
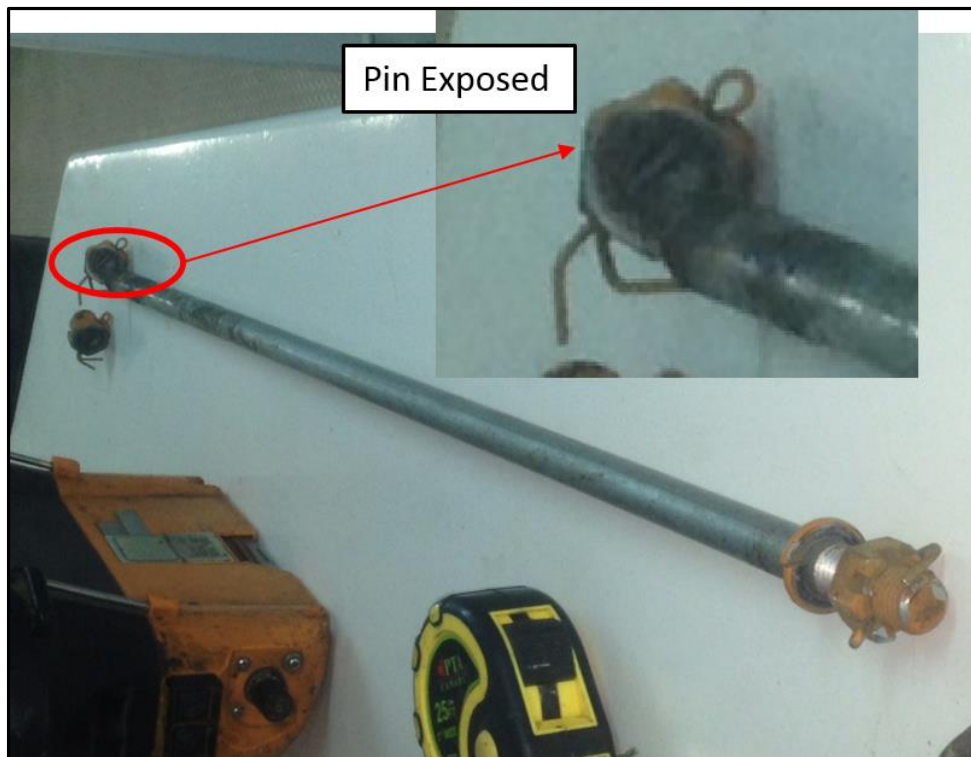


<b>Safety Bulletin</b>			 <b>TESCO</b> ®	Tesco Corporation 5616 – 80th Avenue SE Calgary, Alberta, Canada T2C 4N5 Tel: 1-877-TESCO-77 (North America) Tel: 1 (713) 359-7195 (AMSS 24-hour support) Tel: 1 (713) 359-7295 (International) Email: <a href="mailto:bulletins@tescocorp.com">bulletins@tescocorp.com</a> <a href="http://www.tescocorp.com">www.tescocorp.com</a> <a href="http://www.tescoparts.com">www.tescoparts.com</a>
<b>No: SB086</b>	<b>Rev: 0</b>	<b>Date: September 26, 2014</b>		
<b>Dropped Object - Incorrectly Installed Castle Nut on Ward Leonard Motor</b>				
<input checked="" type="checkbox"/> <b>Internal Use Only</b>		<input checked="" type="checkbox"/> <b>External Use</b>	<input checked="" type="checkbox"/> <b>Mandatory</b>	<input type="checkbox"/> <b>Recommended</b>

**NOTE:** All numbers in parentheses are TESCO part numbers unless otherwise noted.

**BACKGROUND INFORMATION:**

During field operation of a TESCO EXI Top Drive, a dropped object incident occurred where two through-stator studs (Figure 1) had broken on a Ward Leonard motor (840060) and the sheared ends fell to the rig floor. No injuries to personnel were reported, and there have not been any other incidents reported to date.

