

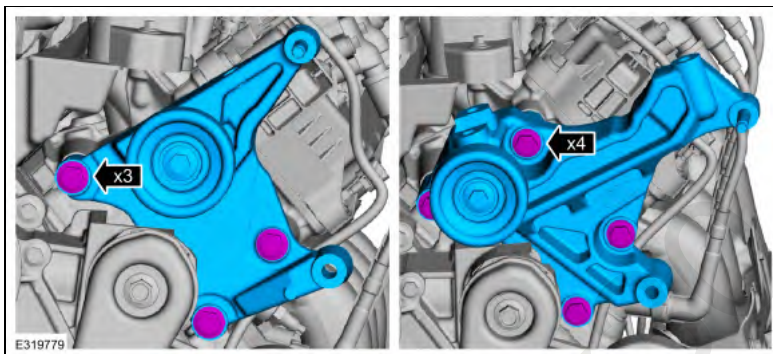
Cylinder Head LH

Removal

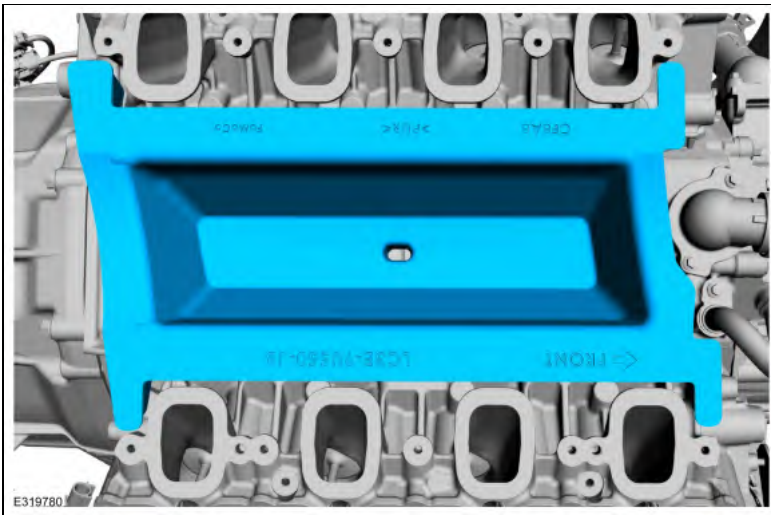
NOTICE: During engine repair procedures, cleanliness is extremely important. Any foreign material, including any material created while cleaning gasket surfaces, that enters the oil passages, coolant passages or the oil pan, can cause engine failure.

1. With the vehicle in NEUTRAL, position it on a hoist.
Refer to: Jacking and Lifting - Overview (100-02 Jacking and Lifting, Description and Operation).
2. Release the fuel system pressure.
Refer to: Fuel System Pressure Release (310-00C Fuel System - General Information - 7.3L 2V DEVCT V8 (239kW/320PS) (J0), General Procedures).
3. Disconnect the battery ground cable.
Refer to: Battery Disconnect and Connect (414-01 Battery, Mounting and Cables, General Procedures).
4. Drain the engine cooling system.
Refer to: Engine Cooling System Draining, Vacuum Filling and Bleeding (303-03D Engine Cooling - 7.3L 2V DEVCT V8 (239kW/320PS) (J0), General Procedures).
5. Remove the generator(s).
Refer to: Generator - 7.3L 2V DEVCT V8 (239kW/320PS) (J0) (414-02 Generator and Regulator, Removal and Installation).
6. **NOTE:** The dual generator bracket has an additional bolt.

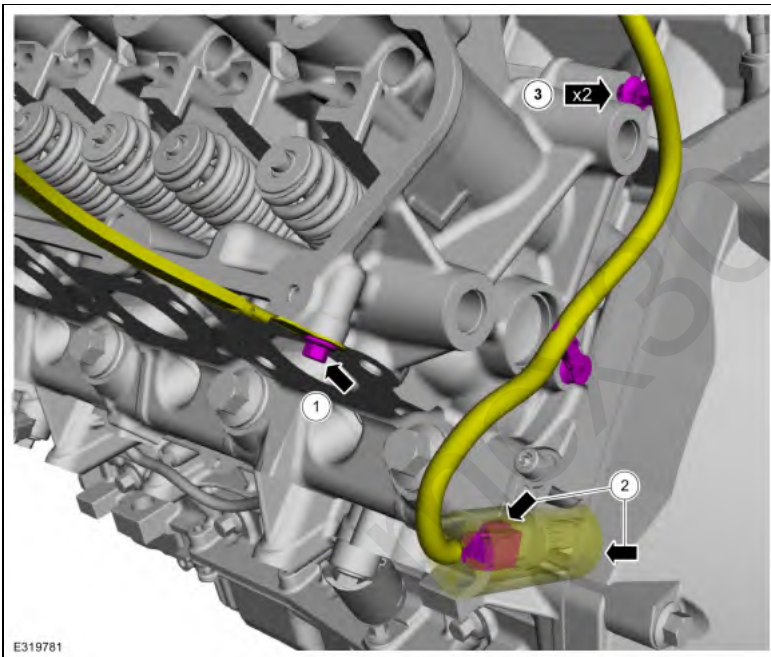
Remove the bolts and the generator bracket.



