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2020.0 DEFENDER (LE), 303-04E

FUEL CHARGING AND CONTROLS - INGENIUM I6 3.0L PETROL

HIGH PRESSURE FUEL PUMP (G2300866)

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REMOVAL AND INSTALLATION

PART(S)

STEP	PART NAME	QUANTITY
Installation Step 1	Fuel pump O-ring seal	1
Installation Step 2	High pressure fuel pump retaining bolts	2

REMOVAL

WARNINGS:

- Wait for a minimum of 1 minute after the engine has stopped before carrying out any repair to the fuel injection system.
- Avoid flames, sparks or lighted substances.
- Place the vehicle in a well ventilated, quarantined area and arrange 'No Smoking/Petrol Fumes' signs about the vehicle.
- Be prepared to collect escaping fuel.

CAUTIONS:

- Before disconnecting any components, make sure the area is clean and free from foreign material. When disconnected all openings must be sealed.
- While installing seals / Gaskets, make sure all the mating faces are clean and free from foreign material.

NOTE:

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

1. Depressurise the fuel system.

Refer to: [Fuel System Pressure Release](#) (310-00 Fuel System - General Information, General Procedures).

2. Disconnect the startup battery ground cable.

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

3. Remove the evaporative emission canister purge valve.

Refer to: [Evaporative Emission Canister Purge Valve](#) (303-13B Evaporative Emissions - INGENIUM I6 3.0L Petrol, Removal and Installation).

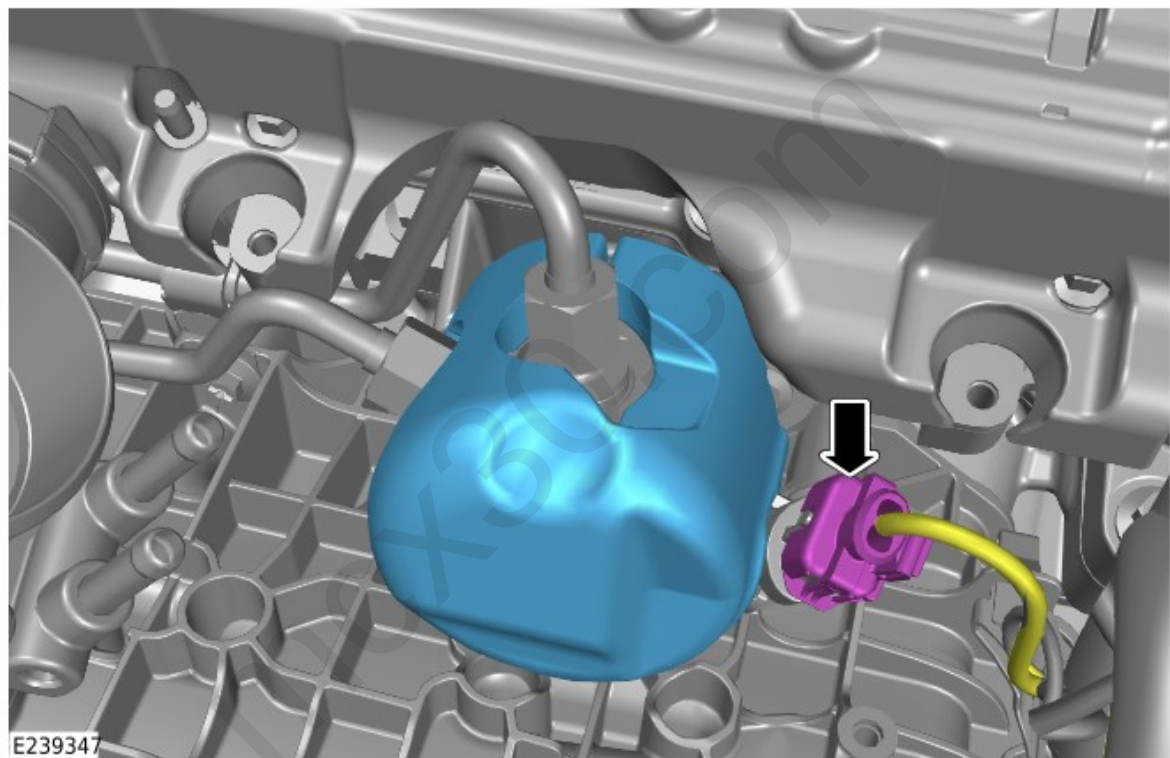
4. Position the charge air cooler into service position.

