DAIMLER

Daimler Trucks North America
[redacted]
District Service Manager
Field Service

09/26/18

[redacted]

Subject: DD13 Oil Pick-Up Tube O-rings

Dear [redacted]

Our records indicate that you are the owner of certain vehicles, and DTNA has decided to share the following documentation with you.

This documentation applies to Freightliner Business Class M2 vehicles built with certain DD13 engines.

We hope you find this information helpful.

Sent Via "email"

Certain Freightliner Business Class M2's built with DD13's of EPA 10 vintage to engine build date 12/2012 will be updated with improved oil pick up tube o-rings. Affected vehicle list is provided with this communication.

Applicable vehicles should be coordinated for update with the authorized local Freightliner or Detroit Diesel distributor.

For claim approval, please contact:

[redacted] District Service Manager Daimler Trucks North America [redacted]
Mobile: [redacted]

Claim preparation should follow warranty guidelines for documentation and supplemental repair times (SRT's).

Daimler Trucks North America, LLC
4747 N. Channel Avenue
Portland OR 97217-7699
Phone: XXX-XXX-XXXX

10.10.2 Removal of the Oil Pump, Oil Suction Manifold, and Oil Lines

Remove as follows:

WARNING:

PERSONAL INJURY

To avoid injury, never remove any engine component while the engine is running.

WARNING:

PERSONAL INJURY

To avoid injury from hot surfaces, wear protective gloves, or allow engine to cool before removing any component.

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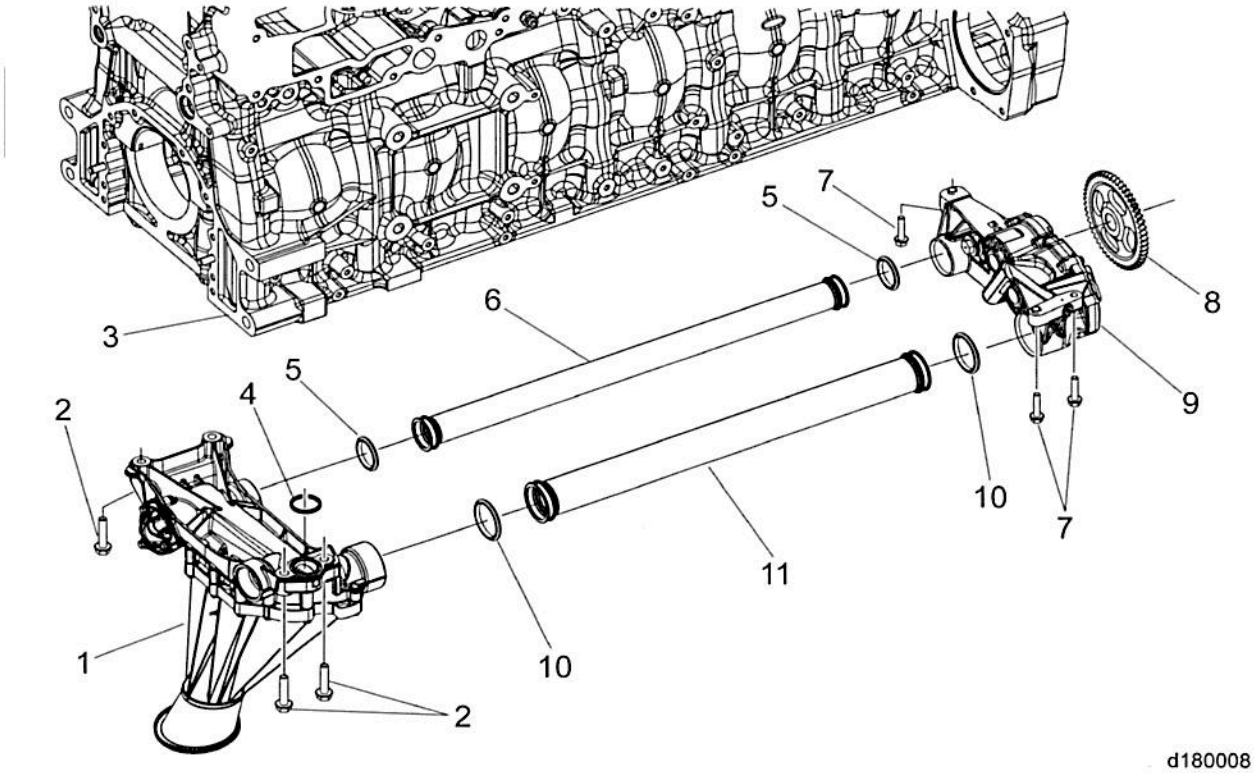
NOTICE:

