

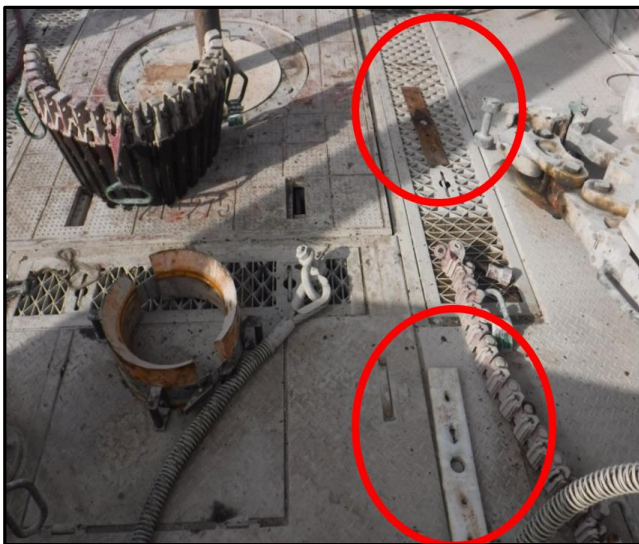


<b>Safety Bulletin</b>			 Tesco Corporation 5616 – 80th Avenue SE Calgary, Alberta, Canada T2C 4N5 Tel: 1-877-TESCO-77 (North America) Tel: 1 (713) 359-7195 (AMSS 24-hour support) Tel: 1 (713) 359-7295 (International) Email: <a href="mailto:bulletins@tescocorp.com">bulletins@tescocorp.com</a> <a href="http://www.tescocorp.com">www.tescocorp.com</a> <a href="http://www.tescoparts.com">www.tescoparts.com</a>	
<b>No: SB101</b>	<b>Rev: 0</b>	<b>Date: October 12, 2016</b>		
<b>EXI Top Drive Torque Restraint/Dolly System Dropped Object Incident</b>			 <b>TESCO</b> ®	
<input type="checkbox"/> Internal Use Only		<input checked="" type="checkbox"/> External Use		<input checked="" type="checkbox"/> Mandatory

**BACKGROUND INFORMATION:**

A dropped object incident was reported during a casing job where a dual-rail torque restraint liner and metal shim from a customer-owned Tesco EXI Top Drive fell to the rig floor. Weighing approximately 3 pounds (1.4 kg), the liner and shim (Figure 1) landed in front of the driller’s cabin from a height of 46 feet (14 meters). The casing job was stopped immediately. As the top drive was brought down for inspection a second shim fell from approximately the same height. The top drive and torque rails were inspected and a third shim was found to be loose as well; it was subsequently removed from the torque rail. There were no injuries to rig personnel.

