


Product Bulletin – Action Required			 <p>Tesco Corporation 6204 – 6A Street SE Calgary, Alberta T2H 2B7 Phone: (403) 692 5700 www.tescocorp.com</p>
Bulletin SPB0023	Rev: 0	Date: December 14, 2005	
Description: Top Drive Load Path Components			

PRODUCT INSPECTION AND REPLACEMENT NOTICE

Load Path Upgrade Program

BACKGROUND

TESCO Top Drive load path components have operated successfully for many years. However, in early 2005 load path components on some TESCO Top Drive Units failed. TESCO's initial investigations identified several reasons for the failures, including operating conditions and practices. However, these initial investigations also identified a group of load path components manufactured from material supplied by a single supplier which did not meet TESCO's requirements for minimum material toughness (impact strength), despite Material Test Reports which indicated to TESCO that the toughness specifications were met. As a result of these findings, in May 2005, TESCO issued Safety Bulletin SB0020 providing for the removal of this group of load path components from service.

Subsequent investigations also determined that material toughness test results in Material Test Reports provided by suppliers of material to TESCO were not in all cases representative of actual toughness values of threaded load path connections manufactured from these materials.

Ongoing TESCO investigations determined that the stated static load capacity, as well as other mechanical properties, with the exception of material toughness, of the TESCO Top Drive are not compromised.

However, components manufactured from materials with insufficient toughness values may experience a shorter life cycle due to crack initiation in the thread root of the load path connection and may experience rapid propagation of such cracks, particularly in severe service operating conditions (e.g. heavy jarring, use of bent drill pipe, high corrosion, high hook loads etc.). This may reduce axial load capacity of the Top Drive. This could cause serious personal injury, death, and property damage or business interruption.

There have been few failures to date among the thousands of load path components in operation. Investigations are ongoing regarding the role of material toughness in these incidents. It is clear however, that operating conditions and practices were a factor in all failures.

COMPONENTS AFFECTED

Load path components that contain integral API rotary shouldered connections (excluding Mud Saver/Safety Valves, Saver Subs).

NEW TESCO DESIGN AND TEST CRITERIA

As a responsible manufacturer, TESCO has now addressed this material supply issue. Material now supplied to TESCO for the manufacture of load path components must meet a new, more stringent TESCO design and test criteria.

REPLACEMENT OF OLD COMPONENTS

As actual toughness values can only be determined by destructive testing, TESCO has decided to provide upgraded replacement components manufactured in accordance with its new, more stringent design and test criteria to all Units presently in the field. TESCO will provide upgraded replacement components at no cost. Installation of the upgraded replacement components may be scheduled in conjunction with routine or opportune maintenance to avoid interruption to business operations, but in any case, as soon as is reasonably practical.

However, owners of TESCO Top Drive systems must strictly follow the Safety Procedures set out below until replacement components are installed.

SAFETY PROCEDURES**Inspection:**

1. Immediately complete a baseline load path inspection. This inspection should include, at a minimum, a complete visual and wet magnetic particle inspection of all rotary-shouldered connection to detect whether any cracking, corrosion or diameter changes may exist.
2. In the event that any operation exceeds manufacturer's specification at any time, complete an immediate further inspection as described in 1. above.
3. Until completion of upgraded component replacement, follow a more rigorous and frequent inspection and maintenance schedule than that set out in the Maintenance Guide, which includes the inspection of the load path and the rotary shouldered connections and 500-day recertification intervals. The Maintenance Guide is available from TESCO on our web page at www.tescocorp.com or you may call the number below.
4. In severe service applications undertake an even more rigorous load path inspection program.
5. If inspection reveals any connection defects, including cracks, excess corrosion, or washout/leakage, immediate replacement of the load path component is required. Immediately contact TESCO regarding replacement.

**Assembly
and
Operation:**

1. Follow API Recommended Practice 7G for the assembly and use of rotary shouldered connections.
2. Under no circumstances should the TESCO recommended load path connections torque values or the axial load rating of the Top Drive be exceeded.
3. Additional care should be taken while personnel are working under or around the Top Drive.

CONTACT INFORMATION

Contact Don Murray at (403) 692-5804, or by email to don_murray@tescocorp.com for further information regarding this notice, requests for replacement components and scheduling.