The engine oil can be reused if it is not contaminated and has been properly maintained.

1. ☐ Remove oil drain plug from the oil pan and drain the oil into a suitable container.
2. ☐ Remove the oil pan. Refer to section "Removal of the Oil Pan" .
3. ☐ Remove the four bolts (2) securing the oil suction manifold (1) to the cylinder block (3).



4. ☐ Remove the oil suction manifold (1), oil lines (6 and 11) and O-rings (4, 5 and 10). Discard the O-rings.

5. ☐ Remove the three bolts (7) securing the oil pump (9) to the cylinder block (3) and remove the oil pump.

Last updated on 01-21-2016

10.10.4 Installation of the Oil Pump, Oil Suction Manifold, and Oil Lines

Install as follows:

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1. ☐ Verify the oil pump part number to be sure is correct for the application.

NOTICE:

The DD13 and DD15 AT oil pump **cannot** be used on a DD16 engine. Failure to install the correct oil pump or improper oil pump mounting will result in permanent damage to the engine. The oil pump must mount flush to the bottom of the cylinder block before installing the oil pan.

2. ☐ Position the oil pump on the cylinder block so that the drive gear of the oil pump meshes with the crankshaft gear.
3. ☐ Install the three oil pump mounting bolts. Torque the bolts to 30 N·m (22 lb·ft).
4. ☐ Install the oil suction and pressure lines, using new O-rings on each end.
5. ☐ Install the oil suction manifold onto the cylinder block. Torque the mounting bolts:
    1. ☐ M10 diameter bolt to 60 N·m (44 lb·ft).
    2. ☐ M8 diameter bolt to 30 N·m (22 lb·ft).
6. ☐ Install the oil pan. Refer to section "Installation of the Oil Pan" .
7. ☐ Prime the lubrication system. Refer to section "Priming the Engine Lubrication System" .

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Last updated on 01-21-2016

10.9.5 Installation of the Oil Pan

Install as follows:

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1. If the oil pump and oil suction manifold were removed, Refer to section "Removal of the Oil Pump, Oil Suction Manifold, and Oil Lines" .

2. For the plastic oil pan, install the oil pan mounting seal as follows.

3. Insert the raised lip portion of the seal into the groove in the oil pan.

4. Press down on the mounting seal and insert it completely around the oil pan. Be careful not to stretch or bunch the seal.

5. For best results, install the seal at each corner, then at points half way between the corners. Continue in this manner, halving the distance and seating the seal.

6. For the aluminum oil pan, place the mounting gasket on the top of the pan.

7. Apply a 5 mm (0.2 in.) diameter bead of Loctite® 5970 or equivalent to the four corners circled below on the gasket.

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8. Install the eighteen oil pan mounting bolts and isolator assemblies through the oil pan rail into the holes in the gasket

9. Install the oil pan assembly into position on the cylinder block.

10. Hand-tighten the mounting bolts.

NOTICE:

Before torquing, bolt grade must be determined by a marking on the bolt head. Grade 8.8 oil pan bolts cannot be torqued above 25 N·m (18 lb·ft) or damage to the bolt will occur.

NOTE: The corner bolts on the oil pan will be torqued twice, as each is marked with two numbers in the illustration below.

11. Ensure the oil pan mounting seal has not been disturbed. Torque the eighteen oil pan mounting bolts using the proper torque sequence shown below.

