

**Engine Cooling - V8 5.0L Petrol -****Lubricants**

<b>Description</b>	<b>Specification</b>
Anti-freeze	Havoline Extended Life Coolant (XLC)
Anti-freeze concentration	50%

**Capacities**

<b>Item</b>	<b>Specification</b>
Vehicles fitted with 4 zone air conditioning (A/C)	16.6L (dry capacity)
Vehicles fitted with 2 zone A/C	15.9L (dry capacity)

**Torque Specifications**

<b>Description</b>	<b>Nm</b>	<b>lb-ft</b>	<b>lb-in</b>
Coolant expansion tank retaining bolt	10	7	-
Cooling fan retaining nut	65	48	-
Thermostat housing retaining bolt	10	7	-
Coolant pump retaining bolts	12	9	-
Radiator air deflector retaining bolts	9	-	80
Refrigerant line to condenser core retaining bolts	10	7	-
Radiator retaining bolts	25	18	-
Condenser core to radiator bolts	10	7	-
Coolant bleed screw(s)	3	-	27

# Engine Cooling - V8 5.0L Petrol - Cooling System Draining and Vacuum Filling

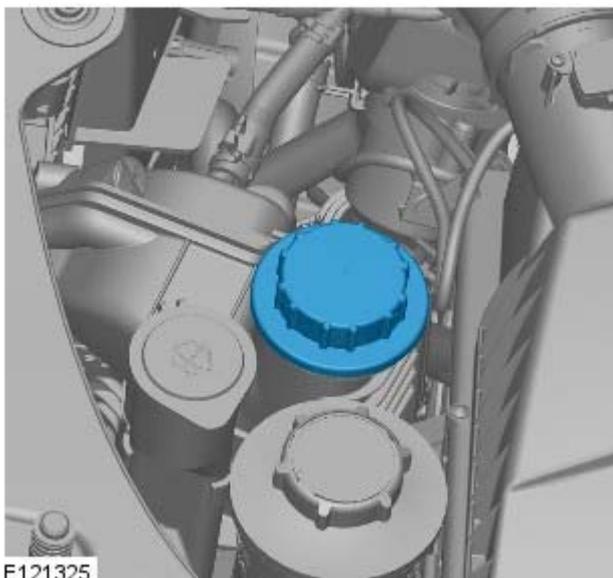
General Procedures

## Draining

1. Refer to: [Engine Cover - V8 5.0L Petrol](#) (501-05 Interior Trim and Ornamentation, Removal and Installation).

2.  **WARNING:** Make sure to support the vehicle with axle stands.

Raise and support the vehicle.



3.  **WARNING:** Release the cooling system pressure by slowly turning the coolant expansion tank cap a quarter of a turn. Cover the expansion tank cap with a thick cloth to prevent the possibility of scalding. Failure to follow this instruction may result in personal injury.

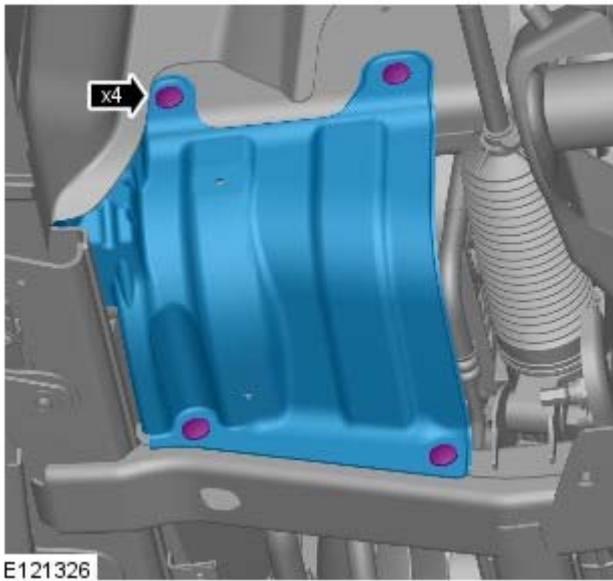
• CAUTIONS:

