTL”

- Perform a drive screw inspection - inspect the drive screw for any irregularities, sharp edges or foreign objects and dust caught in the threads - be sure no damage exists to the drive screw and that it is entirely clean.

- Compare the amount of movement in the drive nuts from side to side and up and down without rotating the drive nut at all. If they feel overly sloppy or as though threads may be missing then they need to be replaced. Signs of bronze thread material or shavings are another indicator of worn lifting nuts (Fig. 4)

- If the amount of movement is minimal spin the drive nuts by hand to check for resistance, if any resistance is felt or the drive nut binds then they must be replaced. If the drive nuts test OK and do not need replacing proceed with the rest of this procedure. If they do need to be replaced refer to the document “Replacement of Drive Nuts in TTL”
With the guide frame securely propped in the air, spin the 2 drive nuts by hand up to the slotted channel on the guide frame where the nuts will finally sit. **Make sure the drive nuts are spaced apart by \( ¾'' \) and the flats on the nuts are in line to slide into the slotted channel. **Keep hands clear of the slotted channel and drive nuts when the guide frame is lowered onto the drive nuts - injury can occur if this is ignored. (Fig. 5)

- Remove the shoring device or prop on the guide frame and lower the frame over the drive nuts returning the drive nuts to their original position.
- Readjust the lower limit switch so the activation lever (black rod) is penetrating the drive nut safety bracket by about \( 3/8'' \) (Fig. 6)
- Replace the 10-32 x ½” shear pin (Pan head screw)
- Grease the drive screw (Mobil SHC 460-Synthetic)
- Restore power to the unit

Test the function of the unit to make sure the lower limit switch is functioning properly and that the drive nuts remain in the channel when activating the lower limit switch. (Fig. 7)

- Install front panels and any other options removed at the start of this procedure.