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2020.0 DEFENDER (LE), 412-02

AUXILIARY CLIMATE CONTROL

FUEL FIRED BOOSTER HEATER (G2323743)

mcx30.com

REMOVAL AND INSTALLATION

PART(S)

STEP	PART NAME	QUALIFICATION	QUANTITY
Step 14	Fuel fired booster heater seal	All vehicles	1

REMOVAL

⚠ CAUTION:

Before disconnecting any components, make sure the area is clean and free from foreign material. When disconnected all openings must be sealed.

△ NOTE:

- 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.

The following step(s) applies to:

All vehicles

1. Disconnect the startup battery ground cable.

Refer to: [Startup Battery Disconnect and Connect](#) (414-00 Battery and Charging System - General Information, General Procedures).

2. Raise and support the vehicle on a suitable 2-post lift.

Refer to: [Jacking and Lifting](#) (100-02 Jacking and Lifting, Description and Operation).

3. Drain the cooling system.

Refer to: [Cooling System Partial Draining and Vacuum Filling](#) (303-03C Engine Cooling - INGENIUM I6 3.0 L Petrol, General Procedures).

4. Install the secondary bulkhead center panel.

Refer to: Secondary Bulkhead Center Panel (501-02, Removal and Installation).

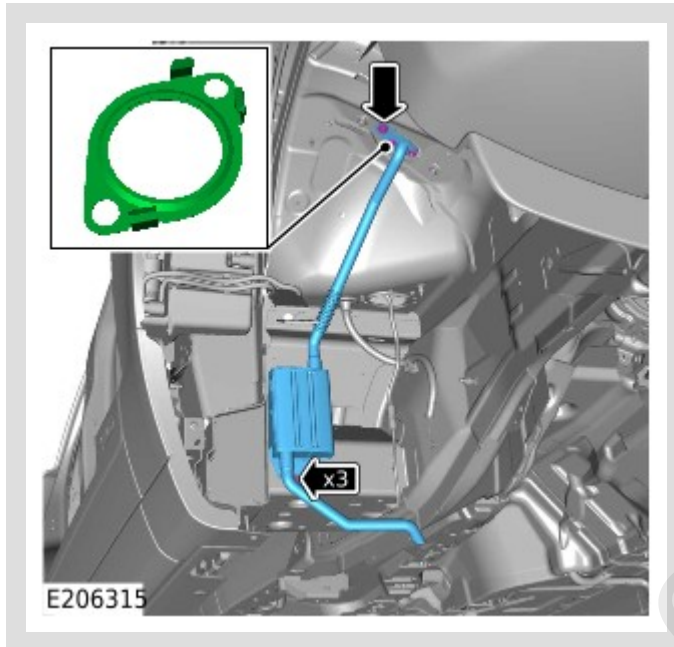
5. Remove the secondary bulkhead right panel.

Refer to: [Secondary Bulkhead Right Panel](#) (501-02 Front End Body Panels, Removal and Installation).

6. Remove the front right wheel arch liner.

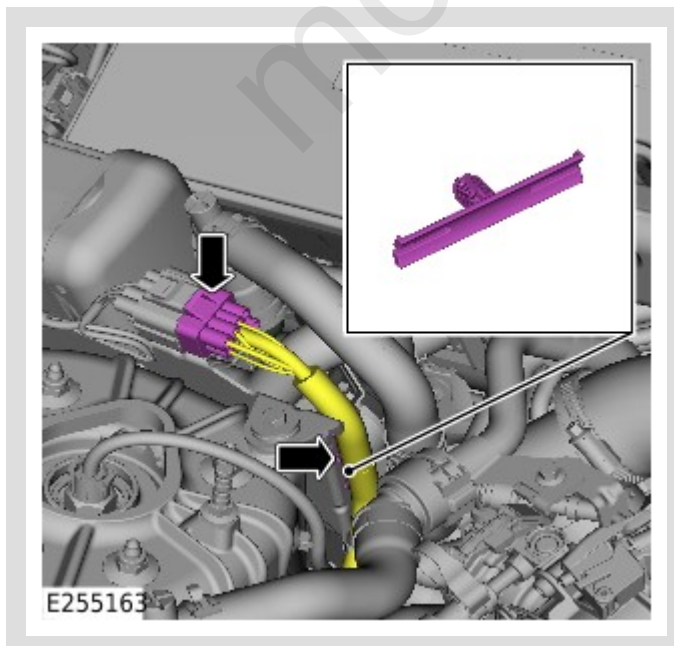
Refer to: [Front Wheel Arch Liner](#) (501-02 Front End Body Panels, Removal and Installation).