Refer to: [Charge Air Cooler Service Position](#) (303-12C Intake Air Distribution and Filtering - INGENIUM I6 3.0L Petrol, General Procedures).

5. Remove the throttle body.

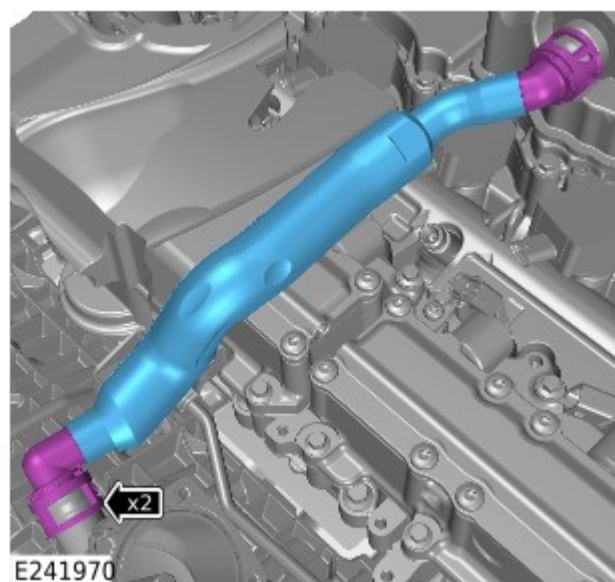
Refer to: [Throttle Body](#) (303-04E Fuel Charging and Controls - INGENIUM I6 3.0L Petrol, Removal and Installation).

- 6.



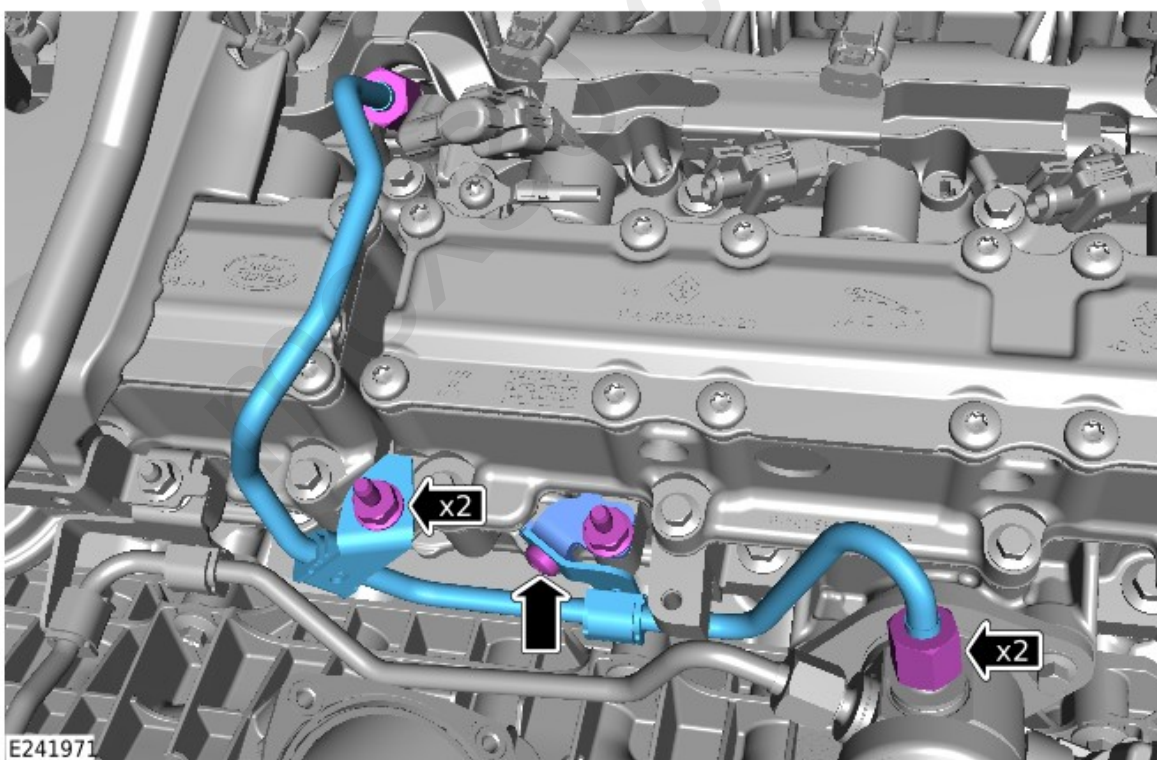
- Disconnect the electrical connector.
- Remove the Noise, Vibration and Harshness (NVH) material.

