

REMOVAL AND INSTALLATION > CYLINDER HEAD LH > REMOVAL



NOTE: 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.



NOTE: If the cylinder head is replaced, a new secondary timing chain tensioner will need to be installed. Refer to Variable Camshaft Timing (VCT) Unit .

1.

With the vehicle in NEUTRAL, position it on a hoist. Refer to: Jacking and Lifting - Overview .

2.

Release the fuel system pressure. Refer to: FUEL SYSTEM PRESSURE RELEASE .

3.

Disconnect the battery ground. Refer to: Battery Disconnect and Connect .

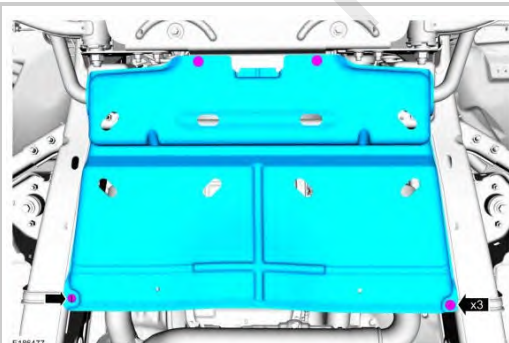
4.

Drain the cooling system. Refer to: COOLING SYSTEM DRAINING AND VACUUM FILLING .

5.

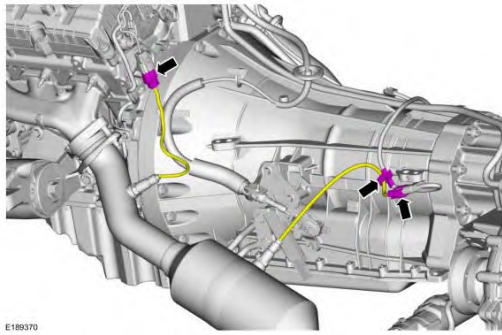
If equipped, remove the bolts.

Release the retainer and remove the transmission housing cover.



6.

Disconnect the LH HO2S and catalyst monitor sensors electrical connectors and detach wiring harness from the retainer.

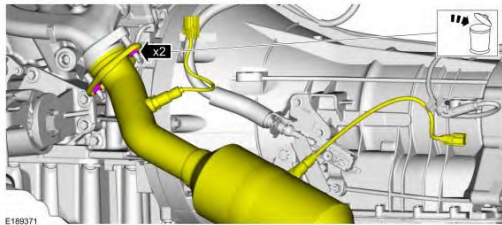


7.



NOTE: Clean the catalytic converter-to-exhaust manifold sealing surfaces.

Remove and discard the LH catalytic converter flange nuts.



8.

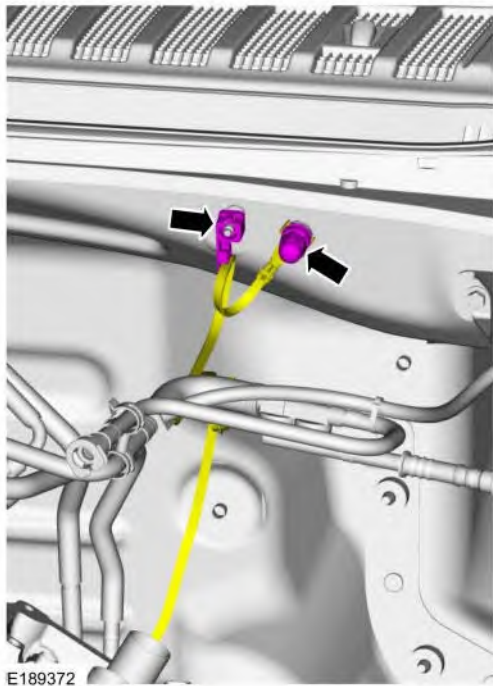
Remove the LH camshafts. Refer to: Camshafts .

9.

Remove the lower intake manifold. Refer to: Lower Intake Manifold .

