

PUBLISHED: 05-JUL-2018  
2010.0 DISCOVERY 4 / LR4 , 303-01B

ENGINE - TDV6 3.0L DIESEL

# LEFT VALVE COVER (G1254964)

REMOVAL AND INSTALLATION

12.29.43	CAMSHAFT COVER - LEFT - RENEW	3000 CC, TDV6	3.90	USED WITHINS	+
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## SPECIAL TOOL(S)



**100-012**

Slide Hammer



**310-213**

Fuel Injector Removal Adapter

## PART(S)

STEP	PART NAME	QUANTITY
Installation Step 1	Camshaft cover gasket	1
Installation Step 10	Fuel Injector replacement kits	3

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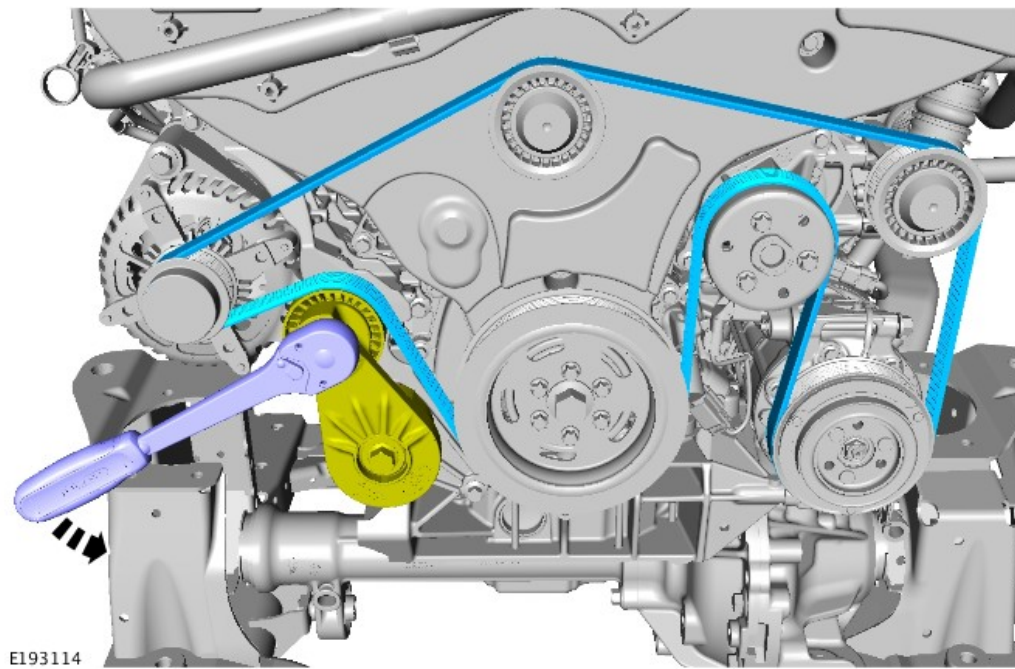
## REMOVAL

### NOTES:

- This procedure contains some variation in the illustrations depending on the vehicle specification, but the essential information is always correct.
- This procedure contains illustrations showing certain components removed to provide extra clarity.