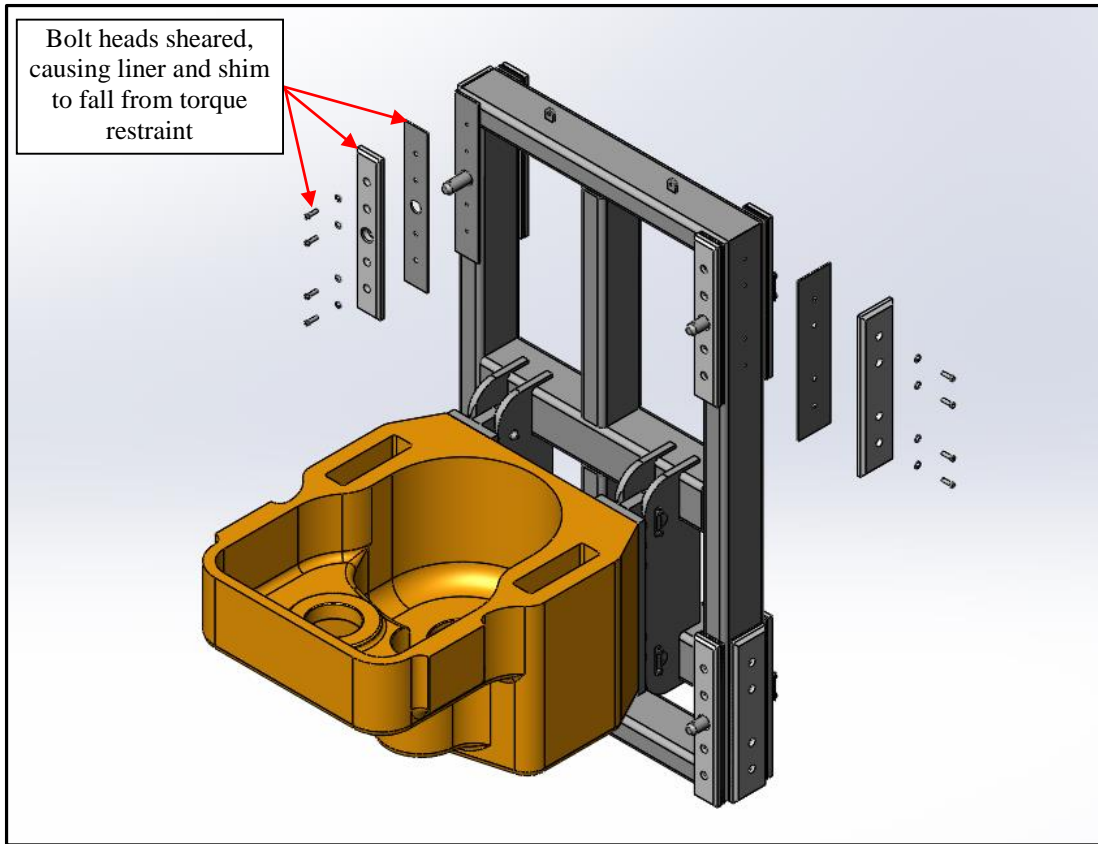


**Figure 1: Bolts heads from torque restraint sheared, causing liner and metal shims to fall to the rig floor**

The top drive had been in operation for approximately six months when the incident happened. Initial reports indicate that the liner was worn past acceptable operating limits, exposing the liner bolts. This resulted in the bolts shearing off (Figure 2) which contributed to failure of the torque restraint liner described above. It is unclear at this time whether the torque restraint liner had undergone a prior visual inspection and replacement as recommended in the top drive maintenance guide.

Version	Date (D/M/Y)	ECN	Description of changes
Rev 0	03/10/2016	267-0037	Initial release of document

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**Figure 2: EXI Top Drive dual-rail torque restraint**

**AFFECTED PRODUCTS:**

All Tesco Top Drive models that are operating on a dolly style torque restraint.

**ACTION REQUIRED:**

The Tesco Top Drive maintenance guides require a routine daily and weekly visual inspection of the torque restraint system including all liners for all models of top drives. The same inspection documented in the current maintenance manual for the torque track/torque bushing system is applicable to the dolly when used as a torque restraint system; the maintenance guide is being updated accordingly as per Figure 3. All customers using a dual-rail torque restraint system (dolly) are required to follow the maintenance guide and replace torque restraint liners when needed to avoid any risk of dropped liners/shims.

Contact your local Tesco service representative for more information regarding the maintenance of a top drive torque restraint/dolly system.

## TORQUE ARREST SYSTEM SERVICE REQUIREMENTS

### Daily Mono/Dual-Rail Torque Arrest System Service

The following visual inspections should be performed *at least once every operating day*. More frequent inspection might be required if operating the top drive in harsh or demanding drilling environments.

Inspect	For
All pinned connections	damage or decay/corrosion
All overhead equipment (T-bar, torque beam, torque track, torque bushing, dolly)	damage or decay/corrosion
Torque track hanging assembly	damage; close visual inspection is required

### Weekly Mono/Dual-Rail Torque Arrest System Service

The following visual inspections should be performed *at least once every operating week*. More frequent inspection might be required if operating the top drive in harsh or demanding drilling environments.

Inspect	For
All bolts and threaded rods	damage or decay, tightness
Torque bushing / dolly liner	wear (the bushing liner must be replaced before the liner mounting bolts come in contact with the torque tube)
Torque bushing / dolly clearance	amount of clearance (between 1/16" to 1/4"); adjust side plates to obtain clearance as specified
Torque track stabilization components	cracks or loose fasteners; close visual inspection is required
Hydraulic hoses and fittings	damage, excessive wear, hose hardness, heat cracked or charred; replace if damaged condition occurs

**Figure 3: Updated maintenance guide specifying visual inspections for dual-rail dolly**