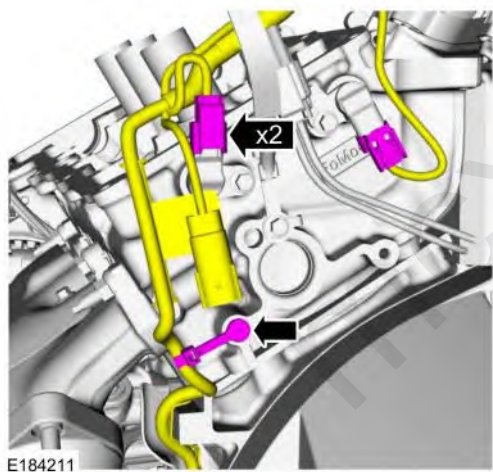
10.

Detach the retainer, remove the nut and ground strap.



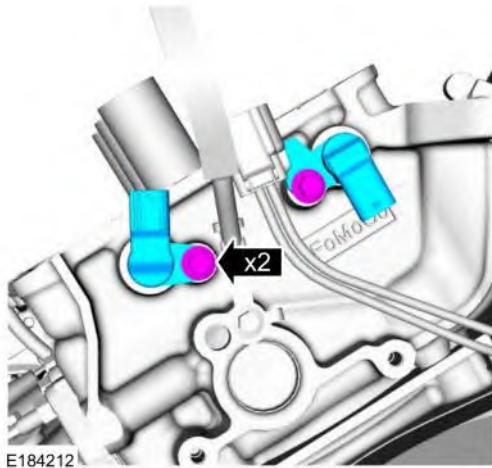
11.

Disconnect the CMP sensor electrical connectors and detach the wiring harness retainer.



12.

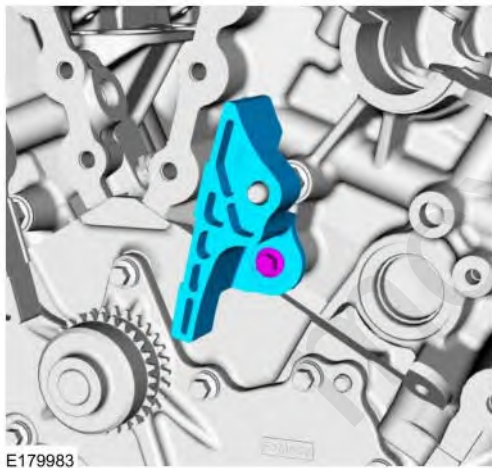
Remove the bolts and the CMP sensors.



13.

 **NOTE:** Do not use power tools to remove the bolt or damage to the upper LH timing chain guide may occur.

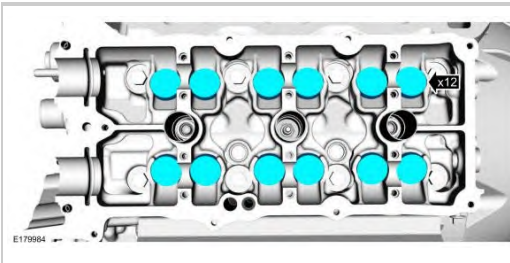
Remove the bolt and the upper LH timing chain guide.



14.