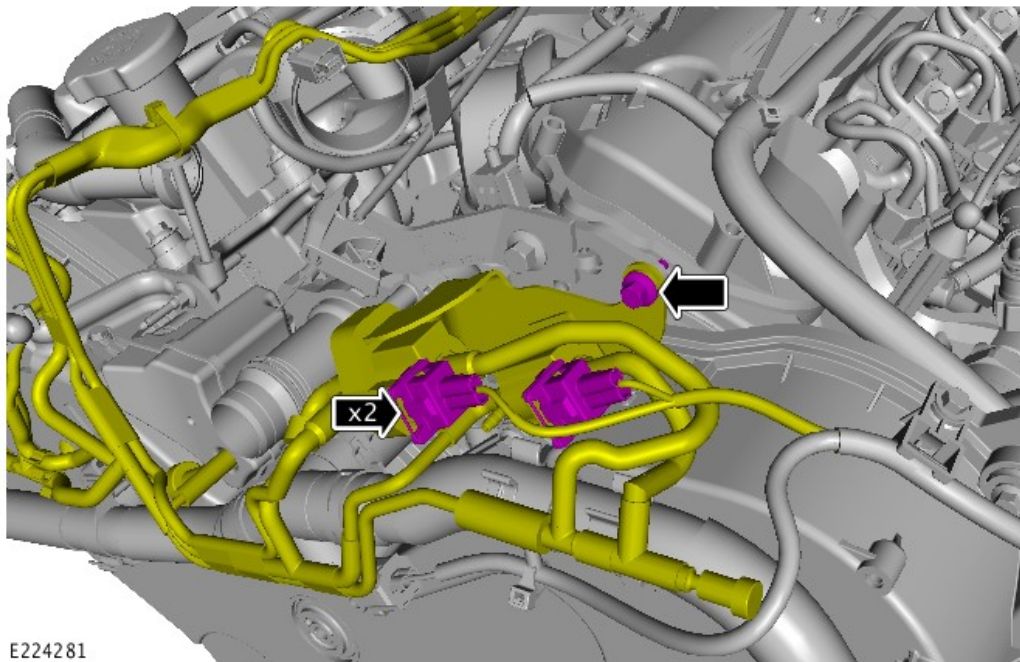
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1. Disconnect the startup battery ground cable.  
Refer to: [Specifications](#) (414-01 Battery, Mounting and Cables, Specifications).
  2. Raise and support the vehicle on a suitable 2 post lift.  
Refer to: [Lifting - Armoured](#) (100-02 Jacking and Lifting, Description and Operation).
  3. Partially drain the cooling system.  
Refer to: [Cooling System Partial Draining and Vacuum Filling](#) (303-03A Engine Cooling - TDV6 2.7L Diesel, General Procedures).
  4. Remove the throttle body.  
Refer to: [Intake Air Shutoff Throttle](#) (303-04C Fuel Charging and Controls - TDV6 3.0L Diesel, Removal and Installation).

5.



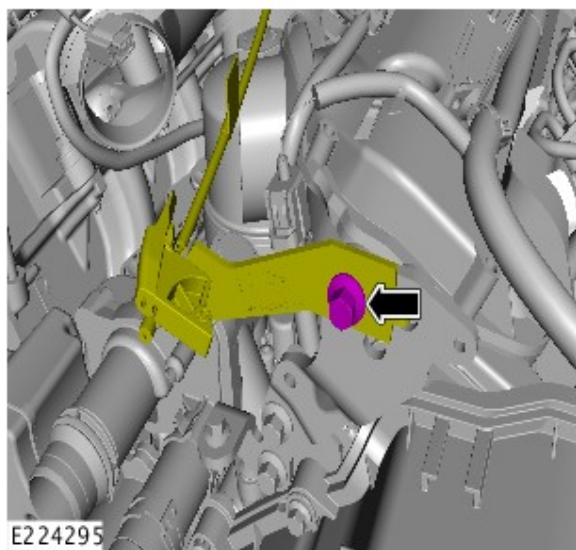
Remove the accessory drive belt.

6.



- Disconnect the 2 electrical connectors.
- Release the vacuum harness and position aside.

7.

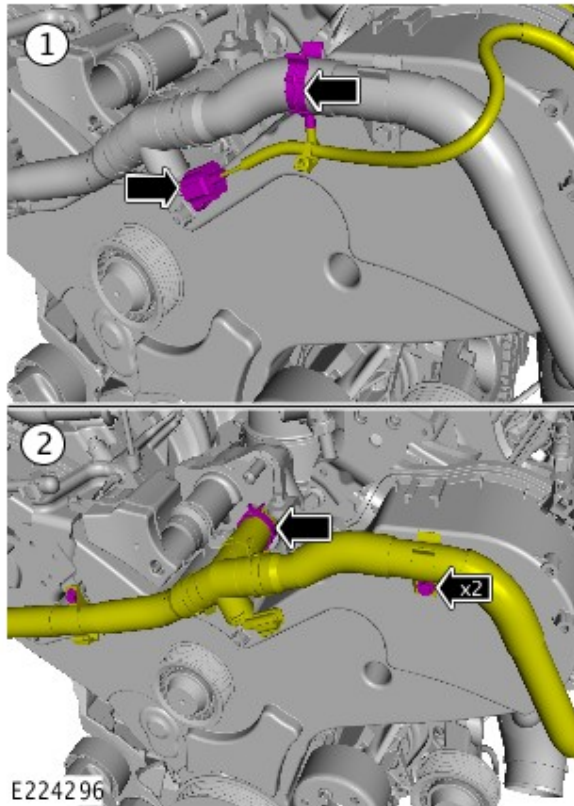


- Release the emergency park release assembly and position aside.

8.

**CAUTION:**

Be prepared to collect escaping engine coolant.