7.



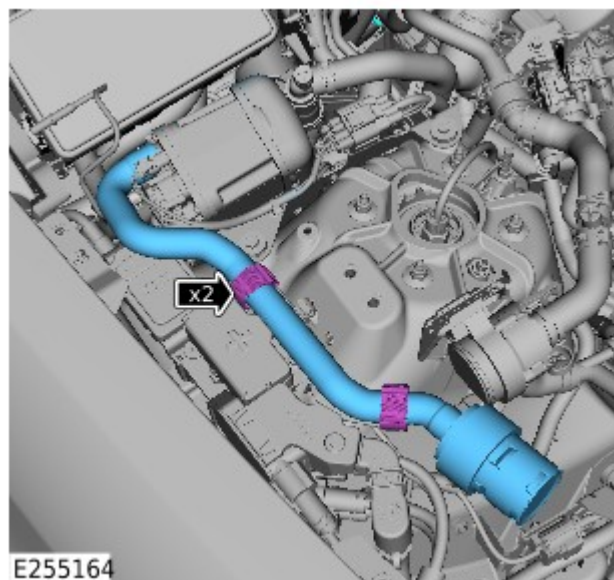
- Remove the 3 nuts and 1 bolt.
- Remove the Fuel Fired Booster Heater (FFBH) exhaust assembly.
- Remove and discard the gasket.

8.



- Disconnect the electrical connector.
- Release the wiring harness clip.

9.

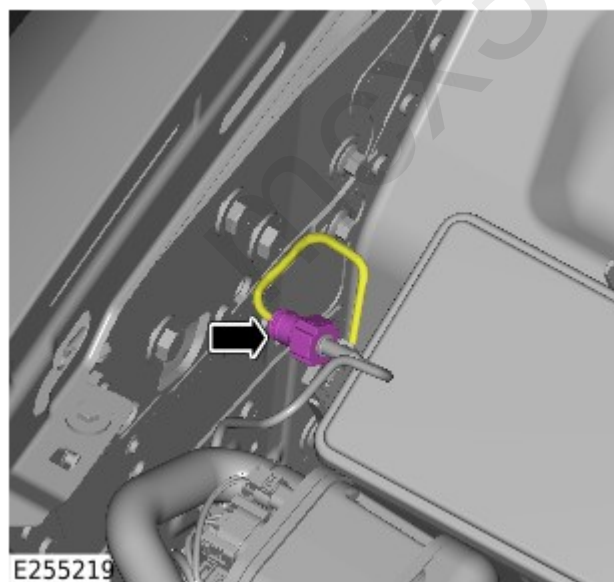


- Release the FFBH air intake hose from the 2 clips.
- Remove the air intake hose.

10.

⚠ CAUTION:

Be prepared to collect escaping fuel.



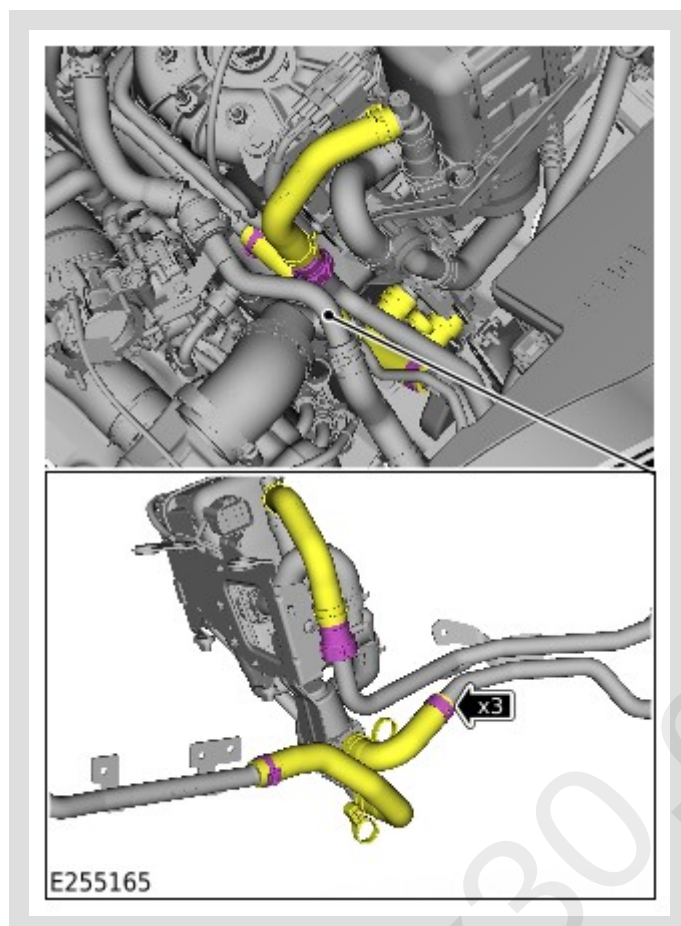
Disconnect the FFBH fuel line.

