

Fuel Tank and Lines - I6 3.2L Petrol -**Capacities**

Item	Capacity (liters/gallons)
Fuel tank	70.0/15.4

General Specification

Item	Specification
System type	ERFS Electronic Returnless Fuel System
Fuel delivery module	PAG Module
Fuel pump:	
Maximum output @ 11.5 volts min	110l/hr max
Operating pressure	Variable
Maximum operating pressure	3.8 Bar max
Fuel tank sender units	Magnetic Passive Position Sensor (MAPPS)

Torque Specifications

Description	Nm	lb-ft
Fuel tank bolts*	25	18
Fuel tank filler pipe lower bracket	10	7
Fuel tank filler pipe upper bracket	10	7

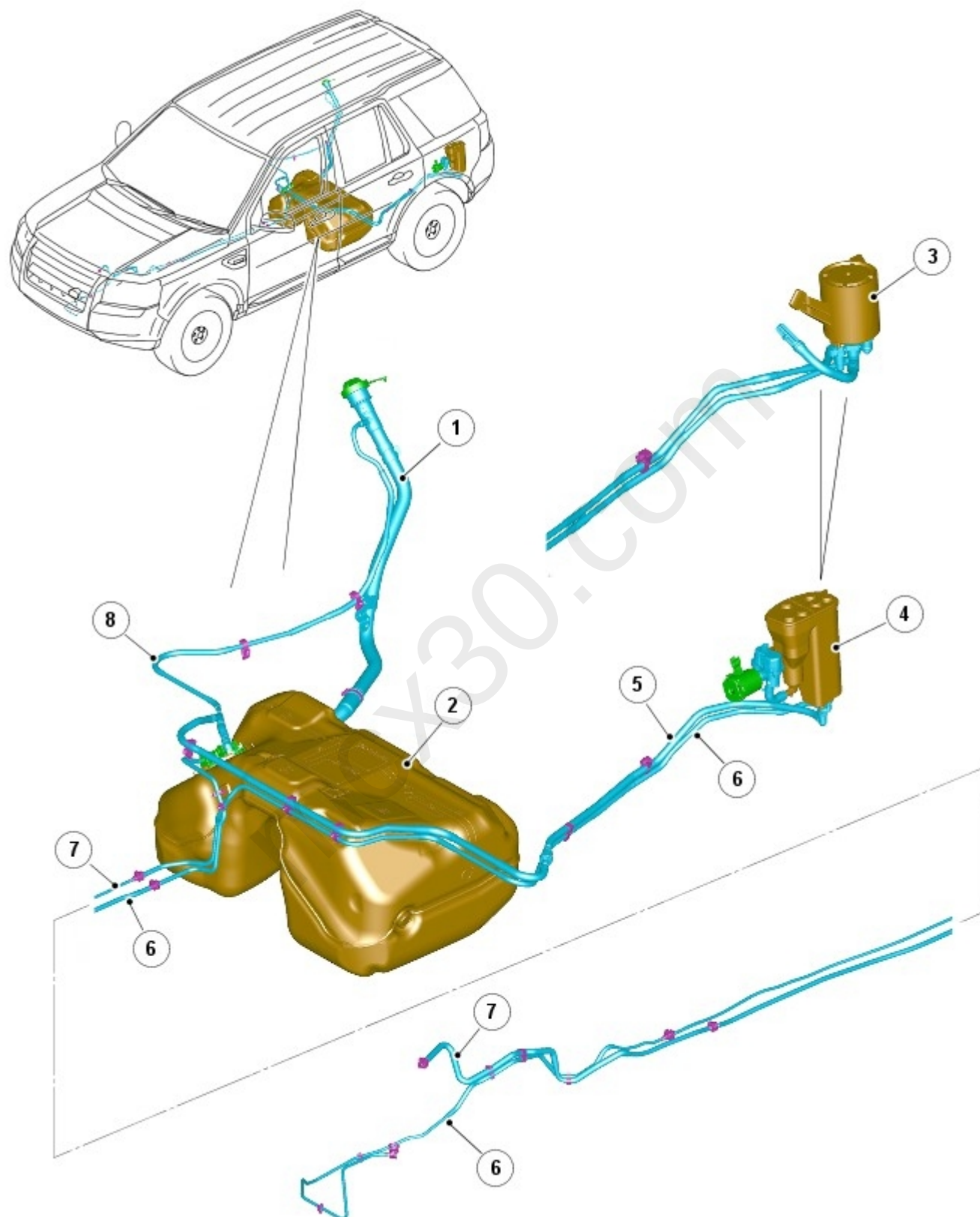
*** New nuts/bolts must be fitted**

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Fuel Tank and Lines - I6 3.2L Petrol - Fuel Tank and Lines

Description and Operation

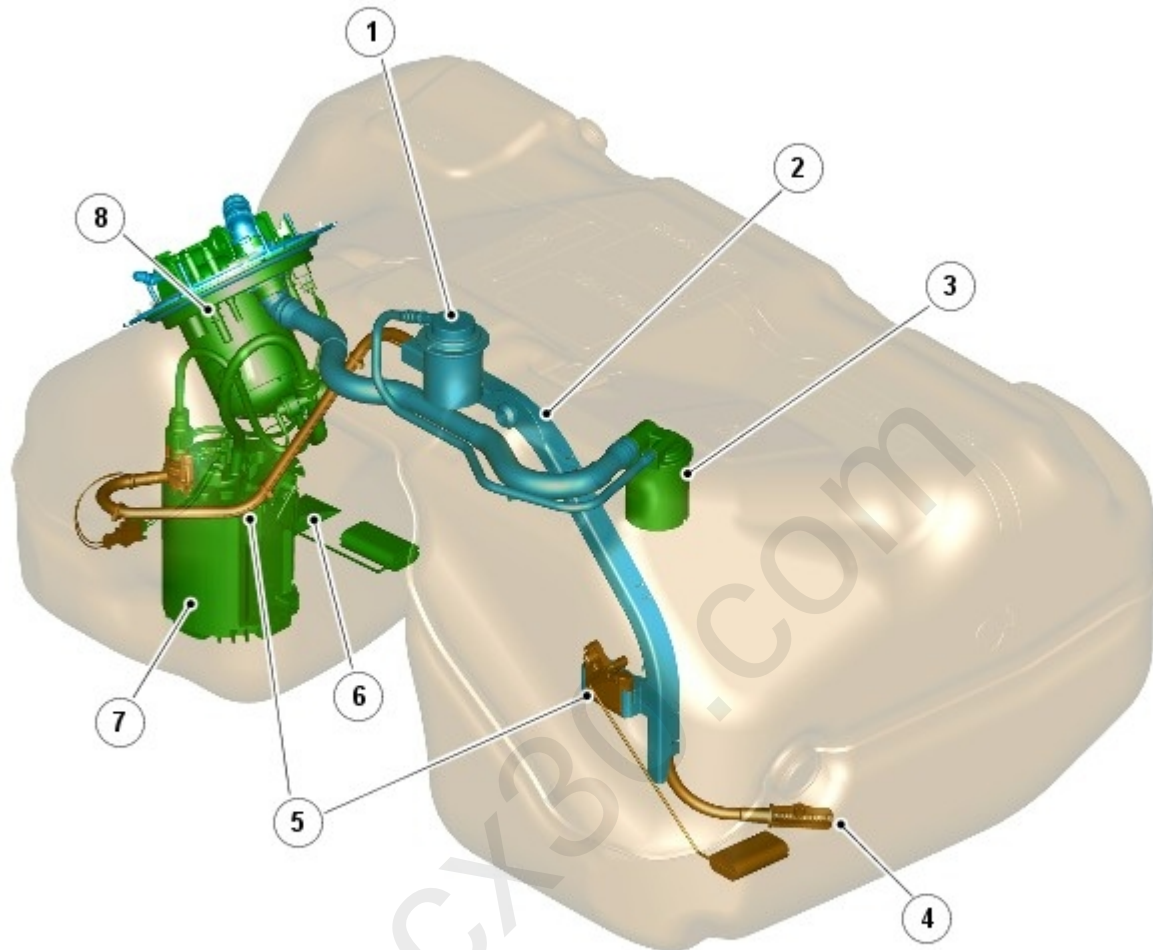
COMPONENT LOCATION



E79503

Item	Part Number	Description
1	-	Filler neck
2	-	Fuel tank
3	-	Evaporative emission canister - Rest of World (ROW) derivative
4	-	Evaporative emission canister - North American Specification (NAS) derivative

5	-	Vapor pipe to evaporative emission canister
6	-	Vapor purge pipe to intake manifold
7	-	Fuel delivery pipe to engine
8	-	Breather pipe



E79504

Item	Part Number	Description
1	-	Roll Over Valve (ROV)
2	-	Crossover tube assembly
3	-	Fill limit vent valve
4	-	Coarse fuel filter
5	-	Fuel gage sender units
6	-	Primary fuel filter
7	-	Fuel delivery module
8	-	Fuel filter element

OVERVIEW

The 70 liter saddle-type fuel tank is located below the rear seat and astride the driveshaft.

