

Exhaust Gas Recirculation (EGR) Valve

Special Tool(s) / General Equipment

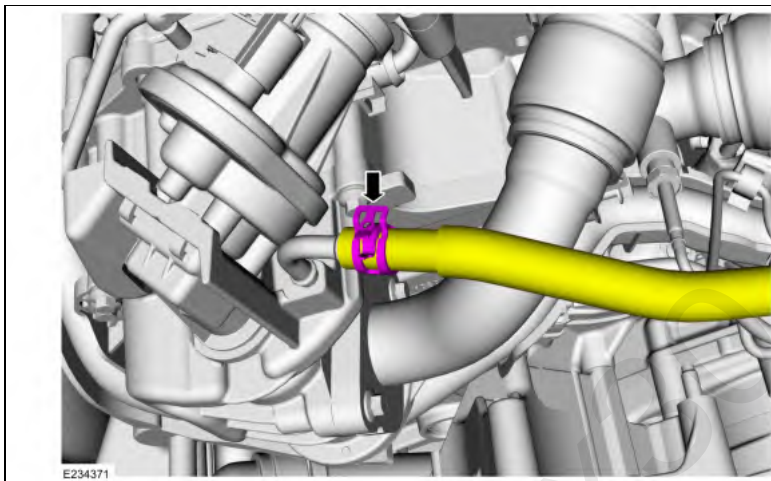
Hose Clamp Remover/Installer

Removal

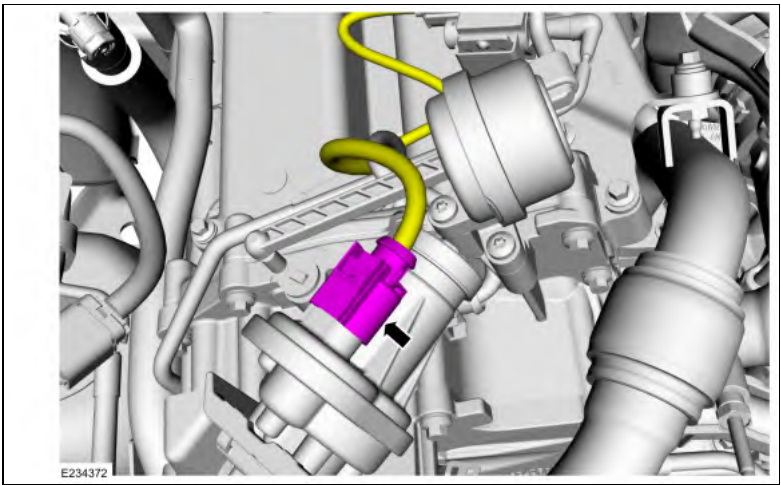
NOTE: Only replace the EGR valve on-vehicle if directed to do so by the PC/ED manual due to an electrical concern. Refer to Powertrain Control/Emissions Diagnosis (PC/ED) manual.

NOTE: The EGR valve cannot be replaced on-vehicle for a coolant leak. Refer to: exhaust gas recirculation (EGR) cooler leak test.

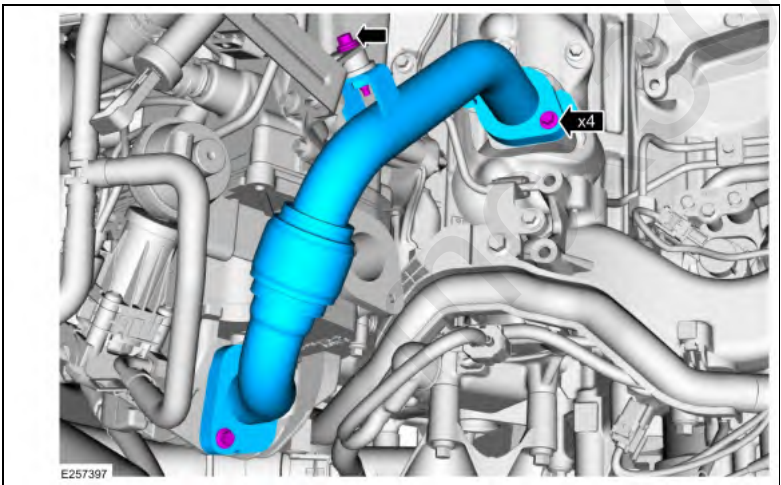
1. Drain the cooling system.
Refer to: Engine Cooling System Draining, Vacuum Filling and Bleeding (303-03B Engine Cooling - 6.7L Power Stroke Diesel, General Procedures).
2. Remove the air cleaner outlet pipe.
Refer to: Air Cleaner Outlet Pipe (303-12B Intake Air Distribution and Filtering - 6.7L Power Stroke Diesel, Removal and Installation).
3. Disconnect the EGR valve coolant vent hose from the EGR valve.
Use the General Equipment: Hose Clamp Remover/Installer