The following step(s) applies to:

Vehicles with 3.0L petrol engine

CAUTION:

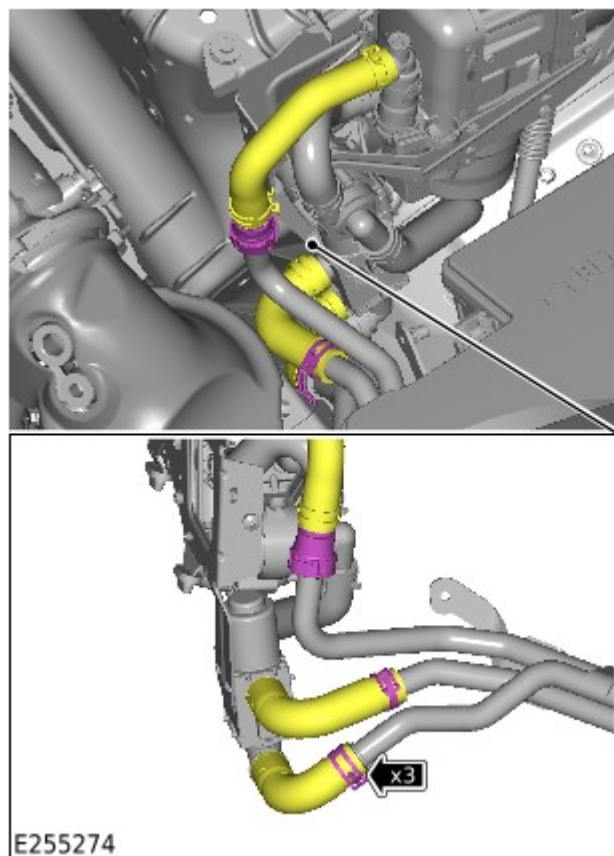
Be prepared to collect escaping coolant.



Disconnect the 3 coolant hoses.

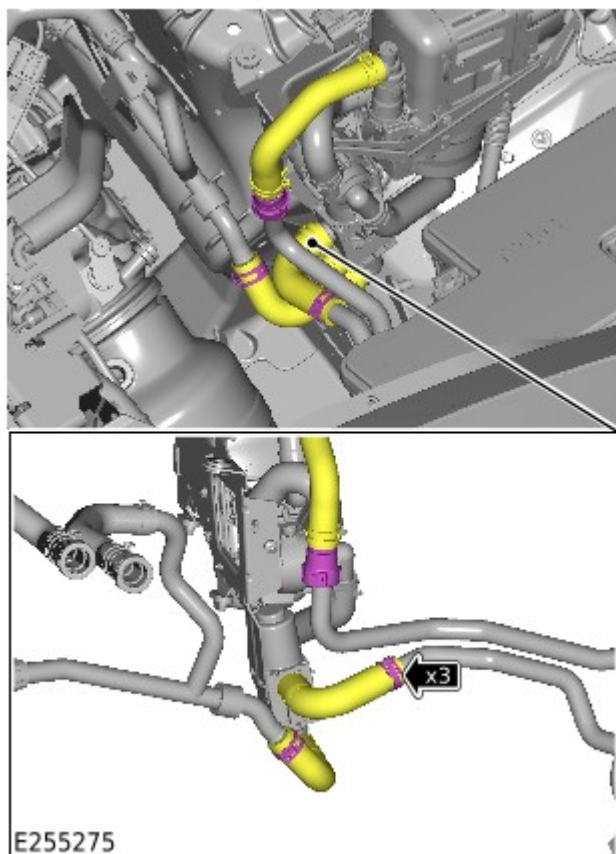
The following step(s) applies to:

Vehicles with 2.0L diesel engine



Disconnect the 3 coolant hoses.

