

Upper Oil Pan

Special Tool(s) / General Equipment

Vehicle/Axle Stands
Wooden Block

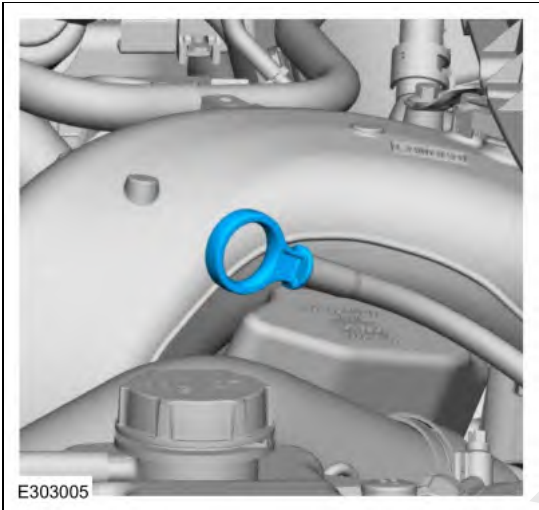
Materials

Name	Specification
Motorcraft® High Performance Engine RTV Silicone TA-357	WSE-M4G323-A6

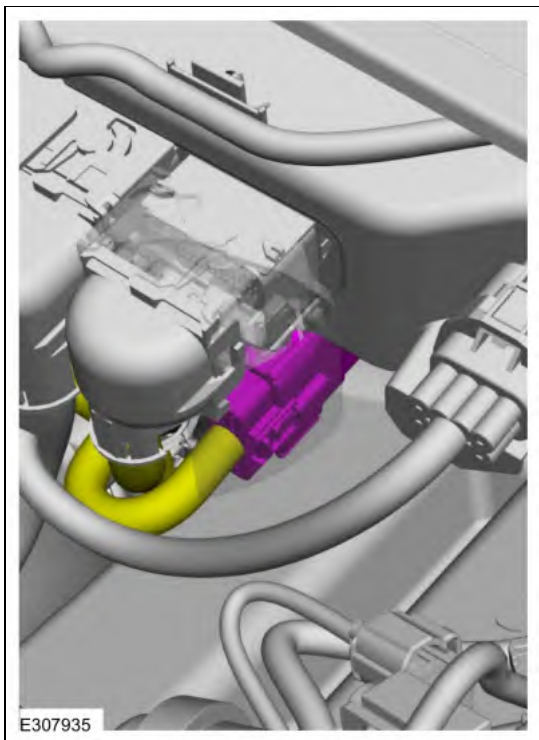
Removal

NOTICE: During engine repair procedures, cleanliness is extremely important. Any foreign material, including any material created while cleaning gasket surfaces that enter the oil passages, coolant passages or the oil pan, may cause engine failure.

