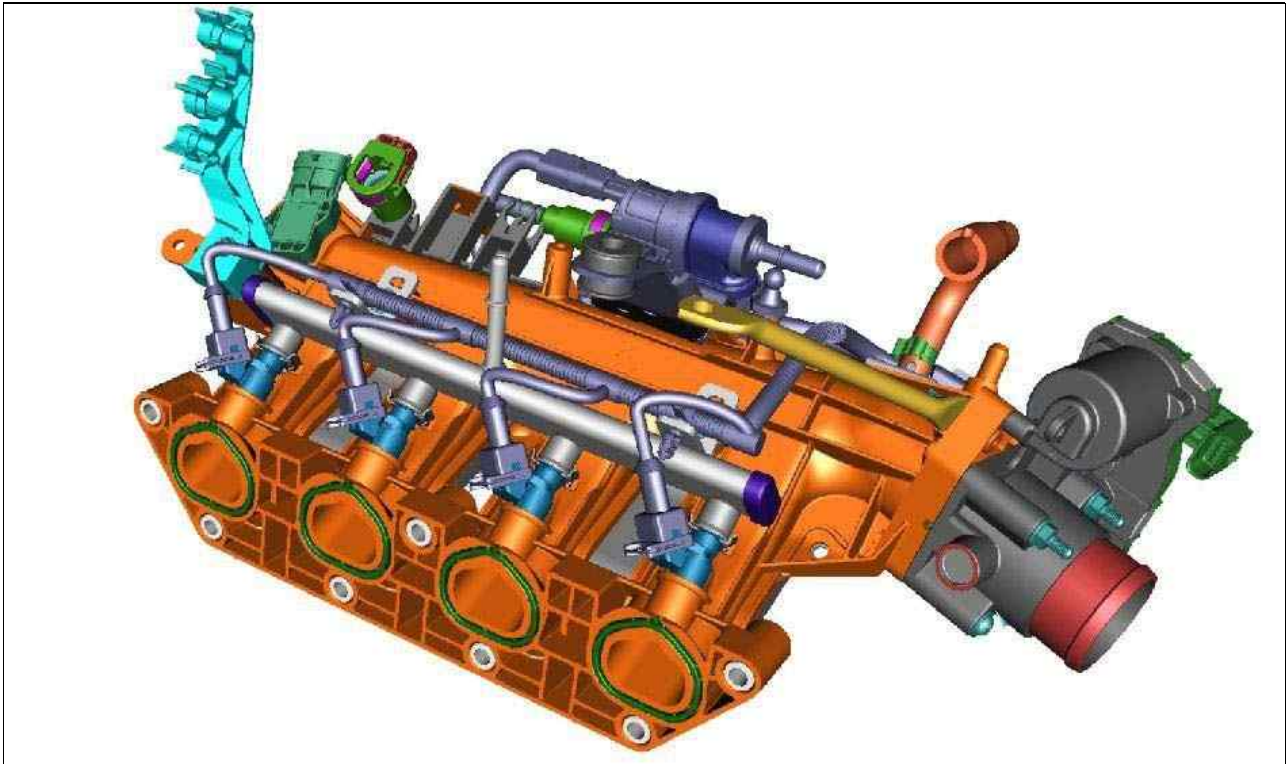


Service Manual: FUEL SYSTEM

FUEL DELIVERY > DESCRIPTION AND OPERATION > 1.4L MULTIAIR TURBO

Fig 1: Fuel Supply System Components



Courtesy of CHRYSLER GROUP, LLC

The fuel supply system provides fuel at the correct operating pressure to the injector assembly.

The system consists of:

- A fuel pump/level gauge unit submerged in the tank
- A delivery pipe
- An injector rail
- A recirculation pipe

The electric pump unit consists of:

- Fuel pump
- Fuel filter
- Maximum pressure regulator
- Fuel level sensor

The fuel pump is controlled by the Engine Management Module through a special supply relay.

The fuel filter is fitted inside the pump unit and does not require maintenance.

A maximum pressure regulator is built into the pump unit between the pump and the supply pipe; this ensures fuel recirculation for safety reasons if the pressure exceeds 6.9 -9.8 bar.

A fuel level sensor is also fitted in the pump unit; this is connected directly to the Body Computer Module.

The fuel supply pipe connects the tank with the injector-carrier rail; the pipe is connected through quick couplings.

The injector rail ensures the supply of fuel to the injectors and is made from metal for turbocharged versions:

- Inlet connector, connected to the delivery pipe

Approx. fuel pressure value:

- 3.5 bar

FUEL DELIVERY > SPECIFICATIONS > TORQUE SPECIFICATIONS

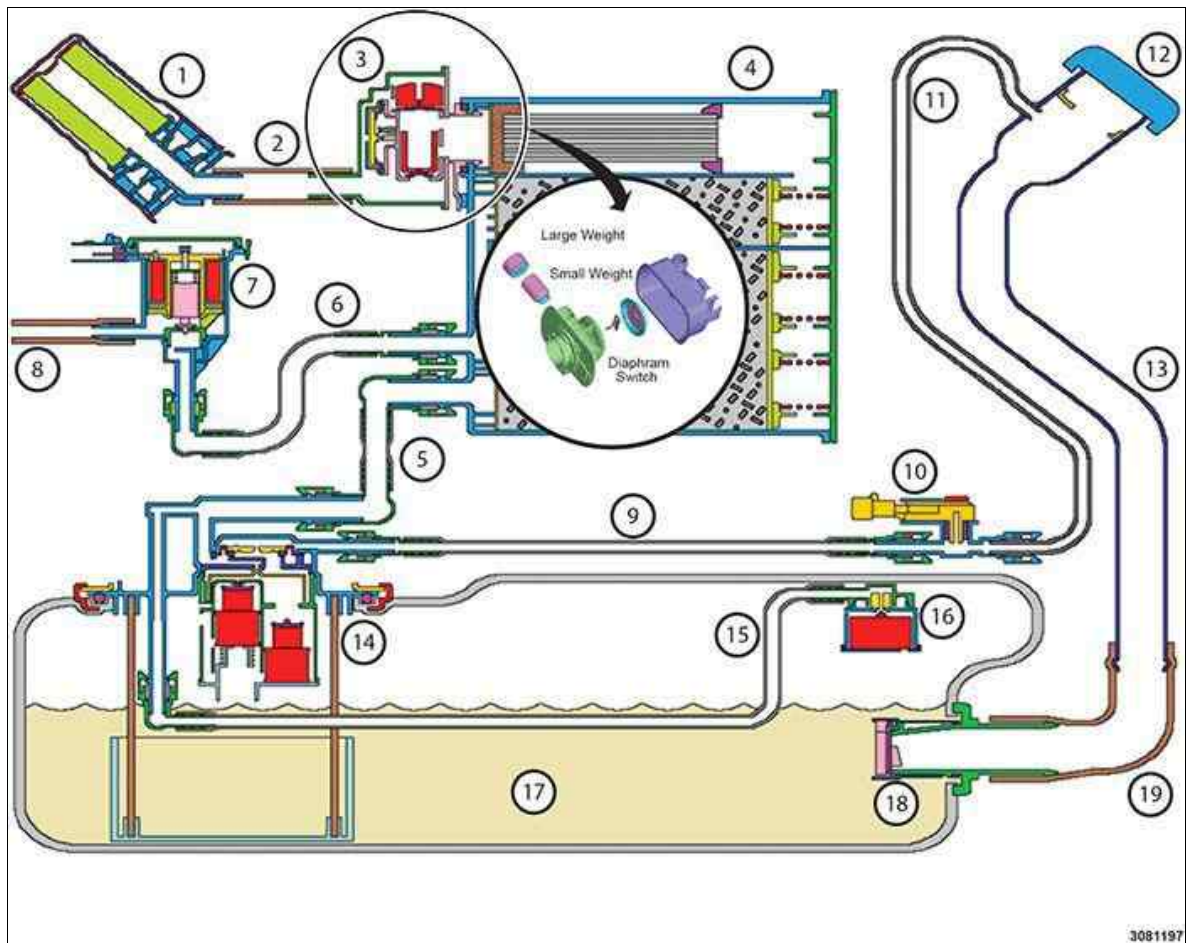
TORQUE SPECIFICATIONS

DESCRIPTION	N.m	Ft. Lbs.	In. Lbs.	NEW FASTENER*
Fuel Delivery Pipe to Fuel Injection Pump	23	17	-	
Fuel Pipe to Fuel Rail	19	14	-	
Fuel Rail Pressure Sensor	70	52	-	
Fuel Tank Strap Bolts	35	26	-	
Injection Pump Pulley Nut	50	37	-	
Injection Pump Retaining Nuts	25	18	-	
*NEW FASTENER: Do not reuse these fasteners. If removed, a new fastener must be installed and tightened to specifications.				

FUEL DELIVERY > DIAGNOSIS AND TESTING > DIAGNOSIS AND TESTING - HARD TO FILL WITH FUEL

1. CHECK FOR AN OBSTRUCTED RECIRCULATION TUBE NEAR THE FUEL TANK

Fig 1: EVAP System Component Identification & Location



Courtesy of CHRYSLER GROUP, LLC

CALL OUT	DESCRIPTION
1	Filter - Fresh Air Inlet
2	Filter Hose (Filter to ESIM)
3	Evaporative System Integrity Monitor (ESIM)
4	Evaporative Canister
5	Canister Tube (Fuel Tank to Canister)
6	Purge Tube (Purge Solenoid to Canister)
7	Purge Solenoid
8	Manifold Hose (Purge Solenoid to Engine Manifold)
9	Recirculation Tube (Fuel Tank to FTPS)
10	Fuel Tank Pressure Sensor (FTPS)
11	Recirculation Tube (metal portion) (FTPS to Fuel Filler Tube)

12	Gas Cap or Cap-less Refueling Unit (if equipped)
13	Fuel Filler Tube
14	Fill Limit Vent Valve (FLVV) / Control Valve (CV)
15	GVV Tube (GVV to MFCV)
16	Grade Vent Valve (GVV)
17	Fuel Tank
18	Inlet Check Valve (ICV)
19	Hose - Fuel Filler Tube to ICV

We are all familiar with the handle we squeeze to get fuel to exit the nozzle. The shut off is created by an aspirator or sensing port located underneath the end of the nozzle and when fuel covers the sensing port, the nozzle shuts off.

When the fuel pump nozzle is placed in the filler cup and triggered on, fuel flows down the fill pipe. Air from the outside of the filler cup is also drawn into the filler cup due to vacuum created by the fuel flow. The air and fuel flow into the fuel tank through the inlet check valve (ICV), the valve that is welded to the fuel tank and creates the connection between the fill hose and fuel tank shell. Fuel displaces the vapor in the fuel tank, fuel vapor and the entrained air from the outside flow out of the fuel tank through the Fill Limit Vent Valve (FLVV) or a Control Valve (CV) if so equipped. The Control Valve has an internal component (diaphragm) that communicates with atmosphere through the recirculation line when the fuel cap is removed prior to refueling. The recirculation line must be free of debris, liquid or any other type of blockage in order to create the communication link. The confirmation of this link will permit the diaphragm to rise off of the main venting orifice allowing fuel vapor to exit the fuel tank.

That fuel vapor flows from the FLVV / CV through the canister line and into the evaporative canister where the hydrocarbons attach to the charcoal in the evaporative canister and fresh air exits the evaporative canister. The fresh air travels past the Evaporative System Integrity Monitor (ESIM) and through the air line and exiting the fuel system through the fresh air filter. Once the fuel level reaches full, there is a refueling float in the FLVV / CV which closes the main vapor venting orifice. The closure of this orifice prevents fuel vapor from exiting the fuel tank. The pressure in the fuel tank rises rapidly and fuel fills the filler pipe. When the fuel hits the aspirator valve in the fuel fill nozzle the fuel flow is shut off.

Every element that fuel and vapor flow through results in additional back pressure during refueling. When functioning properly, the back pressure is low enough that the fuel in the filler pipe does not rise high enough to cover the sensing port and shut off the refueling nozzle.

When a hard to fill condition is present, something has happened to cause an increase in system back pressure. The back pressure rises to the point where the fuel height in the filler pipe covers the aspirator and shuts off the fuel nozzle, or the customer can only get fuel into the tank at a very slow rate due to the additional back pressure restriction.

The "Hard to Fill" diagnostic procedure focuses on trying to efficiently identify what has created the increase in back pressure creating the hard to fill condition.

There can also be problems with fuel station nozzles and operator procedure, such as not putting the nozzle into the filler pipe properly. This can result in a hard to fill condition where constant fuel flow is not able to be established. As the customer gets used to their vehicle, the owner typically figures out the proper nozzle insertion. An issue with the fuel pump nozzle would

be intermittent when they pull up to a pump with a bad nozzle, unless they always refuel at the same station / same pump and it happens to have a bad nozzle.

FUEL DELIVERY > DIAGNOSIS AND TESTING > DIAGNOSIS AND TESTING - HARD TO FILL WITH FUEL > DIAGNOSTIC PROCEDURE

1. Verbally confirm customer complaint.

1. Has the vehicle always had this issue, or is it recent?
2. Does it occur on all fill ups or is it intermittent?
3. Is the issue only on high flow and is it okay on low flow of the fuel pump?

2. Scan and record any fuel related P Codes.

3. **Line Check** - Put vehicle up on hoist and examine visually, by feel or mirror to look for a kink, bend, or twist condition in the Fill Hose, Air Line, Recirc Line, or Canister Line. Check that the Air Line is connected to both the ESIM and the Air Filter.

1. Were any problems found?
2. **No** - Continue to Step 4
3. **Yes** - For a disconnected Air Line, replace the ESIM and Canister and proceed to Step 10. For a kink, bend or twist, straighten or replace as necessary, document on the repair order, and proceed to Step 10 - Fuel Fill Verification

4. **Air Filter Check** - Disconnect the air filter and tap it on a table to determine if the air filter is dirty or plugged.

1. Were any problems found?
2. **No** - Continue to Step 5
3. **Yes** - Replace Air Filter. Remove the gas cap and tap it on the table to see if it is dirty and replace it if it is. Proceed to Step 10 - Fuel Fill Verification

5. **Recirculation Line Check** - Remove the recirc line from the fill neck and remove the large fill hose at the fuel tank. The gas cap should still be on. Blow air into the recirc line and air with no contamination should flow freely out of the fill large fill hose.

1. Were any problems found?
2. **No** - Continue to Step 6
3. **Yes** - Replace fuel filler neck and proceed to Step 10 - Fuel Fill Verification

6. **Fuel Tank Inlet Check Valve (ICV) Check** - The fill hose should already be removed from the ICV. Visually look inside the ICV for an obstruction. If obstructed, remove the object if possible. Using a long thin object (not a screwdriver) that will not damage the seal on the check valve or the antisiphon features inside the ICV, push the object into the ICV to verify that it is free of obstruction. There is a spring behind it, so there will be a little resistance, but it should move freely and not be sticky.

1. Were any problems found?
 2. **No** - Continue to Step 7
 3. **Yes** - If an obstruction was found , but the ICV moves freely proceed to Step 10 Fuel Fill Verification. If the ICV does not move freely, replace the fuel tank and proceed to Step 10 - Fuel Fill Verification
7. Reassemble the components removed in earlier steps.
8. **Canister Weight Check** - Remove the heat shield and take the lines off the canister, disconnect the electrical and take the canister and ESIM assembly off the tank. Use a weight scale such as one for shipping parts or mail to weigh the assembly. A canister on a 26 gallon tank assembly should weigh less than 2700 grams (5.9 pounds). A canister on a 32 gallon assembly should weigh less than 2500 grams (5.5 pounds).
1. Were any problems found?
 2. **No** - Continue to Step 9
 3. **Yes** - Look into the ESIM ports to see if the ESIM floats have any appearance of rust or dirt. If the ESIM float is clean, replace the canister. If the ESIM appears to have rust or dirt, replace both Canister and ESIM. Proceed to Step 10 - Fuel Fill Verification
9. Nothing found in Step 1 through 7, reassemble and components removed in earlier steps and proceed to step 11.
10. Fuel Tank Refuel Check with Problem Identified and Repaired - Take the vehicle to the gas station and determine if it fills cleanly.
1. Fuel tank fills clean - Problem found and complete
 2. Still Hard to Fill - Return above to the step below where you found an issue and continue diagnostic.
11. **EVAP System Check** - Disconnect the vapor line on the fuel tank control valve (CV) Take the vehicle to the gas station and determine if it fills cleanly.
1. Fuel tank fills clean - Replace the canister and ESIM assembly and refuel to verify problem solved.
 2. Still Hard to Fill - Move to Step 12
12. **Recirculation Check** - Reconnect canister at the control valve and disconnect the recirc line at the control valve. Take the vehicle to the gas station and determine if it fills cleanly
1. Fuel tank fills clean - Replace the recirc line and the fuel filler pipe and refuel to verify problem is solved
 2. Still Hard to Fill - Replace the fuel tank and refuel to verify the problem is solved.

FUEL DELIVERY > DIAGNOSIS AND TESTING > DIESEL FUEL SYSTEM PRELIMINARY TESTS

**NOTE:**

The fuel system is highly sensitive.

**NOTE:**

All work must be carried out with great cleanliness and care.

**NOTE:**

Any air in the system can damage the high pressure fuel pump. Therefore, the vehicle must never be operated with the fuel tank empty.

CHECK TO BE MADE	RESOLUTION
Verify that the tank contains the right type of fuel.	Drain and properly dispose of fuel tank contents and clean the fuel tank.
There must be greater than 5 liters of fuel in the tank.	Add the necessary amount of fuel.
Check for leaks in the fuel supply: Check hoses and tubes connected to detect any obstruction, damage, etc.; Check that there are no points of failure / scratches on the fuel lines or fuel injection; Check connections of fuel lines (quick connectors); Check the status of the fasteners. Verify that the connections and seals are fitted correctly. Check there is no obstructions, leaks, air or water in the fuel system.	Repair or replace components as necessary.
Verify the tightening torque of the countersunk screws	Properly tighten the components
Check the fuel filter.	Replace the fuel filter. Refer to FILTER, FUEL, REMOVAL AND INSTALLATION .

FUEL DELIVERY > STANDARD PROCEDURE > FUEL CUTOFF RESET

Resetting the of the fuel cutoff feature may be necessary following an impact of the vehicle. An event that cuts off the fuel flow from the fuel tank is indicated by a warning indicator in the instrument cluster.

CHECK TO BE MADE	RESOLUTION
Restore fuel supply Perform the following procedure to reset the fuel cutoff feature: - Ignition key to "OFF" (starting condition) - Ignition key to the "ON" position - Activate the right turn indicator - Turn off right turn indicator - Activate the left turn indicator - Turn off left turn indicator - Activate on right turn indicator - Turn off right turn indicator - Activate the left turn indicator - Turn off left turn indicator - Ignition key to the "OFF" position In the presence of control units in error continue as indicated by the diagnostic tool.	Repair the wiring between multifunction switch and Body Control Module (BCM). If the wiring is OK replace multifunction switch. Refer to SWITCH, MULTIFUNCTION, REMOVAL AND INSTALLATION .

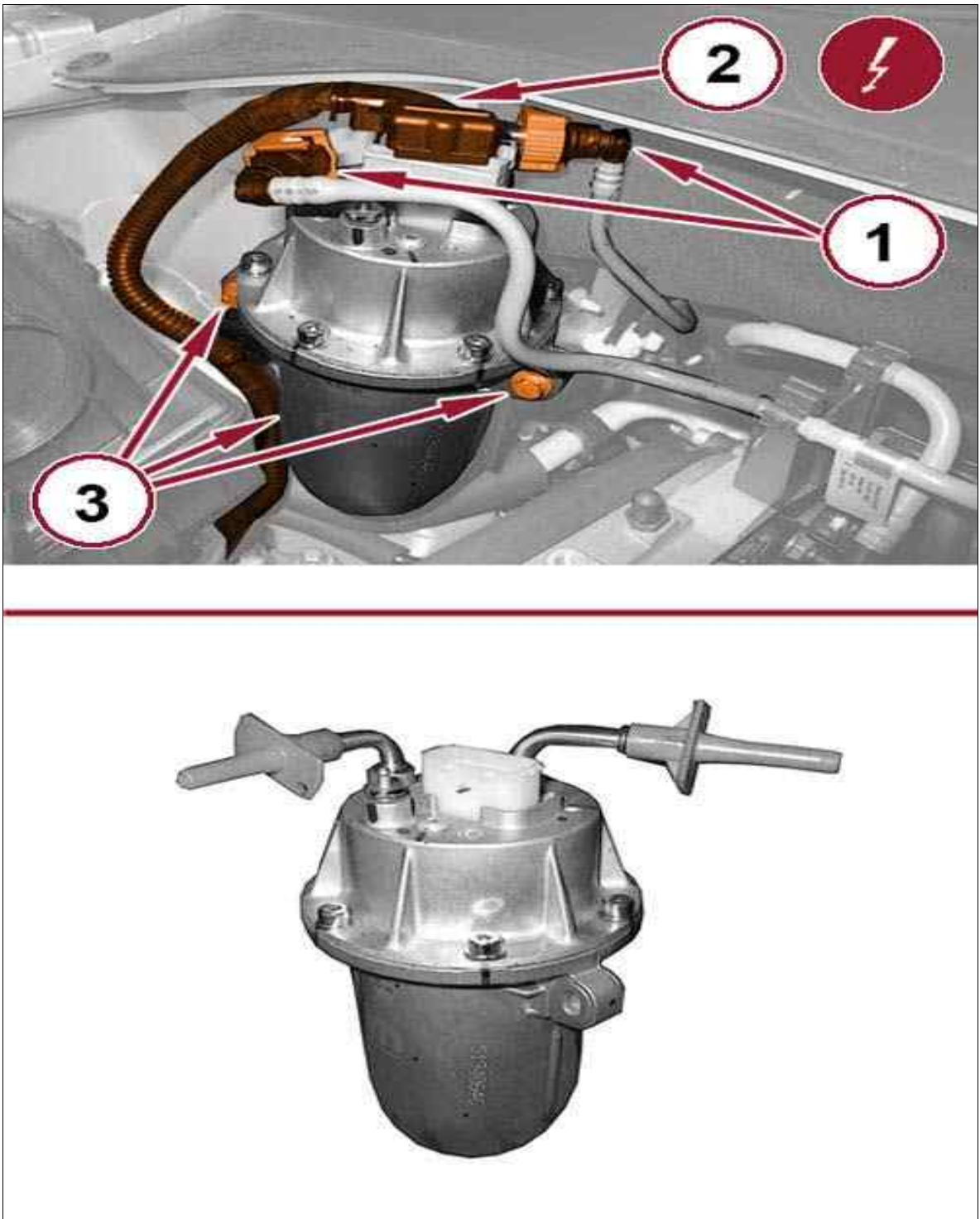
FUEL DELIVERY > SPECIAL TOOLS > SPECIAL TOOLS

Tool (EMEA)	Tool (NAFTA)	Name	Function
2000002100	9340	Loosen / tighten the fuel pump mounting ring	
* Tool not available for NAFTA. Use a commercially available tool or contact Mopar Essential Tools to order the custom EMEA tool.			

FUEL DELIVERY > FILTER, FUEL > REMOVAL AND INSTALLATION > 1.6L/2.0L > REMOVAL

1. Open the cover of the fuse box in the engine compartment and remove the fuse F21 (15 A) of the fuel pump.
2. Start the engine and run until the fuel in the lines is depleted.
3. Install the fuse removed earlier and close the fuse box cover.
4. Remove the engine cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .

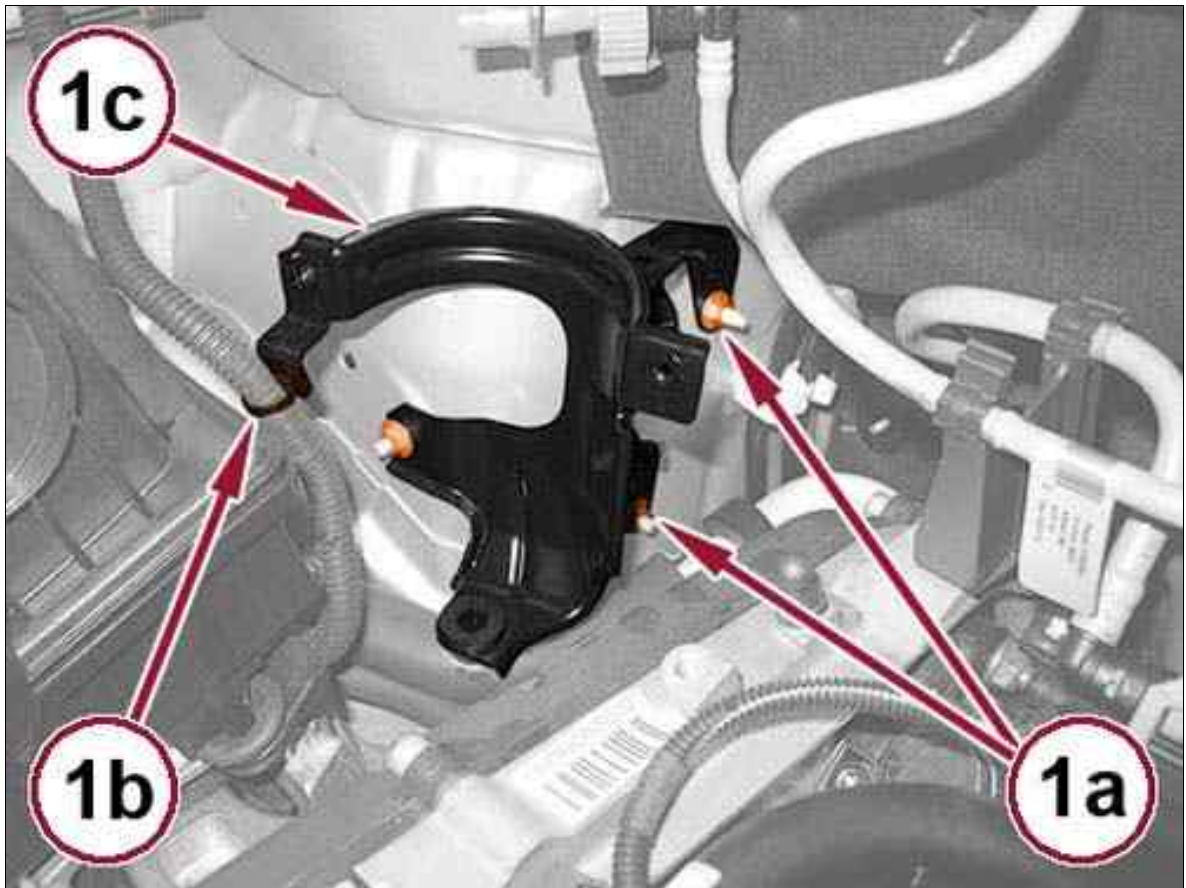
Fig 1: Fuel Filter Couplings, Screws & Sensor



Courtesy of CHRYSLER GROUP, LLC

5. Disconnect the flow and return pipe quick release couplings from the fuel filter (1).
6. Disconnect the electrical connection of the temperature and the water in the fuel filter sensor (2).
7. Remove the screws and remove the fuel filter (3).

Fig 2: Fuel Filter Support Bracket, Clip & Nuts



Courtesy of CHRYSLER GROUP, LLC

8. If required, loosen the nuts (1a), open the retaining clip wiring (1b) and remove the fuel filter support bracket (1c).

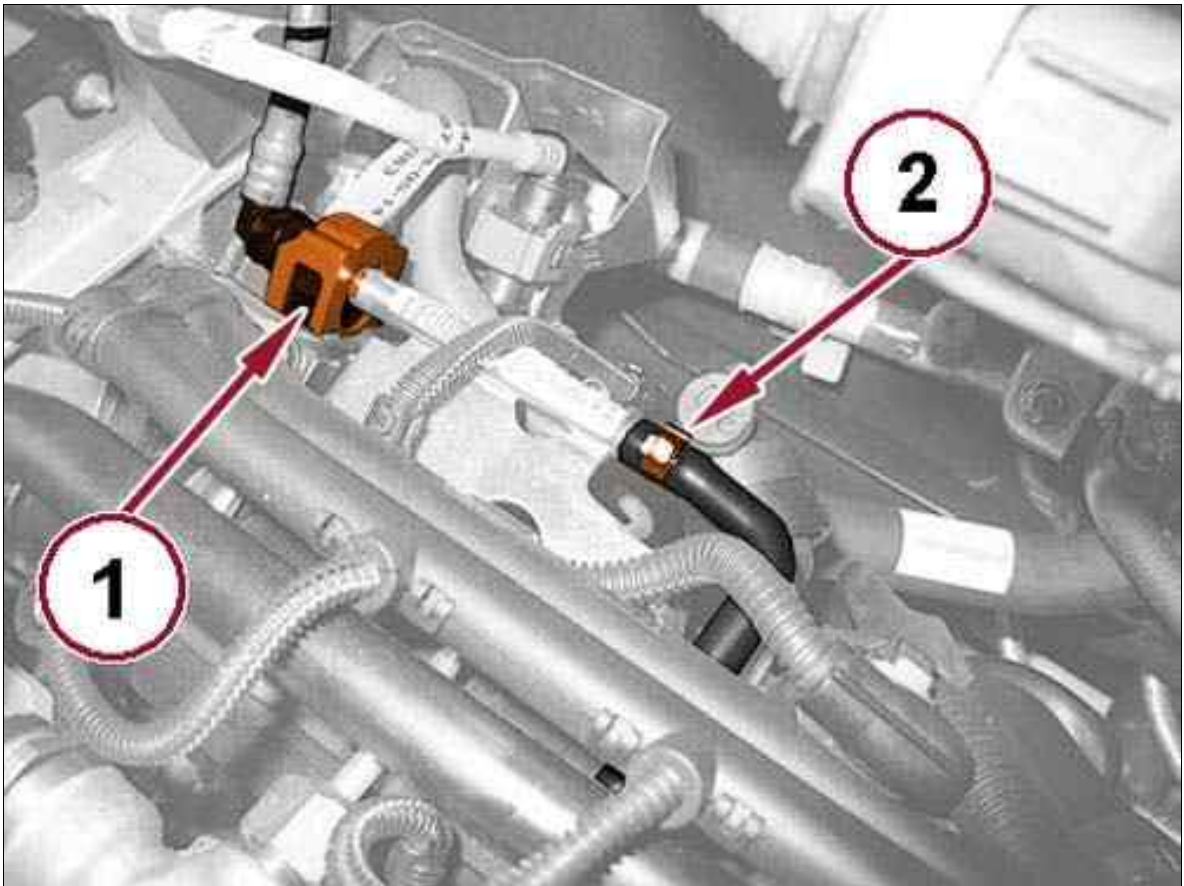
FUEL DELIVERY > FILTER, FUEL > REMOVAL AND INSTALLATION > 1.6L/2.0L > INSTALLATION

1. Install the fuel filter bracket support, close the wiring retainer clip and securely tighten the mounting nuts.
2. Position the fuel filter into the bracket and securely tighten the mounting nuts.
3. Connect the electrical connection to the temperature and water in fuel sensor.
4. Connect the flow and return pipe quick release couplings to the fuel filter.
5. Install the engine cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .

FUEL DELIVERY > PUMP, FUEL INJECTION > REMOVAL AND INSTALLATION > 1.6L/2.0L > REMOVAL

1. Open the cover of the fuse box in the engine compartment and remove the fuse F21 (15 A) of the fuel pump.
2. Start the engine and run until the fuel in the lines is depleted.
3. Install the fuse removed earlier and close the fuse box cover.
4. Place the vehicle on a lift.
5. Remove the right front splash shield. Refer to SHIELD, SPLASH, FRONT WHEELHOUSE, REMOVAL AND INSTALLATION .
6. Remove the belly pan. Refer to BELLY PAN, REMOVAL AND INSTALLATION or BELLY PAN, SIDE, REMOVAL AND INSTALLATION .
7. Drain the engine coolant. Refer to STANDARD PROCEDURE .
8. Remove the air cleaner body. .
9. Remove the fuel filter. Refer to FILTER, FUEL, REMOVAL AND INSTALLATION .

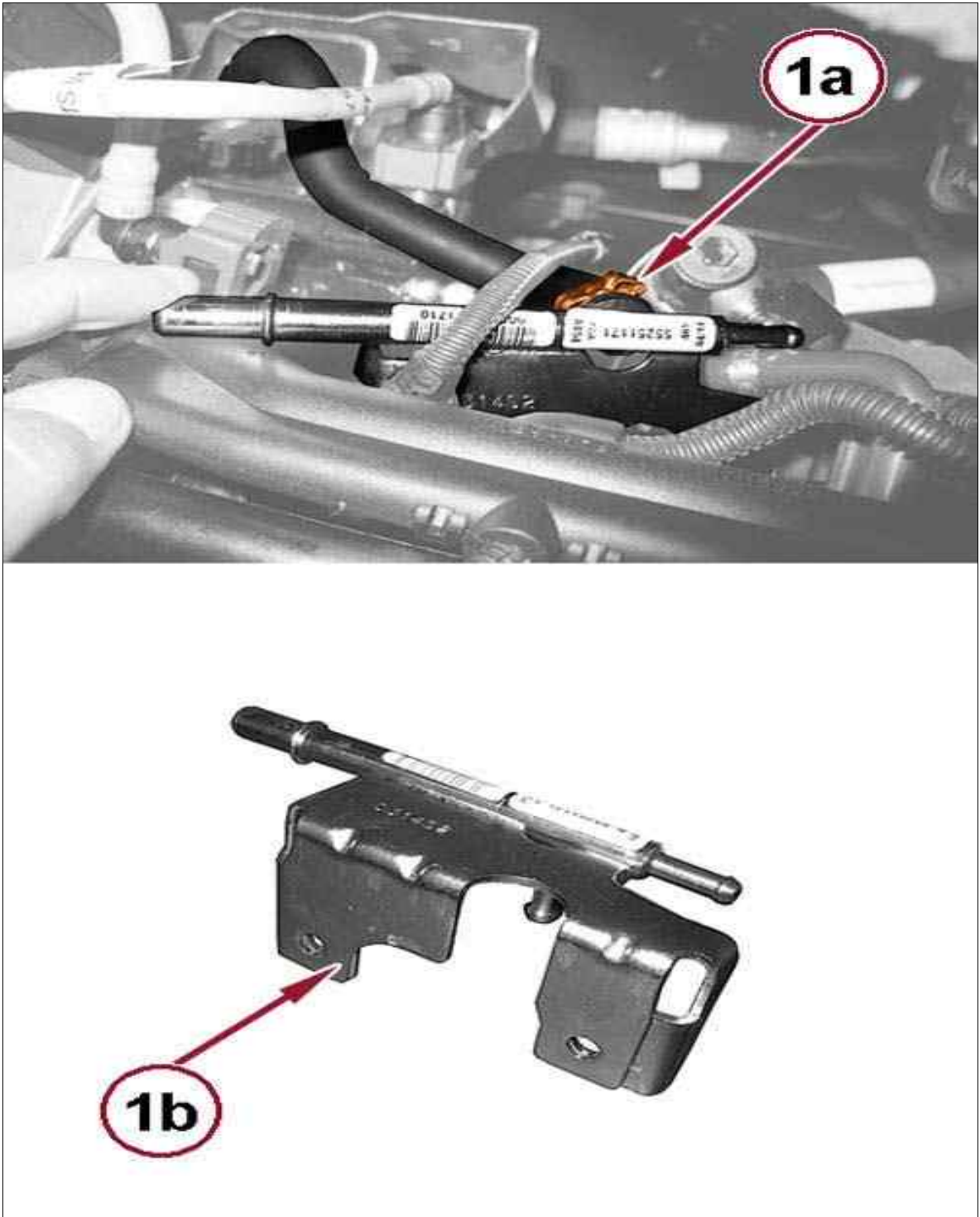
Fig 1: Injectors Fuel Return Pipe & Tank Fuel Return Pipe



Courtesy of CHRYSLER GROUP, LLC

10. Disconnect the quick coupling of the fuel return pipe to the tank (1).
11. Loosen the hose clamp and disconnect the fuel return pipe from the injectors (2).

Fig 2: Fuel Return Manifold & Clamp



Courtesy of CHRYSLER GROUP, LLC

12. Loosen the screws and move the fuel return manifold to side.

13. loosen clamp (1a) and remove the fuel return manifold (1b).

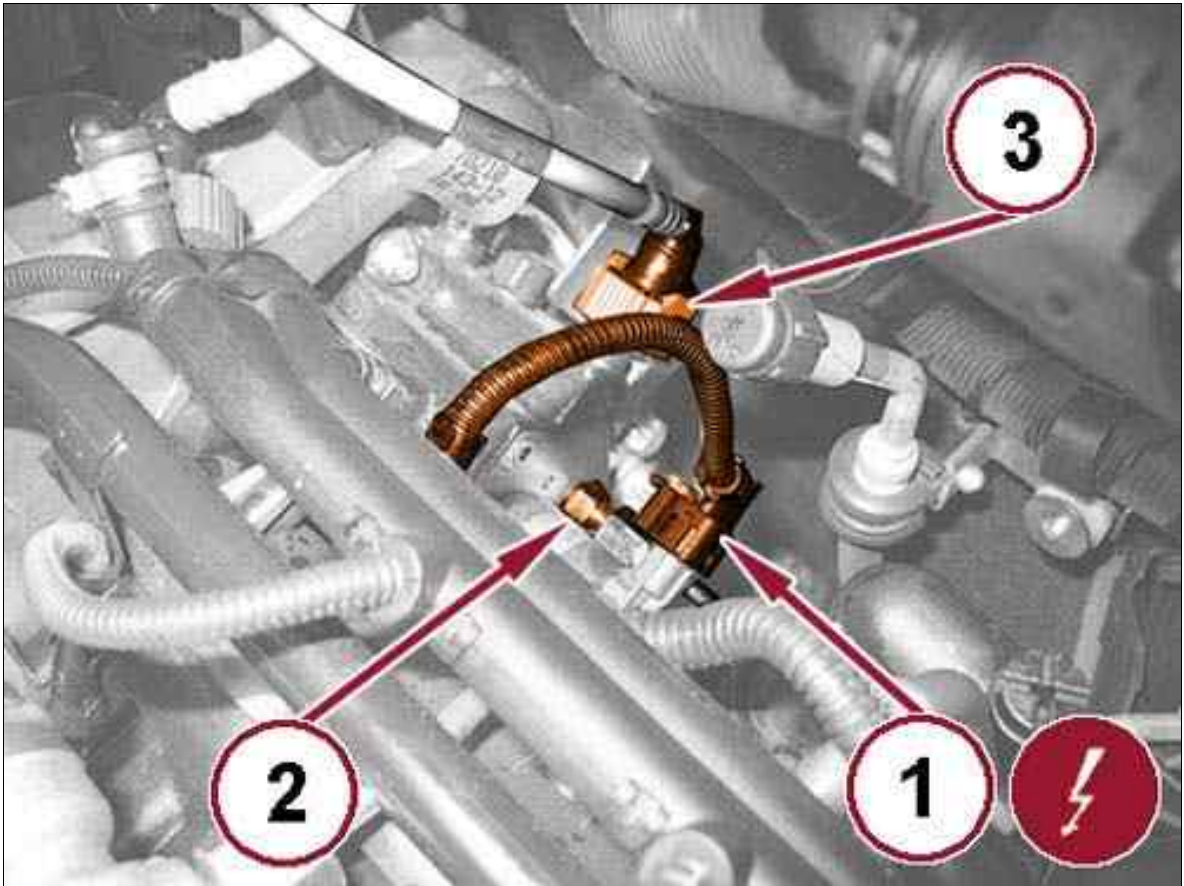
Fig 3: Timing Cover & Screws



Courtesy of CHRYSLER GROUP, LLC

14. Unscrew the screws (1a) and remove the timing cover (1b).

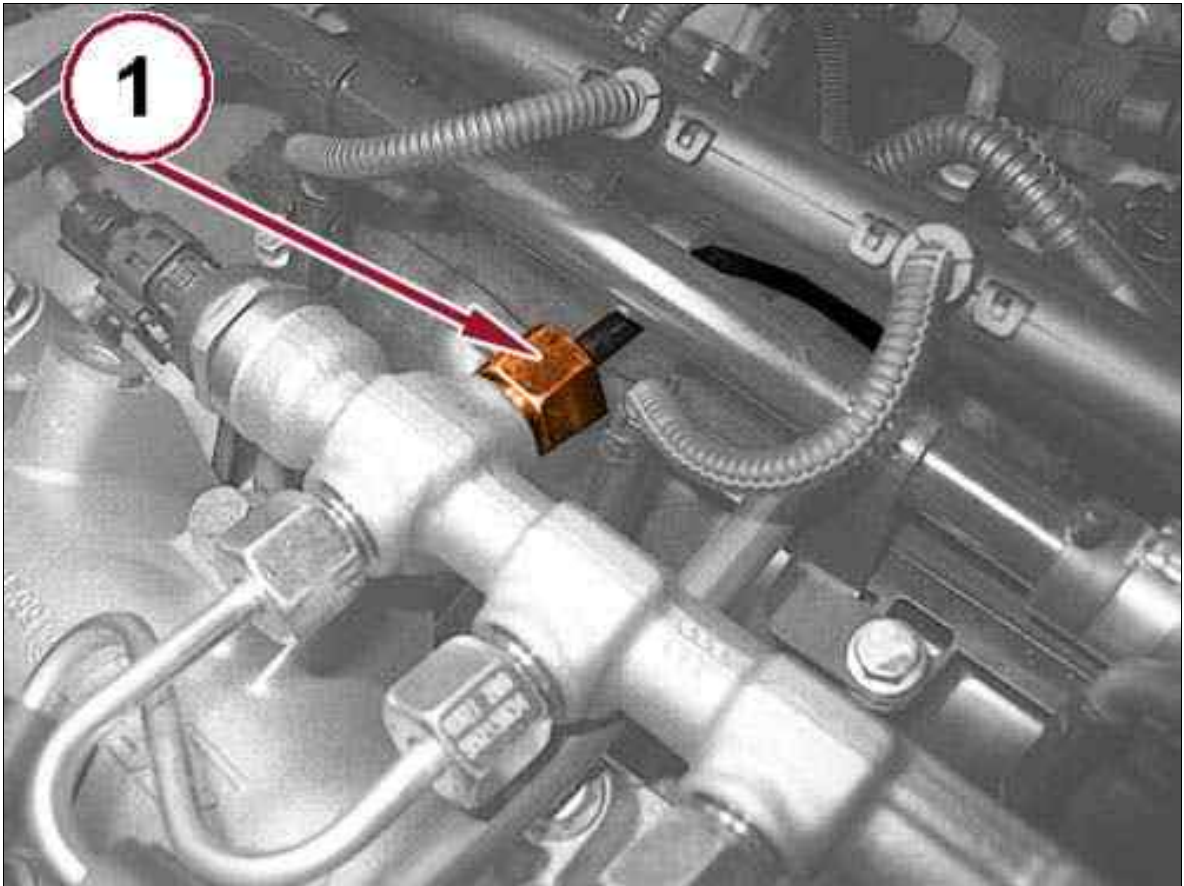
Fig 4: Fuel Pressure Regulator, Fuel Injection Pump & Coupling



Courtesy of CHRYSLER GROUP, LLC

15. Disconnect the electrical connection of the fuel pressure regulator (1).
16. Unscrew the fuel delivery pipe fitting from fuel injection pump (2).
17. Disconnect the quick coupling of fuel supply pipe to the pressure pump and remove it (3).

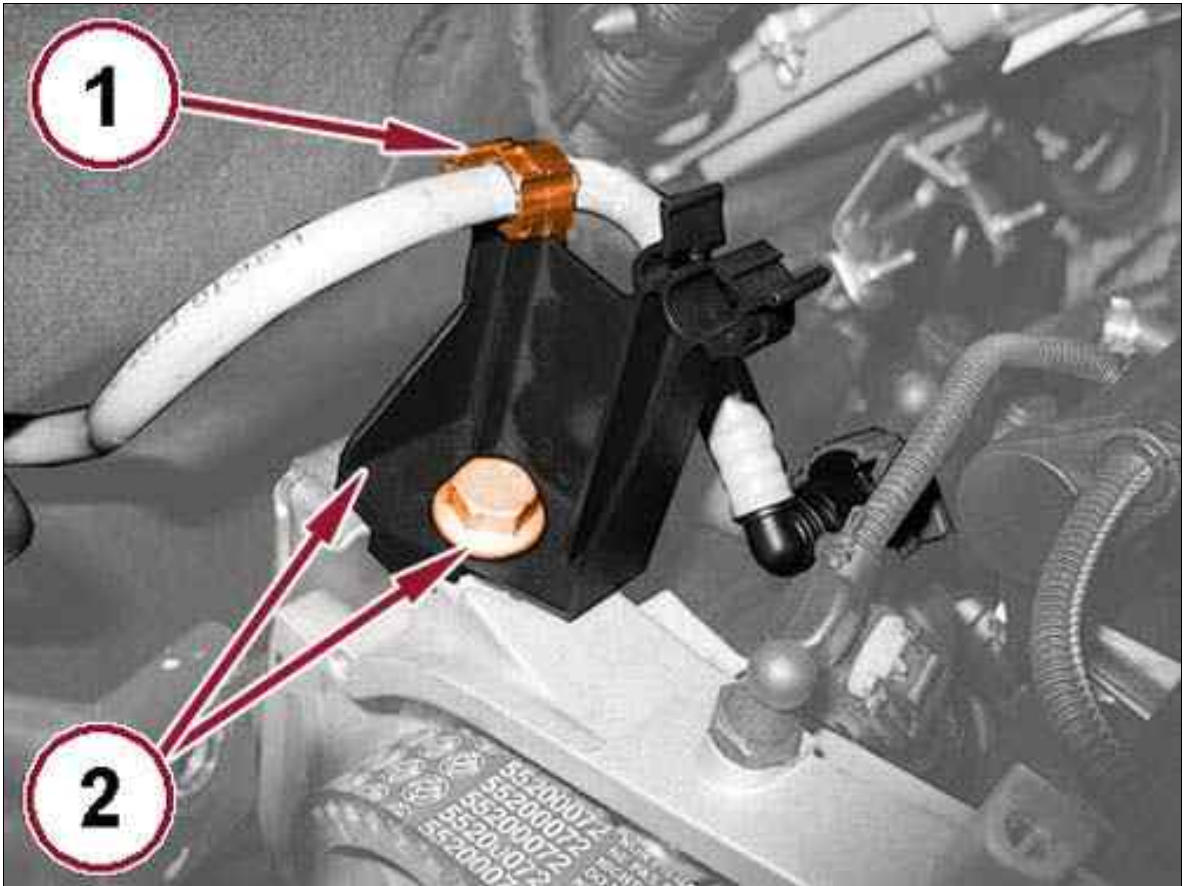
Fig 5: Fuel Manifold Delivery Pipe



Courtesy of CHRYSLER GROUP, LLC

18. Unscrew the fitting and remove the fuel delivery pipe from the fuel manifold (1).

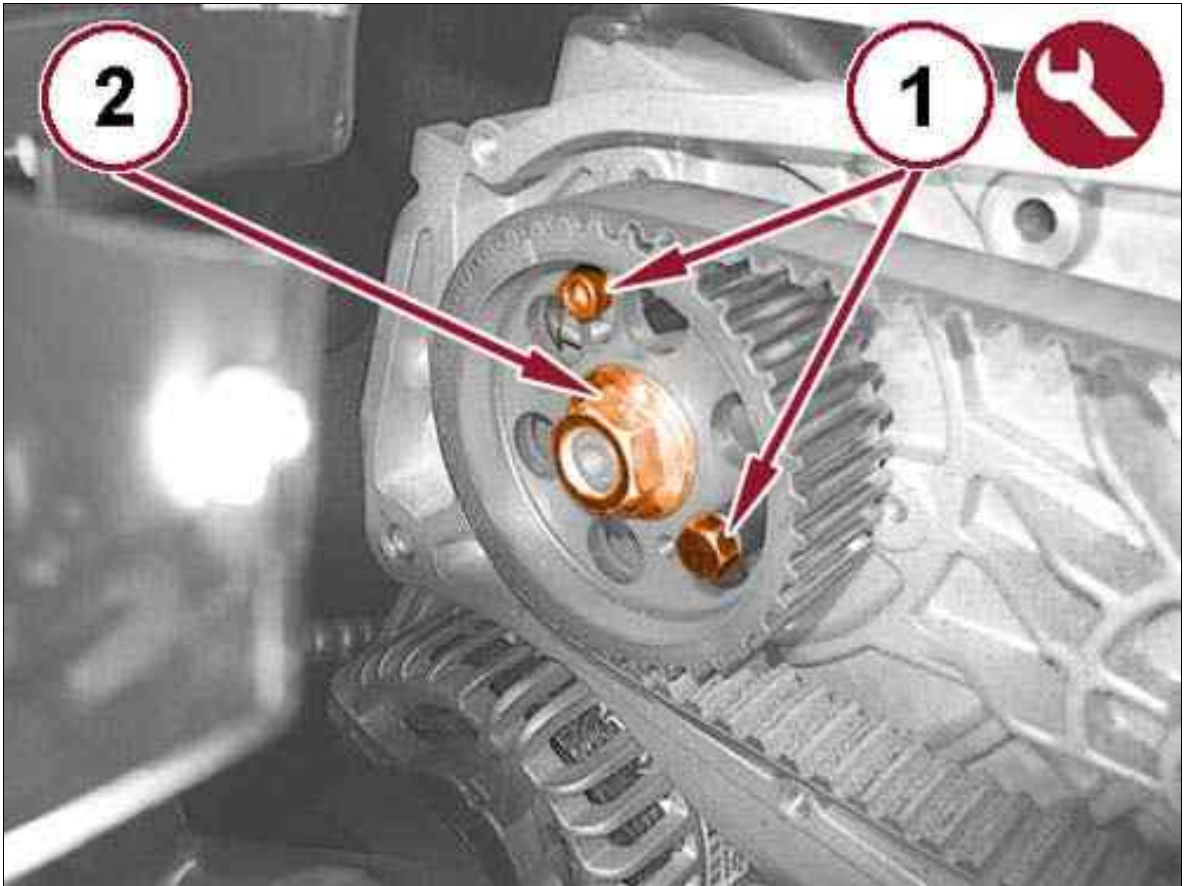
Fig 6: Fuel Pipe Support Bracket & Retaining Clips



Courtesy of CHRYSLER GROUP, LLC

19. Open the fuel pipe retaining clips (1).
20. Unscrew the screw and remove the fuel pipe support bracket (2).
21. Unscrew the screws and remove the pressure pump protection.

Fig 7: Injection Pump Drive Pulley Screws & Nut



Courtesy of CHRYSLER GROUP, LLC

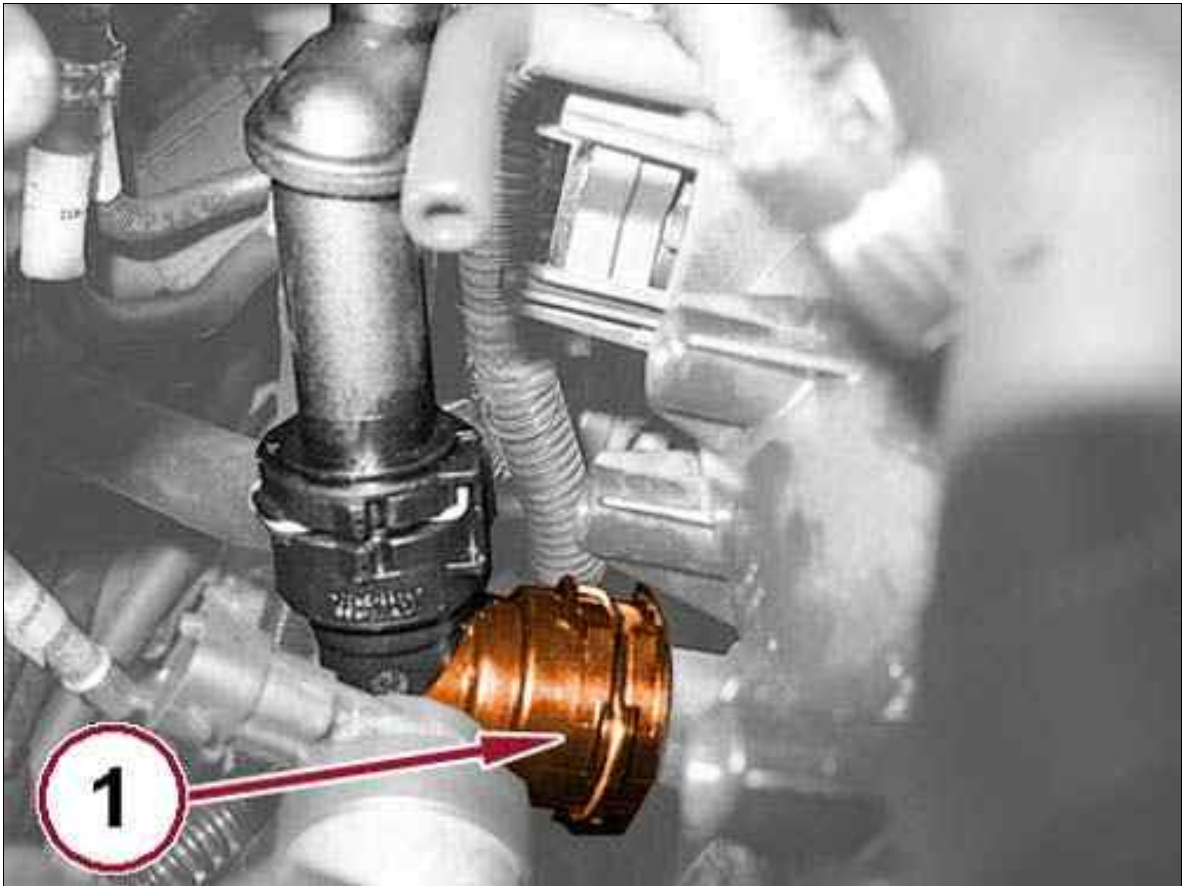
22. Tighten the screws of the tool (2000026900) to lock the injection pump drive pulley to its support (1).

 NOTE:

Rotate the crankshaft to align the threaded holes of the pulley with the corresponding injection pump support and insert the calibrated screw to the position indicated in the figure.

23. Unscrew the injection pump nut (2).

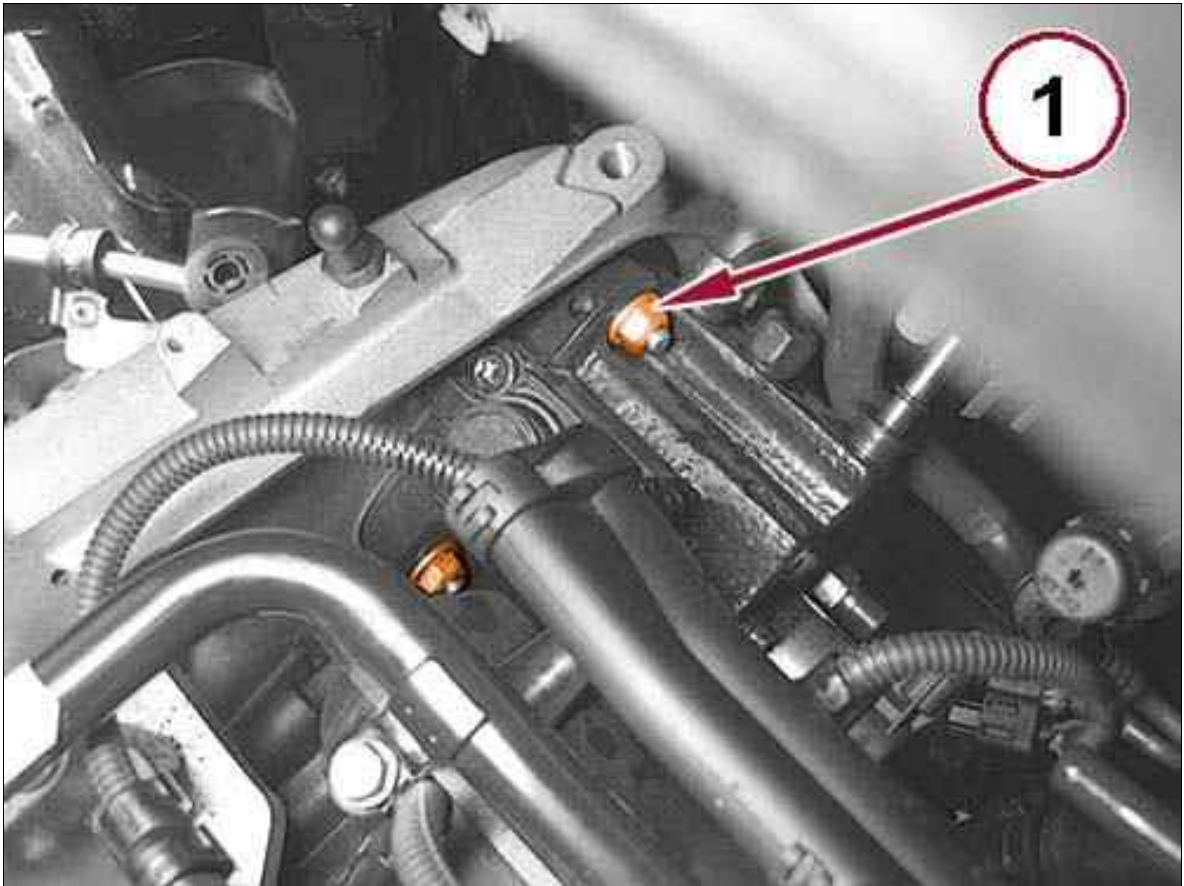
Fig 8: Water Pump Return Pipe



Courtesy of CHRYSLER GROUP, LLC

24. Disconnect the quick connector of the three-way union for the return pipe to the water pump (1).

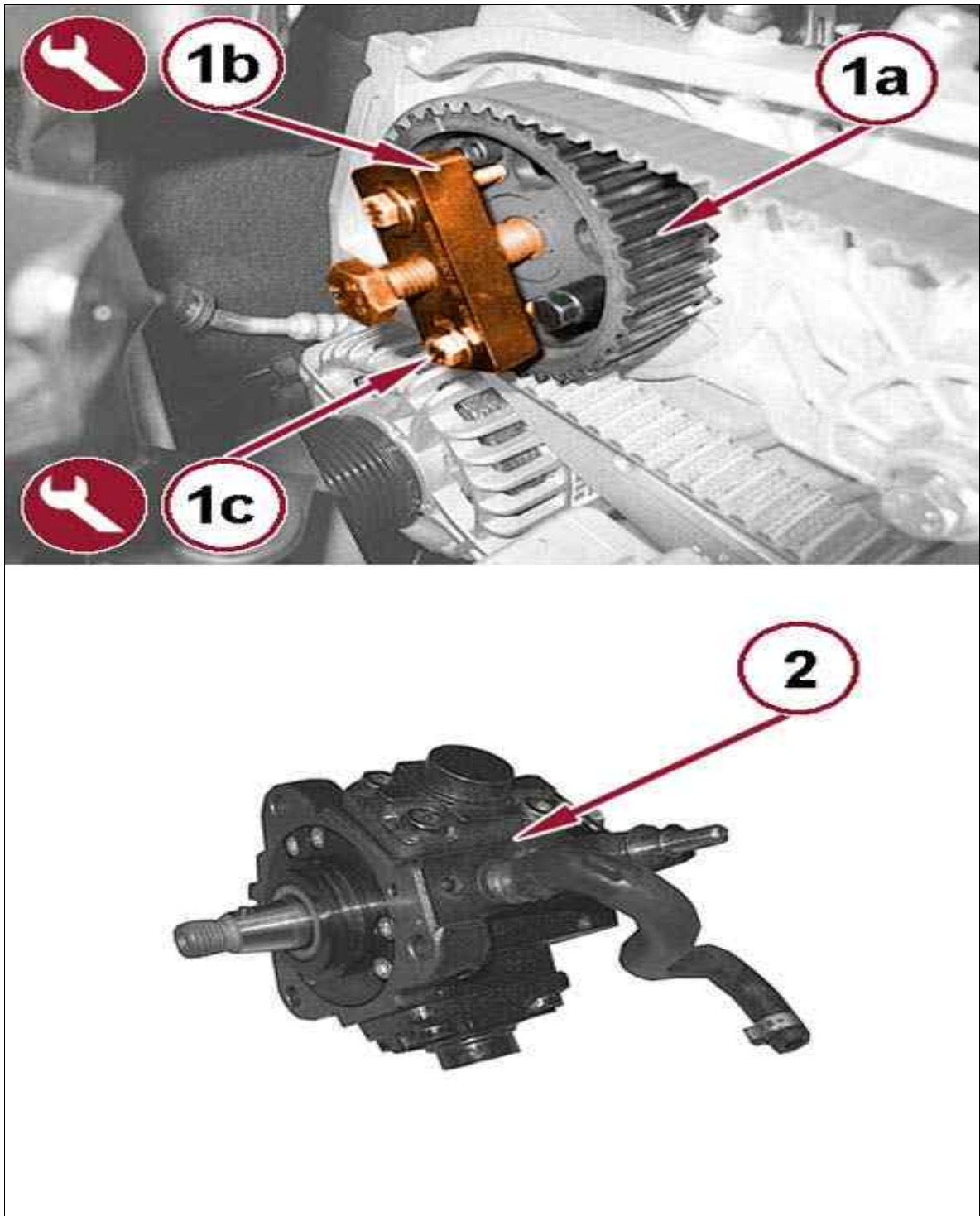
Fig 9: Injection Pump Nuts



Courtesy of CHRYSLER GROUP, LLC

25. Remove the nuts holding the injection pump to its support (1).

Fig 10: Injection Pump, Pulley, Extractor & Screws

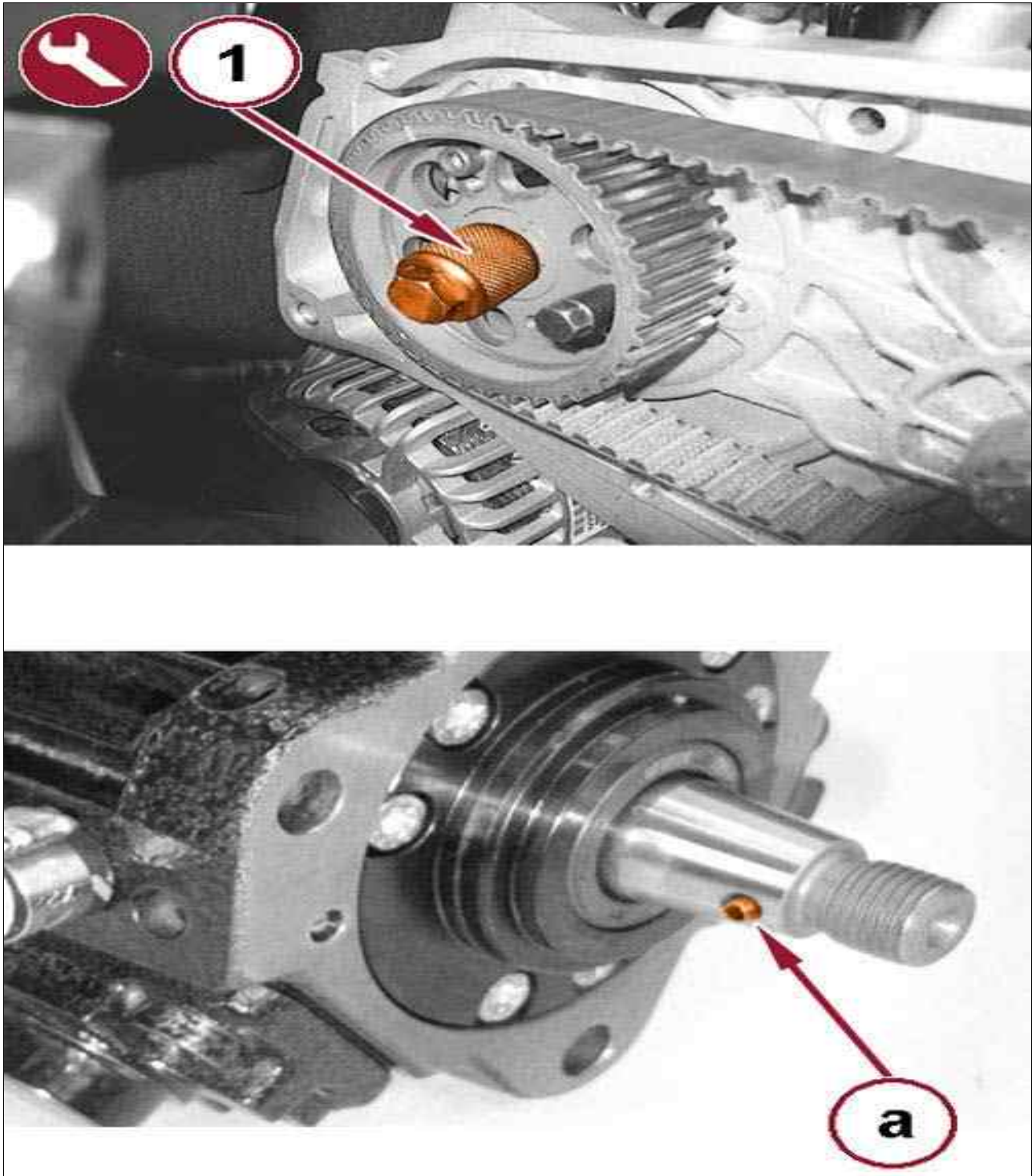


Courtesy of CHRYSLER GROUP, LLC

26. Remove the injection pump pulley (1a) using the extractor (1b) and the screws (1c).
27. Move back, turn towards the passenger compartment and remove the injection pump (2).
28. Remove the injection pump removal tools.

**FUEL DELIVERY > PUMP, FUEL INJECTION > REMOVAL AND INSTALLATION >
1.6L/2.0L > INSTALLATION**

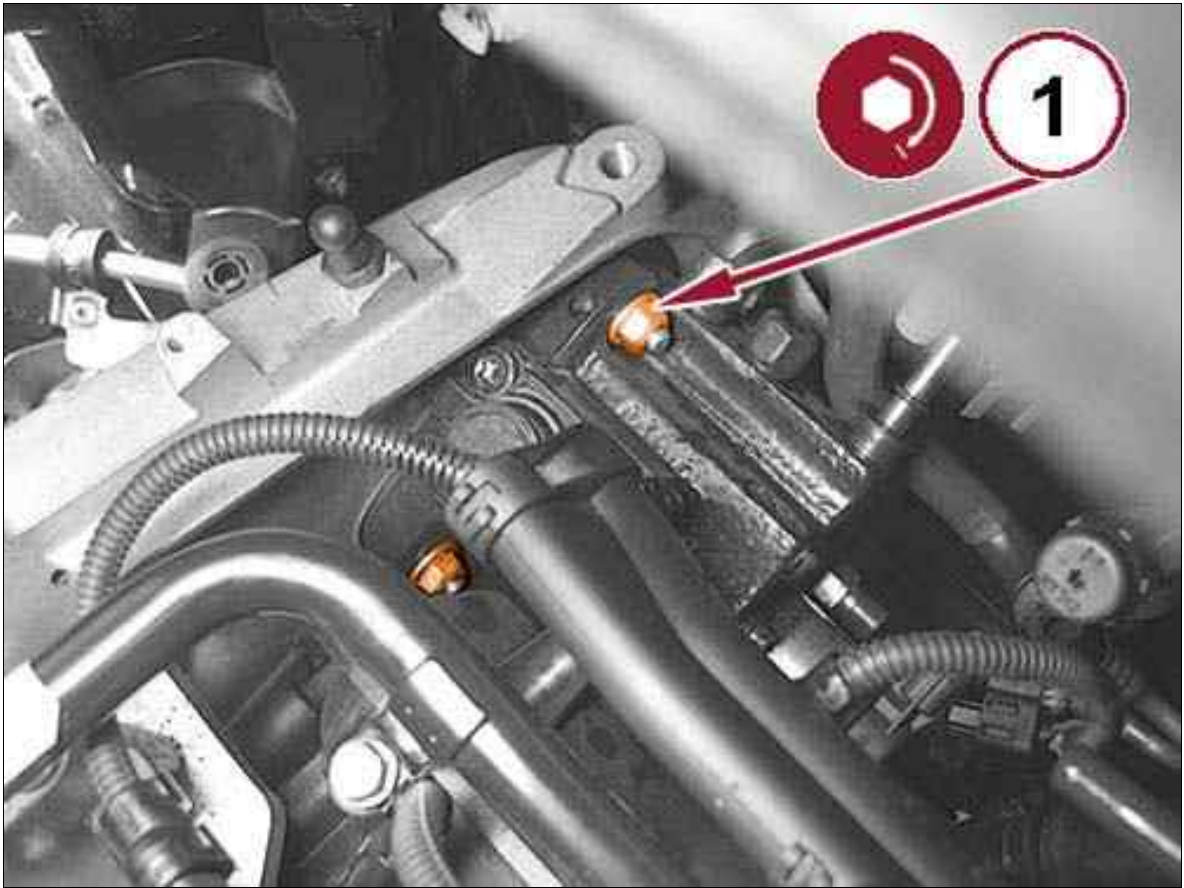
Fig 1: Special Tool & Centering Pin



Courtesy of CHRYSLER GROUP, LLC

1. Put in place the pressure pump, tighten the tool to rotate the pump shaft in order to align the centering pin (a) with the Groove on the drive pulley.

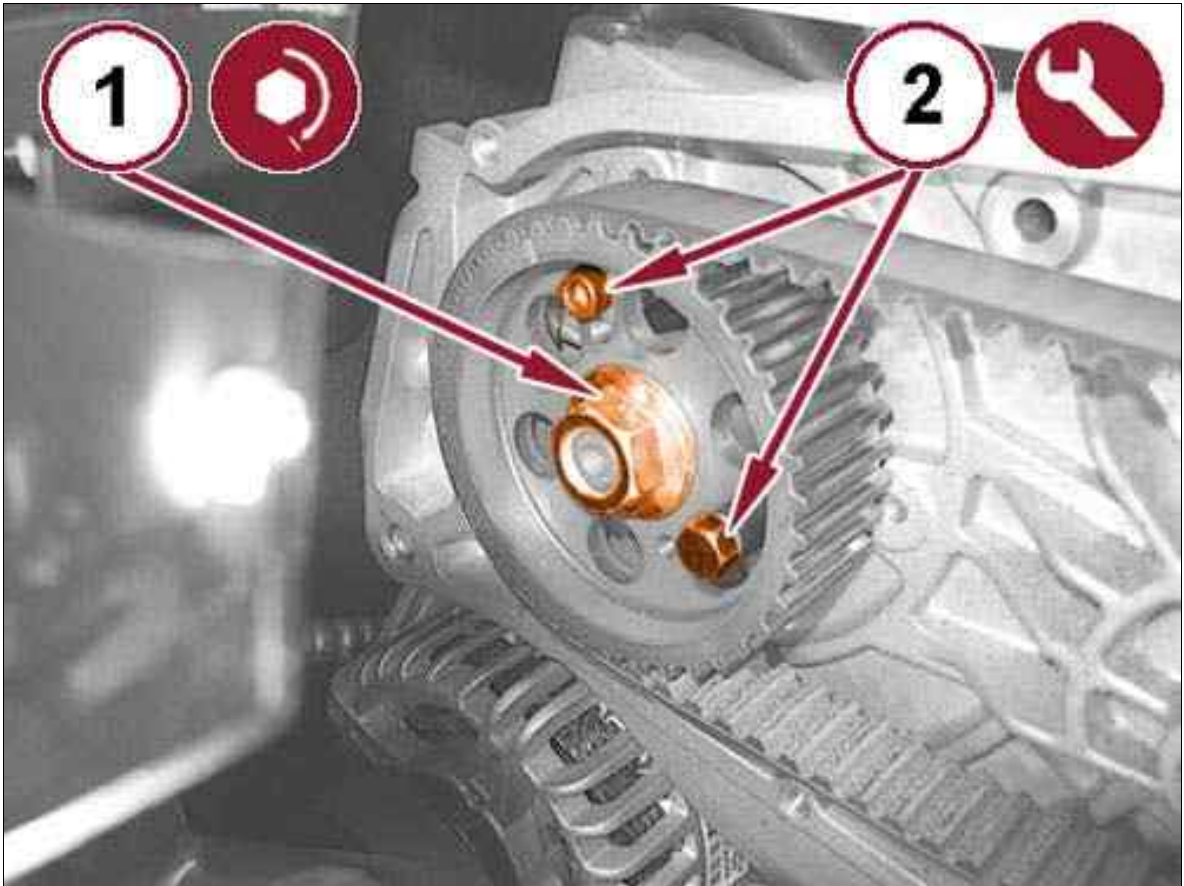
Fig 2: Injection Pump Retaining Nuts



Courtesy of CHRYSLER GROUP, LLC

2. Tighten the injection pump retaining nuts (1) to the proper torque specification. Refer to FUEL DELIVERY, SPECIFICATIONS .
3. Connect the quick coupling three-way fitting to the return pipe to the water pump.
4. Remove the tool used for the rotation of the pump shaft.

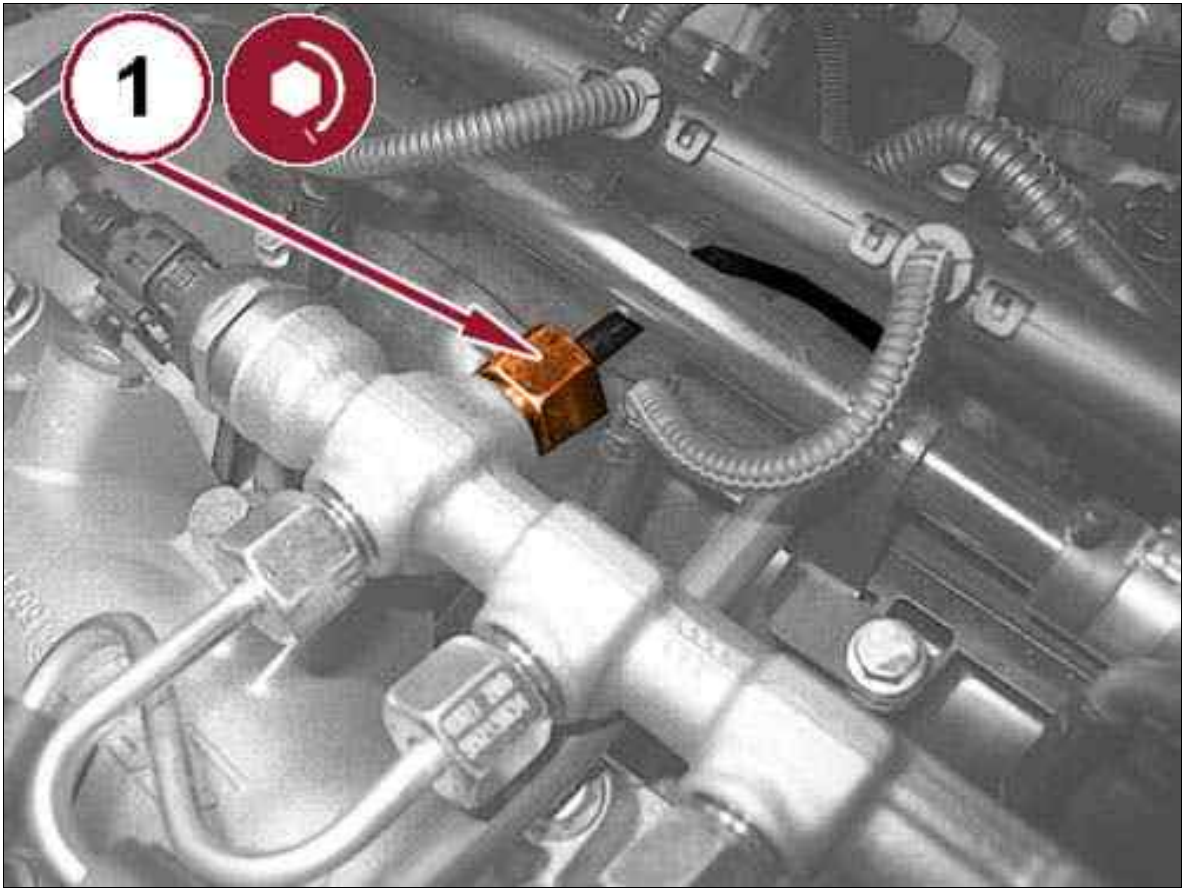
Fig 3: Injection Pump Drive Pulley Screws & Nut



Courtesy of CHRYSLER GROUP, LLC

5. Install and tighten the injection pump pulley retaining nut (1) to the proper torque specification. Refer to FUEL DELIVERY, SPECIFICATIONS .
6. Remove the screws (2) of the tool to lock the injection pump pulley to its support.
7. Install the injection pump protection and securely tighten the screws.
8. Install the fuel pipe support bracket and securely tighten the screw.
9. Engage the fuel pipe retaining clips.

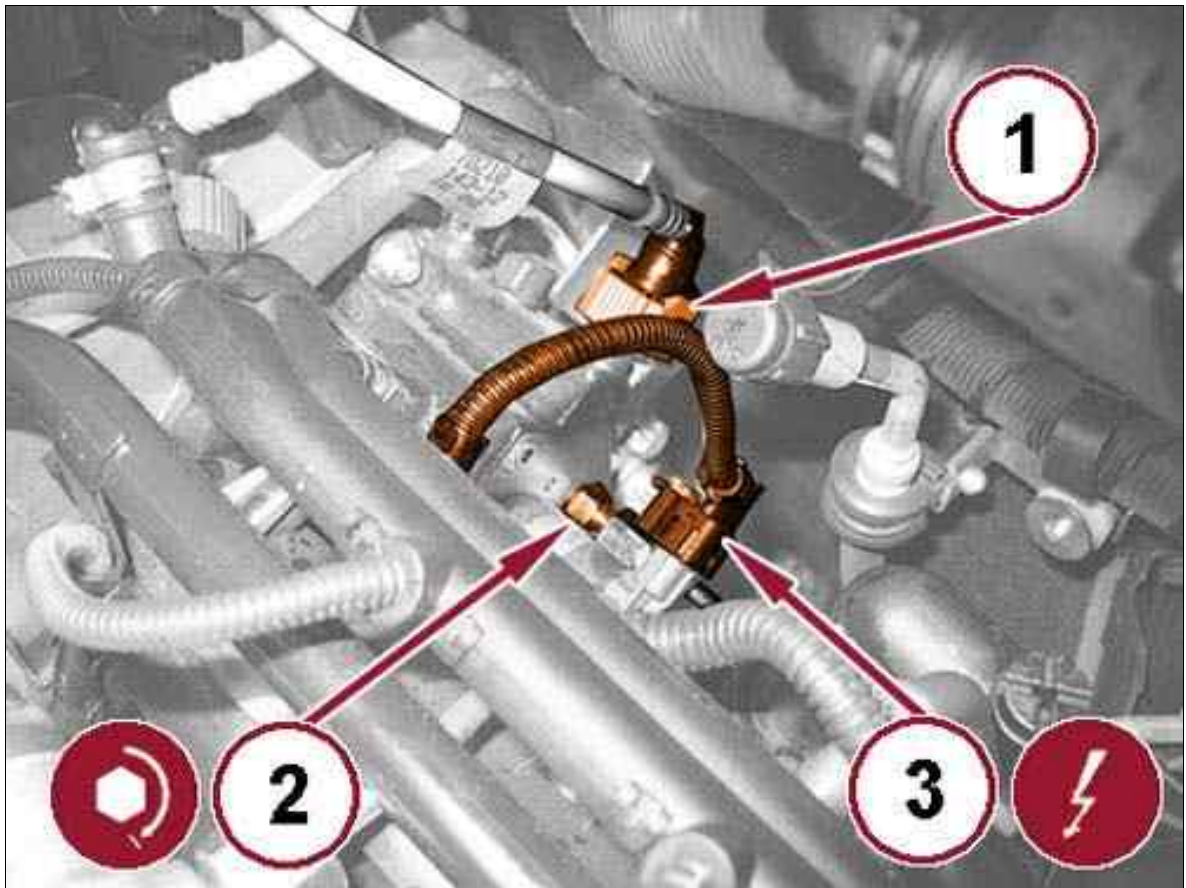
Fig 4: Fuel Manifold Delivery Pipe



Courtesy of CHRYSLER GROUP, LLC

10. Install the fuel delivery pipe to the fuel manifold and tighten the fitting to the proper torque specification. Refer to FUEL DELIVERY, SPECIFICATIONS .

Fig 5: Fuel Pressure Regulator, Fuel Delivery Pipe Fitting & Coupling



Courtesy of CHRYSLER GROUP, LLC

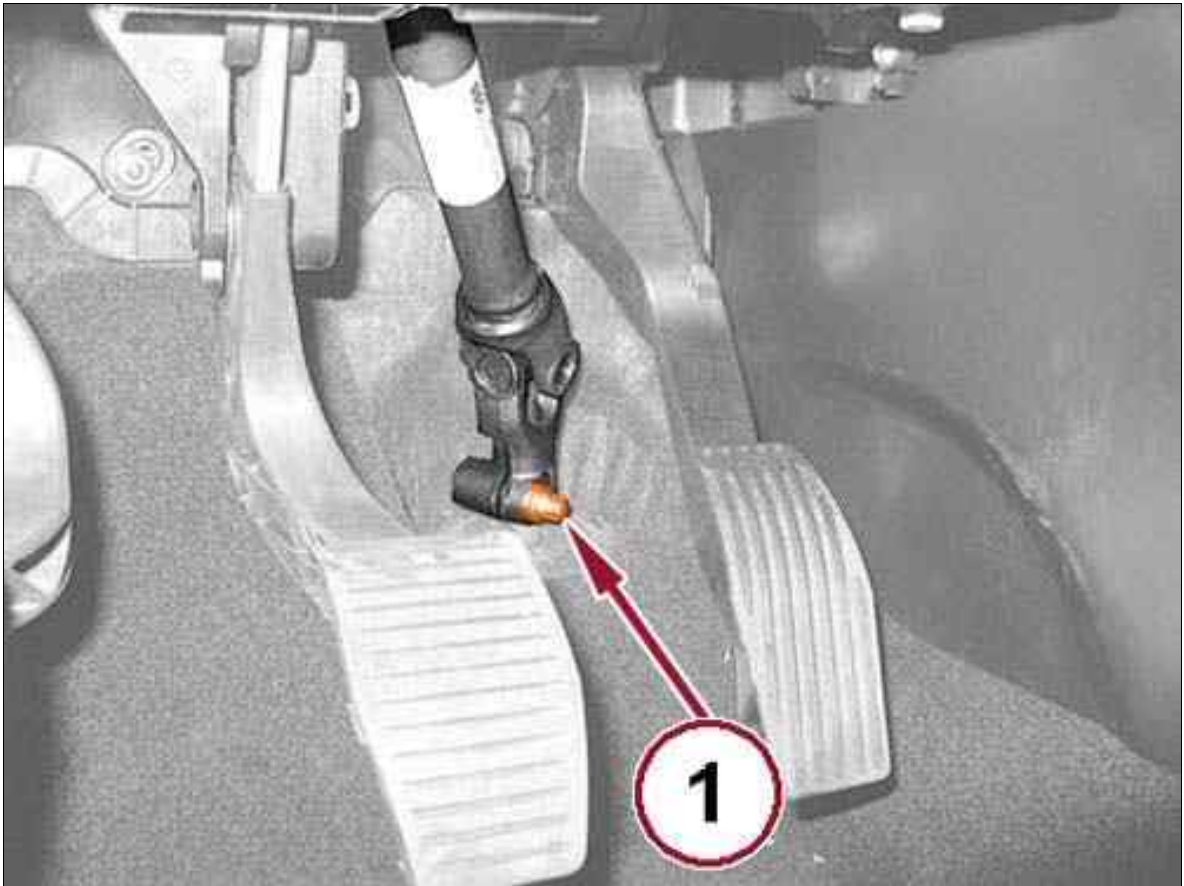
11. Install the fuel supply pipe to the injection pump and connect the quick coupling (1).
12. Tighten the fuel delivery pipe fitting (2) to the proper torque specification. Refer to FUEL DELIVERY, SPECIFICATIONS .
13. Connect the electrical connection of the fuel pressure regulator (3).
14. Install the timing cover and securely tighten the fasteners.
15. Install the fuel return manifold and tighten the screws.
16. Connect the return line from the fuel injectors to the fuel return manifold and tighten its clamp.
17. Connect the quick coupling of the fuel return pipe to the tank.
18. Install the fuel filter. Refer to FILTER, FUEL, REMOVAL AND INSTALLATION .
19. Install the air cleaner body. .
20. Fill the engine coolant. Refer to STANDARD PROCEDURE .
21. Install the belly pan. Refer to BELLY PAN, REMOVAL AND INSTALLATION or BELLY PAN, SIDE, REMOVAL AND INSTALLATION .
22. Install the right front splash shield. Refer to SHIELD, SPLASH, FRONT WHEELHOUSE, REMOVAL AND INSTALLATION .

23. Remove the vehicle from the lift.

FUEL DELIVERY > LINES, FUEL > REMOVAL AND INSTALLATION > 1.4L > REMOVAL - FRONT FUEL DELIVERY LINE - 1.4L

1. Raise and support the vehicle.
2. Open the cover of the Power Distribution Center (PDC) in the engine compartment and remove the fuel pump fuse (F21 - 15 ampere).
3. Wait for the residual pressure in the fuel distribution manifold to be relieved.
4. Reinstall the fuel pump fuse (F21 - 15 ampere) and close the PDC cover.
5. Remove the engine cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .
6. Remove the belly pan. Refer to BELLY PAN, REMOVAL AND INSTALLATION or BELLY PAN, SIDE, REMOVAL AND INSTALLATION .
7. Remove the front fascia. Refer to FASCIA, FRONT, REMOVAL AND INSTALLATION .
8. Remove the right front wheel. Refer to REMOVAL AND INSTALLATION .
9. Remove the right front wheelhouse splash shield. Refer to SHIELD, SPLASH, FRONT WHEELHOUSE, REMOVAL AND INSTALLATION .

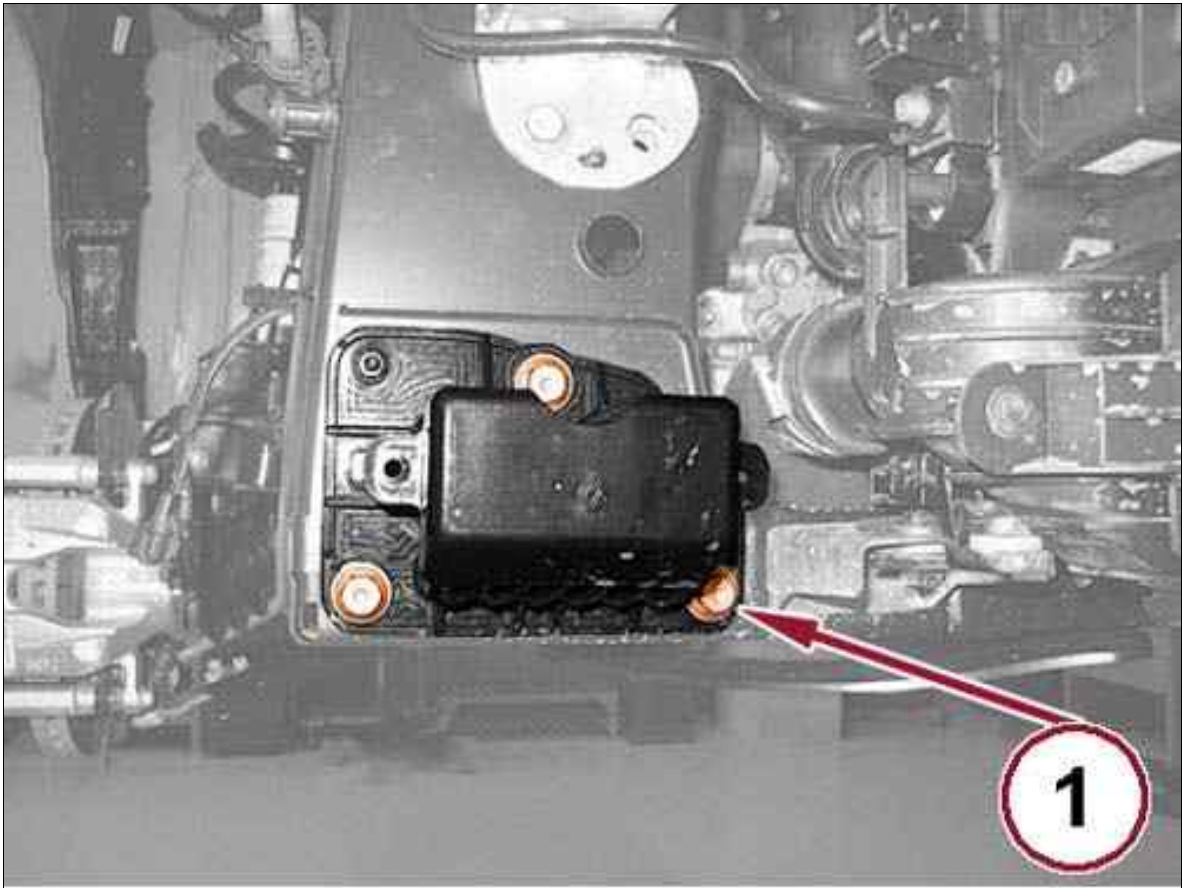
Fig 1: Steering Column To The Steering Gear Pinion Bolt



Courtesy of CHRYSLER GROUP, LLC

10. Remove the bolt (1) securing the steering column to the steering gear pinion.

Fig 2: Right And Left Lower Load Beams At The Front End



Courtesy of CHRYSLER GROUP, LLC

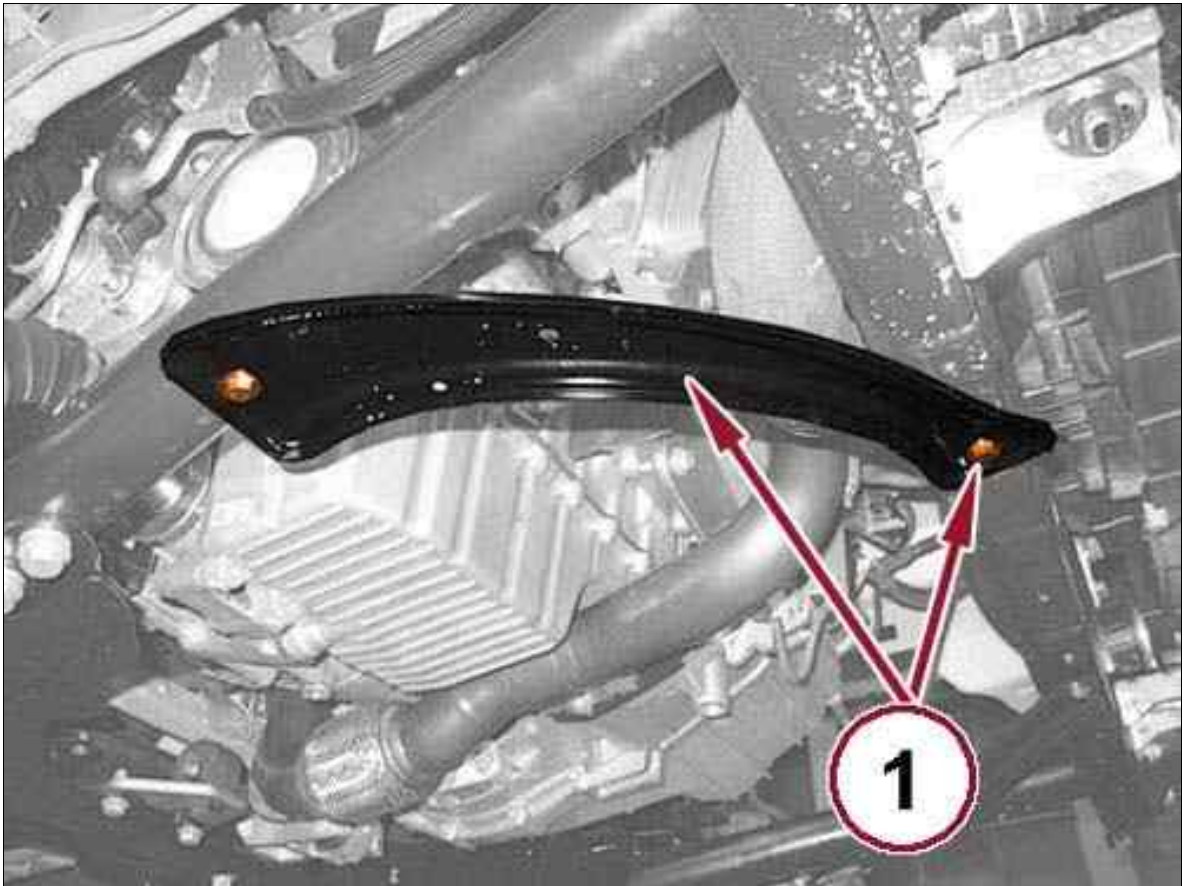


NOTE:

Right side shown in the illustration, left side similar.

11. Remove the three bolts (1) securing right and left lower load beams at the front end.

Fig 3: Front Lower Frame Strut Bolts



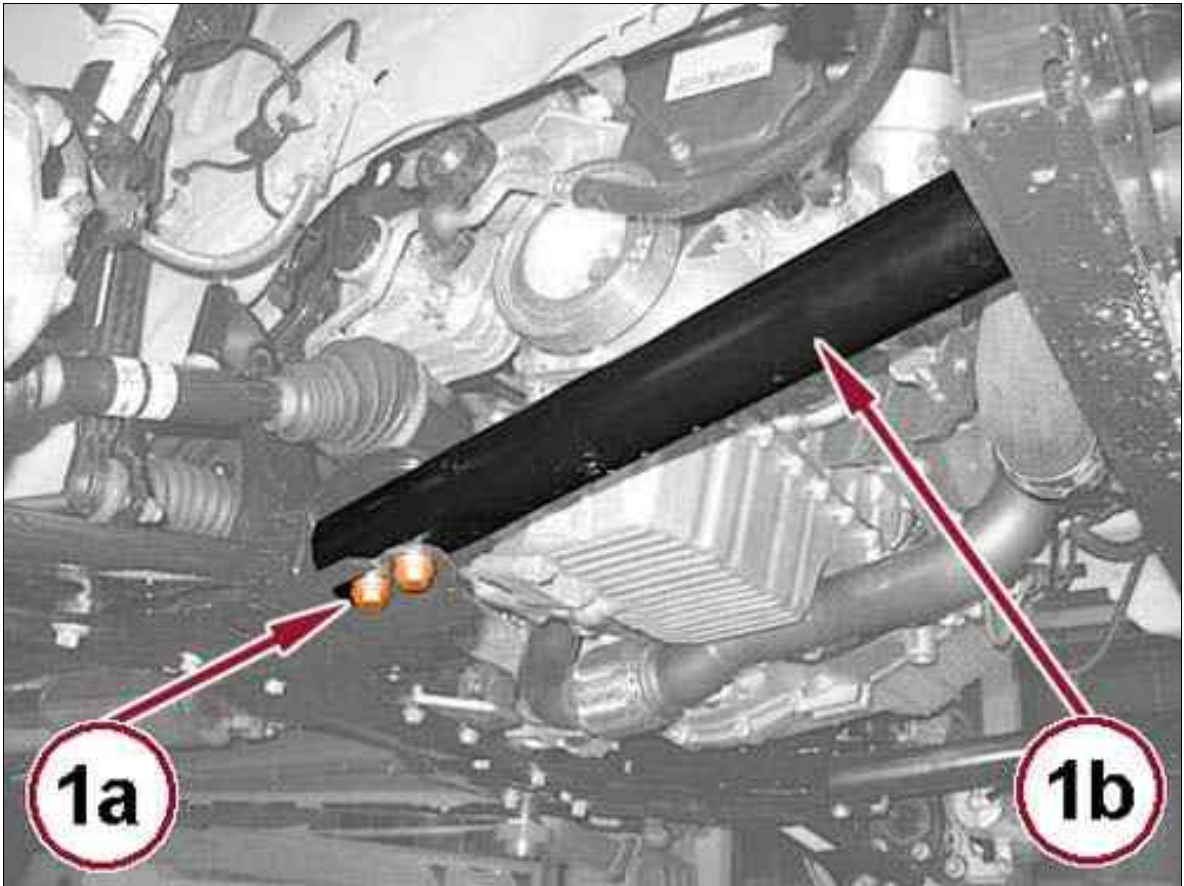
Courtesy of CHRYSLER GROUP, LLC

 **NOTE:**

Right side shown in the illustration, left side similar.

12. Remove the two bolts (1) and remove the right and left front lower frame struts for the front end.

Fig 4: Right And Left Lower Load Beam Bottom Bolts



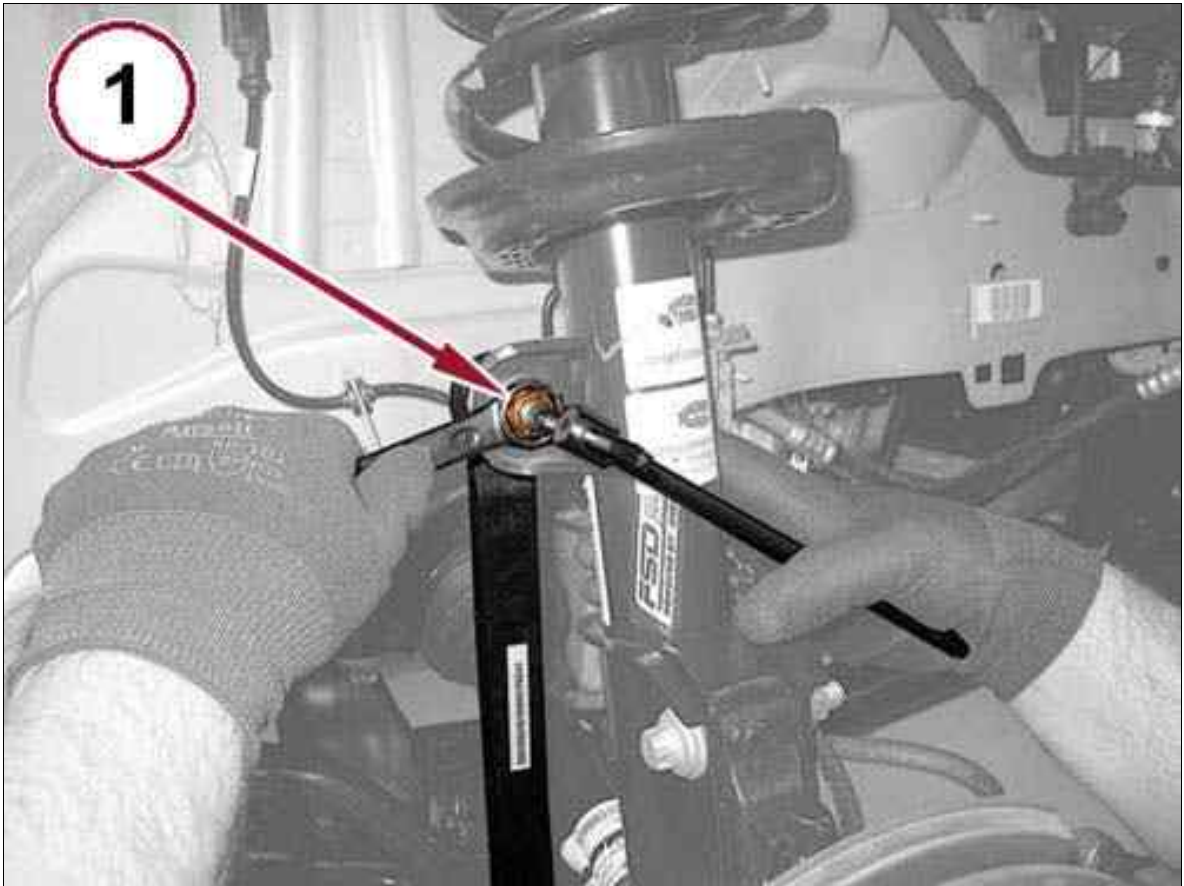
Courtesy of CHRYSLER GROUP, LLC

 **NOTE:**

Right side shown in the illustration, left side similar.

13. Remove the two bolts (1a) and remove the right and left lower load beam (1b).

Fig 5: Stabilizer Bar Nut



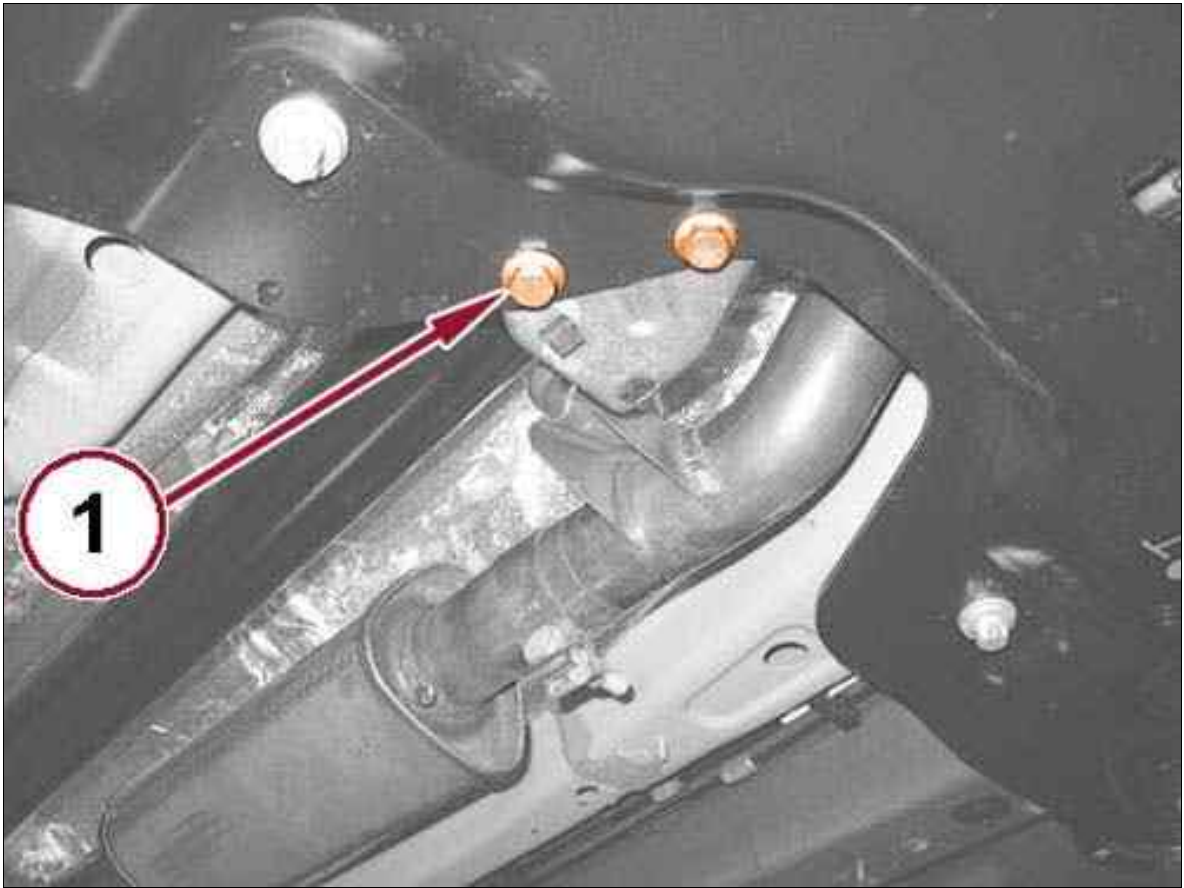
Courtesy of CHRYSLER GROUP, LLC

 **NOTE:**

Right side shown in the illustration, left side similar.

14. Remove the nut (1) from the right and left joint stabilizer bars and disconnect them from the shock.

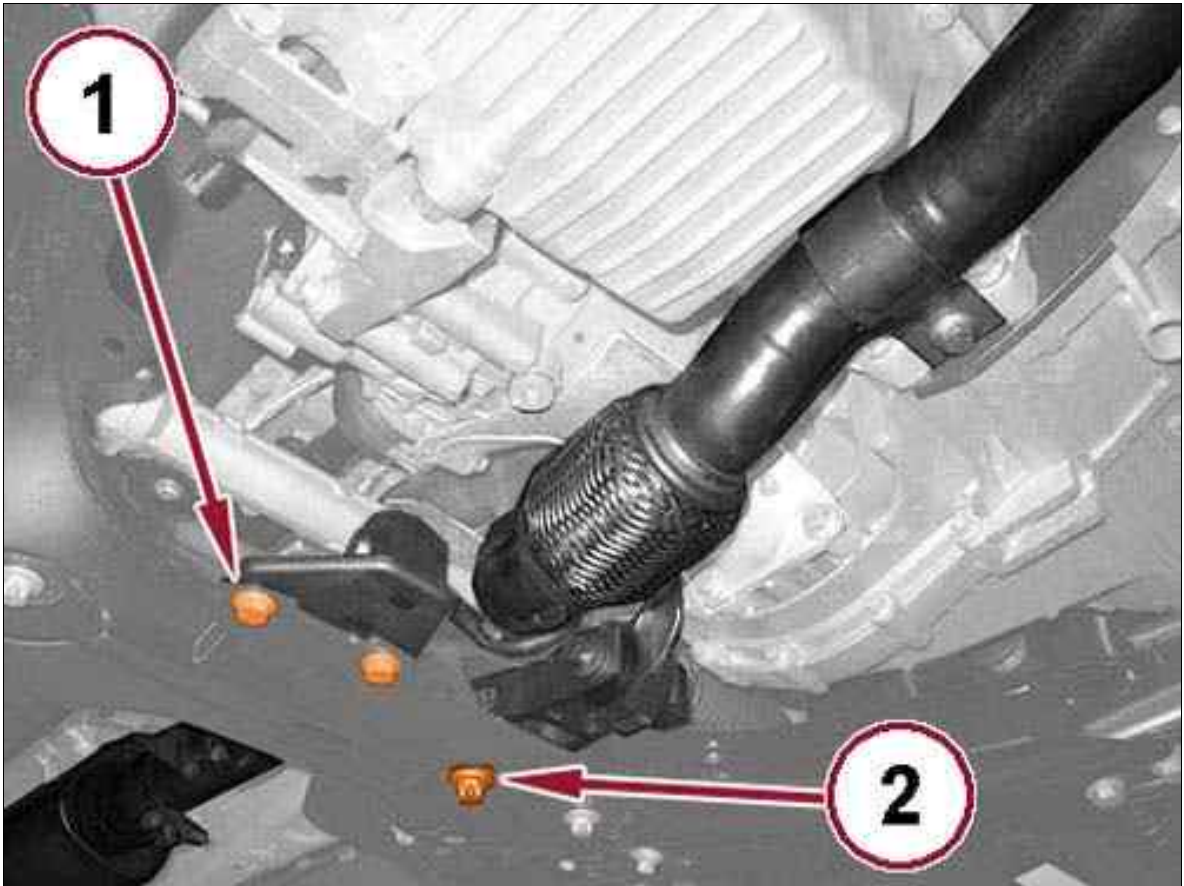
Fig 6: Exhaust Pipe Rear Support Bracket Bolts



Courtesy of CHRYSLER GROUP, LLC

15. Remove the bolts (1) from the rear bracket supporting the exhaust pipe.

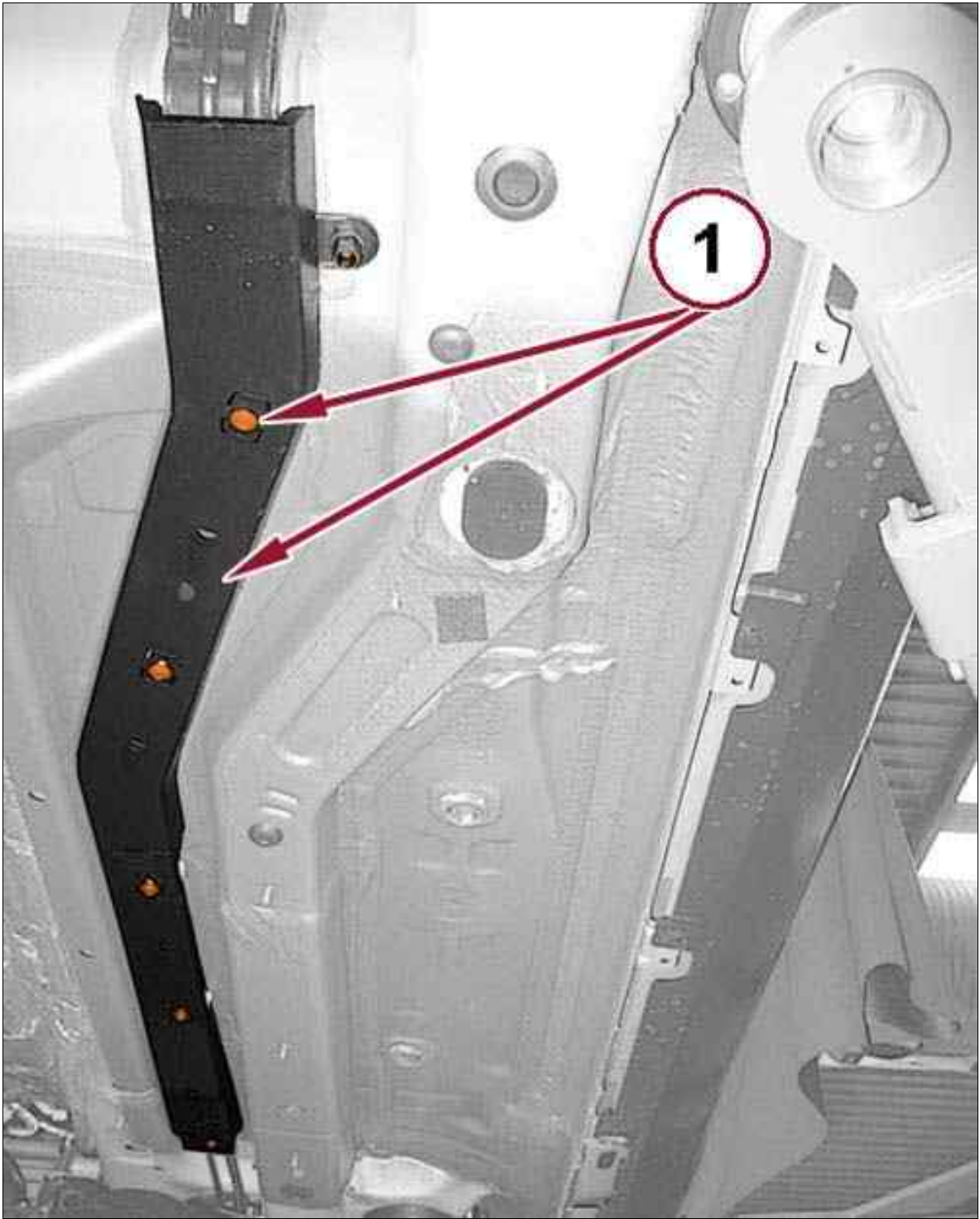
Fig 7: Front Exhaust Support Bracket Bolts & Exhaust Dampening Rod Bolts



Courtesy of CHRYSLER GROUP, LLC

16. Remove the two bolts (1) securing the support bracket front exhaust.
17. Remove the bolt (2) from the exhaust dampening rod securing it to the crossmember.

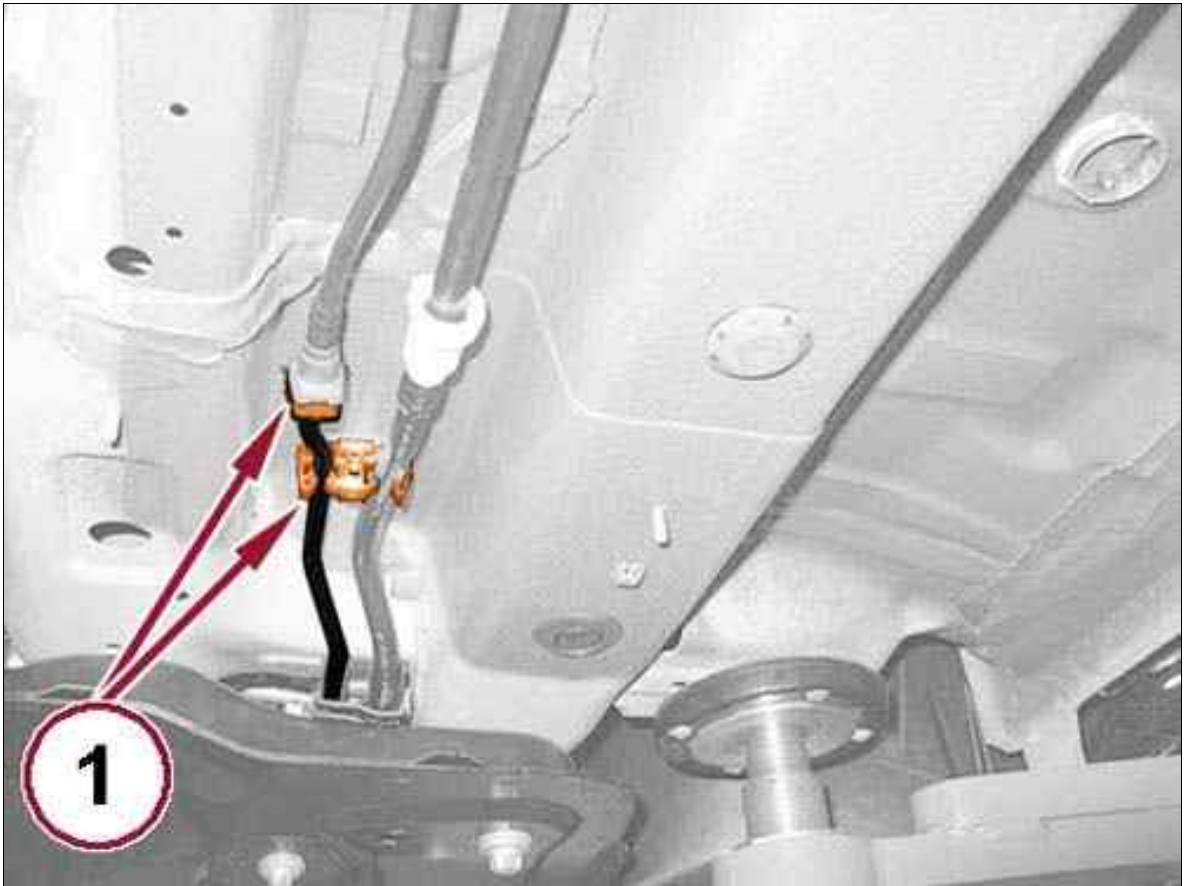
Fig 8: Front & Rear Fuel Line Shield Bolts



Courtesy of CHRYSLER GROUP, LLC

18. Remove the four bolts (1) and remove the front and rear fuel line shields.

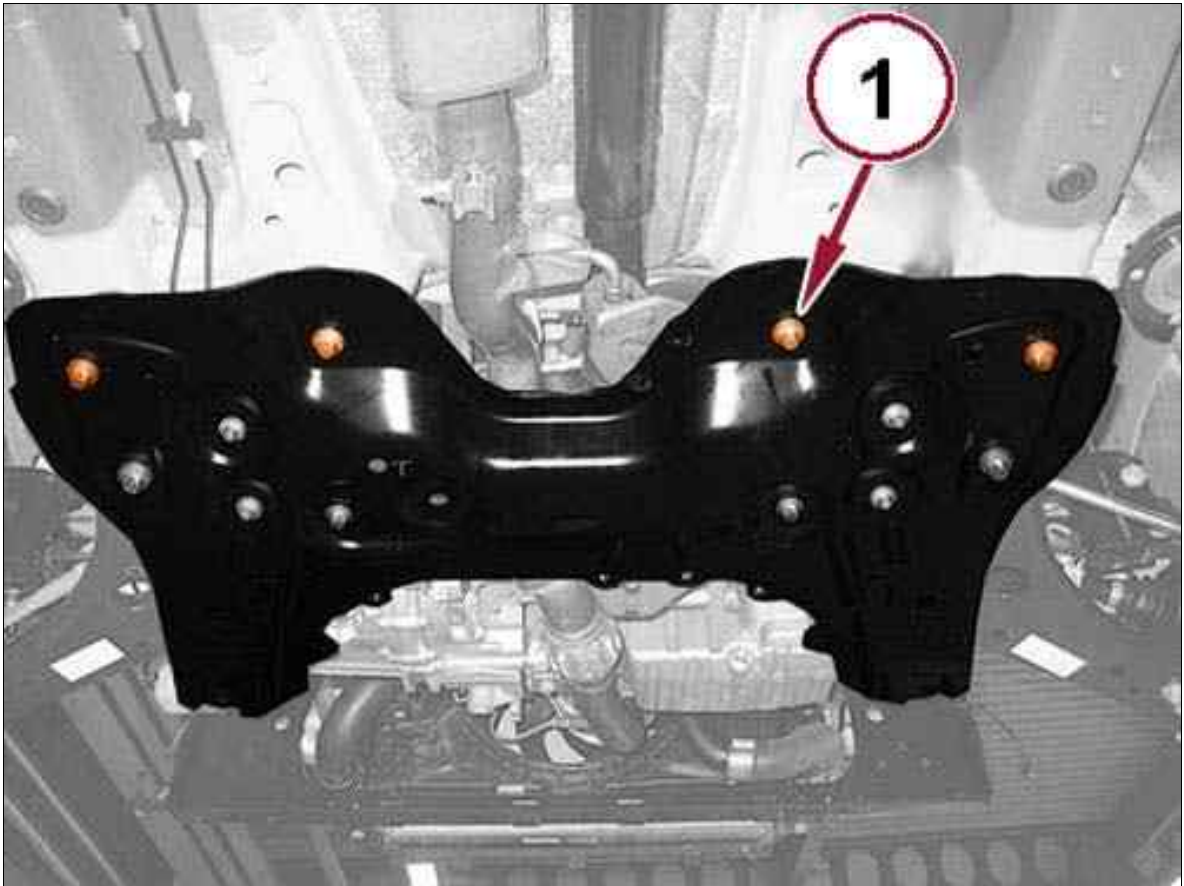
Fig 9: Fuel Delivery Line Retainer Clip & Coupling



Courtesy of CHRYSLER GROUP, LLC

19. Disconnect the quick coupling (1) and disengage the fuel delivery line from the rear retainer clip (1).

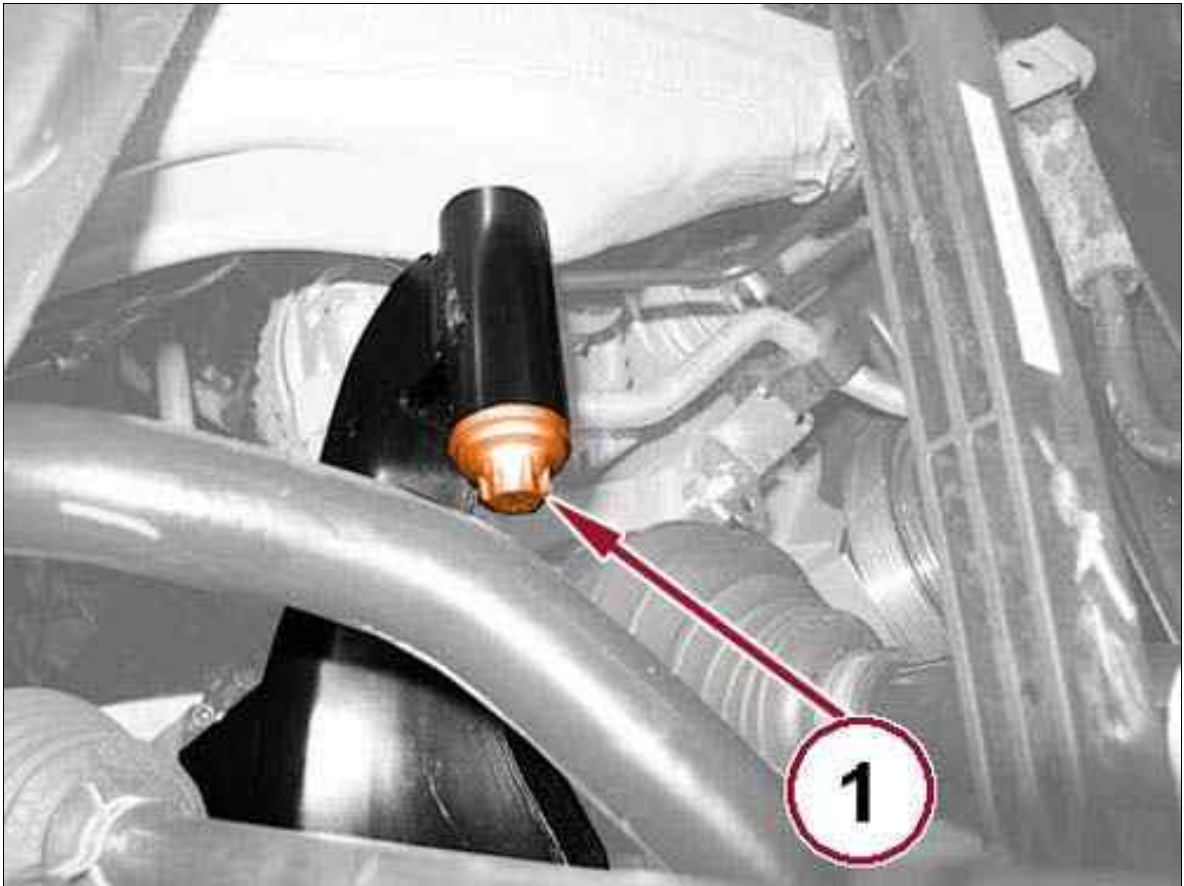
Fig 10: Suspension Crossmember Rear Bolts



Courtesy of CHRYSLER GROUP, LLC

20. Place a suitable hydraulic lift under the suspension crossmember.
21. Remove the rear bolts (1) from the suspension crossmember that secure it to the body.

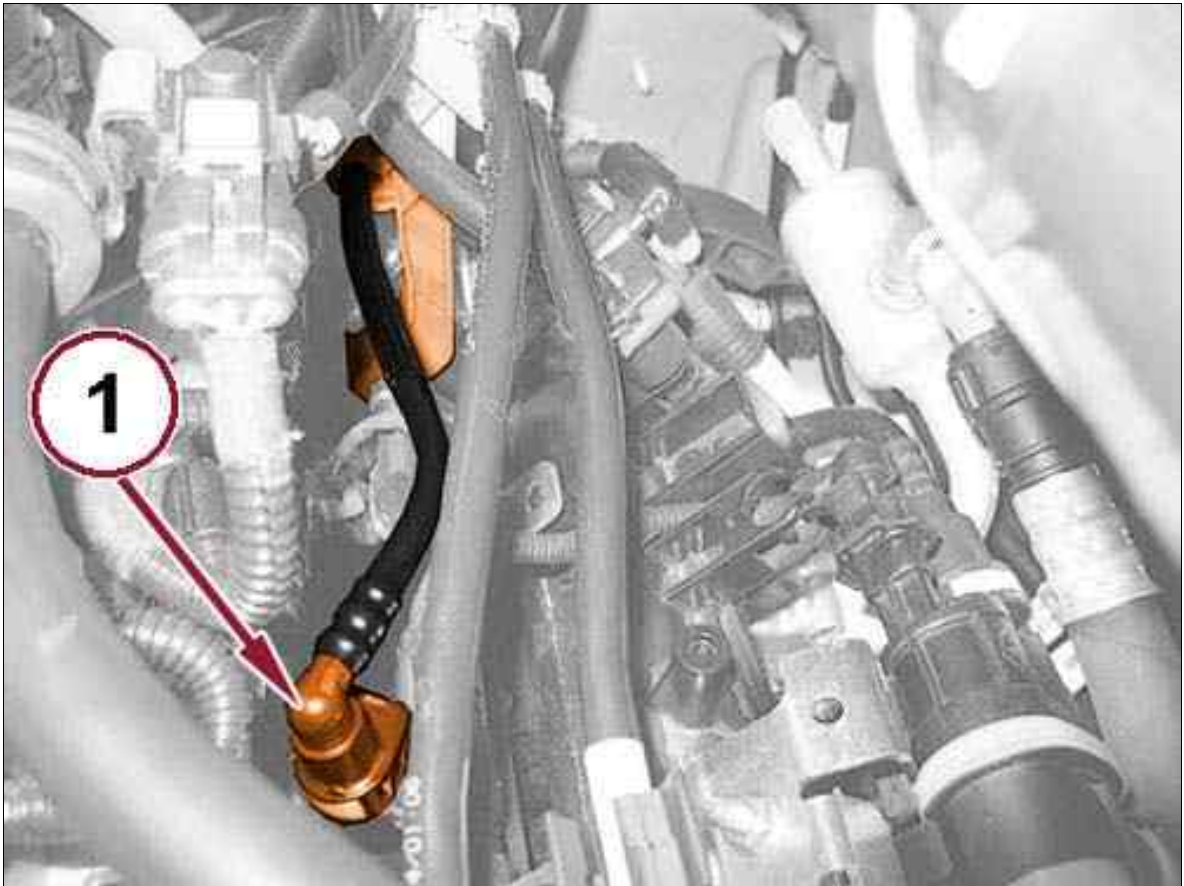
Fig 11: Suspension Crossmember Left & Right Front Siderail Bolts



Courtesy of CHRYSLER GROUP, LLC

22. Remove the front bolts (1) from the suspension crossmember that secure it to the left and right siderails.
23. Lower the hydraulic lift with the suspension crossmember.
24. Remove the suspension crossmember from the lift and position it out of the way.

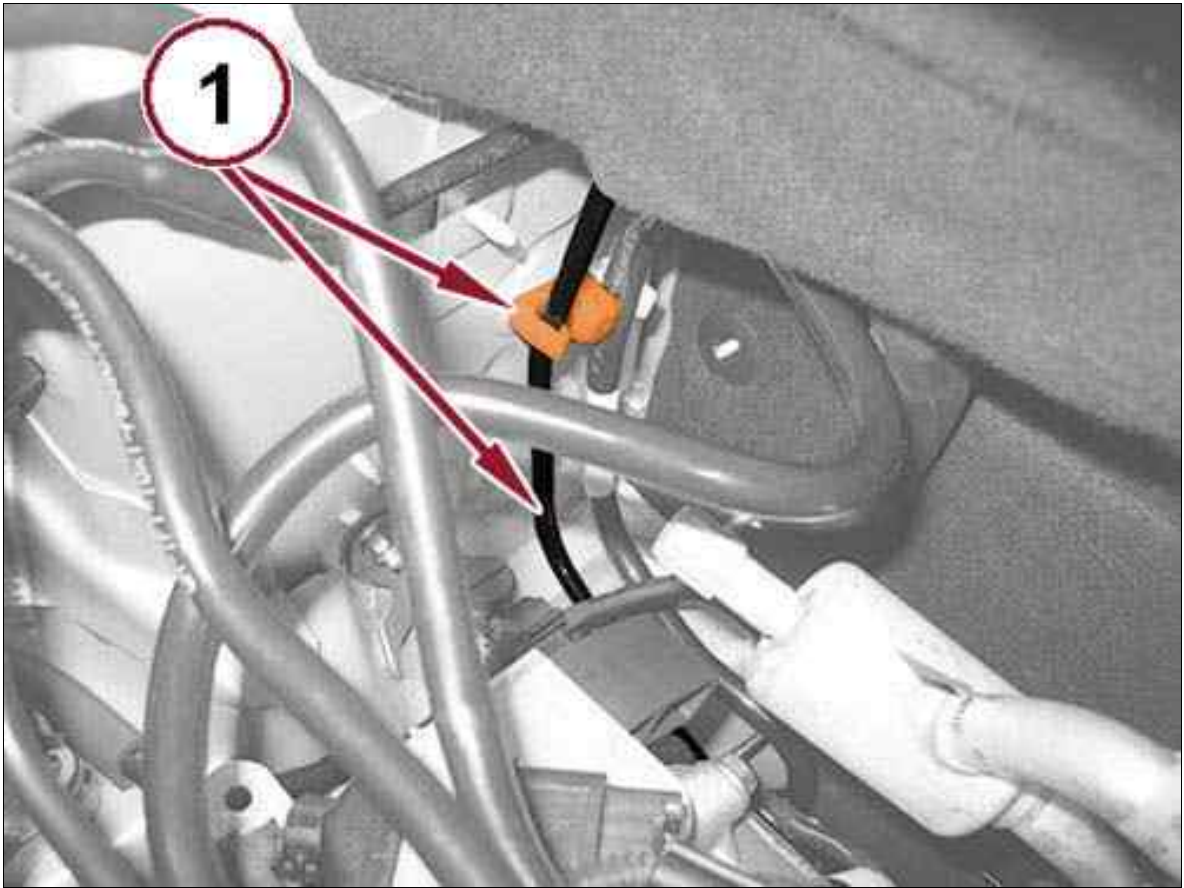
Fig 12: Fuel Delivery Line Coupling



Courtesy of CHRYSLER GROUP, LLC

25. Disconnect the front quick coupling (1) of the fuel delivery line and open the retaining clip.

Fig 13: Fuel Delivery Line & Retaining Clips

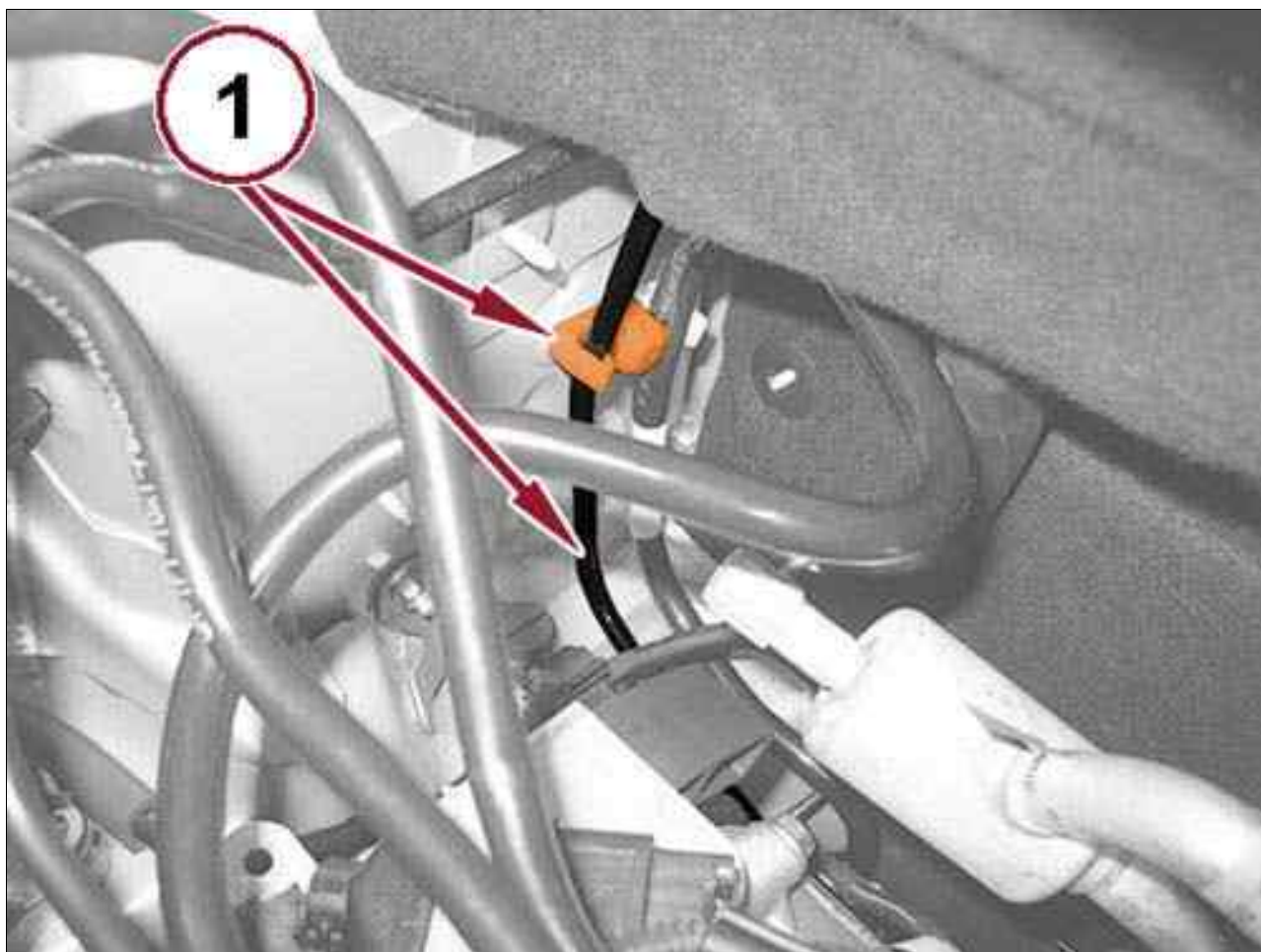


Courtesy of CHRYSLER GROUP, LLC

26. Disengage the fuel delivery line (1) from the front retaining clips (1) on the right side of the engine compartment.
27. Working from the engine compartment, remove the front fuel delivery line and remove the line from the engine compartment.

**FUEL DELIVERY > LINES, FUEL > REMOVAL AND INSTALLATION > 1.4L >
INSTALLATION - FRONT FUEL DELIVERY LINE - 1.4L**

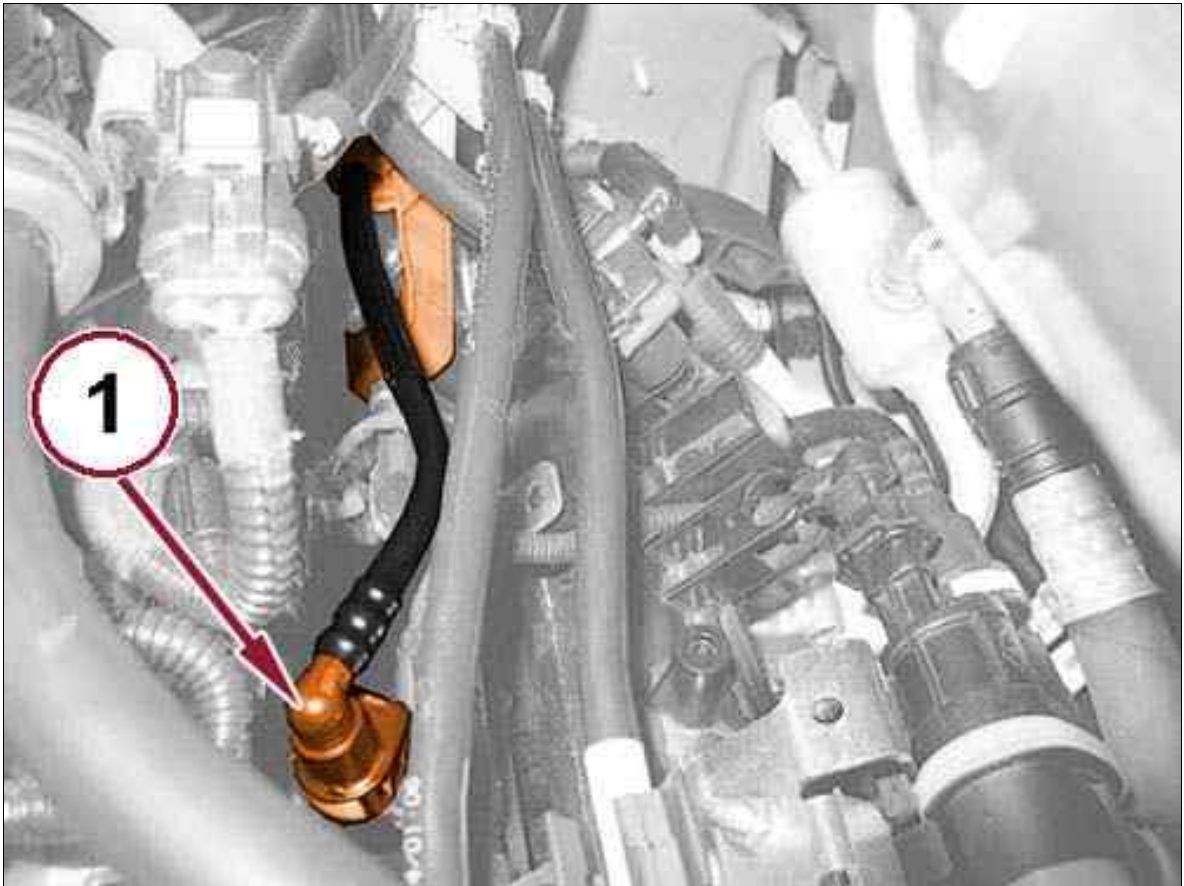
Fig 1: Fuel Delivery Line & Retaining Clips



Courtesy of CHRYSLER GROUP, LLC

1. Working from the engine compartment, put into place the front fuel delivery line (1) and engage the retaining clips (1).

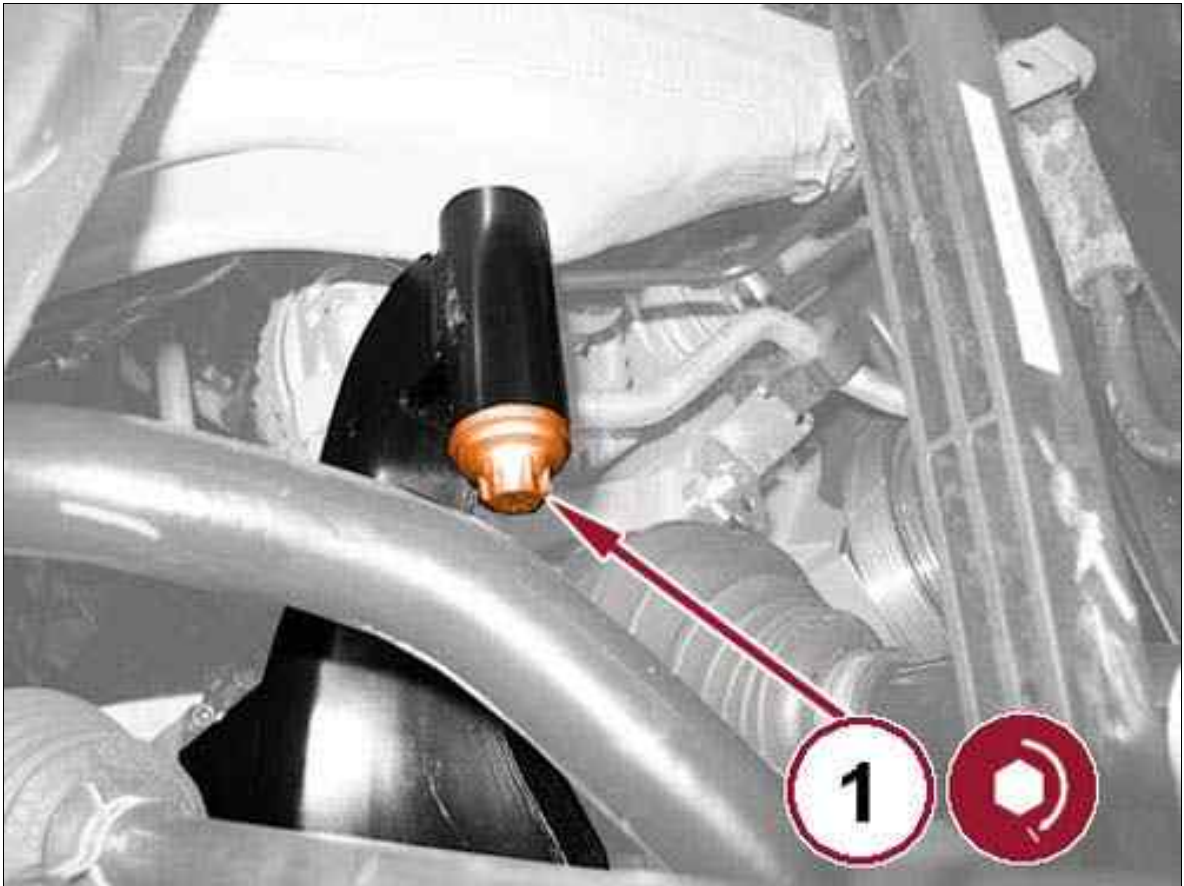
Fig 2: Fuel Delivery Line Coupling



Courtesy of CHRYSLER GROUP, LLC

2. Connect the quick coupling (1) of the front fuel delivery line and close the retainer clip.

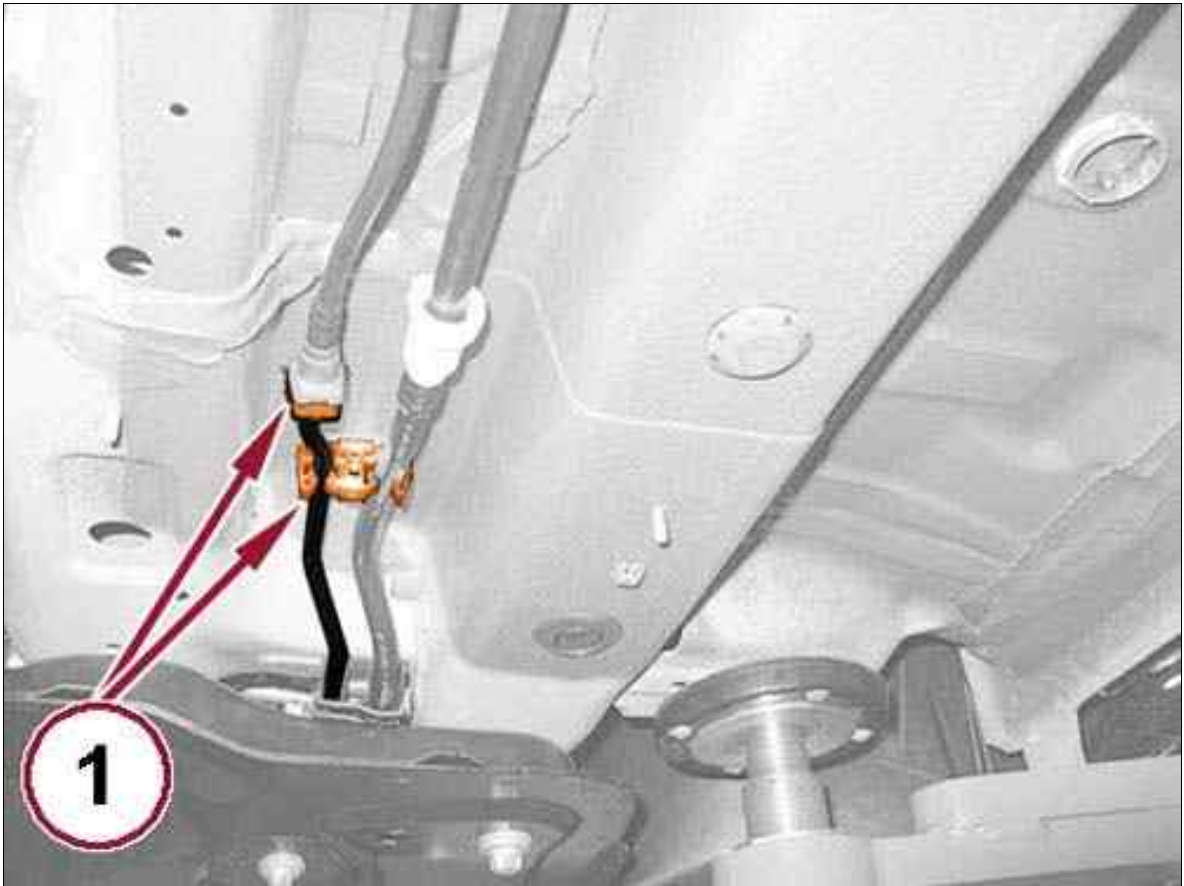
Fig 3: Suspension Crossmember Left & Right Front Siderail Bolts



Courtesy of CHRYSLER GROUP, LLC

3. Using a hydraulic lift, put into place the suspension crossmember. Install the front mounting bolts (1) to the left and right side rails and tighten to the proper torque specification. Refer to SPECIFICATIONS .
4. Install the rear bolts (1) for the suspension crossmember to the body. Tighten to the proper torque specification. Refer to SPECIFICATIONS .
5. Remove the hydraulic lift.

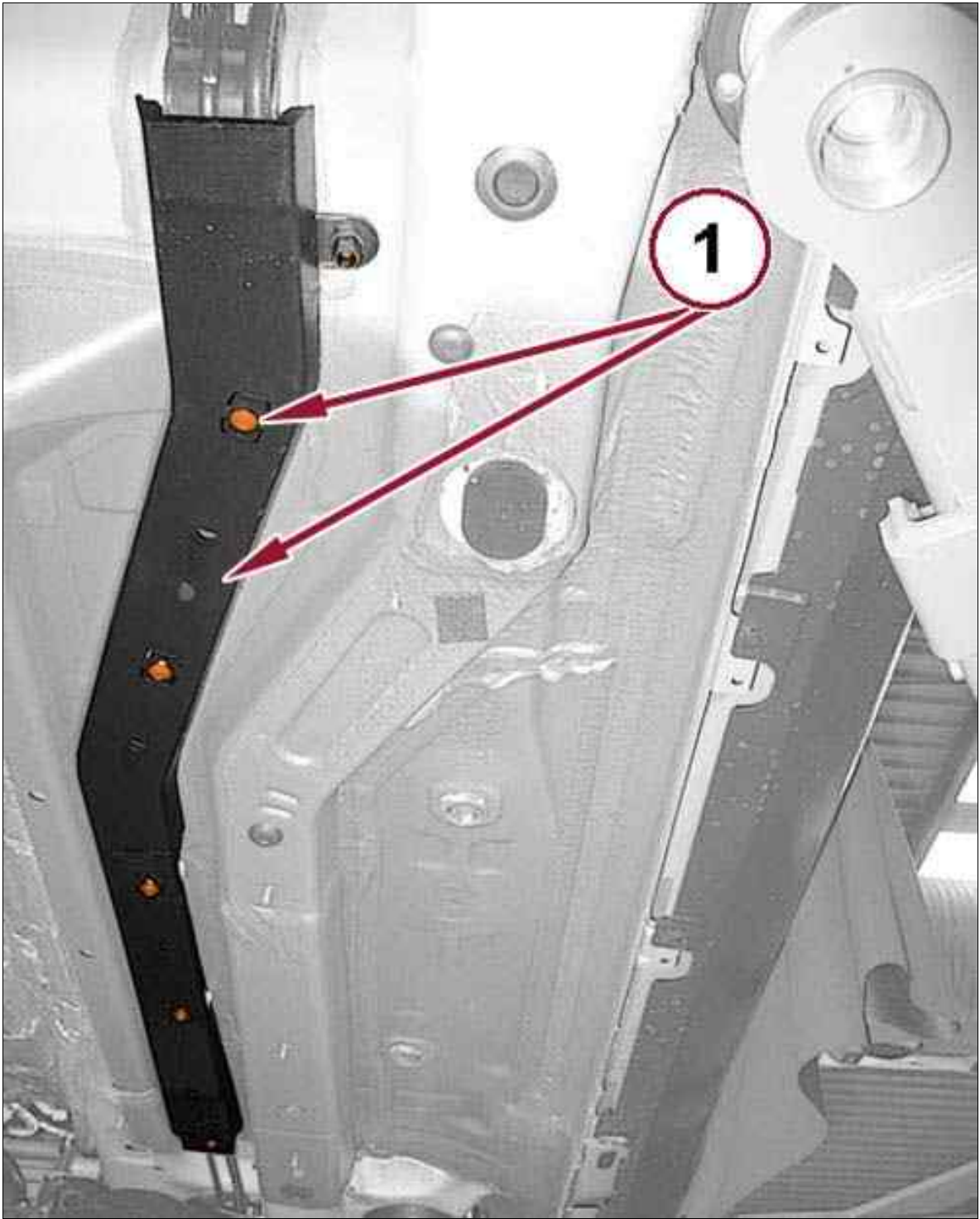
Fig 4: Fuel Delivery Line Retainer Clip & Coupling



Courtesy of CHRYSLER GROUP, LLC

6. Connect the quick coupling (1) and insert the front fuel delivery line into the spring retainer (1).

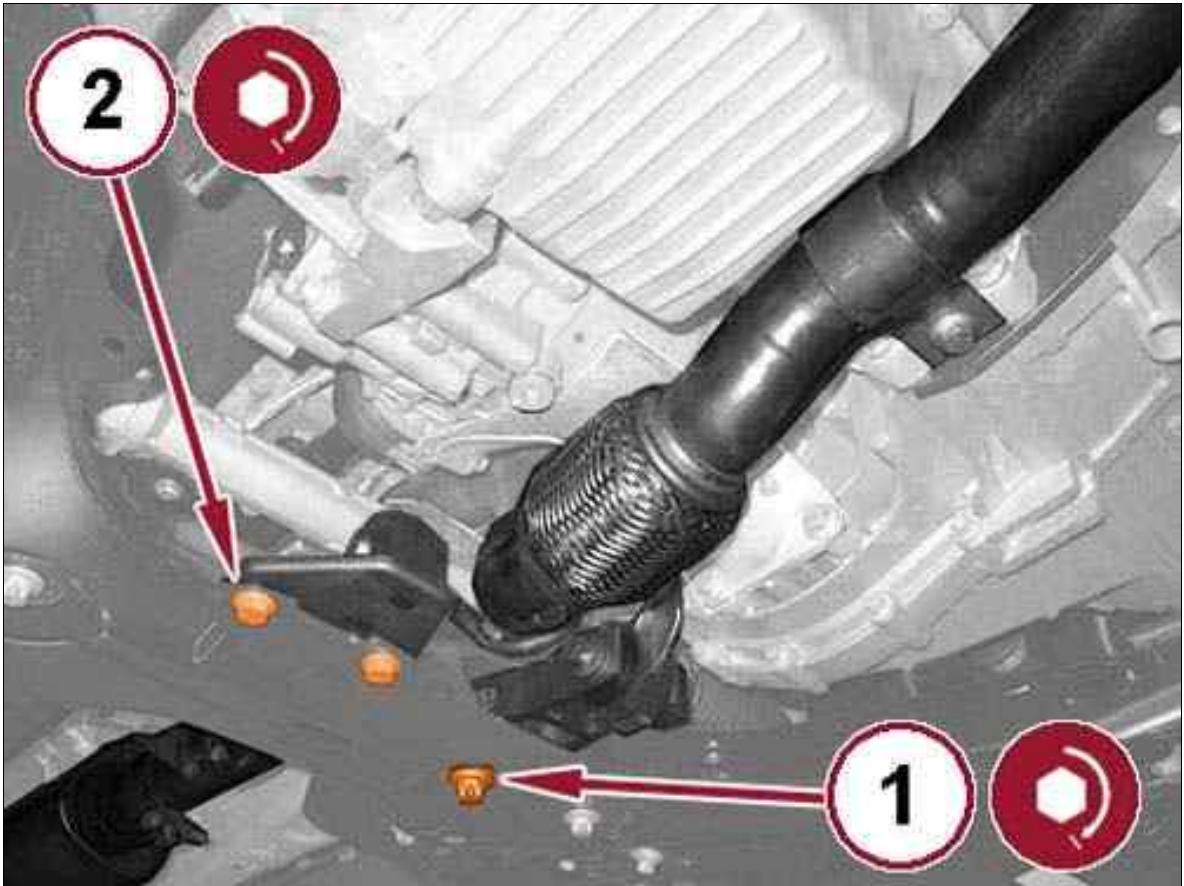
Fig 5: Front & Rear Fuel Line Shield Bolts



Courtesy of CHRYSLER GROUP, LLC

7. Position the front and rear fuel pipe shields and install the four bolts (1).

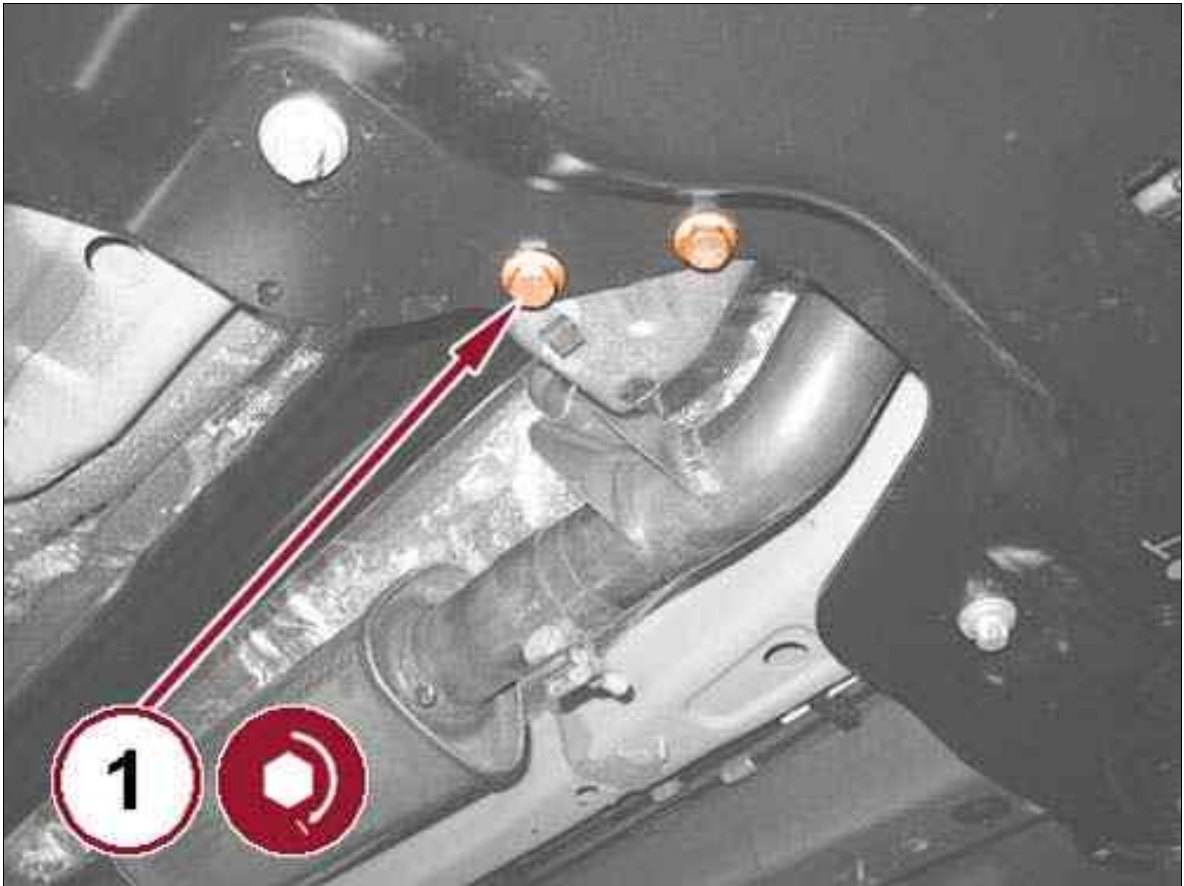
Fig 6: Exhaust Dampening Rod & Exhaust Support Bracket Bolts



Courtesy of CHRYSLER GROUP, LLC

8. Position the exhaust dampening rod and install the bolt (1) securing it to the crossmember. Tighten to the proper torque specification. Refer to SPECIFICATIONS .
9. Install the two bolts (1) securing the front exhaust support bracket. Tighten to the proper torque specification. Refer to SPECIFICATIONS .

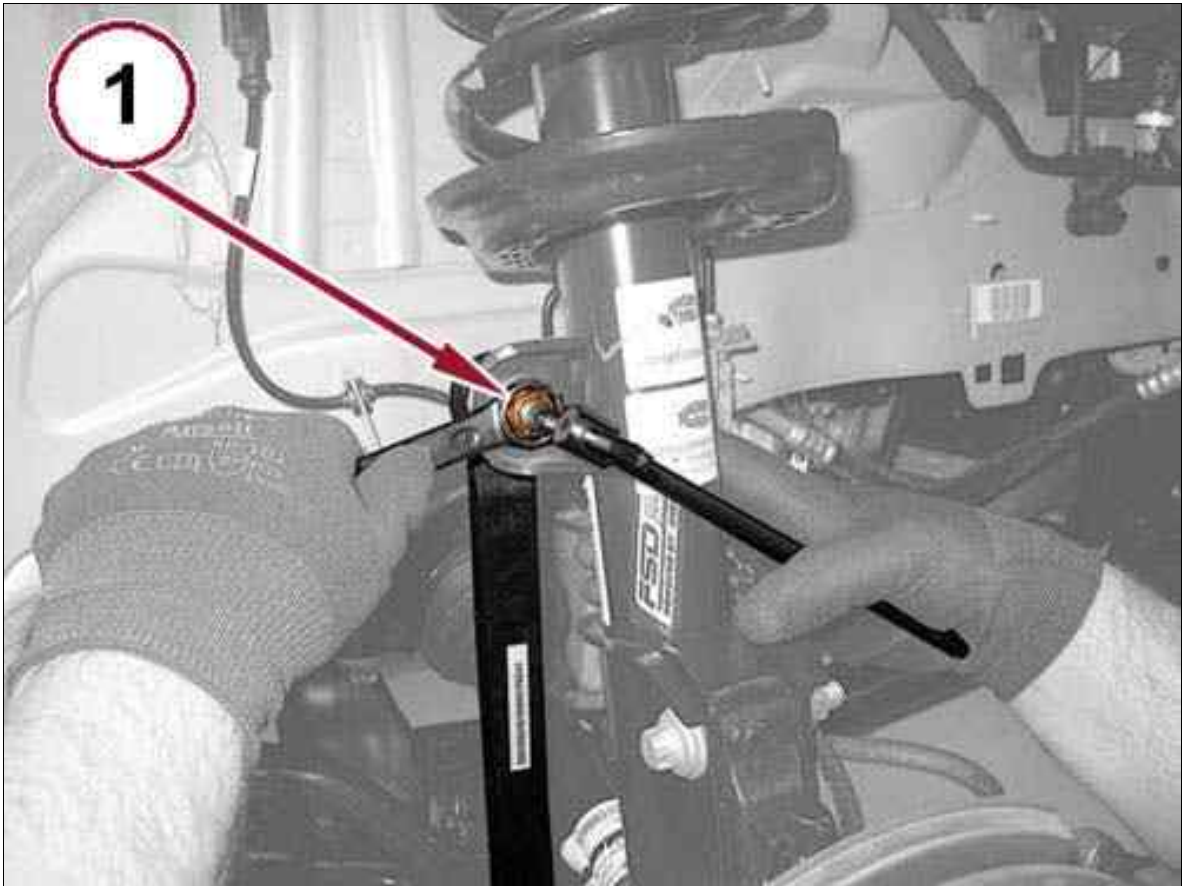
Fig 7: Exhaust Pipe Rear Support Bracket Bolts



Courtesy of CHRYSLER GROUP, LLC

10. Install the bolts (1) for the rear bracket supporting the exhaust pipe. Tighten to the proper torque specification. Refer to SPECIFICATIONS .

Fig 8: Stabilizer Bar Nut



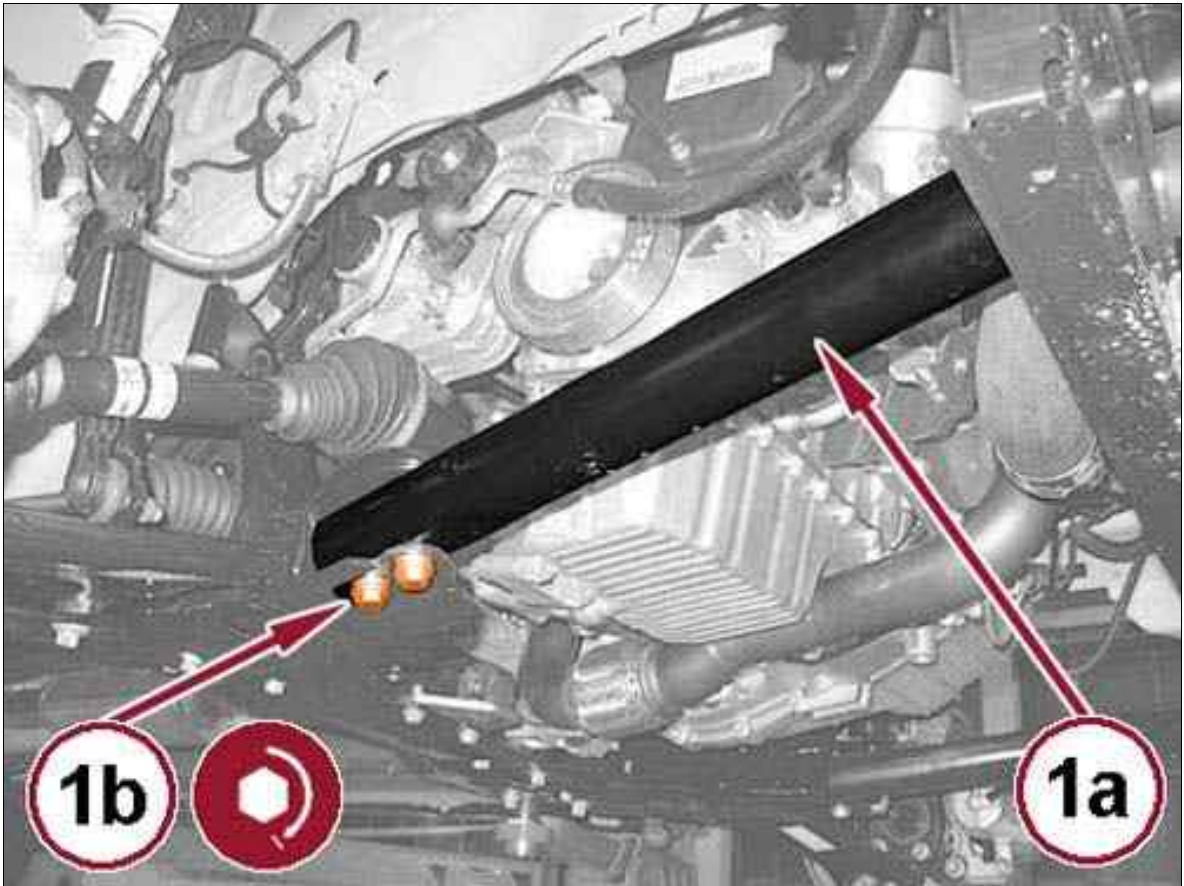
Courtesy of CHRYSLER GROUP, LLC

 NOTE:

Right side shown in the illustration, left side similar.

11. Connect the right and left joint stabilizer bars to the shocks and install the nuts (1). Tighten to the proper torque specification. Refer to FRONT, SPECIFICATIONS .