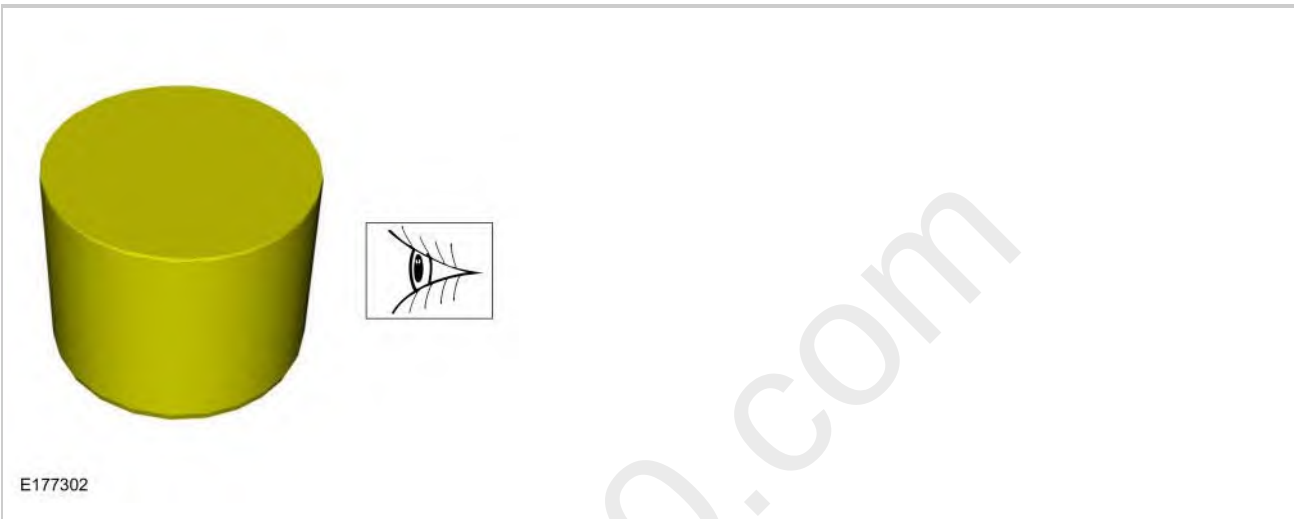
 **NOTE:** If the components are to be reinstalled, they must be installed in the same positions. Mark the components for installation into their original locations.

Remove the valve tappets.



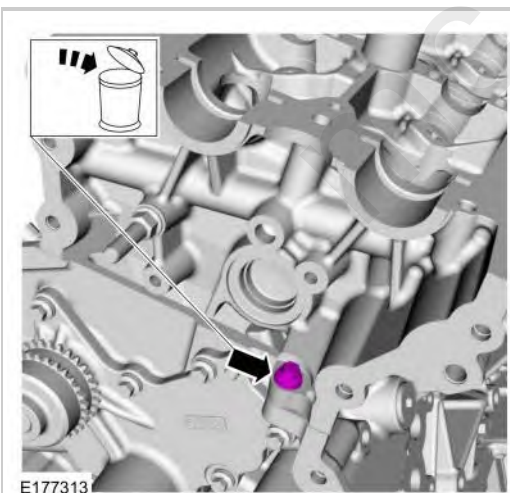
15.

Inspect and install new components as necessary.



16.

Remove and discard the M6 bolt.



17.

 **NOTE:** Place clean shop towels over exposed engine cavities. Carefully remove the towels so foreign material is not dropped into the engine. Any foreign material

(including any material created while cleaning gasket surfaces) that enters the oil passages or the oil pan, may cause engine failure.



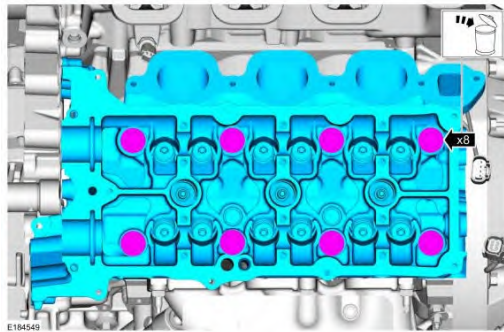
NOTE: Aluminum surfaces are soft and can be scratched easily. Never place the cylinder head gasket surface, unprotected, on a bench surface



NOTE: The cylinder head bolts must be discarded and new bolts must be installed. They are tighten-to-yield designed and cannot be reused.

Remove and discard the bolts.

Remove the cylinder head.

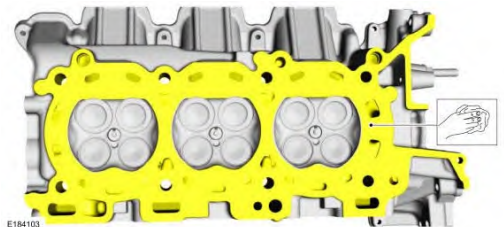


18.



NOTE: 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 that make leak paths. Use a plastic scraping tool to remove all traces of the head gasket.

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



19.

Remove and discard the cylinder head gasket.