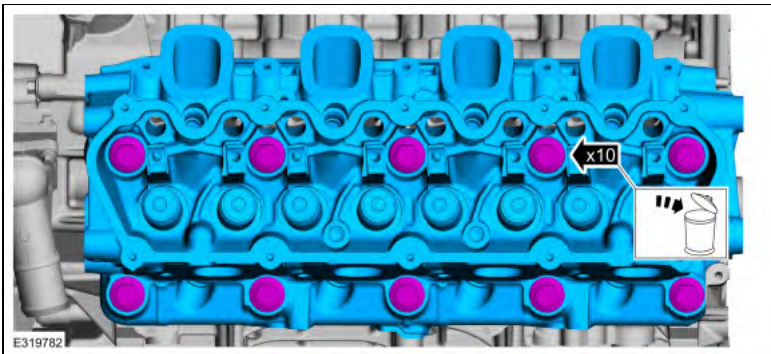
7. Remove the following items:
 1. LH exhaust manifold.
Refer to: Exhaust Manifold LH (303-01C Engine - 7.3L 2V DEVCT V8 (239kW/320PS) (J0), Removal and Installation).
 2. Intake manifold.
Refer to: Intake Manifold (303-01C Engine - 7.3L 2V DEVCT V8 (239kW/320PS) (J0), Removal and Installation).
 3. LH fuel injectors.
Refer to: Fuel Injectors (303-04D Fuel Charging and Controls - 7.3L 2V DEVCT V8 (239kW/320PS) (J0), Removal and Installation).
 4. LH push rods.
Refer to: Push Rod (303-01C Engine - 7.3L 2V DEVCT V8 (239kW/320PS) (J0), Removal and Installation).
 5. LH spark plugs.
Refer to: Spark Plugs (303-07B Engine Ignition - 7.3L 2V DEVCT V8 (239kW/320PS) (J0), Removal and Installation).
8. Remove the insulator.



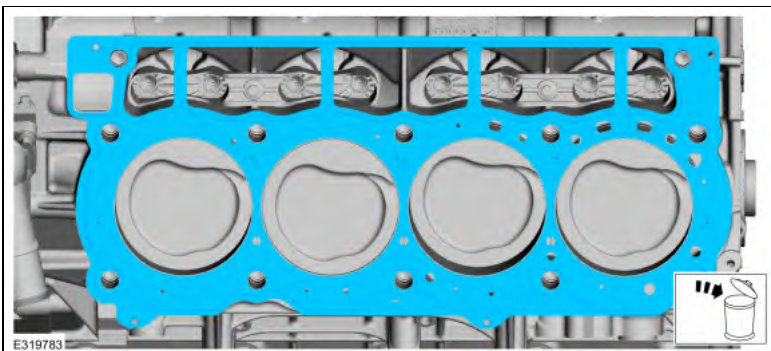
- 9.
1. Remove the bolt and disconnect the ground strap.
 2. Reposition the insulator and disconnect the CKP sensor.
 3. Detach the wiring harness retainers and position the harness aside.



- 10.
- Remove and discard the bolts.
 - Remove the cylinder head.



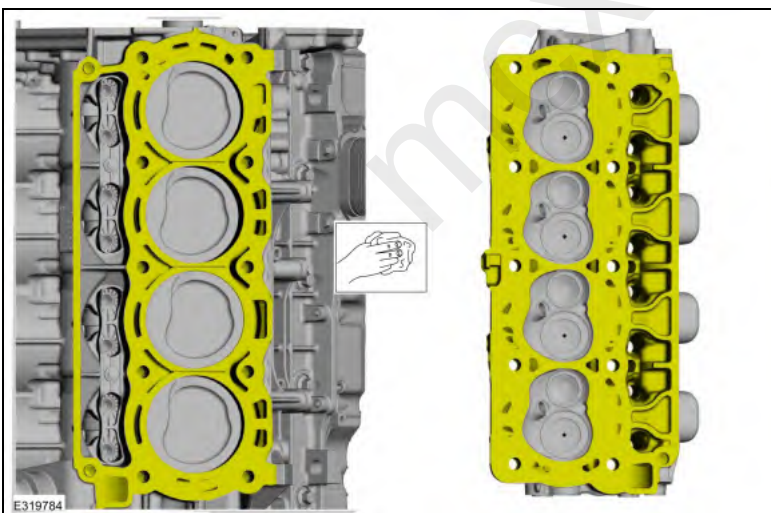
11. Remove and discard the cylinder head gasket.



