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| <h1>Safety Bulletin</h1> | | |  <p>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</p> |
| No: SB074 | Rev: 0 | Date: March 12, 2013 | |
| Fasteners Joining Junction Box to 600HP Motor Can Fail – TESCO EXI 600 Top Drive | | | |

BACKGROUND INFORMATION:

An incident occurred involving a TESCO EXI 600 Top Drive where the cap screws that fasten the high voltage junction box to the 600HP motor came loose or broke off during a period of rough drilling.

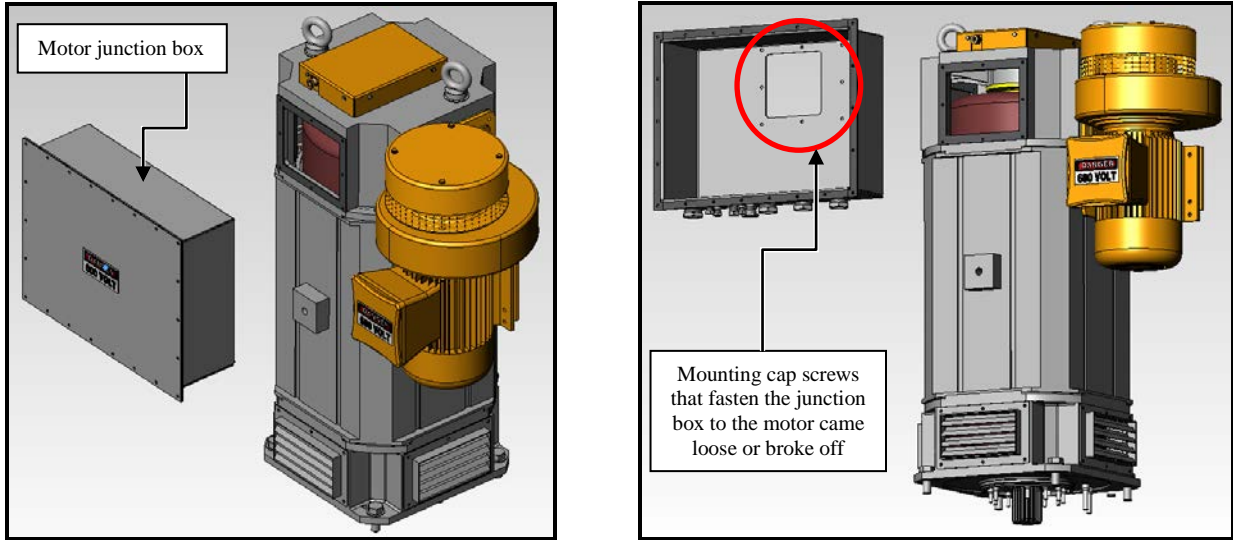


Figure 1: Motor junction box showing location of affected cap screws

Fasteners that fail to secure the junction box to the motor can result in two potential hazards – dropped object incident and high voltage arcing – both of which could cause serious injury to personnel and damage to equipment.



Figure 2: Bolts that have come loose or failed, causing the motor junction box to slip on the TESCO EXI-600 Top Drive

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AFFECTED PRODUCTS:

All TESCO EXI-600 Top Drive Systems that utilize 5/16" fasteners prior to November 2012, and EXI Top Drives that utilize 3/8" fasteners from November 2012 onwards.

ACTION REQUIRED:

Given that the consequences of failure may be severe and include the possibility of the motor junction box coming loose from the top drive and falling to the rig floor, the following actions must be implemented as soon as practical.

Immediate Correction

1. Open the junction box cover.
2. Inspect the motor junction box mounting cap screws and note the size, condition and if any retention methods are in place.
3. If the fasteners are 5/16" UNC, loosen them slightly then retighten using a 3/8" drive torque wrench. Tighten the fasteners to 25 lb-ft, install safety wire on the fasteners and secure the junction box assembly with a safety cable 10281. It will be necessary to replace the 5/16" fasteners as soon as possible.
4. Re-install the junction box cover.
5. At the earliest possible service time, perform the permanent correction below.

Permanent Correction

Once the top drive is properly locked out and brought to a safe working area, perform the following steps to replace the 5/16" fasteners:

1. Open the junction box cover and check the size of the fasteners. If they are 5/16" then:
 - a. Remove the 5/16" fasteners. (**Check fastener length before ordering**).
 - b. Drill the clearance holes in the junction box to 25/64" diameter to facilitate the new 3/8" fasteners.
 - c. Drill the mounting holes in the motor out with a 5/16" drill bit, and tap the holes using a 3/8" - 16 UNC bottoming tap.
 - d. Complete the following step.
2. If the fasteners were already 3/8" UNC, determine the fastener grade:
 - a. If not Grade 8, or were originally 5/16" size, replace with 3/8" - 16 UNC x 1" Grade 8 drilled head fasteners (TESCO part number 1320150).
 - b. Fasten the junction box to the motor with 3/8" Grade 8 fasteners.
 - c. Use a 3/8" drive torque wrench to tighten the 3/8" Grade 8 fasteners to 40 lb-ft. Install safety wire on all the fasteners.
3. Re-install the junction box cover.

| Version | Date (D/M/Y) | ECN | Description of changes |
|---------|--------------|----------|-----------------------------|
| Rev 0 | 12/03/2013 | 127-0522 | Initial release of document |

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