The following step(s) applies to:
Vehicles with 2.0L petrol engine

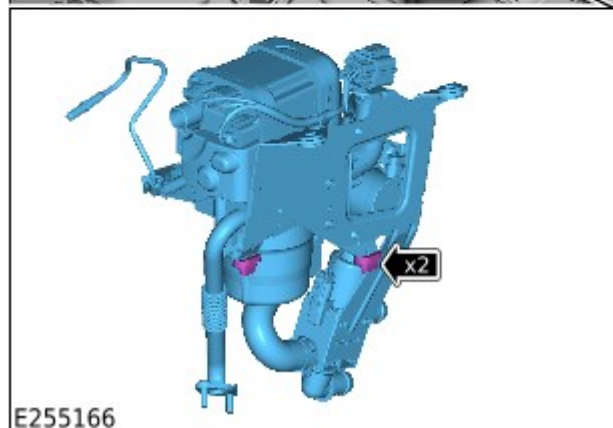
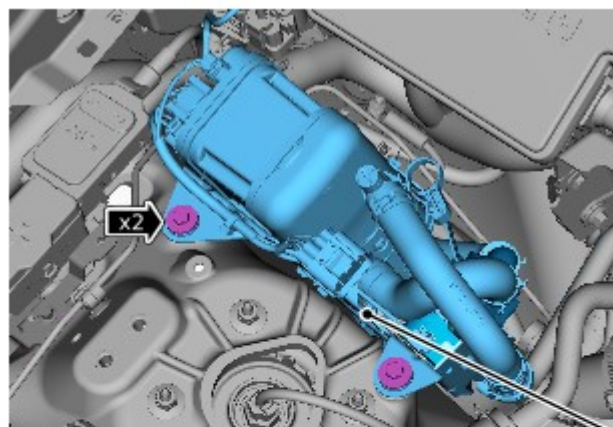


Disconnect the 3 coolant hoses.

The following step(s) applies to:

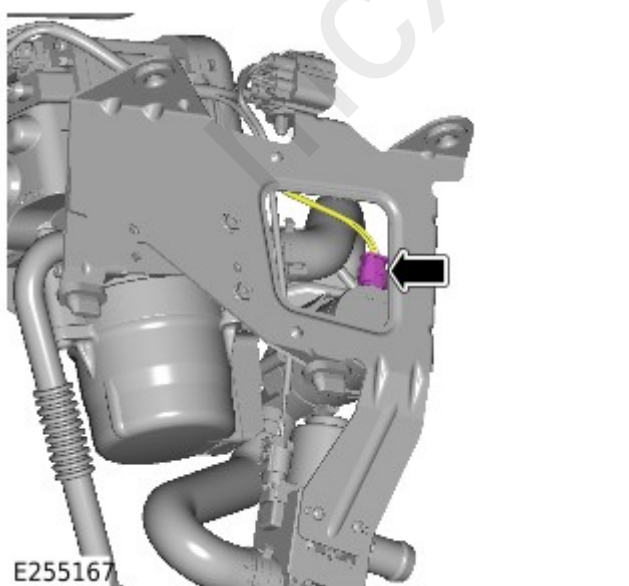
All vehicles

14.



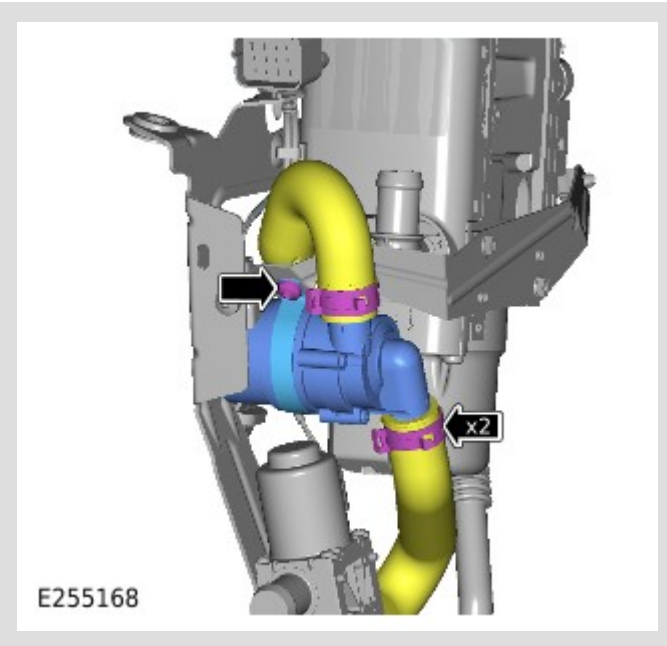
- Remove the 2 bolts.
- Remove the FFBH.