The fuel tank is manufactured using the latest six-layer laminated blow-molding technology providing both high mechanical strength and complete emissions integrity. The fuel filler neck is produced from aluminum to balance high-strength with low-weight. In the event of an accident damaging the filler neck, an inlet check valve in the tank's filler stub prevents fuel escaping.

A single pump supplies the engine's fuel demands while also supplying the fuel to power the venturi. The rapid flow of fuel through the venturi nozzle creates a depression which draws fuel back across the saddle into the pump side of the tank.

The fuel gage senders are sealed units which use magnetic actuation in place of electrical contacts; this prevents the

problem of chemical contamination of electrical components.

To meet on-board refueling vapor recovery (ORVR) requirements, the fuel tank and associated components are designed to minimize fuel vapor loss during refueling. This is achieved by preventing fuel vapor from the fuel tank venting directly to the atmosphere. Instead fuel vapor is directed into the evaporative emission (EVAP) canister where it is stored before being purged at intervals to the engine's intake manifold.

For additional information, refer to: [Evaporative Emissions](#) (303-13 Evaporative Emissions, Description and Operation).

Roll Over Valve (ROV)

The ROV is connected via pipes to a liquid vapour separator. The separator is connected via a pipe to the tank breather outlet in the pump module flange. The ROV contains a non-return valve, which closes in the event of the vehicle overturning, preventing liquid fuel escaping from the tank via the breather pipe.

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Fuel Tank and Lines - I6 3.2L Petrol - Fuel Tank and Lines

Diagnosis and Testing

Principles of Operation

For a detailed description of the fuel tank and lines systems, refer to the relevant Description and Operation section in the workshop manual.

REFER to: [Fuel Tank and Lines](#) (310-01A Fuel Tank and Lines - I6 3.2L Petrol, Description and Operation).

Inspection and Verification



CAUTION: Diagnosis by substitution from a donor vehicle is **NOT** acceptable. Substitution of control modules does not guarantee confirmation of a fault, and may also cause additional faults in the vehicle being tested and/or the donor vehicle.

• **NOTE:** For diagnostic purposes the cylinders are divided into two banks: Bank 1 - Cylinder numbers 1, 2 and 3. Bank 2 - Cylinders 4, 5 and 6

1. **1.** Verify the customer concern.
2. **2.** Visually inspect for obvious signs of mechanical or electrical damage.

Visual Inspection

Mechanical	Electrical
● Fuel leaks ● Damaged fuel lines ● Damaged push connect fittings ● Fuel level ● Fuel contamination/grade/quality ● Damaged fuel tank filler pipe cap ● Damaged fuel tank filler pipe	● Fuses ● Loose or corroded electrical connectors ● Harnesses ● Fuel Pump Driver Module (FPDM) ● Central Junction Box (CJB) ● Fuel pump relay ● Engine Control Module (ECM)

3. **3.** If an obvious cause for an observed or reported concern is found, correct the cause (if possible) before proceeding to the next step.
4. **4.** If the cause is not visually evident, verify the symptom and refer to the Symptom Chart, alternatively, check for Diagnostic Trouble Codes (DTCs) and refer to the DTC Index.

Symptom Chart

Symptom	Possible Cause	Action
Engine cranks, but does not fire	● Engine breather system disconnected/restricted ● Ignition system ● Fuel system ● Electronic engine controls	● Ensure the engine breather system is free from restriction and is correctly installed ● For ignition system tests. REFER to: Engine Ignition (303-07A Engine Ignition, Diagnosis and Testing). ● For fuel system tests. Read DTCs and refer to DTC Index in this section ● For electronic engine control tests. REFER to: Electronic Engine Controls (303-14A Electronic Engine Controls - I6 3.2L Petrol, Diagnosis and Testing).
Engine cranks and fires, but will not start	● Evaporative emissions purge valve ● Fuel pump ● Spark plugs ● Ignition coil failure(s)	● For purge valve tests. REFER to: Evaporative Emissions (303-13 Evaporative Emissions, Diagnosis and Testing). ● For fuel pump tests. Check for DTCs and refer to DTC Index in this section ● For ignition system tests. REFER to: Engine Ignition (303-07A Engine Ignition, Diagnosis and Testing).
Difficult cold start	● Check engine coolant level/anti-freeze content ● Battery ● Electronic engine controls ● Fuel pump ● Evaporative emissions purge valve	● Check the engine coolant level and condition. REFER to: Specifications (303-03A Engine Cooling - I6 3.2L Petrol, Specifications). ● Ensure the battery is in a fully charged and serviceable condition ● For electronic engine control tests. REFER to: Electronic Engine Controls (303-14A Electronic Engine Controls - I6 3.2L Petrol, Diagnosis and Testing). ● For fuel system tests. Read DTCs and refer to DTC Index in this section ● For purge valve tests. REFER to: Evaporative Emissions (303-13 Evaporative Emissions, Diagnosis and Testing).

Symptom	Possible Cause	Action
Difficult hot start	● Injector leak ● Electronic engine controls ● Evaporative emissions purge valve ● Fuel pump ● Ignition system ● Injector leak	● Carry out injector leak tests, install new injectors as necessary. REFER to: Fuel Injector (303-04A Fuel Charging and Controls - I6 3.2L Petrol, Removal and Installation). ● For electronic engine control tests. REFER to: Electronic Engine Controls (303-14A Electronic Engine Controls - I6 3.2L Petrol, Diagnosis and Testing). ● For purge valve tests. REFER to: Evaporative Emissions (303-13 Evaporative Emissions, Diagnosis and Testing). ● For fuel system tests. Read DTCs and refer to DTC Index in this section ● For ignition system tests. REFER to: Engine Ignition (303-07A Engine Ignition, Diagnosis and Testing).
Difficult to start after hot soak (vehicle standing, engine off, after engine has reached operating temperature)	● Electronic engine controls ● Evaporative emissions purge valve ● Fuel pump ● Ignition system	● Carry out injector leak tests, install new injectors as necessary. REFER to: Fuel Injector (303-04A Fuel Charging and Controls - I6 3.2L Petrol, Removal and Installation). ● For electronic engine control tests. REFER to: Electronic Engine Controls (303-14A Electronic Engine Controls - I6 3.2L Petrol, Diagnosis and Testing). ● For purge valve tests. REFER to: Evaporative Emissions (303-13 Evaporative Emissions, Diagnosis and Testing). ● For fuel system tests. Read DTCs and refer to DTC Index in this section ● For ignition system tests. REFER to: Engine Ignition (303-07A Engine Ignition, Diagnosis and Testing).
Engine stalls soon after start	● Breather system disconnected/restricted ● ECM relay ● Electronic engine controls ● Ignition system ● Air intake system restricted ● Air leakage ● Fuel lines	● Ensure the engine breather system is free from restriction and is correctly installed ● For ECM relay and electronic engine controls tests. REFER to: Electronic Engine Controls (303-14A Electronic Engine Controls - I6 3.2L Petrol, Diagnosis and Testing). ● For ignition system tests. REFER to: Engine Ignition (303-07A Engine Ignition, Diagnosis and Testing). ● Check for blockage in air cleaner element and air intake system ● Check for leakage in air intake system ● For fuel line tests. GO to Pinpoint Test A.
Engine hesitates/poor acceleration	● Fuel pressure, fuel pump, fuel lines ● Injector leak ● Air leakage ● Electronic engine controls ● Ignition system ● Transmission malfunction ● Restricted pedal travel (carpet, etc)	● For fuel pressure tests. GO to Pinpoint Test B. For fuel line tests. GO to Pinpoint Test A. For fuel pump tests, check DTCs and refer to DTC Index in this section ● Carry out fuel injector leak tests, install new injectors as necessary. REFER to: Fuel Injector (303-04A Fuel Charging and Controls - I6 3.2L Petrol, Removal and Installation). ● Check for leakage from air intake system ● For electronic engine control tests. REFER to: Electronic Engine Controls (303-14A Electronic Engine Controls - I6 3.2L Petrol, Diagnosis and Testing). ● For ignition system tests. REFER to: Engine Ignition (303-07A Engine Ignition, Diagnosis and Testing). ● For transmission system tests. REFER to: Diagnostics (307-01 Automatic Transmission/Transaxle, Diagnosis and Testing). ● Ensure accelerator pedal is free from restriction
Engine backfires	● Fuel pump, fuel lines ● Air leakage ● Electronic engine controls ● Ignition system ● Sticking variable camshaft timing (VCT) hub	● For fuel pump tests. Read DTCs and refer to DTC Index in this section. For fuel line tests. GO to Pinpoint Test A. ● Check for leakage from air intake system ● For electronic engine control tests. REFER to: Electronic Engine Controls (303-14A Electronic Engine Controls - I6 3.2L Petrol, Diagnosis and Testing). ● For ignition system tests. REFER to: Engine Ignition (303-07A Engine Ignition, Diagnosis and Testing).

