

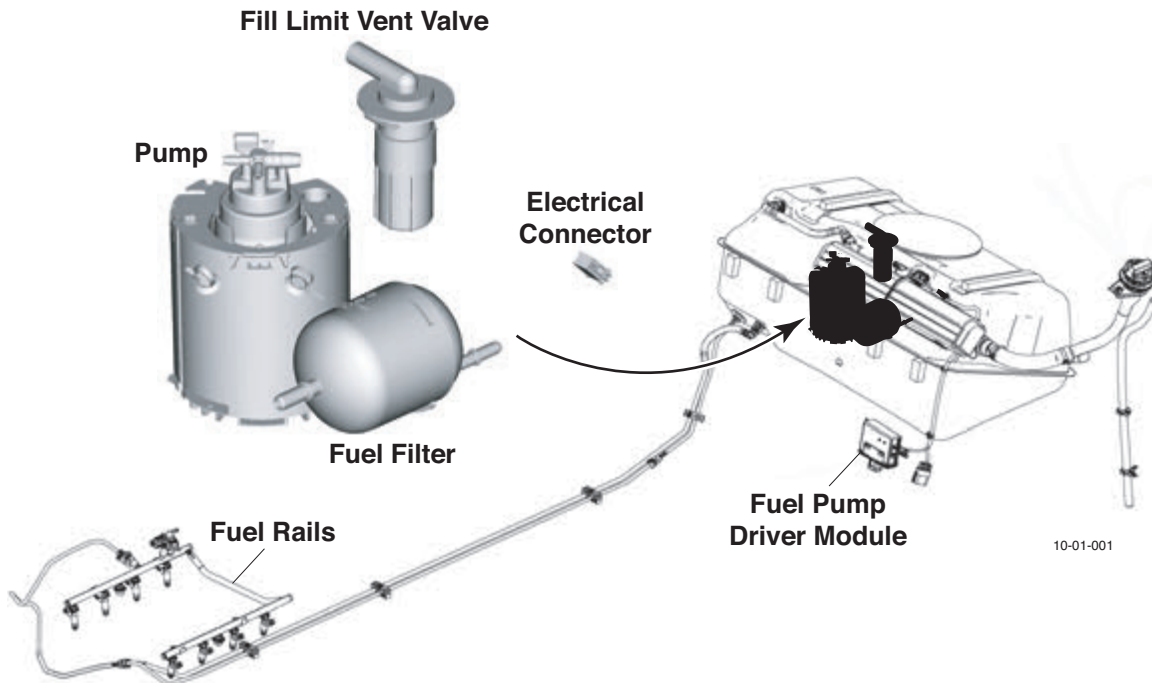
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Fuel (10.00)

Fuel Tank and Lines (10.01)

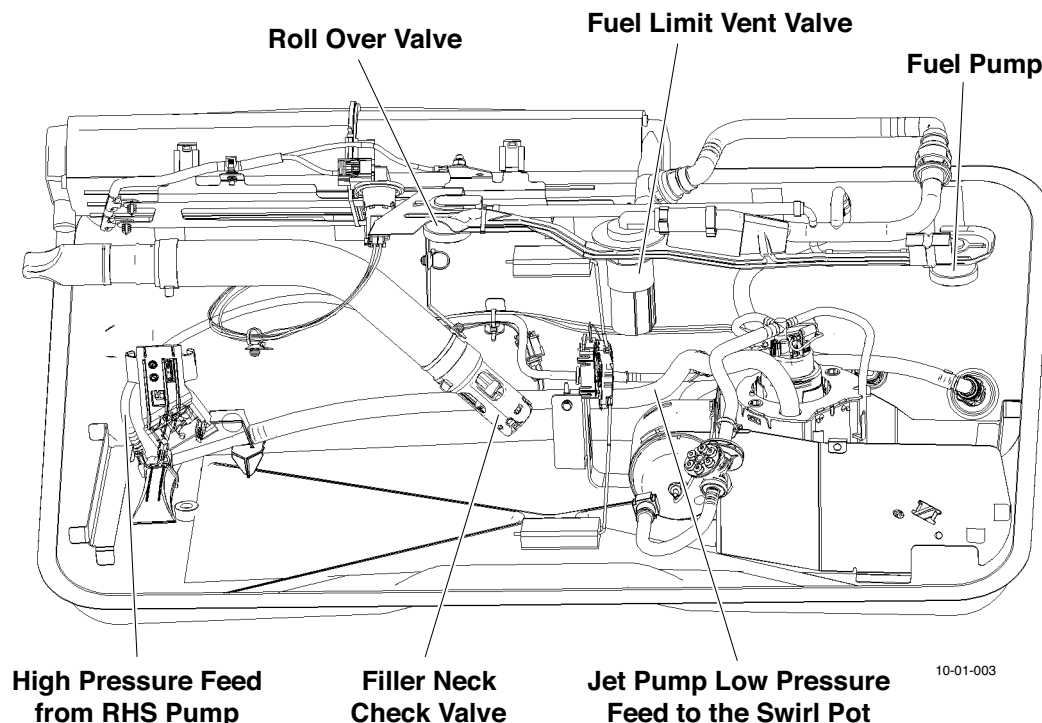
Description



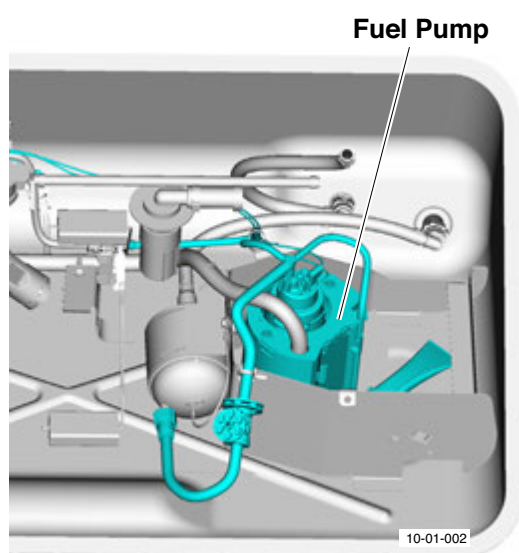
This vehicle uses a return less fuel system in which the fuel pump, controlled by the fuel pump driver module, is run to supply fuel through one in-tank filter to the fuel rail (Refer to 'Fuel Charging System (03.04)', page 3-5-1). A pressure sensor and a temperature sensor are fitted on the primary fuel rail. The fuel pump speeds are varied as required to regulate the fuel pressure in the fuel rails.

Fuel Tank

The fuel tank incorporates a single filler neck and check valve, internal fuel pump, internal fuel filter, a sender unit and an 'on board refuelling vapour recovery' system.



Fuel Pumps



During normal running, pressurised fuel from each fuel pump passes from the tank, through an 3 micron in-tank fuel filter to one of the two fuel rails on the engine.

Fuel temperature is measured on the primary fuel rail. If fuel temperature becomes excessive, the fuel pressure is increased to prevent fuel vaporisation (boiling).

Fuel pressure is measured by sensors on each fuel rail. The fuel pressure to each rail is regulated as required by continuously changing the run speed of the associated fuel pump. Maximum pressure in the system is limited to 5.3 bar by in-tank pressure regulators.