15.



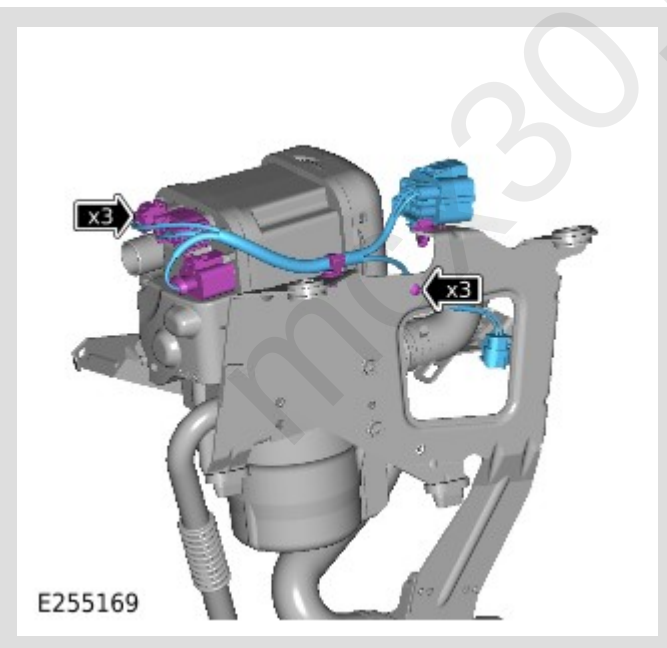
Disconnect the FFBH auxiliary coolant pump electrical connector.

16.



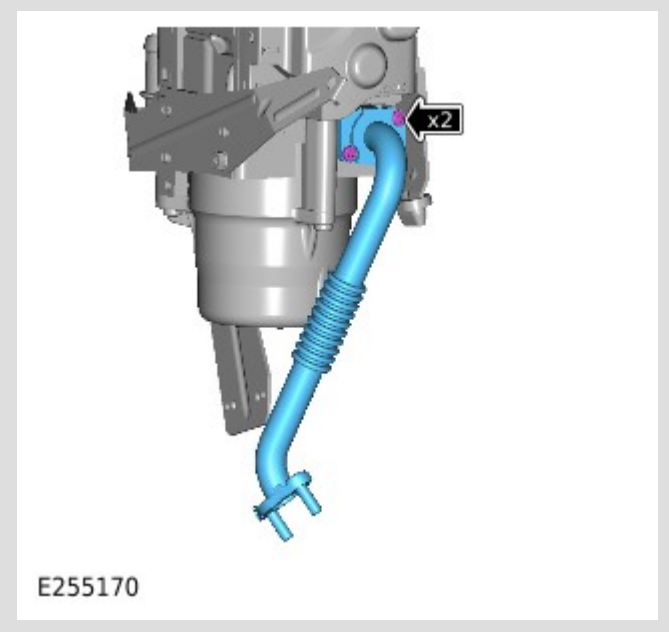
- Release the 2 coolant hoses.
- Remove the bolt.
- Remove the FFBH coolant pump.

17.