1. Remove the oil level indicator.



2. Disconnect and position aside the wire harness.

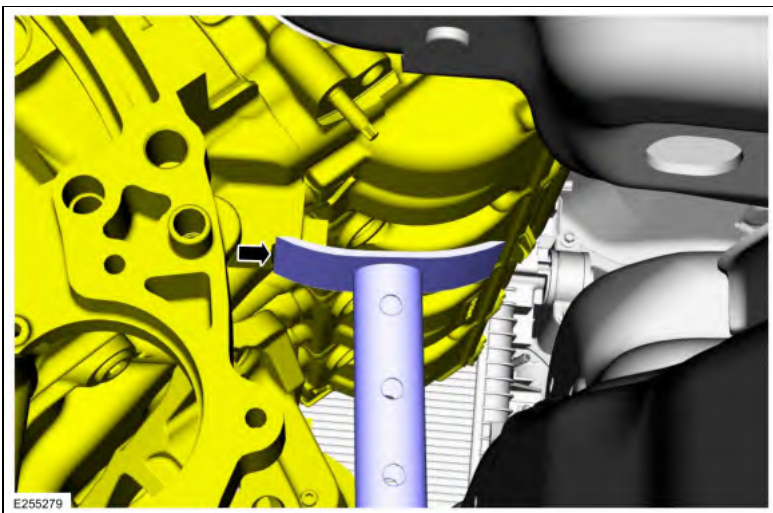


3. Remove the following items:

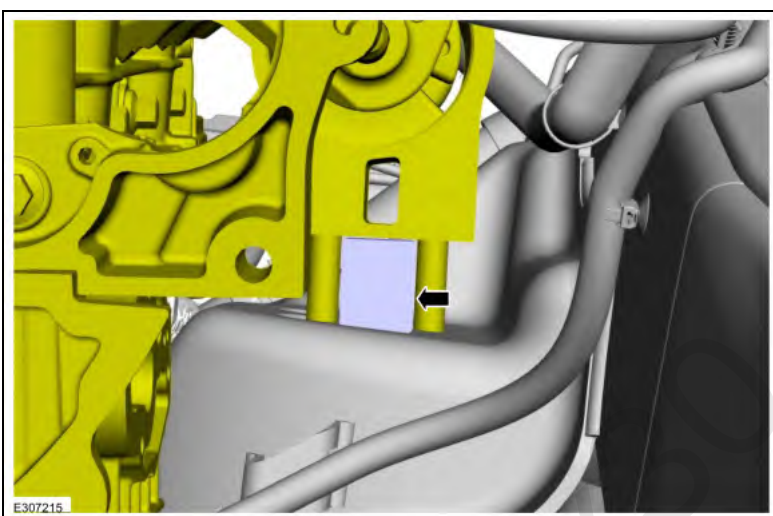
1. Remove the cooling fan upper shroud.
Refer to: Cooling Fan Upper Shroud (303-03B Engine Cooling - 6.7L Power Stroke Diesel, Removal and Installation).
2. Remove the upper intake manifold.
Refer to: Upper Intake Manifold (303-01B Engine - 6.7L Power Stroke Diesel, Removal and Installation).
3. Remove the lower section of the exhaust downpipe.
4. Remove the flexplate.
Refer to: Flexplate (303-01B Engine - 6.7L Power Stroke Diesel, Removal and Installation).
5. Remove the oil cooler.
Refer to: Oil Cooler (303-01B Engine - 6.7L Power Stroke Diesel, Removal and Installation).
6. Remove the lower oil pan.
Refer to: Lower Oil Pan (303-01B Engine - 6.7L Power Stroke Diesel, Removal and Installation).

4. **NOTICE: Constantly check the clearance between the turbocharger and the body.**

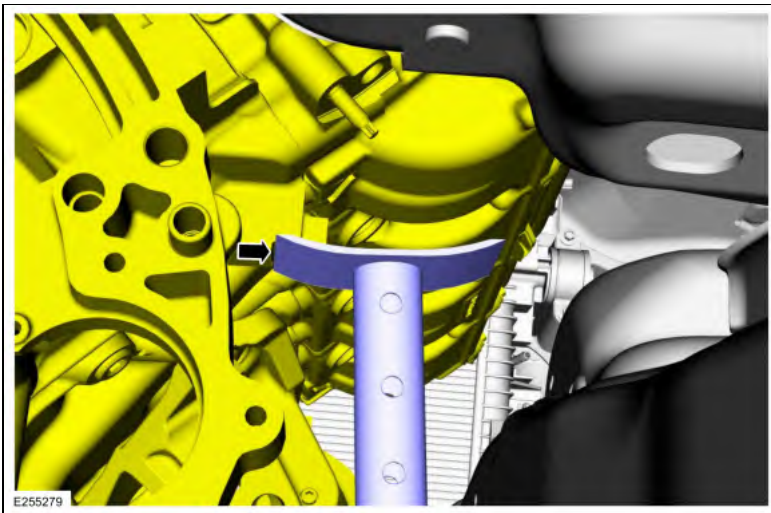
Using an adjustable stand, raise the engine 1.5 in. (38 mm).
Use the General Equipment: Vehicle/Axle Stands



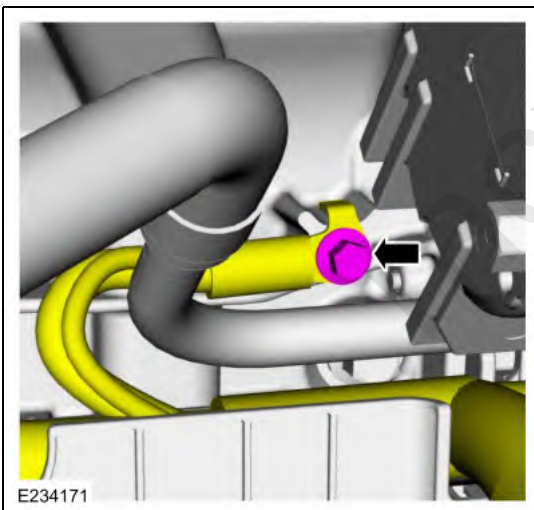
5. Install a suitable tool between the engine mount and the frame.
Use the General Equipment: Wooden Block