A constant head of fuel is maintained in the fuel pump modules to ensure that the pumps cannot run dry in a 'low fuel' situation.

The modular fuel pump is immersed in the base of the fuel tank. The pump can deliver up to 150 litres/hour. The in-tank fuel line connects to the external line using a quick-fit connector in the base of the fuel tank.

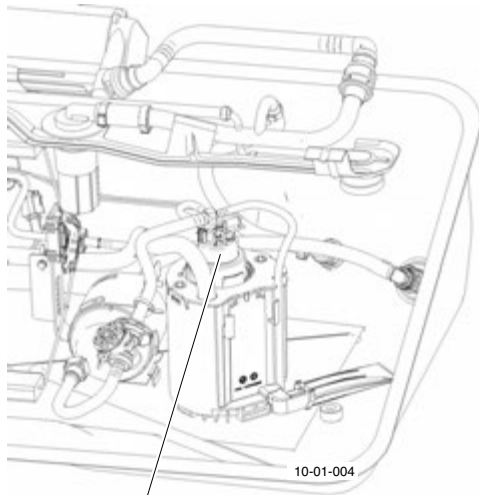


Jet Pumps

Fuel feed from the fuel pumps is split three ways:

1. Feed to the fuel rails.
2. Feed to the swirl pot jet pump (integral to the FDM).
3. Feed to the externally mounted jet pump (LHS).

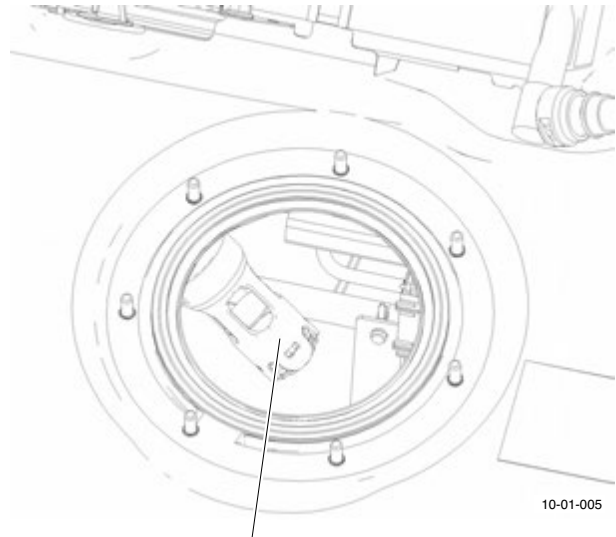
These pumps ensure that the appropriate pump swirl pot is maintained with fuel under severe dynamic conditions.



Jet Pump Assy

Filler Neck and Check Valve

Incoming fuel passes through a check valve at the base of the filler neck. This valve is normally held closed by light spring pressure. The valve opens under the pressure of incoming fuel and closes again when fuel flow ceases. The check valve prevents surging of fuel in the filler neck.

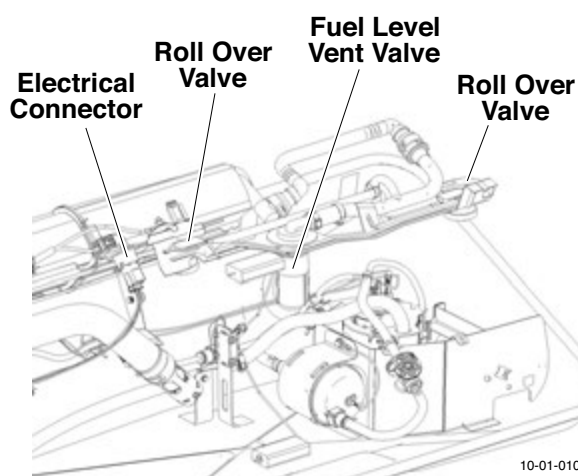


Check Valve

The filler neck also forms part of the on-board refuelling vapour recovery system. Incoming fuel forms a liquid seal in the filler neck. Thus any air displaced during fuel tank filling cannot escape via the filler neck.



Valves and Sensors



Fuel Limit Vent Valve (FLVV)

This valve contains a float which rises to cut off the path for displaced air when the fuel level rises towards maximum during fuel filling. This causes a rapid pressure build up in the tank which triggers the cut-off valve in the fuel delivery nozzle. This discourages overfilling of the fuel tank.

The FLVV also includes an over pressure relief valve set at about 2 psi to vent the tank if all other vents fail.

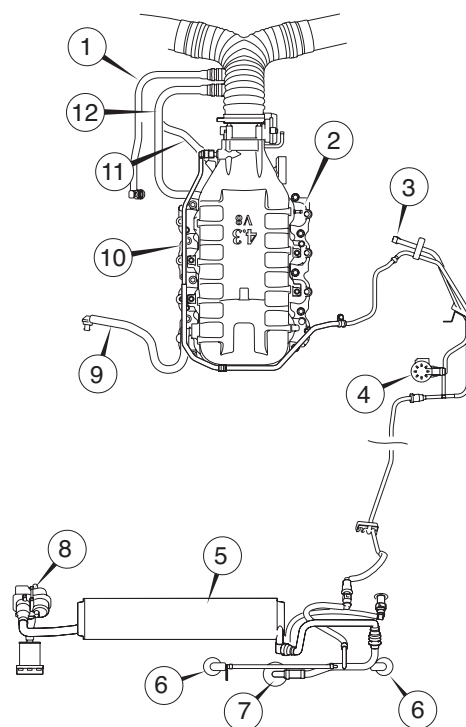
Roll Over Valves

The roll over valves purpose is to vent the highest point of the tank. If the tank is grossly overfilled (e.g. many clicks over the normal filler nozzle cut-off), the FLVV will suffer a hydraulic lock. The roll over vent valve allows venting of the tank at the highest possible level in this situation.

All three valves allow the tank to breath until it is inverted when they will close to prevent fuel spill. The fuel level vent valve controls the fuel height of the tank by creating a pressure spike inside the tank which shuts of the fill nozzle.

If the vehicle is inverted in an accident, this valve will close to prevent leakage of liquid fuel.

Fuel System Schematic



1. Positive crankcase ventilation
2. Engine emission vacuum control
3. Service port
4. Purge valve
5. Carbon canister
6. Roll over valve
7. Fill limit vent valve
8. Leak detection module
9. Brake booster (LHD shown)
10. Purge line
11. Part load breather
12. Secondary air

10-01-012

Evaporative Loss System

Fuel vapour is displaced from the fuel tank during filling. Vapour is also displaced due to fuel evaporation in higher temperatures. Displaced fuel vapour is absorbed in the carbon canister filter located on top of the fuel tank.

