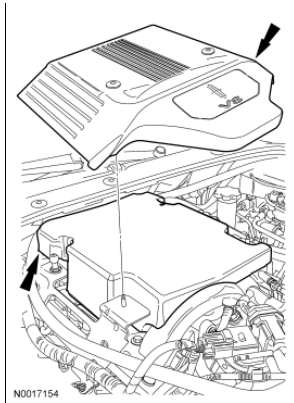


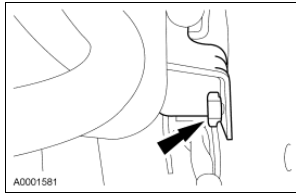
**⚠ CAUTION:** During engine repair procedures, cleanliness is extremely important. Any foreign material, including any material created while cleaning gasket surfaces that enters the oil passages, coolant passages or the oil pan, can cause engine failure.

1. Disconnect the battery ground cable. For additional information, refer to [Section 414-01](#) .
2. **⚠ CAUTION:** The engine appearance cover is equipped with a noise suppressor. If the noise suppressor becomes separated from the engine appearance cover it must be positioned on the intake manifold prior to installing the engine appearance cover.

Remove the engine appearance cover and the noise suppressor (if detached).



3. Remove the air cleaner. For additional information, refer to [Section 303-12](#) .
4. Remove the LH ignition coil-on-plugs. For additional information, refer to [Section 303-07B](#) .
5. Release the fuel system pressure. For additional information, refer to [Section 310-00](#) .
6. Disconnect the fuel tube spring lock coupling at the fuel rail. For additional information, refer to [Section 310-00](#) .
7. Disconnect the variable cam timing (VCT) solenoid electrical connector.
8. Detach the vacuum harness retainers from the LH engine appearance cover bracket.
9. Detach the 4 wiring harness retainers and position the wiring harness aside.
10. Remove the 2 nuts and the LH engine appearance cover bracket.
11. Disconnect the crankcase ventilation tube from the valve cover.
12. Disconnect the evaporative emissions (EVAP) hose from the intake manifold.
13. Remove the bolt and the oil level indicator tube.
  - Discard the O-ring seal.
14. Remove the fuel hose bracket bolt from the LH shock tower.

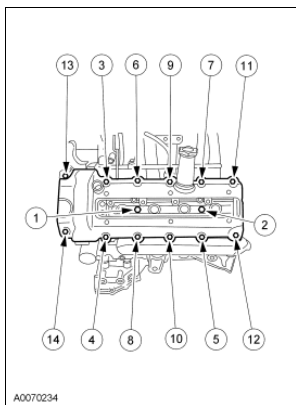


15. Loosen the bolts and position the power steering pump reservoir aside.

16. **NOTE:** The valve cover bolts are not to be removed from the valve cover.

Loosen the bolts in the sequence shown.

- Remove the LH valve cover.
- Discard the gaskets.

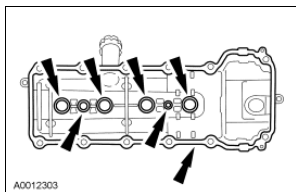


## Installation

1. **⚠ CAUTION:** Do not use metal scrapers, wire brushes, power abrasive discs or other abrasive means to clean the surfaces. These tools cause scratches and gouges, which make leak paths. Use a plastic scraping tool to remove all traces of sealant.

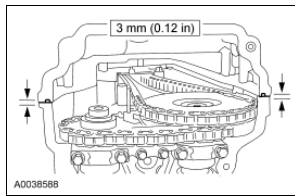
Clean the valve cover, cylinder head and front cover sealing surfaces with silicone gasket remover and metal surface prep.

2. Install new gaskets.



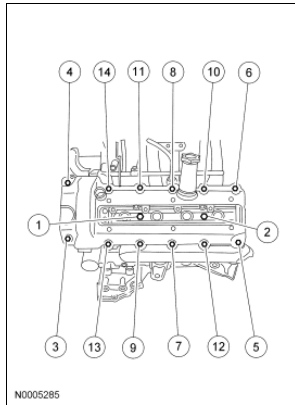
3. **NOTE:** The valve cover must be installed and the bolts and stud bolts tightened within 4 minutes of sealant application.

Apply a 3-mm (0.12-in) dot of silicone gasket sealant to the front cover-to-cylinder head joints.



4. Install the LH valve cover.

- Tighten the bolts in the sequence shown to 10 Nm (89 lb-in).

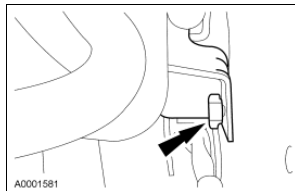


5. Install the power steering pump reservoir.

- Tighten upper bolt to 6 Nm (53 lb-in).
- Tighten lower bolt to 12 Nm (9 lb-ft).

6. Install the fuel hose bracket bolt to the LH shock tower.

- Tighten to 11 Nm (8 lb-ft).



7. **⚠ CAUTION:** Failure to lubricate the O-ring seal and the oil level indicator tube-to-engine block mating surface with clean engine oil can result in engine oil leaks.

**⚠ CAUTION:** Make sure the O-ring seal remains in position and does not roll up the indicator tube during installation.

Install a new O-ring seal, the oil level indicator tube and bolt.

- Lubricate the new O-ring seal and engine mating surface with clean engine oil.
- Tighten the bolt to 6 Nm (53 lb-in).

8. Connect the EVAP hose to the intake manifold.

9. Connect the crankcase ventilation tube to the valve cover.

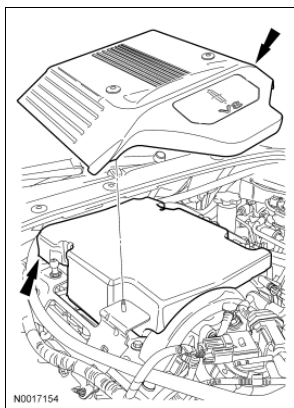
10. Install LH engine appearance cover bracket and the 2 nuts.

- Tighten to 6 Nm (53 lb-in).

11. Position the wiring harness and attach the 4 wiring harness retainers.

12. Attach the vacuum harness retainers to the LH engine appearance cover bracket.
13. Connect the VCT solenoid electrical connector.
14. Install the LH ignition coil-on-plugs. For additional information, refer to [Section 303-07B](#) .
15. Connect the fuel tube spring lock coupling. For additional information, refer to [Section 310-00](#) .
16. Install the air cleaner. For additional information, refer to [Section 303-12](#) .
17. **⚠ CAUTION: The engine appearance cover is equipped with a noise suppressor. If the noise suppressor becomes separated from the engine appearance cover it must be positioned on the intake manifold prior to installing the engine appearance cover.**

Install the noise suppressor (if detached) and the engine appearance cover.



18. Connect the battery ground cable. For additional information, refer to [Section 414-01](#) .
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