Symptom	Possible Cause	Action
		Ignition, Diagnosis and Testing). ● For VCT system tests. REFER to: Electronic Engine Controls (303-14A Electronic Engine Controls - I6 3.2L Petrol, Diagnosis and Testing).
Engine surges	● Fuel pump, fuel lines ● Electronic engine controls ● Ignition system	● For fuel pump tests, read DTCs and refer to DTC Index in this section. For fuel line tests. GO to Pinpoint Test A . ● For electronic engine control tests. REFER to: Electronic Engine Controls (303-14A Electronic Engine Controls - I6 3.2L Petrol, Diagnosis and Testing). ● For ignition system tests. REFER to: Engine Ignition (303-07A Engine Ignition, Diagnosis and Testing).
Engine detonates/knocks	● Electronic engine controls ● Fuel pump, fuel lines, fuel quality ● Air leakage ● Sticking VCT hub	● For electronic engine control tests. REFER to: Electronic Engine Controls (303-14A Electronic Engine Controls - I6 3.2L Petrol, Diagnosis and Testing). ● For fuel pump tests, read DTCs and refer to DTC Index in this section. For fuel line tests. GO to Pinpoint Test A . ● Check for leakage from air intake system ● For VCT system tests. REFER to: Electronic Engine Controls (303-14A Electronic Engine Controls - I6 3.2L Petrol, Diagnosis and Testing).

DTC Index

- NOTE: If a module or component is suspect, and the vehicle remains under the Manufacturers warranty, refer to the Warranty Policy and Procedure manual (section B1.2), or determine if any prior approval programme is in operation, prior to the installation of a new module/component.
- NOTE: Generic scan tools may not read the codes listed, or may read only five digit codes. Match the five digits from the scan tool to the first five digits of the seven digit code listed to identify the fault (the last two digits give extra information read by the manufacturer-approved diagnostic system).
- NOTE: When performing electrical voltage or resistance tests, always use a digital multimeter (DMM) accurate to three decimal places, and with an up-to-date calibration certificate. When testing resistance, always take the resistance of the DMM leads into account.
- NOTE: Check and rectify basic faults before beginning diagnostic routines involving pinpoint tests.
- NOTE: If DTCs are recorded and, after performing the pinpoint tests, a fault is not present, an intermittent concern may be the cause. Always check for loose connections and corroded terminals.

For a complete list of all diagnostic trouble codes that could be logged on this vehicle, please refer to section 100-00. REFER to:

[Diagnostic Trouble Code \(DTC\) Index - I6 3.2L Petrol, DTC: Engine Control Module \(ECM\)](#) (100-00 General Information, Description and Operation),
[Diagnostic Trouble Code \(DTC\) Index - I6 3.2L Petrol, DTC: Engine Control Module \(ECM\) - From 10MY](#) (100-00, Description and Operation).

PINPOINT TEST A : CHECK THE FUEL LINES	
TEST CONDITIONS	DETAILS/RESULTS/ACTIONS
A1: CHECK THE FUEL LINES FOR RESTRICTIONS	
	 WARNING: This procedure involves fuel handling. Be prepared for fuel spillage at all times and always observe fuel handling precautions. Failure to follow these instructions may result in personal injury.
	1 Detach the fuel line from the fuel rail and from the fuel pump module. 2 Using an air line gently blow through the line checking for blockages or restrictions.
	Is a blockage or restriction evident? Yes CLEAR/REPAIR the blocked or restricted fuel line and test the system for normal operation. No GO to A2.
A2: CHECK THE FUEL TANK LINES FOR RESTRICTIONS	
	1 Remove the fuel pump module locking ring. REFER to: Fuel Pump and Sender Unit (310-01A Fuel Tank and Lines - I6 3.2L Petrol, Removal and Installation). 2 Detach the fuel lines from the fuel pump module. 3 Using an air line gently blow through the tank lines checking for blockages or restrictions.

	Is a blockage or restriction evident? Yes CLEAR/REPAIR the blocked or restricted fuel line and test the system for normal operation. No CHECK for DTCs and symptoms indicating another cause for the problem. REFER to: Electronic Engine Controls (303-14A Electronic Engine Controls - I6 3.2L Petrol, Diagnosis and Testing).
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PINPOINT TEST B : CHECK THE FUEL SYSTEM PRESSURE

TEST CONDITIONS	DETAILS/RESULTS/ACTIONS
B1: CHECK THE PUMP ACTIVITY	
	1 Remove the rear seat cushion. REFER to: Rear Seat Cushion (501-10 Seating, Removal and Installation). 2 Set ignition status to ON, engine OFF. 3 Listen for pump noise.
	Can the fuel pump be heard running? Yes GO to B2. No CHECK for DTCs. REFER to: Electronic Engine Controls (303-14A Electronic Engine Controls - I6 3.2L Petrol, Diagnosis and Testing).
B2: CHECK THE FUEL SYSTEM PRESSURE	
	 WARNING: This procedure involves fuel handling. Be prepared for fuel spillage at all times and always observe fuel handling precautions. Failure to follow these instructions may result in personal injury. 1 Make sure the vehicle is in Park and apply the parking brake. 2 Set ignition status to OFF • NOTE: Place suitable absorbent material around the Schraeder valve to absorb any spillage when connecting the gauge set. 3 Connect adapter 310-162 and gauge assembly 310-116 to the fuel Schraeder valve. Remove the absorbent material and dispose of safely. 4 Disconnect and plug the vacuum hose from the pressure regulator. 5 Open the valve on the fuel pressure gauge and adapter 310-116/162. 6 Set ignition status to ON, engine OFF. 7 Record the fuel pressure reading.
	Is the fuel pressure 3.6 - 4.2 bar (52.2 - 60.9 lb/in²)? Yes GO to B3. No CHECK for DTCs. REFER to: Electronic Engine Controls (303-14A Electronic Engine Controls - I6 3.2L Petrol, Diagnosis and Testing).
B3: CHECK THE FUEL SYSTEM PRESSURE WITH THE ENGINE CRANKING	
	1 Apply footbrake and press start button. 2 Record the fuel pressure reading when engine cranking.
	Is the fuel pressure 3.6 - 4.2 bar (52.2 - 60.9 lb/in²)? Yes GO to B4. No CHECK for DTCs. REFER to: Electronic Engine Controls (303-14A Electronic Engine Controls - I6 3.2L Petrol, Diagnosis and Testing).
B4: CHECK THE FUEL SYSTEM PRESSURE WITH THE ENGINE IDLING (WHERE POSSIBLE)	
	1 With engine running.
	Is the fuel pressure 3.6 - 4.2 bar (52.2 - 60.9 lb/in²)? Yes CHECK for DTCs and symptoms indicating another cause of the problem. REFER to: Electronic Engine Controls (303-14A Electronic Engine Controls - I6 3.2L Petrol, Diagnosis and Testing). No CHECK the fuel pump module power and ground circuits.

Fuel Tank and Lines - I6 3.2L Petrol - Fuel Filter Element

Removal and Installation

Special Tool(s)

	310-123 Locking Ring, Fuel Tank
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Removal

- NOTE: Removal steps in this procedure may contain installation details.

1. Disconnect the battery ground cable.

Refer to: [Specifications](#) (414-00 Battery and Charging System - General Information, Specifications).

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

Raise and support the vehicle.