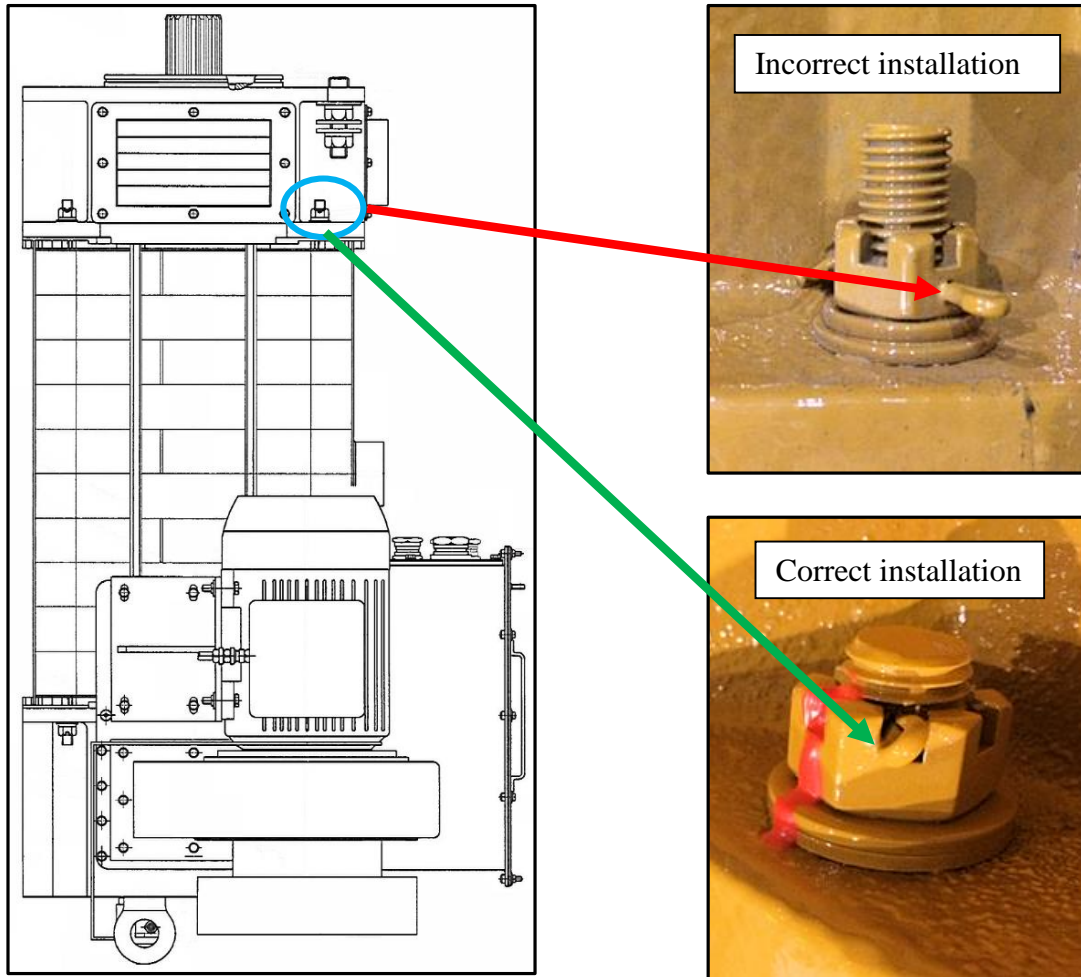


**Figure 1: Cotter pin exposed after through-stator stud on a Ward Leonard motor broke off**

The motor assembly (stator and two ends of the motor) is held together with four through-stator studs secured by castle nuts on each end, using cotter pins for secondary retention (Figure 2). The hole for the cotter pin should normally be drilled through the castellated portion of the nut. In the dropped object incident, it was found that this hole was drilled through the body of the nut and into the stressed portion of the stud.

