



**No.: 04 TS - 53**  
October 6, 2004

TO: All Distributors/Dealers and Their Branches  
US, Canada and Mexico

ATTN.: Service Managers

FROM: Technical Service

SUBJECT: **MBE4000 – Fuel Pump Gear – Inspection Procedure Revised**

The procedure for inspection of the fuel pump gear can be found in the *MBE4000 Service Manual (6SE412)* – section 2.12.2.3, “Checking the Fuel Pump Driven Gear Bolt Torque.”

What follows is a revised version of this procedure, which contains the most updated technical information available to service this component of the MBE4000 engine.

There is also a new gasket for the camshaft cover. This new gasket can be ordered through DDC and Freightliner PDCs under *P/N: 4570110880*. The installation procedure is included also.

Please contact the DDC Customer Support Center at 313-592-5800 if you have any questions.



## Checking the Fuel Pump Driven Gear Bolt Torque

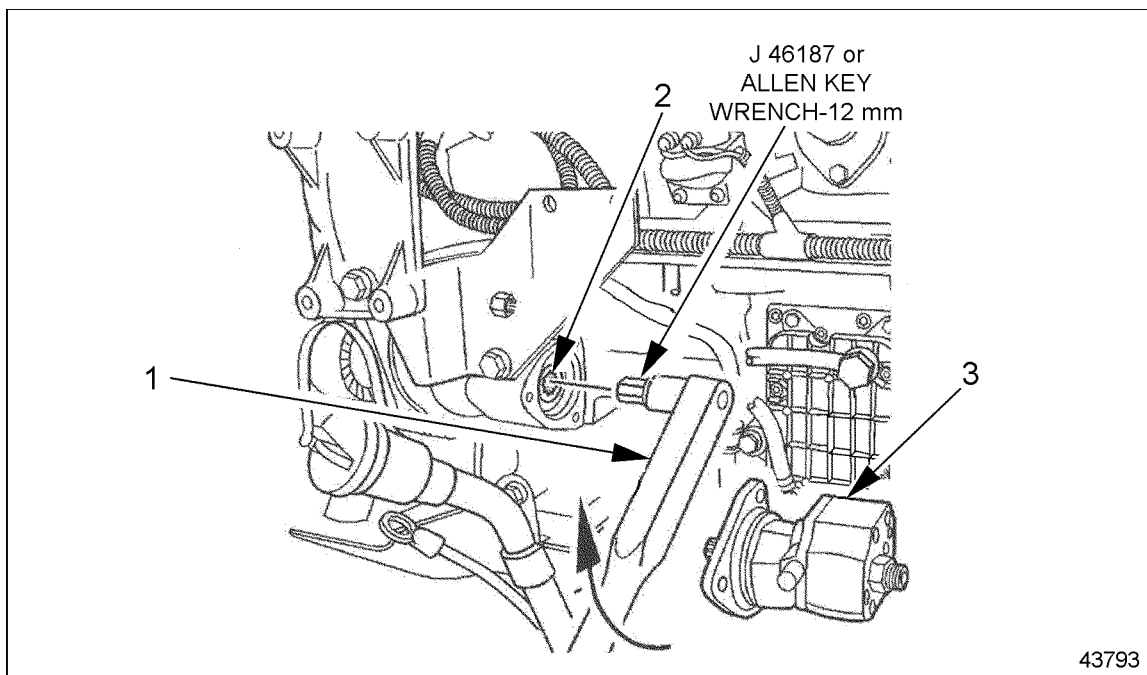
This procedure describes how to check the fuel pump assembly for any play or wear on the fuel pump shaft drive gear mounting bolt. Any play in this component will impact engine performance.

1. Remove the fuel pump.
2. Set the torque wrench to 30 N·m (22 lb·ft).

**NOTICE:**

Do not apply a torque over 30 N·m (22 lb·ft). Excessive torque can cause the bolt/gear failure.

