

COOLING SYSTEM PARTIAL DRAINING AND VACUUM FILLING (G1313553)

GENERAL PROCEDURES

SPECIAL TOOL(S)



HU-919

Coolant System Vacuum Refill Kit

DRAINING

WARNING:

Since injury such as scalding could be caused by escaping steam or coolant, do not remove the filler cap from the coolant expansion tank while the system is hot.

CAUTIONS:

- The engine cooling system must be maintained with the correct concentration and type of anti-freeze solution to prevent corrosion and frost damage. Failure to follow this instruction may result in damage to the engine.
- Engine coolant will damage the paint finished surfaces. If spilt, immediately remove the coolant and clean the area with water.

 **NOTE:**

Removal steps in this procedure may contain installation details.

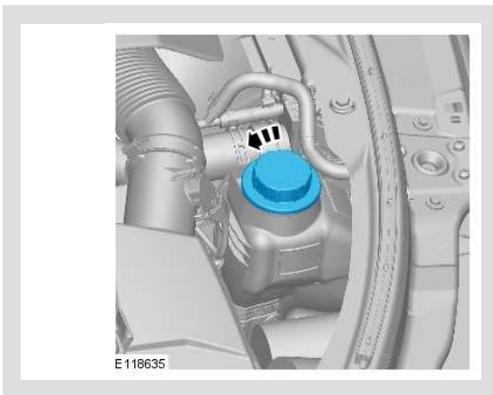
The following step(s) applies to:

All vehicles

1.

 **WARNING:**

Since injury such as scalding could be caused by escaping steam or coolant, do not remove the filler cap from the coolant expansion tank while the system is hot.



2.

 **WARNING:**

Make sure to support the vehicle with axle stands.

Raise and support the vehicle.

3.

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

The following step(s) applies to:

Vehicles with 5.0L engine

4.

WARNING:

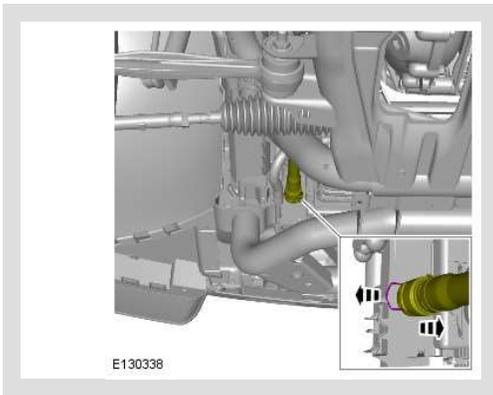
Eye protection must be worn.

CAUTION:

Be prepared to collect escaping fluids.

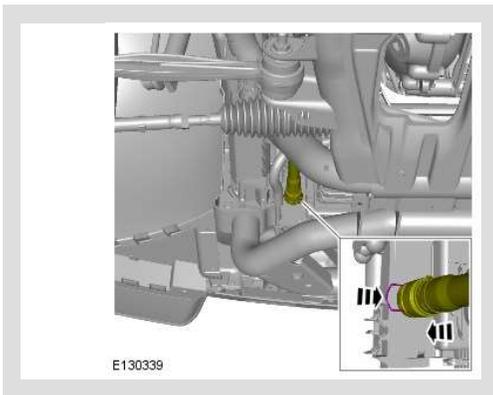
NOTE:

Collect the coolant in a clean container and reuse.



Position a container to collect the fluid.

5.



Remove the container.

The following step(s) applies to:

Vehicles with 3.6L diesel engine

6.



Drain the coolant.

Position a container to collect the fluid.

Attach a hose to the radiator drain tap.

Open the radiator drain tap.

7. Close the radiator drain tap and remove the hose.

Remove the container.

The following step(s) applies to:

Vehicles with 4.4L diesel engine

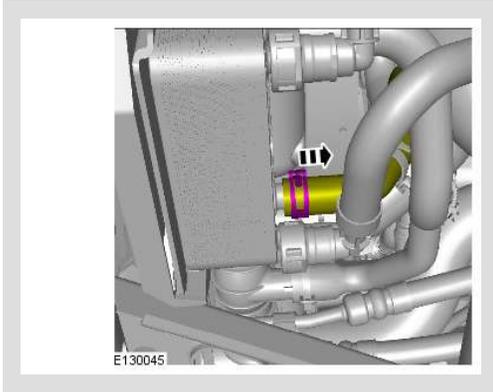
8.

WARNING:

Eye protection must be worn.

