



Model: EXI 600 Top Drives

Serial #: N/A

Nov. 6, 2019

Product Bulletin # TDS-207 v 1.0

Alert



Junction Box to 600HP Motor Fasteners

Issue

An incident occurred involving a Canrig top drive model TESCO EXI 600 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.

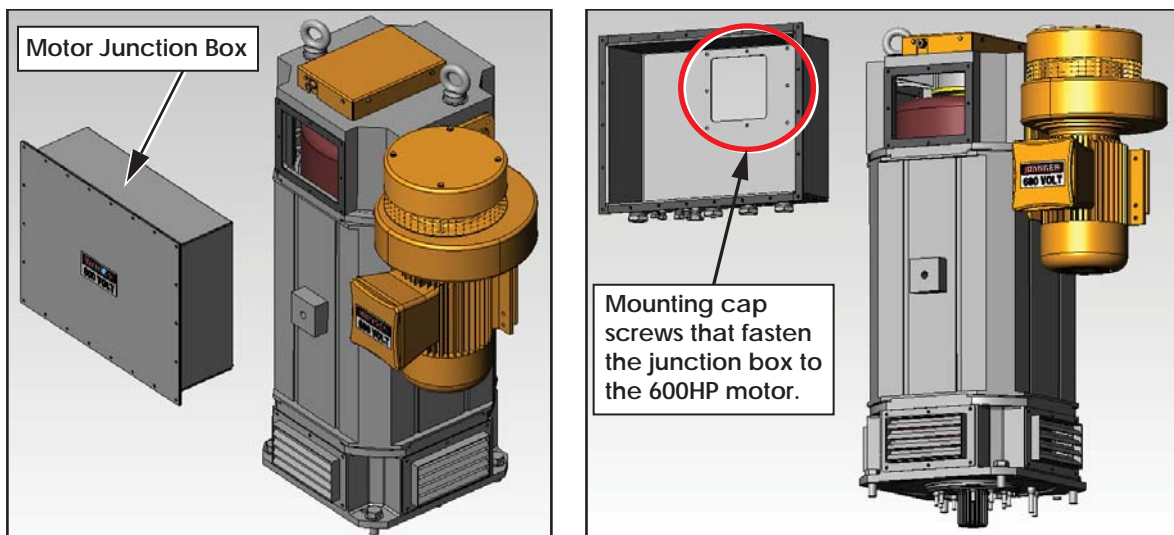


Figure 1: Motor junction box showing location of affected cap screws

Fasteners that fail to secure the junction box to the motor can result in two potential hazards – dropped object incident and high voltage arcing.



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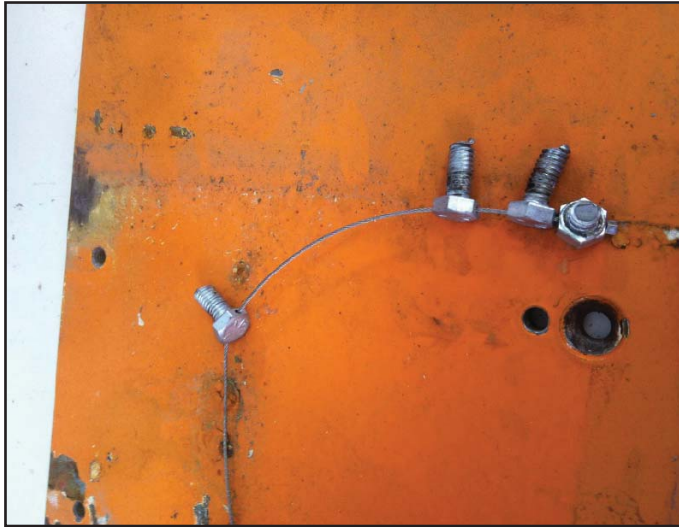


Figure 2: Bolts that have come loose or failed, causing the motor junction box to slip on the TESCO EXI-600 Top Drive

Affected Models

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

Recommended Action

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. It will be necessary to replace the 5/16" fasteners as soon as possible. If the fasteners are 5/16" UNC, loosen them slightly then re-tighten 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.
4. Re-install the junction box cover.
5. At the earliest possible service time, perform the permanent correction below.



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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.



Note: 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 stainless steel, replace them with 3/8" - 16 UNC X 1-1/4" Grade 8 drilled head fasteners (Canrig P/N: 5965) with lock washers (Canrig P/N: 1066) and flat washers (Canrig P/N: 10340).
 - b. Apply Loctite® 243 (Canrig P/N: 17756) to the fasteners and tighten to 40 ft-lb.
 - c. Apply 0.032" stainless annealed safety wire (Canrig P/N: 2909) on all fasteners.
3. Re-install the junction box cover.