Fig 9: Right And Left Lower Load Beam Bottom Bolts



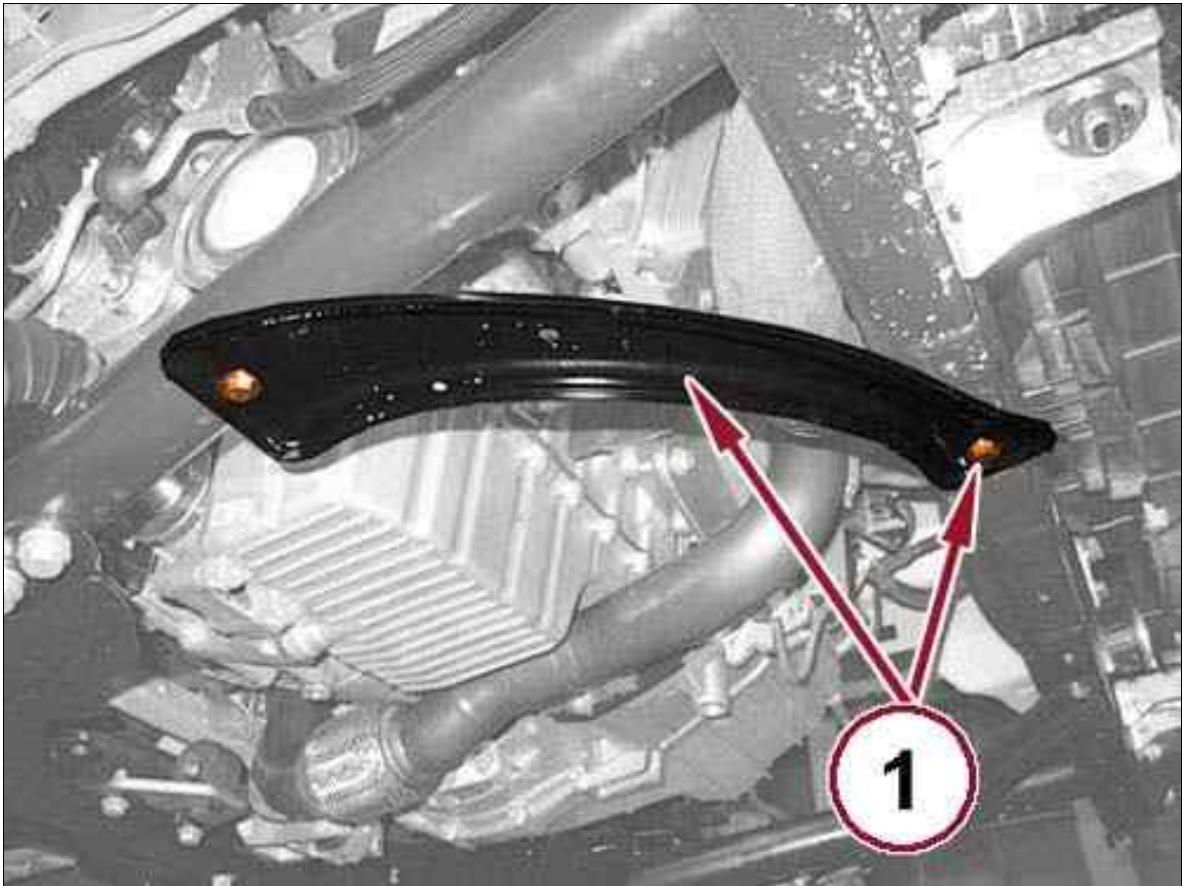
Courtesy of CHRYSLER GROUP, LLC

 NOTE:

Right side shown in the illustration, left side similar.

12. Position the right and left lower load beams (1a) and install the two bolts (1b). Tighten to the proper torque specification. Refer to SPECIFICATIONS .

Fig 10: Front Lower Frame Strut Bolts



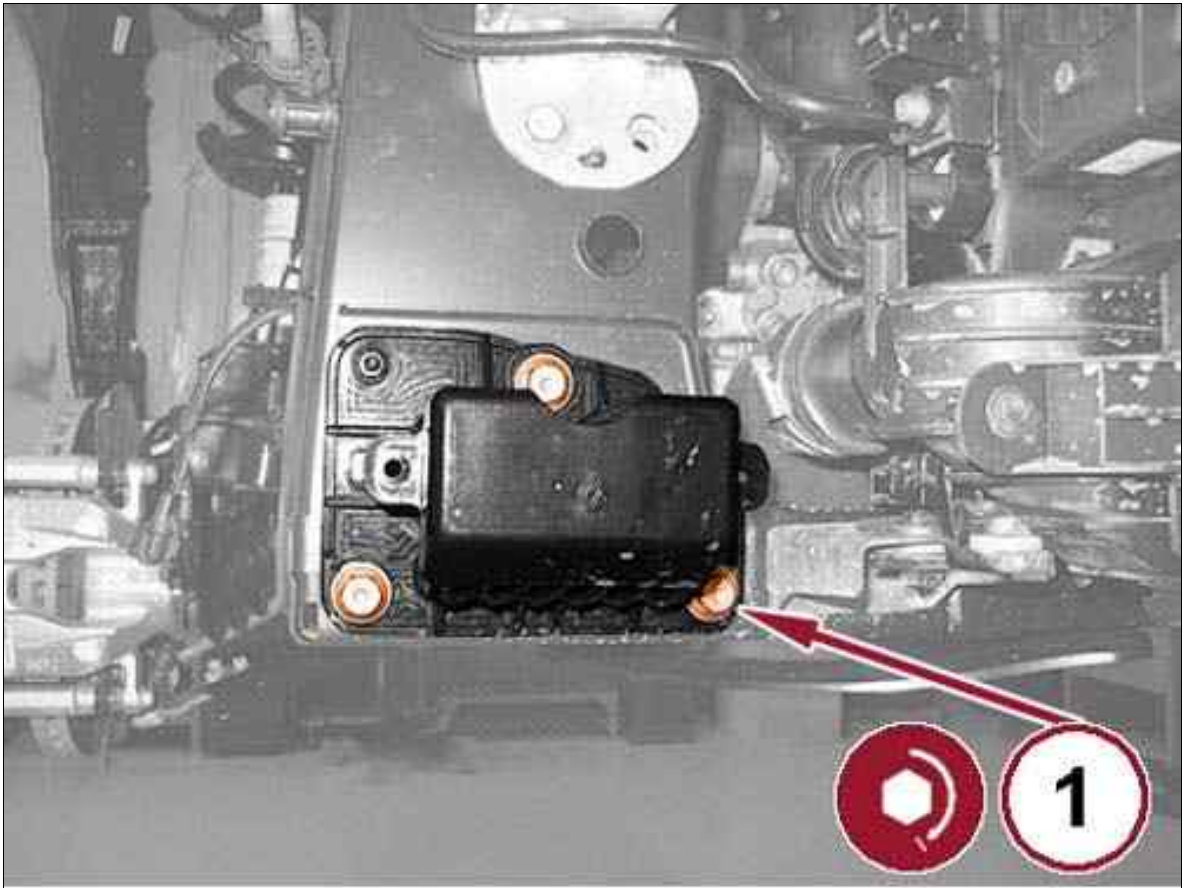
Courtesy of CHRYSLER GROUP, LLC

 NOTE:

Right side shown in the illustration, left side similar.

13. Position the right and left front lower frame struts for the front end and install the two bolts (1). Tighten to the proper torque specification. Refer to SPECIFICATIONS .

Fig 11: Right And Left Lower Load Beams At The Front End



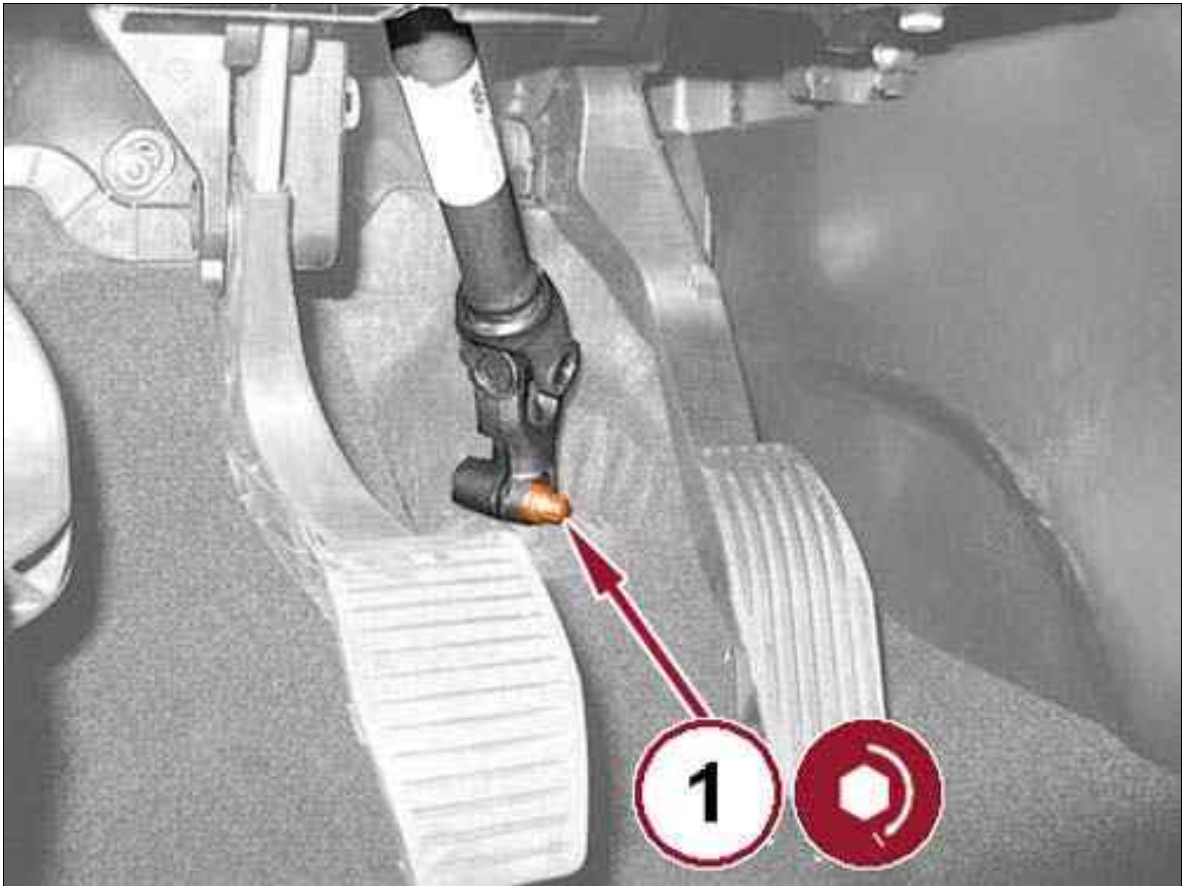
Courtesy of CHRYSLER GROUP, LLC

 NOTE:

Right side shown in the illustration, left side similar.

14. Install the three bolts (1) securing right and left lower load beams at the front end. Tighten to the proper torque specification. Refer to SPECIFICATIONS .

Fig 12: Steering Column-To-Pinion Steering Box Screw

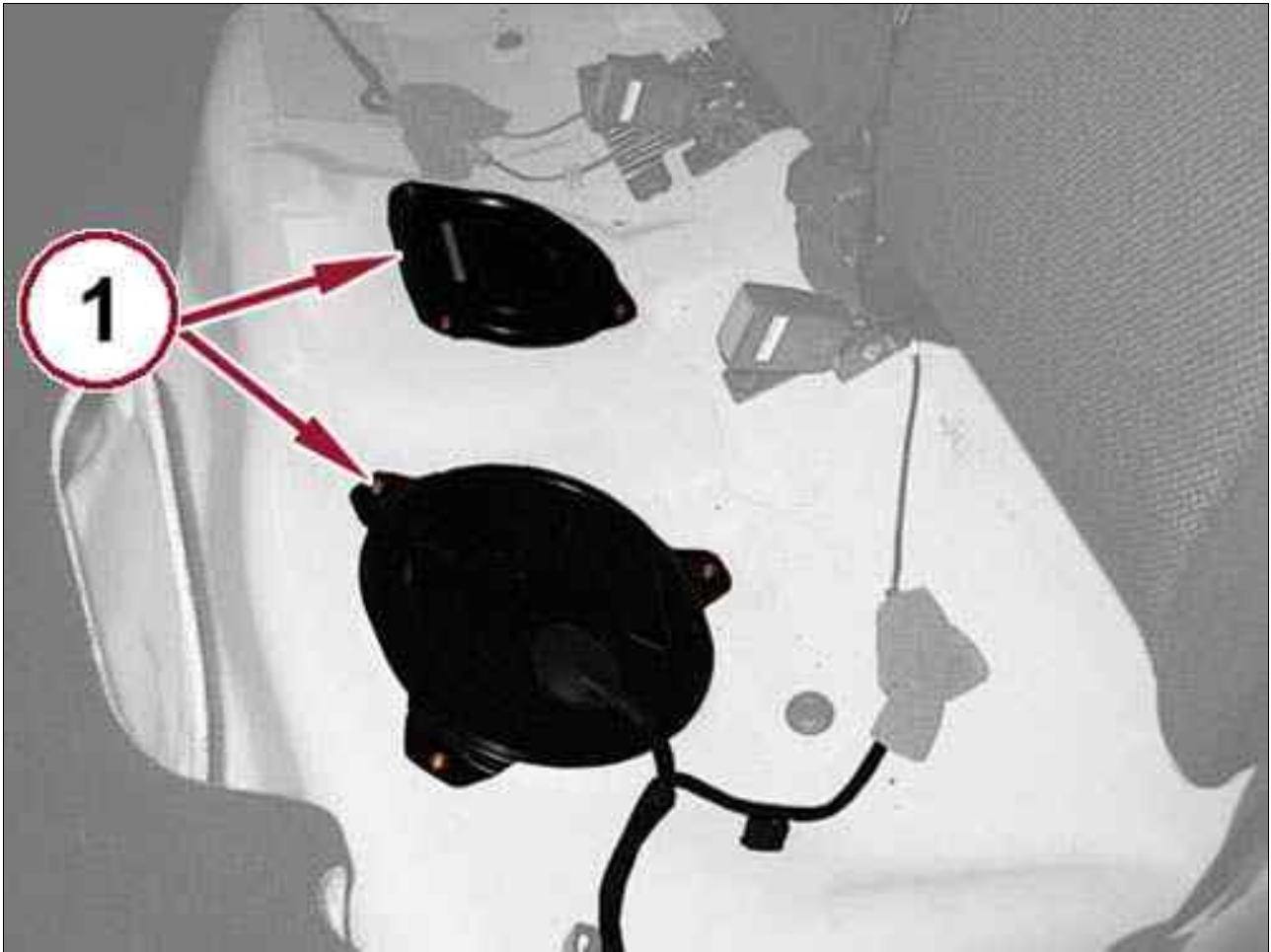


Courtesy of CHRYSLER GROUP, LLC

15. Install a new bolt (1) securing the steering column shaft to the pinion steering gear. Tighten to the proper torque specification. Refer to SPECIFICATIONS .
16. Install the right front wheelhouse splash shield. Refer to SHIELD, SPLASH, FRONT WHEELHOUSE, REMOVAL AND INSTALLATION .
17. Install the right front wheel. Refer to REMOVAL AND INSTALLATION .
18. Install the front fascia. Refer to FASCIA, FRONT, REMOVAL AND INSTALLATION .
19. Install the belly pan. Refer to BELLY PAN, REMOVAL AND INSTALLATION or BELLY PAN, SIDE, REMOVAL AND INSTALLATION .
20. Install the engine cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .
21. Remove the support and lower the vehicle.

**FUEL DELIVERY > LINES, FUEL > REMOVAL AND INSTALLATION > 1.4L > REMOVAL
- REAR FUEL DELIVERY LINE - 1.4L**

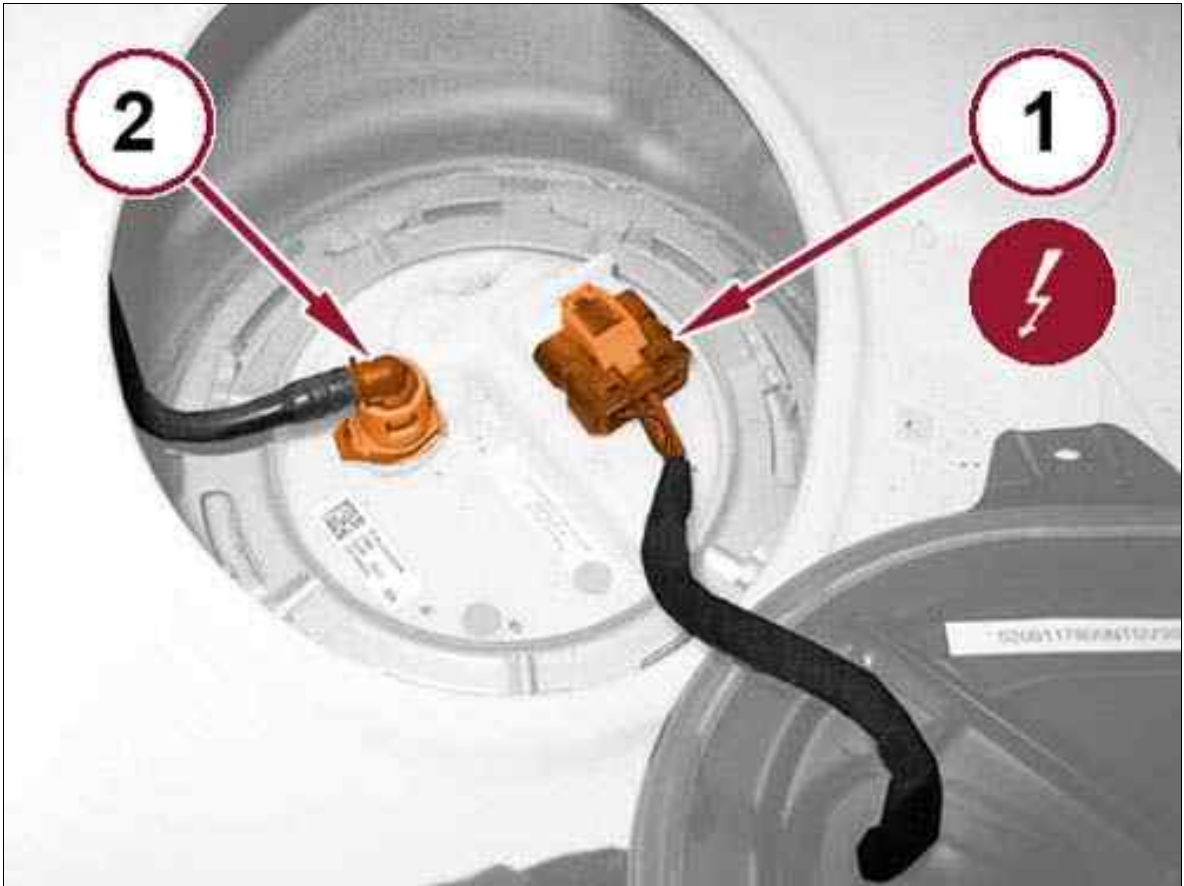
Fig 1: Fuel Pump Access Covers & Screws



Courtesy of CHRYSLER GROUP, LLC

1. Open the cover of the Power Distribution Center (PDC) in the engine compartment and remove the fuel pump fuse (F21 - 15 ampere).
2. Wait for the residual pressure in the fuel distribution manifold to be relieved.
3. Reinstall the fuel pump fuse (F21 - 15 ampere) and close the PDC cover.
4. Remove the rear seat cushion from the vehicle. Refer to SEAT CUSHION, REMOVAL AND INSTALLATION .
5. Lift the floor covering to access and remove the screws (1) that secure the fuel pump and vent tube access covers to the floor panel and remove the access cover.

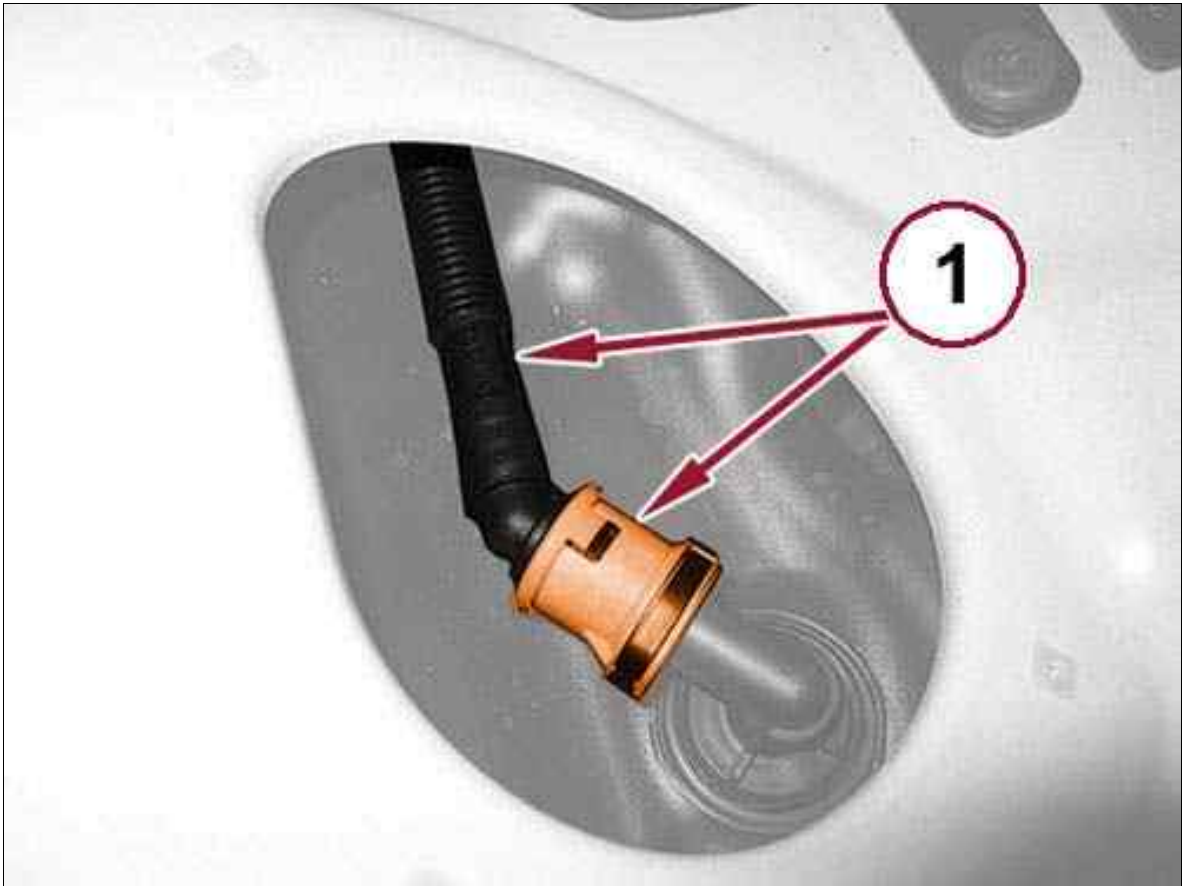
Fig 2: Electric Fuel Pump Connector & Rear Fuel Delivery Tube Quick Coupling



Courtesy of CHRYSLER GROUP, LLC

6. Disconnect the wire harness connector (1) from the electric fuel pump.
7. Disconnect the rear fuel delivery tube quick coupling (2) from the electric fuel pump.

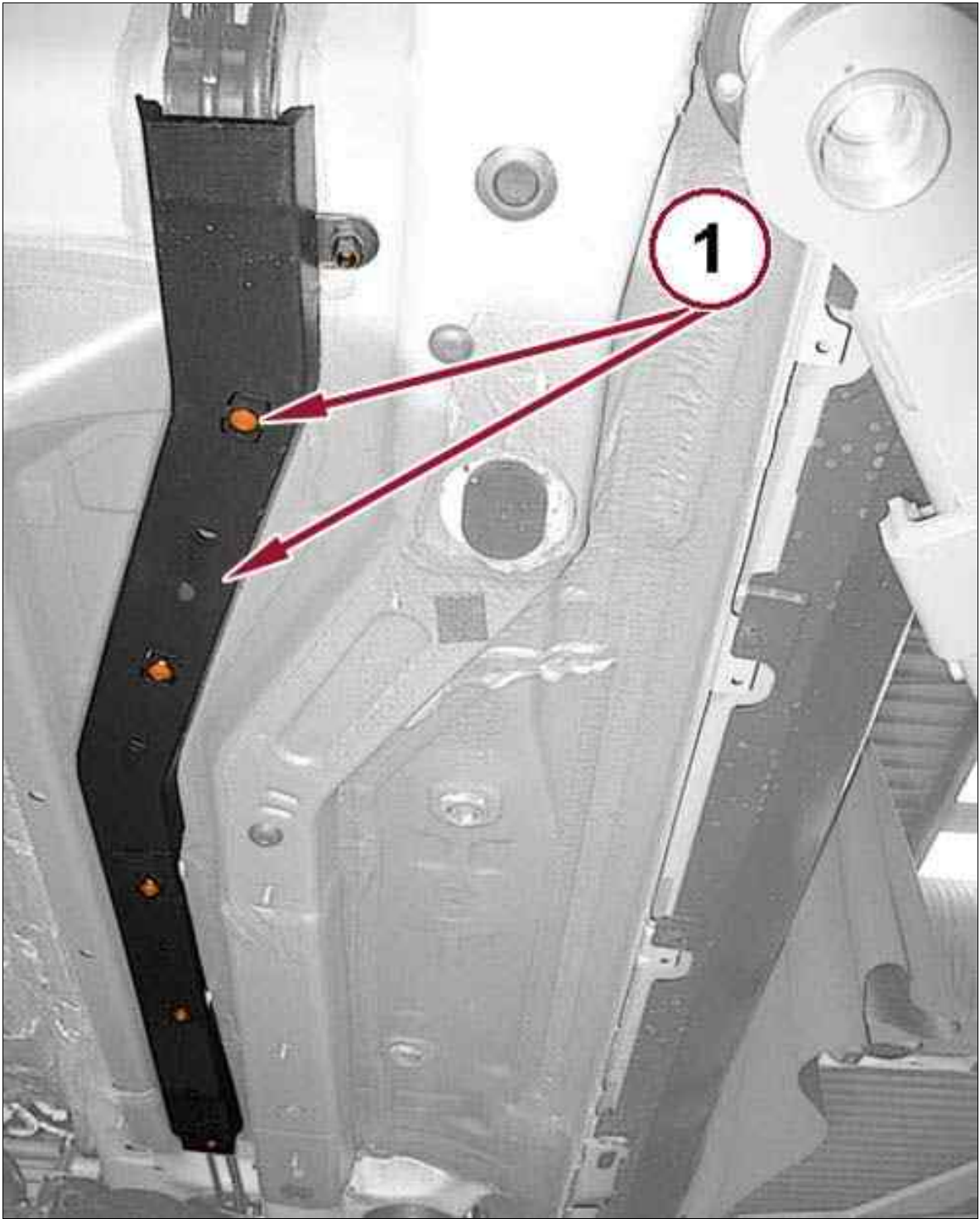
Fig 3: Rear Vent Tube Quick Coupling



Courtesy of CHRYSLER GROUP, LLC

8. Disconnect the rear vent tube quick coupling (1).
9. Raise and support the vehicle.
10. Remove the side belly pan from the underbody of the vehicle. Refer to BELLY PAN, REMOVAL AND INSTALLATION or BELLY PAN, SIDE, REMOVAL AND INSTALLATION .

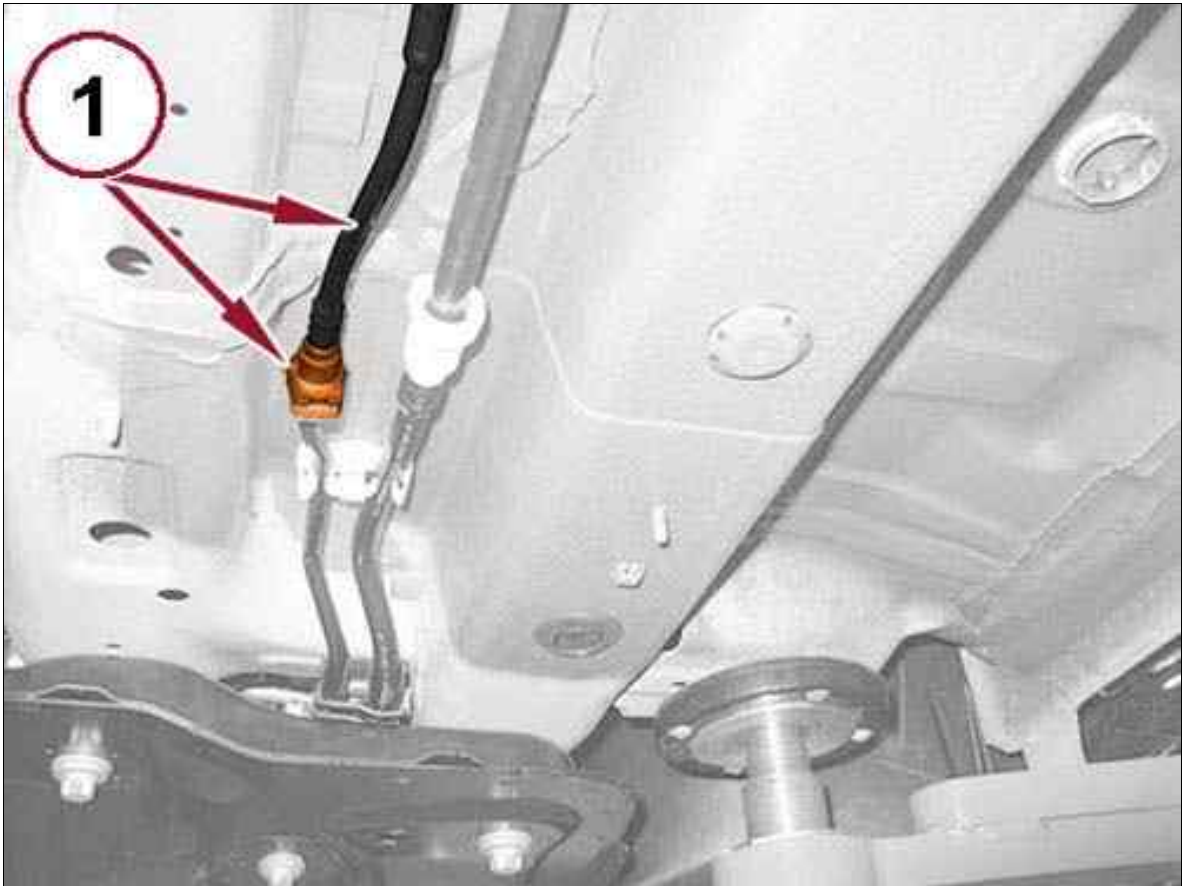
Fig 4: Fuel Tube Shield Screws



Courtesy of CHRYSLER GROUP, LLC

11. Remove the screws (1) that secure the fuel tube shield beneath the underbody and remove the front and rear shields.

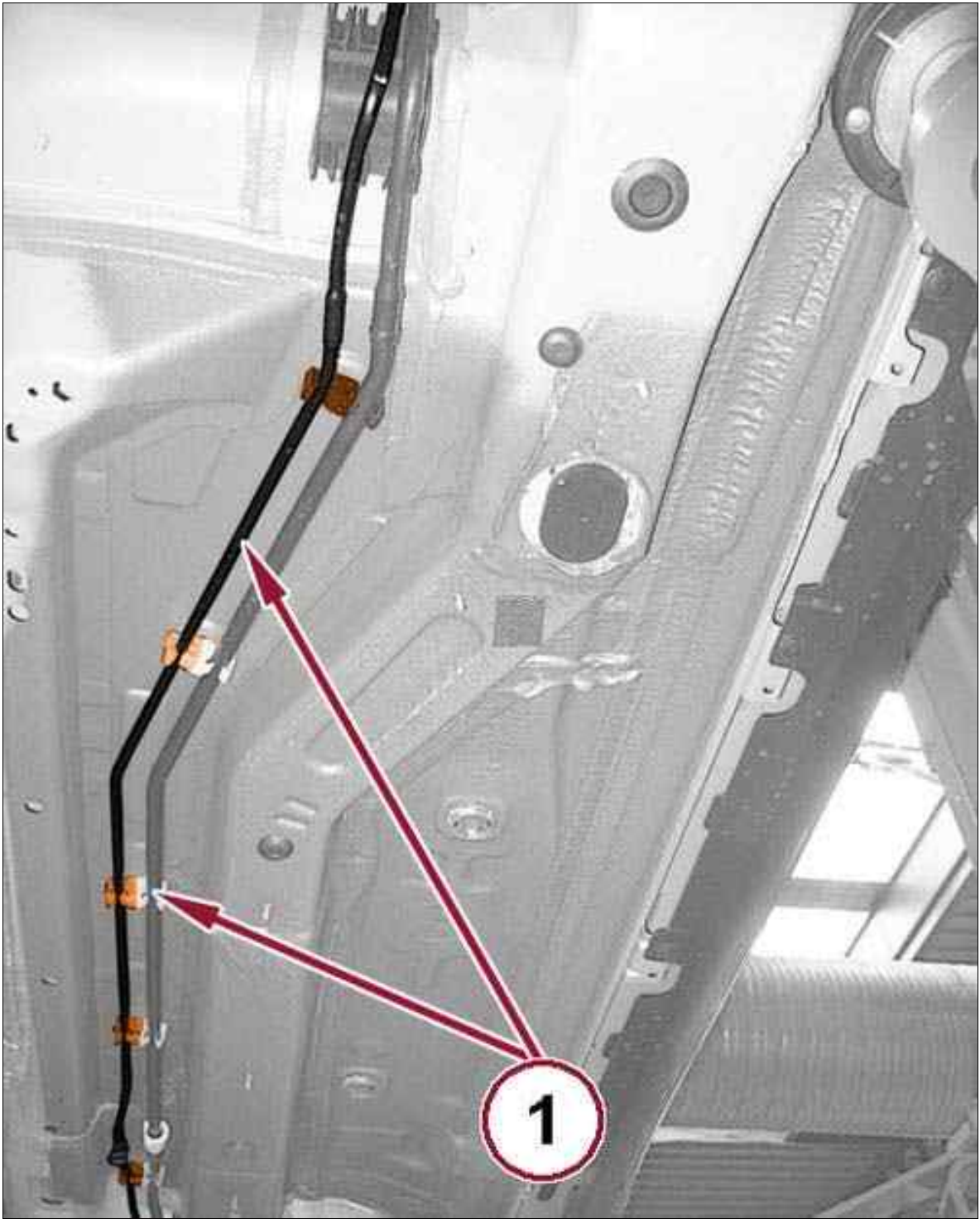
Fig 5: Fuel Delivery Tube Front Quick Coupling



Courtesy of CHRYSLER GROUP, LLC

12. Disconnect the rear fuel delivery tube front quick coupling (1).

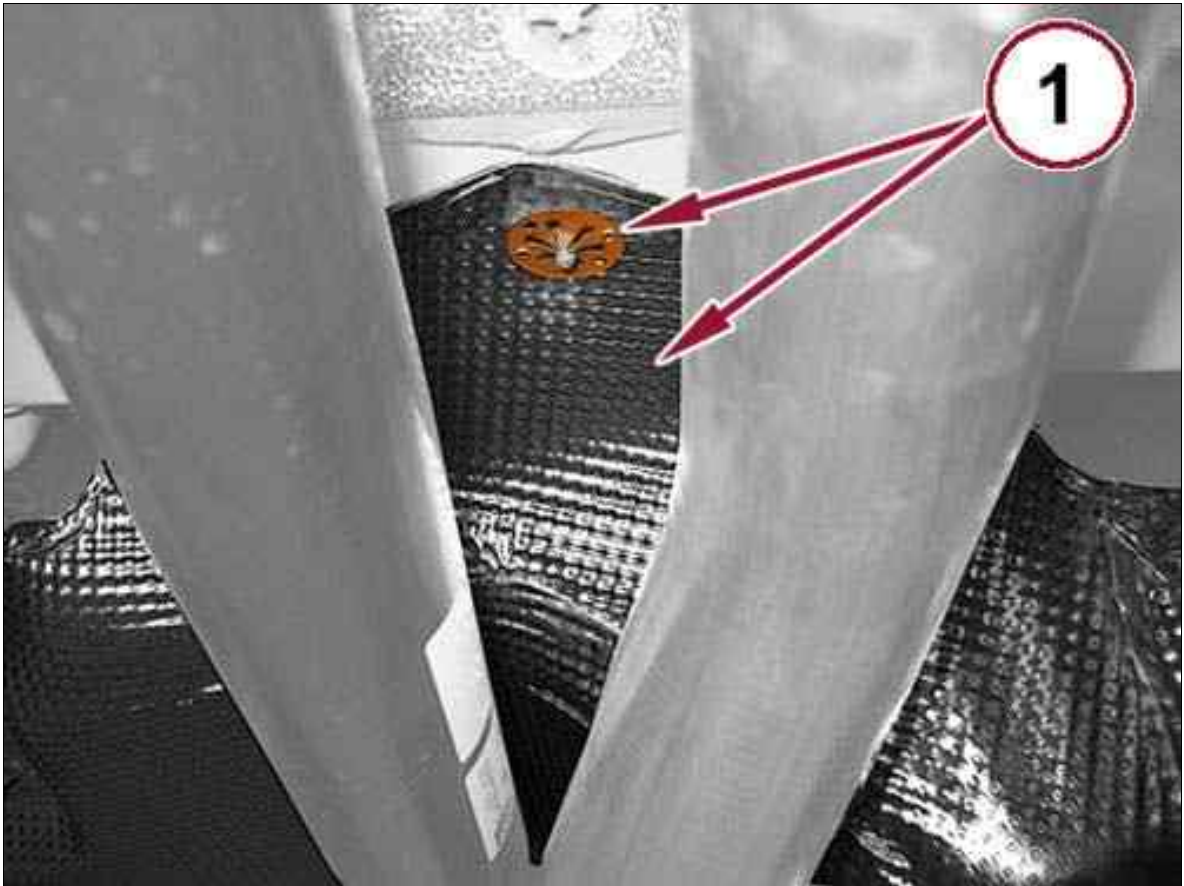
Fig 6: Rear Fuel Delivery Tube



Courtesy of CHRYSLER GROUP, LLC

13. Disengage the rear fuel delivery tube (1) from the retaining clips on the underbody.

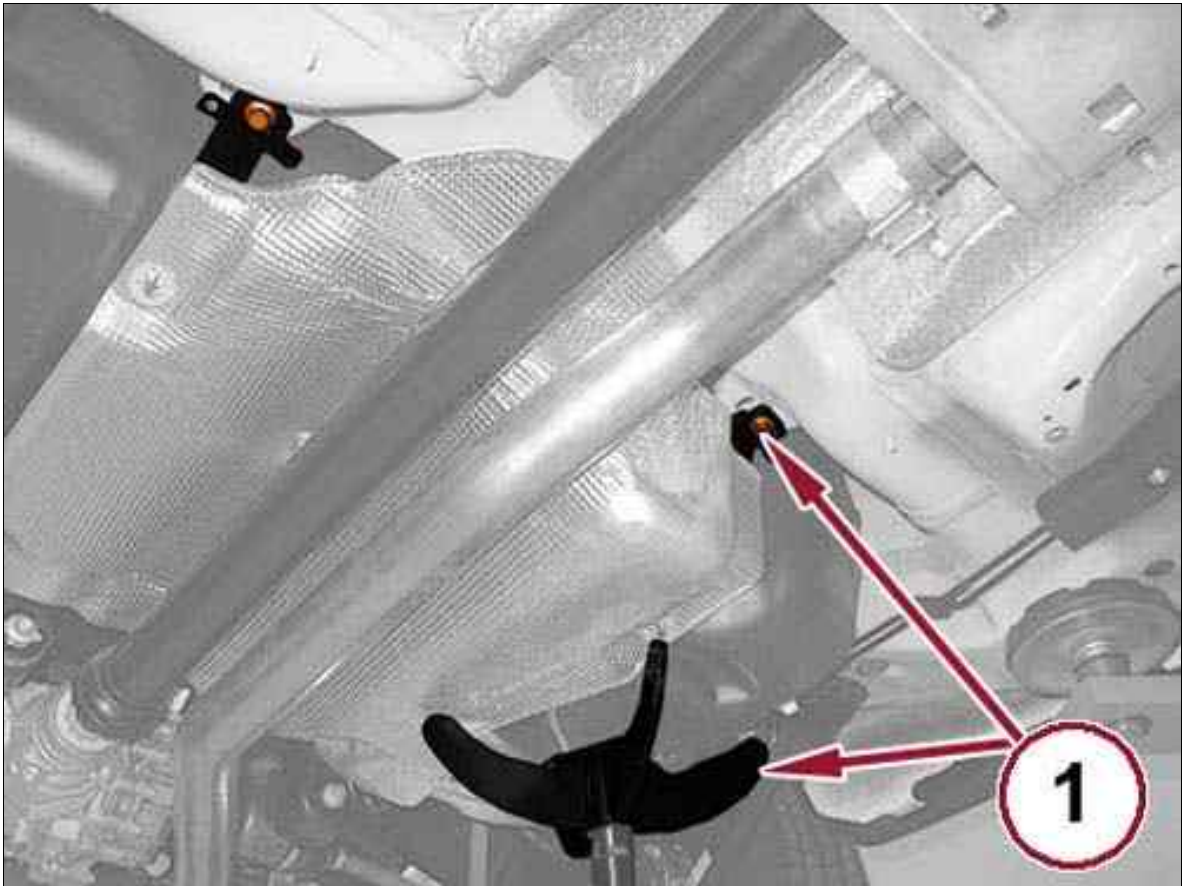
Fig 7: Fuel Tank Heat Shield Retaining Washer



Courtesy of CHRYSLER GROUP, LLC

14. Unscrew the serrated fuel tank heat shield retaining washer (1).

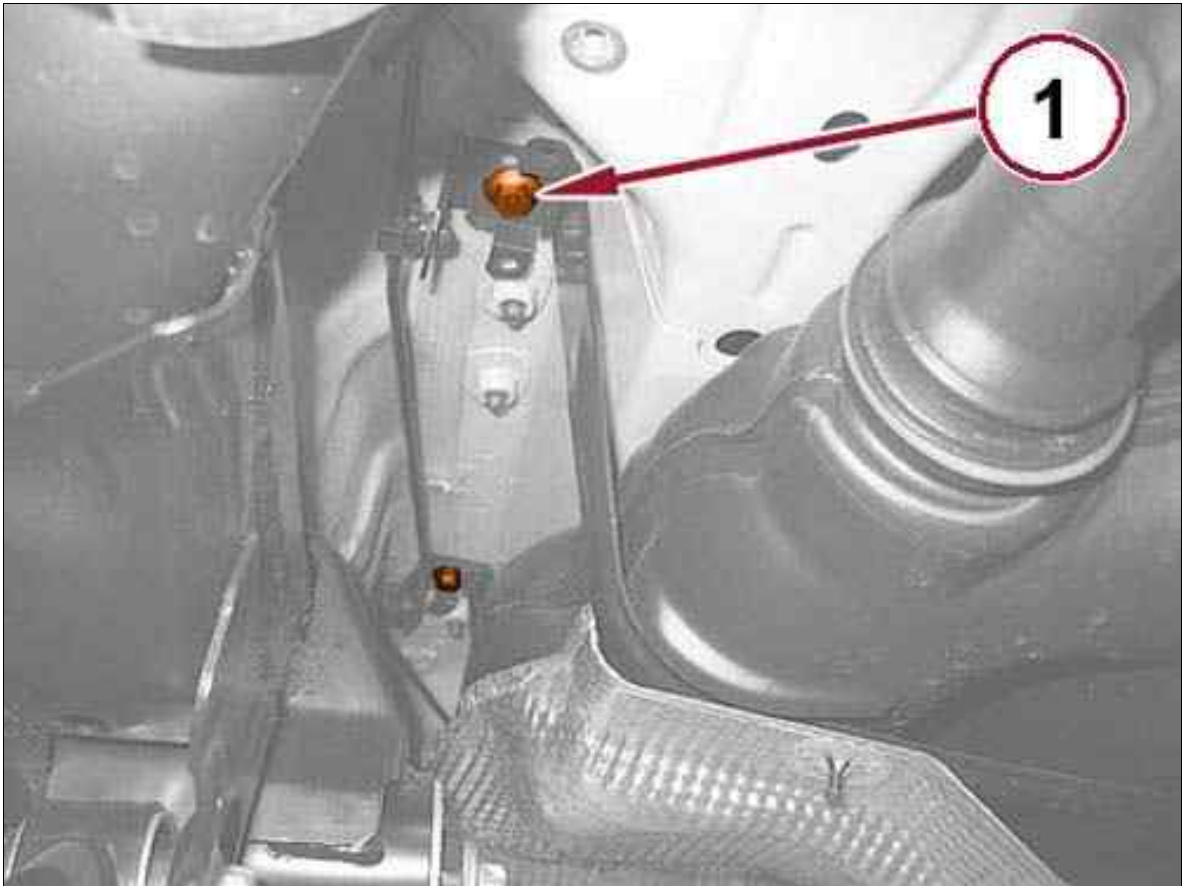
Fig 8: Front Tank Mounting Brackets & Hydraulic Lift



Courtesy of CHRYSLER GROUP, LLC

15. Place a suitable hydraulic lift to support the fuel tank, then remove the screws from the front tank mounting brackets (1).

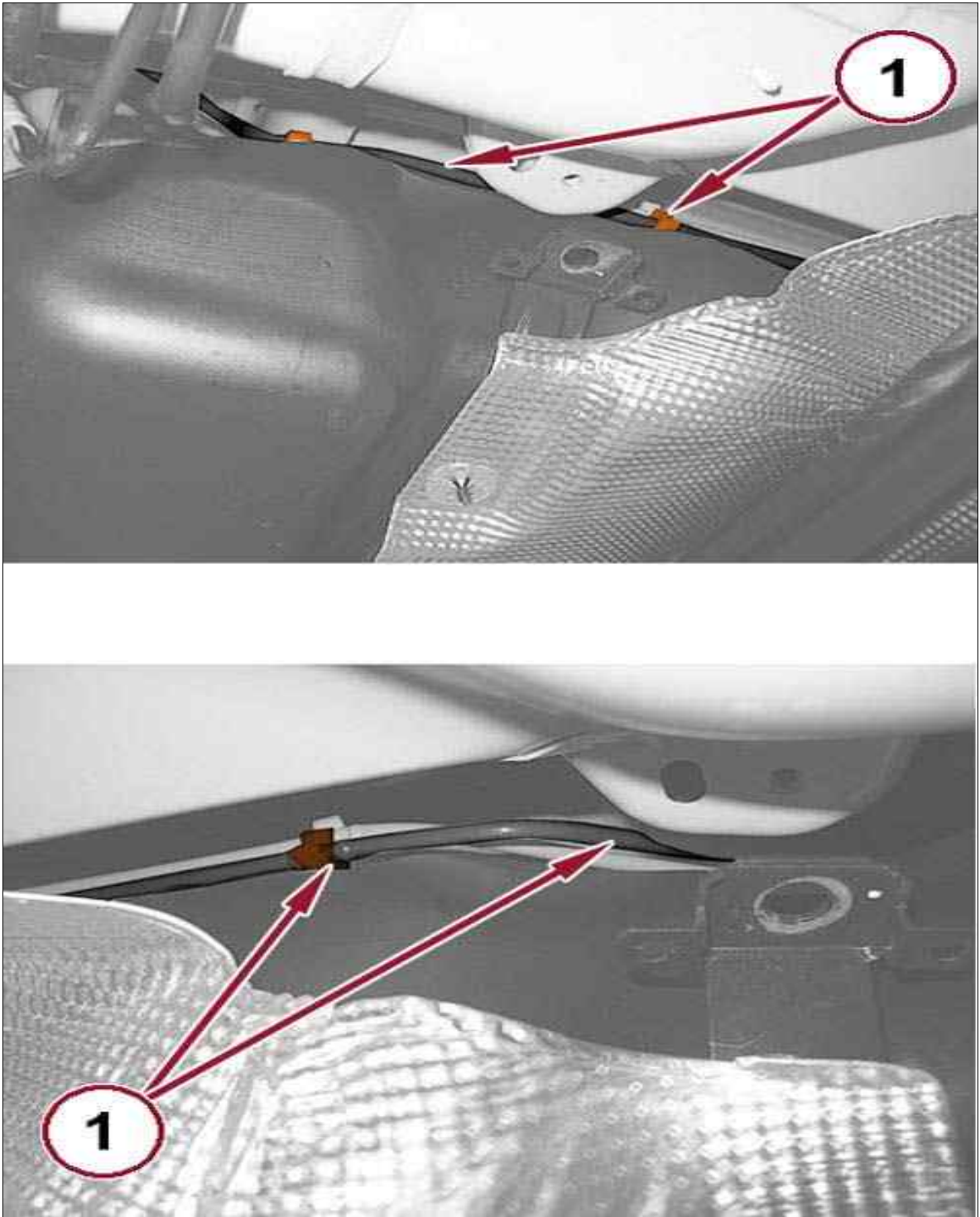
Fig 9: Rear Tank Mounting Brackets & Screws



Courtesy of CHRYSLER GROUP, LLC

16. Remove the screws (1) from the rear tank mounting brackets.

Fig 10: Rear Fuel Delivery Tube & Retaining Clips

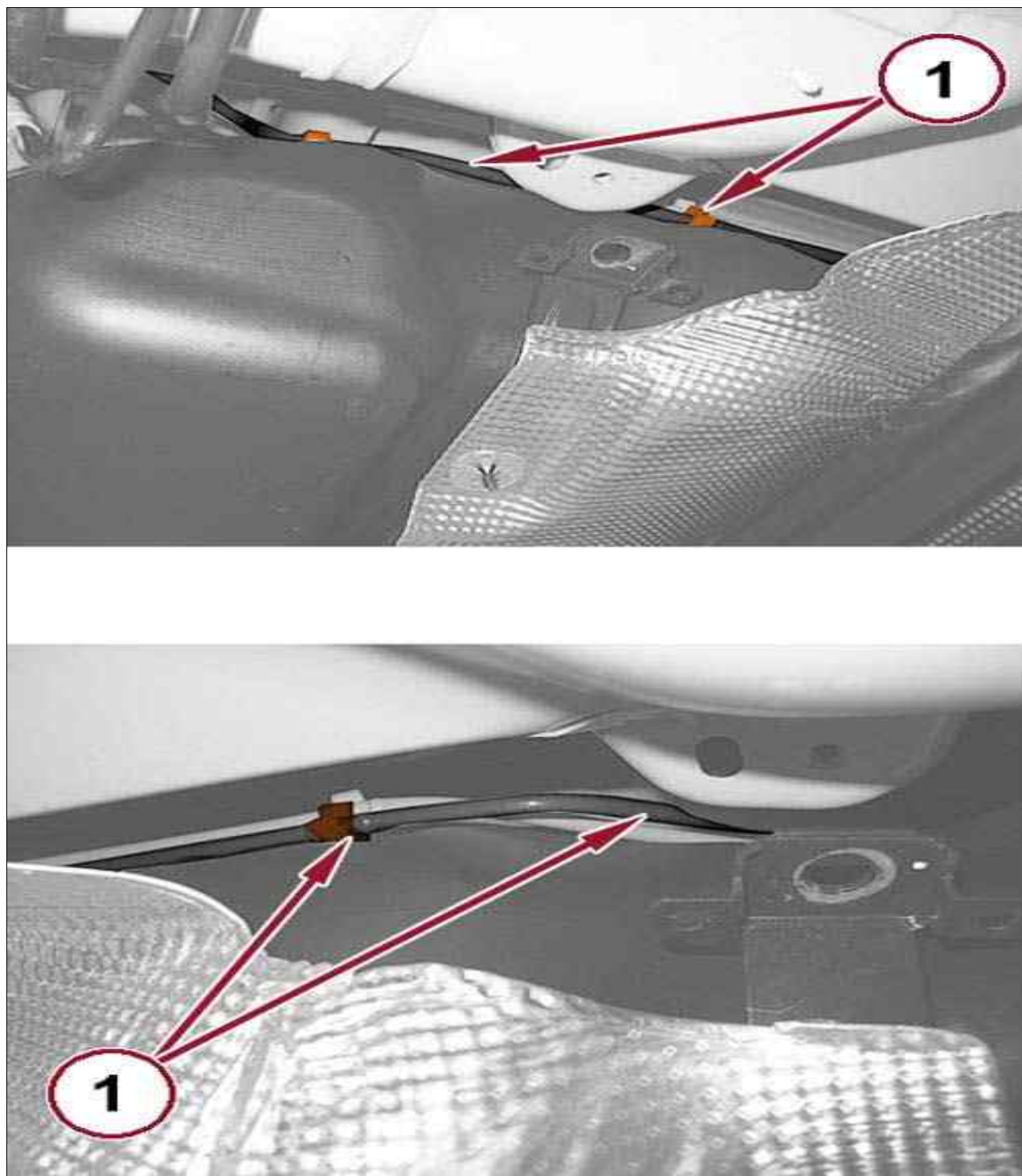


Courtesy of CHRYSLER GROUP, LLC

17. Lower the fuel tank far enough to access and disengage the rear fuel delivery tube from the retaining clips (1) and remove.

**FUEL DELIVERY > LINES, FUEL > REMOVAL AND INSTALLATION > 1.4L >
INSTALLATION - REAR FUEL DELIVERY LINE - 1.4L**

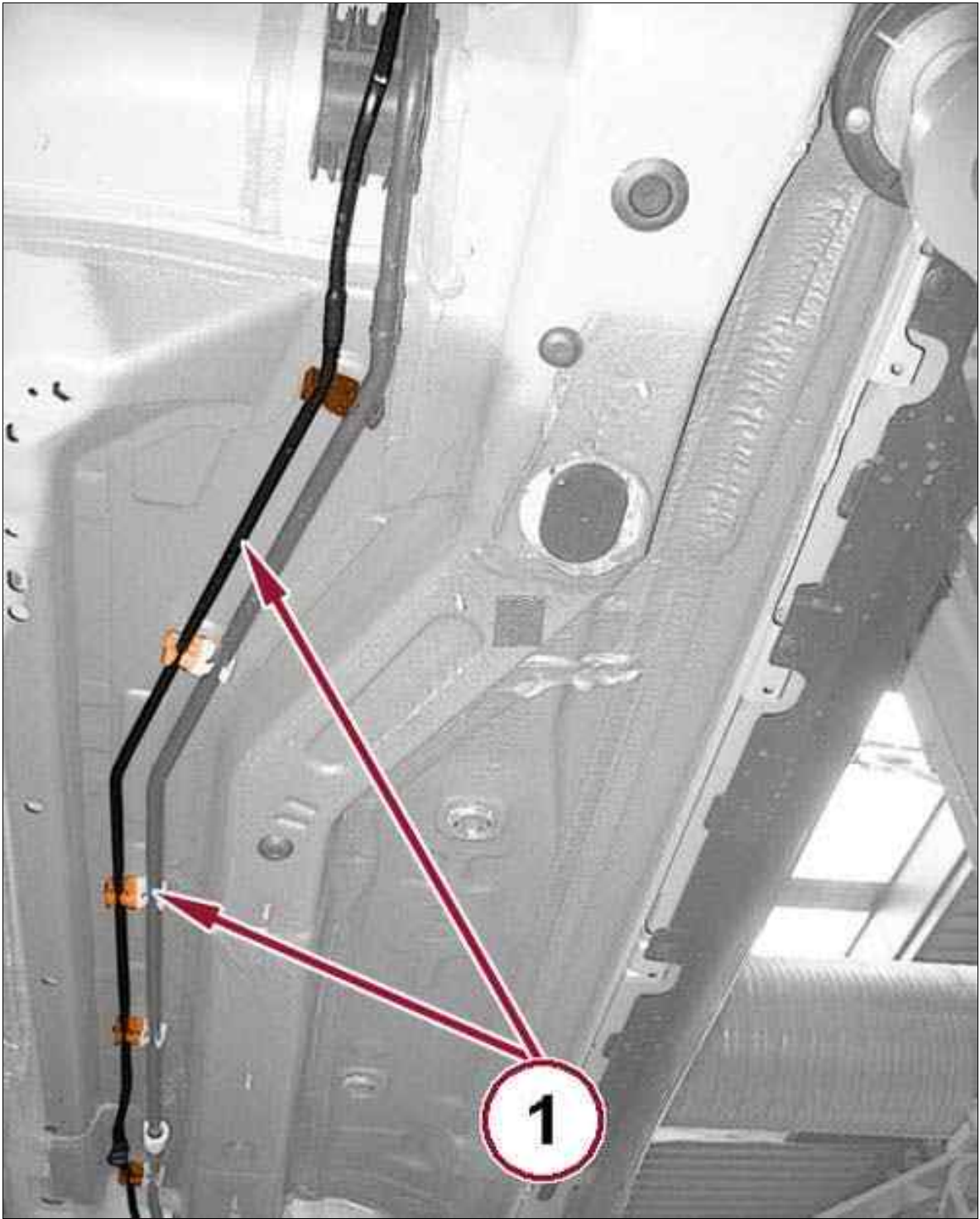
Fig 1: Rear Fuel Delivery Tube & Retaining Clips



Courtesy of CHRYSLER GROUP, LLC

1. Position the rear fuel delivery tube (1) to the vehicle underbody.

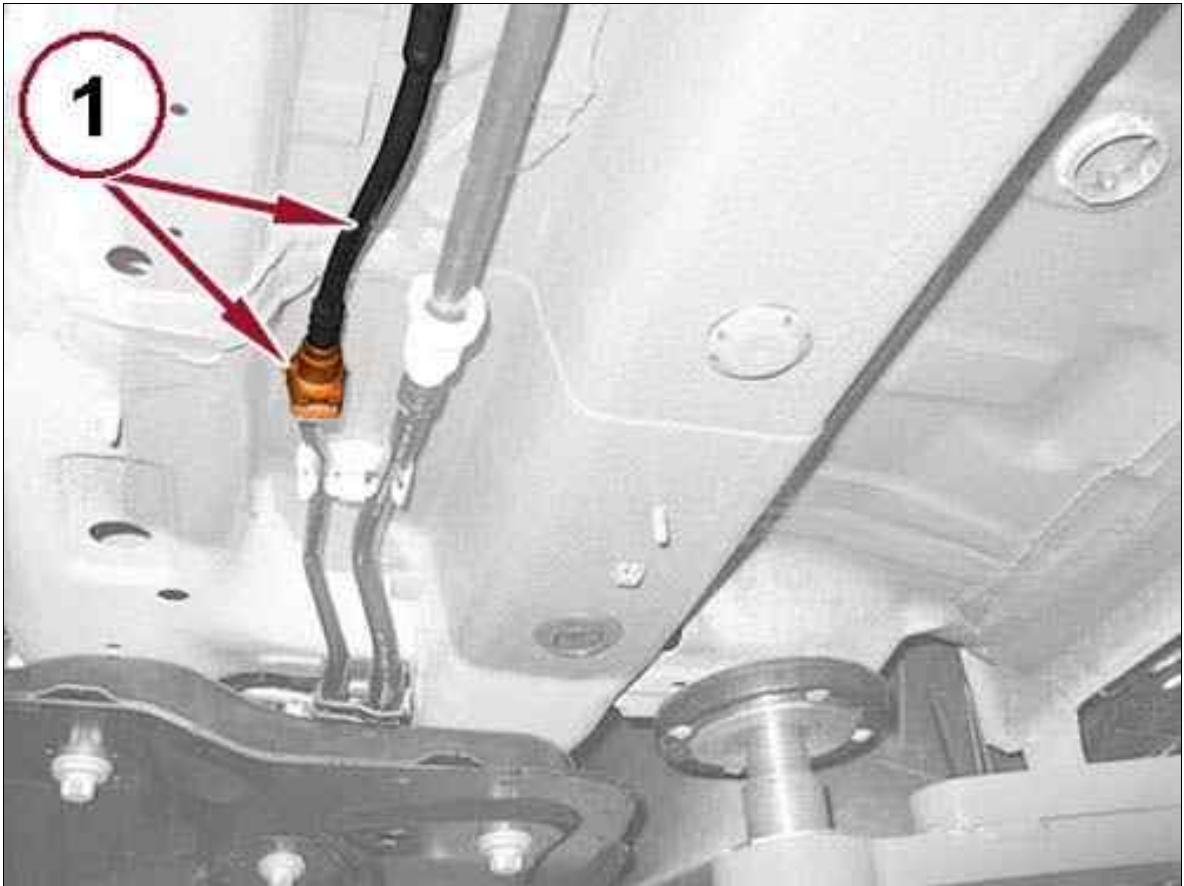
Fig 2: Rear Fuel Delivery Tube



Courtesy of CHRYSLER GROUP, LLC

2. Engage the rear fuel delivery tube (1) with the retaining clips on the underbody.

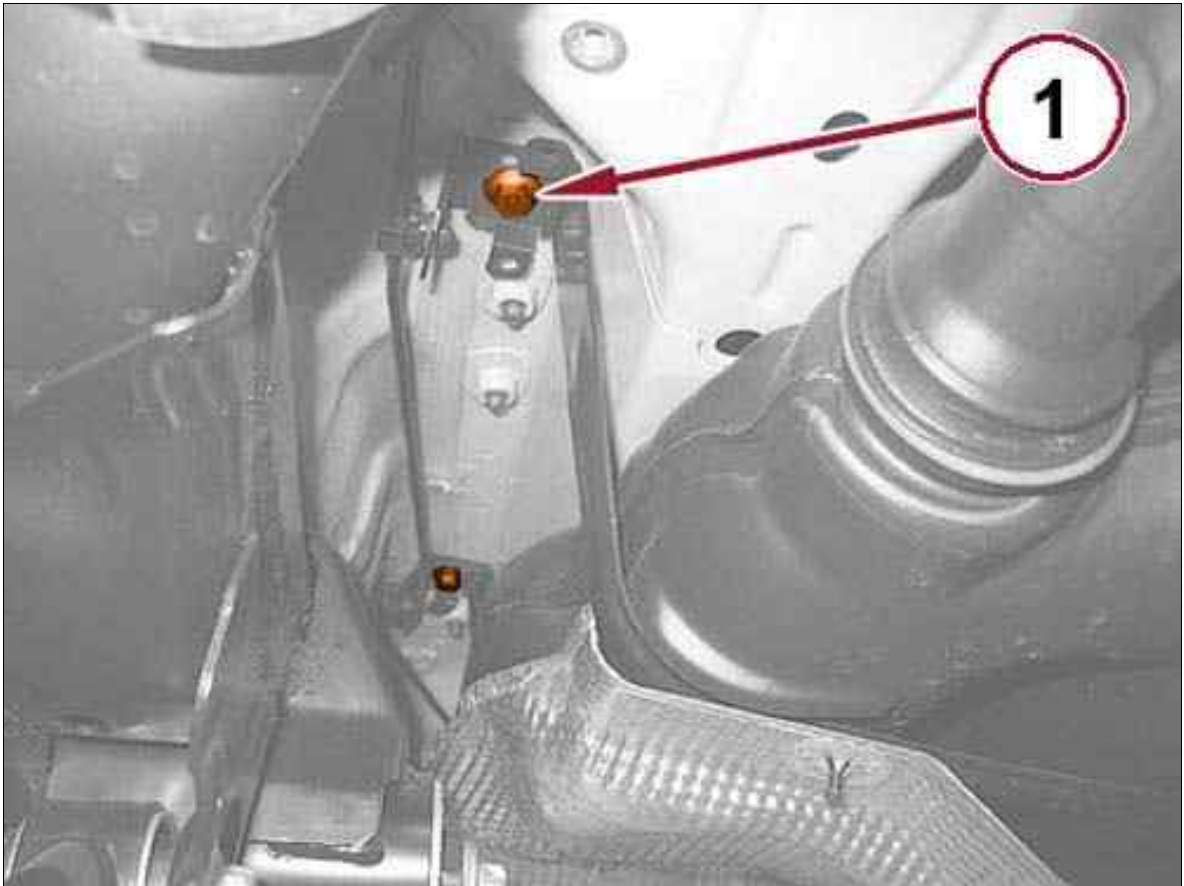
Fig 3: Fuel Delivery Tube Front Quick Coupling



Courtesy of CHRYSLER GROUP, LLC

3. Connect the rear fuel delivery tube front quick coupling (1).

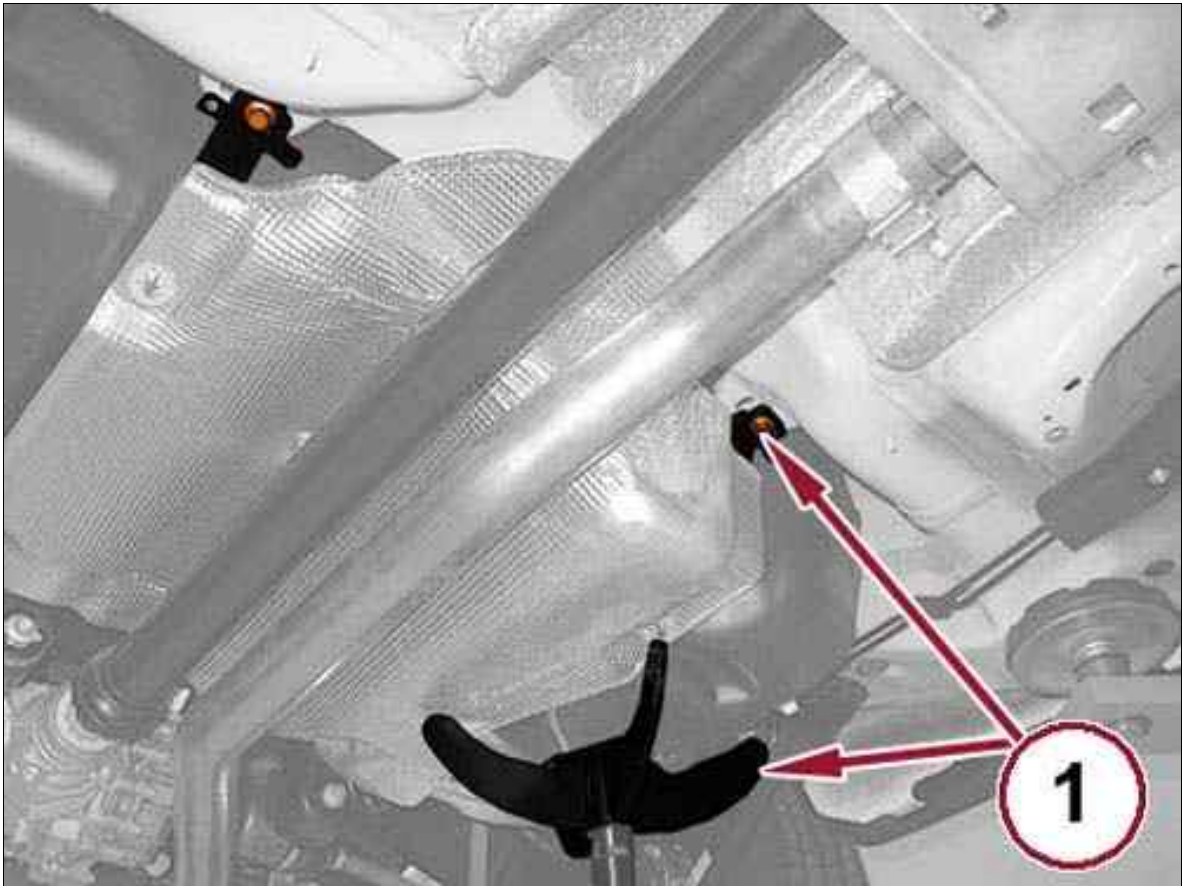
Fig 4: Rear Tank Mounting Brackets & Screws



Courtesy of CHRYSLER GROUP, LLC

4. Lift the fuel tank back into position then install and tighten the screws (1) for the rear tank mounting brackets. Tighten the screws securely.

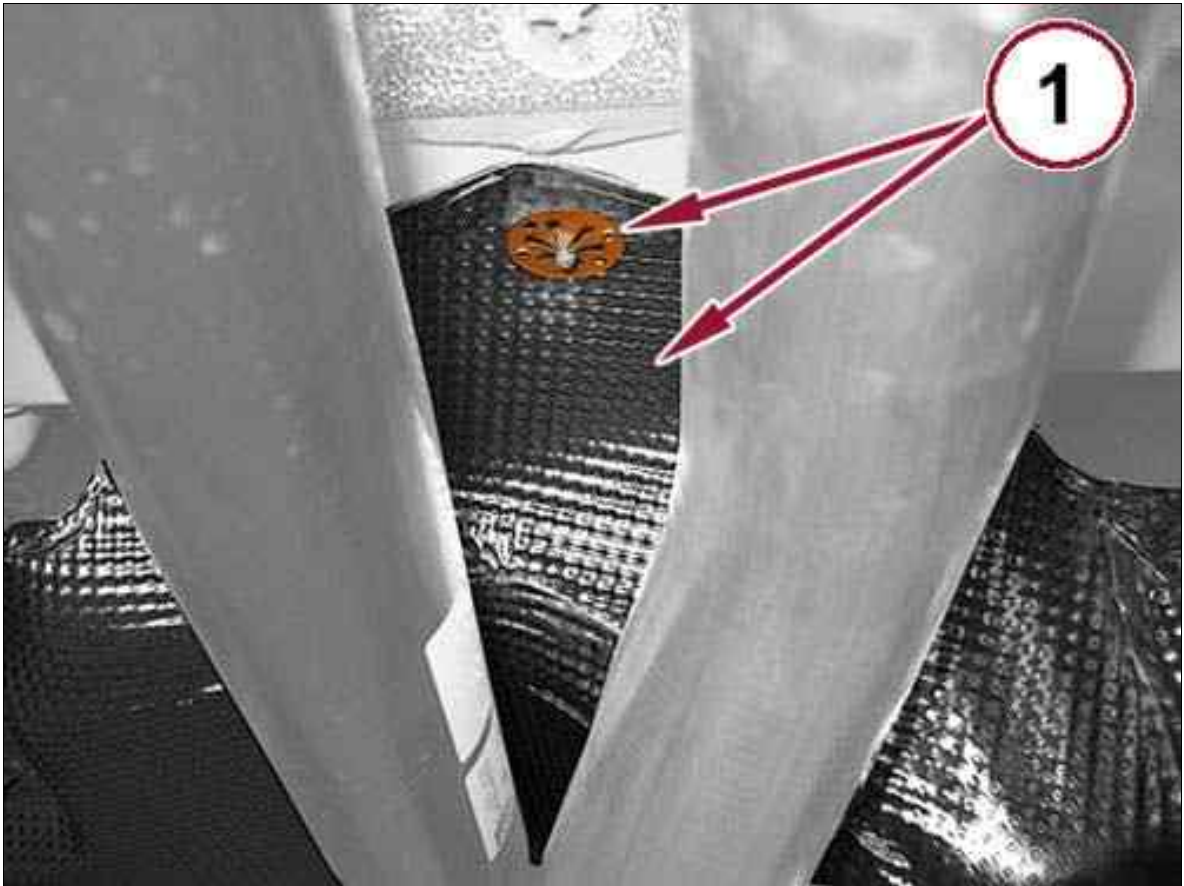
Fig 5: Front Tank Mounting Brackets & Hydraulic Lift



Courtesy of CHRYSLER GROUP, LLC

5. Install and tighten the screws that secure the front tank mounting brackets (1). Tighten the screws securely.

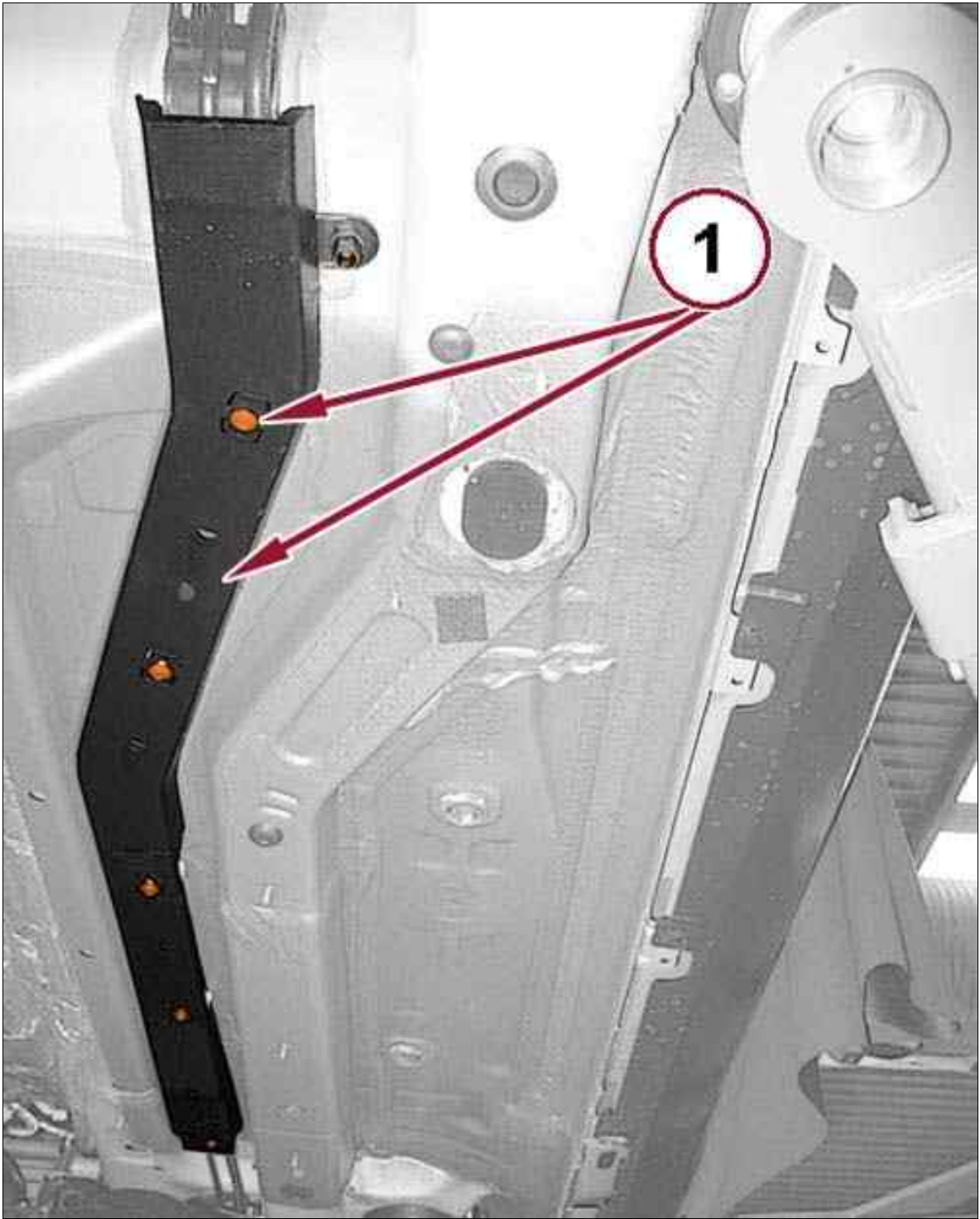
Fig 6: Fuel Tank Heat Shield Retaining Washer



Courtesy of CHRYSLER GROUP, LLC

6. Position the fuel tank heat shield and secure it by screwing on the serrated retainer washer (1).

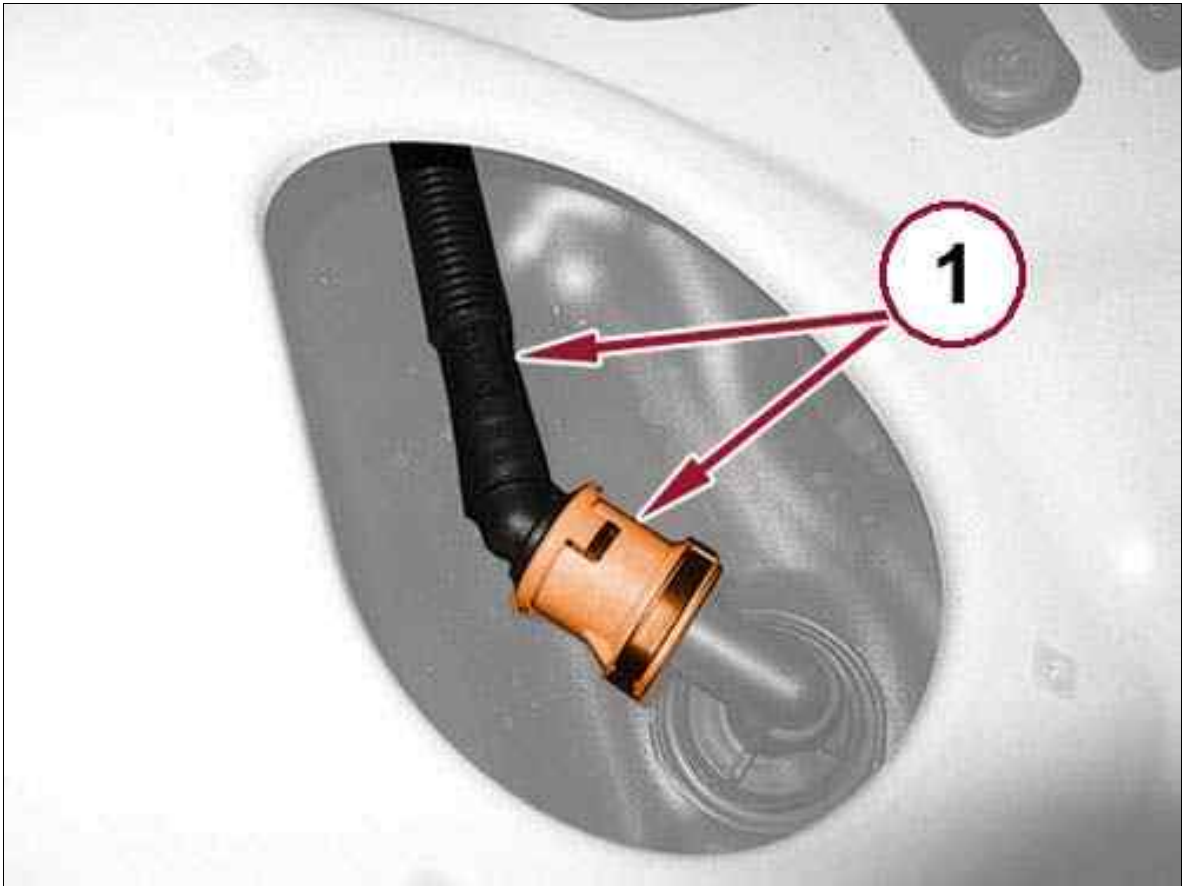
Fig 7: Fuel Tube Shield Screws



Courtesy of CHRYSLER GROUP, LLC

7. Position the front and rear fuel tube shields to the underbody then install and tighten the screws (1) that secure it. Tighten the screws securely.
8. Install the side belly pan onto the underbody of the vehicle. Refer to BELLY PAN, REMOVAL AND INSTALLATION or BELLY PAN, SIDE, REMOVAL AND INSTALLATION .

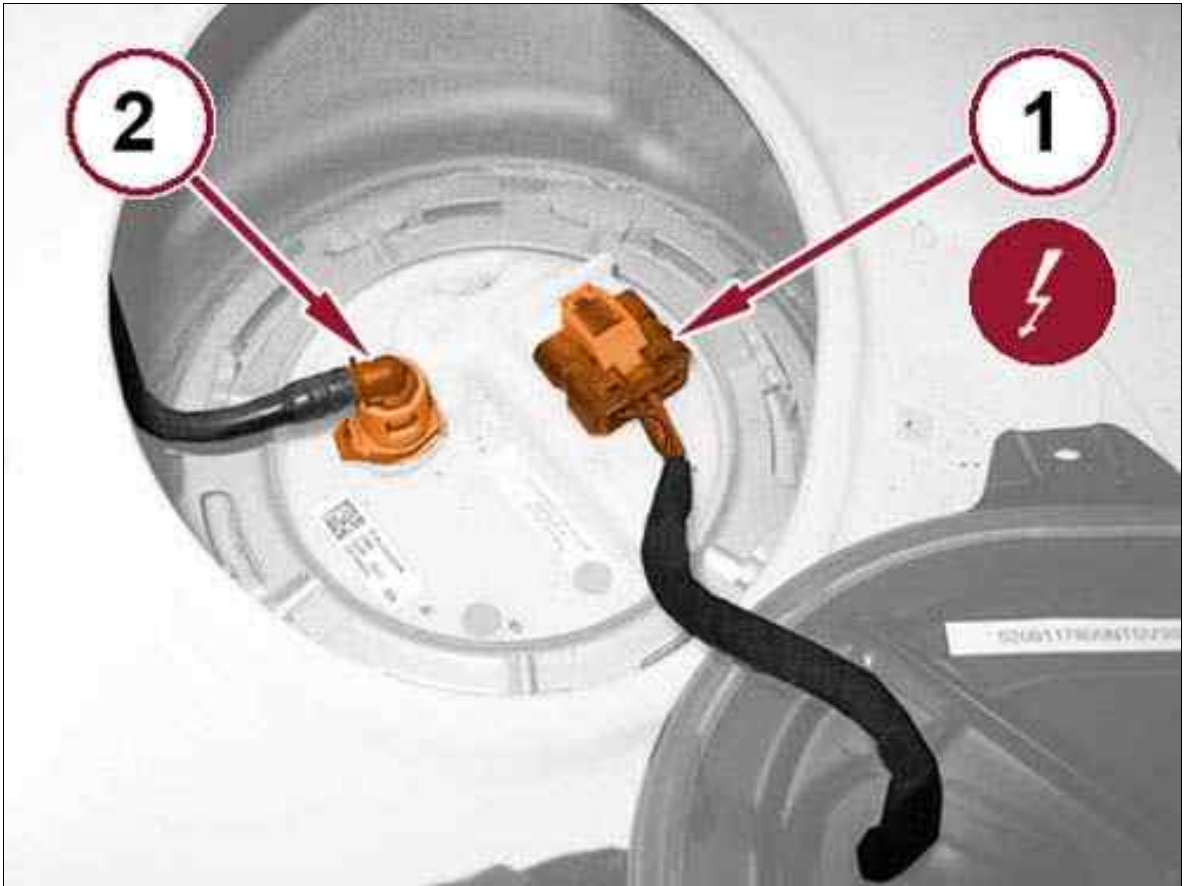
Fig 8: Rear Vent Tube Quick Coupling



Courtesy of CHRYSLER GROUP, LLC

9. Remove the support and lower the vehicle.
10. Lift the floor covering to access and connect the rear vent tube quick coupling (1).

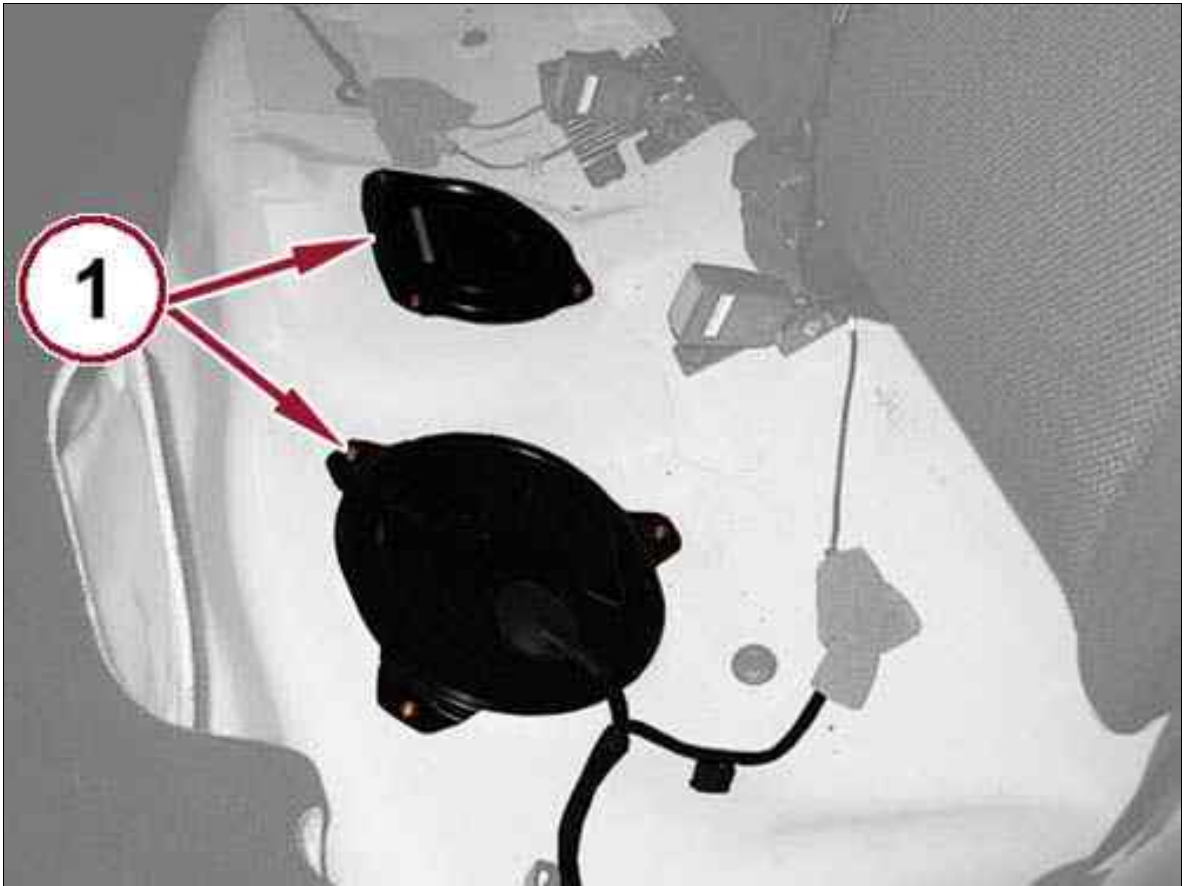
Fig 9: Electric Fuel Pump Connector & Rear Fuel Delivery Tube Quick Coupling



Courtesy of CHRYSLER GROUP, LLC

11. Connect the rear fuel delivery tube quick coupling (2) to the electric fuel pump.
12. Connect the wire harness connector (1) to the electric fuel pump.

Fig 10: Fuel Pump Access Covers & Screws



Courtesy of CHRYSLER GROUP, LLC

13. Position the fuel pump and vent tube access covers to the floor panel then install and tighten the screws (1) to secure them. Tighten the screws securely.
14. Install the rear seat cushion into the vehicle. Refer to SEAT CUSHION, REMOVAL AND INSTALLATION .

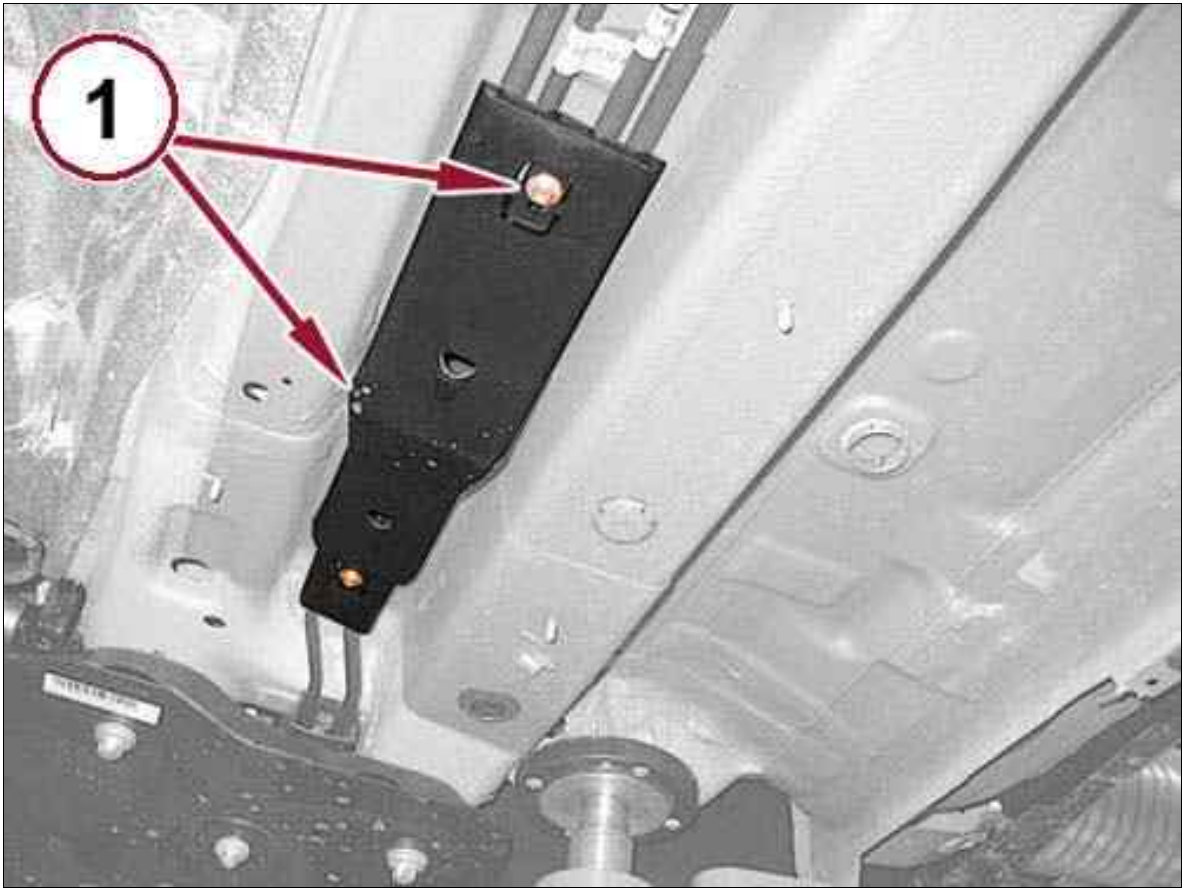
**FUEL DELIVERY > LINES, FUEL > REMOVAL AND INSTALLATION > 1.6L > REMOVAL
- FRONT FUEL DELIVERY LINE - 1.6L**

 CAUTION:

Cleanliness cannot be overemphasized when handling or replacing diesel fuel system components. This especially includes the fuel injectors, high-pressure fuel lines and fuel injection pump. Very tight tolerances are used with these parts. Dirt contamination could cause rapid part wear and possible plugging of fuel injector nozzle tip holes. This in turn could lead to possible engine misfire. Always wash/clean any fuel system component thoroughly before disassembly and then air dry. Cap or cover any open part after disassembly. Before assembly, examine each part for dirt, grease or other contaminants and clean if necessary. When installing new parts, lubricate them with clean engine oil or clean diesel fuel only. DO NOT use any lubricating or sliding agents that contain water.

1. Raise and support the vehicle.
2. Remove the engine cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .
3. Remove the belly pan. Refer to BELLY PAN, REMOVAL AND INSTALLATION .
4. Remove the side belly pan. Refer to BELLY PAN, SIDE, REMOVAL AND INSTALLATION .
5. Recover the refrigerant from the A/C system. Refer to PLUMBING, STANDARD PROCEDURE .
6. Remove the right front wheel. Refer to REMOVAL AND INSTALLATION .
7. Remove the right front wheelhouse splash shield. Refer to SHIELD, SPLASH, FRONT WHEELHOUSE, REMOVAL AND INSTALLATION .
8. Remove the air cleaner body.
9. Remove the fuel filter. Refer to FILTER, FUEL, REMOVAL AND INSTALLATION .
10. Remove the alternator and position it out of the way. Refer to GENERATOR, REMOVAL AND INSTALLATION .

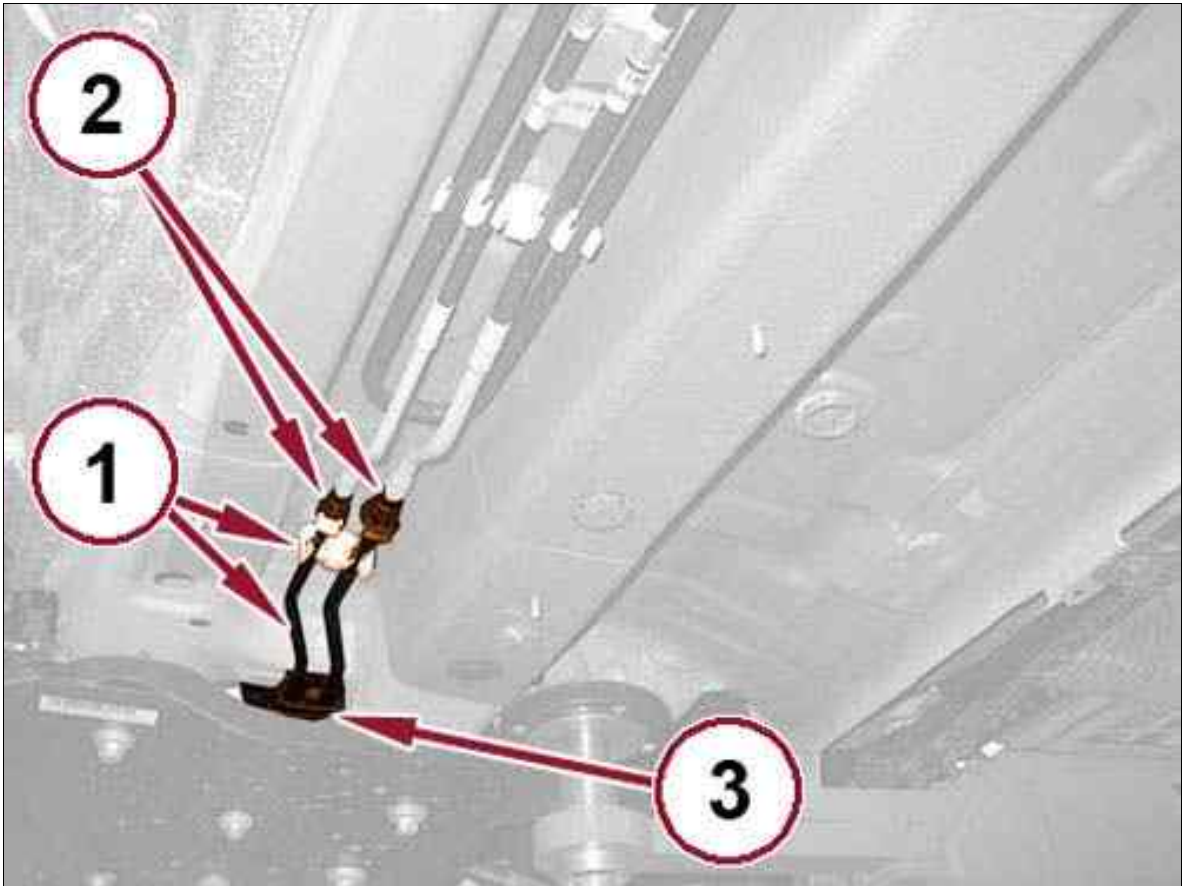
Fig 1: Fuel Line Shield & Bolts



Courtesy of CHRYSLER GROUP, LLC

11. Remove the bolts (1) and remove the fuel line shield (1).

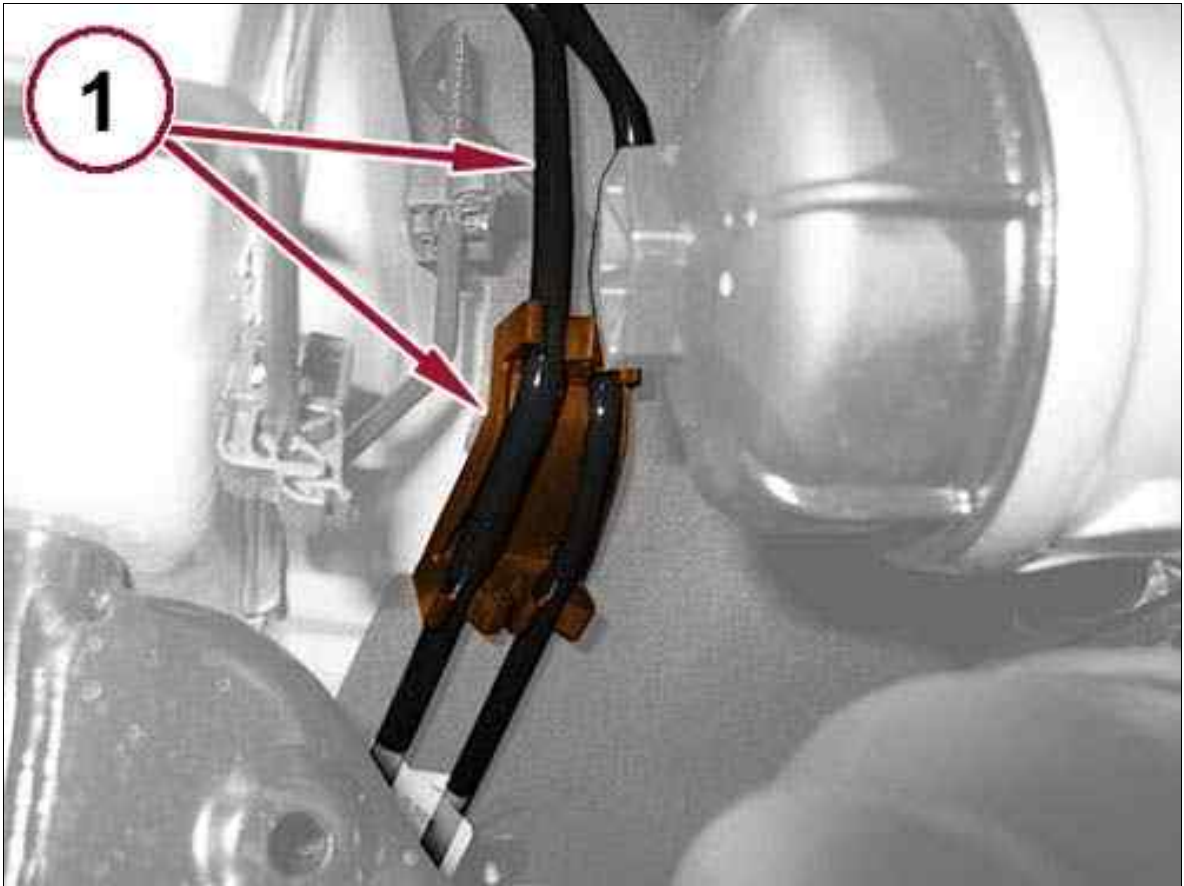
Fig 2: Fuel Lines, Retaining Clips & Couplings



Courtesy of CHRYSLER GROUP, LLC

12. Disengage the fuel lines (1) from the retaining clips (1).
13. Disconnect the quick couplings (2) of the discharge and return fuel lines.
14. Disengage the fuel lines from the retaining clip (3).

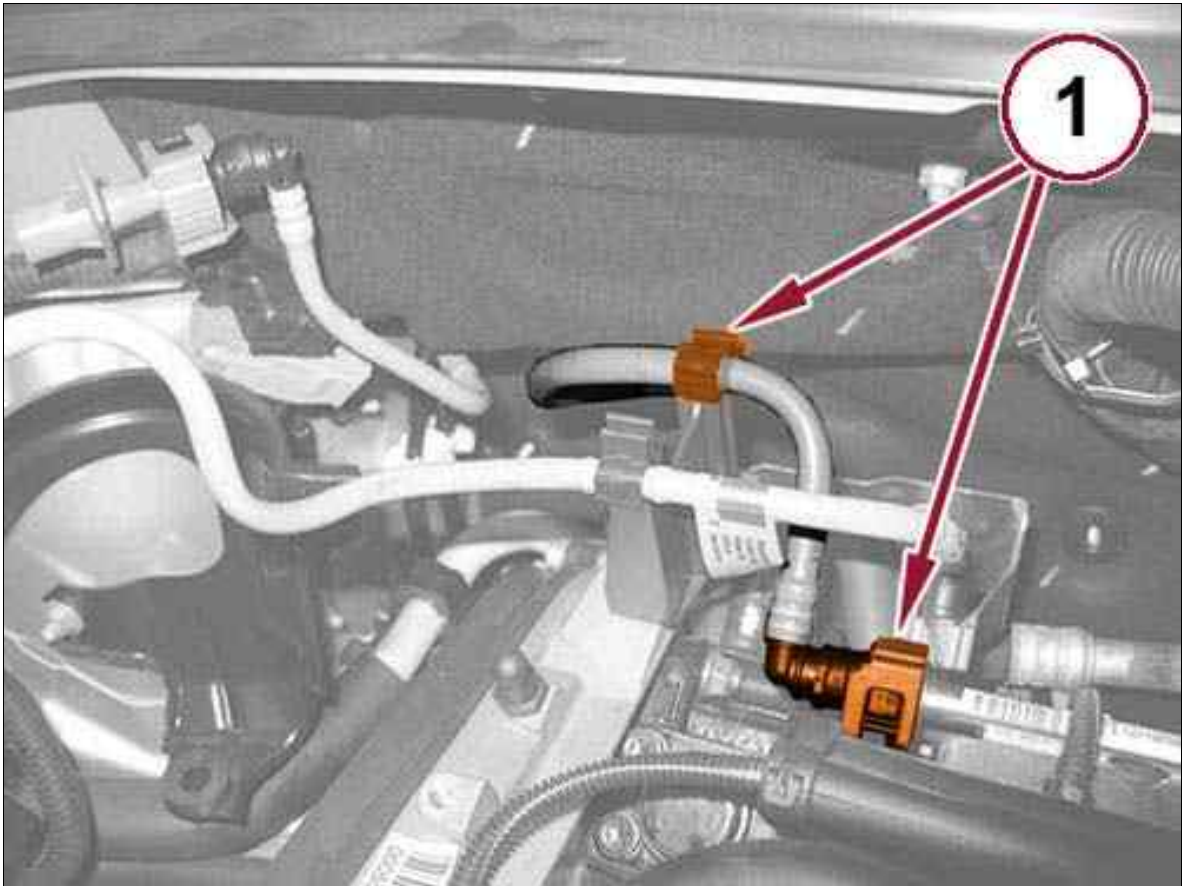
Fig 3: Fuel Lines & Retaining Clip



Courtesy of CHRYSLER GROUP, LLC

15. Disengage the fuel lines and remove the retaining clip (1).

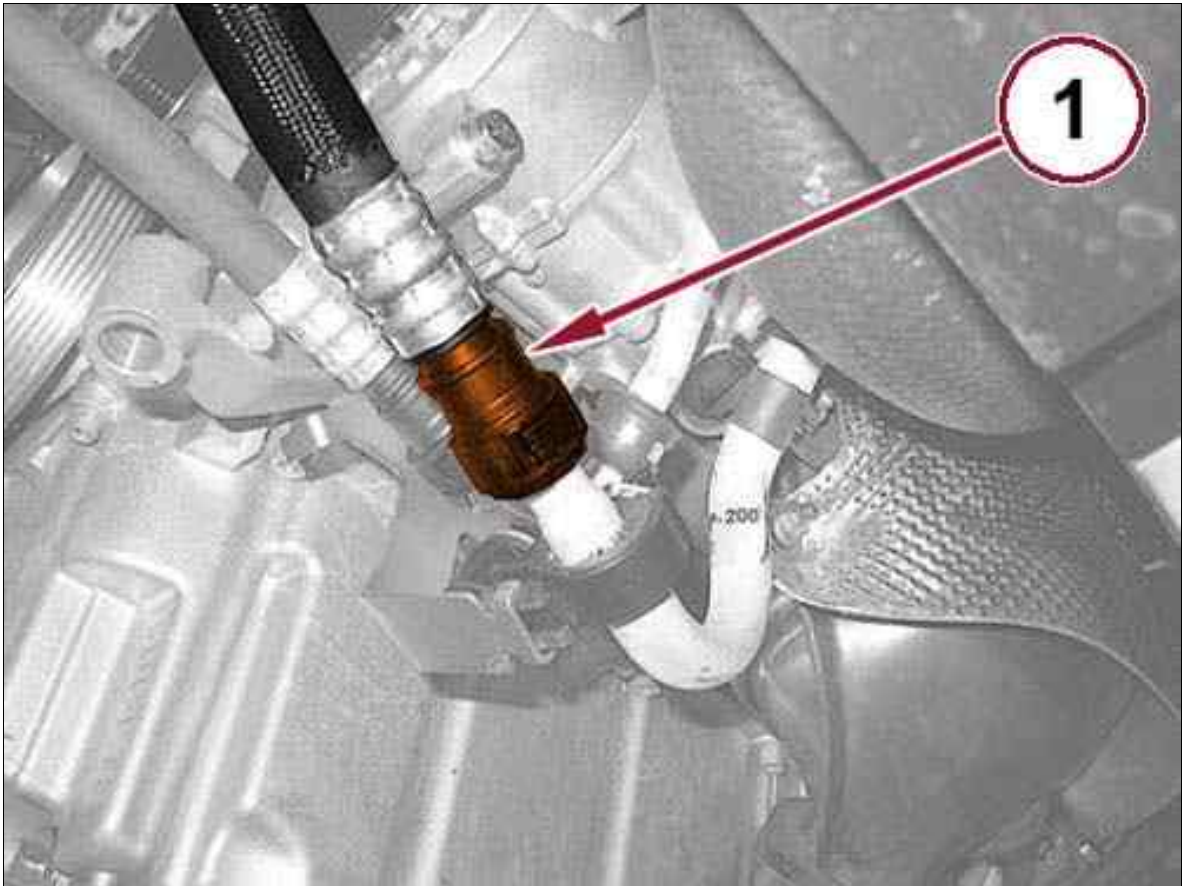
Fig 4: Fuel Return Pipe Coupling & Retaining Clip



Courtesy of CHRYSLER GROUP, LLC

16. Open the retaining clip (1) and disconnect the quick coupling (1) of the fuel return pipe.

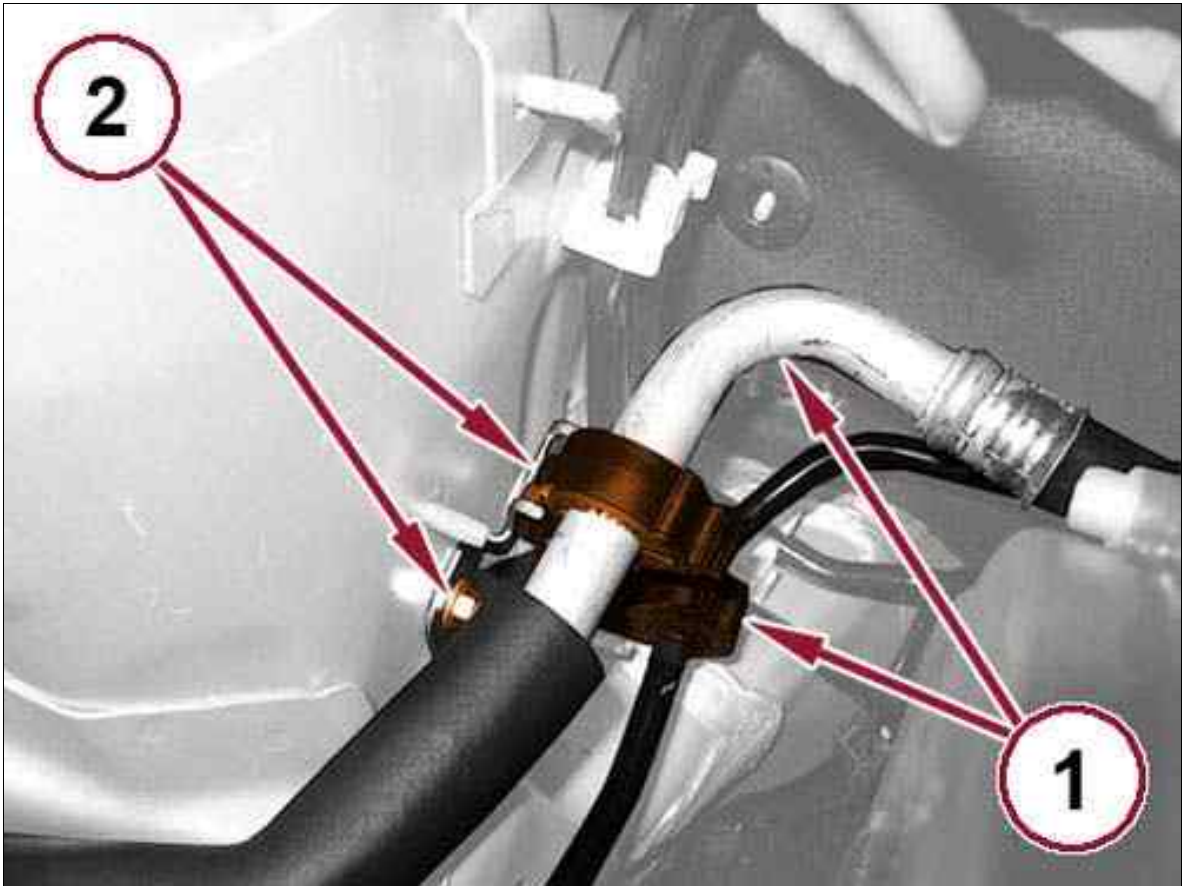
Fig 5: A/C Suction Line Quick Coupling



Courtesy of CHRYSLER GROUP, LLC

17. Disconnect the quick coupling (1) of the A/C suction line from the expansion valve to the A/C compressor flange line.

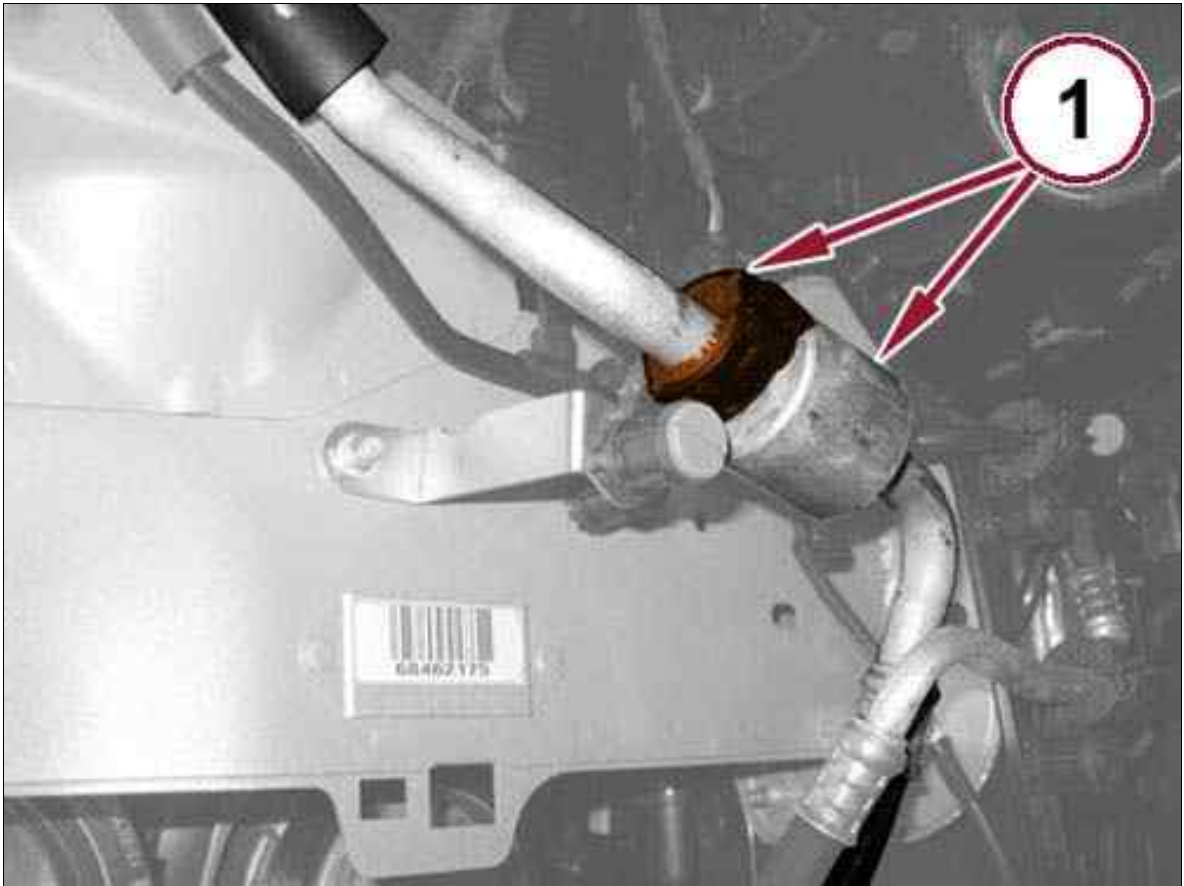
Fig 6: Retaining Clips & Nut



Courtesy of CHRYSLER GROUP, LLC

18. Open the retaining clips (1 and 2) and release the A/C suction and liquid lines from the clips.
19. Remove the nut (2) from the A/C line bracket and remove the bracket complete with retaining clips (1 and 2).

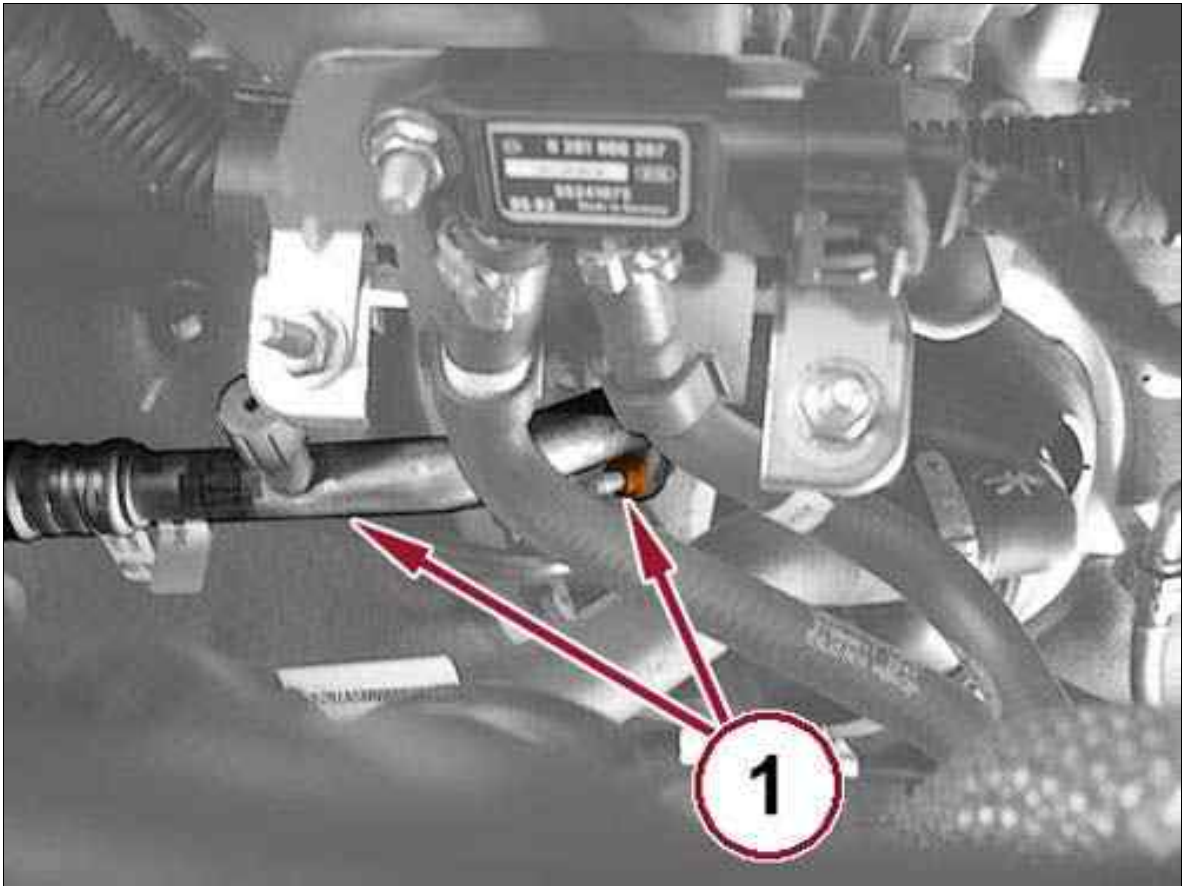
Fig 7: A/C Suction Line & Retaining Clip



Courtesy of CHRYSLER GROUP, LLC

20. Open the retaining clip (1) for the A/C suction line and disengage the A/C suction line from the retaining clip.

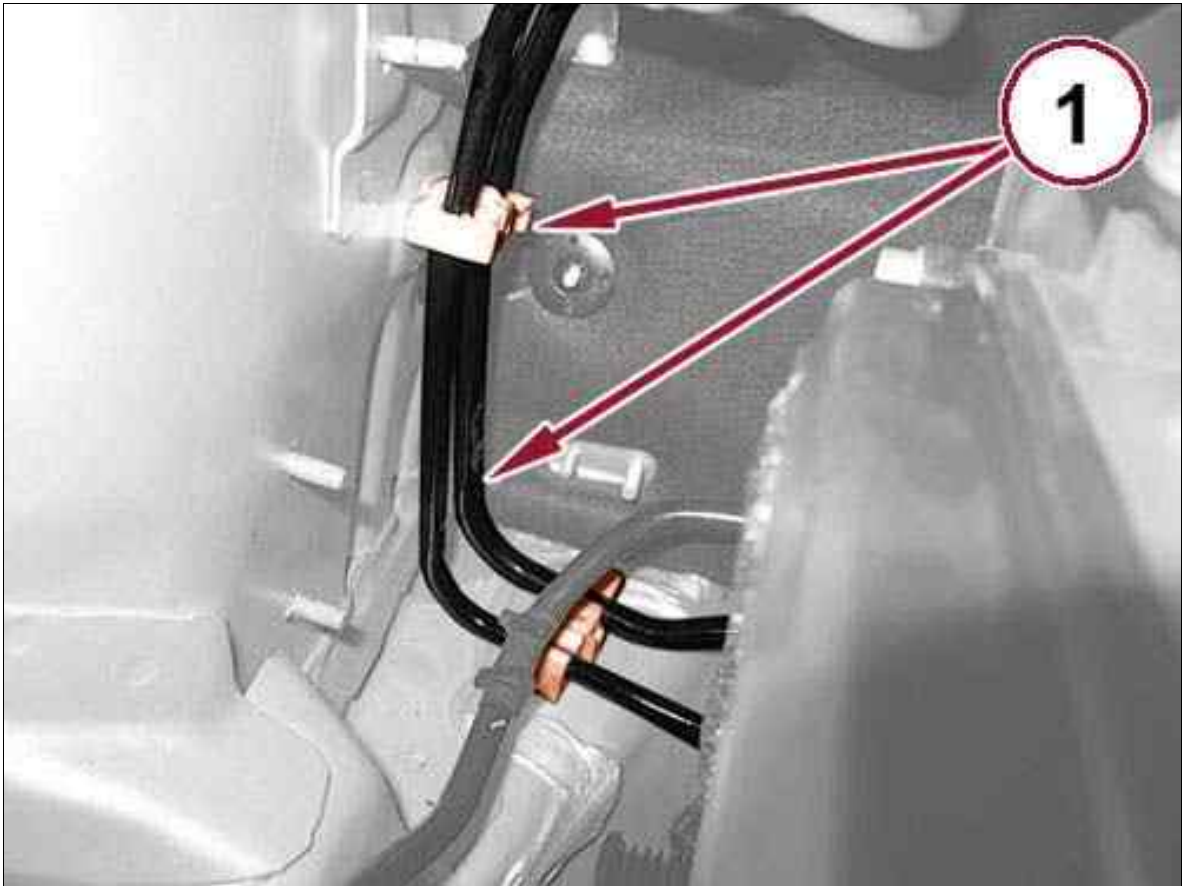
Fig 8: A/C Suction Line & Nut



Courtesy of CHRYSLER GROUP, LLC

21. Remove the nut (1), disconnect and remove the A/C suction line (1) from the A/C expansion valve.

Fig 9: Fuel Pressure & Return Lines



Courtesy of CHRYSLER GROUP, LLC

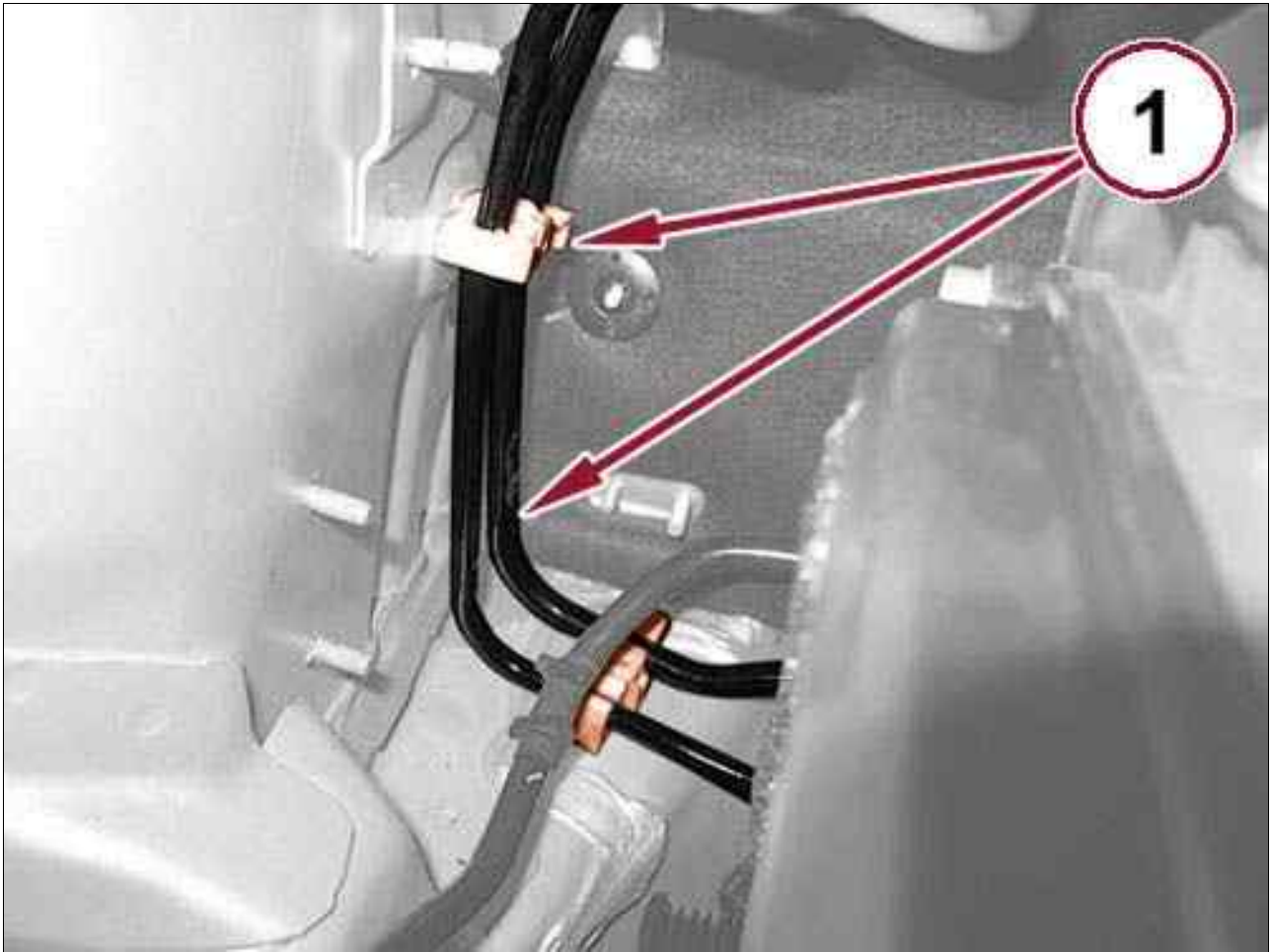
22. Release the fuel pressure and return lines (1) from the upper and lower retaining clips.
23. Remove the front fuel delivery line from the engine compartment.

FUEL DELIVERY > LINES, FUEL > REMOVAL AND INSTALLATION > 1.6L > INSTALLATION - FRONT FUEL DELIVERY LINE - 1.6L

⚠ CAUTION:

Cleanliness cannot be overemphasized when handling or replacing diesel fuel system components. This especially includes the fuel injectors, high-pressure fuel lines and fuel injection pump. Very tight tolerances are used with these parts. Dirt contamination could cause rapid part wear and possible plugging of fuel injector nozzle tip holes. This in turn could lead to possible engine misfire. Always wash/clean any fuel system component thoroughly before disassembly and then air dry. Cap or cover any open part after disassembly. Before assembly, examine each part for dirt, grease or other contaminants and clean if necessary. When installing new parts, lubricate them with clean engine oil or clean diesel fuel only. DO NOT use any lubricating or sliding agents that contain water.

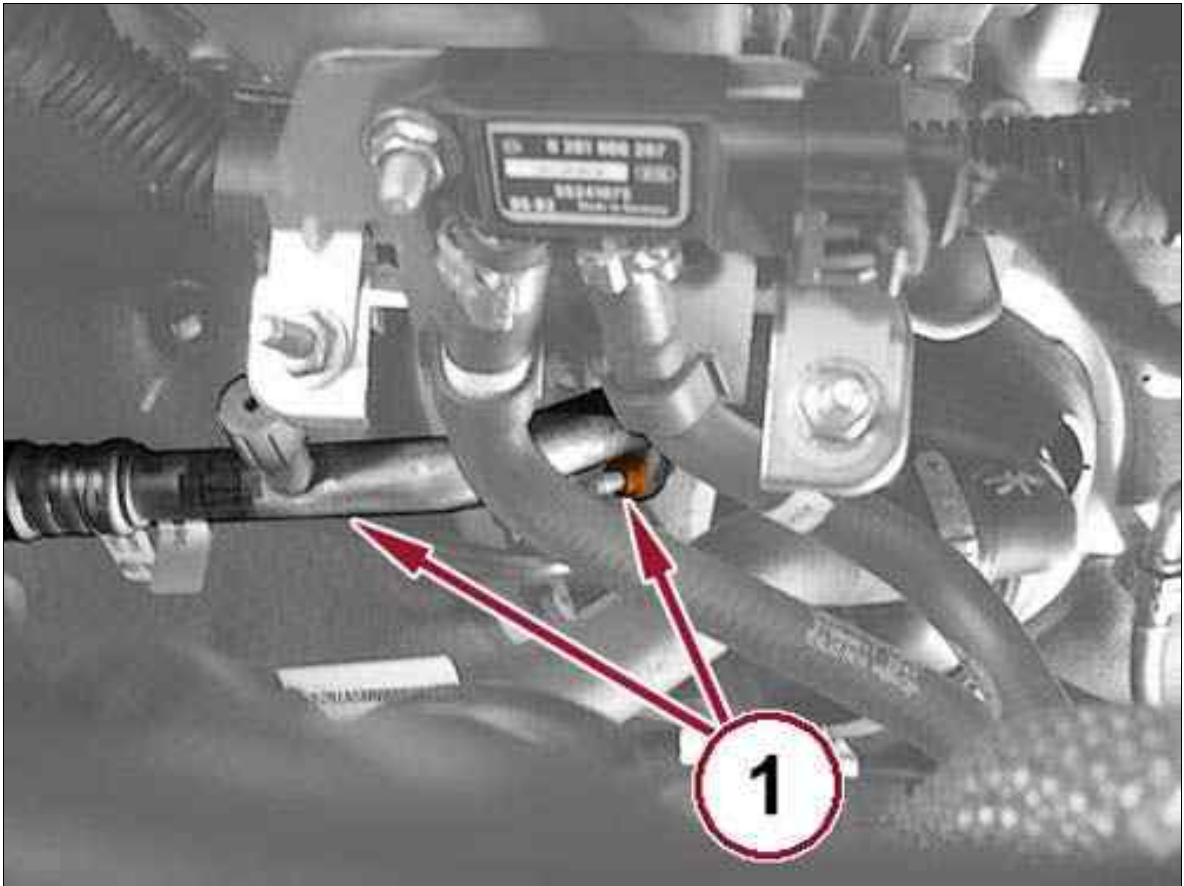
Fig 1: Fuel Pressure & Return Lines



Courtesy of CHRYSLER GROUP, LLC

1. Working from the engine compartment, put into place the front fuel delivery lines (1) and engage the retaining clips (1).

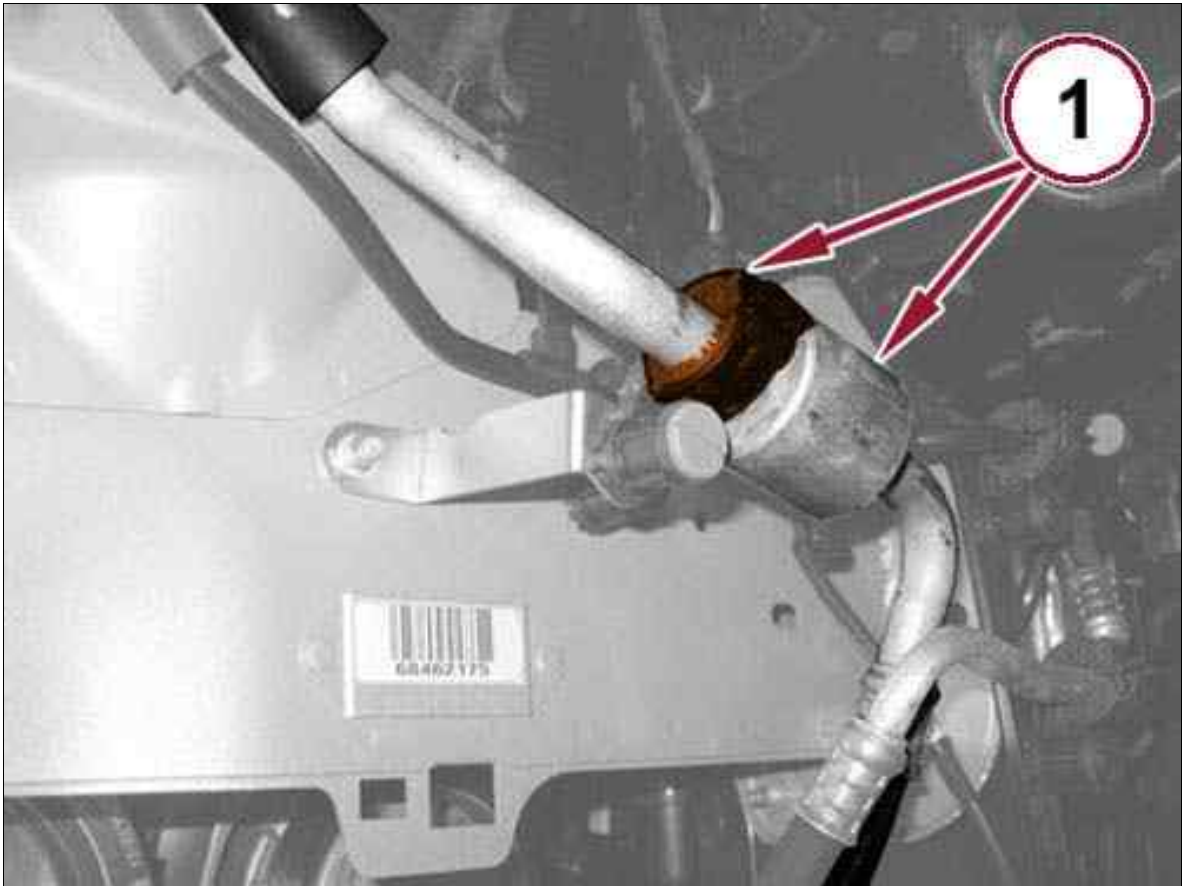
Fig 2: A/C Suction Line & Nut



Courtesy of CHRYSLER GROUP, LLC

2. Replace the O-ring on the A/C suction line at the A/C expansion valve and connect the A/C suction line (1) to the expansion valve.
3. Install the nut (1) and torque the nut to the proper torque specification. Refer to SPECIFICATIONS .

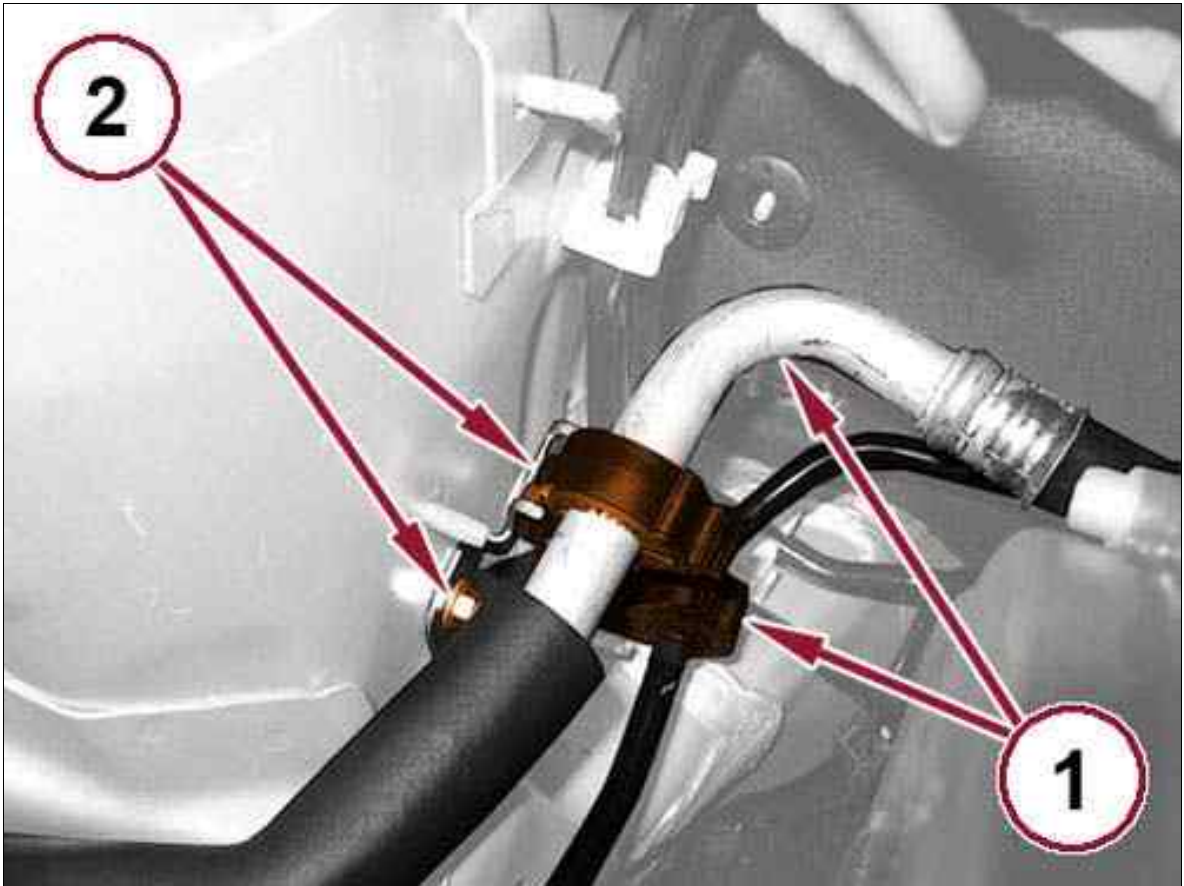
Fig 3: A/C Suction Line & Retaining Clip



Courtesy of CHRYSLER GROUP, LLC

4. Install the A/C suction line (1) to the retaining clip and engage the retaining clip (1).

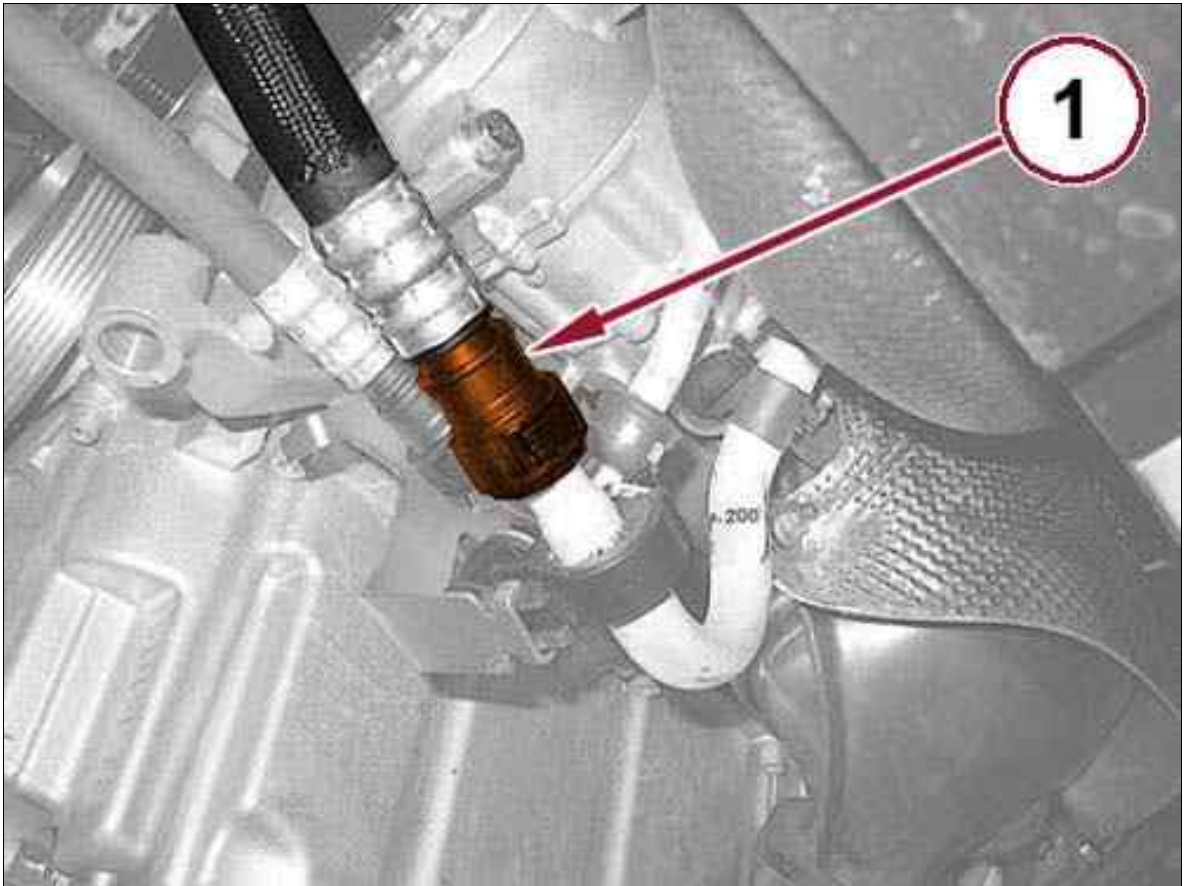
Fig 4: Retaining Clips & Nut



Courtesy of CHRYSLER GROUP, LLC

5. Position the A/C line bracket and install the nut (2) for the bracket complete with retaining clips (1 and 2).
6. Install the A/C suction and liquid lines to the retaining clips and engage the retaining clips (1 and 2).

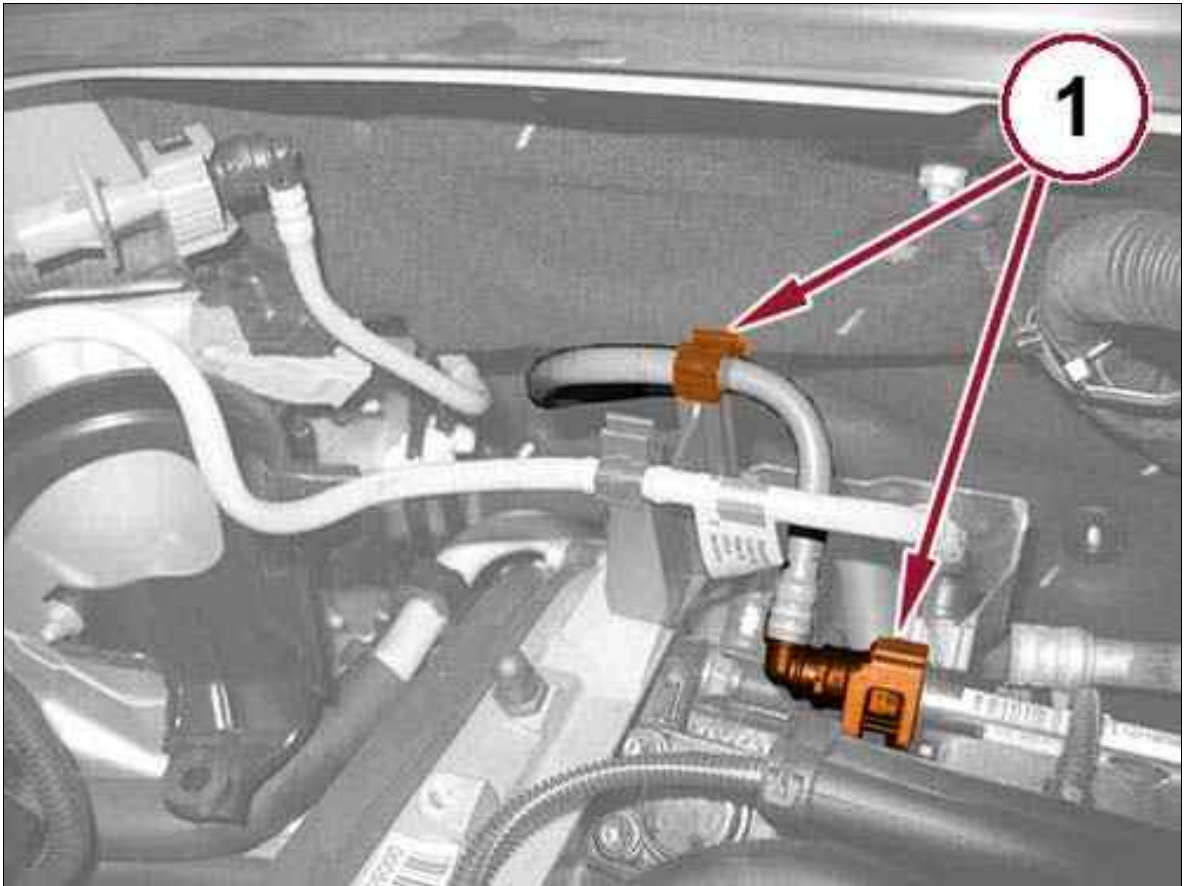
Fig 5: A/C Suction Line Quick Coupling



Courtesy of CHRYSLER GROUP, LLC

7. Connect the quick coupling (1) of the A/C suction line to the A/C compressor flange line.

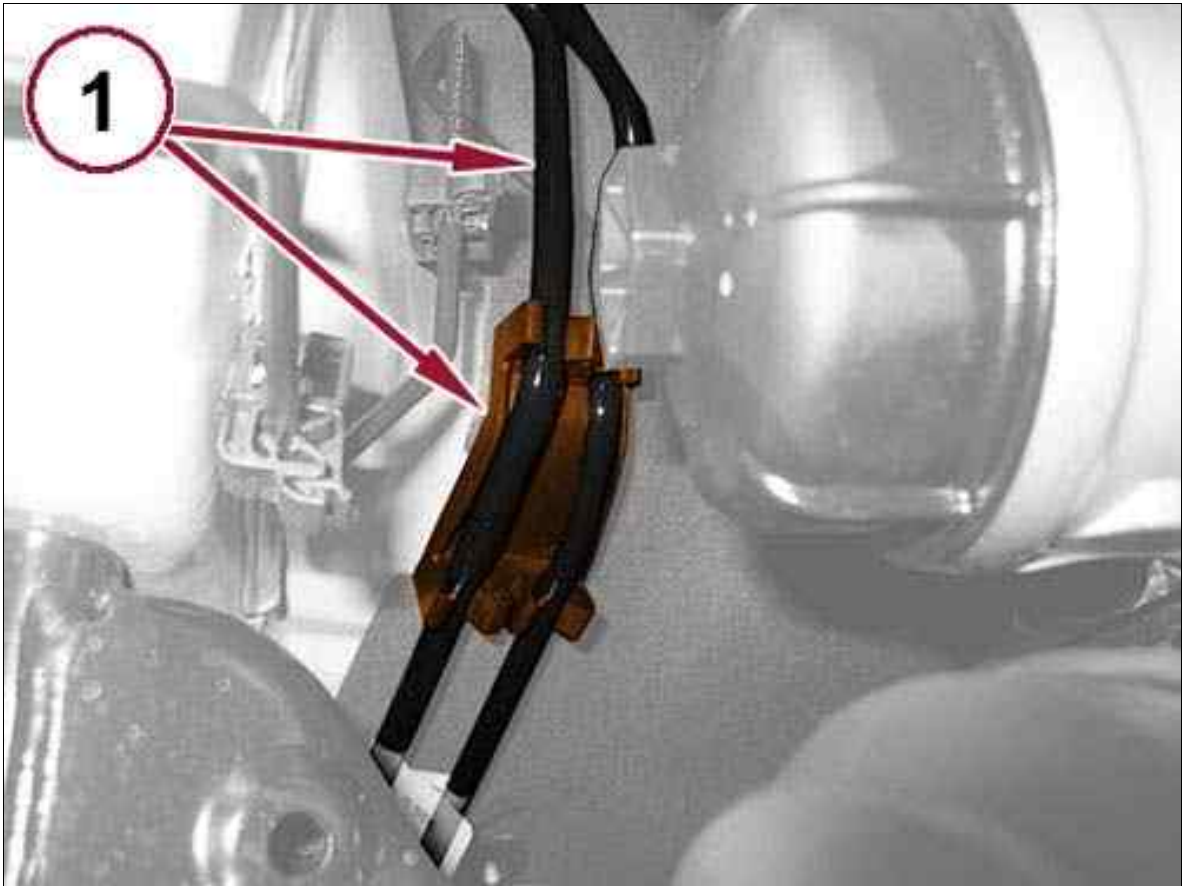
Fig 6: Fuel Return Pipe Coupling & Retaining Clip



Courtesy of CHRYSLER GROUP, LLC

8. Connect the quick coupling (1) for the fuel return pipe and engage the retaining clip (1).

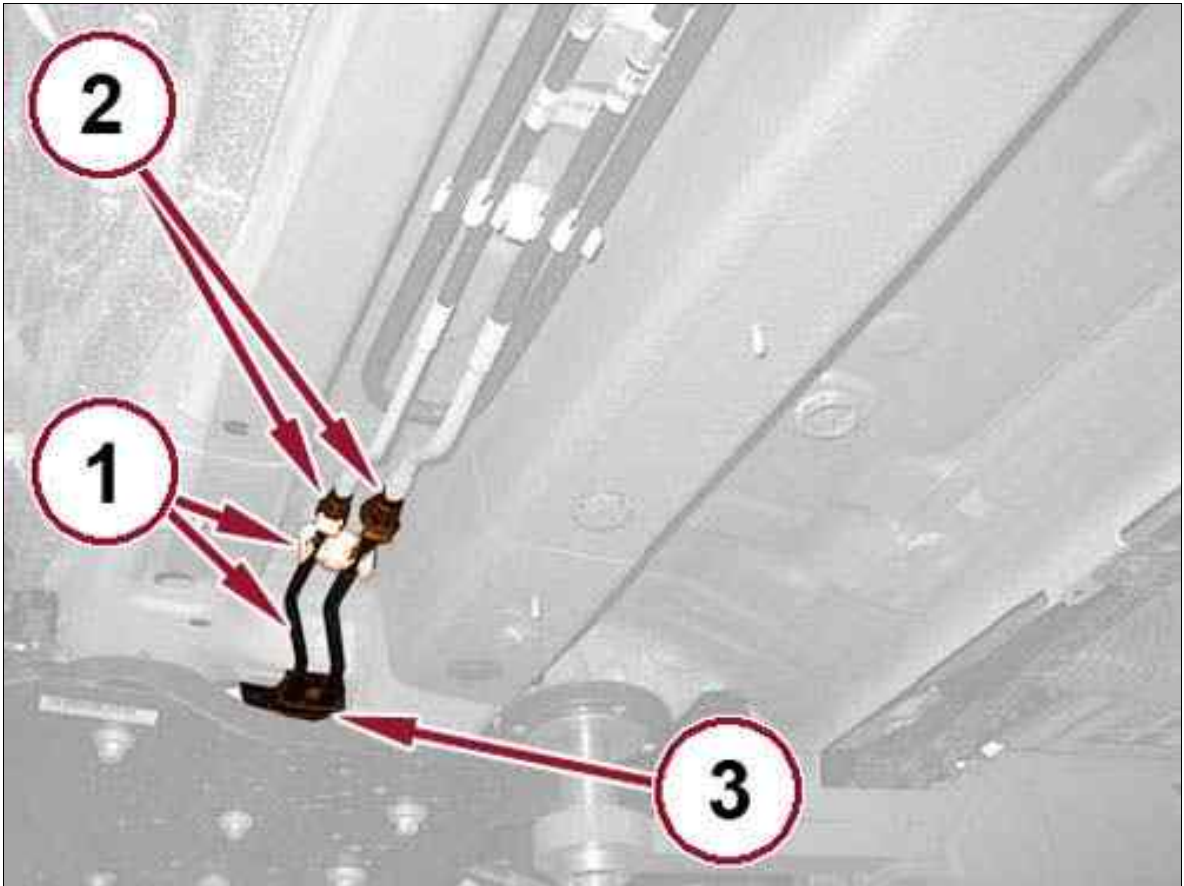
Fig 7: Fuel Lines & Retaining Clip



Courtesy of CHRYSLER GROUP, LLC

9. Engage the fuel lines to the retaining clip (1).

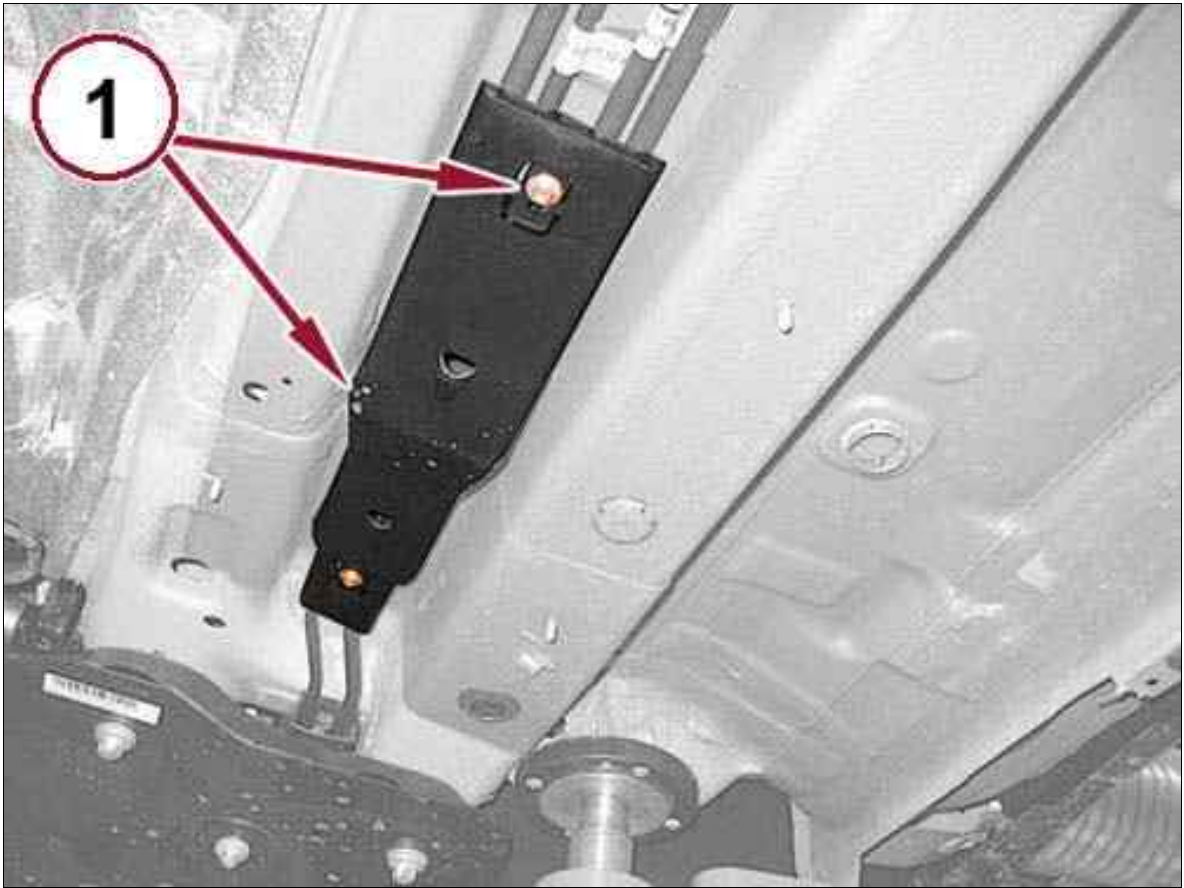
Fig 8: Fuel Lines, Retaining Clips & Couplings



Courtesy of CHRYSLER GROUP, LLC

10. Engage the fuel lines into the retaining clip (3).
11. Connect the quick couplings (2) for the discharge and return fuel lines.
12. Engage the fuel lines (1) into the retaining clips (1).

Fig 9: Fuel Line Shield & Bolts

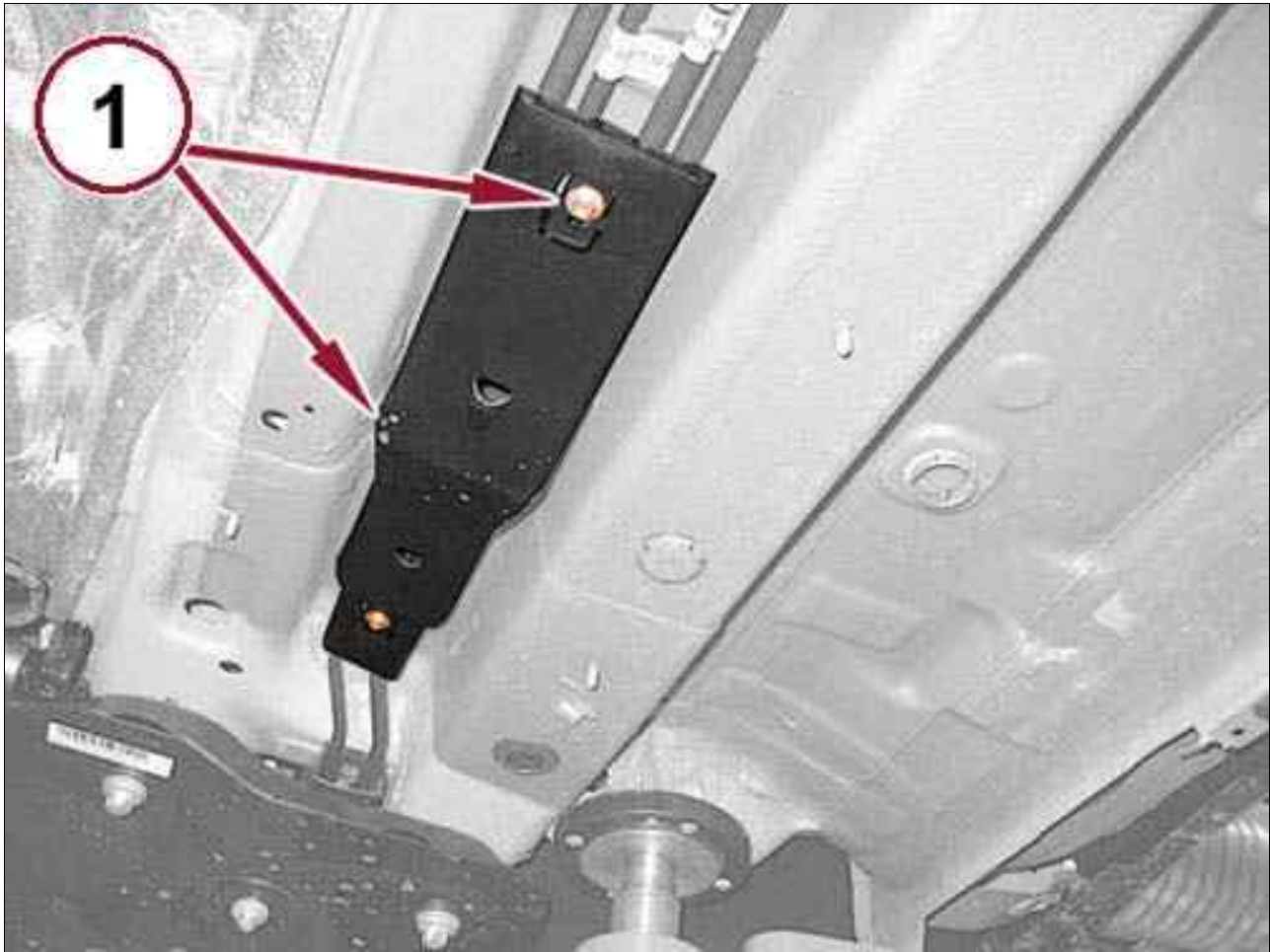


Courtesy of CHRYSLER GROUP, LLC

13. Position the fuel line shield (1) and install the bolts (1). Tighten the bolts securely.
14. Install the alternator and position it out of the way. Refer to GENERATOR, REMOVAL AND INSTALLATION .
15. Install the fuel filter. Refer to FILTER, FUEL, REMOVAL AND INSTALLATION .
16. Install the air cleaner body. .
17. Install the right front wheelhouse splash shield. Refer to SHIELD, SPLASH, FRONT WHEELHOUSE, REMOVAL AND INSTALLATION .
18. Install the right front wheel. Refer to REMOVAL AND INSTALLATION .
19. Install the side belly pan. Refer to BELLY PAN, SIDE, REMOVAL AND INSTALLATION .
20. Install the belly pan. Refer to BELLY PAN, REMOVAL AND INSTALLATION .
21. Evacuate and charge the A/C system. Refer to PLUMBING, STANDARD PROCEDURE .
22. Install the engine cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .
23. Remove the support and lower the vehicle.

**FUEL DELIVERY > LINES, FUEL > REMOVAL AND INSTALLATION > 1.6L > REMOVAL
- 1040B54 FUEL RETURN PIPE FRONT - 1.6L**

Fig 1: Fuel Line Shield & Bolts

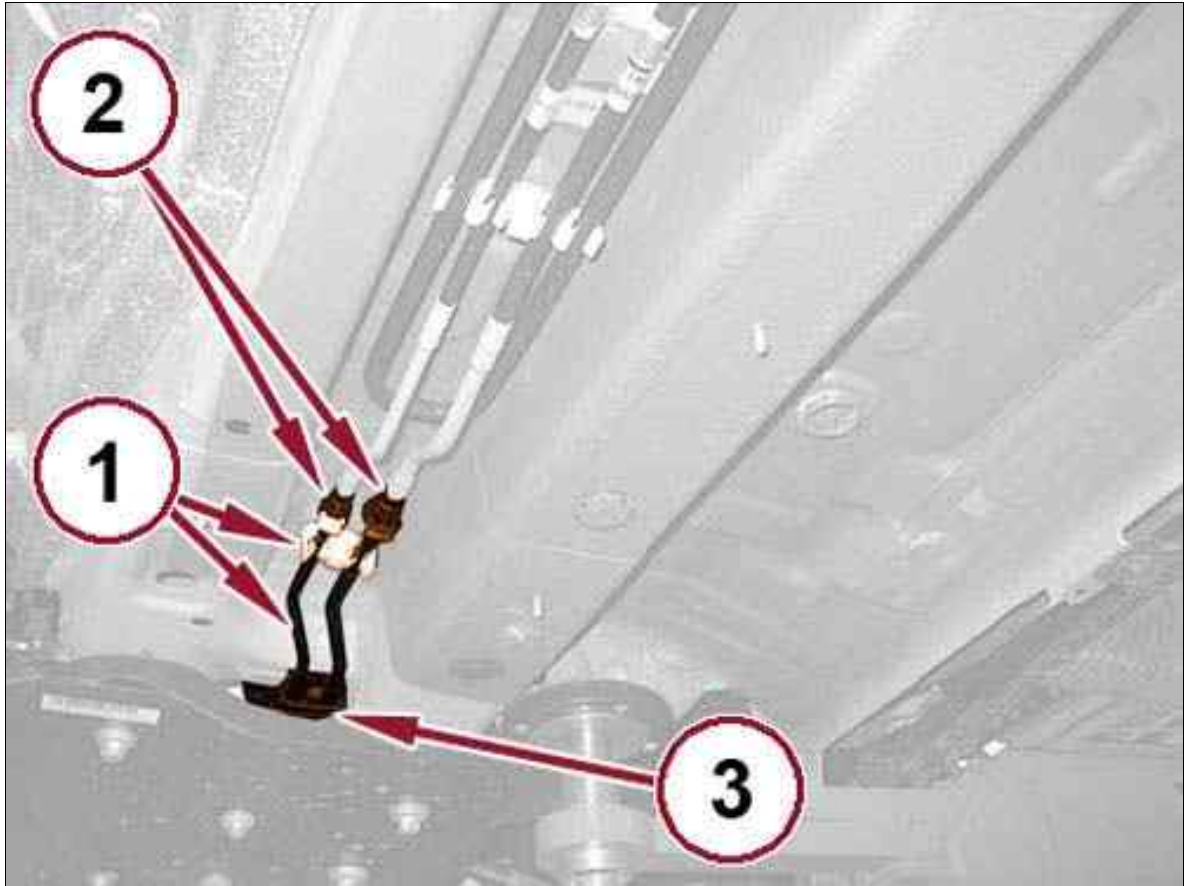


Courtesy of CHRYSLER GROUP, LLC

1. Raise and support the vehicle.
2. Remove the front belly pan from the underside of the vehicle. Refer to BELLY PAN, REMOVAL AND INSTALLATION .
3. Remove the side belly pan from the underbody of the vehicle. Refer to BELLY PAN, SIDE, REMOVAL AND INSTALLATION .
4. Remove the splash shield from the right front wheel house of the vehicle. Refer to SHIELD, SPLASH, FRONT WHEELHOUSE, REMOVAL AND INSTALLATION .
5. Remove the engine cover from the vehicle. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .
6. Remove the engine air cleaner assembly from the vehicle. .
7. Remove the fuel filter from the vehicle. Refer to FILTER, FUEL, REMOVAL AND INSTALLATION .

8. Recover the refrigerant from the air conditioning system. Refer to PLUMBING, STANDARD PROCEDURE .
9. Remove the mounting fasteners that secure the alternator and move the alternator aside. Refer to GENERATOR, REMOVAL AND INSTALLATION .
10. Remove the screws (1) that secure the fuel tube shield beneath the underbody and remove the shield.

