

Technical Bulletin

No: TB063

Rev: 0

Date: 04 Feb 2008

Description: Spacer/Seal Arrangement EMI 400 (ECN-112-0185)



Tesco Corporation
6204 – 6A Street SE
Calgary, AB. T2H 2B7
Phone: (403) 692 5700
www.tescocorp.com

BACKGROUND INFORMATION:

A condition has been identified, where over time the current orientation of the Upper Quill Bearing Seals has led to the seal lips cutting grooves into the Quill. This condition has created a pathway allowing water and dirt to enter the gearbox, leading to the premature wear of internal components such as gears and bearings.

TESCO implemented a hard facing (tungsten carbide) to the upper seal area for both 150 and 250 ton quills, to reduce quill wear for all new EMI400 top drive systems.

AFFECTED PRODUCT:

All models of EMI 400 Top Drive units with quills manufactured prior to March, 2009.

TESCO part numbers:

TPN 830044 "Quill, NC50Pinx6.25-3ACME-2G-LH Pin, 2.5"Bore, 250-EMI-400"

TPN 820108 "Quill, NC50Pinx6.25-3ACME-2G-LHPin, w/o PH, 150-EMI-400"

ACTION REQUIRED:

Field Units:

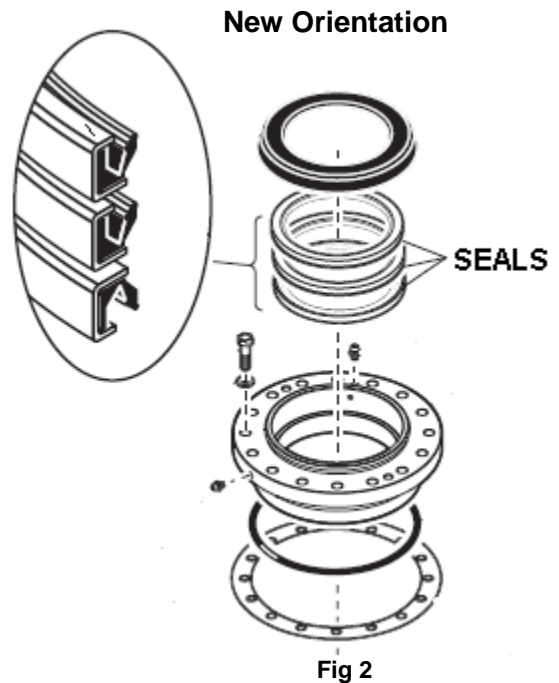
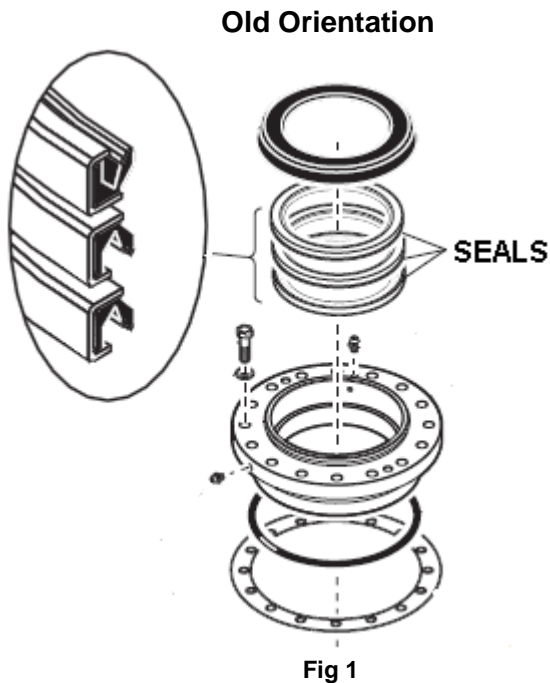
Visual inspections of EMI400 upper quill bearing seals are to be performed during routine maintenance inspections. To include visual inspection of quill face where seal lips contact the quill. If the grooves in the quill are deeper than 0.003" then the unit should be scheduled for the following field modification as soon as possible:

- New seals should be installed with the revised seal orientation, top two seals facing upward and the bottom seal facing downward as per illustration I-720752 or I-1130110 or I-1130111 (see figs 1 & 2 for old and new orientation)
- If the grooves in the quill are deeper than 0.003" then a spacer, TESCO Part Number 1410108 – Spacer, Seal 150T & 250T, should be placed between the upper 2 seals lips to run on full dimensioned areas of the quill (see fig 3 for spacer dimensions)

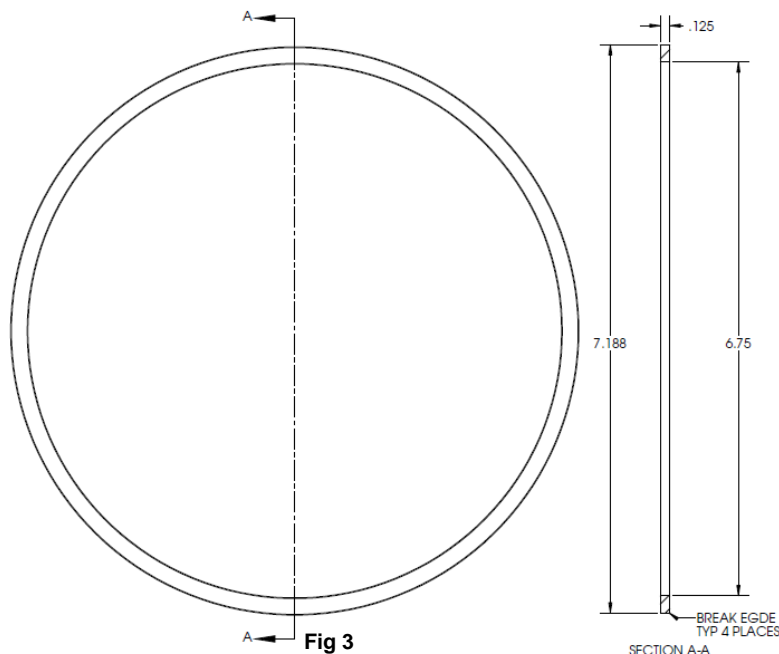
1,000 Day Recertification or units in for a scheduled maintenance:

New seals should be installed with the revised seal orientation, top two seals facing upward and the bottom seal facing downward as per applicable illustration: I-720752, I-1130110 or I-1130111 (see figs 1 & 2 for old and new orientation)

- implemented a hard facing (tungsten carbide) to the upper seal area for both 150 and 250 ton quills to reduce quill wear for all new EMI400 top drive systems. Seal area is to be built up and hard surfaced as per drawing 830044 or 820108



Spacer 1410108



RECOMMENDATIONS:

- When a wash pipe assembly leaks, change the gear oil in the gearbox
- Prior to re-installing the wash pipe, remove the seal saver and clean off the bearing retainer and seal area
- Grease the seals until clean grease appears from the top seal, re-install the seal saver and wash pipe

Note: The seals should be greased *at least once every operating day*. More frequent lubrication may be required if you are operating the top drive in harsh or demanding drilling environments. Refer to chapter 2 of the EMI 400 top drive system maintenance manual.

Contact your local TESCO Parts and Service Center for further information regarding this bulletin and or supply of affected components noted above.