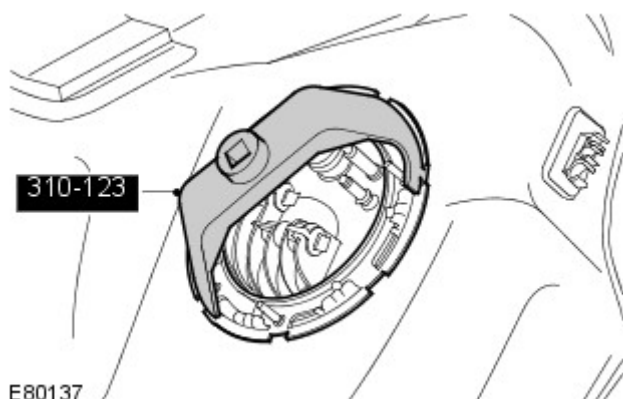
3. Remove the fuel tank.

Refer to: [Fuel Tank](#) (310-01A Fuel Tank and Lines - I6 3.2L Petrol, Removal and Installation).

4. Remove the fuel tank pad.



E80136



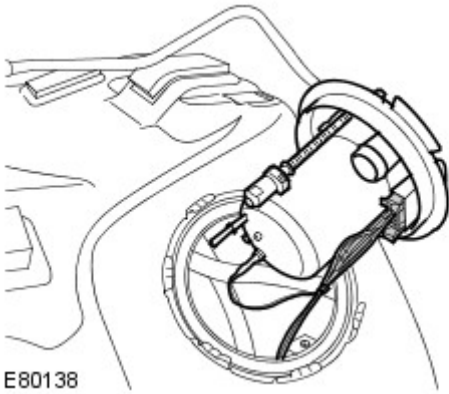
E80137

5.  **CAUTION:** Extreme cleanliness must be exercised when handling these components.

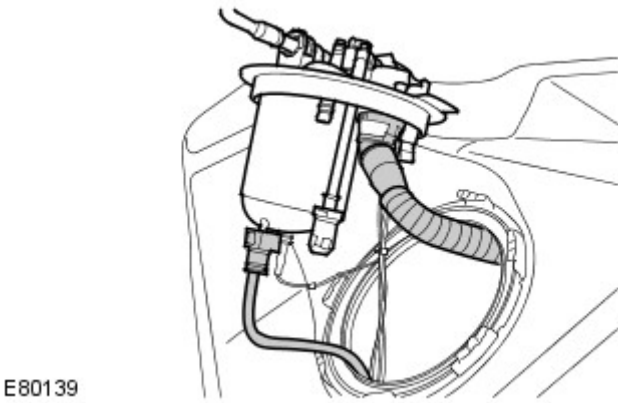
- Remove the fuel pump module locking ring.

- Special Tool(s): [310-123](#)
- Torque: 200 Nm

6.  CAUTION: A new O-ring seal is to be installed.



- 7.



Installation

1. To install, reverse the removal procedure.

Fuel Tank and Lines - I6 3.2L Petrol - Fuel Tank

Removal and Installation

Special Tool(s)

	310-123 Locking Ring, Fuel Tank
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General Equipment

Powertrain Jack

Removal

• WARNINGS:



Fuel may still be present in the fuel tank after draining.



Avoid flames, sparks or lighted substances.

• CAUTIONS:



Extreme cleanliness must be exercised when handling these components.



Make sure that all openings are sealed. Use new blanking caps.

- NOTE: Some variation in the illustrations may occur, but the essential information is always correct.

All vehicles

1. Disconnect the battery ground cable.

Refer to: [Specifications](#) (414-00 Battery and Charging System - General Information, Specifications).

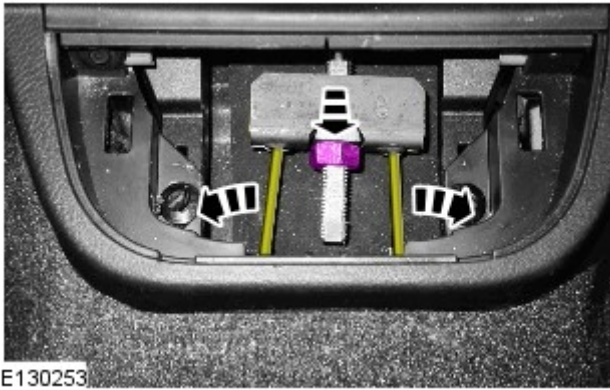
2. Drain the fuel tank.

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

3. Remove the coin tray.



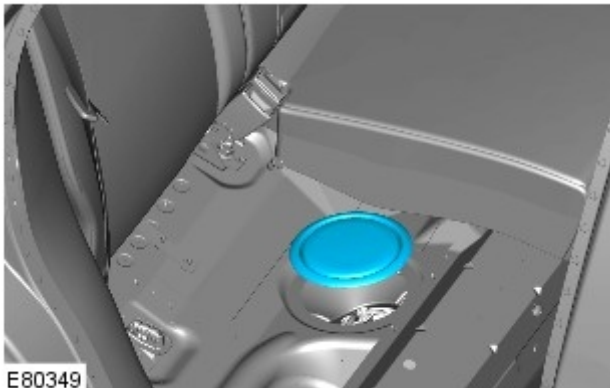
E73369



E130253

4. Release the adjusting nut and disconnect the parking brake cables from the compensator.

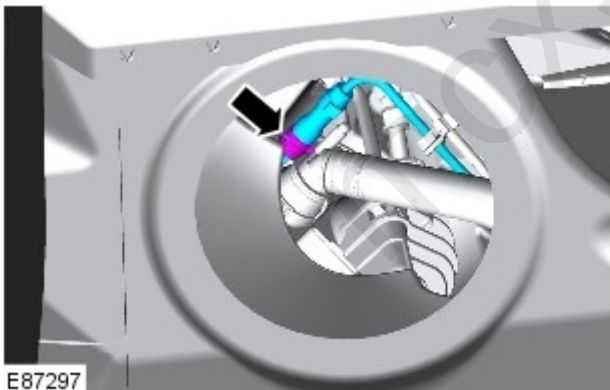
5. Fold the RH rear seat cushion forwards.



E80349

6. Release the carpet and remove the grommet.

Vehicles with fuel fired heater



E87297

7. **7. CAUTIONS:**

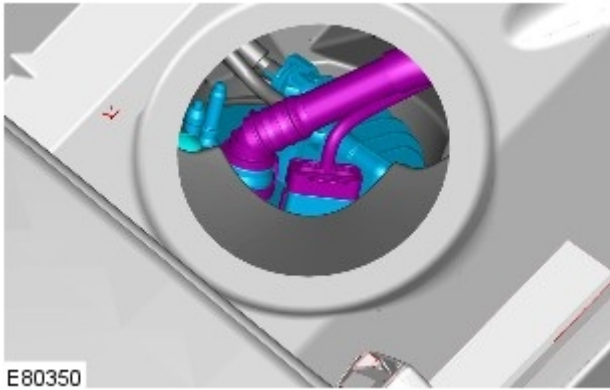


Extreme cleanliness must be exercised when handling these components.



Make sure that all openings are sealed. Use new blanking caps.

All vehicles



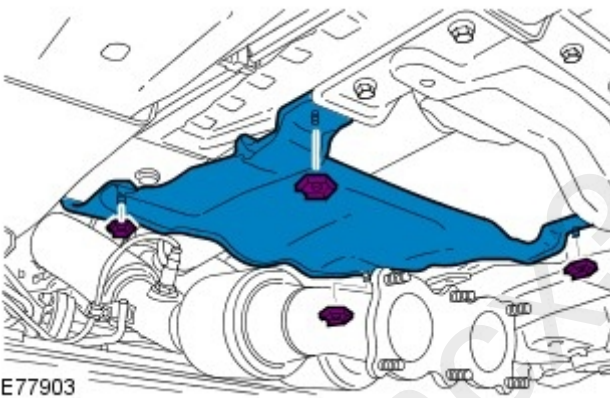
8. Disconnect the electrical connector and the breather hose.

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

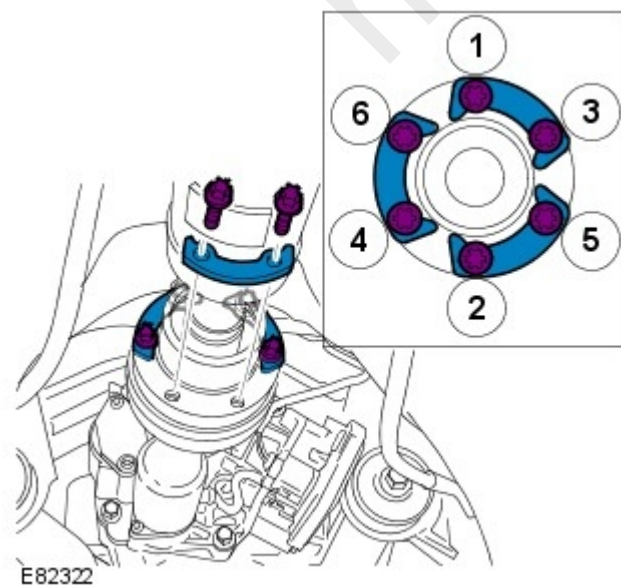
Raise and support the vehicle.