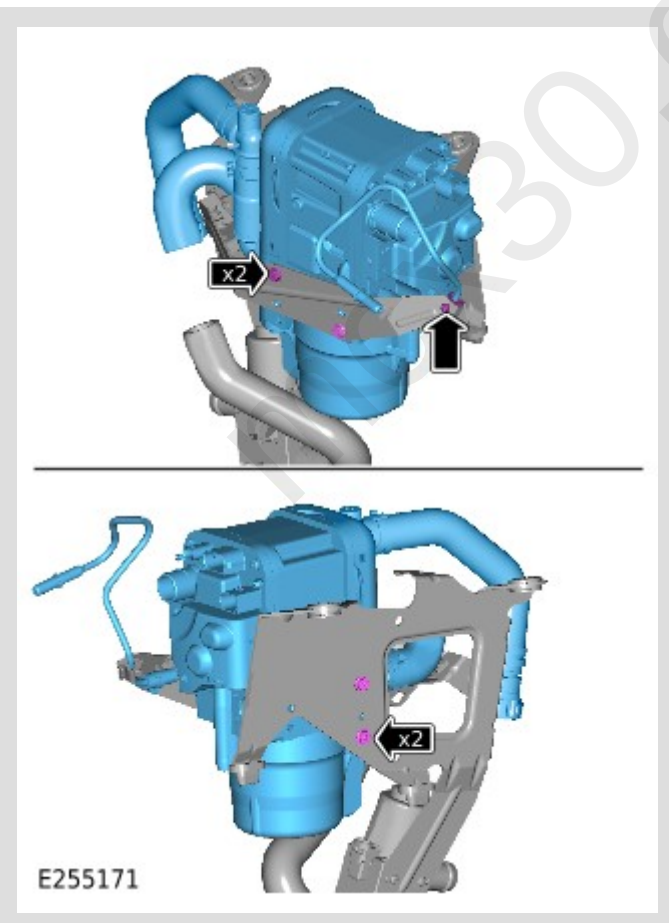
- Release the 3 wiring harness clips.
- Disconnect the 3 electrical connectors.
- Remove the wiring harness.

18.

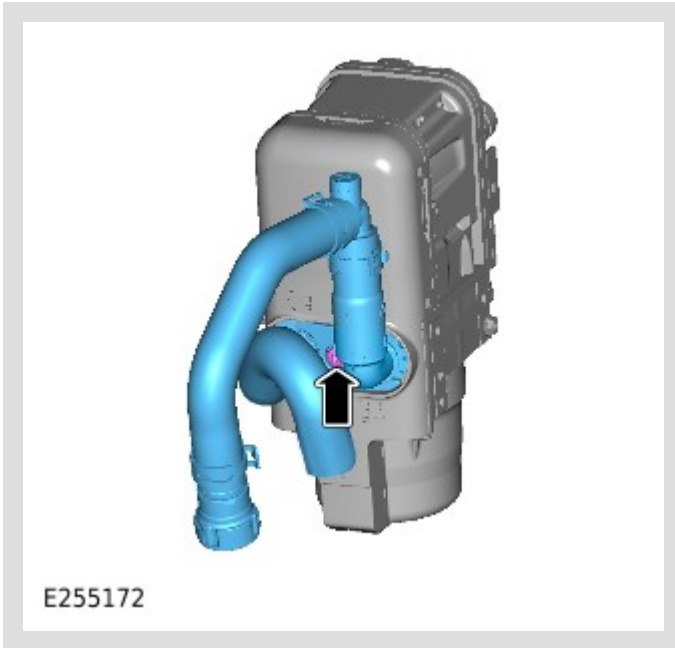


- Remove the 2 bolts.
- Remove the FFBH exhaust pipe.

19.



- Release the FFBH fuel line from the clip.
- Remove the 4 bolts.
- Remove the FFBH.



- Remove the screw.
- Remove the FFBH coolant feed and return hoses.

INSTALLATION

The following step(s) applies to:
All vehicles

1.

- Install the Fuel Fired Booster Heater (FFBH) coolant feed and return hoses.
- Install and tighten the screw.

2.

- Install the FFBH.
- Install and tighten the 4 bolts.
- Install the FFBH fuel line to the clip.