7.



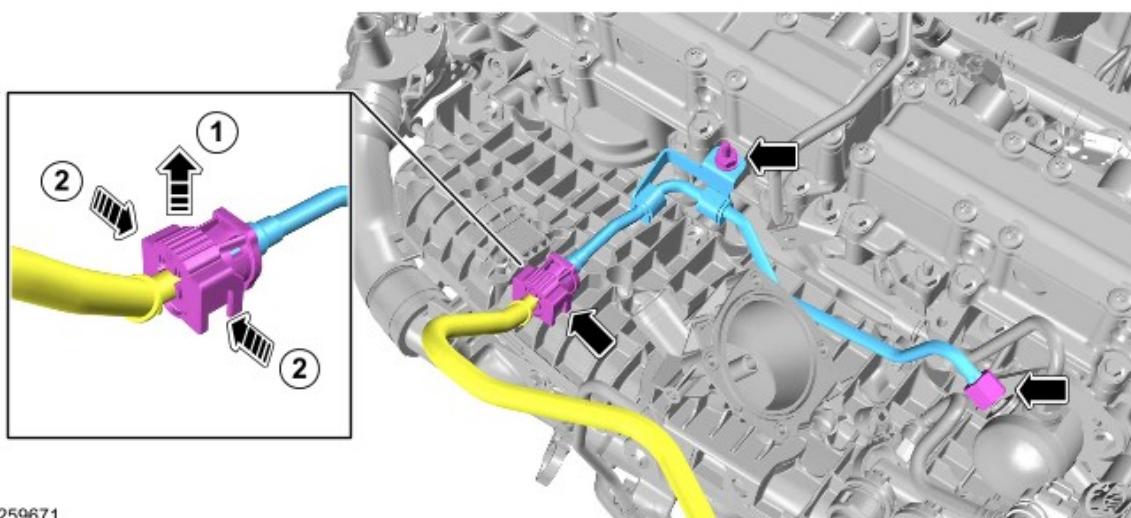
- Disconnect the breather pipe.
- Remove the breather pipe.

8.



