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Service Information Bulletin

SUBJECT	DATE
GHG17 DD5 Medium Duty - Exhaust and EGR - Turbocharger Oil Supply Lines	January 2017

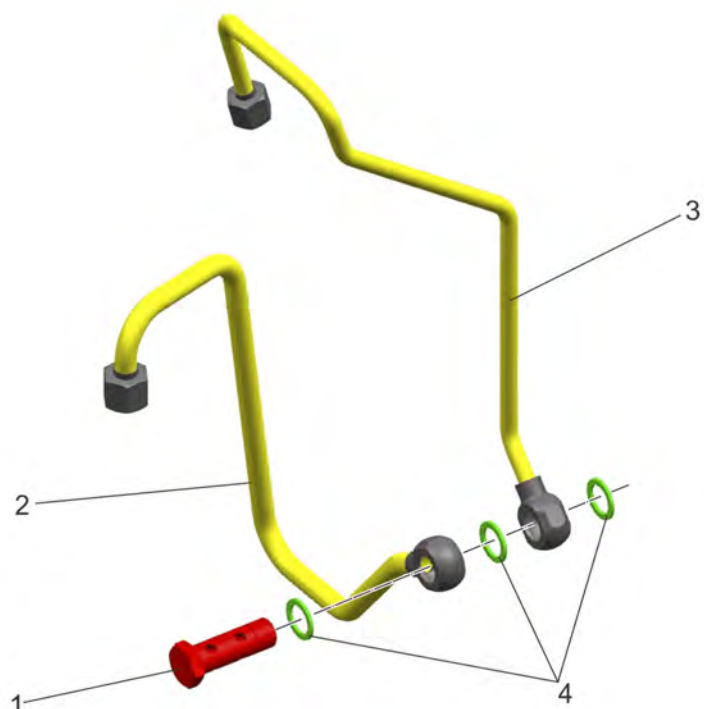
Additions, Revisions, or Updates

Publication Number / Title	Platform	Section Title	Change
DDC-SVC-MAN-0194	GHG17 DD5 Medium Duty	Description and Operation of the Turbocharger Oil Supply Lines	New sections.
		Removal of the Turbocharger Oil Supply Lines	
		Inspection of the Turbocharger Oil Supply Lines	
		Installation of the Turbocharger Oil Supply Lines	



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2 Description and Operation of the Turbocharger Oil Supply Lines



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- 1. Banjo Bolt
- 2. Lower Oil Supply Line

- 3. Upper Oil Supply Line
- 4. Seal Rings

Figure 1. Turbocharger Oil Supply Lines

3 Removal of the Turbocharger Oil Supply Lines

Table 1.

Service Tools Used in the Procedure		
Tool Number	Description	Tool
DSN930E16013	Medium Duty 17mm Oil Line Socket	 d580217
FLS1219, or equivalent	19mm Socket	 d580216

Remove as follows:



WARNING: PERSONAL INJURY

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

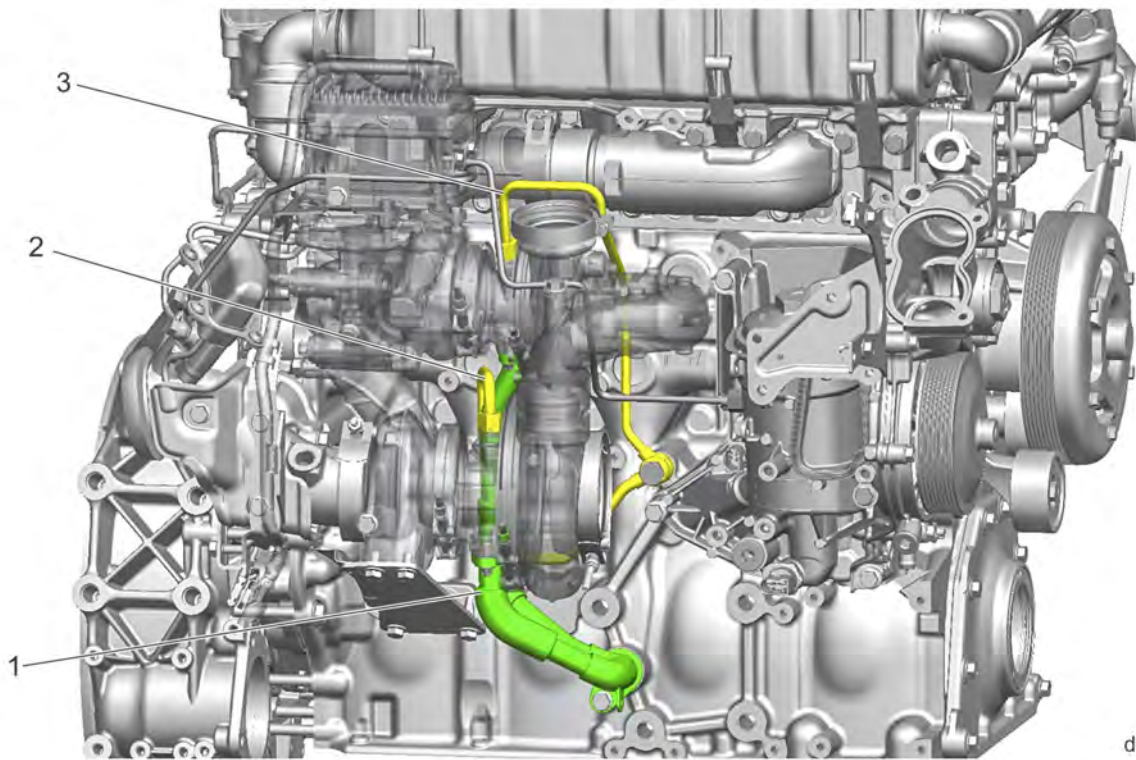
1. Shut off the engine, apply the parking brake, chock the wheels, and perform any other applicable safety steps.
2. Open the hood.



CAUTION: ELECTRICAL SHOCK

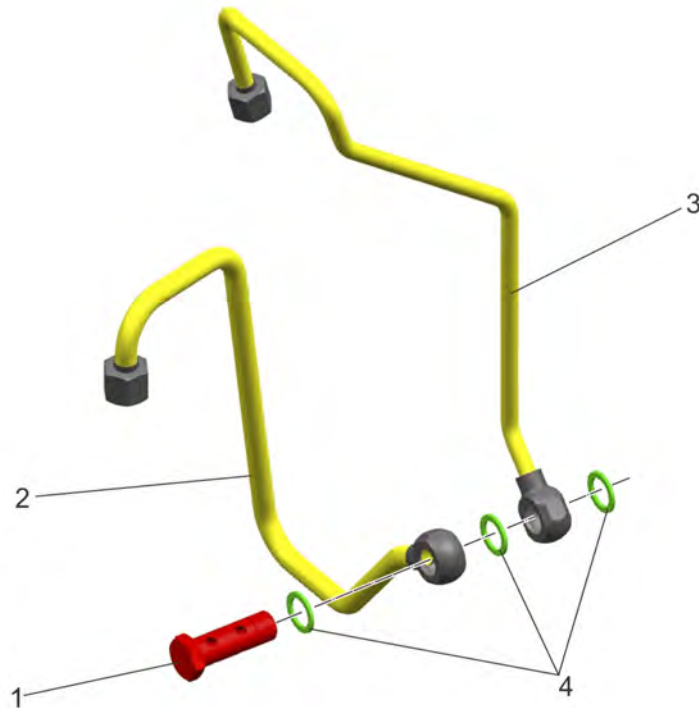
To avoid injury from electrical shock, use care when connecting battery cables. The magnetic switch studs are at battery voltage.