10. Remove the exhaust system.

Refer to: [Exhaust System](#) (309-00A Exhaust System - I6 3.2L Petrol, Removal and Installation).



- 11.



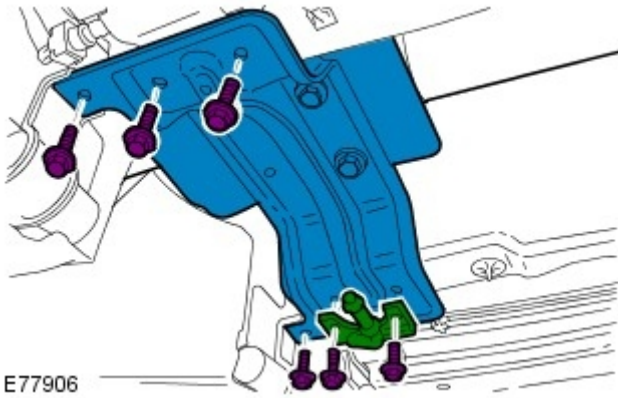
12.  **WARNING:** Do not lever the driveshaft joints to release from the power transfer unit or the rear differential flanges.

• **CAUTIONS:**

 Make sure that the driveshaft is supported with suitable retaining straps.

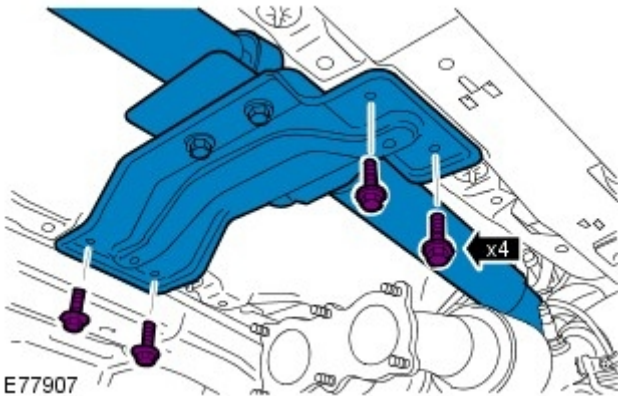
 Make sure that new bolts are installed.

Torque: 40 Nm



13. **13.** NOTE: All vehicles built up to VIN 180237

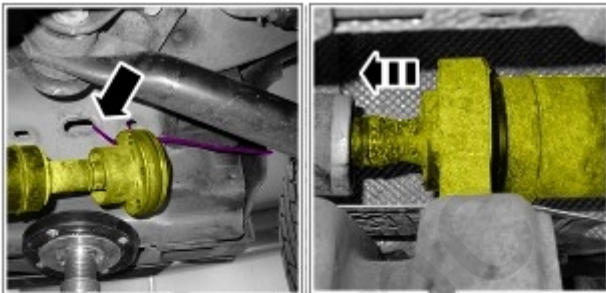
- Torque: 25 Nm



14. **14.** NOTE: All vehicles.

- NOTE: This step requires the aid of another technician.

- Torque: 25 Nm



15. **15.** CAUTIONS:

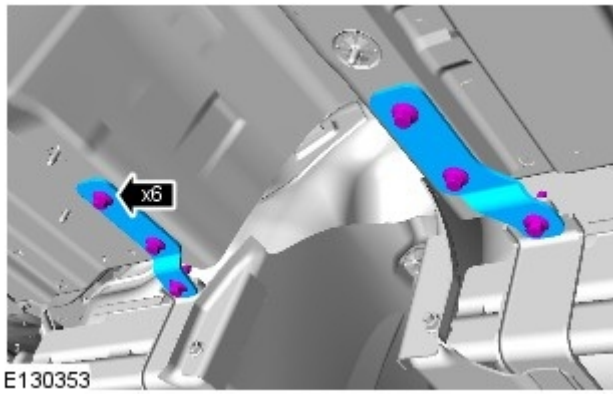
- ⚠ Make sure that the centre driveshaft joint is compressed. Failure to follow this instruction may result in damage to the component.

- ⚠ To avoid damage to the joint or gaiter, do not allow the driveshaft to hang.

- NOTE: This step requires the aid of another technician.

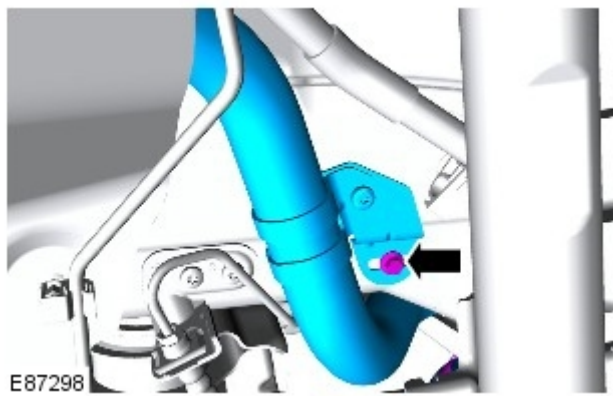
- Compress the propshaft centre joint.
- Tie the propshaft to the right hand side of the vehicle.



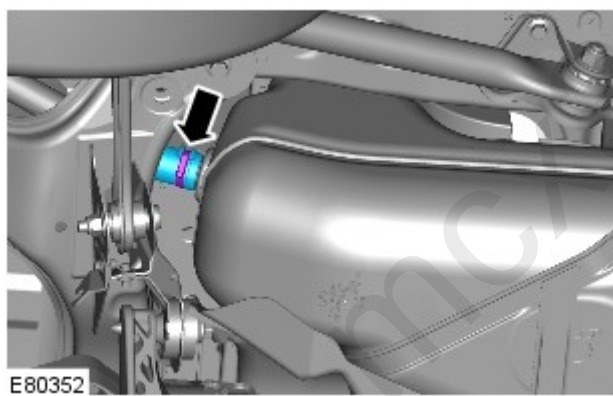


16. **16.** NOTE: Si6 built from VIN 180238

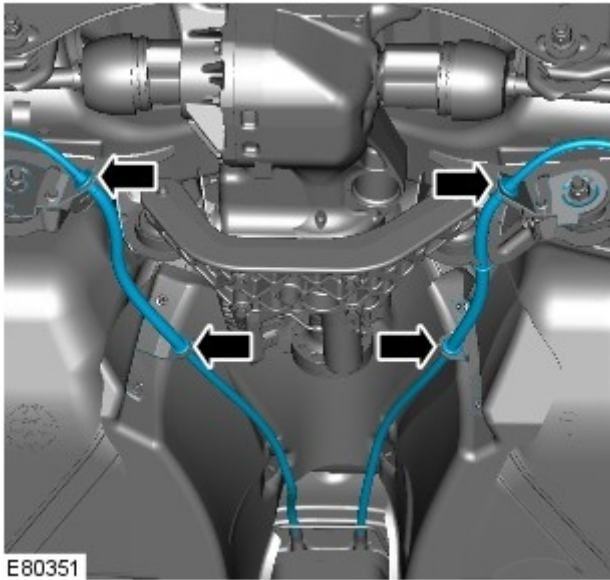
- Torque: 25 Nm



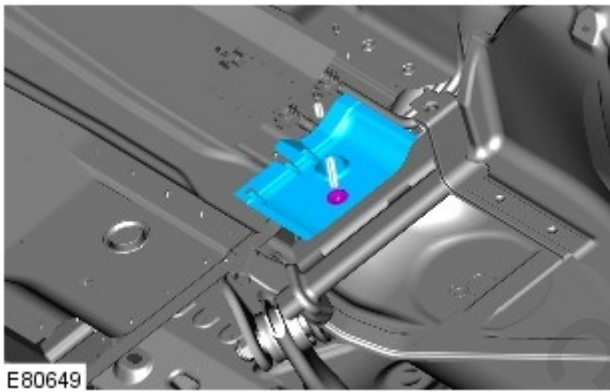
17.