Version	Date (D/M/Y)	ECN	Description of changes
Rev 0	12/09/2014	157-00XX	Initial release of document

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**Figure 2: Location of castle nut on Ward Leonard motor; incorrect vs correct installation of castle nut**

**AFFECTED PRODUCTS:**

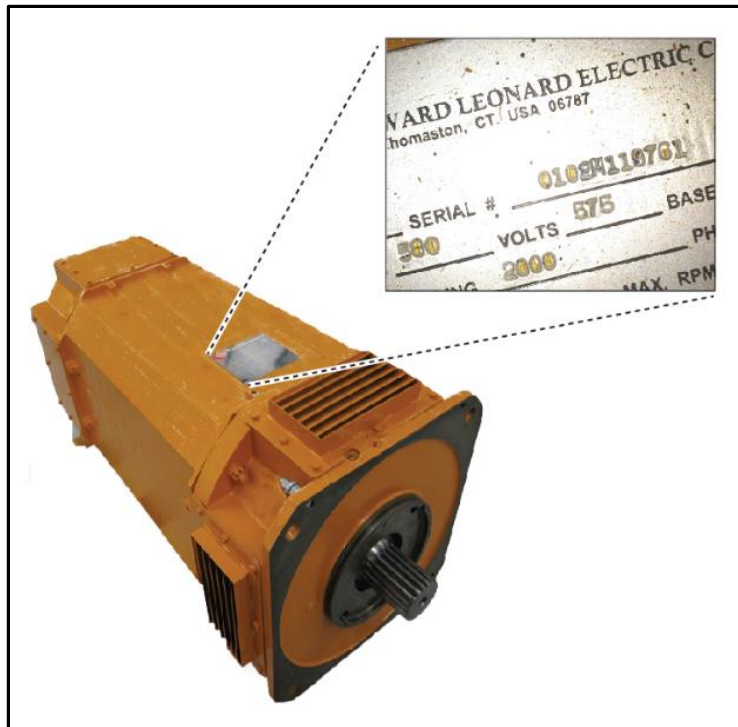
All TESCO Top Drives using the following Ward Leonard motors:

TESCO Part #	Description	Motor HP
721069	Motor, Elec, 400HP, 575V, 1770RPM, 40Hz, w/600V Blower, (WL)	400HP
5015571	Motor, Elec, 400HP, 575V, 1770RPM, 40Hz, w/480V Blower, (WL)	
1740004	Motor, Elec, 400HP, 575V, 1174RPM, 40Hz, w/575V/50Hz Blower (WL)	
840060	Motor, Elec, 600HP, 575VAC/60Hz, 575V Blower Motor, 1180rpm, CSA, Z	600 HP
5011133	Motor, Elec, 600HP, 575VAC/50Hz, w/50Hz Blower, CE/ATEX Zone 1	
710057	Motor, Elec, 600HP, 575VAC/60Hz, 600V Blower Motor, 1180rpm, CE/ATEX	
1120407	Motor, Elec, 600HP, 575VAC/60Hz, 600V Blower Motor, 1180rpm, Singl	
970237	Motor, Elec, 600HP, 575VAC/60Hz, 575V Blower Motor, 1180rpm, CSA, Z	
970238	Motor, Elec, 600HP, 575VAC/60Hz, 480V Blower Motor, 1180rpm, CE/ATEX	
1120408	Motor, Elec, 600HP, 575VAC/60Hz, 480V Blower Motor, 1180rpm, CE/ATEX	

TESCO is currently working with the motor vendor to determine the total number of affected components.

**ACTION REQUIRED:**

1. Find the motor nameplate on the top drive and confirm if the motor is a Ward Leonard motor (Figure 3).



**Figure 3: Ward Leonard nameplate**

2. **IMMEDIATELY INSPECT** the castle nut assembly to ensure that it is correctly installed. If it is not installed correctly, stop top drive operation and replace as soon as it is practical. If it is not practical to stop top drive operation, inspect the castle nut assembly every 6 hours for any signs of failure, such as cracks or loose pin connections.
3. When installing a new castle nut assembly, ensure that it is torqued to specification and installed with cotter pins.

TESCO is working with the motor vendor to develop a field repair procedure and a supplement to this bulletin will be released shortly.

If it is determined that your top drive is affected please contact a local TESCO service center **immediately** to provide motor serial number and top drive unit number.