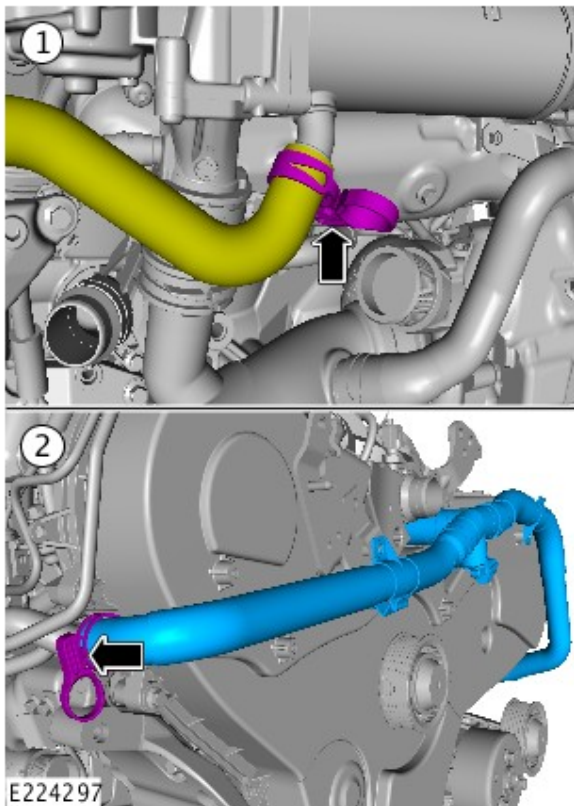


- Disconnect the electrical connector and release the wiring harness from the engine coolant pipe.
- Release the engine coolant hose from the engine coolant outlet.
- Remove the 2 bolts.

9.

**CAUTION:**

Be prepared to collect escaping engine coolant.

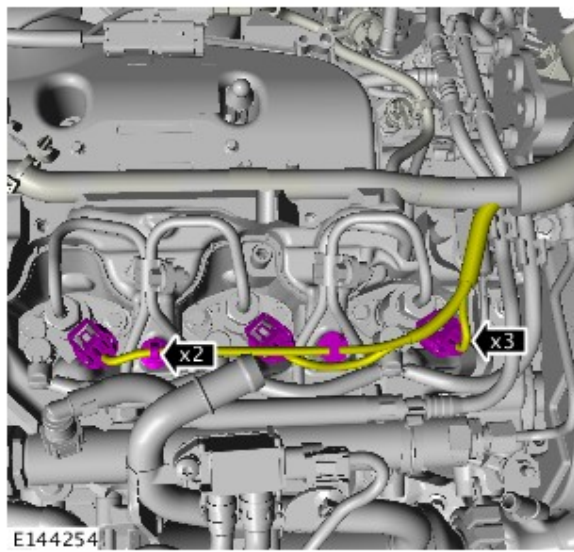


- Release the engine coolant hose from the left Exhaust Gas Recirculation (EGR) valve.
- Remove the engine coolant hose.

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10. Always follow the cleaning process before doing any repairs to the fuel injection system components. Failure to follow this instruction may result in damage to the fuel injection system. Refer to: [Fuel Injection Component Cleaning](#) (303-04A Fuel Charging and Controls - TDV6 2.7L Diesel, General Procedures).

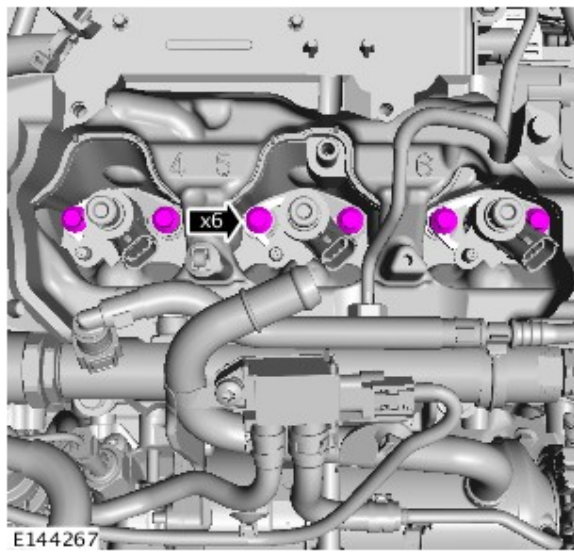
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11. Remove the left fuel rail.  
Refer to: [Left Fuel Rail](#) (303-04C Fuel Charging and Controls - TDV6 3.0L Diesel, Removal and Installation).

12.



Disconnect and release the fuel injector wiring harness.