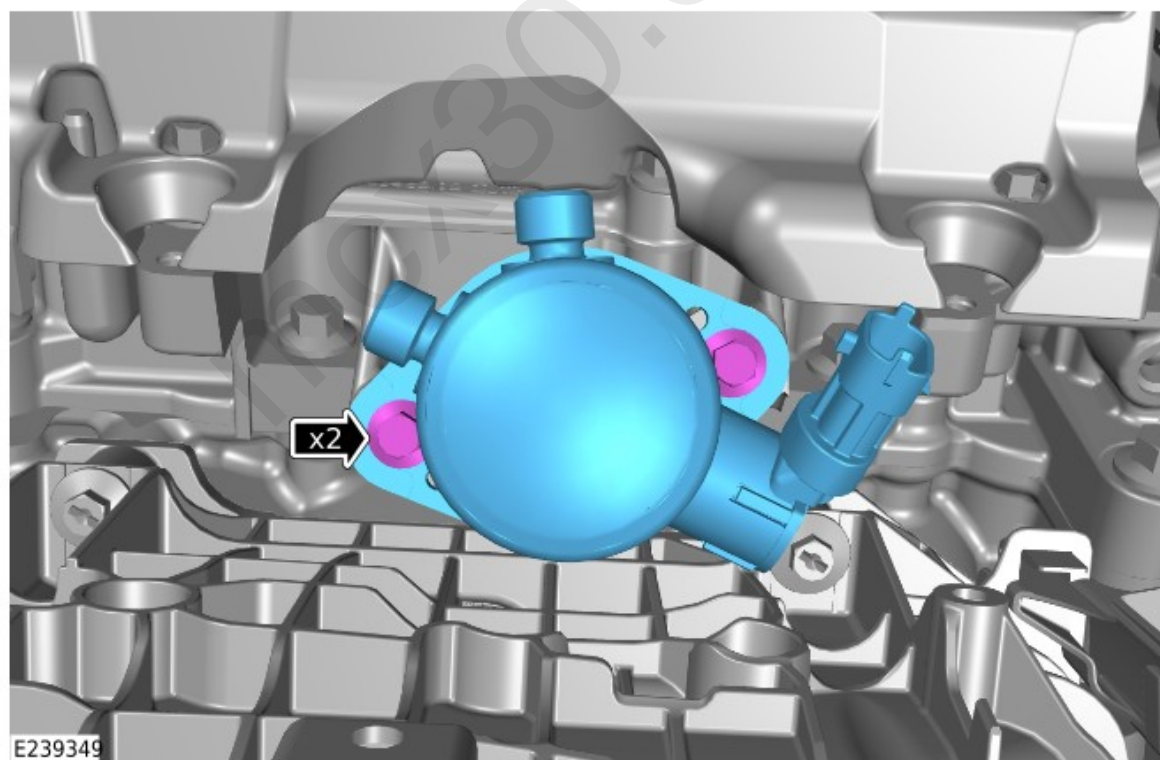
- Remove the 2 bolts.
- Disconnect the 2 fuel line unions.
- Remove the High Pressure (HP) fuel pump outlet pipe assembly.
- Loosen the M6 Torx™ bolt.

9.

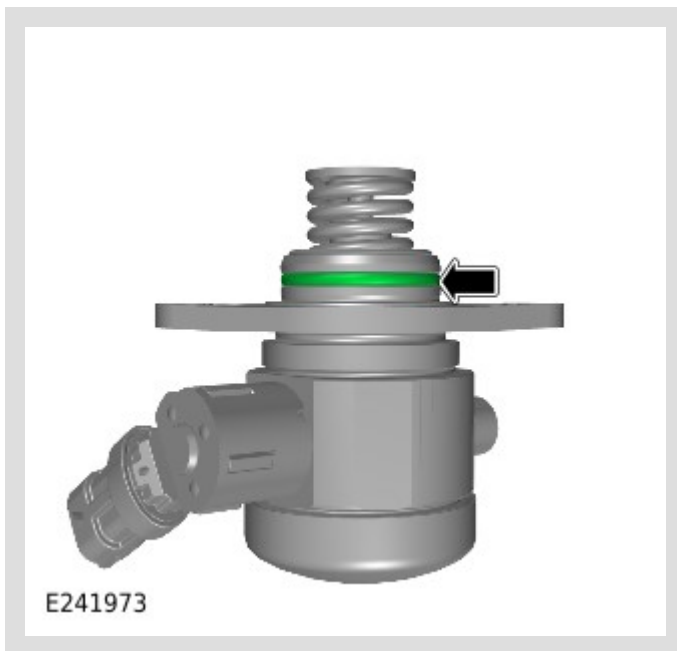


- Disconnect the fuel line union.
- Remove the stud.
- Disconnect the Low Pressure (LP) fuel line.
- Remove the LP fuel line.