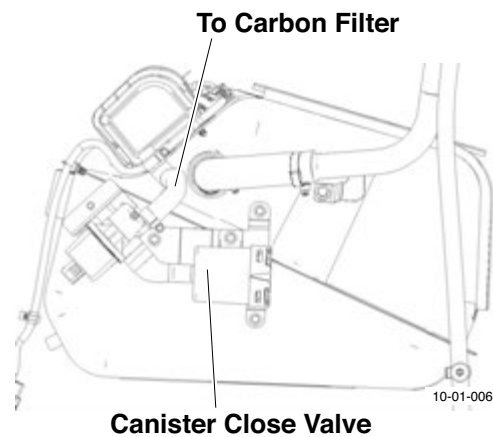
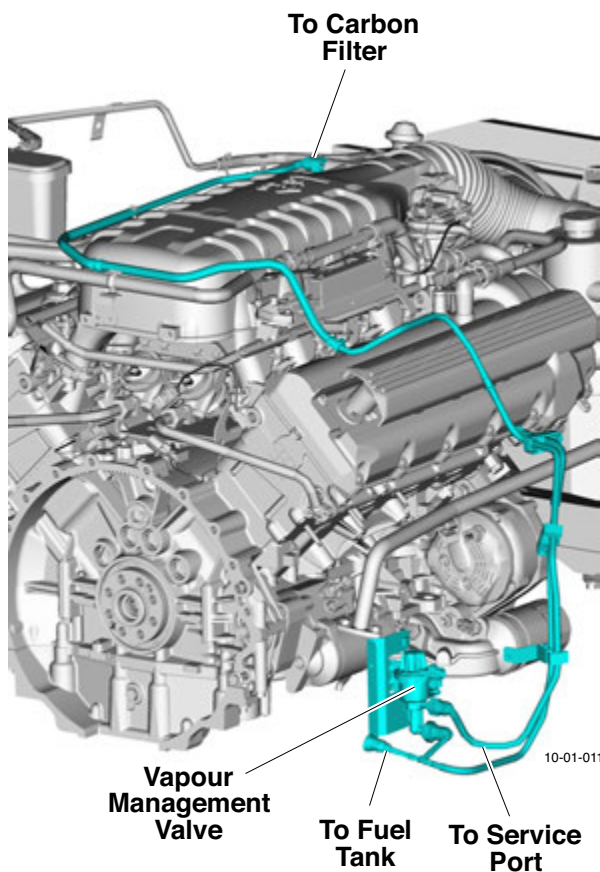
During normal engine running, absorbed fuel vapour is purged from the carbon canister and mixed with the normal fuel/air charge in the inlet manifold.

System Operation

Displaced fuel vapour leaves the fuel tank via the normally open fuel level vent valve and the roll over valves. It passes through the carbon canister where fuel hydrocarbons are absorbed. Clean air leaves the system via the normally open canister vent valve. This valve is only closed during diagnostic pressure testing of the fuel system.

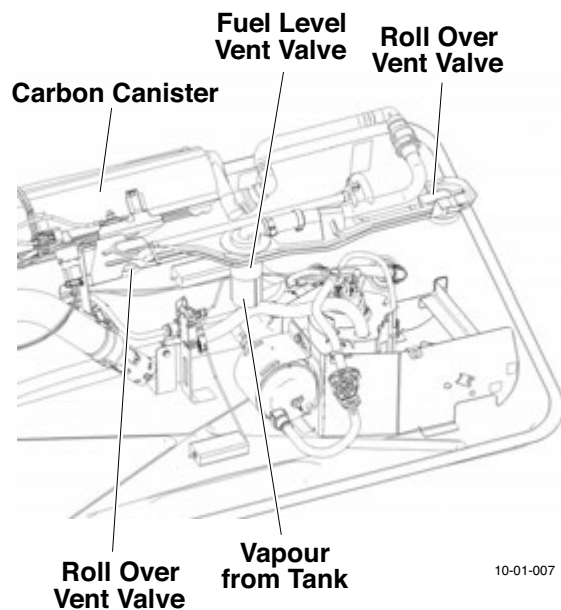
During normal engine running, the single vapour management valve in the engine bay is periodically opened, when negative pressure exists in the intake manifold, allowing fresh air flow into the open canister vent valve, through the carbon canister, through the vapour management valve and into the primary inlet manifold. This fresh air flow progressively purges any absorbed fuel vapour from the carbon canister.

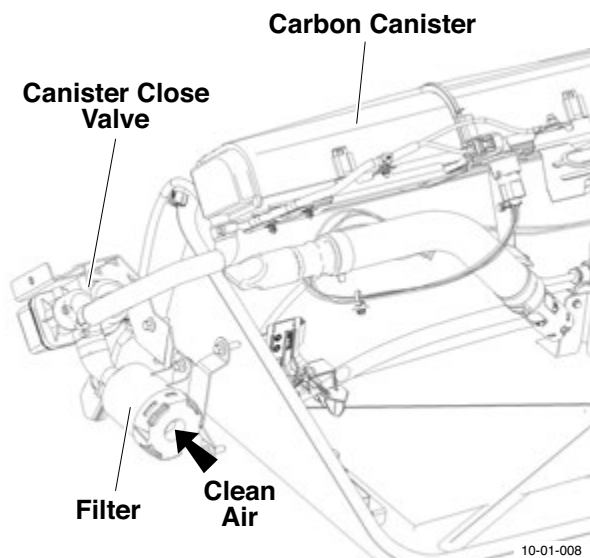
Fuel Tank Vents and Control Valves



On-Board Refuelling Vapour Recovery

All of the vapour displaced from the tank by refuelling passes through a series of valves and through a carbon canister. This filters out and stores all the fuel vapour and clean air exits the carbon canister port.





Normal Fuel Fill - Air displaced from the fuel tank during filling can only exit via the fuel level vent valve and roll over valves and be forced through the carbon canister. Any fuel vapour in the displaced air is absorbed in the carbon filter material. No fuel vapour can escape to the atmosphere. Clean air then exits the carbon canister, via an additional filter, to atmosphere.

Excessive Fuel Fill - In the event of overfilling of the fuel tank, the fuel level vent valve will close at normal maximum fuel level. Finally the roll over vent valve will close, completely sealing the tank. Any excess pressure in the fuel tank will 'blow off' via the Over-pressure vent valve (part of the roll over vent valves) in the Fuel Level vent valve assembly.

Safety Precautions

Operations on fuel system result in fuel liquid and vapour being present in the working environment. This presents a very serious risk and the following precautions must be strictly observed:

Warning

Operations on refuelling and the fuel system must only be performed by personnel who have completed training on fuel handling.

Warning

Smoking must not be allowed near the working area. "NO SMOKING" signs must be posted around the working area.

Warning

Any operation which could involve sparks or naked lights (e.g. battery testing, welding, metal grinding, etc.) must not be allowed near the working area.

Warning

A CO2 fire extinguisher must be available close at hand.

Warning

Dry sand must be available close at hand to soak up any accidental fuel spillage.

Warning

If necessary, empty the fuel into an explosion proof container using suitable fireproof fuel handling equipment.

Warning

The working area must be well ventilated.

Warning

Disconnect the battery before commencing work on the fuel system.

Warning

Depressurise the fuel system before disconnecting any fuel lines.

Specifications

Pump Pressure

Nominal pump pressure 40 psi (2.7 bar) above inlet manifold pressure.

Torque Figures

Description	Nm	lb. / ft.
Tank retaining plate bolts	20-25	15-18.5



Maintenance

Fuel System

The fuel system must only be serviced by staff trained in fuel handling.

Fuel Filter Assembly-Renew

Repair Operation Time (ROT)	
Item	Code
Fuel Filter Assembly-Renew	10.01.AB

Removal

Warning

Read and follow all fuel handling instructions (at the beginning of the Fuel System section) and the fuel bowser manufacturers fuel handling documentation before commencing work on the fuel system. Clean up spillages immediately and dispose of fuel contaminated materials safely.