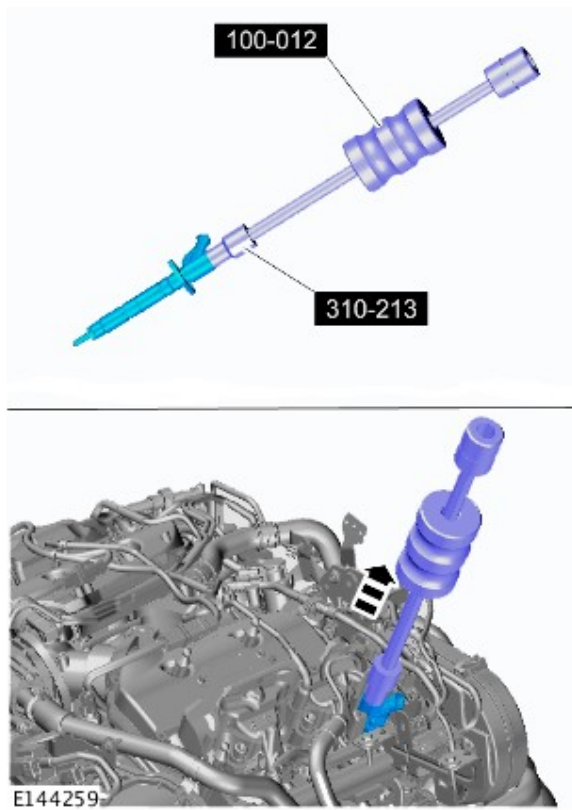
13.



Remove the fuel injector bolts.



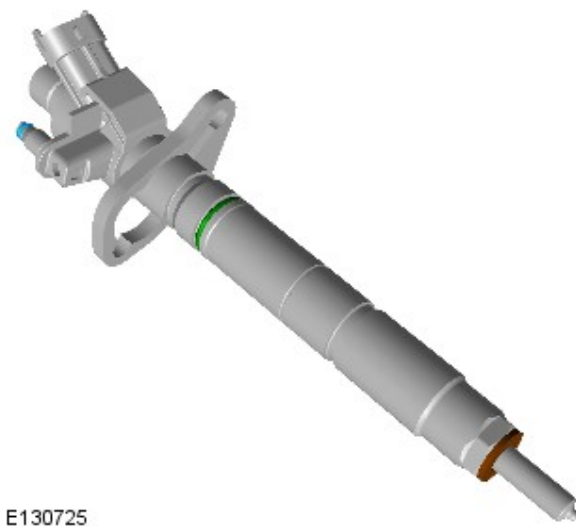
14.



Using the special tools remove the fuel injector.

*Special Tool(s):* [100-012](#), [310-213](#)

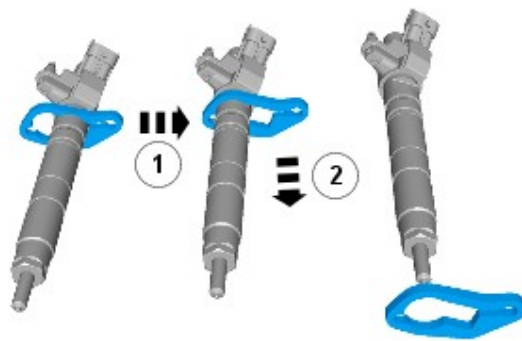
15.



- Remove and discard the O-ring seal.
- Remove and discard the sealing washer.



16.

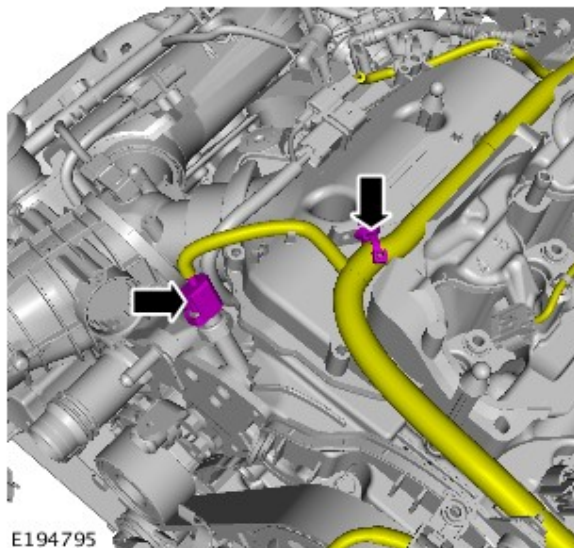


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Remove and discard the fuel injector retaining clamp.

