

Safety Bulletin			 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: bulletins@tescocorp.com www.tescocorp.com www.tescoparts.com	
No: SB091	Rev: 0	Date: March 11, 2016		
Secondary Retention on ESI-1000 / ESI-1350 Two-Piece Guards				
<input checked="" type="checkbox"/> Internal Use Only		<input type="checkbox"/> External Use	<input type="checkbox"/> Mandatory	<input checked="" type="checkbox"/> Recommended

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

BACKGROUND INFORMATION:

In 2014, the standard one-piece guard assembly used with Tesco ESI Top Drives was replaced with a two-piece guard (upper and lower). The two-piece guard provided more convenient access to assemblies and individual components during maintenance and transport of the top drive. During a routine review it was found that some of the fasteners securing the upper guard had not been supplied with drilled heads to permit secondary retention by lockwire.

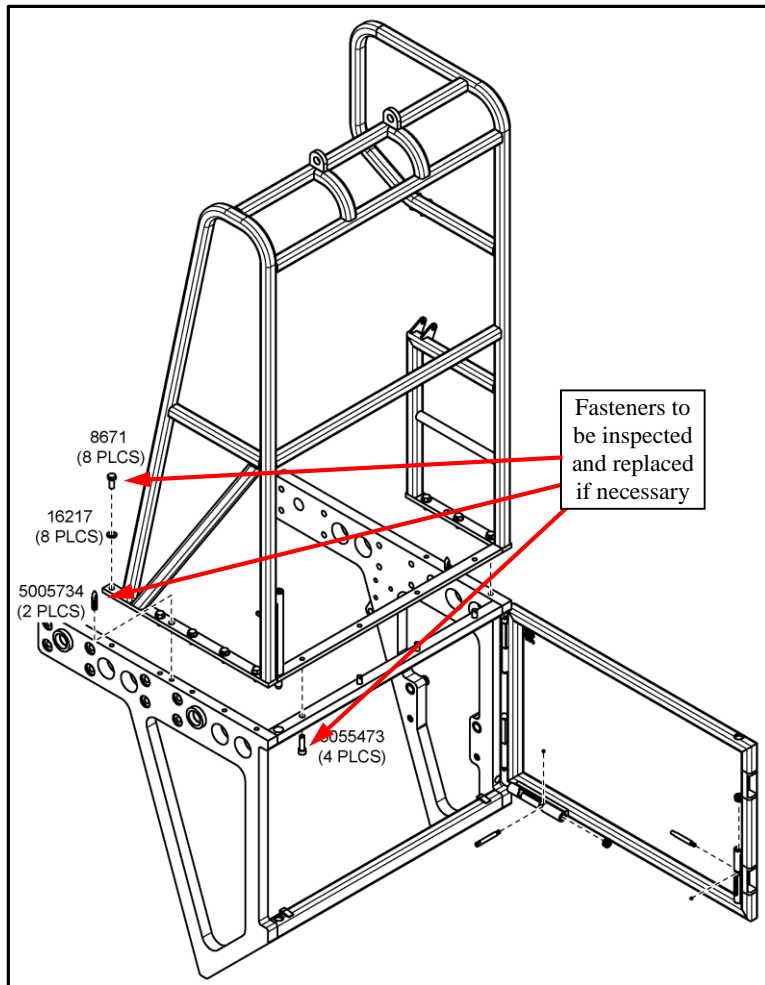


Figure 1: ESI-1000 / ESI-1350 Two-Piece Guard

Version	Date (D/M/Y)	ECN	Description of changes
Rev 0	11/03/2016	097-0276	Initial release of document

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To date there have been no reported instances of dropped fasteners or separation of the upper guard due to lack of lockwire secondary retention. However, fasteners without lockwire as a secondary retention could loosen during operation, and over time, lead to joint failure and dropped objects, resulting in avoidable incidents and unscheduled downtime.

AFFECTED PRODUCTS:

Two-piece guards on the following Tesco ESI Top Drive units are affected:

Top Drive Unit	
1400	1407
1401	1408
1402	1475
1403	1476
1404	1496
1405	1500
1406	1503

ACTION REQUIRED:

At the earliest convenience, inspect the fasteners securing the ESI Top Drive upper guard. If they cannot be lockwired then they should be removed and replaced with the following fasteners:

Part Number	Quantity	Description
16217	8	Washer, Belleville, 2991 lbs, 3/4" ID x 1.5" OD, SS
5055473	4	Screw, Cap, Skt Hd, 3/4"-10UNC x 2 1/2", Dr Thd
5005734	2	Pin, Alignment, Guard, 500-ESI

As a general recommendation, fasteners on all top drive components should be visually inspected on a daily basis for correct location, tightness and secondary retention, as suggested in the Maintenance Guide.

Daily Top Drive Service

Inspection

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

Inspect	For
12-Station manifold	general condition, oil leaks, moisture
Hydraulic hoses and connections at the top drive	leaks, damage, excessive wear, hardness, heat cracks or charring replace if any one of these conditions occurs
Grabber leg safety chain	broken components, stretched or deformed chain links, loose shackles, loose wires, lockwires, cotter pins
Grabber dies	excessive wear
Saver sub threads	excessive thread wear, seal face condition
Gearbox lubrication system hoses	oil leaks; adequate circulation NOTE: pressure should be 60 to 120 psi when warm
Gearbox oil level	correct gearbox oil level (halfway up sight glass)
All fasteners (nuts, bolts, cotter pins and lock wires)	correct location, tightness, secondary retention
Blower motor	abnormal noise, correct operation
Connection locking clamps	correct location, tightness
Counterbalance system	correct installation and function; correct cushion height = 2 in (5.08 cm)
Main top drive auxiliary hydraulics relief valve	correct setting (2000 psi)
Intensifier	correct operation
Mudsaver valve (lower ball)	manually operate to verify correct function
Pipe bumper/motor guard	dents or bends that could indicate bolt damage
Pipe handler locking system	check for wear, perform a function test
Robotic cable connectors	damage, tightness, secondary retention
Stuffing box (washpipe)	leakage, replace seals if it is leaking
Top drive electric connectors	damage, tightness
Secondary retention	missing or damaged cables and clamps NOTE: Refer to Dropped Object Prevention Scheme (DROPS)

Contact a local Tesco service center for more information regarding the ESI two-piece guard and the Secondary Retention Reference Guide and Checklist available for your top drive unit.