

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: SB098	Rev: 1	Date: October 31, 2016		
Guard Latch Failure on EXI Top Drive			 TESCO [®]	
<input type="checkbox"/> Internal Use Only		<input checked="" type="checkbox"/> External Use	<input checked="" type="checkbox"/> Mandatory	<input type="checkbox"/> Recommended

NOTE: All parts mentioned have Tesco part numbers unless otherwise noted.

BACKGROUND INFORMATION

For reasons yet to be determined, an EXI Top Drive guard door opened unexpectedly and collided with the rig structure. The collision resulted in the top drive guard door being forcefully removed from the top drive and falling to the drill floor. The root cause of the incident is yet to be determined.

No injuries occurred as a result of the incident.

Damage to the top drive appears to be limited to the guard and the drilling contractor was able to continue the drilling program.

The Tesco Engineering team has reviewed the latest EXI Top Drive guard door design. The current design utilizes two latches for safety — if one latch fails, the other latch secures the guard door. EXI Top Drive documentation (such as the operations guide and maintenance guide) are being updated to provide more detailed instructions on how to operate and maintain the guard door and its related components (see Table 1 and Figure 1).

AFFECTED PRODUCTS

All EXI Top Drive Models

Affected parts:

Part number	Description
810505	Door, Guard, 350-EXI-600
1100140	Latch Assy, Door Guard, EXI
820179	Plunger, Indexing, 1/2"-13 UNC, Non-Locking, Reid WIP-15
820234	Hinge, Door, Guard, EXI
810508	Lock, Door, Guard Assembly, 350-EXI-600

Table 1: Guard door and components

Version	Date (D/M/Y)	ECN	Description of changes
Rev 0	29/06/2016	ECN-115-0016	Initial release of document
Rev 1	31/10/2016	ECN-267-0038	Revised to include instructions and maintenance recommendations for guard door

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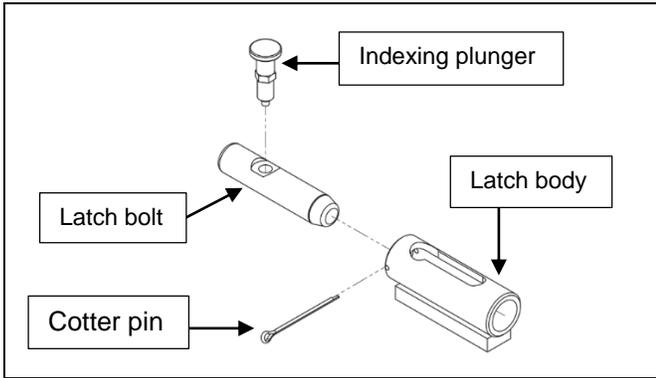


Figure 1: Door latch assembly

ACTION REQUIRED

In an effort to prevent failure of the guard door latch, Tesco recommends the following:

- Proper operation of the guard door
- Weekly inspections and maintenance of the guard door and its related components

Guard door operation

Always ensure correct operation of the indexing plunger in order to prevent equipment damage.



WARNING! If the latch does not engage smoothly, do NOT strike it with a hammer or any other tools. Doing so will render the latch inoperable and/or permanently damaged.



CAUTION! As shown in Figures 2 and 3, always ensure that the cotter pin is in place and has been folded back to mitigate any risk of latch bolt failure in the event that the indexing plunger is damaged.

To lock the indexing plunger:

1. Pull the knob on the indexing plunger to release it from the unlock position.

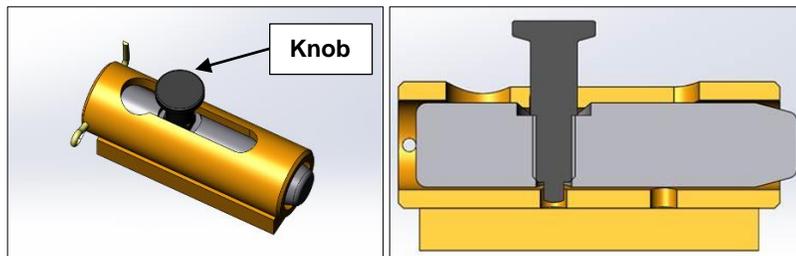


Figure 2: Indexing plunger unlocked

2. Use the knob to slide the indexing plunger all the way down the latch body.

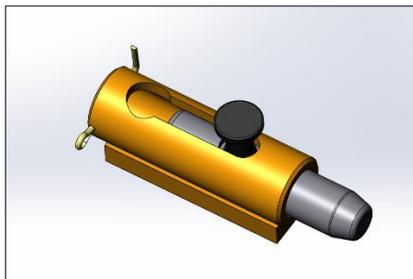


Figure 3: Slide knob to lock

3. Release the knob and ensure the indexing plunger is engaged in the lock position.

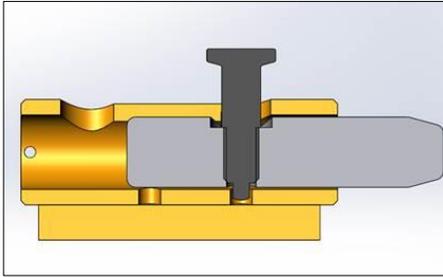


Figure 4: Lock position

To unlock the indexing plunger:

1. Pull the knob on the indexing plunger to release it from the lock position.
2. Use the knob to slide the indexing plunger all the way up the latch body.
3. Release the knob and ensure the indexing plunger is engaged in the unlock position.

Weekly inspection and maintenance

At least once a week, the operator is required to do the following:



CAUTION! It may be necessary to perform the following actions more than once a week if one or more of these conditions apply:

- the top drive is operating in a corrosive environment
 - severe vibration of the top drive is observed
 - the top drive is being used for rough drilling
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- Visually inspect the guard door, door latches, indexing plungers, door hinges, lock, and latch pins.
- Use penetrating oil spray (or an equivalent spray lubricant) to spray the indexing plungers, door hinges, lock, and latch pins.
- Open the guard door to operate the latch pins and indexing plungers. Ensure there is no binding or damage.
- Replace any indexing pins that do not operate correctly.
- If the guard door is bent or damaged, it must be repaired or replaced. If repair/replacement cannot be immediately performed, then secure the door to prevent it from opening inadvertently.
- If a door latch is damaged, replace it immediately.

Should any issues arise concerning the operation of the guard door, contact your local Tesco representative to discuss possible solutions.