

No.: 06 TS – 10
May 8, 2006

TO: DDC Distributors, FLLC Dealers, Global Dealers

FROM: Technical Service

SUBJECT: **MBE 4000 EGR Engine Oil Leak**

ISSUE

Oil leak and subsequent low oil pressure

CAUSE

Missing or leaking oil gallery cup plug. There are two cup plugs at the right rear face of the engine block behind the starter and flywheel housing. A third cup plug is on the right front face of the engine block near the damper. See Figure 1 below for the location of the three cup plugs.

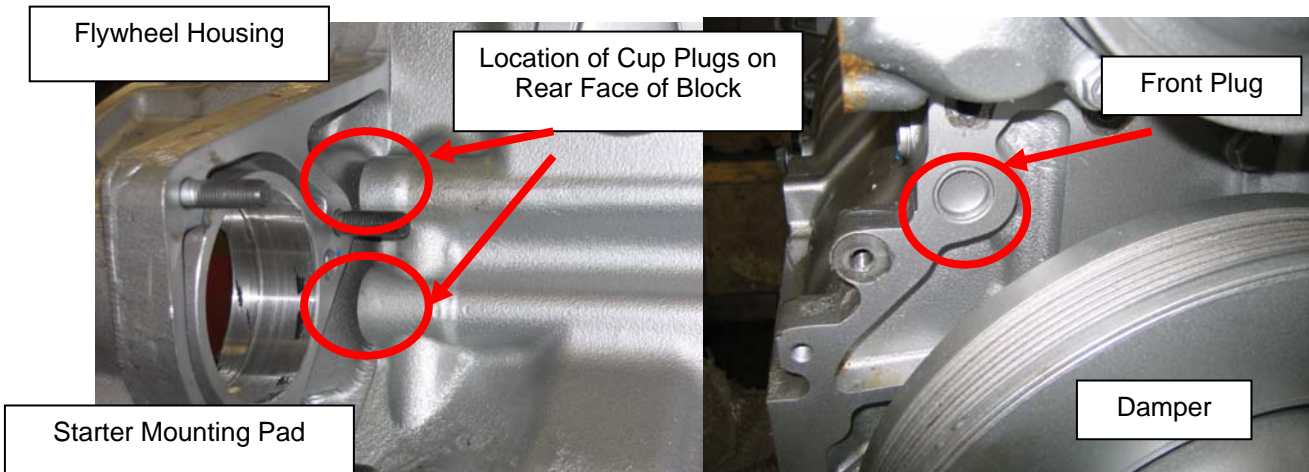


Figure 1 - Location of Cup Plugs

REQUIRED ACTION

- A bracket and epoxy kit has been developed to retain and seal the two rear cup plugs. See Figure 2. No bracket kit is needed for the front cup plug since the oil pressure is much lower than the two rear cup plugs.

NOTE: Do NOT remove the bracket from the engine unless there is an oil leak.

- Install the bracket and epoxy kit on all engines that do not already have it.
- A threaded plug kit was developed to repair engines that suffer a rear cup plug failure. See Figure 3.

There are two general groups of vehicles affected by this issue. Below are specific instructions for each group.