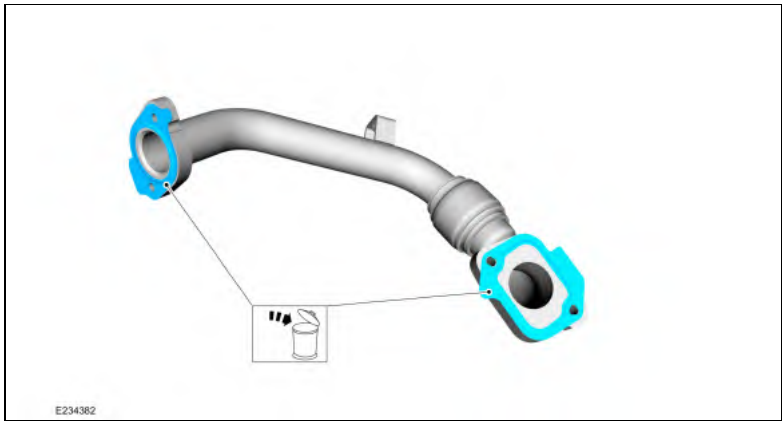
4. Disconnect the EGR valve electrical connector.



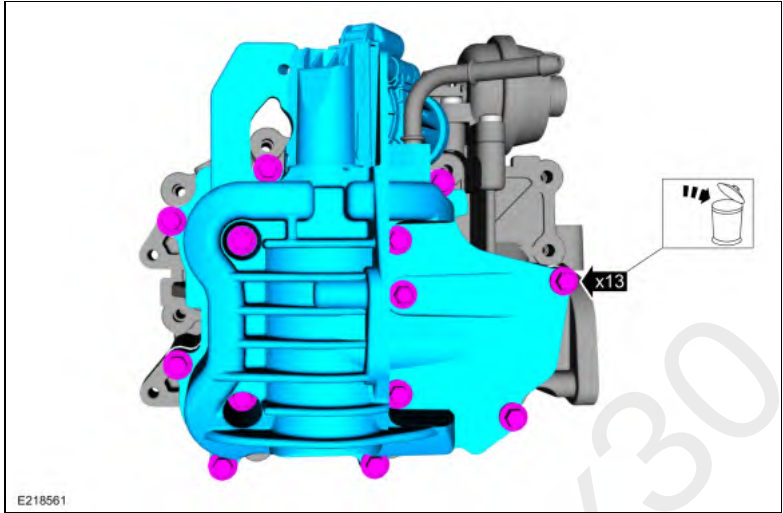
5. Remove the bolts and the EGR valve inlet tube.



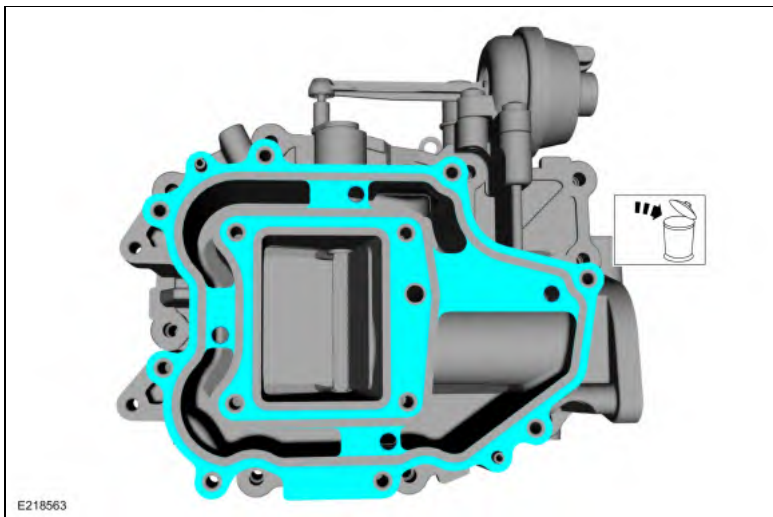
6. Remove and discard the EGR valve inlet tube gaskets.