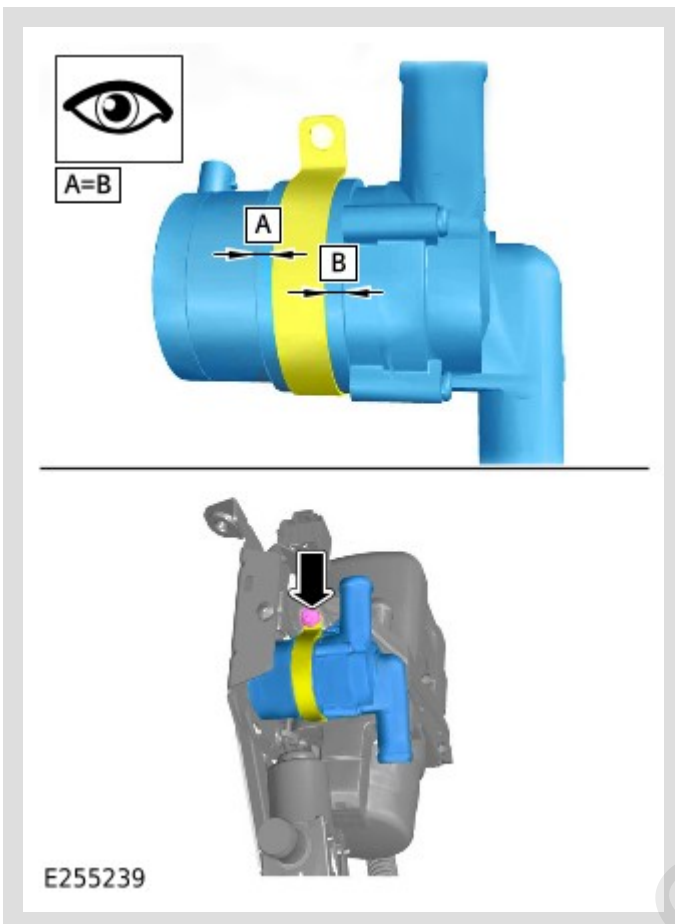
3.

- Install the FFBH exhaust pipe.
- Install and tighten the 2 bolts.

4.

- Install the wiring harness.
- Connect the 3 electrical connectors.
- Install the wiring harness at 3 clips.

5.



- Install the FFBH coolant pump.
- Make sure the metal strap bracket sits over the rubber isolator without touching the FFBH coolant pump.
- Install and tighten the bolt.
- Install the 2 coolant hoses.

6. Connect the FFBH auxiliary coolant pump electrical connector.

7.

ⓘ CAUTION:

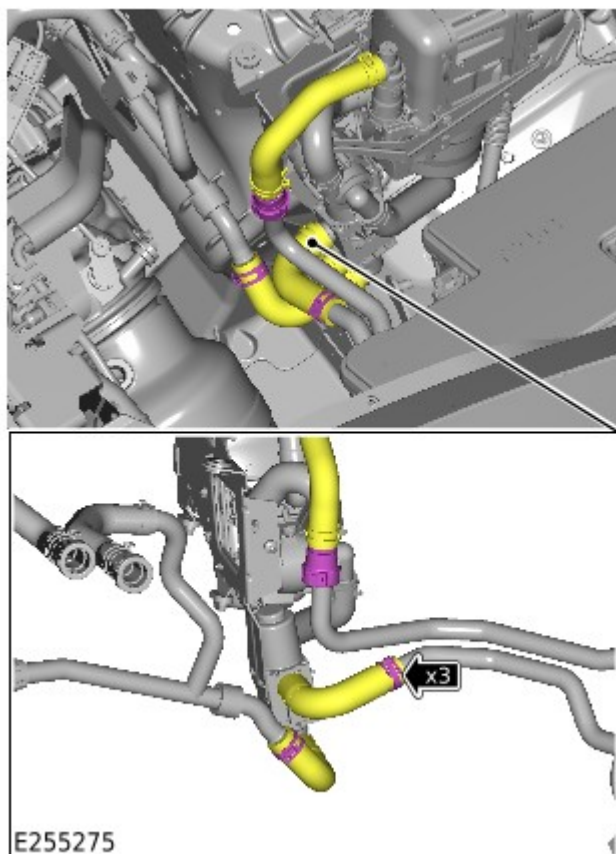
Make sure that the component is correctly located.

- Install the FFBH assembly.
- Install and tighten the 2 bolts.