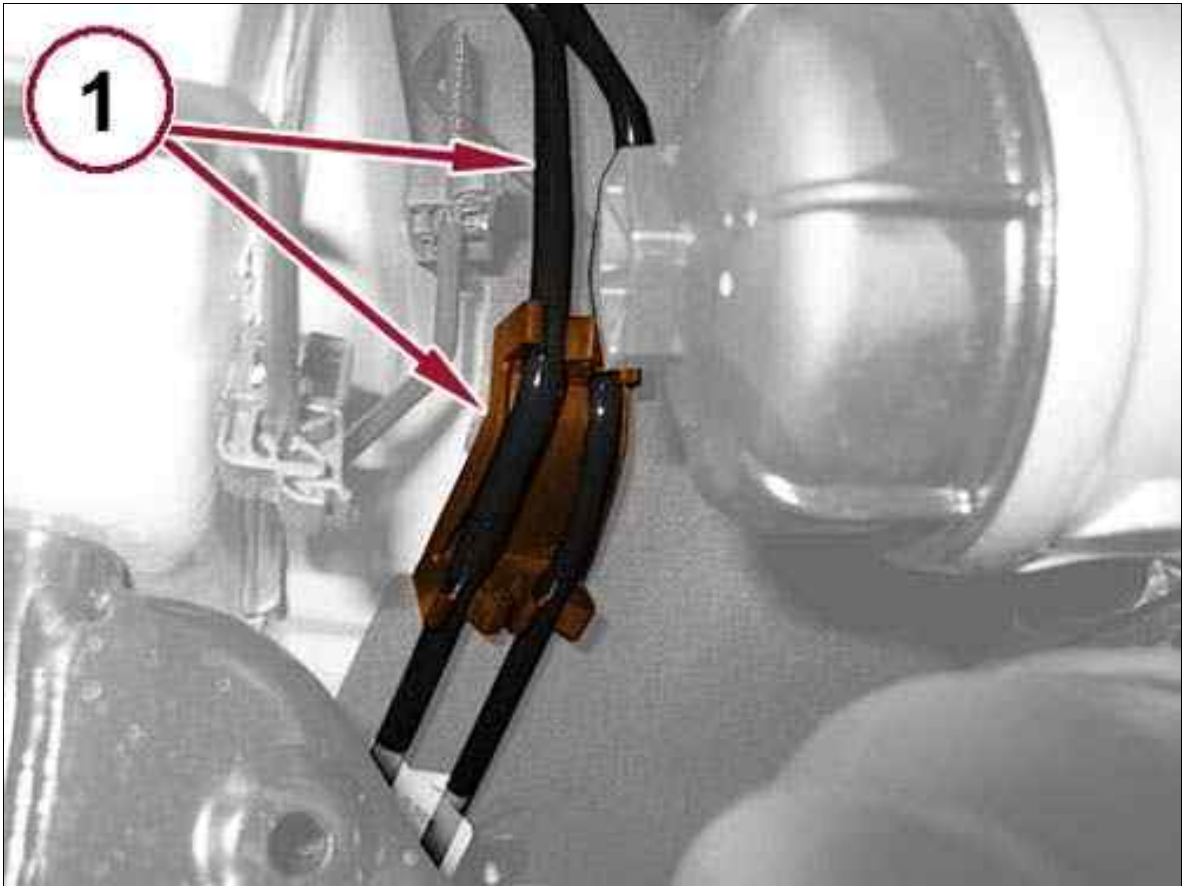
Fig 2: Fuel Lines, Retaining Clips & Couplings



Courtesy of CHRYSLER GROUP, LLC

11. Disengage the fuel tubes (1) from the retaining clips on the underbody.
12. Disconnect the fuel return and discharge tube quick connect fittings (2).
13. Remove the retaining clip (3).

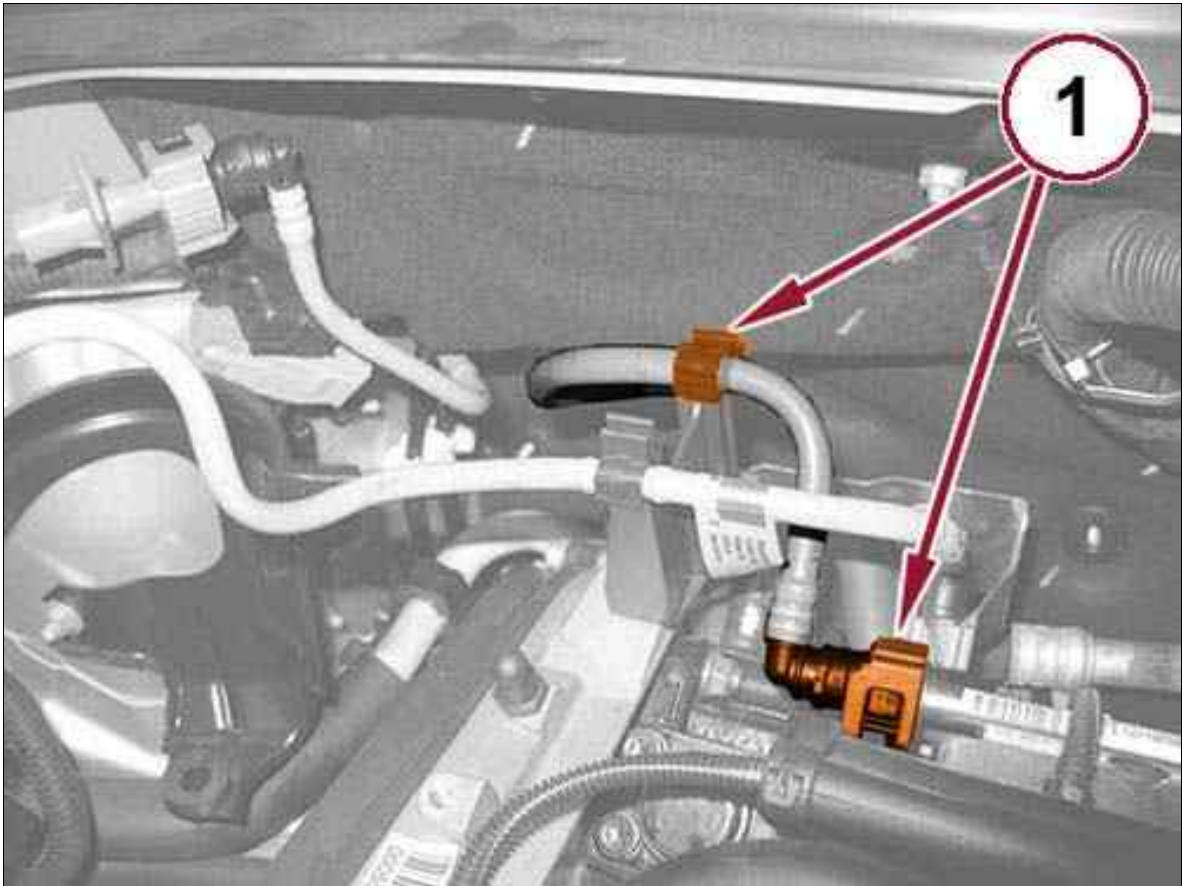
Fig 3: Fuel Lines & Retaining Clip



Courtesy of CHRYSLER GROUP, LLC

14. Unhook the fuel lines and remove them from the retaining clip (1).

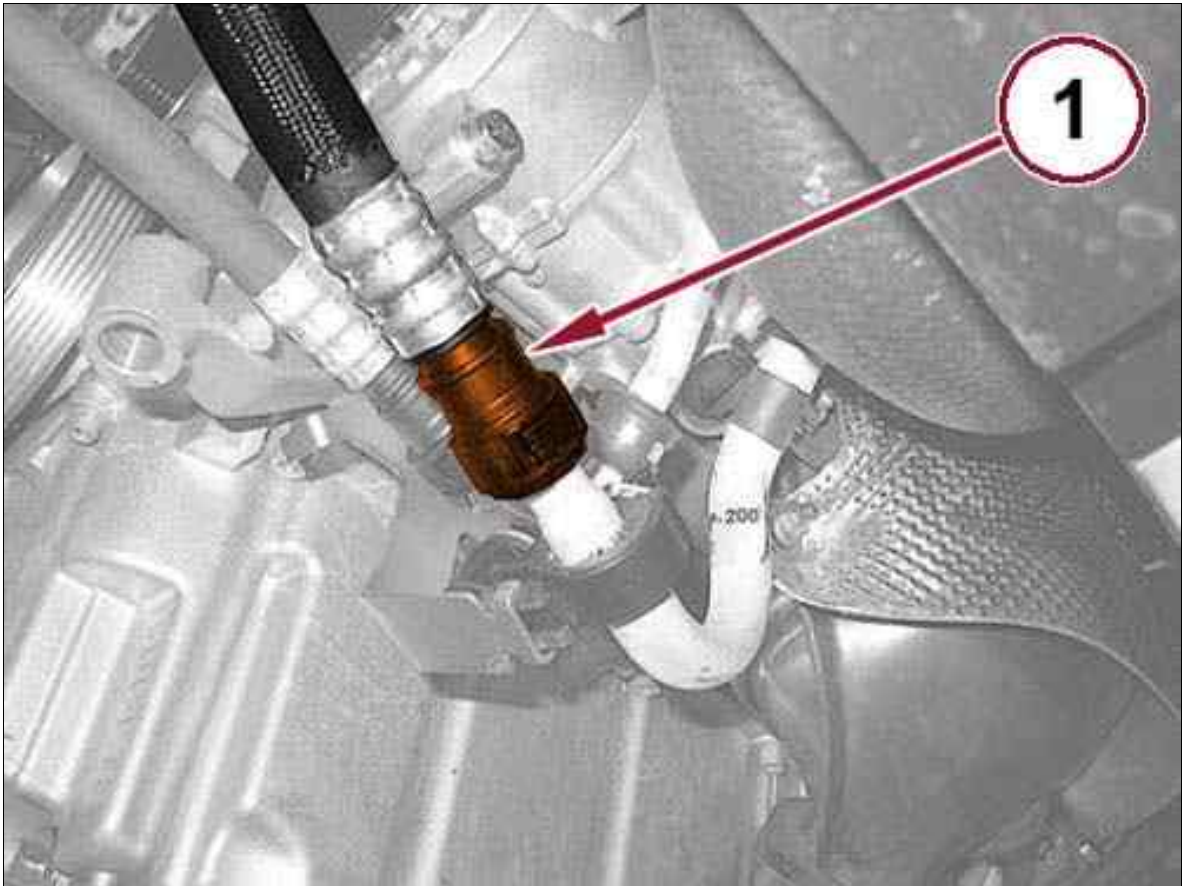
Fig 4: Fuel Return Pipe Coupling & Retaining Clip



Courtesy of CHRYSLER GROUP, LLC

15. Open the retaining clip and disconnect the return line quick connect fitting (1).

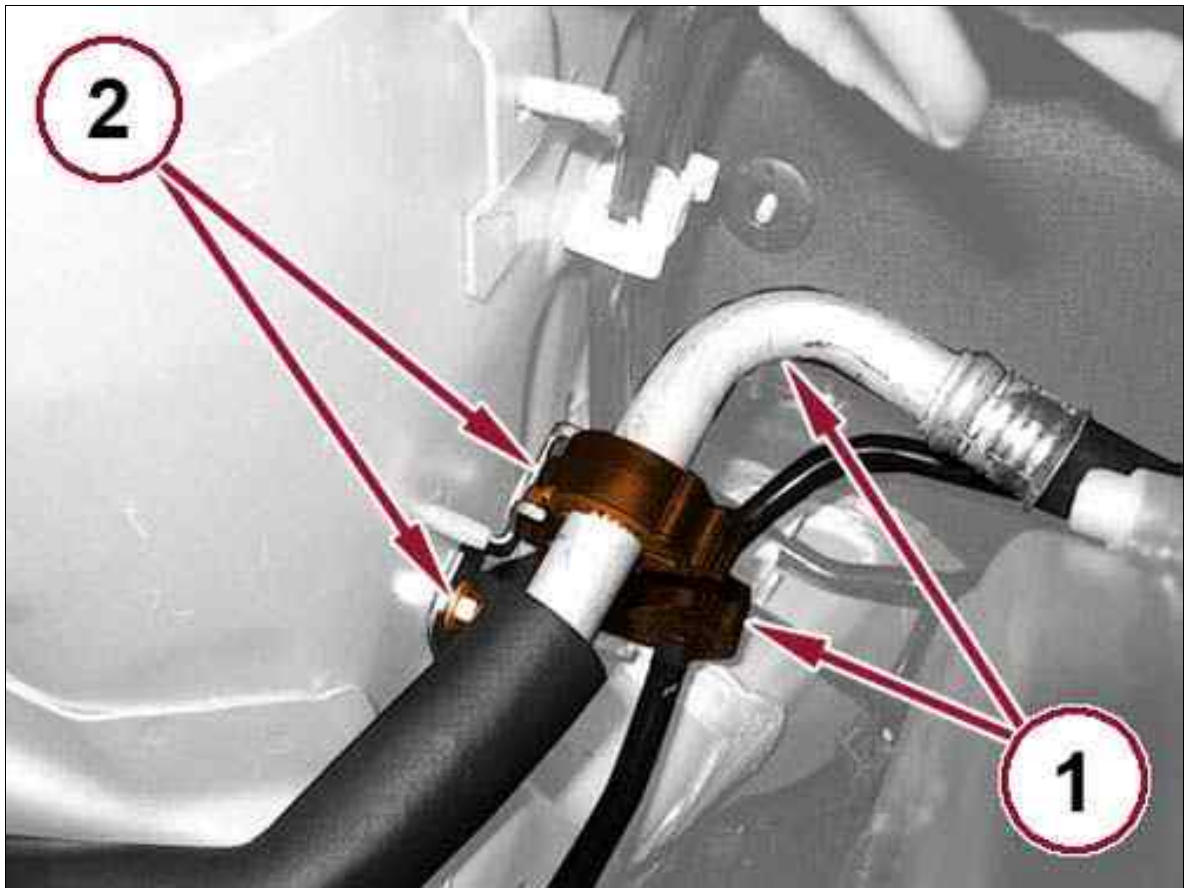
Fig 5: A/C Suction Line Quick Coupling



Courtesy of CHRYSLER GROUP, LLC

16. Disconnect the quick connect (1) of the air conditioning expansion valve tubing, tandem tube side.

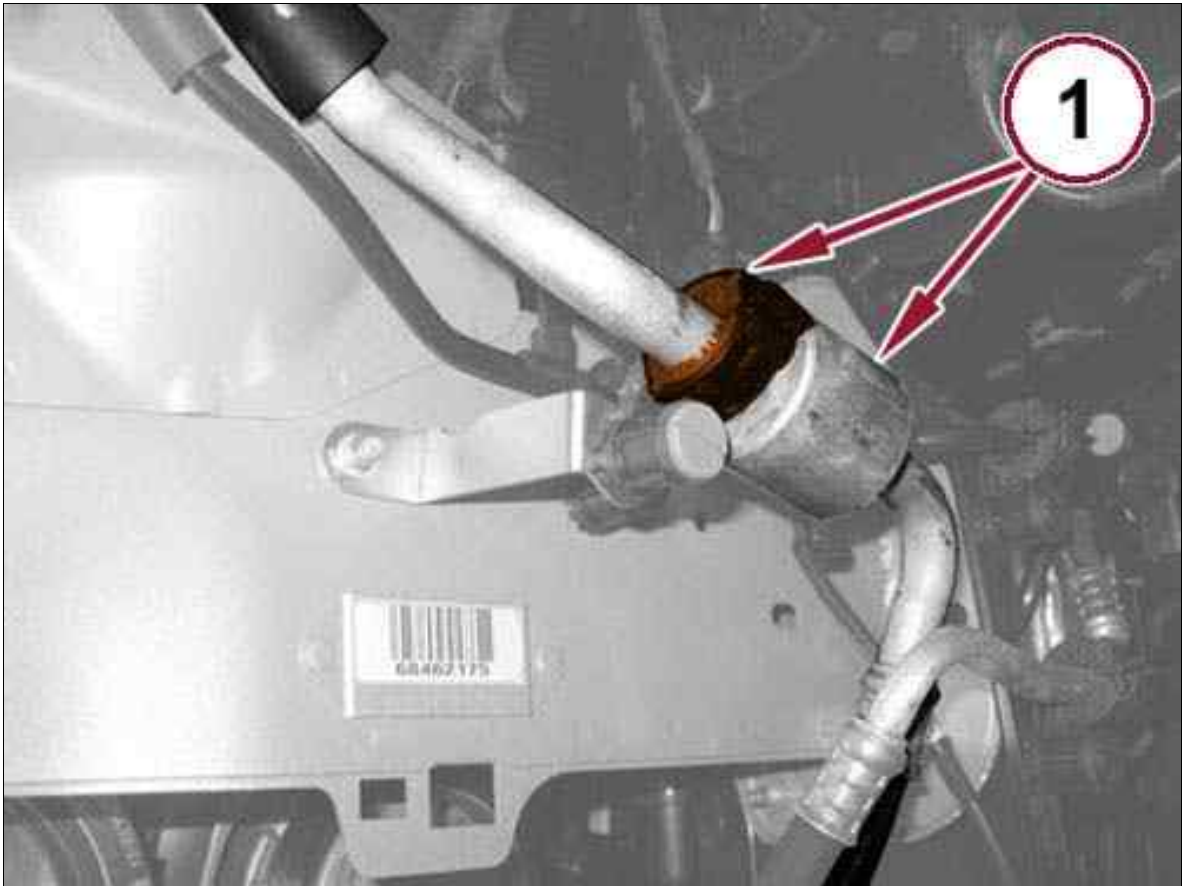
Fig 6: Retaining Clips & Nut



Courtesy of CHRYSLER GROUP, LLC

17. Open the retaining clips and release the air conditioning tube (1).
18. Unscrew the nut and remove the complete bracket (2).

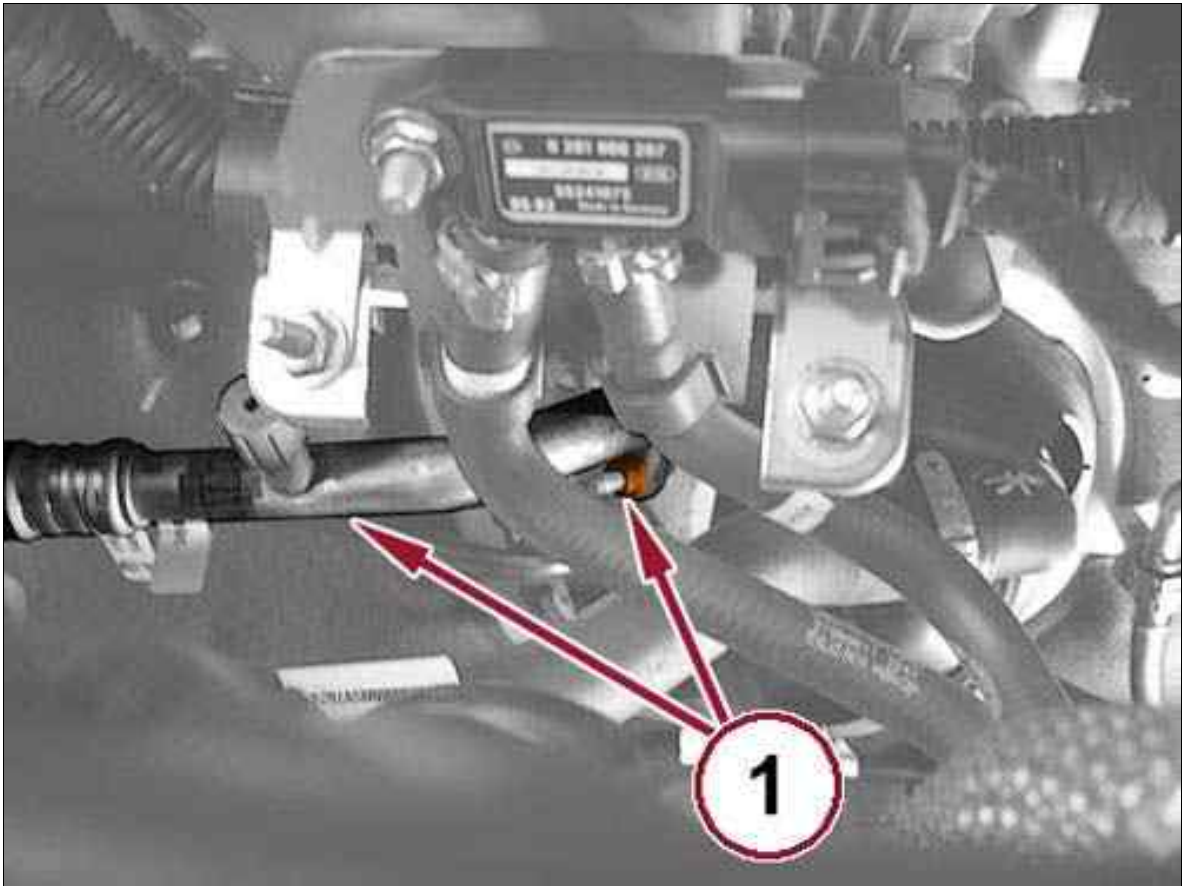
Fig 7: A/C Suction Line & Retaining Clip



Courtesy of CHRYSLER GROUP, LLC

19. Open the clip and disengage the air conditioning expansion valve tandem tube (1).

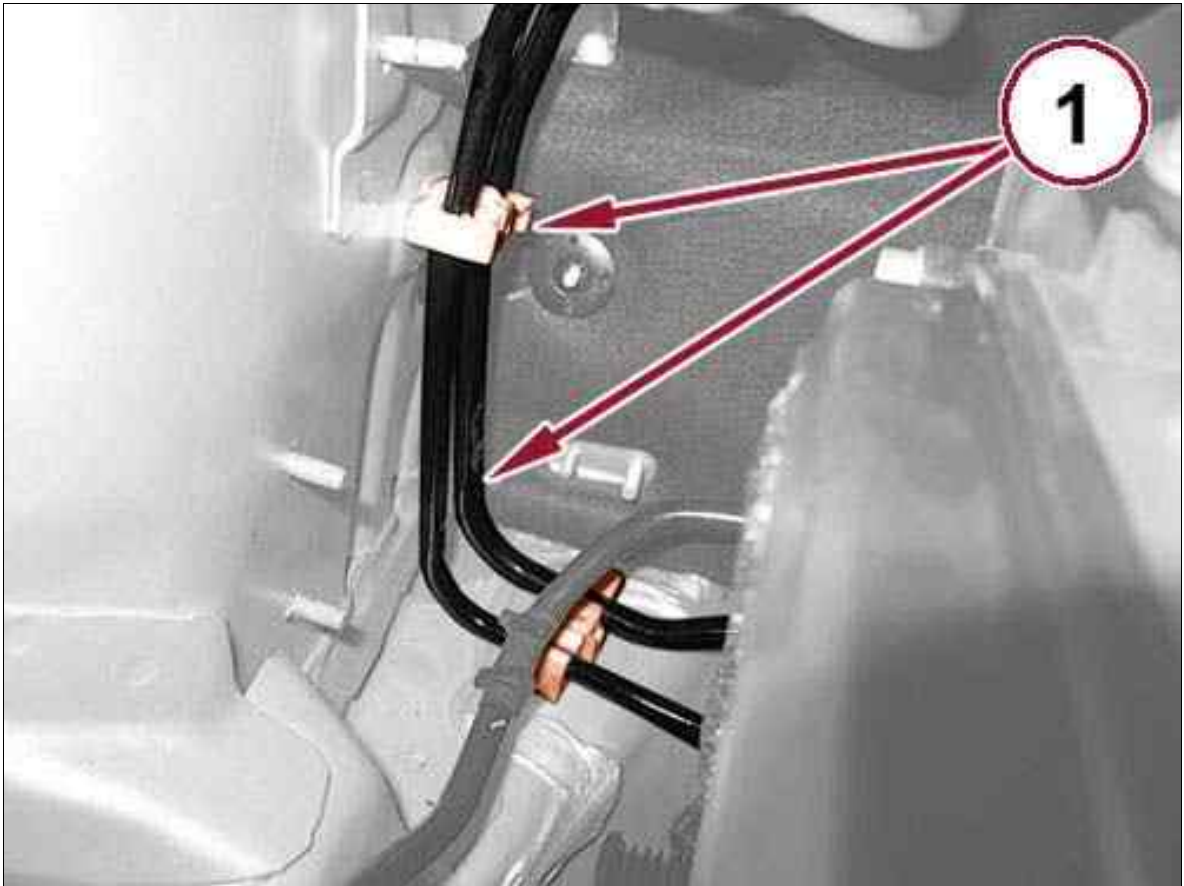
Fig 8: A/C Suction Line & Nut



Courtesy of CHRYSLER GROUP, LLC

20. Unscrew the nut, disconnect and remove the tube from the expansion valve to the tandem tube on the expansion valve side (1).

Fig 9: Fuel Pressure & Return Lines

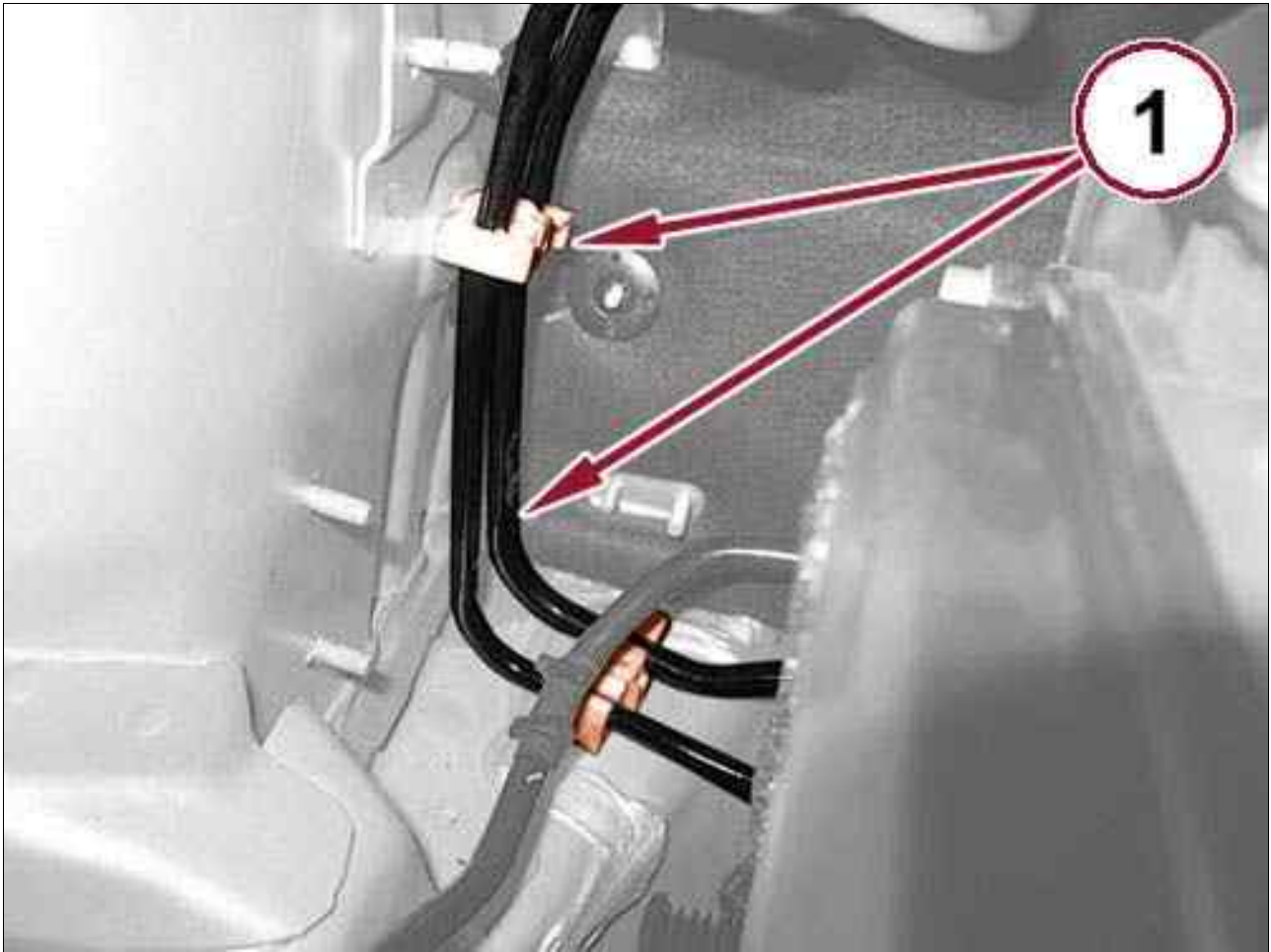


Courtesy of CHRYSLER GROUP, LLC

21. Disengage the fuel pressure and return lines from the retaining clips (1).
22. Remove the fuel return tube front from the engine compartment.

**FUEL DELIVERY > LINES, FUEL > REMOVAL AND INSTALLATION > 1.6L >
INSTALLATION - 1040B54 FUEL RETURN PIPE FRONT - 1.6L**

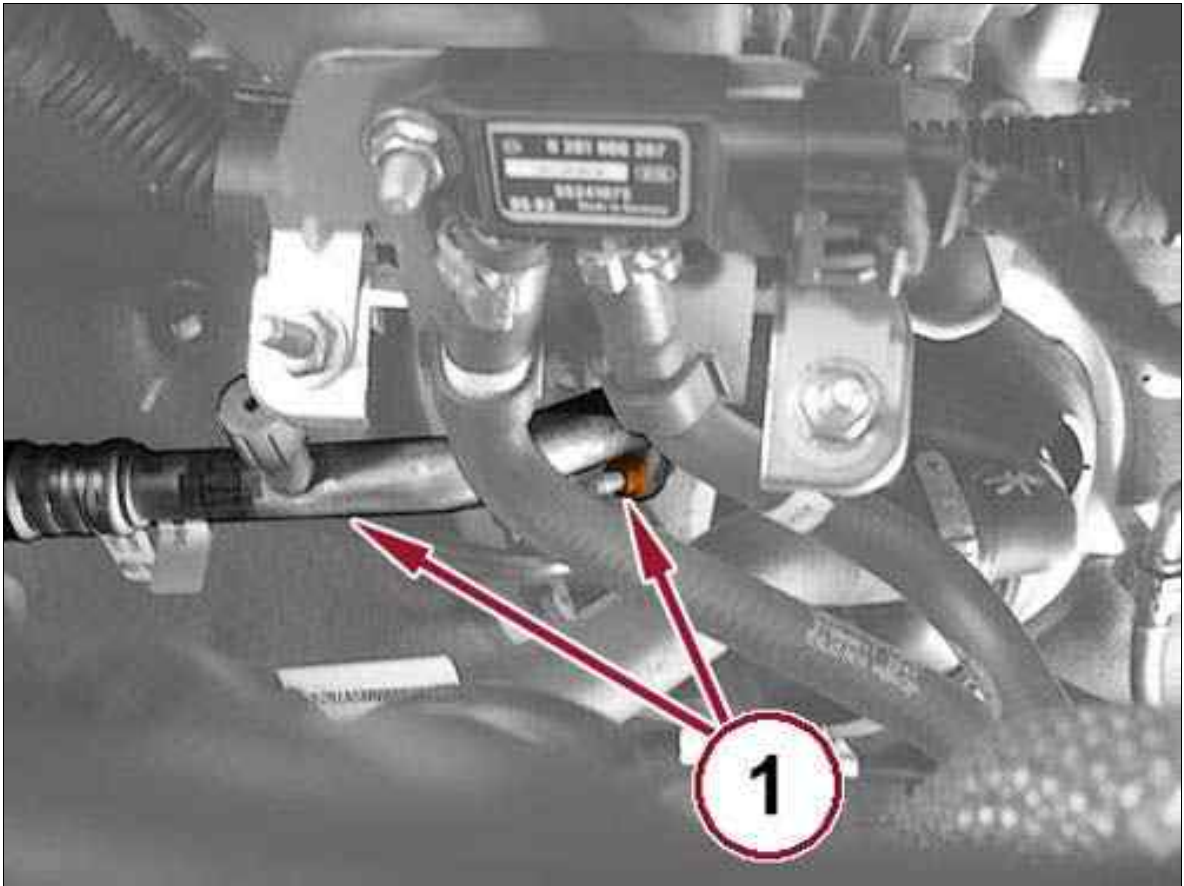
Fig 1: Fuel Pressure & Return Lines



Courtesy of CHRYSLER GROUP, LLC

1. Position the front fuel return tube into the engine compartment.
2. Engage the fuel pressure and return tubes with the retaining clips (1).

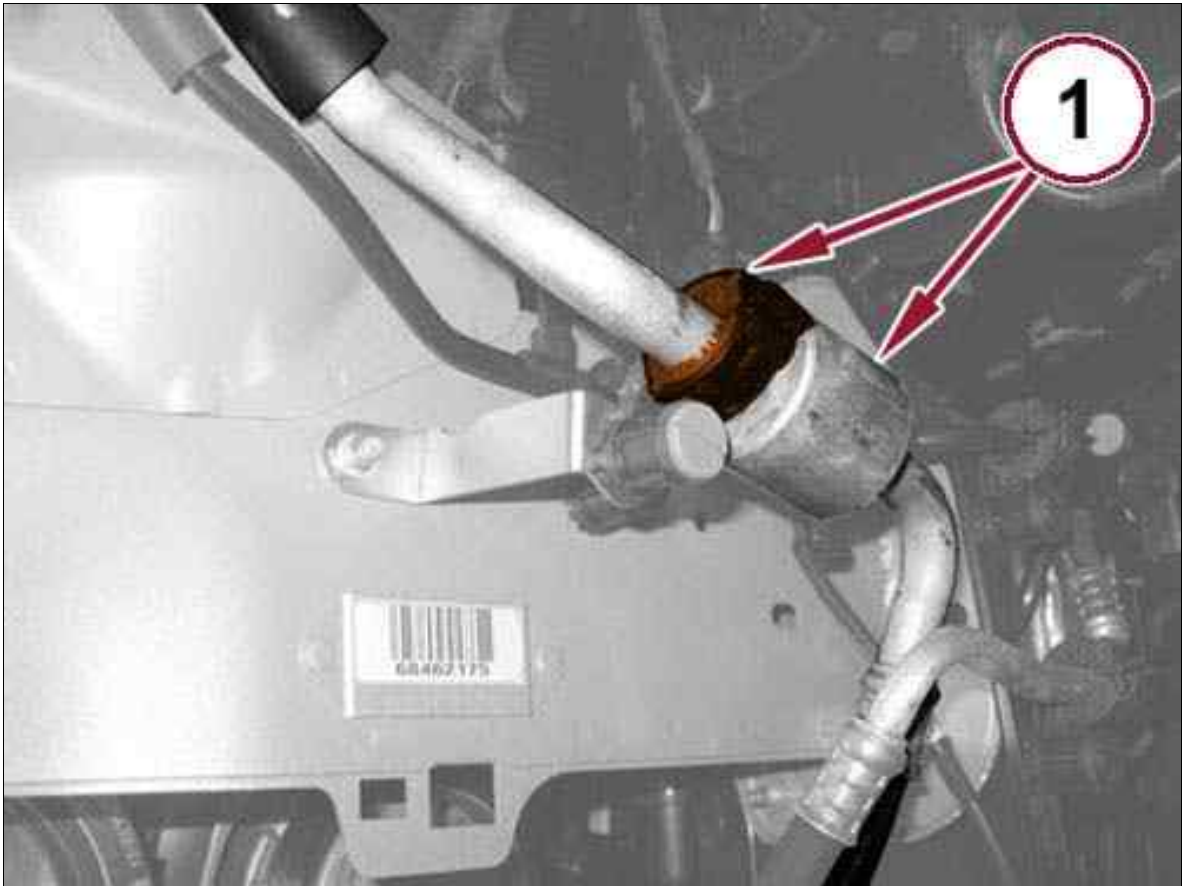
Fig 2: A/C Suction Line & Nut



Courtesy of CHRYSLER GROUP, LLC

3. Reconnect and install the tube from the expansion valve to the tandem tube on the expansion valve side (1), then tighten the nut. Always be certain to use new O-ring seals on refrigerant line fittings.

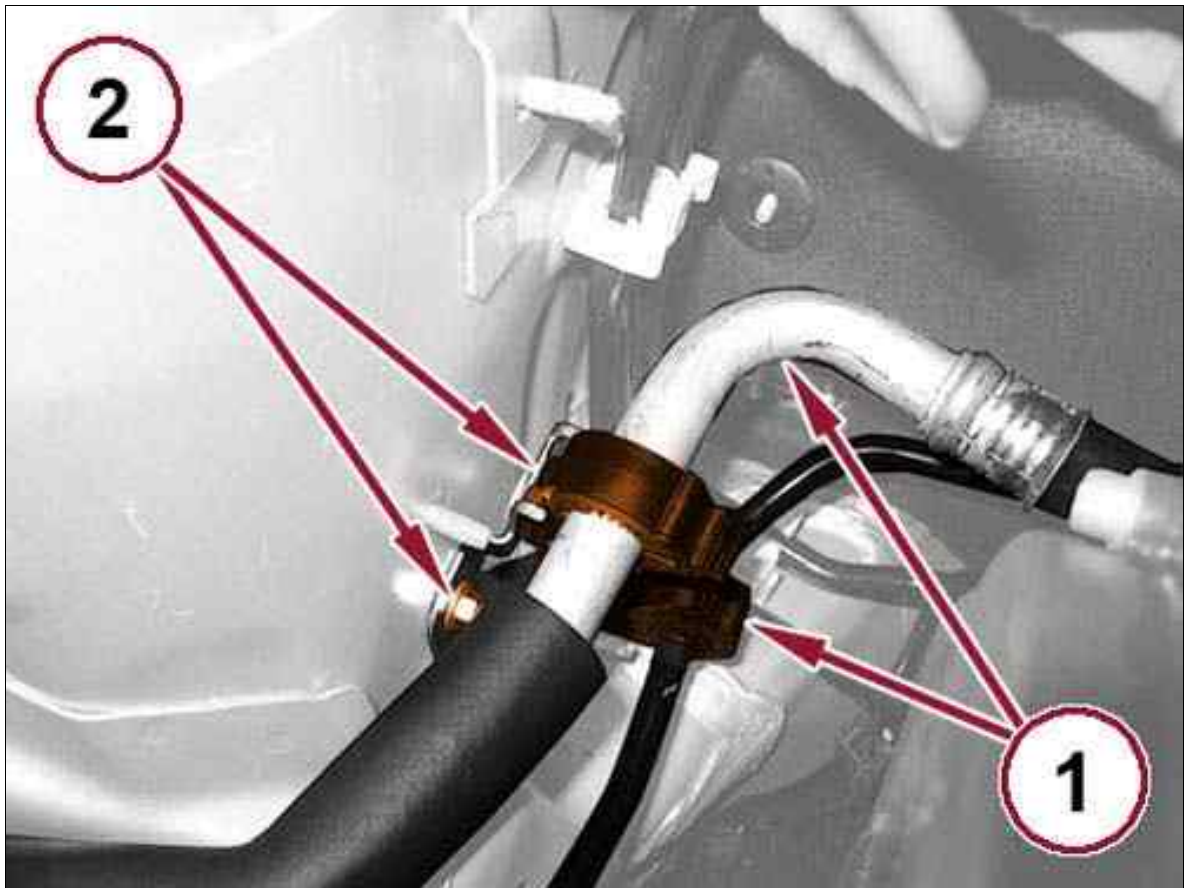
Fig 3: A/C Suction Line & Retaining Clip



Courtesy of CHRYSLER GROUP, LLC

4. Engage the air conditioning expansion valve tandem tube (1) and secure the retaining clip.

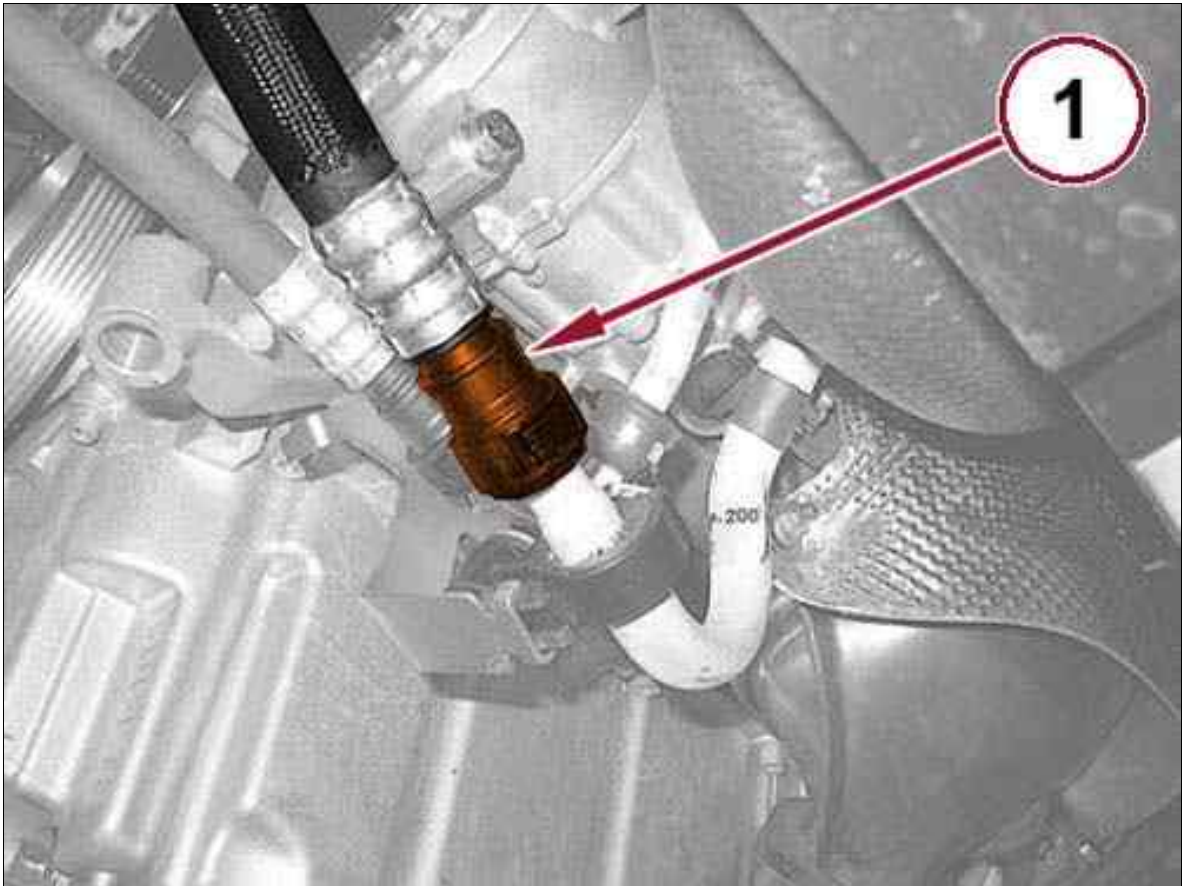
Fig 4: Retaining Clips & Nut



Courtesy of CHRYSLER GROUP, LLC

5. Position the complete bracket (2) and secure it with a nut.
6. Position the air conditioning tube and engage the retaining clips (1).

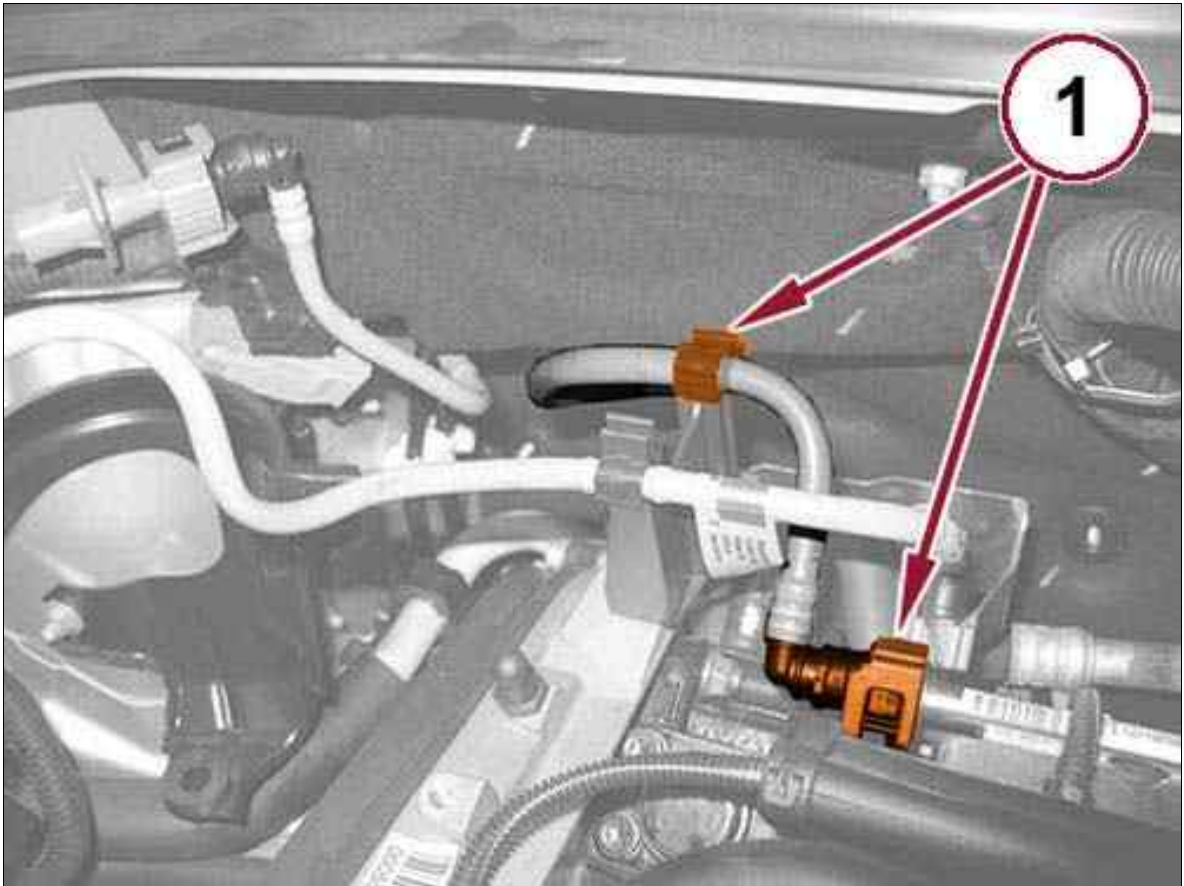
Fig 5: A/C Suction Line Quick Coupling



Courtesy of CHRYSLER GROUP, LLC

7. Reconnect the quick connect (1) of the air conditioning expansion valve tubing, tandem tube side. Always be certain to use new O-ring seals on refrigerant line fittings.

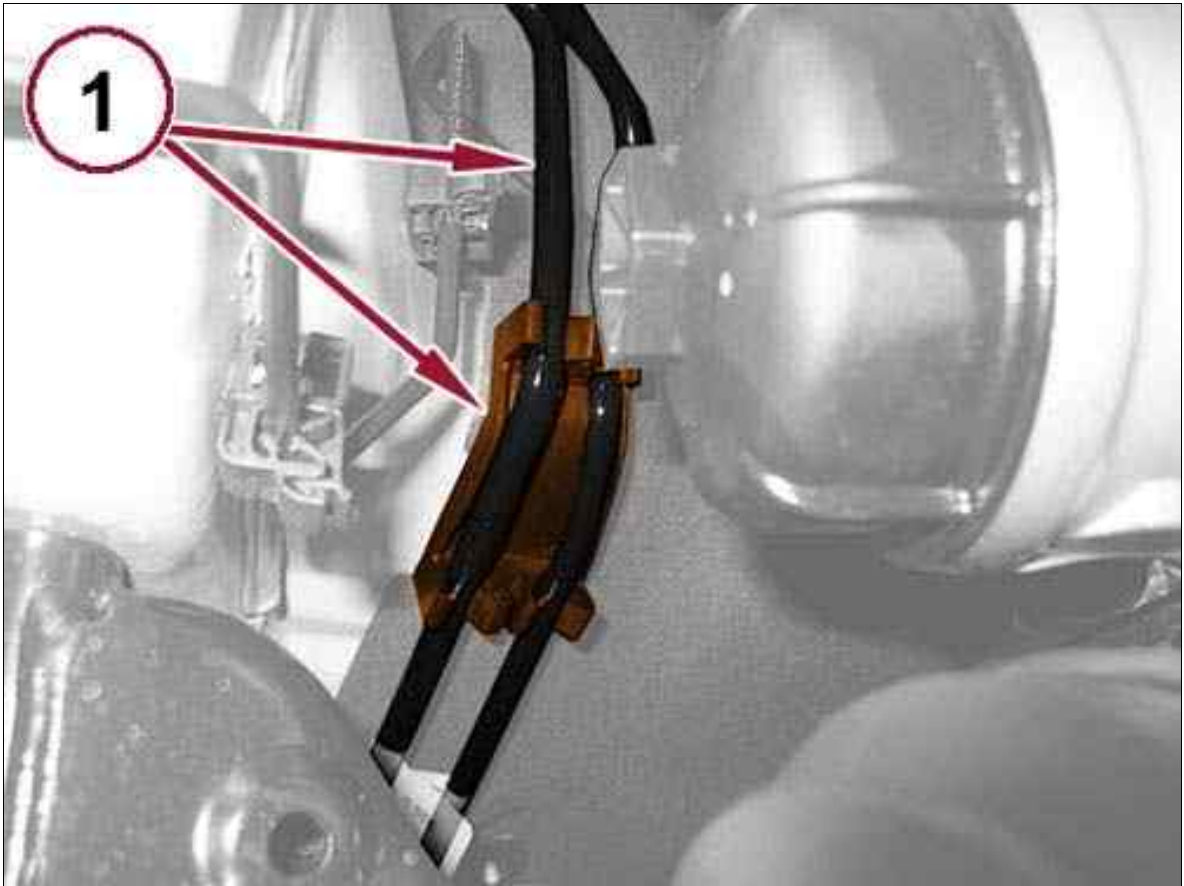
Fig 6: Fuel Return Pipe Coupling & Retaining Clip



Courtesy of CHRYSLER GROUP, LLC

8. Reconnect the return line quick connect fitting and close the retaining clip (1).

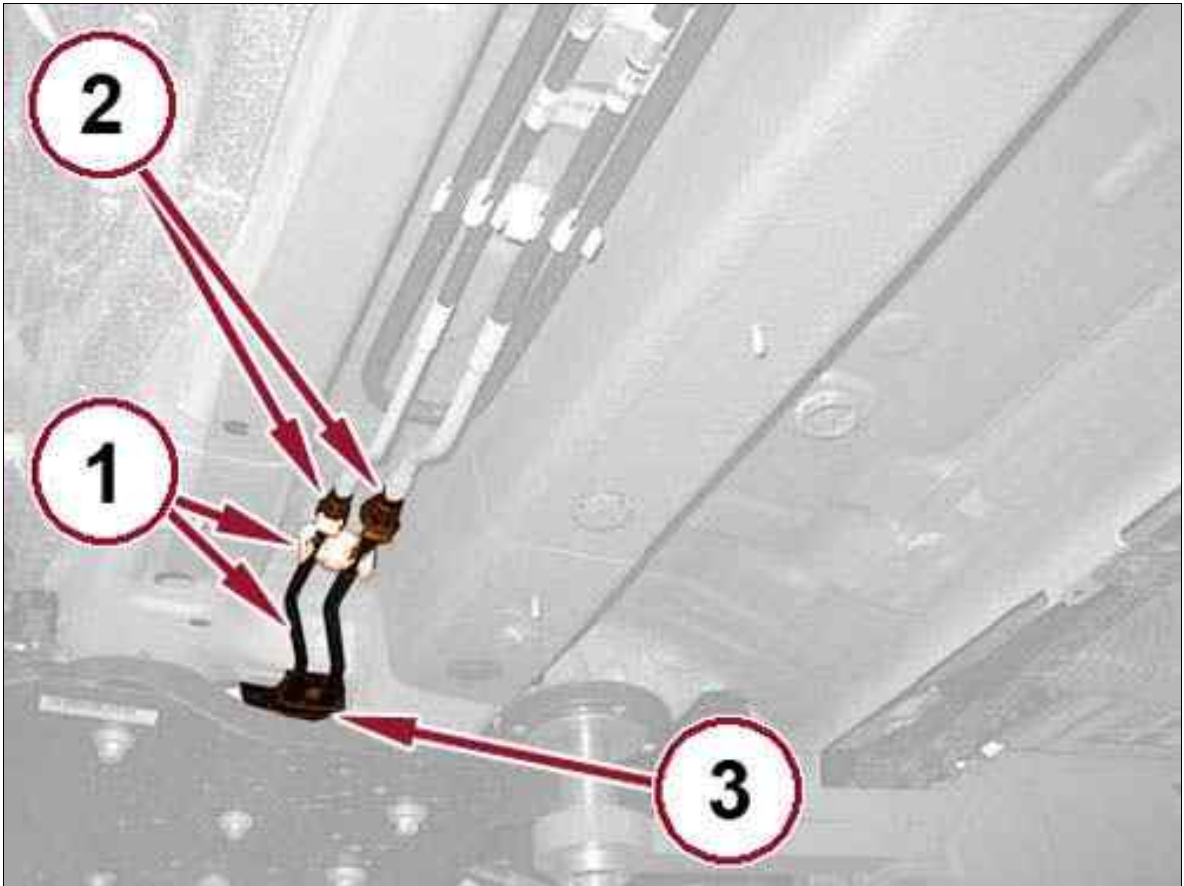
Fig 7: Fuel Lines & Retaining Clip



Courtesy of CHRYSLER GROUP, LLC

9. Engage the fuel lines into the retaining clip (1).

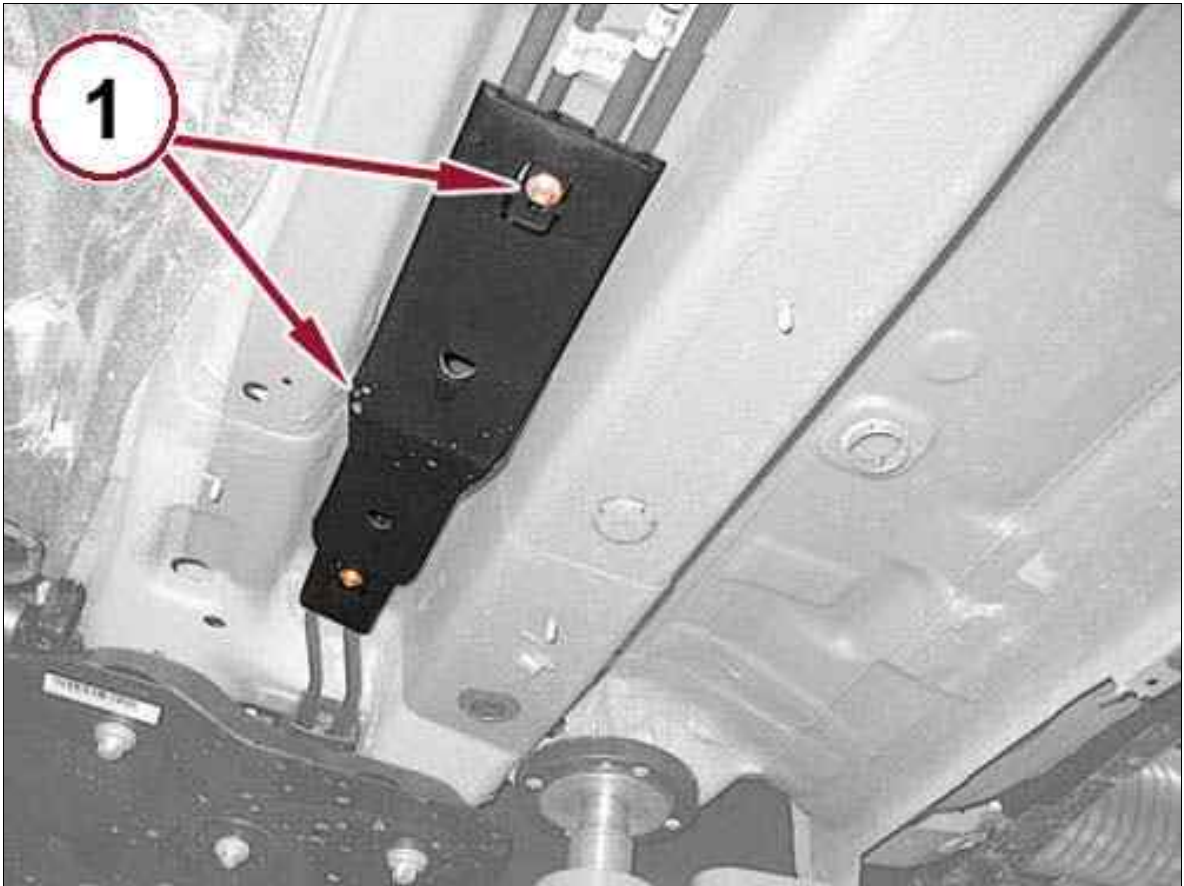
Fig 8: Fuel Lines, Retaining Clips & Couplings



Courtesy of CHRYSLER GROUP, LLC

10. Reinstall the retaining clip (3).
11. Reconnect the fuel return and discharge tube quick connect fittings (2).
12. Engage the fuel tubes (1) with the retaining clips on the underbody.

Fig 9: Fuel Line Shield & Bolts



Courtesy of CHRYSLER GROUP, LLC

13. Position the fuel tube shield to the underbody then install and tighten the screws (1) that secure it. Tighten the screws securely.
14. Reinstall the alternator. Refer to GENERATOR, REMOVAL AND INSTALLATION .
15. Evacuate and recharge the air conditioning system. Refer to PLUMBING, STANDARD PROCEDURE .
16. Reinstall the fuel filter into the vehicle. Refer to FILTER, FUEL, REMOVAL AND INSTALLATION .
17. Reinstall the engine air cleaner assembly into the vehicle. .
18. Reinstall the engine cover into the vehicle. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .
19. Reinstall the splash shield into the right front wheel house of the vehicle. Refer to SHIELD, SPLASH, FRONT WHEELHOUSE, REMOVAL AND INSTALLATION .
20. Reinstall the side belly pan onto the underbody of the vehicle. Refer to BELLY PAN, SIDE, REMOVAL AND INSTALLATION .
21. Reinstall the front belly pan onto the underside of the vehicle. Refer to BELLY PAN, REMOVAL AND INSTALLATION or BELLY PAN, SIDE, REMOVAL AND INSTALLATION .

**FUEL DELIVERY > LINES, FUEL > REMOVAL AND INSTALLATION > 1.6L > REMOVAL
- REAR FUEL DELIVERY LINE - 1.6L**

⚠ CAUTION:

Cleanliness cannot be overemphasized when handling or replacing diesel fuel system components. This especially includes the fuel injectors, high-pressure fuel lines and fuel injection pump. Very tight tolerances are used with these parts. Dirt contamination could cause rapid part wear and possible plugging of fuel injector nozzle tip holes. This in turn could lead to possible engine misfire. Always wash/clean any fuel system component thoroughly before disassembly and then air dry. Cap or cover any open part after disassembly. Before assembly, examine each part for dirt, grease or other contaminants and clean if necessary. When installing new parts, lubricate them with clean engine oil or clean diesel fuel only. DO NOT use any lubricating or sliding agents that contain water.

Fig 1: Fuel Pump Access Cover & Screws



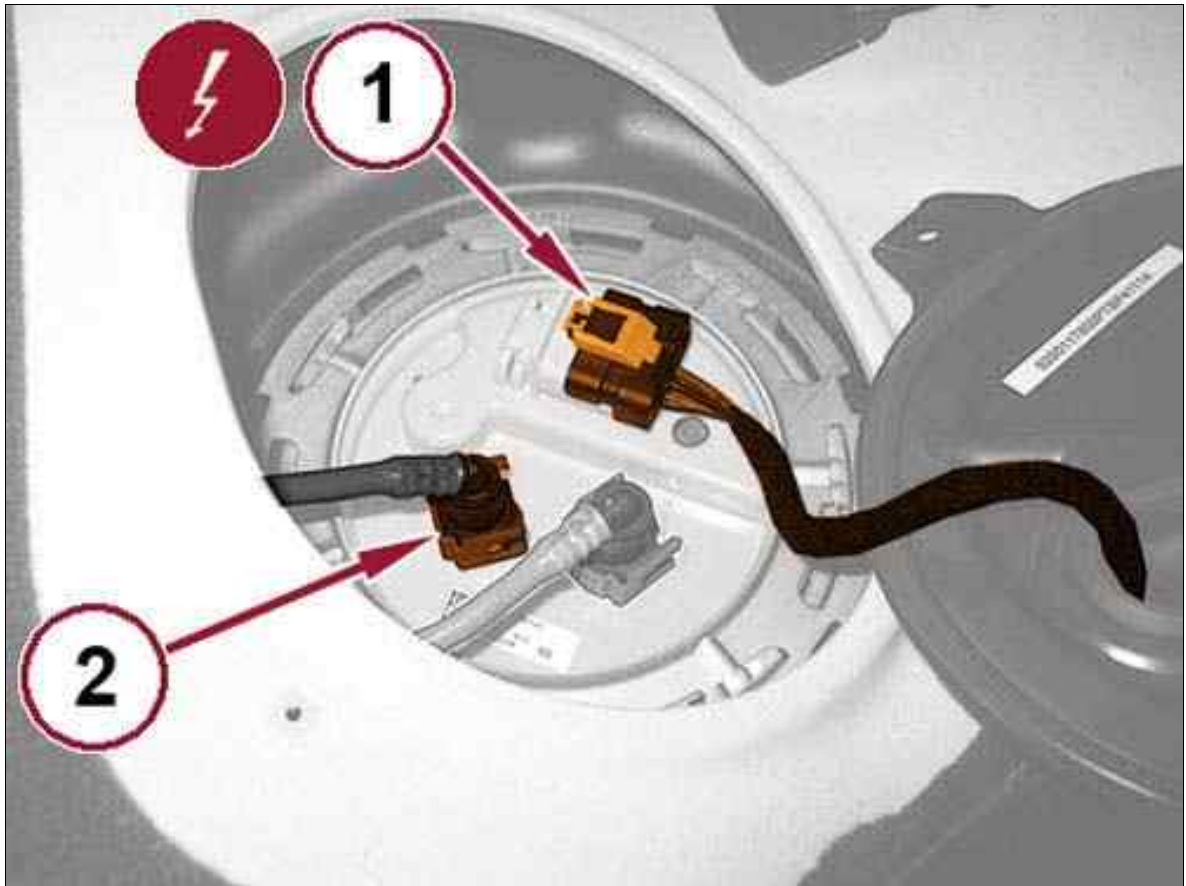
Courtesy of CHRYSLER GROUP, LLC

1. Open the cover of the Power Distribution Center (PDC) in the engine compartment and remove

the fuel pump fuse (F21 - 15 ampere).

2. Wait for the residual pressure in the fuel distribution manifold to be relieved.
3. Reinstall the fuel pump fuse (F21 - 15 ampere) and close the PDC cover.
4. Remove the rear seat cushion from the vehicle. Refer to SEAT CUSHION, REMOVAL AND INSTALLATION .
5. Lift the floor covering to access and remove the screws (1) that secure the fuel pump access cover to the floor panel and remove the access cover.

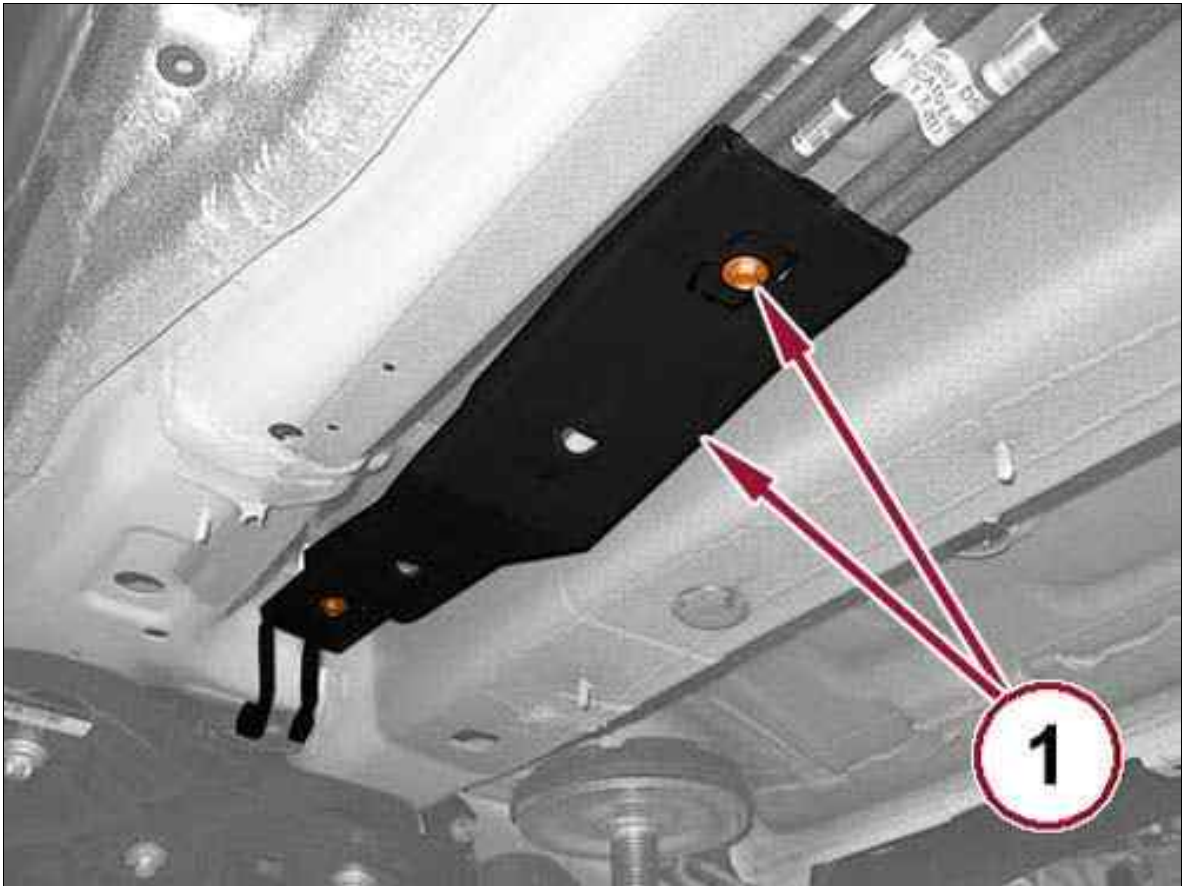
Fig 2: Wire Harness Connector & Rear Fuel Delivery Tube Quick Coupling



Courtesy of CHRYSLER GROUP, LLC

6. Disconnect the wire harness connector (1) from the electric fuel pump.
7. Disconnect the rear fuel delivery tube quick coupling (2) from the electric fuel pump.
8. Raise and support the vehicle.
9. Remove the side belly pan from the underbody of the vehicle. Refer to BELLY PAN, SIDE, REMOVAL AND INSTALLATION .

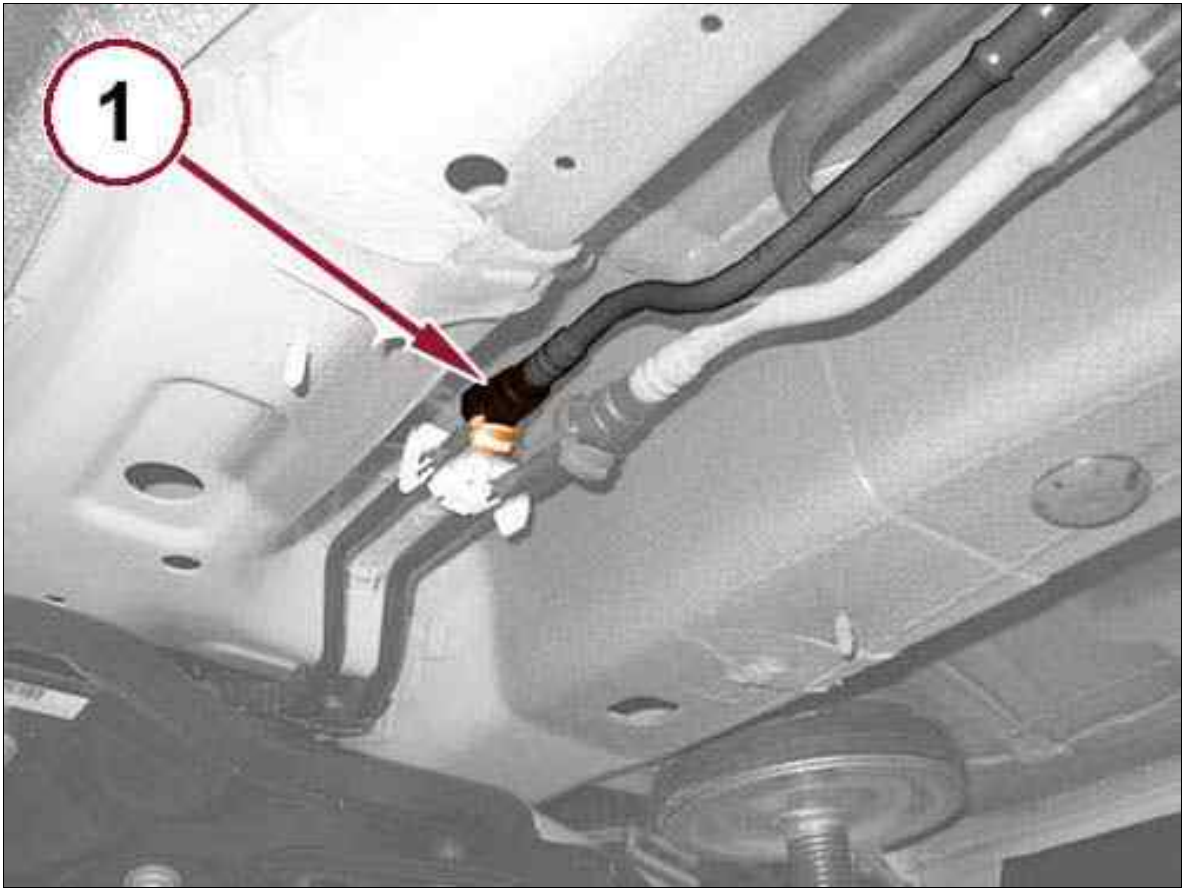
Fig 3: Fuel Tube Shield & Screws



Courtesy of CHRYSLER GROUP, LLC

10. Remove the screws (1) that secure the fuel tube shield beneath the underbody and remove the shield.

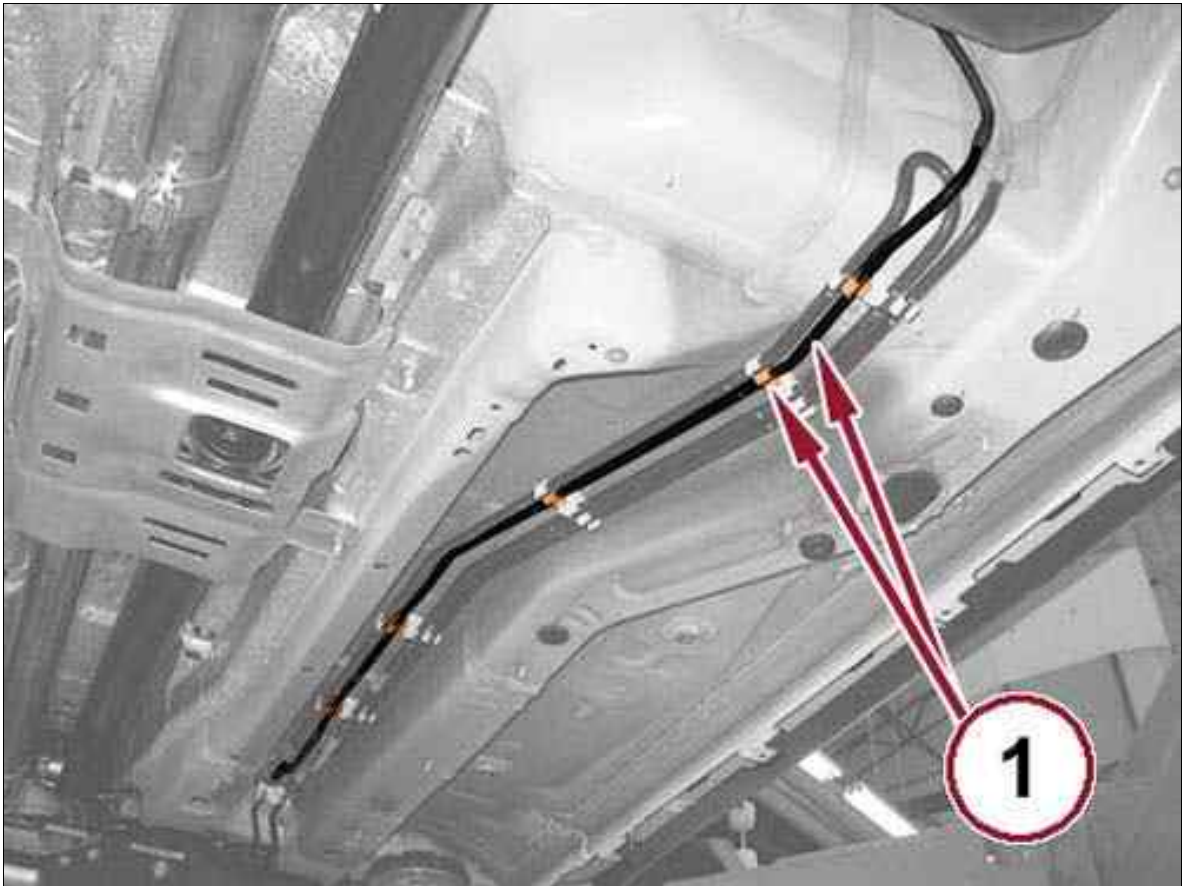
Fig 4: Rear Fuel Delivery Tube Front Quick Coupling



Courtesy of CHRYSLER GROUP, LLC

11. Disconnect the rear fuel delivery tube front quick coupling (1).

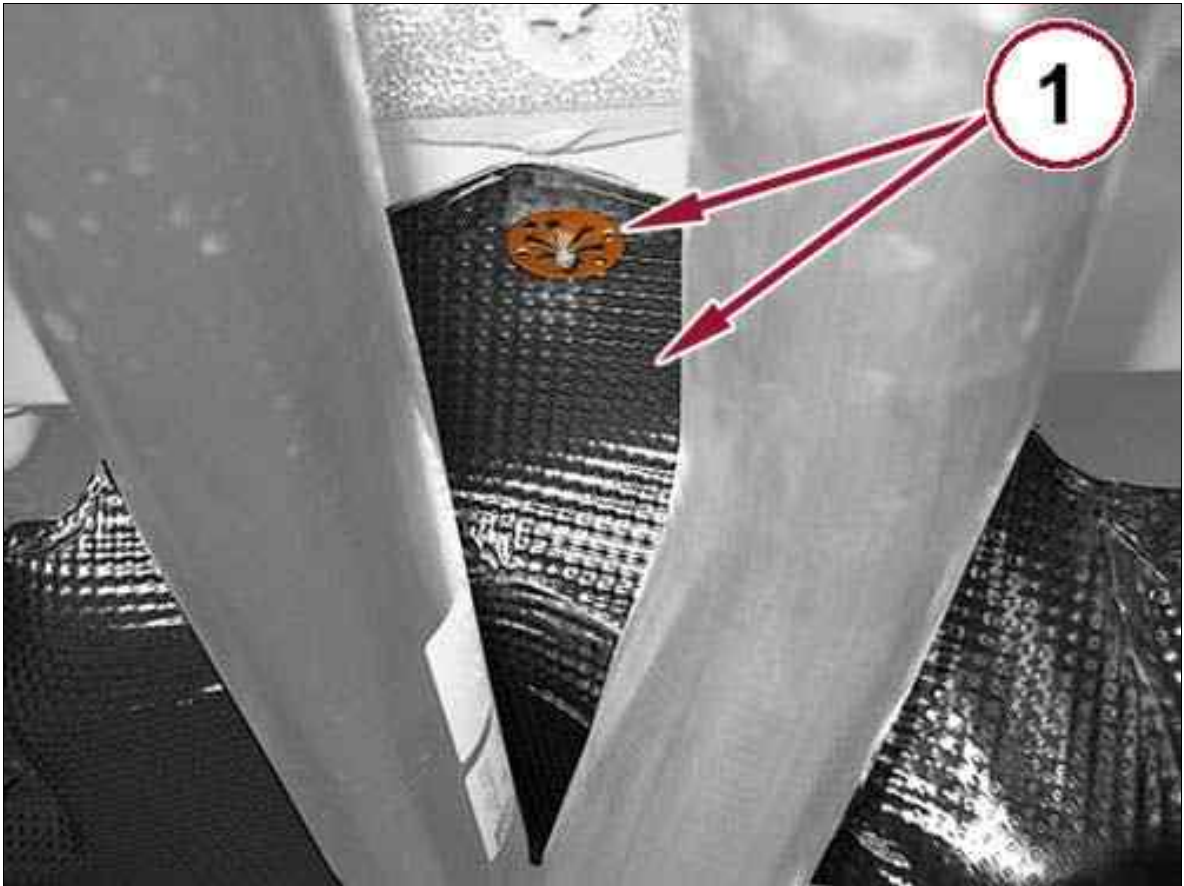
Fig 5: Rear Fuel Delivery Tube & Retaining Clips



Courtesy of CHRYSLER GROUP, LLC

12. Disengage the rear fuel delivery tube (1) from the retaining clips on the underbody.

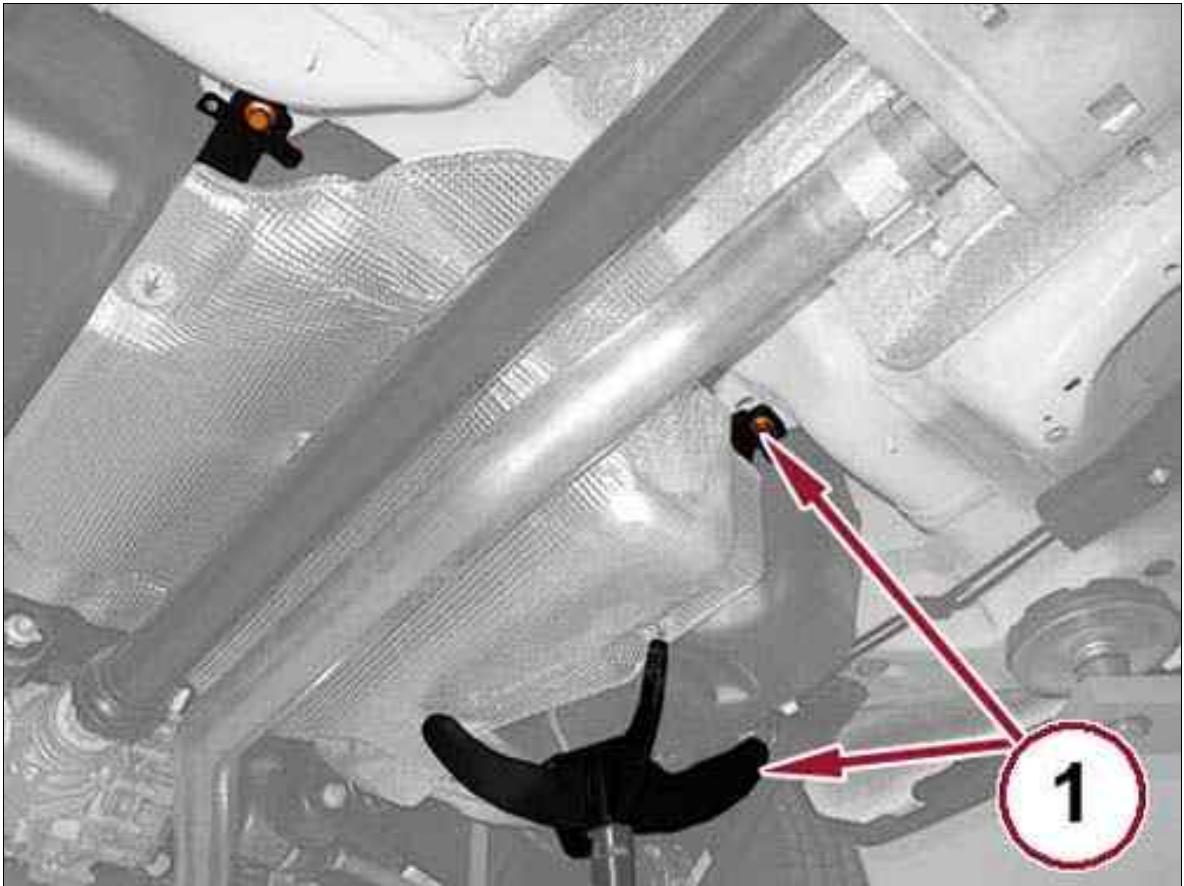
Fig 6: Fuel Tank Heat Shield Retaining Washer



Courtesy of CHRYSLER GROUP, LLC

13. Unscrew the serrated fuel tank heat shield retaining washer (1).

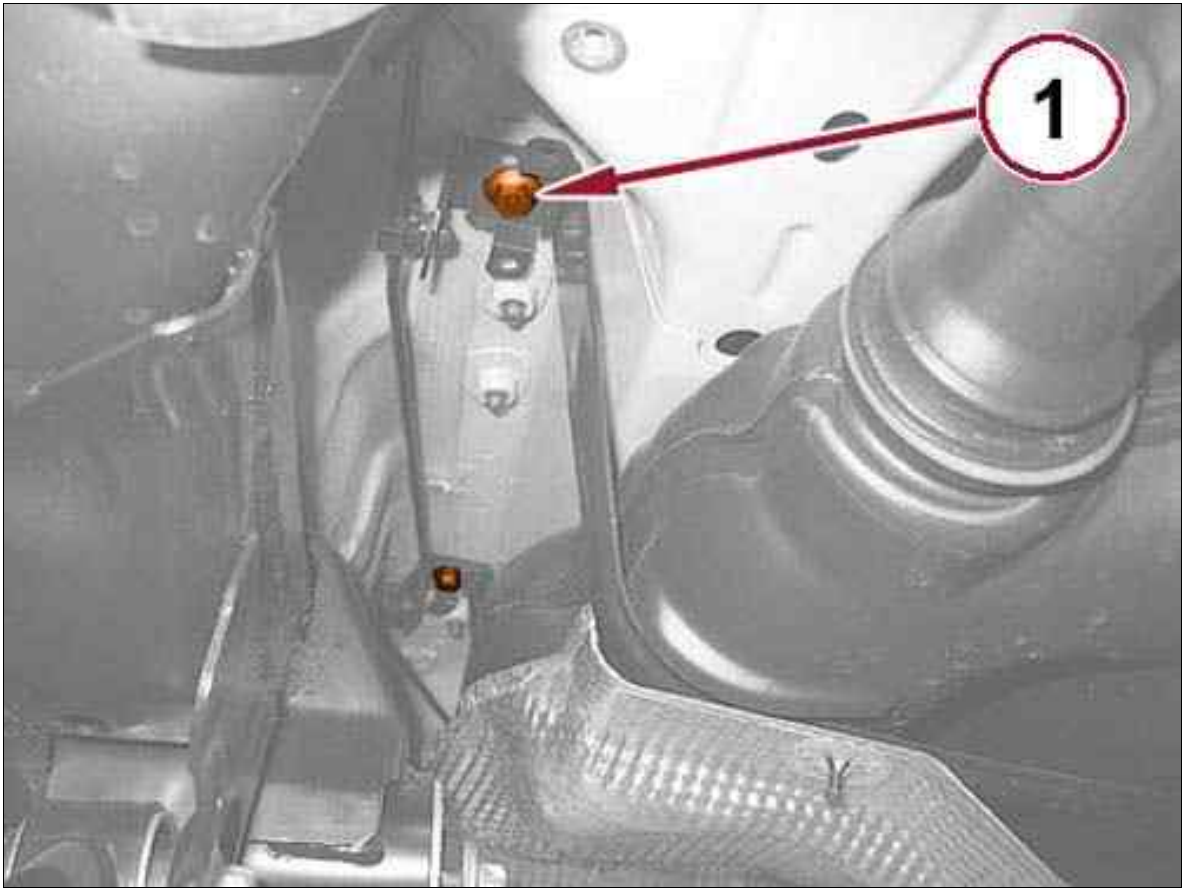
Fig 7: Front Tank Mounting Brackets & Hydraulic Lift



Courtesy of CHRYSLER GROUP, LLC

14. Place a suitable hydraulic lift to support the fuel tank, then remove the screws from the front tank mounting brackets (1).

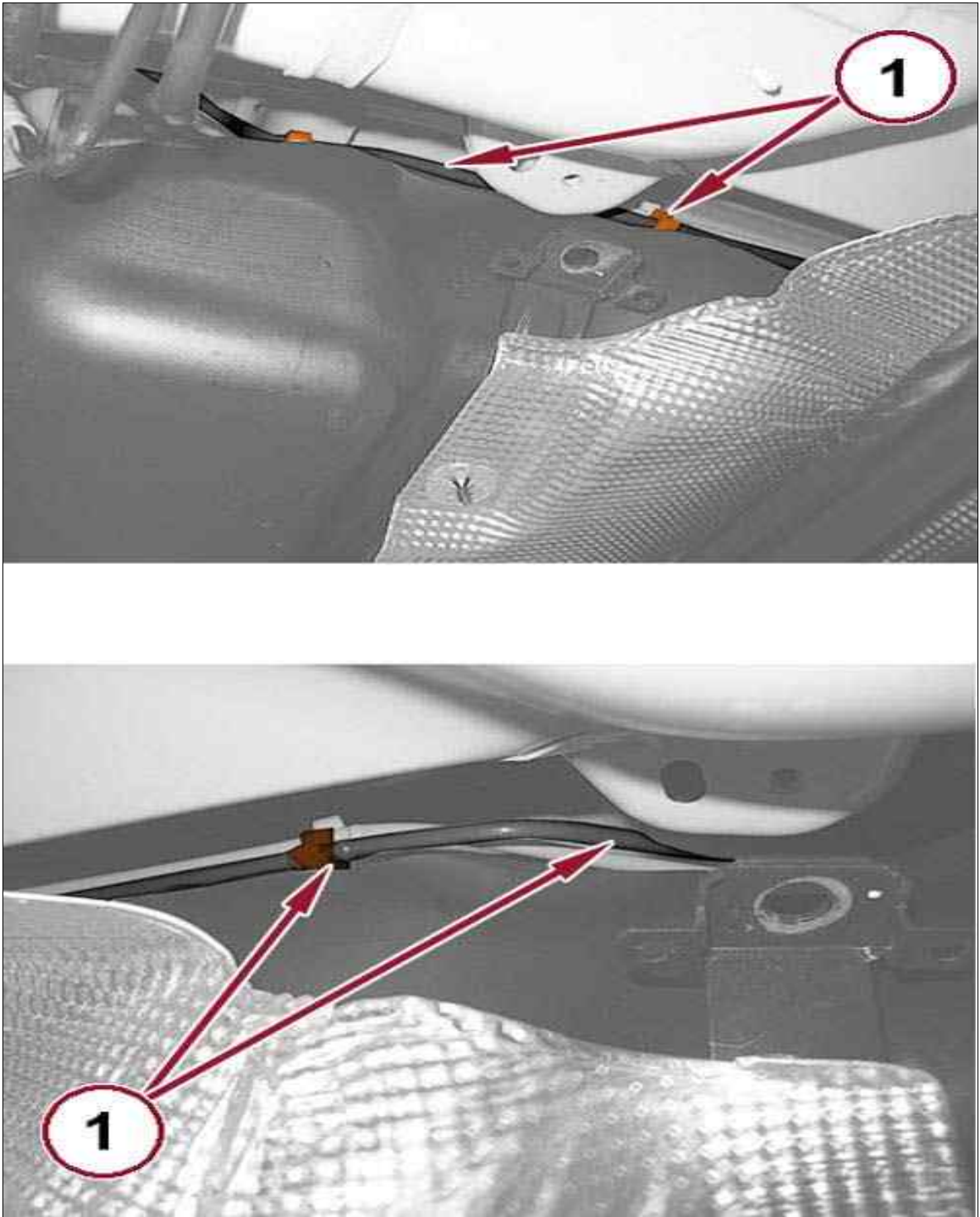
Fig 8: Rear Tank Mounting Brackets & Screws



Courtesy of CHRYSLER GROUP, LLC

15. Remove the screws (1) from the rear tank mounting brackets.

Fig 9: Rear Fuel Delivery Tube & Retaining Clips



Courtesy of CHRYSLER GROUP, LLC

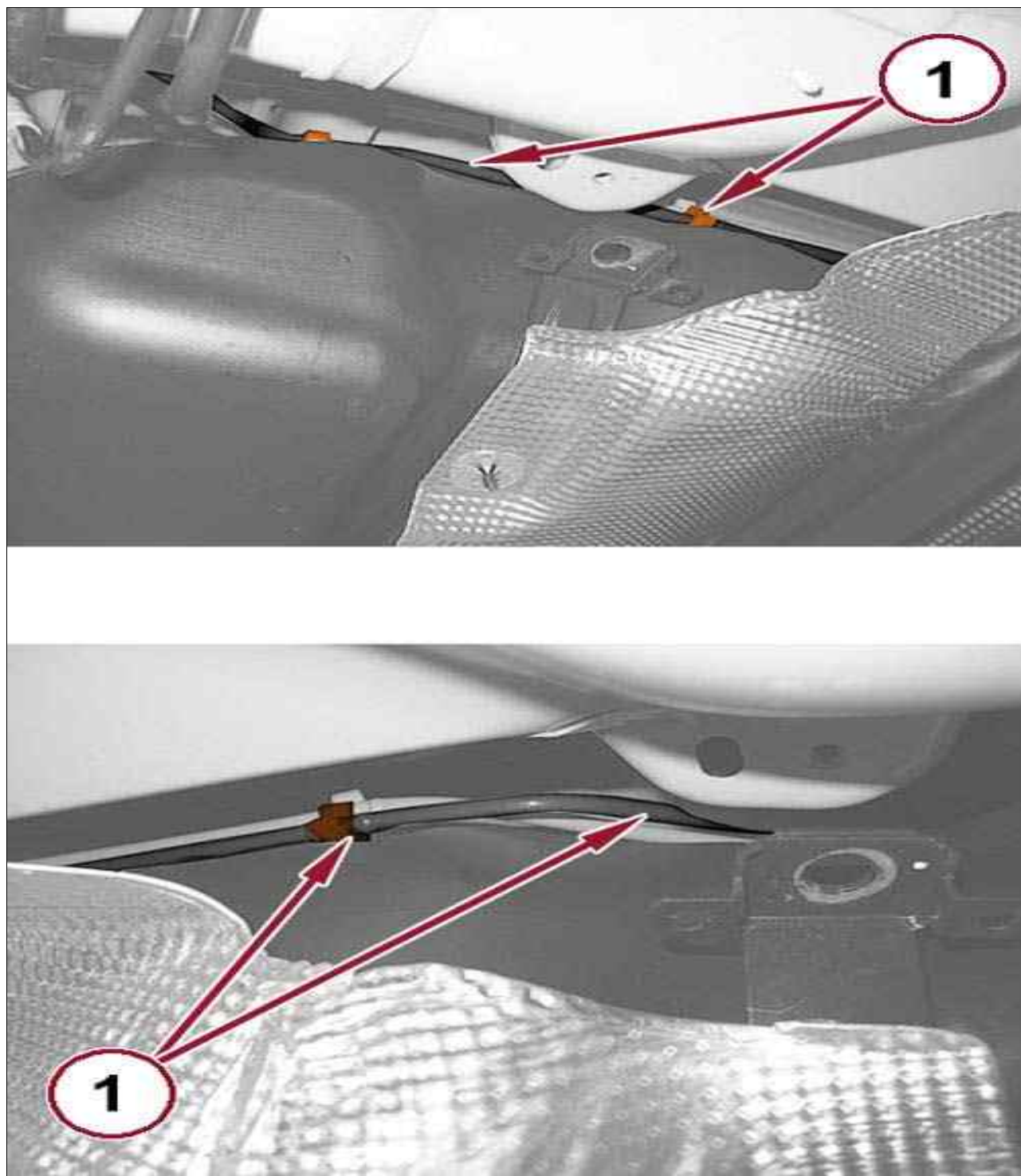
16. Lower the fuel tank far enough to access and disengage the rear fuel delivery tube from the retaining clips (1) and remove.

**FUEL DELIVERY > LINES, FUEL > REMOVAL AND INSTALLATION > 1.6L >
INSTALLATION - REAR FUEL DELIVERY LINE - 1.6L**

 CAUTION:

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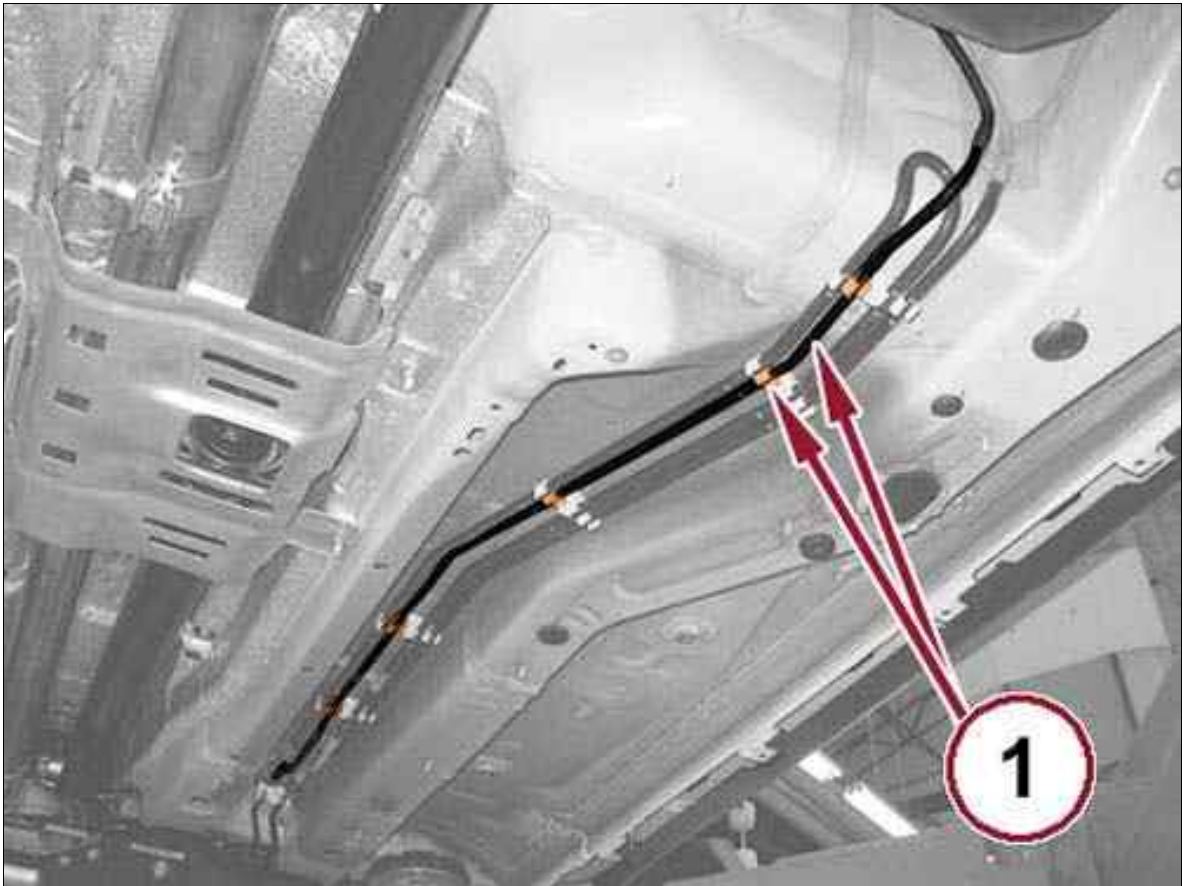
Fig 1: Rear Fuel Delivery Tube & Retaining Clips



Courtesy of CHRYSLER GROUP, LLC

1. Position the rear fuel delivery tube (1) to the vehicle underbody.

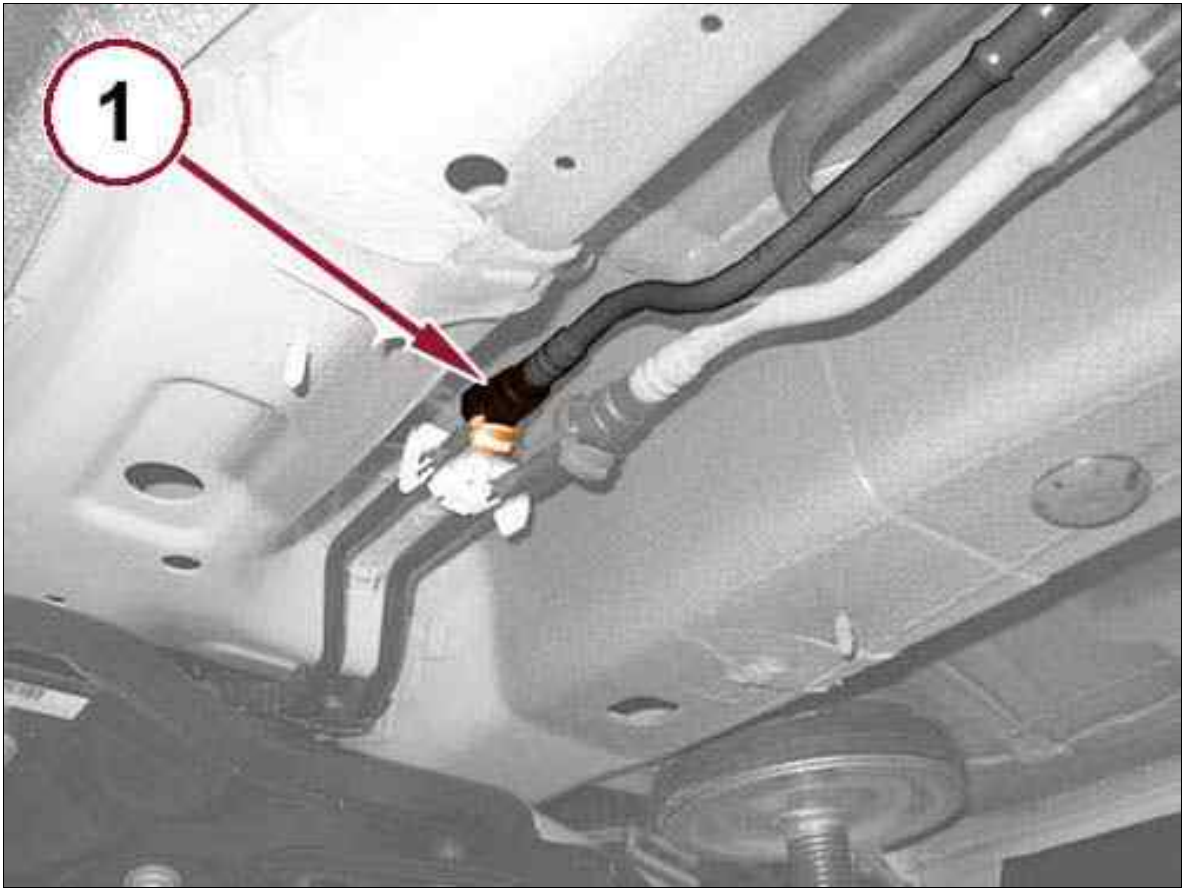
Fig 2: Rear Fuel Delivery Tube & Retaining Clips



Courtesy of CHRYSLER GROUP, LLC

2. Engage the rear fuel delivery tube (1) with the retaining clips on the underbody.

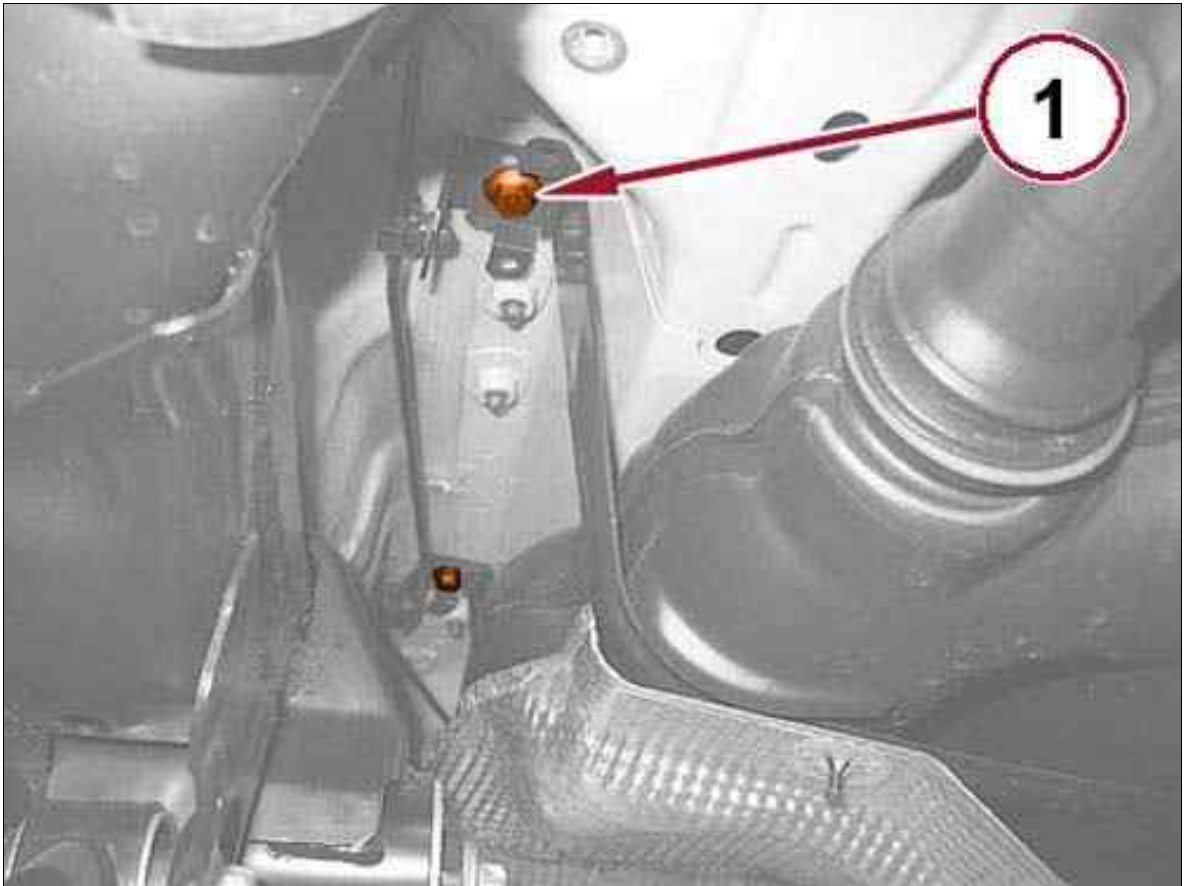
Fig 3: Rear Fuel Delivery Tube Front Quick Coupling



Courtesy of CHRYSLER GROUP, LLC

3. Reconnect the rear fuel delivery tube front quick coupling (1).

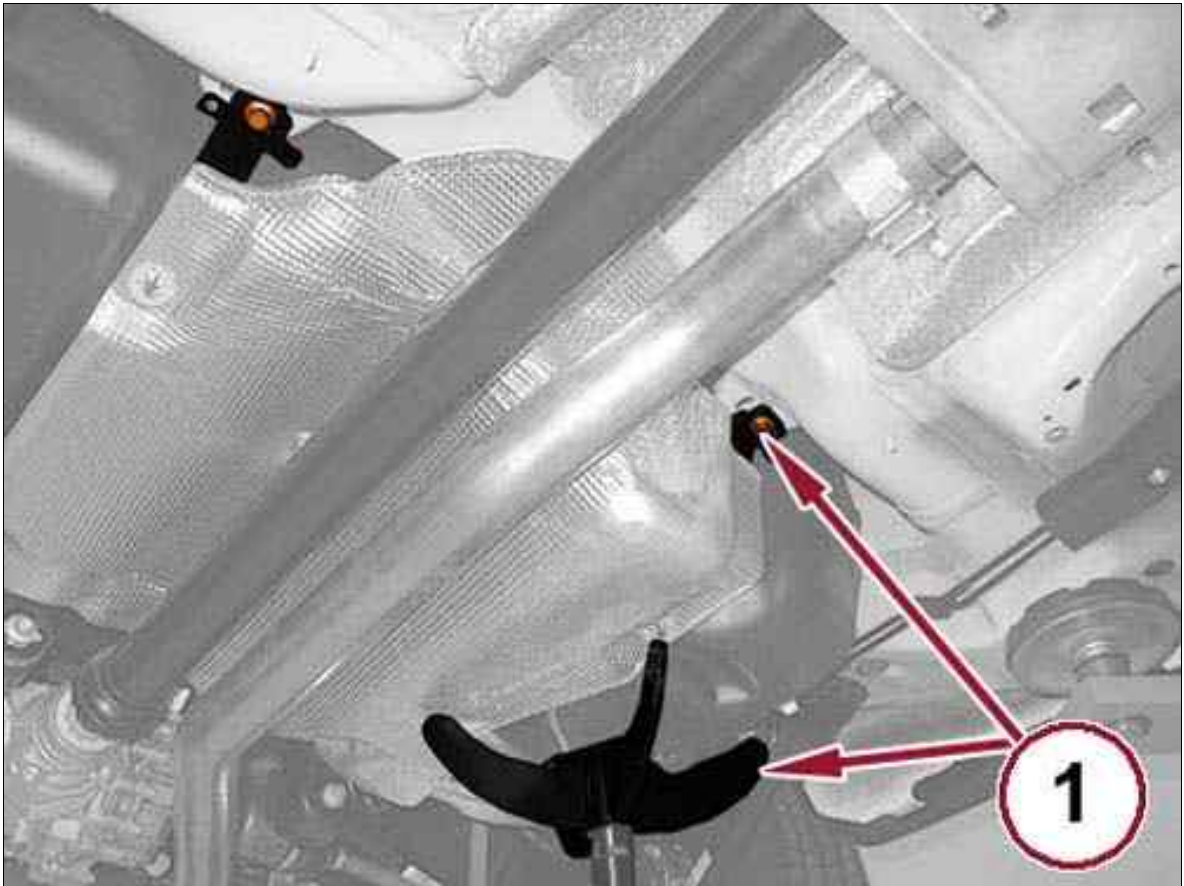
Fig 4: Rear Tank Mounting Brackets & Screws



Courtesy of CHRYSLER GROUP, LLC

4. Lift the fuel tank back into position then install and tighten the screws (1) for the rear tank mounting brackets. Tighten the screws securely.

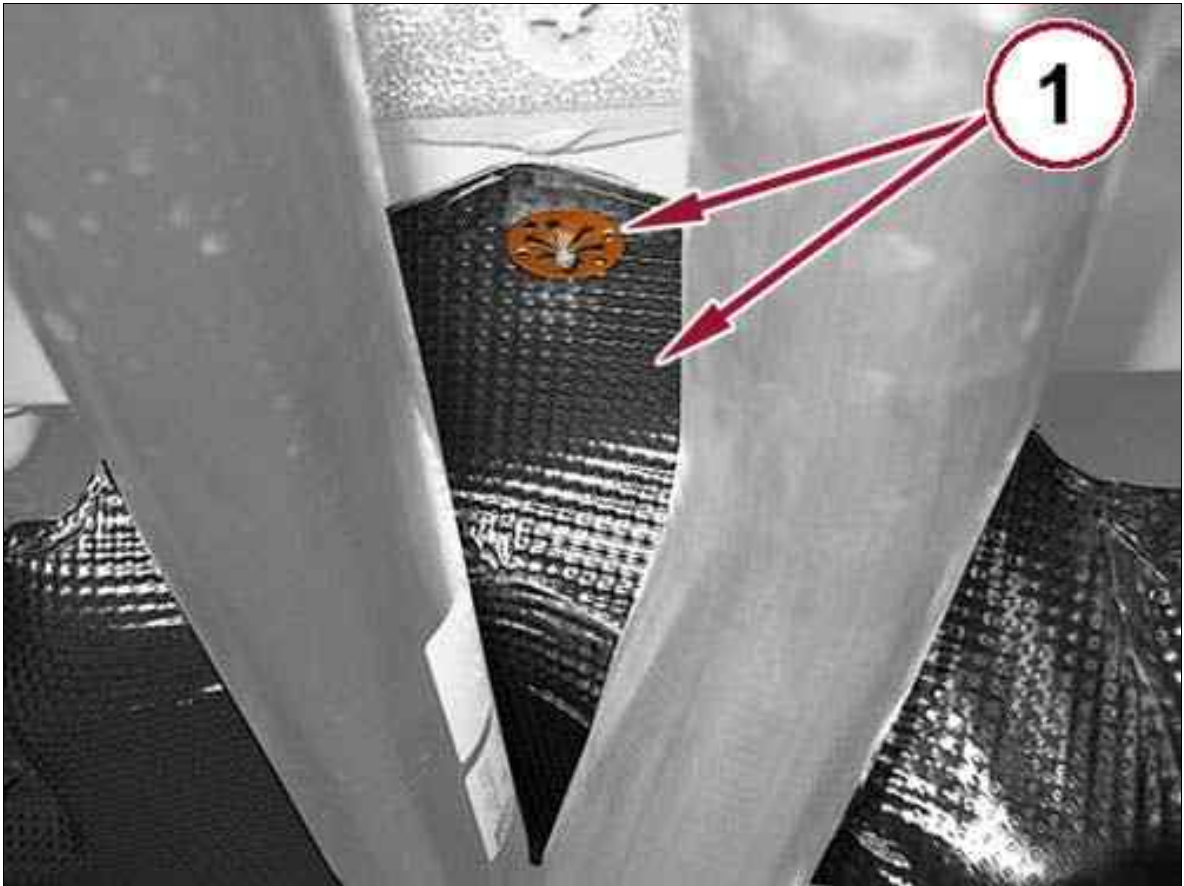
Fig 5: Front Tank Mounting Brackets & Hydraulic Lift



Courtesy of CHRYSLER GROUP, LLC

5. Install and tighten the screws that secure the front tank mounting brackets (1). Tighten the screws securely.

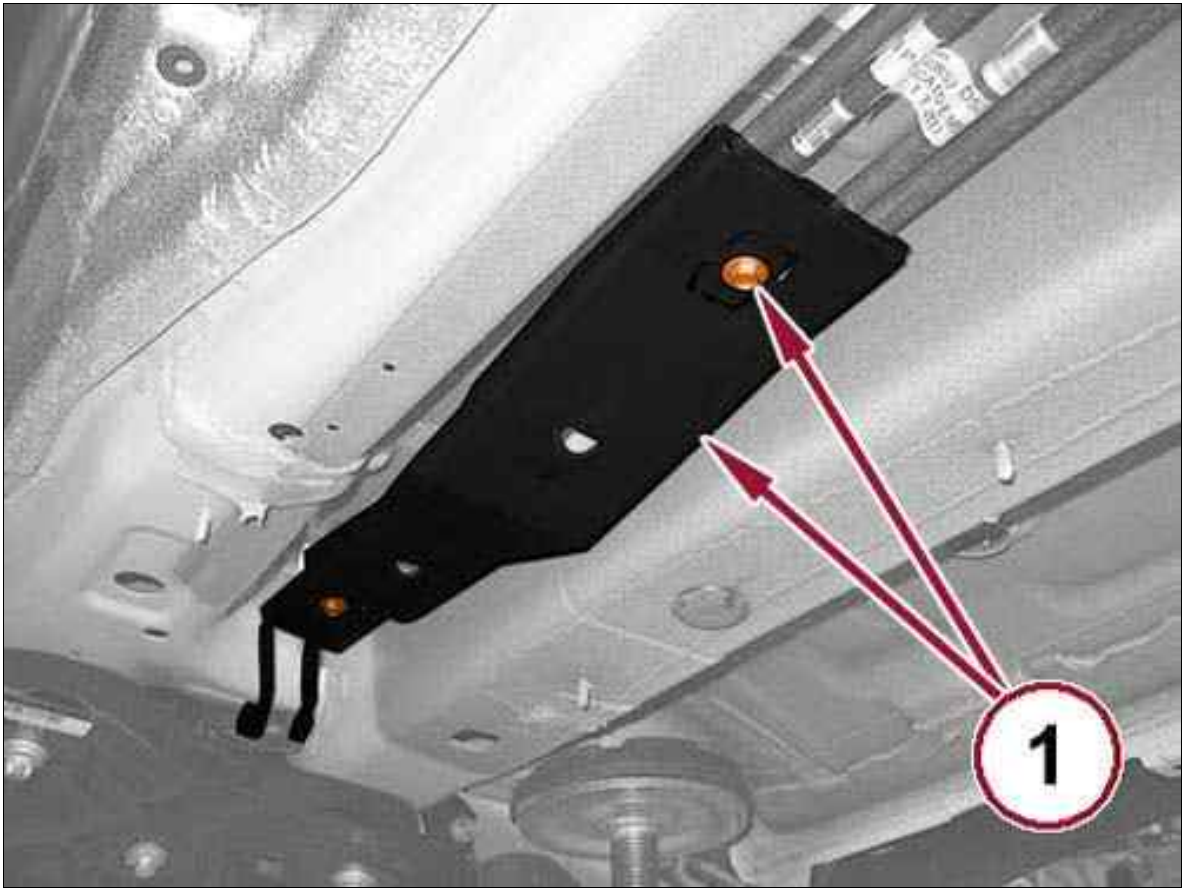
Fig 6: Fuel Tank Heat Shield Retaining Washer



Courtesy of CHRYSLER GROUP, LLC

6. Position the fuel tank heat shield and secure it by screwing on the serrated retainer washer (1).

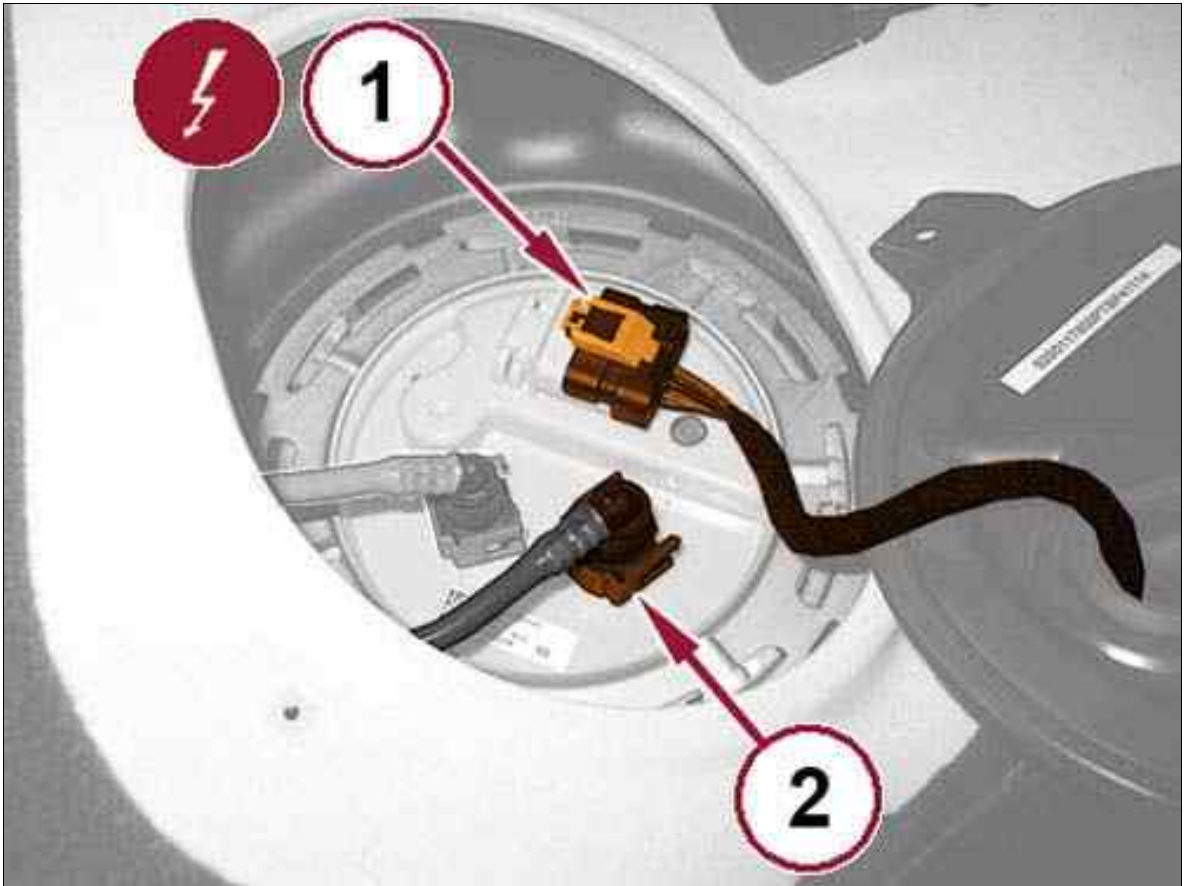
Fig 7: Fuel Tube Shield & Screws



Courtesy of CHRYSLER GROUP, LLC

7. Position the fuel tube shield to the underbody then install and tighten the screws (1) that secure it. Tighten the screws securely.
8. Install the side belly pan onto the underbody of the vehicle. Refer to BELLY PAN, SIDE, REMOVAL AND INSTALLATION .

Fig 8: Rear Fuel Delivery Tube Quick Coupling & Wire Harness Connector



Courtesy of CHRYSLER GROUP, LLC

9. Remove the support and lower the vehicle.
10. Lift the floor covering to access and connect the rear fuel delivery tube quick coupling (2) to the electric fuel pump.
11. Connect the wire harness connector (1) to the electric fuel pump.

Fig 9: Fuel Pump Access Cover & Screws



Courtesy of CHRYSLER GROUP, LLC

12. Position the fuel pump access cover to the floor panel then install and tighten the screws (1) to secure it. Tighten the screws securely.
13. Install the rear seat cushion into the vehicle. Refer to SEAT CUSHION, REMOVAL AND INSTALLATION .

**FUEL DELIVERY > LINES, FUEL > REMOVAL AND INSTALLATION > 1.6L > REMOVAL
- 1040B56 FUEL RETURN PIPE BACK - 1.6L**

⚠ CAUTION:

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Fig 1: Fuel Pump Access Cover & Screws

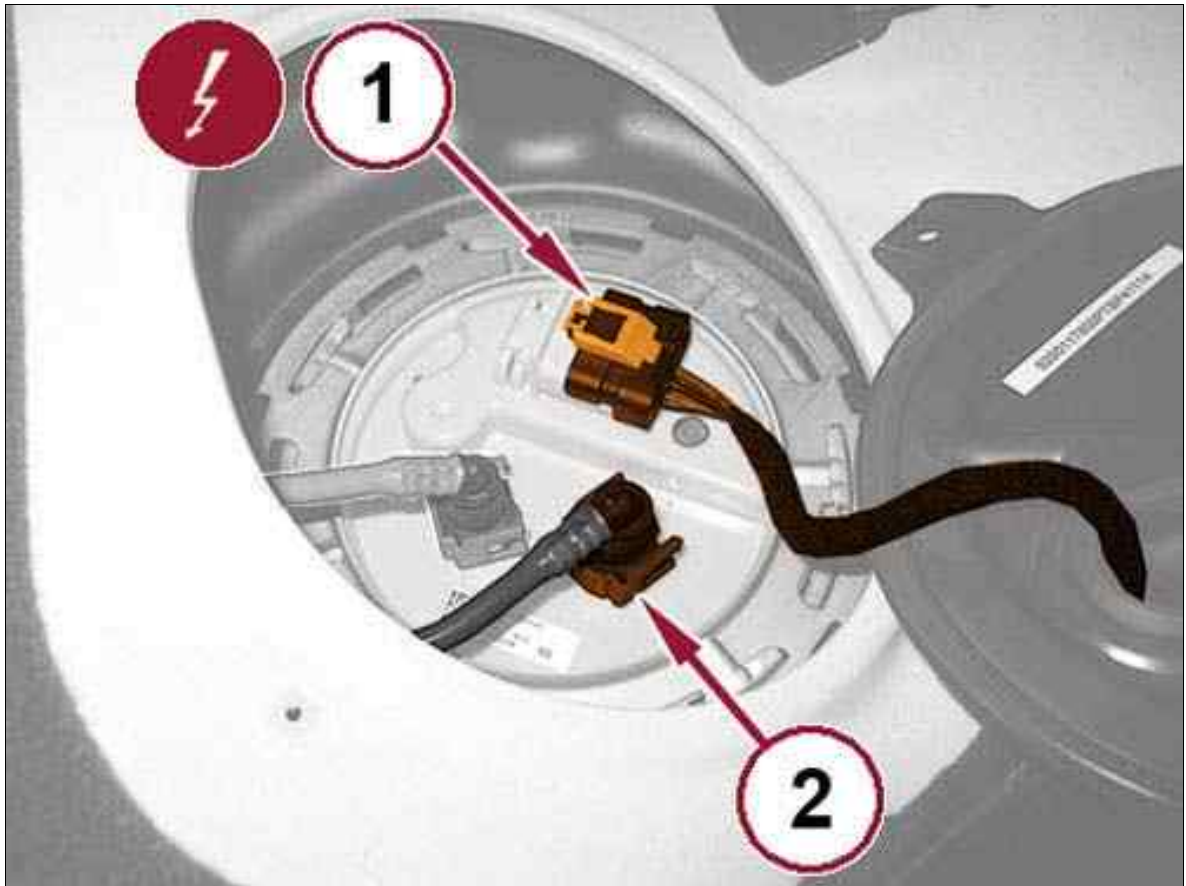


Courtesy of CHRYSLER GROUP, LLC

1. Open the cover of the Power Distribution Center (PDC) in the engine compartment and remove the fuel pump fuse (F21 - 15 ampere).
2. Wait for the residual pressure in the fuel distribution manifold to be relieved.
3. Reinstall the fuel pump fuse (F21 - 15 ampere) and close the PDC cover.

4. Remove the rear seat cushion from the vehicle. Refer to SEAT CUSHION, REMOVAL AND INSTALLATION .
5. Lift the floor covering to access and remove the screws (1) that secure the fuel pump access cover to the floor panel and remove the access cover.

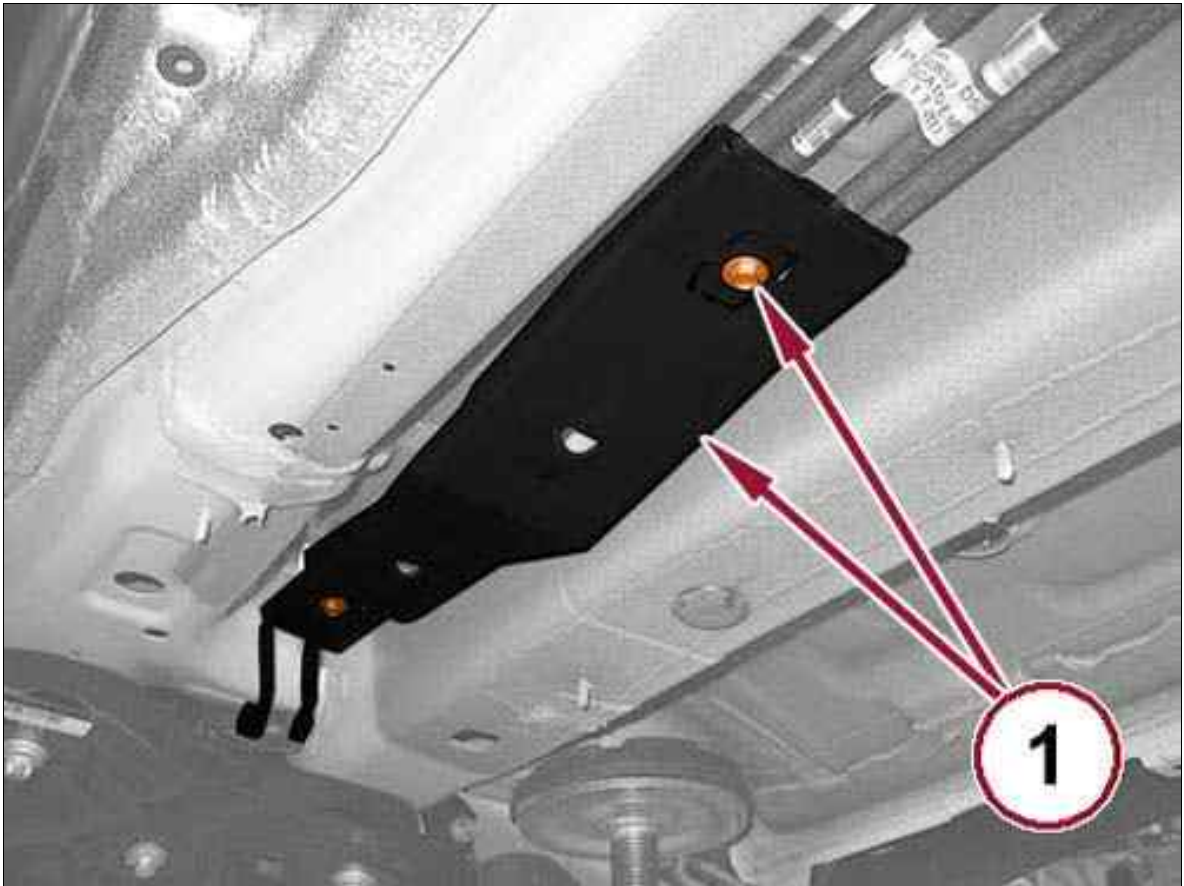
Fig 2: Rear Fuel Delivery Tube Quick Coupling & Wire Harness Connector



Courtesy of CHRYSLER GROUP, LLC

6. Disconnect the wire harness connector (1) from the electric fuel pump.
7. Disconnect the rear fuel return tube quick connect fitting (2) from the electric fuel pump.
8. Raise and support the vehicle.
9. Remove the side belly pan from the underbody of the vehicle. Refer to BELLY PAN, SIDE, REMOVAL AND INSTALLATION .

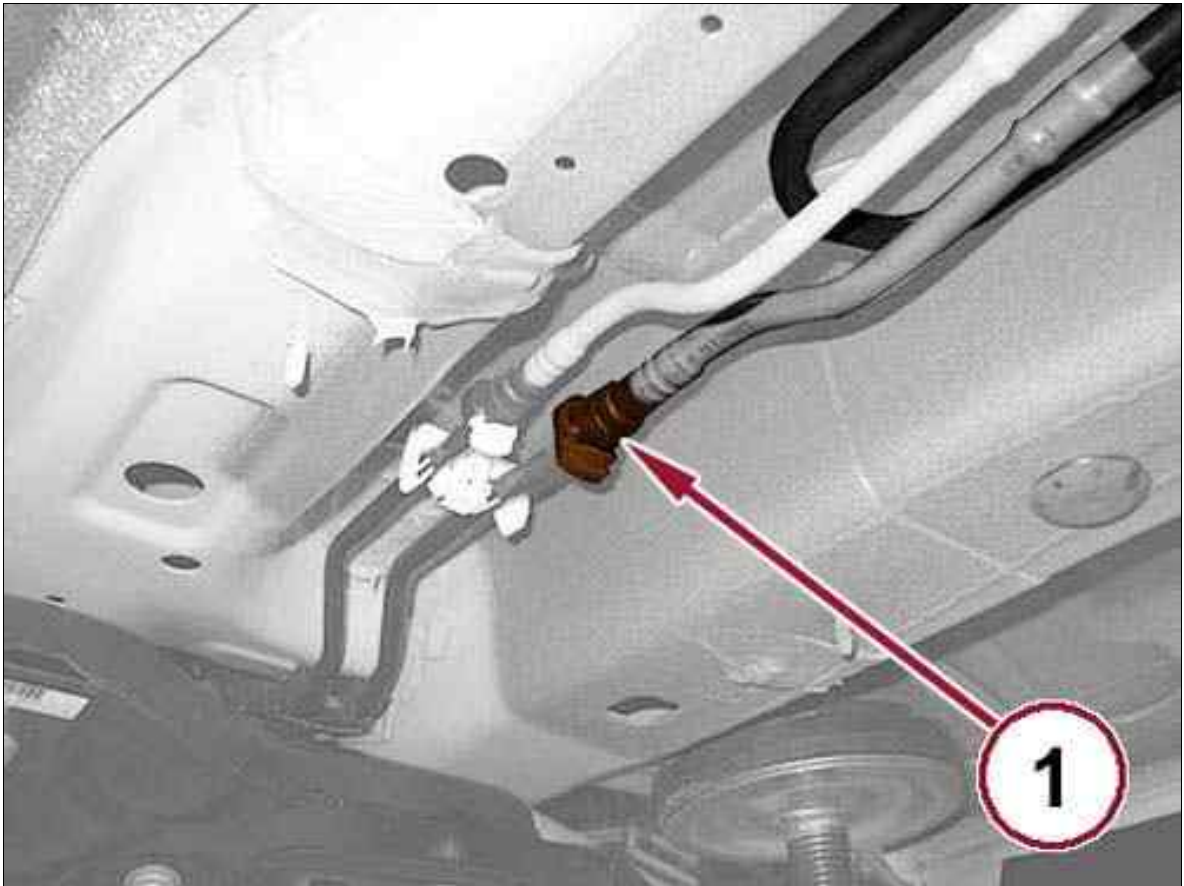
Fig 3: Fuel Tube Shield & Screws



Courtesy of CHRYSLER GROUP, LLC

10. Remove the screws (1) that secure the fuel tube shield beneath the underbody and remove the shield.

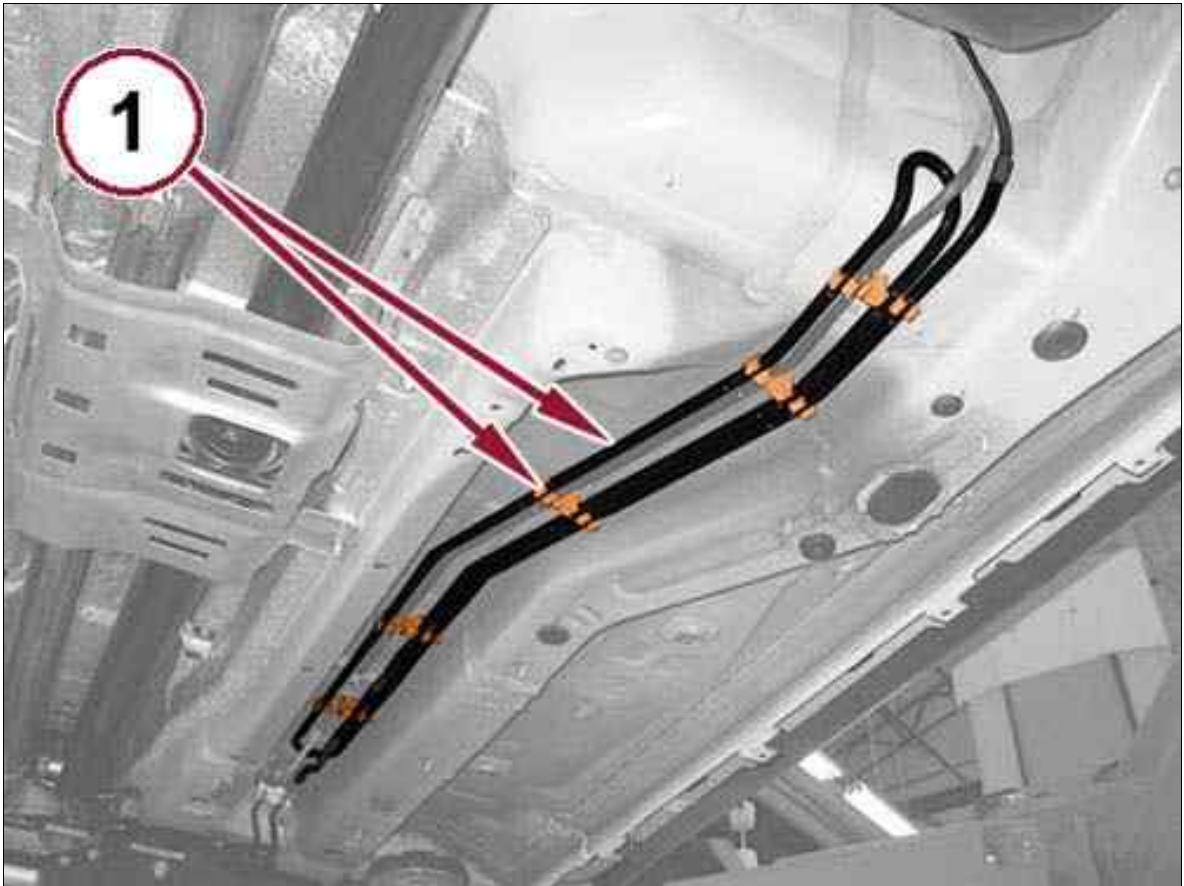
Fig 4: Rear Fuel Return Tube Front Quick Connect Fitting



Courtesy of CHRYSLER GROUP, LLC

11. Disconnect the rear fuel return tube front quick connect fitting (1).

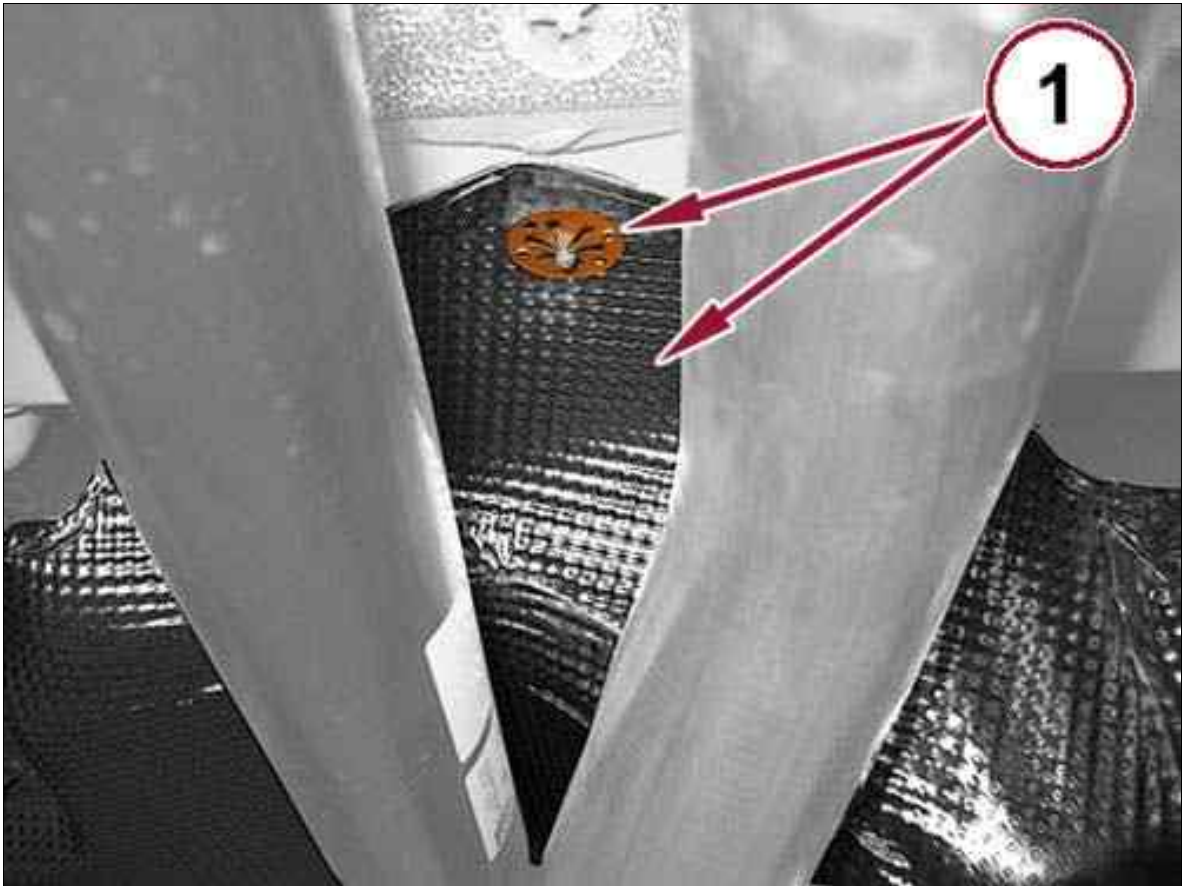
Fig 5: Rear Fuel Return Tube & Retaining Clips



Courtesy of CHRYSLER GROUP, LLC

12. Disengage the rear fuel return tube (1) from the retaining clips on the underbody.

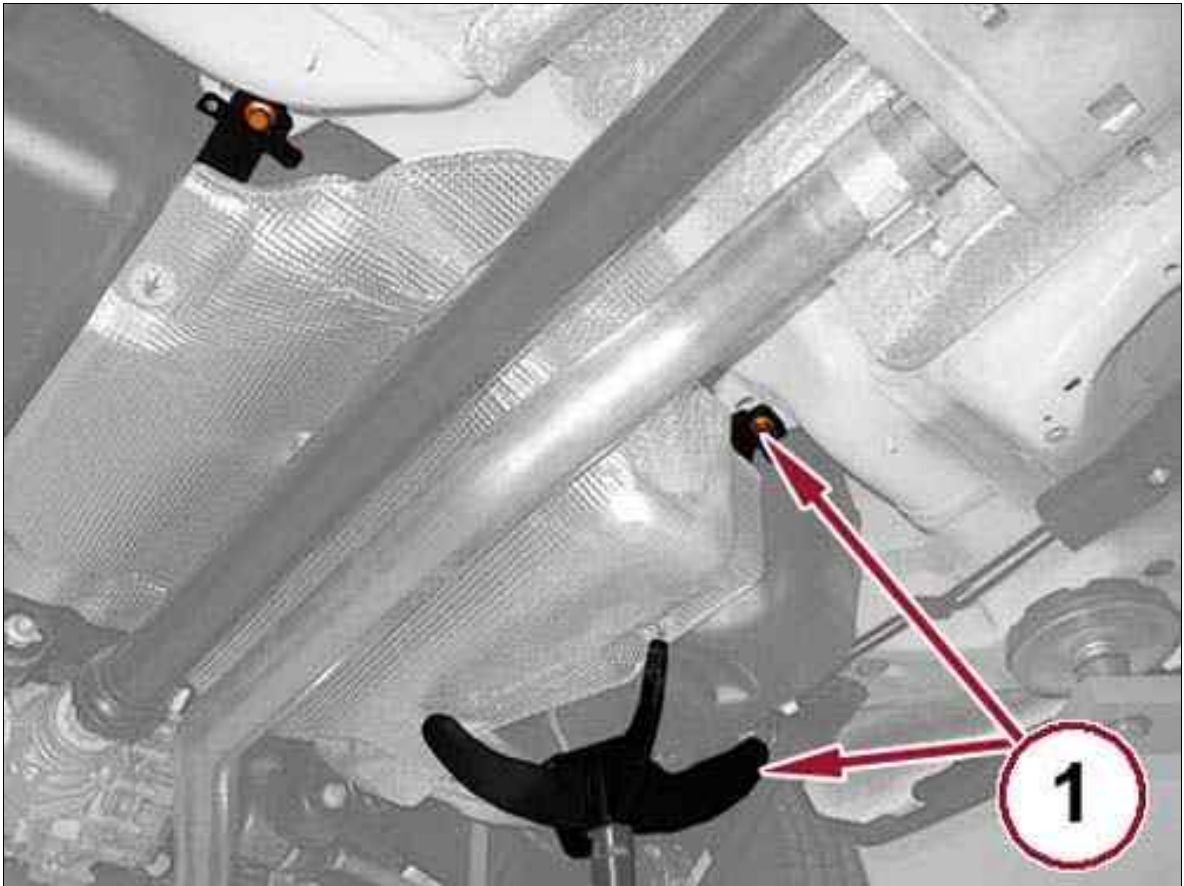
Fig 6: Fuel Tank Heat Shield Retaining Washer



Courtesy of CHRYSLER GROUP, LLC

13. Unscrew the serrated fuel tank heat shield retaining washer (1).

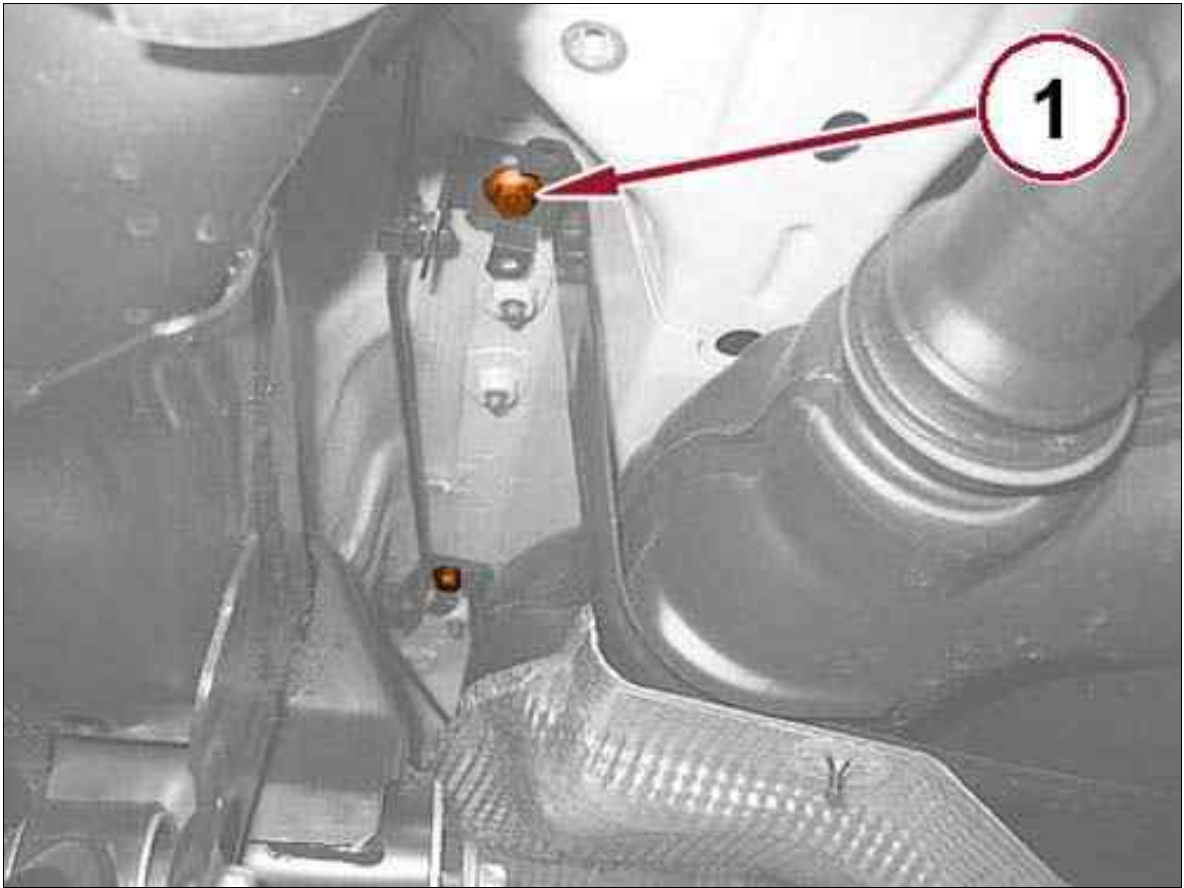
Fig 7: Front Tank Mounting Brackets & Hydraulic Lift



Courtesy of CHRYSLER GROUP, LLC

14. Place a suitable hydraulic lift to support the fuel tank, then remove the screws from the front tank mounting brackets (1).

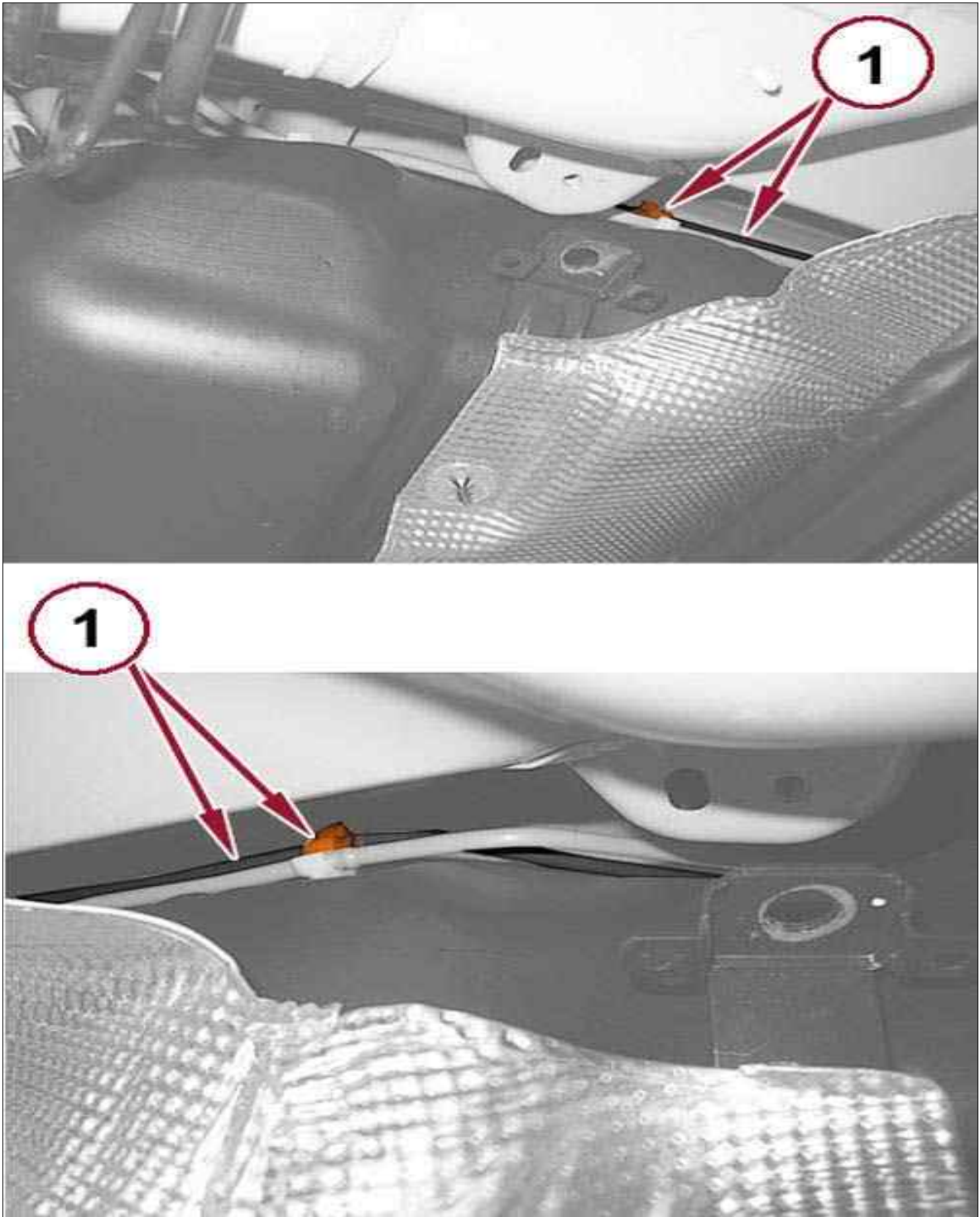
Fig 8: Rear Tank Mounting Brackets & Screws



Courtesy of CHRYSLER GROUP, LLC

15. Remove the screws (1) from the rear tank mounting brackets.

Fig 9: Rear Fuel Return Tube & Retaining Clips



Courtesy of CHRYSLER GROUP, LLC

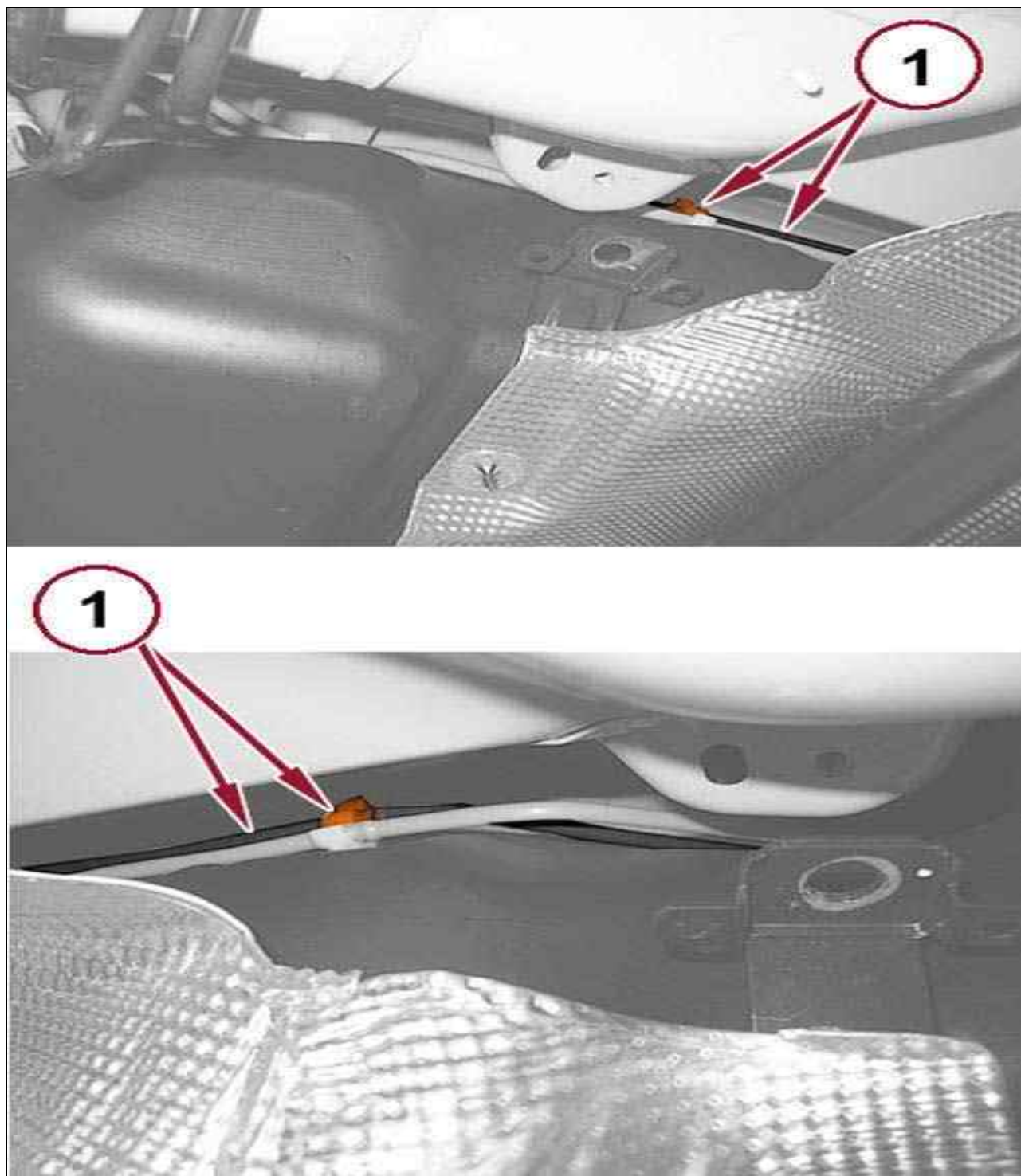
16. Lower the fuel tank far enough to access and disengage the rear fuel return tube from the retaining clips (1) and remove.

**FUEL DELIVERY > LINES, FUEL > REMOVAL AND INSTALLATION > 1.6L >
INSTALLATION - 1040B56 FUEL RETURN PIPE BACK - 1.6L**

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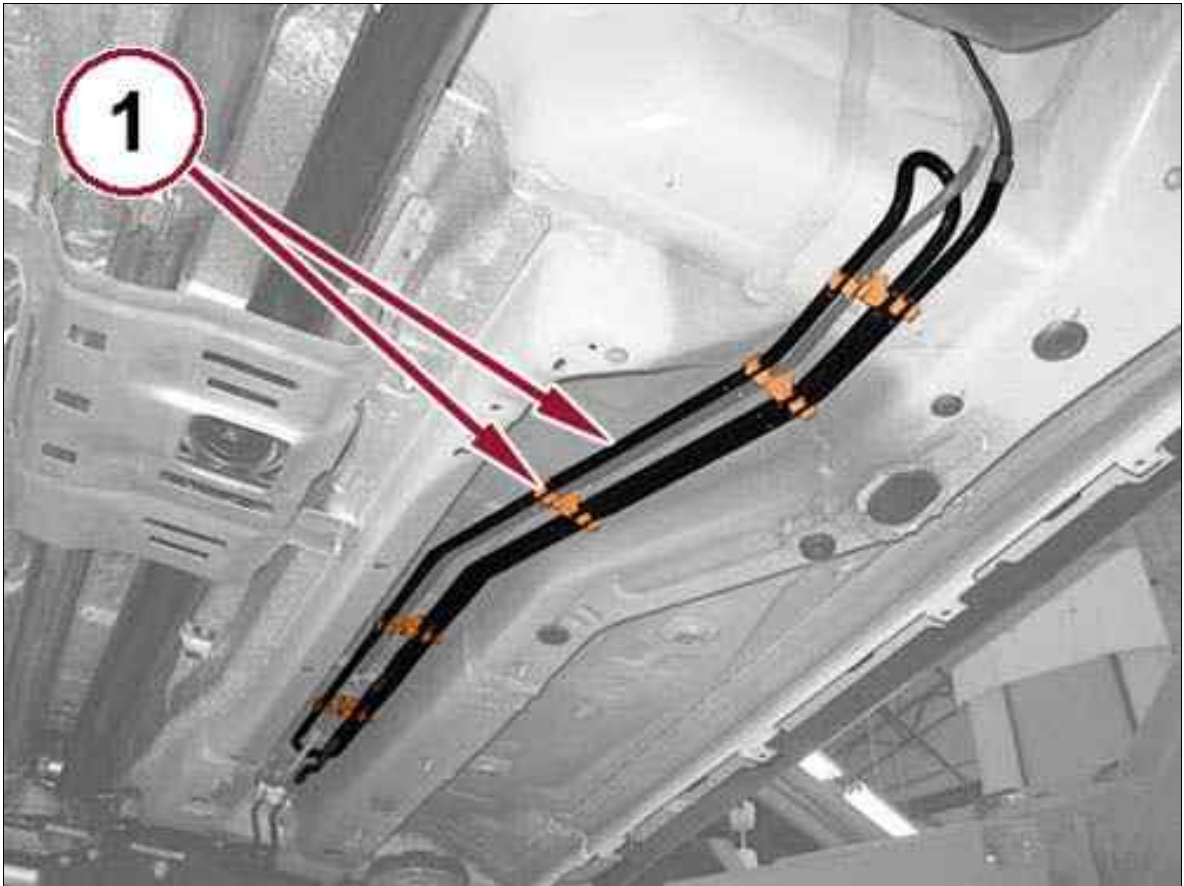
Fig 1: Rear Fuel Return Tube & Retaining Clips



Courtesy of CHRYSLER GROUP, LLC

1. Position the rear fuel return tube (1) to the vehicle underbody.

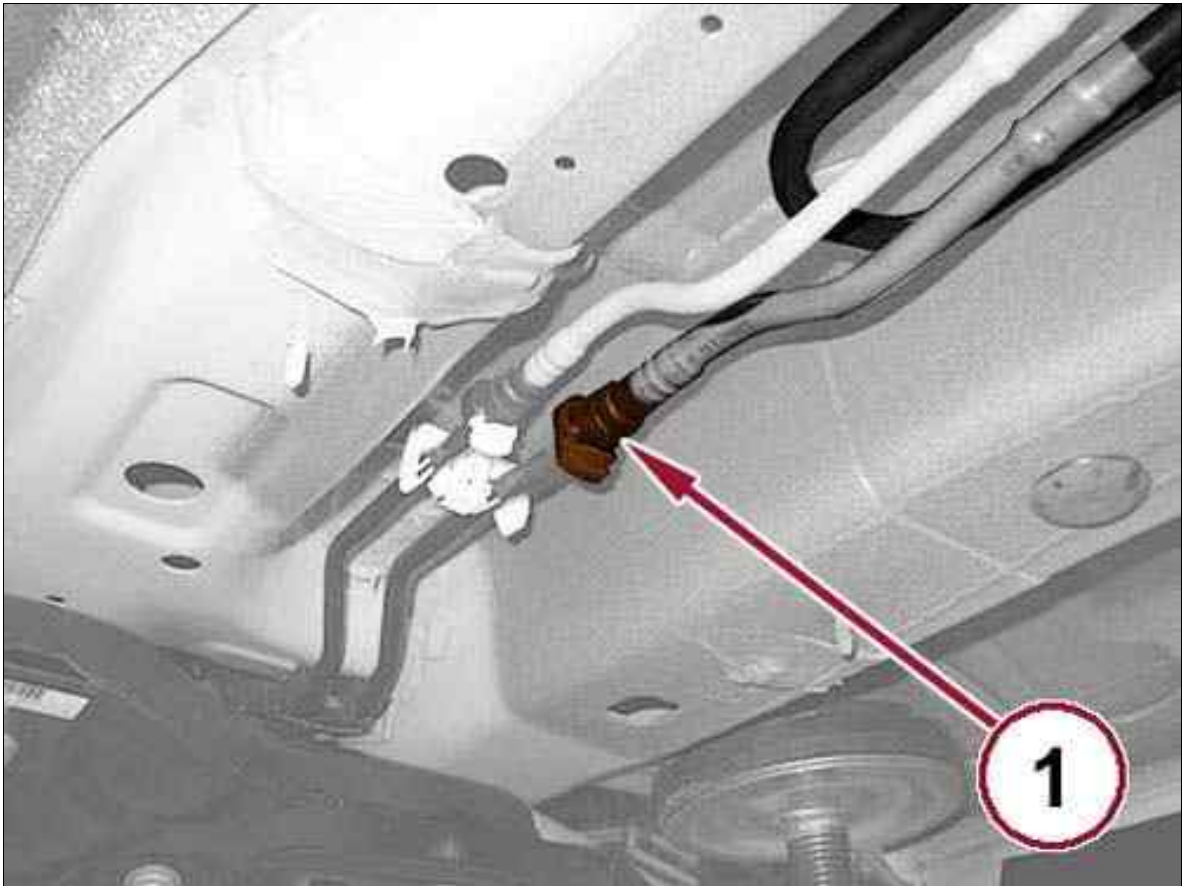
Fig 2: Rear Fuel Return Tube & Retaining Clips



Courtesy of CHRYSLER GROUP, LLC

2. Engage the rear fuel return tube (1) with the retaining clips on the underbody.

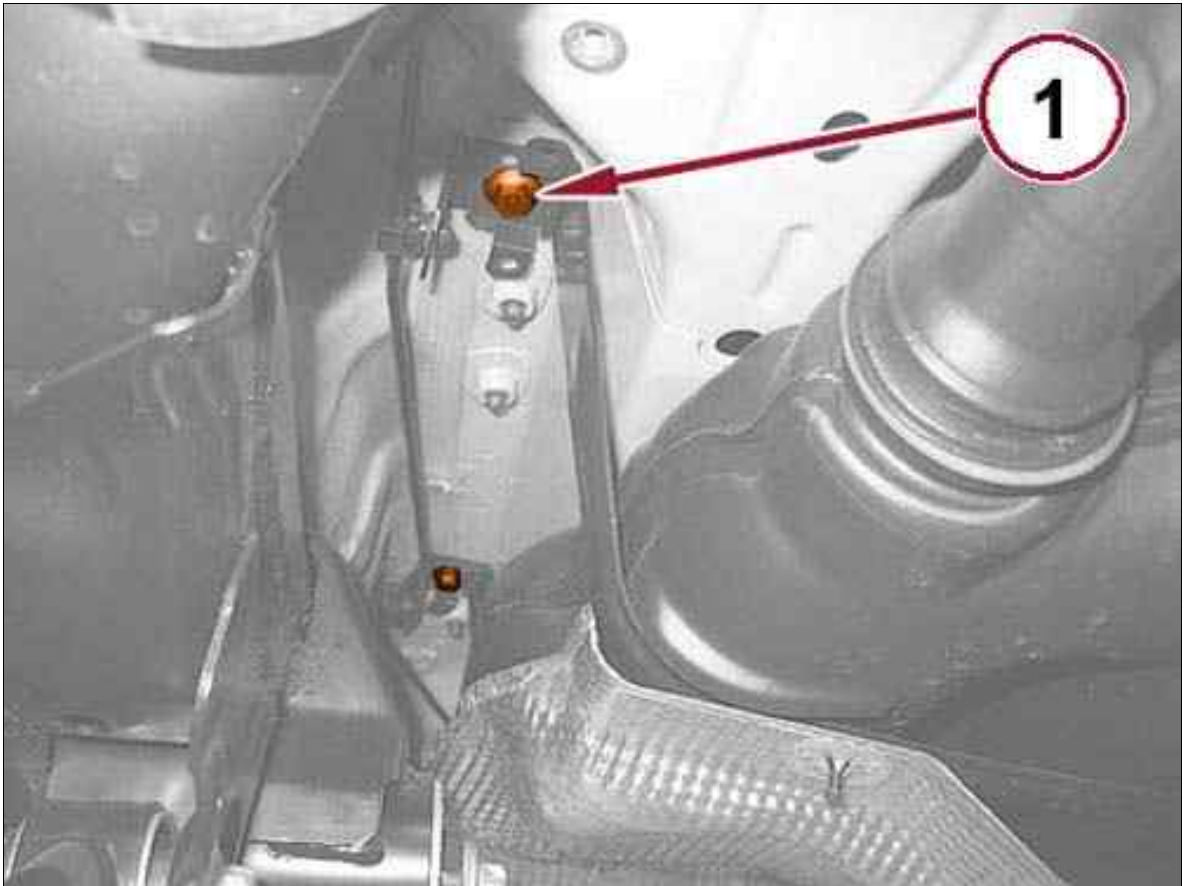
Fig 3: Rear Fuel Return Tube Front Quick Connect Fitting



Courtesy of CHRYSLER GROUP, LLC

3. Reconnect the rear fuel return tube front quick connect fitting (1).

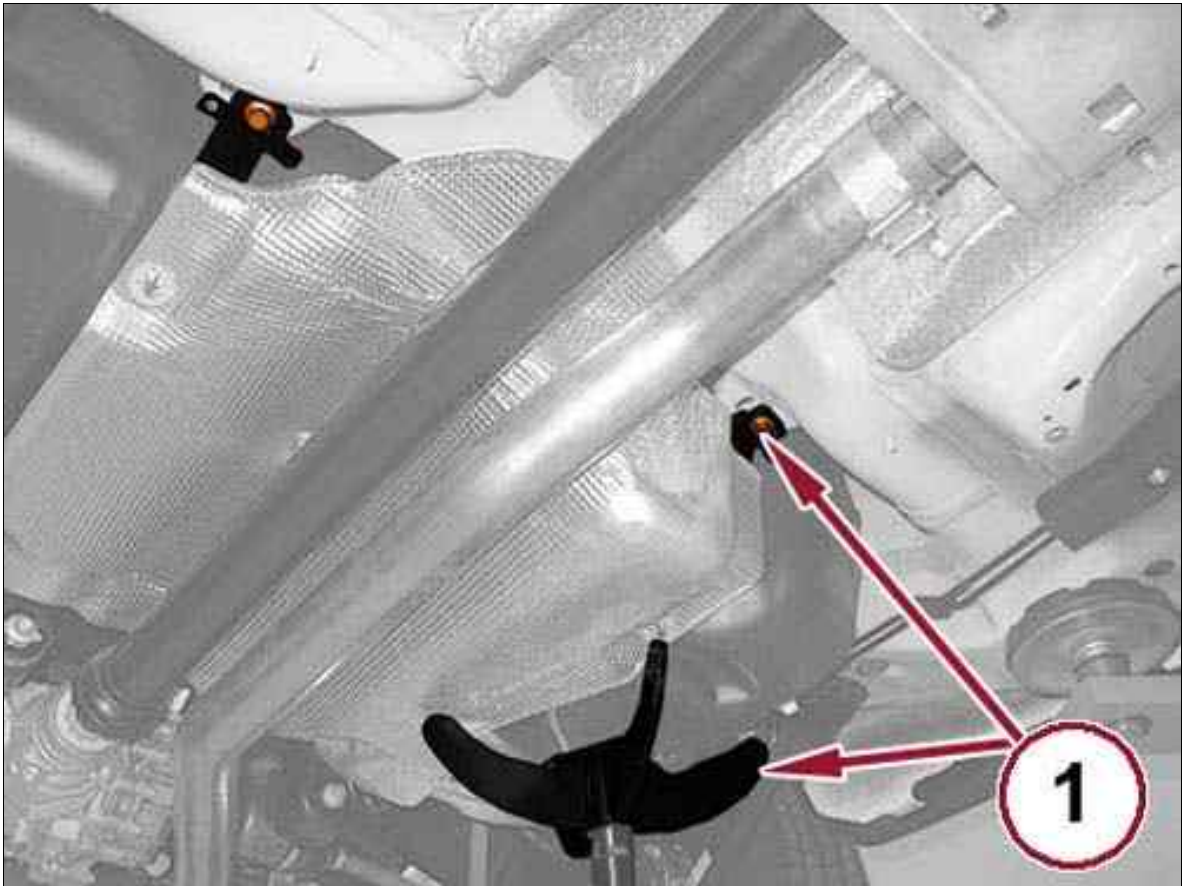
Fig 4: Rear Tank Mounting Brackets & Screws



Courtesy of CHRYSLER GROUP, LLC

4. Lift the fuel tank back into position then install and tighten the screws (1) for the rear tank mounting brackets. Tighten the screws securely.