1. Depressurise the fuel system (see Workshop Manual procedure 10.01.EK Fuel System - Depressurise).

Warning

Ensure there is adequate ventilation inside the vehicle (i.e. place the vehicle in a well ventilated area, with the windows open).

Warning

Disconnect the battery earth lead before commencing work on the fuel system.

2. Disconnect battery earth lead.
3. Release and remove luggage compartment rear floor carpet.
4. Remove luggage compartment front floor carpet retainers (x6).
5. Remove luggage compartment front floor carpet.
6. Remove fuel tank cover, clean off the sealant around the aperture.

Caution

The following procedure is completed inside the vehicle cabin area. Extra care must be taken to ensure no fuel or fuel vapours come into contact with the vehicle interior.

7. Remove nuts (x7) and release fuel tank service cover and clamp.

8. Install the fuel tank drainage adaptor (see Fig. 1).

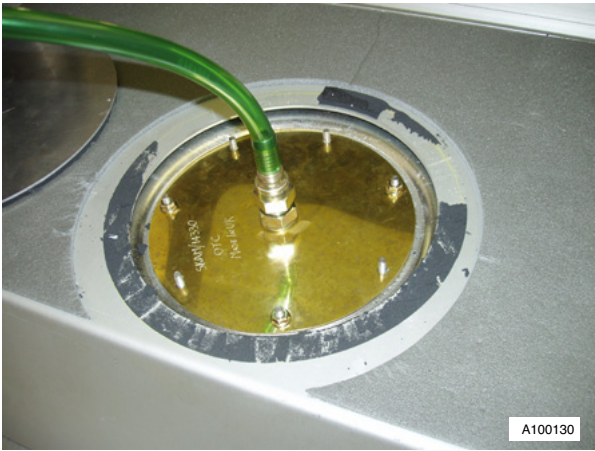


Fig. 1

Warning

Several litres of fuel remain in the fuel tank sump after draining.

9. Connect the external pipe to a fuel recovery unit. Recover the fuel in accordance with the recovery unit instructions.
10. Release the fuel filter hoses (x2) quick release unions (see Fig. 2).

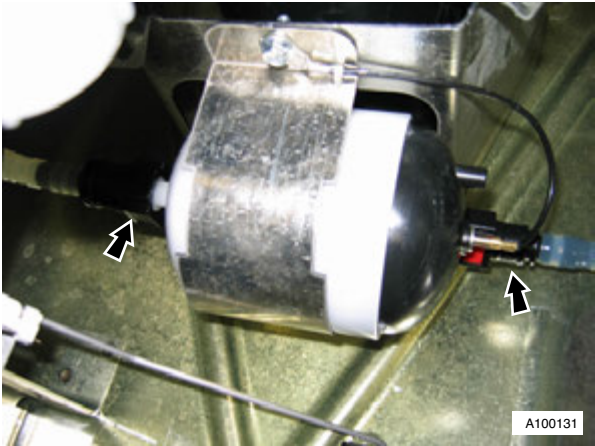


Fig. 2

11. Remove nut fuel filter clamp to bracket (see Fig. 2).

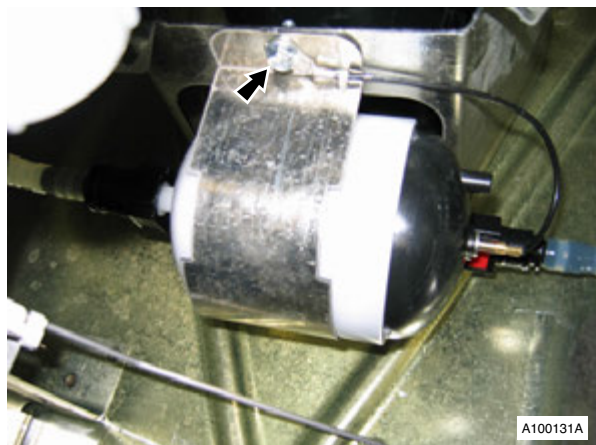


Fig. 3

1. Remove the fuel filter clamp and withdraw the filter.

Installation

1. Position filter in clamp and install nut (x1).
2. Connect fuel filter hoses (x2).
3. Install fuel tank service cover (nuts x7).
4. Install fuel tank cover with new seal.
5. Install luggage compartment front floor carpet and retainers (x6)
6. install luggage compartment rear floor carpet.

Warning

Fire Risk. Do Not connect the vehicle battery and switch on the ignition until all work on the fuel system is completed and the area is cleared of fuel contamination.

Remove contaminated material, open fuel containers and waste fuel. Fully ventilate vehicle and work area to remove all fuel fumes.

7. Connect battery earth lead.

Warning

Fire Risk. Do Not start the engine until the fuel system integrity is confirmed.

Fuel Pump and Reservoir Assembly-Renew

Repair Operation Time (ROT)	
Item	Code
Fuel Pump and Reservoir Assembly-Renew	10.01.CB
As above less WDS Allowance	10.01.CC

Removal

Warning

Read and follow all fuel handling instructions (at the beginning of the Fuel System section) and the fuel bowser manufacturers fuel handling documentation before commencing work on the fuel system. Clean up spillages immediately and dispose of fuel contaminated materials safely.

1. Depressurise fuel system (see Workshop Manual procedure 10.01.EK Fuel System - Depressurise).

Warning

Ensure there is adequate ventilation inside the vehicle (i.e. place the vehicle in a well ventilated area, with the windows open).

Warning

Disconnect the battery earth lead before commencing work on the fuel system.

2. Disconnect battery earth lead.
3. Release and remove luggage compartment rear floor carpet.
4. Remove luggage compartment front floor carpet retainers (x6).
5. Remove luggage compartment front floor carpet.
6. Remove fuel tank cover, clean off the sealant around the aperture.

Caution

The following procedure is completed inside the vehicle cabin area. Extra care must be taken to ensure no fuel or fuel vapours come into contact with the vehicle interior.

7. Remove nuts (x7) and release fuel tank service cover and clamp.
8. Install the fuel tank drainage adaptor (see Fig. 1).

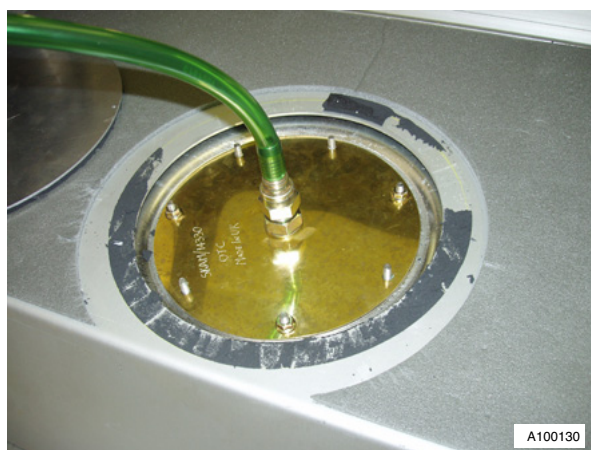


Fig. 1

Warning

Several litres of fuel remain in the fuel tank sump after draining.