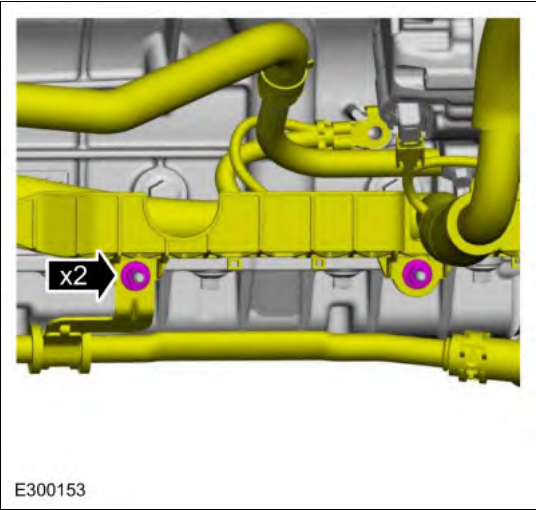
6. Lower the engine and remove the adjustable stand.
Use the General Equipment: Vehicle/Axle Stands



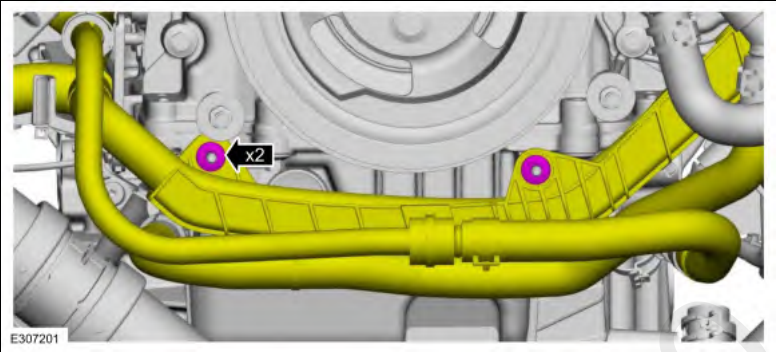
7. Remove the RH ground bolt.



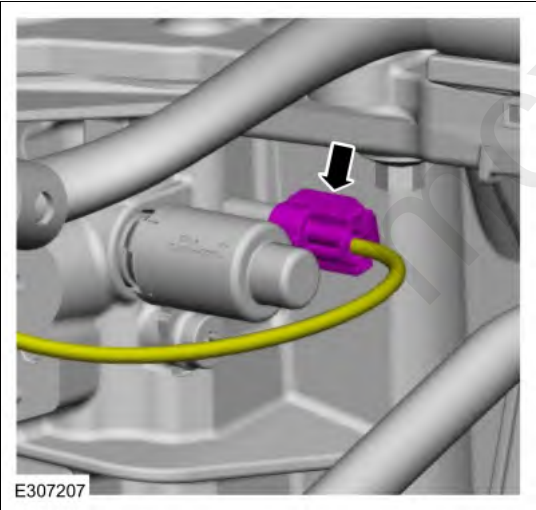
8. Remove the nuts, position aside the coolant tube and the battery wire harness.



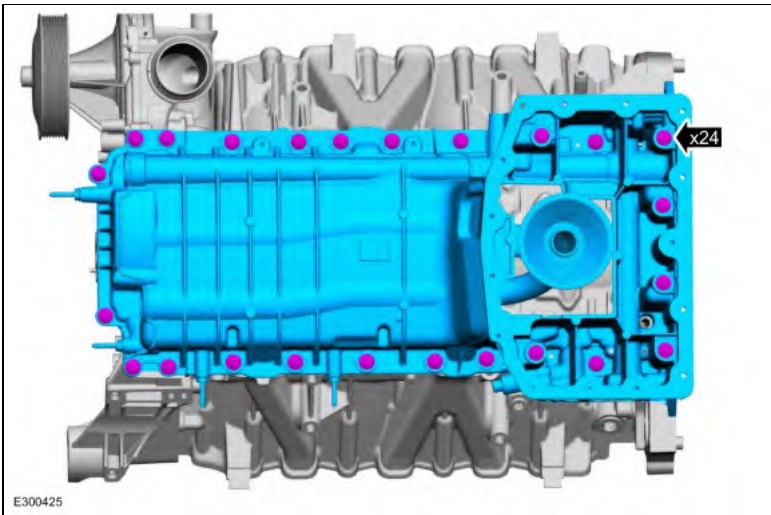
9. Remove the nuts from the front of the engine and position the battery wire harness aside.