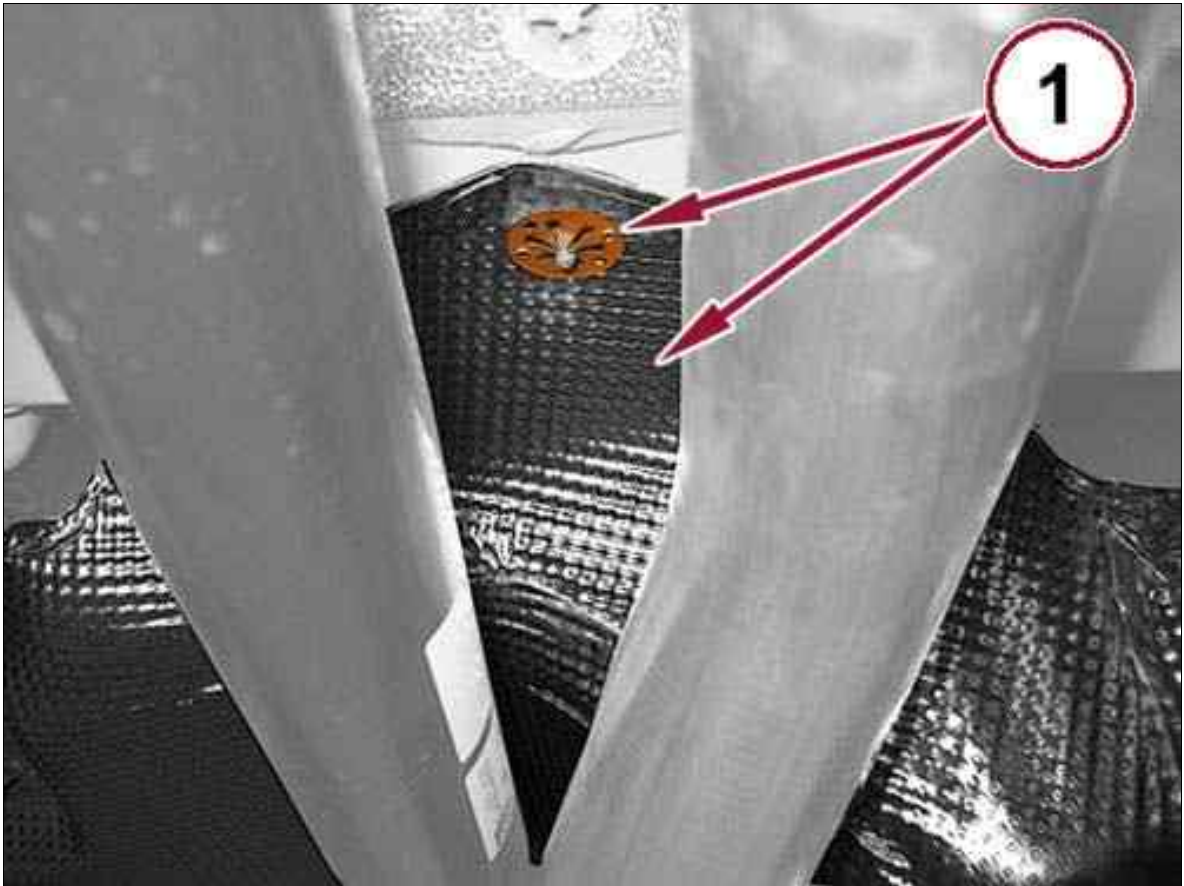
Fig 5: Front Tank Mounting Brackets & Hydraulic Lift



Courtesy of CHRYSLER GROUP, LLC

5. Install and tighten the screws that secure the front tank mounting brackets (1). Tighten the screws securely.

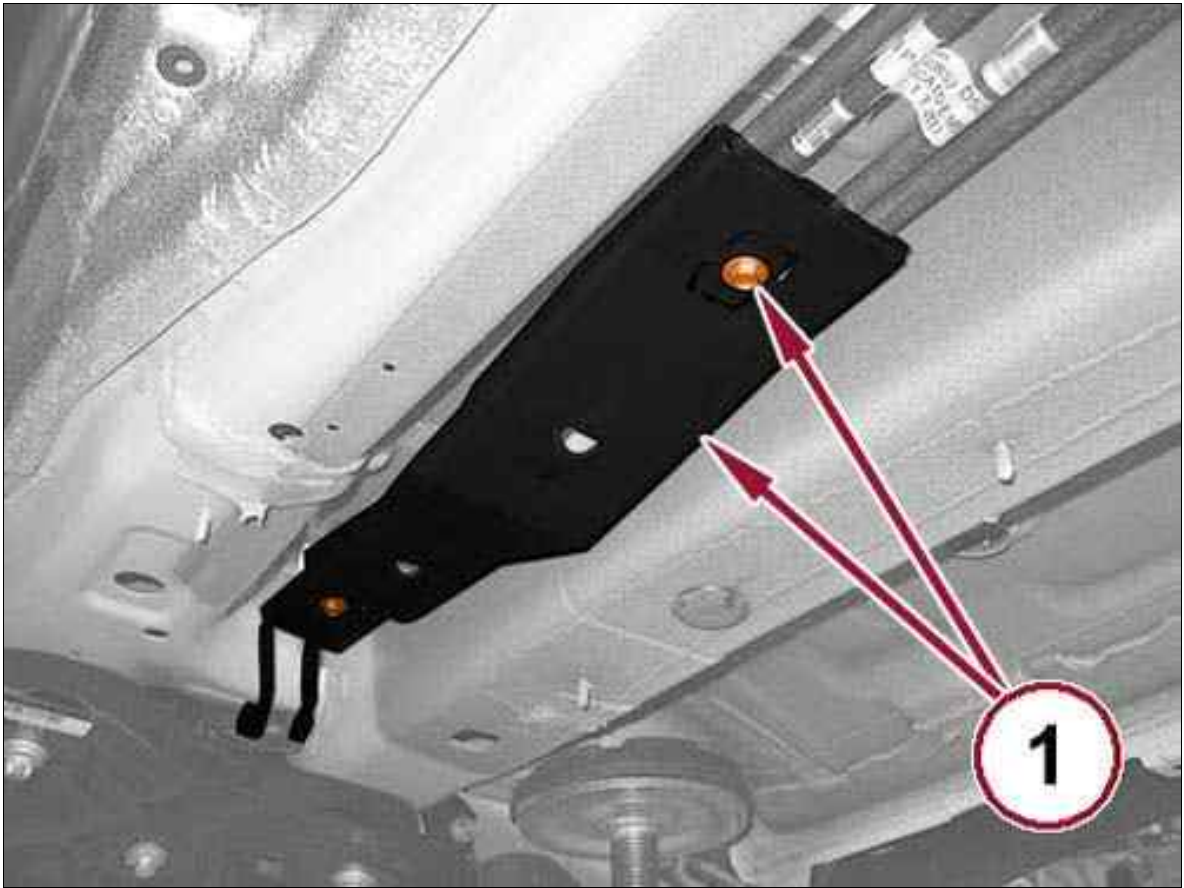
Fig 6: Fuel Tank Heat Shield Retaining Washer



Courtesy of CHRYSLER GROUP, LLC

6. Position the fuel tank heat shield and secure it by screwing on the serrated retainer washer (1).

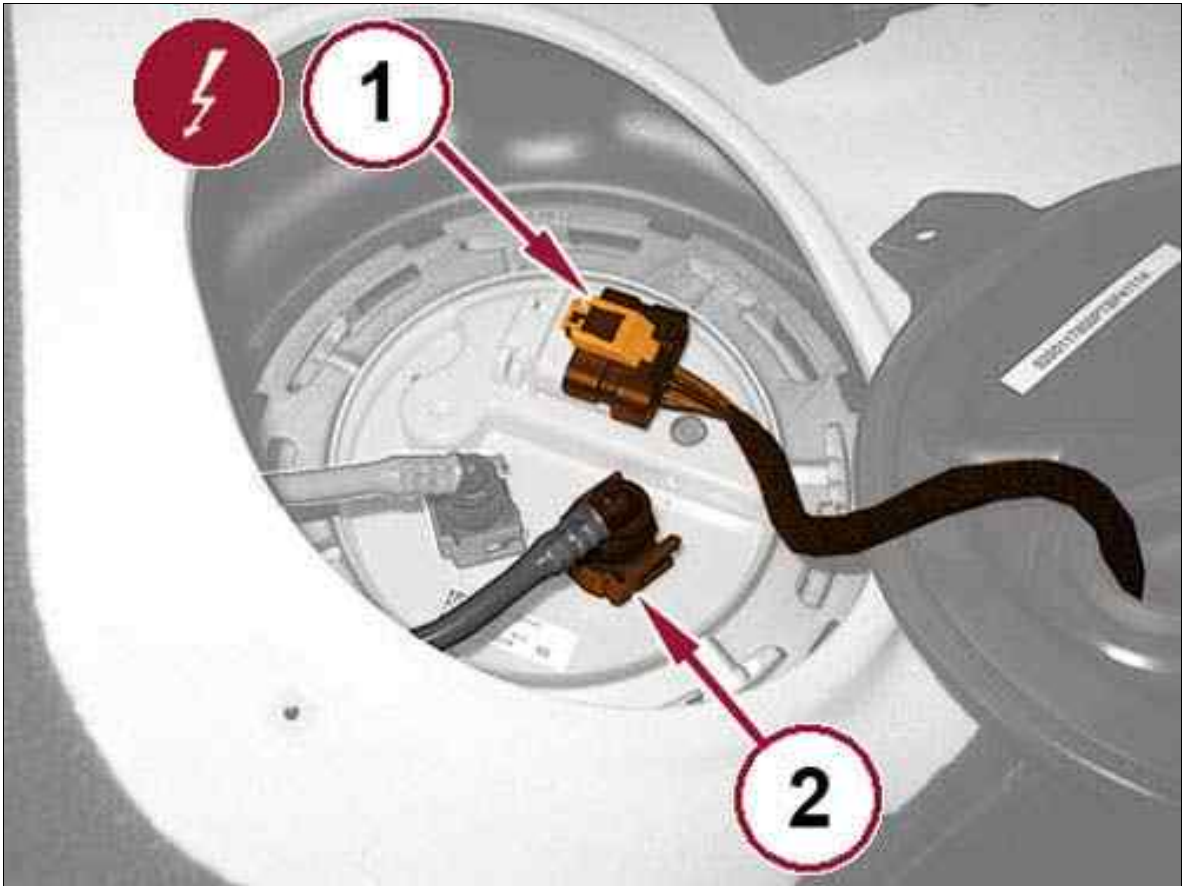
Fig 7: Fuel Tube Shield & Screws



Courtesy of CHRYSLER GROUP, LLC

7. Position the fuel tube shield to the underbody then install and tighten the screws (1) that secure it. Tighten the screws securely.
8. Reinstall the side belly pan onto the underbody of the vehicle. Refer to BELLY PAN, SIDE, REMOVAL AND INSTALLATION .

Fig 8: Rear Fuel Delivery Tube Quick Coupling & Wire Harness Connector



Courtesy of CHRYSLER GROUP, LLC

9. Lift the floor covering to access and reconnect the rear fuel return tube quick connect fitting (2) to the electric fuel pump.
10. Reconnect the wire harness connector (1) to the electric fuel pump.

Fig 9: Fuel Pump Access Cover & Screws



Courtesy of CHRYSLER GROUP, LLC

11. Position the fuel pump access cover to the floor panel then install and tighten the screws (1) to secure it. Tighten the screws securely.
12. Reinstall the rear seat cushion into the vehicle. Refer to SEAT CUSHION, REMOVAL AND INSTALLATION .

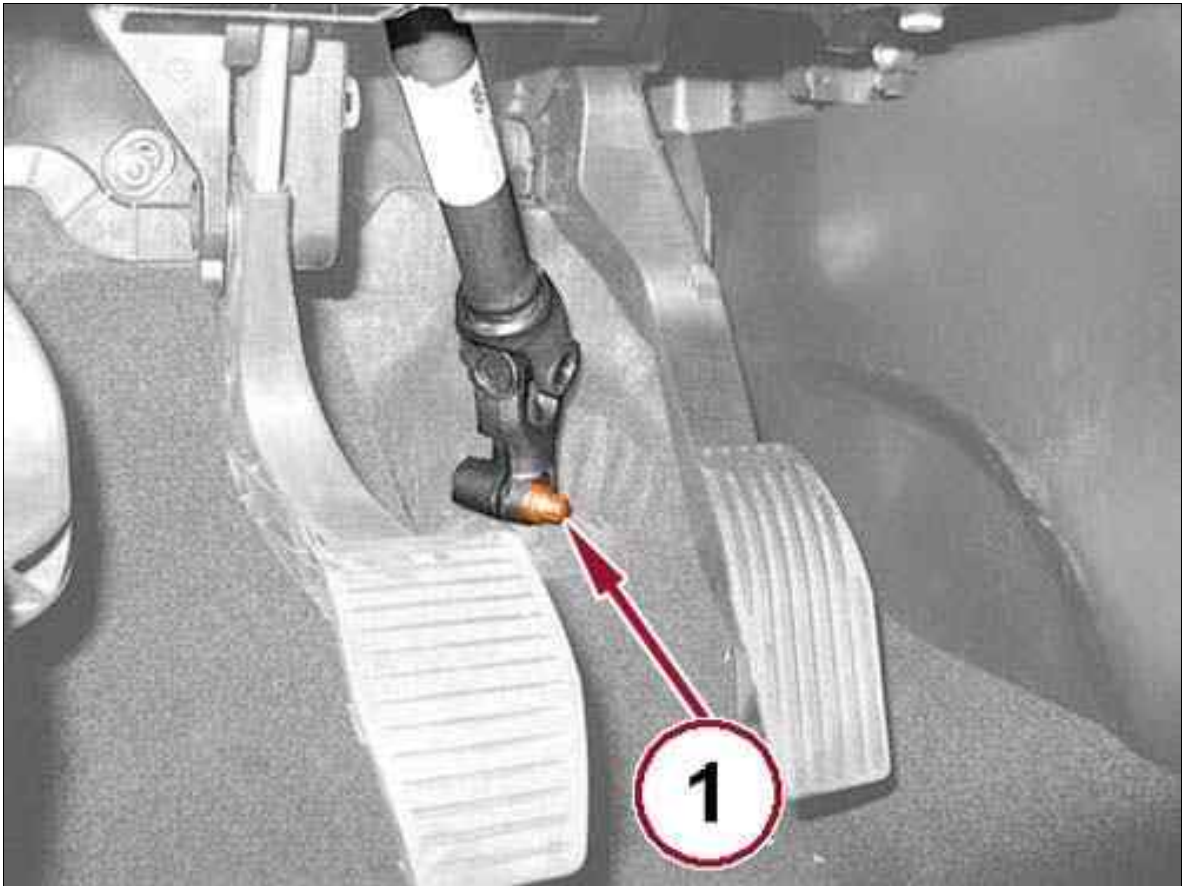
**FUEL DELIVERY > LINES, FUEL > REMOVAL AND INSTALLATION > 2.0L > REMOVAL
- FRONT FUEL DELIVERY LINE - 2.0L**

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1. Raise and support the vehicle.
2. Open the cover of the Power Distribution Center (PDC) in the engine compartment and remove the fuel pump fuse (F21 - 15 ampere).
3. Wait for the residual pressure in the fuel distribution manifold to be relieved.
4. Reinstall the fuel pump fuse (F21 - 15 ampere) and close the PDC cover.
5. Remove the engine cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .
6. Recover the refrigerant from the A/C system. Refer to PLUMBING, STANDARD PROCEDURE .
7. Remove the belly pan. Refer to BELLY PAN, REMOVAL AND INSTALLATION .
8. Remove the front fascia. Refer to FASCIA, FRONT, REMOVAL AND INSTALLATION .
9. Remove the right front wheel. Refer to REMOVAL AND INSTALLATION .
10. Remove the right front wheelhouse splash shield. Refer to SHIELD, SPLASH, FRONT WHEELHOUSE, REMOVAL AND INSTALLATION .
11. Remove the fuel filter. Refer to FILTER, FUEL, REMOVAL AND INSTALLATION .
12. Remove the air cleaner body. .

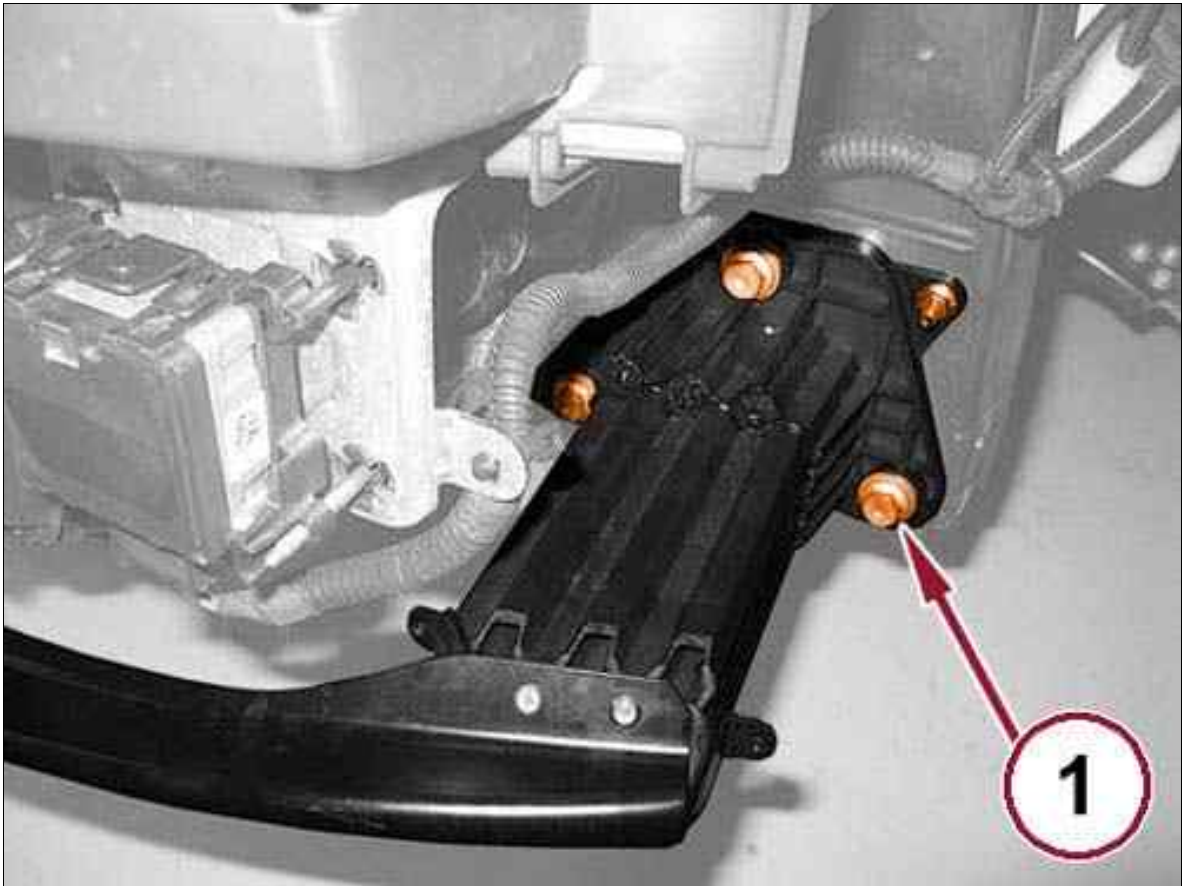
Fig 1: Steering Column To The Steering Gear Pinion Bolt



Courtesy of CHRYSLER GROUP, LLC

13. Remove the bolt (1) securing the steering column to the steering gear pinion.

Fig 2: Right And Left Lower Load Beams Fasteners At The Front End



Courtesy of CHRYSLER GROUP, LLC

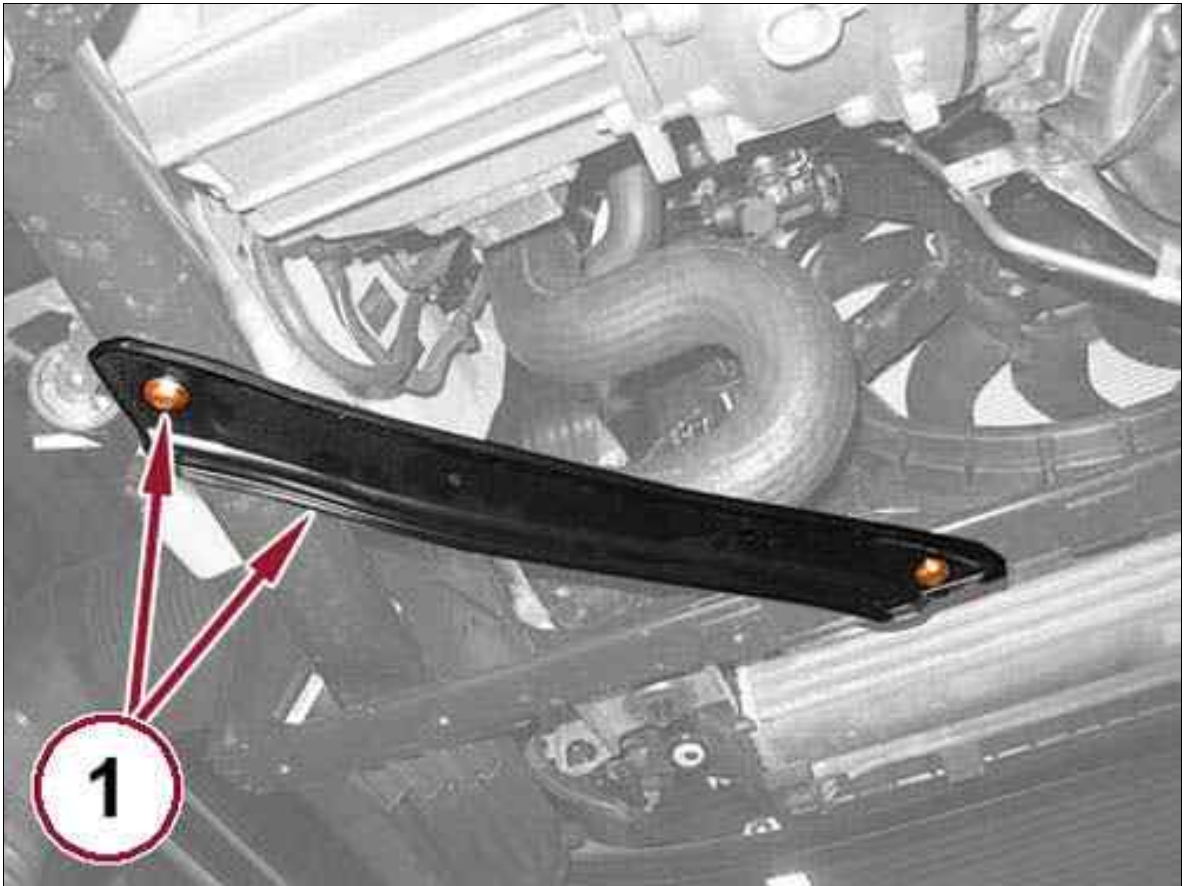


NOTE:

Left side shown in the illustration, right side similar.

14. Remove the fasteners (1) securing right and left lower load beams at the front end.

Fig 3: Right And Left Front Lower Frame Struts & Bolts



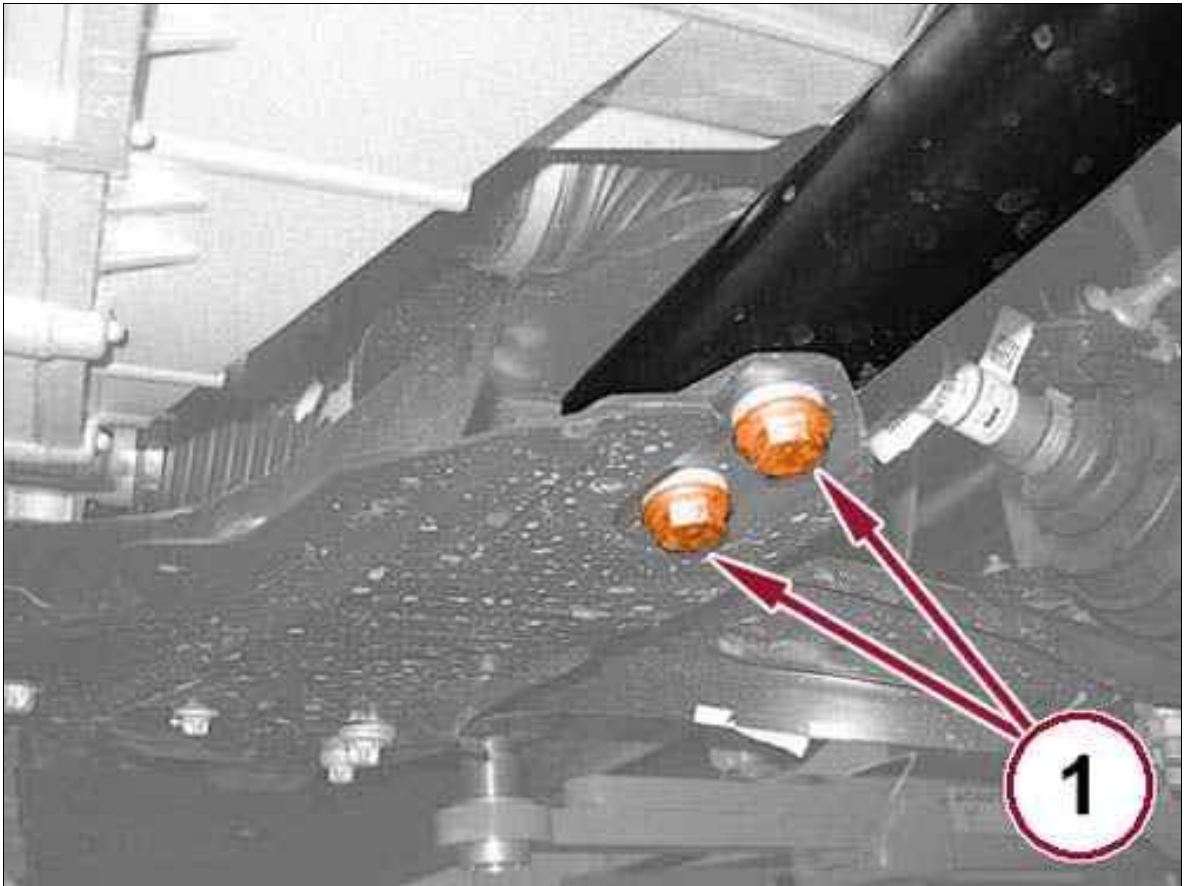
Courtesy of CHRYSLER GROUP, LLC

 **NOTE:**

Left side shown in the illustration, right side similar.

15. Remove the two bolts (1) and remove the right and left front lower frame struts for the front end.

Fig 4: Right And Left Lower Load Beam & Bolts



Courtesy of CHRYSLER GROUP, LLC



NOTE:

Left side shown in the illustration, right side similar.

16. Remove the two bolts (1a) and remove the right and left lower load beam (1b).

Fig 5: Joint Stabilizer Bars & Nut



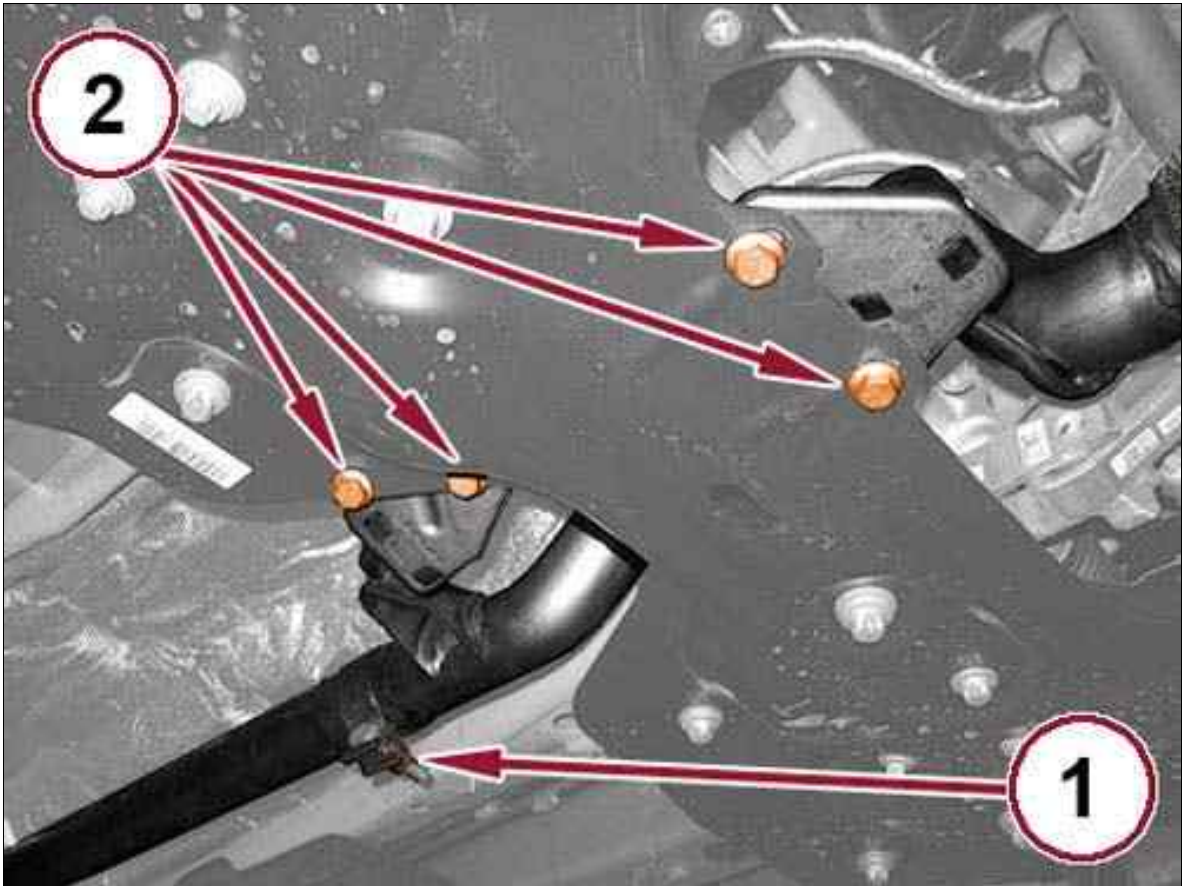
Courtesy of CHRYSLER GROUP, LLC

 **NOTE:**

Left side shown in the illustration, right side similar.

17. Remove the nut (1) from the right and left joint stabilizer bars and disconnect them from the shock.

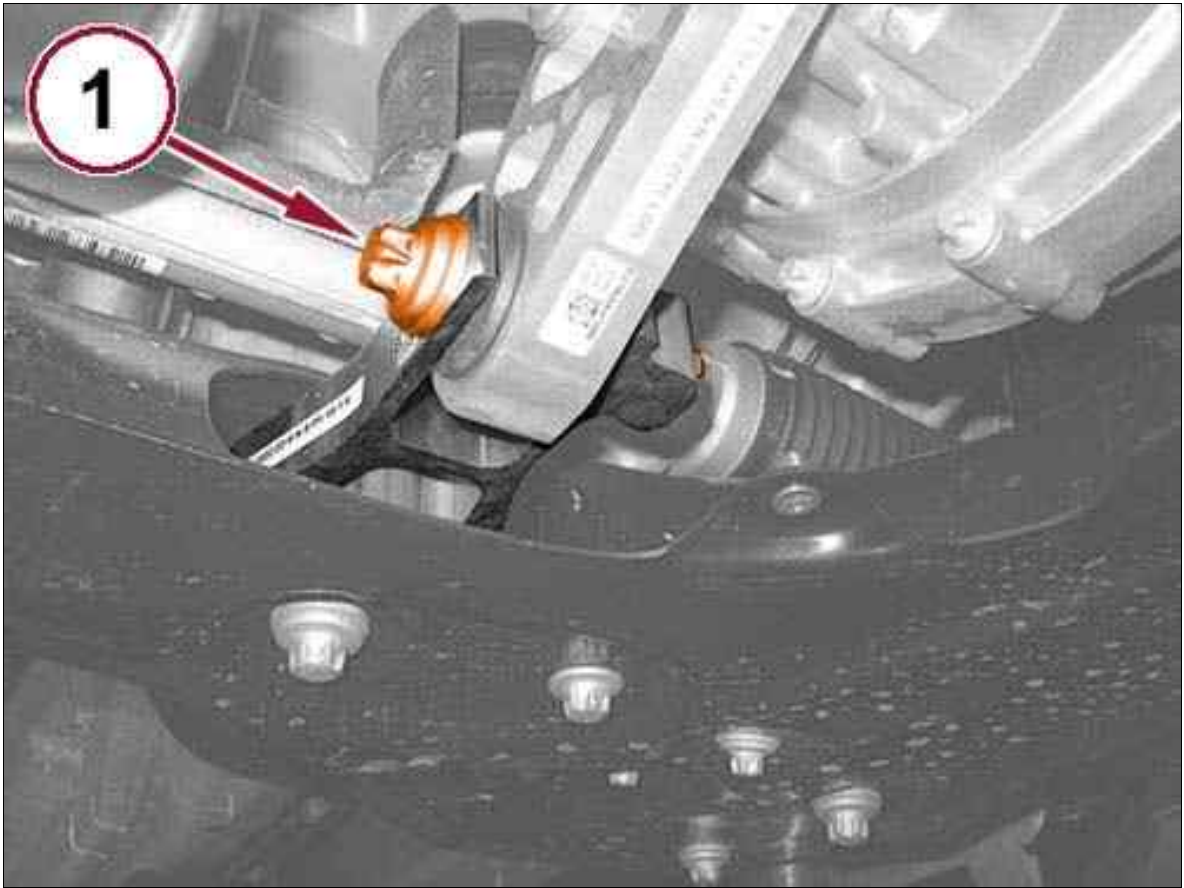
Fig 6: Collar Nut & Front Exhaust Support Bracket Bolts



Courtesy of CHRYSLER GROUP, LLC

18. Remove the nut (1) and loosen the collar for the exhaust connecting pipes.
19. Remove the bolts (2) securing the front exhaust support bracket.

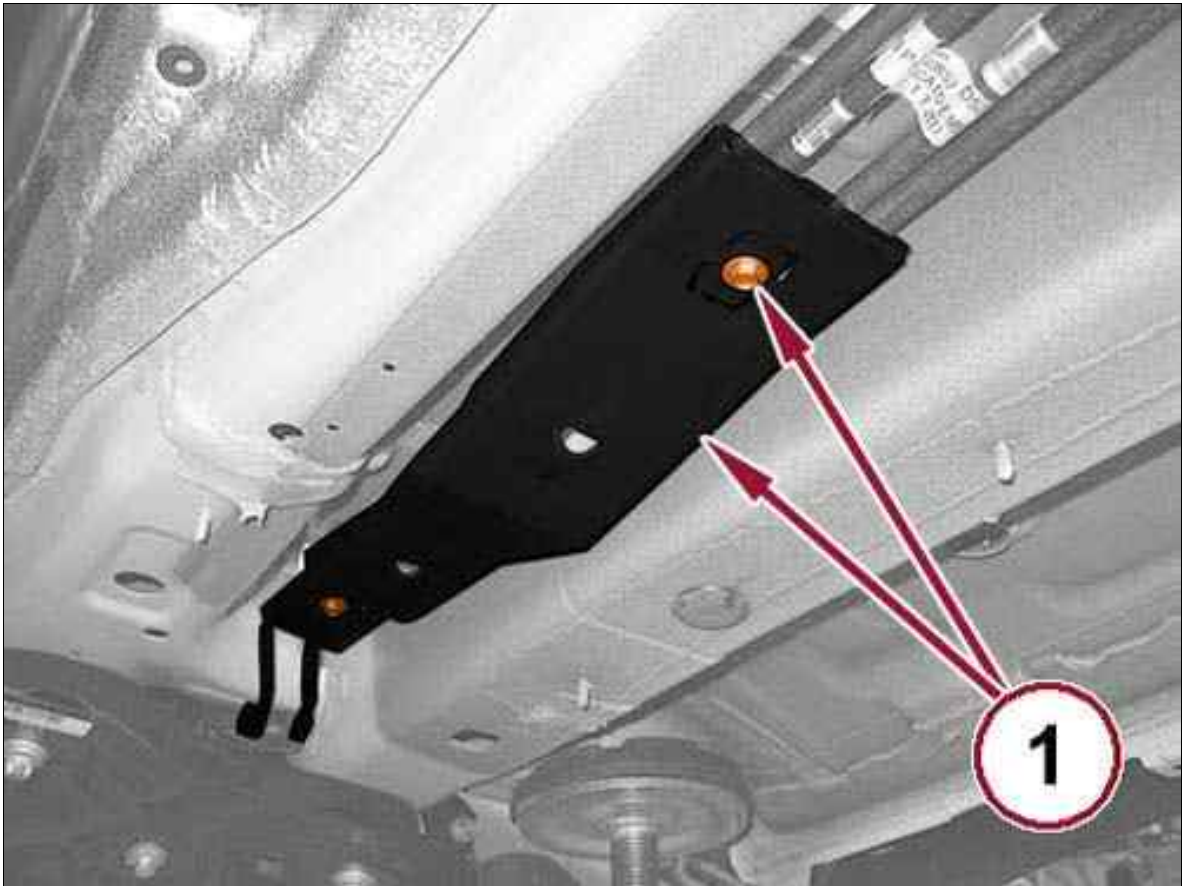
Fig 7: Exhaust Dampening Rod Bolt



Courtesy of CHRYSLER GROUP, LLC

20. Remove the bolt (2) from the exhaust dampening rod securing it to the crossmember.

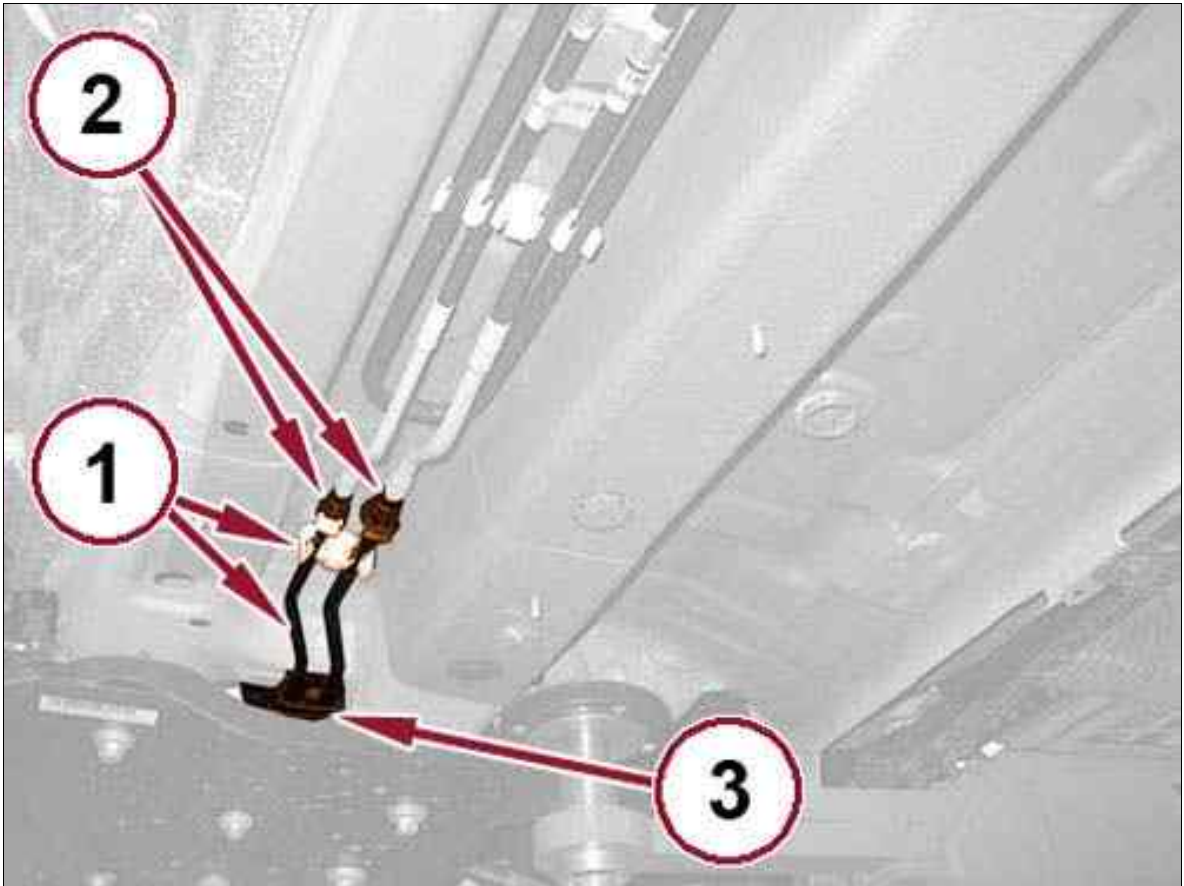
Fig 8: Fuel Line Shield Bolts



Courtesy of CHRYSLER GROUP, LLC

21. Remove the bolts (1) and remove the fuel line shield.

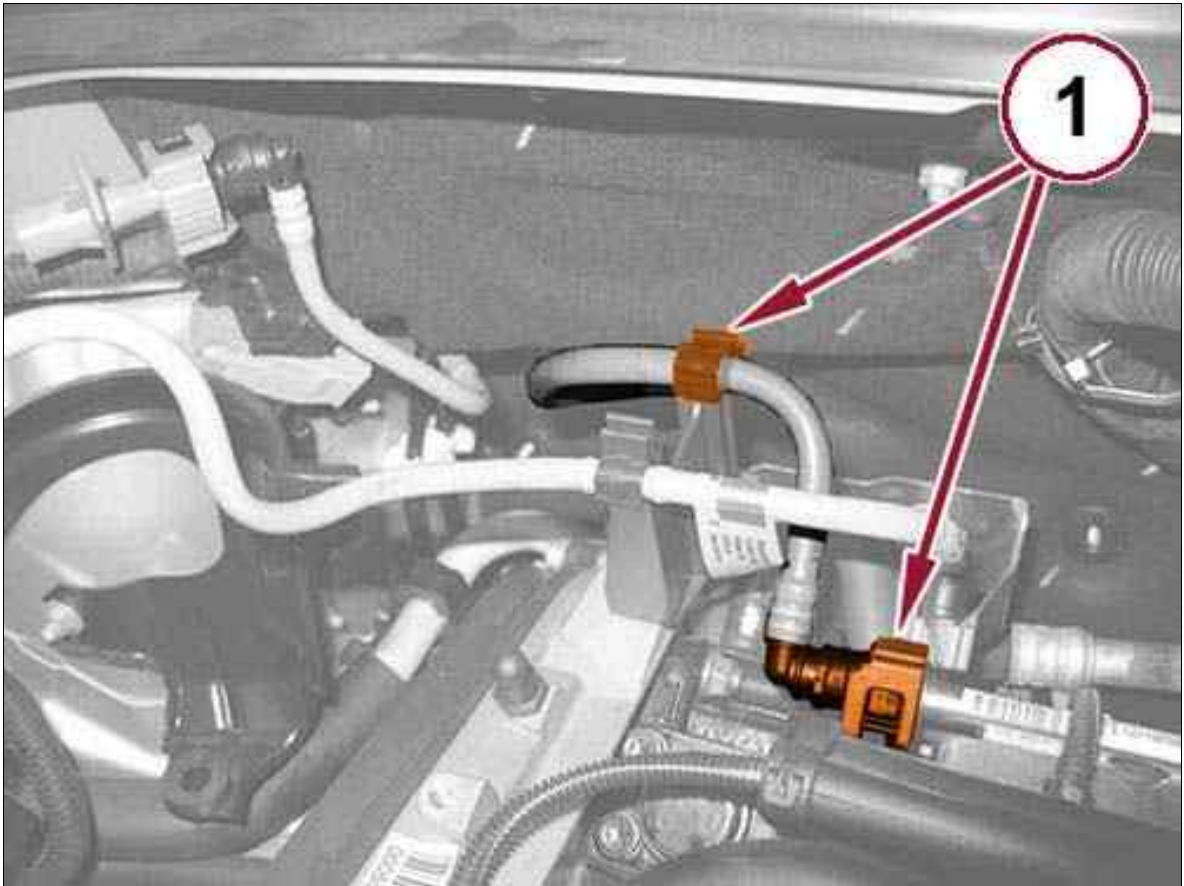
Fig 9: Fuel Lines, Retaining Clips & Coupling



Courtesy of CHRYSLER GROUP, LLC

22. Disengage the fuel lines (1) from the retaining clip (1).
23. Disconnect the quick couplings (2) of the discharge and return fuel lines.
24. Disengage the fuel lines from the retaining clip (3).

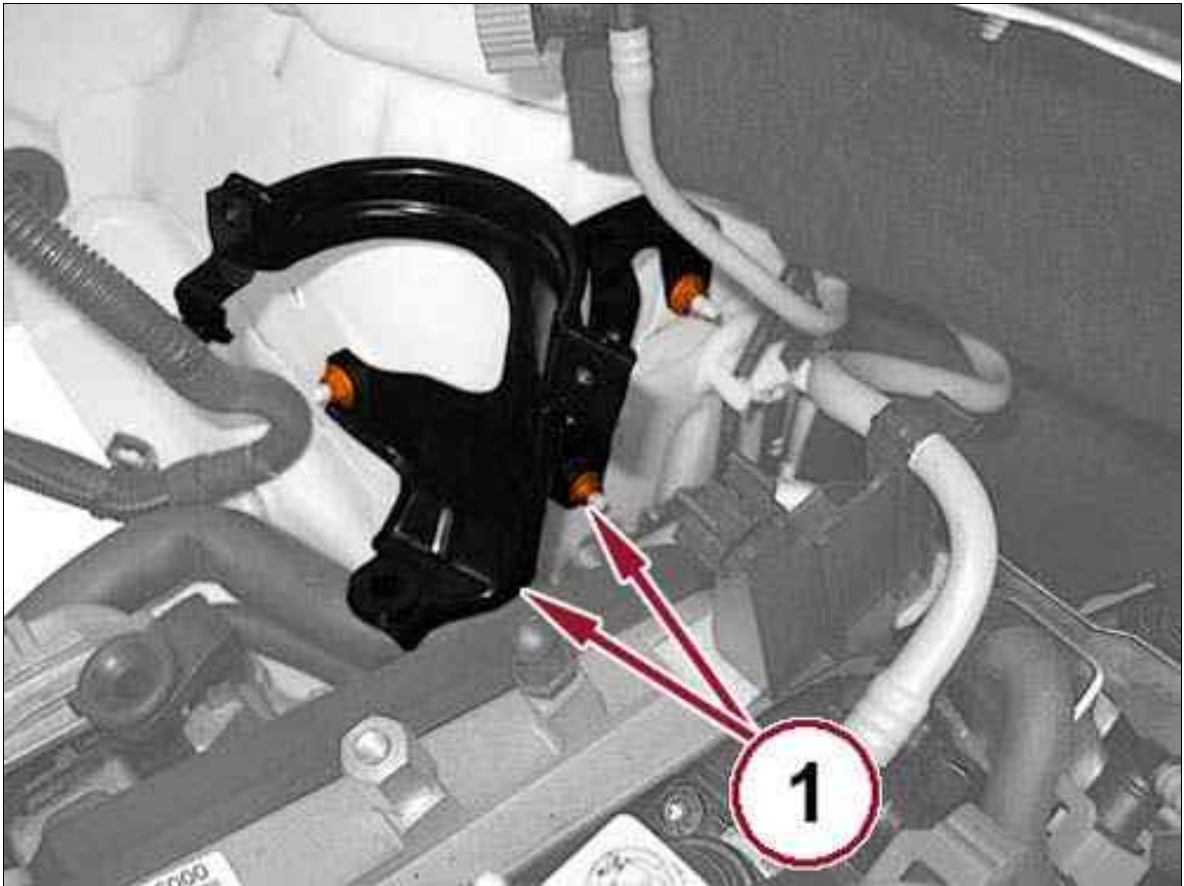
Fig 10: Fuel Return Pipe Coupling & Retaining Clip



Courtesy of CHRYSLER GROUP, LLC

25. Open the retaining clip (1) and disconnect the quick coupling (1) of the fuel return pipe.

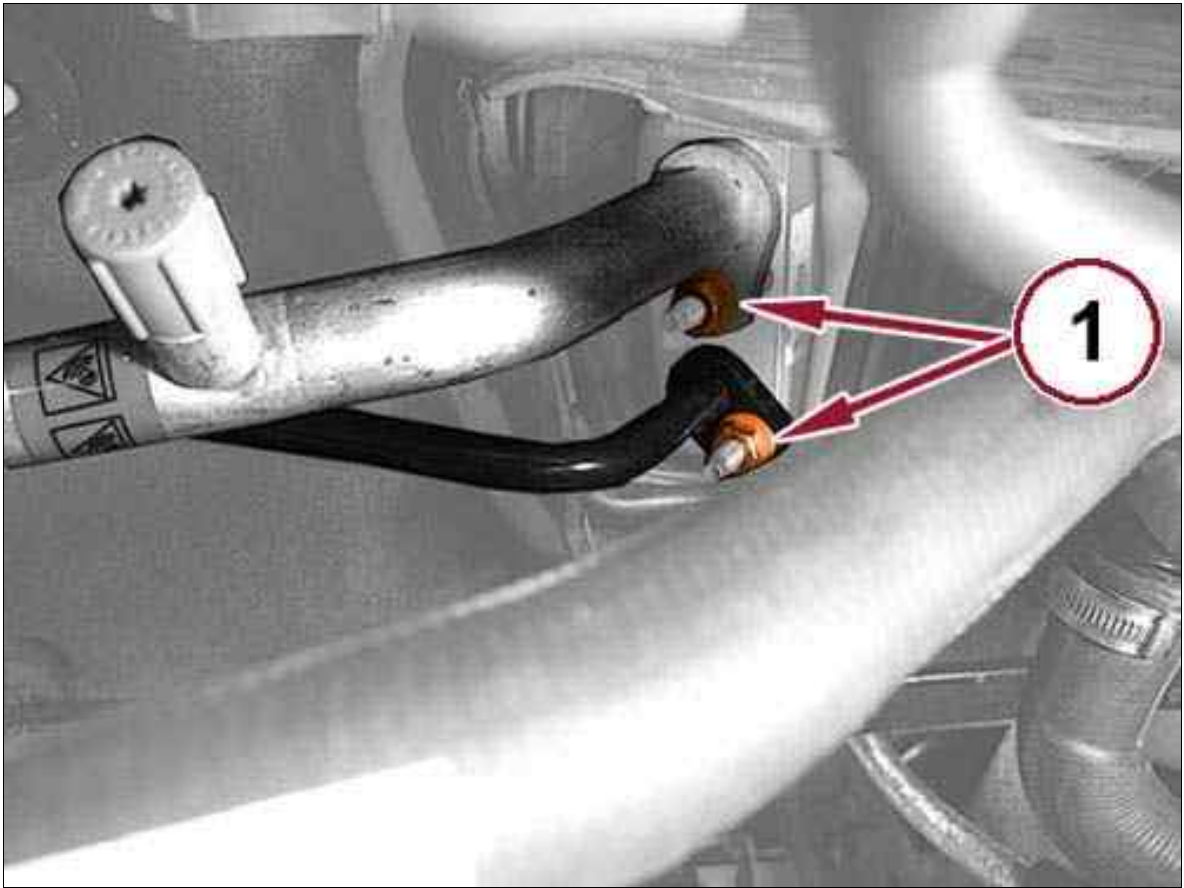
Fig 11: Fuel Filter Support Bracket & Nuts



Courtesy of CHRYSLER GROUP, LLC

26. Remove the nuts (1) and remove the fuel filter support bracket.

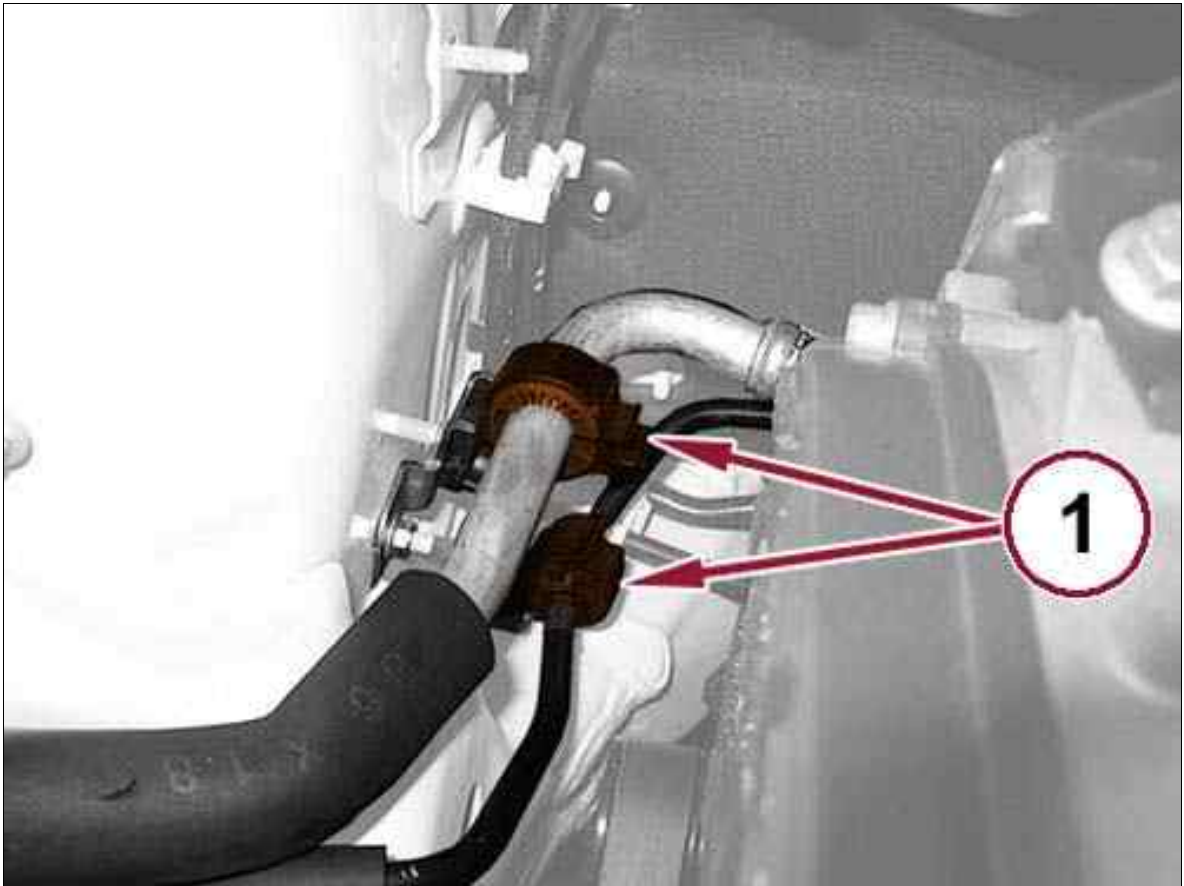
Fig 12: A/C Suction & Liquid Line Nuts



Courtesy of CHRYSLER GROUP, LLC

27. Remove the nuts (1) from the A/C suction and liquid lines and disconnect the lines from the expansion valve. Discard the O-rings.

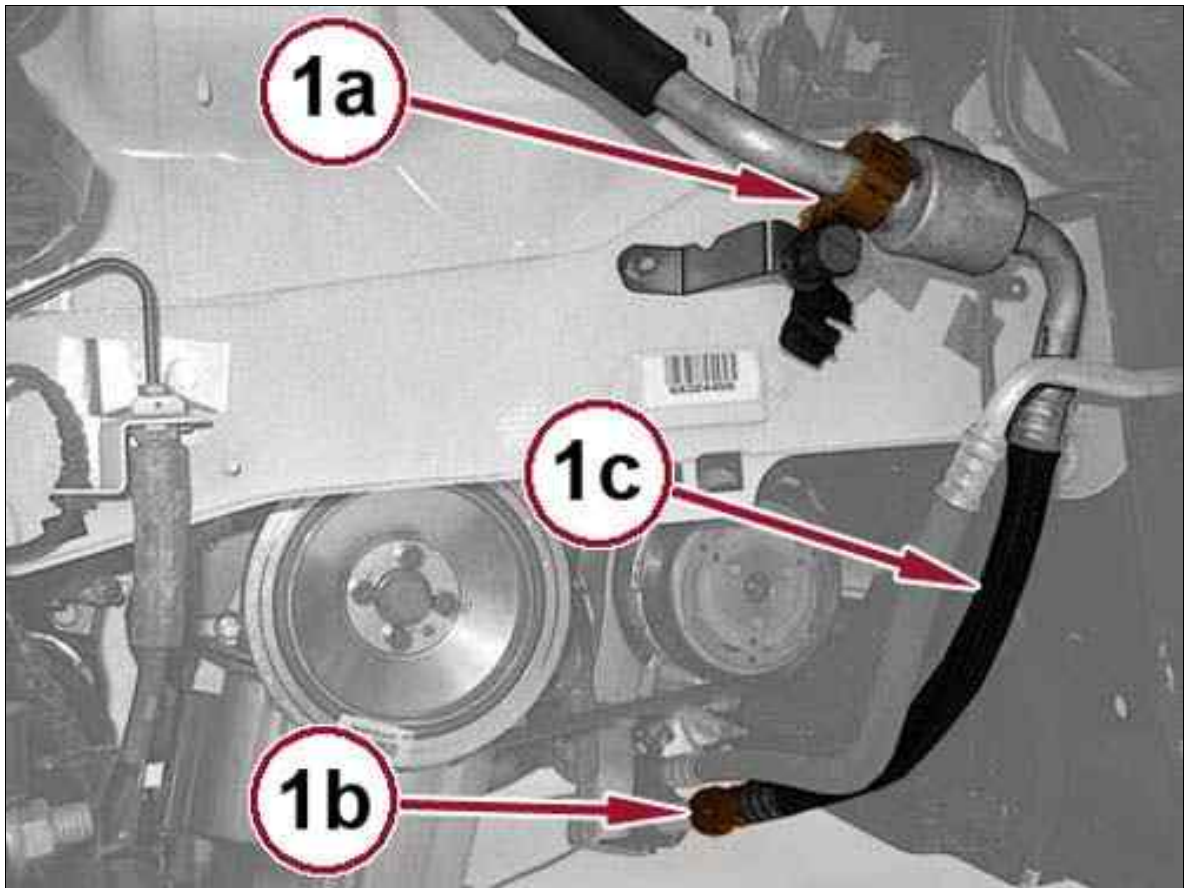
Fig 13: A/C Suction & Liquid Line Retaining Clips



Courtesy of CHRYSLER GROUP, LLC

28. Release the retaining clips (1) for the A/C suction and liquid lines.

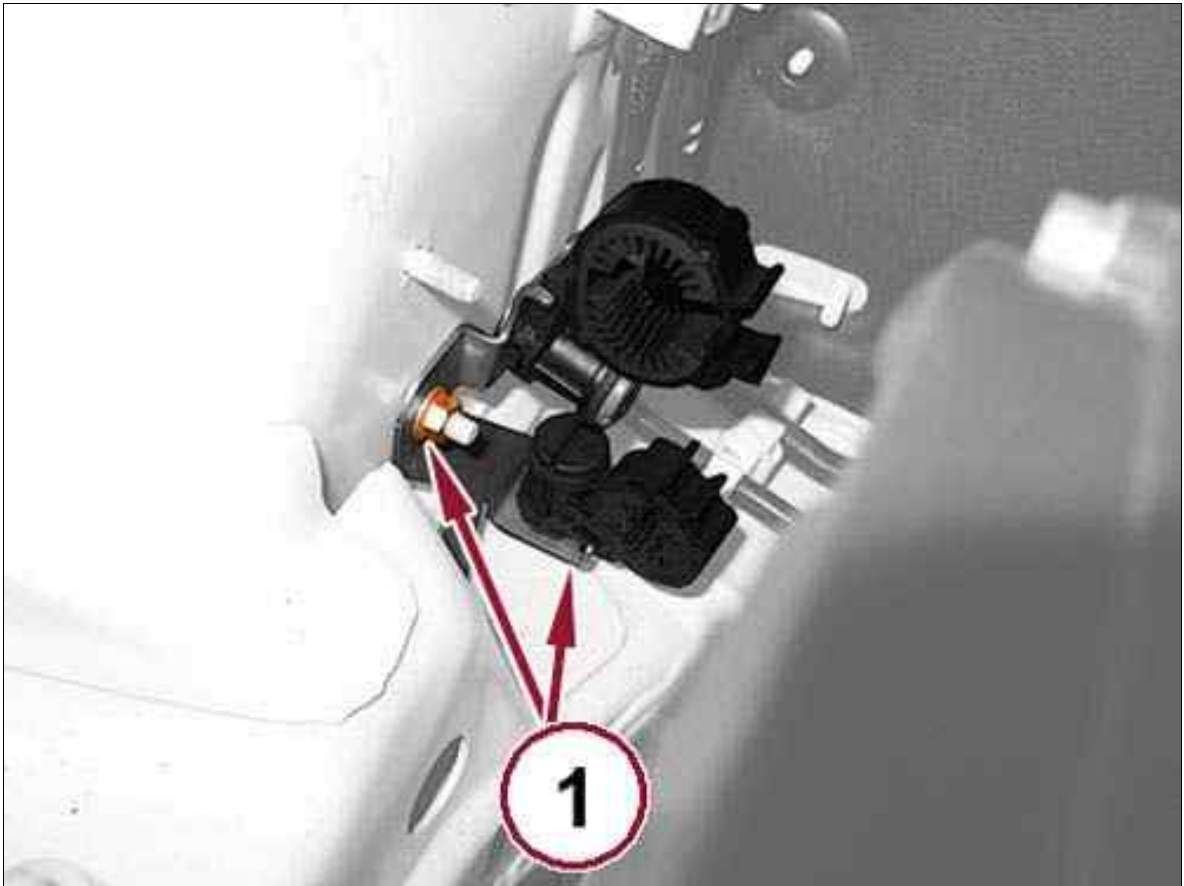
Fig 14: A/C Suction Line, Retaining Clip & Coupling



Courtesy of CHRYSLER GROUP, LLC

29. Release the retaining clip (1a), disconnect quick coupling (1b) and remove the A/C suction line (1c).

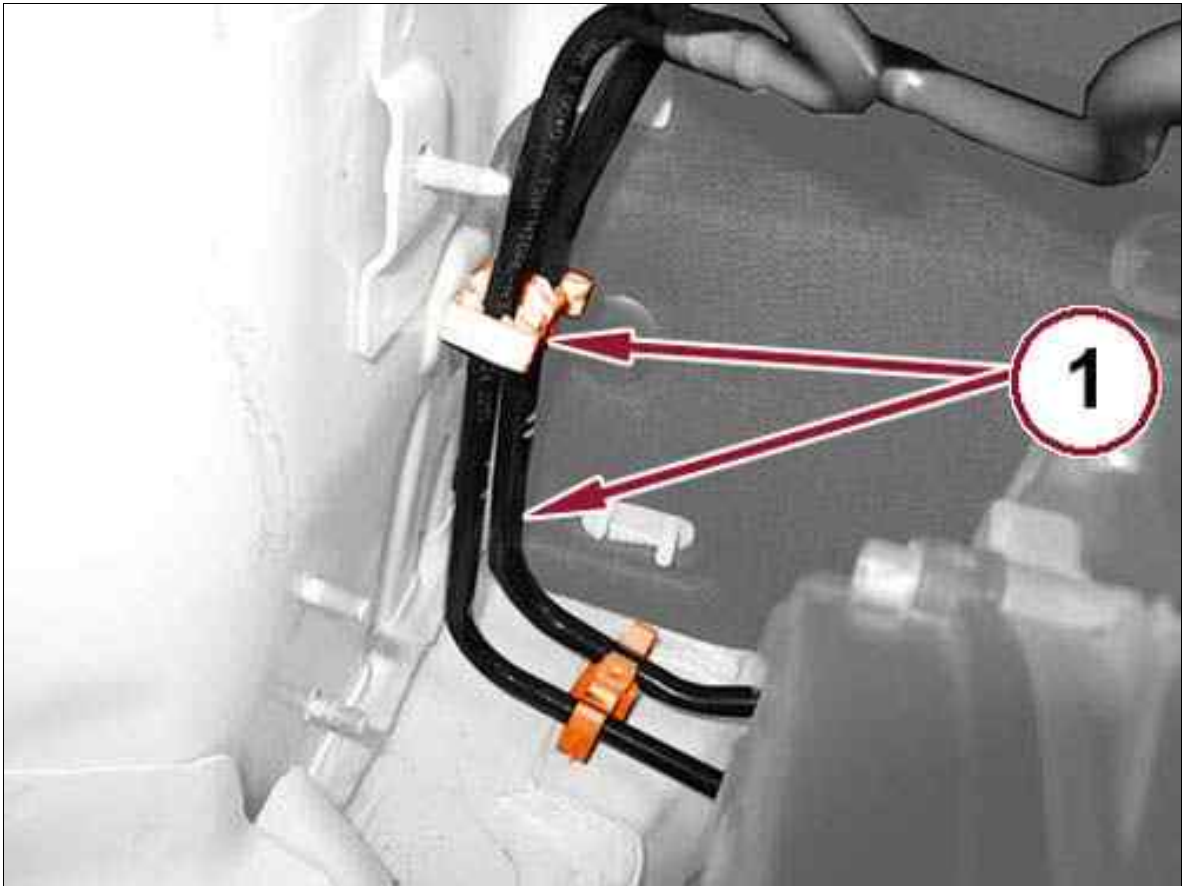
Fig 15: Retaining Bracket & Nut



Courtesy of CHRYSLER GROUP, LLC

30. Remove the nut (1) and remove the A/C suction and liquid lines retaining bracket (1).

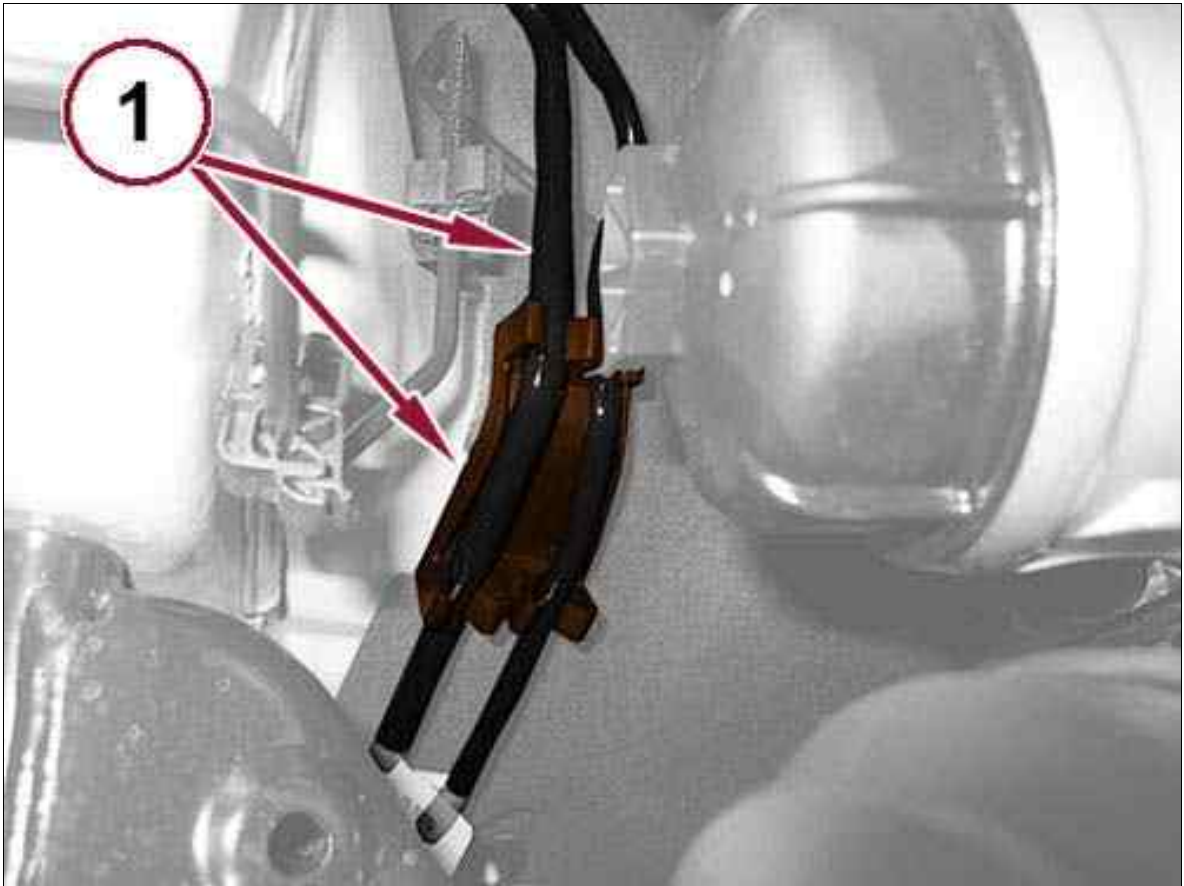
Fig 16: Fuel Delivery/Return Lines & Retaining Clips



Courtesy of CHRYSLER GROUP, LLC

31. Disengage the fuel delivery/return lines (1) from the retaining clips (1).

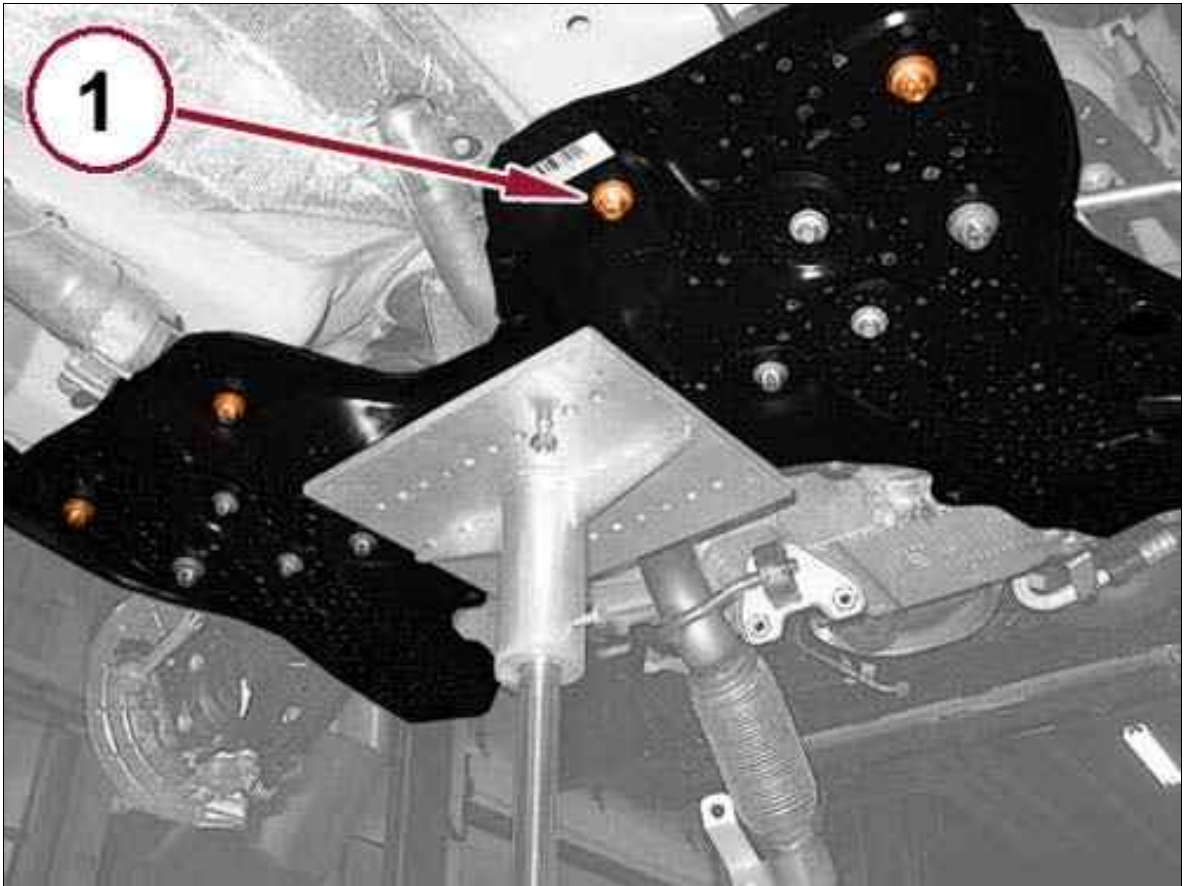
Fig 17: Fuel Delivery/Return Lines & Retaining Clips



Courtesy of CHRYSLER GROUP, LLC

32. Disengage the fuel delivery/return lines (1) from the retaining clips (1).

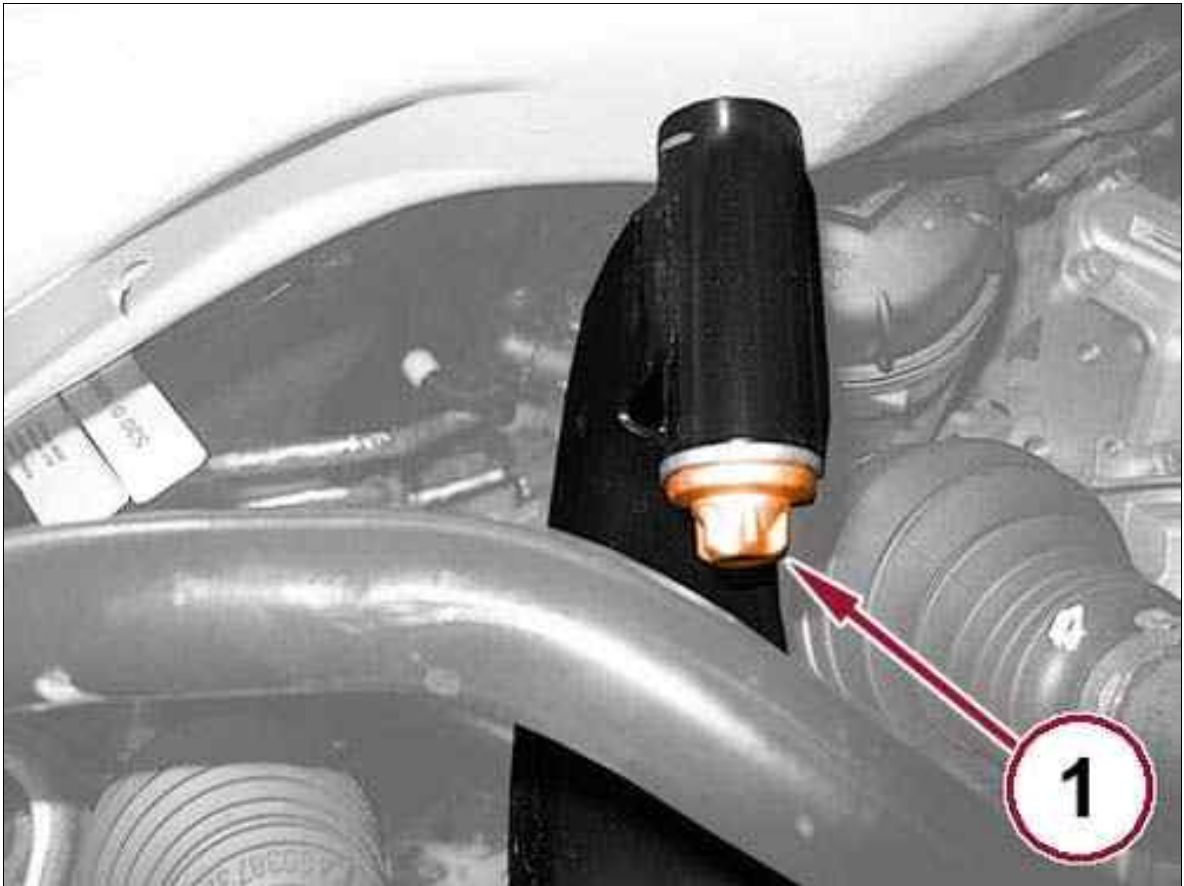
Fig 18: Suspension Crossmember Rear Bolts



Courtesy of CHRYSLER GROUP, LLC

33. Place a suitable hydraulic lift under the suspension crossmember.
34. Remove the rear bolts (1) from the suspension crossmember that secure it to the body.

Fig 19: Suspension Crossmember Left And Right Siderail Bolts



Courtesy of CHRYSLER GROUP, LLC

35. Remove the front bolts (1) from the suspension crossmember that secure it to the left and right siderails.
36. Lower the hydraulic lift with the suspension crossmember.
37. Remove the suspension crossmember from the lift and position it out of the way.
38. Working from the engine compartment, remove the front fuel delivery line and remove the line from the engine compartment.

FUEL DELIVERY > LINES, FUEL > REMOVAL AND INSTALLATION > 2.0L > INSTALLATION - FRONT FUEL DELIVERY LINE - 2.0L

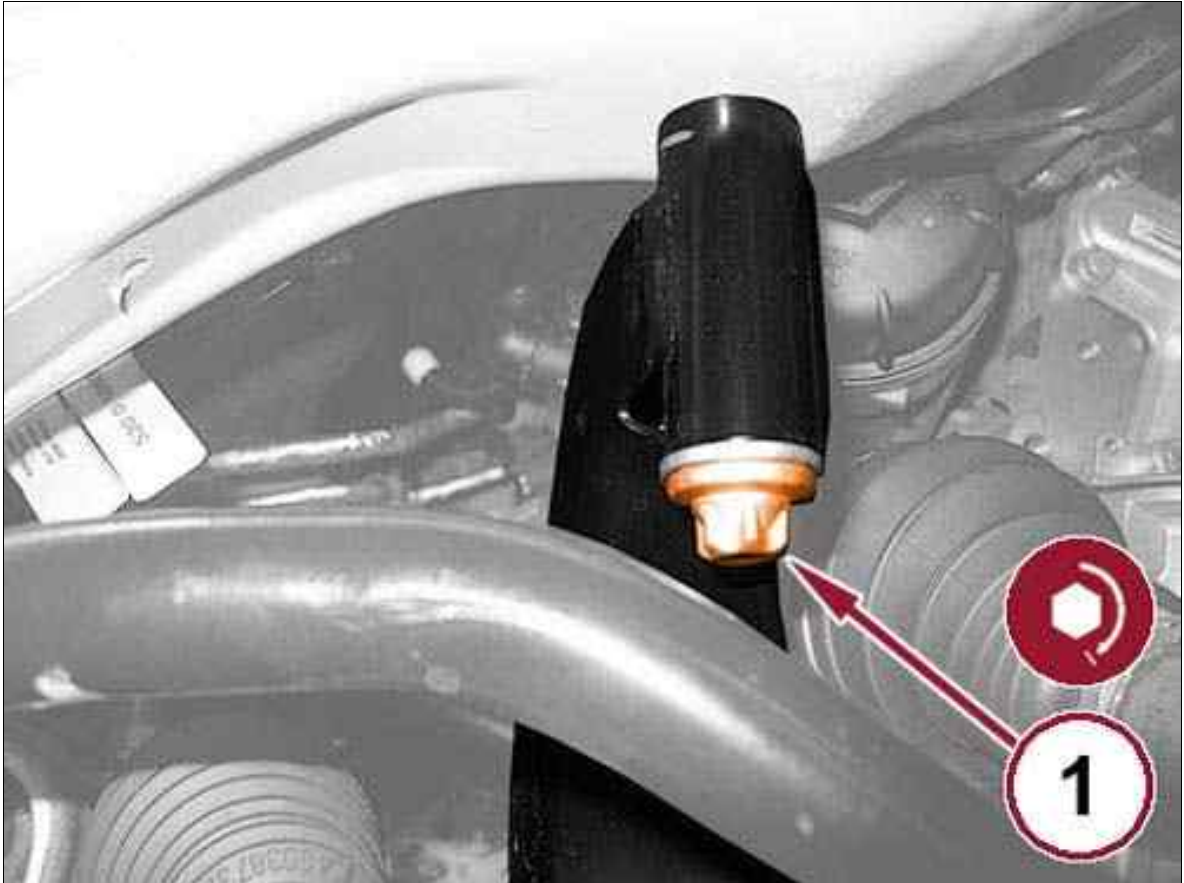
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disassembly. Before assembly, examine each part for dirt, grease or other contaminants and clean if necessary. When installing new parts, lubricate them with clean engine oil or clean diesel fuel only. DO NOT use any lubricating or sliding agents that contain water.

1. Working from the engine compartment, put into place the front fuel delivery line and engage the retaining clips.

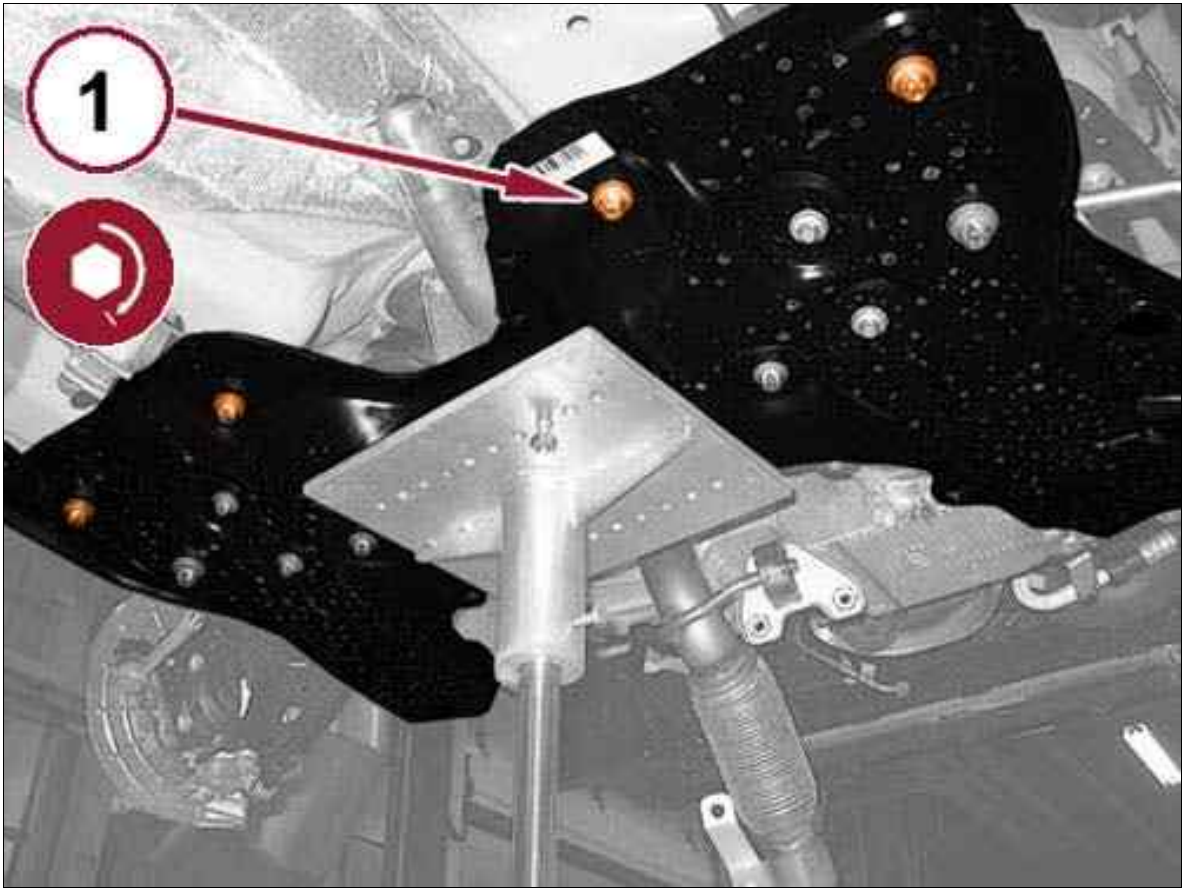
Fig 1: Suspension Crossmember Left And Right Siderail Bolts



Courtesy of CHRYSLER GROUP, LLC

2. Using a hydraulic lift, put into place the suspension crossmember. Install the front mounting bolts (1) to the left and right siderails and tighten to the proper torque specification. Refer to SPECIFICATIONS .

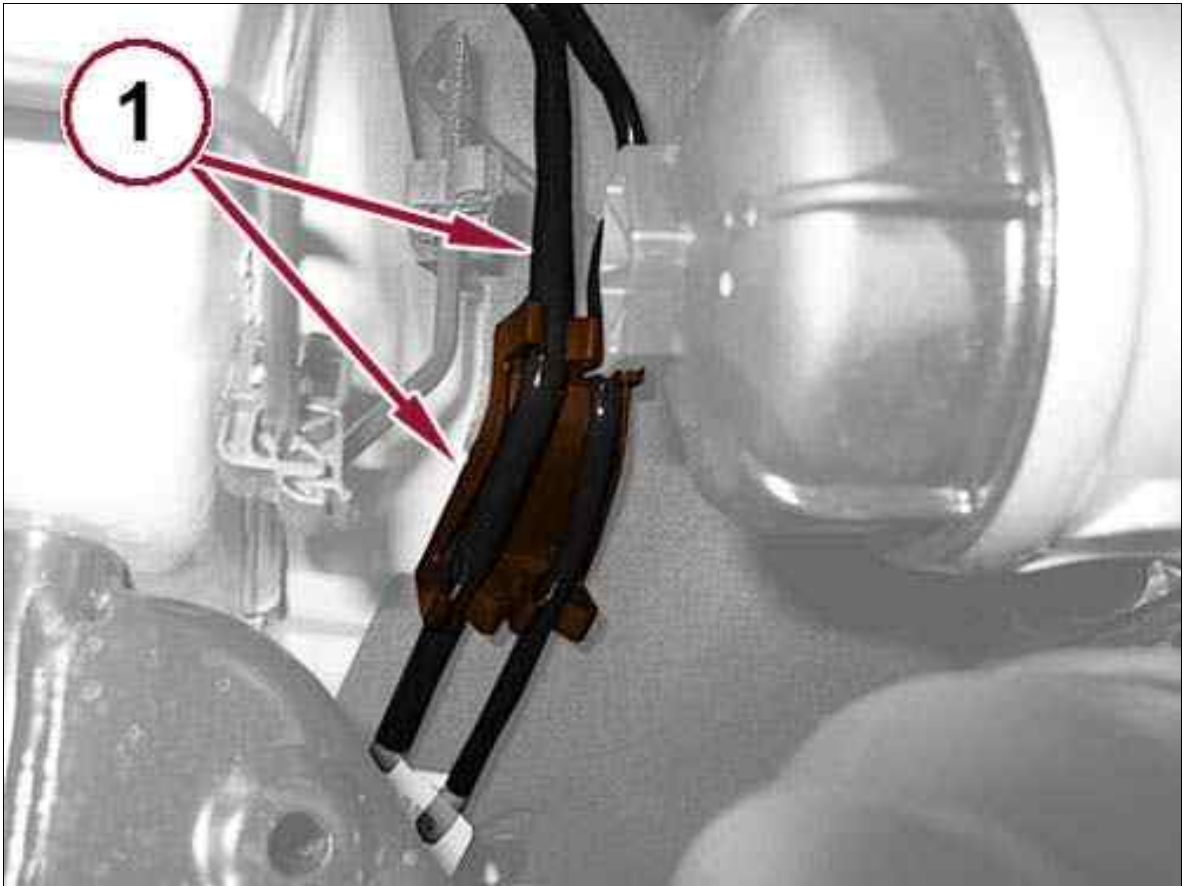
Fig 2: Suspension Crossmember To Body Rear Bolts



Courtesy of CHRYSLER GROUP, LLC

3. Install the rear bolts (1) for the suspension crossmember to the body. Tighten to the proper torque specification. Refer to SPECIFICATIONS .
4. Remove the hydraulic lift.

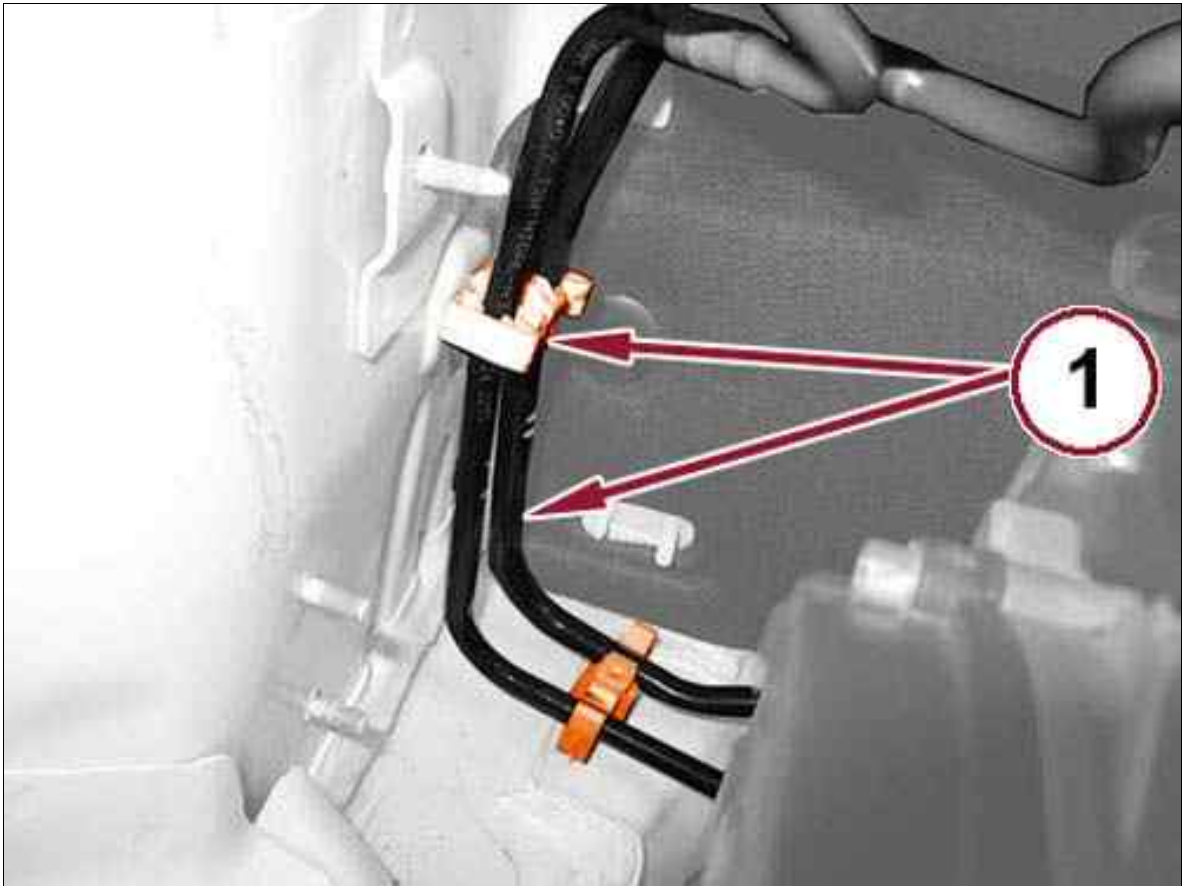
Fig 3: Fuel Delivery/Return Lines & Retaining Clips



Courtesy of CHRYSLER GROUP, LLC

5. Engage the fuel delivery/return lines (1) into the retaining clips (1).

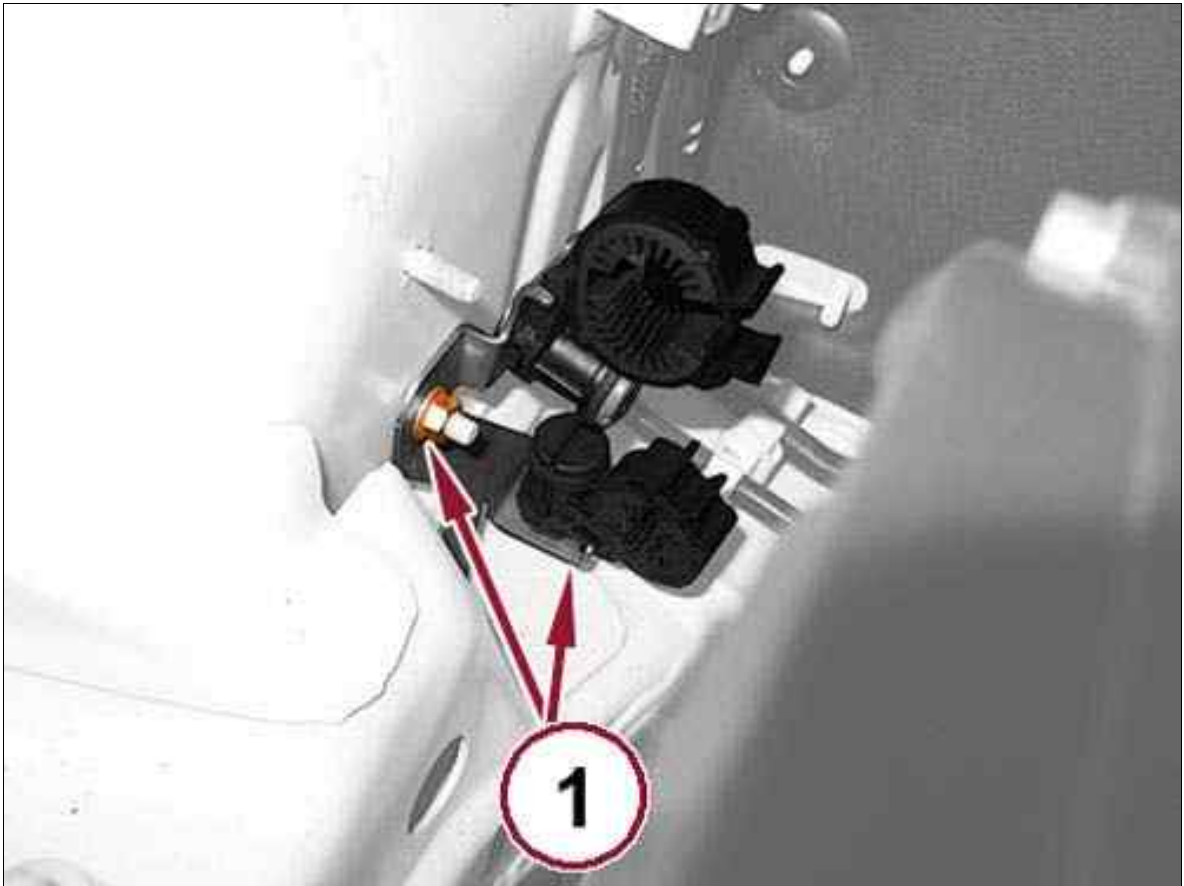
Fig 4: Fuel Delivery/Return Lines & Retaining Clips



Courtesy of CHRYSLER GROUP, LLC

6. Engage the fuel delivery/return lines (1) into the retaining clips (1).

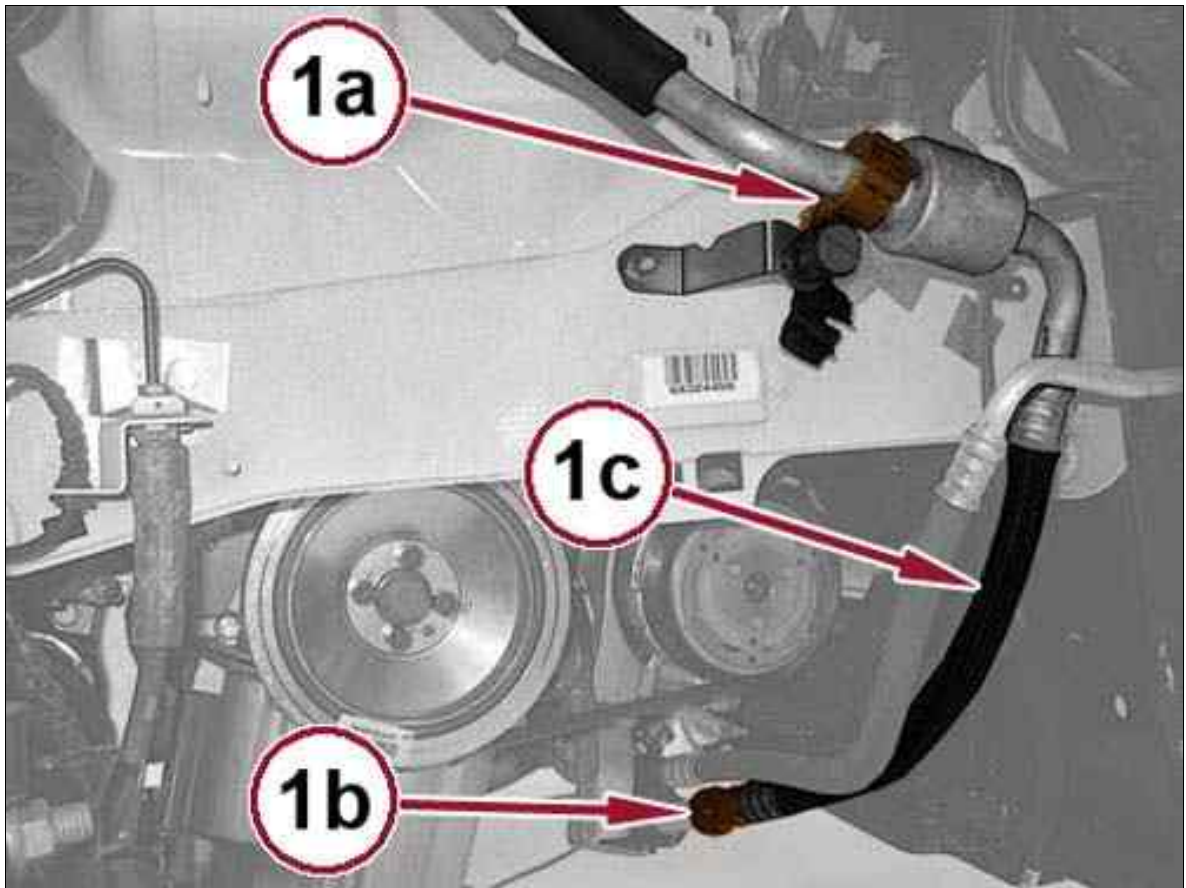
Fig 5: Retaining Bracket & Nut



Courtesy of CHRYSLER GROUP, LLC

7. Position the A/C suction and liquid lines retaining bracket (1) and install the nut (1). Tighten the nut securely.

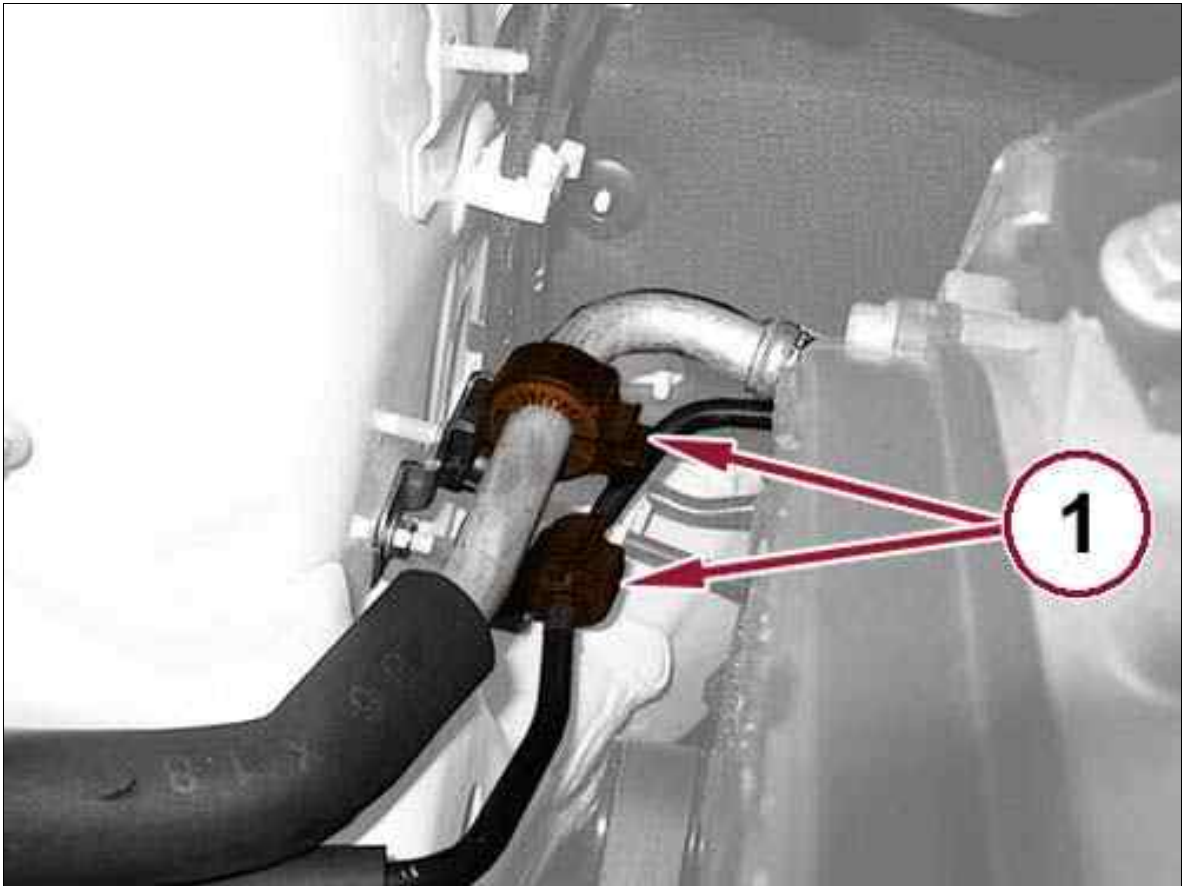
Fig 6: A/C Suction Line, Retaining Clip & Coupling



Courtesy of CHRYSLER GROUP, LLC

8. Engage the A/C suction line (1c) into the retaining clip (1a) and connect the quick coupling (1b).

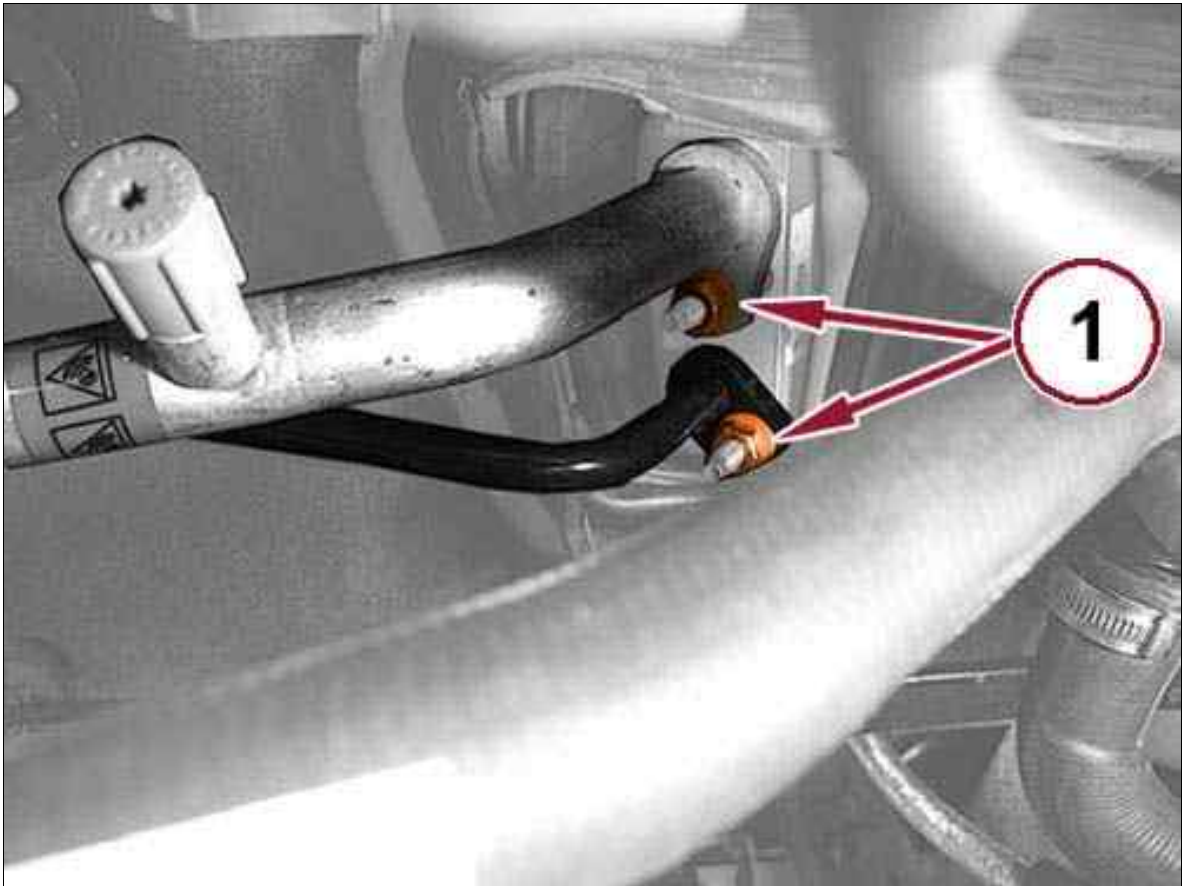
Fig 7: A/C Suction And Liquid Line Retaining Clips



Courtesy of CHRYSLER GROUP, LLC

9. Engage the A/C suction and liquid lines into the retaining clips (1).

Fig 8: A/C Suction & Liquid Line Nuts



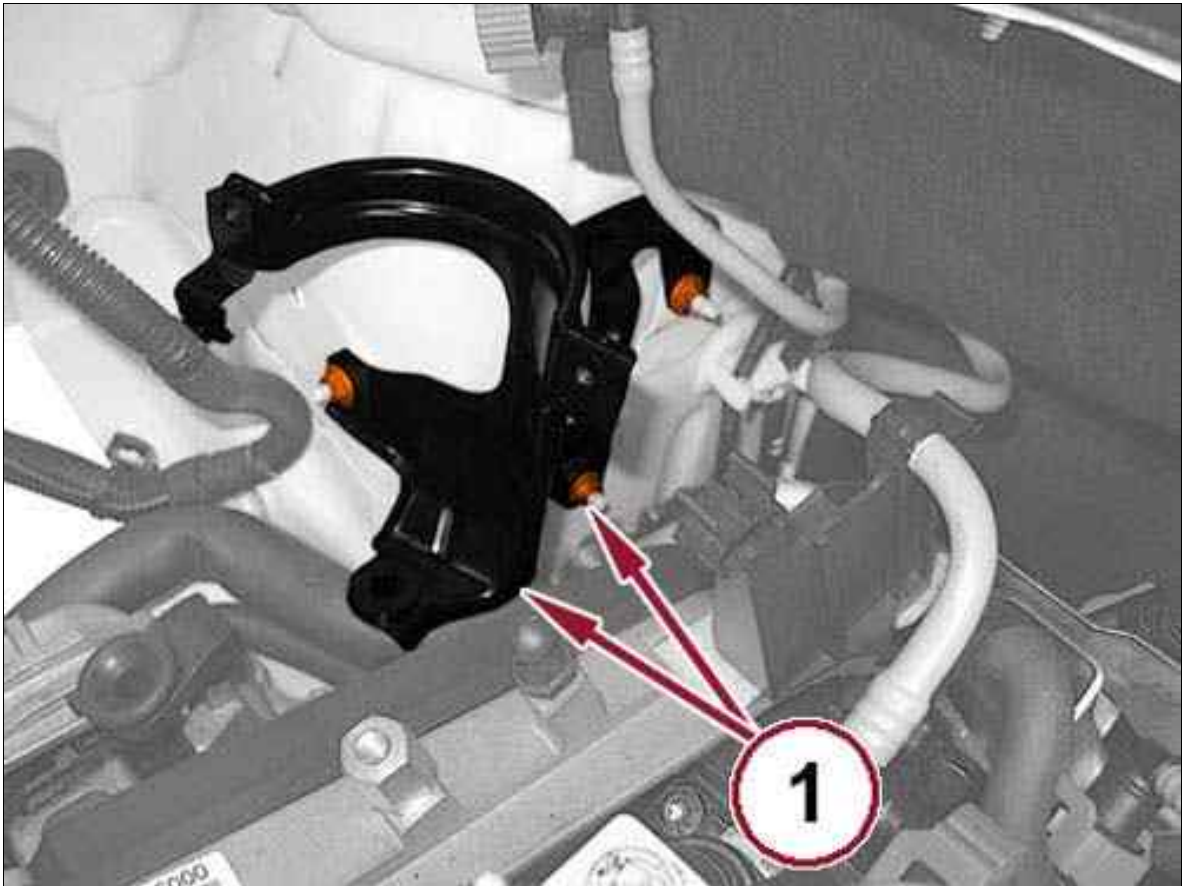
Courtesy of CHRYSLER GROUP, LLC

 NOTE:

The O-rings must be replaced for each A/C line that was disconnected, using only O-rings that are made for the type of refrigerant oil that is in the A/C system. Failure to replace the O-rings may result in a refrigerant leak.

10. Install new O-rings on the A/C suction and liquid lines. Connect the lines to the expansion valve and install the nuts (1). Torque the nuts to the proper torque specification. Refer to SPECIFICATIONS .

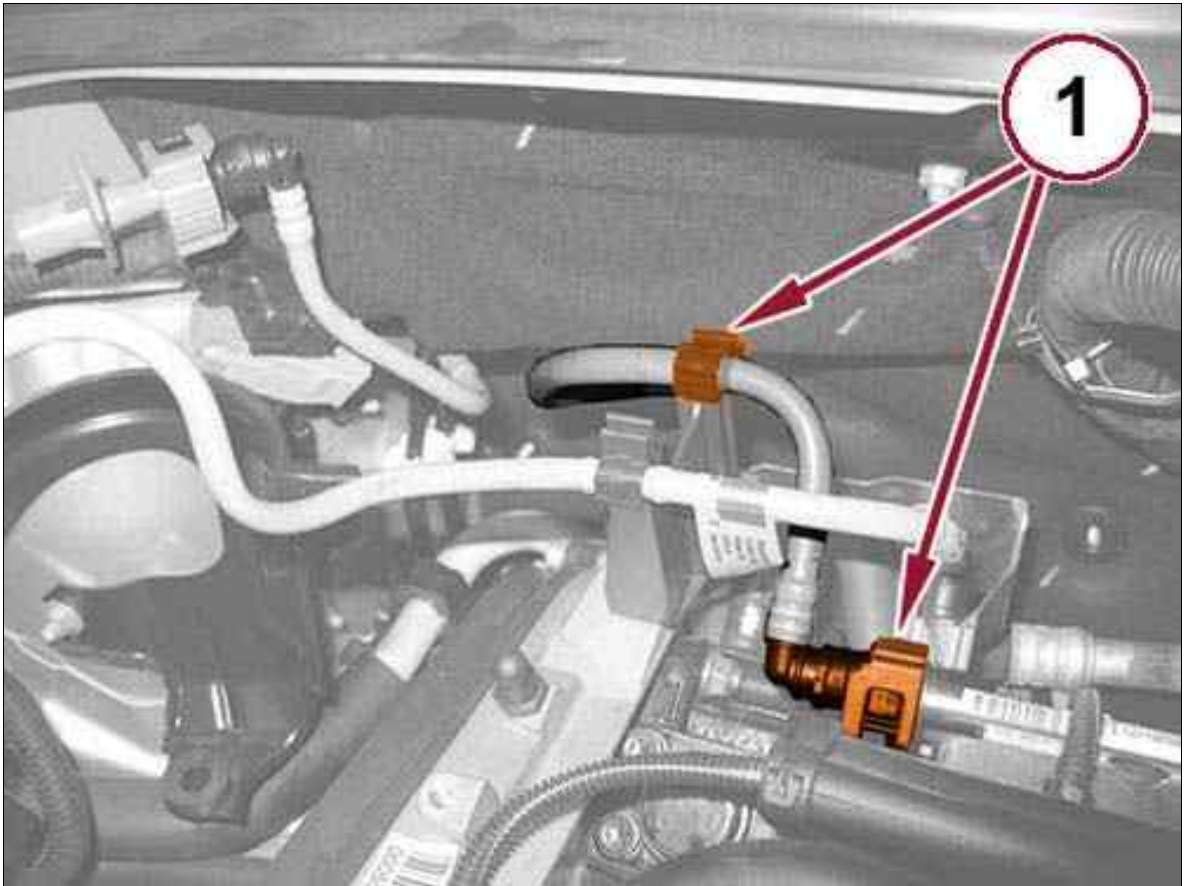
Fig 9: Fuel Filter Support Bracket & Nuts



Courtesy of CHRYSLER GROUP, LLC

11. Position the fuel filter support bracket and install the nuts (1). Tighten the nuts securely.

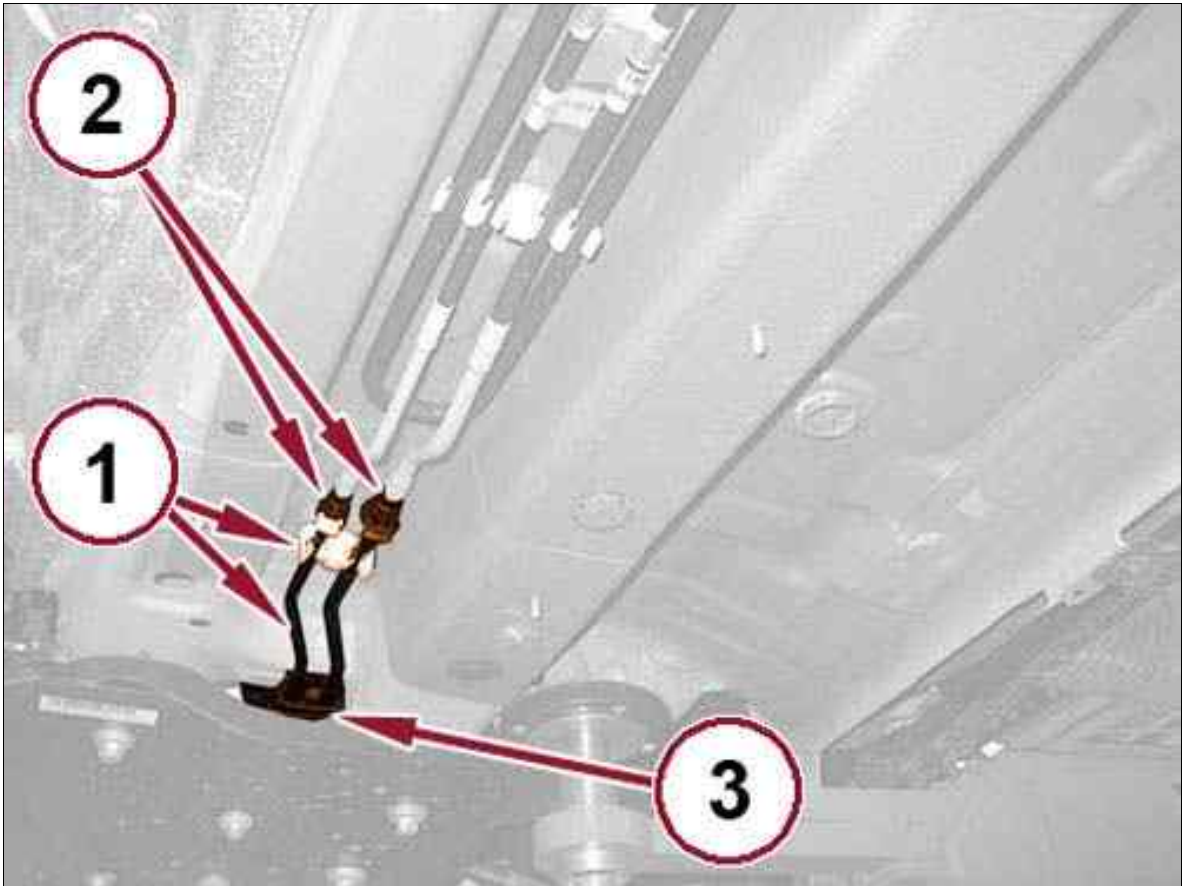
Fig 10: Fuel Return Pipe Coupling & Retaining Clip



Courtesy of CHRYSLER GROUP, LLC

12. Insert the fuel return pipe into the retaining clip (1) and connect the quick coupling (1).

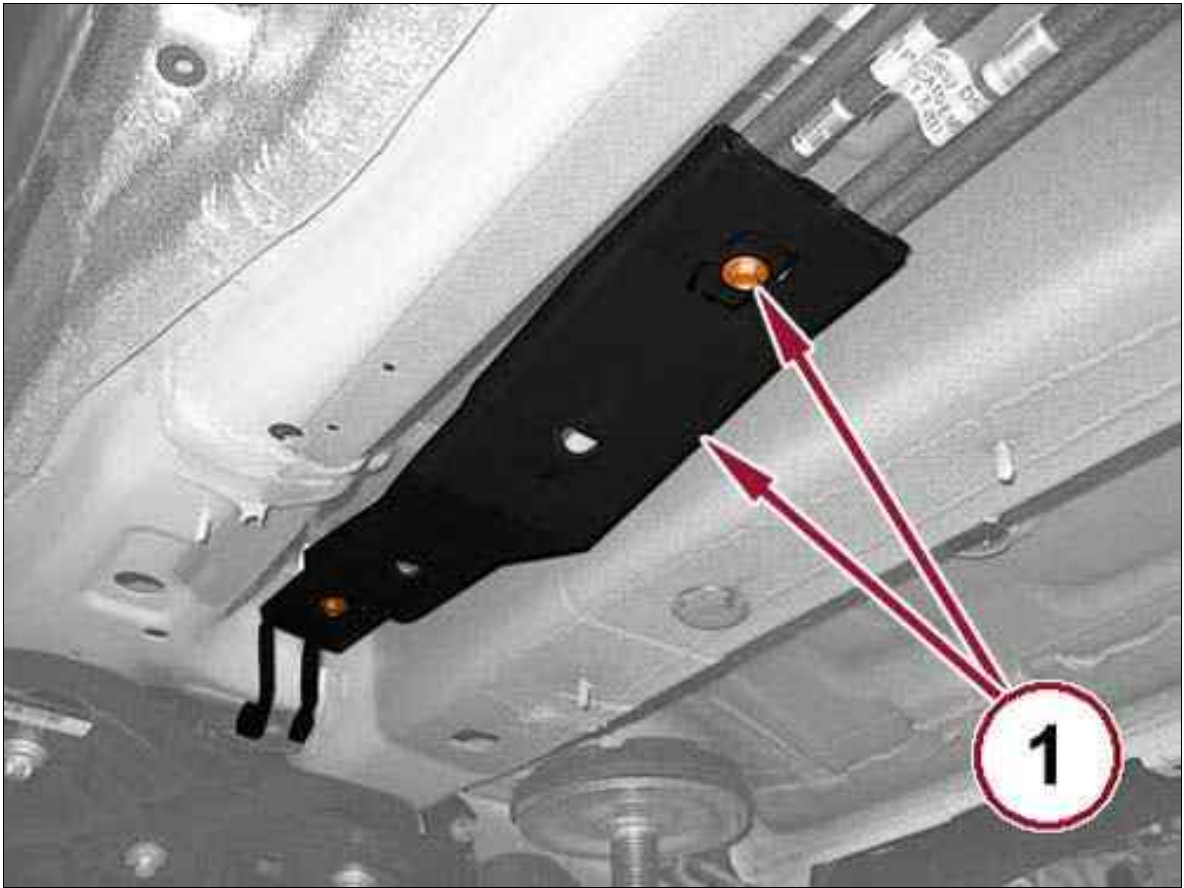
Fig 11: Fuel Lines, Retaining Clips & Coupling



Courtesy of CHRYSLER GROUP, LLC

13. Engage the fuel lines into the retaining clip (3).
14. Connect the quick couplings (2) for the discharge and return fuel lines.
15. Engage the fuel lines (1) into the retaining clip (1).

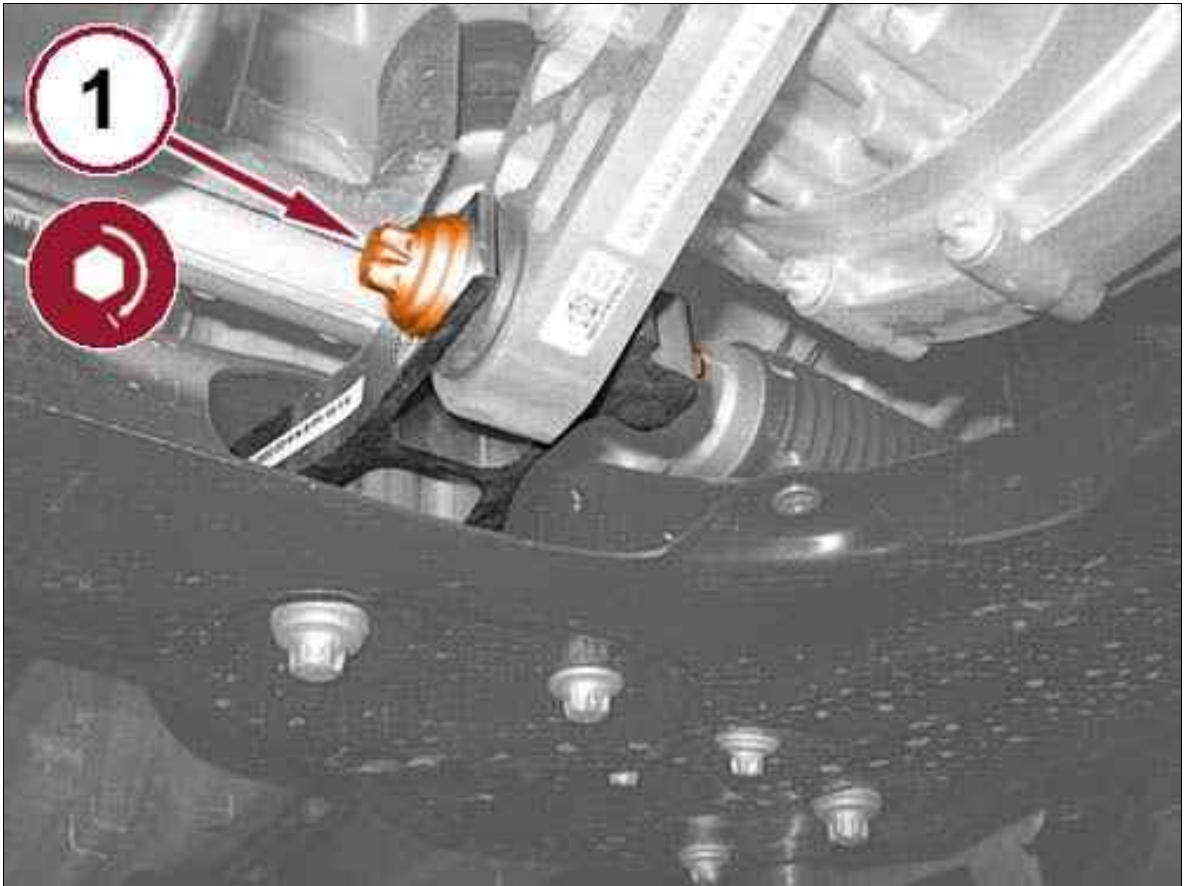
Fig 12: Fuel Line Shield Bolts



Courtesy of CHRYSLER GROUP, LLC

16. Position the fuel line shield and install the bolts (1). Tighten the bolts securely.

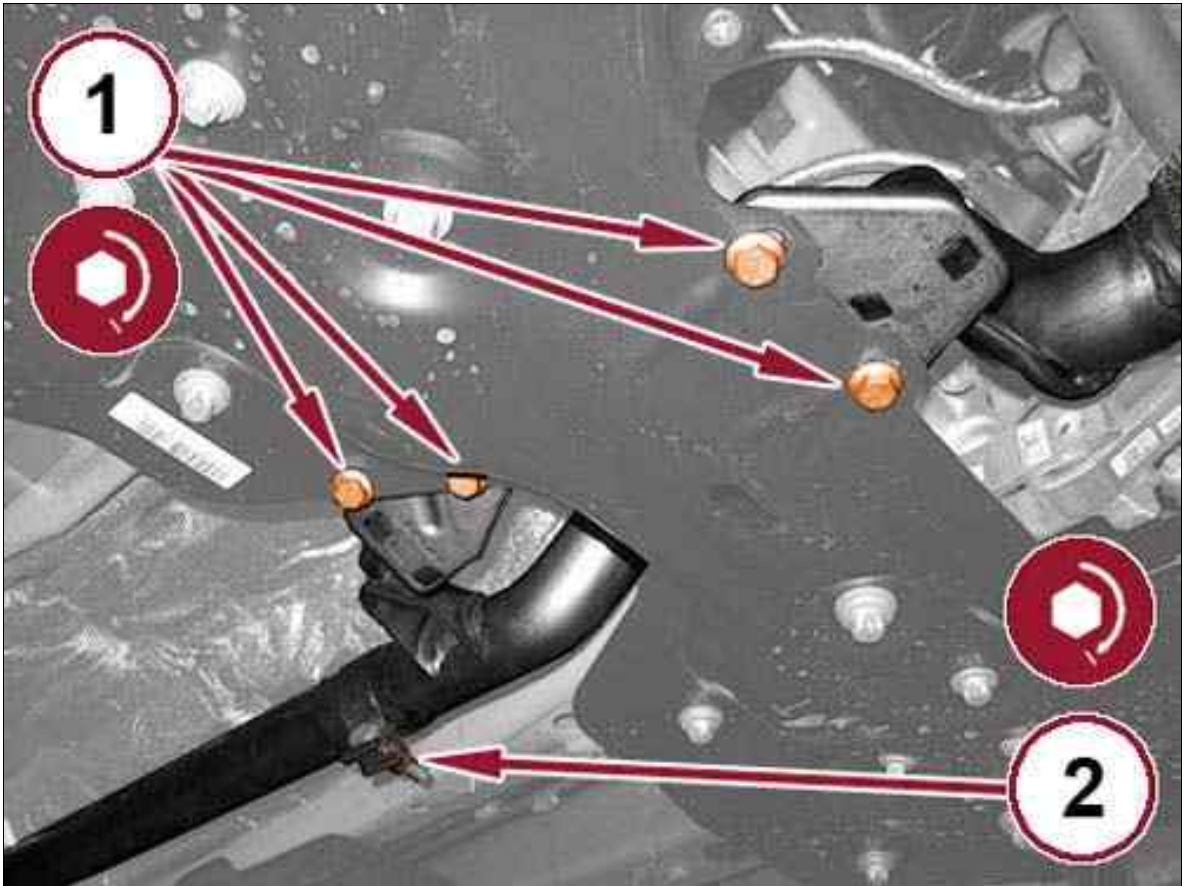
Fig 13: Dampening Rod To Crossmember Bolt



Courtesy of CHRYSLER GROUP, LLC

17. Install the bolt (1) for the dampening rod securing it to the crossmember. Tighten to the proper torque specification. Refer to SPECIFICATIONS .

Fig 14: Exhaust Dampening Rod Bolt & Collar Nut



Courtesy of CHRYSLER GROUP, LLC

18. Position the exhaust dampening rod and install the bolt (1) securing it to the crossmember. Tighten to the proper torque specification. Refer to SPECIFICATIONS
19. Install the nut (2) for the collar securing the exhaust connecting pipes. Tighten to the proper torque specification. Refer to SPECIFICATIONS .

Fig 15: Joint Stabilizer Bars & Nut



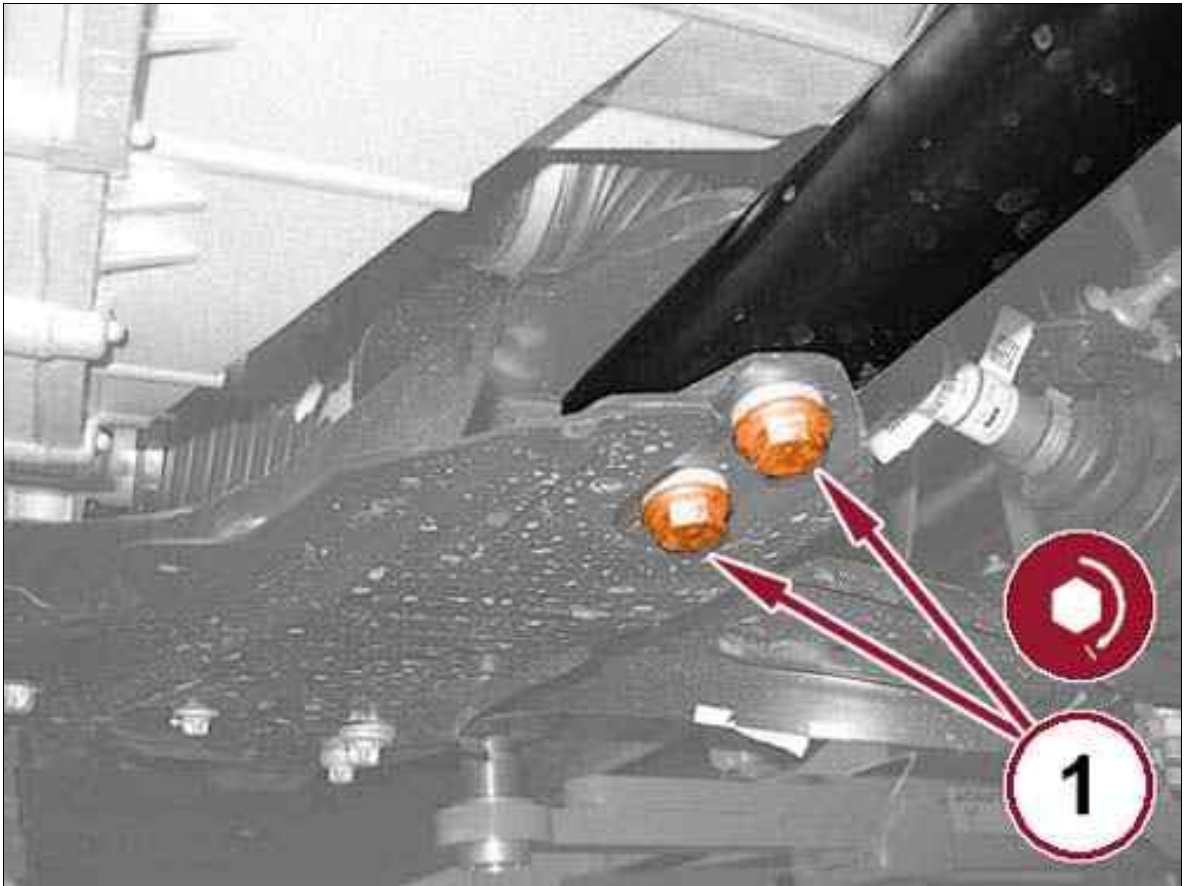
Courtesy of CHRYSLER GROUP, LLC

 NOTE:

Left side shown in the illustration, right side similar.

20. Connect the right and left joint stabilizer bars to the shocks and install the nuts (1). Tighten to the proper torque specification. Refer to FRONT, SPECIFICATIONS .

Fig 16: Right And Left Lower Load Beams Bottom Bolts



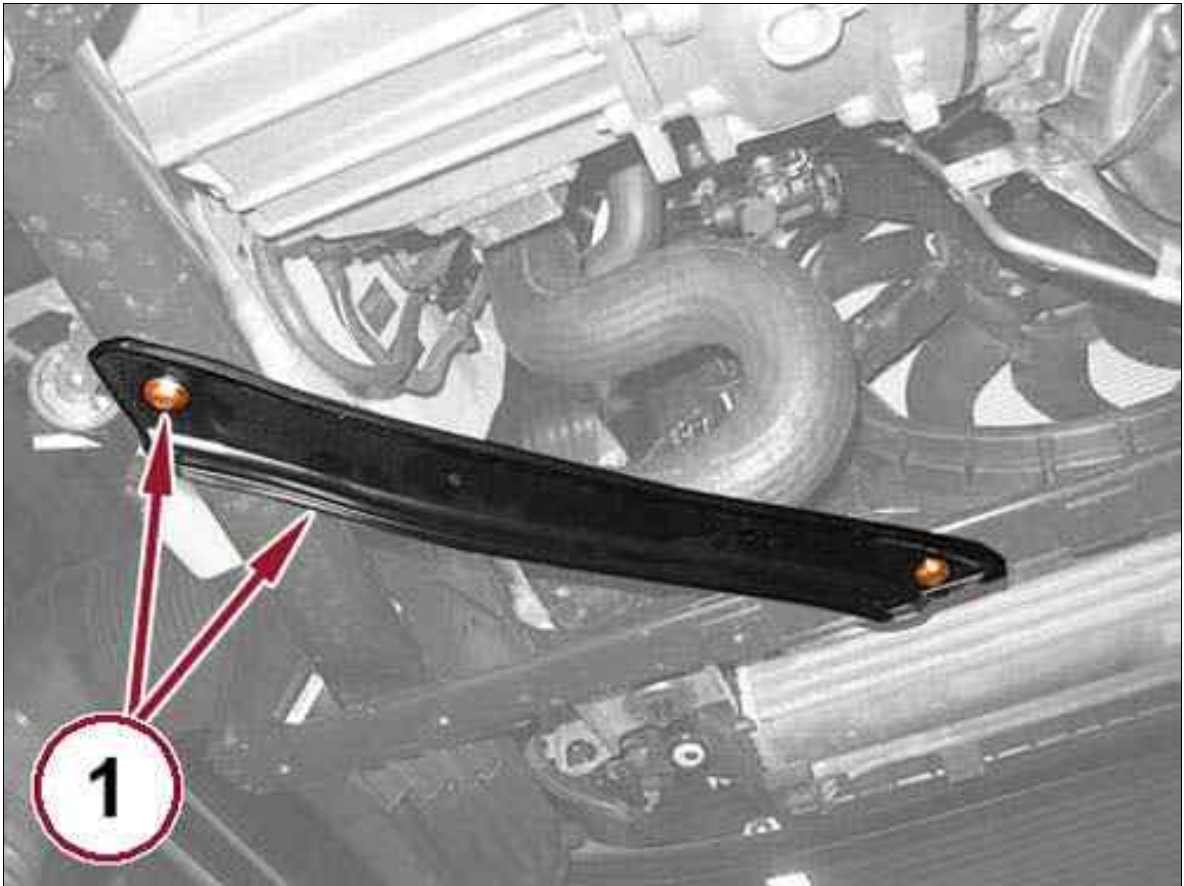
Courtesy of CHRYSLER GROUP, LLC

 NOTE:

Left side shown in the illustration, right side similar.

21. Position the right and left lower load beams (1a) and install the two bolts (1b). Tighten to the proper torque specifications. Refer to SPECIFICATIONS .

Fig 17: Right And Left Front Lower Frame Struts & Bolts



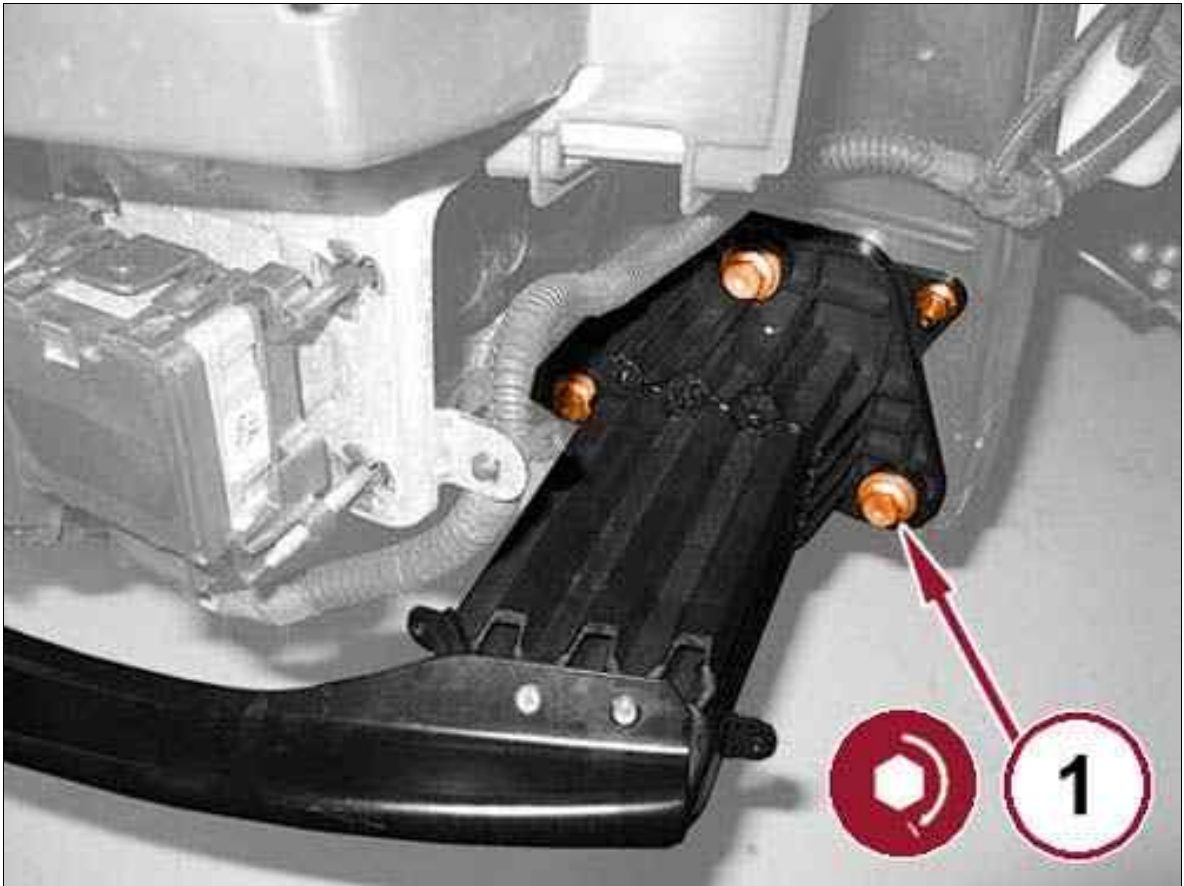
Courtesy of CHRYSLER GROUP, LLC

 **NOTE:**

Left side shown in the illustration, right side similar.

22. Position the right and left front lower frame struts for the front end and install the two bolts (1). Tighten to the proper torque specifications. Refer to SPECIFICATIONS .

Fig 18: Right And Left Lower Load Beam Fasteners At The Front End



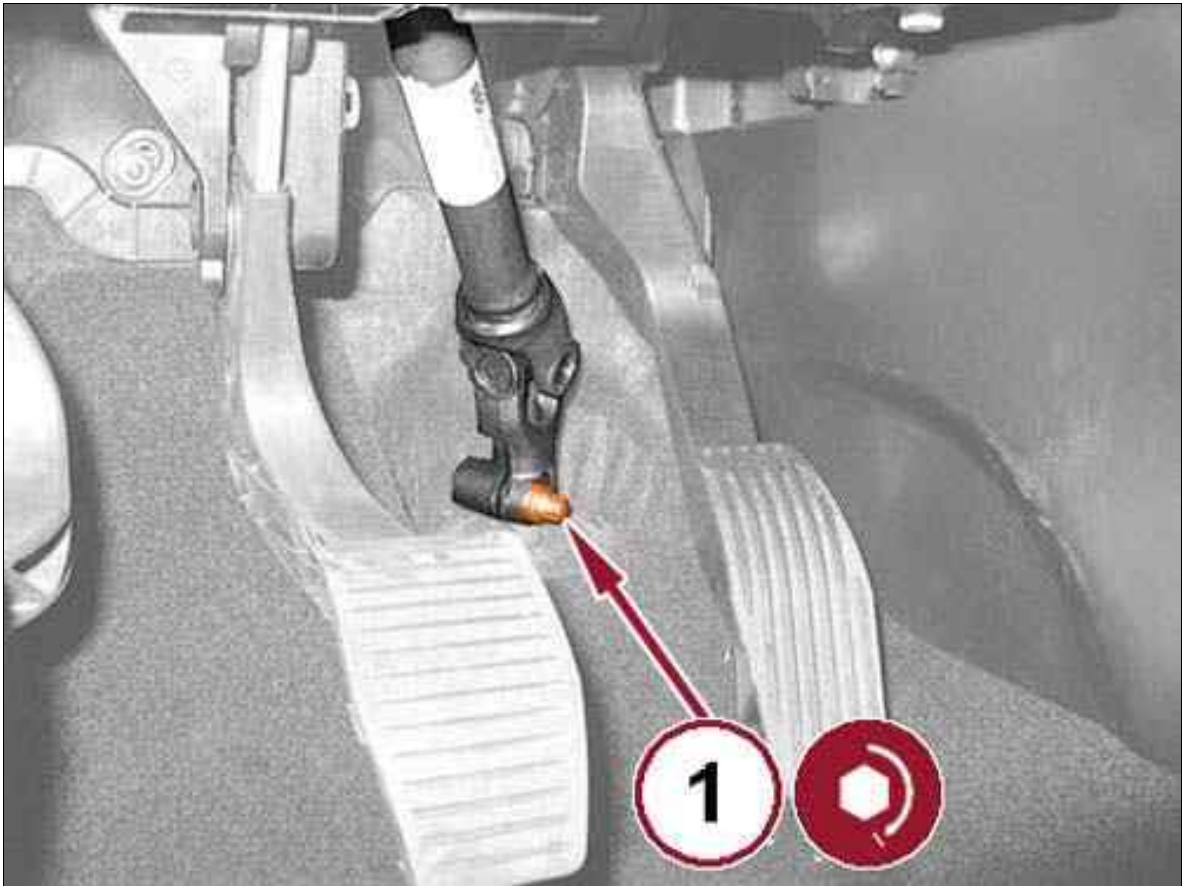
Courtesy of CHRYSLER GROUP, LLC

 NOTE:

Left side shown in the illustration, right side similar.

23. Install the fasteners (1) securing right and left lower load beams at the front end. Tighten to the proper torque specifications. Refer to SPECIFICATIONS .

Fig 19: Steering Column-To-Pinion Steering Box Screw

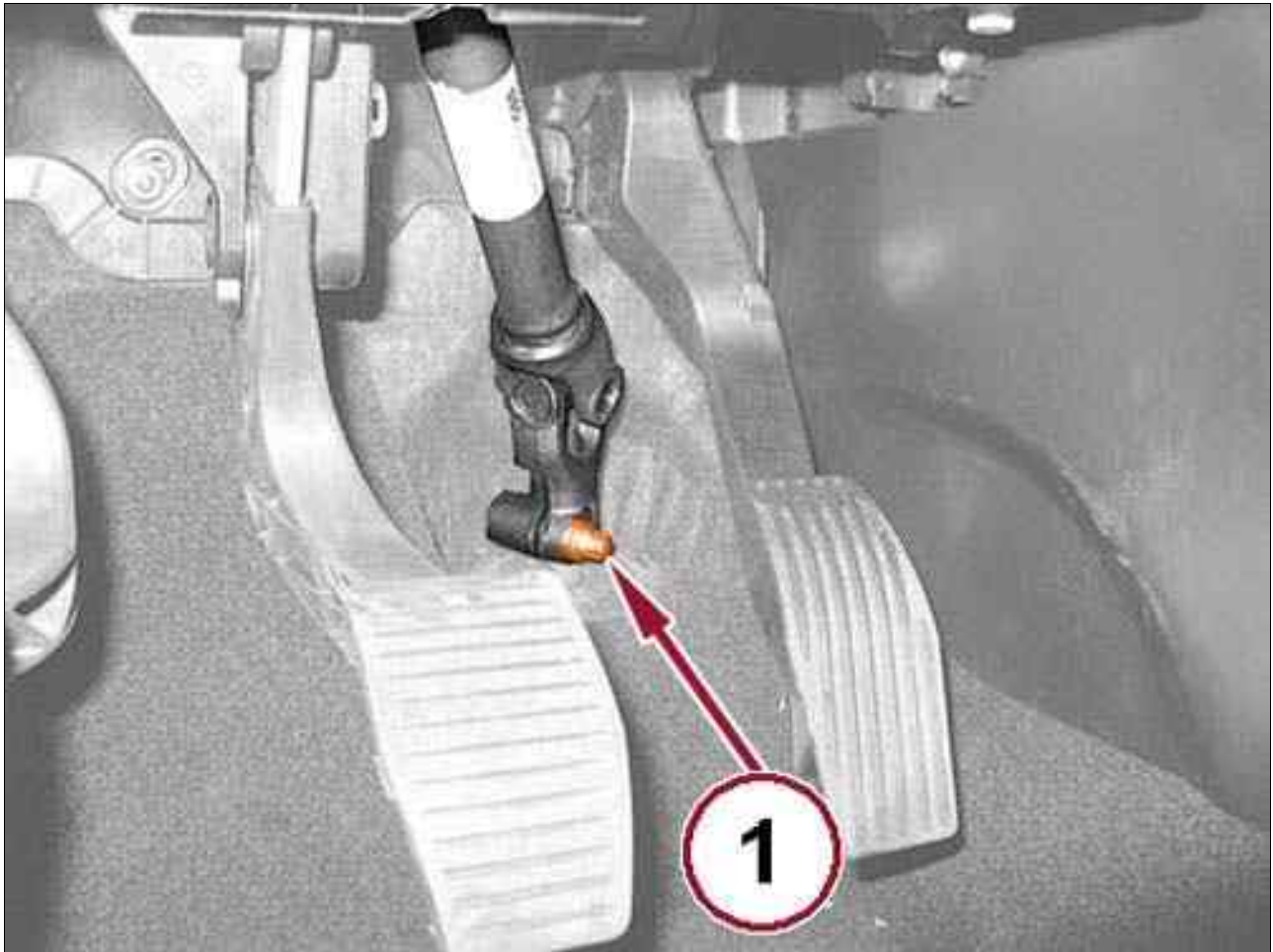


Courtesy of CHRYSLER GROUP, LLC

24. Install a new bolt (1) securing the steering column shaft to the pinion steering gear. Tighten to the proper torque specification. Refer to SPECIFICATIONS .
25. Install the air cleaner body. .
26. Install the fuel filter. Refer to FILTER, FUEL, REMOVAL AND INSTALLATION .
27. Install the right front wheelhouse splash shield. Refer to SHIELD, SPLASH, FRONT WHEELHOUSE, REMOVAL AND INSTALLATION .
28. Install the right front wheel. Refer to REMOVAL AND INSTALLATION .
29. Install the front fascia. Refer to FASCIA, FRONT, REMOVAL AND INSTALLATION .
30. Install the belly pan. Refer to BELLY PAN, REMOVAL AND INSTALLATION .
31. Evacuate and charge the A/C system. Refer to PLUMBING, STANDARD PROCEDURE .
32. Install the engine cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .
33. Remove the support and lower the vehicle.

- 1040B54 FUEL RETURN PIPE FRONT - 2.0L

Fig 1: Steering Column To The Steering Gear Pinion Bolt

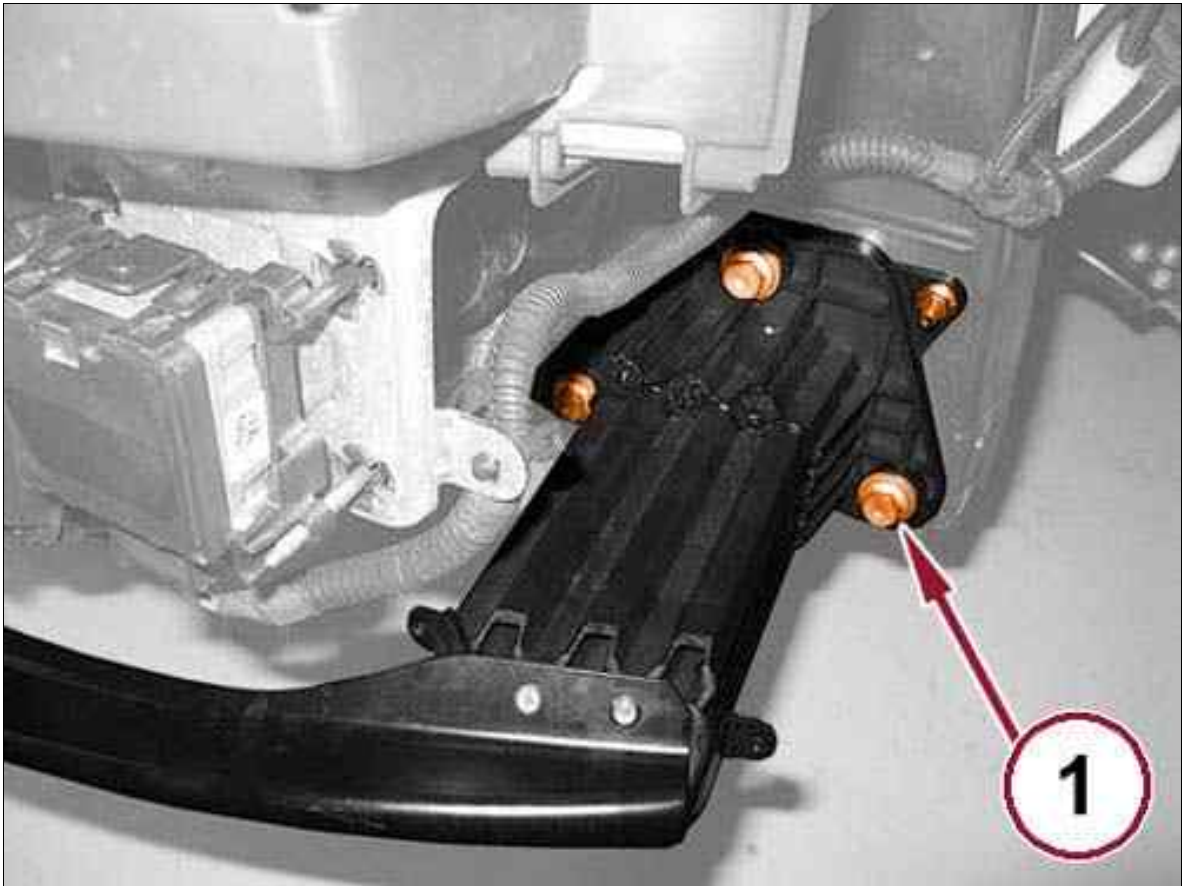


Courtesy of CHRYSLER GROUP, LLC

1. Open the cover of the Power Distribution Center (PDC) in the engine compartment and remove the fuel pump fuse (F21 - 15 ampere).
2. Wait for the residual pressure in the fuel distribution manifold to be relieved.
3. Reinstall the fuel pump fuse (F21 - 15 ampere) and close the PDC cover.
4. Remove the engine cover from the vehicle. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .
5. Recover the refrigerant from the air conditioning system. Refer to PLUMBING, STANDARD PROCEDURE .
6. Raise and support the vehicle.
7. Remove the front belly pan from the underside of the vehicle. Refer to BELLY PAN, REMOVAL AND INSTALLATION or BELLY PAN, SIDE, REMOVAL AND INSTALLATION .
8. Remove the front bumper fascia from the vehicle. Refer to FASCIA, FRONT, REMOVAL AND INSTALLATION .

9. Remove the splash shield from the right front wheel house of the vehicle. Refer to SHIELD, SPLASH, FRONT WHEELHOUSE, REMOVAL AND INSTALLATION .
10. Remove the fuel filter from the vehicle. Refer to FILTER, FUEL, REMOVAL AND INSTALLATION .
11. Remove the engine air cleaner assembly from the vehicle.
12. Remove the screw (1) that secures the steering column shaft coupling to the steering rack pinion shaft.

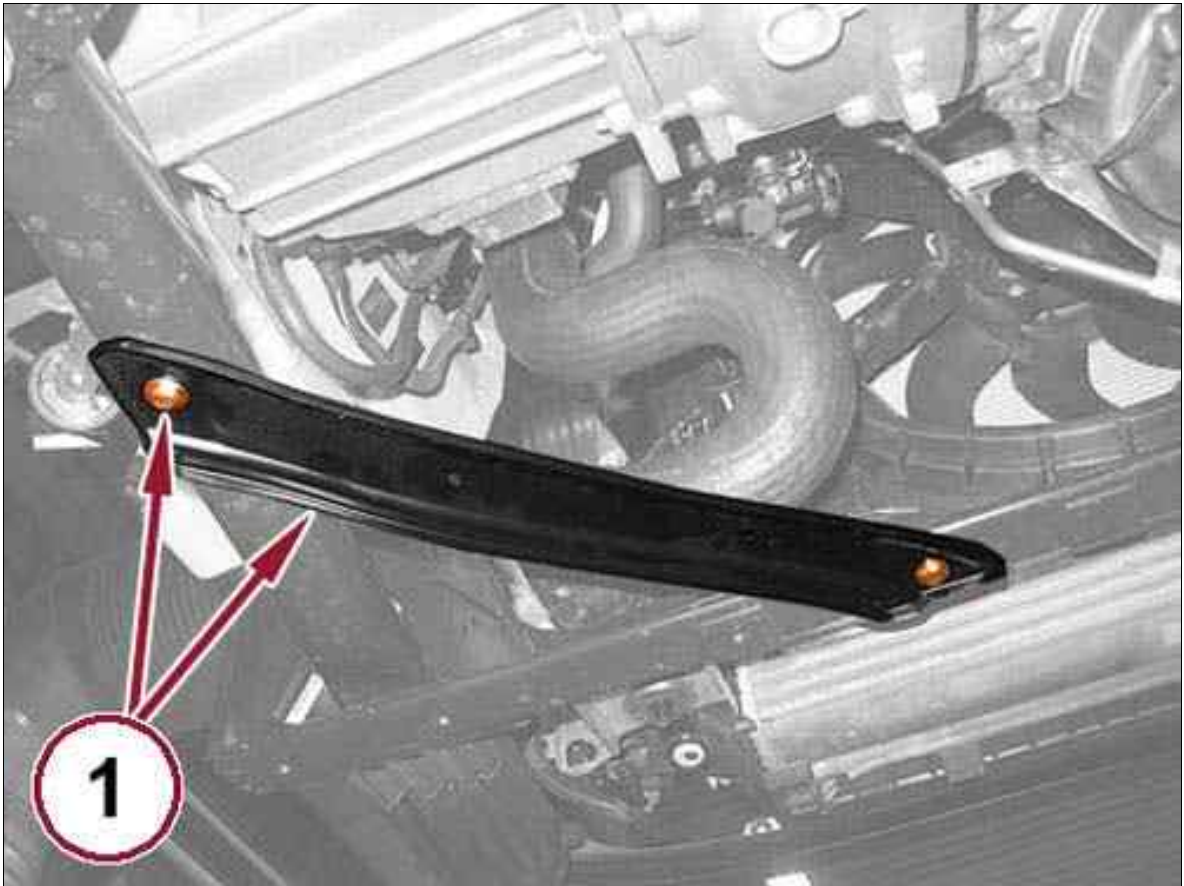
Fig 2: Right And Left Lower Load Beams Fasteners At The Front End



Courtesy of CHRYSLER GROUP, LLC

13. Remove the screws (1) that secure the left and right brackets of the front bumper bar to the front end structure.

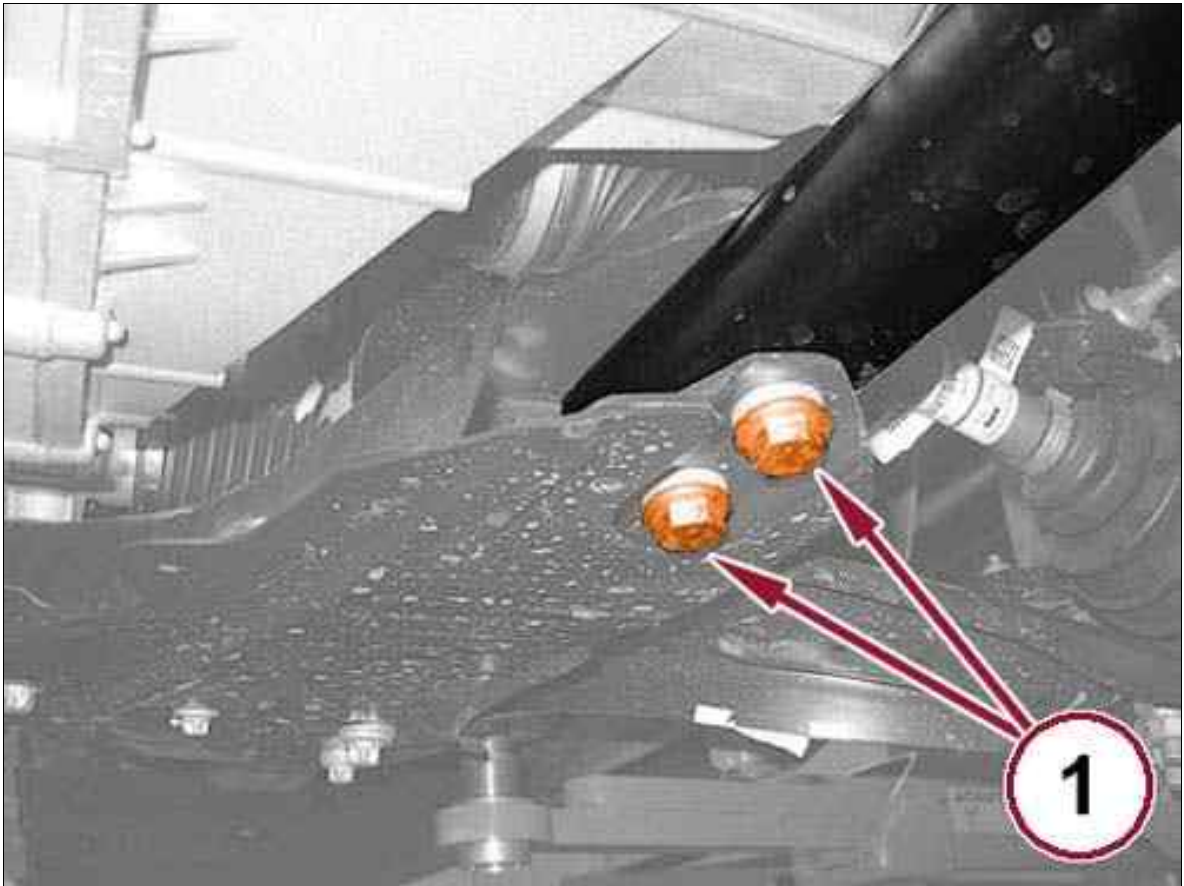
Fig 3: Right And Left Front Lower Frame Struts & Bolts



Courtesy of CHRYSLER GROUP, LLC

14. Remove the screws and the reinforcements (1) from the left and right front end structure.

Fig 4: Right And Left Lower Load Beam & Bolts



Courtesy of CHRYSLER GROUP, LLC

15. Remove the screws (1) and the left and right brackets of the front bumper bar from the front end structure.

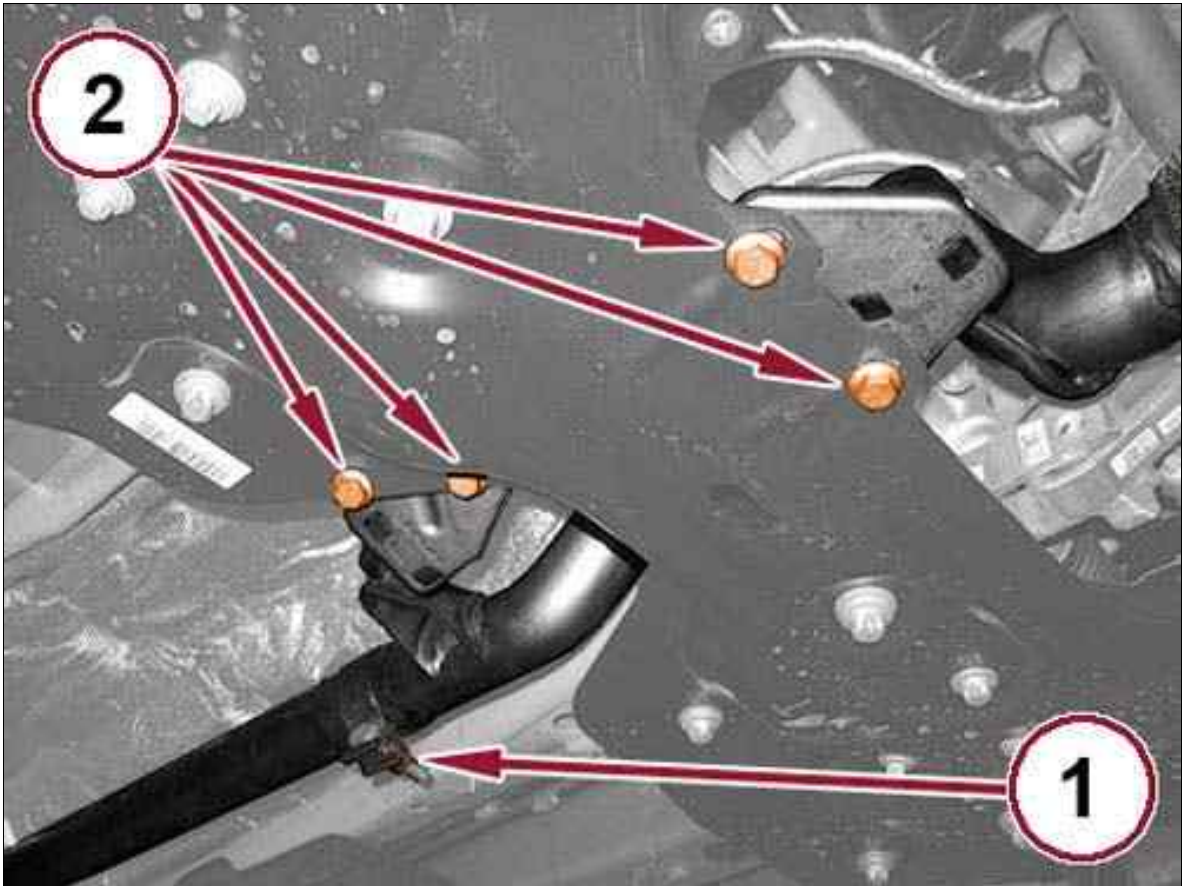
Fig 5: Joint Stabilizer Bars & Nut



Courtesy of CHRYSLER GROUP, LLC

16. Remove the lock nut and disengage the stabilizer link (1) from each of the left and right front strut brackets.

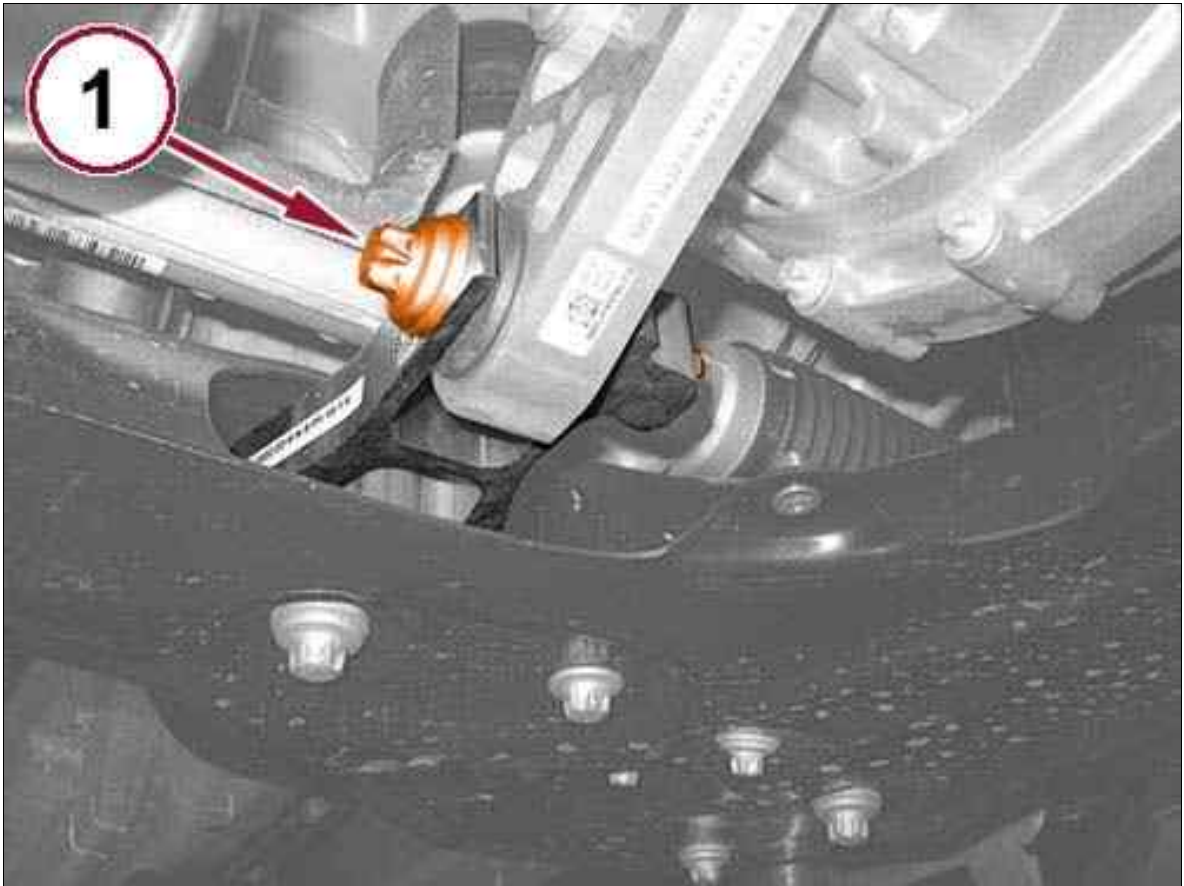
Fig 6: Collar Nut & Front Exhaust Support Bracket Bolts



Courtesy of CHRYSLER GROUP, LLC

17. Remove the nut (1) and loosen the clamp connecting the return pipes.
18. Remove the screws (2) that secure the return pipe support brackets to the side of the suspension cross member.