9. Connect the external pipe to a fuel recovery unit. Recover the fuel in accordance with the recovery unit instructions.

10. Remove recovery unit and fuel tank drainage adaptor.
11. Release the fuel filter hose to pump (x1) quick release unions (see Fig. 2).

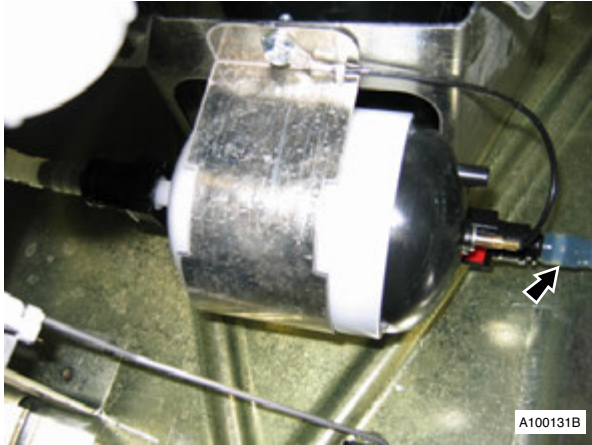


Fig. 2

12. Release vent hose from fuel pump assembly (see Fig. 3).

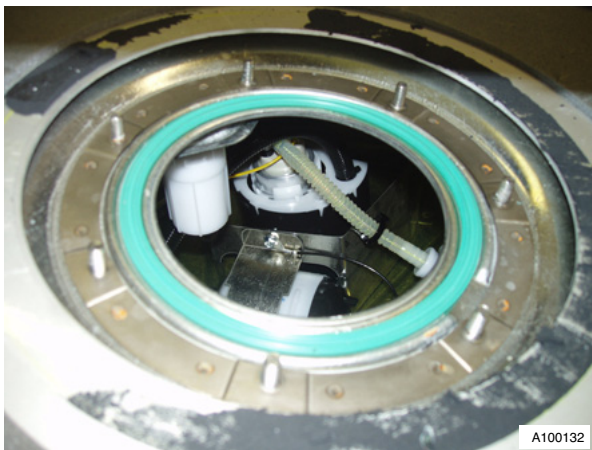


Fig. 3

13. Release fuel hose and tank harness from fuel pump bracket clip.
14. Disconnect wiring harness plugs (x2).

15. Install fuel pump removal tool (310-140) (see Fig. 4).

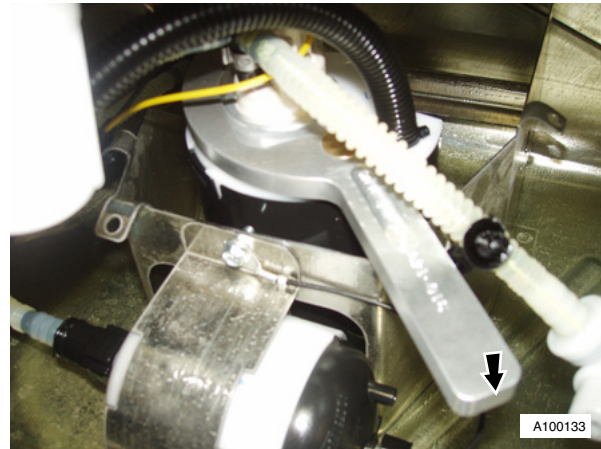


Fig. 4

16. Turn the fuel pump anti-clockwise, release and withdraw pump from mounting.
17. Remove fuel pump.

Installation

1. Position fuel pump in its mounting. Using the service tool, turn clockwise to secure fuel pump.
2. Secure fuel hose and tank harness to bracket
3. Install vent hose to fuel pump.
4. Connect hose to pump assembly.
5. Connect wiring harness multiplugs (x2).
6. Connect fuel filter pipes.
7. Install fuel tank service cover and clamp.
8. Install fuel tank cover with new seal.
9. Install luggage compartment front floor carpet and retainers (x6).
10. Install luggage compartment rear floor carpet.

Warning

Fire Risk. Do Not connect the vehicle battery and switch on the ignition until all work on the fuel system is completed and the area is cleared of fuel contamination.

Remove contaminated material, open fuel containers and waste fuel. Fully ventilate vehicle and work area to remove all fuel fumes.

11. Connect battery earth lead.

Warning

Fire Risk. Do Not start the engine until the fuel system integrity is confirmed.

Fuel Tank and Canister Assembly-Renew

Repair Operation Time (ROT)	
Item	Code
Fuel Tank and Canister Assembly-Renew	10.01.FB

Removal

Warning

Read and follow all fuel handling instructions (at the beginning of the Fuel System section) and the fuel bowser manufacturers fuel handling documentation before commencing work on the fuel system. Clean up spillages immediately and dispose of fuel contaminated materials safely.

Warning

Fuel vapour is explosive. During the following procedure, fuel tank and fuel lines will be open. Ensure good ventilation and take all necessary precautions to eliminate fire risk.

Warning

Fire Risk. Before commencing work on the vehicle fuel system, disconnect the earth (- ve) lead from the vehicle battery.

1. Disconnect vehicle battery.
2. Remove rear subframe (see Workshop Manual procedure 02.01.CA Subframe Assembly - Rear - Remove for Access and Refit).
3. Remove fuel filler cap.
4. Remove bolt filler pipe bracket to spring damper assembly.
5. Remove nut filler neck pipe and hose to body.
6. Release filler neck pipe and hose, collect sealing washer.
7. Remove filler neck pipe and hose assembly from the tank (using filler neck disconnection tool - 310 - 134) (see Fig. 2).

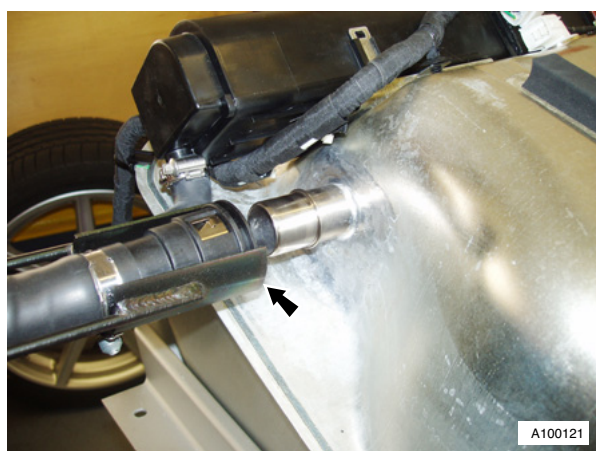


Fig. 2

8. loosen jubilee clip and disconnect hose from evaporative emission control assembly (see Fig. 3).