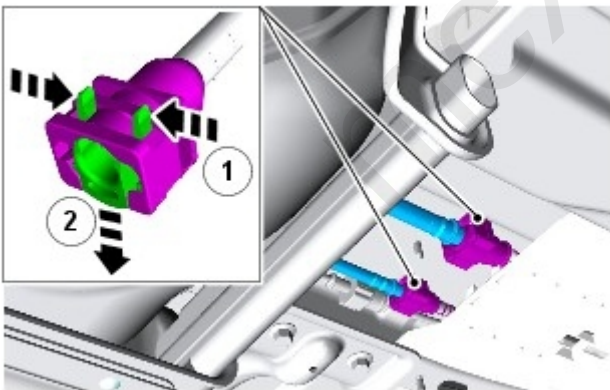
18.



19. Release the parking brake cables from the fuel tank cradle.



20. Remove the fuel line cover.



21. **21. CAUTIONS:**



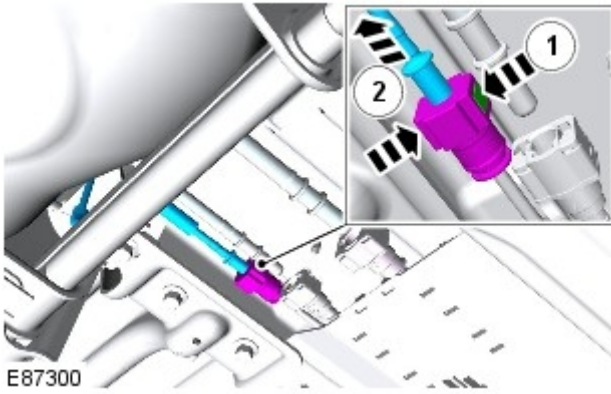
Extreme cleanliness must be exercised when handling these components.



Make sure that all openings are sealed. Use new blanking caps.

Disconnect the 2 fuel lines.

Vehicles with fuel fired heater



22. **22. CAUTIONS:**

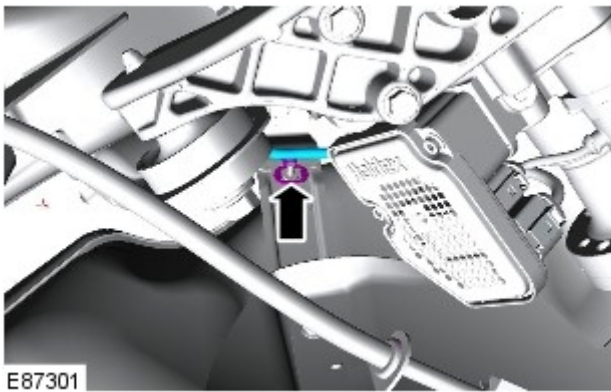


Extreme cleanliness must be exercised when handling these components.

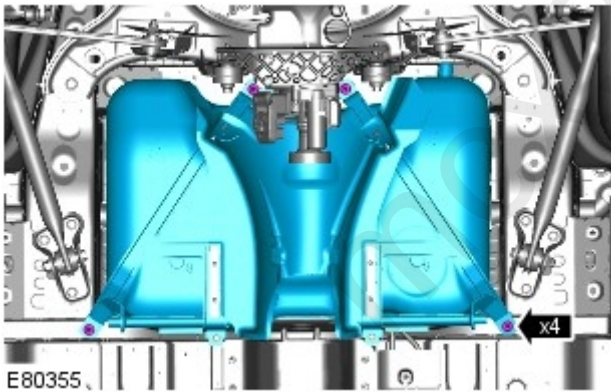


Make sure that all openings are sealed. Use new blanking caps.

All vehicles



23.



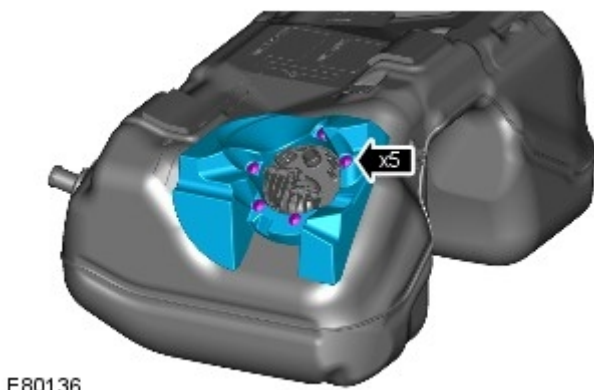
24. **24. WARNING:** This step requires the aid of another technician.



CAUTION: Make sure that new bolts are installed.

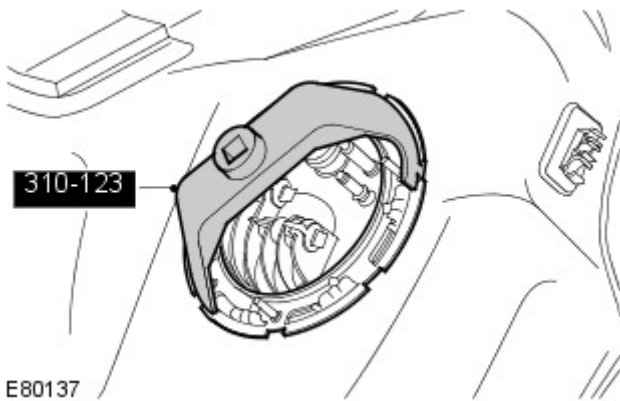
Remove the fuel tank.

General Equipment: [Powertrain Jack](#)
Torque: 25 Nm

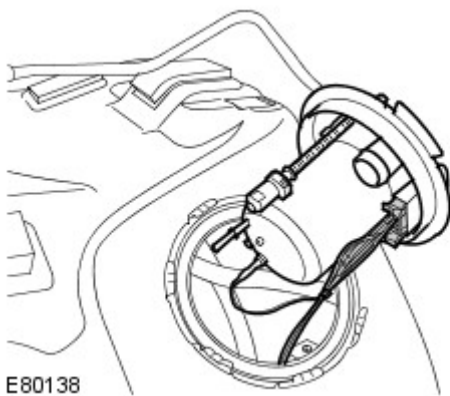


25. **25. NOTE:** Do not disassemble further if the component is removed for access only.

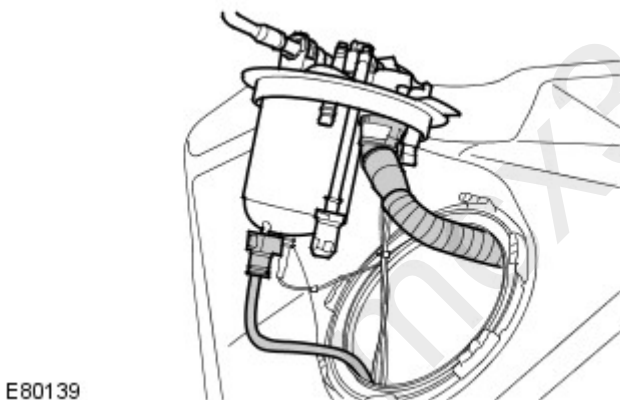
Remove the fuel tank pad.



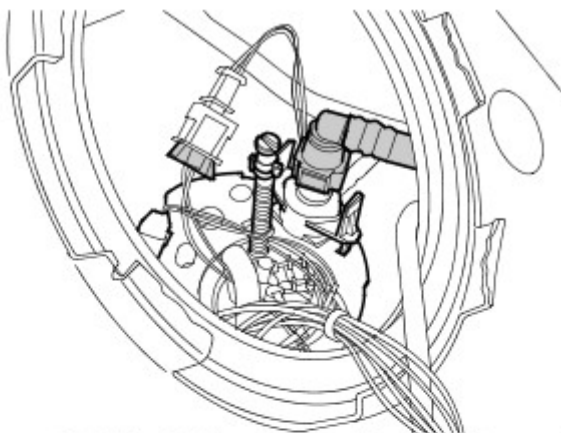
26. **26.**  **CAUTION:** Extreme cleanliness must be exercised when handling these components.
- Remove the fuel pump module locking ring.
- Special Tool(s):* [310-123](#)
- *Torque:* 200 Nm



27. **27.**  **CAUTION:** A new O-ring seal is to be installed.
- Release the fuel filter.

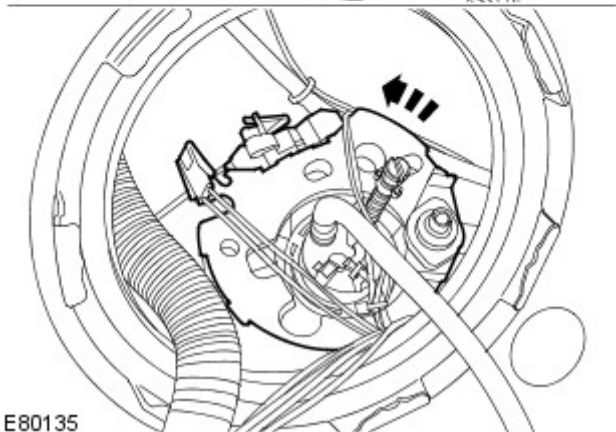


28. **28.** **NOTE:** Petrol illustration shown, diesel similar.
- Remove the fuel filter.

