

- Tighten the bolts to 12 Nm (9 lb.ft).
- Remove the retaining rod.

7. Install the RH primary timing chain.

- Make sure the timing chain slack is on the tensioner side of the timing chain.

8. Install the RH primary timing chain tensioner guide.

- Tighten the bolts to 12 Nm (9 lb.ft).

9.  **CAUTION:** During timing chain tensioner compression, do not release the ratchet stem until the timing chain tensioner piston is fully bottomed in its bore or damage to the ratchet stem will result.

Install the RH primary timing chain tensioner.

- Using 3 mm diameter metal rod, retain the chain tensioner piston.
- Tighten the bolts to 12 Nm (9 lb.ft).
- Remove the retaining rod.

10. Remove the special tool from the RH cylinder head.

11. Remove the special tool from the LH cylinder head.

12. Install the oil pan.

For additional information, refer to: Oil Pan (303-01, In-vehicle Repair).

13. Connect the battery ground cable.

For additional information, refer to: Specifications (414-00, Specifications).

Engine - 4.2L SC V8 - AJV8 - Oil Filter Housing

In-vehicle Repair

Removal

1. Disconnect the battery ground cable.

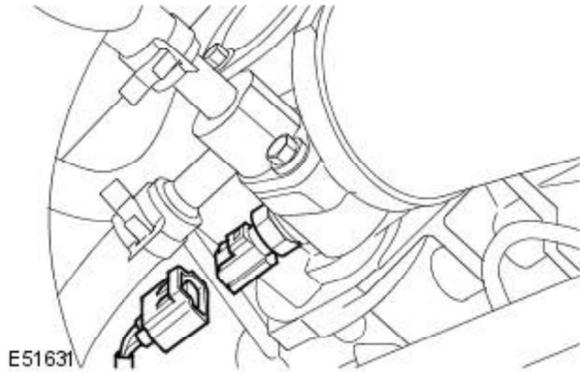
For additional information, refer to: Specifications (414-00, Specifications).

2.  **WARNING:** Do not work on or under a vehicle supported only by a jack. Always support the vehicle on safety stands.

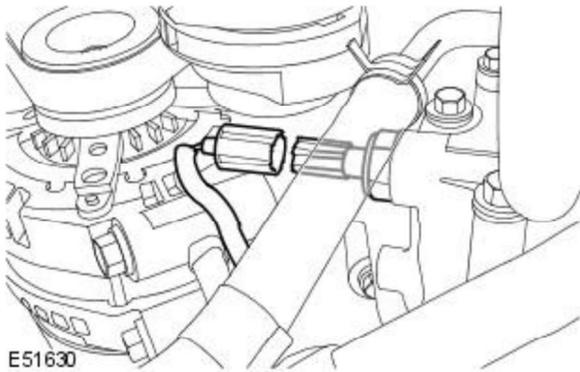
Raise and support the vehicle.

3. Remove the radiator splash shield.

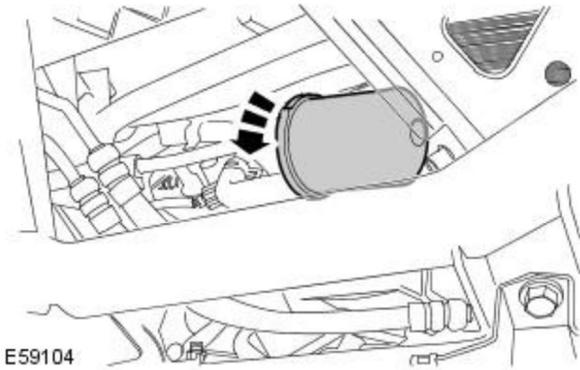
For additional information, refer to: [Radiator Splash Shield](#) (501-02 Front End Body Panels, Removal and Installation).



4. Disconnect the engine oil temperature sensor electrical connector.

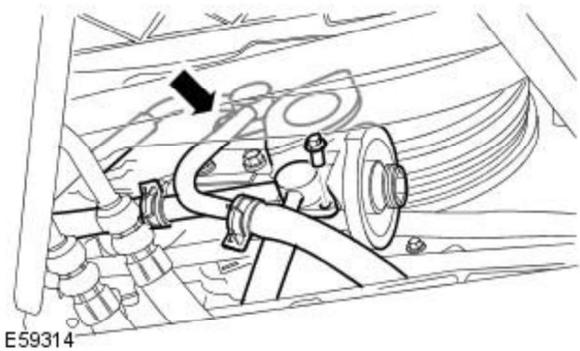


5. Disconnect the engine oil pressure (EOP) sensor electrical connector.



6. Remove the engine oil filter.

Position a container to collect the fluid spillage.