12. **NOTICE:** Do not use metal scrapers, wire brushes, power abrasive discs or other abrasive means to clean the sealing surfaces. These tools cause scratches and gouges which make leak paths.

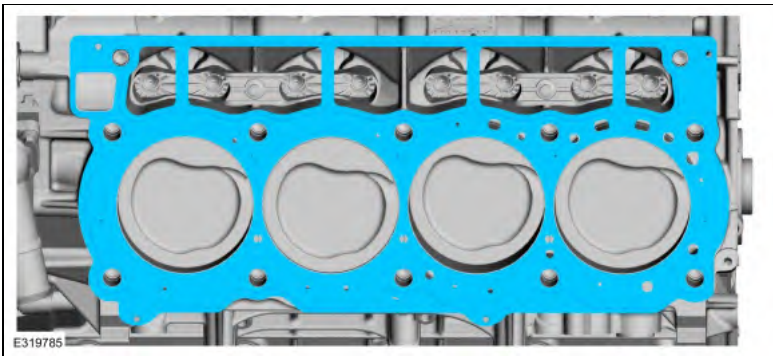
NOTE: Clean the cylinder head bolt holes in the cylinder block using compressed air. Make sure all coolant, oil or other foreign material is removed.

- Clean and inspect the cylinder head-to-cylinder block mating surfaces of both the cylinder head and the cylinder block.
- Refer to: Cylinder Head Distortion (303-00 Engine System - General Information, General Procedures).
- Refer to: Cylinder Block Distortion (303-00 Engine System - General Information, General Procedures).



Installation

1. Install a new cylinder head gasket.

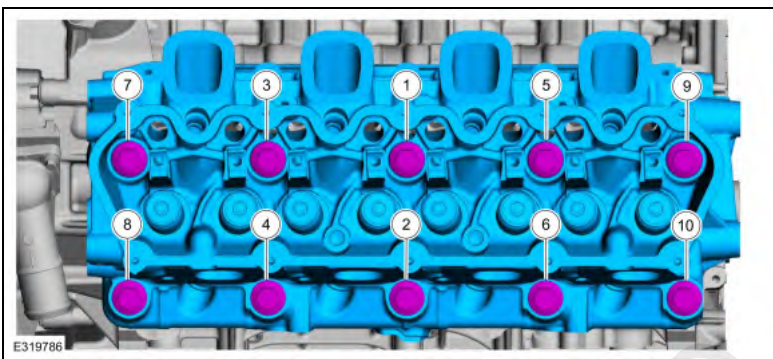


2. **NOTE:** The cylinder head bolts are torque-to-yield and must not be reused. New cylinder head bolts must be installed.

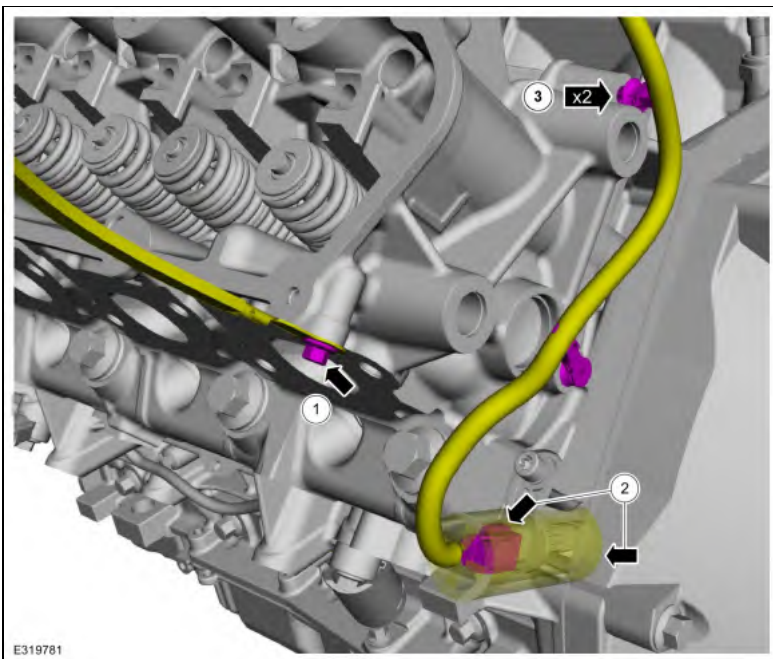
Install the cylinder head and hand start the new bolts.