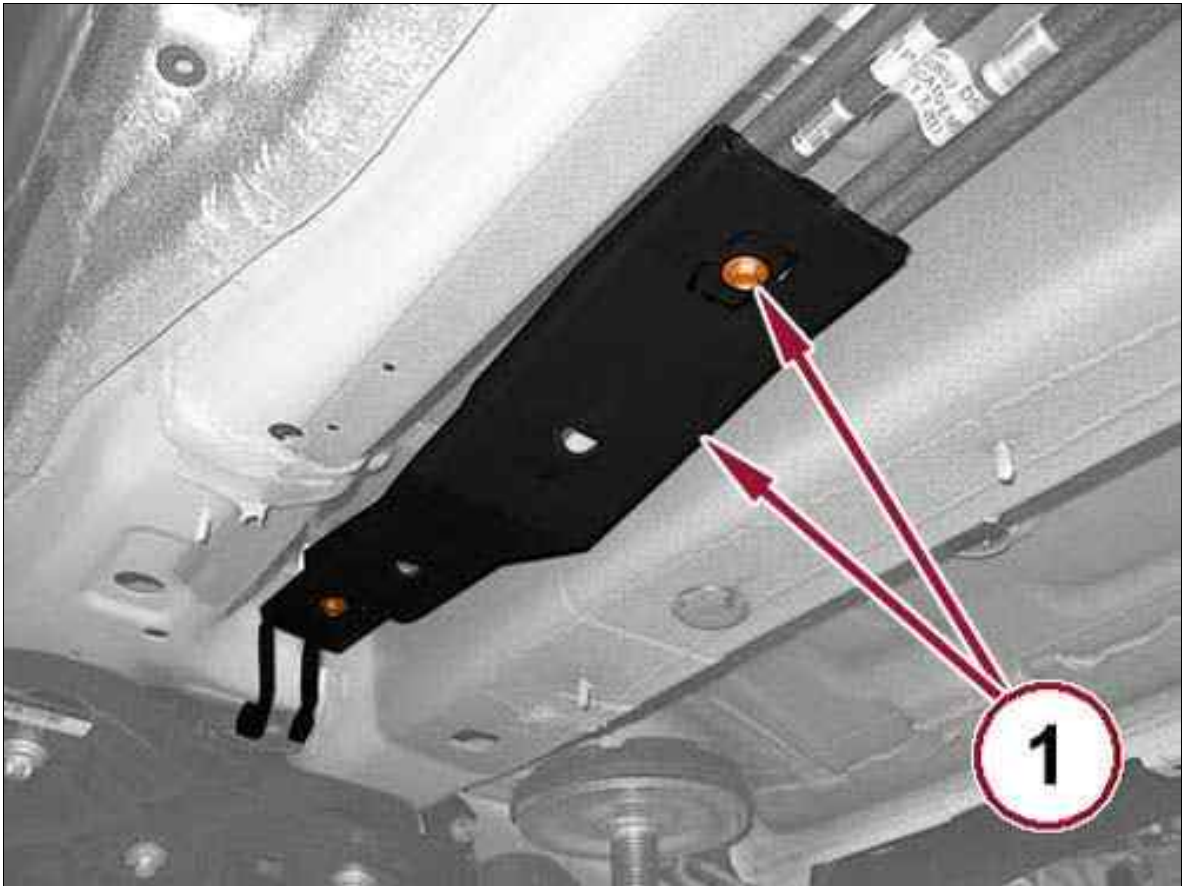
Fig 7: Exhaust Dampening Rod Bolt



Courtesy of CHRYSLER GROUP, LLC

19. Remove the screw (1) securing the rear mount to the transmission support.

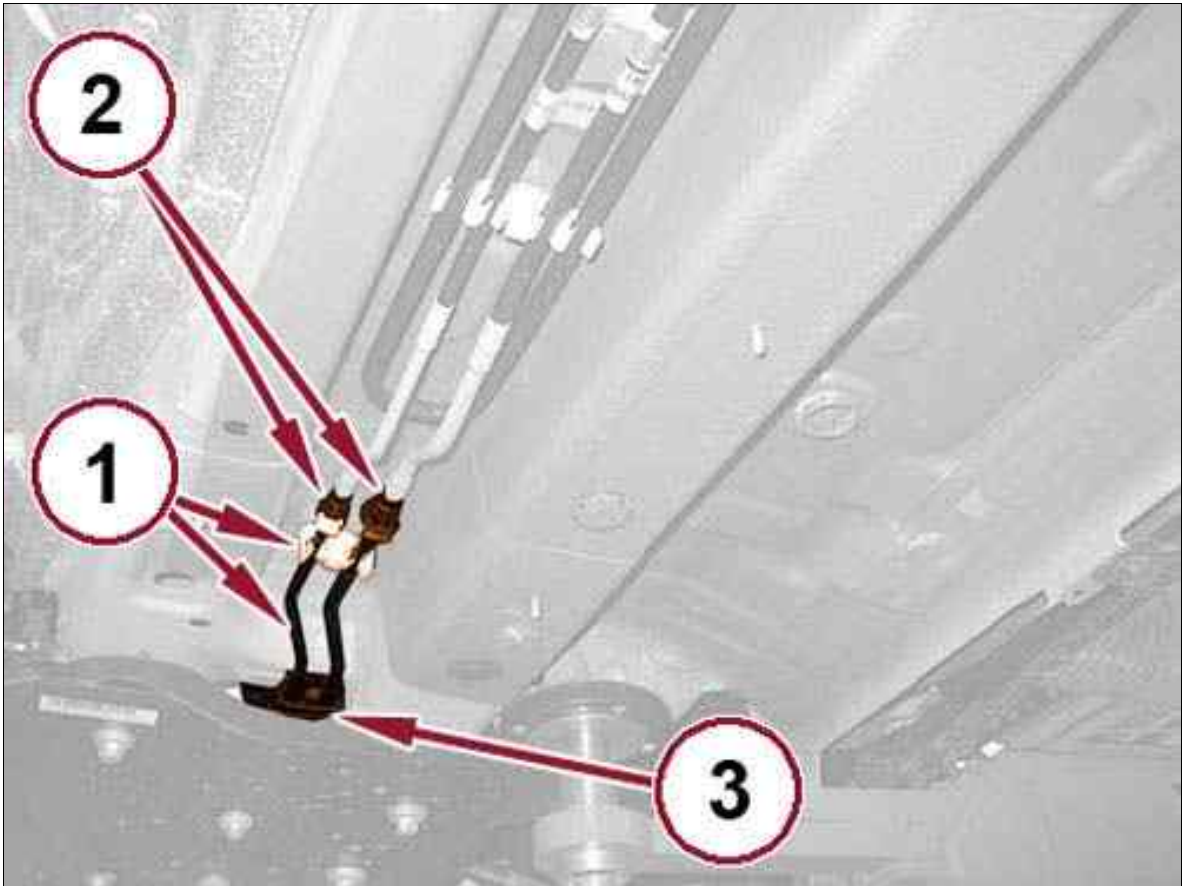
Fig 8: Fuel Line Shield Bolts



Courtesy of CHRYSLER GROUP, LLC

20. Remove the screws (1) that secure the fuel tube shield beneath the underbody and remove the shield.

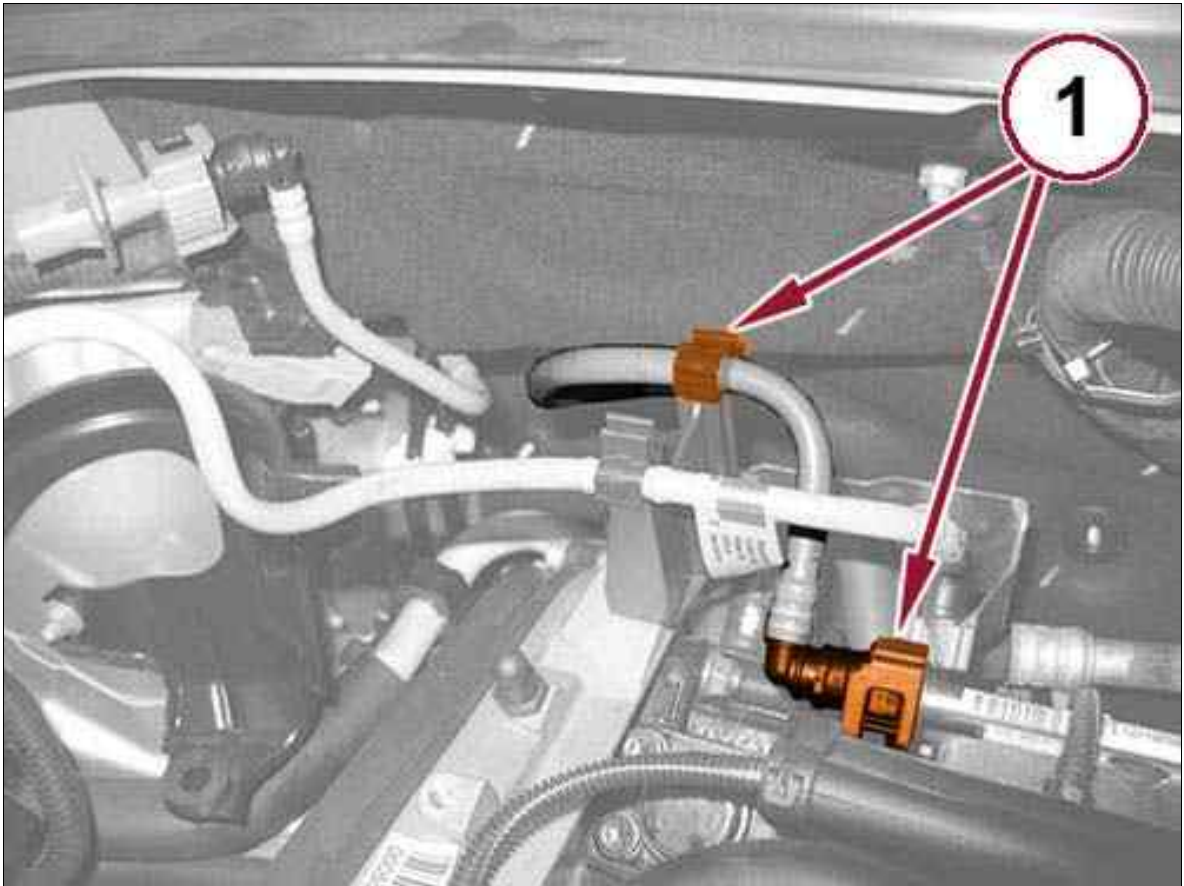
Fig 9: Fuel Lines, Retaining Clips & Couplings



Courtesy of CHRYSLER GROUP, LLC

21. Disengage the fuel tubes (1) from the retaining clips on the underbody.
22. Disconnect the fuel return and discharge tube quick connect fittings (2).
23. Remove the retaining clip (3).

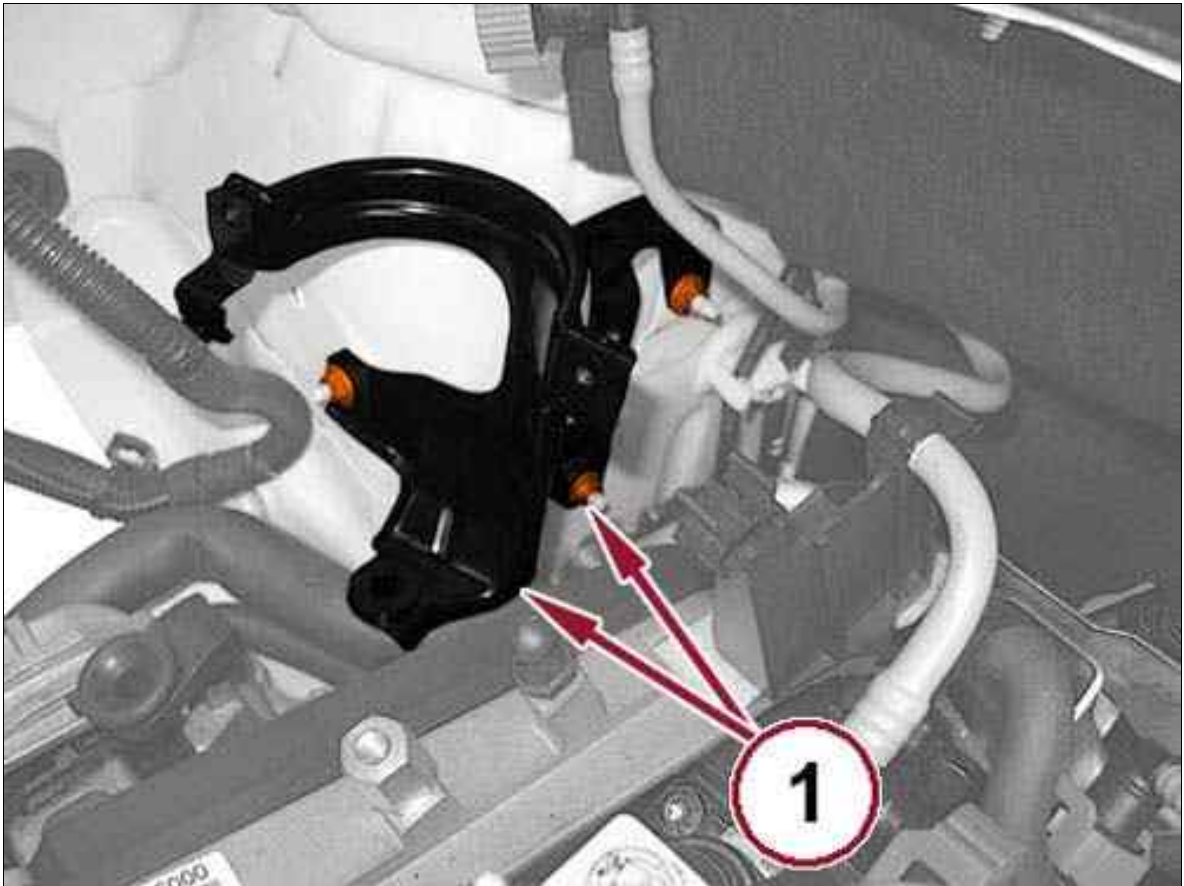
Fig 10: Fuel Return Pipe Coupling & Retaining Clip



Courtesy of CHRYSLER GROUP, LLC

24. Open the retaining clip and disconnect the quick connect fitting (1) on the return line side of the return manifold.

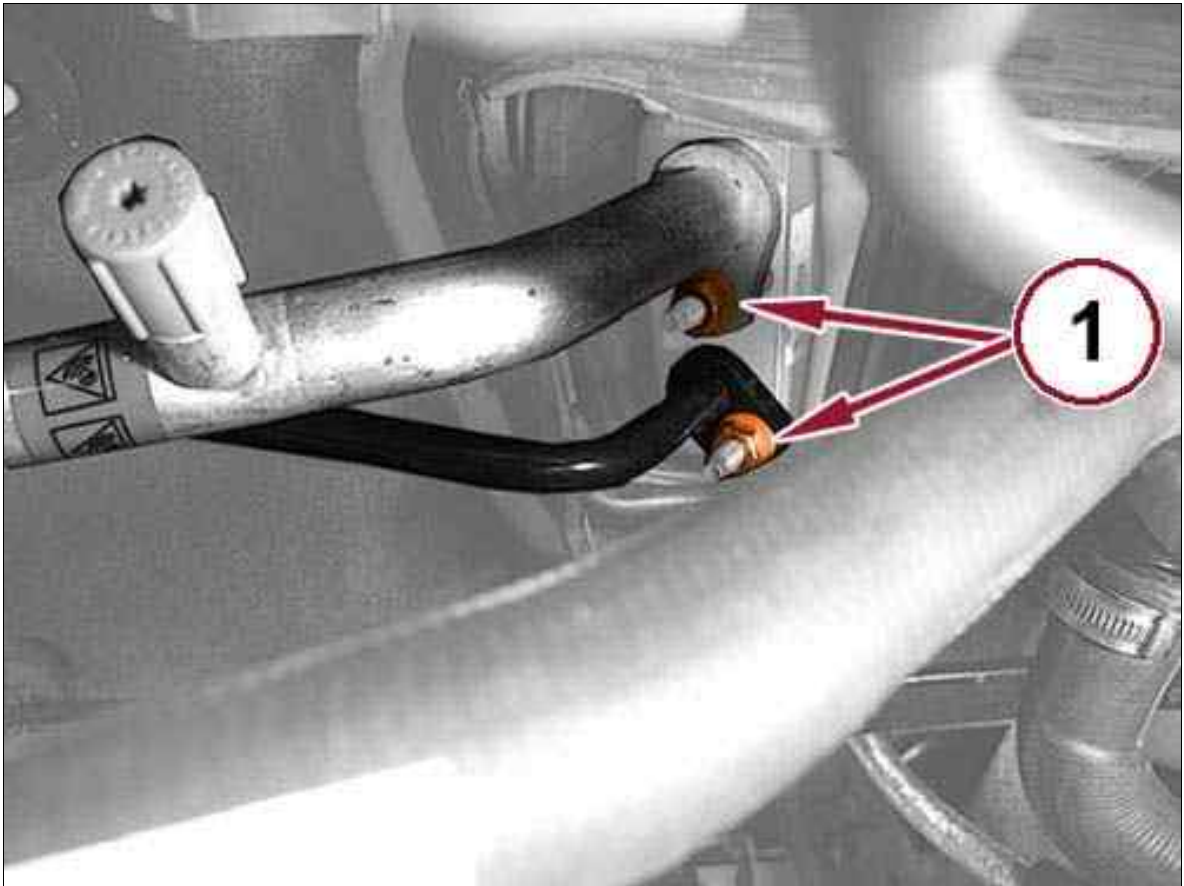
Fig 11: Fuel Filter Support Bracket & Nuts



Courtesy of CHRYSLER GROUP, LLC

25. Remove the nuts and the fuel filter support bracket (1).

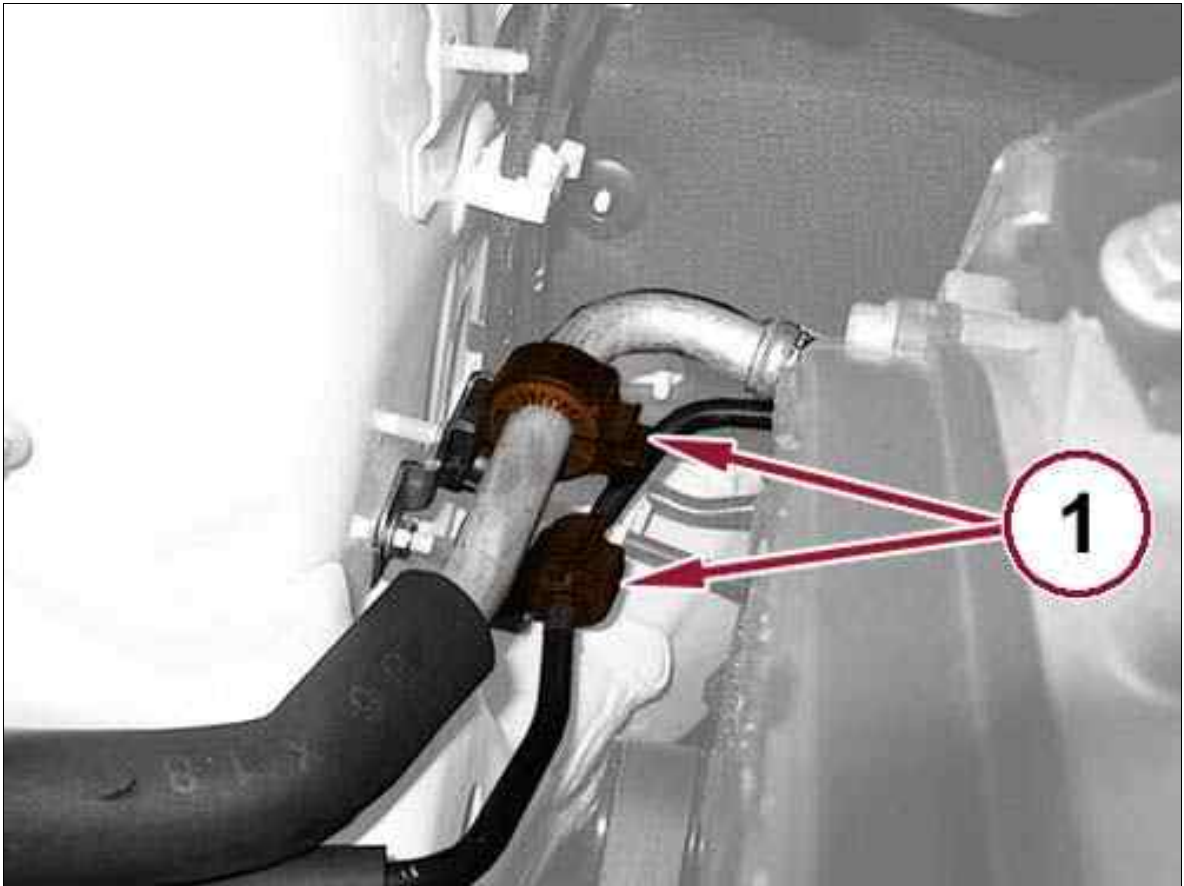
Fig 12: A/C Suction & Liquid Line Nuts



Courtesy of CHRYSLER GROUP, LLC

26. Remove the nuts (1) that secure the refrigerant lines to the expansion valve.

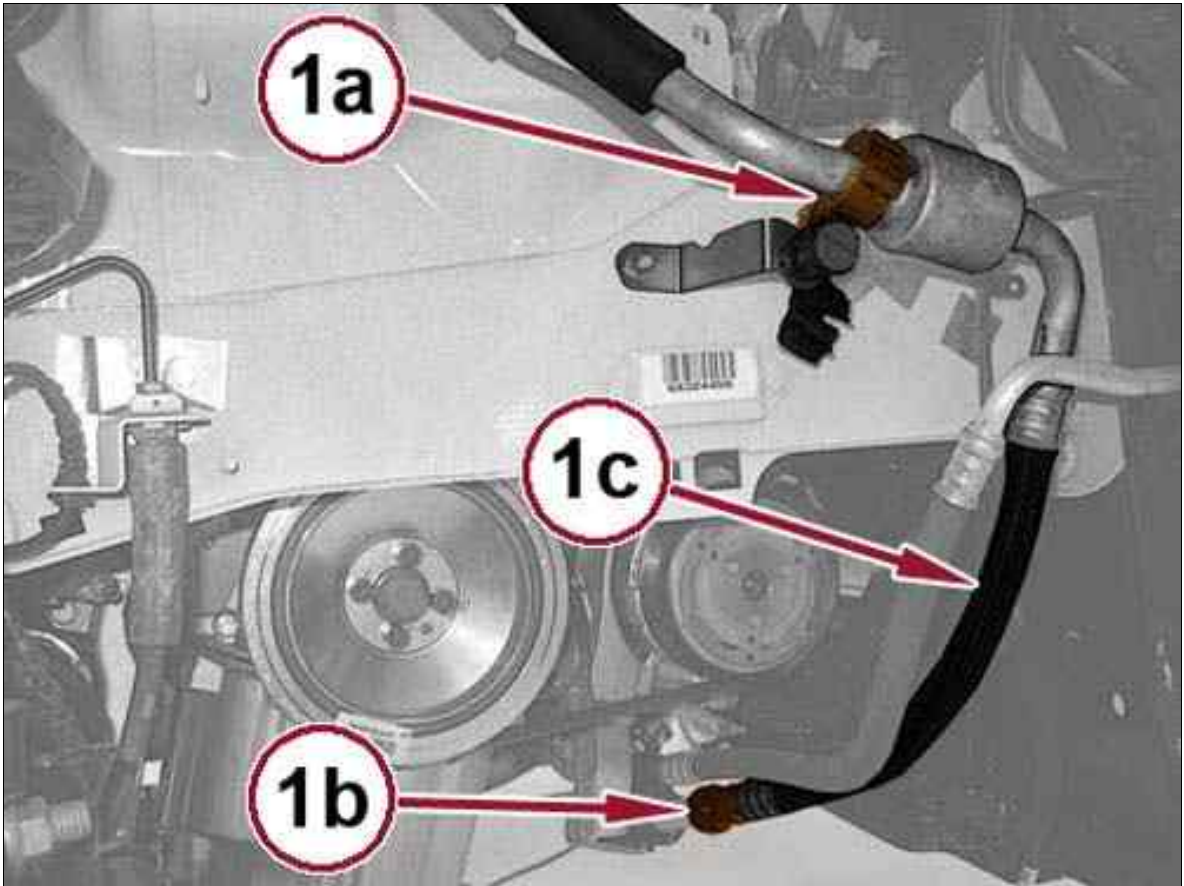
Fig 13: A/C Suction And Liquid Line Retaining Clips



Courtesy of CHRYSLER GROUP, LLC

27. Open the retaining clips (1) on the refrigerant lines.

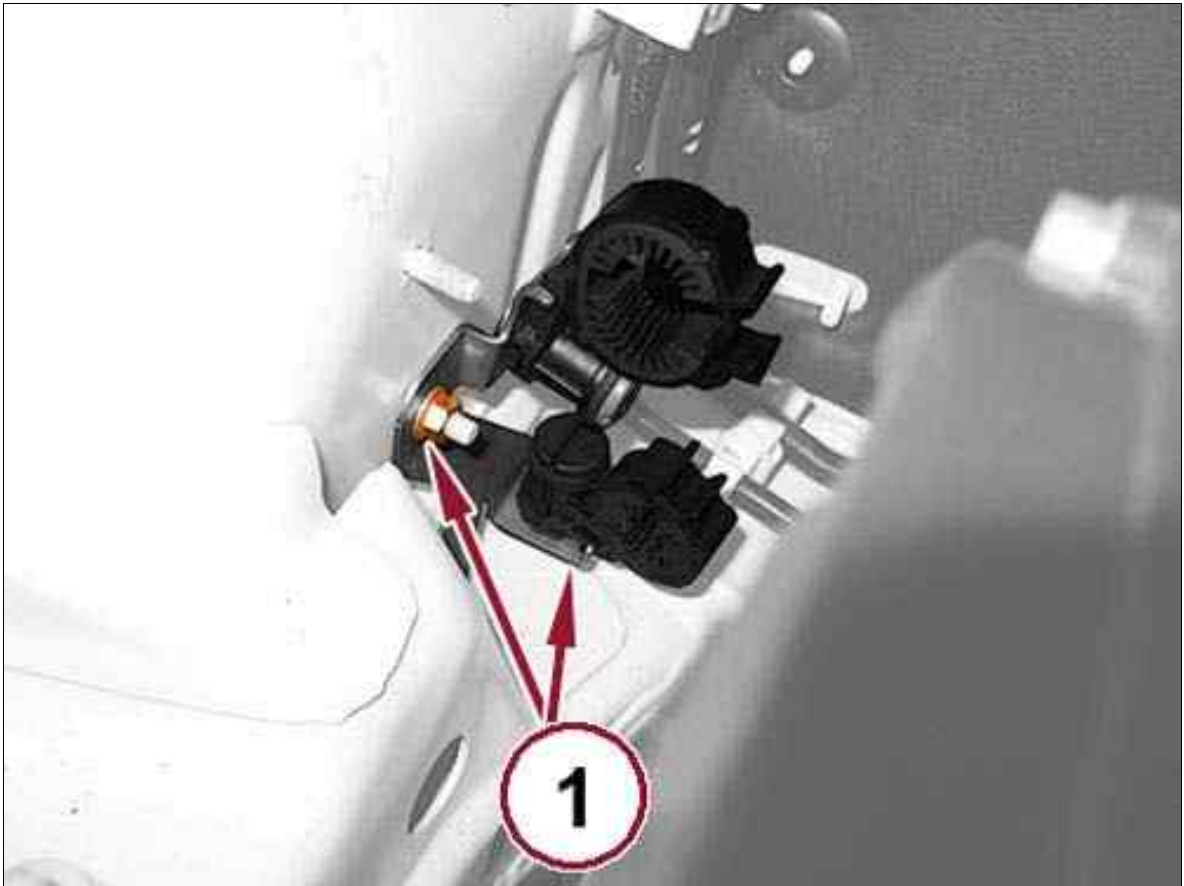
Fig 14: A/C Suction Line, Retaining Clip & Coupling



Courtesy of CHRYSLER GROUP, LLC

28. Open the retaining clip (1a), disconnect the quick connect (1b) and remove the refrigerant return line (1c).

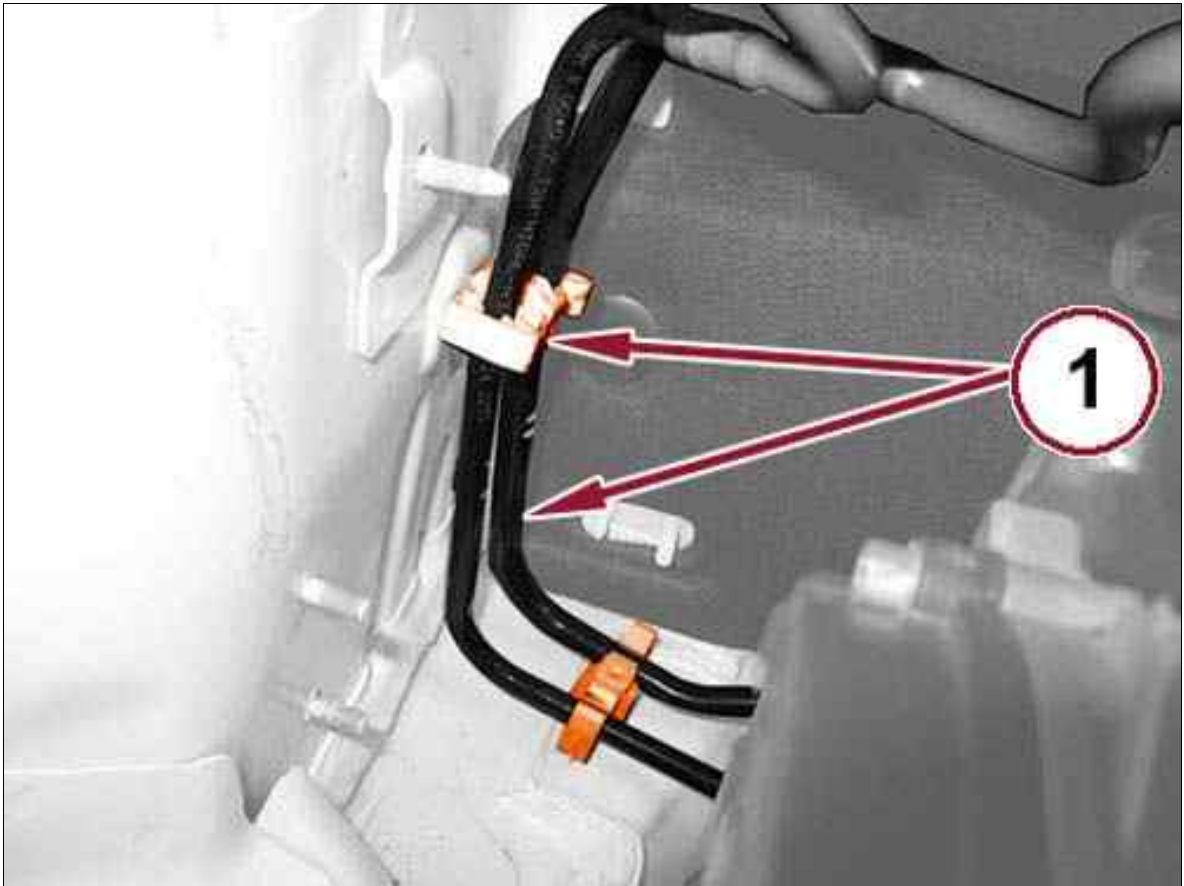
Fig 15: Retaining Bracket & Nut



Courtesy of CHRYSLER GROUP, LLC

29. Remove the nut and the refrigerant line retaining bracket (1).

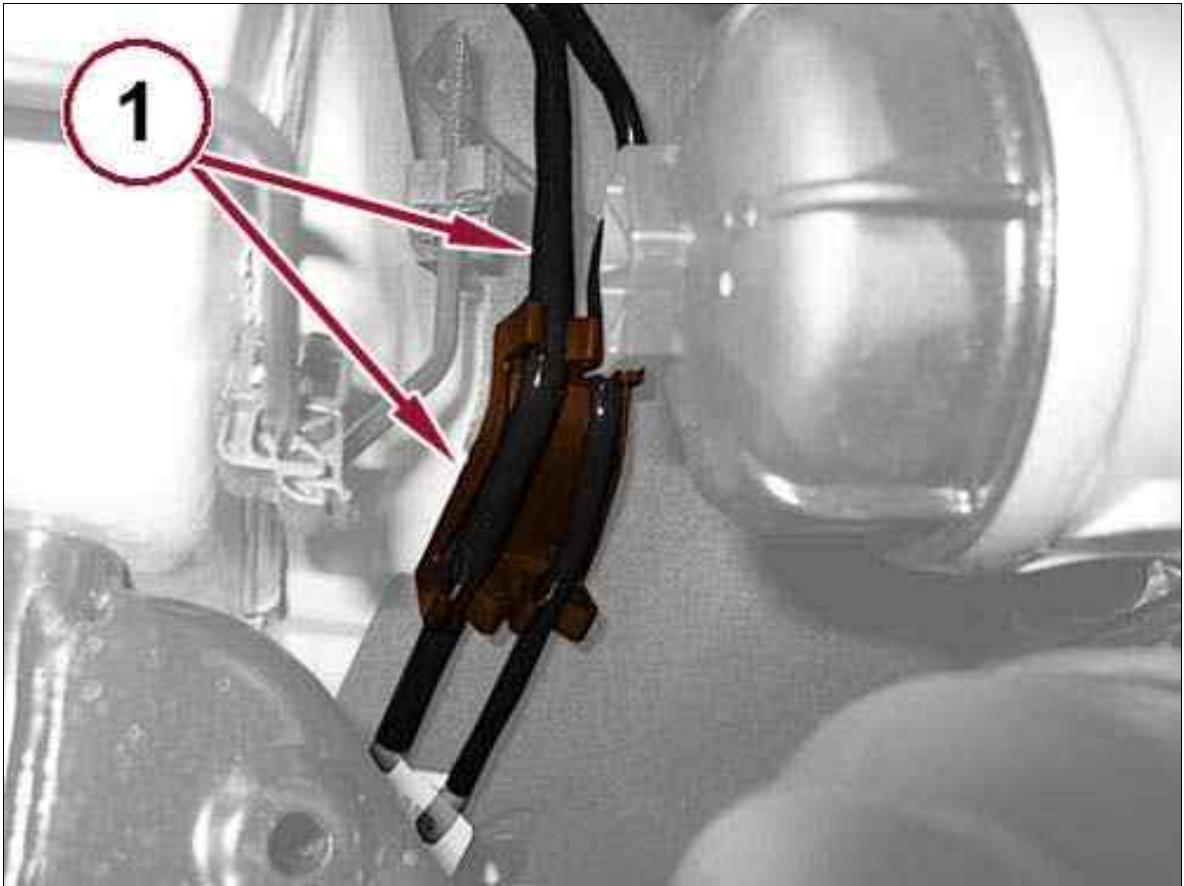
Fig 16: Fuel Delivery/Return Lines & Retaining Clips



Courtesy of CHRYSLER GROUP, LLC

30. Disengage the fuel supply and return pipes from the retaining clips (1).

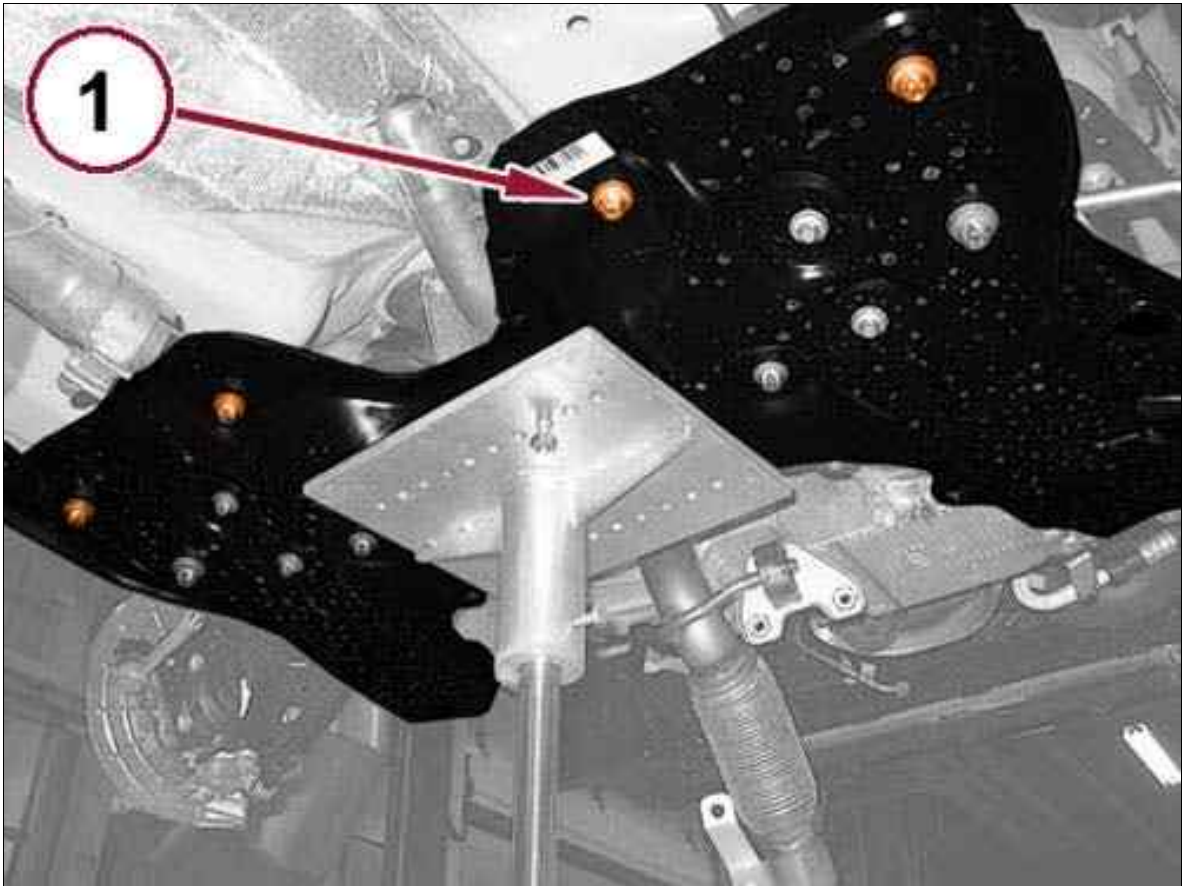
Fig 17: Fuel Delivery/Return Lines & Retaining Clips



Courtesy of CHRYSLER GROUP, LLC

31. Unhook the fuel lines and remove them from the retaining clip (1).

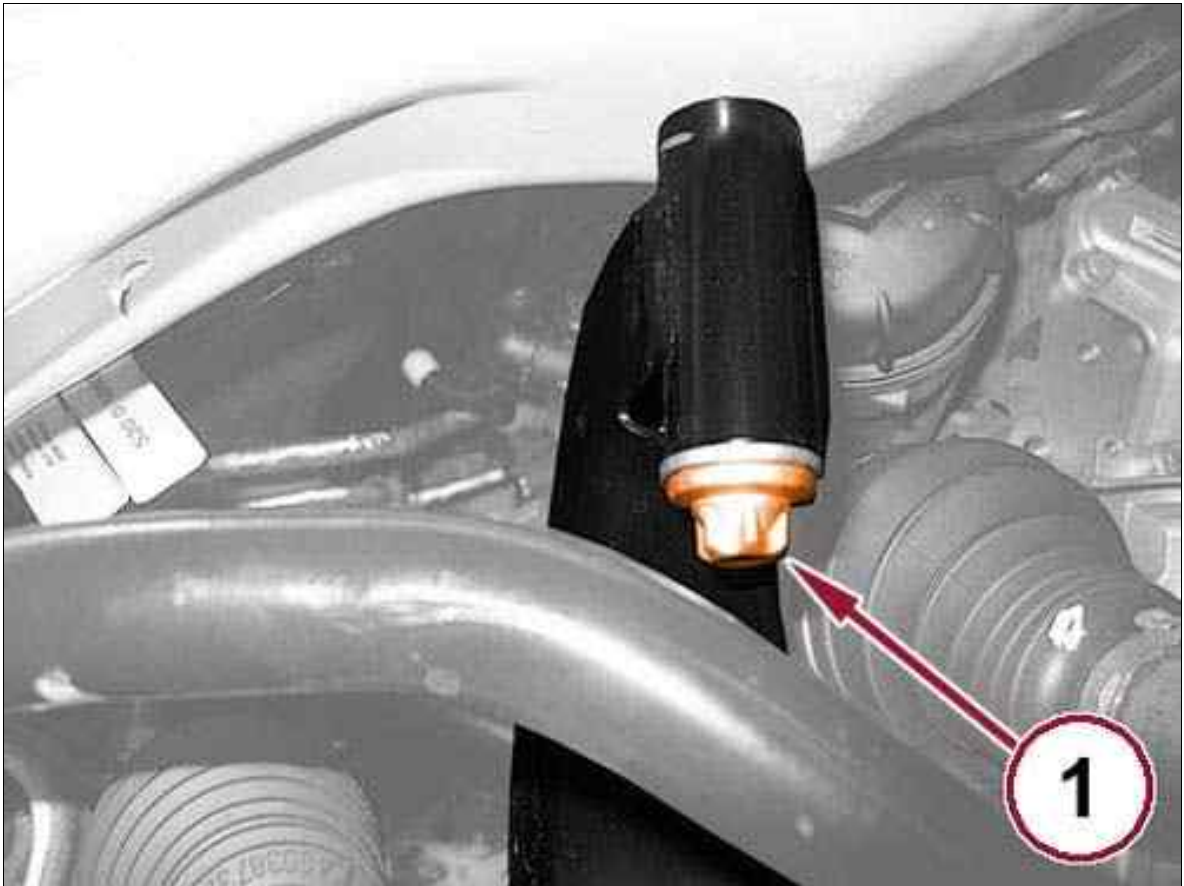
Fig 18: Suspension Crossmember Rear Bolts



Courtesy of CHRYSLER GROUP, LLC

32. Place a suitable hydraulic lift under the rear suspension cross member.
33. Remove the screws (1) securing the rear suspension cross member to the body.

Fig 19: Suspension Crossmember Left And Right Siderail Bolts

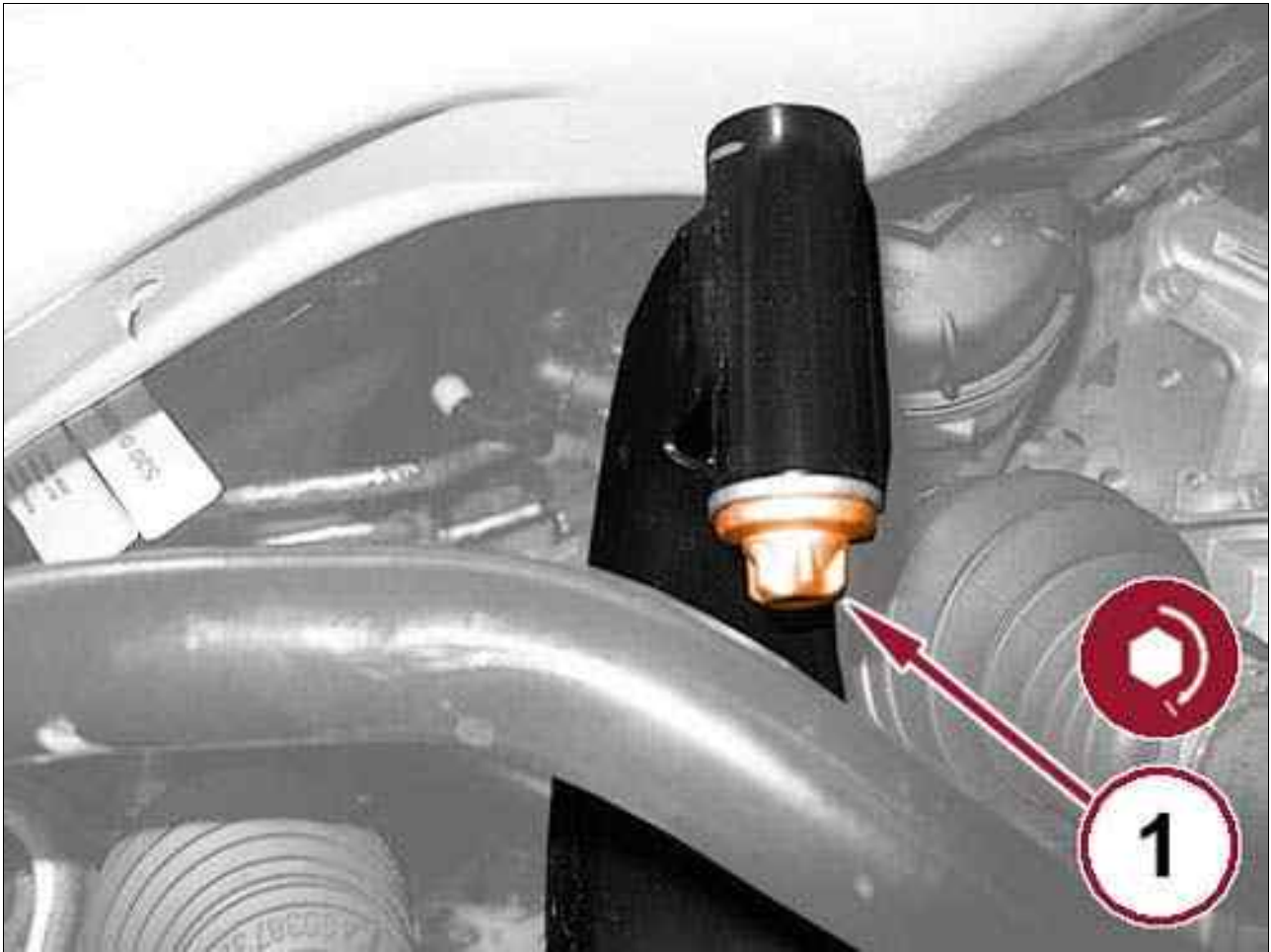


Courtesy of CHRYSLER GROUP, LLC

34. Remove the screws (1) securing the rear suspension cross member to the left and right side panels.
35. Use the hydraulic lift to lower the rear suspension cross member.
36. Remove the hydraulic lift.
37. Working from the engine compartment, remove the front fuel return pipe.

**FUEL DELIVERY > LINES, FUEL > REMOVAL AND INSTALLATION > 2.0L >
INSTALLATION - 1040B54 FUEL RETURN PIPE FRONT - 2.0L**

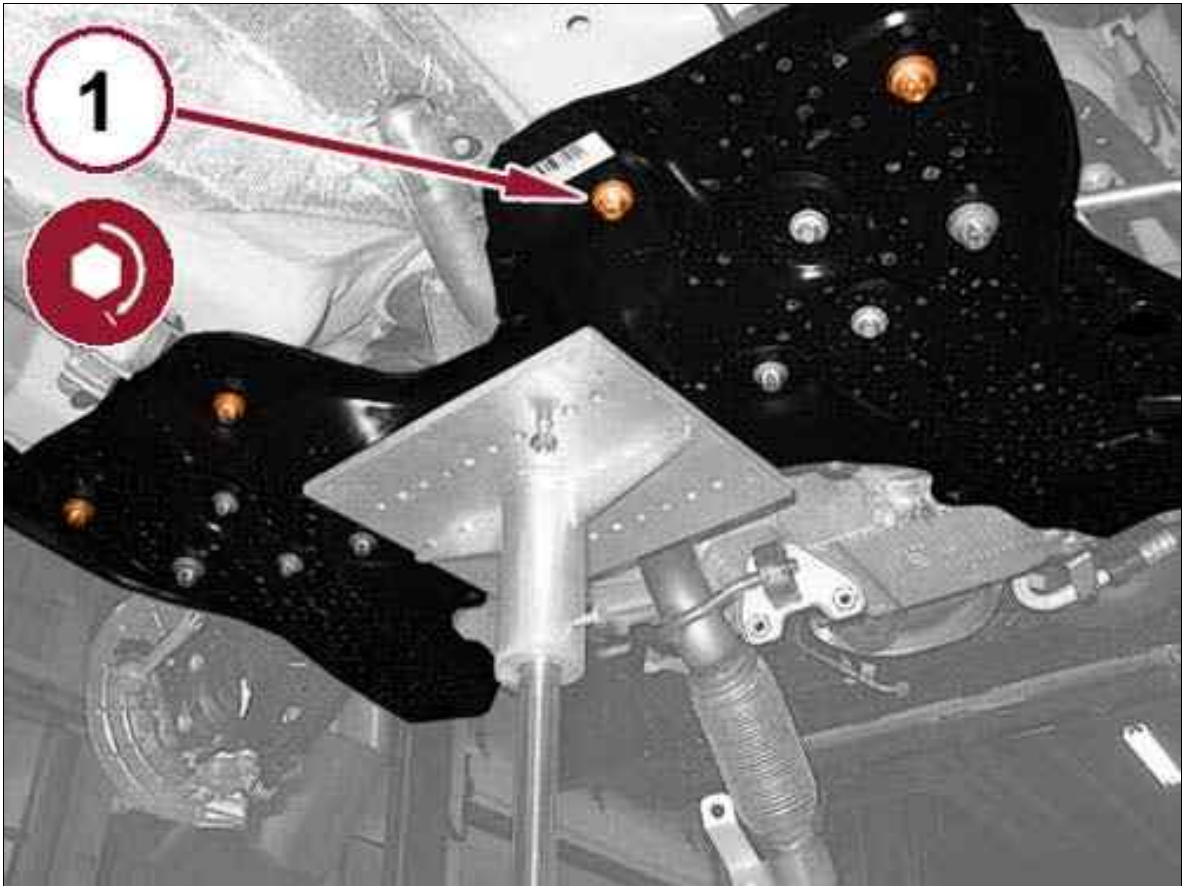
Fig 1: Suspension Crossmember Left And Right Siderail Bolts



Courtesy of CHRYSLER GROUP, LLC

1. Position the front fuel return tube into the engine compartment and engage with the retaining clips.
2. Place a suitable hydraulic lift under the rear suspension cross member and raise the cross member into place.
3. Install and tighten the screws (1) securing the rear suspension cross member to the left and right side panels. Tighten the screws to the proper torque specification.

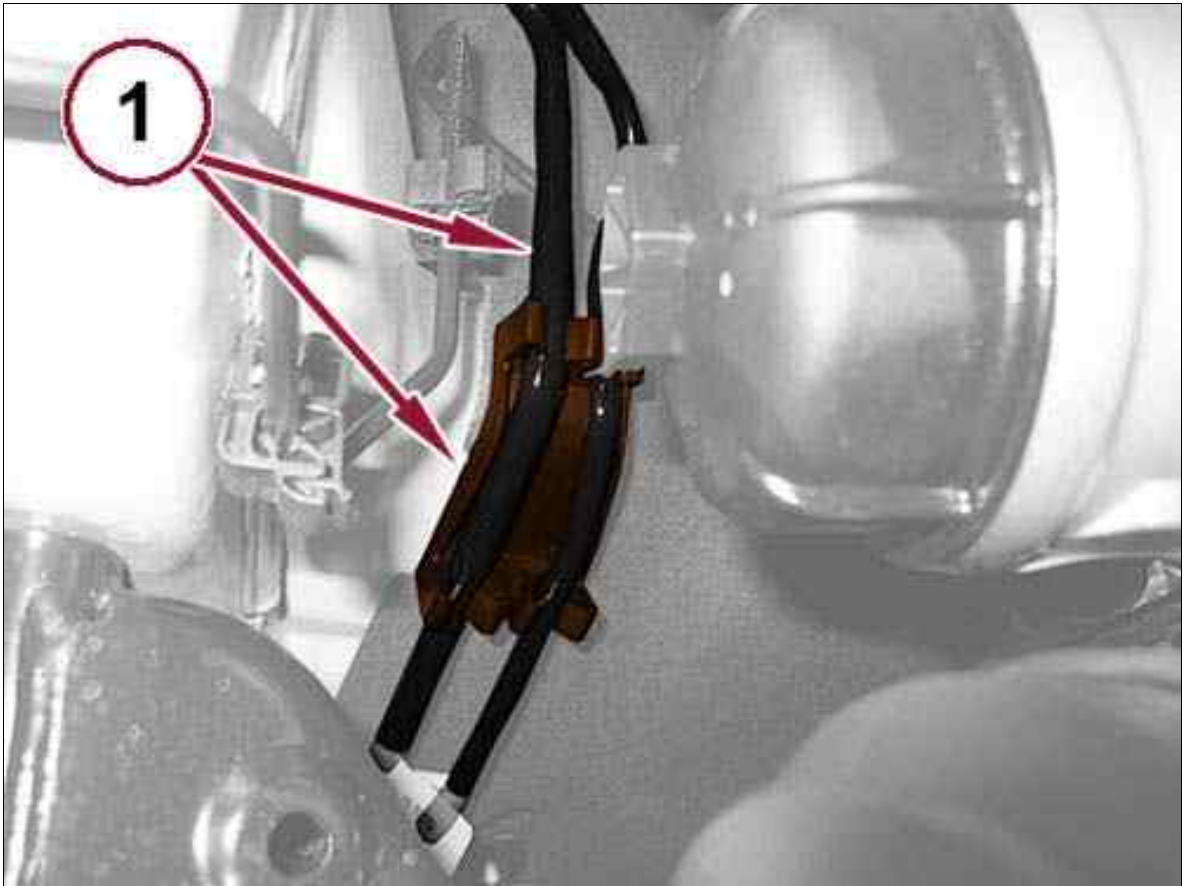
Fig 2: Suspension Crossmember To Body Rear Bolts



Courtesy of CHRYSLER GROUP, LLC

4. Install and tighten the screws (1) securing the rear suspension cross member to the body.
Tighten the screws to the proper torque specification.
5. Remove the hydraulic lift.

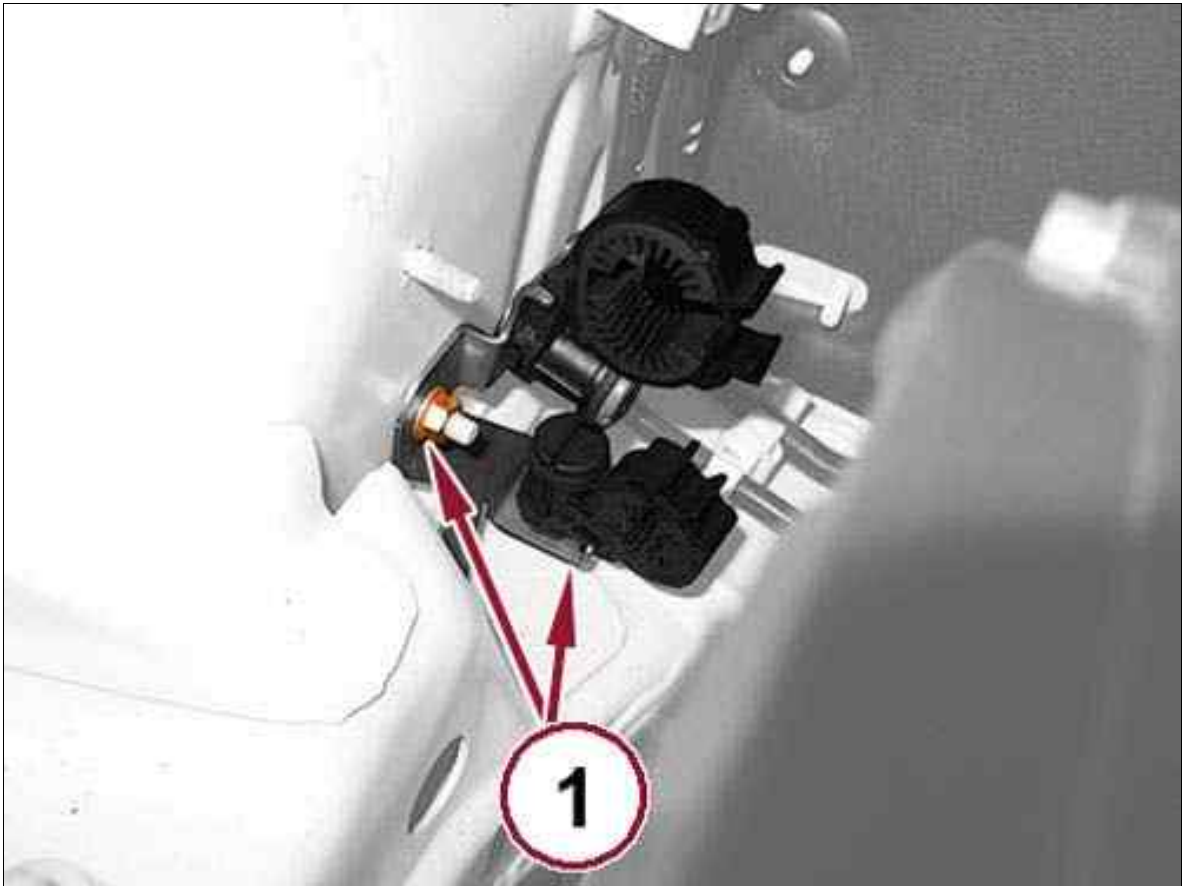
Fig 3: Fuel Delivery/Return Lines & Retaining Clips



Courtesy of CHRYSLER GROUP, LLC

6. Engage the fuel supply and return tubes with the retaining clips (1).

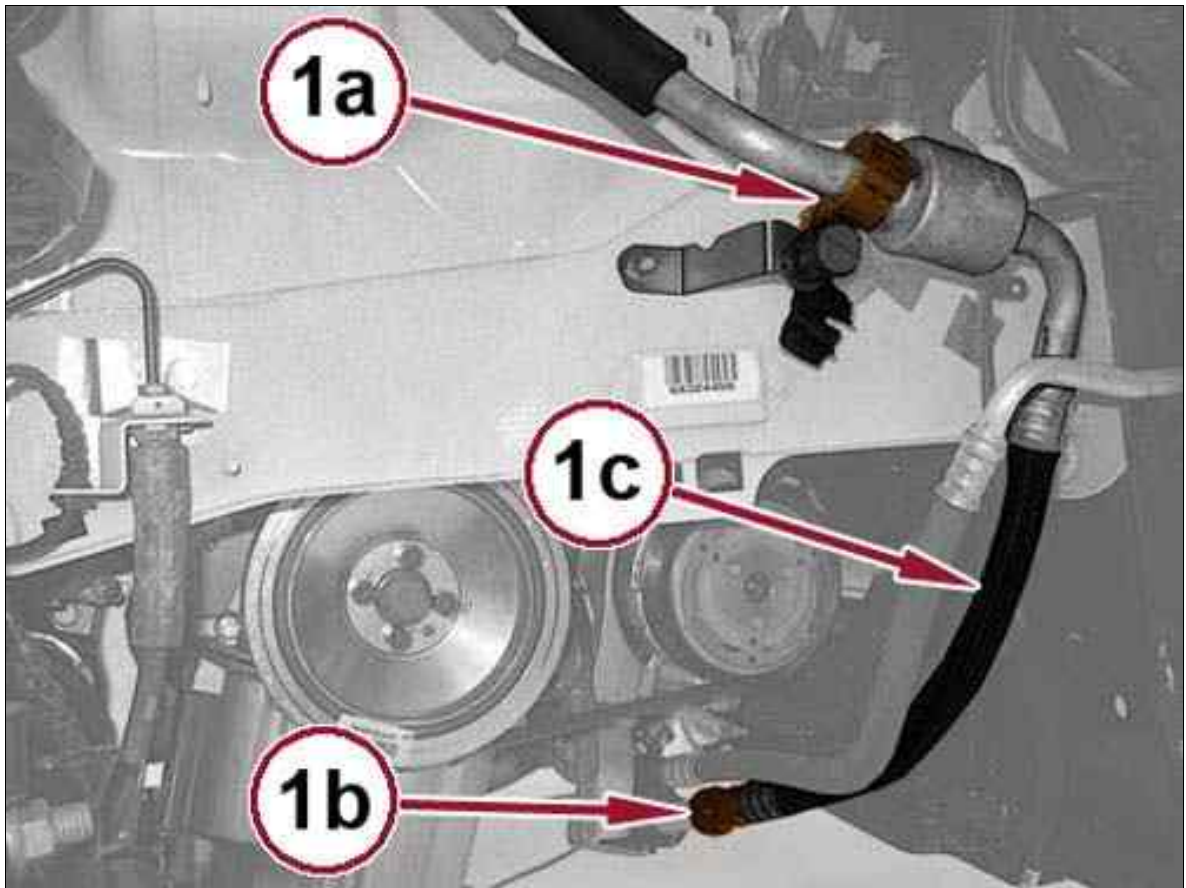
Fig 4: Retaining Bracket & Nut



Courtesy of CHRYSLER GROUP, LLC

7. Position the refrigerant line bracket (1) and secure it with a nut.

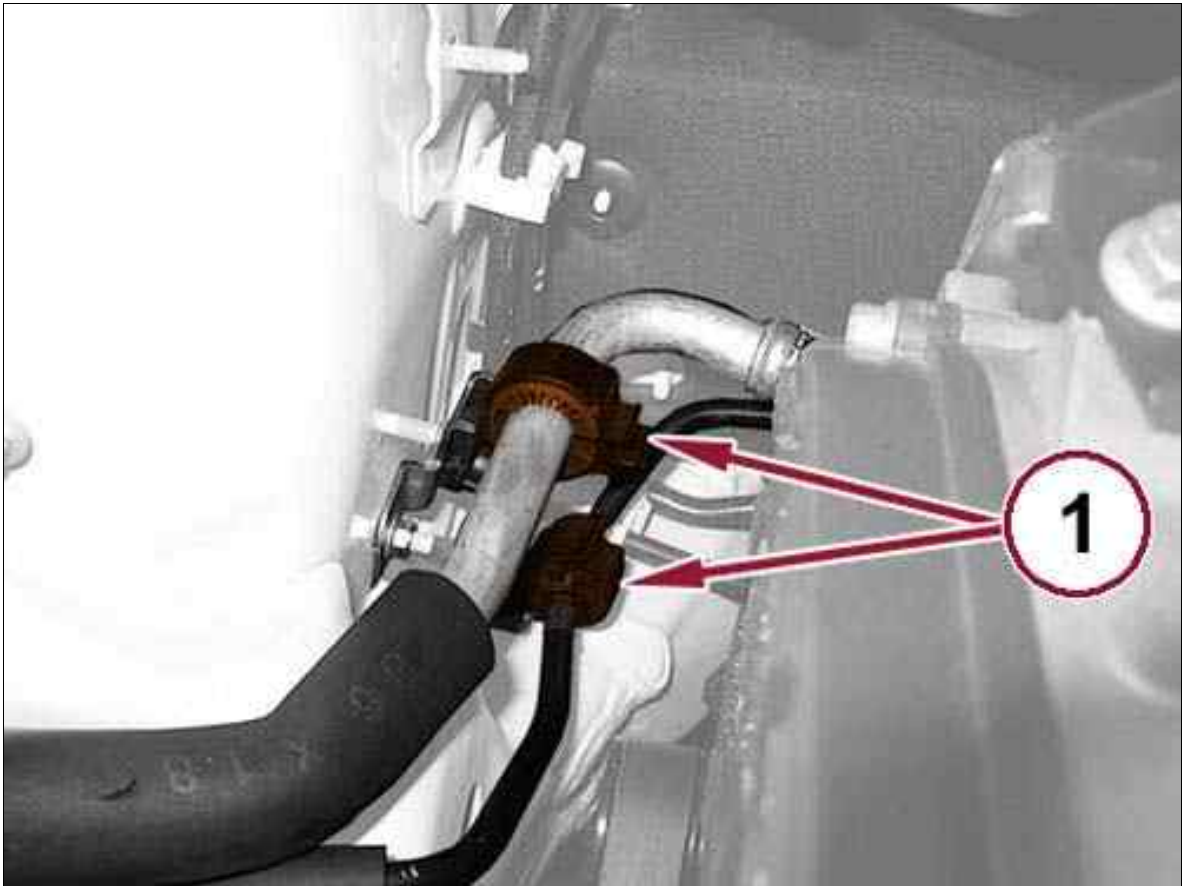
Fig 5: A/C Suction Line, Retaining Clip & Coupling



Courtesy of CHRYSLER GROUP, LLC

8. Position the refrigerant return line (1c), reconnect the quick connect (1b) and close the retaining clip (1a). Always use new o-rings on refrigerant line connections.

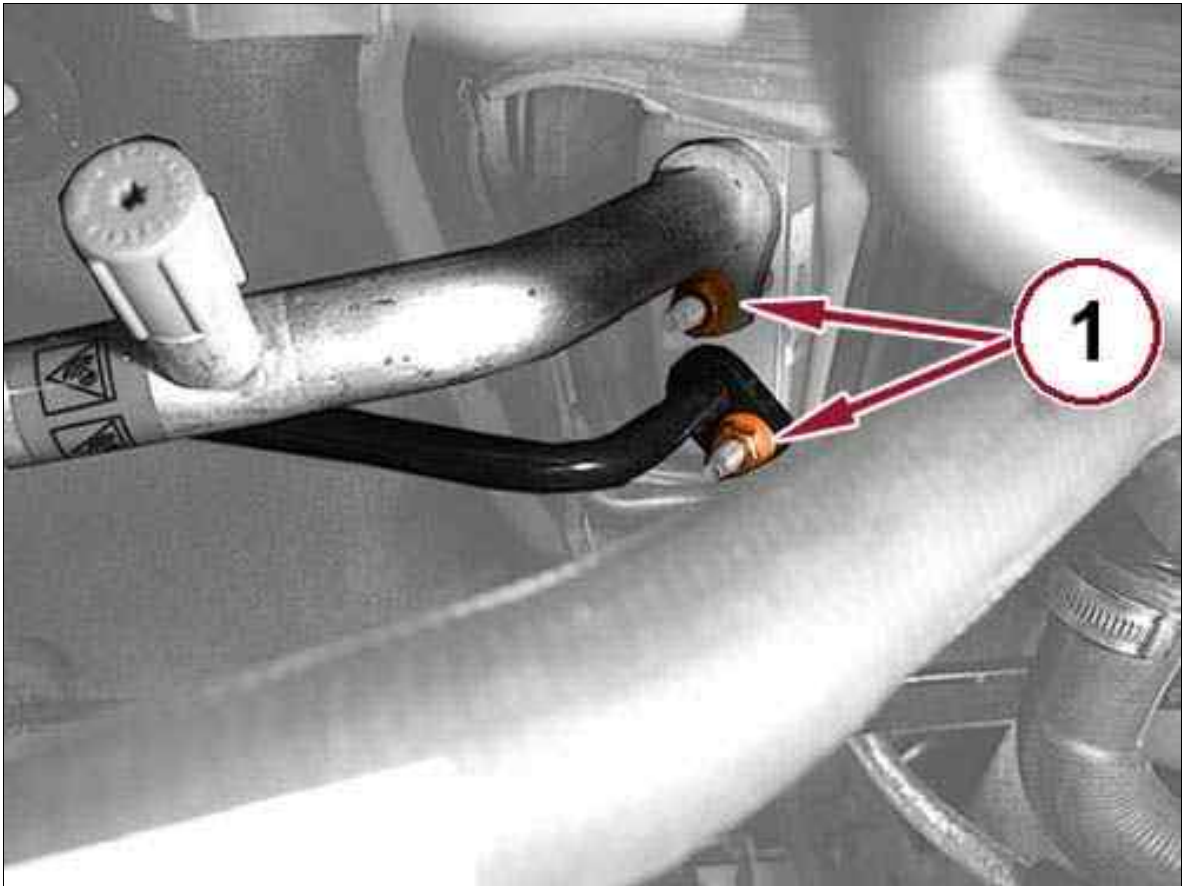
Fig 6: A/C Suction And Liquid Line Retaining Clips



Courtesy of CHRYSLER GROUP, LLC

9. Close the retaining clips (1) on the refrigerant lines.

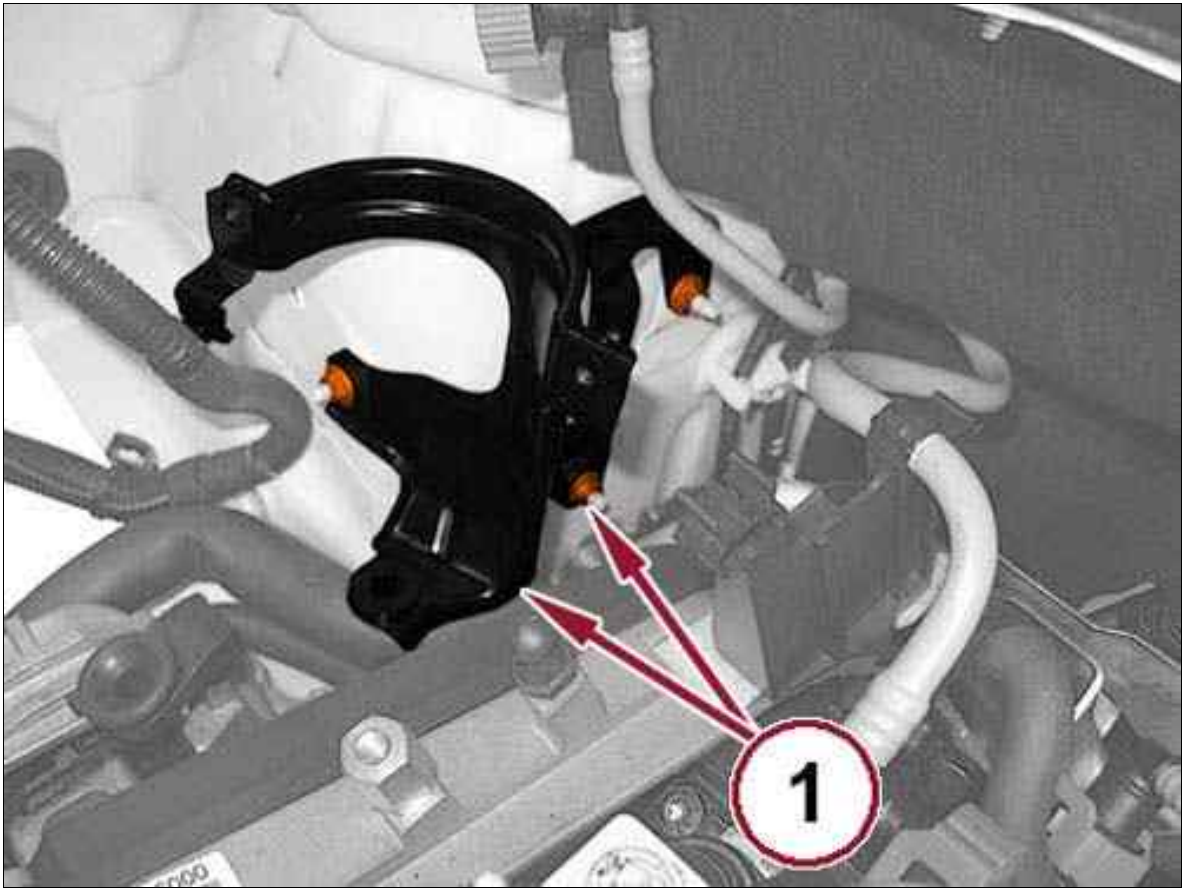
Fig 7: A/C Suction & Liquid Line Nuts



Courtesy of CHRYSLER GROUP, LLC

10. Install and tighten the nuts (1) that secure the refrigerant lines to the expansion valve. Always use new o-rings on refrigerant line connections. Tighten the nuts securely.

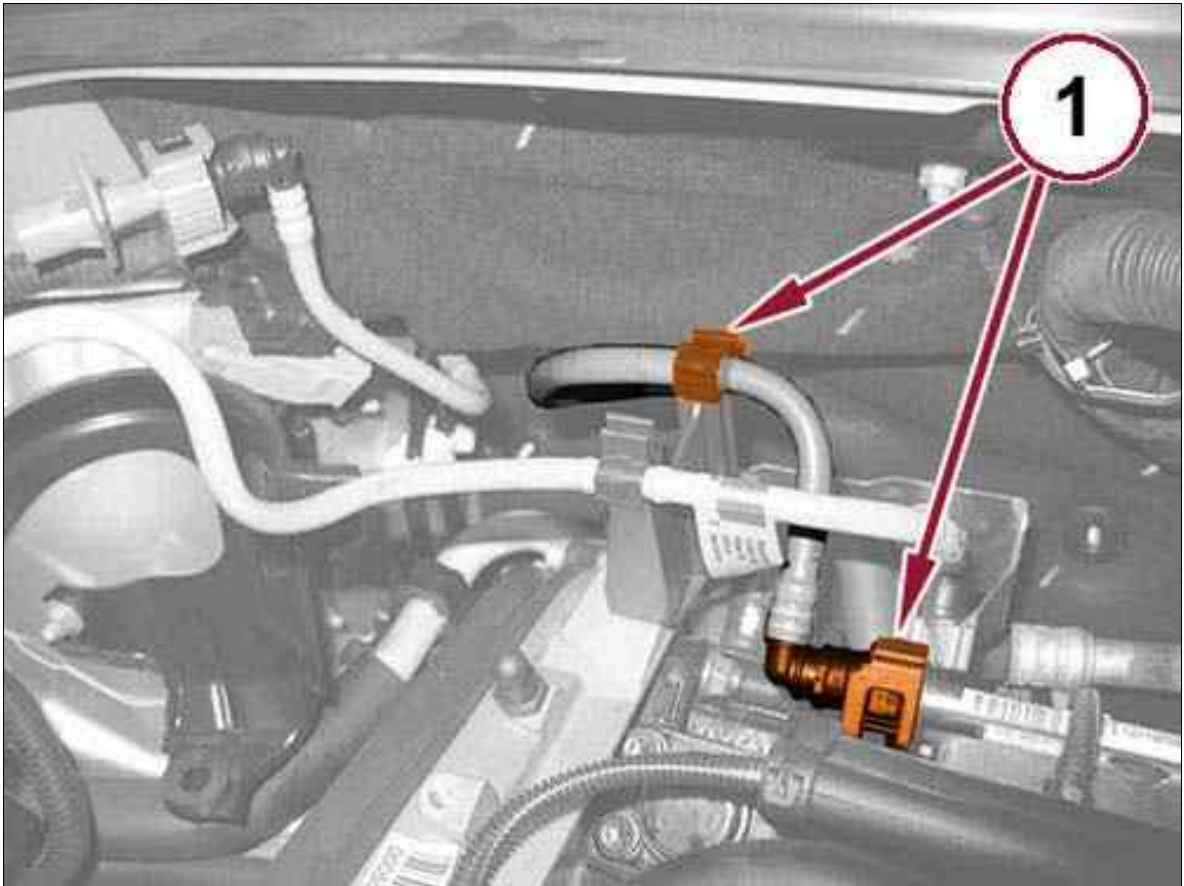
Fig 8: Fuel Filter Support Bracket & Nuts



Courtesy of CHRYSLER GROUP, LLC

11. Position the fuel filter support bracket (1), then install and tighten the nuts to secure it. Tighten the nuts securely.

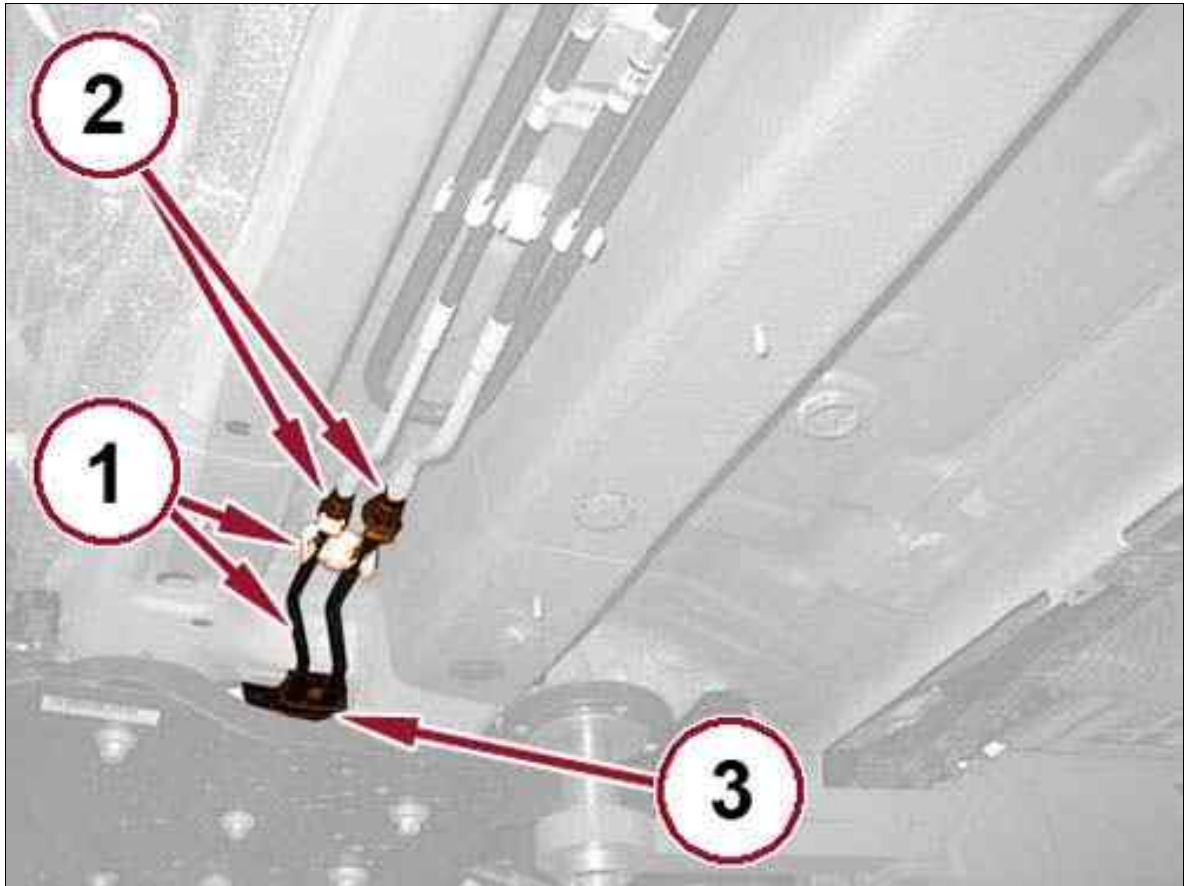
Fig 9: Fuel Return Pipe Coupling & Retaining Clip



Courtesy of CHRYSLER GROUP, LLC

12. Reconnect the quick connect fitting (1) on the return line side of the return manifold and close the retaining clip.

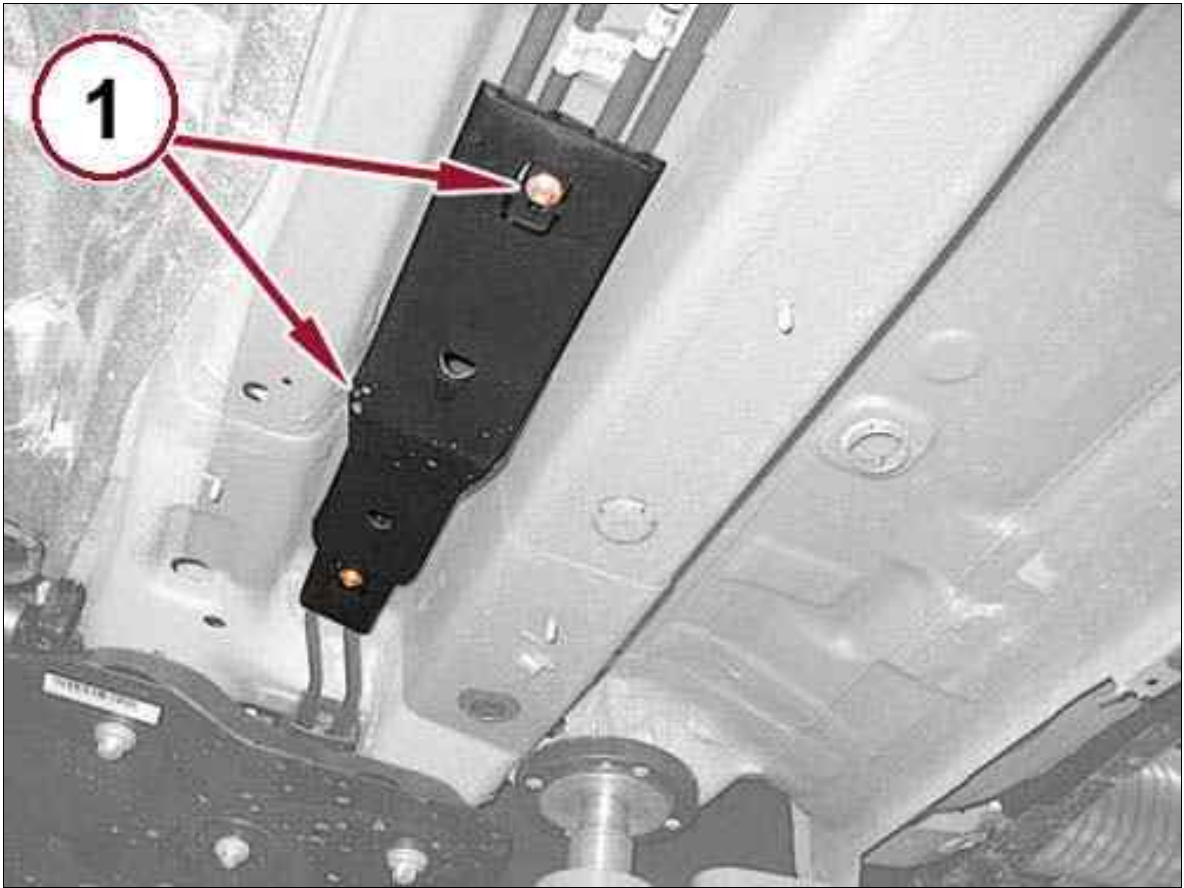
Fig 10: Fuel Lines, Retaining Clips & Couplings



Courtesy of CHRYSLER GROUP, LLC

13. Install the retaining clip (3).
14. Reconnect the fuel return and discharge tube quick connect fittings (2).
15. Engage the fuel tubes (1) with the retaining clips on the underbody.

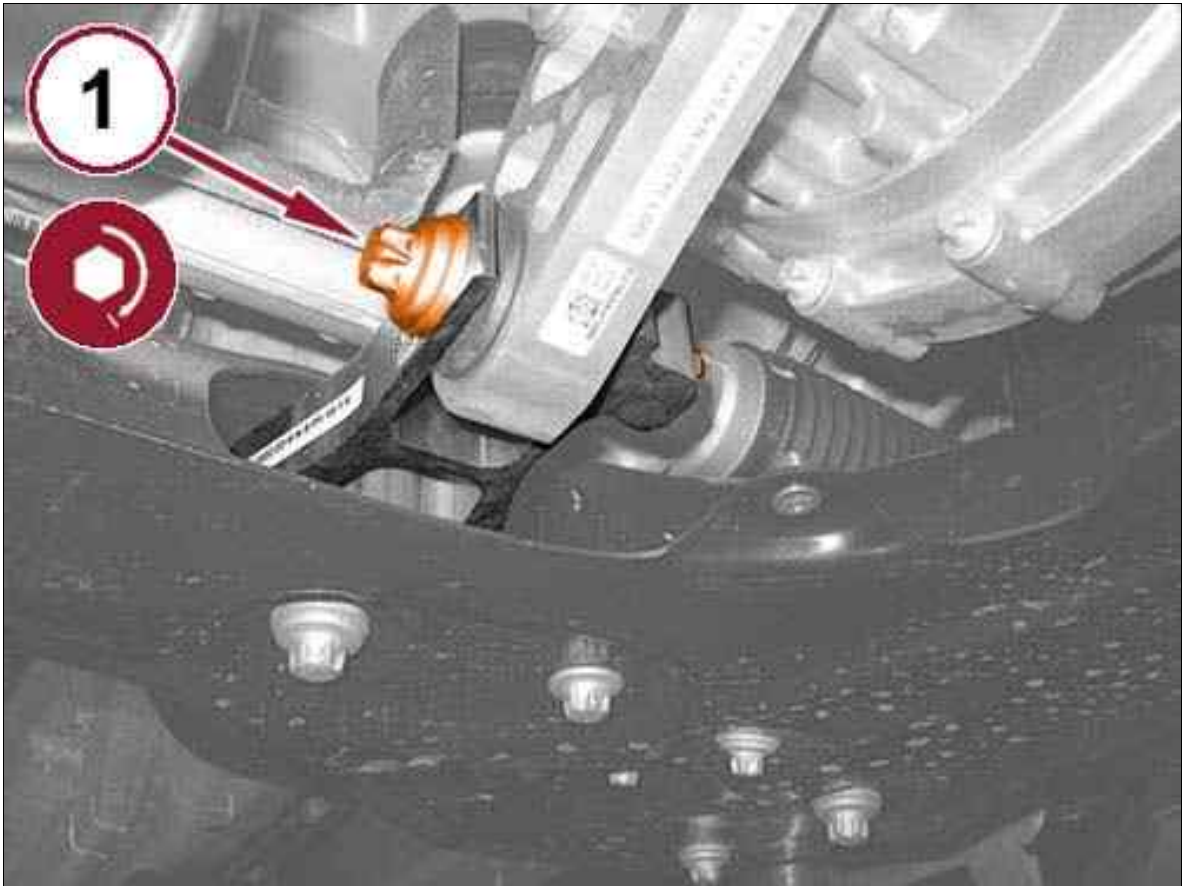
Fig 11: Fuel Line Shield & Bolts



Courtesy of CHRYSLER GROUP, LLC

16. Position the fuel tube shield to the underbody then install and tighten the screws (1) that secure it. Tighten the screws securely.

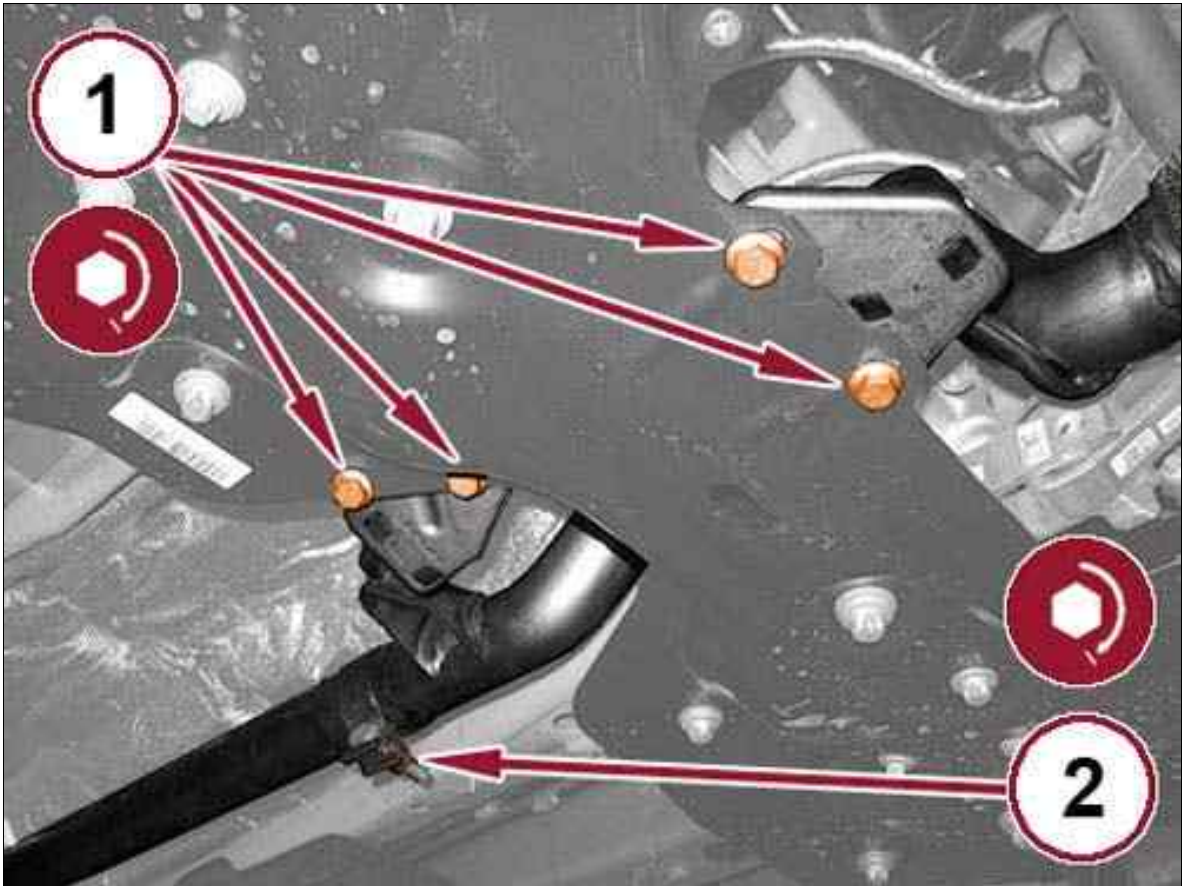
Fig 12: Dampening Rod To Crossmember Bolt



Courtesy of CHRYSLER GROUP, LLC

17. Install and tighten the screw (1) securing the rear mount to the transmission support. Tighten the screw to the proper torque specification.

Fig 13: Exhaust Dampening Rod Bolt & Collar Nut



Courtesy of CHRYSLER GROUP, LLC

18. Install and tighten the screws (1) that secure the return pipe support brackets to the side of the suspension cross member. Tighten the screws to the proper torque specifications.
19. Install and tighten the nut (2) for the clamp connecting the return pipes. Tighten the nut to the proper torque specifications.

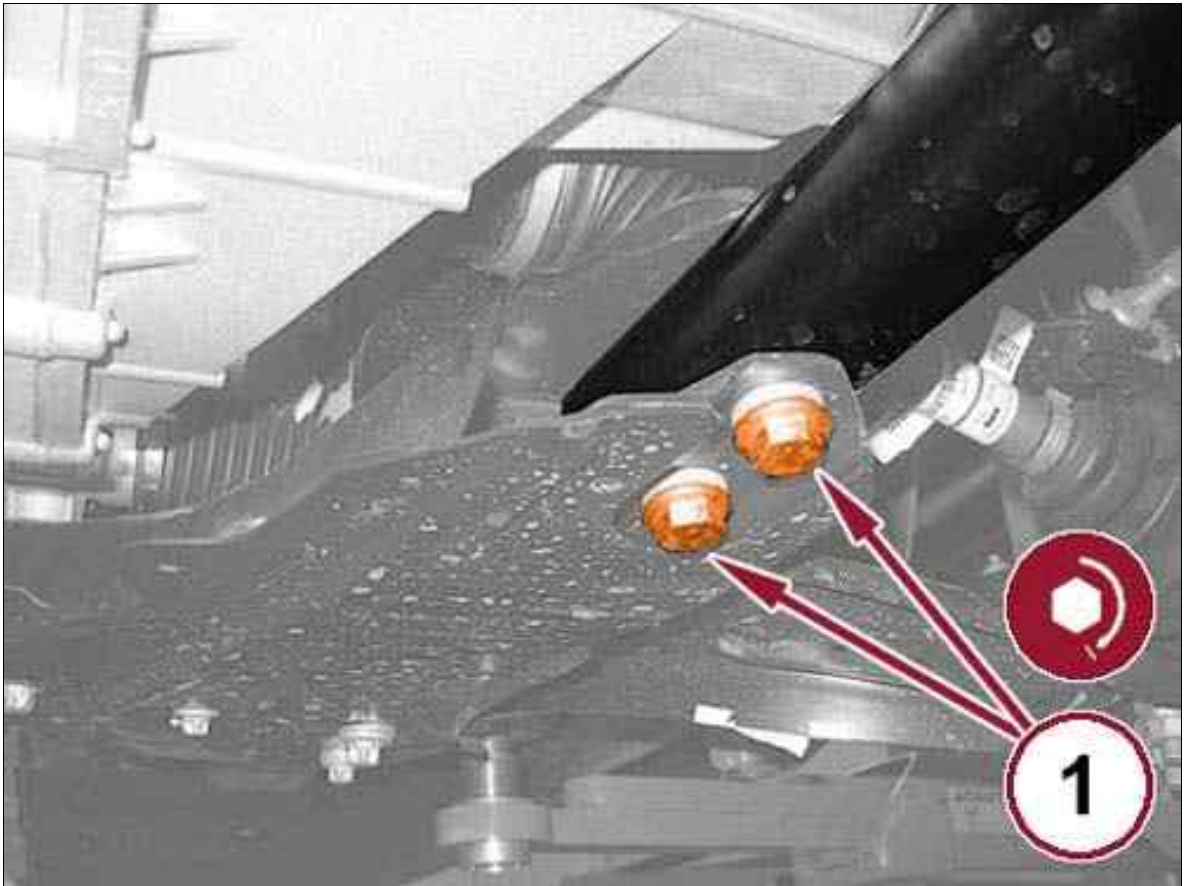
Fig 14: Joint Stabilizer Bars & Nut



Courtesy of CHRYSLER GROUP, LLC

20. Engage the stabilizer links to each of the left and right front strut brackets, then install and tighten the lock nuts (1). Tighten the nuts to the proper torque specifications.

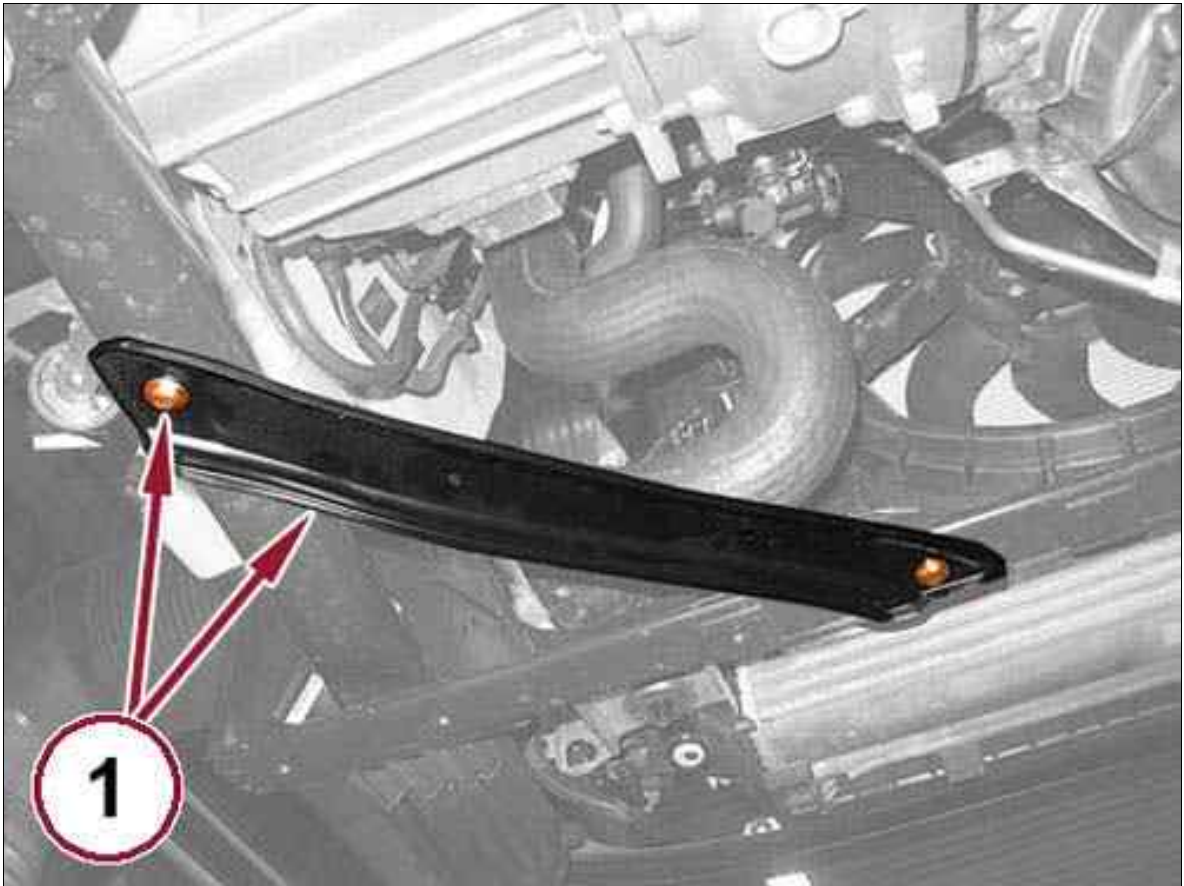
Fig 15: Right And Left Lower Load Beams Bottom Bolts



Courtesy of CHRYSLER GROUP, LLC

21. Install and tighten the screws (1) that secure the left and right brackets of the front bumper bar to the front end structure. Tighten the screws to the proper torque specifications.

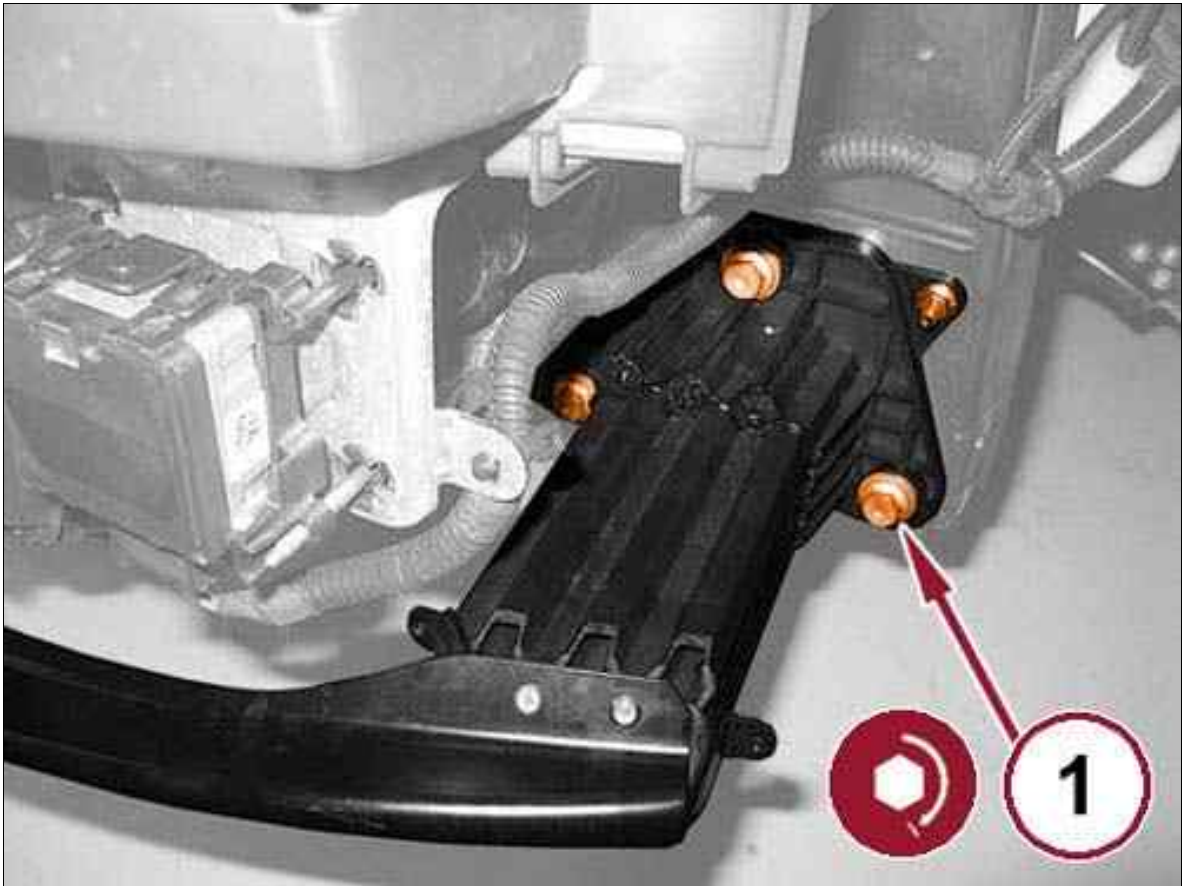
Fig 16: Right And Left Front Lower Frame Struts & Bolts



Courtesy of CHRYSLER GROUP, LLC

22. Install and tighten the screws that secure the left and right reinforcements (1) to the front end structure. Tighten the screws to the proper torque specifications.

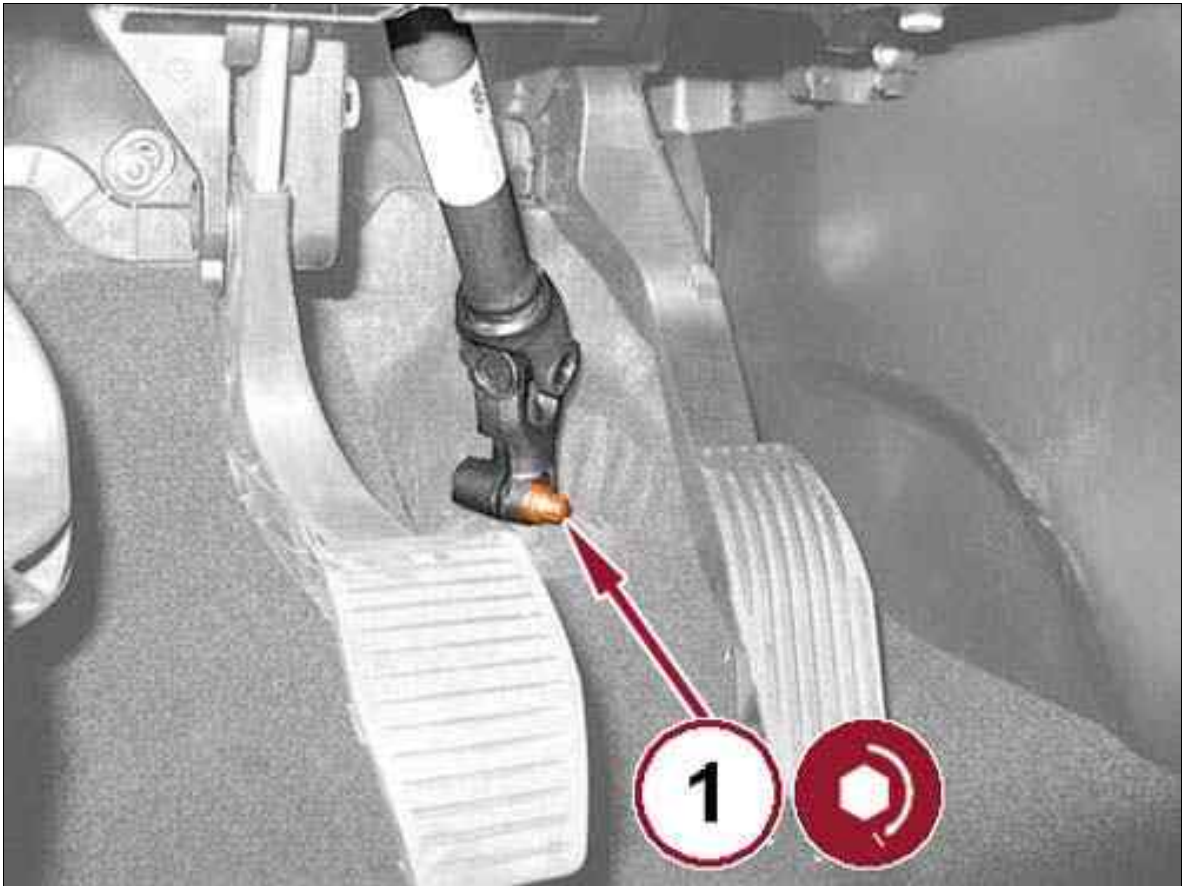
Fig 17: Right And Left Lower Load Beam Fasteners At The Front End



Courtesy of CHRYSLER GROUP, LLC

23. Install and tighten the screws (1) that secure the left and right brackets of the front bumper bar to the front end structure. Tighten the screws to the proper torque specifications.

Fig 18: Steering Column-To-Pinion Steering Box Screw



Courtesy of CHRYSLER GROUP, LLC

24. Install and tighten the screw (1) that secures the steering column shaft coupling to the steering rack pinion shaft. Tighten the screw to the proper torque specification.
25. Reinstall the engine air cleaner assembly into the vehicle.
26. Reinstall the fuel filter into the vehicle. Refer to FILTER, FUEL, REMOVAL AND INSTALLATION .
27. Reinstall the splash shield into the right front wheel house of the vehicle. Refer to SHIELD, SPLASH, FRONT WHEELHOUSE, REMOVAL AND INSTALLATION
28. Reinstall the front bumper fascia onto the vehicle. Refer to FASCIA, FRONT, REMOVAL AND INSTALLATION .
29. Reinstall the front belly pan onto the underside of the vehicle. Refer to BELLY PAN, REMOVAL AND INSTALLATION or BELLY PAN, SIDE, REMOVAL AND INSTALLATION .
30. Evacuate and recharge the air conditioning system. Refer to PLUMBING, STANDARD PROCEDURE .
31. Reinstall the engine cover into the vehicle. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .

**FUEL DELIVERY > LINES, FUEL > REMOVAL AND INSTALLATION > 2.0L > REMOVAL
- REAR FUEL DELIVERY LINE - 2.0L**

⚠ CAUTION:

Cleanliness cannot be overemphasized when handling or replacing diesel fuel system components. This especially includes the fuel injectors, high-pressure fuel lines and fuel injection pump. Very tight tolerances are used with these parts. Dirt contamination could cause rapid part wear and possible plugging of fuel injector nozzle tip holes. This in turn could lead to possible engine misfire. Always wash/clean any fuel system component thoroughly before disassembly and then air dry. Cap or cover any open part after disassembly. Before assembly, examine each part for dirt, grease or other contaminants and clean if necessary. When installing new parts, lubricate them with clean engine oil or clean diesel fuel only. DO NOT use any lubricating or sliding agents that contain water.

Fig 1: Fuel Pump Access Cover & Screws

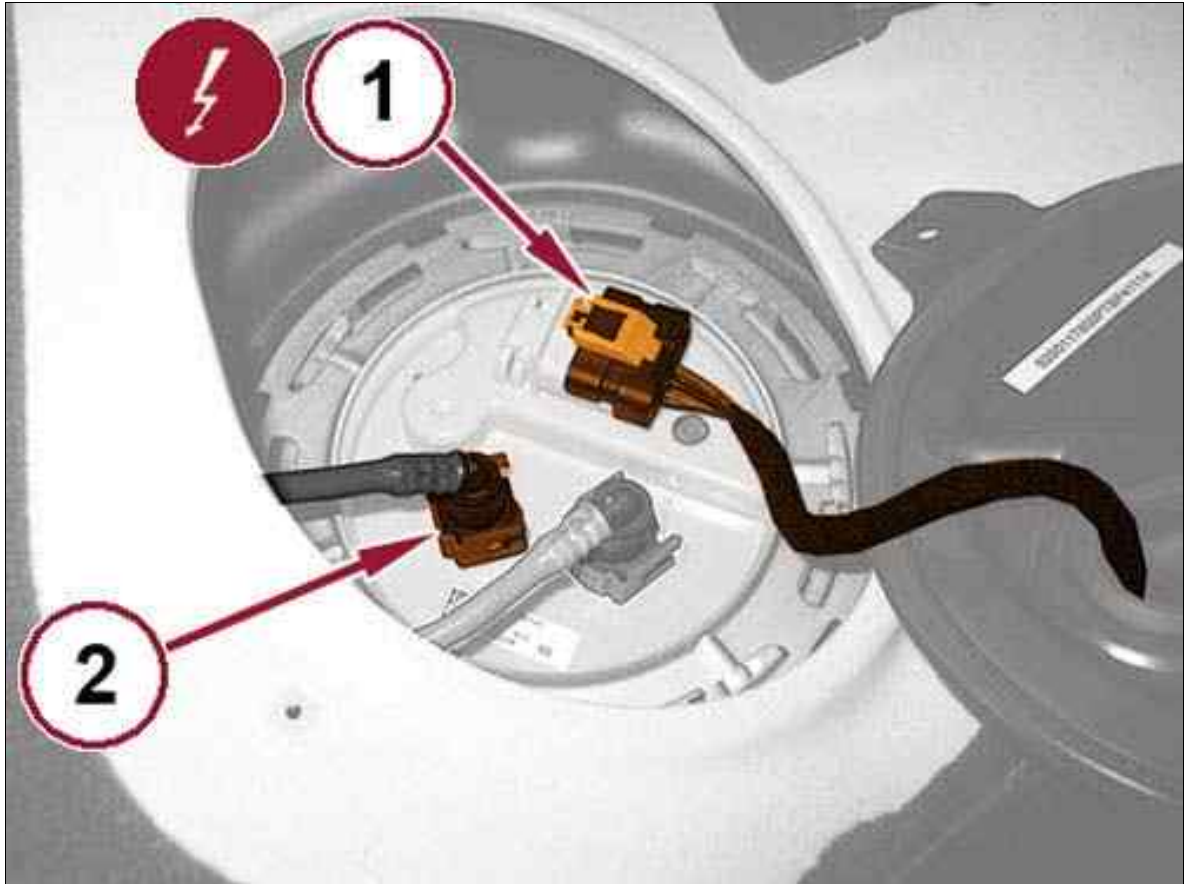


Courtesy of CHRYSLER GROUP, LLC

1. Open the cover of the Power Distribution Center (PDC) in the engine compartment and remove the fuel pump fuse (F21 - 15 ampere).
2. Wait for the residual pressure in the fuel distribution manifold to be relieved.

3. Reinstall the fuel pump fuse (F21 - 15 ampere) and close the PDC cover.
4. Remove the rear seat cushion from the vehicle. Refer to SEAT CUSHION, REMOVAL AND INSTALLATION .
5. Lift the floor covering to access and remove the screws (1) that secure the fuel pump access cover to the floor panel and remove the access cover.

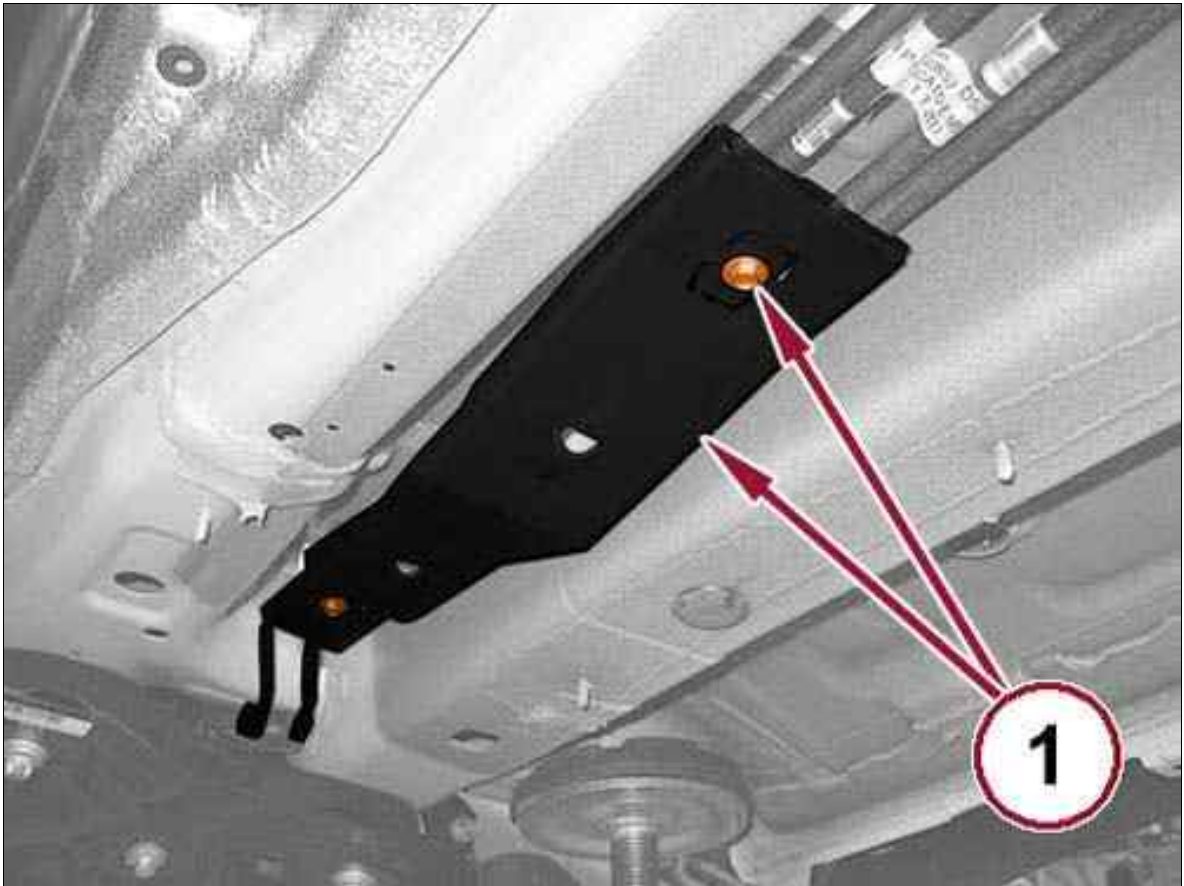
Fig 2: Wire Harness Connector & Rear Fuel Delivery Tube Quick Coupling



Courtesy of CHRYSLER GROUP, LLC

6. Disconnect the wire harness connector (1) from the electric fuel pump.
7. Disconnect the rear fuel delivery tube quick coupling (2) from the electric fuel pump.
8. Raise and support the vehicle.
9. Remove the side belly pan from the underbody of the vehicle. Refer to BELLY PAN, SIDE, REMOVAL AND INSTALLATION .

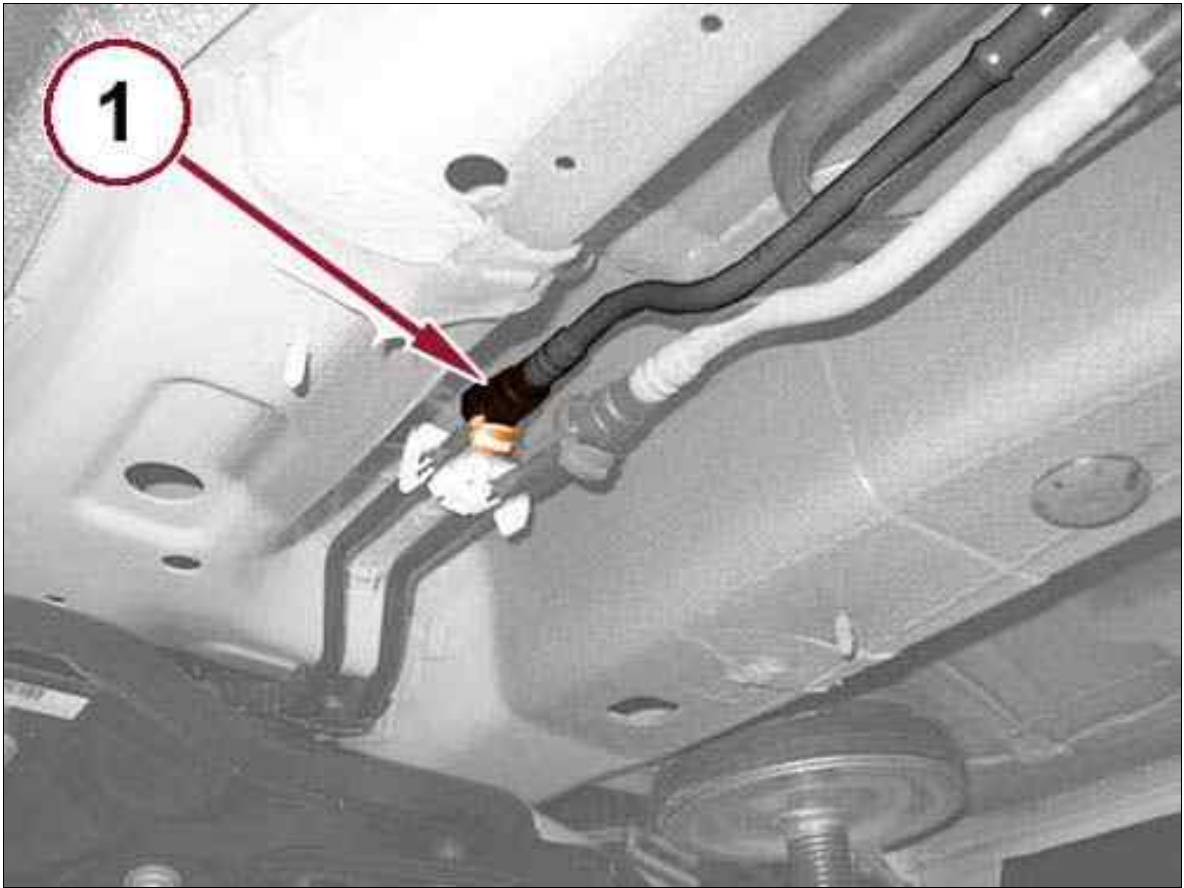
Fig 3: Fuel Tube Shield & Screws



Courtesy of CHRYSLER GROUP, LLC

10. Remove the screws (1) that secure the fuel tube shield beneath the underbody and remove the shield.

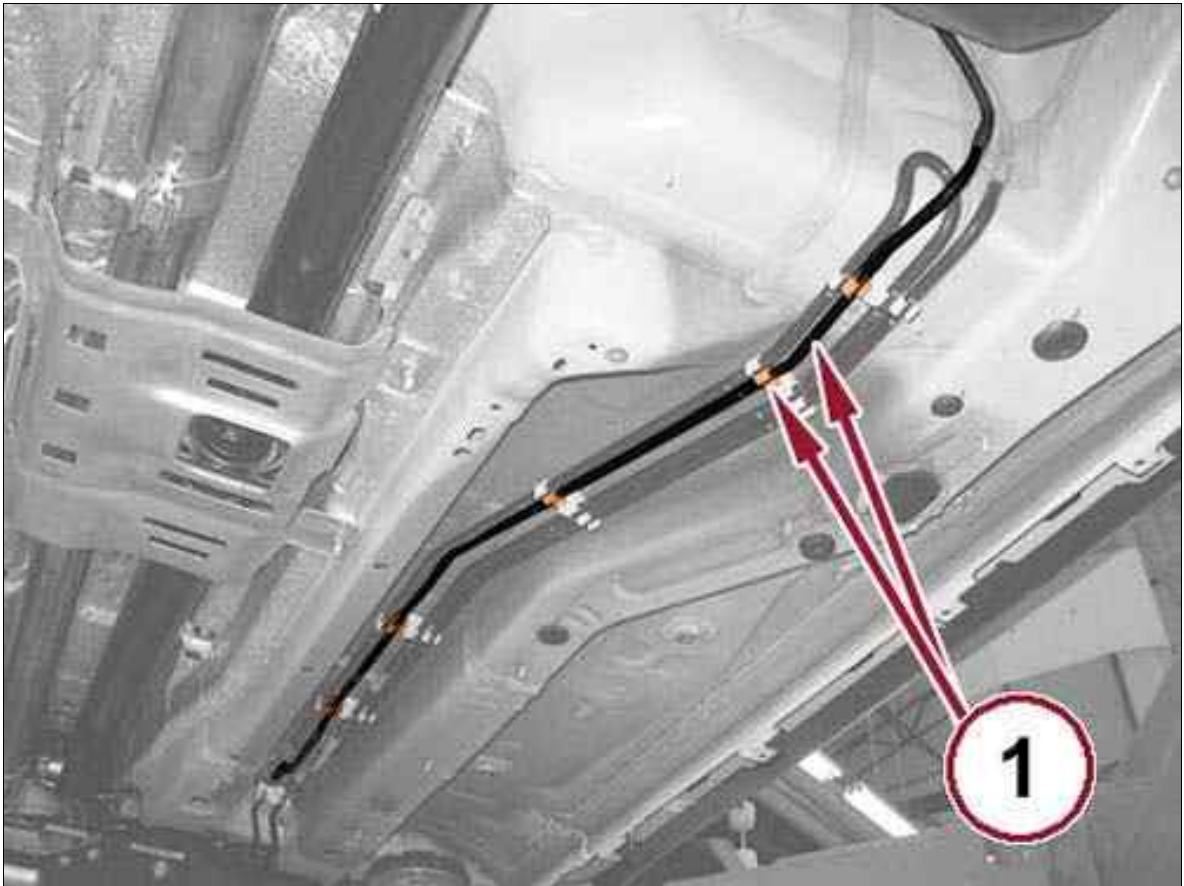
Fig 4: Rear Fuel Delivery Tube Front Quick Coupling



Courtesy of CHRYSLER GROUP, LLC

11. Disconnect the rear fuel delivery tube front quick coupling (1).

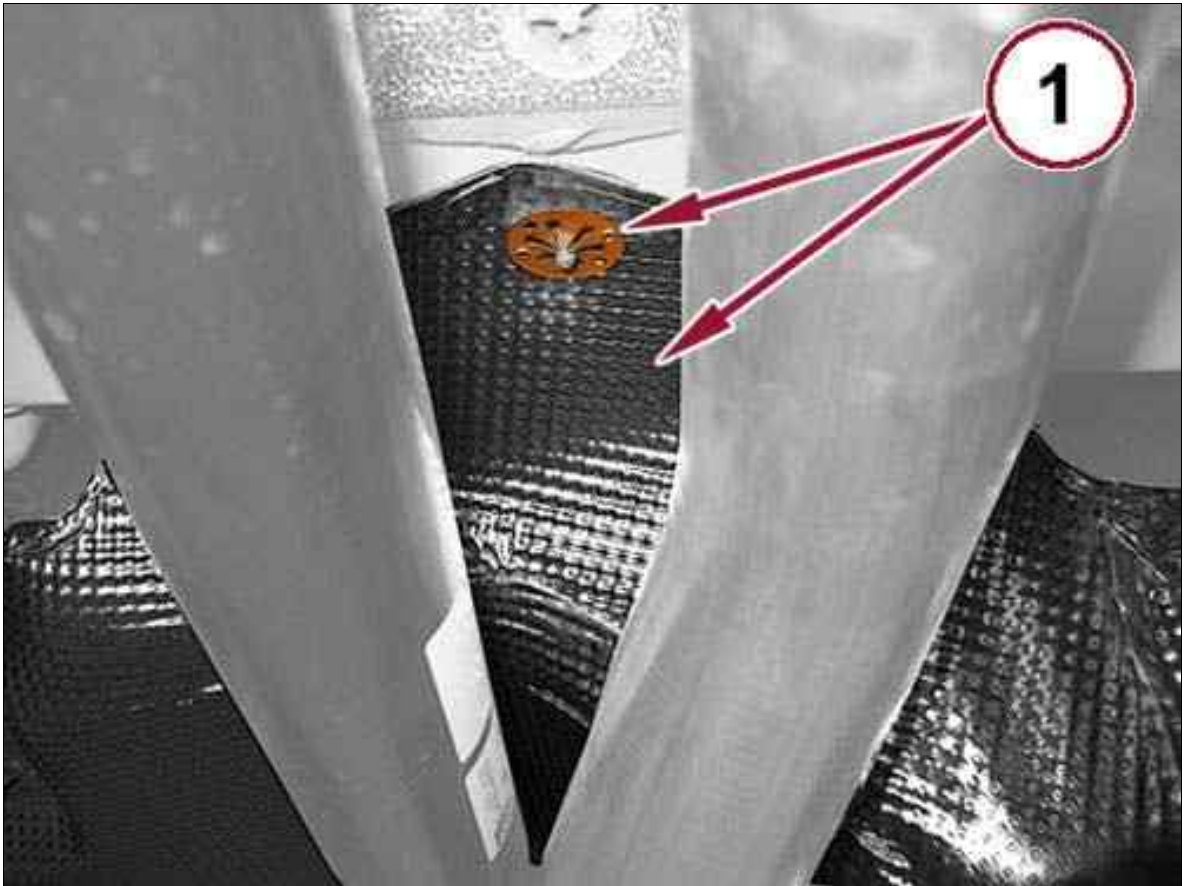
Fig 5: Rear Fuel Delivery Tube & Retaining Clips



Courtesy of CHRYSLER GROUP, LLC

12. Disengage the rear fuel delivery tube (1) from the retaining clips on the underbody.

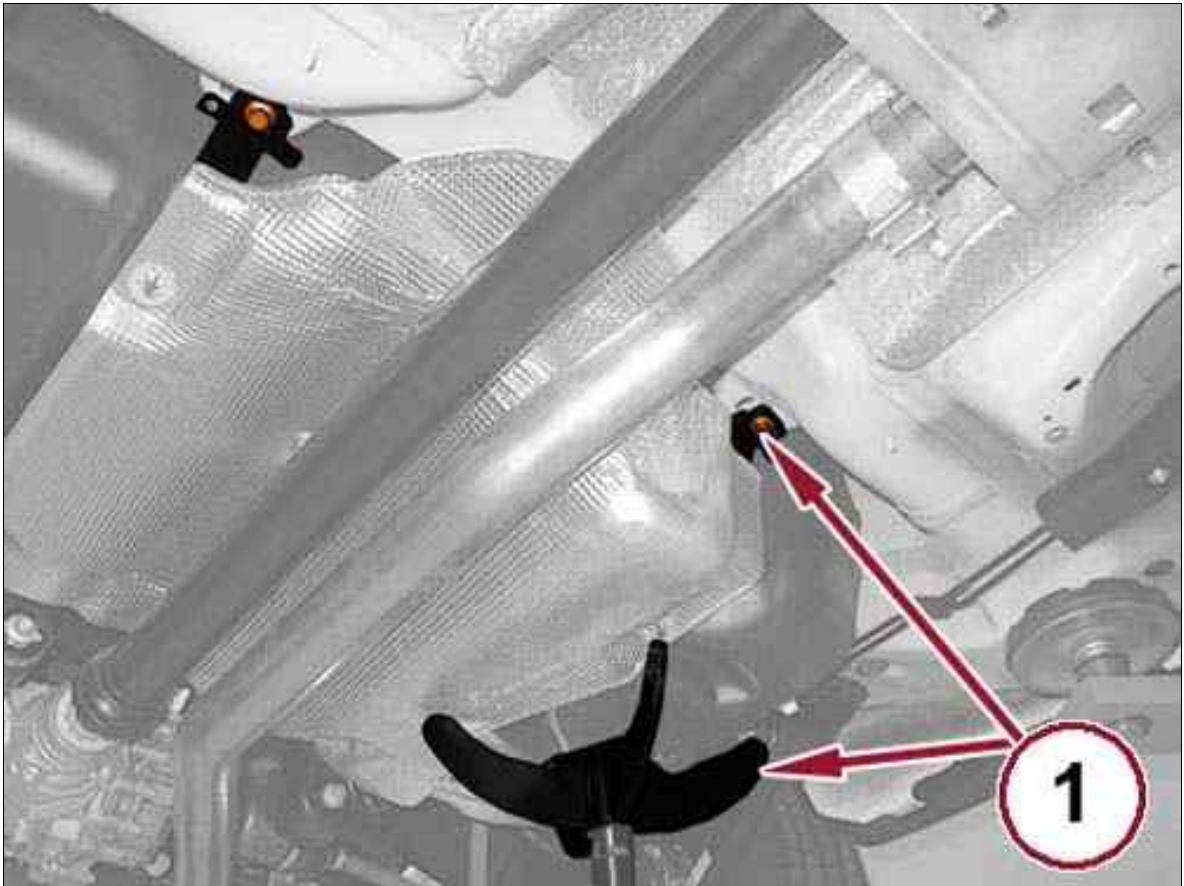
Fig 6: Fuel Tank Heat Shield Retaining Washer



Courtesy of CHRYSLER GROUP, LLC

13. Unscrew the serrated fuel tank heat shield retaining washer (1).

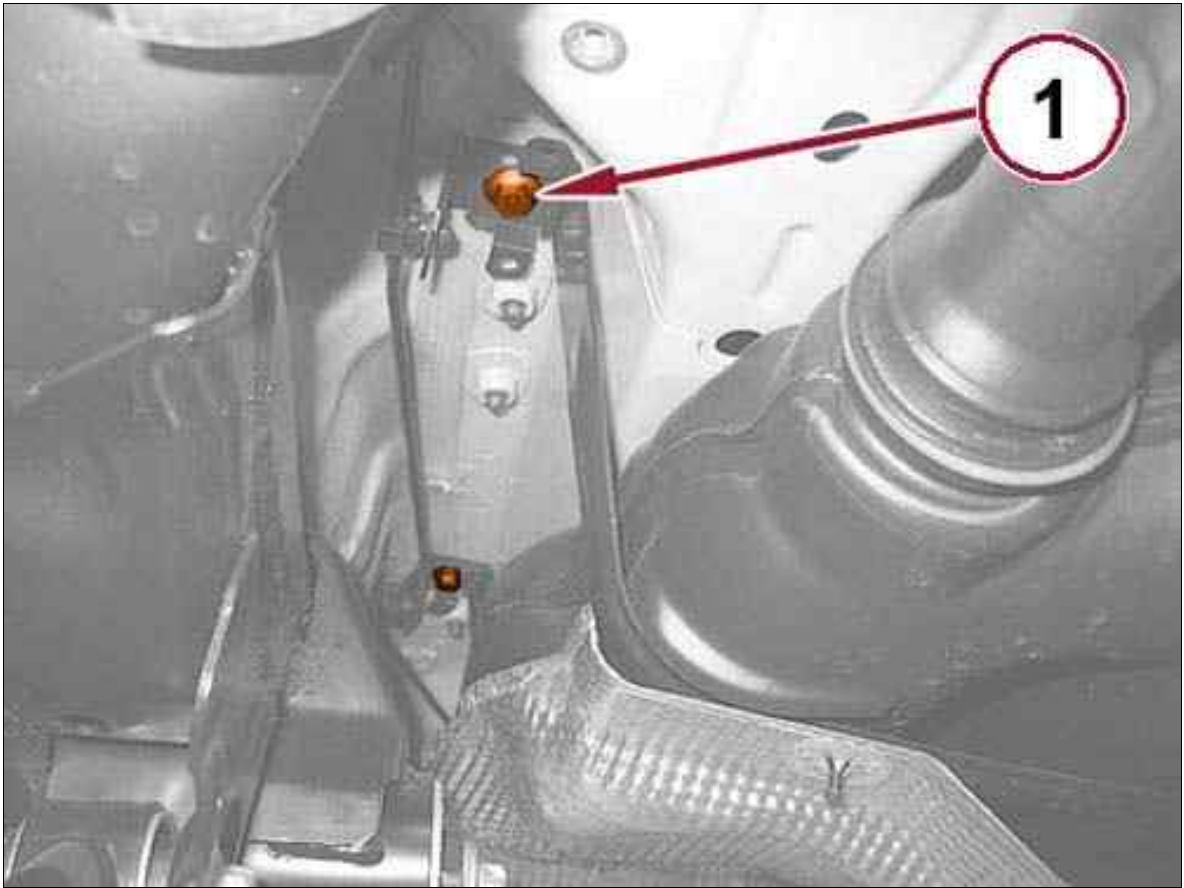
Fig 7: Front Tank Mounting Brackets & Hydraulic Lift



Courtesy of CHRYSLER GROUP, LLC

14. Place a suitable hydraulic lift to support the fuel tank, then remove the screws from the front tank mounting brackets (1).

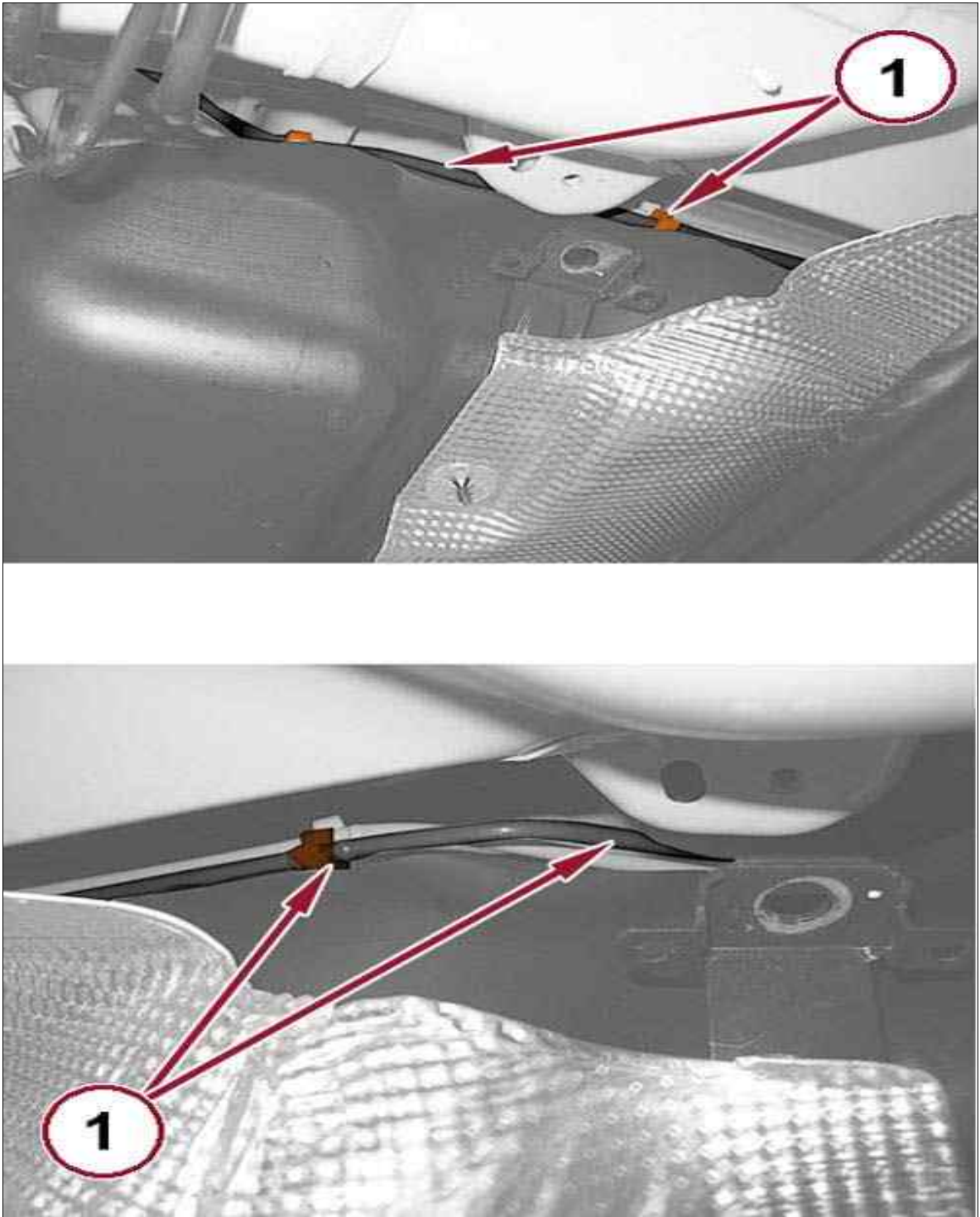
Fig 8: Rear Tank Mounting Brackets & Screws



Courtesy of CHRYSLER GROUP, LLC

15. Remove the screws (1) from the rear tank mounting brackets.

Fig 9: Rear Fuel Delivery Tube & Retaining Clips



Courtesy of CHRYSLER GROUP, LLC

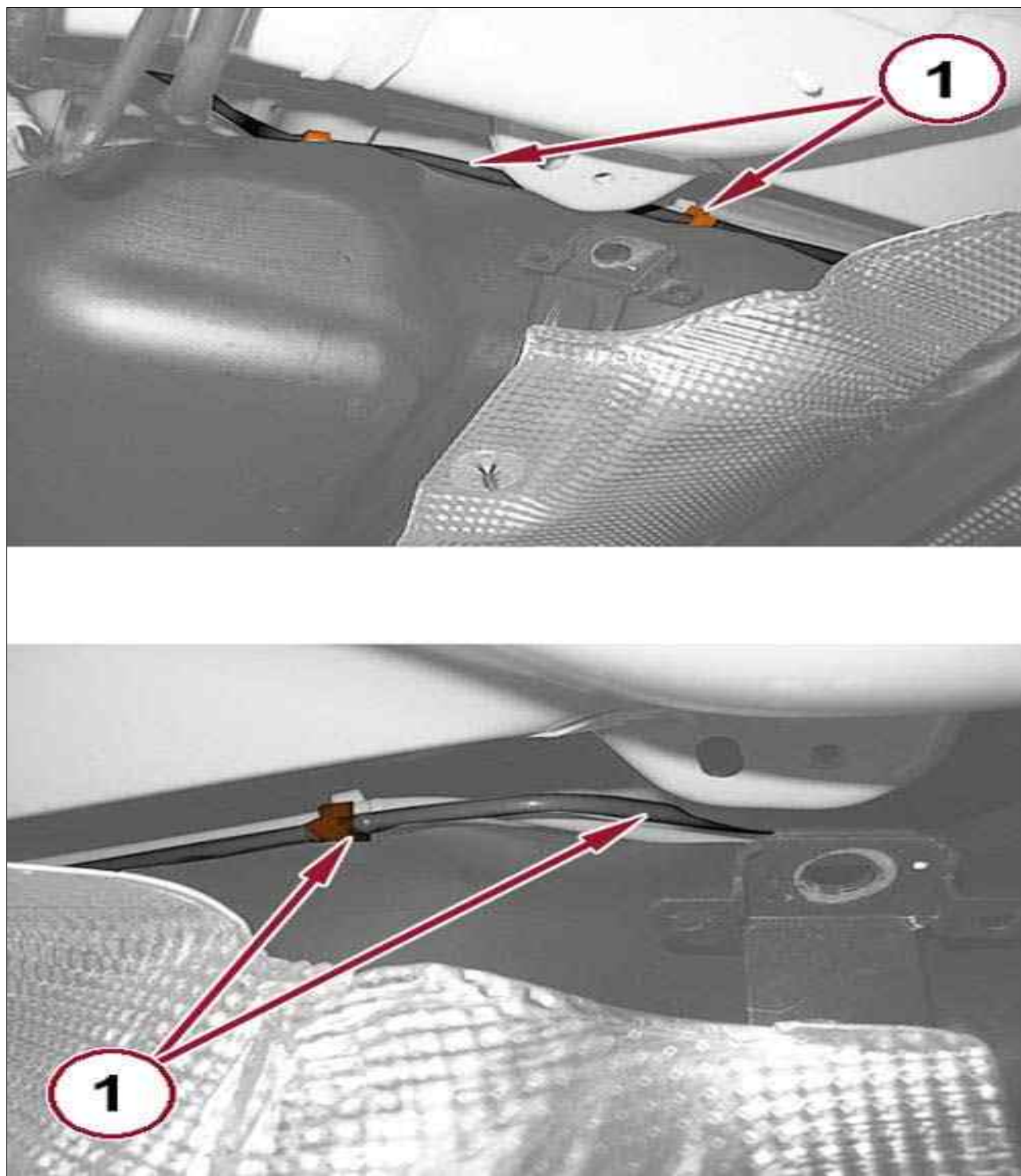
16. Lower the fuel tank far enough to access and disengage the rear fuel delivery tube from the retaining clips (1) and remove.

**FUEL DELIVERY > LINES, FUEL > REMOVAL AND INSTALLATION > 2.0L >
INSTALLATION - REAR FUEL DELIVERY LINE - 2.0L**

 CAUTION:

Cleanliness cannot be overemphasized when handling or replacing diesel fuel system components. This especially includes the fuel injectors, high-pressure fuel lines and fuel injection pump. Very tight tolerances are used with these parts. Dirt contamination could cause rapid part wear and possible plugging of fuel injector nozzle tip holes. This in turn could lead to possible engine misfire. Always wash/clean any fuel system component thoroughly before disassembly and then air dry. Cap or cover any open part after disassembly. Before assembly, examine each part for dirt, grease or other contaminants and clean if necessary. When installing new parts, lubricate them with clean engine oil or clean diesel fuel only. DO NOT use any lubricating or sliding agents that contain water.

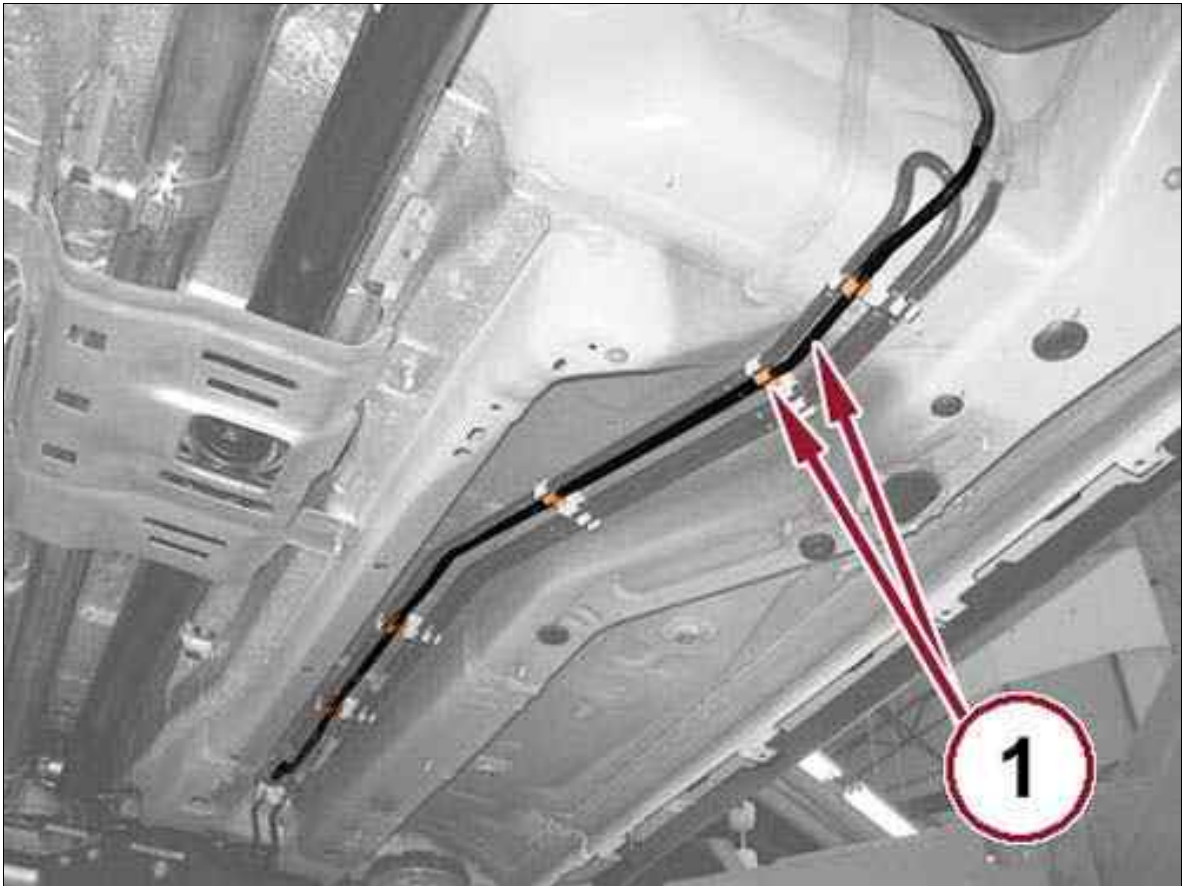
Fig 1: Rear Fuel Delivery Tube & Retaining Clips



Courtesy of CHRYSLER GROUP, LLC

1. Position the rear fuel delivery tube (1) to the vehicle underbody.

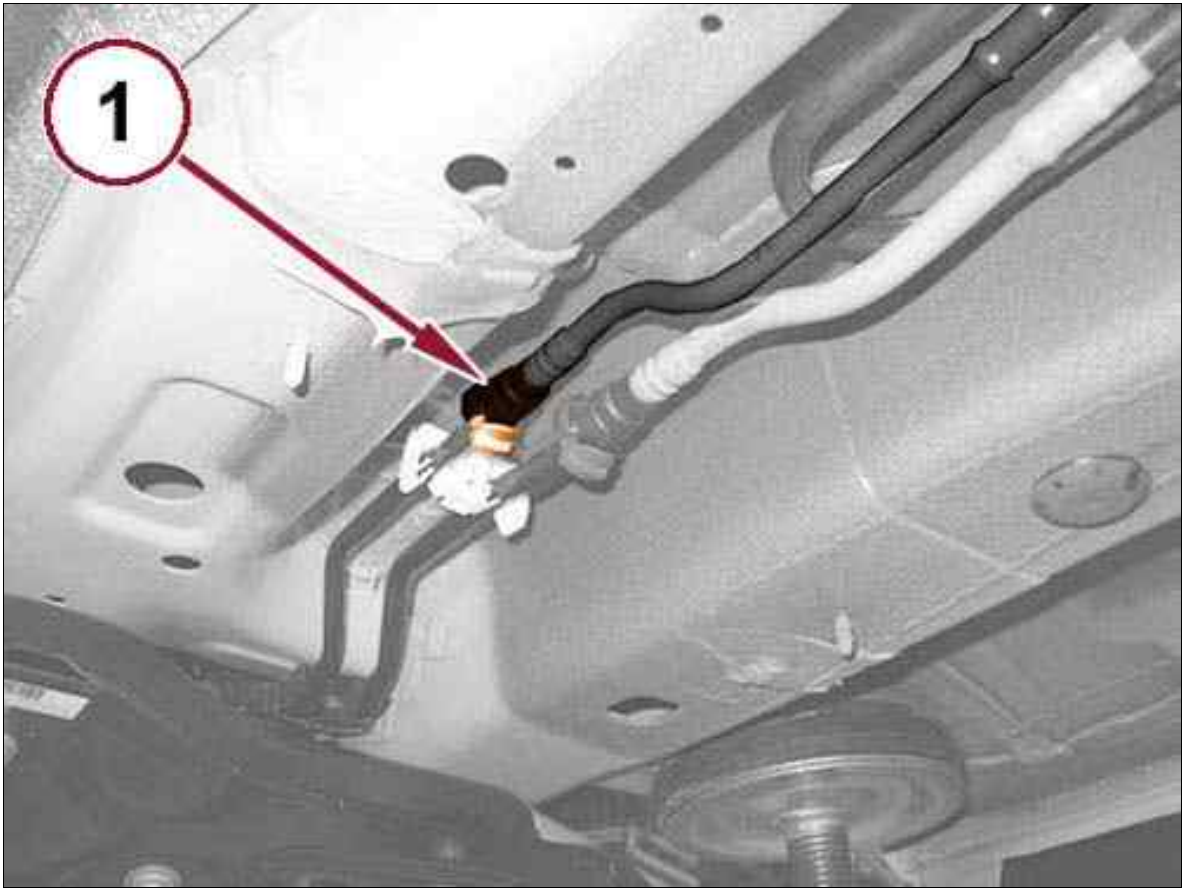
Fig 2: Rear Fuel Delivery Tube & Retaining Clips



Courtesy of CHRYSLER GROUP, LLC

2. Engage the rear fuel delivery tube (1) with the retaining clips on the underbody.

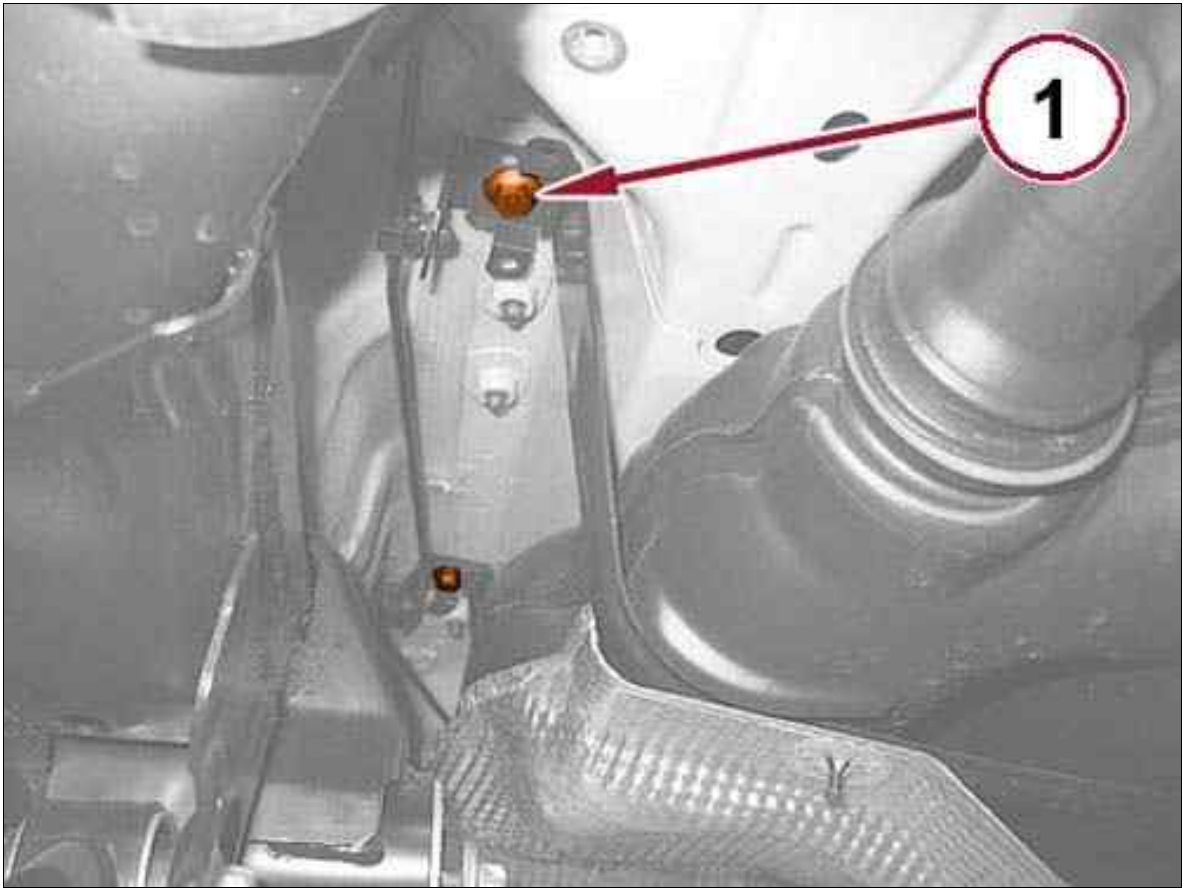
Fig 3: Rear Fuel Delivery Tube Front Quick Coupling



Courtesy of CHRYSLER GROUP, LLC

3. Reconnect the rear fuel delivery tube front quick coupling (1).

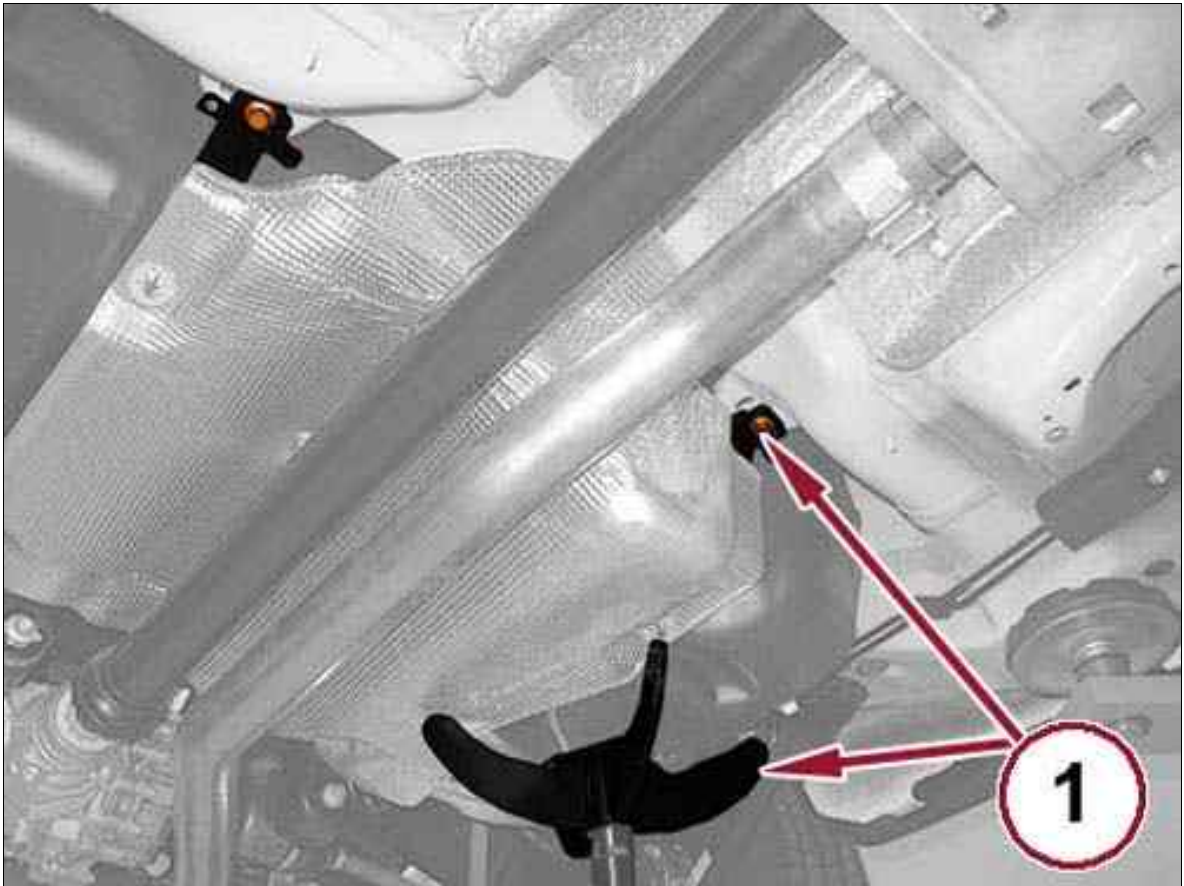
Fig 4: Rear Tank Mounting Brackets & Screws



Courtesy of CHRYSLER GROUP, LLC

4. Lift the fuel tank back into position then install and tighten the screws (1) for the rear tank mounting brackets. Tighten the screws securely.