3. Turn the torque wrench as shown by the arrow in until the torque wrench “clicks.” This resistance ensures that the fuel pump drive gear is in good condition. In the event of NO resistance found with shaft turning freely, proceed to the step 4. See Figure 1.

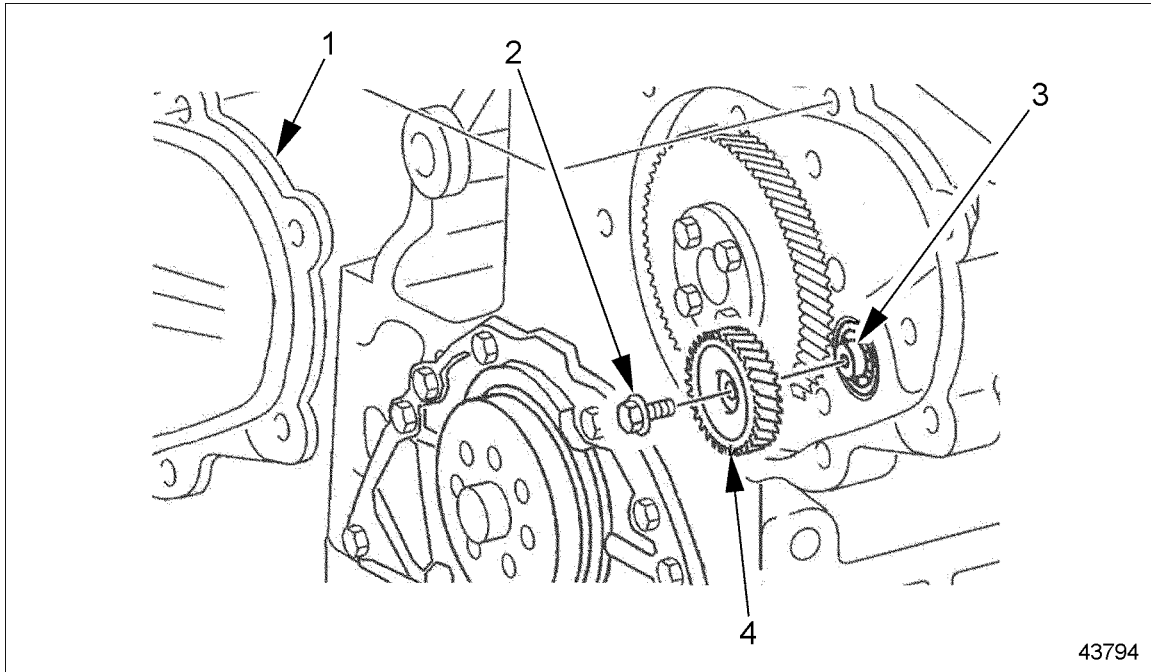


1. Torque wrench
2. Fuel Pump Drive Gear Splines
3. Fuel Pump

### Figure 1 Checking Fuel Pump Drive Gear

4. Remove the fuel pump drive gear cover.

5. Remove the bolt and gear. See Figure 2.



- |                             |                         |
|-----------------------------|-------------------------|
| 1. Cover                    | 3. Fuel Pump Shaft      |
| 2. Drive Gear Mounting Bolt | 4. Fuel Pump Drive Gear |

**Figure 2** □ **Removing/Installing Fuel Pump Drive Gear and Bolt**

6. Check the mounting between bolt, gear, and shaft. Look for damaged parts. Replace damaged part. Replacement ensures parts will not become loose.
7. Install gear and bolt. Apply Loctite® 271 sealant to the bolt. For the correct tightening of the bolt, install the special tool J46187 to the fuel pump spline and block the shaft movement. See Figure 1.
8. Torque bolt to 35 N·m (26 lb·ft).
9. Install the camshaft cover and the new gasket (P/N: 4570110880). Torque 50 N·m (37 lb·ft).
10. Install the fuel pump and a new fuel pump gasket. Torque the fuel pump bolts to 25 N·m (18 lb·ft).