3. Disconnect the batteries. Refer to Original Equipment Manufacturer (OEM) procedure.
4. If needed, remove the right-hand bumper end. Refer to OEM procedures.
5. Remove the air cleaner assembly. Refer to Original Equipment Manufacturer (OEM) procedure.
6. Remove the turbocharger compressor outlet pipe. Discard O-ring. Refer to section "Removal of the Turbocharger Outlet Pipe".
7. Remove the turbocharger inlet elbow.
8. Remove the air compressor air inlet hose.
9. Using tool DSN930E16013, loosen the flare nut on the upper oil supply line (3).



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10. Using FLS1219 or equivalent, loosen the flare nut on the lower oil supply line (2).



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NOTICE: Failure to replace the upper or lower oil supply line(s) can result in an oil leak.

11. Remove the banjo bolt (1) at the cylinder block. Discard the seal rings (4) and the upper and lower oil supply lines (2,3).

4 Inspection of the Turbocharger Oil Supply Lines


Inspect as follows:

NOTICE: Failure to replace the upper or lower oil supply line(s) can result in an oil leak.

1. Inspect the upper and lower fittings on the turbocharger assembly for burs or damaged sealing surfaces. The sealing surface must be smooth and uniform. Repair or replace as necessary.
2. Inspect the threaded bore and block sealing surface at the banjo mounting boss for damage. Repair or replace as necessary.

5 Installation of the Turbocharger Oil Supply Lines

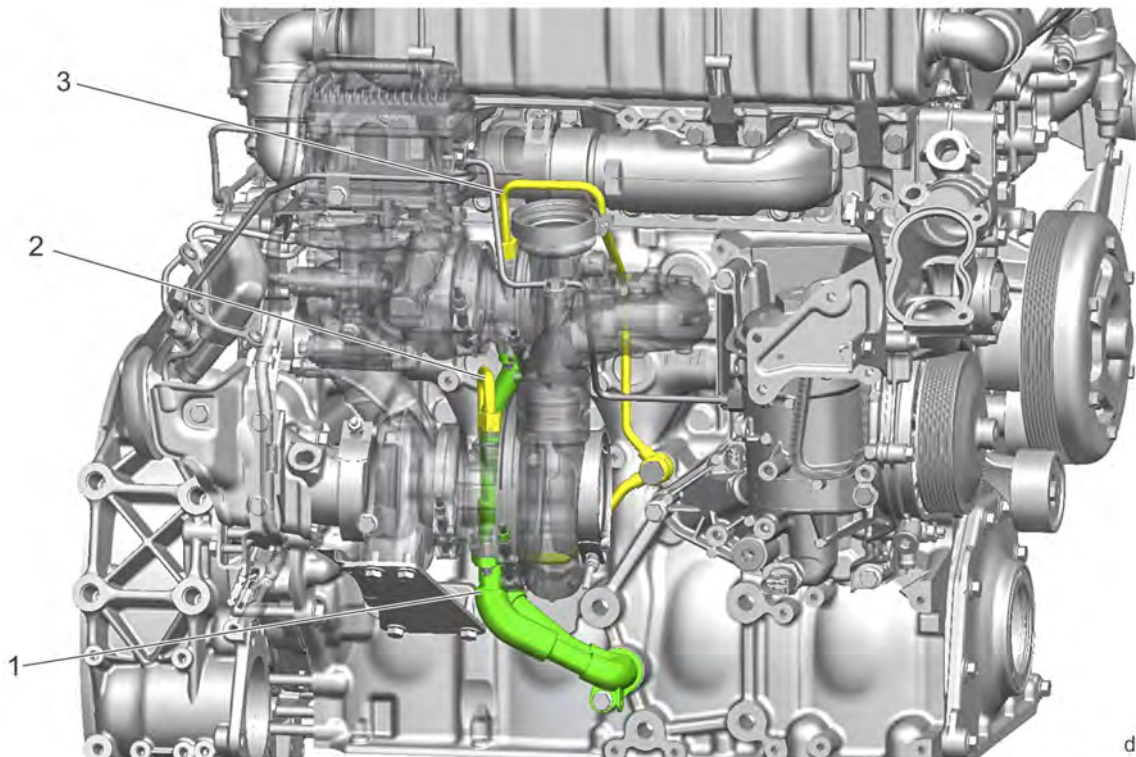
Table 2.