10. Disconnect the oil pressure control solenoid electrical connector.

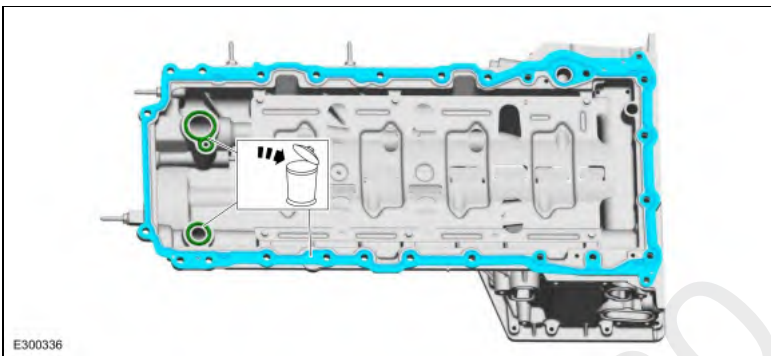


11. Remove the bolts and the upper oil pan.

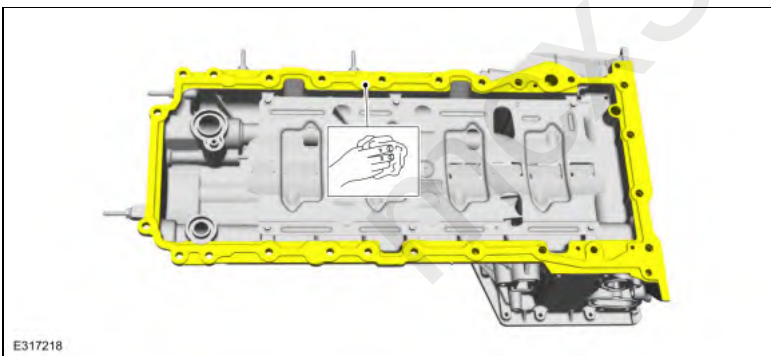


12.

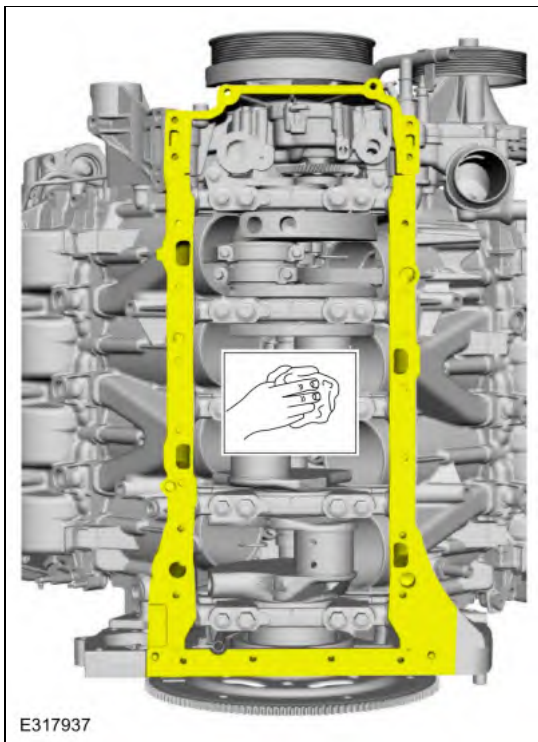
- Remove and discard the upper oil pan gasket.
- Remove and discard the oil pan press-in-place gaskets.



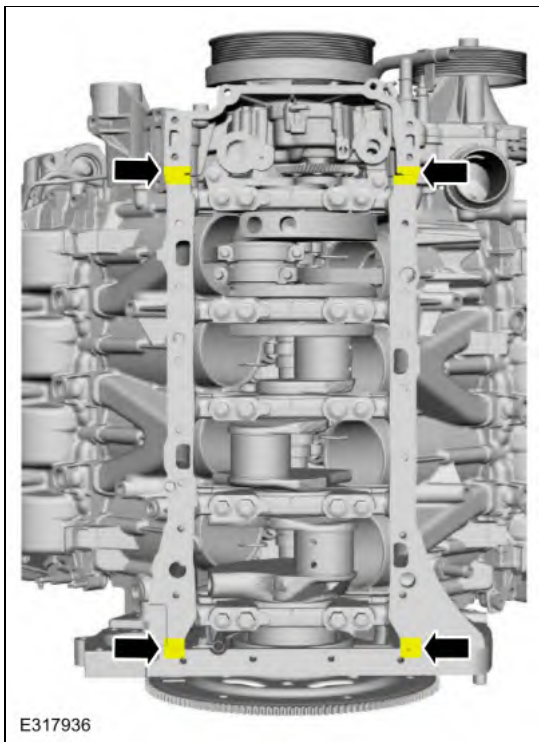
13. Clean and inspect the upper oil pan sealing surface.