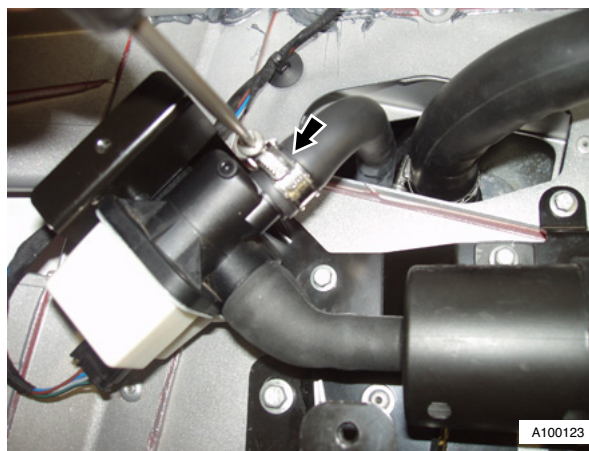


Fig. 3

9. Disconnect fuel tank harness from main harness (see Fig. 4).



Fig. 4

10. Remove nut and release earth lead from stud (see Fig. 5).



Fig. 5

11. Disconnect vapour purge and fuel pipe from the tank
12. Remove bolts (x4) exhaust heatshield to floor.
13. Remove nuts (x5) oil cooler pipes to body.
14. Release exhaust vacuum pipe from clips.
15. Remove vacuum hose clips from studs.
16. Remove vacuum hose clip bolts /stud (x4) tank to body.

Warning

The fuel tank is heavy. Fuel tank removal / replacement is a two person operation.

17. With assistance support tank, remove bolts (x14) tank to body and remove fuel tank (see Fig. 6).

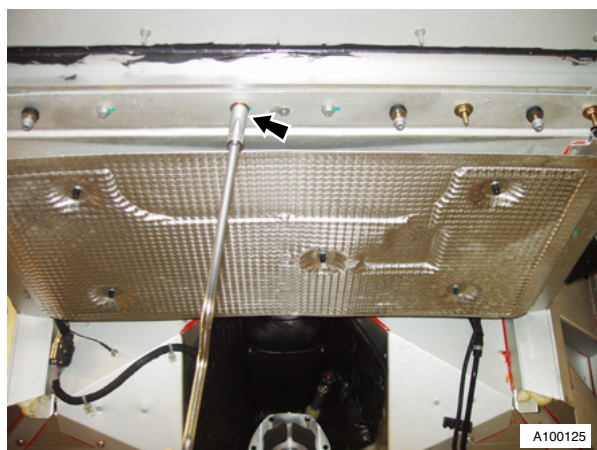


Fig. 6

18. Disconnect fuel vapour hose quick fit connection to tank (see Fig. 7).



Fig. 7

19. Remove nut (x1) fuel tank harness earth (see Fig. 8).

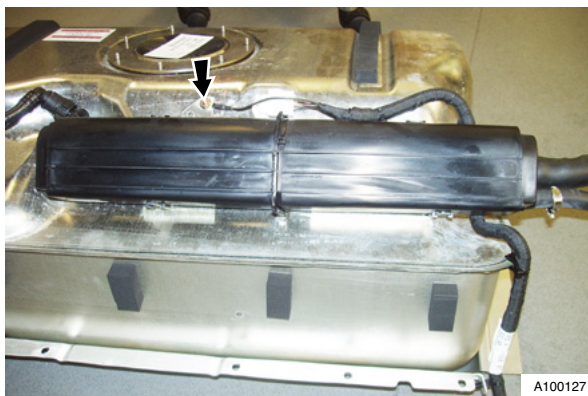


Fig. 8

20. Disconnect multiplug (x1) fuel tank harness (see Fig. 9).



Fig. 9

21. Release clips (x5) fuel tank harness and remove harness (see Fig. 10).

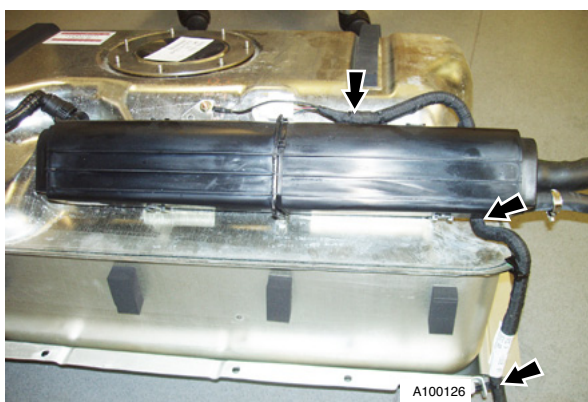


Fig. 10

22. Remove cable tie carbon canister to bracket (see Fig. 11).



Fig. 11

23. Remove carbon canister from fuel tank (clips 4) (see Fig. 12)

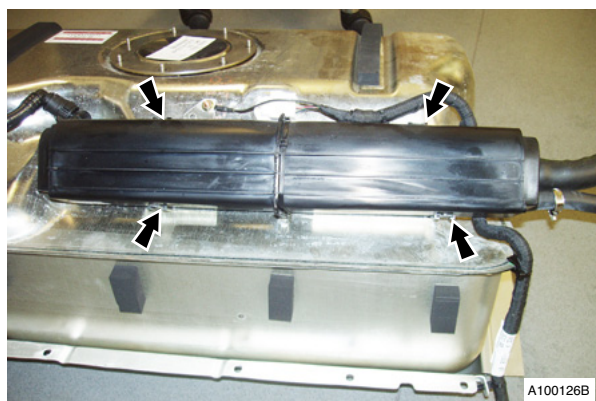


Fig. 12

24. Remove tank from support plate.

Installation

1. Position tank to support plate.
2. Install new cable tie behind carbon canister bracket.
3. Align and secure carbon canister to clips (x4).
4. Tighten cable tie around carbon canister.
5. Connect multiplug (x1) fuel tank harness.
6. Install nut (x1) fuel tank harness earth.
7. Secure fuel tank harness (clips x5).
8. Connect fuel vapour hose quick fit connection to tank.

Warning

The fuel tank is heavy. Fuel tank removal / replacement is a two person operation.

9. With assistance position tank and secure with bolts (x14)
10. Install vacuum hose clip to tank bolts / studs (x4)
11. install vacuum hose clips to studs and secure vacuum hose.
12. Install nuts (x5) oil cooler to body.
13. Install heatshield.

14. Connect vapour purge and fuel pipe to tank.
15. Position earth lead and secure with nut.
16. Connect fuel tank harness to main harness.
17. Connect evaporative emission control assembly hose and secure with jubilee clip.
18. install filler neck pipe and hose assembly to fuel tank.
19. Position filler neck pipe, hose assembly and sealing washer to body.
20. Install nut filler neck pipe and hose assembly to body.
21. Install bolt filler pipe bracket to spring damper assembly.
22. install fuel filler cap
23. Install rear subframe (see Workshop Manual procedure 02.01.CA Subframe Assembly - Rear - Remove for Access and Refit).

Warning

Fire Risk. Do Not connect the vehicle battery and switch on the ignition until all work on the fuel system is completed and the area is cleared of fuel contamination.

Remove contaminated material, open fuel containers and waste fuel. Fully ventilate vehicle and work area to remove all fuel fumes.

24. Connect vehicle battery.

Warning

Fire Risk. Do Not start the engine until the fuel system integrity is confirmed.

Fuel Tank and Canister Assembly-Remove for Access/Refit

Repair Operation Time (ROT)

Item	Code
Fuel Tank and Canister Assembly-Remove for Access/Refit	10.01.GA

Removal

Warning

Read and follow all fuel handling instructions (at the beginning of the Fuel System section) and the fuel bowser manufacturers fuel handling documentation before commencing work on the fuel system. Clean up spillages immediately and dispose of fuel contaminated materials safely.