 Since injury such as scalding could be caused by escaping steam or coolant, make sure the vehicle cooling system is cool prior to carrying out this procedure

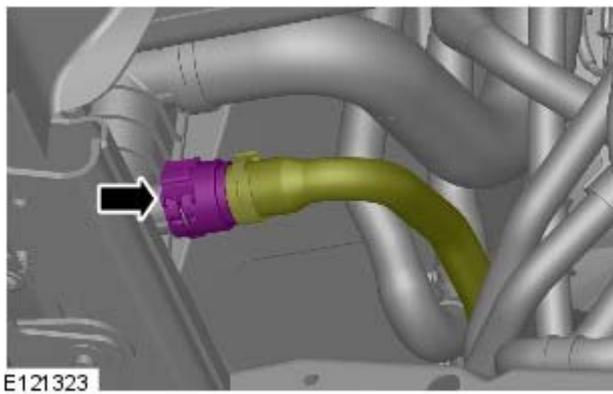
 Be prepared to collect escaping coolant.



4. Remove the 4 bolts.

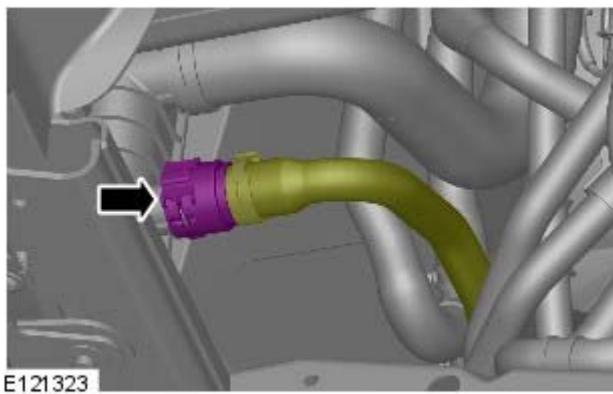


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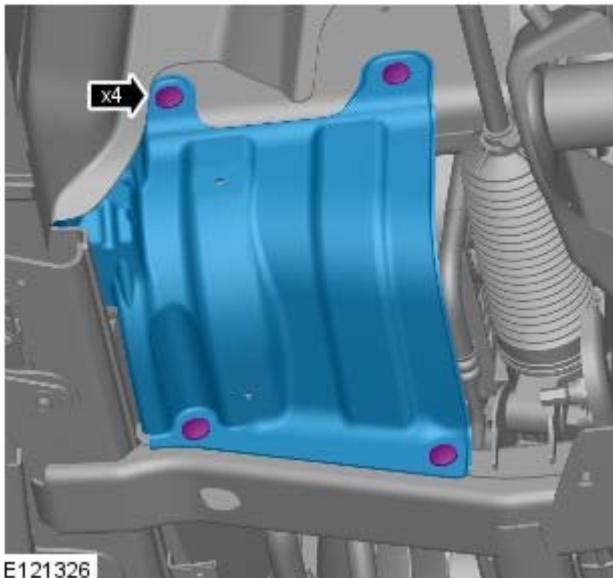


6.  CAUTION: Be prepared to collect escaping coolant.

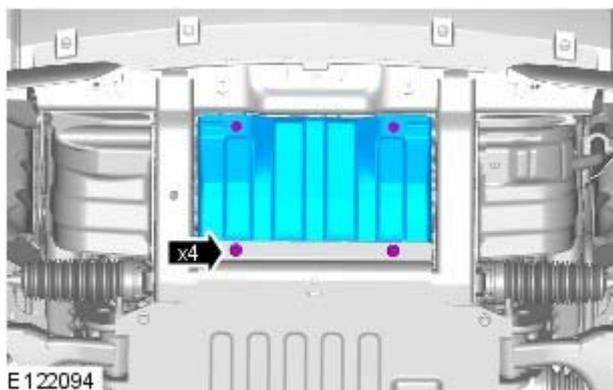
Position a container to collect the fluid.