14. Clean and inspect the cylinder block, the engine front cover and the engine rear cover.

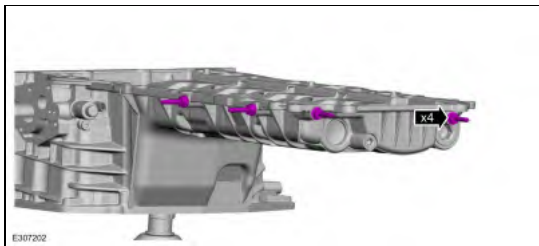


15. Clean and prepare the RTV sealing surface.
Refer to: RTV Sealing Surface Cleaning and Preparation (303-00 Engine System - General Information, General Procedures).

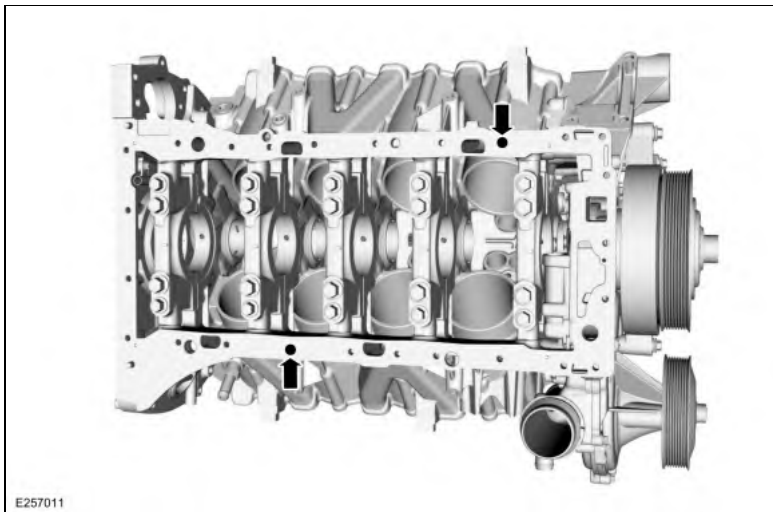


Installation

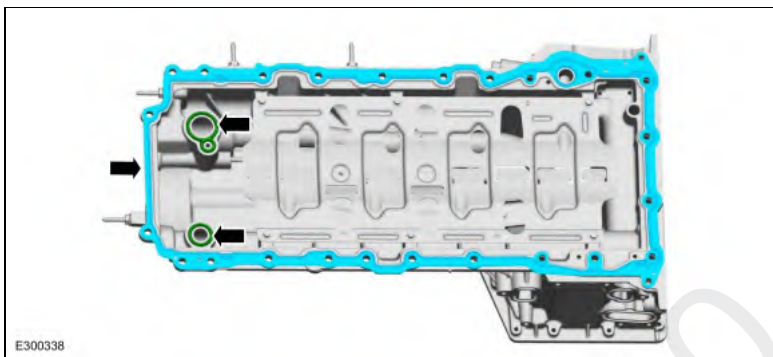
1. Remove the upper oil pan stud bolts.



2. **NOTE:** Use guide studs to aid in installation. Studs must be fabricated locally.
Position 2 guide studs in the cylinder block at the location shown.



- 3.
- Install the oil pan press-in-place gaskets.
 - Position the upper oil pan gasket.