7. Remove and discard the EGR valve bolts and then remove the EGR valve.



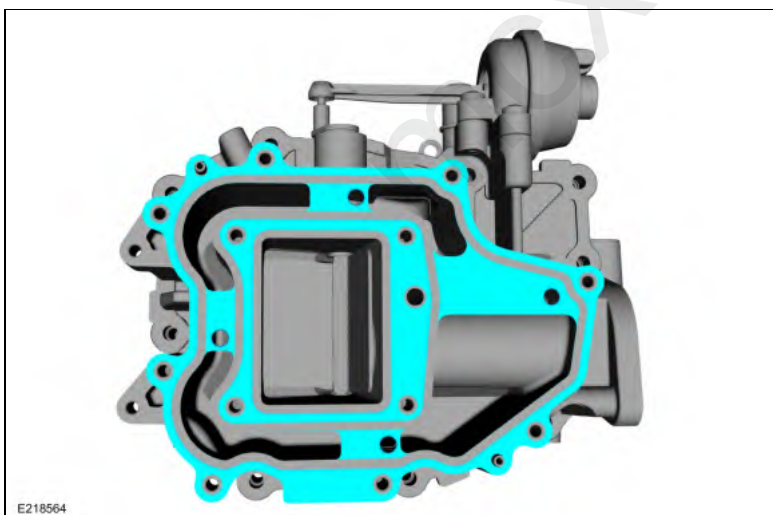
8. Remove and discard the EGR valve gasket.



Installation

NOTICE: Make sure that the mating faces are clean and free of foreign material.

1. Clean the mating surfaces. Install a new EGR valve gasket.



2. Install the EGR valve, the EGR valve the bolts, tighten in the 4 stages and in the sequence shown:

Torque:

Bolts 1-12:

Stage 1: 106 lb.in (12 Nm)

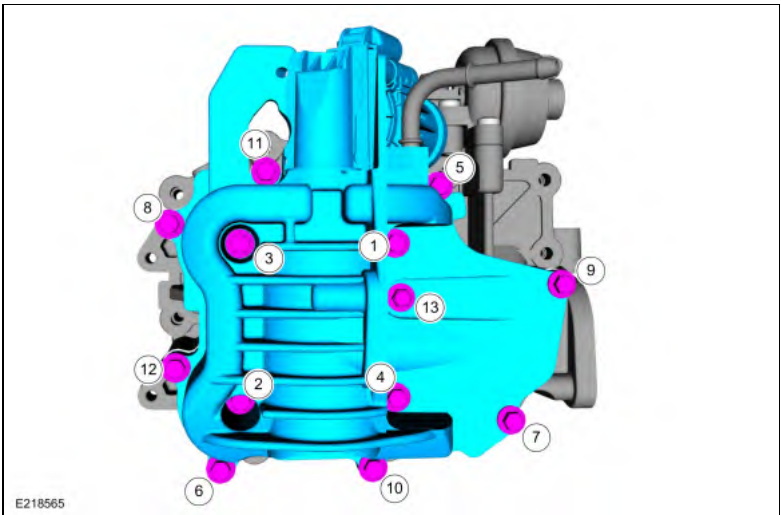
Stage 2: 142 lb.in (16 Nm)

Bolts 1-4: 142 lb.in (16 Nm)

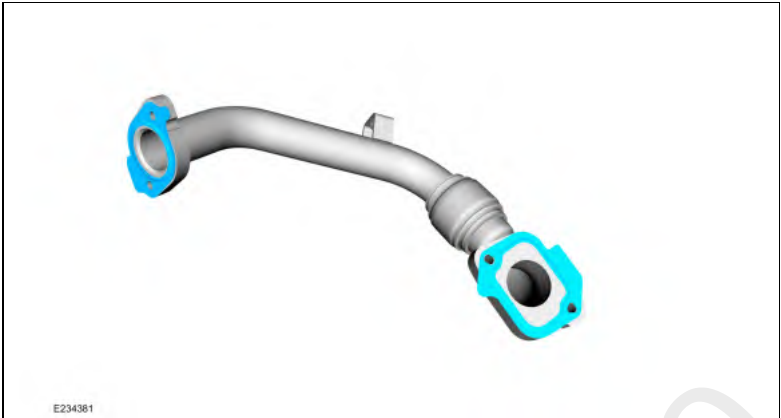
Bolt 13:

Stage 3: 106 lb.in (12 Nm)