10.



- Loosen the 2 bolts half turn at a time.
- Remove and discard the 2 bolts.
- Remove the HP fuel pump.



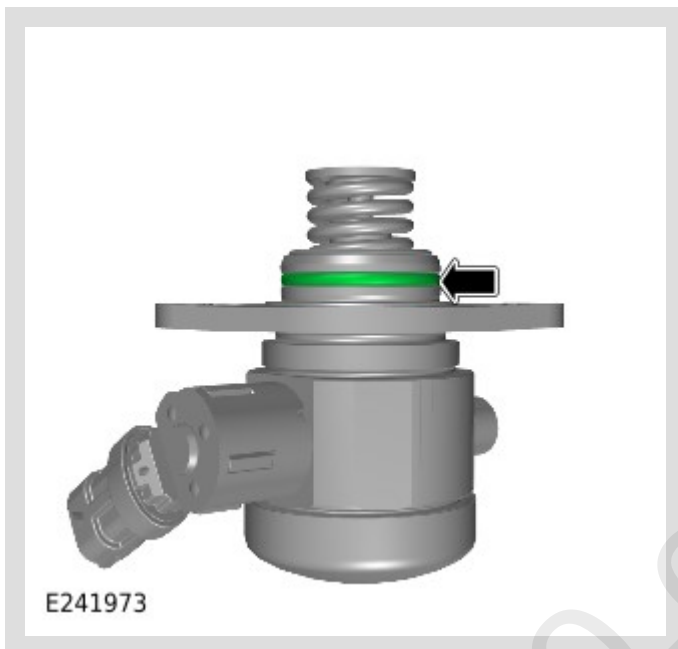
Remove and discard the O-ring seal.

INSTALLATION

1.

⚠ CAUTION:

Lubricate the O-ring seal with clean engine oil.



- Lubricate the O-ring seal with clean engine oil that meets with the engine oil specifications.
Refer to: [Specifications](#) (303-01C Engine - INGENIUM I6 3.0L Petrol, Specifications).
- Install a new O-ring seal.
Renew Part: [Fuel pump O-ring seal](#) Quantity: 1.

2.

⚠ NOTE:

Tighten each of the bolts a half turn at a time until the fuel pump is fully installed.

- Install the HP fuel pump.
- Install, but do not fully tighten the 2 bolts.
Renew Part: [High pressure fuel pump retaining bolts](#) Quantity: 2.
- Tighten each bolt half a turn at a time until the correct torque is achieved.
Torque: 14Nm

⚠ CAUTION:

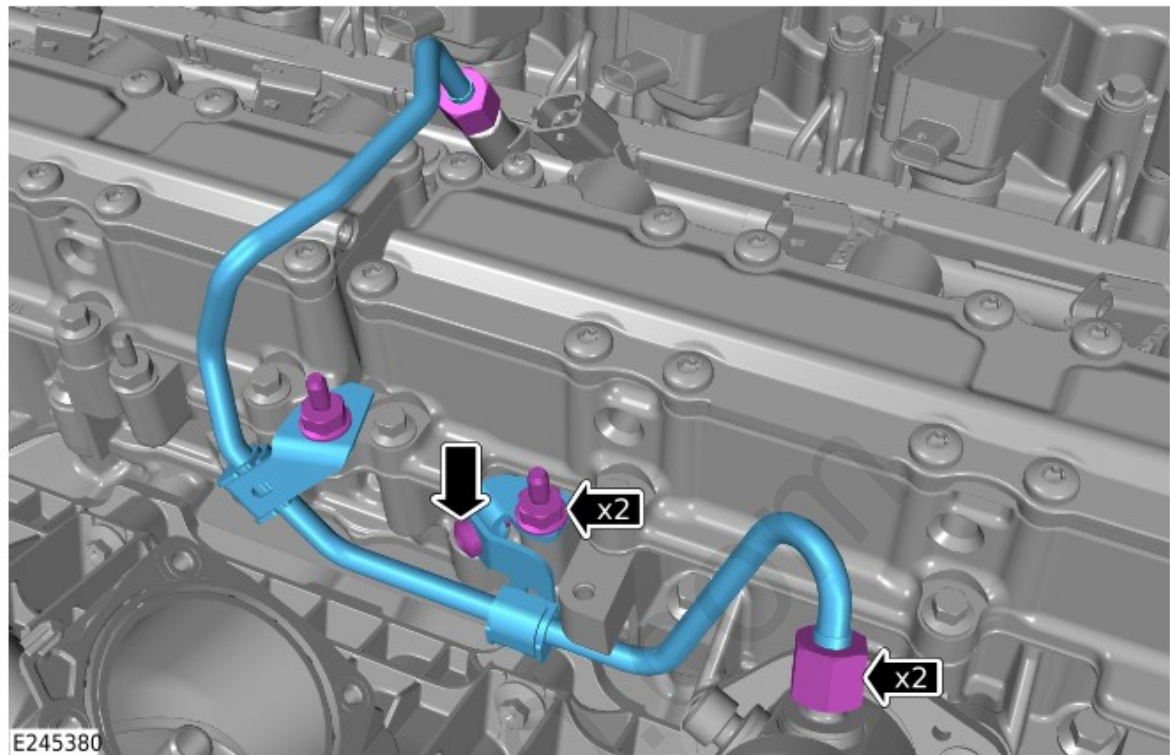
Fuel lines may only be reused 1 time. After final tightening, clean the fuel line and apply a paint mark to identify reuse. If the fuel line is already paint marked, a new fuel line must be installed.

- Install the LP fuel line and finger tighten the fuel line union until seated.
- Install and tighten the M6 stud.
Torque: 11.5Nm
- Tighten the fuel line union.
Torque: 20Nm
- Wait 30 seconds then perform a torque over-check of 20 ± 2 Nm to make sure no torque relaxation of the Pipe nuts has occurred.
- Connect the LP fuel line.

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⚠ CAUTION:

Fuel lines may only be reused one time. After final tightening, clean the fuel line and apply a paint mark to identify reuse. If the fuel line is already paint marked, a new fuel line must be installed.



- Install the HP fuel line.
- Finger tighten the 2 unions.
- Tighten the 2 unions.
Torque: 20Nm
- Install and tighten the 2 M6 Hex stud bolts.
Torque: 11.5Nm
- Fully loosen the 2 fuel line unions.
- Finger tighten the 2 unions.
- Tighten the 2 fuel line unions.
Torque: 20Nm
- Wait for 30 seconds and recheck the final torque.
- Install and tighten the M6 Torx bolt.
Torque: 11.5Nm

6.

- Connect the electrical connector.
- Install the NVH material.

7.

Install the throttle body.

Refer to: [Throttle Body](#) (303-04E Fuel Charging and Controls - INGENIUM I6 3.0L Petrol, Removal and Installation).

8.

Reposition the charge air cooler in the correct location.

Refer to: [Charge Air Cooler Service Position](#) (303-12C Intake Air Distribution and Filtering - INGENIUM I6 3.0L Petrol, General Procedures).

9.

Install the evaporative emission canister purge valve.

Refer to: [Evaporative Emission Canister Purge Valve](#) (303-13B Evaporative Emissions - INGENIUM I6 3.0L Petrol, Removal and Installation).

10.

Connect the startup battery ground cable.

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

11.

Bleed the fuel system.

Refer to: [High-Pressure Fuel System Bleeding](#) (310-00 Fuel System - General Information, General Procedures).