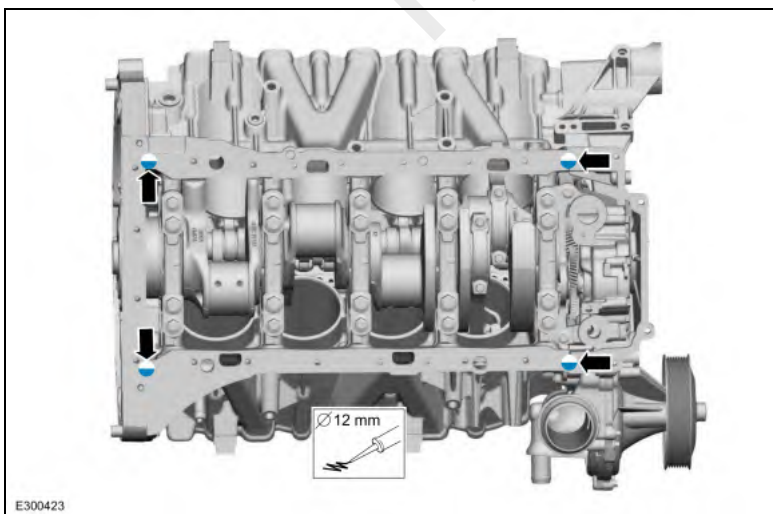
4. **NOTICE:** Failure to use Motorcraft® High Performance Engine RTV Silicone Sealant may cause the engine oil to foam excessively and result in serious engine damage.

NOTE: If the upper oil pan is not secured within 10 minutes of sealant application, the sealant must be removed and the sealing area cleaned with metal surface prep. Allow to dry until there is no sign of wetness, or 10 minutes, whichever is longer. Failure to follow this procedure can cause future oil leakage.

NOTE: The bead of Motorcraft® High Performance Engine RTV Silicone Sealant should cover the openings of the front and rear engine cover gaskets.

Apply a 12 mm (0.47 in) diameter of Motorcraft® High Performance Engine RTV Silicone Sealant at the T-joint areas.

Material: Motorcraft® High Performance Engine RTV Silicone / TA-357 (WSE-M4G323-A6)



5. **NOTE:** Final torque must be reached within 15 minutes of sealant application.

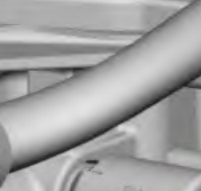
With the help of an assistant, install the upper oil pan and the bolts.

Torque:

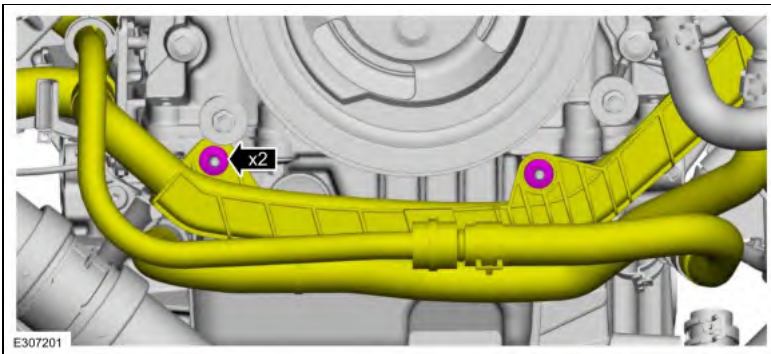
Stage 1: 18 lb.in (2 Nm)

Stage 2: Tighten bolts 1 through 8, 11 through 14 and 19 through 24 to 18 Nm (159 lb-in) plus : 25 Å°

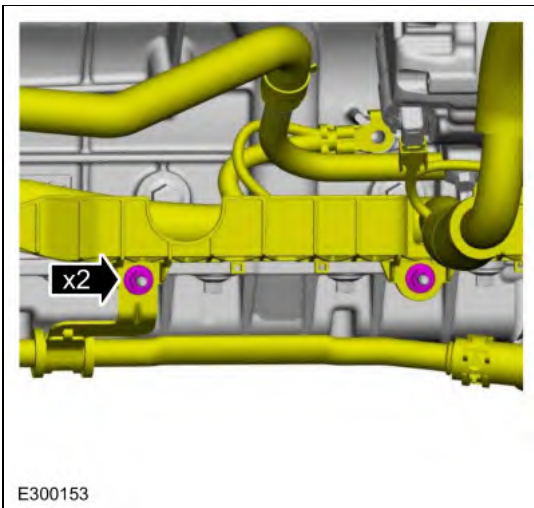
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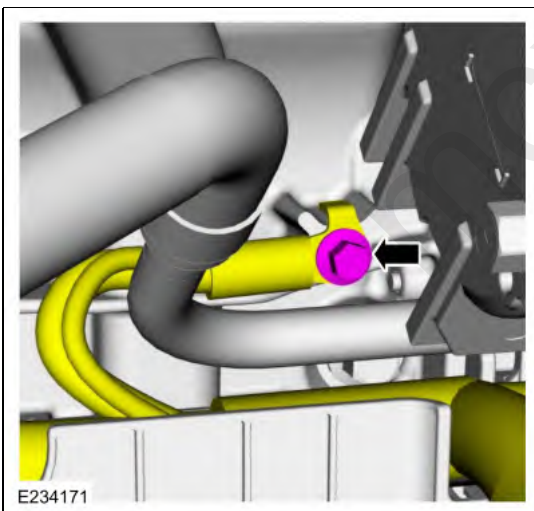
- Torque: 106 lb.in (12 Nm)*