Torque:

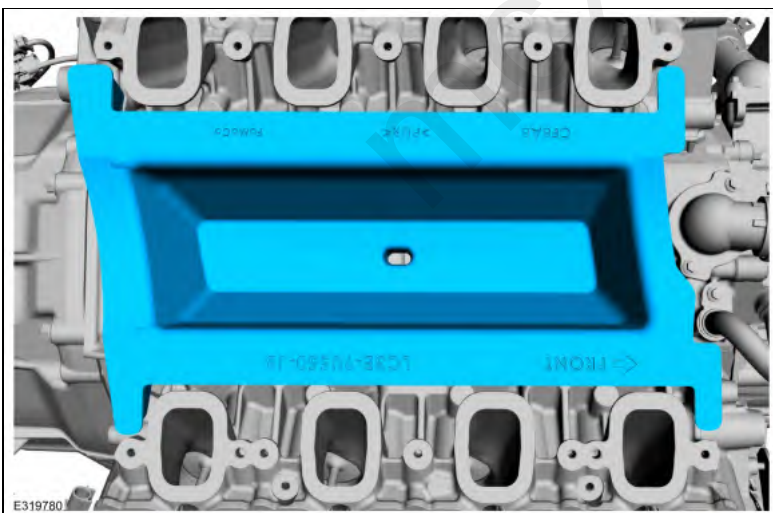
- Stage 1: 22 lb.ft (30 Nm)
- Stage 2: 44 lb.ft (60 Nm)
- Stage 3: 74 lb.ft (100 Nm)
- Stage 4: Tighten an additional : 90°
- Stage 5: Tighten an additional : 90°



- 3.
1. Install the ground strap and the bolt.
Torque: 97 lb.in (11 Nm)
 2. Connect the CKP sensor and position the insulator.
 3. Attach the wiring harness retainers.



4. Install the insulator.



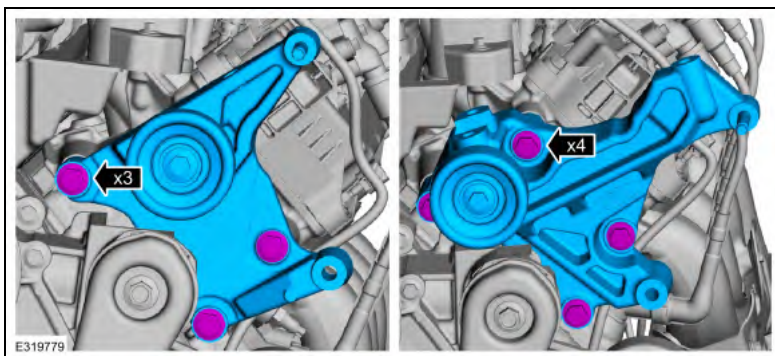
5. Install the following items:

1. LH spark plugs.
Refer to: Spark Plugs (303-07B Engine Ignition - 7.3L 2V DEVCT V8 (239kW/320PS) (J0), Removal and Installation).
2. LH push rods.
Refer to: Push Rod (303-01C Engine - 7.3L 2V DEVCT V8 (239kW/320PS) (J0), Removal and Installation).
3. LH fuel injectors.
Refer to: Fuel Injectors (303-04D Fuel Charging and Controls - 7.3L 2V DEVCT V8 (239kW/320PS) (J0), Removal and Installation).
4. Intake manifold.
Refer to: Intake Manifold (303-01C Engine - 7.3L 2V DEVCT V8 (239kW/320PS) (J0), Removal and Installation).
5. LH exhaust manifold.
Refer to: Exhaust Manifold LH (303-01C Engine - 7.3L 2V DEVCT V8 (239kW/320PS) (J0), Removal and Installation).

6. **NOTE:** The dual generator bracket has an additional bolt.

Install the generator bracket and the bolts.

Torque: 35 lb.ft (48 Nm)



7. Install the generator(s).
Refer to: Generator - 7.3L 2V DEVCT V8 (239kW/320PS) (J0) (414-02 Generator and Regulator, Removal and Installation).
8. Drain the engine oil and remove and discard the oil filter. Install a new engine oil filter and refill the engine with clean engine oil.
Refer to: Engine Oil Draining and Filling (303-01C Engine - 7.3L 2V DEVCT V8 (239kW/320PS) (J0), General Procedures).
9. Fill and bleed the engine cooling system.
Refer to: Engine Cooling System Draining, Vacuum Filling and Bleeding (303-03D Engine Cooling - 7.3L 2V DEVCT V8 (239kW/320PS) (J0), General Procedures).
10. Pressurize the fuel system.
Refer to: Fuel System Pressure Release (310-00C Fuel System - General Information - 7.3L 2V DEVCT V8 (239kW/320PS) (J0), General Procedures).
11. Use the Powertrain Control Module (PCM) Misfire Monitor Profile Correction routine in the diagnostic scan tool.
12. Start and check the exhaust system for leaks.