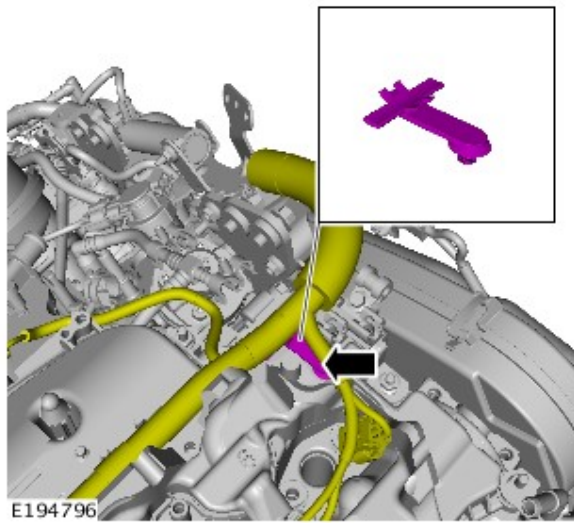
17. Repeat steps 14 to 16 for the remaining 2 fuel injectors.

18.



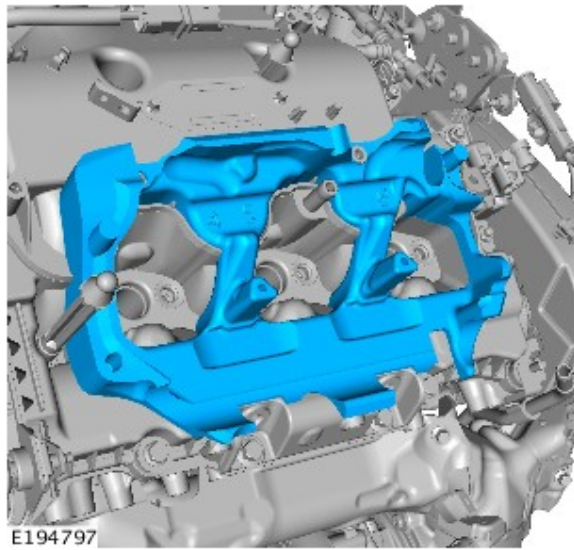
Disconnect the electrical connector and release the wiring harness.

19.



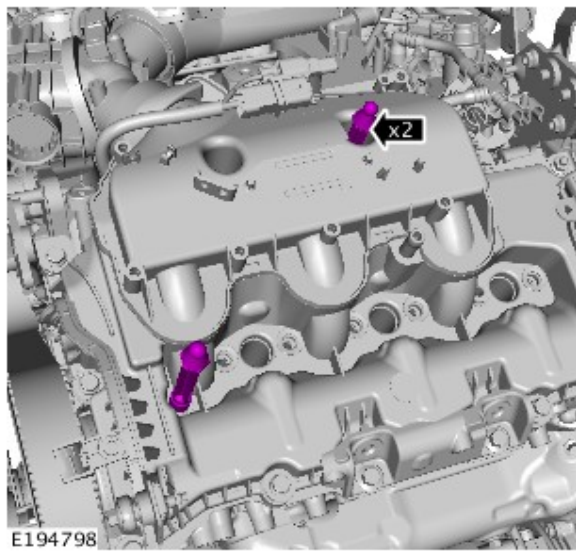
Release the wiring harness.

20.



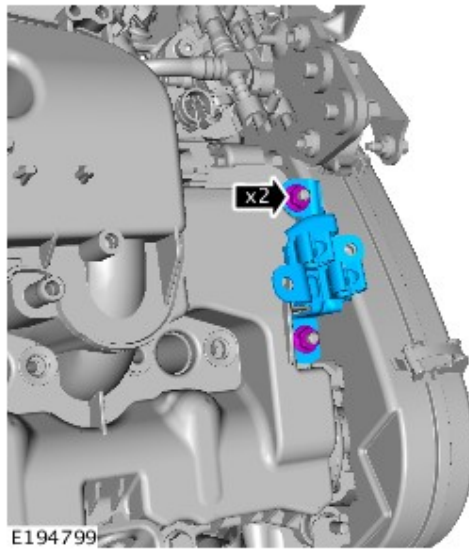
Remove the Noise, Vibration and Harshness material.

21.



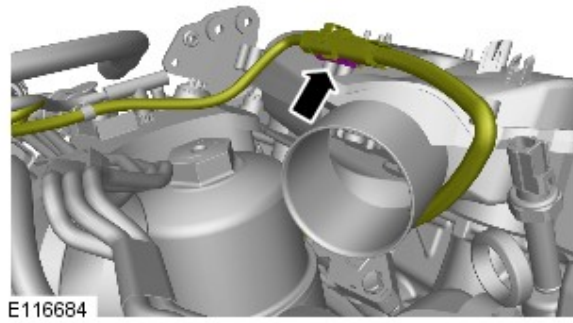
Remove the pins.