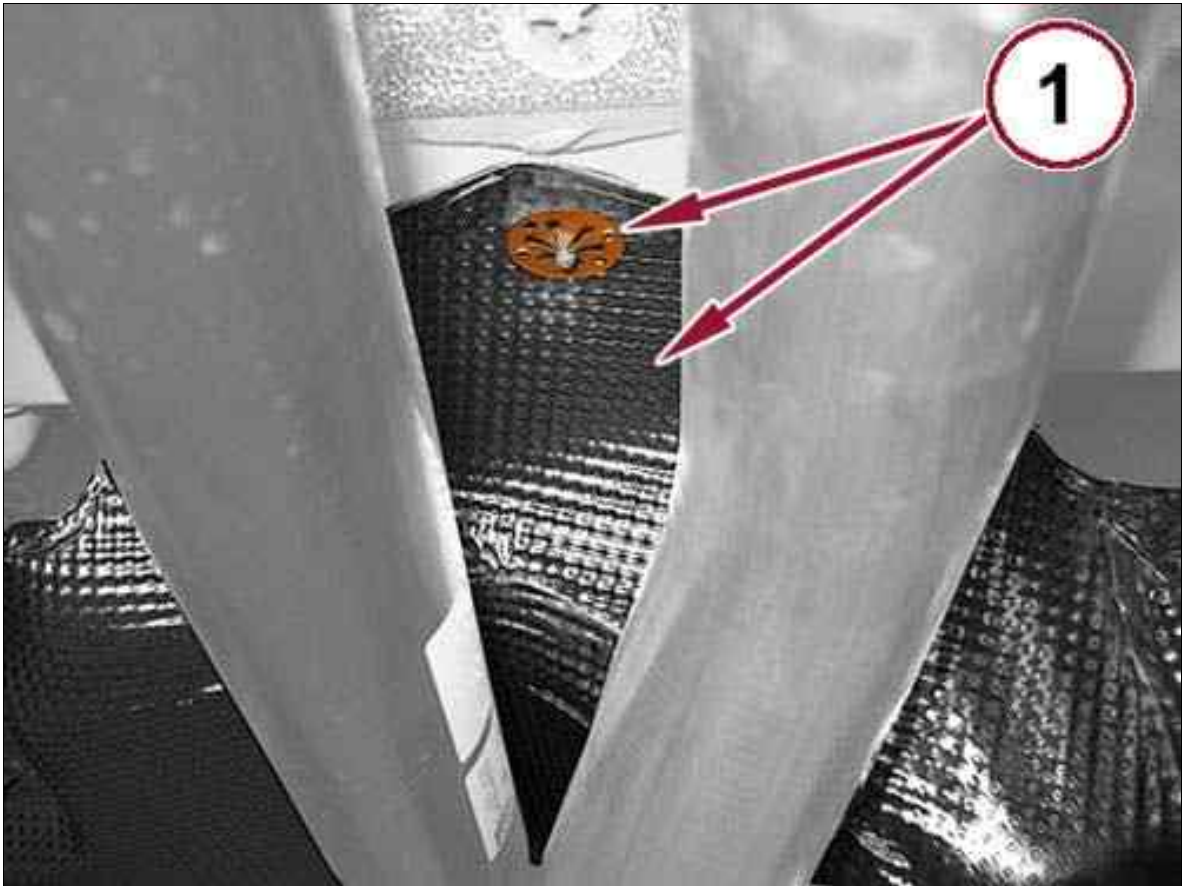
Fig 5: Front Tank Mounting Brackets & Hydraulic Lift



Courtesy of CHRYSLER GROUP, LLC

5. Install and tighten the screws that secure the front tank mounting brackets (1). Tighten the screws securely.

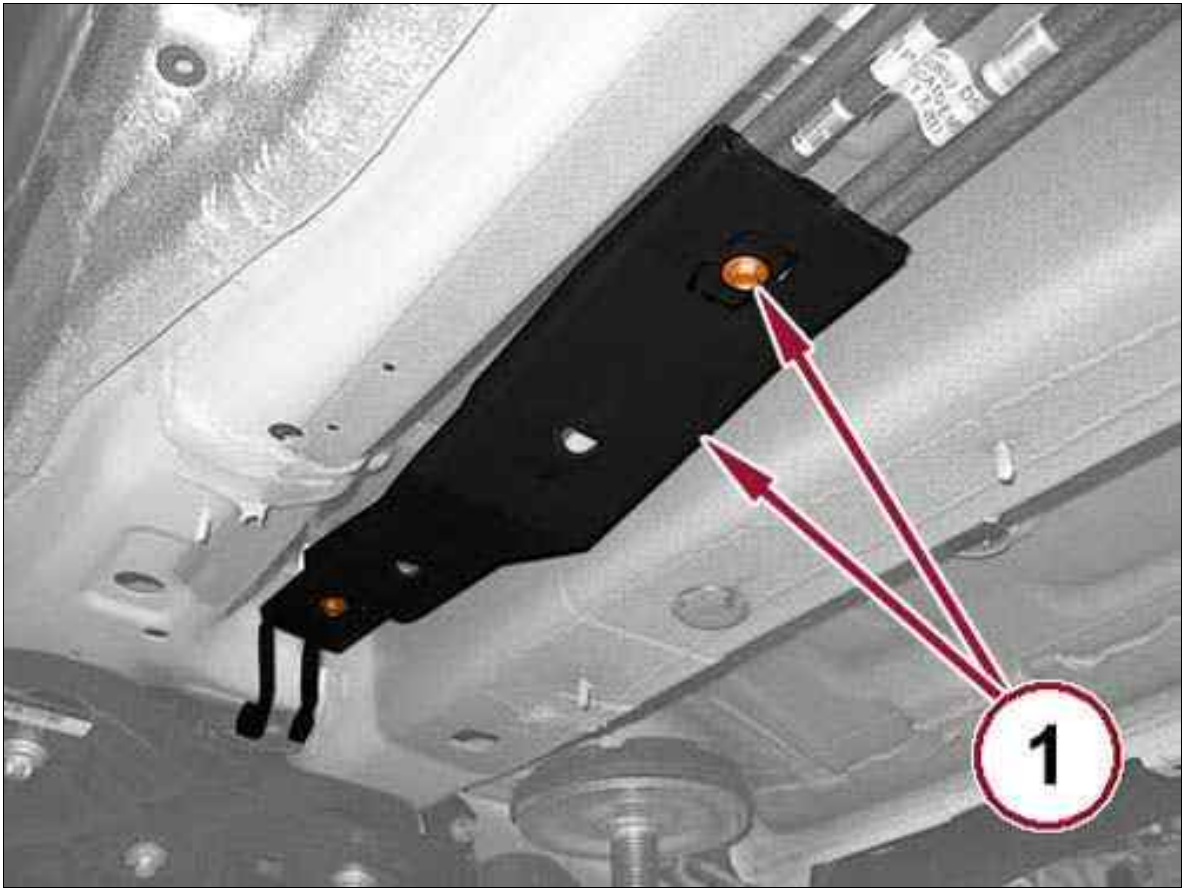
Fig 6: Fuel Tank Heat Shield Retaining Washer



Courtesy of CHRYSLER GROUP, LLC

6. Position the fuel tank heat shield and secure it by screwing on the serrated retainer washer (1).

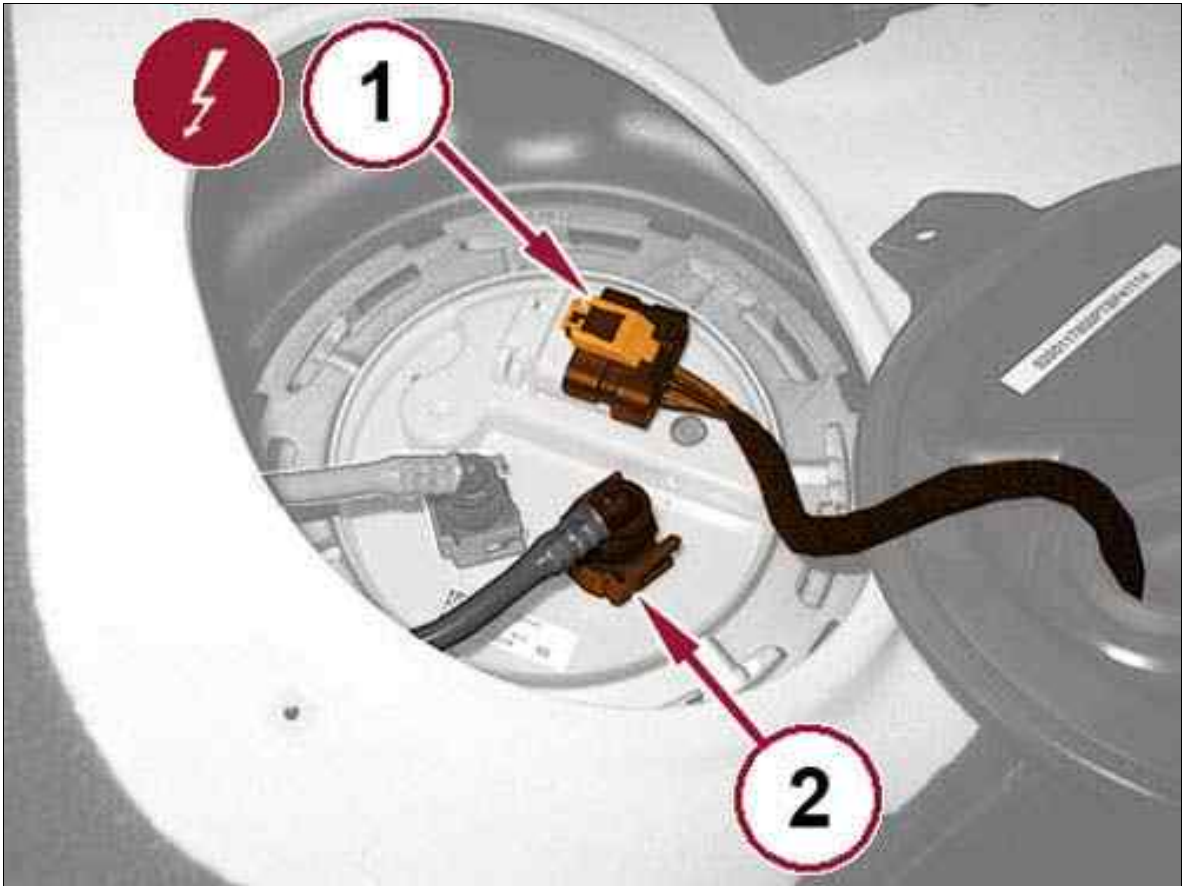
Fig 7: Fuel Tube Shield & Screws



Courtesy of CHRYSLER GROUP, LLC

7. Position the fuel tube shield to the underbody then install and tighten the screws (1) that secure it. Tighten the screws securely.
8. Install the side belly pan onto the underbody of the vehicle. Refer to BELLY PAN, SIDE, REMOVAL AND INSTALLATION .

Fig 8: Rear Fuel Delivery Tube Quick Coupling & Wire Harness Connector



Courtesy of CHRYSLER GROUP, LLC

9. Remove the support and lower the vehicle.
10. Lift the floor covering to access and connect the rear fuel delivery tube quick coupling (2) to the electric fuel pump.
11. Connect the wire harness connector (1) to the electric fuel pump.

Fig 9: Fuel Pump Access Cover & Screws



Courtesy of CHRYSLER GROUP, LLC

12. Position the fuel pump access cover to the floor panel then install and tighten the screws (1) to secure it. Tighten the screws securely.
13. Install the rear seat cushion into the vehicle. Refer to SEAT CUSHION, REMOVAL AND INSTALLATION .

**FUEL DELIVERY > LINES, FUEL > REMOVAL AND INSTALLATION > 2.0L > REMOVAL
- 1040B56 FUEL RETURN PIPE BACK - 2.0L**

 CAUTION:

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Fig 1: Fuel Pump Access Cover & Screws

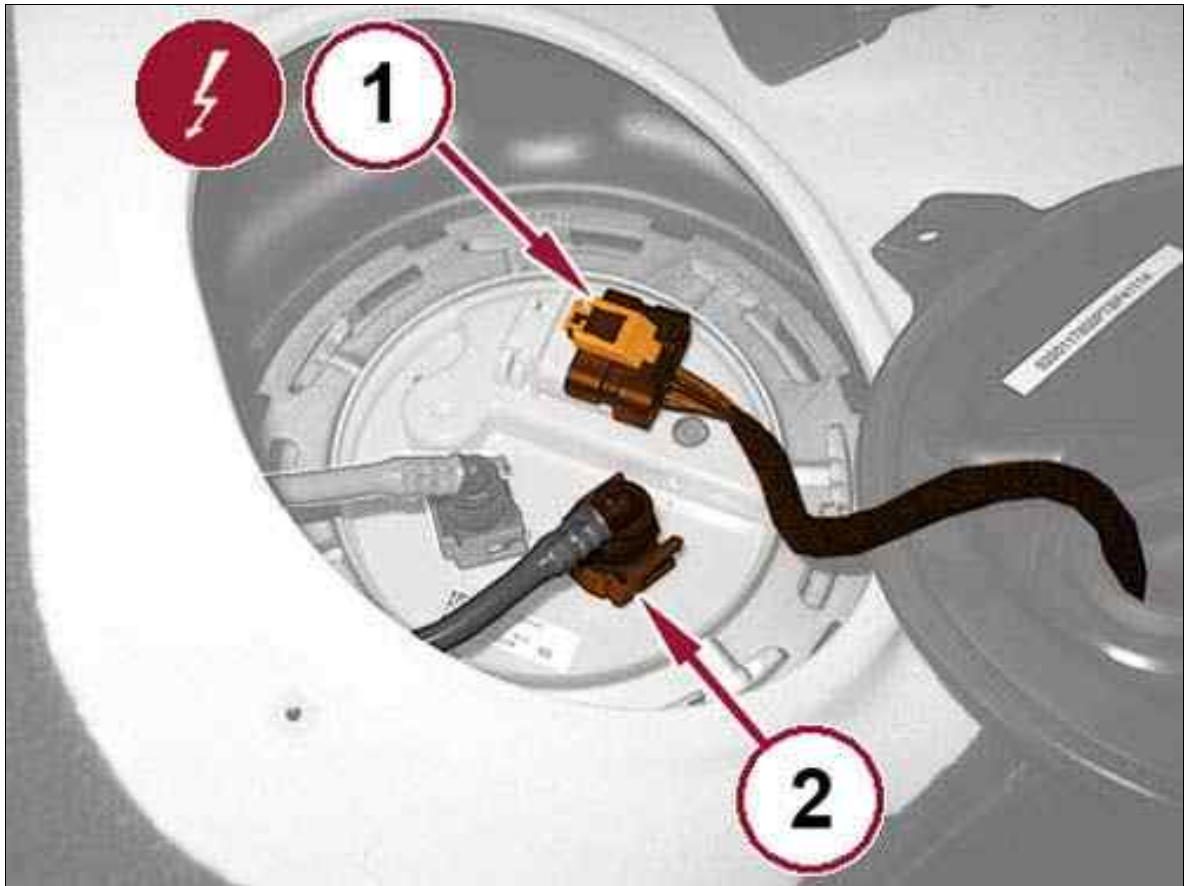


Courtesy of CHRYSLER GROUP, LLC

1. Open the cover of the Power Distribution Center (PDC) in the engine compartment and remove the fuel pump fuse (F21 - 15 ampere).
2. Wait for the residual pressure in the fuel distribution manifold to be relieved.
3. Reinstall the fuel pump fuse (F21 - 15 ampere) and close the PDC cover.

4. Remove the rear seat cushion from the vehicle. Refer to SEAT CUSHION, REMOVAL AND INSTALLATION .
5. Lift the floor covering to access and remove the screws (1) that secure the fuel pump access cover to the floor panel and remove the access cover.

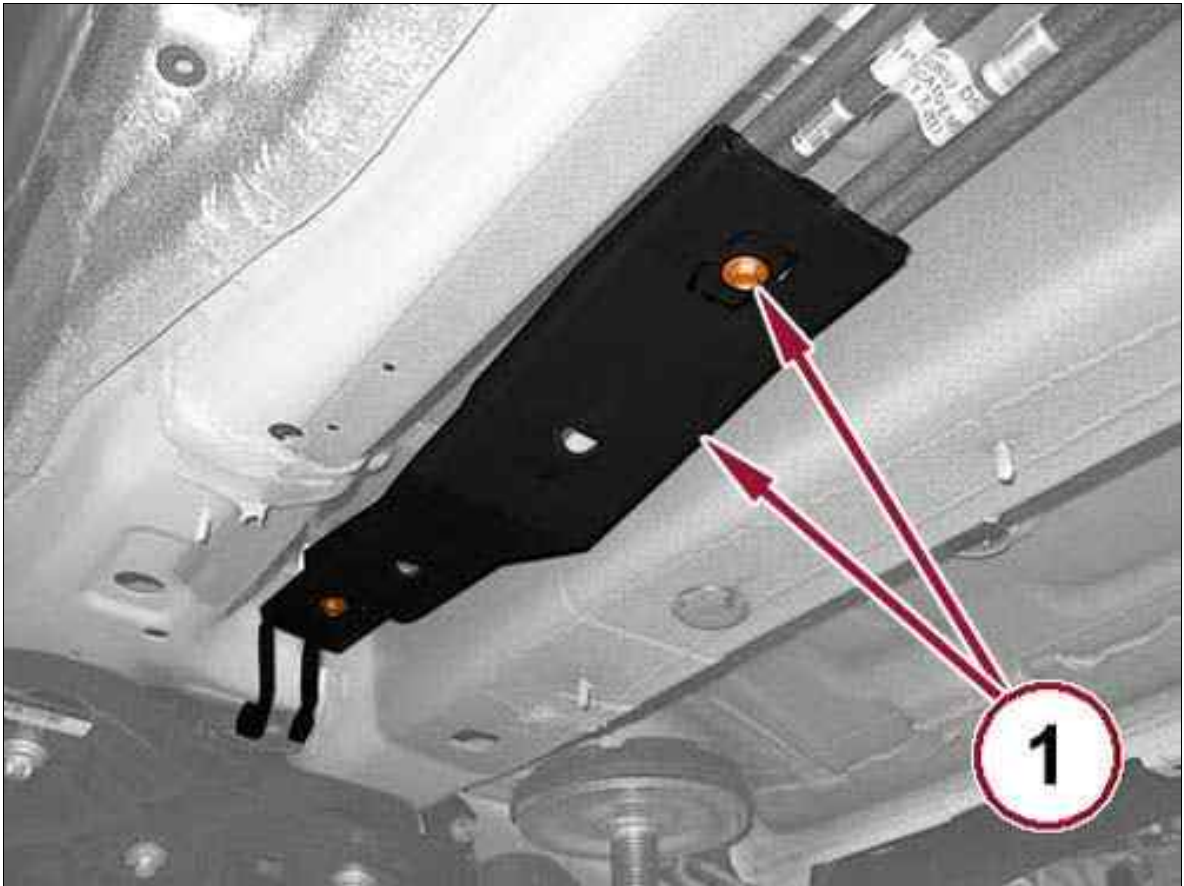
Fig 2: Rear Fuel Delivery Tube Quick Coupling & Wire Harness Connector



Courtesy of CHRYSLER GROUP, LLC

6. Disconnect the wire harness connector (1) from the electric fuel pump.
7. Disconnect the rear fuel return tube quick connect fitting (2) from the electric fuel pump.
8. Raise and support the vehicle.
9. Remove the side belly pan from the underbody of the vehicle. Refer to BELLY PAN, SIDE, REMOVAL AND INSTALLATION .

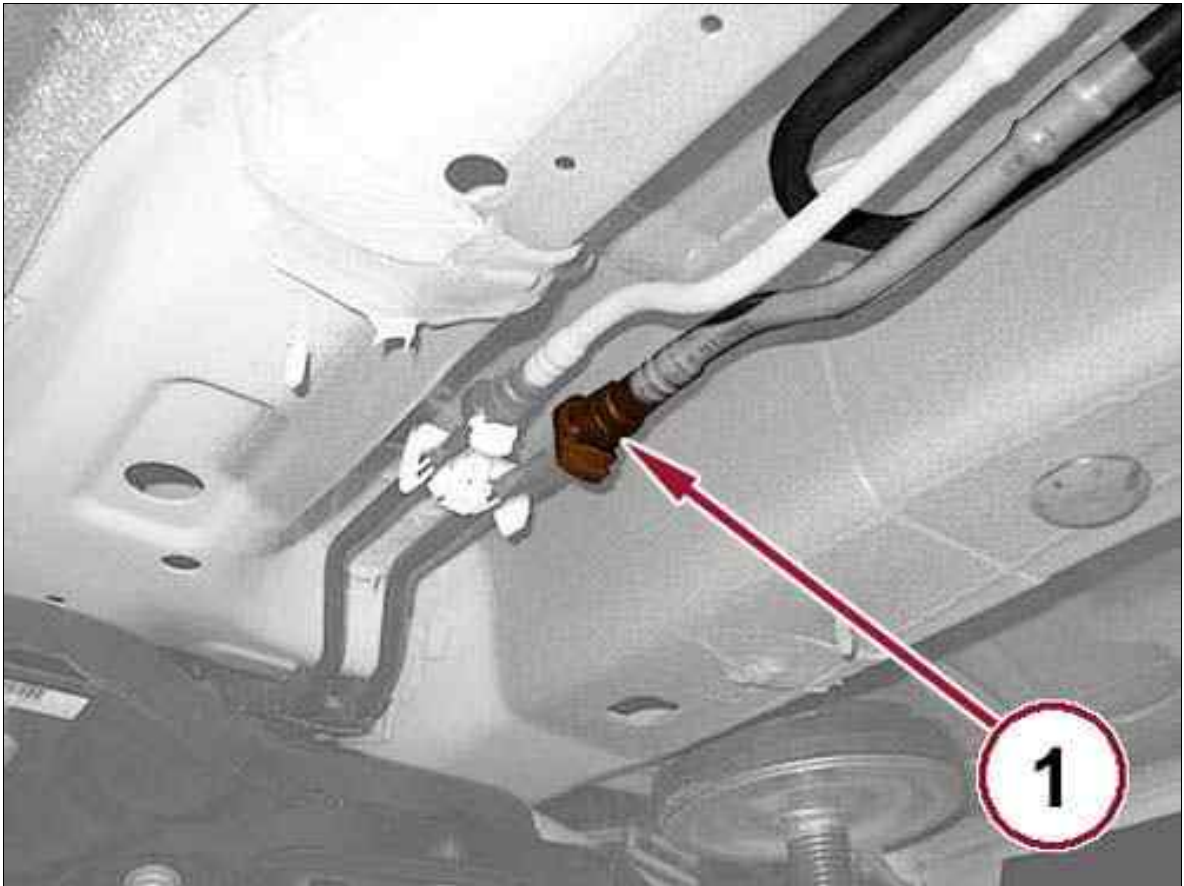
Fig 3: Fuel Tube Shield & Screws



Courtesy of CHRYSLER GROUP, LLC

10. Remove the screws (1) that secure the fuel tube shield beneath the underbody and remove the shield.

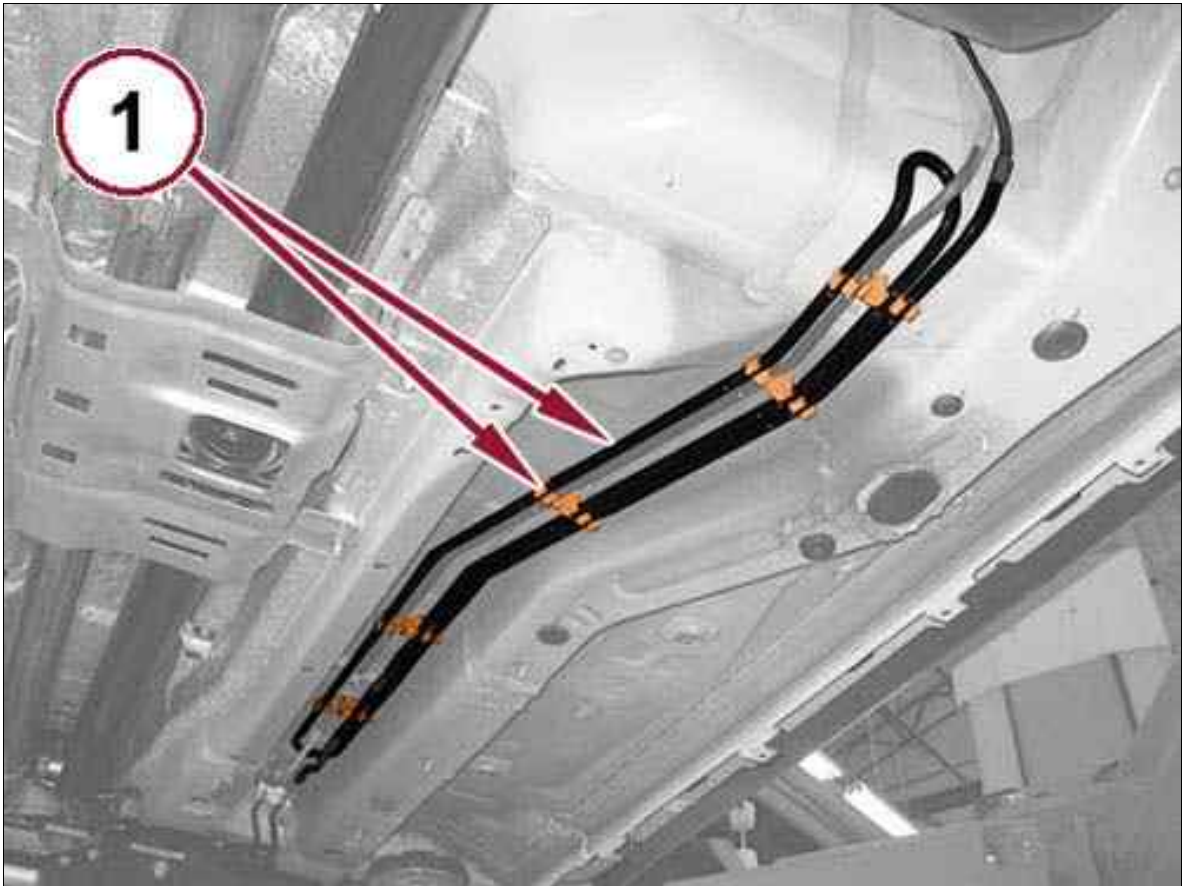
Fig 4: Rear Fuel Return Tube Front Quick Connect Fitting



Courtesy of CHRYSLER GROUP, LLC

11. Disconnect the rear fuel return tube front quick connect fitting (1).

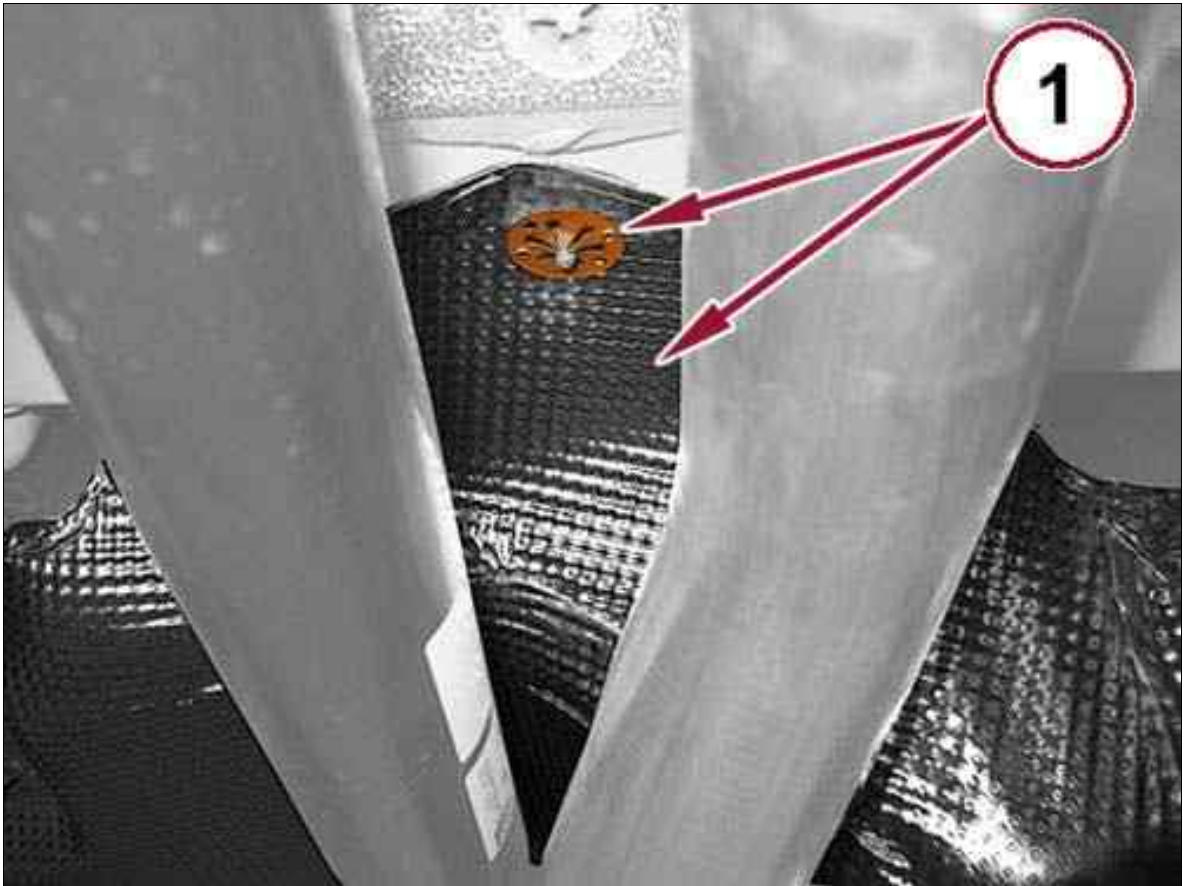
Fig 5: Rear Fuel Return Tube & Retaining Clips



Courtesy of CHRYSLER GROUP, LLC

12. Disengage the rear fuel return tube (1) from the retaining clips on the underbody.

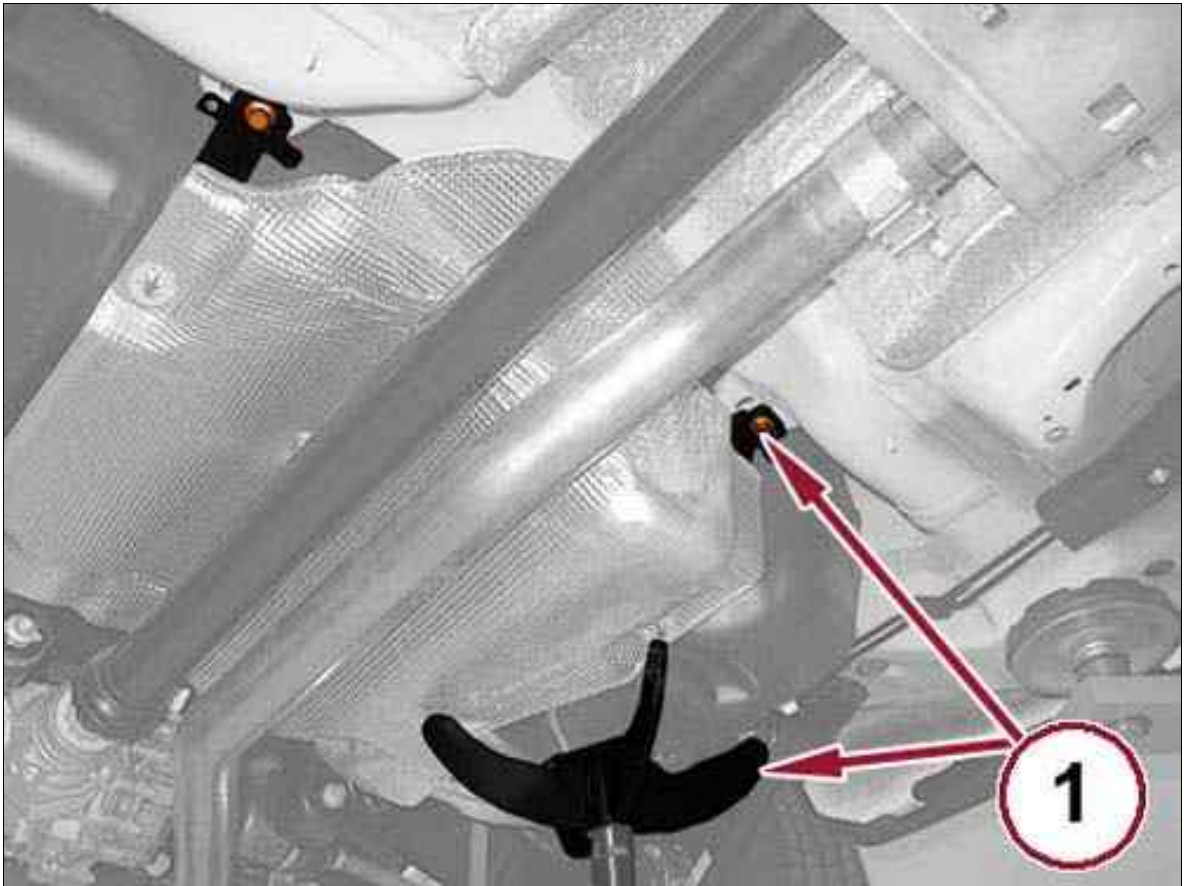
Fig 6: Fuel Tank Heat Shield Retaining Washer



Courtesy of CHRYSLER GROUP, LLC

13. Unscrew the serrated fuel tank heat shield retaining washer (1).

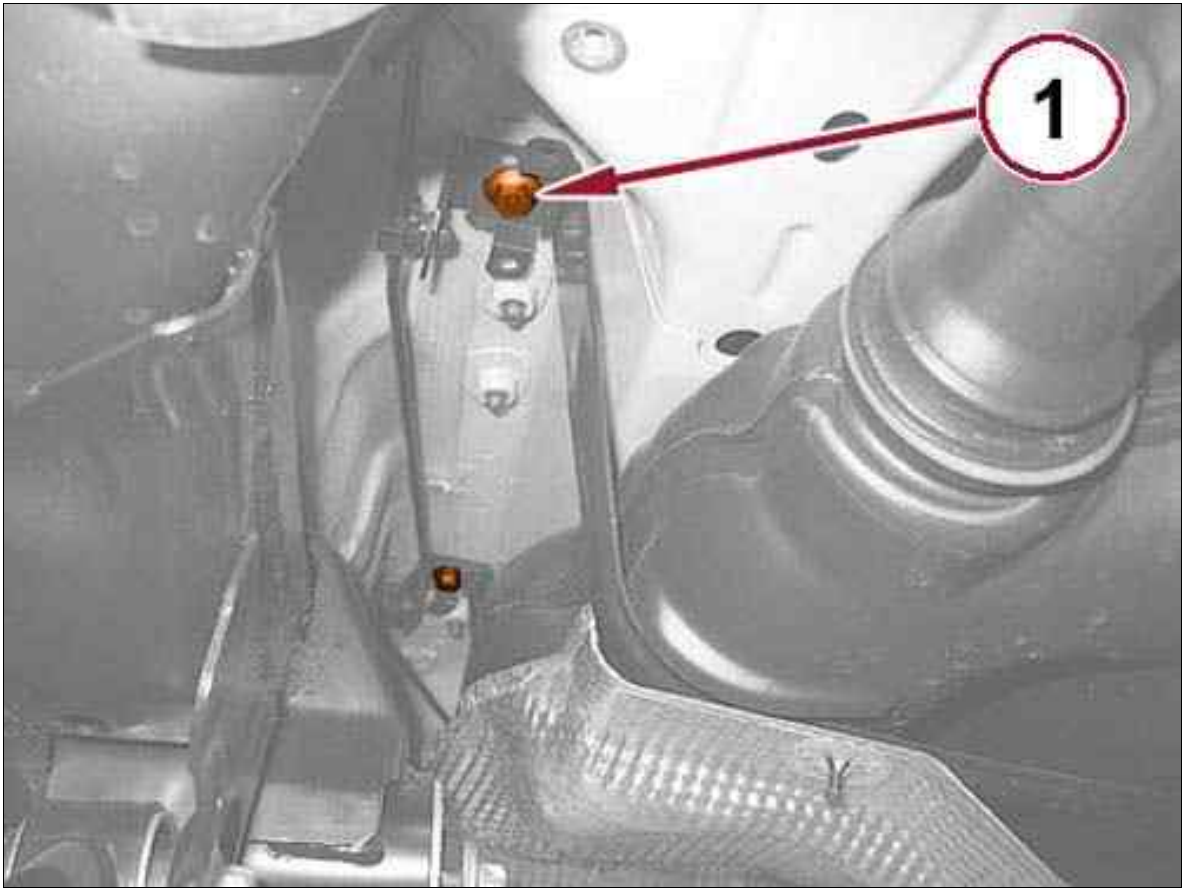
Fig 7: Front Tank Mounting Brackets & Hydraulic Lift



Courtesy of CHRYSLER GROUP, LLC

14. Place a suitable hydraulic lift to support the fuel tank, then remove the screws from the front tank mounting brackets (1).

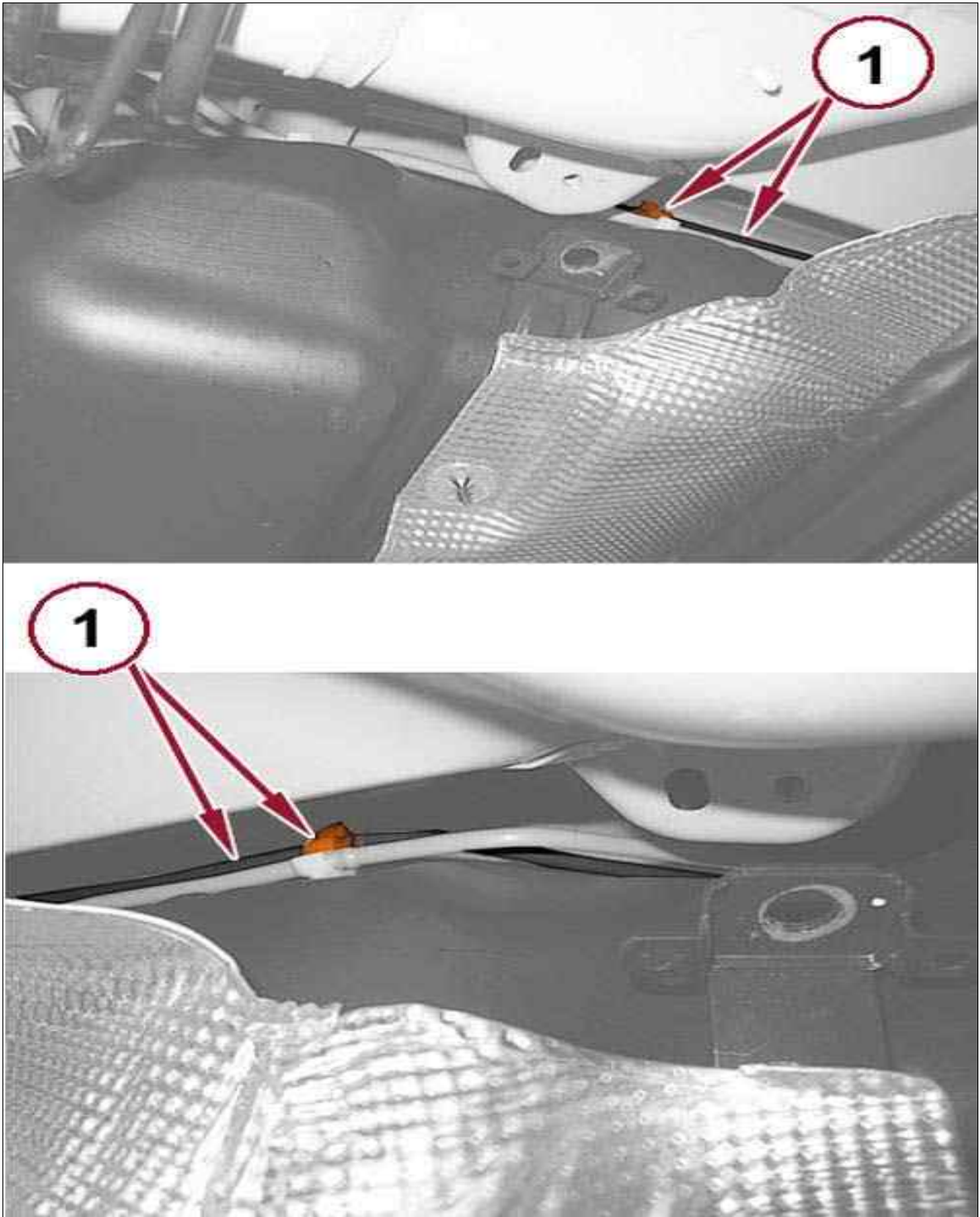
Fig 8: Rear Tank Mounting Brackets & Screws



Courtesy of CHRYSLER GROUP, LLC

15. Remove the screws (1) from the rear tank mounting brackets.

Fig 9: Rear Fuel Return Tube & Retaining Clips



Courtesy of CHRYSLER GROUP, LLC

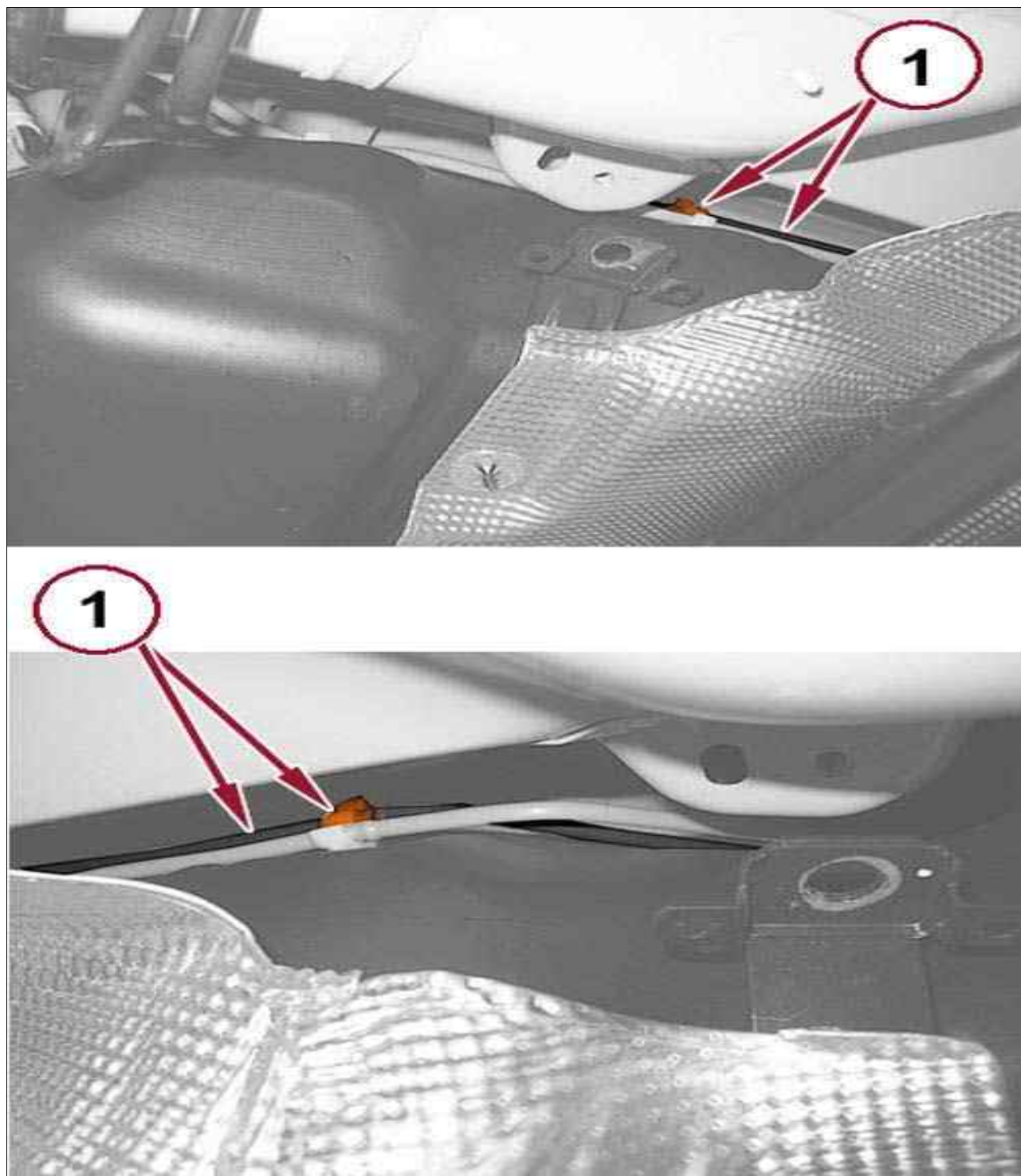
16. Lower the fuel tank far enough to access and disengage the rear fuel return tube from the retaining clips (1) and remove.

**FUEL DELIVERY > LINES, FUEL > REMOVAL AND INSTALLATION > 2.0L >
INSTALLATION - 1040B56 FUEL RETURN PIPE BACK - 2.0L**

 CAUTION:

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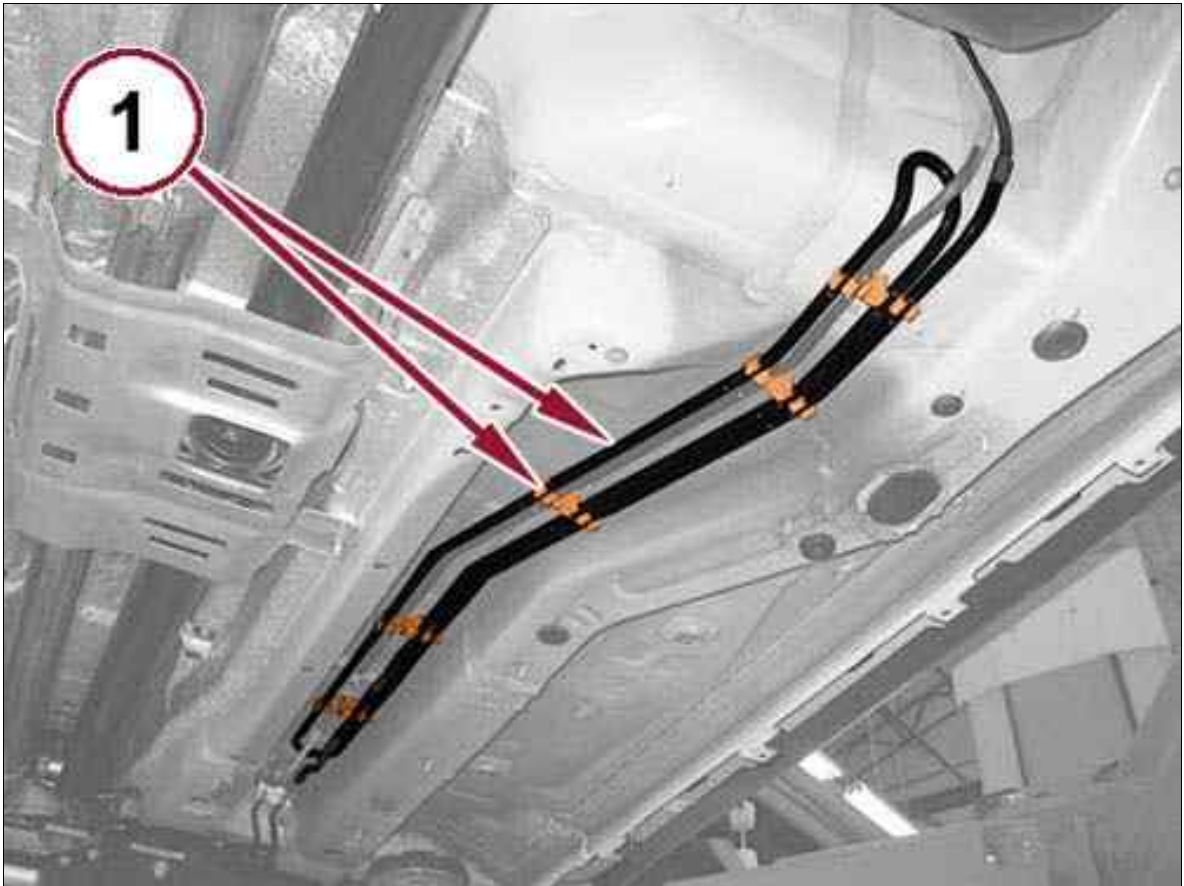
Fig 1: Rear Fuel Return Tube & Retaining Clips



Courtesy of CHRYSLER GROUP, LLC

1. Position the rear fuel return tube (1) to the vehicle underbody.

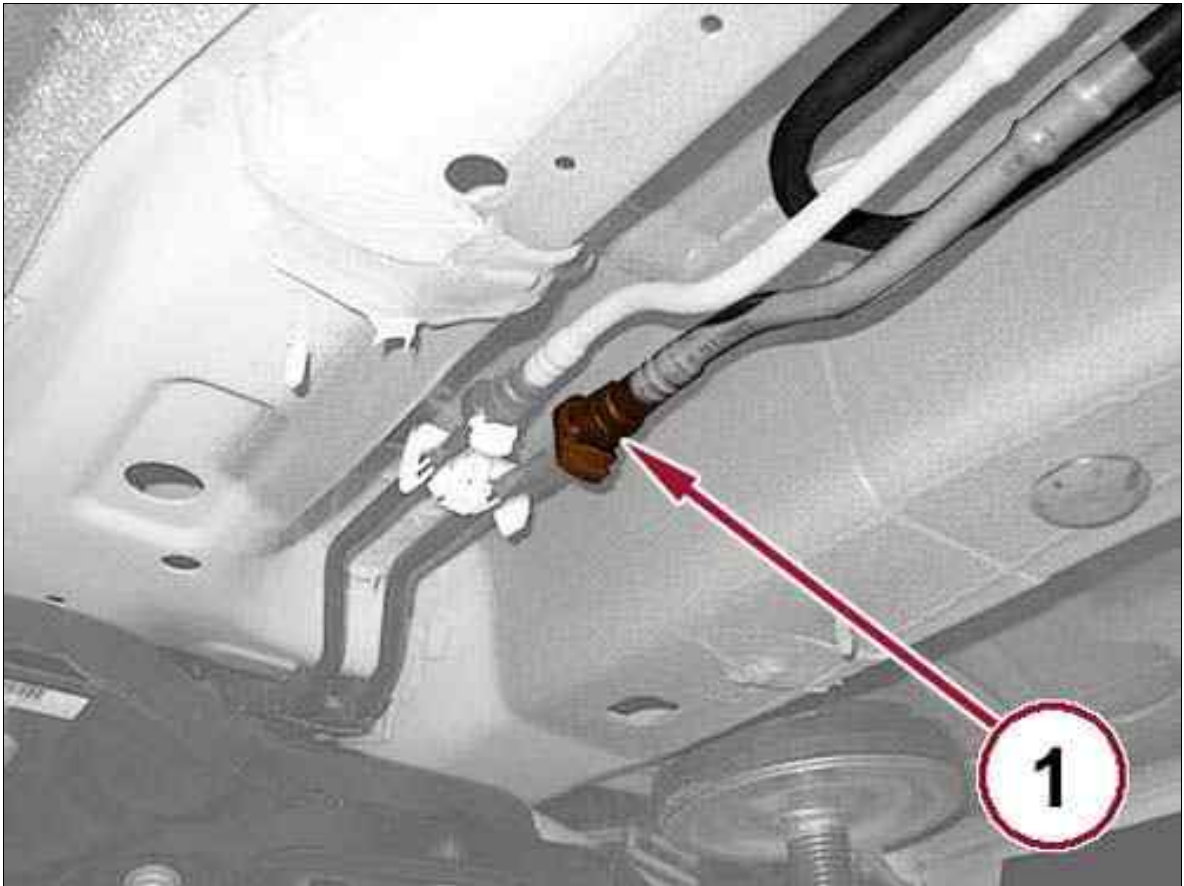
Fig 2: Rear Fuel Return Tube & Retaining Clips



Courtesy of CHRYSLER GROUP, LLC

2. Engage the rear fuel return tube (1) with the retaining clips on the underbody.

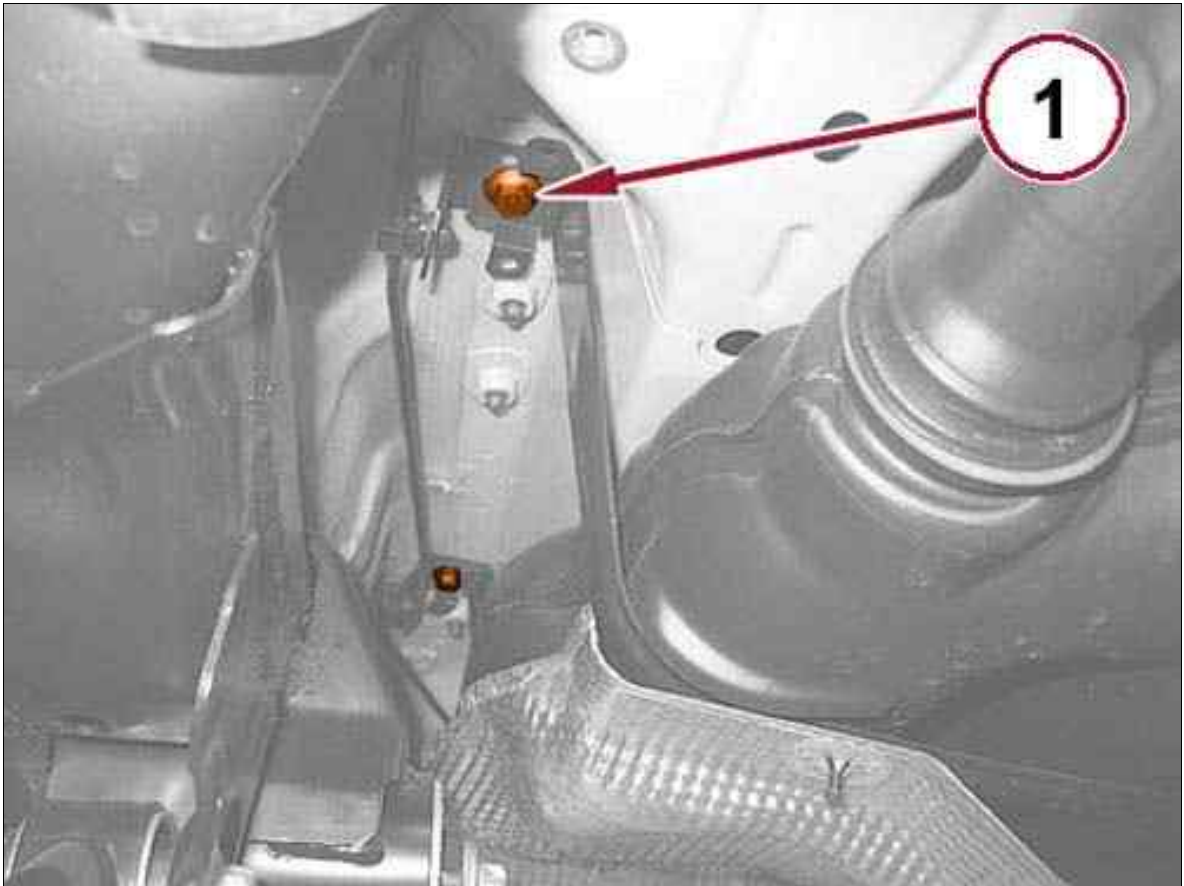
Fig 3: Rear Fuel Return Tube Front Quick Connect Fitting



Courtesy of CHRYSLER GROUP, LLC

3. Reconnect the rear fuel return tube front quick connect fitting (1).

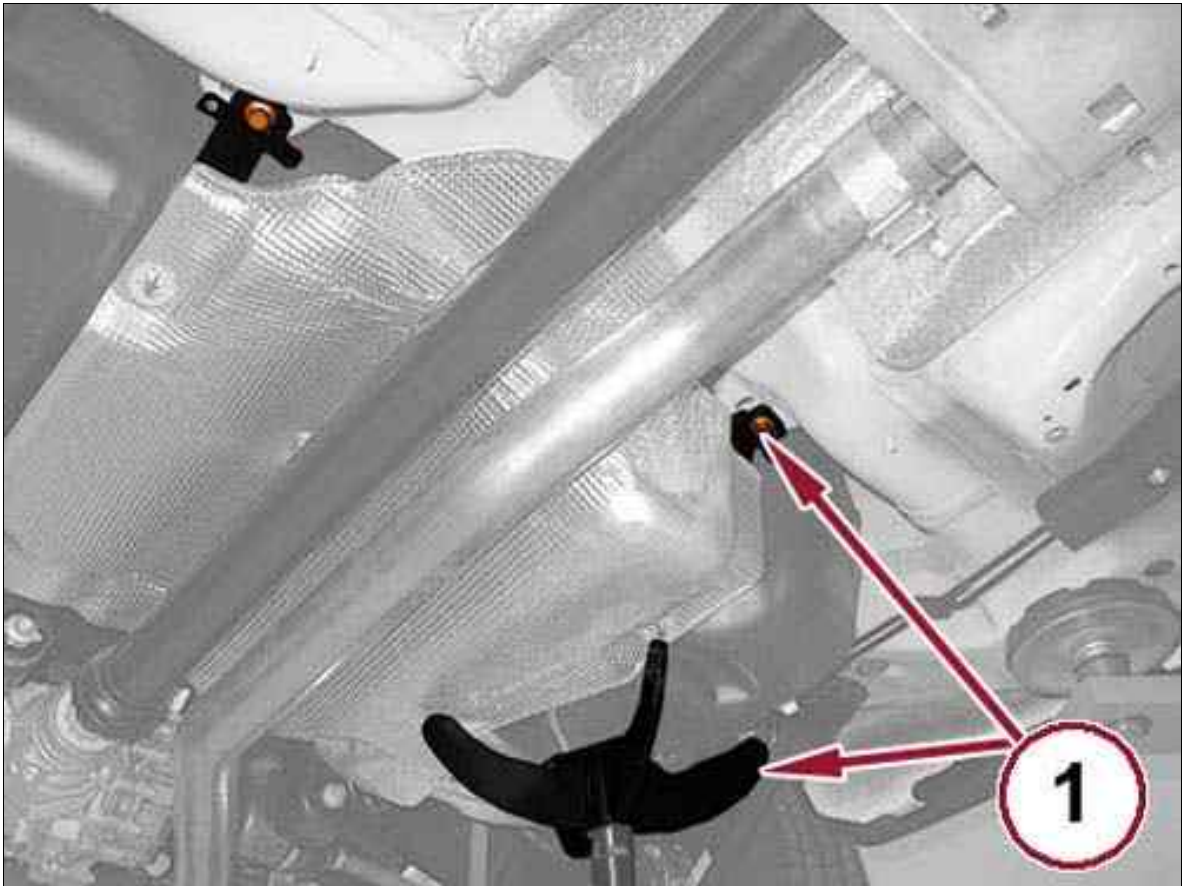
Fig 4: Rear Tank Mounting Brackets & Screws



Courtesy of CHRYSLER GROUP, LLC

4. Lift the fuel tank back into position then install and tighten the screws (1) for the rear tank mounting brackets. Tighten the screws securely.

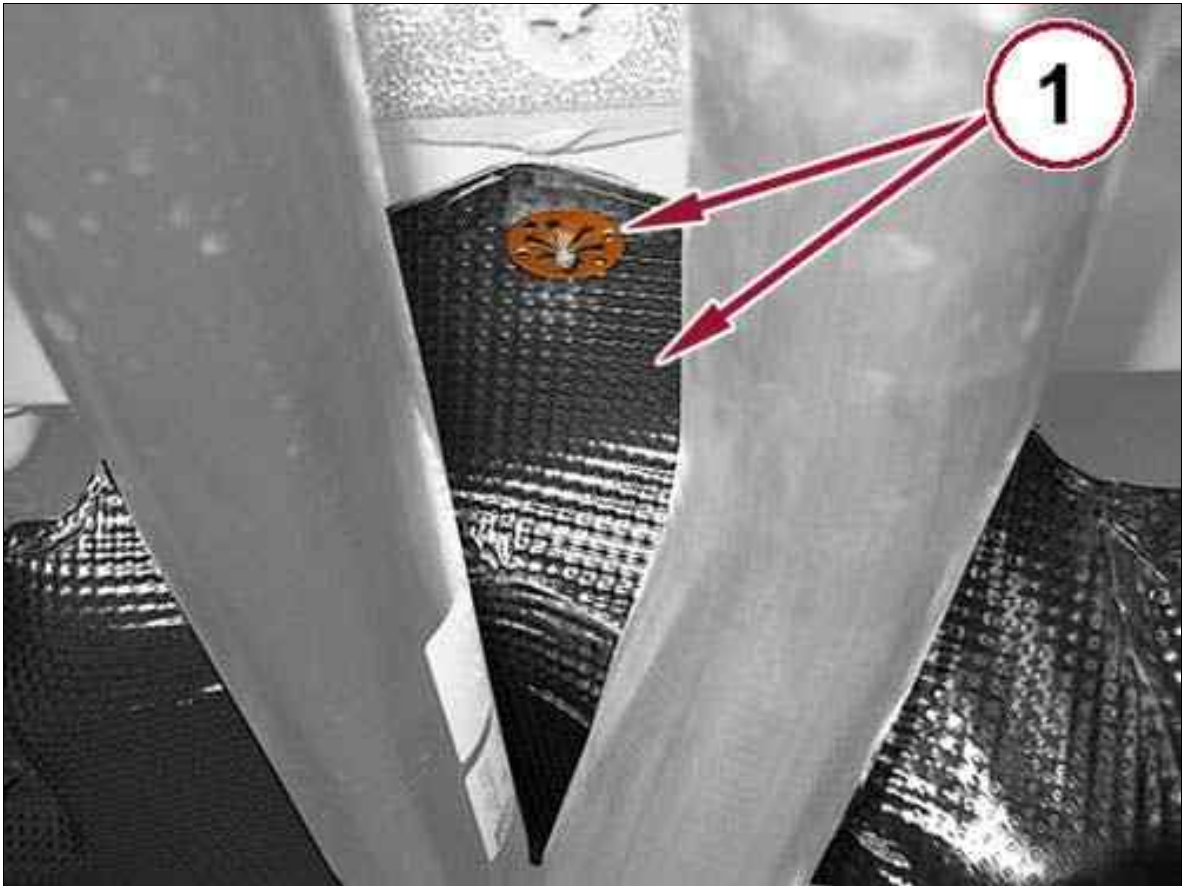
Fig 5: Front Tank Mounting Brackets & Hydraulic Lift



Courtesy of CHRYSLER GROUP, LLC

5. Install and tighten the screws that secure the front tank mounting brackets (1). Tighten the screws securely.

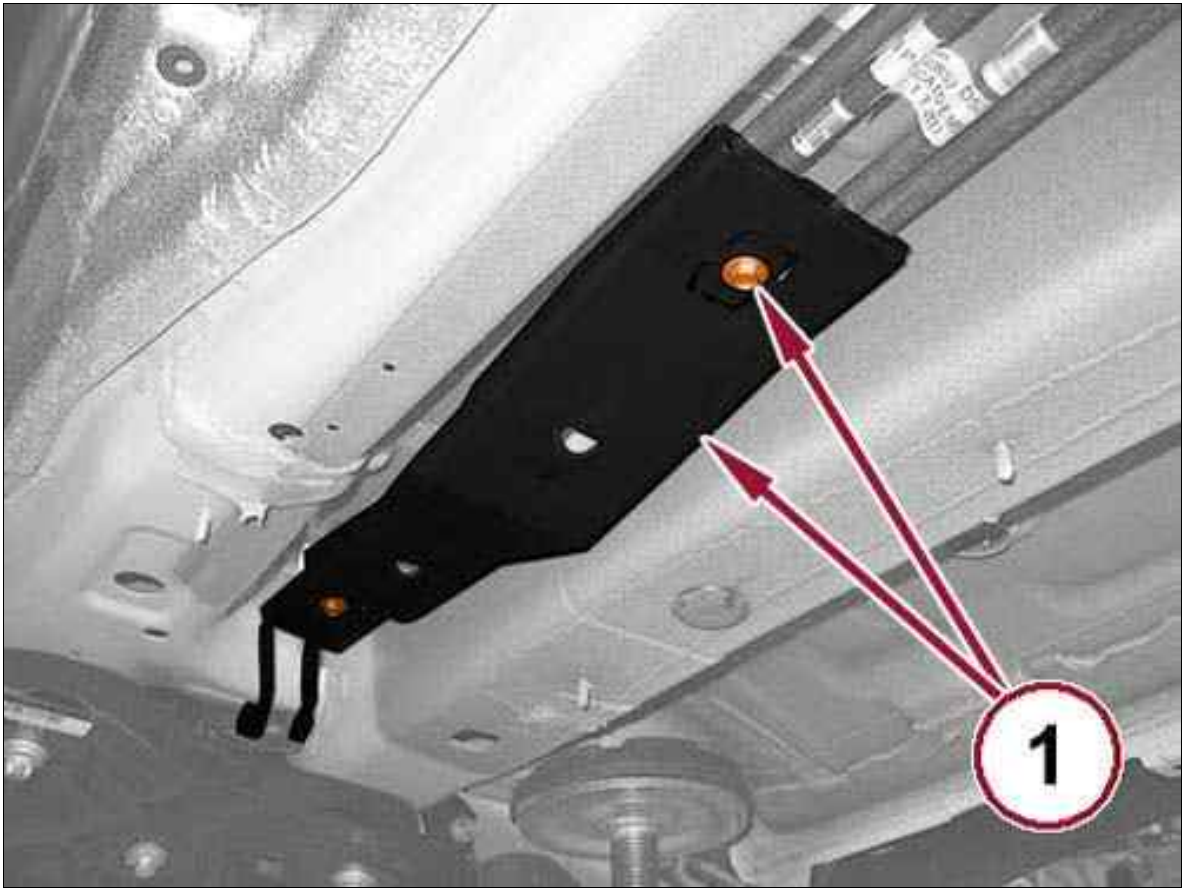
Fig 6: Fuel Tank Heat Shield Retaining Washer



Courtesy of CHRYSLER GROUP, LLC

6. Position the fuel tank heat shield and secure it by screwing on the serrated retainer washer (1).

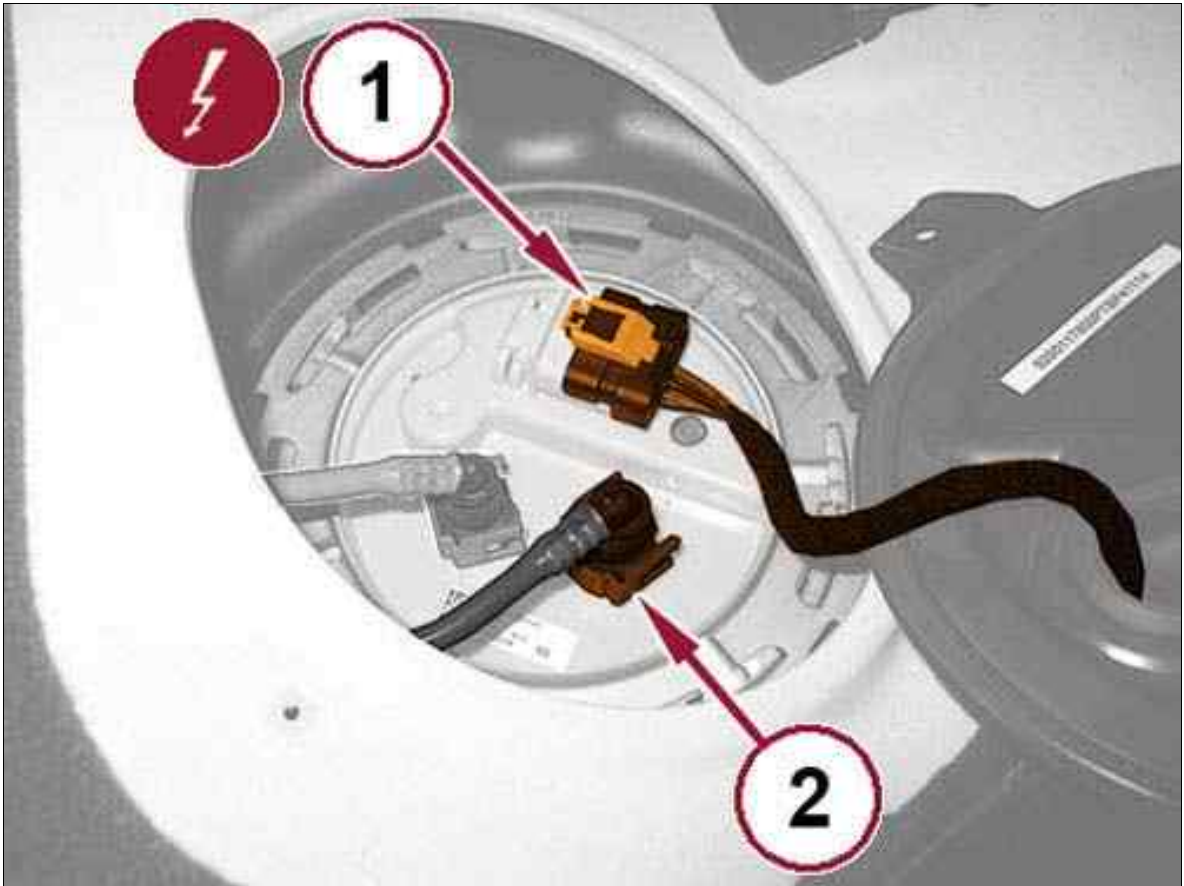
Fig 7: Fuel Tube Shield & Screws



Courtesy of CHRYSLER GROUP, LLC

7. Position the fuel tube shield to the underbody then install and tighten the screws (1) that secure it. Tighten the screws securely.
8. Reinstall the side belly pan onto the underbody of the vehicle. Refer to BELLY PAN, SIDE, REMOVAL AND INSTALLATION .

Fig 8: Rear Fuel Delivery Tube Quick Coupling & Wire Harness Connector



Courtesy of CHRYSLER GROUP, LLC

9. Lift the floor covering to access and reconnect the rear fuel return tube quick connect fitting (2) to the electric fuel pump.
10. Reconnect the wire harness connector (1) to the electric fuel pump.

Fig 9: Fuel Pump Access Cover & Screws



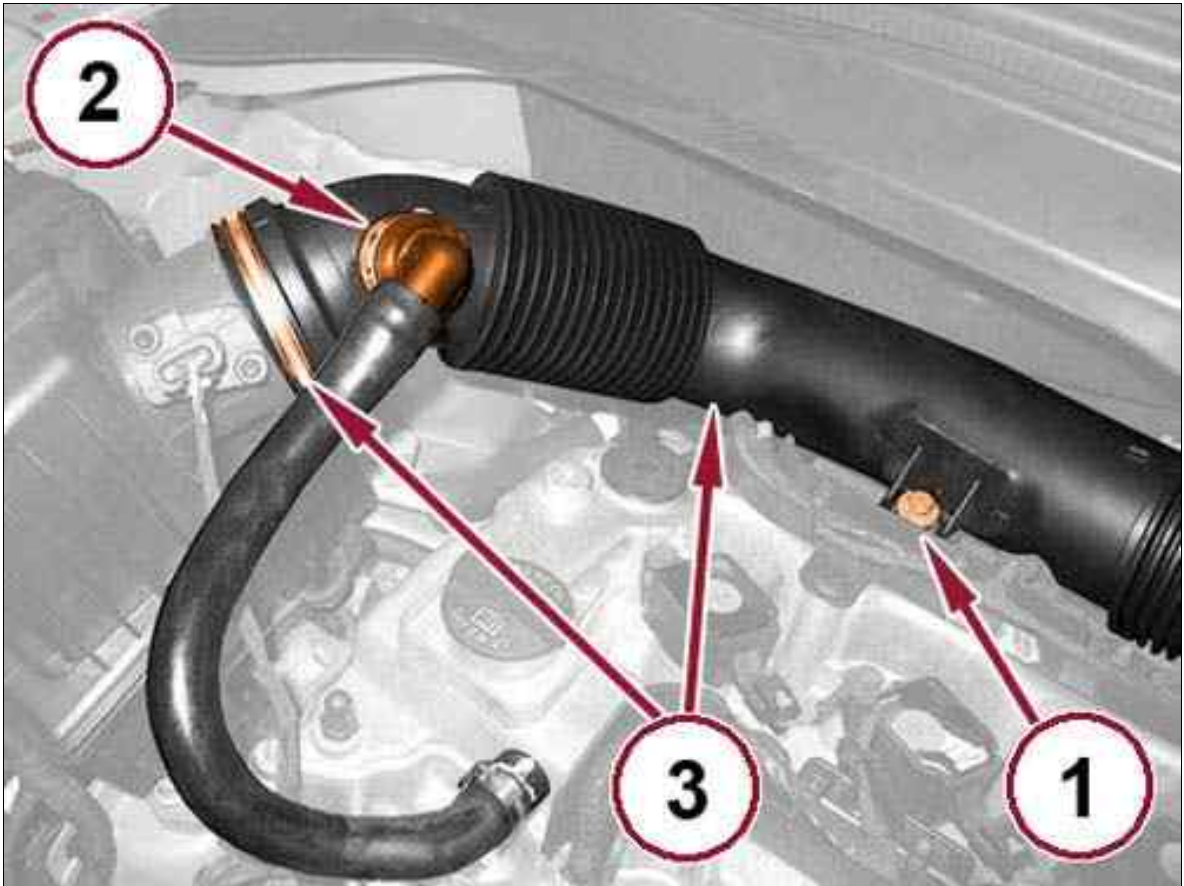
Courtesy of CHRYSLER GROUP, LLC

11. Position the fuel pump access cover to the floor panel then install and tighten the screws (1) to secure it. Tighten the screws securely.
12. Reinstall the rear seat cushion into the vehicle. Refer to SEAT CUSHION, REMOVAL AND INSTALLATION .

FUEL DELIVERY > LINES, FUEL > REMOVAL AND INSTALLATION > 2.4L > REMOVAL - FRONT FUEL DELIVERY LINE - 2.4L

1. Open the cover of the Power Distribution Center (PDC) in the engine compartment and remove the fuel pump fuse (F21 - 15 ampere).
2. Wait for the residual pressure in the fuel distribution manifold to be relieved.
3. Reinstall the fuel pump fuse (F21 - 15 ampere) and close the PDC cover.
4. Remove the engine cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .

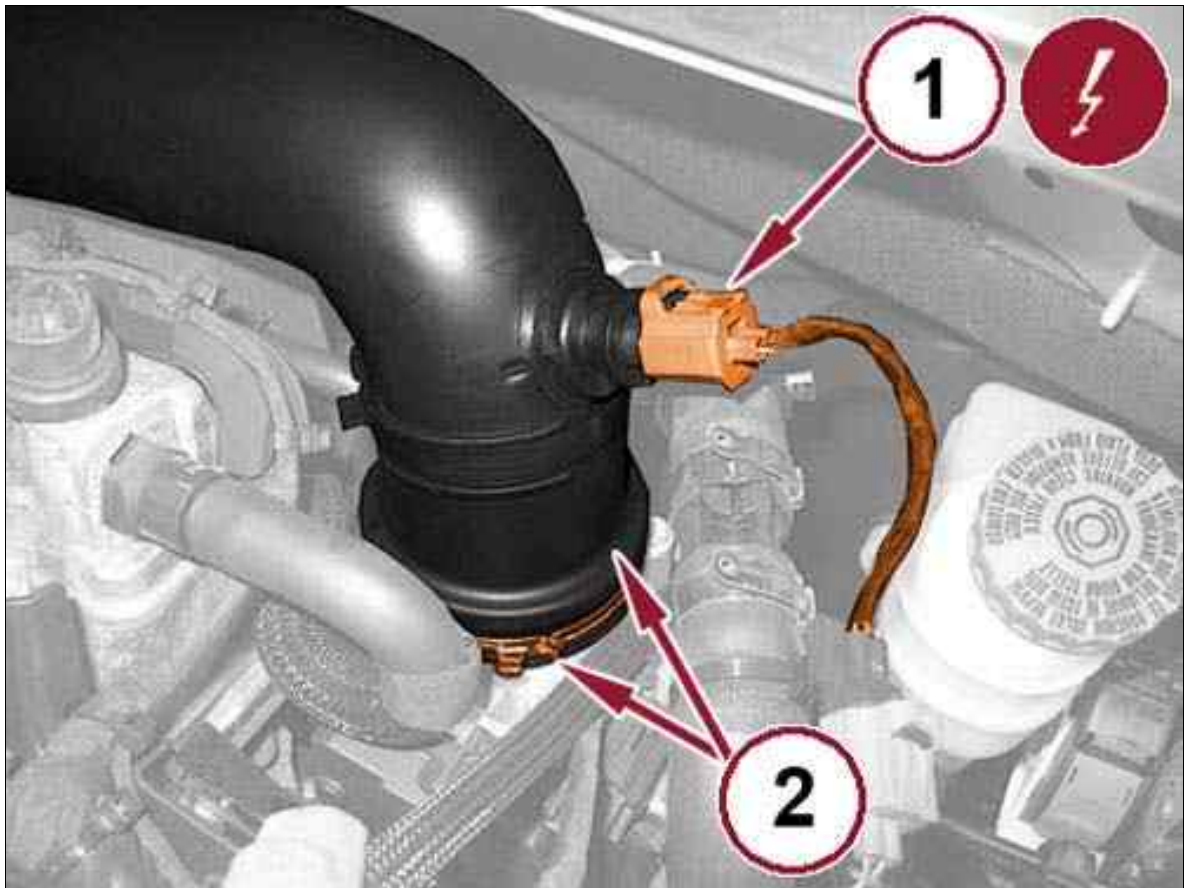
Fig 1: Engine Oil Vapor Hose Quick Coupling, Clean Air Hose, Clamp & Bolt



Courtesy of CHRYSLER GROUP, LLC

5. Remove the bolt (1) from the clean air hose which goes between the air cleaner body cover and the throttle body.
6. Disconnect the engine oil vapor hose quick coupling (2).
7. Loosen the clamp (3) and disconnect the clean air hose (3) from the air cleaner body cover.

Fig 2: Clean Air Hose & Clamp



Courtesy of CHRYSLER GROUP, LLC

8. Disconnect the wire harness connector (1) from the inlet air temperature sensor.
9. Loosen the clamp (2) and remove the clean air hose (2).

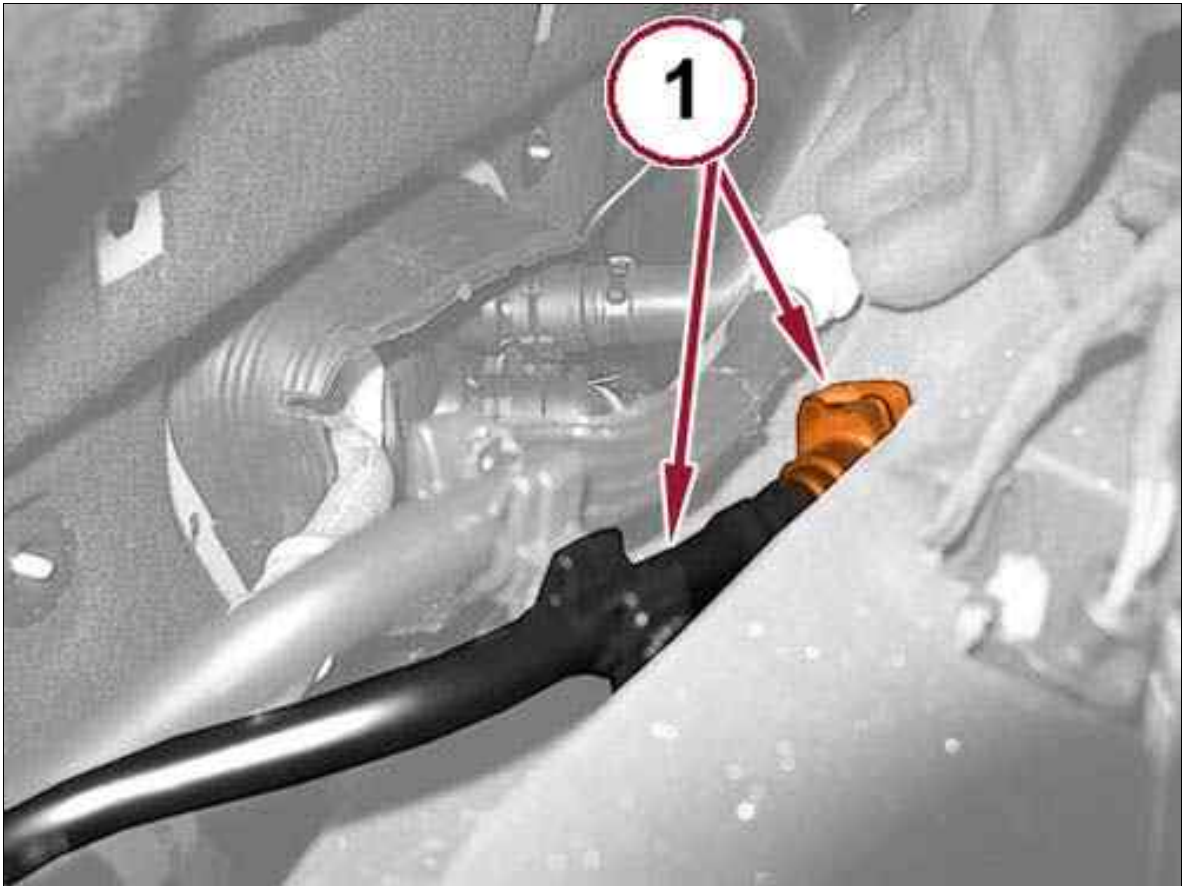
Fig 3: Front Fuel Delivery Line Right End Quick Coupling



Courtesy of CHRYSLER GROUP, LLC

10. Disconnect the quick coupling (1) on the right end of the front fuel delivery line.

Fig 4: Front Fuel Delivery Line Left End Quick Coupling

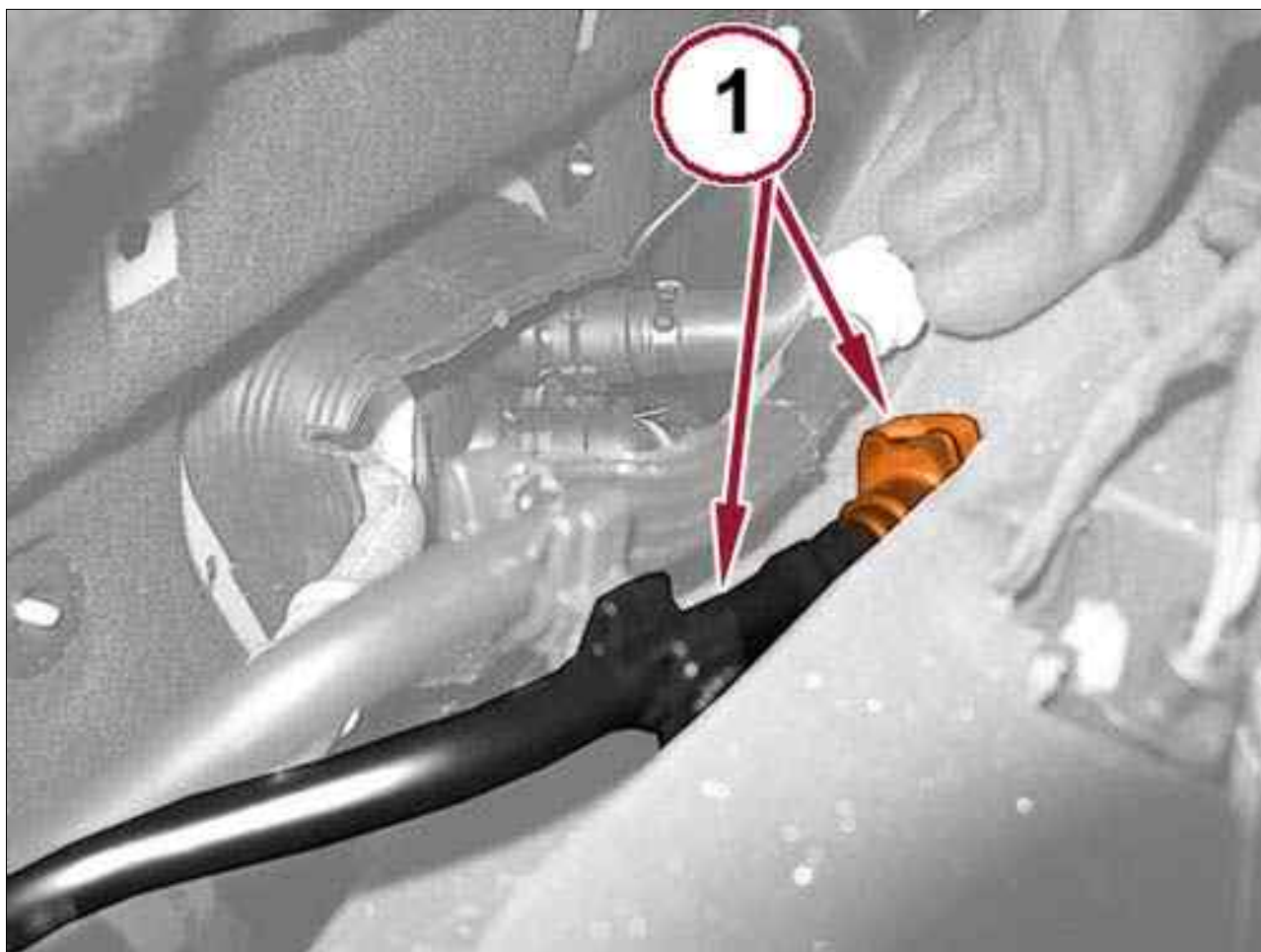


Courtesy of CHRYSLER GROUP, LLC

11. Disconnect the quick coupling (1) on the left end of the front fuel delivery line and remove the line from the vehicle.

**FUEL DELIVERY > LINES, FUEL > REMOVAL AND INSTALLATION > 2.4L >
INSTALLATION - FRONT FUEL DELIVERY LINE - 2.4L**

Fig 1: Front Fuel Delivery Line Left End Quick Coupling



Courtesy of CHRYSLER GROUP, LLC

1. Position the front fuel delivery line to the engine and connect the quick coupling (1).

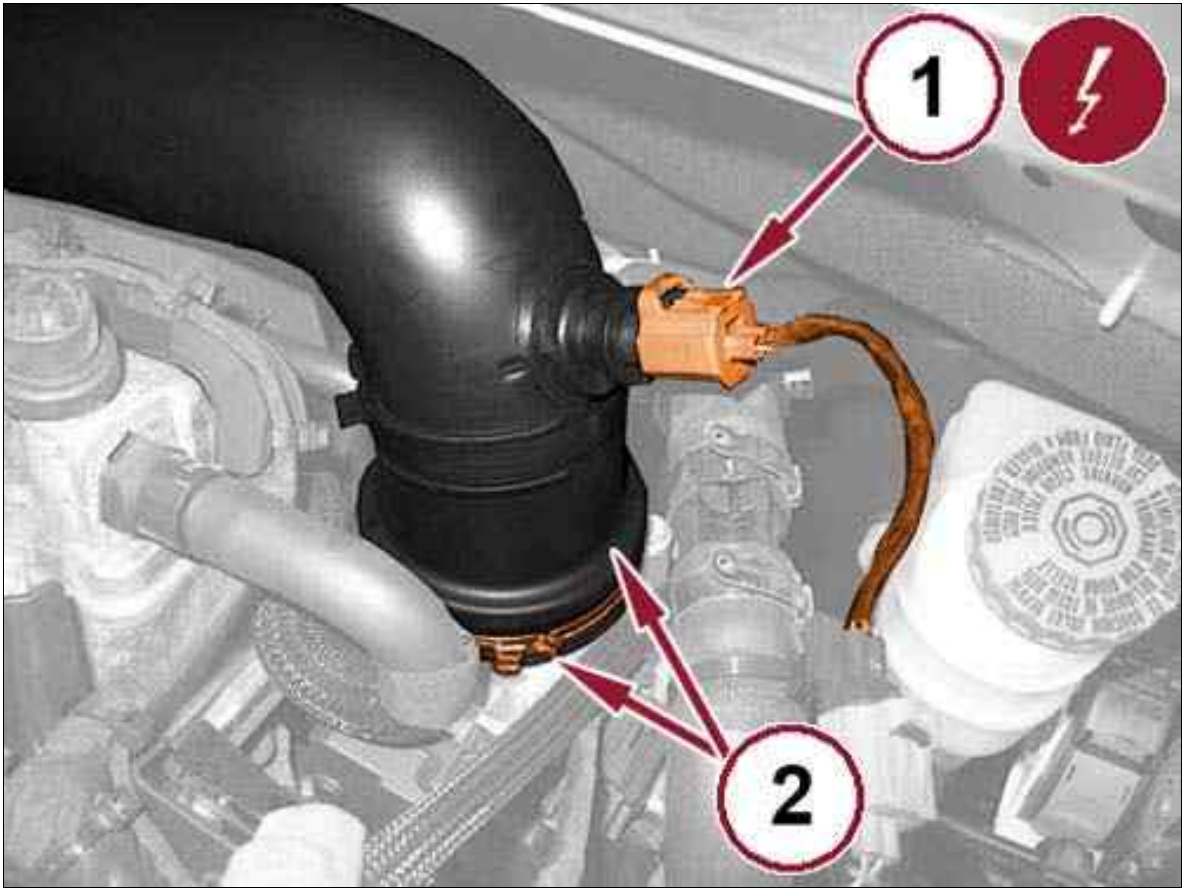
Fig 2: Front Fuel Delivery Line Right End Quick Coupling



Courtesy of CHRYSLER GROUP, LLC

2. Connect the quick coupling (1) for the right end of the front fuel delivery line.

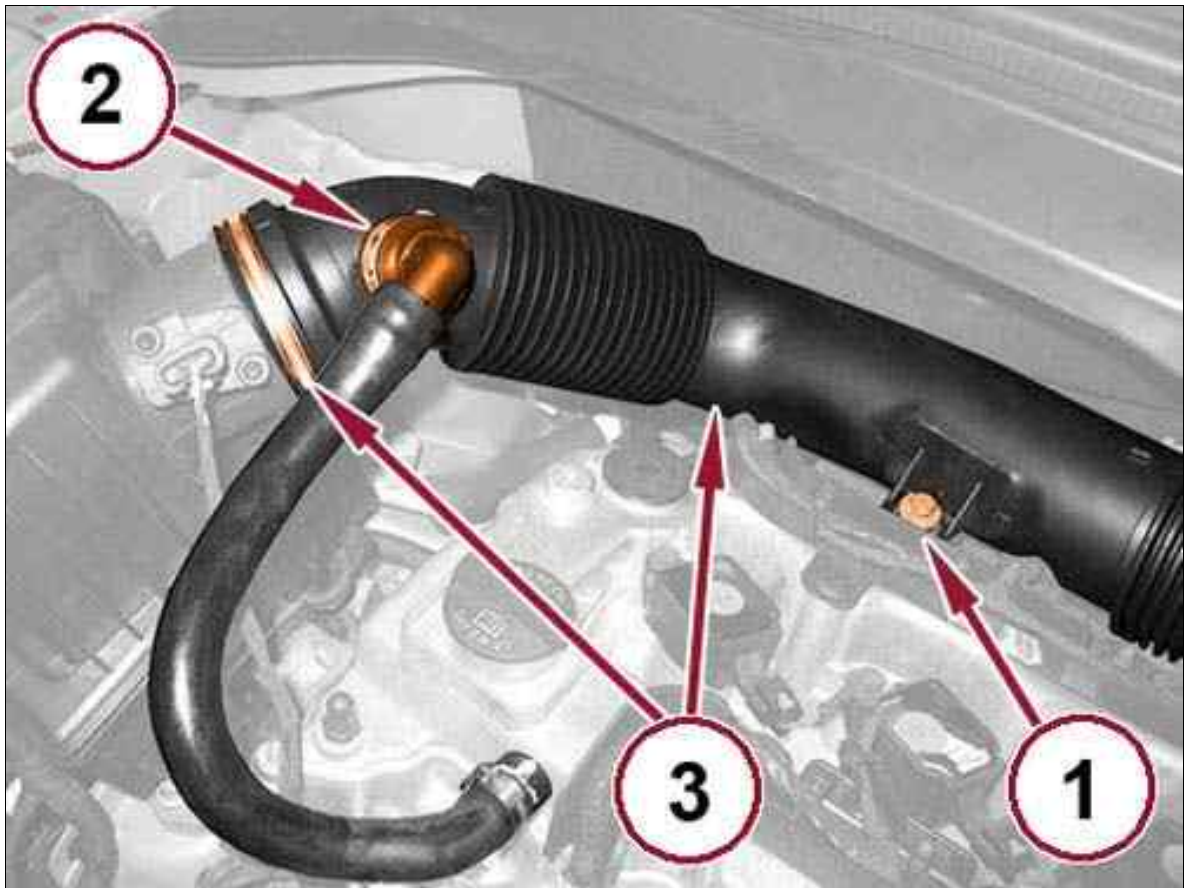
Fig 3: Clean Air Hose & Clamp



Courtesy of CHRYSLER GROUP, LLC

3. Connect the clean air hose (2) to the throttle body and tighten the clamp (2) securely.
4. Connect the wire harness connector (1) to the inlet air temperature sensor.

Fig 4: Engine Oil Vapor Hose Quick Coupling, Clean Air Hose, Clamp & Bolt



Courtesy of CHRYSLER GROUP, LLC

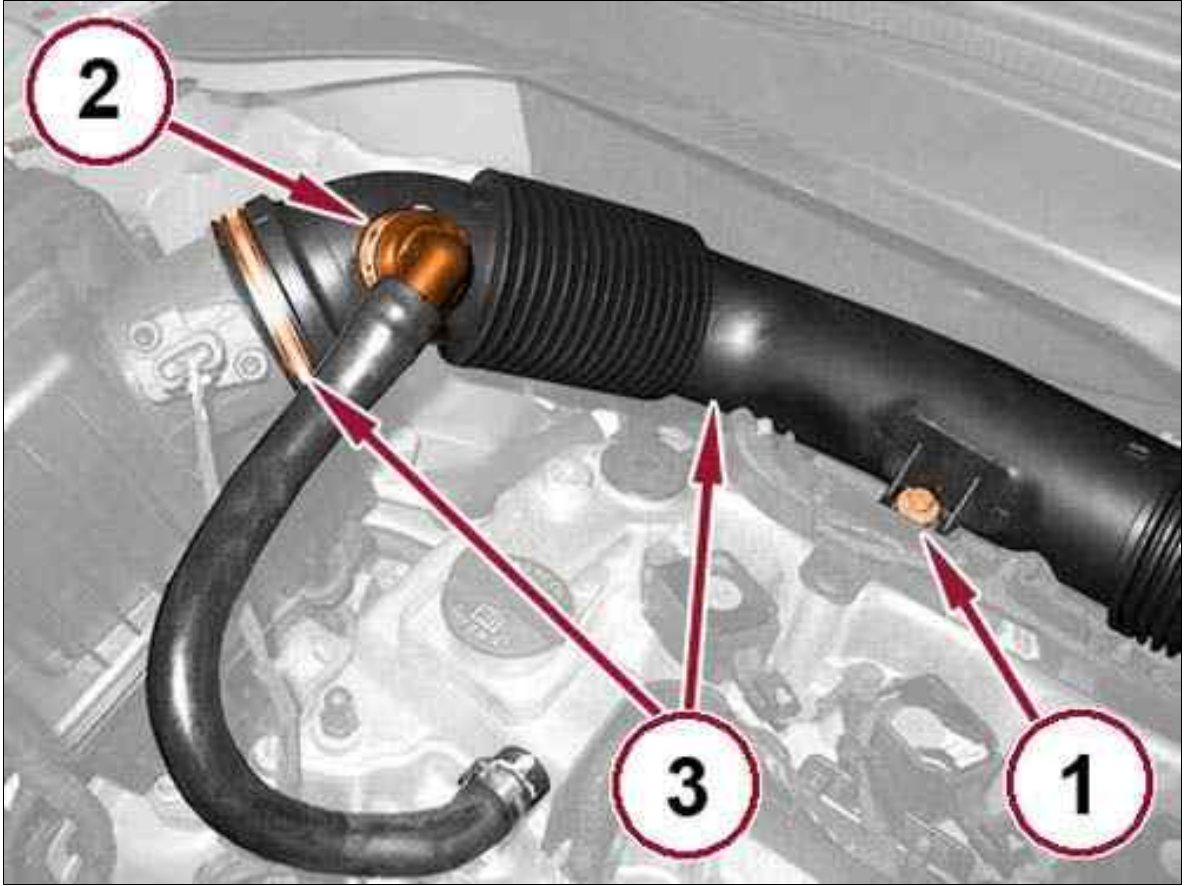
5. Connect the clean air hose (3) to the air cleaner body cover and tighten the clamp (3) securely.
6. Connect the engine oil vapor hose quick coupling (2).
7. Install the bolt (1) for the clean air hose which goes between the air cleaner body cover and the throttle body.
8. Install the engine cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .

FUEL DELIVERY > LINES, FUEL > REMOVAL AND INSTALLATION > 2.4L > REMOVAL - INTERMEDIATE FUEL DELIVERY LINE - 2.4L

1. Open the cover of the Power Distribution Center (PDC) in the engine compartment and remove the fuel pump fuse (F21 - 15 ampere).
2. Wait for the residual pressure in the fuel distribution manifold to be relieved.
3. Reinstall the fuel pump fuse (F21 - 15 ampere) and close the PDC cover.
4. Remove the belly pan. Refer to BELLY PAN, REMOVAL AND INSTALLATION .
5. Remove the side belly pan. Refer to BELLY PAN, SIDE, REMOVAL AND INSTALLATION .

6. Remove the engine cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .

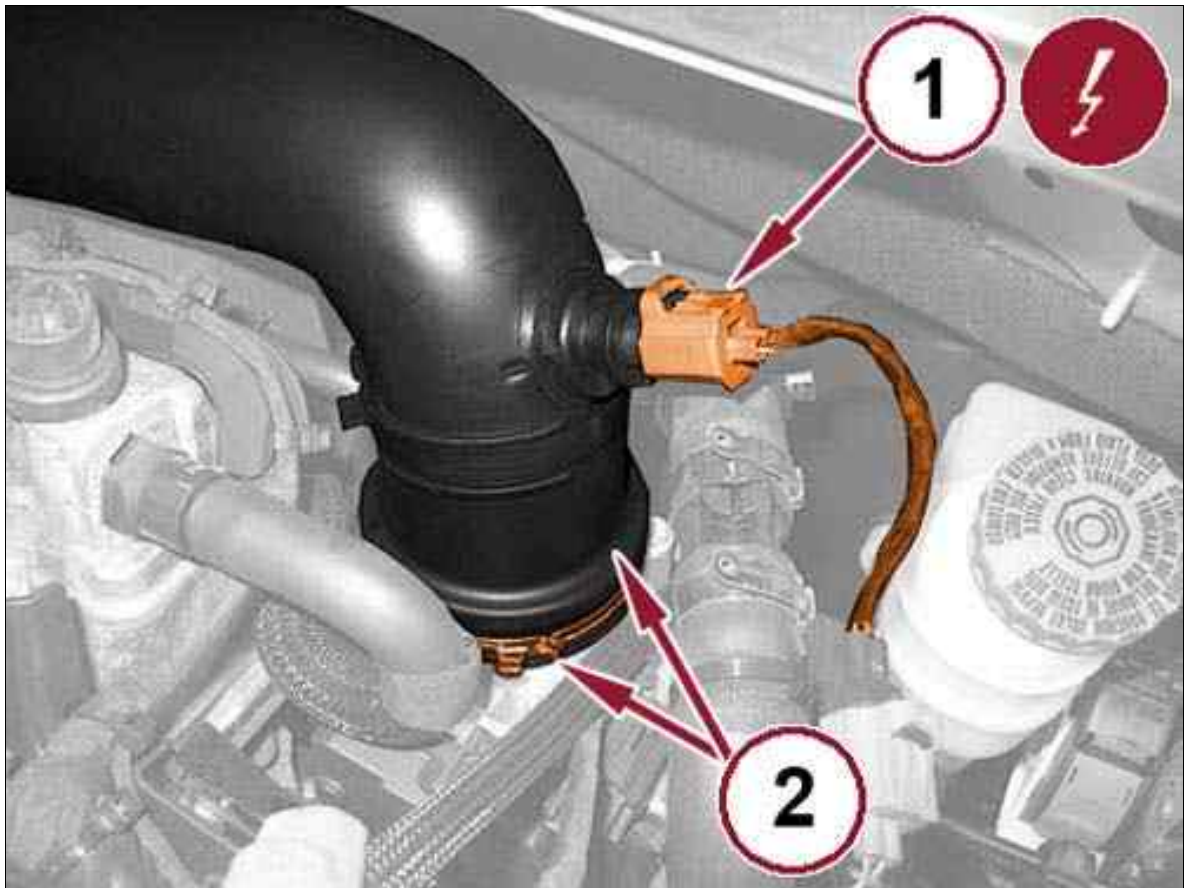
Fig 1: Engine Oil Vapor Hose Quick Coupling, Clean Air Hose, Clamp & Bolt



Courtesy of CHRYSLER GROUP, LLC

7. Remove the bolt (1) from the clean air hose which goes between the air cleaner body cover and the throttle body.
8. Disconnect the engine oil vapor hose quick coupling (2).
9. Loosen the clamp (3) and disconnect the clean air hose (3) from the air cleaner body cover.

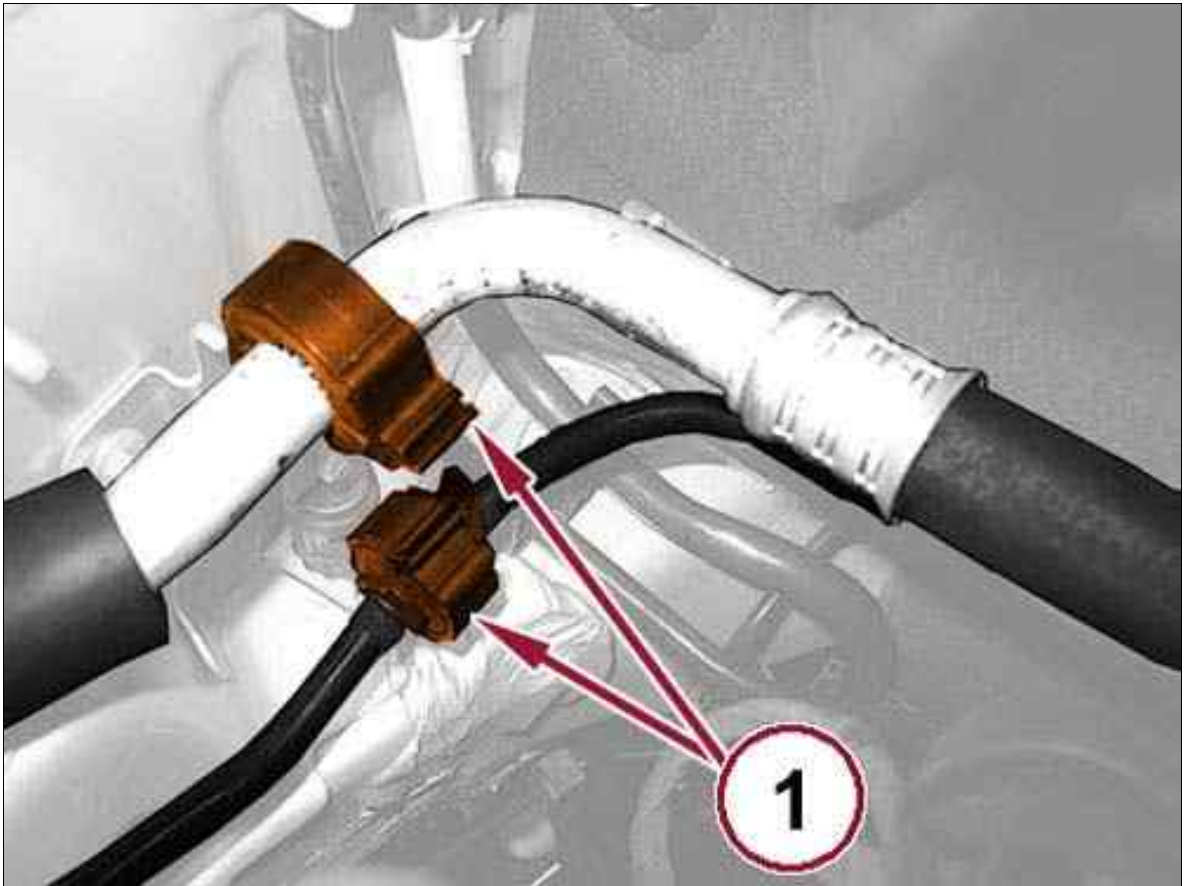
Fig 2: Clean Air Hose & Clamp



Courtesy of CHRYSLER GROUP, LLC

10. Disconnect the wire harness connector (1) from the inlet air temperature sensor.
11. Loosen the clamp (2) and remove the clean air hose (2).

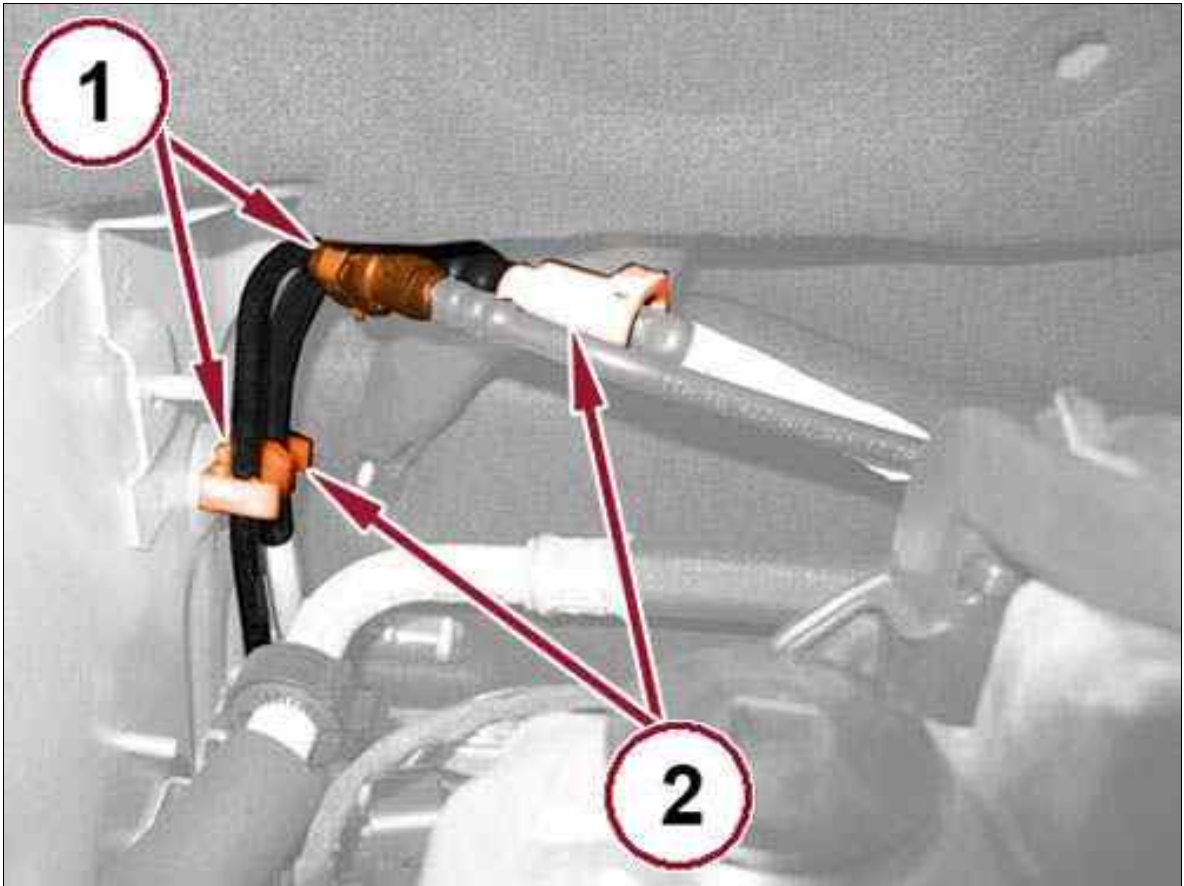
Fig 3: A/C Suction And Liquid Line Retainers



Courtesy of CHRYSLER GROUP, LLC

12. Release the A/C suction and liquid lines from the retainers (1).

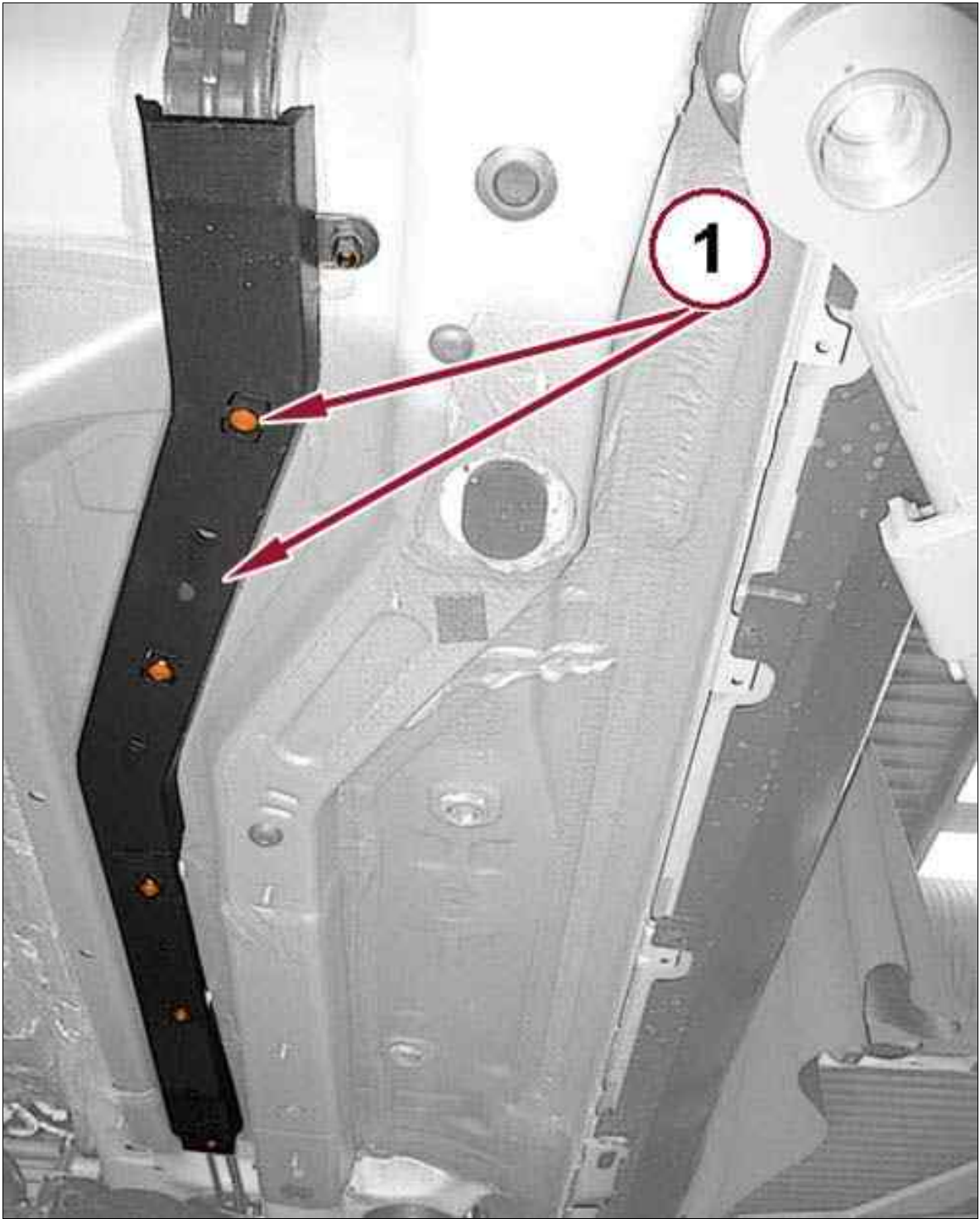
Fig 4: Front Fuel Delivery & Vapor Line Quick Couplings



Courtesy of CHRYSLER GROUP, LLC

13. Disconnect the quick couplings (1 and 2) for the right end of the front fuel delivery and vapor lines. Release the lines from the upper and lower retaining clips.

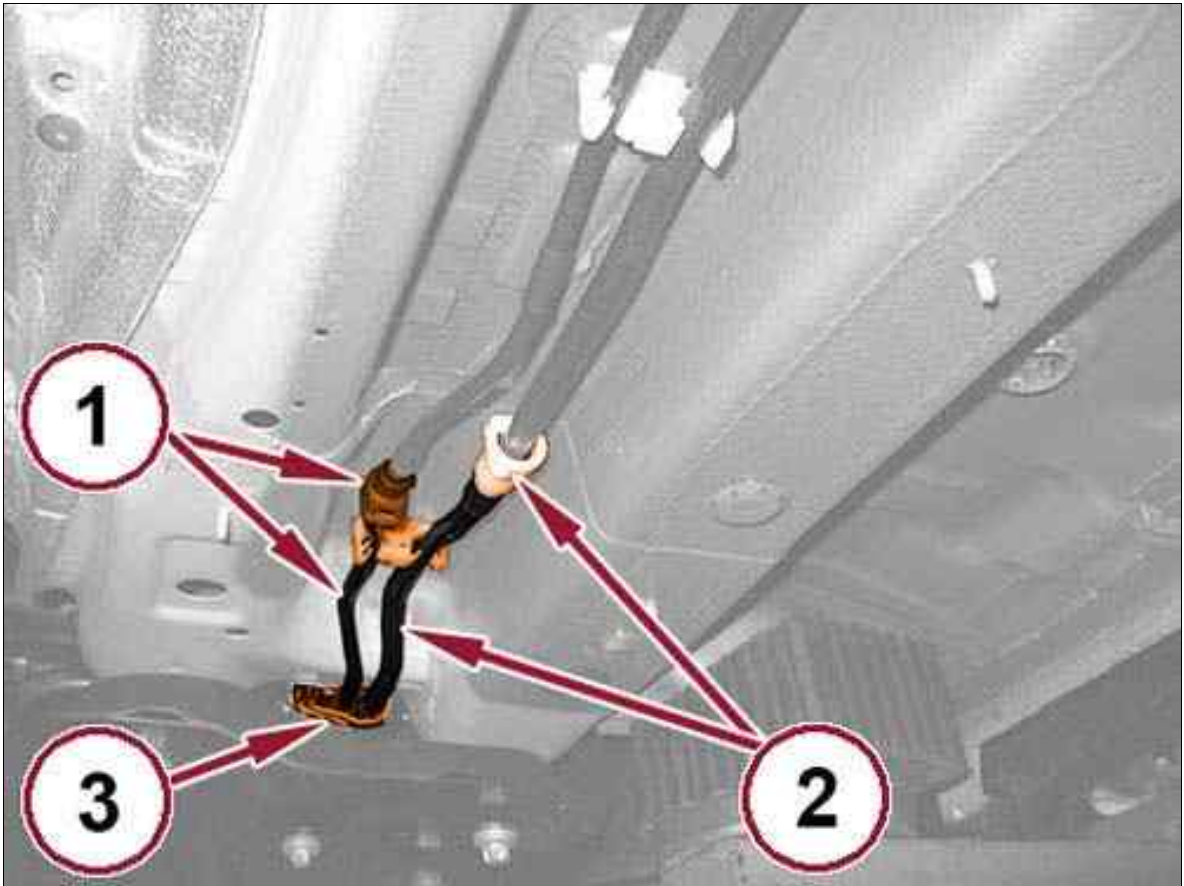
Fig 5: Front & Rear Fuel Line Shield Bolts



Courtesy of CHRYSLER GROUP, LLC

14. Raise and support the vehicle.
15. Remove the four bolts (1) and remove the front and rear fuel line shields.

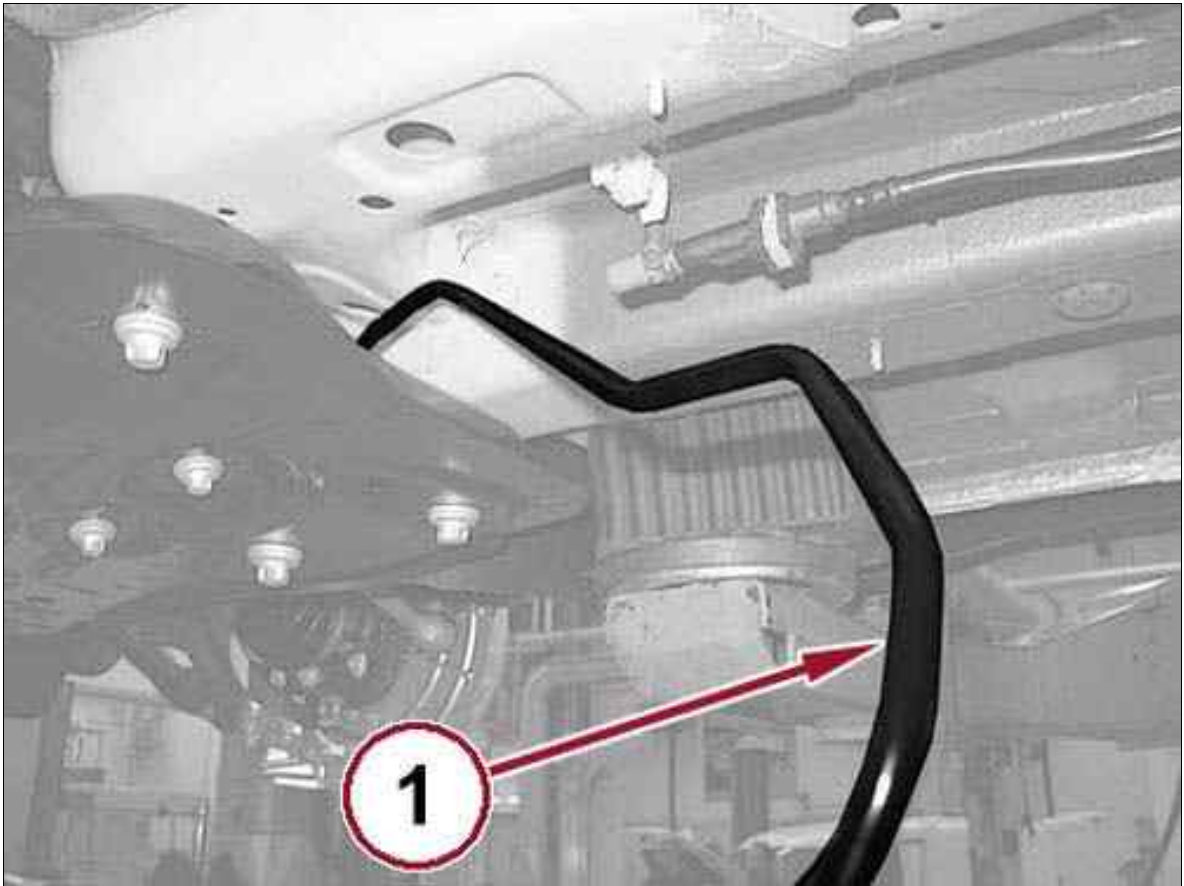
Fig 6: Fuel Delivery Line, Vapor Line & Quick Couplings



Courtesy of CHRYSLER GROUP, LLC

16. Disconnect the quick coupling (2) and disengage the intermediate fuel delivery line (2) from the rear retaining clip.
17. Disconnect the quick coupling (1) and disengage the intermediate fuel vapor line (1) from the rear retaining clip.

Fig 7: Intermediate Fuel Delivery And Vapor Lines

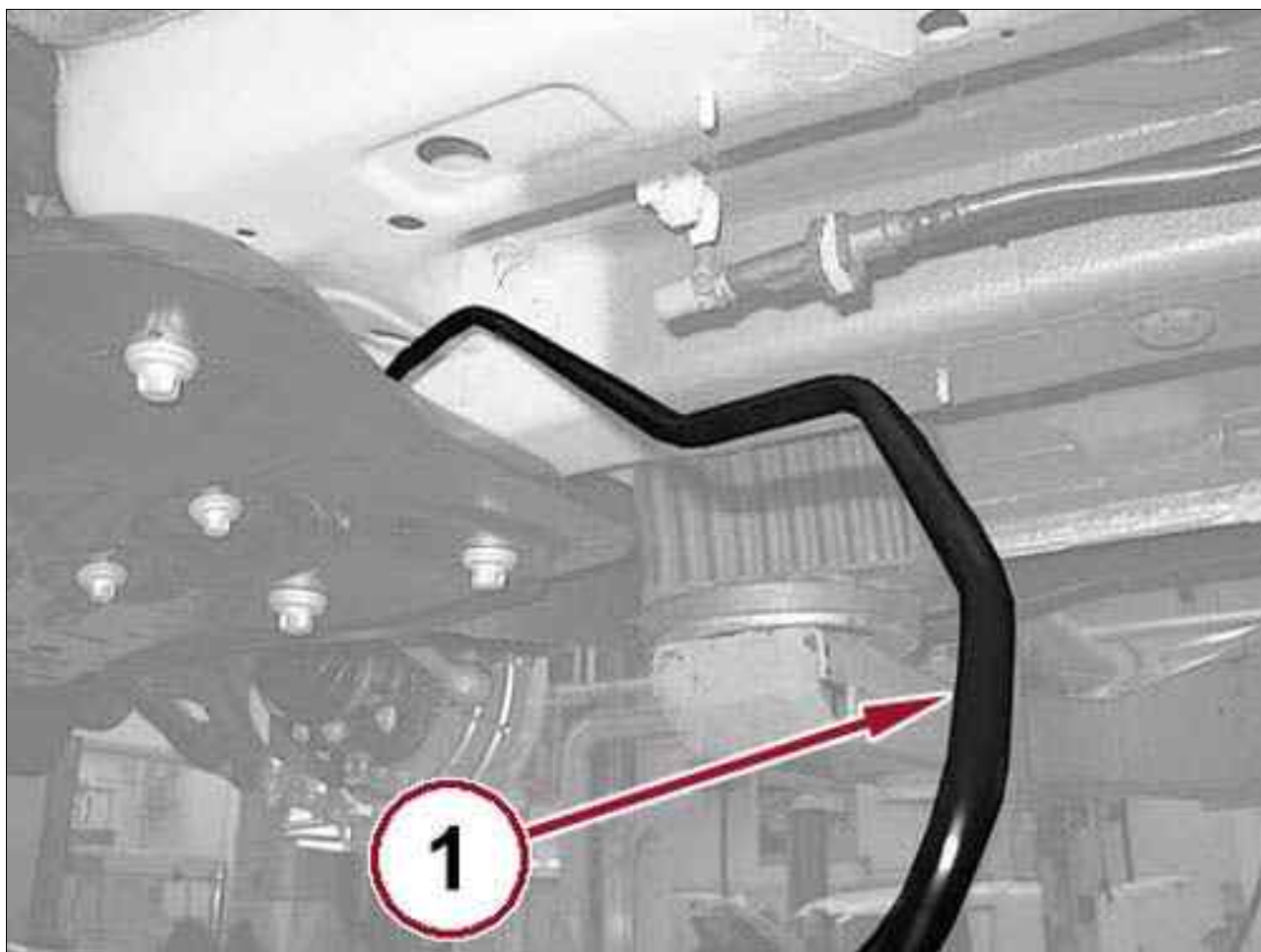


Courtesy of CHRYSLER GROUP, LLC

18. Disengage the intermediate fuel delivery and vapor lines (1) from the front retaining clip and remove them from the vehicle.

**FUEL DELIVERY > LINES, FUEL > REMOVAL AND INSTALLATION > 2.4L >
INSTALLATION - INTERMEDIATE FUEL DELIVERY LINE - 2.4L**

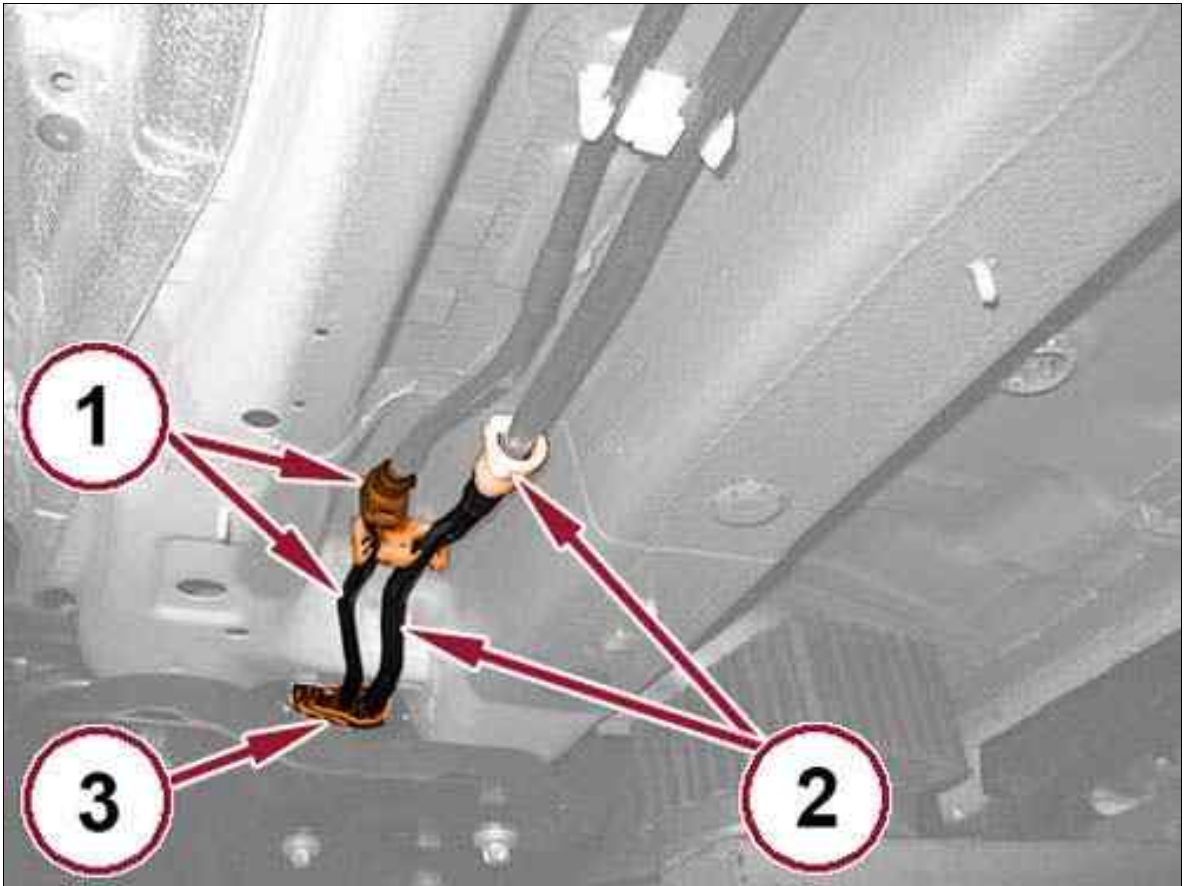
Fig 1: Intermediate Fuel Delivery And Vapor Lines



Courtesy of CHRYSLER GROUP, LLC

1. Position the intermediate fuel delivery and vapor lines to the vehicle and insert them into the front retaining clip.

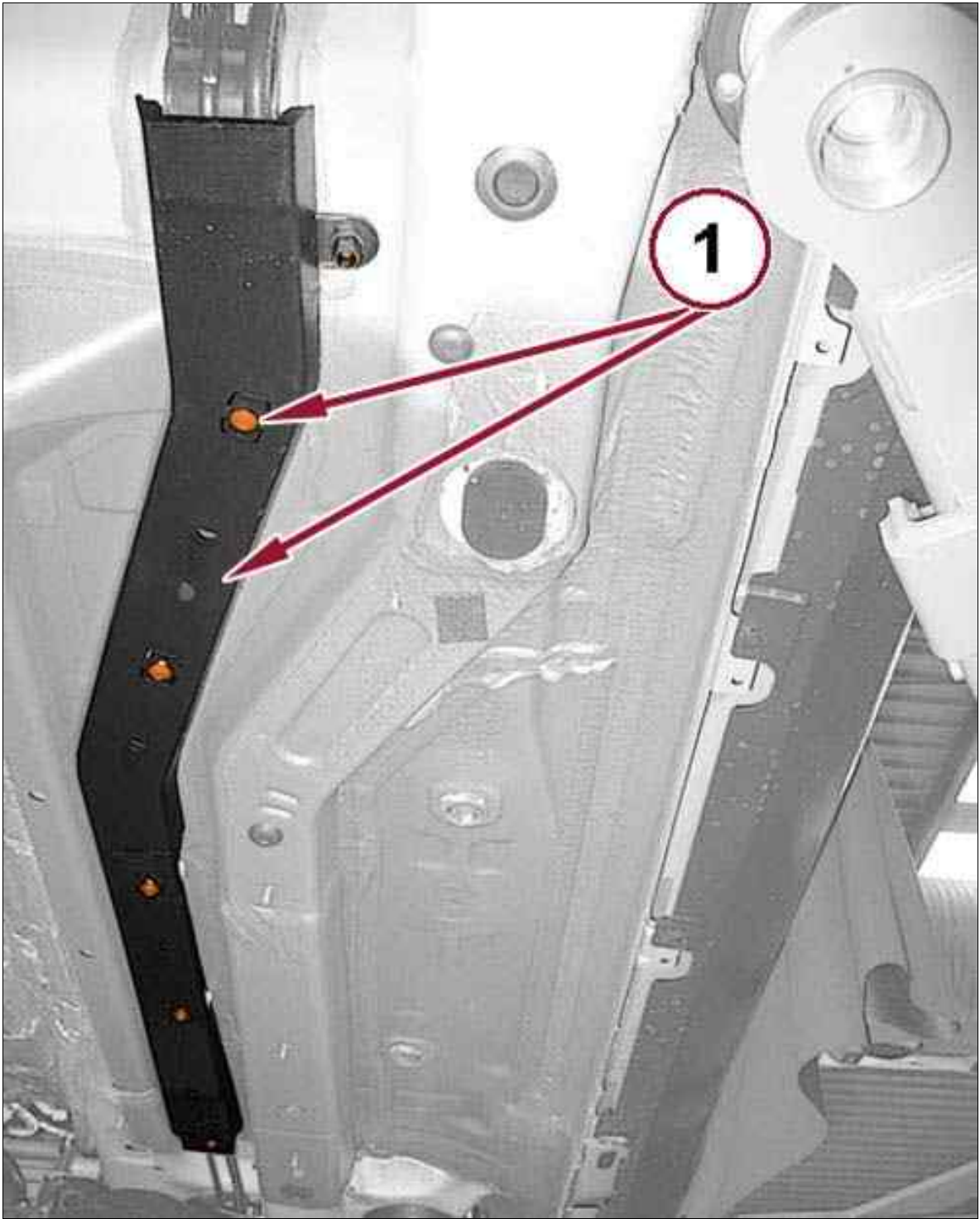
Fig 2: Fuel Delivery Line, Vapor Line & Quick Couplings



Courtesy of CHRYSLER GROUP, LLC

2. Close the front retaining clip (3) and connect the quick couplings (1) for the intermediate fuel delivery and vapor lines.
3. Insert the intermediate fuel delivery and vapor lines (1 and 2) in the rear retaining clip.

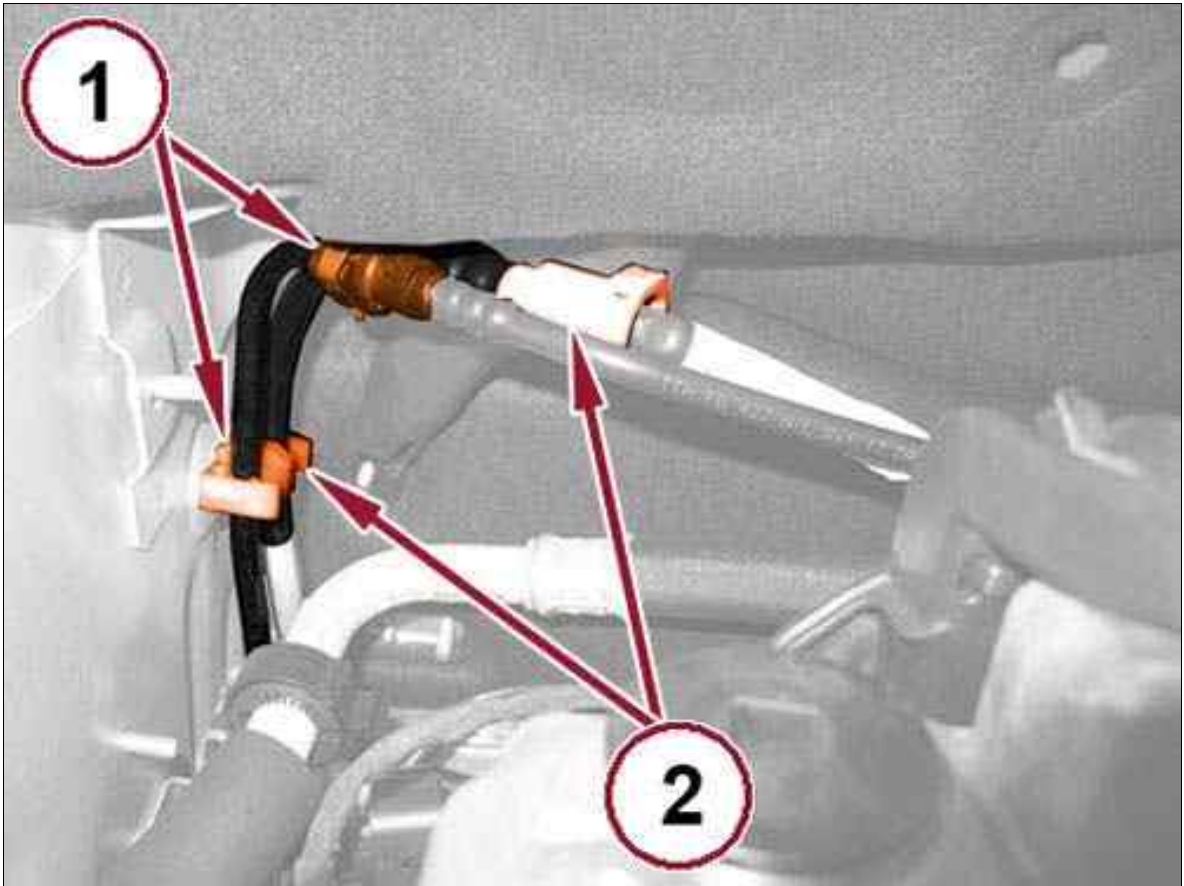
Fig 3: Front & Rear Fuel Line Shield Bolts



Courtesy of CHRYSLER GROUP, LLC

4. Position the front and rear fuel line shields and install the bolts (1). Tighten the bolts securely.

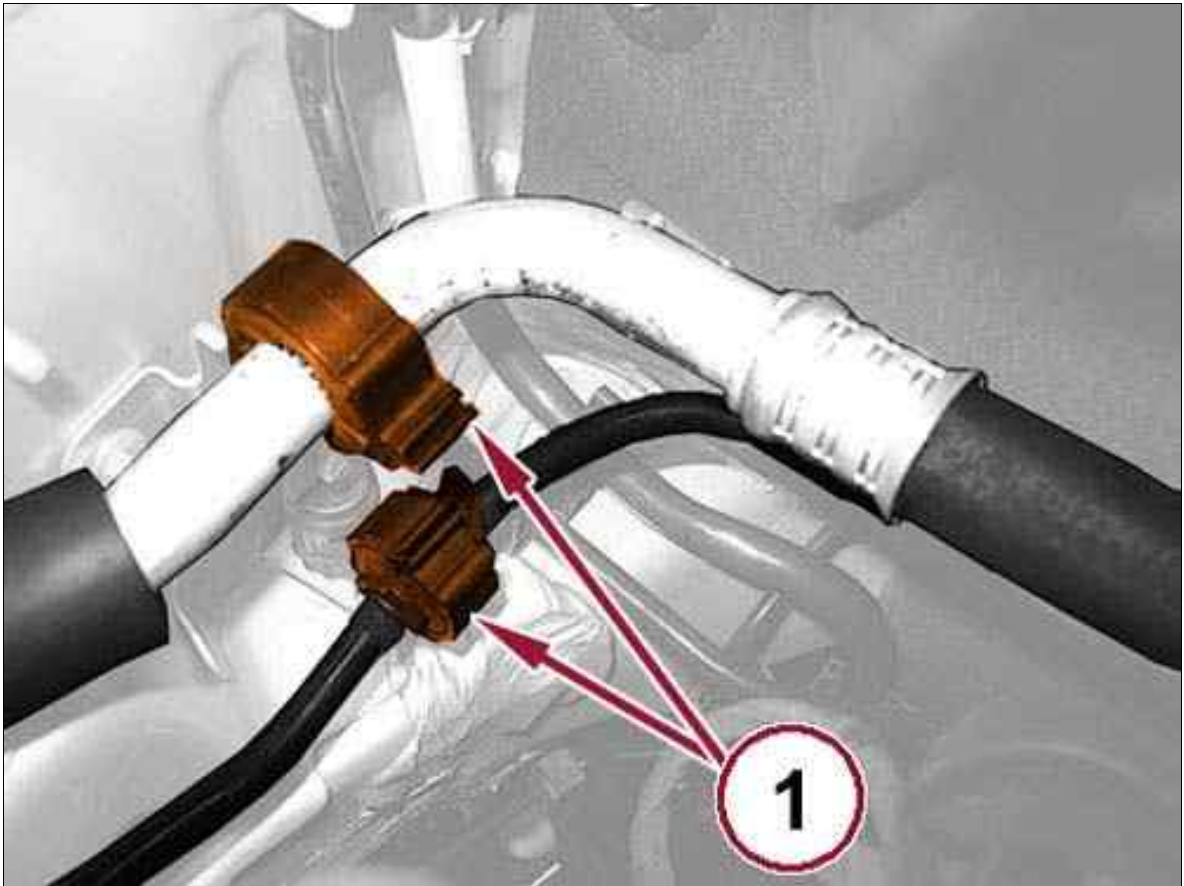
Fig 4: Front Fuel Delivery & Vapor Line Quick Couplings



Courtesy of CHRYSLER GROUP, LLC

5. Connect the quick couplings (1 and 2) for the right end of the front fuel delivery and vapor lines. Insert the lines into the upper and lower retaining clips.

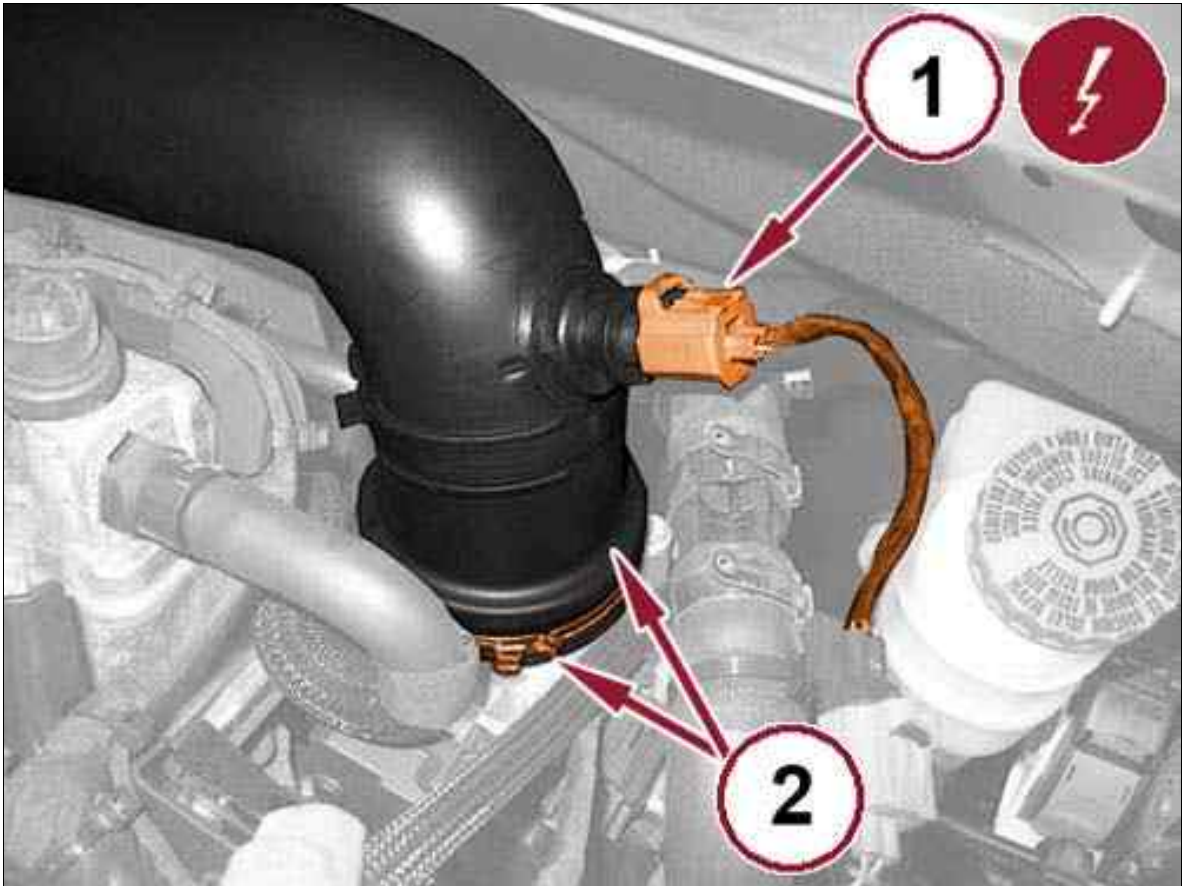
Fig 5: A/C Suction And Liquid Line Retainers



Courtesy of CHRYSLER GROUP, LLC

6. Insert the A/C suction and liquid lines into the retainers (1).

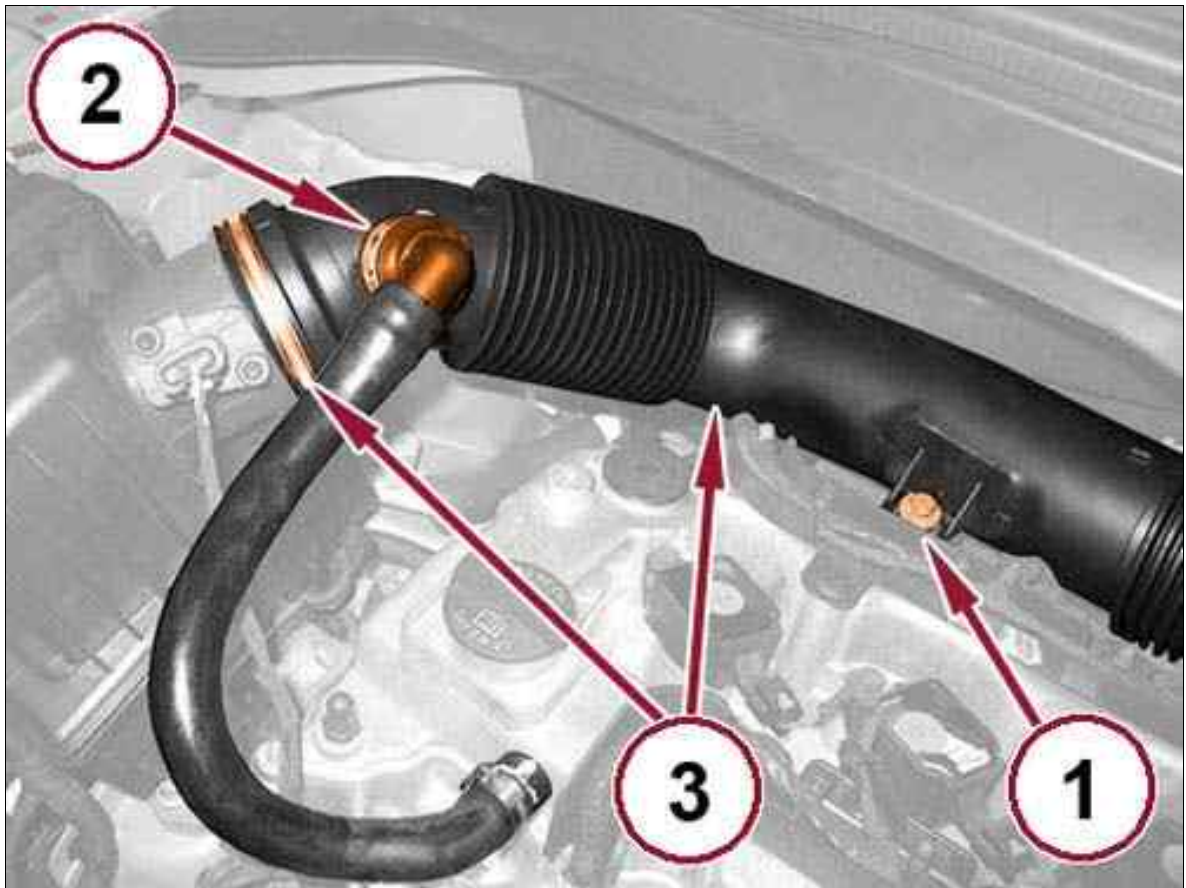
Fig 6: Clean Air Hose & Clamp



Courtesy of CHRYSLER GROUP, LLC

7. Connect the clean air hose (2) to the throttle body and tighten the clamp (2) securely.
8. Connect the wire harness connector (1) to the inlet air temperature sensor.

Fig 7: Engine Oil Vapor Hose Quick Coupling, Clean Air Hose, Clamp & Bolt



Courtesy of CHRYSLER GROUP, LLC

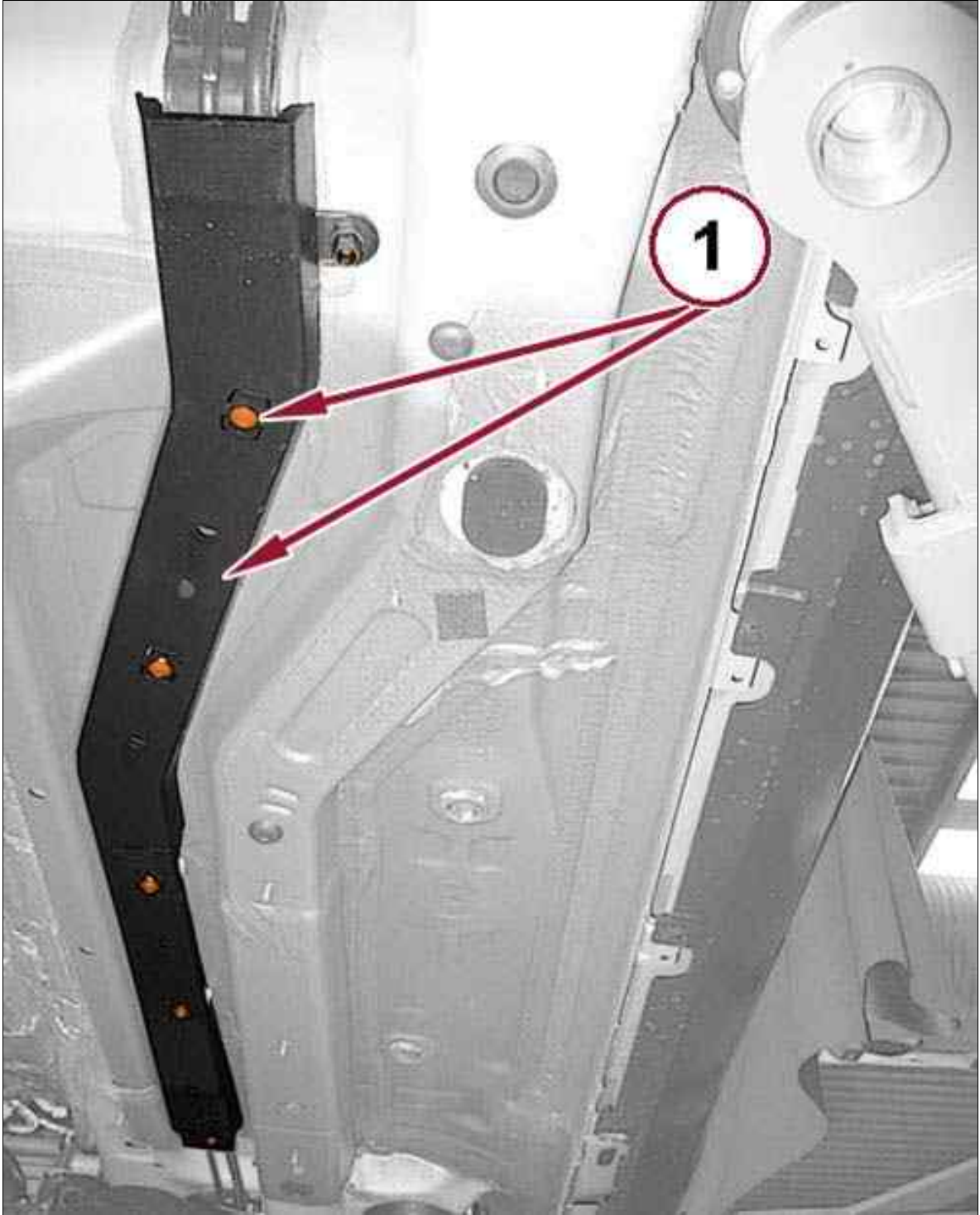
9. Connect the clean air hose (3) to the air cleaner body cover and tighten the clamp (3) securely.
10. Connect the engine oil vapor hose quick coupling (2).
11. Install the bolt (1) for the clean air hose which goes between the air cleaner body cover and the throttle body.
12. Install the engine cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .
13. Install the side belly pan. Refer to BELLY PAN, SIDE, REMOVAL AND INSTALLATION .
14. Install the belly pan. Refer to BELLY PAN, REMOVAL AND INSTALLATION .
15. Remove the support and lower the vehicle.

FUEL DELIVERY > LINES, FUEL > REMOVAL AND INSTALLATION > 2.4L > REMOVAL - REAR FUEL DELIVERY LINE - 2.4L

1. Raise and support the vehicle.
2. Remove the fuel tank from the vehicle. Refer to TANK, FUEL, REMOVAL AND INSTALLATION .
3. Remove the side belly pan from the underbody of the vehicle. Refer to BELLY PAN, SIDE,

REMOVAL AND INSTALLATION .

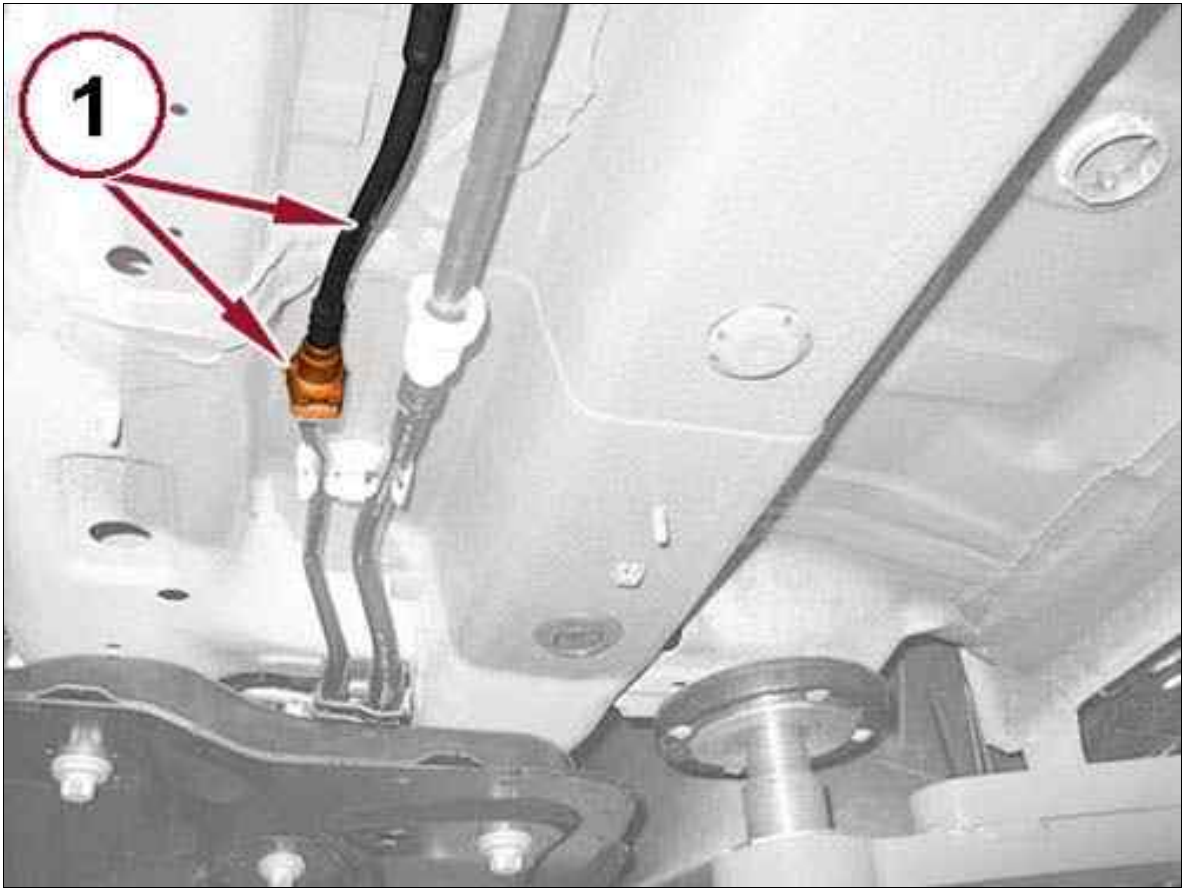
Fig 1: Fuel Tube Shield Screws



Courtesy of CHRYSLER GROUP, LLC

4. Remove the screws (1) that secure the fuel tube shield beneath the underbody and remove the front and rear shields.

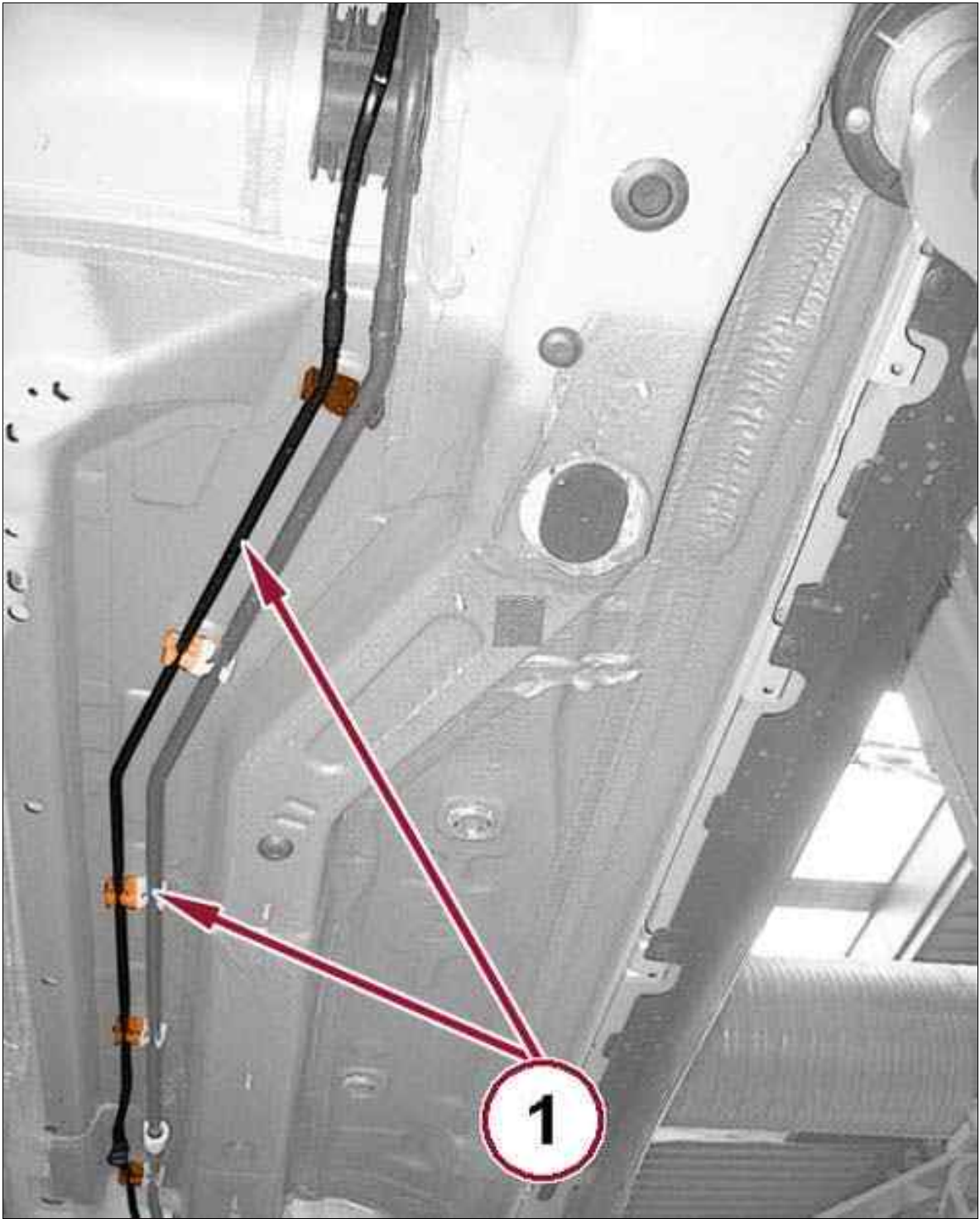
Fig 2: Fuel Delivery Tube Front Quick Coupling



Courtesy of CHRYSLER GROUP, LLC

5. Disconnect the rear fuel delivery tube front quick coupling (1).

Fig 3: Rear Fuel Delivery Tube

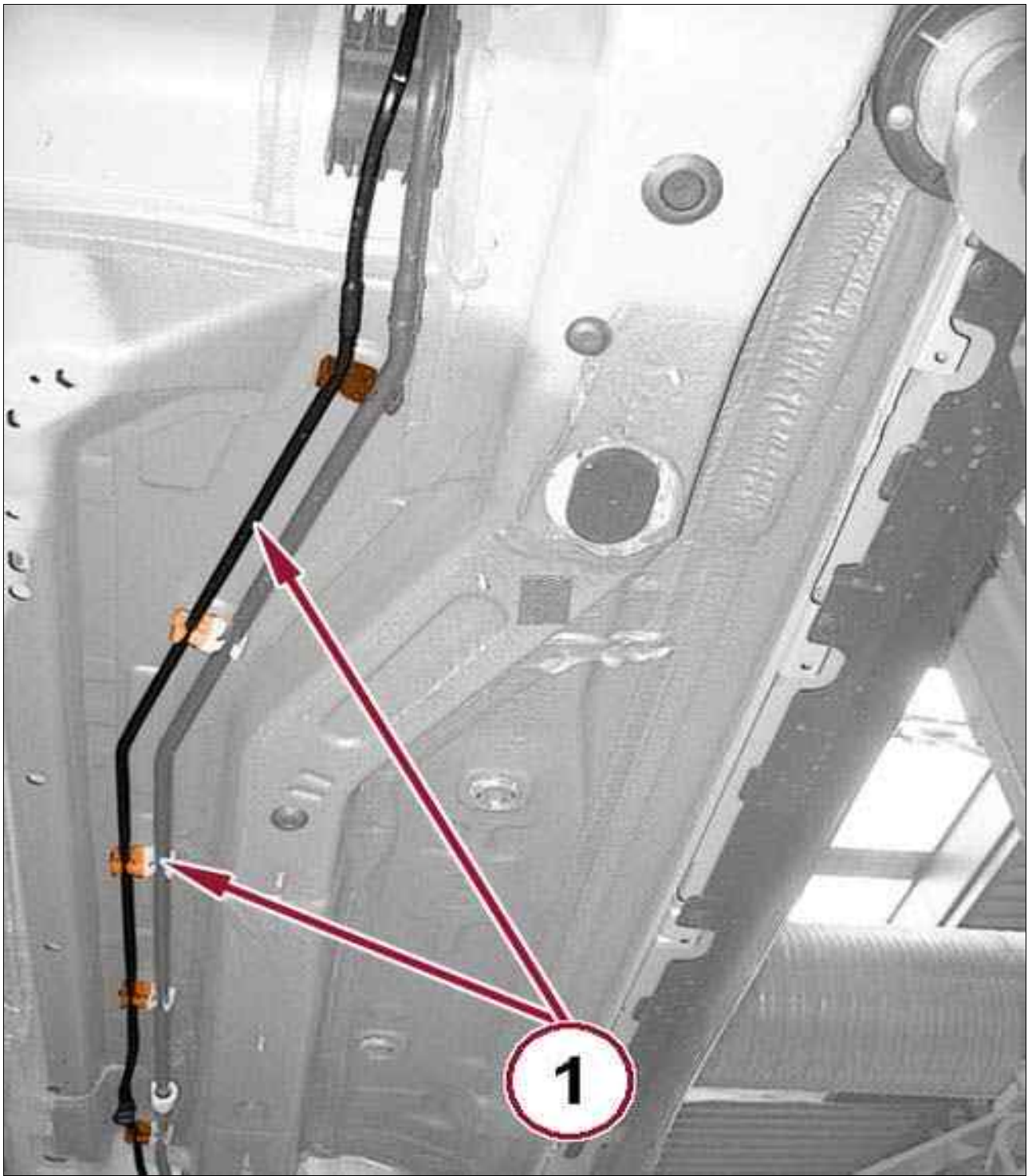


Courtesy of CHRYSLER GROUP, LLC

6. Disengage the rear fuel delivery tube (1) from the retaining clips on the underbody.

**FUEL DELIVERY > LINES, FUEL > REMOVAL AND INSTALLATION > 2.4L >
INSTALLATION - REAR FUEL DELIVERY LINE - 2.4L**

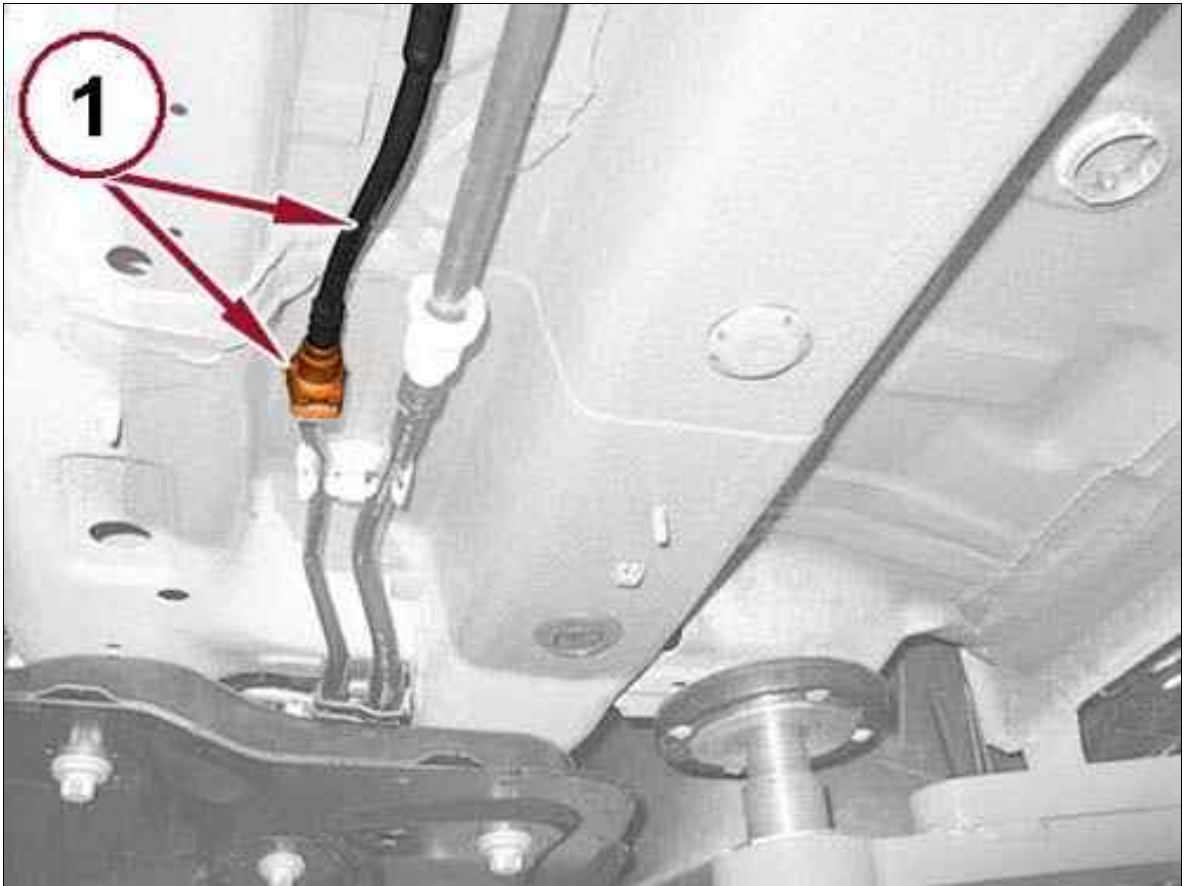
Fig 1: Rear Fuel Delivery Tube



Courtesy of CHRYSLER GROUP, LLC

1. Position the rear fuel delivery tube (1) to the vehicle underbody.
2. Engage the rear fuel delivery tube (1) with the retaining clips on the underbody.