Torque: 10Nm

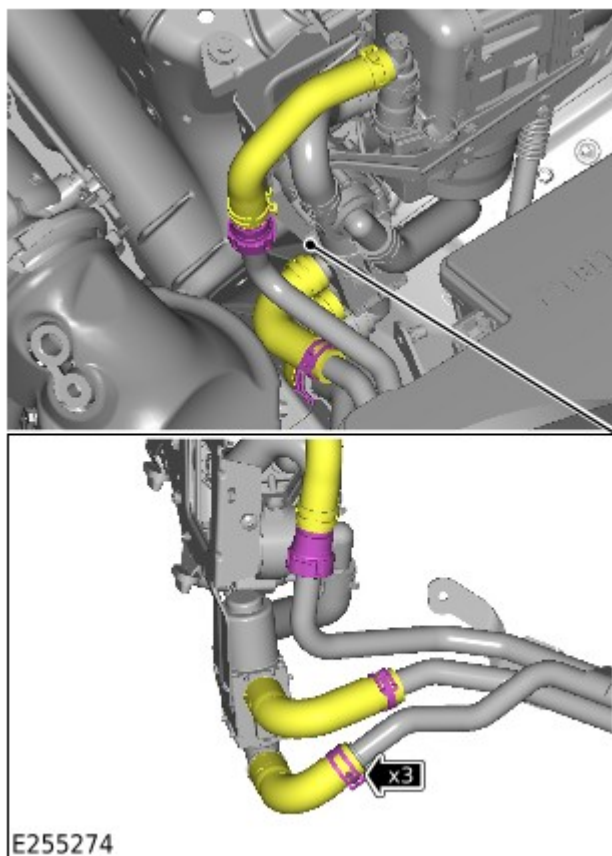
The following step(s) applies to:

Vehicles with 2.0L petrol engine



Connect the 3 coolant hoses.

The following step(s) applies to:
Vehicles with 2.0L diesel engine



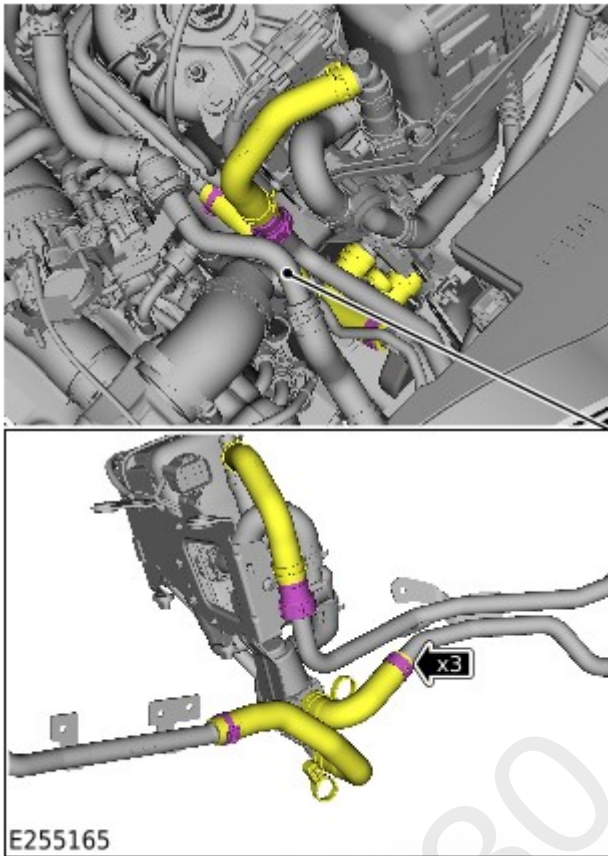
Connect the 3 coolant hoses.

The following step(s) applies to:
Vehicles with 3.0L petrol engine

10.

⚠ CAUTION:

Be prepared to collect escaping coolant.



Connect the 3 coolant hoses.

The following step(s) applies to:

All vehicles

11.

Connect the FFBH fuel line.

12.

- Install the air intake hose.
- Install the FFBH air intake hose to the 2 clips.

13.

- Disconnect the electrical connector.
- Install the wiring harness clip.

14.

- Install the fuel fired booster heater (FFBH) exhaust assembly.
- Install a new gasket.
Renew Part: [Fuel fired booster heater seal](#) Quantity: 1.
- Install and tighten the 3 nuts.
*Torque: **10Nm***
- Install and tighten the bolt.
*Torque: **10Nm***

15.

Install the front right wheel arch liner.

Refer to: [Front Wheel Arch Liner](#) (501-02 Front End Body Panels, Removal and Installation).

16.

Install the secondary bulkhead center panel.

Refer to: Secondary Bulkhead Center Panel (501-02, Removal and Installation).

17.

Install the secondary bulkhead right panel.

Refer to: [Secondary Bulkhead Right Panel](#) (501-02 Front End Body Panels, Removal and Installation).

18.

Fill the coolant system.

Refer to: [Cooling System Partial Draining and Vacuum Filling](#) (303-03C Engine Cooling - INGENIUM I6 3.0 L Petrol, General Procedures).

19.

Connect the startup battery ground cable.

Refer to: [Startup Battery Disconnect and Connect](#) (414-00 Battery and Charging System - General Information, General Procedures).