22.



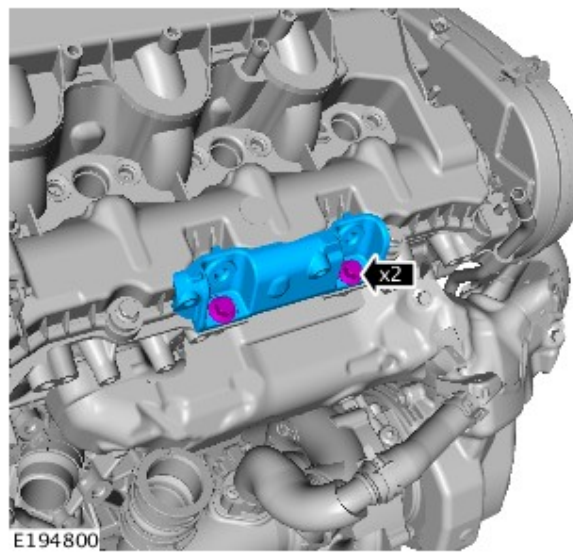
Remove the left valve cover mounting bracket.

23.



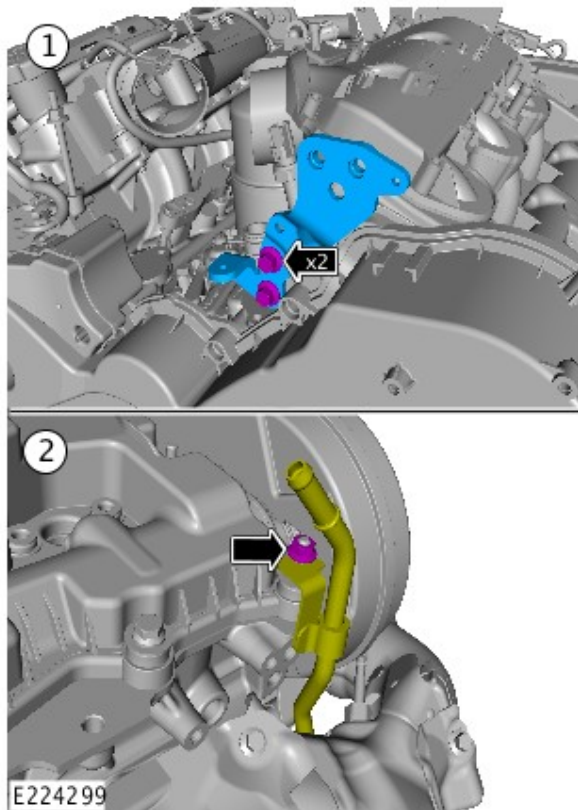
Release the wiring harness.

24.



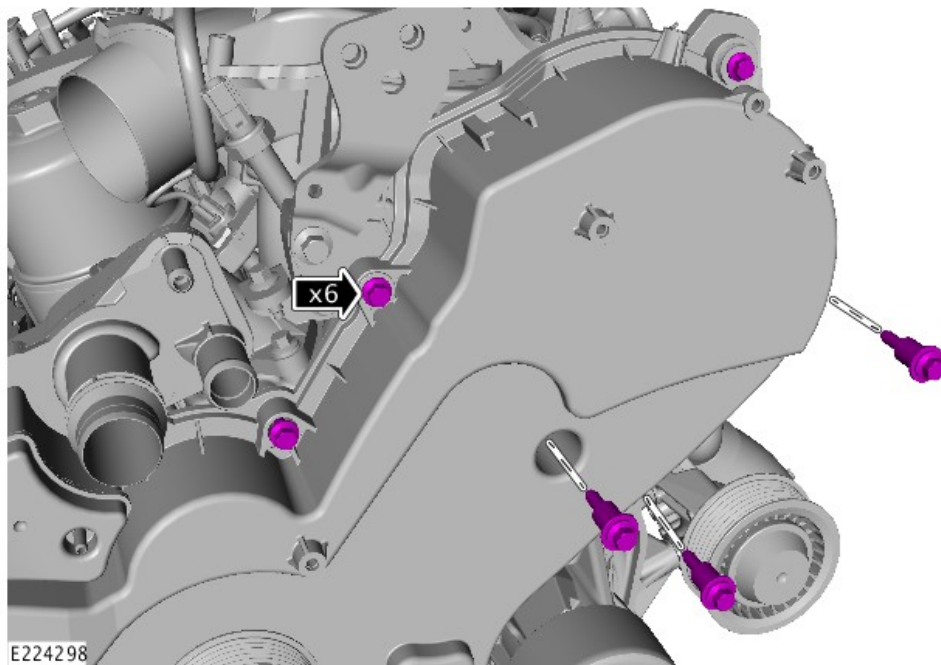
Remove the fuel rail mounting bracket.