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NOTE: Oil pan (1) is an original style plastic oil pan. Oil pan (2) is an updated plastic oil pan.

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1. For an original style plastic oil pan, torque bolts to 20 to 25 N·m (15 to 18 lb·ft).

2. For the aluminum and updated plastic oil pans, torque bolts to 30 to 35 N·m (22 to 26 lb·ft).

12. Install the oil pan drain plug with a new O-ring and torque the plug.1. On a plastic oil pan, torque plug to 45 N·m plus or minus 7 N·m (33 lb·ft plus or minus 5 lb·ft).

2. On an aluminum oil pan torque plug to 60 N·m plus or minus 9 N·m (44 lb·ft plus or minus 6 lb·ft).

13. Install bolt at engine sensor harness P-clip on the front center of the oil pan. Torque bolt at harness P-clip to 23 N·m (17 lb·ft).

14. Remove supports and lower the truck to the ground.

15. Install the oil dipstick tube and attachment hardware. Refer to section "Installation of the Oil Dipstick and Tube" .

16. Tighten the oil filter cap. Torque to 55 N·m (40 lb·ft).

NOTICE:

If the oil pump or oil suction manifold was removed, prime the lubrication system before starting the engine. Refer to section "Priming the Engine Lubrication System" .

NOTICE:

The engine oil can be re-used if it is not contaminated and has been properly maintained.17. Refill the engine with lubricating oil. Refer to section "Engine Oil Capacities" .

18. Reconnect the batteries. Refer to OEM procedures.

19. If removed, install the bumper. Refer to OEM procedures.

warning

PERSONAL INJURY

To avoid injury before starting and running the engine, ensure the vehicle is parked on a level surface, parking brake is set, and the wheels are blocked.

warning

ENGINE EXHAUST

To avoid injury from inhaling engine exhaust, always operate the engine in a well-ventilated area. Engine exhaust is toxic.

20. Start the engine and inspect for oil leaks.

21. Close the hood.

Last updated on 12-07-2015

10.1.5 Priming the Engine Lubrication System

Prime the lubrication system as follows:

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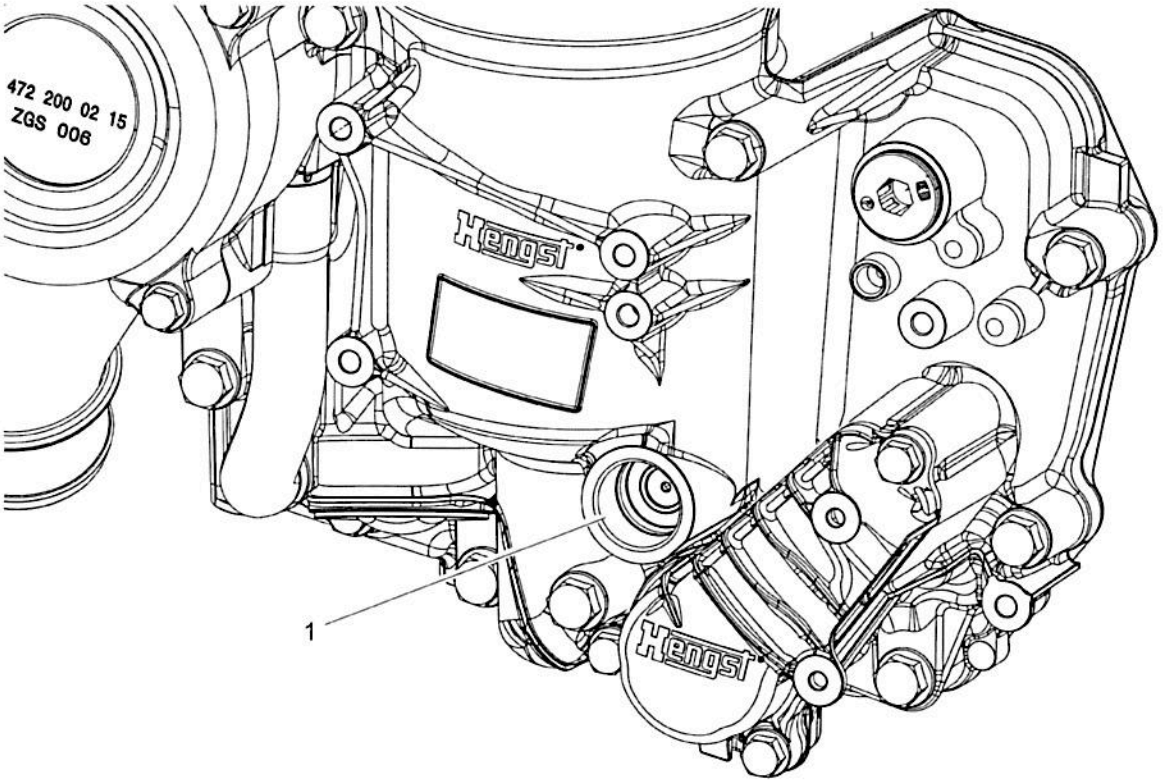
1. ☐ Using a 17 mm Allen tool, remove the Allen head plug from the oil priming port (1) on the oil coolant module.



