



Flight Diesel TB 06/23 R1

SUBJECT: 6.0L Power Stroke Tech. Bulletin – Premature Injector O-Ring Failure - PG.1 May 23, 2015

This Technical Bulletin addresses common issues encountered with the premature failure of the G2.8 Injector oil seal or sometimes called the “D-Ring”.

Problem/Complaint:

- Engine has a “Hard Start” or “No Start”
- Engine stalls when hot, won't restart

Probable Causes:

- Most likely causes are bad injector oil seals “D-Ring” (Figure 1)

Causes of Injector D-Ring Erosion:

Ⓜ Leakage from hair line fractures in the Ball Tube

- Fractures propagate from the damage on the end of the Ball Tube (Figure 2).
- Fractures are typically visible (with magnification) on the inside diameter of the Ball Tube.
- High pressure oil blasts through the crack and erodes the D-Ring from the inside.

Ⓜ Leakage between Ball Tube and Injector D-Ring

- Installation damage to the D-Ring from reuse of damaged Ball Tubes.
- Poor D-Ring to Ball Tube seal from reuses of worn Ball Tubes (Figure 3).

Ⓜ Leaking Ball Tube O-Ring

- Ball Tube O-Rings flatten and harden with age allowing high pressure oil to escape past the Ball Tube O-Ring, blasting the top of the injector D-Ring (Figure 4).



Figure 1

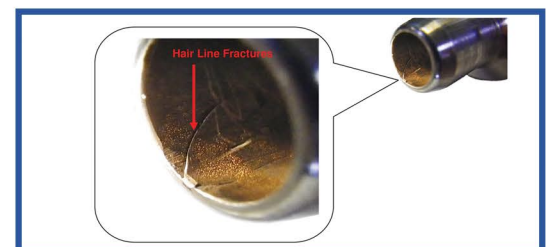


Figure 2

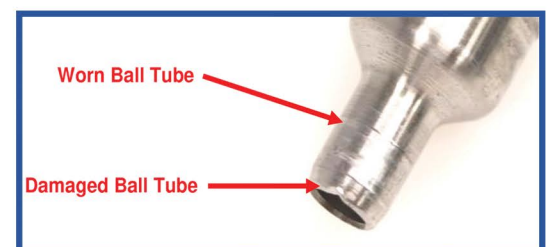


Figure 3



Figure 4

Flight Diesel TB 06/23 R1

SUBJECT: 6.0L Power Stroke Tech. Bulletin – Premature Injector O-Ring Failure - PG.2 May 23, 2015

Causes of Injector D-Ring Erosion Continued:

- ▣ **Leakage between Ball Tube and Injector D-Ring**
 - Installation damage to D-Ring from misaligned Ball Tubes (Figure 5).

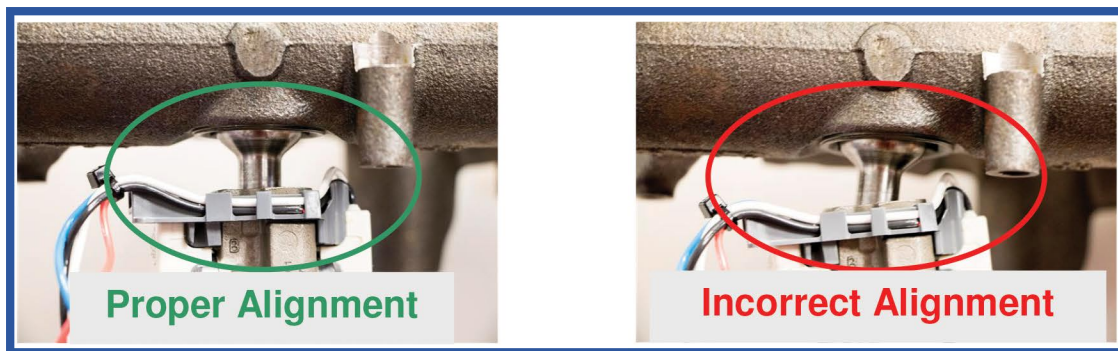


Figure 5

Recommendations:

- Replace Ball Tubes and O-Rings (**FS00103**) when installing injectors.
- Use clean engine oil to lube Ball Tubes prior to installation.
- Ensure Ball Tubes are aligned properly when installing injectors.

Torque Specifications:

- Ball Tube Retaining Nut - 100 lbf-ft (136 Nm)
- Injector Hold Down Screw - 24-26 lbf-ft (33 Nm)

Preventative Maintenance Schedule:

- Replace Engine Oil (15 qts.) - 5,000-7,500 miles
- Replace Fuel Filters - 10,000-15,000 miles

**Ball Tube Kits with New O-Rings are available for purchase, P/N: FS00103. A special tool is required for removal and installation of Ball Tubes, P/N: FS00104. Please visit our website www.flightdiesel.net or call for pricing and availability 717.932.7000.