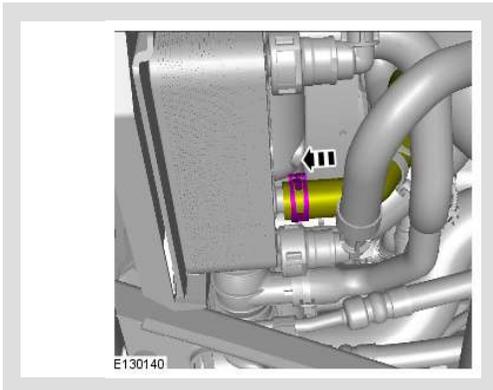
CAUTION:

Be prepared to collect escaping fluids.



Position a container to collect the fluid.

9.



Remove the container.

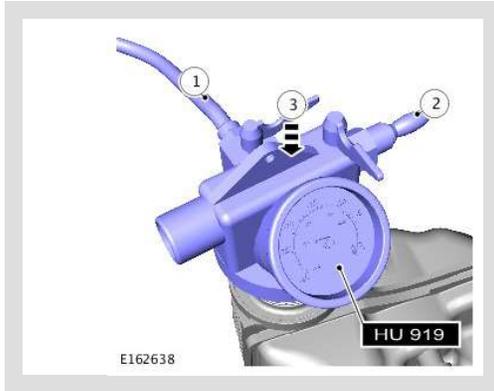
FILLING

1. For additional information, refer to: [Radiator Splash Shield](#) (501-02 Front End Body Panels, Removal and Installation).
2. Prepare a sufficient amount of coolant to the specified concentration.

3.

 NOTES:

- Make sure the coolant supply valve is in the closed position on the special tool.
- The special tool needs an air pressure of 6 to 8 bar (87 to 116 psi) to operate correctly.
- Small diameter or long airlines may restrict airflow to the coolant vacuum fill tool.

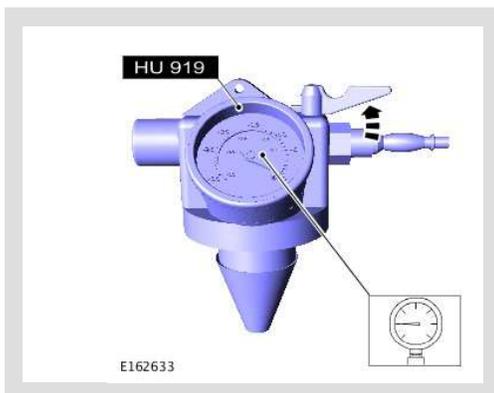


1. Position the hose from the special tool into a container of clean coolant.
2. Connect a regulated compressed air supply to the special tool.
3. Move the special tool to the expansion tank.

4.

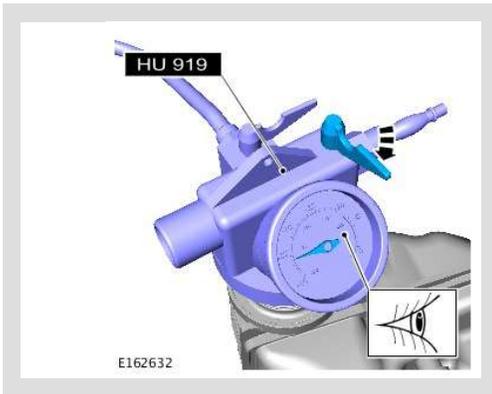
 NOTES:

- Make sure the coolant supply valve is in the closed position on the special tool.
- The coolant vacuum fill tool needs an air pressure of 6 to 8 bar (87 to 116 psi) to operate correctly.
- Small diameter or long airlines may restrict airflow to the coolant vacuum fill tool.



Open the air supply valve until -0.8 Bar (-12 psi) is shown on the gauge.

5.



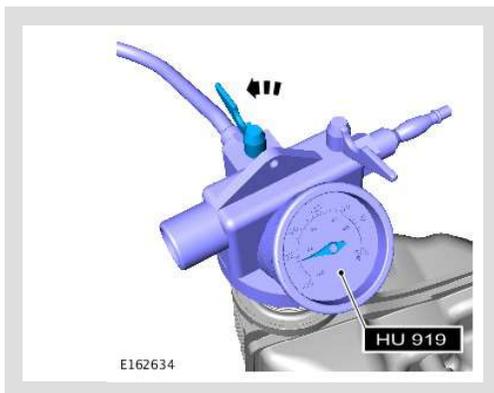
Close the air supply valve.

Allow 1 minute to check the vacuum is held.

6.

 NOTES:

- The coolant is to be reused.
- Close the coolant supply valve when the coolant expansion tank MAX mark is reached or coolant movement has stopped.



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

7. Remove the special tool.

8. Connect exhaust extraction hoses to the tail pipes.

9. Start and run the engine.

10. Install the coolant expansion tank cap.

11. Hold the engine speed at 2000 revolutions per minute (RPM) until warm air is expelled from the heater.

12. Switch the engine off and allow to cool.

13. Clean any spilt or excess coolant from the vehicle.

14.



WARNING:

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

Check and top-up the coolant if required.