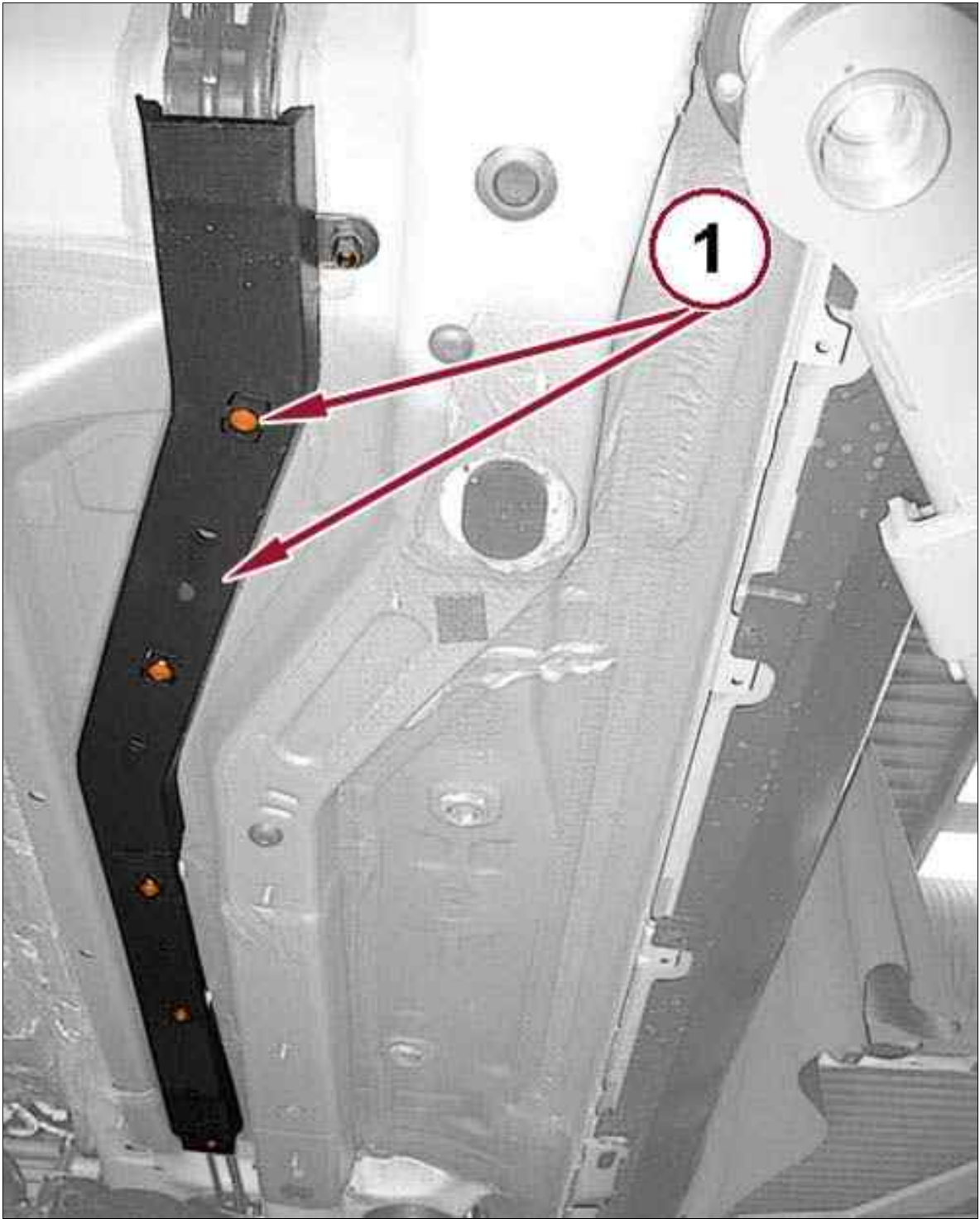
Fig 2: Fuel Delivery Tube Front Quick Coupling



Courtesy of CHRYSLER GROUP, LLC

3. Connect the rear fuel delivery tube front quick coupling (1).

Fig 3: Fuel Tube Shield Screws



Courtesy of CHRYSLER GROUP, LLC

4. Position the front and rear fuel tube shields to the underbody then install and tighten the screws (1) that secure it. Tighten the screws securely.
5. Install the fuel tank into the vehicle. Refer to TANK, FUEL, REMOVAL AND INSTALLATION .
6. Install the side belly pan onto the underbody of the vehicle. Refer to BELLY PAN, SIDE, REMOVAL AND INSTALLATION .

7. Remove the support and lower the vehicle.

FUEL DELIVERY > MODULE, FUEL PUMP > REMOVAL AND INSTALLATION > 1.4L > REMOVAL

1. Open the cover of the fuse box in the engine compartment and remove the fuse F21 (15 A) of the fuel pump.
2. Start the engine and run until the fuel in the lines is depleted.
3. Install the fuse removed earlier and close the fuse box cover.
4. Remove the rear seat cushion. Refer to SEAT CUSHION, REMOVAL AND INSTALLATION .

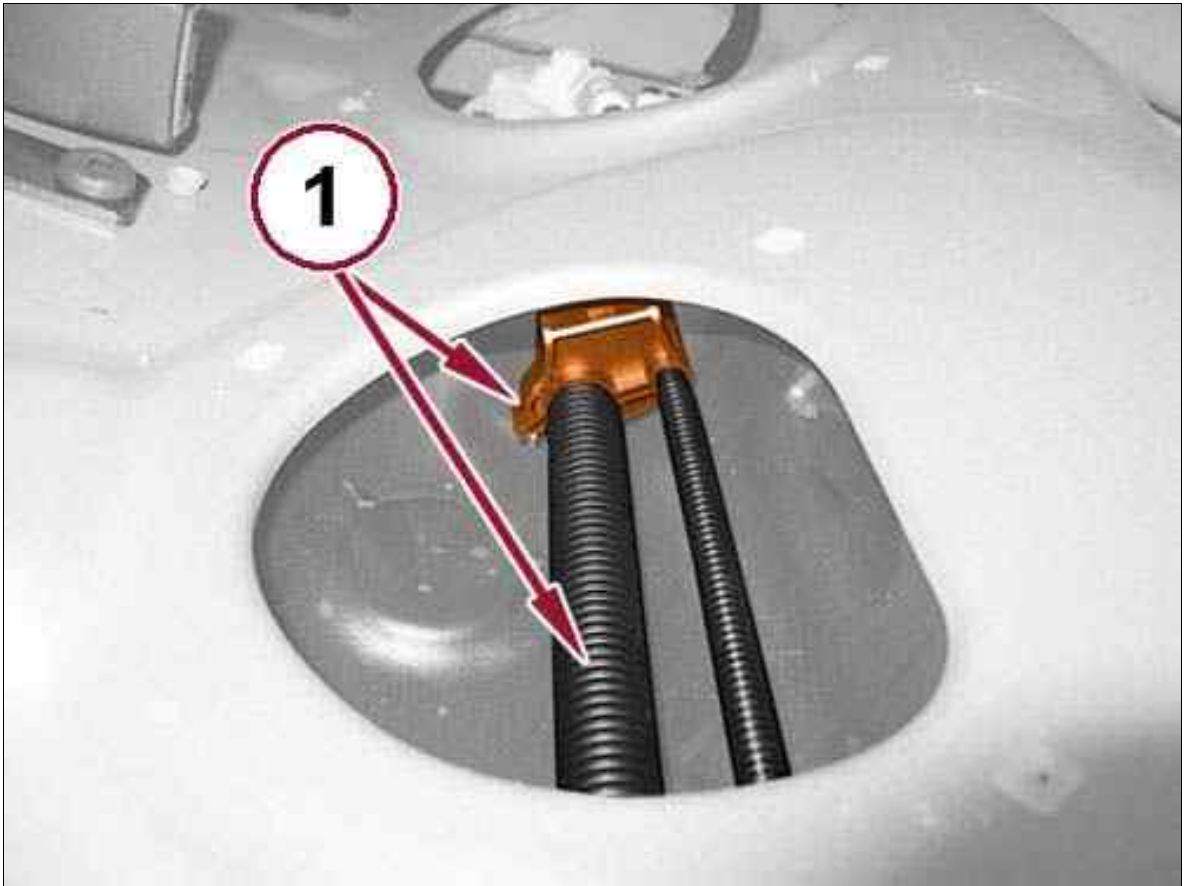
Fig 1: Fuel Pipes Access Cover & Screws



Courtesy of CHRYSLER GROUP, LLC

5. Lift the cover, unscrew the screws and remove the cover to access the fuel pipes (1).

Fig 2: Fuel Vapor Hoses & Clamp



Courtesy of CHRYSLER GROUP, LLC

6. Open the clamp and release the fuel vapor hoses (1).

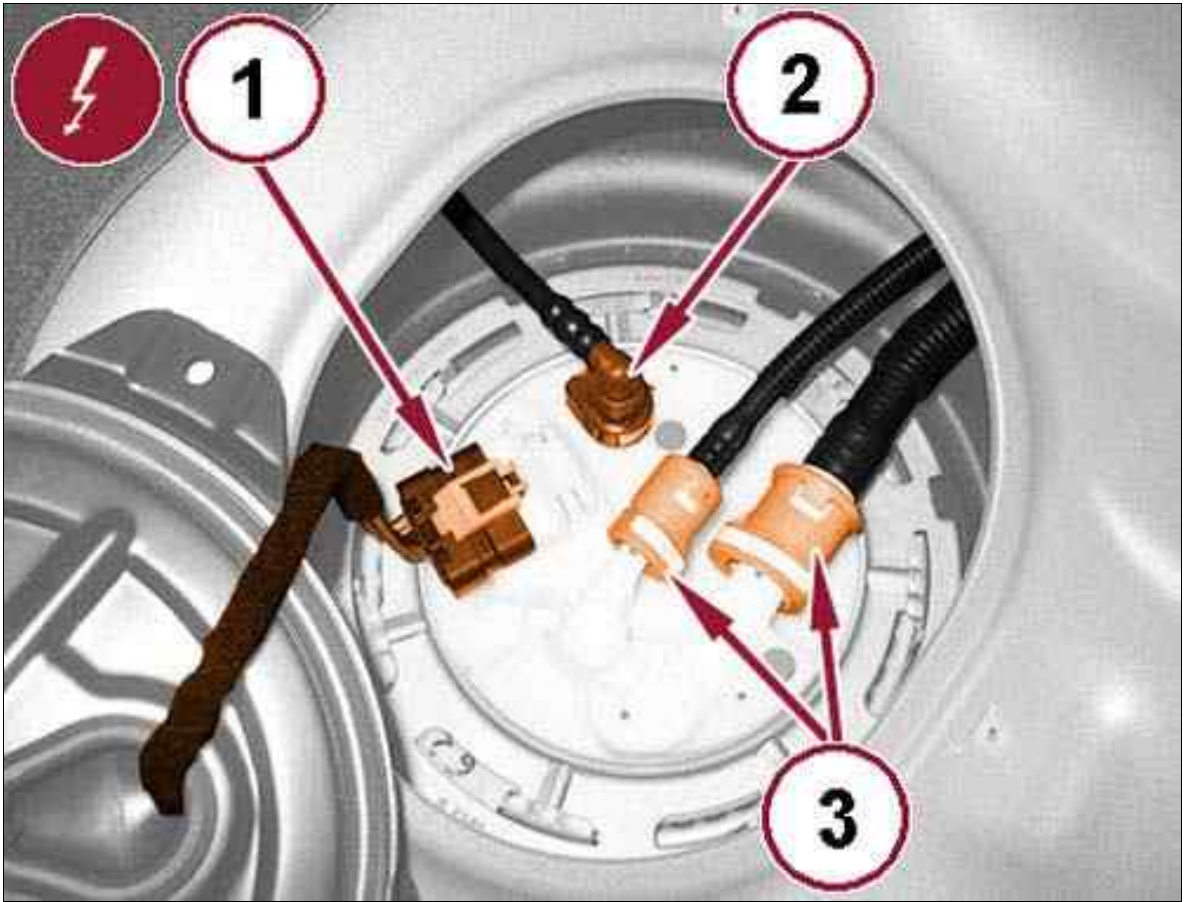
Fig 3: Fuel Pump Access Cover & Screws



Courtesy of CHRYSLER GROUP, LLC

7. Lift the cover, unscrew the screws and remove the cover to access the fuel pump.

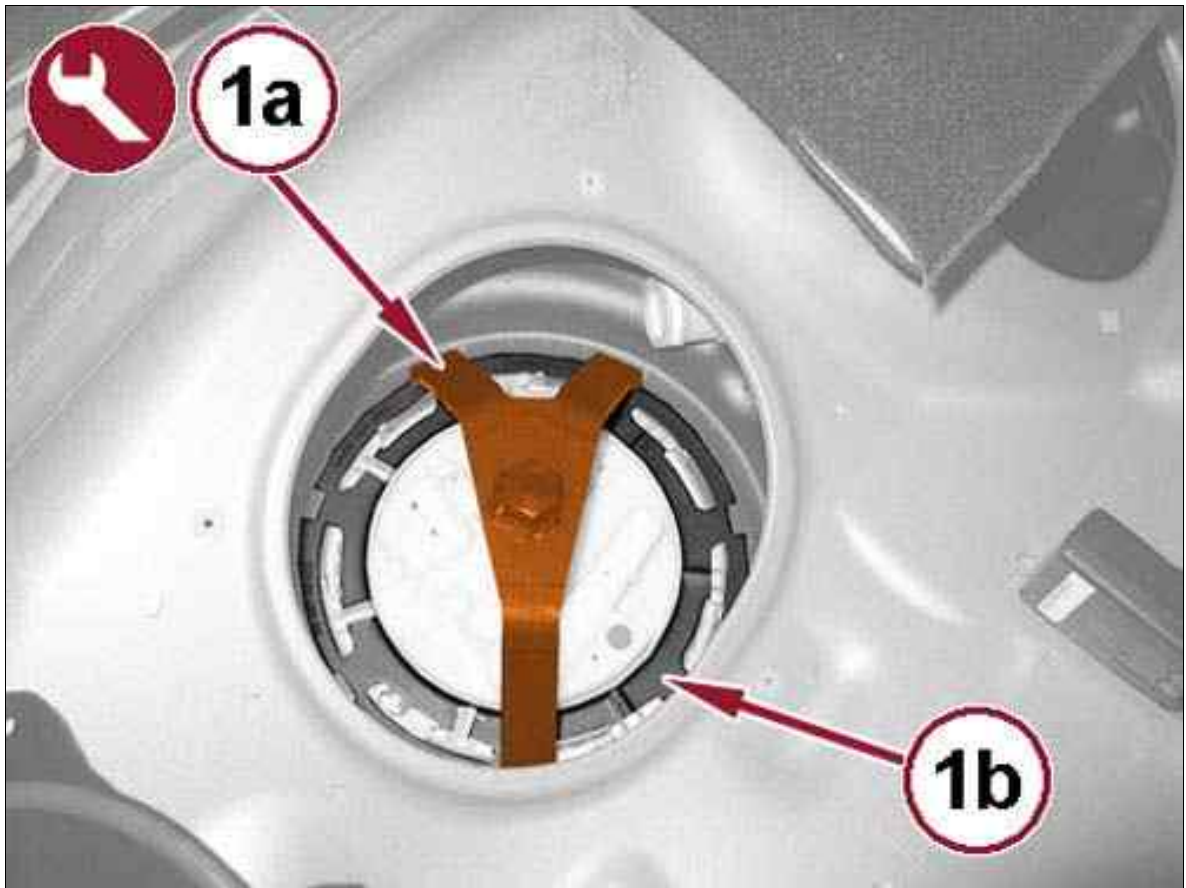
Fig 4: Connector, Fuel Delivery Pipe & Fuel Vapor Pipe Quick Coupling



Courtesy of CHRYSLER GROUP, LLC

8. Unplug the fuel pump's electrical connection (1).
9. Disconnect the fuel delivery pipe quick coupling (2).
10. Disconnect the fuel vapor pipe quick couplings (3).

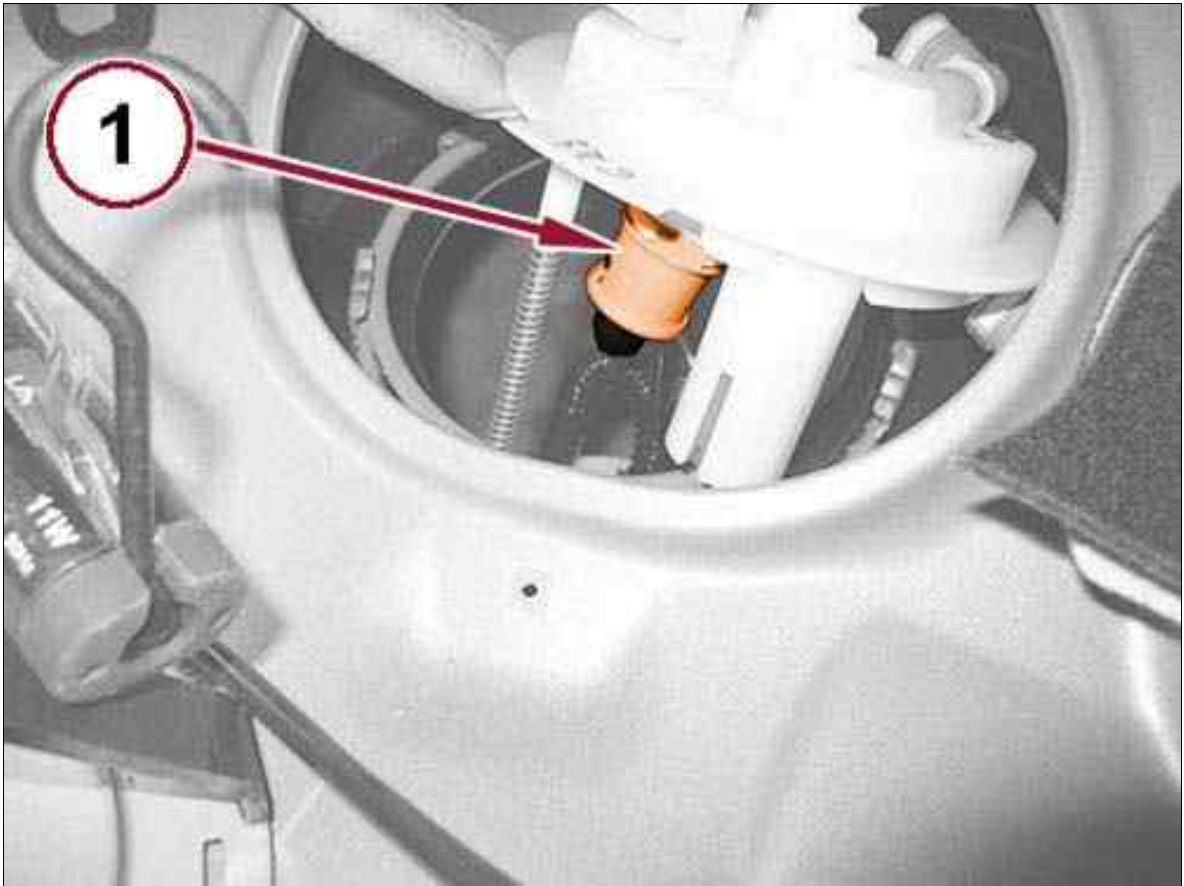
Fig 5: Pump Assembly Mounting Ring Set & Special Tool



Courtesy of CHRYSLER GROUP, LLC

11. Mount the 2000002100 (EMEA) or (special tool #9340, SAE Fuel Pump Lock Ring Wrench) (NAFTA) tool (1a) and remove the pump assembly mounting ring set (1b).

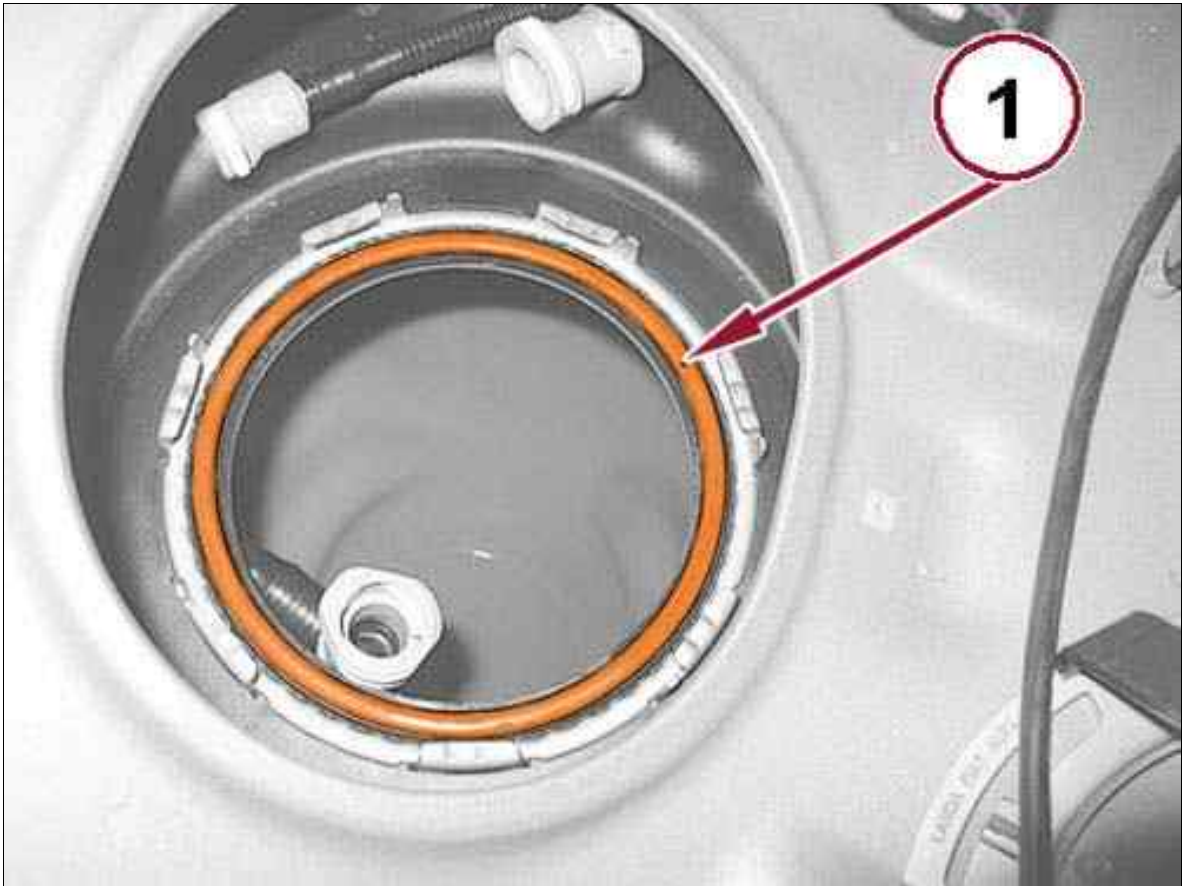
Fig 6: Fuel Pump Assembly



Courtesy of CHRYSLER GROUP, LLC

12. Remove the fuel pump assembly (1).

Fig 7: Tank Seal

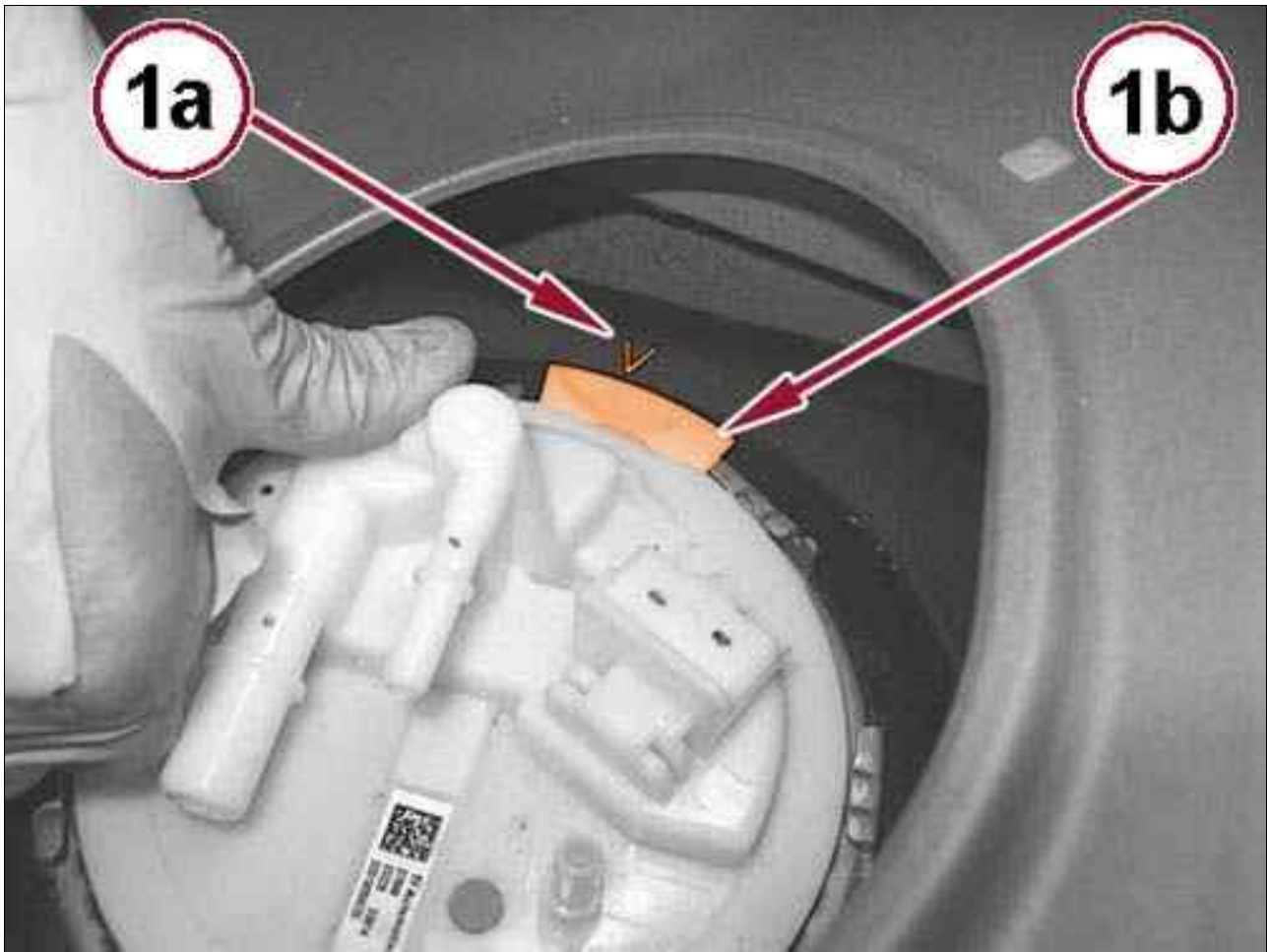


Courtesy of CHRYSLER GROUP, LLC

13. Remove the seal on the tank (1).

FUEL DELIVERY > MODULE, FUEL PUMP > REMOVAL AND INSTALLATION > 1.4L > INSTALLATION

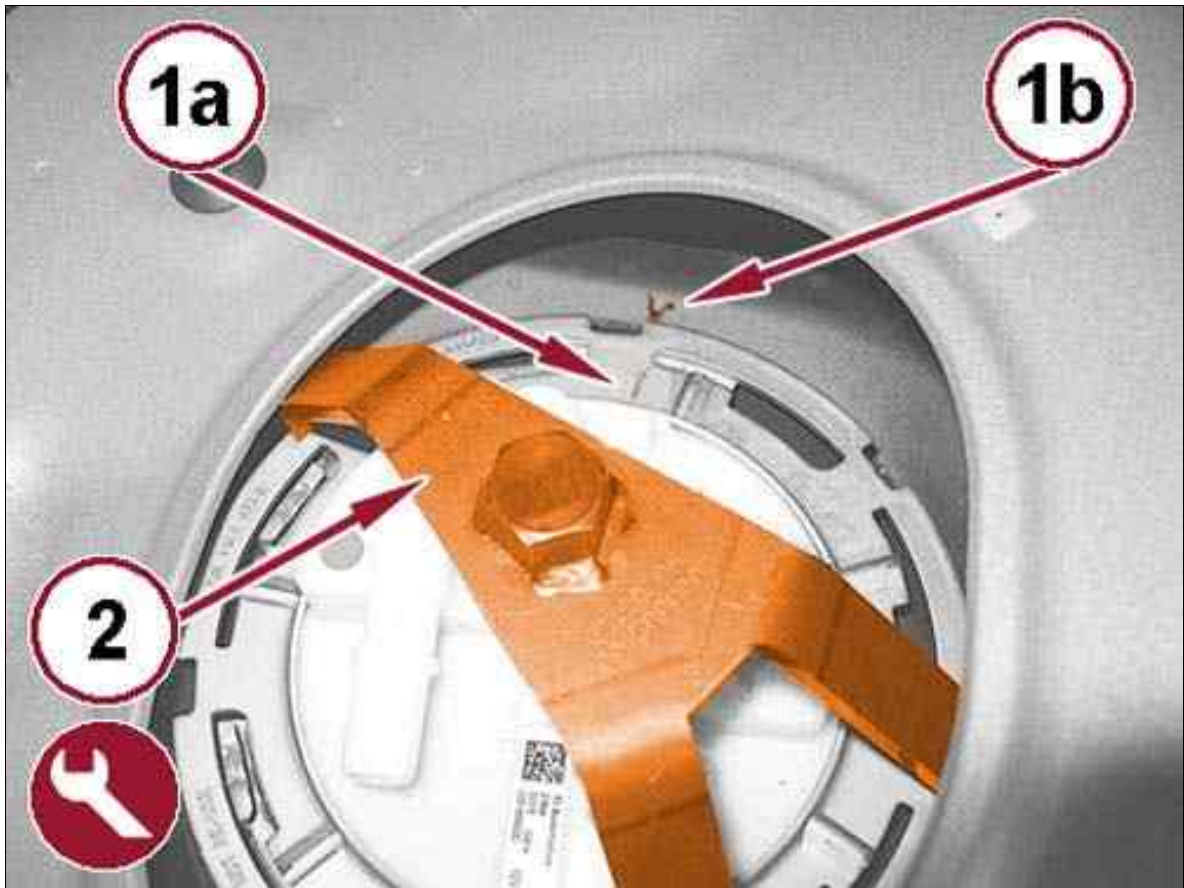
Fig 1: Fuel Pump & Tank Reference Points



Courtesy of CHRYSLER GROUP, LLC

1. Install the fuel pump assembly, taking care to align the reference (1a) on the tank with the appendix (1b) of the pump.

Fig 2: Fuel Pump Mounting Ring & Tank Reference Points



Courtesy of CHRYSLER GROUP, LLC

2. Install the fuel pump assembly mounting ring, by aligning the reference (1a) with the reference (1b) on the tank.
3. Mount the 2000002100 (EMEA) or (special tool #9340, SAE Fuel Pump Lock Ring Wrench) (NAFTA) tool (2) and tighten the fuel pump assembly retaining nut.
4. Connect the fuel vapor quick coupling.
5. Connect the quick coupling of fuel supply hose.
6. Connect the fuel pump's electrical connection.
7. Install the access cover to the fuel pump, tighten the screws and lower the coating.
8. Install the rear seat cushion. Refer to SEAT CUSHION, REMOVAL AND INSTALLATION .

FUEL DELIVERY > MODULE, FUEL PUMP > REMOVAL AND INSTALLATION > 1.6L, 2.0L > REMOVAL

1. Open the cover of the fuse box in the engine compartment and remove the fuse F21 (15 A) of the fuel pump.
2. Start the engine and run until the fuel in the lines is depleted.

3. Install the fuse removed earlier and close the fuse box cover.
4. Remove the rear seat cushion. Refer to SEAT CUSHION, REMOVAL AND INSTALLATION .

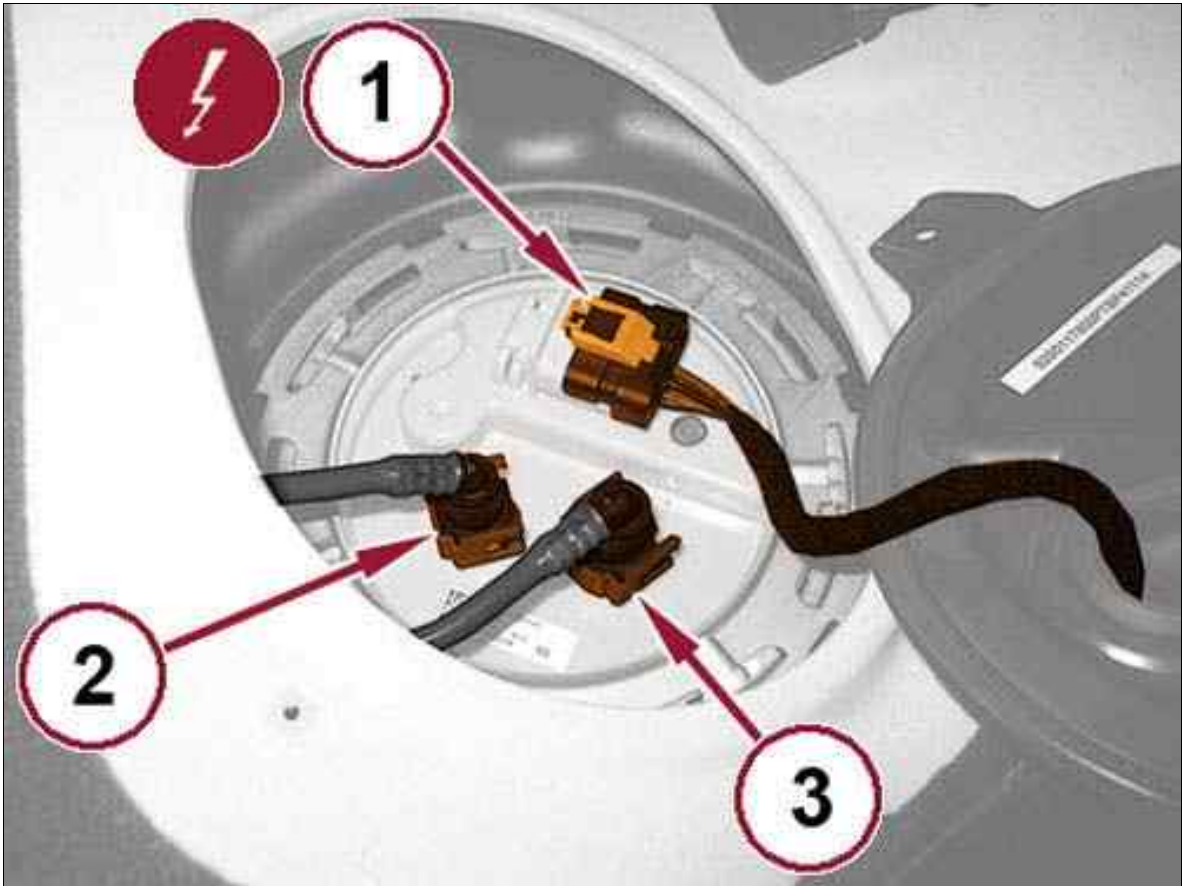
Fig 1: Fuel Pump Access Cover & Screws



Courtesy of CHRYSLER GROUP, LLC

5. Lift the cover, unscrew the screws and remove the cover to access the fuel pump (1).

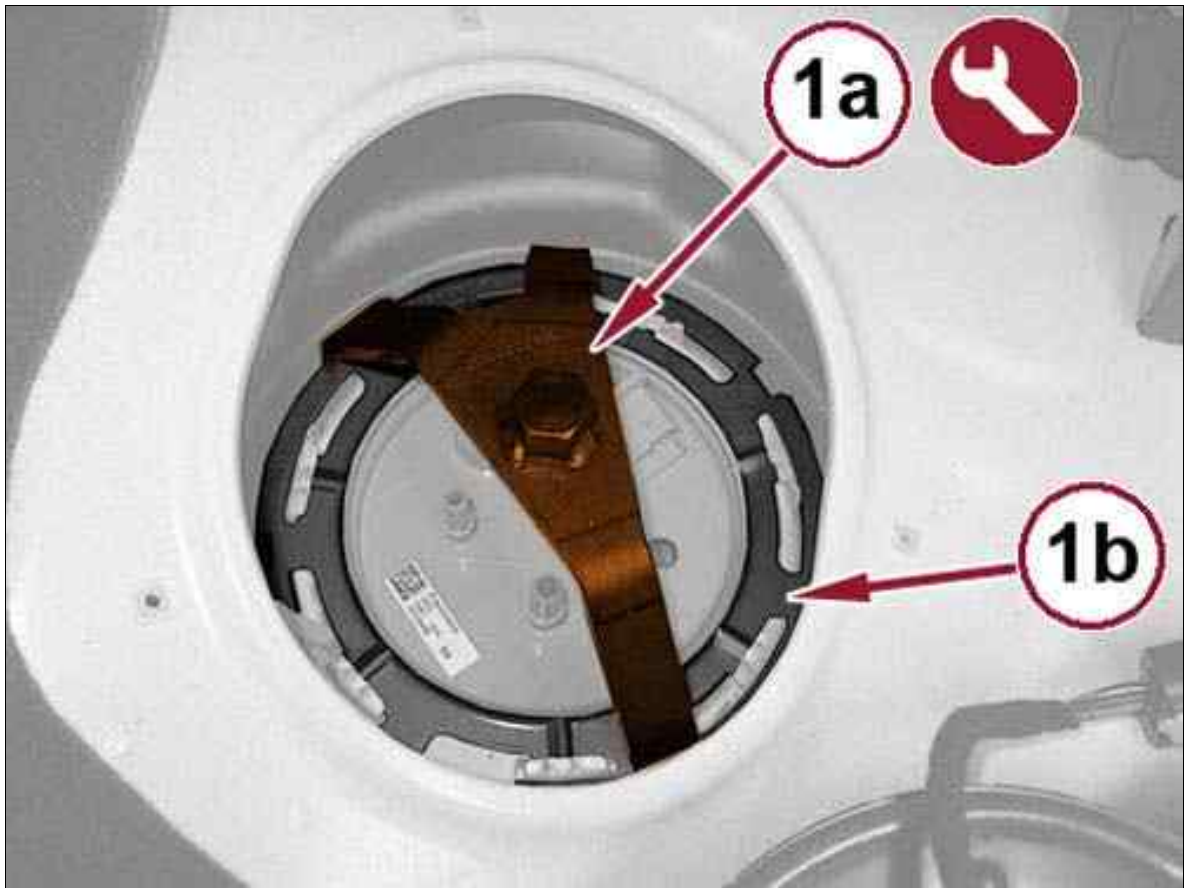
Fig 2: Electrical Connection, Fuel Supply & Fuel Return Pipe Quick Coupling



Courtesy of CHRYSLER GROUP, LLC

6. Unplug the fuel pump's electrical connection (1).
7. Disconnect the fuel supply pipe quick coupling (2).
8. Disconnect the fuel return pipe quick coupling (3).

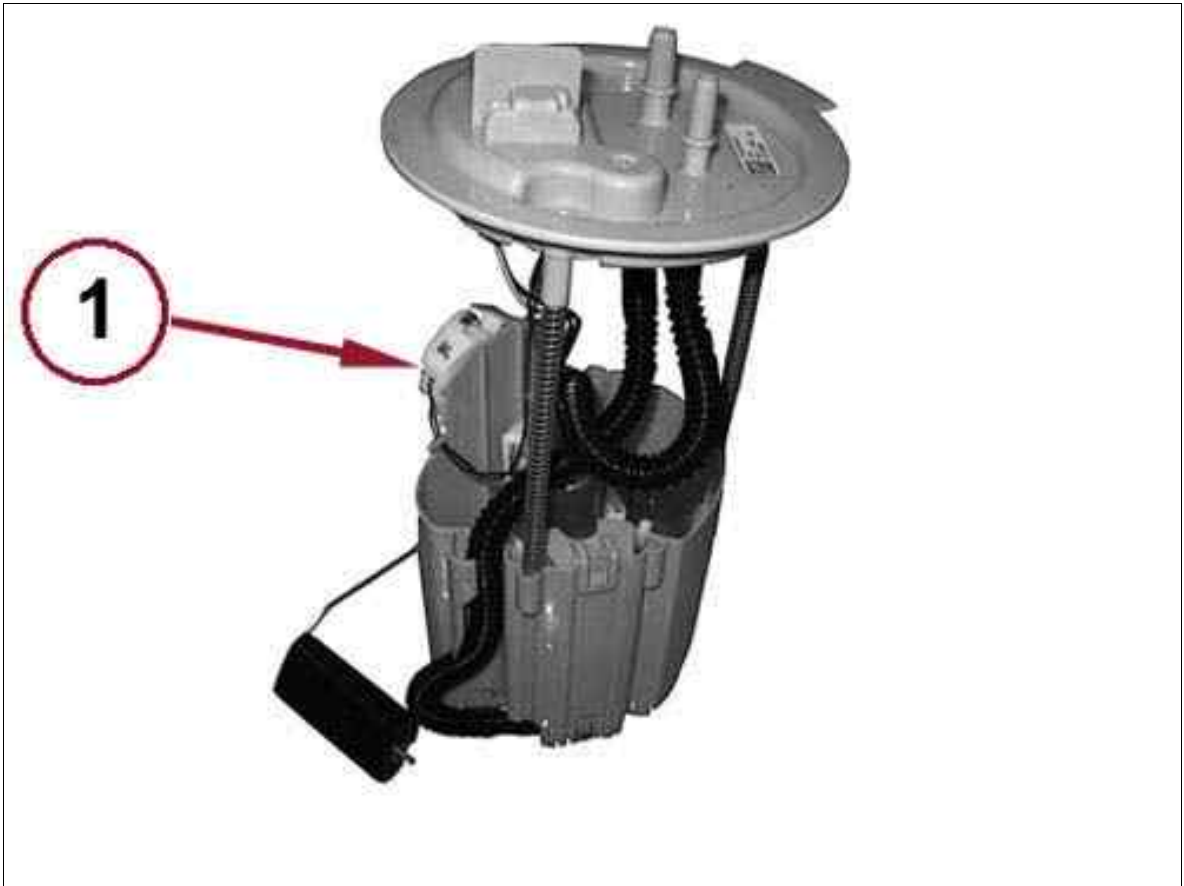
Fig 3: Pump Assembly Mounting Ring Set & Special Tool



Courtesy of CHRYSLER GROUP, LLC

9. Mount the 2000002100 (EMEA) or (special tool #9340, SAE Fuel Pump Lock Ring Wrench) (NAFTA) tool (1a) and remove the pump assembly mounting ring set (1b).

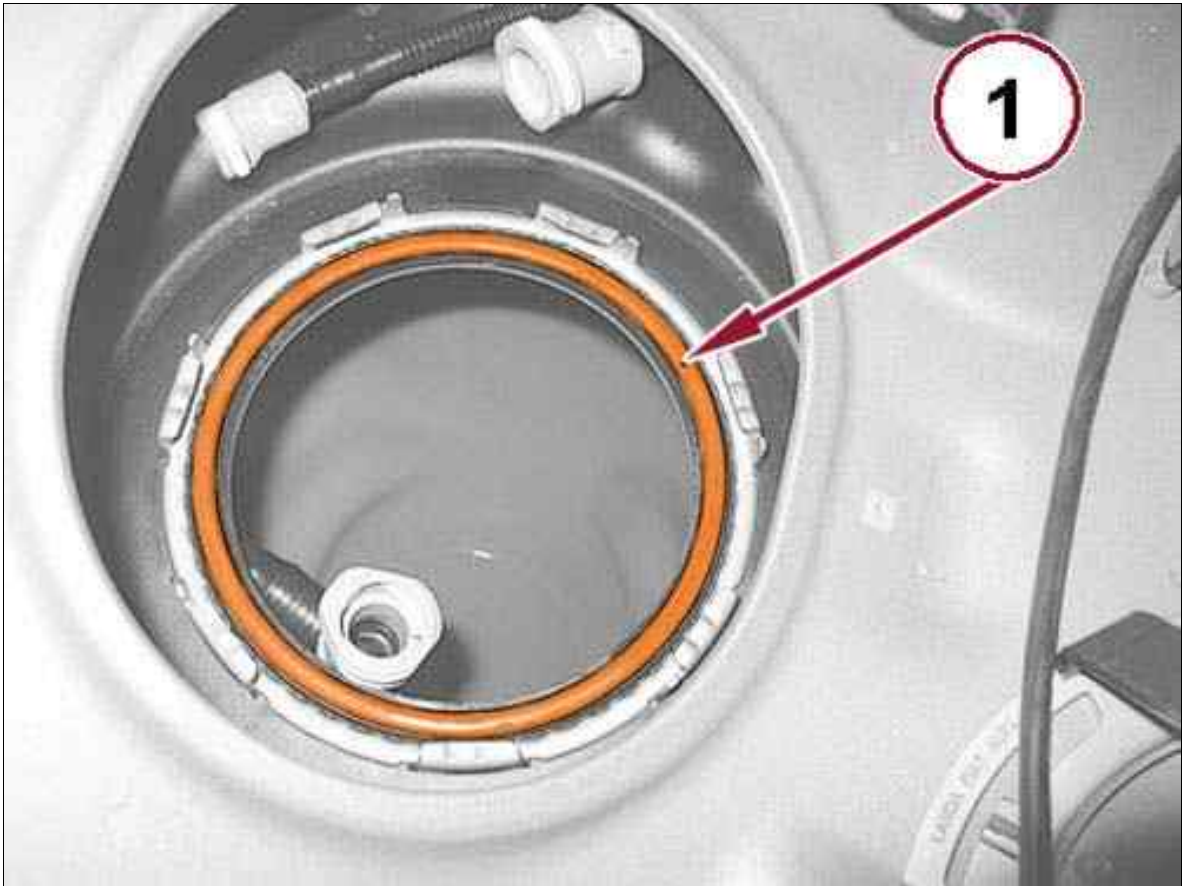
Fig 4: Fuel Pump Assembly



Courtesy of CHRYSLER GROUP, LLC

10. Remove the fuel pump assembly (1).

Fig 5: Tank Seal

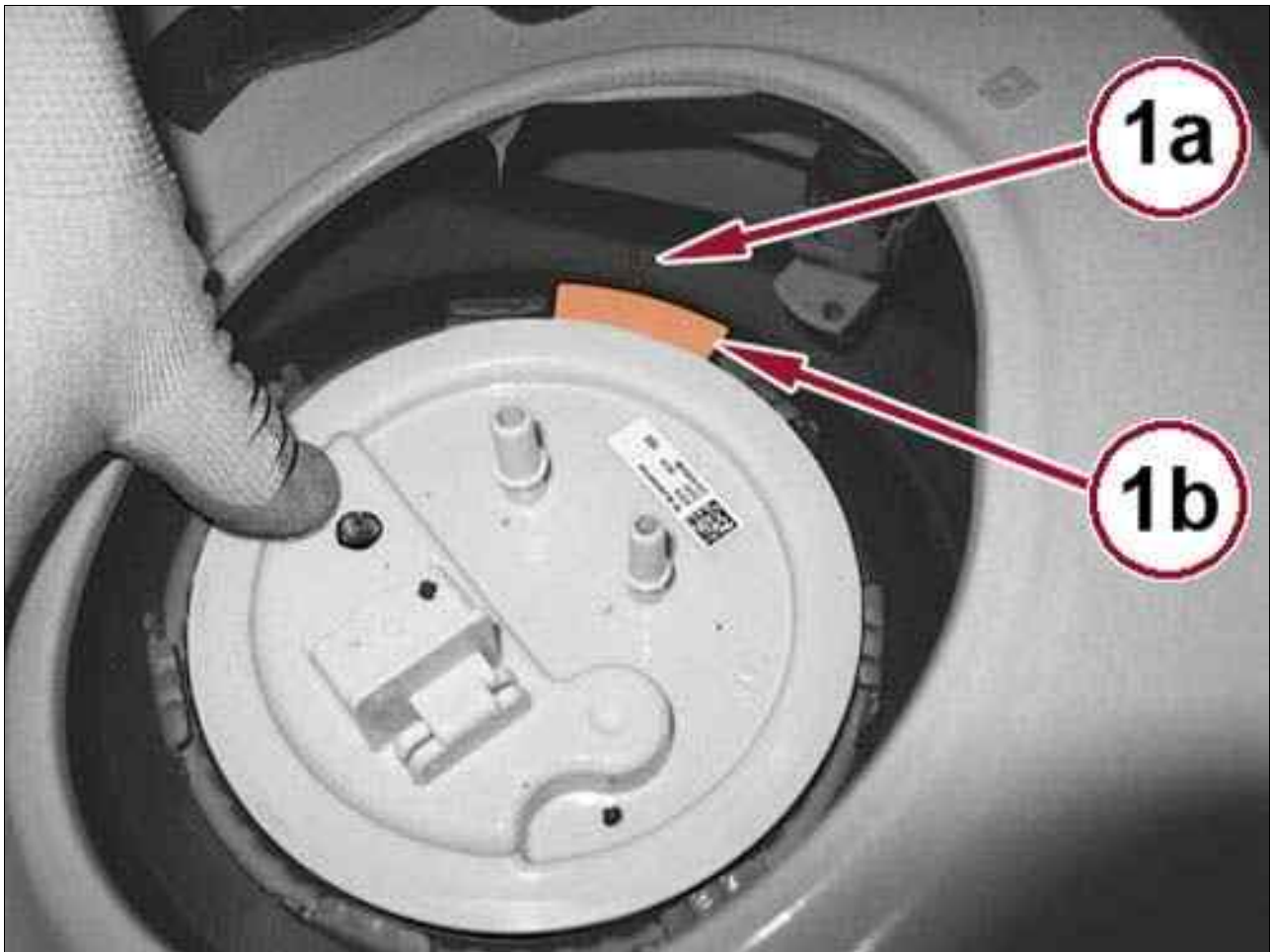


Courtesy of CHRYSLER GROUP, LLC

11. Remove the seal on the tank (1).

**FUEL DELIVERY > MODULE, FUEL PUMP > REMOVAL AND INSTALLATION > 1.6L,
2.0L > INSTALLATION**

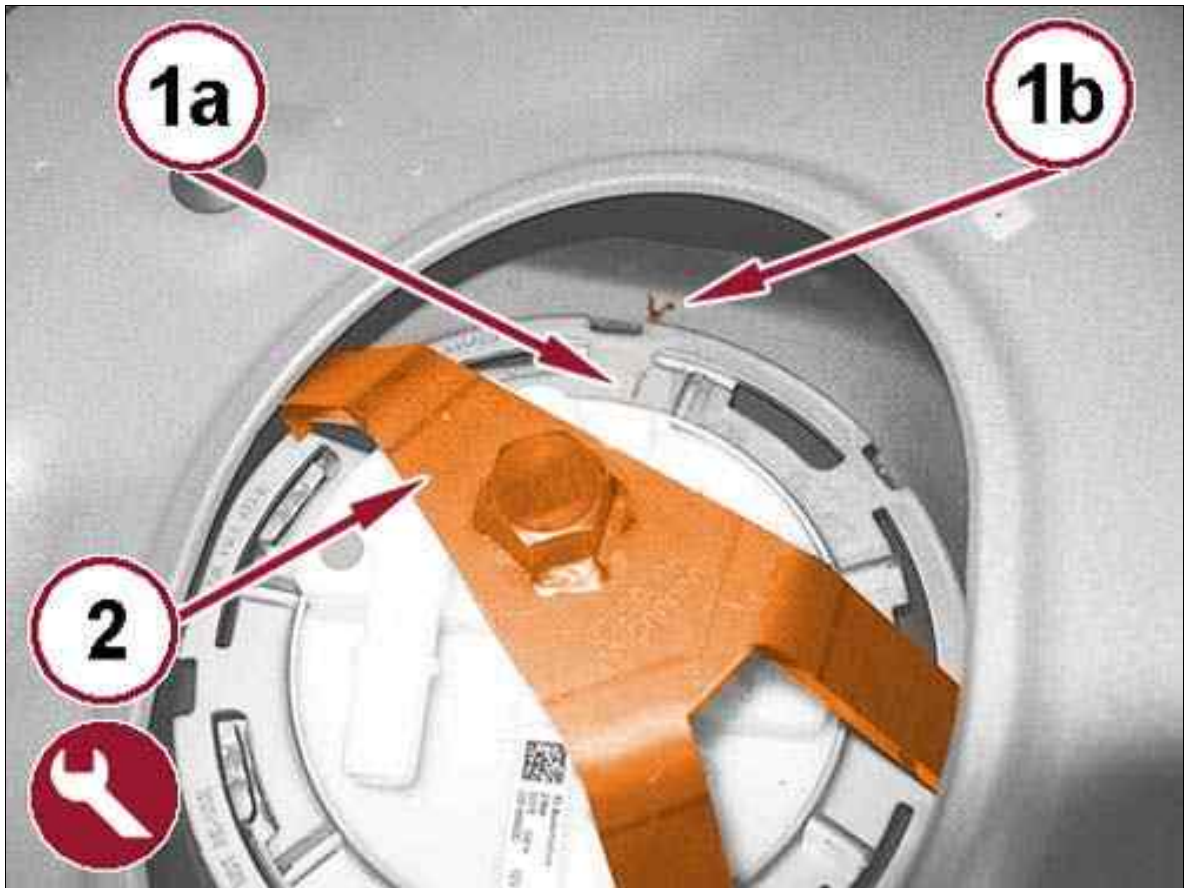
Fig 1: Fuel Pump & Tank Reference Points



Courtesy of CHRYSLER GROUP, LLC

1. Install the fuel pump assembly, taking care to align the reference (1a) on the tank with the appendix (1b) of the pump.

Fig 2: Fuel Pump Mounting Ring & Tank Reference Points



Courtesy of CHRYSLER GROUP, LLC

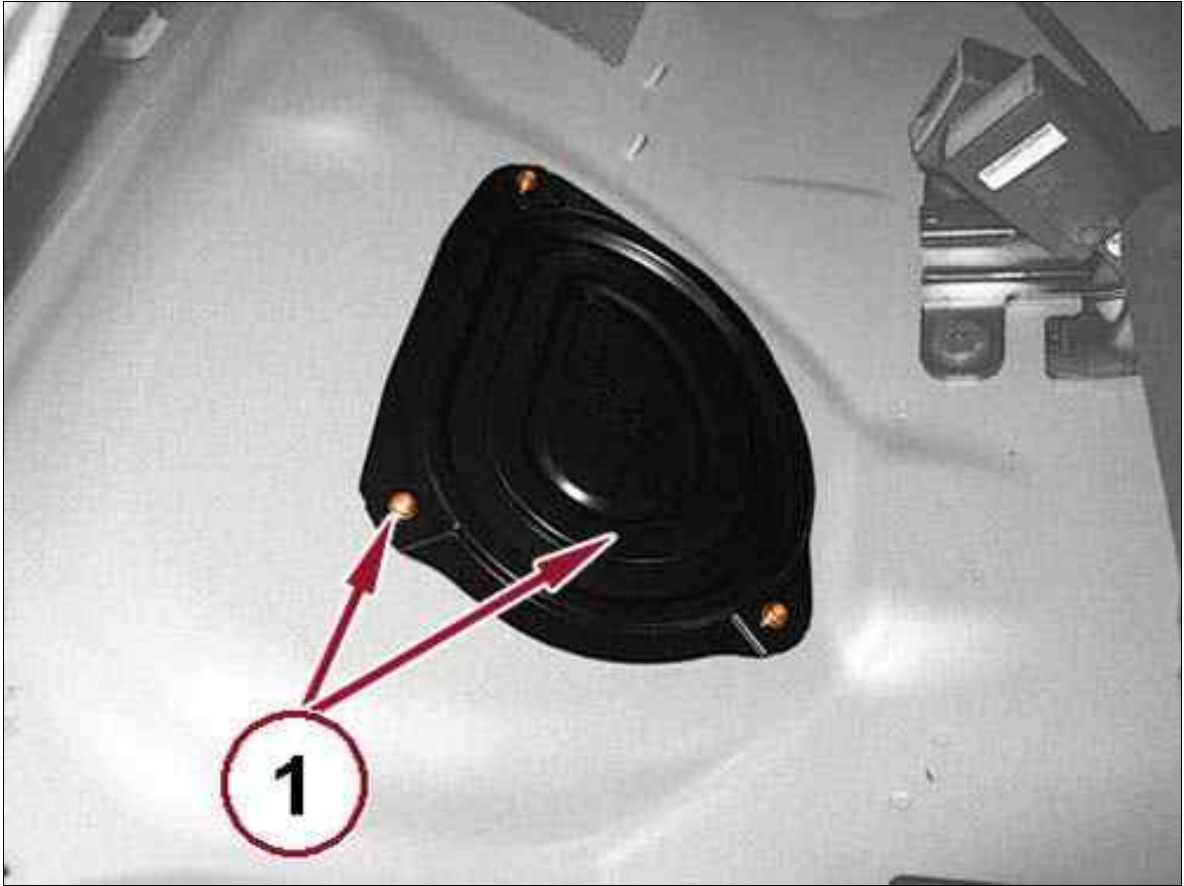
2. Install the fuel pump assembly mounting ring, by aligning the reference (1a) with the reference (1b) on the tank.
3. Mount the 2000002100 (EMEA) or (special tool #9340, SAE Fuel Pump Lock Ring Wrench) (NAFTA) tool (2) and tighten the fuel pump assembly retaining nut.
4. Connect the fuel return tube quick coupling.
5. Connect the quick coupling of fuel supply hose.
6. Connect the fuel pump's electrical connection.
7. Install the access cover to the fuel pump, tighten the screws and lower the coating.
8. Install the rear seat cushion. Refer to SEAT CUSHION, REMOVAL AND INSTALLATION .

FUEL DELIVERY > MODULE, FUEL PUMP > REMOVAL AND INSTALLATION > 2.4L > REMOVAL

1. Open the cover of the fuse box in the engine compartment and remove the fuse F21 (15 A) of the fuel pump.
2. Start the engine and run until the fuel in the lines is depleted.

3. Install the fuse removed earlier and close the fuse box cover.
4. Remove the rear seat cushion. Refer to SEAT CUSHION, REMOVAL AND INSTALLATION .

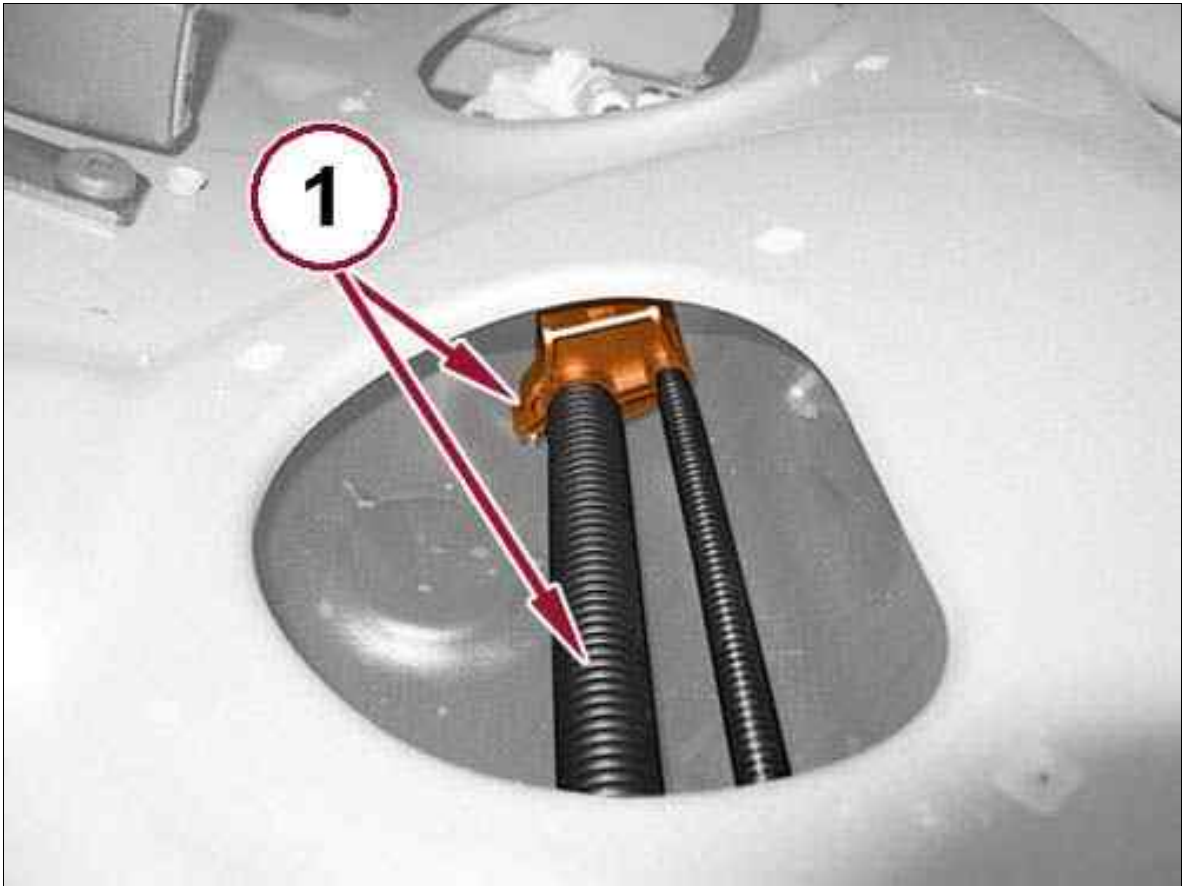
Fig 1: Fuel Pipes Access Cover & Screws



Courtesy of CHRYSLER GROUP, LLC

5. Lift the cover, unscrew the screws and remove the cover to access the fuel pipes (1).

Fig 2: Fuel Vapor Hoses & Clamp



Courtesy of CHRYSLER GROUP, LLC

6. Open the clamp and release the fuel vapor hoses (1).

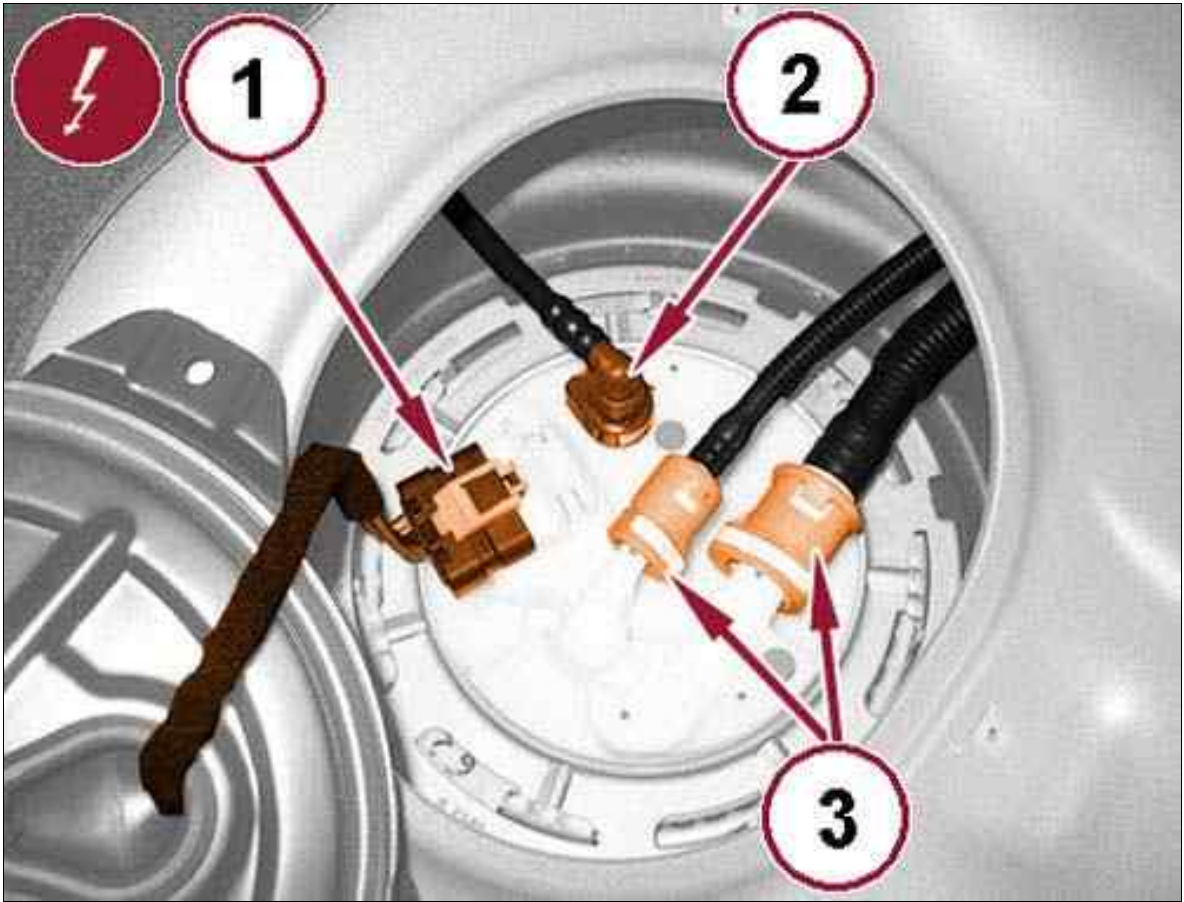
Fig 3: Fuel Pump Access Cover & Screws



Courtesy of CHRYSLER GROUP, LLC

7. Lift the cover, unscrew the screws and remove the cover to access the fuel pump.

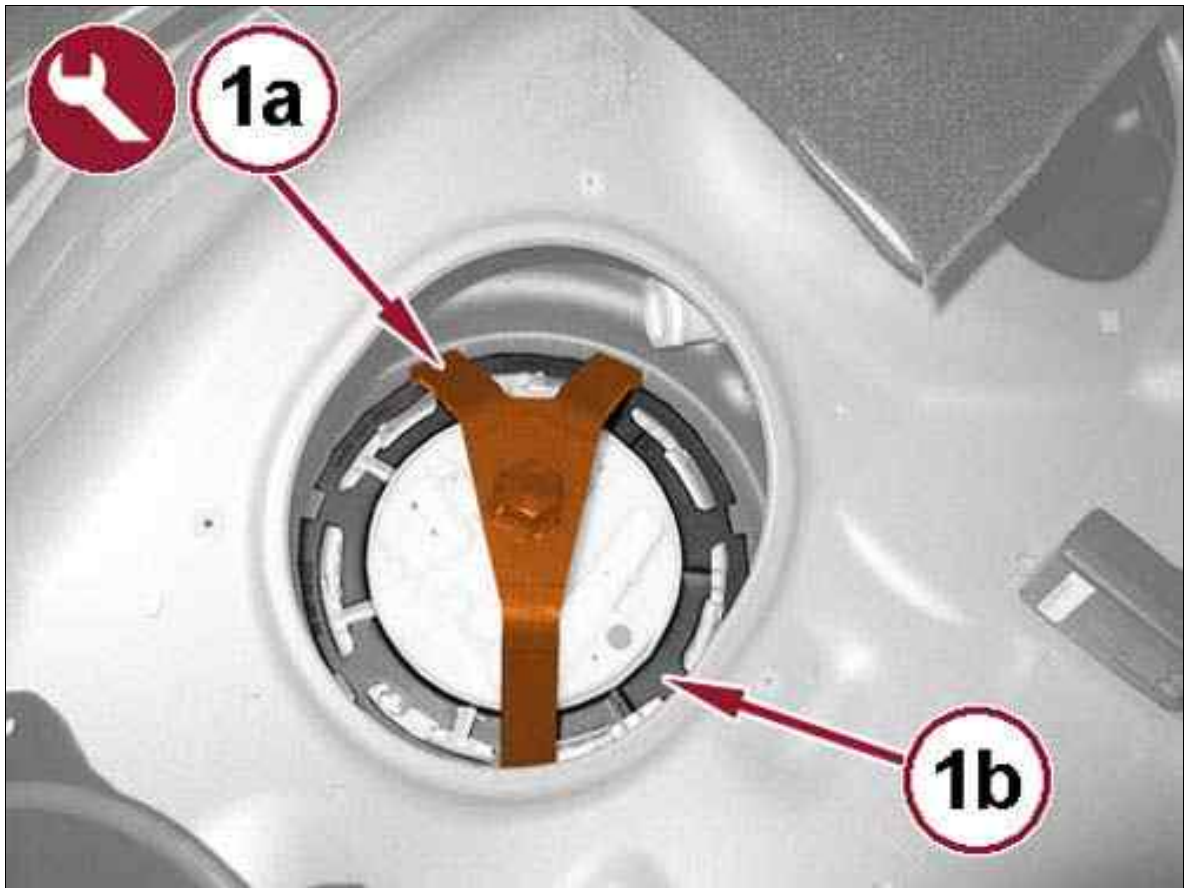
Fig 4: Connector, Fuel Delivery Pipe & Fuel Vapor Pipe Quick Coupling



Courtesy of CHRYSLER GROUP, LLC

8. Unplug the fuel pump's electrical connection (1).
9. Disconnect the fuel delivery pipe quick coupling (2).
10. Disconnect the fuel vapor pipe quick couplings (3).

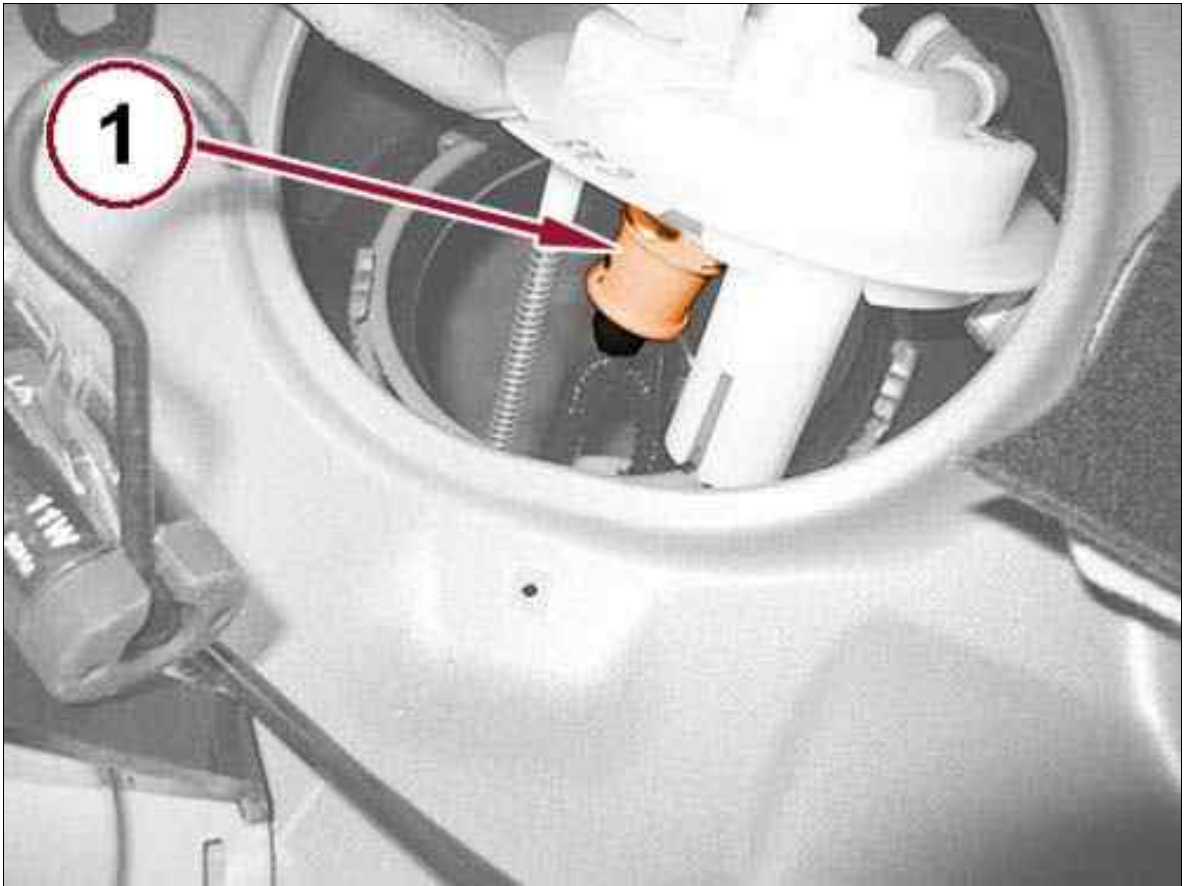
Fig 5: Pump Assembly Mounting Ring Set & Special Tool



Courtesy of CHRYSLER GROUP, LLC

11. Mount the 2000002100 (EMEA) or (special tool #9340, SAE Fuel Pump Lock Ring Wrench) (NAFTA) tool (1a) and remove the pump assembly mounting ring set (1b).

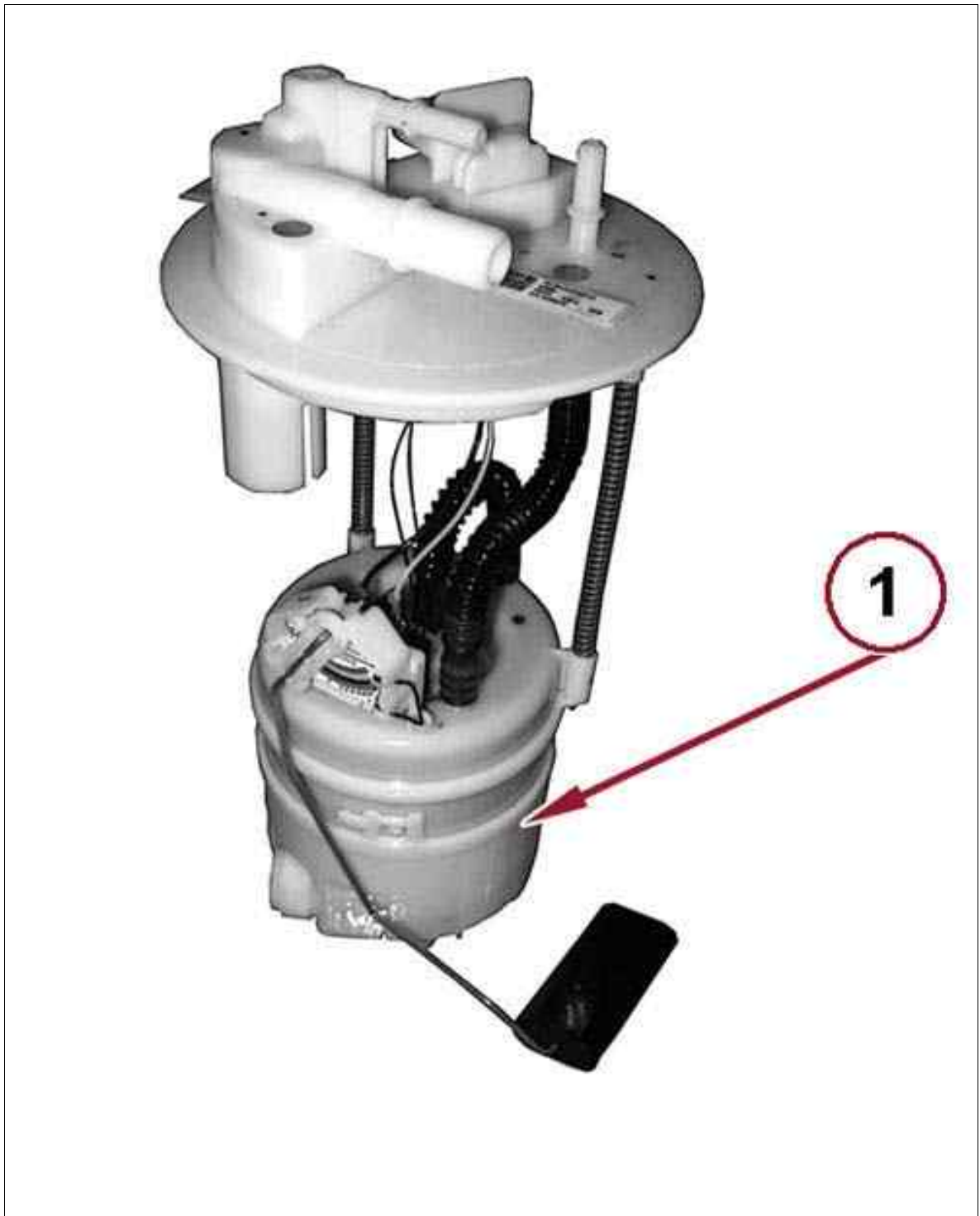
Fig 6: Fuel Pump Assembly



Courtesy of CHRYSLER GROUP, LLC

12. Disconnect the quick coupling of the fuel vapor recovery pipe.

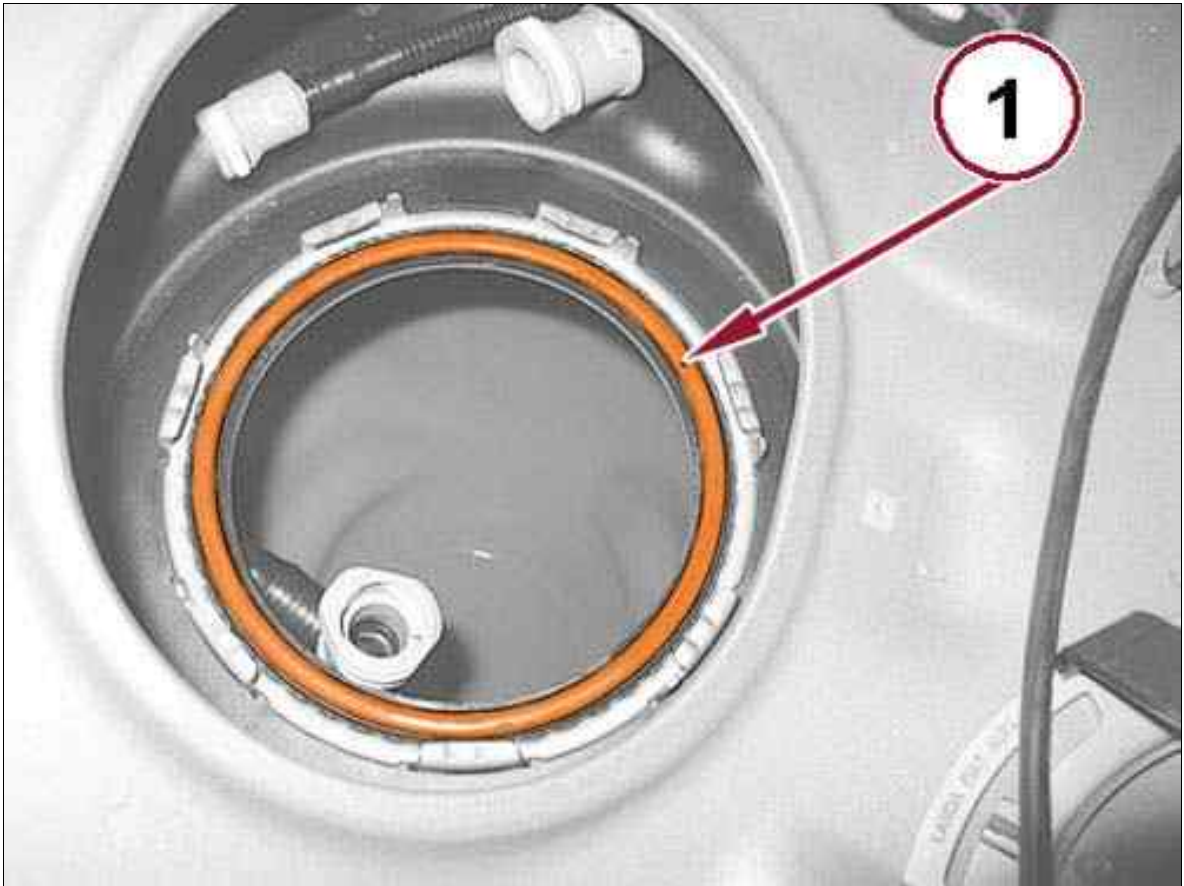
Fig 7: Fuel Pump Assembly



Courtesy of CHRYSLER GROUP, LLC

13. Remove the fuel pump assembly (1).

Fig 8: Tank Seal

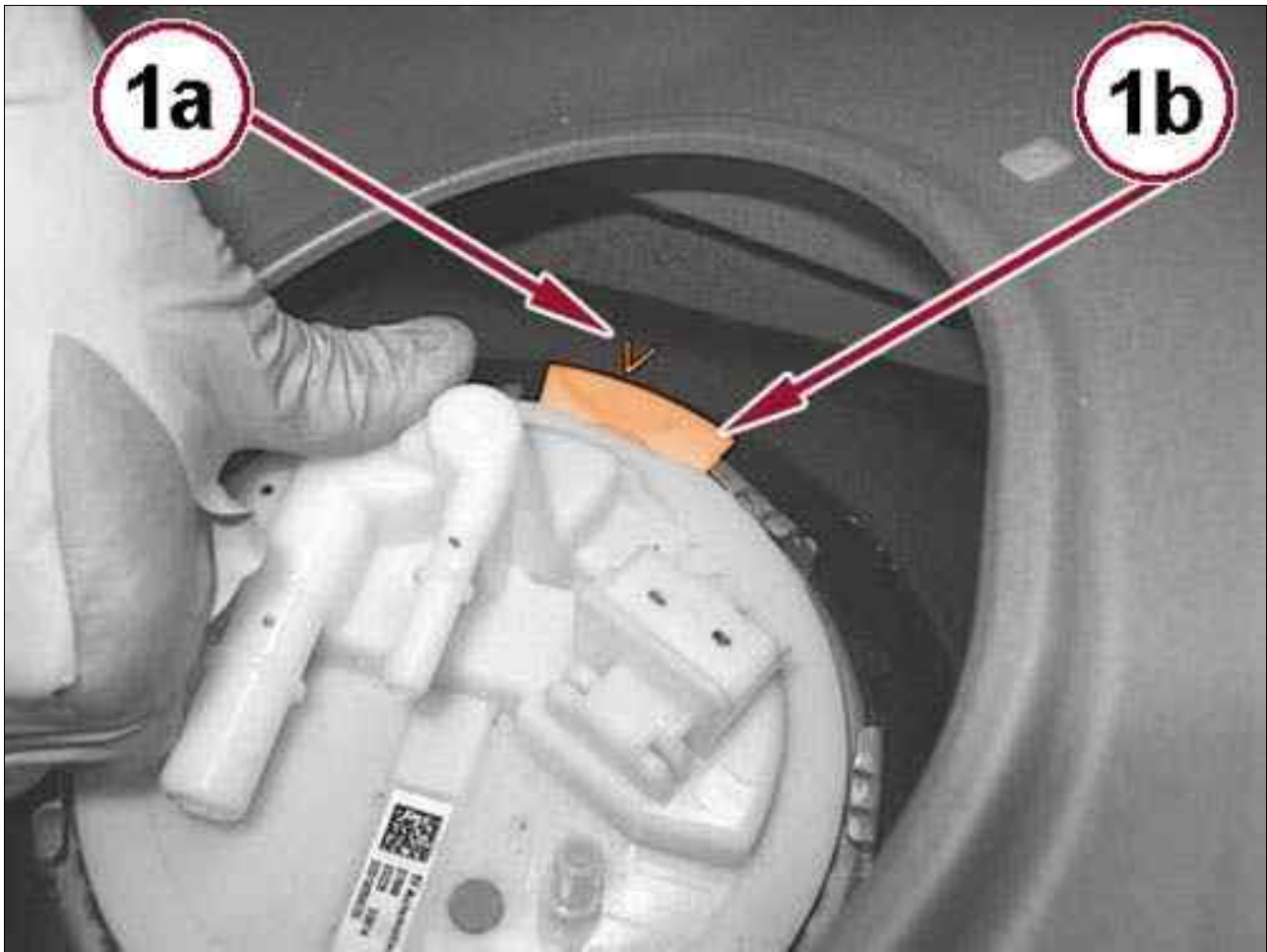


Courtesy of CHRYSLER GROUP, LLC

14. Remove the seal on the tank (1).

FUEL DELIVERY > MODULE, FUEL PUMP > REMOVAL AND INSTALLATION > 2.4L > INSTALLATION

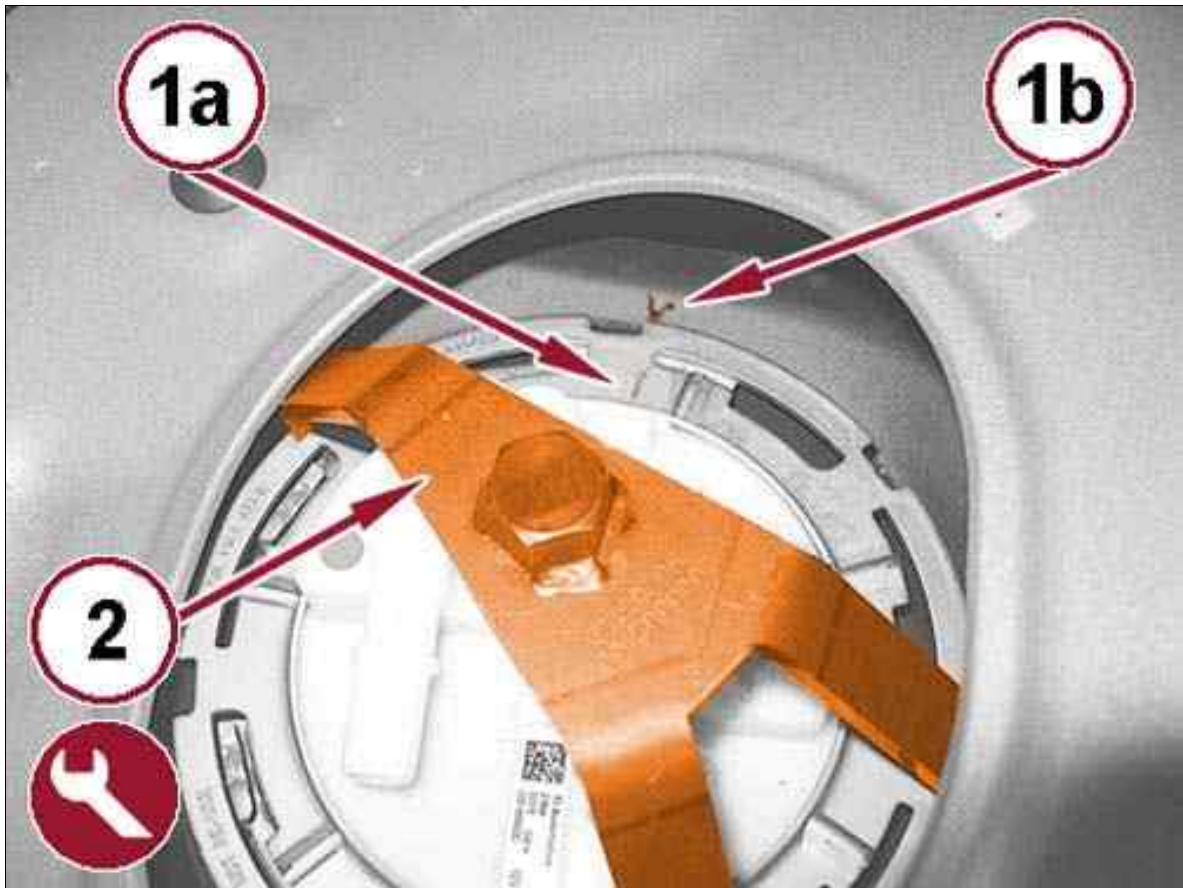
Fig 1: Fuel Pump & Tank Reference Points



Courtesy of CHRYSLER GROUP, LLC

1. Install the fuel pump assembly, taking care to align the reference (1a) on the tank with the appendix (1b) of the pump.

Fig 2: Fuel Pump Mounting Ring & Tank Reference Points



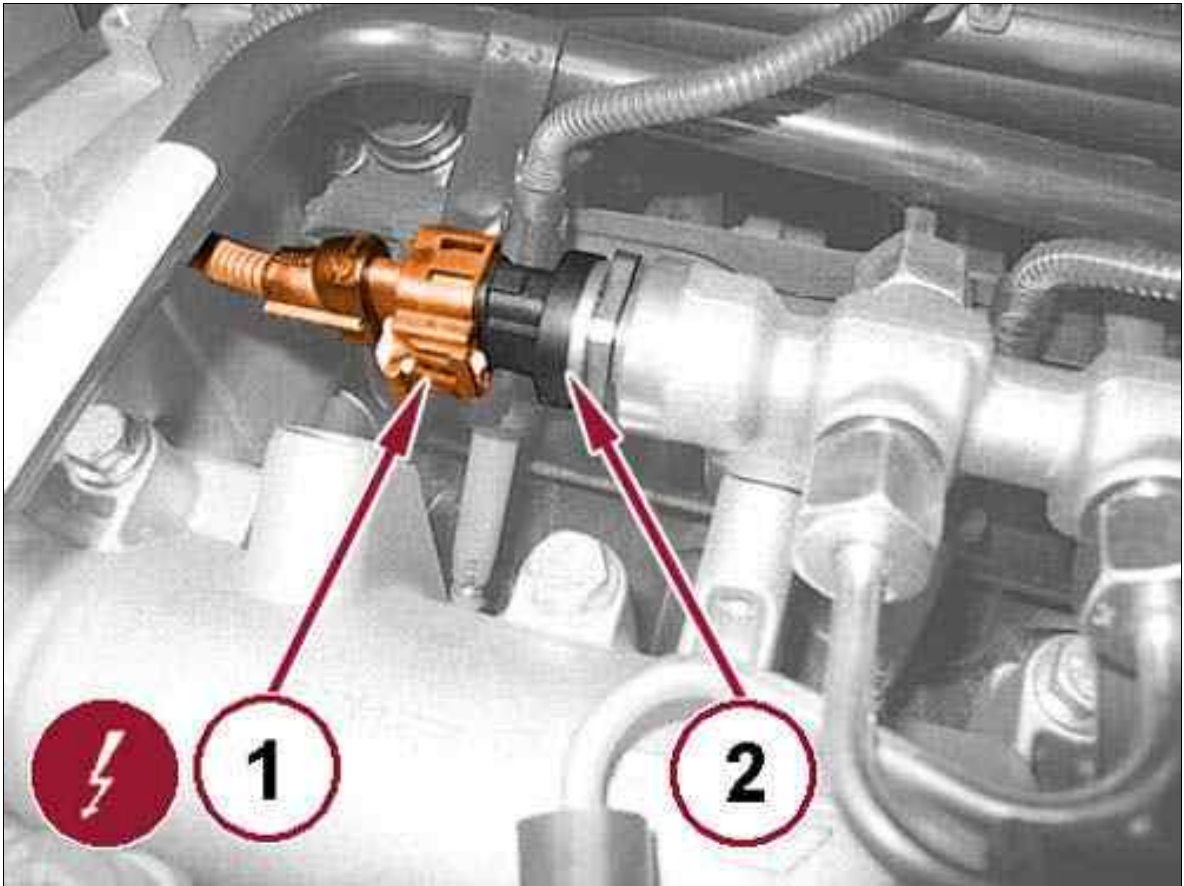
Courtesy of CHRYSLER GROUP, LLC

2. Install the fuel pump assembly mounting ring, by aligning the reference (1a) with the reference (1b) on the tank.
3. Mount the 2000002100 (EMEA) or (special tool #9340, SAE Fuel Pump Lock Ring Wrench) (NAFTA) tool (2) and tighten the fuel pump assembly retaining nut.
4. Connect the fuel vapor quick coupling.
5. Connect the quick coupling of fuel supply hose.
6. Connect the fuel pump's electrical connection.
7. Install the access cover to the fuel pump, tighten the screws and lower the coating.
8. Install the rear seat cushion. Refer to SEAT CUSHION, REMOVAL AND INSTALLATION .

FUEL DELIVERY > SENSOR, FUEL RAIL PRESSURE > REMOVAL AND INSTALLATION > 1.6L, 2.0L > REMOVAL

1. Remove the engine cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .

Fig 1: Fuel Pressure Sensor & Connector

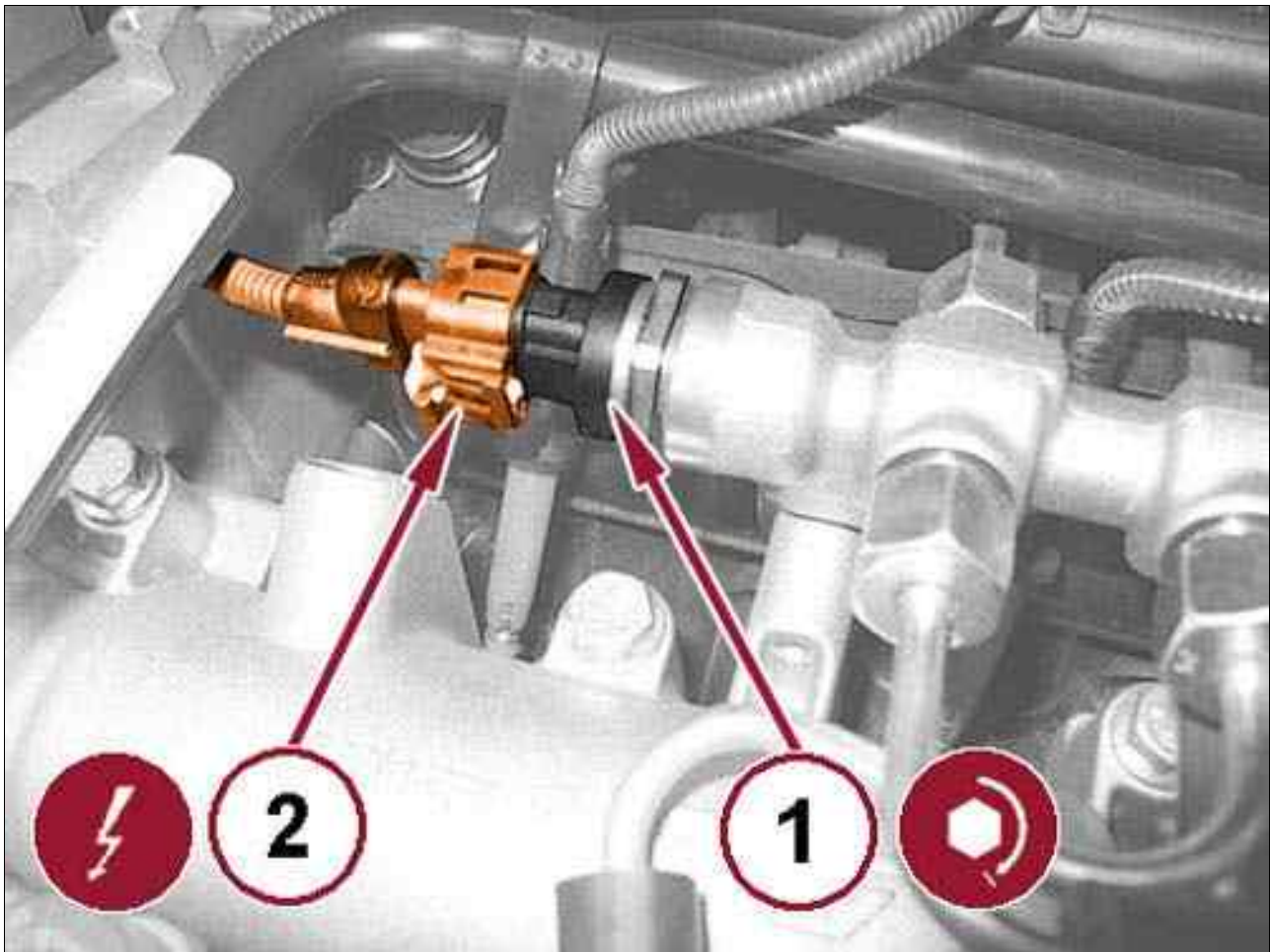


Courtesy of CHRYSLER GROUP, LLC

2. Disconnect the electrical connection of the fuel pressure sensor (1).
3. Unscrew and remove the fuel pressure sensor (2).

**FUEL DELIVERY > SENSOR, FUEL RAIL PRESSURE > REMOVAL AND
INSTALLATION > 1.6L, 2.0L > INSTALLATION**

Fig 1: Fuel Pressure Sensor & Connector

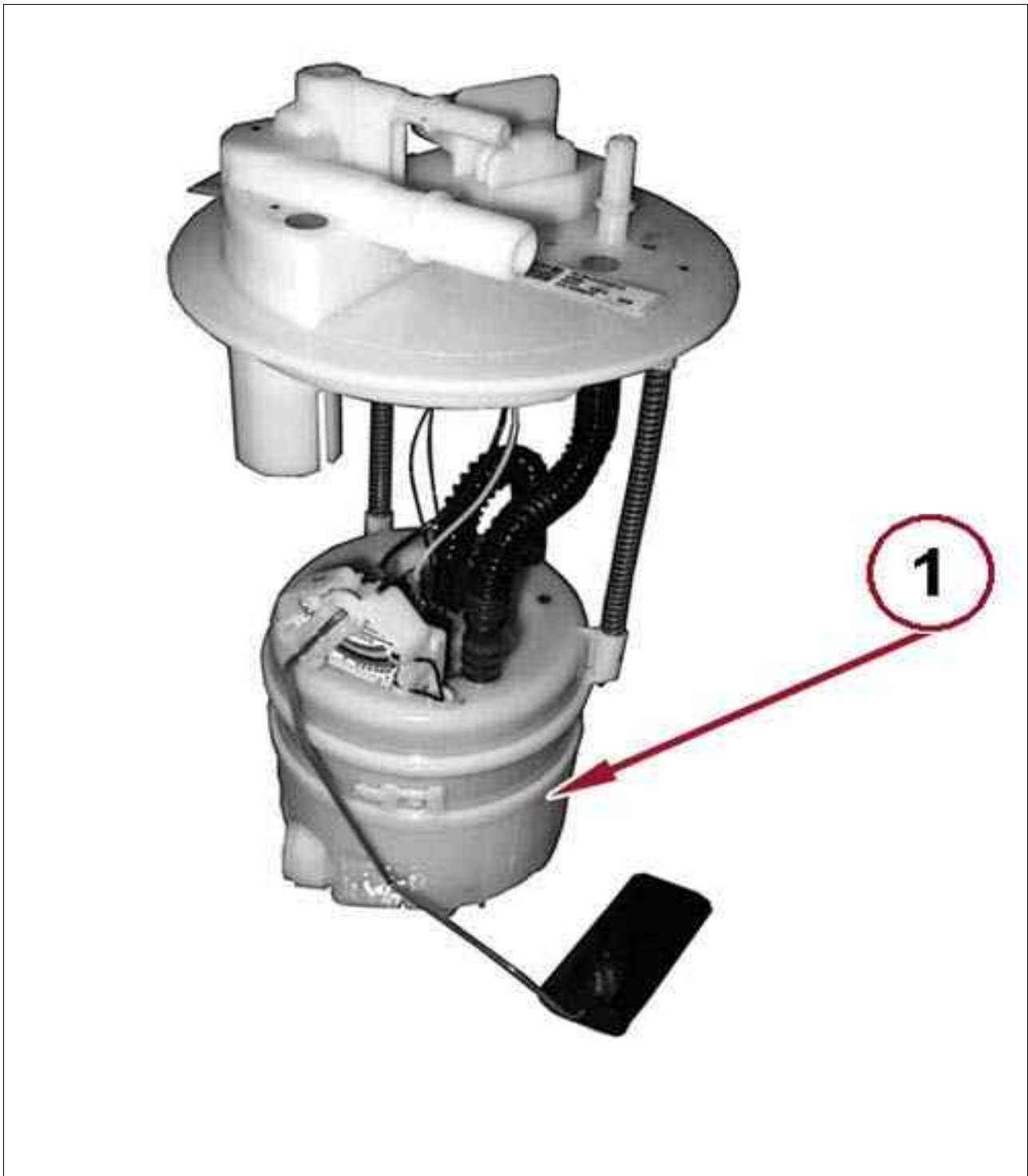


Courtesy of CHRYSLER GROUP, LLC

1. Install the fuel pressure sensor (1) and tighten to the proper torque specification. Refer to FUEL DELIVERY, SPECIFICATIONS .
2. Connect the electrical connection of the fuel pressure sensor (2).
3. Install the engine cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .

FUEL DELIVERY > SENDING UNIT AND SENSOR, FUEL LEVEL > DESCRIPTION AND OPERATION > DESCRIPTION AND OPERATION

Fig 1: Fuel Pump Assembly



Courtesy of CHRYSLER GROUP, LLC

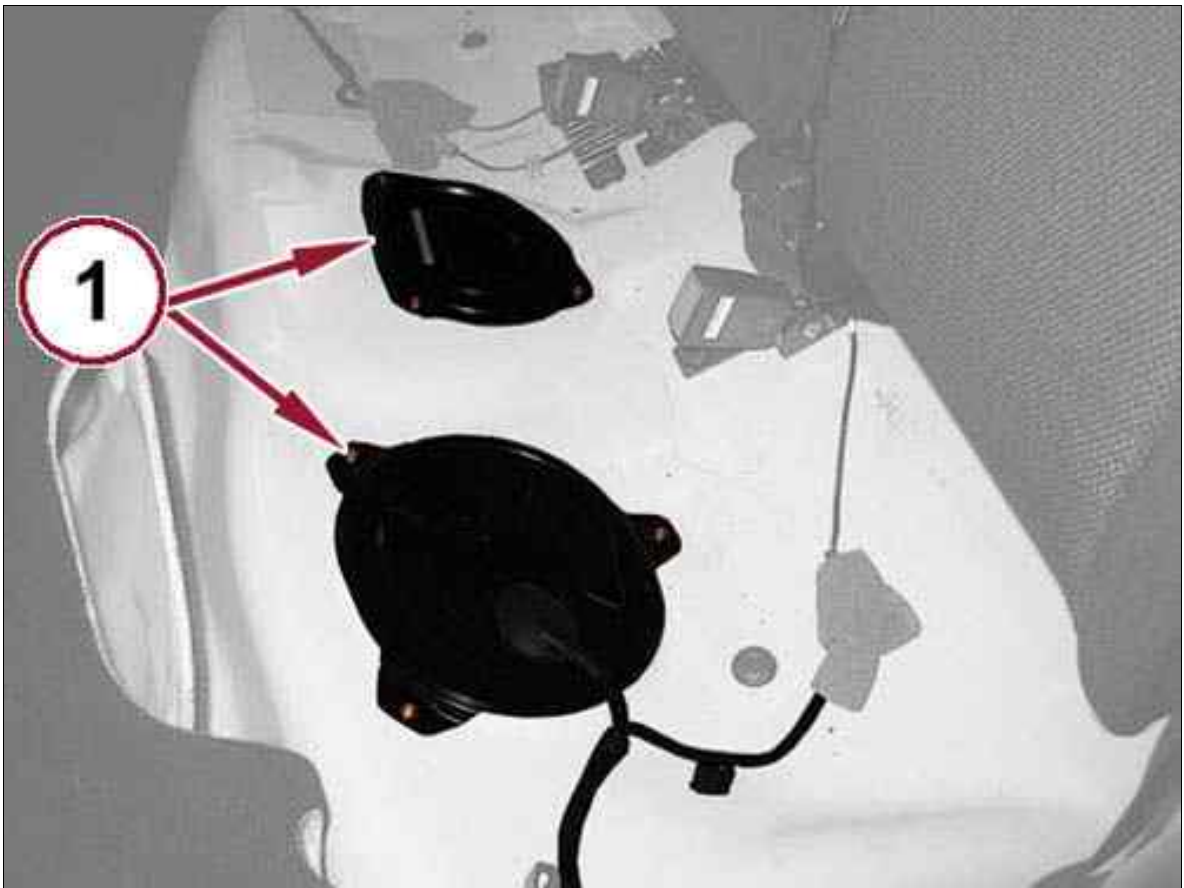
The fuel gauge sending unit (fuel level sensor) is attached to the fuel pump module (1). The sending unit consists of a float, an arm, and a variable resistor.

The sending unit/fuel level sensor is not serviceable. If the fuel level sensor sending unit has failed, the fuel pump module will need to be replaced. Refer to MODULE, FUEL PUMP, REMOVAL AND INSTALLATION .

FUEL DELIVERY > TANK, FUEL > REMOVAL AND INSTALLATION > 1.4L FWD > REMOVAL

1. Place the vehicle on a lift.
2. Open the cover of the fuse box in the engine compartment and remove the fuse F21 (15 A) of the fuel pump.
3. Start the engine and run until the fuel in the lines is depleted.
4. Install the fuse removed earlier and close the fuse box cover.
5. Remove the rear seat cushion. Refer to SEAT CUSHION, REMOVAL AND INSTALLATION .

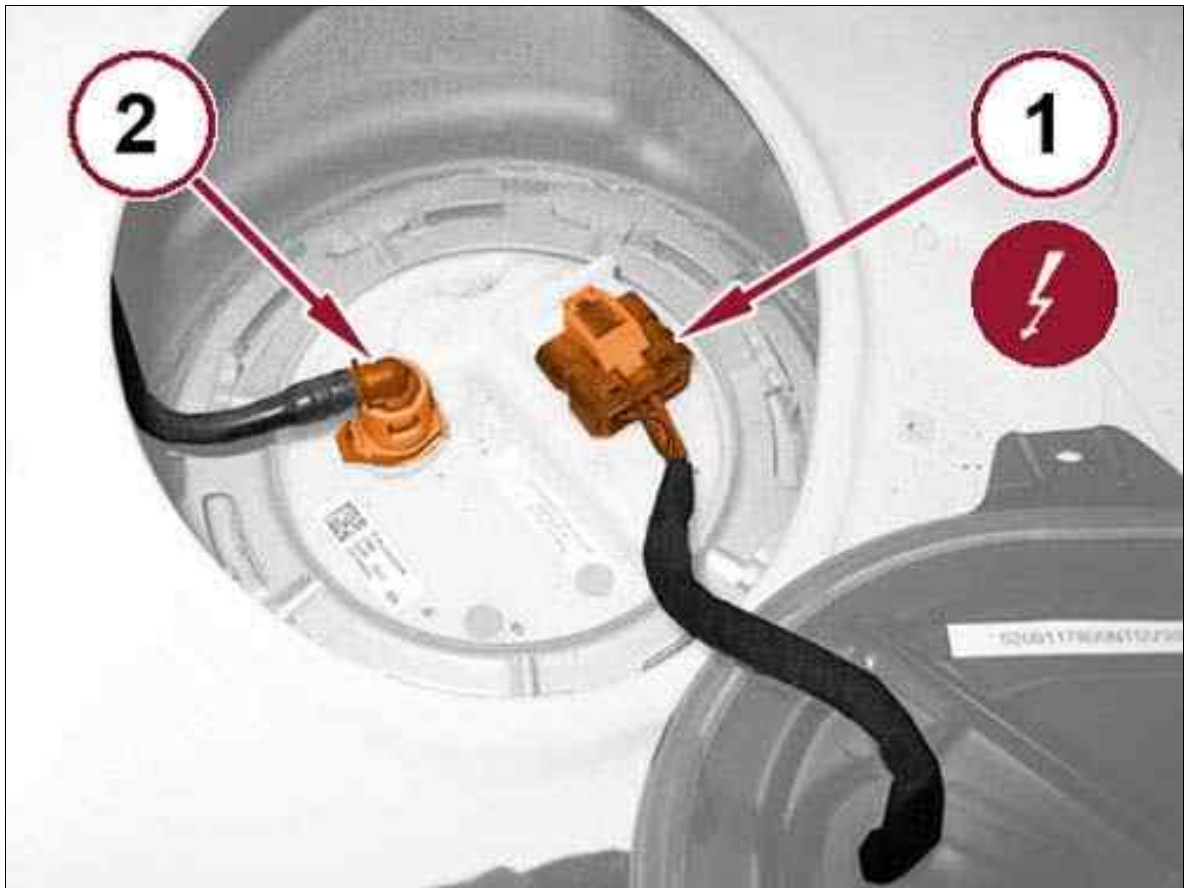
Fig 1: Access Covers & Screws



Courtesy of CHRYSLER GROUP, LLC

6. Lift the cover, unscrew the screws and remove the access covers (1) to the fuel pump and the vent pipe.

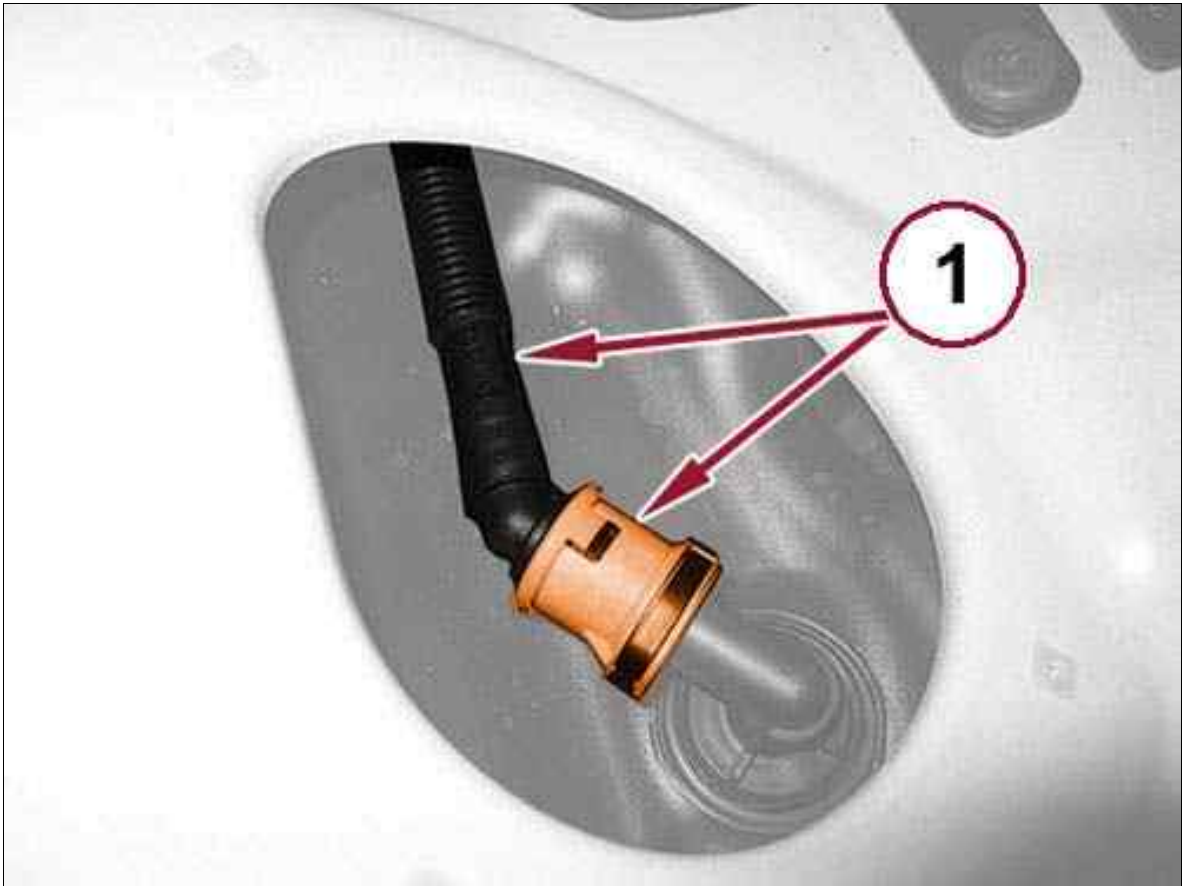
Fig 2: Fuel Delivery Pipe & Electrical Connector



Courtesy of CHRYSLER GROUP, LLC

7. Disconnect the electrical connection (1) of the electric pump fuel.
8. Disconnect the quick coupling of the fuel delivery pipe (2).

Fig 3: Rear Vent Tube Quick Coupling



Courtesy of CHRYSLER GROUP, LLC

9. Disconnect the quick connection of the vent pipe (1).
10. Remove the right rear splash shield. Refer to SHIELD, SPLASH, REAR WHEELHOUSE, REMOVAL AND INSTALLATION .

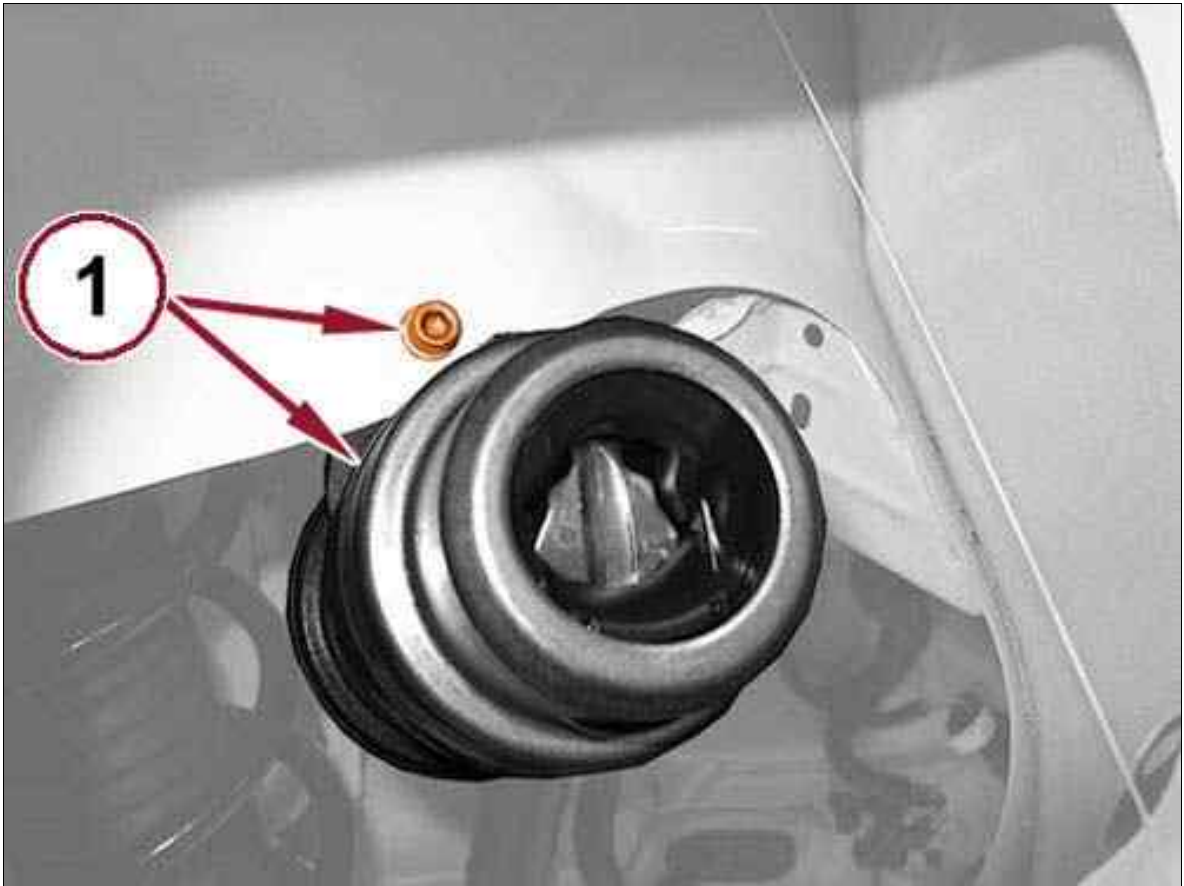
Fig 4: Door Retention Device, Fuel Door, Clips & Screw



Courtesy of CHRYSLER GROUP, LLC

11. Rotate the screw (1a) 90° and remove the door retention device (1b).
12. Disengage the clips (2a) and remove the fuel door (2b).

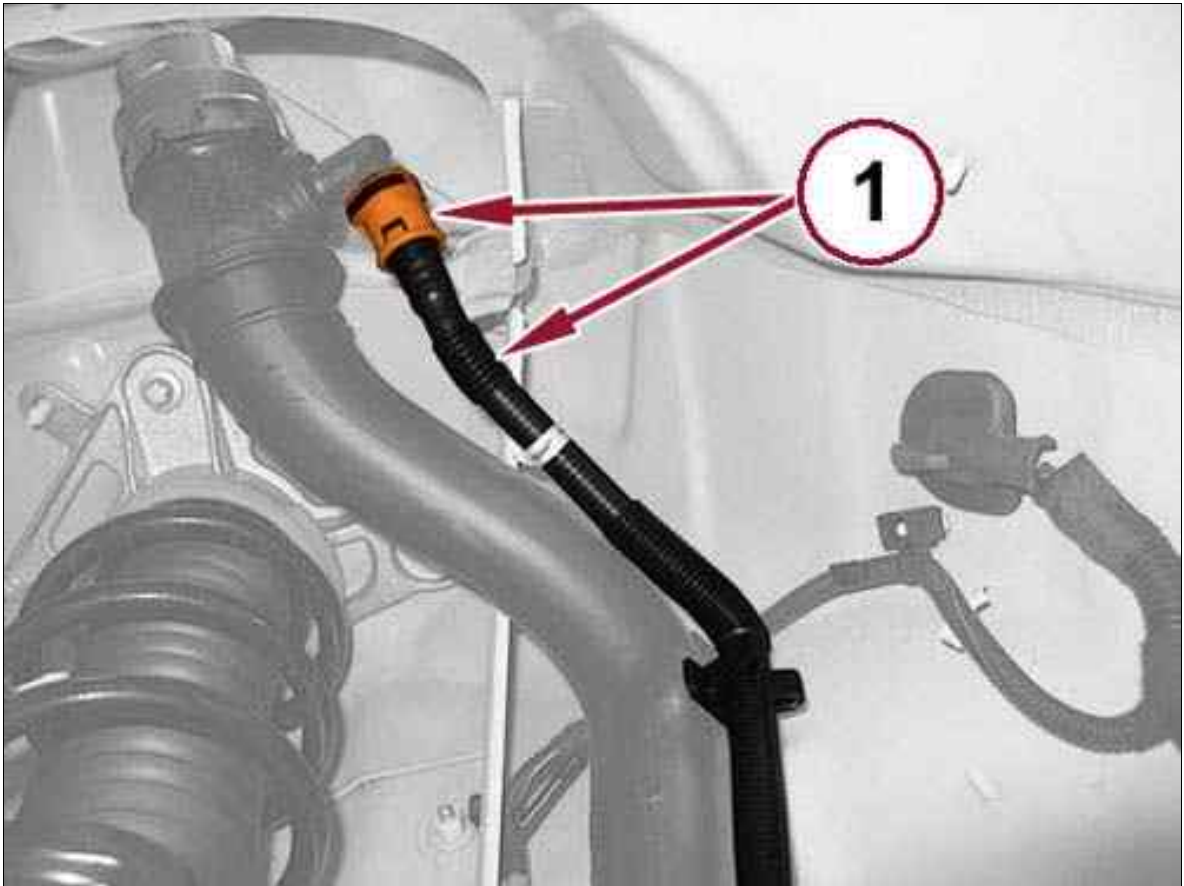
Fig 5: Fuel Fill Tube Retaining Screw



Courtesy of CHRYSLER GROUP, LLC

13. Remove the fuel fill tube retaining screw (1).

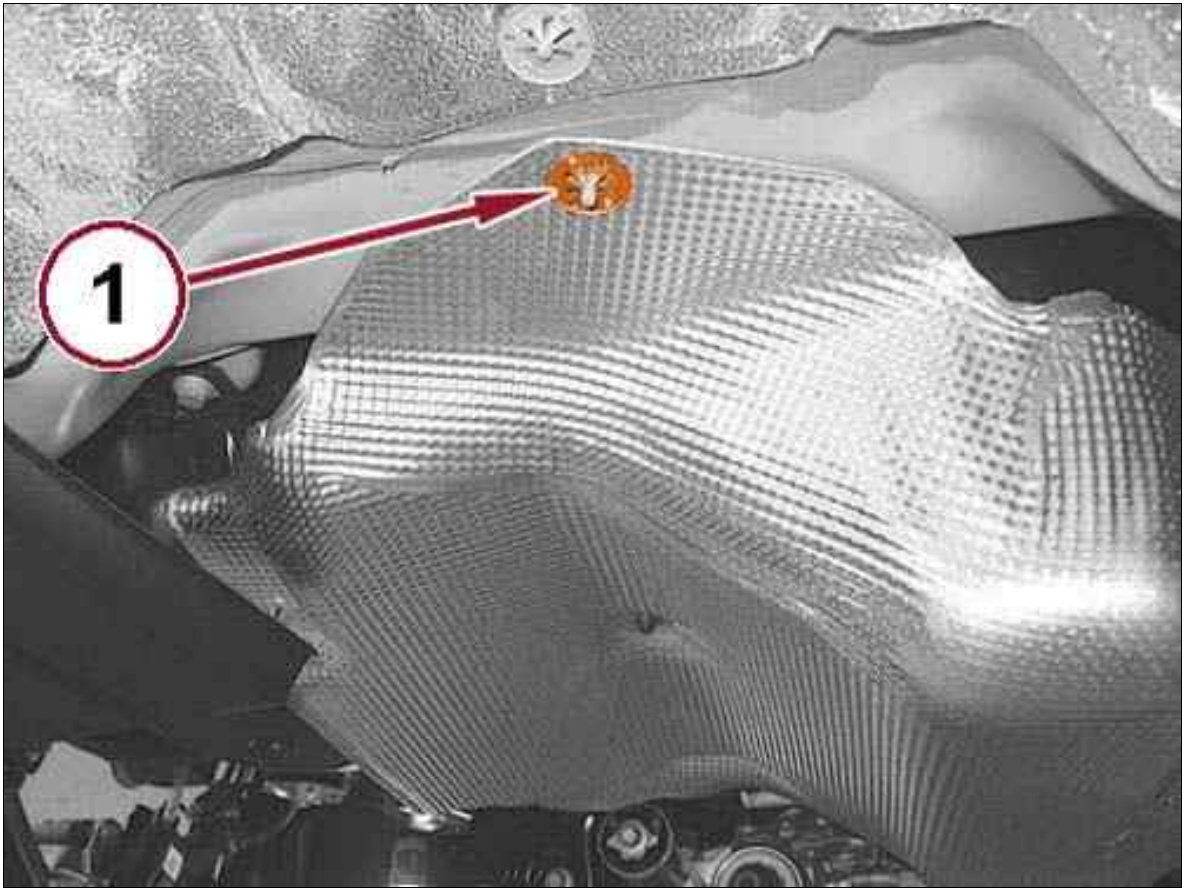
Fig 6: Fuel Fill Tube Vent Pipe



Courtesy of CHRYSLER GROUP, LLC

14. Disconnect the quick coupling and release the vent pipe from the fuel fill tube (1).
15. Remove the muffler assembly. Refer to MUFFLER, EXHAUST, REMOVAL AND INSTALLATION

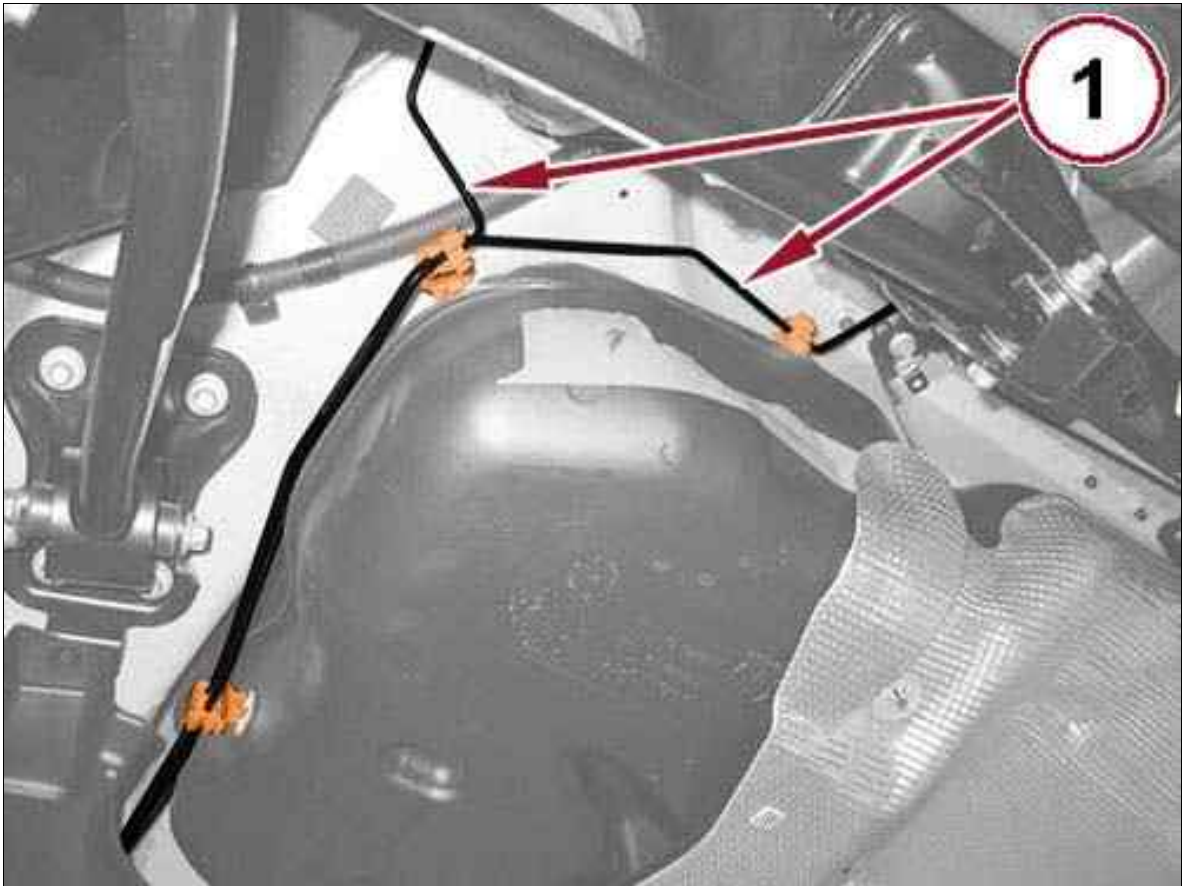
Fig 7: Heat Shield Toothed Washer



Courtesy of CHRYSLER GROUP, LLC

16. Unscrew the toothed washer (1) securing the heat shield to the body.

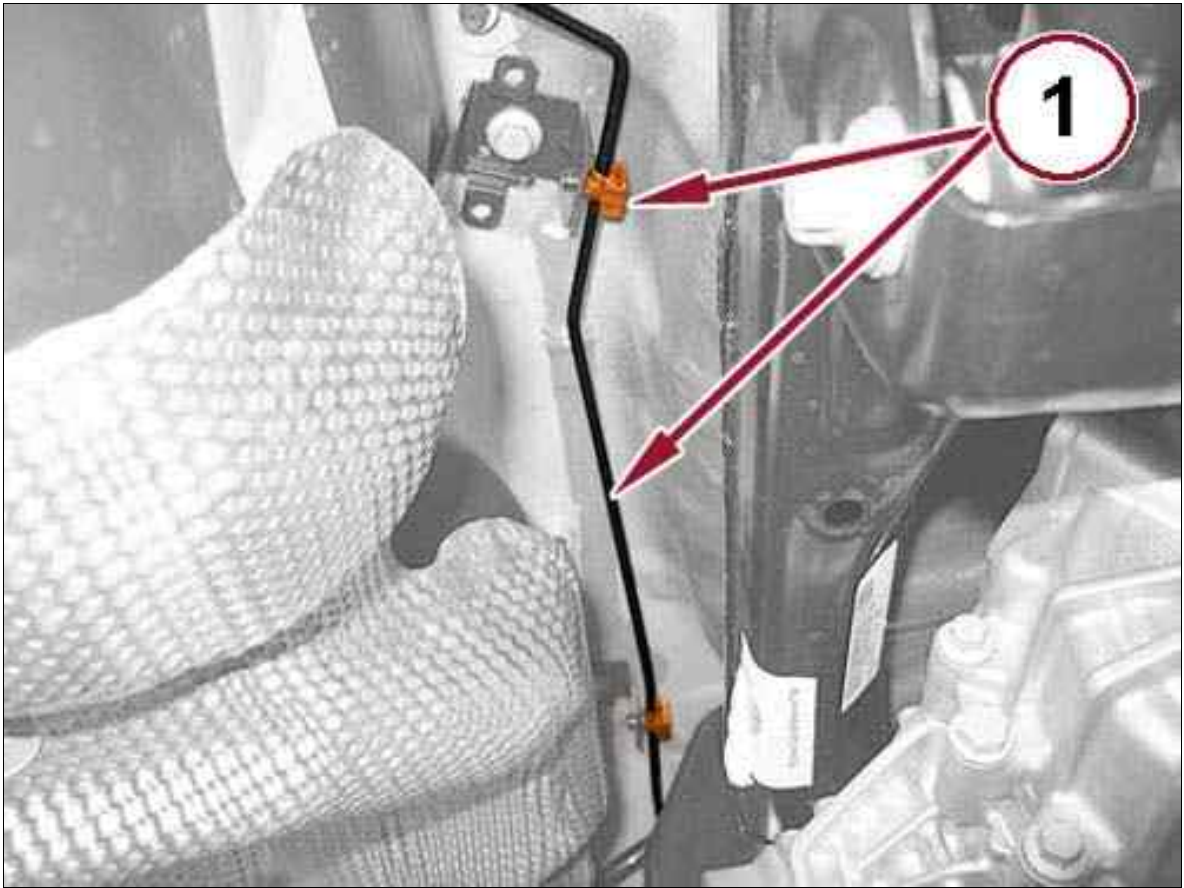
Fig 8: Rear Brake Lines & Retaining Clips



Courtesy of CHRYSLER GROUP, LLC

17. Open the retaining clips and disengage the rear brake lines (1).

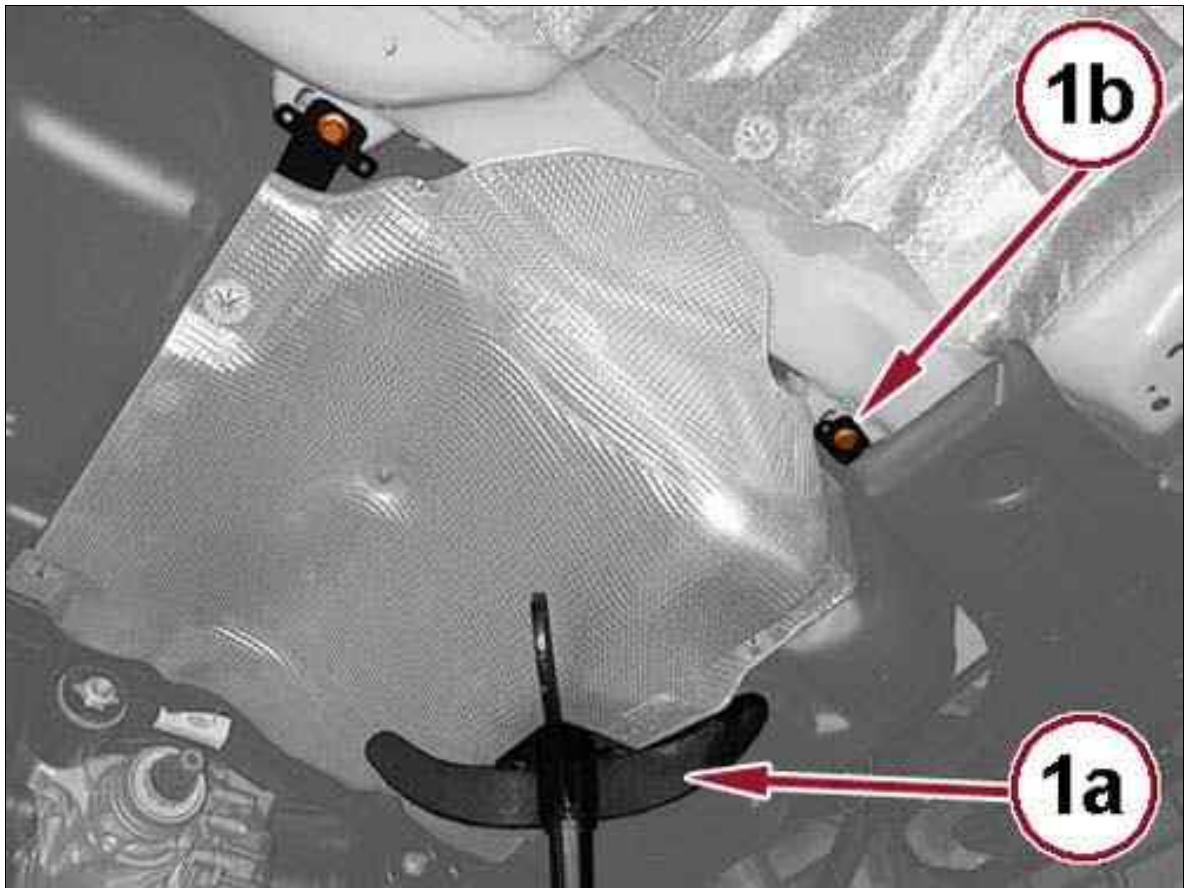
Fig 9: Right Rear Brake Line & Clips



Courtesy of CHRYSLER GROUP, LLC

18. Open the clips and release the right rear brake line (1).

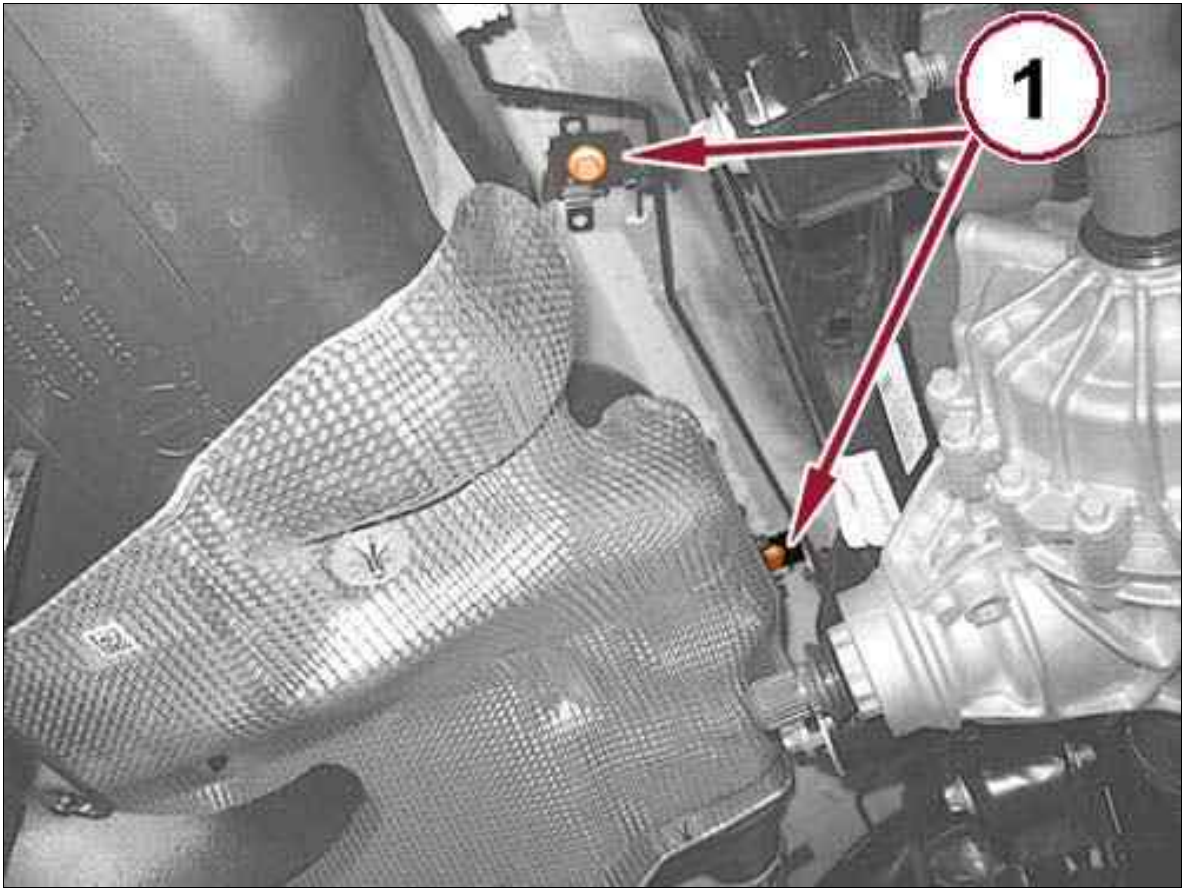
Fig 10: Hydraulic Lift & Mounting Bracket Bolts



Courtesy of CHRYSLER GROUP, LLC

19. Place a suitable hydraulic lift (1a) under the tank and remove the front bolts (1b) securing the mounting brackets.

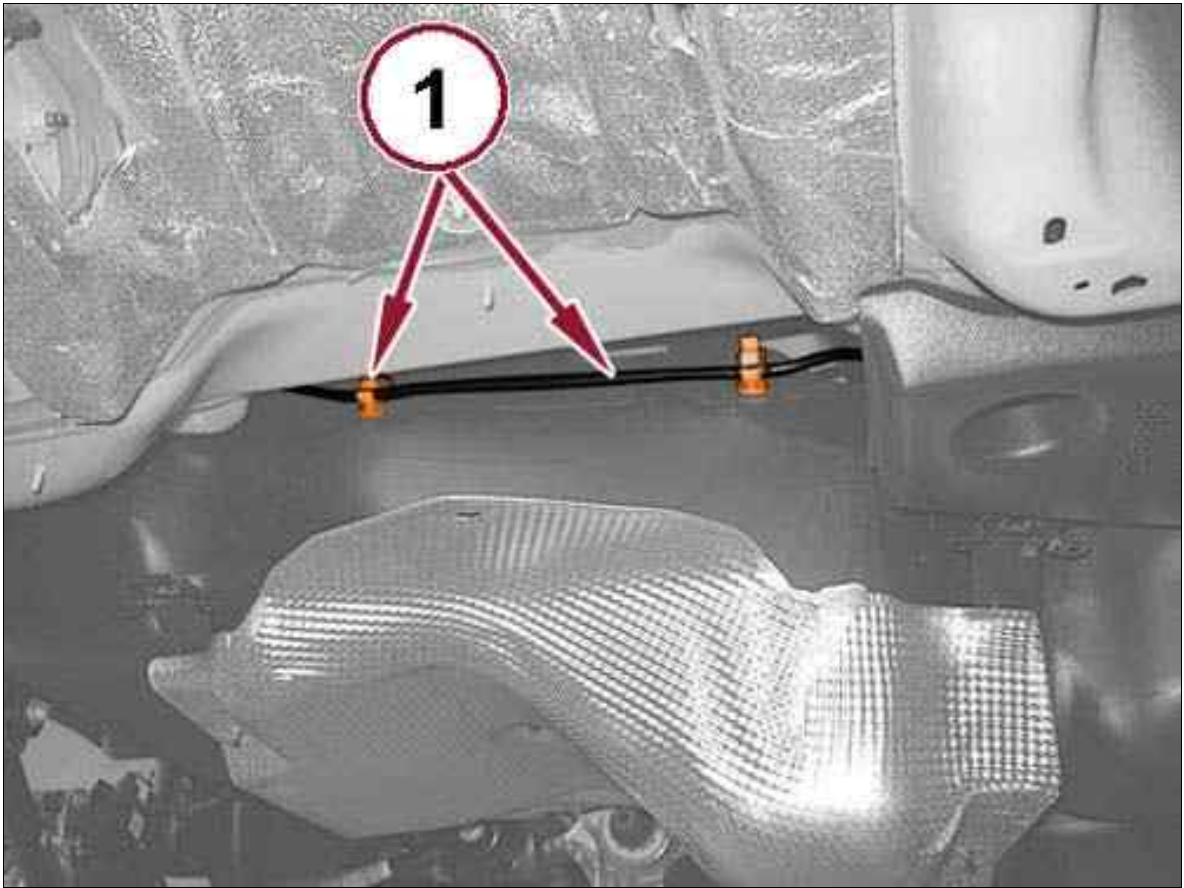
Fig 11: Rear Fuel Tank Support Bracket Bolts



Courtesy of CHRYSLER GROUP, LLC

20. Remove the rear fuel tank support bracket bolts (1).
21. Disconnect the quick coupling of the vapor hose from the fuel tank to the canister.

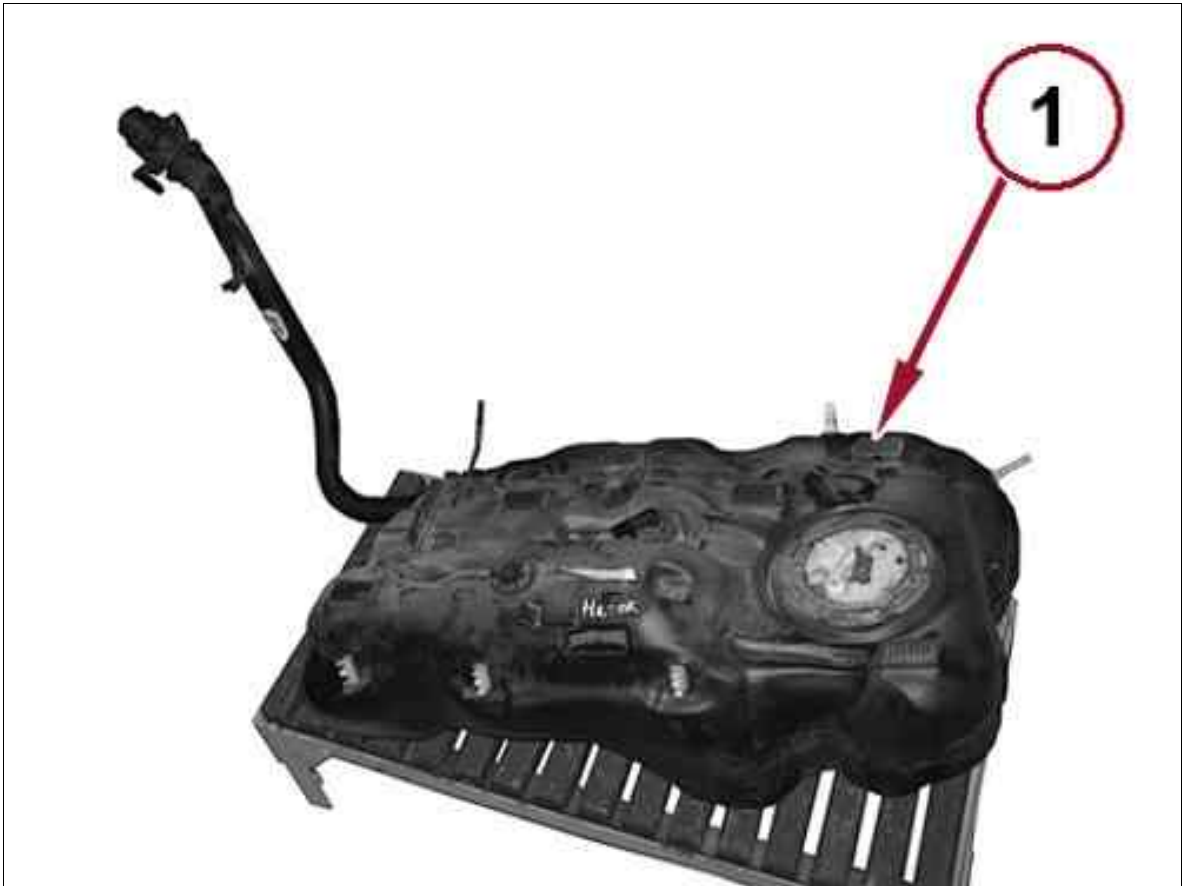
Fig 12: Fuel Delivery Pipe & Retaining Clips



Courtesy of CHRYSLER GROUP, LLC

22. Lower the tank and unhook the fuel delivery pipe from the retaining clips (1).

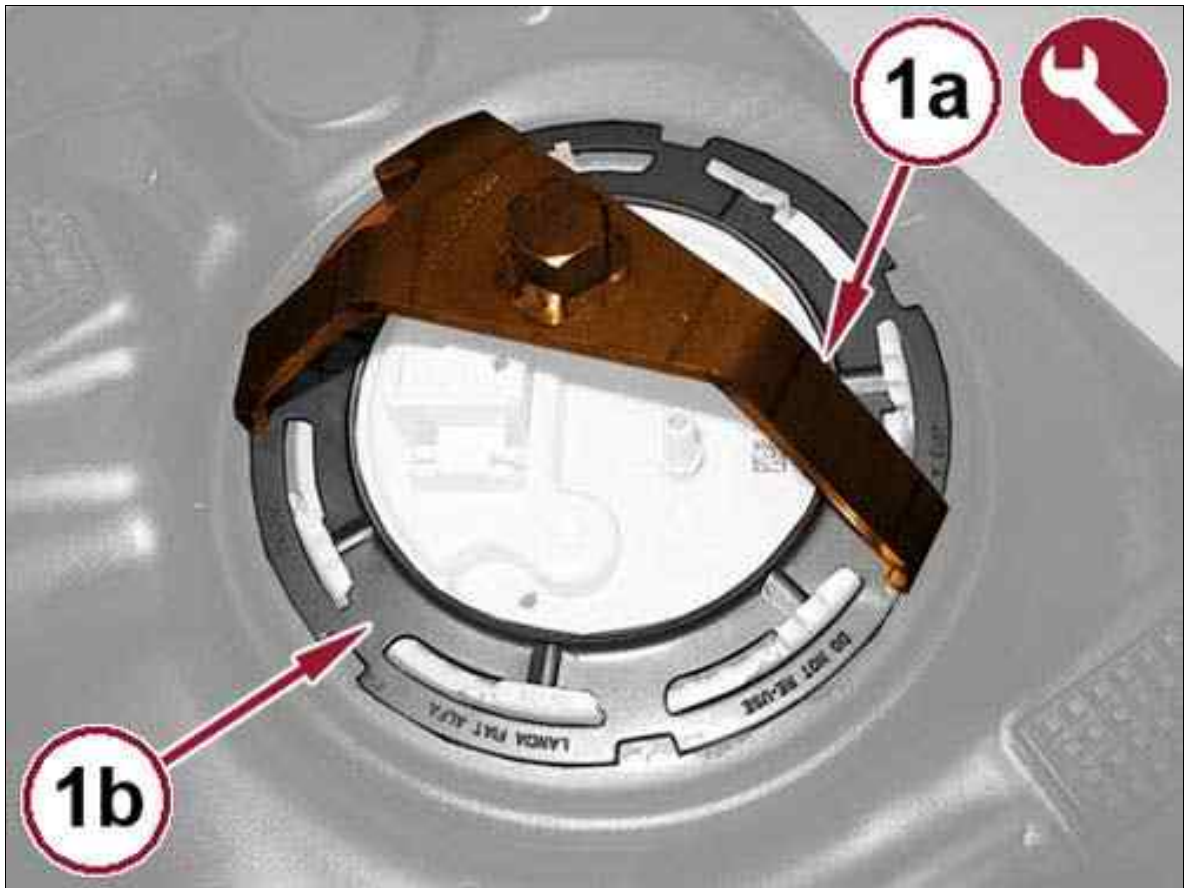
Fig 13: Fuel Tank & Support



Courtesy of CHRYSLER GROUP, LLC

23. Lower the support and remove the fuel tank (1).

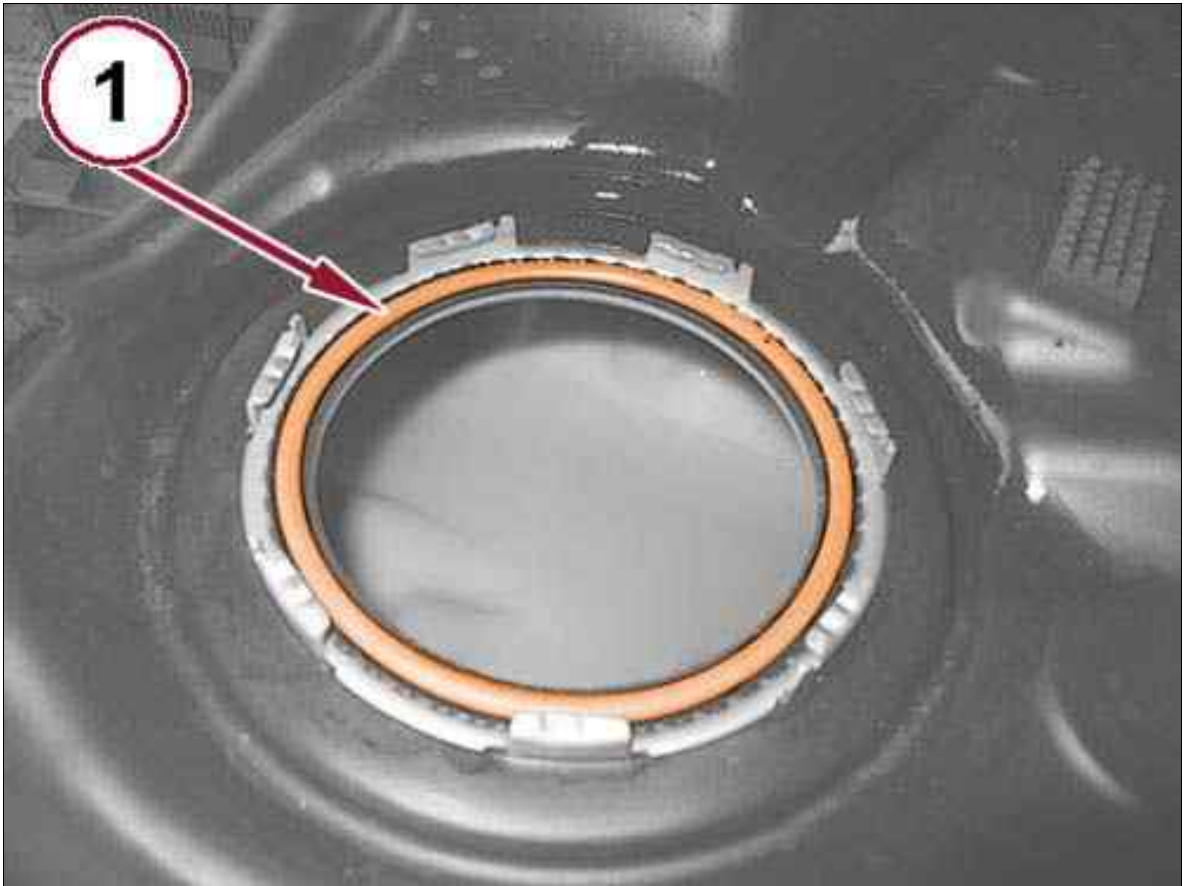
Fig 14: Fuel Pump Assembly Lock Nut & Special Tool



Courtesy of CHRYSLER GROUP, LLC

24. Install the 2000002100 (EMEA) or (special tool #9340, SAE Fuel Pump Lock Ring Wrench) (NAFTA) tool (1a) and remove the lock nut from the fuel pump assembly (1b).
25. Remove the fuel pump assembly.

Fig 15: Fuel Tank Seal Ring



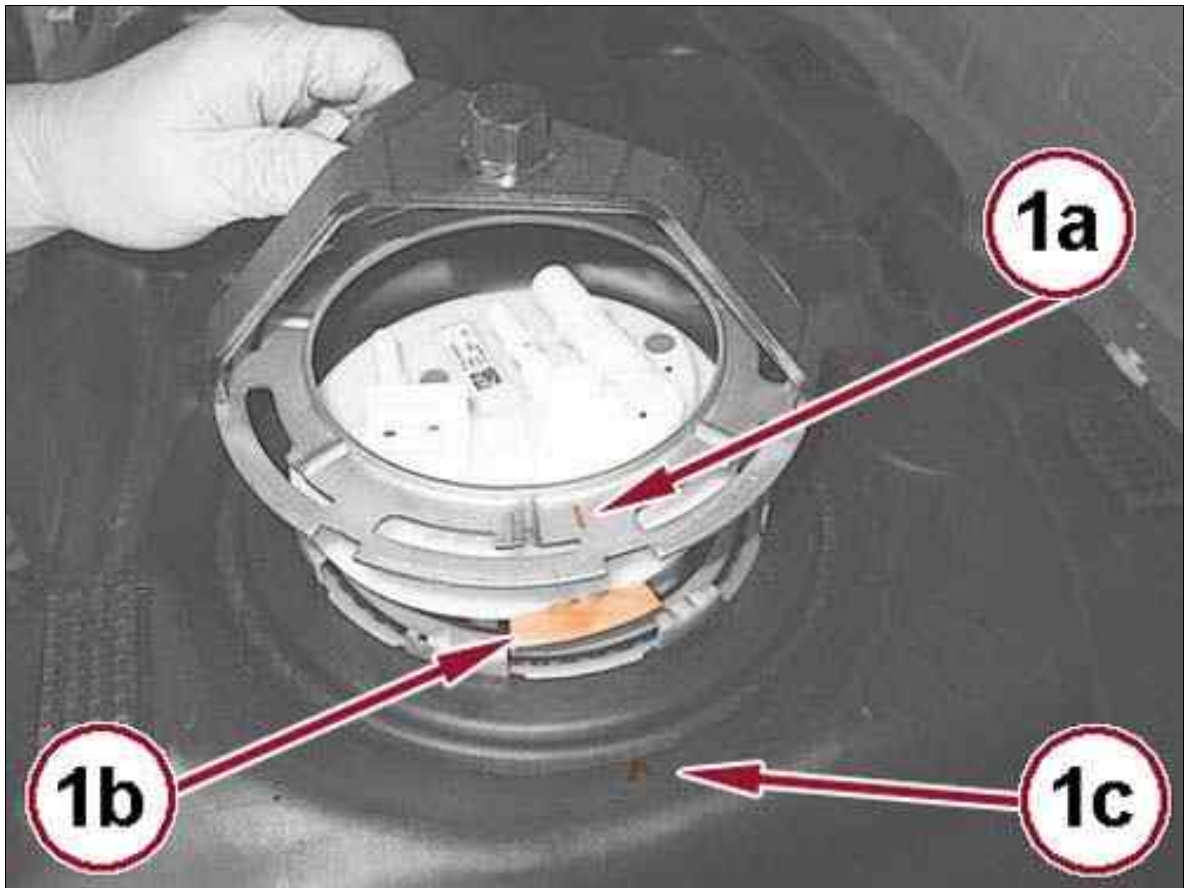
Courtesy of CHRYSLER GROUP, LLC

26. Remove the seal ring on the tank (1).

FUEL DELIVERY > TANK, FUEL > REMOVAL AND INSTALLATION > 1.4L FWD > INSTALLATION

1. Install a new seal on the tank.

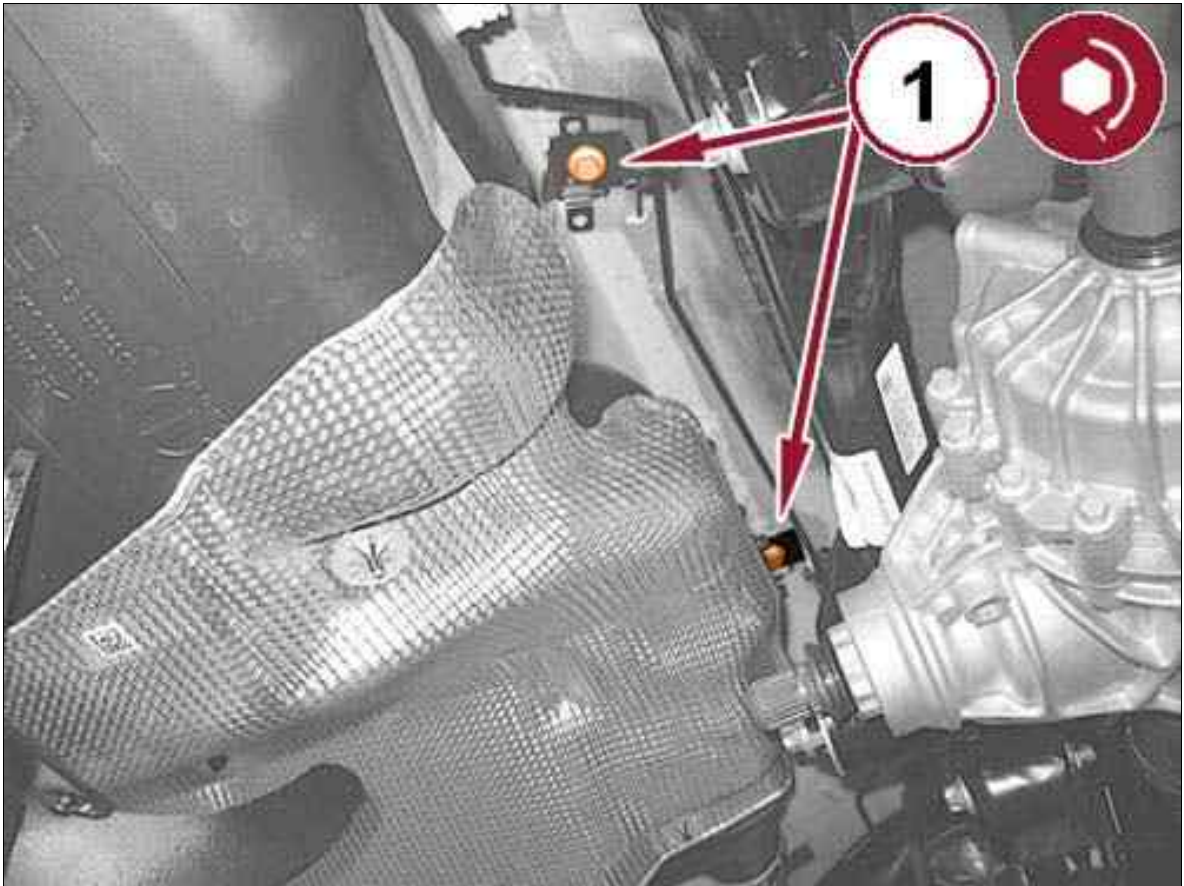
Fig 1: Fuel Pump Assembly Reference Points



Courtesy of CHRYSLER GROUP, LLC

2. Install the fuel pump assembly, taking care to match the references (1a), (1b) and (1c) indicated in the figure.
3. Tighten the fuel pump assembly lock nut.
4. Using the hydraulic lift, put the fuel tank into position.
5. Engage the fuel delivery pipe with the retaining clips.
6. Connect the quick coupling of the vapor hose from the fuel tank to the canister.

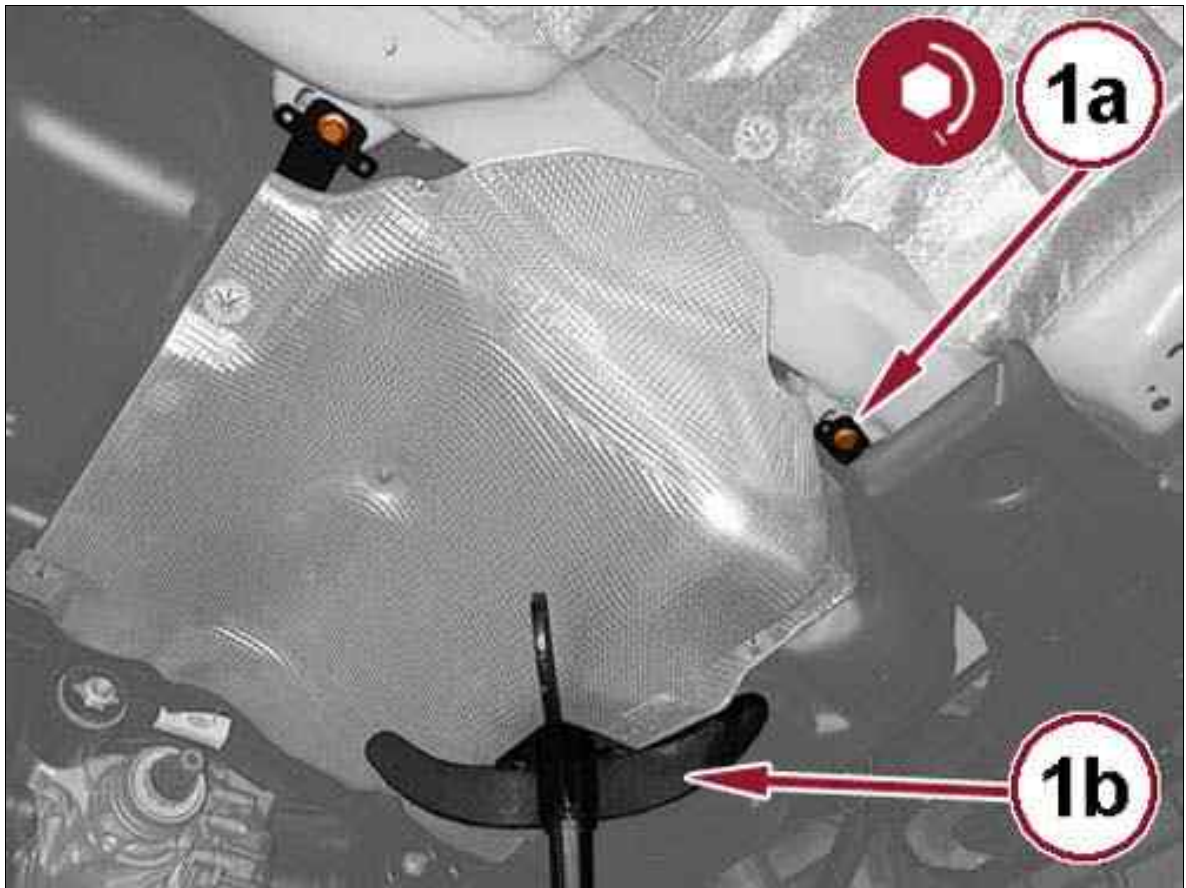
Fig 2: Rear Support Bracket Bolts



Courtesy of CHRYSLER GROUP, LLC

7. Install the rear support bracket bolts (1) and tighten to the proper torque specification. Refer to FUEL DELIVERY, SPECIFICATIONS .

Fig 3: Front Support Bracket Bolts & Hydraulic Lift



Courtesy of CHRYSLER GROUP, LLC

8. Install the front support bracket bolts (1a) and tighten to the proper torque specification. Refer to FUEL DELIVERY, SPECIFICATIONS .
9. Remove the hydraulic lift (1b).
10. Engage the right rear brake lines and close the retaining clips.
11. Engage the rear brake lines and close the retaining clips.
12. Install the toothed washer securing the heat shield to the body.
13. Install the muffler assembly. Refer to MUFFLER, EXHAUST, REMOVAL AND INSTALLATION .
14. Connect the quick coupling and engage the vent pipe with the spring retainer on the fuel fill tube.
15. Install the fuel fill tube retaining screw and tighten to the proper torque specifications. Refer to TORQUE SPECIFICATIONS .
16. Install the fuel door, engaging the retaining clips.
17. Position the door retaining device and turn the screw 90°.
18. Install the right rear splash shield. Refer to SHIELD, SPLASH, REAR WHEELHOUSE, REMOVAL AND INSTALLATION .