Warning

Fuel vapour is explosive. During the following procedure, fuel tank and fuel lines will be open. Ensure good ventilation and take all necessary precautions to eliminate fire risk.

Warning

Fire Risk. Before commencing work on the vehicle fuel system, disconnect the earth (- ve) lead from the vehicle battery.

1. Disconnect vehicle battery.
2. Remove rear subframe (see Workshop Manual procedure 02.01.CA Subframe Assembly - Rear - Remove for Access and Refit).

3. Remove fuel filler cap.
4. Remove bolt filler pipe bracket to spring damper assembly.
5. Remove nut filler neck pipe and hose to body.
6. Release filler neck pipe and hose, collect sealing washer.
7. Remove filler neck pipe and hose assembly from the tank (using filler neck disconnection tool - 310 - 134) (see Fig. 2).

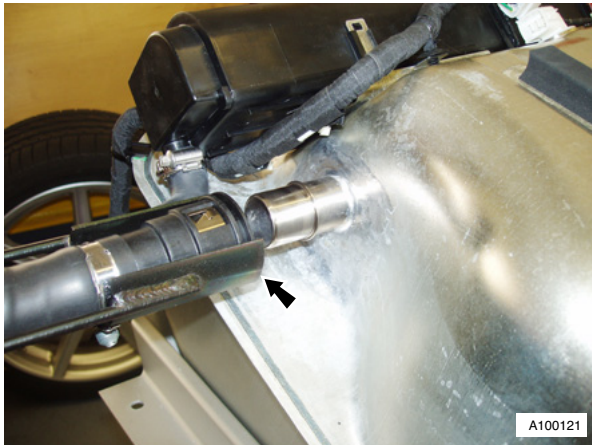


Fig. 2

8. loosen jubilee clip and disconnect hose from evaporative emission control assembly (see Fig. 3).



Fig. 3

9. Disconnect fuel tank harness from main harness (see Fig. 4).



Fig. 4

10. Remove nut and release earth lead from stud (see Fig. 5).



Fig. 5

11. Disconnect vapour purge and fuel pipe from the tank
12. Remove bolts (x4) exhaust heatshield to floor.
13. Remove nuts (x5) oil cooler pipes to body.
14. Release exhaust vacuum pipe from clips.
15. Remove vacuum hose clips from studs.
16. Remove vacuum hose clip bolts/stud (x4) tank to body.

Warning

The fuel tank is heavy. Fuel tank removal / replacement is a two person operation.

17. With assistance support tank, remove bolts (x14) tank to body and remove fuel tank (see Fig. 6).
16. Connect vehicle battery.

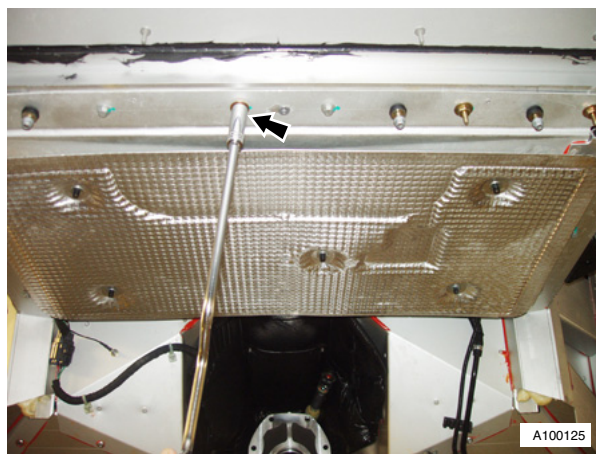


Fig. 6

Installation

Warning

The fuel tank is heavy. Fuel tank removal / replacement is a two person operation.

1. With assistance position tank and secure with bolts (x14)
2. Install vacuum hose clip to tank bolts / studs (x4)
3. install vacuum hose clips to studs and secure vacuum hose.
4. Install nuts (x5) oil cooler to body.
5. Install heatshield.
6. Connect vapour purge and fuel pipe to tank.
7. Position earth lead and secure with nut.
8. Connect fuel tank harness to main harness.
9. Connect evaporative emission control assembly hose and secure with jubilee clip.
10. install filler neck pipe and hose assembly to fuel tank.
11. Position filler neck pipe, hose assembly and sealing washer to body.
12. Install nut filler neck pipe and hose assembly to body.
13. Install bolt filler pipe bracket to spring damper assembly.
14. install fuel filler cap
15. Install rear subframe (see Workshop Manual procedure 02.01.CA Subframe Assembly - Rear - Remove for Access and Refit).

Warning

Fire Risk. Do Not connect the vehicle battery and switch on the ignition until all work on the fuel system is completed and the area is cleared of fuel contamination.

Remove contaminated material, open fuel containers and waste fuel. Fully ventilate vehicle and work area to remove all fuel fumes.

Warning

Fire Risk. Do Not start the engine until the fuel system integrity is confirmed.

Fuel Tank Sender Assembly-Renew

Repair Operation Time (ROT)

Item	Code
Fuel Tank Sender Assembly-Renew	10.01.JB

Removal

Warning

Read and follow all fuel handling instructions (at the beginning of the Fuel System section) and the fuel bowser manufacturers fuel handling documentation before commencing work on the fuel system. Clean up spillages immediately and dispose of fuel contaminated materials safely.

Warning

Fuel vapour is explosive. During the following procedure, fuel tank and fuel lines will be open. Ensure good ventilation and take all necessary precautions to eliminate fire risk.

Warning

Fire Risk. Before commencing work on the vehicle fuel system, disconnect the earth (- ve) lead from the vehicle battery.

1. Disconnect battery earth lead.
2. Release and remove luggage compartment rear floor carpet.
3. Remove luggage compartment front floor carpet retainers (x6) and remove carpet.
4. Remove fuel tank cover, clean off the sealant around the aperture.

Warning

Ensure there is adequate ventilation inside the vehicle (i.e. place the vehicle in a well ventilated area, with the windows open).

5. Remove nuts (x7) and release plate clamp and fuel tank service cover.

Caution

The following procedure is completed inside the vehicle cabin area. Extra care must be taken to ensure no fuel or fuel vapours come into contact with the vehicle interior.



6. Install the fuel tank drainage adaptor (see Fig. 1).

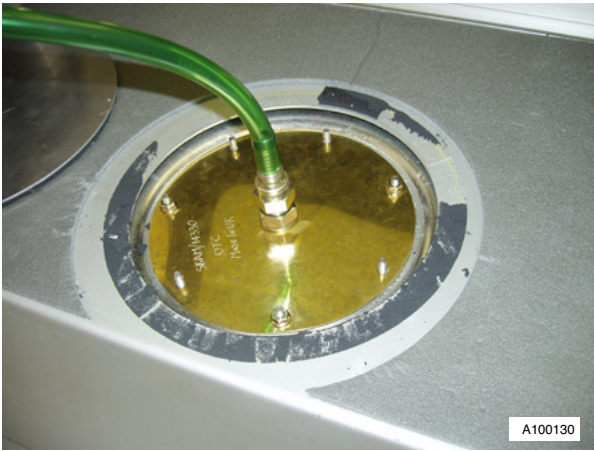


Fig. 1

7. Connect the external pipe to a fuel recovery unit. Recover the fuel in accordance with the recovery unit instructions.
8. Remove the recovery unit and fuel tank drainage adaptor.
9. Disconnect fuel tank sender unit multiplug (see Fig. 2).