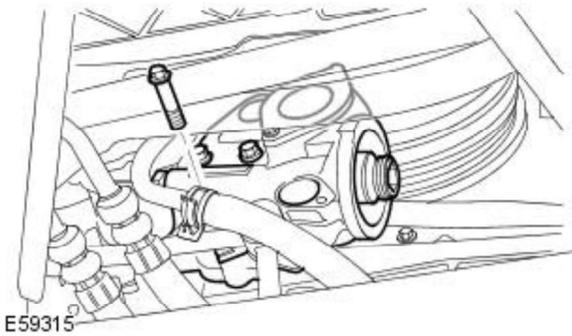
7.  **CAUTION:** Before disconnecting or removing the components, ensure the area around the joint faces and connections are clean. Plug open connections to prevent contamination.

Disconnect the oil cooler hose adapter.

Remove the bolt.

Remove and discard the O-ring seal.

Repeat the above procedure for the remaining adapter.



E59315

8. Remove the oil filter housing.

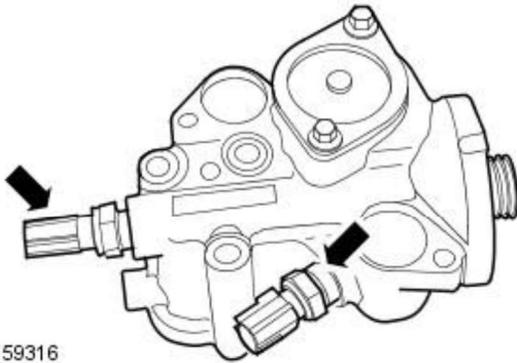
Remove the 3 bolts.

Remove and discard the O-ring seal.

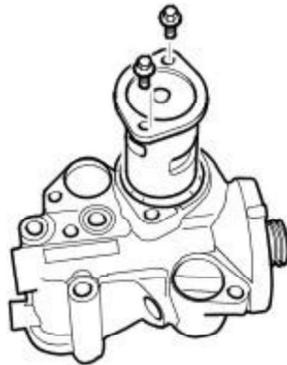
9. NOTE: Do not disassemble further if the component is removed for access only.

Remove the engine oil temperature sensor.

10. Remove the EOP sensor.



E59316



E59317

11. Remove the auxiliary oil cooler thermostat.

Remove the 2 bolts.

Remove and discard the O-ring seal.

Installation

1. Install the auxiliary oil cooler thermostat.

Clean the component mating faces.

Install a new O-ring seal.

Tighten the bolts to 10 Nm (7 lb.ft).

2. Install the EOP sensor.

Tighten the EOP sensor to 13 Nm (10 lb.ft).

3. Install the engine oil temperature sensor.

Tighten the engine oil temperature sensor to 20 Nm (15 lb.ft).

4. Install the oil filter housing.

Clean the component mating faces.

Install a new O-ring seal.

Tighten the bolts to 20 Nm (15 lb.ft).

5. Connect the oil cooler hose adapters.

Clean the component mating faces.

Install new O-ring seals.

Tighten the bolts to 10 Nm (7 lb.ft).

6. Install the engine oil filter.

Lubricate the oil filter seal with clean engine oil and tighten to 18 Nm (13 lb.ft).

7. Connect the EOP sensor electrical connector.

8. Connect the engine oil temperature sensor electrical connector.

9. Install the radiator splash shield.

For additional information, refer to: [Radiator Splash Shield](#) (501-02 Front End Body Panels, Removal and Installation).

10. Connect the battery ground cable.

For additional information, refer to: Specifications (414-00, Specifications).

11. Check and top-up the engine oil.

Engine - 4.2L SC V8 - AJV8 - Oil Pan

In-vehicle Repair

Removal

1. Disconnect the battery ground cable.

For additional information, refer to: Specifications (414-00, Specifications).

2.  **WARNING:** Do not work on or under a vehicle supported only by a jack. Always support the vehicle on safety stands.

Raise and support the vehicle.

3. Remove the engine.

For additional information, refer to: [Engine](#) (303-01A Engine - 4.2L SC V8 - AJV8, Removal).

4. Remove the engine front cover.

For additional information, refer to: Engine Front Cover (303-01A, In-vehicle Repair).