25.



- Remove the engine mounting bracket.
- Release the coolant pipe from the left valve cover.

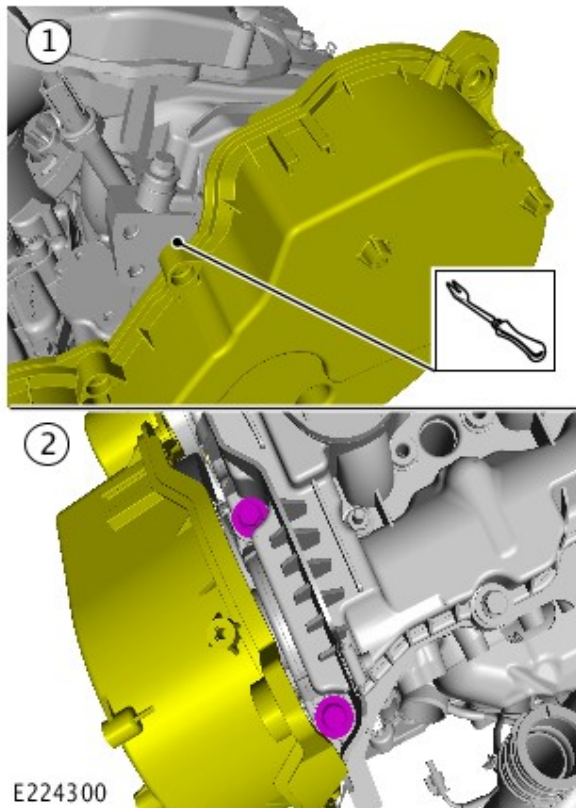
26.



Remove the 6 timing cover bolts.

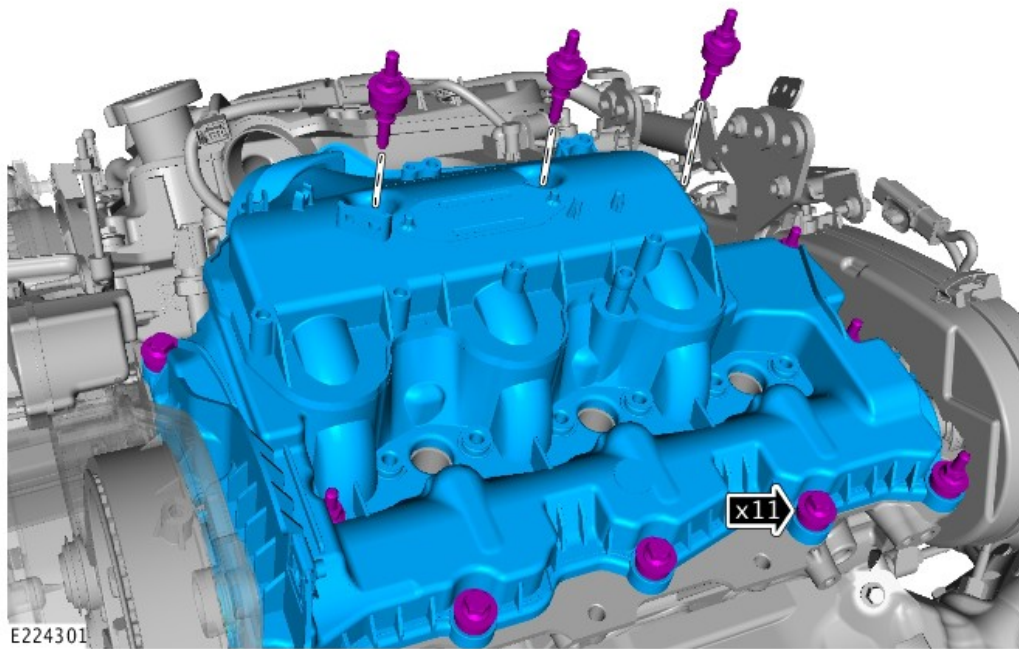
**CAUTION:**

Take care not to damage any surrounding components.



- Using a suitable trim tool, release the timing cover from the left valve cover.
- Loosen the 2 bolts.





- Loosen the 11 left valve cover bolts.
- Remove the left valve cover.
- Remove and discard the left valve cover gasket.

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## INSTALLATION

1.