7. Install the lower coolant hose to the radiator.



8. Install the LH splash shield.



9. Torque: 10 Nm

## Filling

1. Lower the vehicle.
2. **11.**  **CAUTION:** Anti-freeze concentration must be maintained at 50%.
  - Install the cooling system vacuum refill adaptor to the expansion tank.
  - Install the vacuum filler gauge to the cooling system vacuum refill adaptor.
  - Install the venturi tube assembly to the vacuum filler gauge.
3. **12.** NOTE: Make sure the coolant supply valve is in the closed position on the vacuum filler gauge assembly.
  - NOTE: The coolant vacuum fill tool needs an air pressure of 6 to 8 bar (87 to 116 psi) to operate correctly.
  - NOTE: Small diameter or long airlines may restrict airflow to the coolant vacuum fill tool.Connect a regulated compressed air supply to the venturi tube assembly.
4. Position the evacuated air hose into a container.
5. Open the air supply valve.

6. **15.** NOTE: Make sure the coolant supply hose is positioned into a container of fifty percent mixture of Jaguar Premium Cooling System Fluid or equivalent, meeting Jaguar specification WSS M97B44-D and fifty percent water. Make sure no air can enter the coolant supply hose.

Open the coolant supply valve for 2 seconds to prime the coolant supply hose.

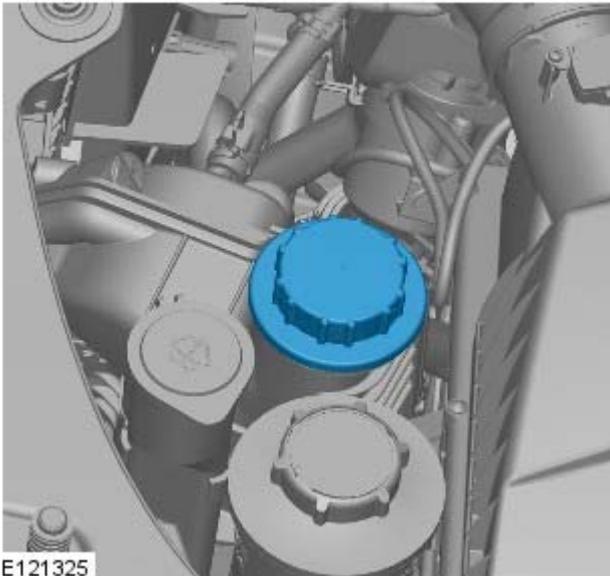
7. Apply air pressure progressively until the arrow on the vacuum filler gauge reaches the green segment.

8. Disconnect the compressed air supply line.

9. **18.** NOTE: Close the coolant supply valve when the coolant expansion tank MAX mark is reached or coolant movement has ceased.

Open the coolant supply valve and allow the coolant to be drawn into the system.

10. Remove the vacuum filler gauge and cooling system vacuum refill adaptor assembly.



11. **20.**  CAUTION: Correct installation of the Coolant expansion tank cap can be obtained by tightening the cap until an audible click is heard.

12. Set the heater controls to maximum.

13. **22.**  CAUTION: Observe the engine temperature gauge. If the engine starts to over-heat switch off immediately and allow to cool. Failure to follow this instruction may cause damage to the vehicle

Start the engine and idle until hot air is emitted at the face registers.

14. Switch the heater off.

15. Raise the engine speed to 2000 RPM for eight minutes.

16. **25.**  CAUTION: Switch off the engine and allow the coolant temperature to go cold.

Switch the engine off.

17. Visually check the engine and cooling system for signs of coolant leakage.

18. **27.**  **WARNING:** When releasing the cooling system pressure, cover the coolant expansion tank cap with a thick cloth.

• **CAUTIONS:**



Since injury such as scalding could be caused by escaping steam or coolant, make sure the vehicle cooling system is cool prior to carrying out this procedure



Make sure the coolant level remains above the "COLD FILL RANGE" lower level mark.

• **NOTE:** When the cooling system is warm, the coolant will be approximately 10mm above the upper level mark on the expansion tank with the cap removed.

Check and top-up the coolant if required.