Fig. 2

10. Release fuel tank sender assembly from bracket.

11. Remove fuel tank sender unit (see Fig. 3).

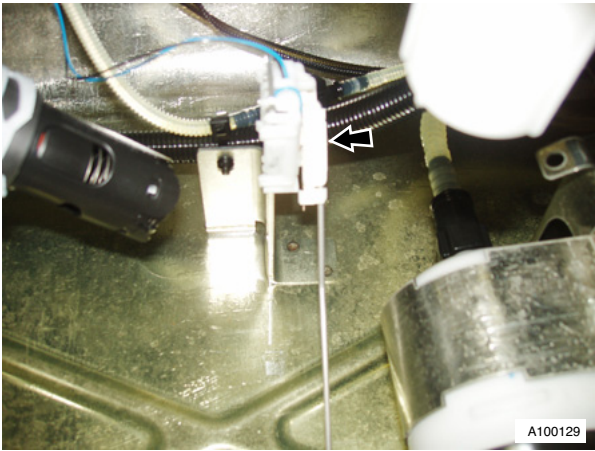


Fig. 3

Installation

1. Install sender unit, secure to bracket and connect multiplug.
2. Install nuts (x7) securing plate clamp and fuel tank service cover.
3. Install fuel tank cover with new seal.
4. Install luggage compartment front floor carpet and retainers (x6).
5. Install luggage compartment rear floor carpet.

Warning

Fire Risk. Do Not connect the vehicle battery and switch on the ignition until all work on the fuel system is completed and the area is cleared of fuel contamination.

Remove contaminated material, open fuel containers and waste fuel. Fully ventilate vehicle and work area to remove all fuel fumes.

6. Connect battery earth lead.

Warning

Fire Risk. Do Not start the engine until the fuel system integrity is confirmed.

Fuel Vapour Pipe Assembly-Renew

Repair Operation Time (ROT)	
Item	Code
Fuel Vapour Pipe Assembly-Renew	10.01.KA

Removal

Warning

Read and follow all fuel handling instructions (at the beginning of the Fuel System section) and the fuel bowser manufacturers fuel handling documentation before commencing work on the fuel system. Clean up spillages immediately and dispose of fuel contaminated materials safely.

1. Battery isolation switch off.

- Remove RH front wheel arch liner (see Workshop Manual procedure 01.02.GB Wheel Arch Liner - Front - RH - Renew).

Warning

Fuel vapour is explosive. During the following procedure, fuel tank and fuel lines will be open. Ensure good ventilation and take all necessary precautions to eliminate fire risk.

- Disconnect quick fit connector fuel vapour pipe to tank.
- Release fuel vapour pipe from fuel line clips (x4).
- Disconnect quick fit connector fuel vapour pipe assembly to purge valve T-piece.
- Remove fuel vapour pipe.

Installation

- Install fuel vapour pipe and connect to purge valve T piece.
- Position fuel vapour pipe in vapour line clips.
- Connect fuel vapour pipe to fuel tank.
- Install RH front wheel arch liner (see Workshop Manual procedure 01.02.GB Wheel Arch Liner - Front - RH - Renew).
- Battery isolation switch on.

Warning

Fire Risk. Do Not start the engine until the fuel system integrity is confirmed.

Fuel Supply and Vapour Pipe Assembly-Renew

Repair Operation Time (ROT)	
Item	Code
Fuel Supply and Vapour Pipe Assembly-Renew	10.01.KB

Removal**Warning**

Read and follow all fuel handling instructions (at the beginning of the Fuel System section) and the fuel bowser manufacturers fuel handling documentation before commencing work on the fuel system. Clean up spillages immediately and dispose of fuel contaminated materials safely.

- Depressurise fuel system (see Workshop Manual procedure 10.01.EK Fuel System - Depressurise).

Warning

Fire Risk. Before commencing work on the vehicle fuel system, disconnect the earth (- ve) lead from the vehicle battery.

- Disconnect vehicle battery.

- Remove RH front wheel arch liner (see Workshop Manual procedure 01.02.GB Wheel Arch Liner - Front - RH - Renew).

Warning

Fuel vapour is explosive. During the following procedure, fuel tank and fuel lines will be open. Ensure good ventilation and take all necessary precautions to eliminate fire risk.

- Position container to collect spillage from fuel supply pipe.
- Disconnect quick fit connector fuel supply pipe to tank
- Release pipe assembly from fuel line clips (x3).
- Disconnect quick fit connector fuel supply to manifold supply (fuel rail) and remove pipe assembly.

Installation

- Connect fuel supply pipe to manifold supply pipe.
- Position fuel line in fuel line clips (x3).
- Connect fuel supply pipe to tank.
- Install RH front wheel arch liner (see Workshop Manual procedure 01.02.GB Wheel Arch Liner - Front - RH - Renew).

Warning

Fire Risk. Do Not connect the vehicle battery and switch on the ignition until all work on the fuel system is completed and the area is cleared of fuel contamination.

Remove contaminated material, open fuel containers and waste fuel. Fully ventilate vehicle and work area to remove all fuel fumes.

- Connect vehicle battery.

Warning

Fire Risk. Do Not start the engine until the fuel system integrity is confirmed.

Manifold Supply Fuel Pipe Assembly-Renew

Repair Operation Time (ROT)	
Item	Code
Manifold Supply Fuel Pipe Assembly-Renew	10.01.KC

Removal**Warning**

Read and follow all fuel handling instructions (at the beginning of the Fuel System section) and the fuel bowser manufacturers fuel handling documentation before commencing work on the fuel system. Clean up spillages immediately and dispose of fuel contaminated materials safely.

- Depressurise fuel system (see Workshop Manual procedure 10.01.EK Fuel System - Depressurise).

Warning

Fire Risk. Before commencing work on the vehicle fuel system, disconnect the earth (- ve) lead from the vehicle battery.



2. Disconnect vehicle battery
3. Remove RH wheel arch liner (see Workshop Manual procedure 01.02.GB Wheel Arch Liner - Front - RH - Renew).
4. Position container to collect fuel spillage.
5. Release fuel supply and vapour pipe from pipe clips (3).
6. Disconnect quick fit connector manifold supply pipe to fuel supply and vapour pipe.
7. Disconnect manifold supply pipe from fuel rail.
8. Release manifold supply pipe from pipe clips (x3) and remove pipe.

Installation

1. Position manifold supply pipe and secure in clips (x3).
2. Connect manifold supply pipe to fuel rail.
3. Connect manifold supply pipe to fuel supply and vapour pipe.
4. Secure fuel supply and vapour pipe in clips (x3).
5. Install wheel arch liner (see Workshop Manual procedure 01.02.GB Wheel Arch Liner - Front - RH - Renew).

Warning

Fire Risk. Do Not connect the vehicle battery and switch on the ignition until all work on the fuel system is completed and the area is cleared of fuel contamination.

Remove contaminated material, open fuel containers and waste fuel. Fully ventilate vehicle and work area to remove all fuel fumes.

6. Connect vehicle battery.

Warning

Fire Risk. Do Not start the engine until the fuel system integrity is confirmed.