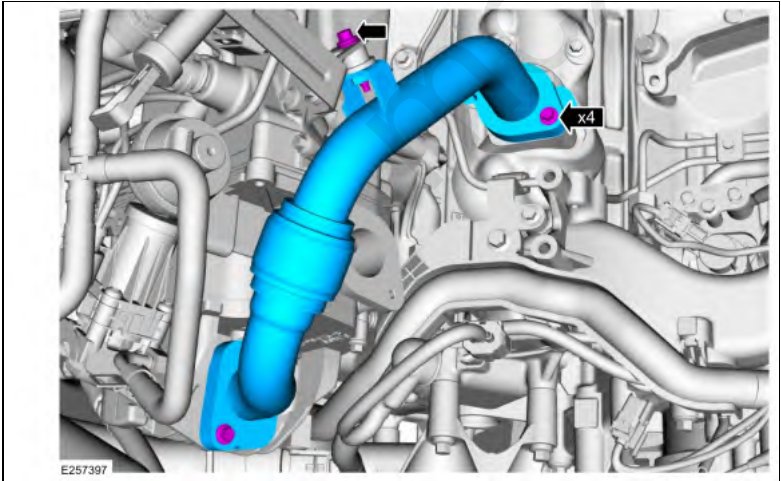
Stage 4: 90°



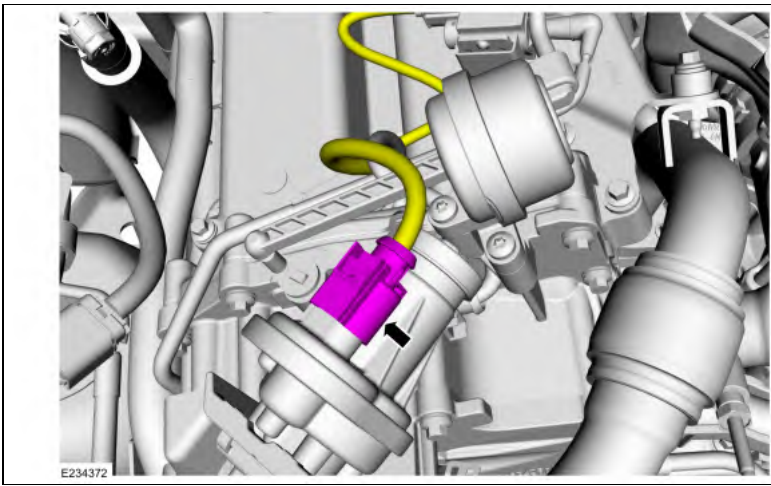
3. Install the new EGR valve inlet tube gaskets.



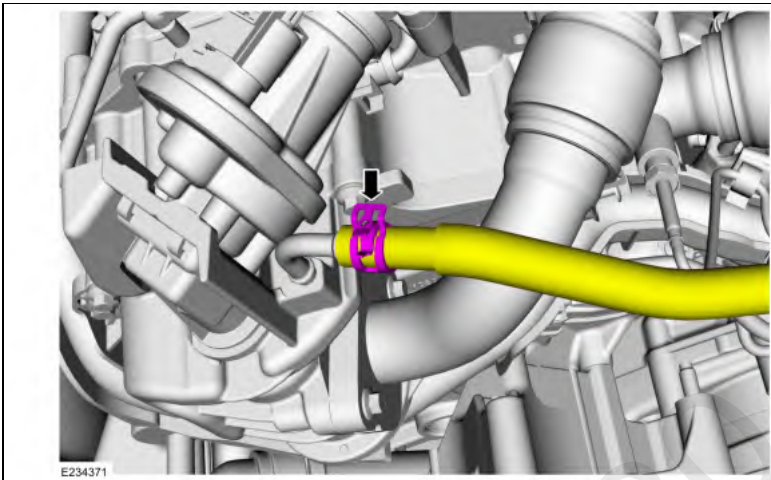
- 4.
- Install the EGR valve inlet tube and the bolts.
- Torque:*
- Tighten the bolts at the exhaust manifold. : 89 lb.in (10 Nm)
 - Tighten the bolts at the EGR valve inlet tube to bracket bolt. : 89 lb.in (10 Nm)
 - Tighten the bolts at the EGR cooler. : 89 lb.in (10 Nm)



5. Connect the EGR valve electrical connector.



6. Connect the EGR valve coolant vent hose to the EGR valve.
Use the General Equipment: Hose Clamp Remover/Installer



7. Install the air cleaner outlet pipe.
Refer to: Air Cleaner Outlet Pipe (303-12B Intake Air Distribution and Filtering - 6.7L Power Stroke Diesel, Removal and Installation).
8. **NOTICE:** Evaluate the cooling system condition before filling the engine cooling system. Failure to follow these instructions can result in damage to the engine.
- Evaluate the cooling system condition.
Refer to: Engine Cooling System Condition Evaluation (303-03B Engine Cooling - 6.7L Power Stroke Diesel, General Procedures).
9. Initiate EGR valve learning cycle after EGR replacement in the following sequence.
- Turn the ignition key to the KOEO for 10 seconds.
 - Turn the ignition key to the OFF position for 30 seconds.