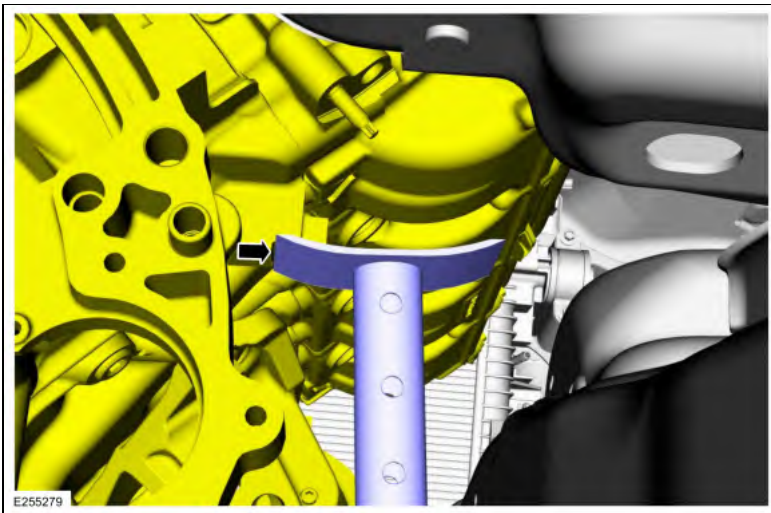
9. Position back the battery wire harness and the coolant tube. Install the nuts.
Torque: 106 lb.in (12 Nm)



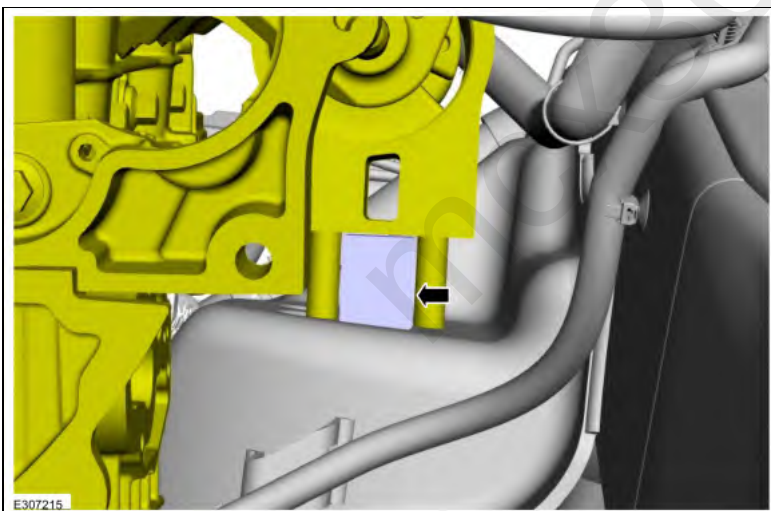
10. Position back the RH ground cable and install the bolt.
Torque: 18 lb.ft (25 Nm)



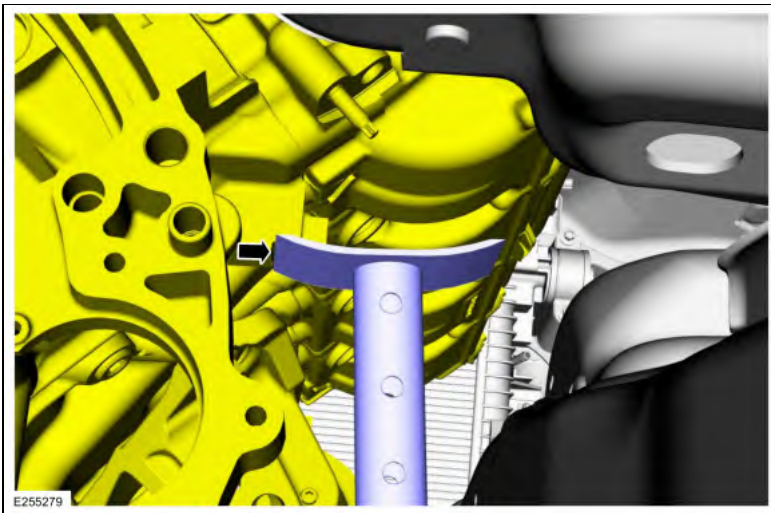
11. Using an adjustable stand, raise the engine.
 Use the General Equipment: Vehicle/Axle Stands