**CAUTION:**

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

- Install a new left valve cover gasket  
*Renew Part: [Camshaft cover gasket](#) Quantity: 1.*
- Install, but do not fully tighten the 11 left valve cover bolts.

2.

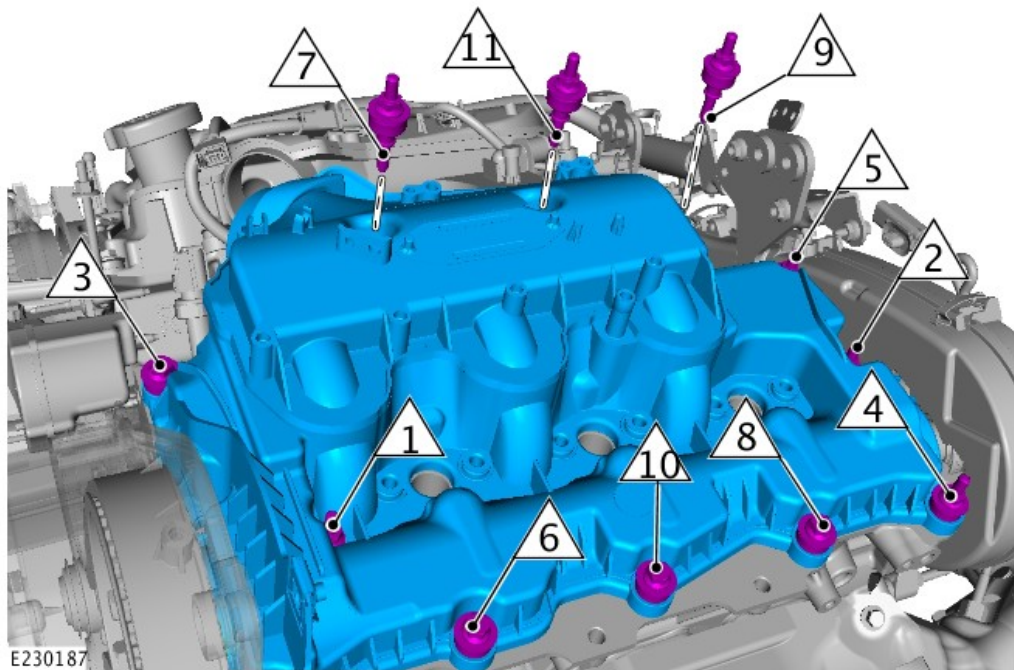
**CAUTION:**

Take care not to damage any surrounding components.

- Using a suitable trim tool, release the timing cover from the left valve cover.
- Install, but do not fully tighten the 2 left valve cover bolts.



3.



- Tighten the 13 left valve cover bolts in the indicated sequence.

*Torque: 10Nm*

4.

- Install the 6 timing cover bolts.

*Torque: 10Nm*

5.

- Install the coolant pipe to the left valve cover.

*Torque: 8Nm*

6.

- Install the engine mounting bracket.

*Torque: 8Nm*

7.

- Install the fuel rail mounting bracket.

*Torque: 23Nm*

8.

- Install the left valve cover mounting bracket.

*Torque: 10Nm*

9.

- Install the Noise, Vibration and Harshness material.
- Install the pins.
- Install the wiring harness and connect the electrical connectors.

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- 10.
- Install new fuel injector retaining clamps.
  - Install new O-ring seals.
  - Install new sealing washers.
- Renew Part: [Fuel Injector replacement kits](#) Quantity: 3.
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11. Install the fuel injectors.
- Torque: **9Nm**
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12. Connect the fuel injector wiring harness.
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13. Install the left fuel rail.
- Refer to: [Left Fuel Rail](#) (303-04C Fuel Charging and Controls - TDV6 3.0L Diesel, Removal and Installation).
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- 14.
- Install the Exhaust Gas Recirculation (EGR) engine coolant crossover pipe.
- Torque: **8Nm**
- Connect the electrical connector.
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15. Install the emergency park release assembly.
- Torque: **8Nm**
- 

- 16.
- Install the vacuum harness.
  - Connect the electrical connectors.
- 

17. Install the accessory drive belt.
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18. Install the throttle body.
- Refer to: [Intake Air Shutoff Throttle](#) (303-04C Fuel Charging and Controls - TDV6 3.0L Diesel, Removal and Installation).
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19. Fill the drain the cooling system.
- Refer to: [Cooling System Partial Draining and Vacuum Filling](#) (303-03A Engine Cooling - TDV6 2.7L Diesel, General Procedures).
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20. Connect the startup battery ground cable.
- Refer to: [Specifications](#) (414-01 Battery, Mounting and Cables, Specifications).
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