Service Tools Used in the Procedure		
Tool Number	Description	Tool
DSN930E16013	Medium Duty 17mm Oil Line Socket	 d580217
FLS1219, or equivalent	19mm Socket	 d580216

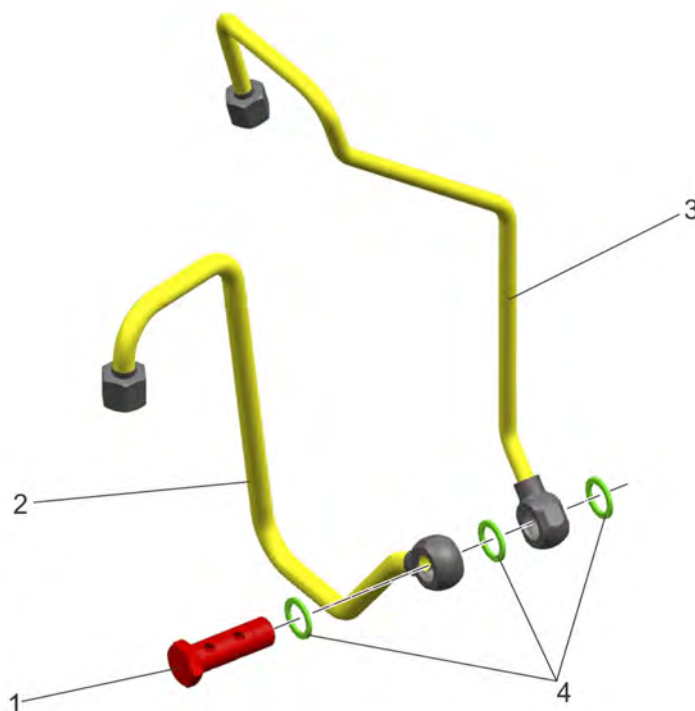
Install as follows:

NOTICE: Failure to replace the upper or lower oil supply line(s) can result in an oil leak.

1. Install a new upper oil supply line (3); hand-tighten the flare nut.
2. Install a new lower oil supply line (2); hand-tighten the flare nut.



3. With new seal rings (4), install the banjo bolt (1) through both banjo fittings to the cylinder block. The lower oil supply line (2) sits in the outward-most position. Hand-tighten the banjo bolt.



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4. Using tool DSN930E16013, torque the upper oil supply line (3) flare nut. See reference table below.
5. Using tool FLS1219 or equivalent, torque the lower oil supply line (2) flare nut. See reference table below.

Table 3.

Upper/Lower Oil Supply Line (flare nut) Torque	
First Stage	Second Stage
10 N·m (7 lb·ft)	45° Torque Turn

6. Torque the banjo bolt at the cylinder block to 30 N·m (22 lb·ft).
7. Install the air compressor air inlet hose.
8. Install the turbocharger inlet elbow. Refer to section "Installation of the Turbocharger Inlet Elbow".
9. With a new sealing ring, install the turbocharger compressor outlet pipe. Refer to section "Installation of the Turbocharger Outlet Pipe".
10. Install the air cleaner assembly. Refer to Original Equipment Manufacturer (OEM) procedure.
11. If removed, install the right-hand bumper end. Refer to OEM procedures.

**CAUTION: ELECTRICAL SHOCK**

To avoid injury from electrical shock, use care when connecting battery cables. The magnetic switch studs are at battery voltage.

12. Connect the batteries. Refer to OEM procedures.
13. Close the hood.