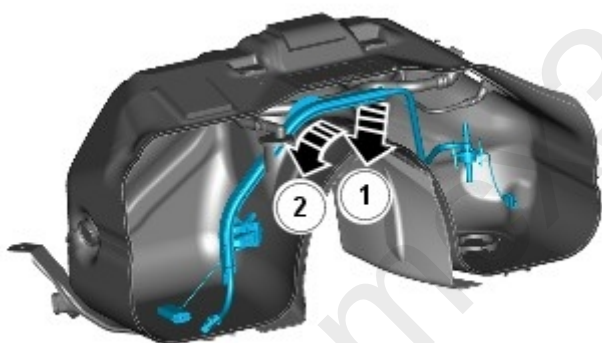


29. **29.** NOTE: Petrol illustration shown, diesel similar.

Remove the fuel pump module.



E80135



E80145

30.

- Push down to release the fuel sender from clip.
- Slide fuel sender assembly forward to release from the bracket.
- Manoeuvre fuel sender out of the tank.



E80354

31. Remove the fuel tank cradle.

Installation

1. To install, reverse the removal procedure.

2. Refill the fuel tank.

3. Adjust the parking brake.

Refer to: [Parking Brake Cable Adjustment](#) (206-05 Parking Brake and Actuation, General Procedures).

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Fuel Tank and Lines - I6 3.2L Petrol - Fuel Tank Filler Pipe

Removal and Installation

Removal

- NOTE: Removal steps in this procedure may contain installation details.

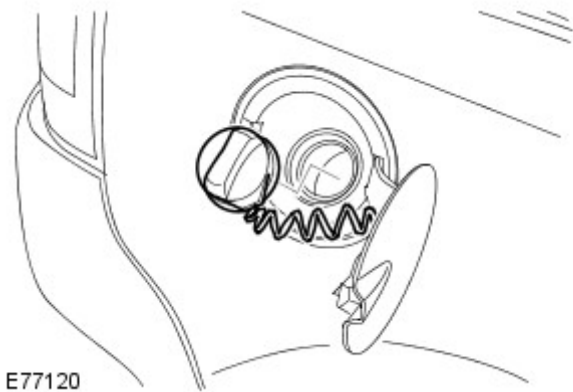
1.  **WARNING:** Do not work on or under a vehicle supported only by a jack. Always support the vehicle on safety stands.

Raise and support the vehicle.

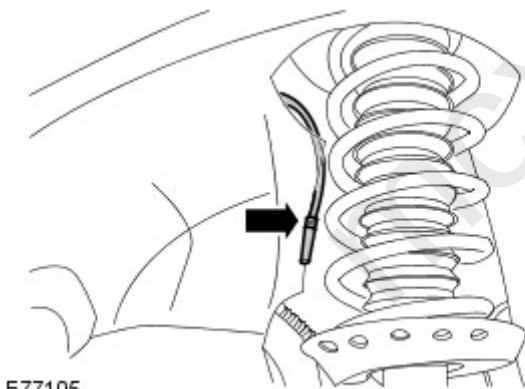
2. Remove the rear wheel.

Refer to: [Wheel and Tire](#) (204-04 Wheels and Tires, Removal and Installation).

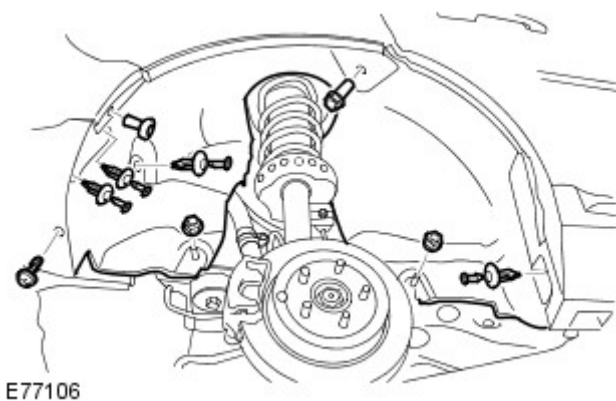
3.

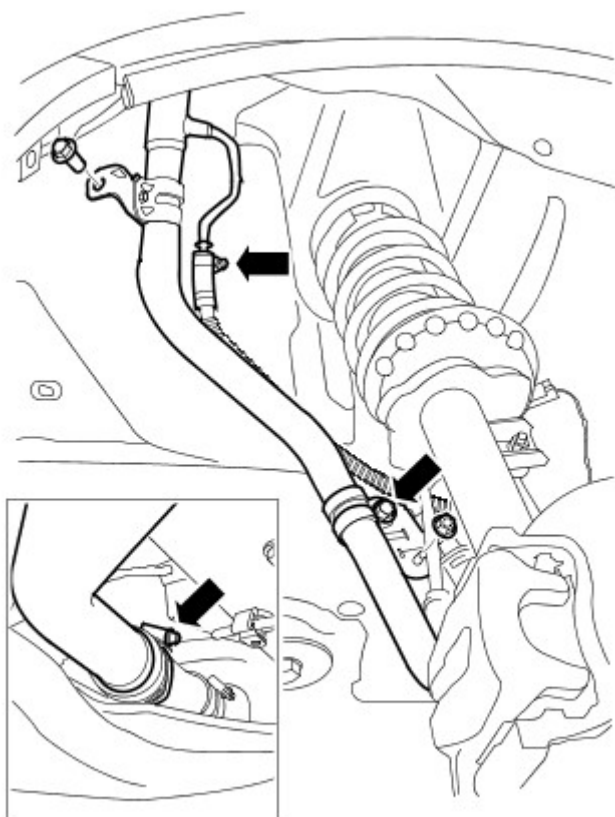


4.



5.





E77107

6.

- Remove the nut and bolt securing the fuel tank filler pipe to the body.

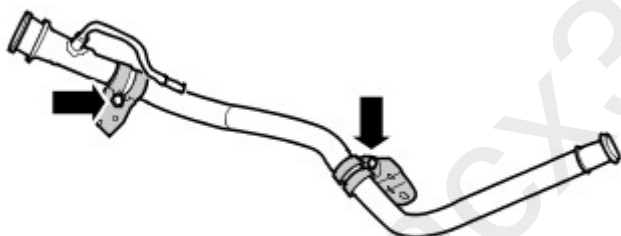
Torque: 10 Nm

- Loosen the fuel tank filler pipe lower bracket.

Torque: 10 Nm

- Loosen the clip and disconnect the fuel filler hose from the fuel tank.
- Loosen the clip and disconnect fuel filler pipe vent hose.

7. *Torque: 10 Nm*



E77108

Installation

1. To install, reverse the removal procedure.

Fuel Tank and Lines - I6 3.2L Petrol - Fuel Pump and Sender Unit

Removal and Installation

Removal

- NOTE: Removal steps in this procedure may contain installation details.

1. Disconnect the battery ground cable.

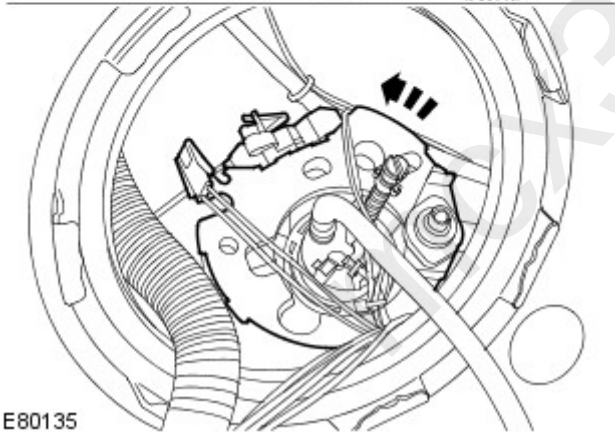
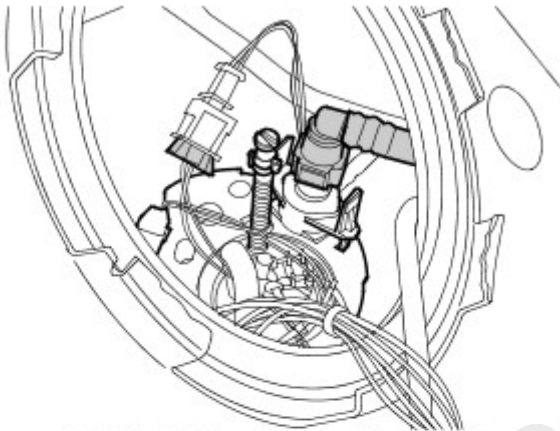
Refer to: [Specifications](#) (414-00 Battery and Charging System - General Information, Specifications).