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2. ☐ If equipped with an oil sample valve in this location, remove the valve and washer.

NOTE: Tool J-49181 is used to adapt the J-45299 oil pre-lube kit for use on a DD platform engine.

3. ☐ Install the oil priming adaptor (J-49181) into the oil priming port in the oil coolant module. Hand-tighten the adaptor.

NOTICE:

If chassis application prevents access, a 45-degree or 90-degree pipe fitting (1/4" NPT) can be used as an adaptor.

4. ☐ Attach the engine pre-lube kit (J–45299) to the oil priming adaptor.

5. ☐ Fill the canister with eight quarts of clean engine oil, meeting the operating requirements of the engine.

6. ☐ Open the valve on the primer and start pumping until the container is almost empty.

7. ☐ Fill the container with an additional eight quarts of clean engine oil and pump until the canister is empty.

8. ☐ The engine lubrication system is now primed with sixteen quarts of oil.

9. ☐ Fill the engine to the appropriate level by adding additional oil to the oil filler neck.

Engine Oil Capacities - GHG17 Only

Parameter	DD13 Truck	DD13 Coach	DD15 Truck	DD16 Truck
Service Fill (Oil and Filter Change)	38.0 L (40.0 qt.)	45.0 L (48.0 qt.)	43.0 L (45.0 qt.)	43.0 L (45.0 qt.)
Oil Pan Capacity, High Limit	35.0 L (37.0 qt.)	42.0 L (44.0 qt.)	40.0 L (42.0 qt.)	40.0 L (42.0 qt.)
Oil Pan Capacity, Low Limit	30.0 L (32.0 qt.)	37.0 L (39.0 qt.)	35.0 L (37.0 qt.)	35.0 L (37.0 qt.)

10. ☐ Close the valve on the primer and loosen the fitting; do not completely remove it from the adaptor.

11. ☐ Remove the priming adaptor from the oil coolant module with the primer line attached to keep the oil from flowing out of the module.

12. ☐ Install the Allen head plug or oil sample valve into the oil coolant module and torque to 70 to 80 N·m (51 to 59 lb·ft).

WARNING:

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To avoid injury before starting and running the engine, ensure the vehicle is parked on a level surface, parking brake is set, and the wheels are blocked.

WARNING:

ENGINE EXHAUST

To avoid injury from inhaling engine exhaust, always operate the engine in a well-ventilated area. Engine exhaust is toxic.

13. ☐ Start the engine and monitor the oil pressure.

NOTE: Oil drain-back time depends on engine coolant and oil temperatures. Wait at least 10 minutes before checking the oil level after the engine is shut down.

14. ☐ After the engine oil pressure stabilizes, shut the engine down and check the oil level. Add oil as necessary.

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