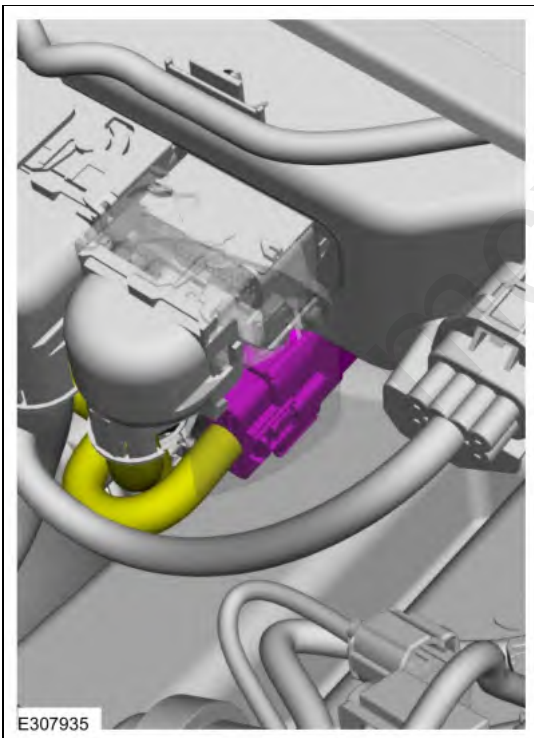
12. Remove the suitable tool from between the engine mount and the frame.
Use the General Equipment: Wooden Block



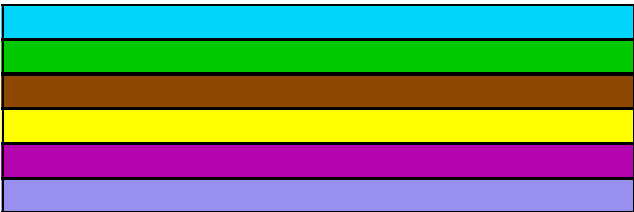
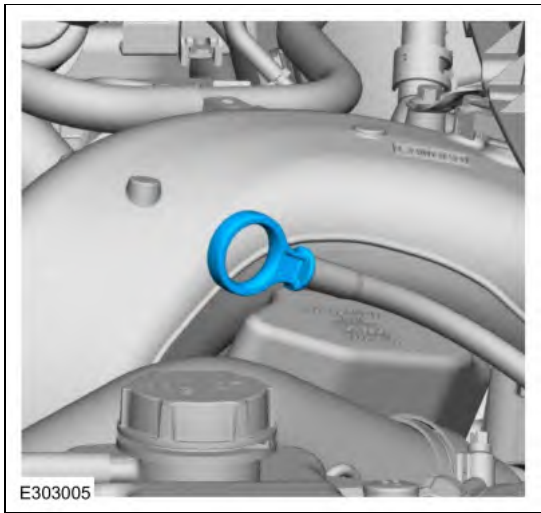
13. Lower the engine and remove the adjustable stand.
Use the General Equipment: Vehicle/Axle Stands



14. Install the following items:
 1. Install the lower oil pan.
Refer to: Lower Oil Pan (303-01B Engine - 6.7L Power Stroke Diesel, Removal and Installation).
 2. Install the oil cooler.
Refer to: Oil Cooler (303-01B Engine - 6.7L Power Stroke Diesel, Removal and Installation).
 3. Install the flexplate.
Refer to: Flexplate (303-01B Engine - 6.7L Power Stroke Diesel, Removal and Installation).
 4. Install the lower section of the exhaust downpipe.
 5. Install the upper intake manifold.
Refer to: Upper Intake Manifold (303-01B Engine - 6.7L Power Stroke Diesel, Removal and Installation).
 6. Install the cooling fan upper shroud.
Refer to: Cooling Fan Upper Shroud (303-03B Engine Cooling - 6.7L Power Stroke Diesel, Removal and Installation).
15. Position back and connect the wire harness.



16. Install the oil level indicator.



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