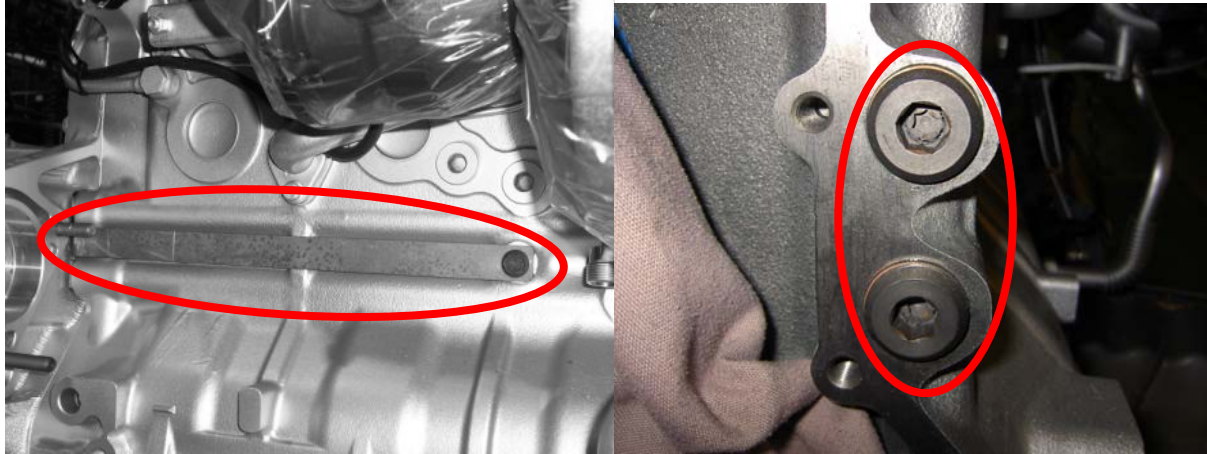


Figure 2 – Bracket And Epoxy Installed

Figure 3 – Threaded Plugs Installed

- Vehicles being delivered to dealers from a Freightliner manufacturing facility or body builder, or in dealer inventory (undelivered):
Some of these vehicles may already have the bracket and epoxy kit installed. These vehicles may already have cup plug kit P/N: 23536000 installed, or have the kit stored in the vehicle cab. If found in the cab, remove the kit. Inspect the right rear area of the engine where the cup plugs are located for oil leaks.
 - If no leaks are found:
 1. Install bracket and epoxy kit P/N: 23536001 if it's not already installed.
 2. After repairs are complete, run the vehicle and inspect for leaks.
 - If leaks are found:
 1. Call the Detroit Diesel Customer Support Center at 313-592-5800 and provide the necessary vehicle information to report the failure.
 2. Install threaded plug kit P/N: 23536501 only on the two rear oil gallery holes.
 3. After repairs are complete, run the vehicle and inspect for leaks.

 - Vehicles running in service:
Inspect the right rear area of the engine where the cup plugs are located for oil leaks.
 1. If no leaks are found:
 - Install bracket and epoxy kit P/N: 23536001 if it's not already installed.
 - After repairs are complete, run the vehicle and inspect for leaks.
 - Return the vehicle to the customer.
 2. If leaks are found:
 - Call the Detroit Diesel Customer Support Center at 313-592-5800 and provide the necessary vehicle information to report the failure.
 - Install threaded plug kit P/N: 23536501 only on the two rear oil gallery holes.
 - After repairs are complete, run the vehicle and inspect for leaks.
 - Return the vehicle to the customer.
- For engines that have suffered an actual cup plug failure:
1. If an instrument panel light and alarm buzzer for low oil pressure occurs and the oil pressure gauge reads zero, shut down the engine immediately to avoid engine damage (if safe to do so).
 2. Call the Detroit Diesel Customer Support Center at 313-592-5800 and provide the necessary vehicle information to report the failure.
 3. Install threaded plug kit P/N: 23536501 only on the two rear oil gallery holes.

4. After repairs are complete, run the vehicle and inspect for leaks.
5. Return the vehicle to the customer.

REPAIR PROCEDURE

Follow the 18SP628 instructions included in bracket and epoxy kit P/N: 23536001 and 18SP631 instructions in threaded plug kit P/N: 23536501. Note that installation of the threaded plug kit requires the use of Kent Moore tool J-47485 as referenced in Tool Letter 06TL-05. Also reference the *MBE4000 Service Manual* (6SE412) for removal of the flywheel housing and the applicable vehicle service manual for removal of the transmission.

ADDITIONAL INFORMATION

- Engines affected are engine unit serial numbers 0460817468 through 0460840294.
- As noted above, contact the Detroit Diesel Customer Support Center at 313-592-5800 for genuine unit down situations.
- Warranty on cup plug failures is already encompassed in the 5 year/500,000 mile critical component (cylinder block) coverage for trucks or the 7 year/250,000 mile coverage for vocational applications. Reference Service Operations letter 06SO-7.
- When ordering repair kits, put the entire quantity of each particular kit part number needed on a single line item. Do NOT use separate line items.
- Existing orders in Paragon or Canton IMS for cup plug kit P/N: 23536000 will be cancelled after May 22, 2006, if not already done so by the ordering facility.
- The bracket and epoxy kit P/N: 23536001 and the threaded plug kit P/N: 23536501 are both stocked at all PDC's and should be ordered on an "as needed" basis.
- Note that installation of the threaded plug kit requires the use of Kent Moore tool J-47485 as referenced in Tool Letter 06TL-05.
- Remember that bracket and epoxy kit P/N: 23536001 contains enough parts for four engines.

CONTACT INFORMATION

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