2. Remove the fuel filter.

Refer to: [Fuel Filter Element](#) (310-01A Fuel Tank and Lines - I6 3.2L Petrol, Removal and Installation).

3.  CAUTION: Extreme cleanliness must be exercised when handling these components.

Remove the fuel pump module.



E80135

Installation

1. To install, reverse the removal procedure.

Fuel Tank and Lines - I6 3.2L Petrol - Fuel Level Sender

Removal and Installation

Removal

- NOTE: Removal steps in this procedure may contain installation details.

1. Disconnect the battery ground cable.

Refer to: [Specifications](#) (414-00 Battery and Charging System - General Information, Specifications).

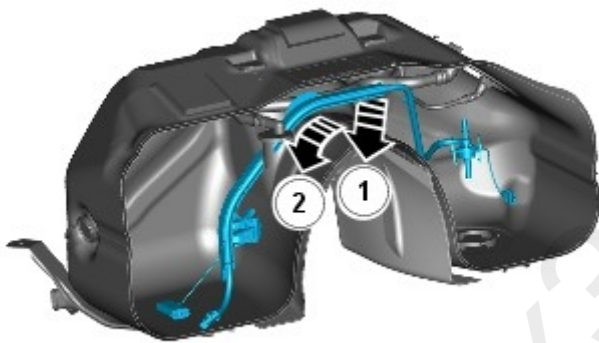
2.  **WARNING:** Make sure to support the vehicle with axle stands.

Raise and support the vehicle.

3. Remove the fuel pump module.

Refer to: [Fuel Pump and Sender Unit](#) (310-01A Fuel Tank and Lines - I6 3.2L Petrol, Removal and Installation).

4. Remove the LH fuel level sender.



E80145

Installation

1. To install, reverse the removal procedure.

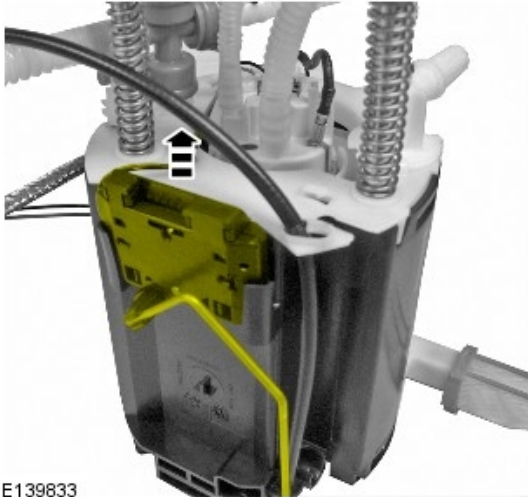
Fuel Tank and Lines - I6 3.2L Petrol - Fuel Pump and Sender Unit Filter

Removal and Installation

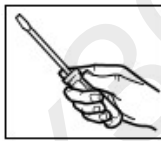
Removal

- NOTE: Removal steps in this procedure may contain installation details.
 - NOTE: Some variation in the illustrations may occur, but the essential information is always correct.
1. Refer to: [Fuel Pump and Sender Unit](#) (310-01A Fuel Tank and Lines - I6 3.2L Petrol, Removal and Installation).

2.



E139833

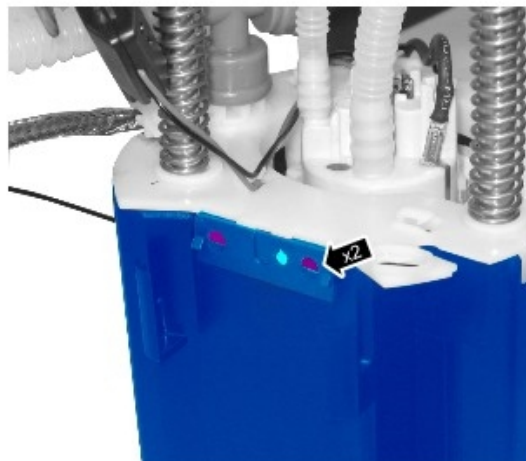


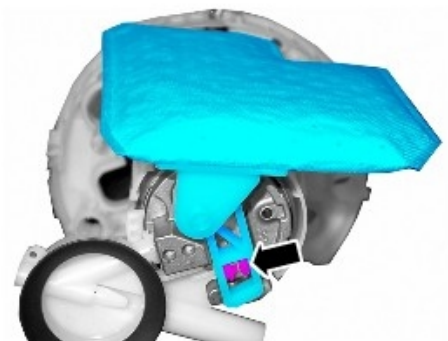
3. **CAUTION:** Care must be taken not to damage the component.

Using a suitable screwdriver, release the locking tangs and remove the housing.



E139834

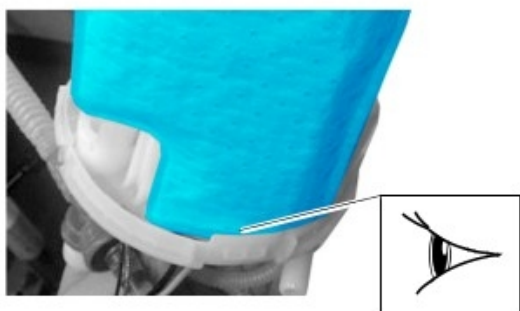




4.  **CAUTION:** Make sure that the fuel pump and sender unit filter remains located behind the lip of the fuel pump and sender unit prior to installation.

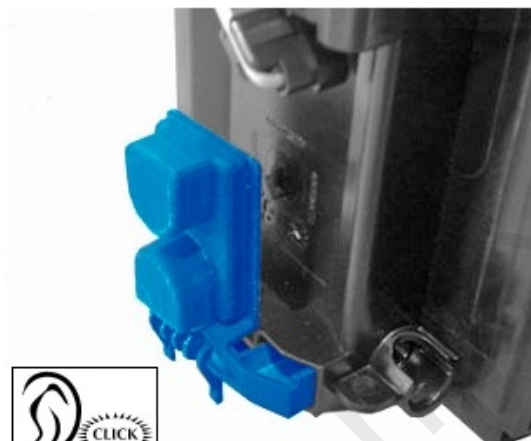
- **NOTE:** Note the orientation of the component prior to removal.

Release the locking tangs and remove the filter from the fuel pump and sender unit.



E140646

Installation



E139837

1.  **CAUTION:** Install the magnet from the service kit. If the magnet has already been installed, check the magnet for foreign material and remove as necessary.

2. CAUTIONS:



Make sure that all components are installed fully home to the fuel pump and sender unit.



Make sure that the components are installed to the noted position in the removal steps.

To install, reverse the removal procedure.

Fuel Tank and Lines - I6 3.2L Petrol - Fuel Pump and Sender Unit Filter Magnet

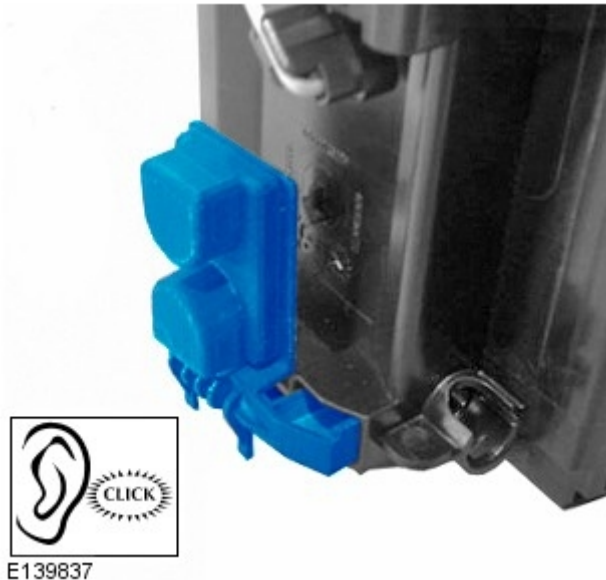
Removal and Installation

Removal

- NOTE: Removal steps in this procedure may contain installation details.

1. Refer to: [Fuel Pump and Sender Unit](#) (310-01A Fuel Tank and Lines - I6 3.2L Petrol, Removal and Installation).

2.



Installation

1.  CAUTION: Make sure that the component is installed fully home to the fuel pump and sender unit.

To install, reverse the removal procedure.