19. Connect the quick coupling of the vent pipe.
20. Connect the quick coupling of the fuel delivery pipe.
21. Connect the electrical connection of the electric fuel pump.
22. Install the access covers for the fuel pump and the vent pipe, securely tighten the screws.
23. Install the rear seat cushion. Refer to SEAT CUSHION, REMOVAL AND INSTALLATION .
24. Remove the vehicle from the lift.

FUEL DELIVERY > TANK, FUEL > REMOVAL AND INSTALLATION > 1.4L 4X4 > REMOVAL

1. Place the vehicle on a lift.
2. Open the cover of the fuse box in the engine compartment and remove the fuse F21 (15 A) of the fuel pump.
3. Start the engine and run until the fuel in the lines is depleted.
4. Install the fuse removed earlier and close the fuse box cover.
5. Remove the muffler assembly. Refer to MUFFLER, EXHAUST, REMOVAL AND INSTALLATION .
6. Remove the propeller shaft assembly. Refer to REMOVAL AND INSTALLATION .
7. Remove the rear seat cushion. Refer to SEAT CUSHION, REMOVAL AND INSTALLATION .

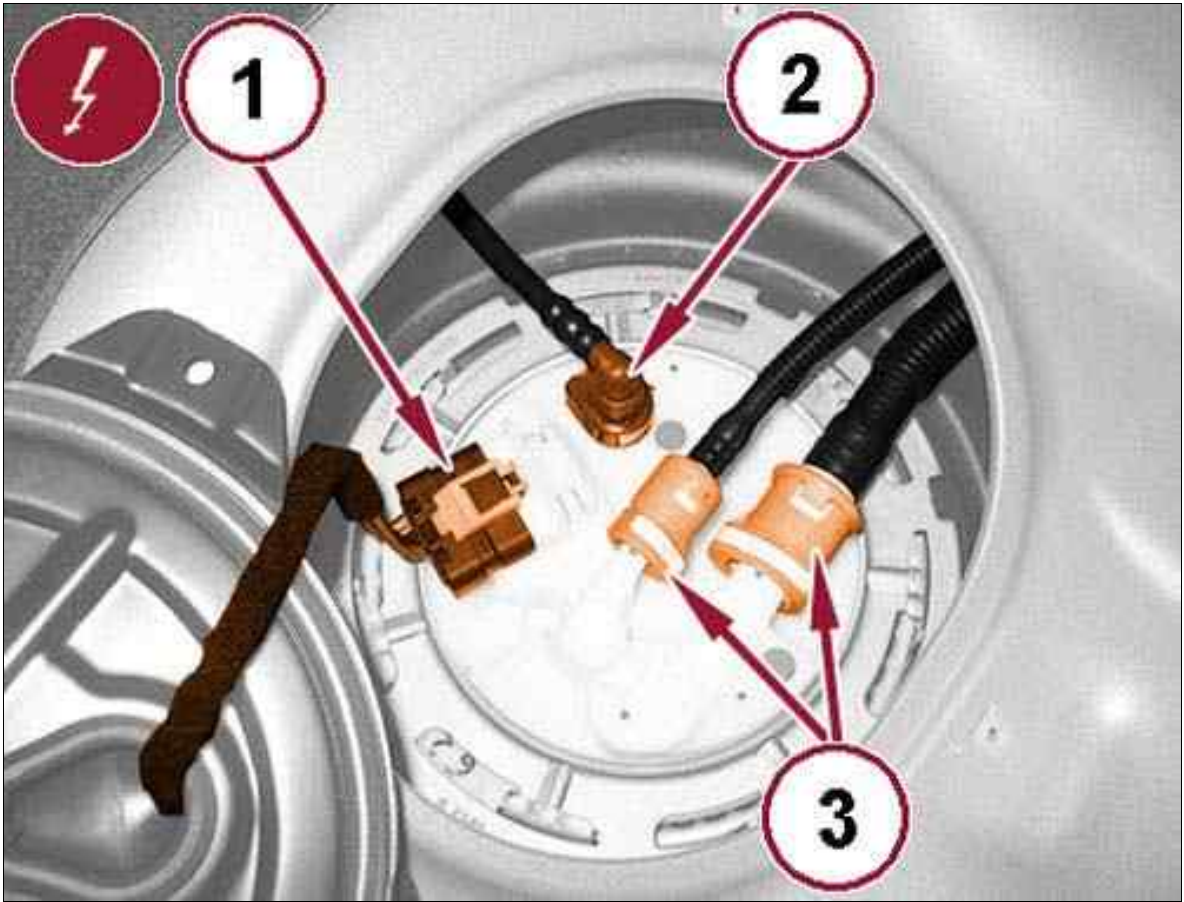
Fig 1: Fuel Pump Access Cover & Screws



Courtesy of CHRYSLER GROUP, LLC

8. Lift the cover, unscrew the screws and remove the access cover to the fuel pump (1).

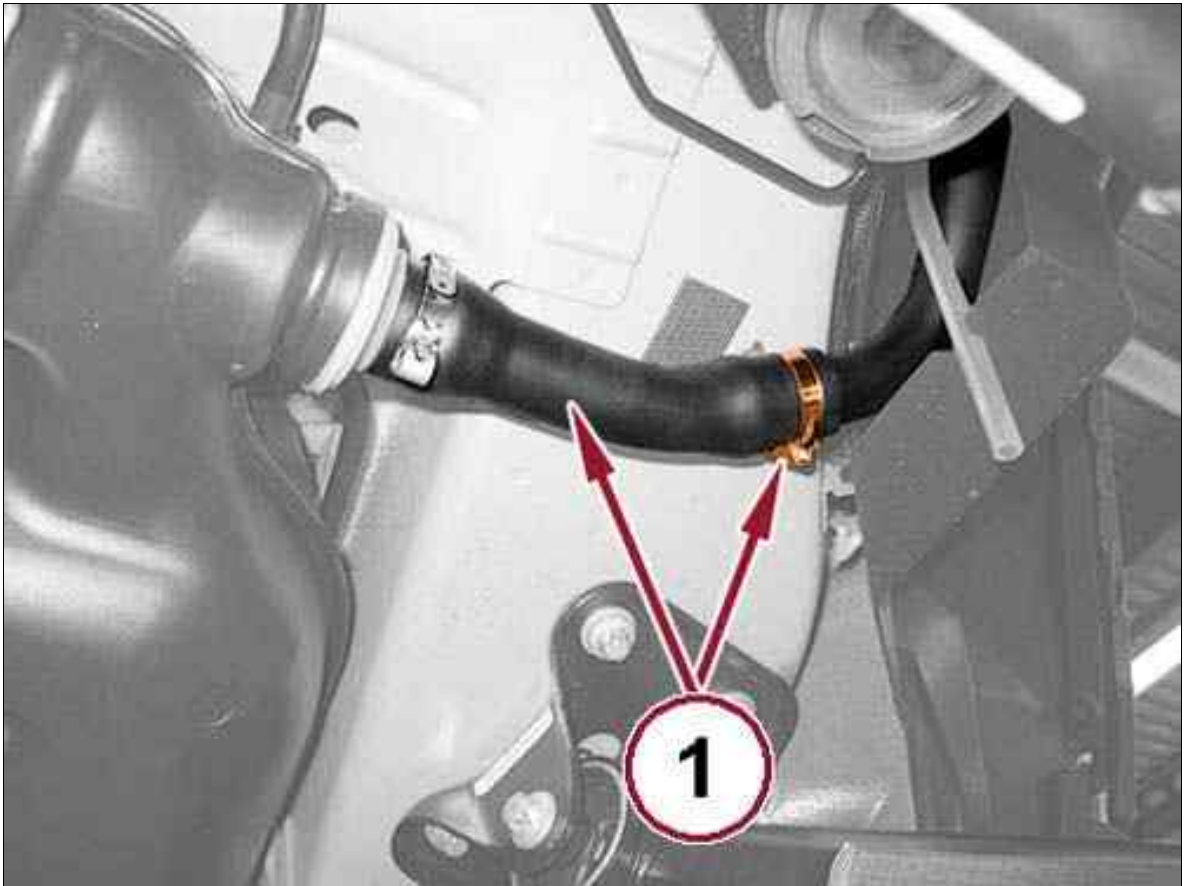
Fig 2: Connector, Fuel Delivery Pipe & Fuel Vapor Pipe Quick Coupling



Courtesy of CHRYSLER GROUP, LLC

9. Disconnect the electrical connection (1) of the electric pump fuel.
10. Disconnect the fuel vapor quick connect couplings (3).
11. Disconnect the quick coupling of the fuel delivery pipe (2).

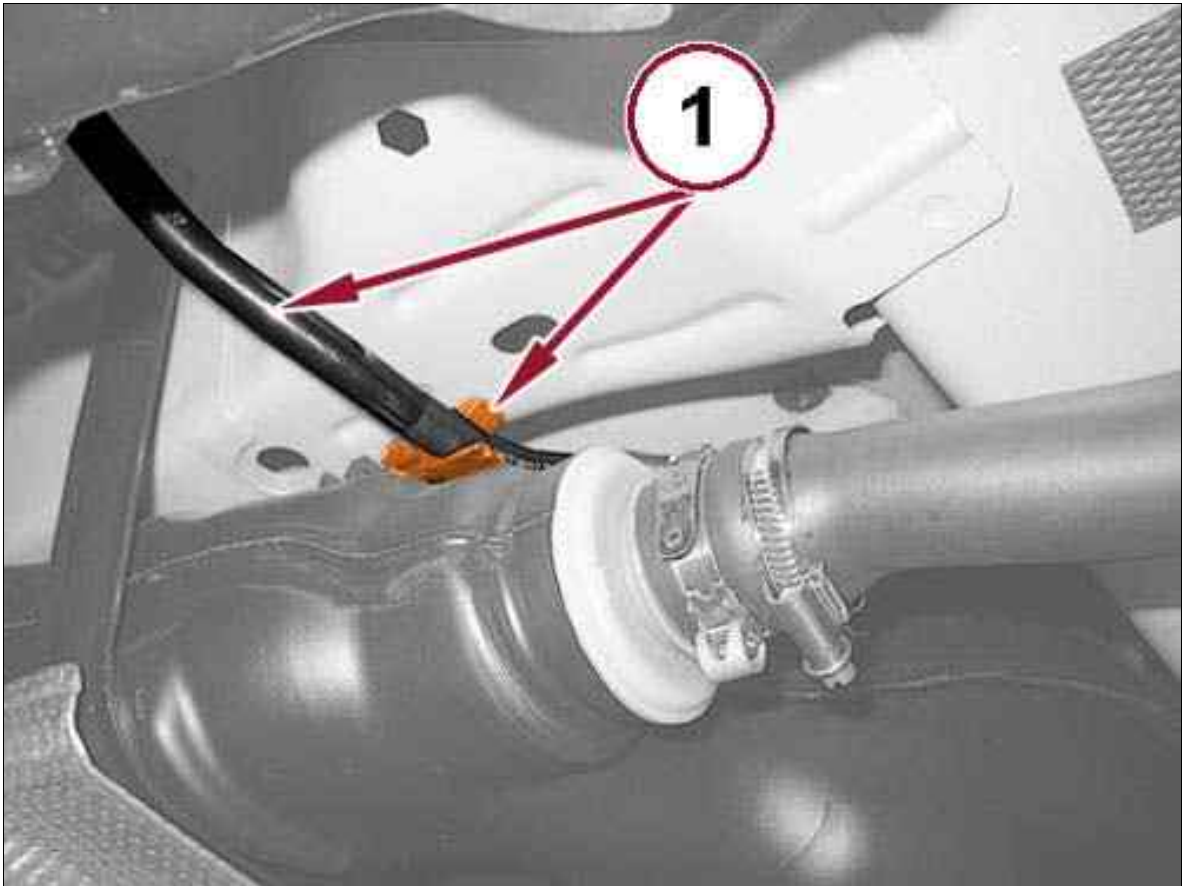
Fig 3: Fuel Fill Tube Hose & Clamp



Courtesy of CHRYSLER GROUP, LLC

12. Loosen the clamp and disconnect the hose from the fuel fill tube (1).

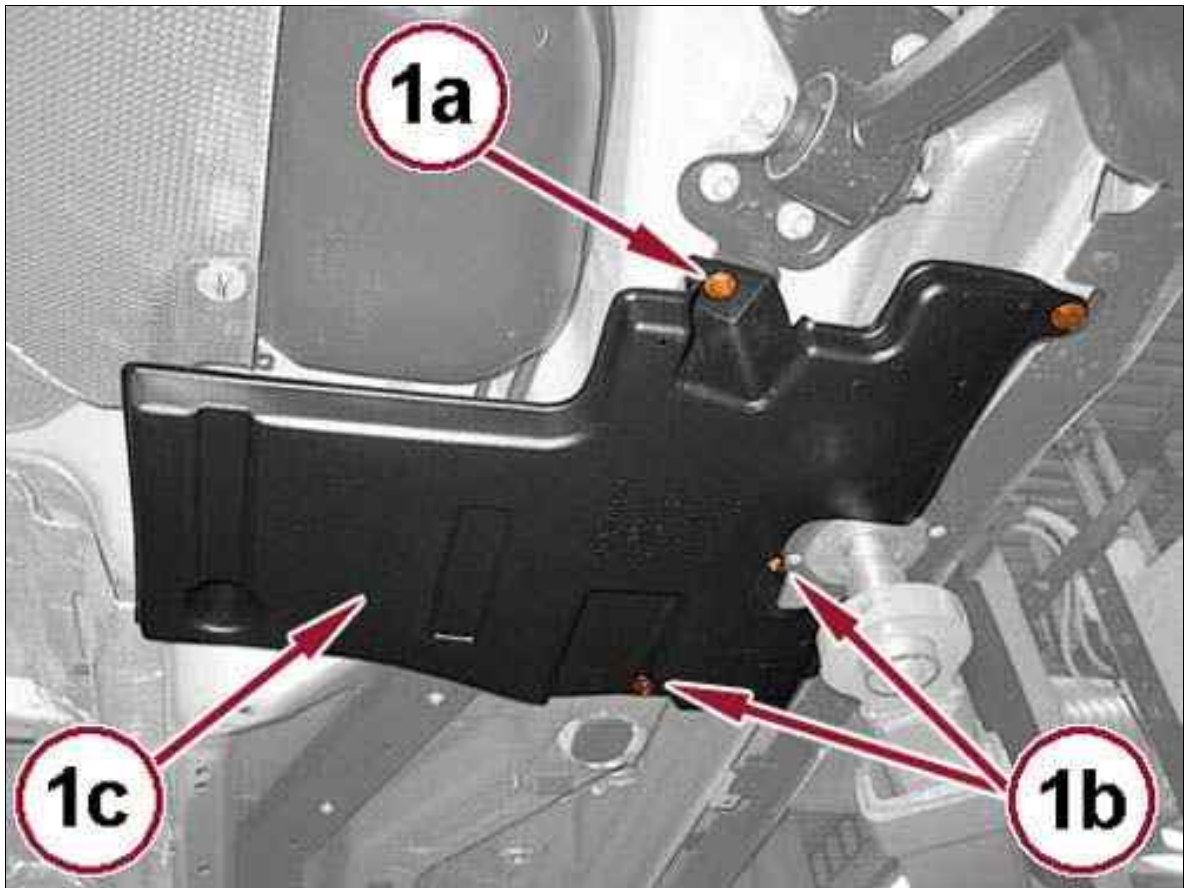
Fig 4: Fuel Vapor Hose & Retaining Clip



Courtesy of CHRYSLER GROUP, LLC

13. Disengage the fuel vapor hose from the retaining clips (1).

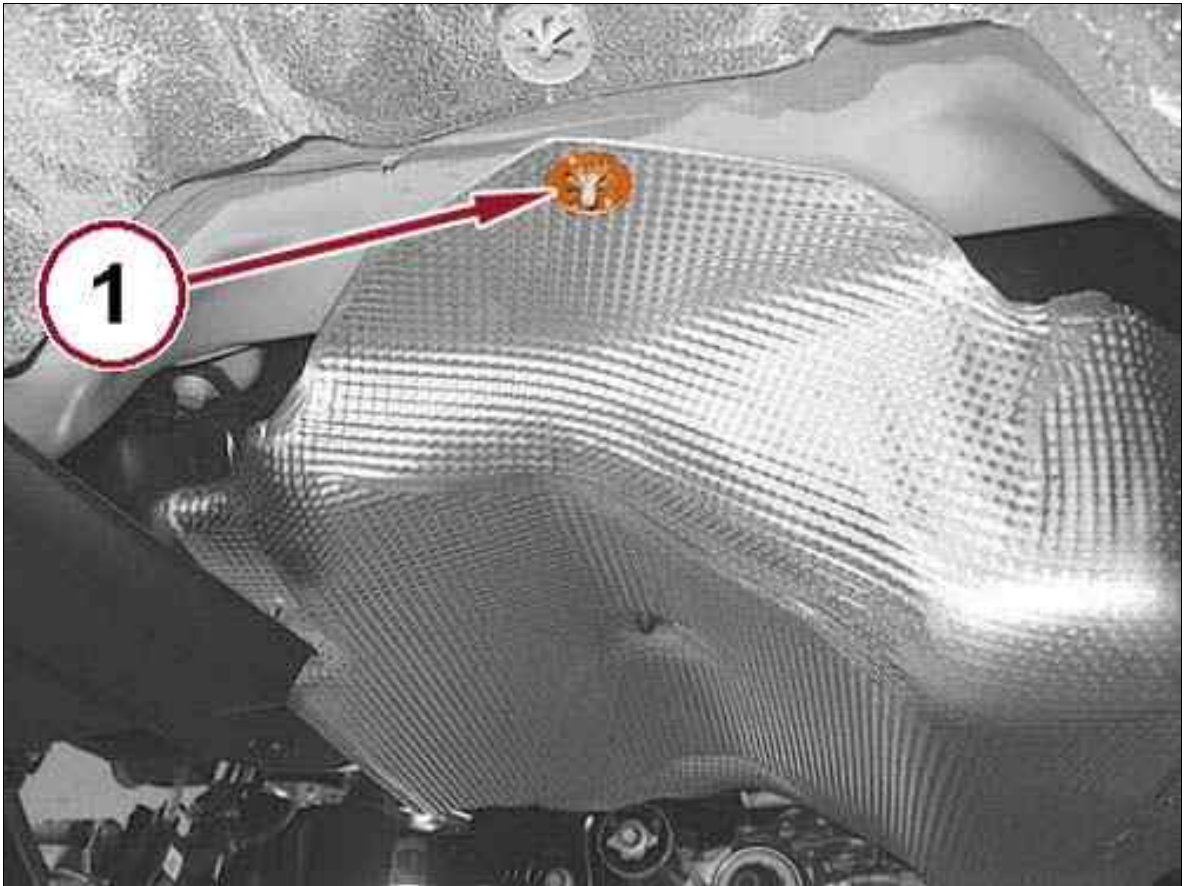
Fig 5: Right Side Cover, Fasteners & Buttons



Courtesy of CHRYSLER GROUP, LLC

14. Remove buttons (1a), loosen the fasteners (1b) and remove the right side cover (1c).

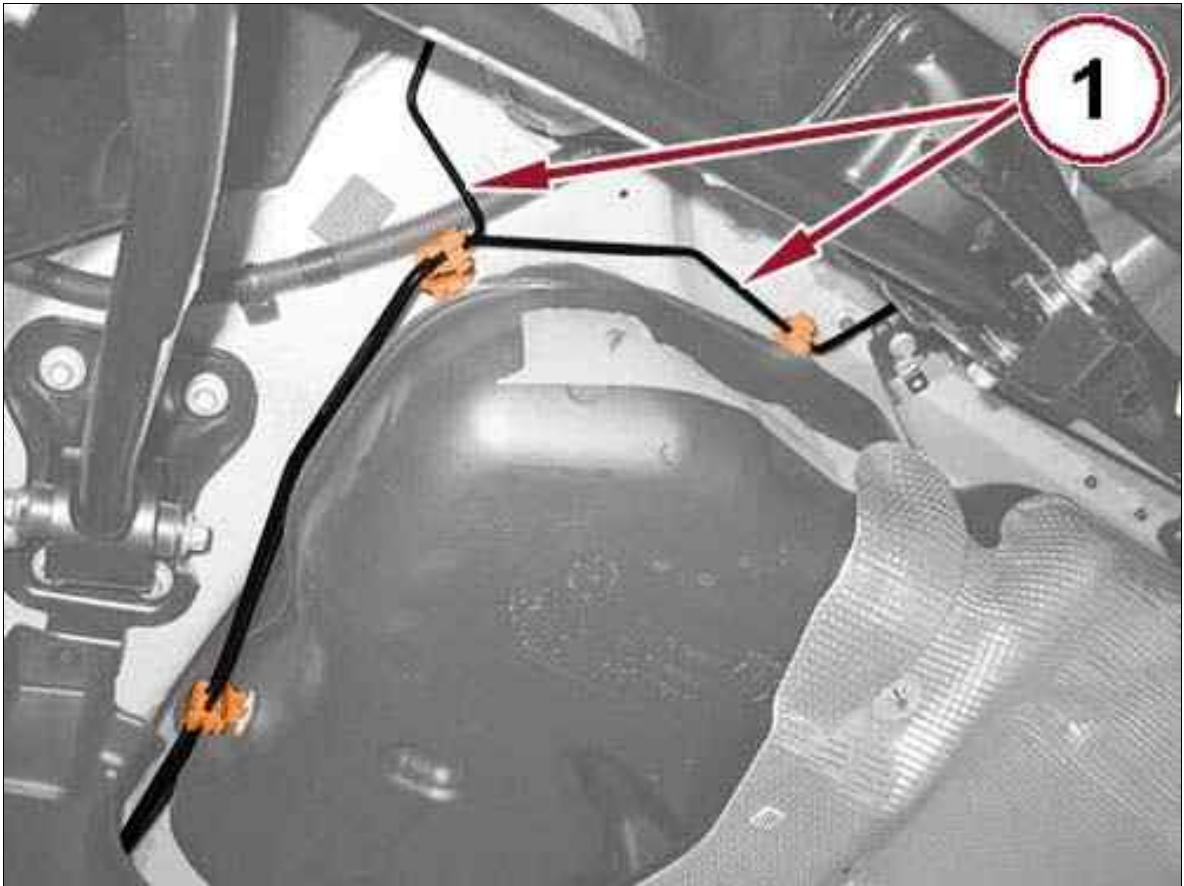
Fig 6: Heat Shield Toothed Washer



Courtesy of CHRYSLER GROUP, LLC

15. Unscrew the toothed washer (1) securing the heat shield to the body.

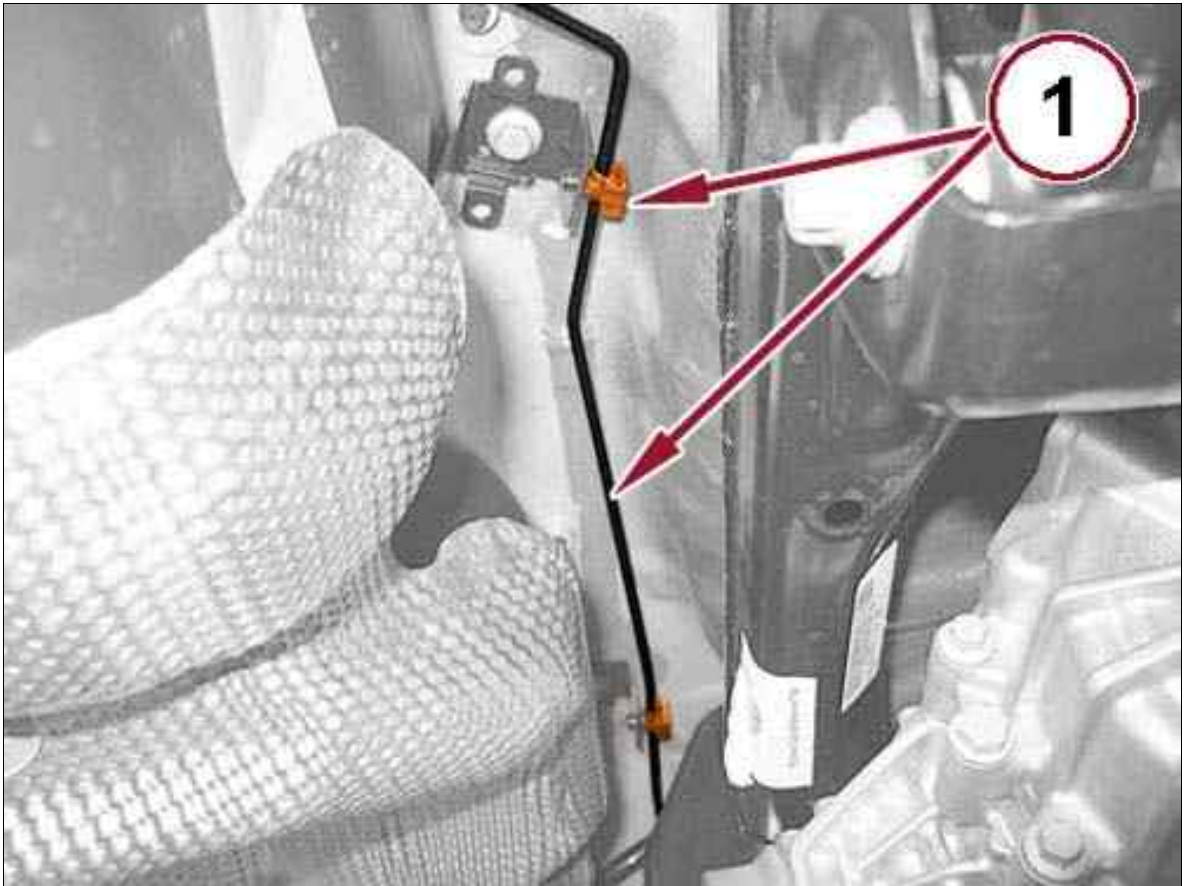
Fig 7: Rear Brake Lines & Retaining Clips



Courtesy of CHRYSLER GROUP, LLC

16. Open the retaining clips and disengage the rear brake lines (1).

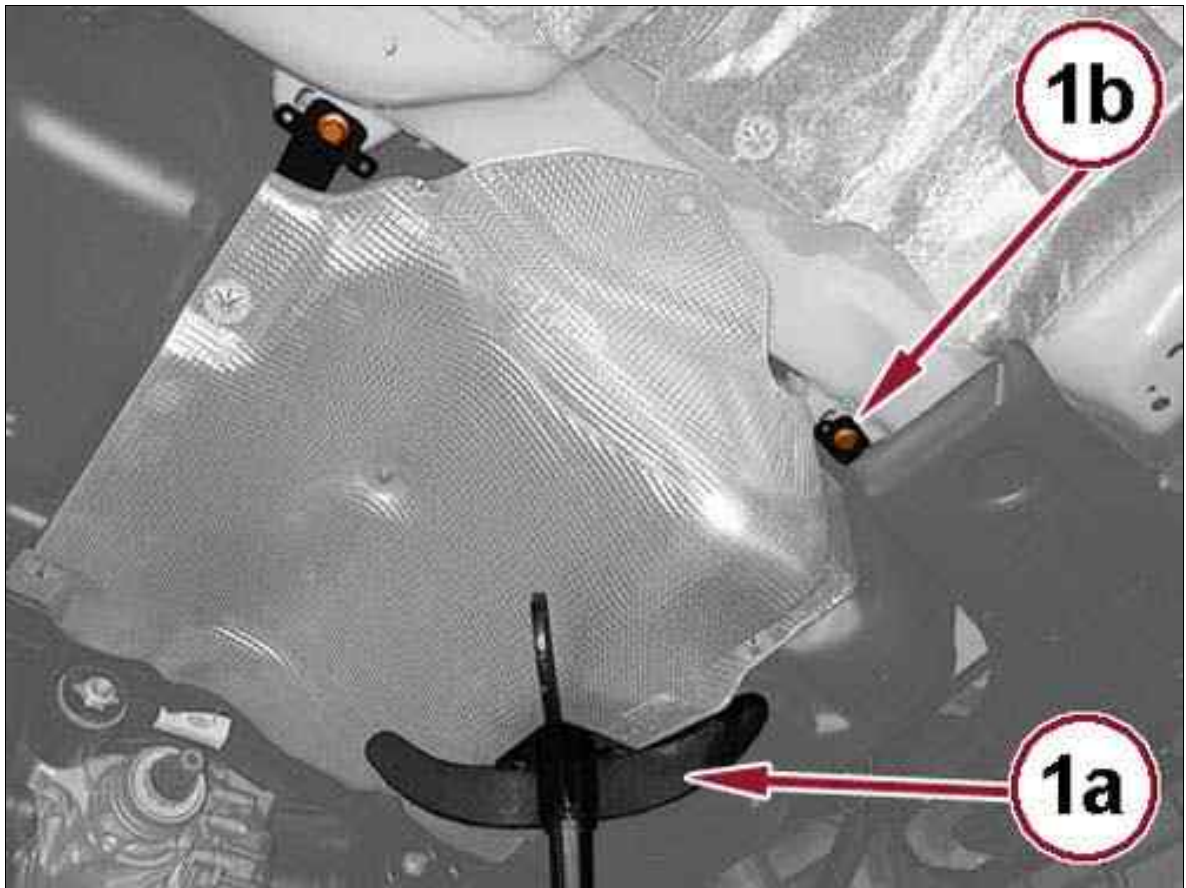
Fig 8: Right Rear Brake Line & Clips



Courtesy of CHRYSLER GROUP, LLC

17. Open the clips and release the right rear brake line (1).

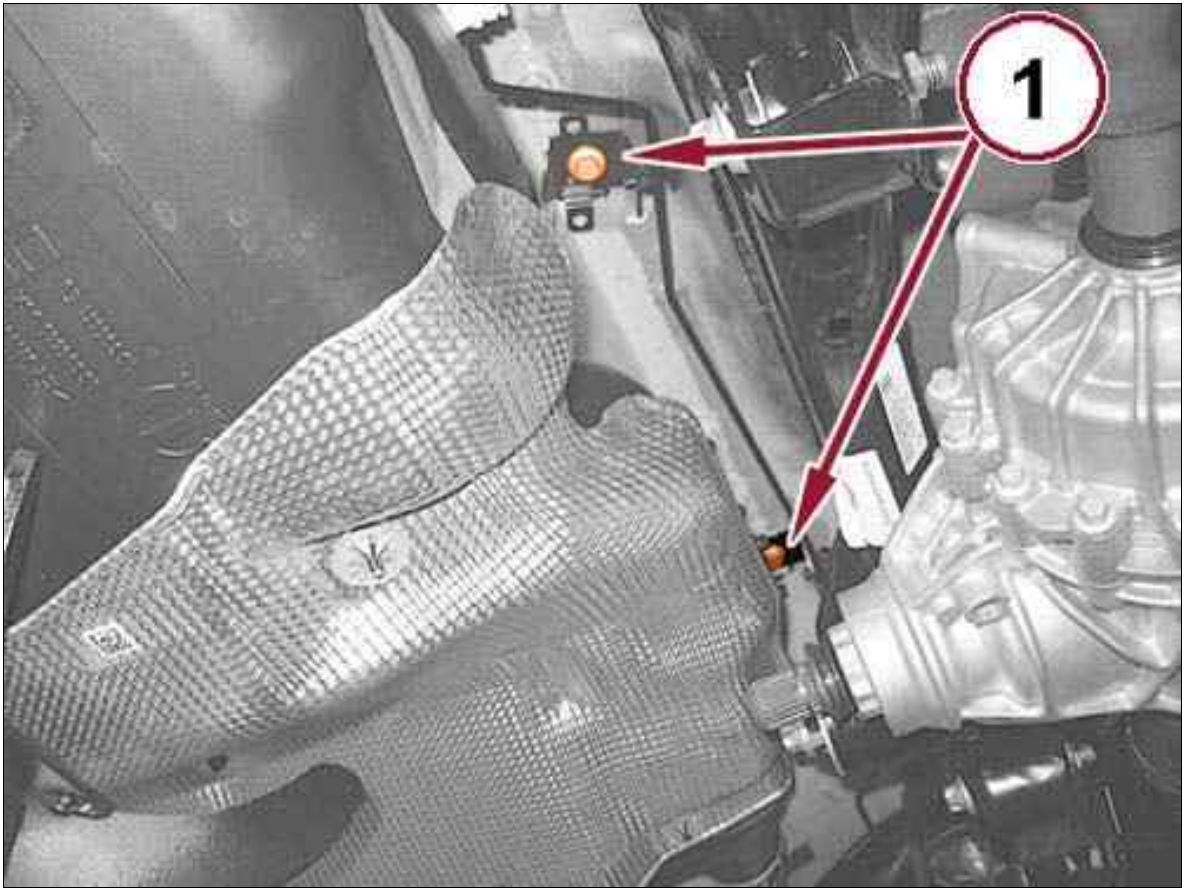
Fig 9: Hydraulic Lift & Mounting Bracket Bolts



Courtesy of CHRYSLER GROUP, LLC

18. Place a suitable hydraulic lift (1a) under the tank and remove the front bolts (1b) securing the mounting brackets.

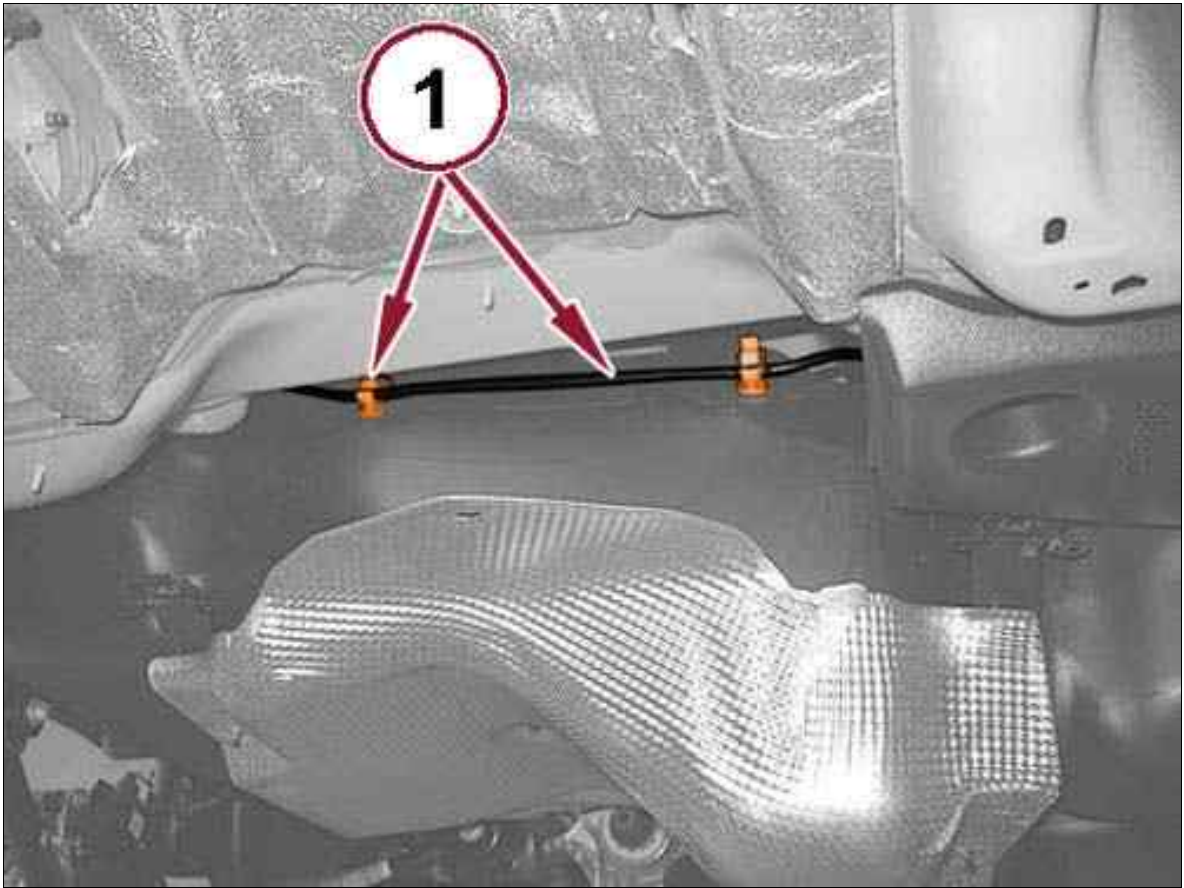
Fig 10: Rear Fuel Tank Support Bracket Bolts



Courtesy of CHRYSLER GROUP, LLC

19. Remove the rear fuel tank support bracket bolts (1).
20. Disconnect the quick coupling of the vapor hose from the fuel tank to the canister.

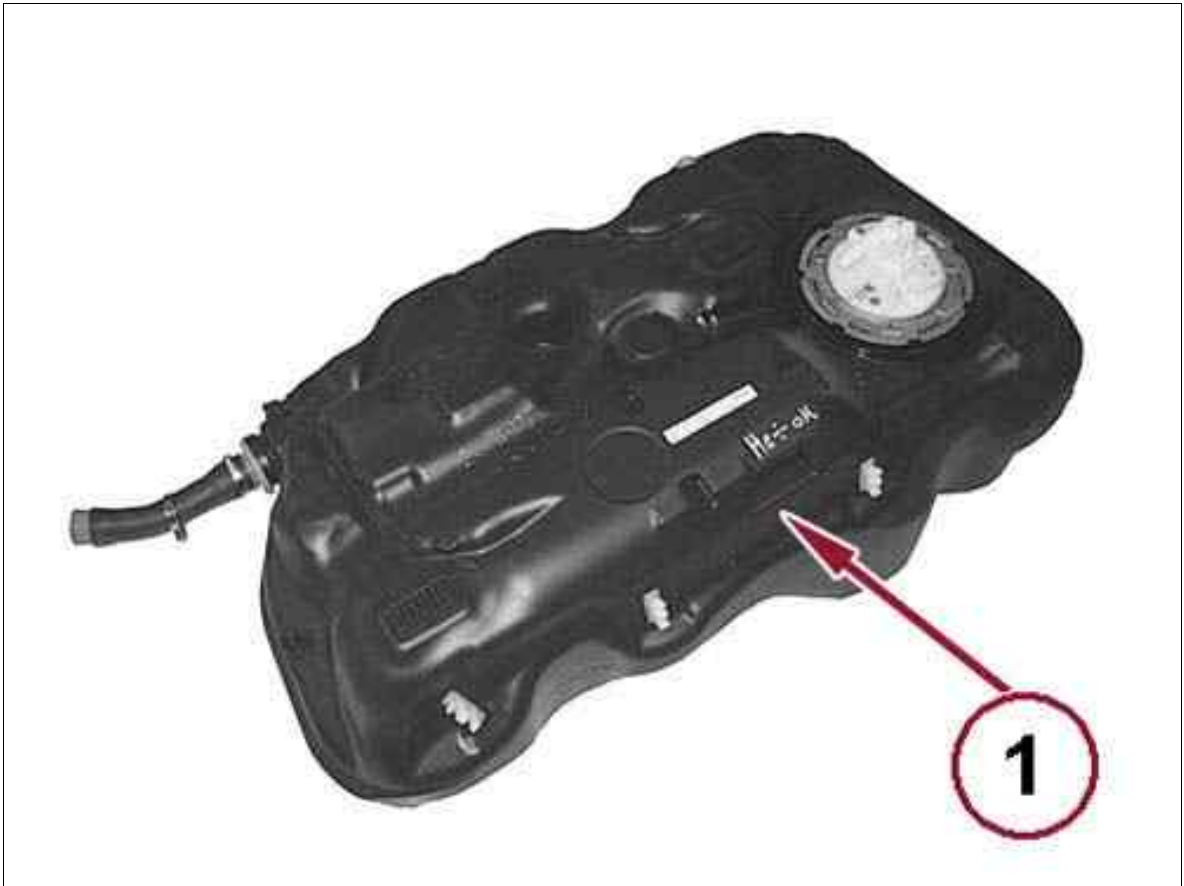
Fig 11: Fuel Delivery Pipe & Retaining Clips



Courtesy of CHRYSLER GROUP, LLC

21. Lower the tank and unhook the fuel delivery pipe from the retaining clips (1).

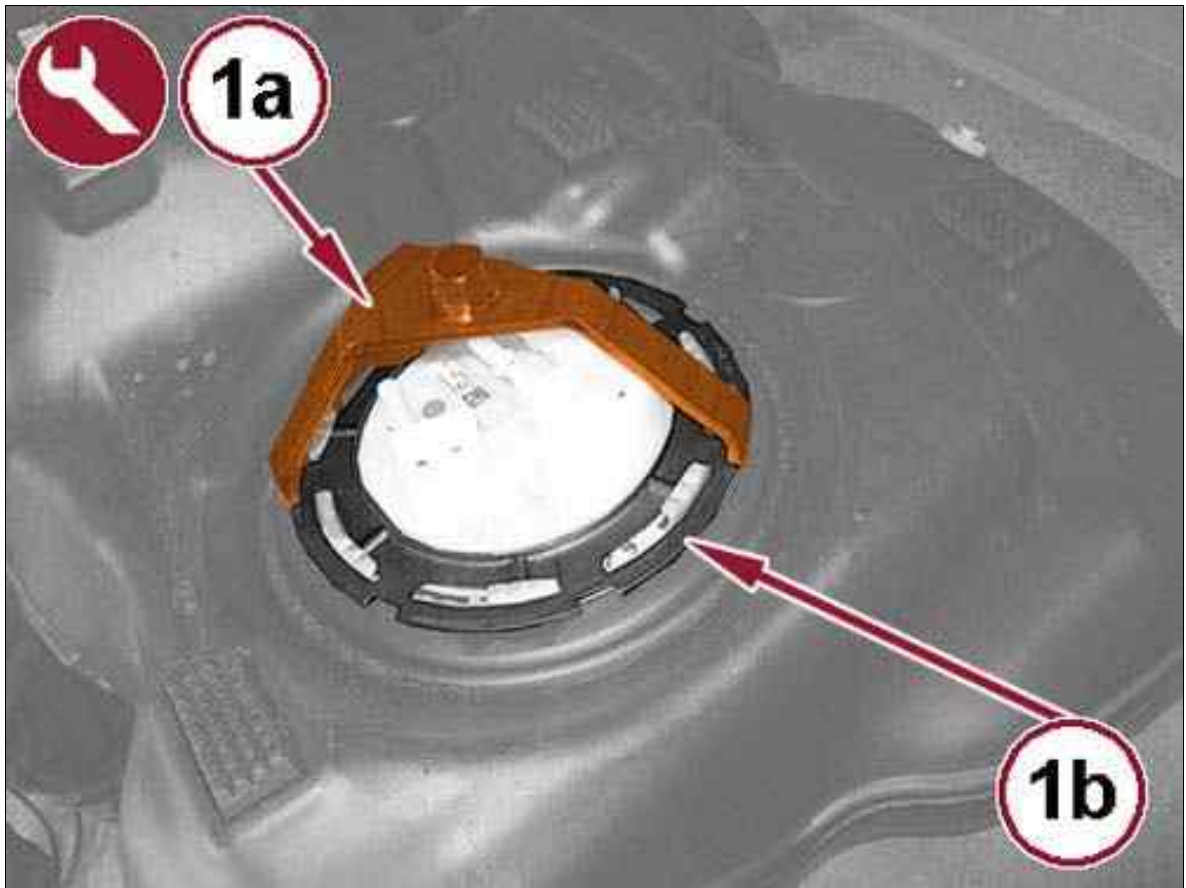
Fig 12: Fuel Tank & Support



Courtesy of CHRYSLER GROUP, LLC

22. Lower the support and remove the fuel tank (1).

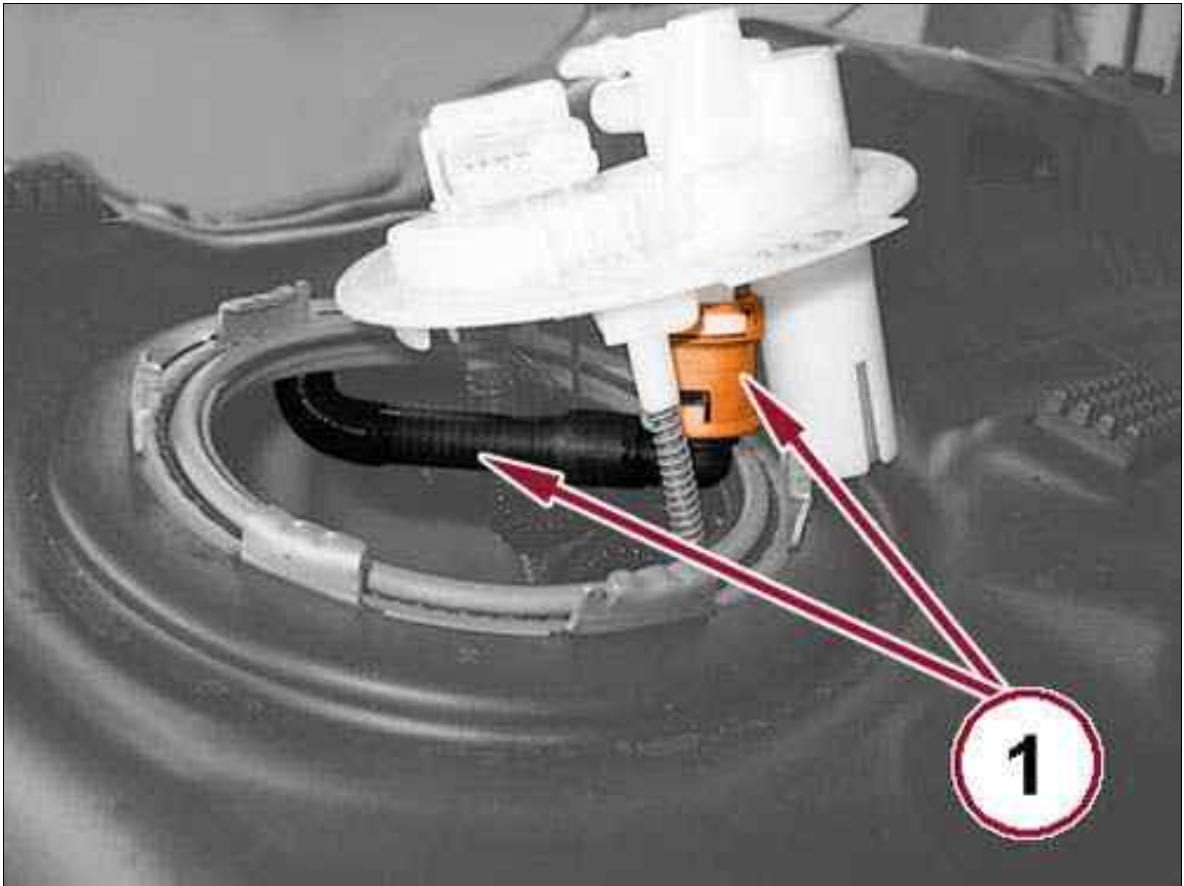
Fig 13: Fuel Pump Assembly Lock Nut & Special Tool



Courtesy of CHRYSLER GROUP, LLC

23. Install the 2000002100 (EMEA) or (special tool #9340, SAE Fuel Pump Lock Ring Wrench) (NAFTA) tool (1a) and remove the lock nut from the fuel pump assembly (1b).

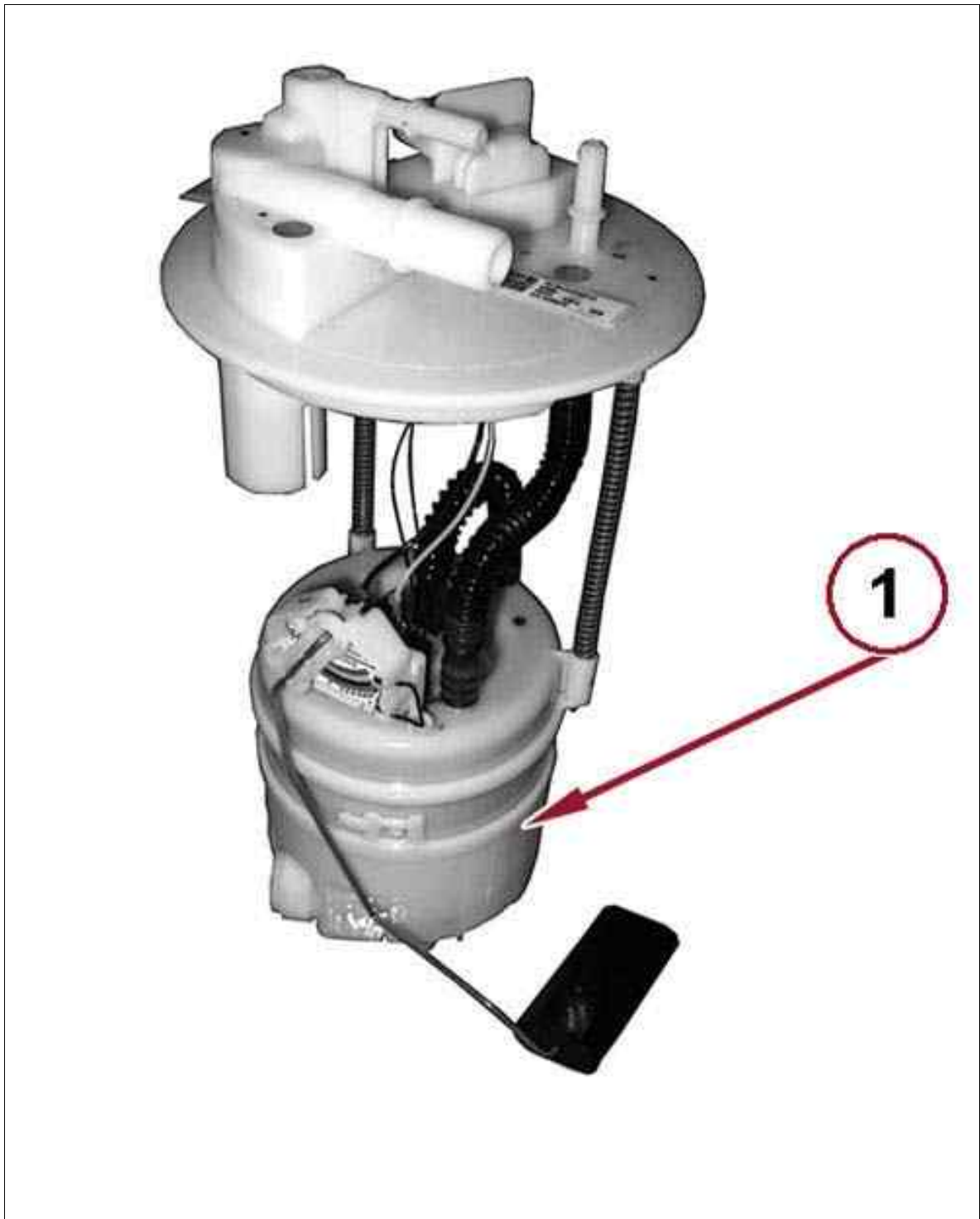
Fig 14: Fuel Vapor Recovery Pipe & Quick Coupling



Courtesy of CHRYSLER GROUP, LLC

24. Raise the fuel pump assembly.
25. Disconnect the quick coupling of the fuel vapor recovery pipe (1).

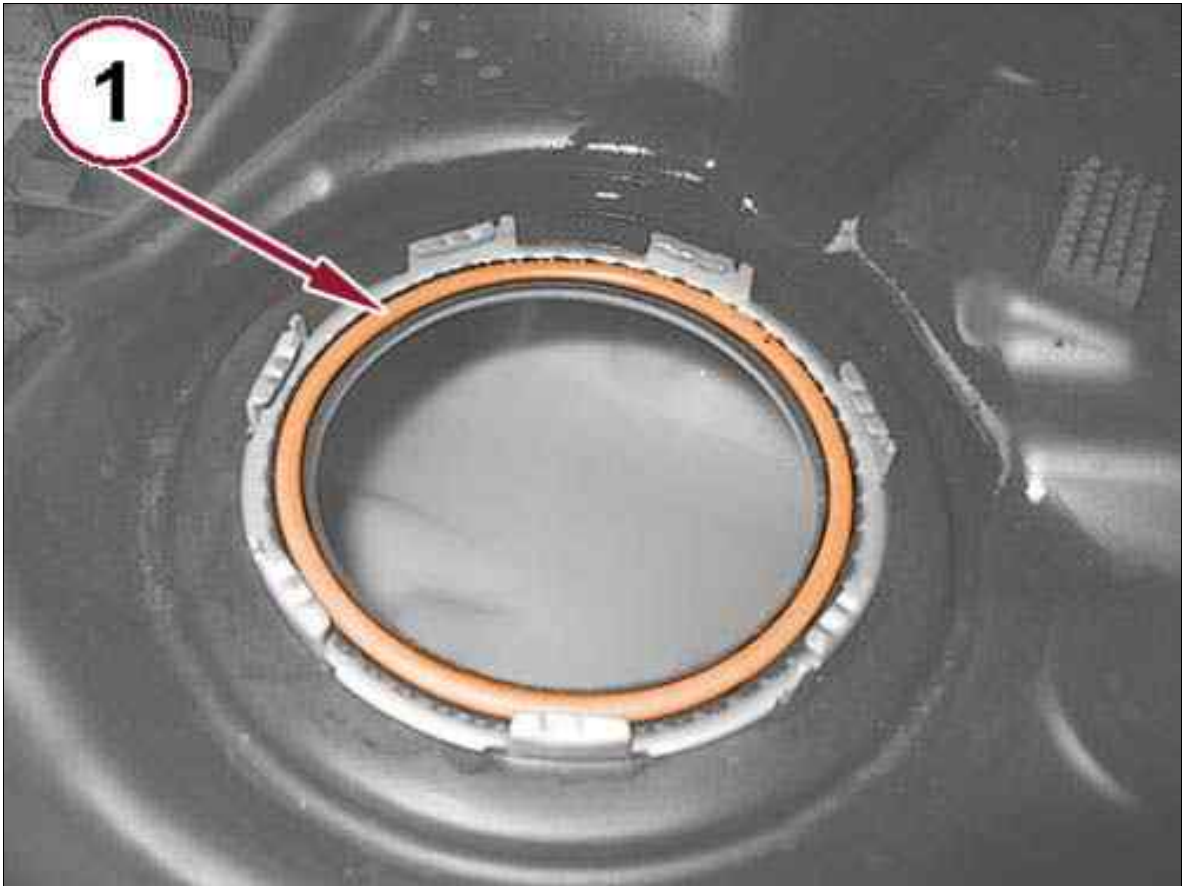
Fig 15: Fuel Pump Assembly



Courtesy of CHRYSLER GROUP, LLC

26. Remove the fuel pump assembly (1).

Fig 16: Fuel Tank Seal Ring



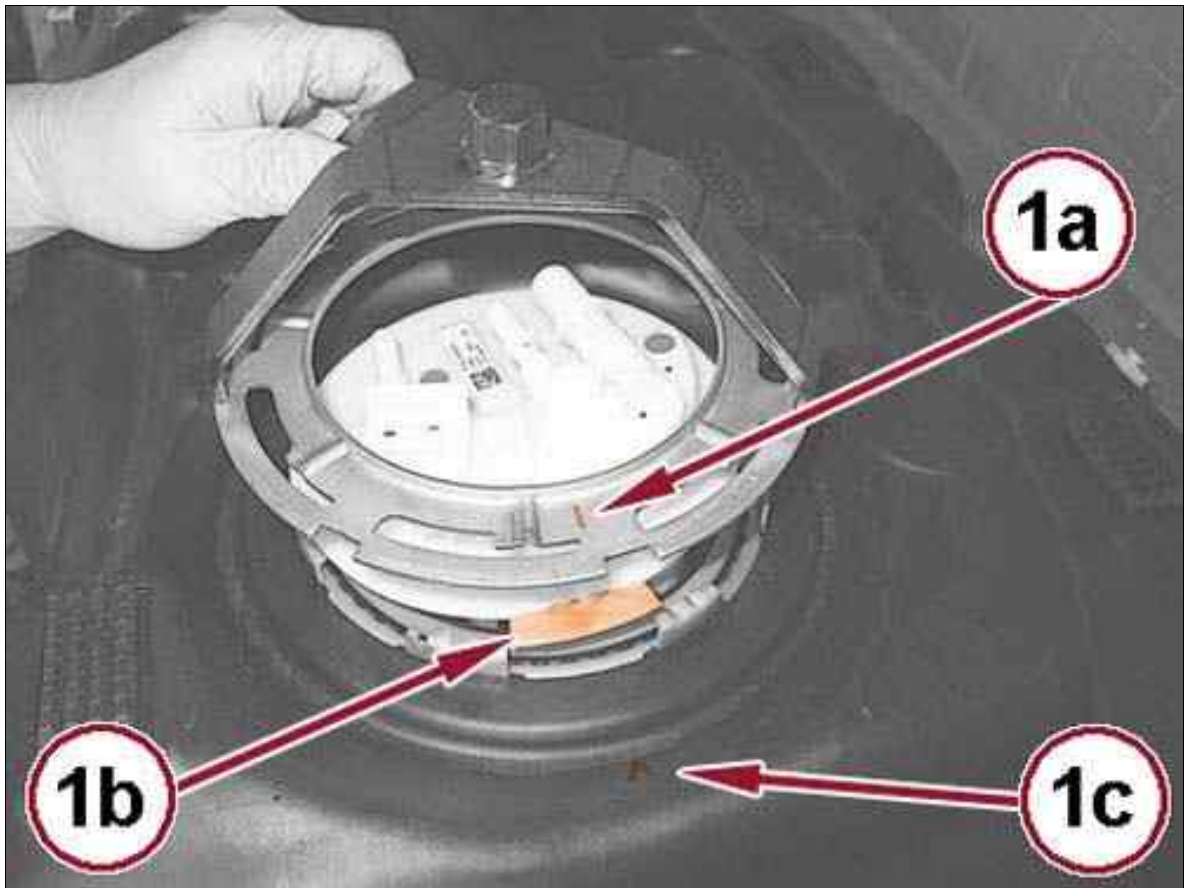
Courtesy of CHRYSLER GROUP, LLC

27. Remove the seal ring on the tank (1).

FUEL DELIVERY > TANK, FUEL > REMOVAL AND INSTALLATION > 1.4L 4X4 > INSTALLATION

1. Install a new seal on the tank.

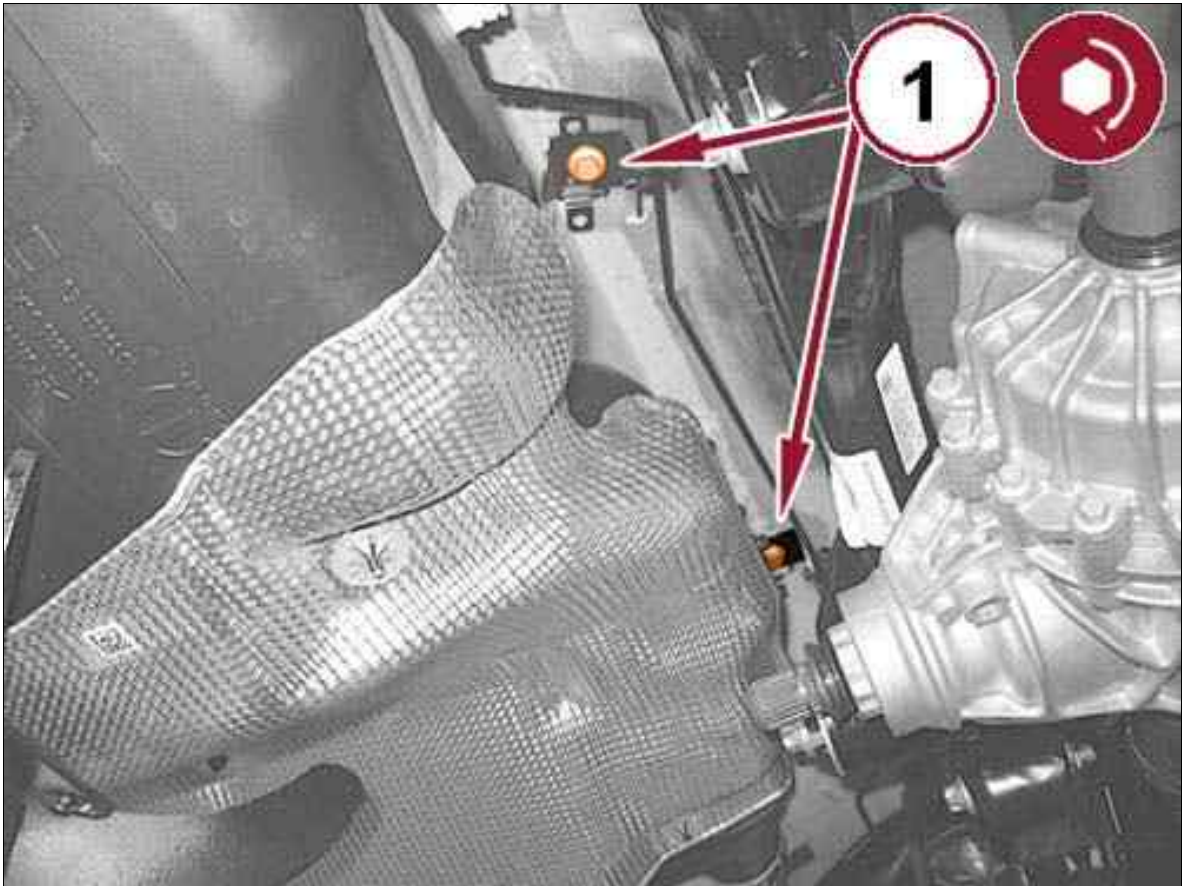
Fig 1: Fuel Pump Assembly Reference Points



Courtesy of CHRYSLER GROUP, LLC

2. Install the fuel pump assembly, taking care to match the references (1a), (1b) and (1c) indicated in the figure.
3. Tighten the fuel pump assembly lock nut.
4. Using the hydraulic lift, put the fuel tank into position.
5. Engage the fuel delivery pipe with the retaining clips.
6. Connect the quick coupling of the vapor hose from the fuel tank to the canister.

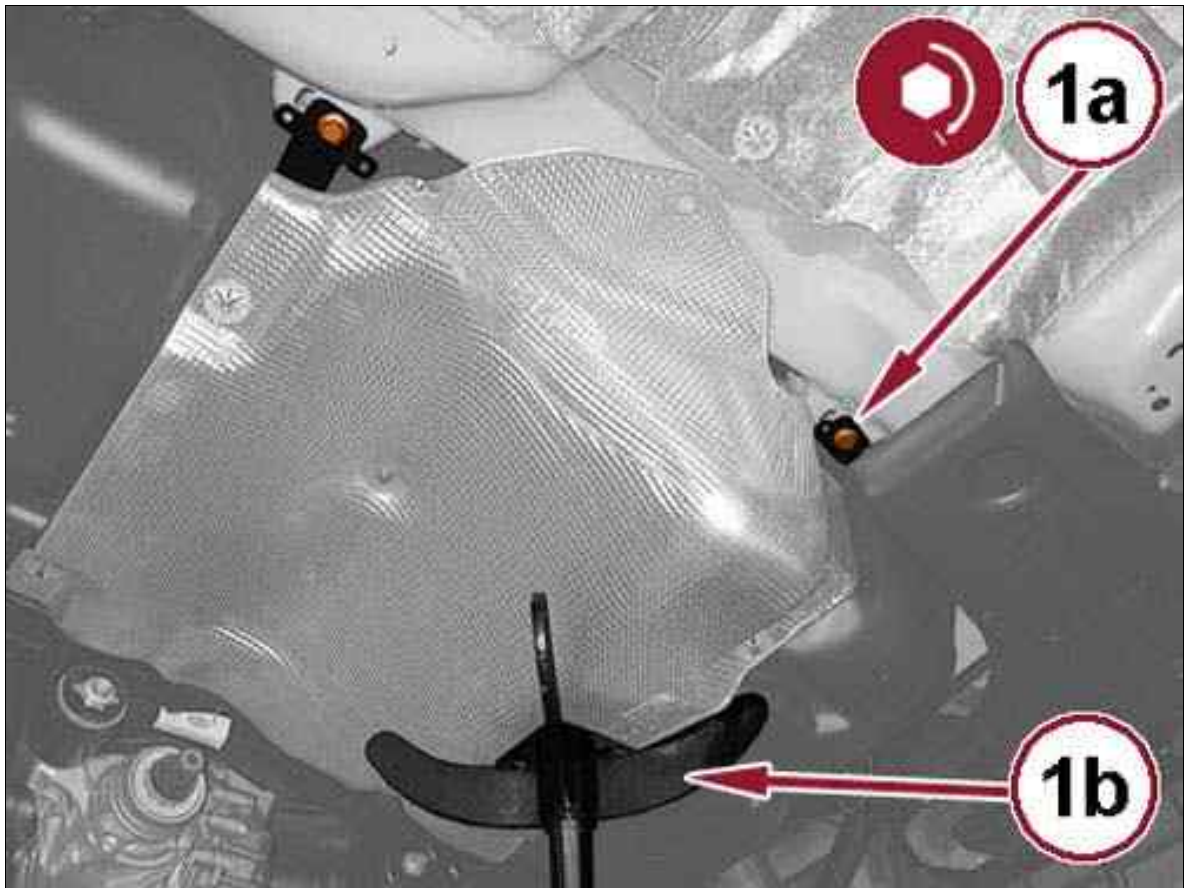
Fig 2: Rear Support Bracket Bolts



Courtesy of CHRYSLER GROUP, LLC

7. Install the rear support bracket bolts (1) and tighten to the proper torque specification. Refer to FUEL DELIVERY, SPECIFICATIONS .

Fig 3: Front Support Bracket Bolts & Hydraulic Lift



Courtesy of CHRYSLER GROUP, LLC

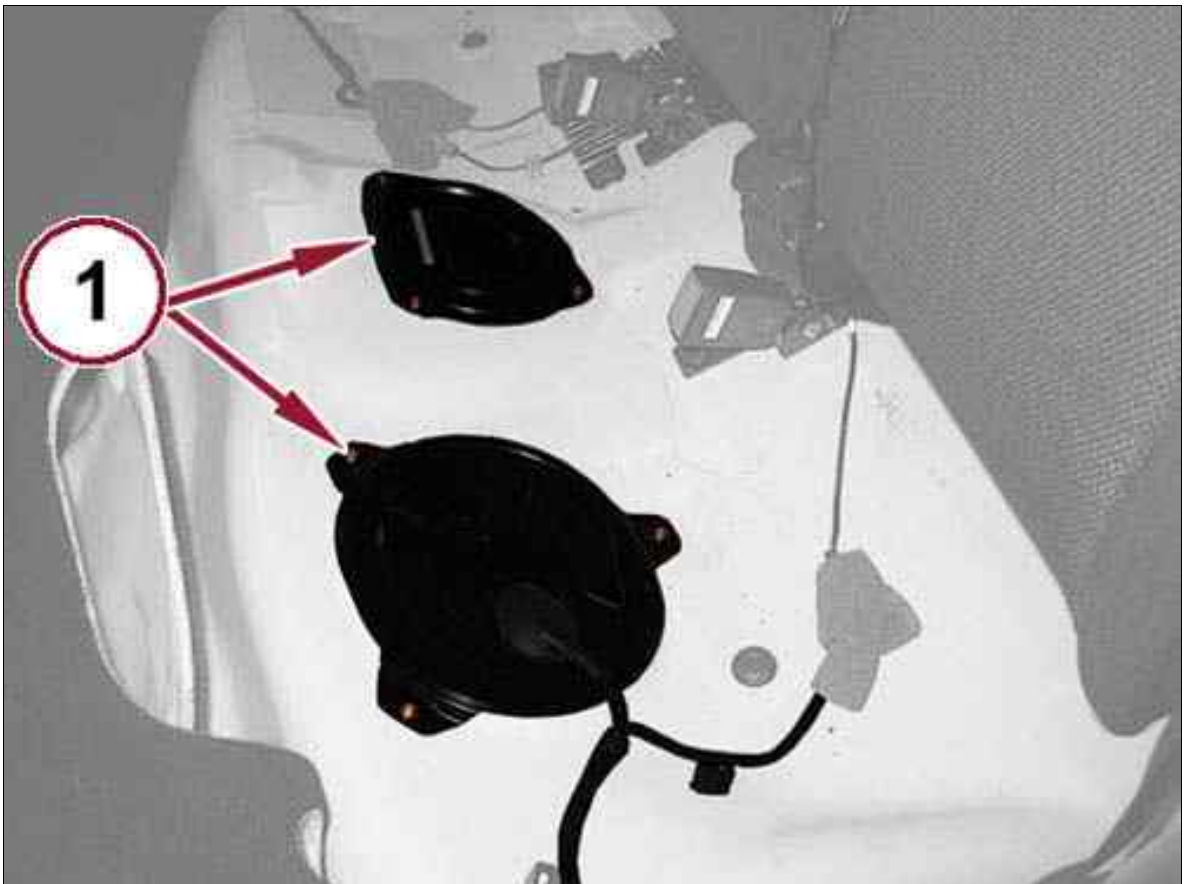
8. Install the front support bracket bolts (1a) and tighten to the proper torque specification. Refer to FUEL DELIVERY, SPECIFICATIONS .
9. Remove the hydraulic lift (1b).
10. Engage the right rear brake lines and close the retaining clips.
11. Engage the rear brake lines and close the retaining clips.
12. Install the toothed washer securing the heat shield to the body.
13. Install the right side cover, tighten the hardware and install the retainer buttons.
14. Engage the fuel vapor hose with the retaining clips.
15. Connect the hose to the fuel fill tube and tighten the clamp.
16. Connect the quick coupling of the vapor pipe.
17. Connect the quick coupling of the fuel delivery pipe.
18. Connect the electrical connection of the electric fuel pump.
19. Install the access covers for the fuel pump and securely tighten the screws.
20. Install the rear seat cushion. Refer to SEAT CUSHION, REMOVAL AND INSTALLATION .

21. Install the propeller shaft assembly. Refer to REMOVAL AND INSTALLATION .
22. Install the muffler assembly. Refer to MUFFLER, EXHAUST, REMOVAL AND INSTALLATION .
23. Remove the vehicle from the lift.

FUEL DELIVERY > TANK, FUEL > REMOVAL AND INSTALLATION > 1.6L > REMOVAL

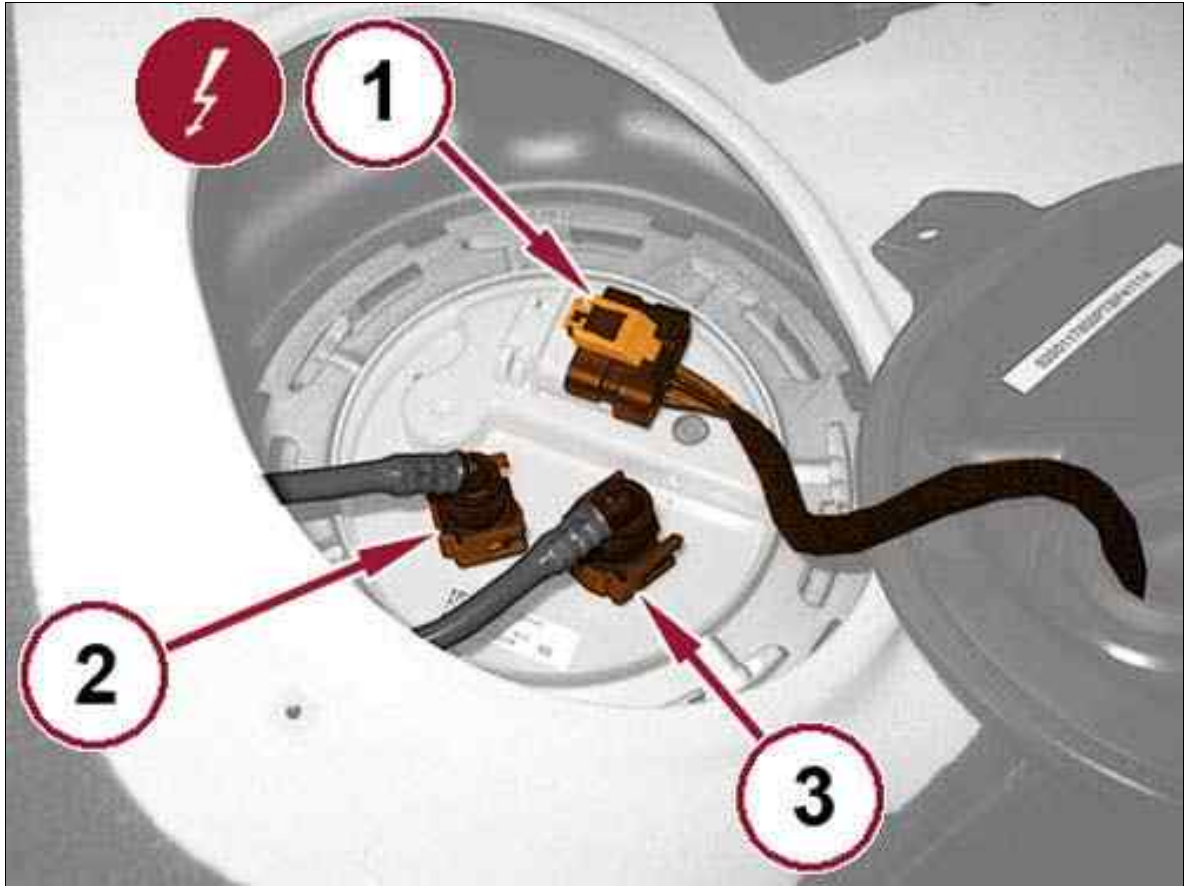
1. Place the vehicle on a lift.
2. Open the cover of the fuse box in the engine compartment and remove the fuse F21 (15 A) of the fuel pump.
3. Start the engine and run until the fuel in the lines is depleted.
4. Install the fuse removed earlier and close the fuse box cover.
5. Remove the underbody shields. Refer to (Refer to 13 - Frame and Bumpers/Under Body Protection/SHIELD, Fuel Tank/Removal).
6. Remove the muffler assembly. Refer to MUFFLER, EXHAUST, REMOVAL AND INSTALLATION .
7. Remove the rear seat cushion. Refer to SEAT CUSHION, REMOVAL AND INSTALLATION .

Fig 1: Fuel Pump Access Covers & Screws



8. Lift the cover, unscrew the screws and remove the access cover to the fuel pump (1).

Fig 2: Electrical Connection, Fuel Supply & Fuel Return Pipe Quick Coupling



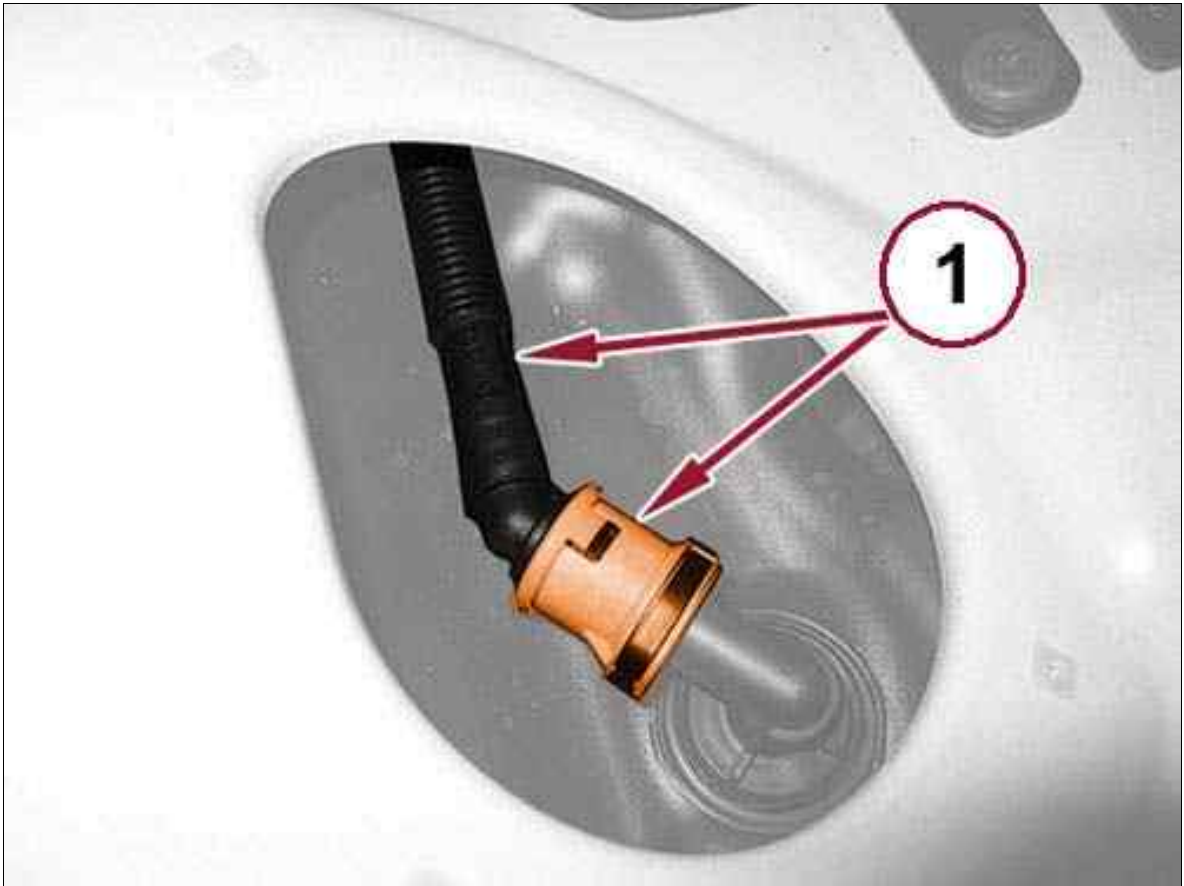
Courtesy of CHRYSLER GROUP, LLC

9. Disconnect the electrical connection of the electric pump fuel (1).

10. Disconnect the fuel return quick connect coupling (3).

11. Disconnect the quick coupling of the fuel delivery pipe (2).

Fig 3: Rear Vent Tube Quick Coupling



Courtesy of CHRYSLER GROUP, LLC

12. Disconnect the quick connection of the vent pipe (1).

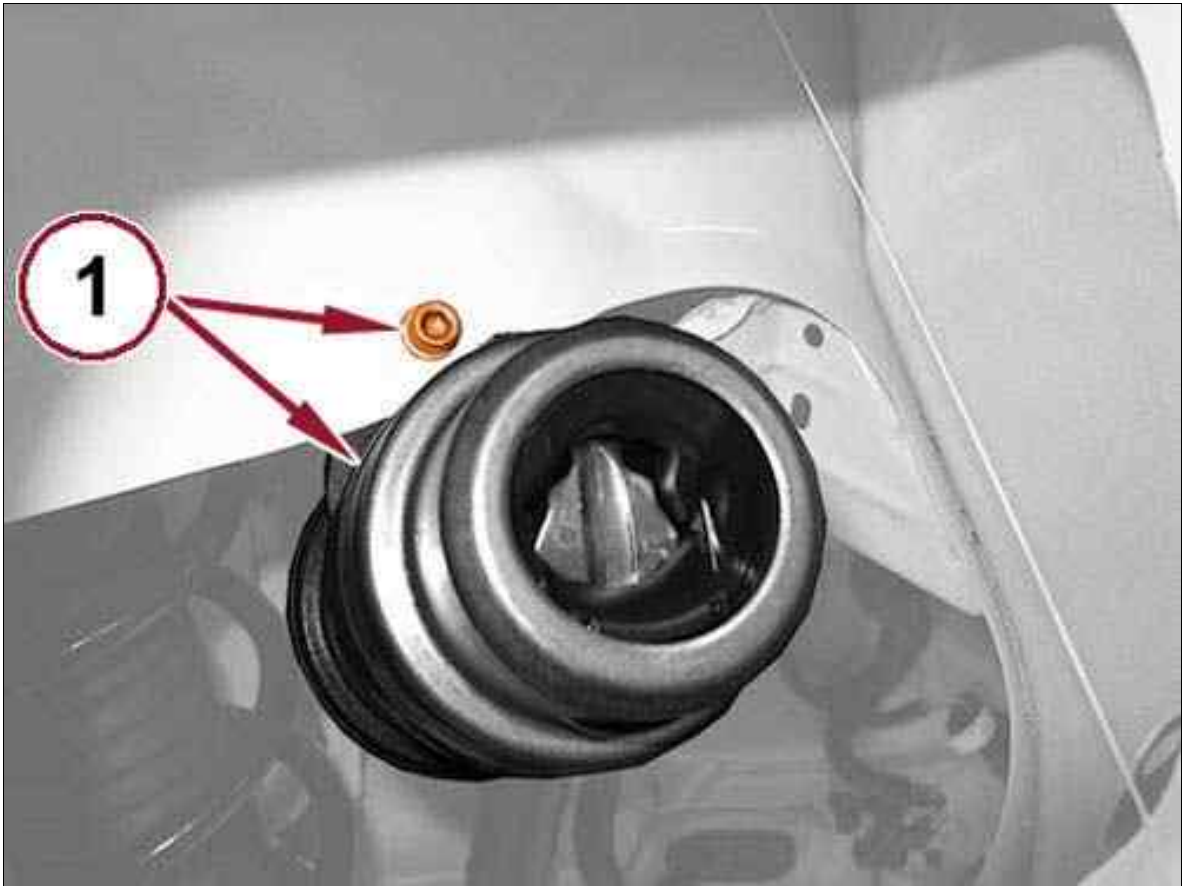
Fig 4: Door Retention Device, Fuel Door, Clips & Screw



Courtesy of CHRYSLER GROUP, LLC

13. Remove the right rear splash shield. Refer to SHIELD, SPLASH, FRONT WHEELHOUSE, REMOVAL AND INSTALLATION SHIELD, SPLASH, REAR WHEELHOUSE, REMOVAL AND INSTALLATION .
14. Rotate the screw (1a) 90° and remove the door retention device (1b).
15. Disengage the clips (2a) and remove the fuel door (2b).

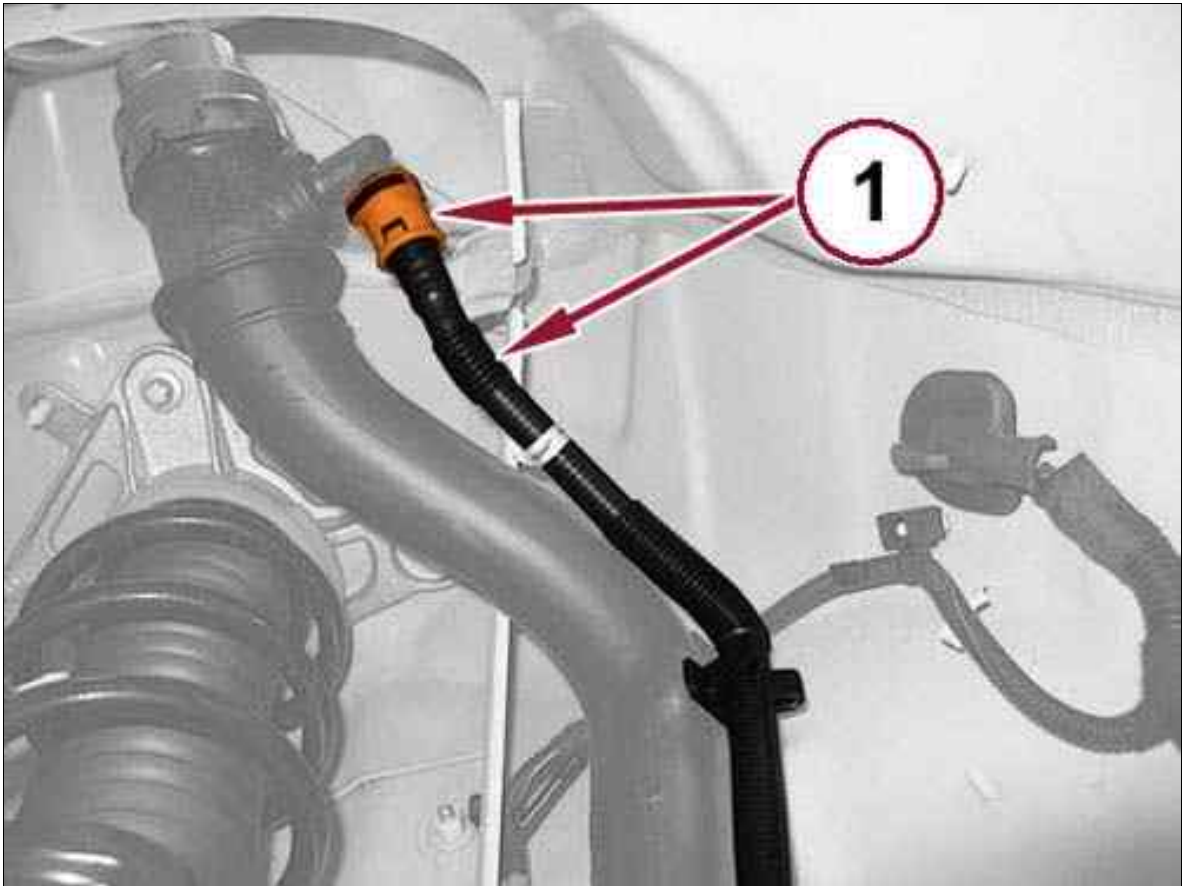
Fig 5: Fuel Fill Tube Retaining Screw



Courtesy of CHRYSLER GROUP, LLC

16. Remove the fuel fill tube retaining screw (1).

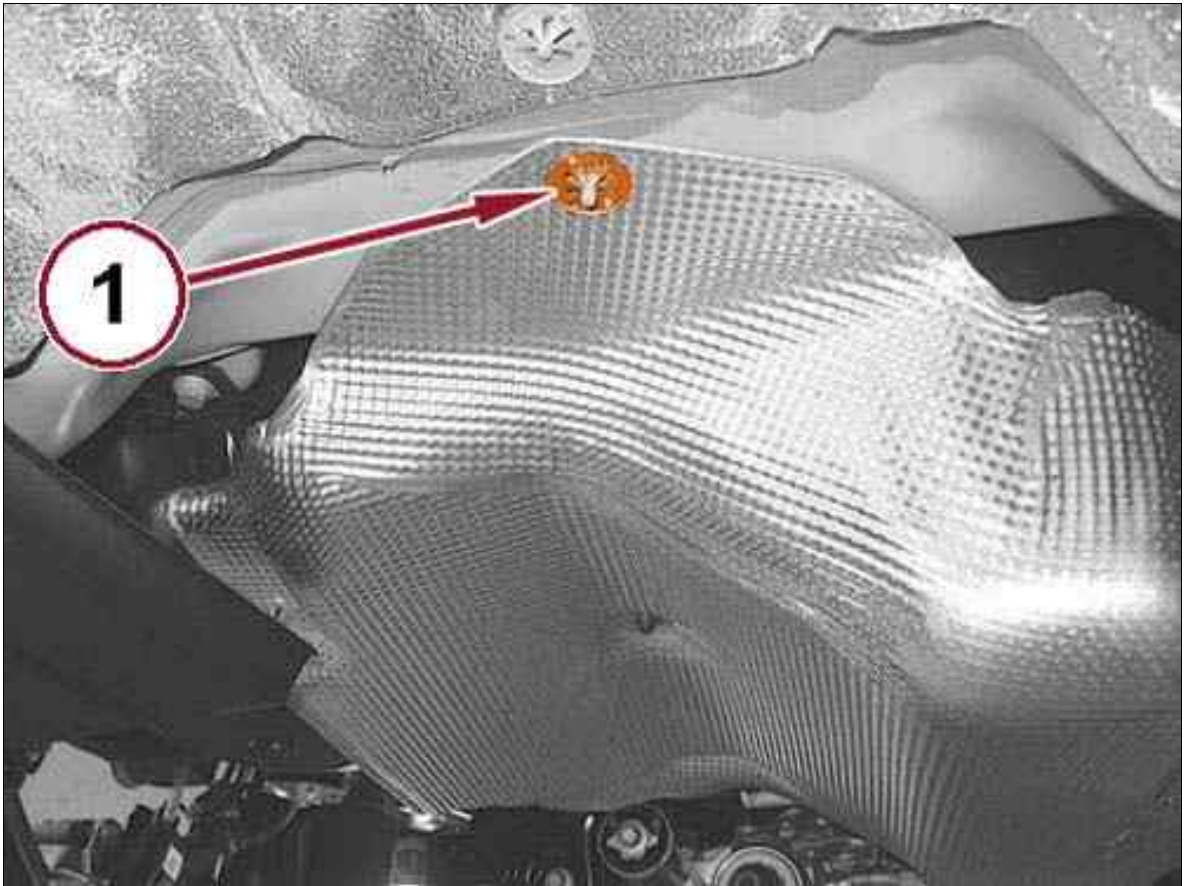
Fig 6: Fuel Fill Tube Vent Pipe



Courtesy of CHRYSLER GROUP, LLC

17. Disconnect the quick coupling and release the vent pipe from the fuel fill tube (1).

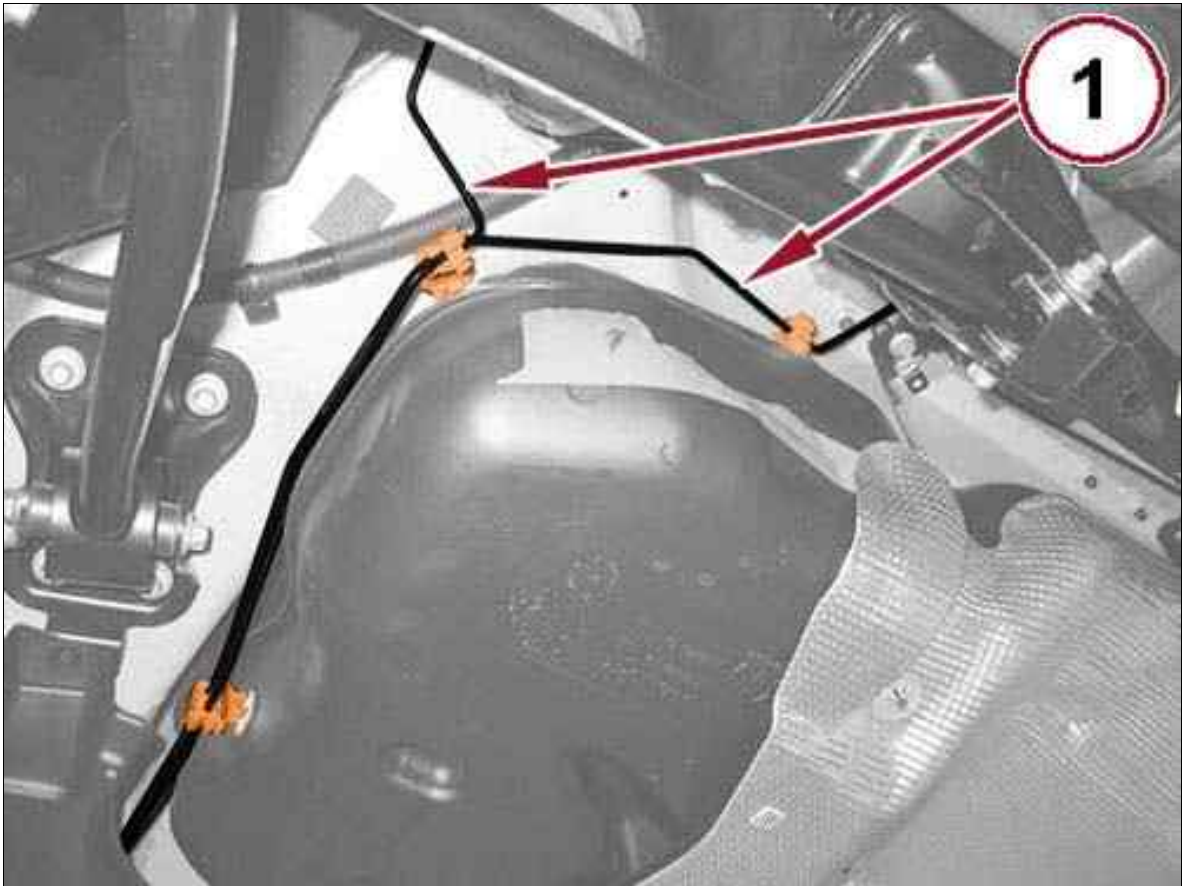
Fig 7: Heat Shield Toothed Washer



Courtesy of CHRYSLER GROUP, LLC

18. Unscrew the toothed washer (1) securing the heat shield to the body.

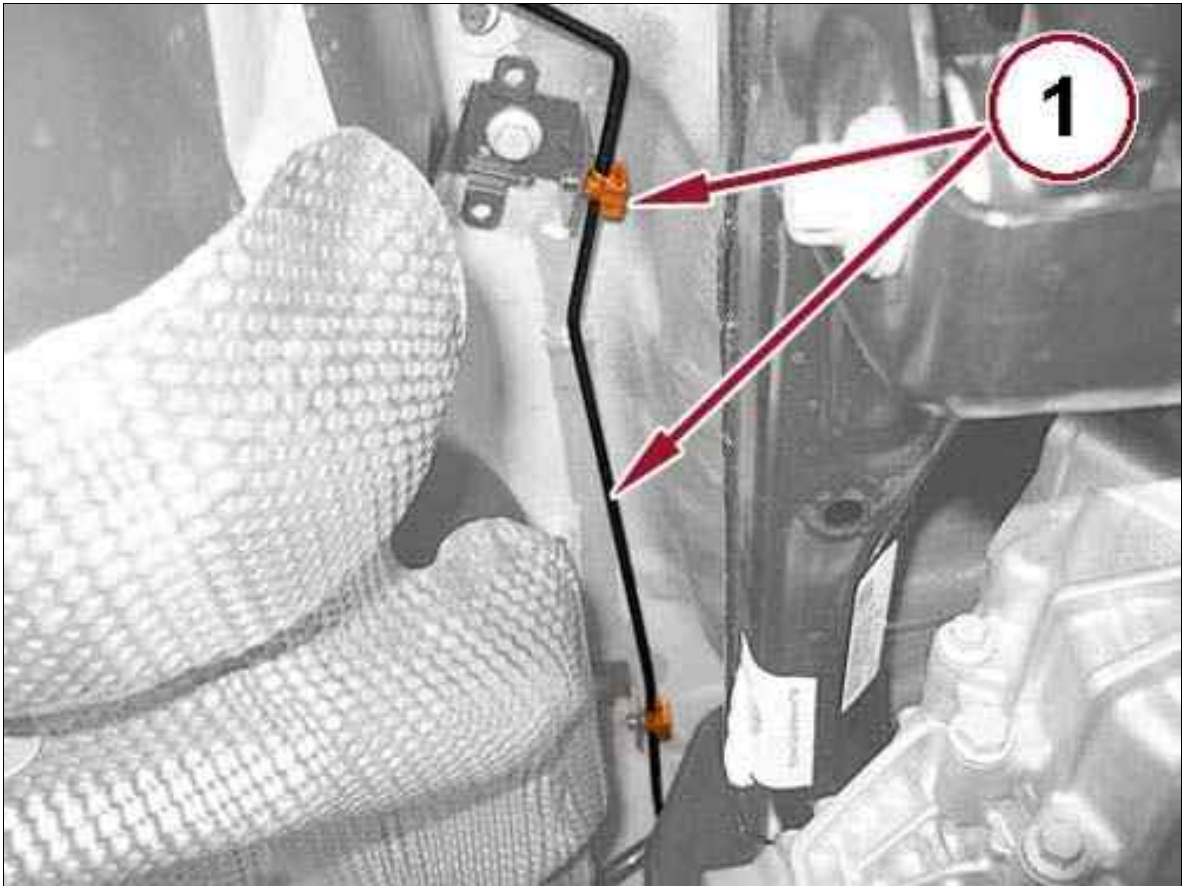
Fig 8: Rear Brake Lines & Retaining Clips



Courtesy of CHRYSLER GROUP, LLC

19. Open the retaining clips and disengage the rear brake lines (1).

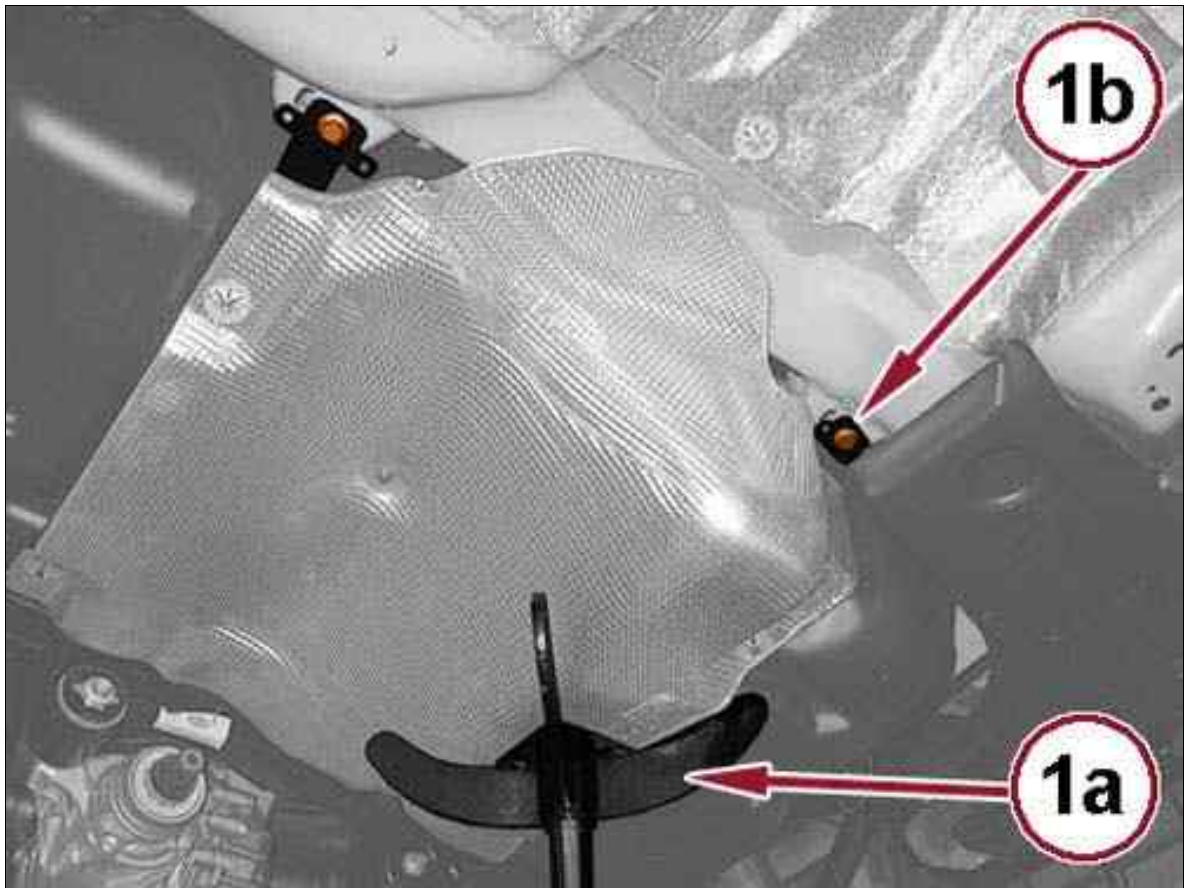
Fig 9: Right Rear Brake Line & Clips



Courtesy of CHRYSLER GROUP, LLC

20. Open the clips and release the right rear brake line (1).

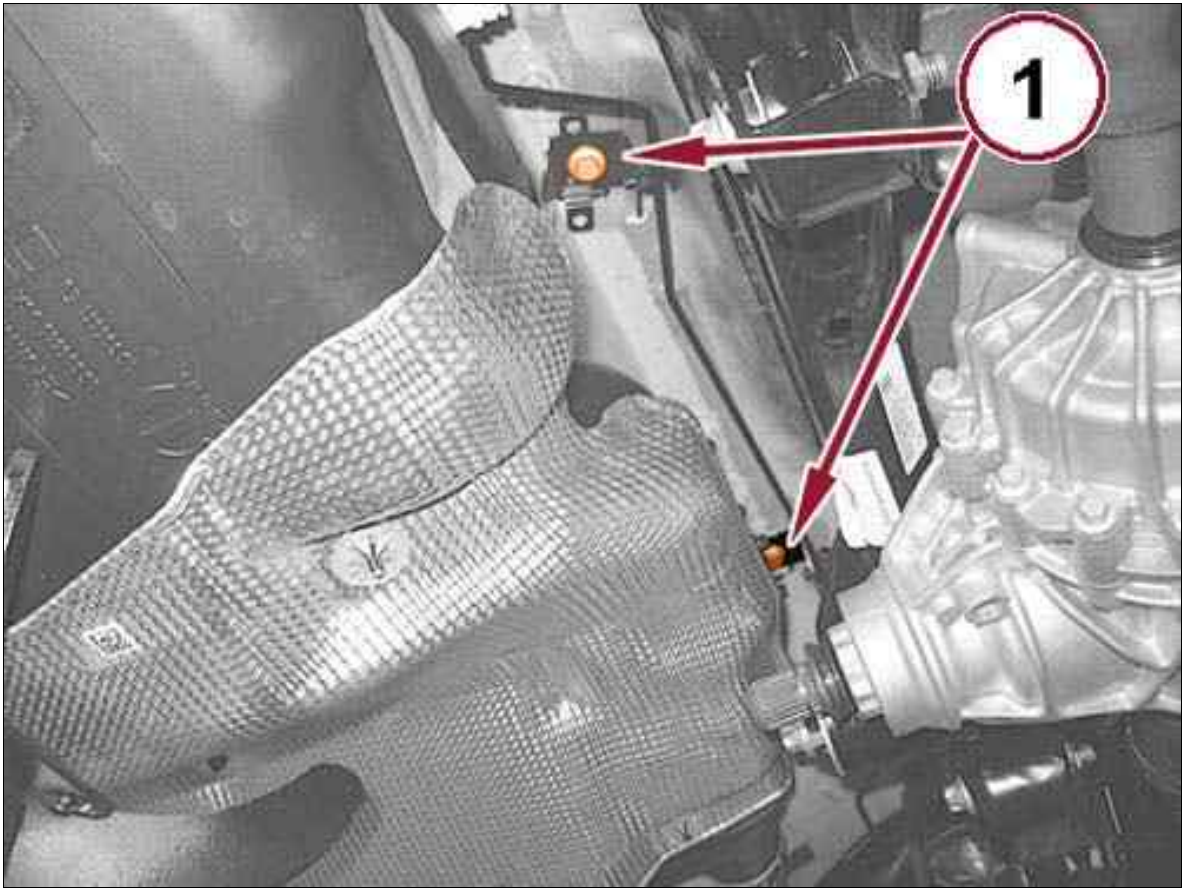
Fig 10: Hydraulic Lift & Mounting Bracket Bolts



Courtesy of CHRYSLER GROUP, LLC

21. Place a suitable hydraulic lift (1a) under the tank and remove the front bolts (1b) securing the mounting brackets.

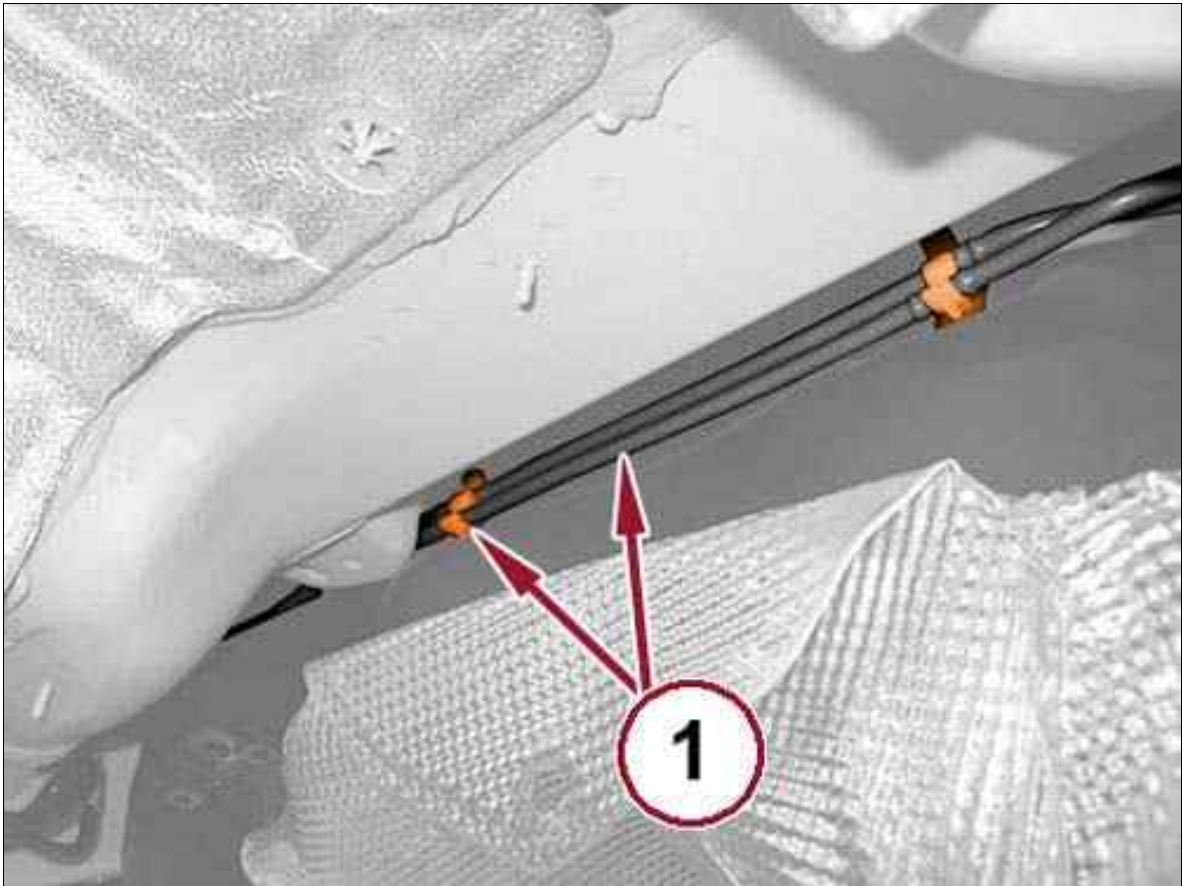
Fig 11: Rear Fuel Tank Support Bracket Bolts



Courtesy of CHRYSLER GROUP, LLC

22. Remove the rear fuel tank support bracket bolts (1).
23. Disconnect the quick coupling of the vapor hose from the fuel tank to the canister.

Fig 12: Fuel Delivery & Return Pipes Retaining Clips



Courtesy of CHRYSLER GROUP, LLC

24. Lower the tank and unhook the fuel delivery and return pipes from the retaining clips (1).

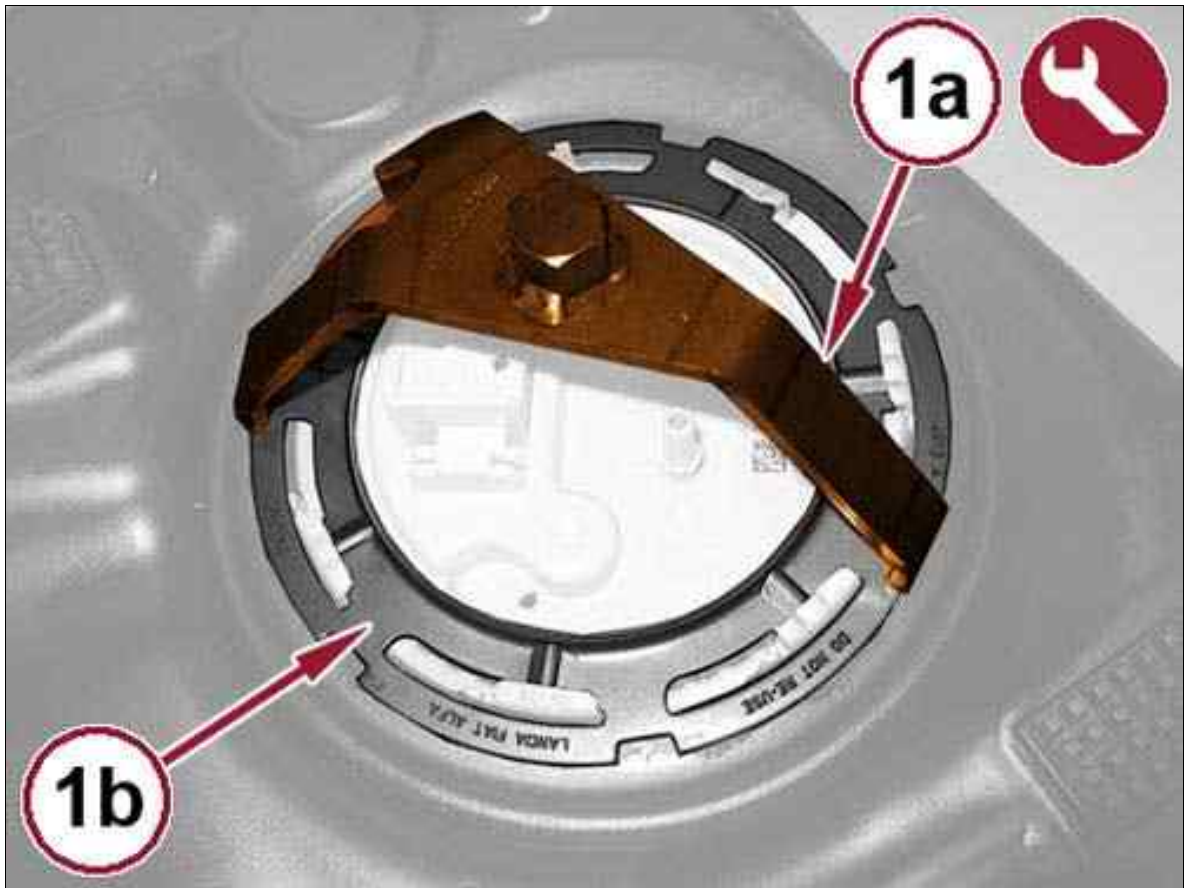
Fig 13: Fuel Tank & Support



Courtesy of CHRYSLER GROUP, LLC

25. Lower the support and remove the fuel tank (1).

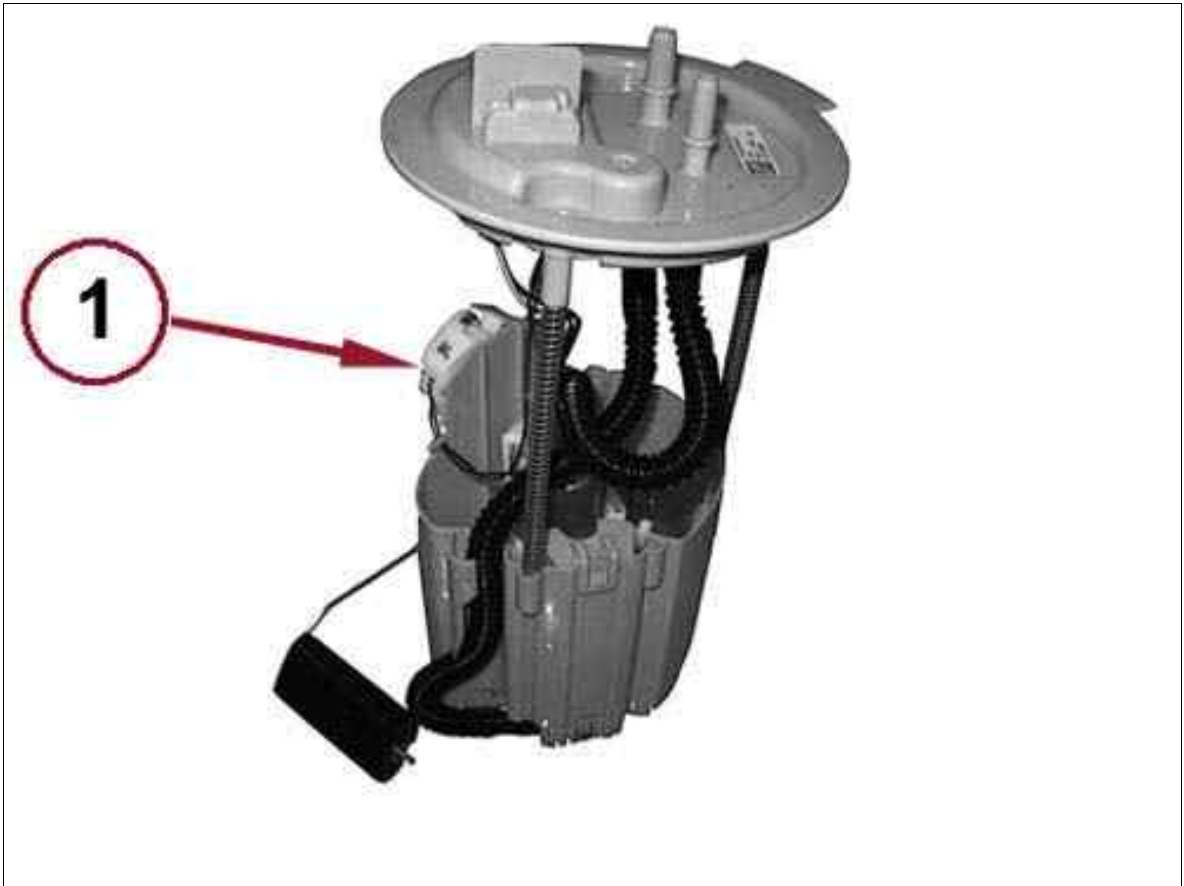
Fig 14: Fuel Pump Assembly Lock Nut & Special Tool



Courtesy of CHRYSLER GROUP, LLC

26. Install the 2000002100 (EMEA) or (special tool #9340, SAE Fuel Pump Lock Ring Wrench) (NAFTA) tool (1a) and remove the lock nut from the fuel pump assembly (1b).

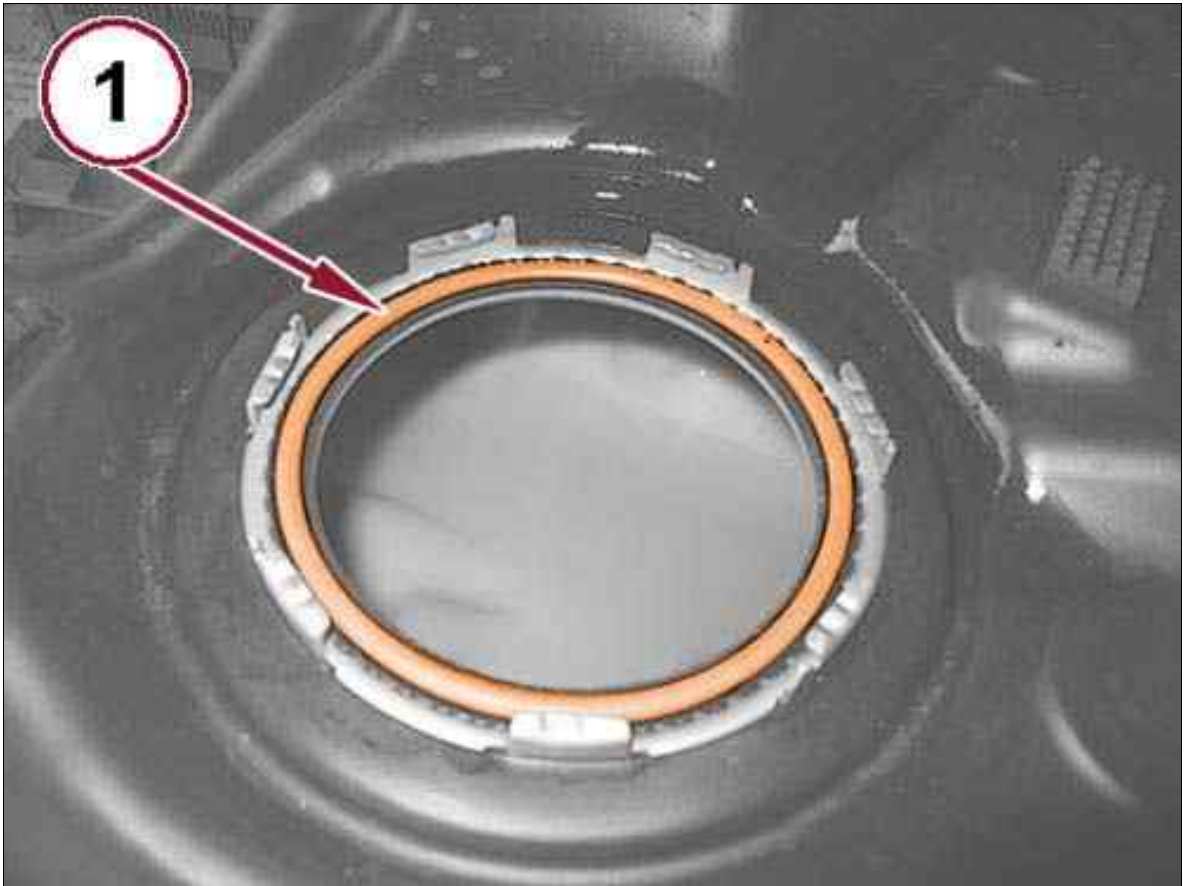
Fig 15: Fuel Pump Assembly



Courtesy of CHRYSLER GROUP, LLC

27. Remove the fuel pump assembly (1).

Fig 16: Fuel Tank Seal Ring



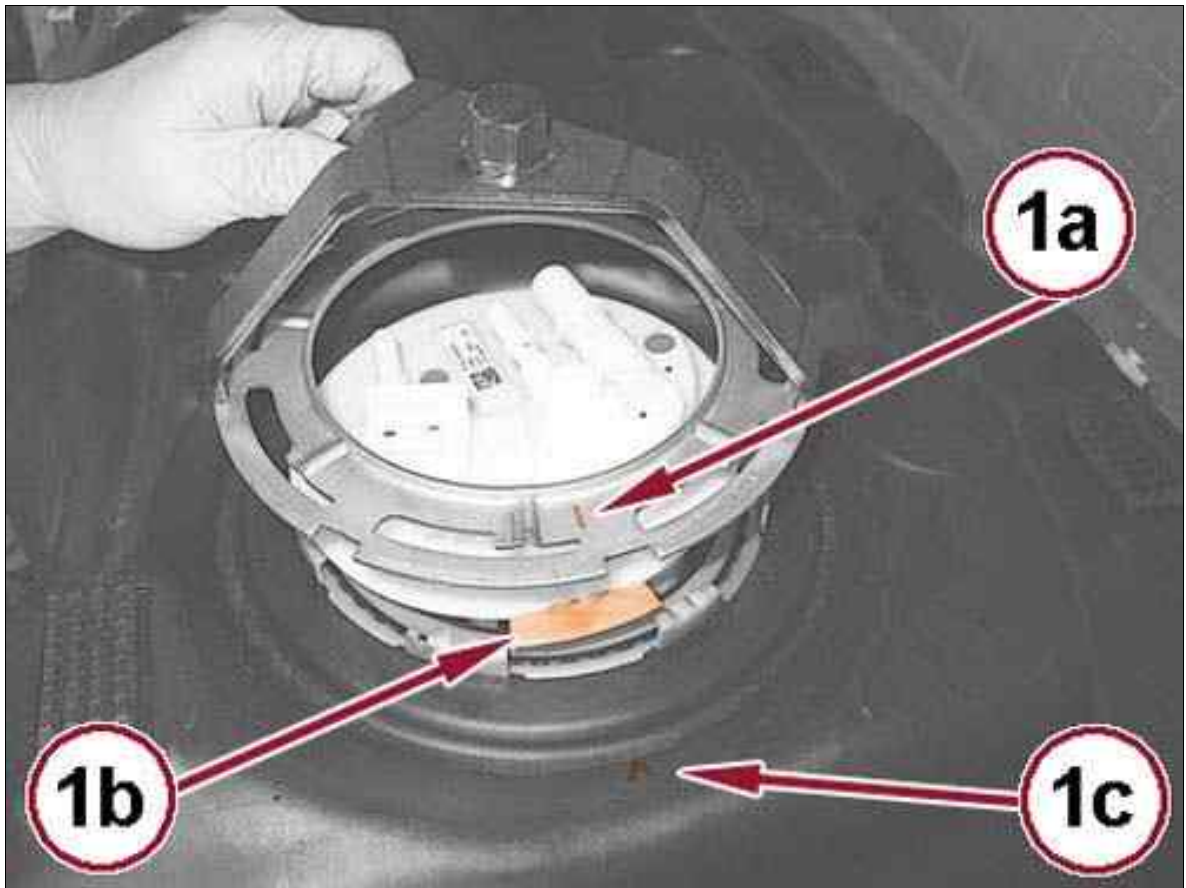
Courtesy of CHRYSLER GROUP, LLC

28. Remove the seal ring on the tank (1).

FUEL DELIVERY > TANK, FUEL > REMOVAL AND INSTALLATION > 1.6L > INSTALLATION

1. Install a new seal on the tank.

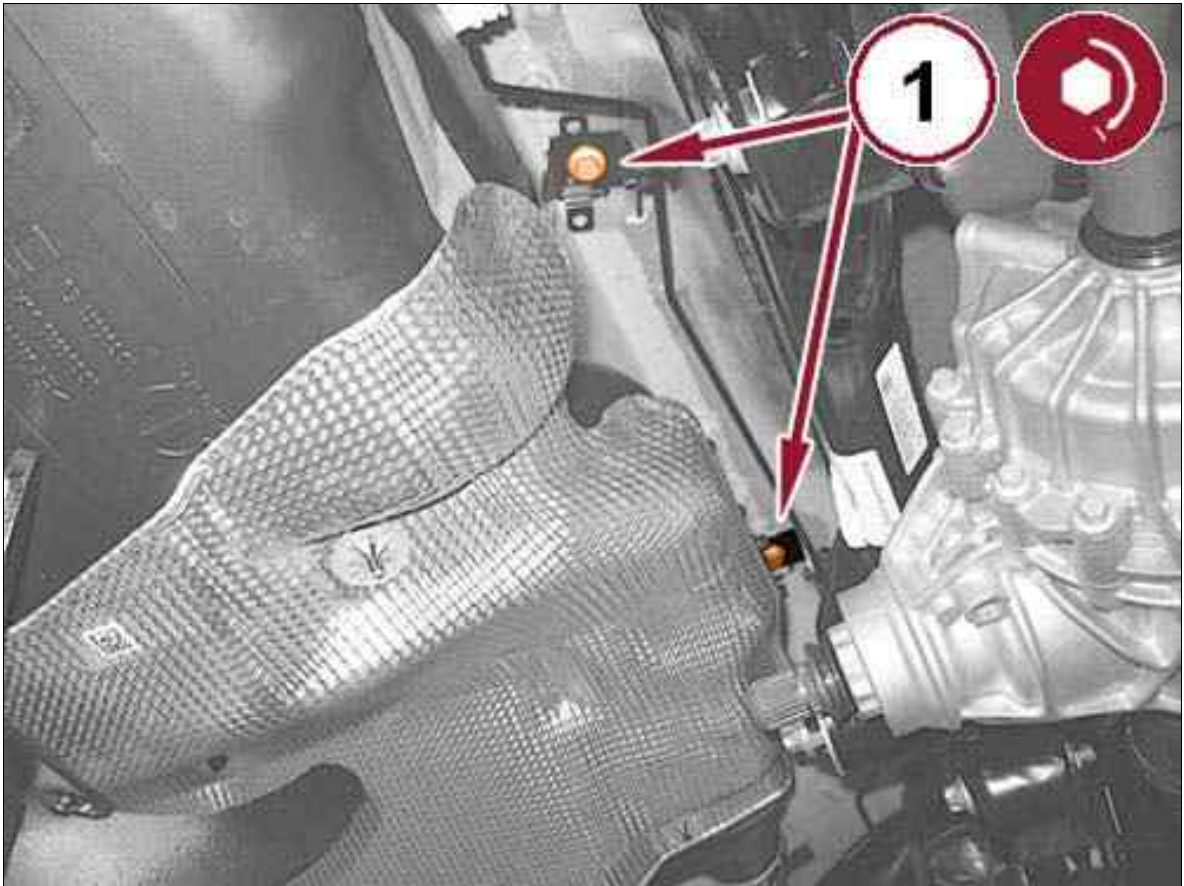
Fig 1: Fuel Pump Assembly Reference Points



Courtesy of CHRYSLER GROUP, LLC

2. Install the fuel pump assembly, taking care to match the references (1a), (1b) and (1c) indicated in the figure.
3. Securely tighten the fuel pump assembly lock nut.
4. Using the hydraulic lift, put the fuel tank into position.
5. Engage the fuel delivery pipe with the retaining clips.

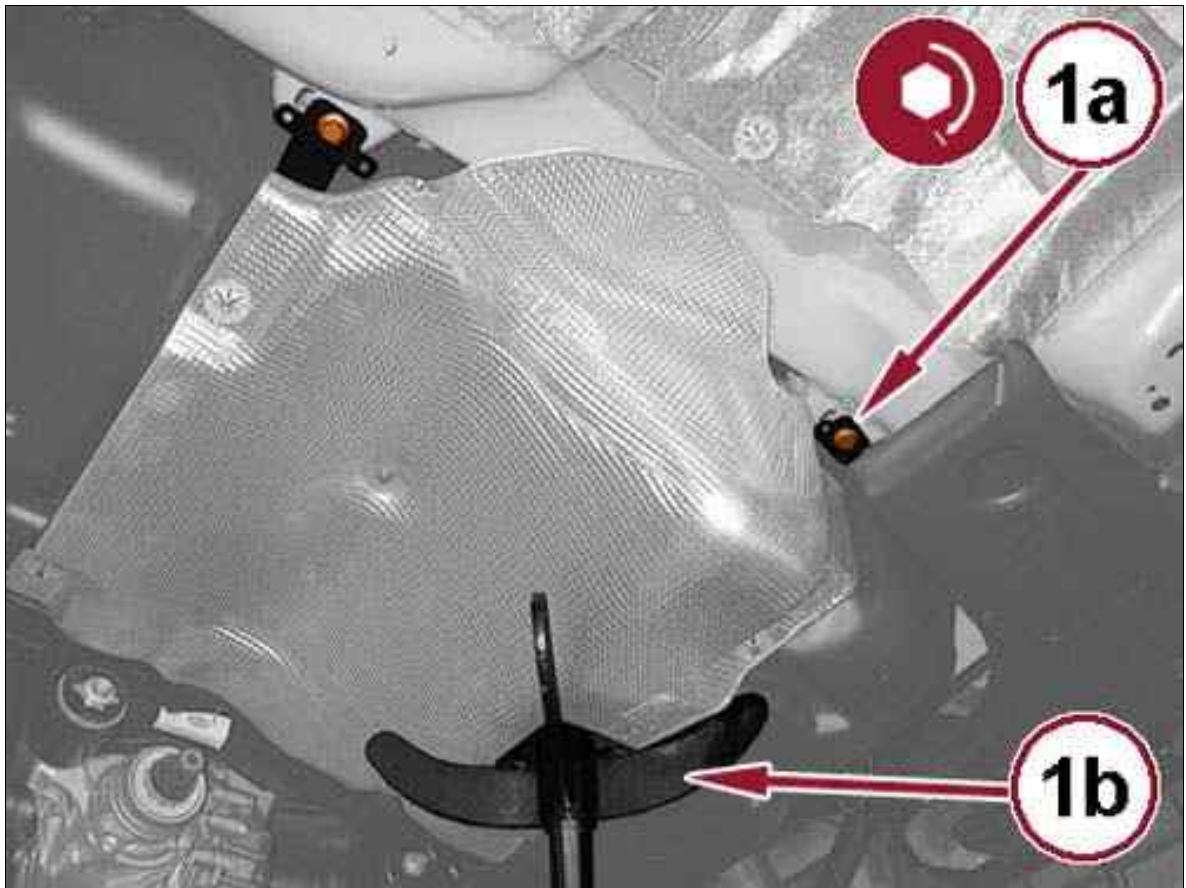
Fig 2: Rear Support Bracket Bolts



Courtesy of CHRYSLER GROUP, LLC

6. Install the rear support bracket bolts (1) and tighten to the proper torque specification. Refer to FUEL DELIVERY, SPECIFICATIONS .

Fig 3: Front Support Bracket Bolts & Hydraulic Lift



Courtesy of CHRYSLER GROUP, LLC

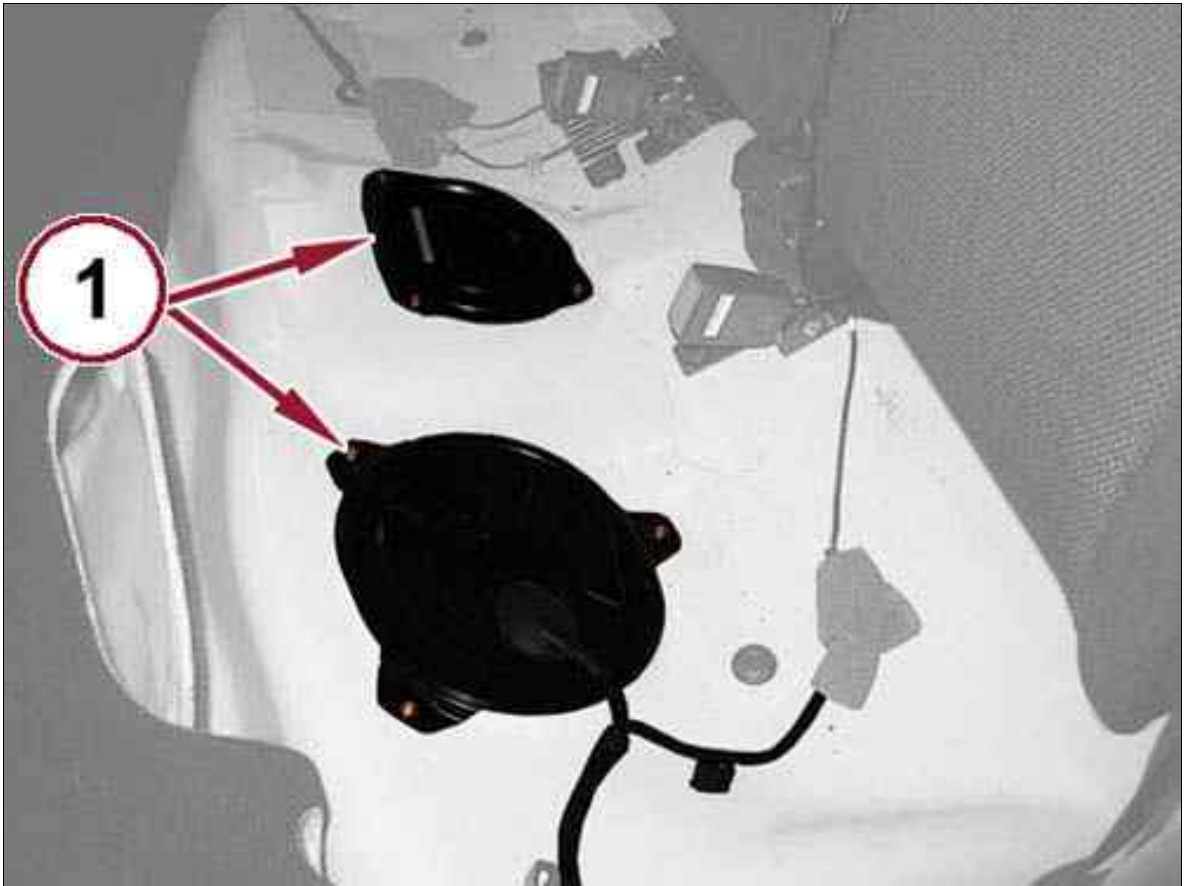
7. Install the front support bracket bolts (1a) and tighten to the proper torque specification. Refer to FUEL DELIVERY, SPECIFICATIONS .
8. Remove the hydraulic lift (1b).
9. Engage the right rear brake lines and close the retaining clips.
10. Engage the rear brake lines and close the retaining clips.
11. Install the toothed washer securing the heat shield to the body.
12. Connect the quick coupling and engage the vent pipe with the spring retainer on the fuel fill tube.
13. Install the fuel fill tube retaining screw and tighten to the proper torque specification. Refer to FUEL DELIVERY, SPECIFICATIONS .
14. Install the fuel door, engaging the retaining clips.
15. Position the door retaining device and turn the screw 90°.
16. Install the right rear splash shield. Refer to SHIELD, SPLASH, FRONT WHEELHOUSE, REMOVAL AND INSTALLATIONSHIELD, SPLASH, REAR WHEELHOUSE, REMOVAL AND INSTALLATION .

17. Connect the quick coupling of the vent pipe.
18. Connect the quick connector of the return pipe.
19. Connect the quick coupling of the fuel delivery pipe.
20. Connect the electrical connection of the electric fuel pump.
21. Install the access covers for the fuel pump and the vent pipe, securely tighten the screws.
22. Install the rear seat cushion. Refer to SEAT CUSHION, REMOVAL AND INSTALLATION .
23. Install the muffler assembly. Refer to MUFFLER, EXHAUST, REMOVAL AND INSTALLATION .
24. Remove the vehicle from the lift.

FUEL DELIVERY > TANK, FUEL > REMOVAL AND INSTALLATION > 2.0L > REMOVAL

1. Place the vehicle on a lift.
2. Open the cover of the fuse box in the engine compartment and remove the fuse F21 (15 A) of the fuel pump.
3. Start the engine and run until the fuel in the lines is depleted.
4. Install the fuse removed earlier and close the fuse box cover.
5. Remove the underbody shields. Refer to UNDER BODY PROTECTION .
6. Remove the muffler assembly. Refer to MUFFLER, EXHAUST, REMOVAL AND INSTALLATION .
7. Remove the propeller shaft assembly. Refer to REMOVAL AND INSTALLATION .
8. Remove the rear seat cushion. Refer to SEAT CUSHION, REMOVAL AND INSTALLATION .

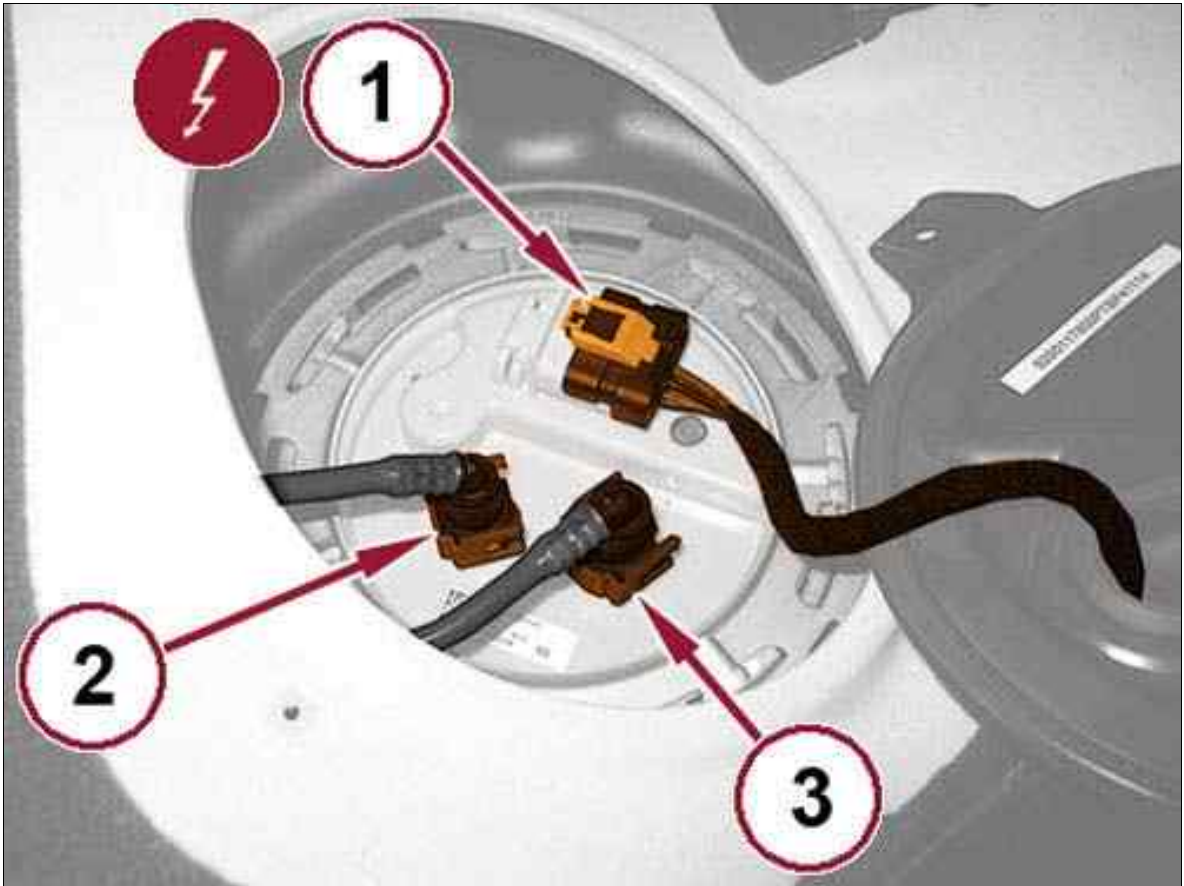
Fig 1: Fuel Pump Access Covers & Screws



Courtesy of CHRYSLER GROUP, LLC

9. Lift the cover, unscrew the screws and remove the access cover to the fuel pump (1).

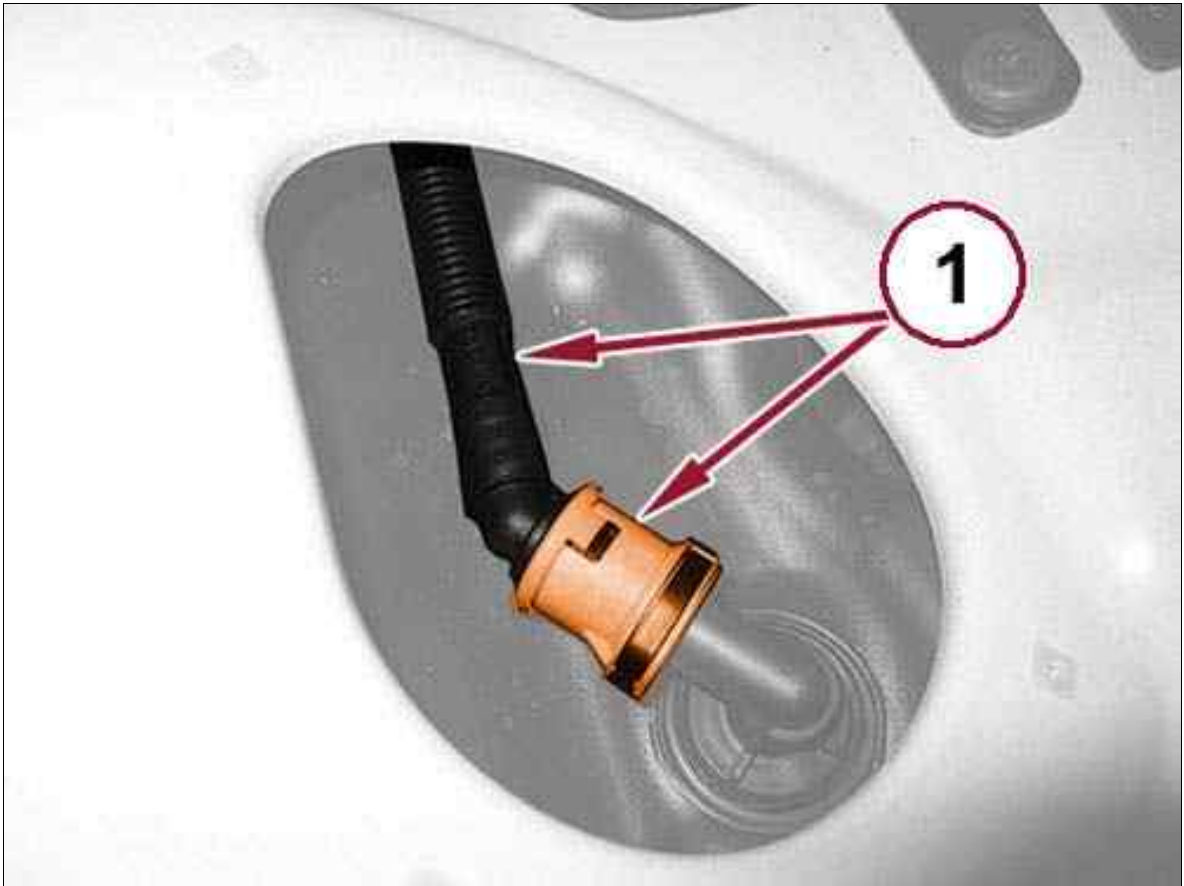
Fig 2: Electrical Connection, Fuel Supply & Fuel Return Pipe Quick Coupling



Courtesy of CHRYSLER GROUP, LLC

10. Disconnect the electrical connection of the electric pump fuel (1).
11. Disconnect the fuel return quick connect coupling (3).
12. Disconnect the quick coupling of the fuel delivery pipe (2).

Fig 3: Rear Vent Tube Quick Coupling



Courtesy of CHRYSLER GROUP, LLC

13. Disconnect the quick connection of the vent pipe (1).

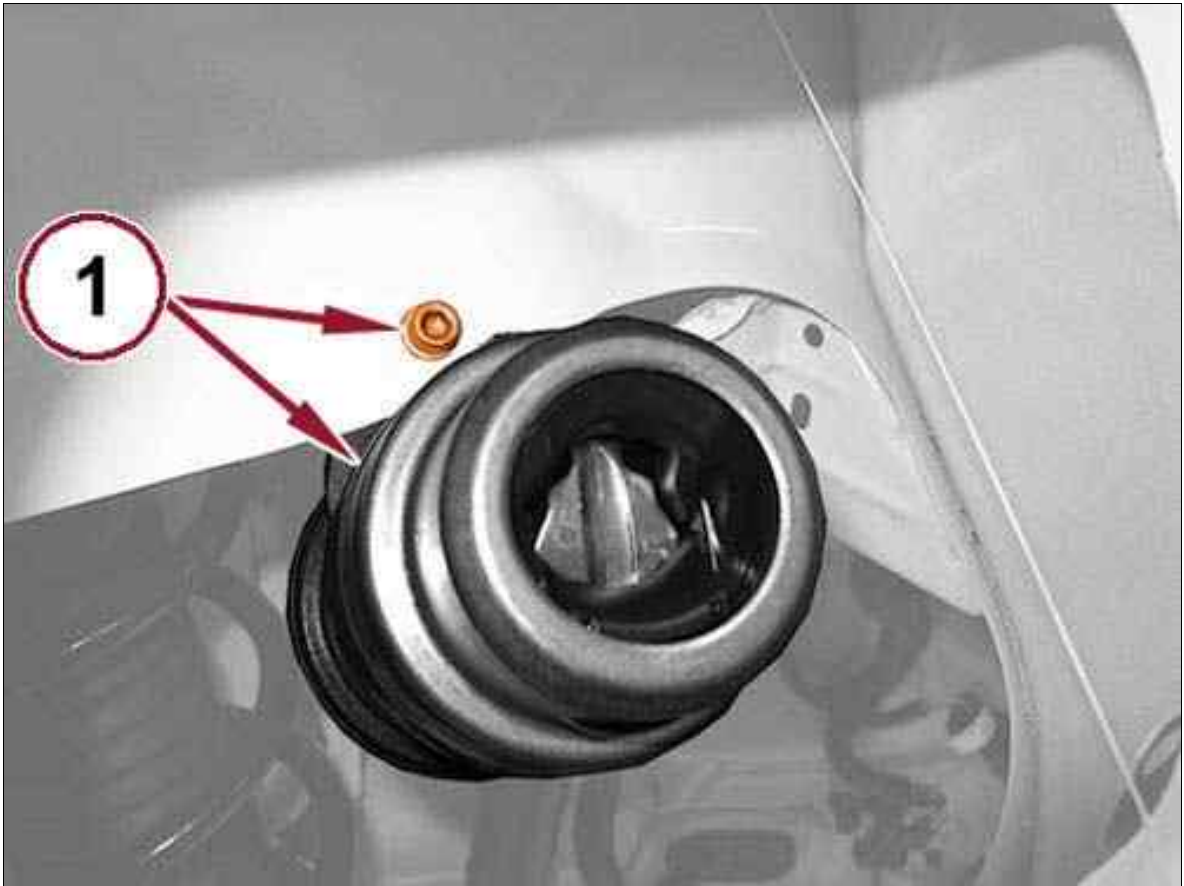
Fig 4: Door Retention Device, Fuel Door, Clips & Screw



Courtesy of CHRYSLER GROUP, LLC

14. Remove the right rear splash shield. Refer to SHIELD, SPLASH, REAR WHEELHOUSE, REMOVAL AND INSTALLATION .
15. Rotate the screw (1a) 90° and remove the door retention device (1b).
16. Disengage the clips (2a) and remove the fuel door (2b).

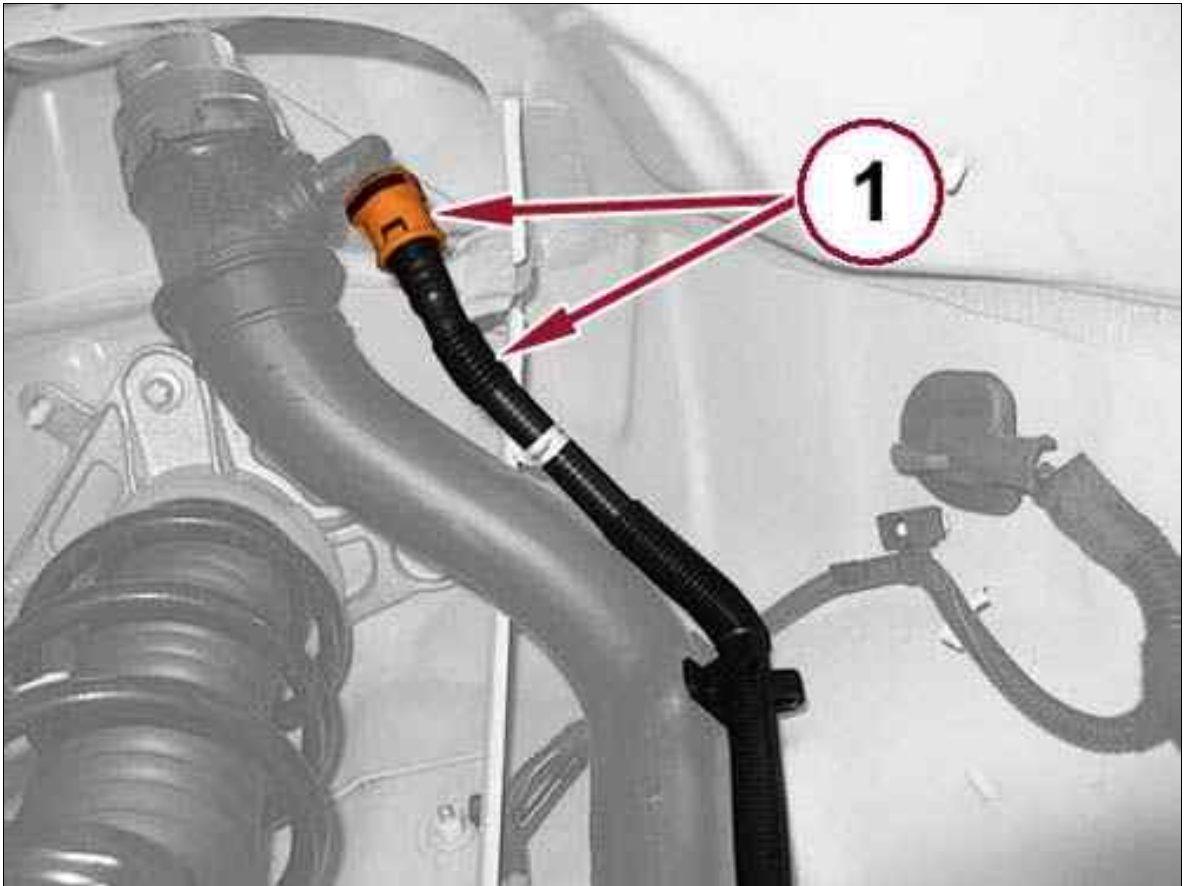
Fig 5: Fuel Fill Tube Retaining Screw



Courtesy of CHRYSLER GROUP, LLC

17. Remove the fuel fill tube retaining screw (1).

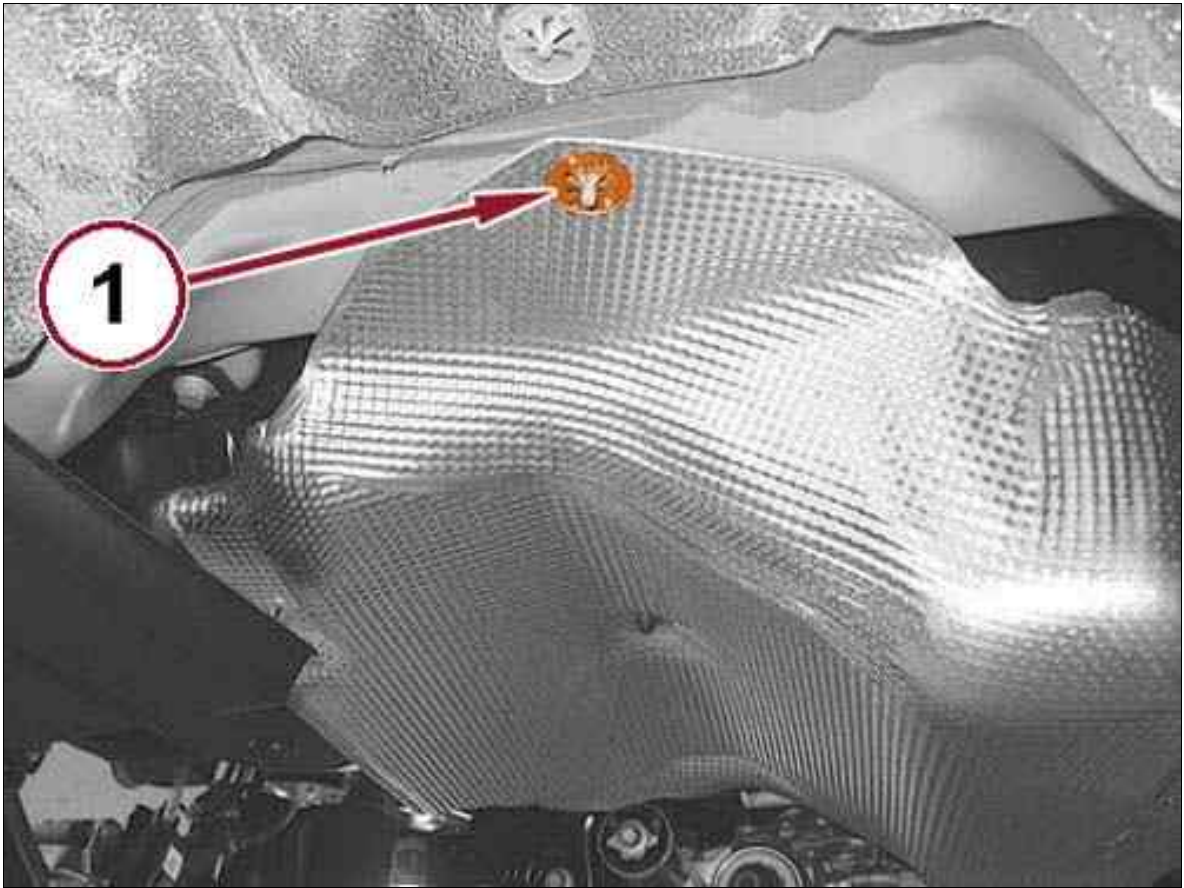
Fig 6: Fuel Fill Tube Vent Pipe



Courtesy of CHRYSLER GROUP, LLC

18. Disconnect the quick coupling and release the vent pipe from the fuel fill tube (1).

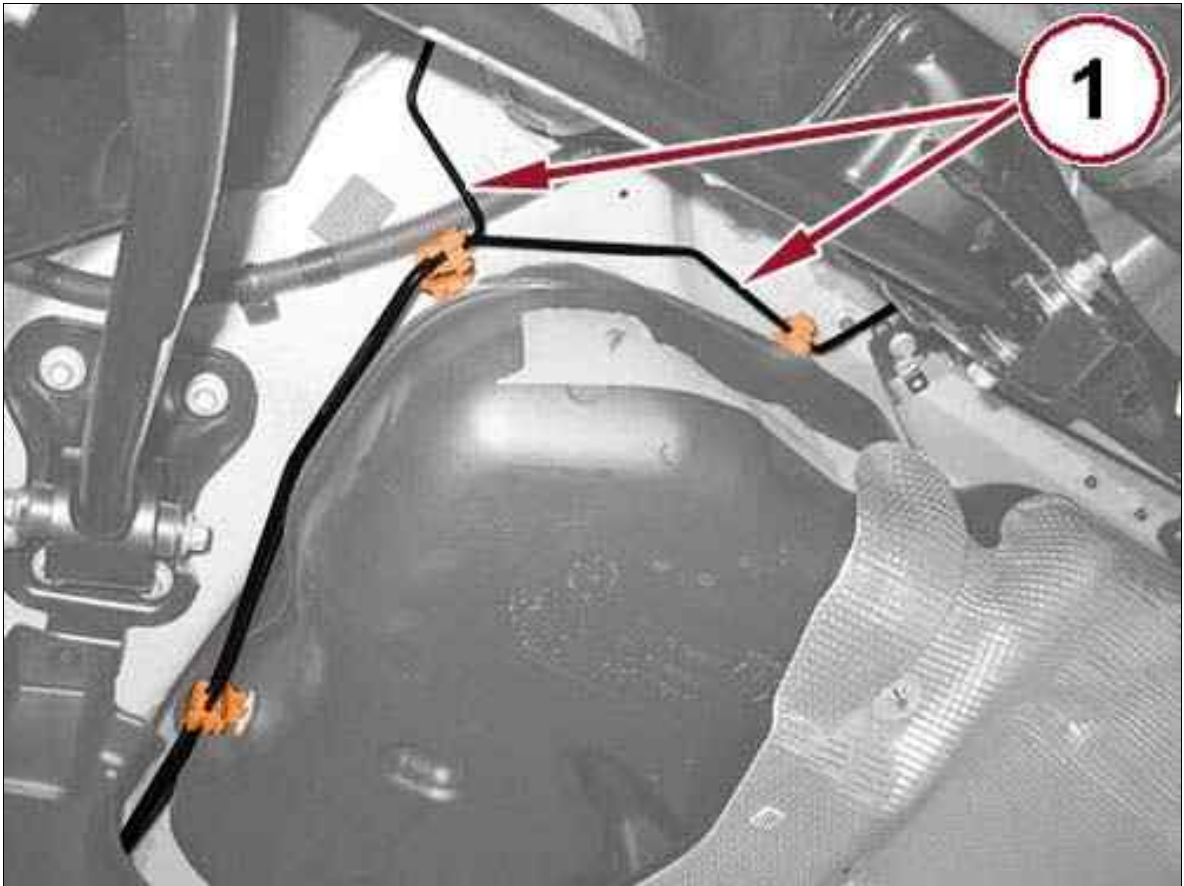
Fig 7: Heat Shield Toothed Washer



Courtesy of CHRYSLER GROUP, LLC

19. Unscrew the toothed washer (1) securing the heat shield to the body.

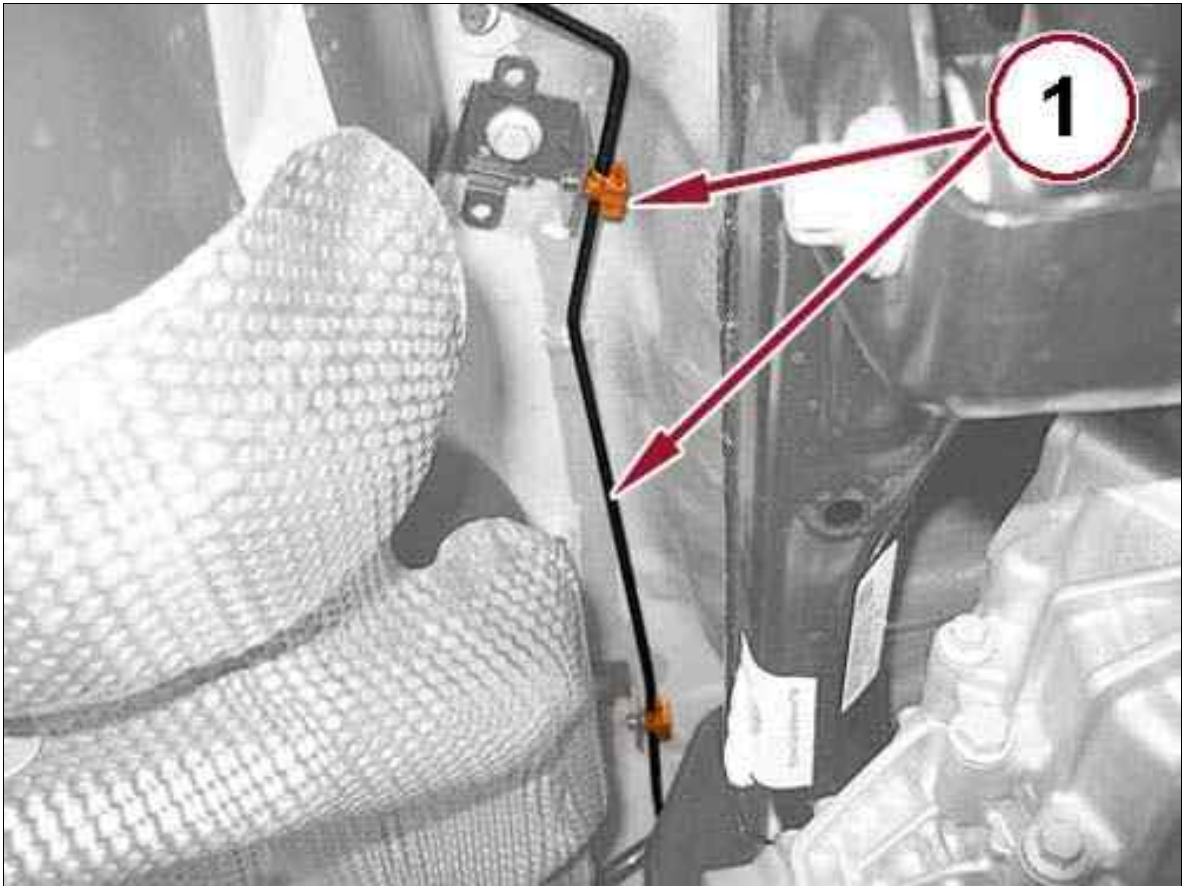
Fig 8: Rear Brake Lines & Retaining Clips



Courtesy of CHRYSLER GROUP, LLC

20. Open the retaining clips and disengage the rear brake lines (1).

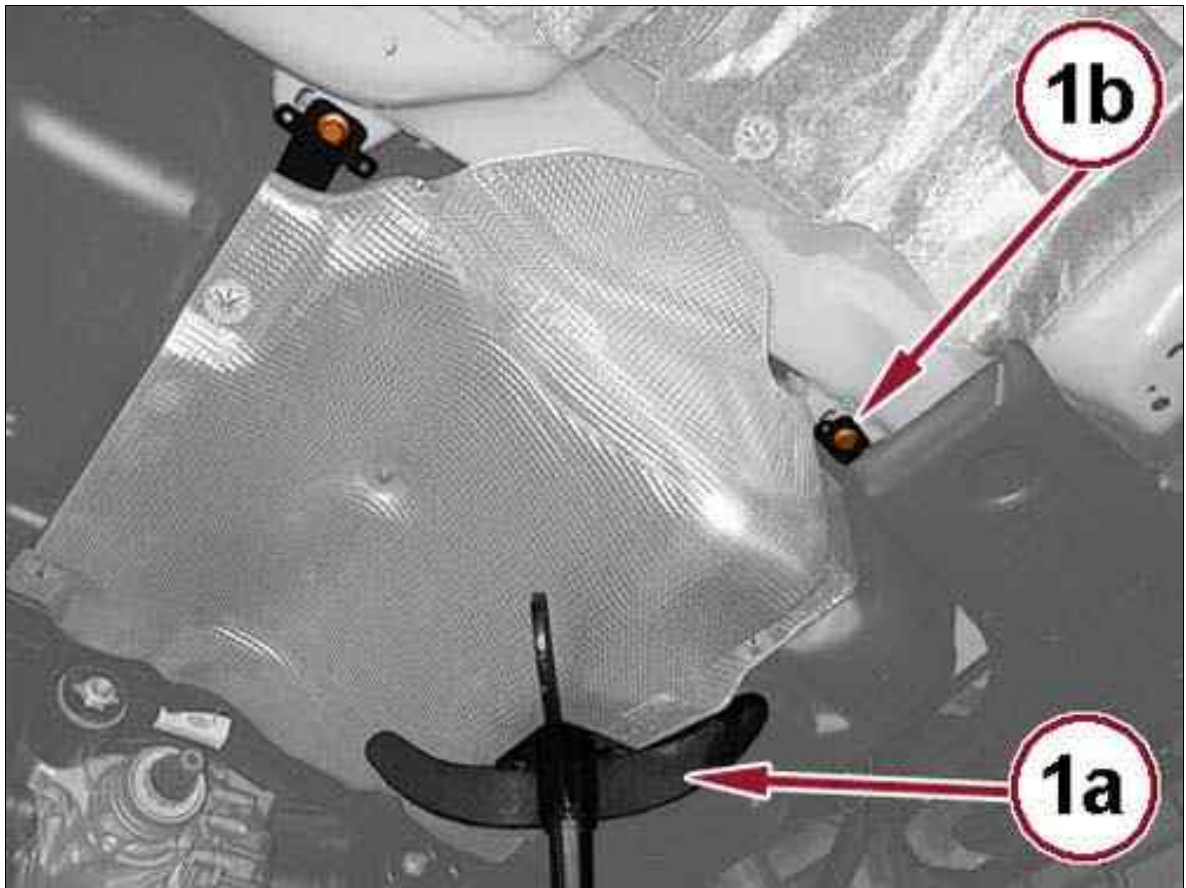
Fig 9: Right Rear Brake Line & Clips



Courtesy of CHRYSLER GROUP, LLC

21. Open the clips and release the right rear brake line (1).

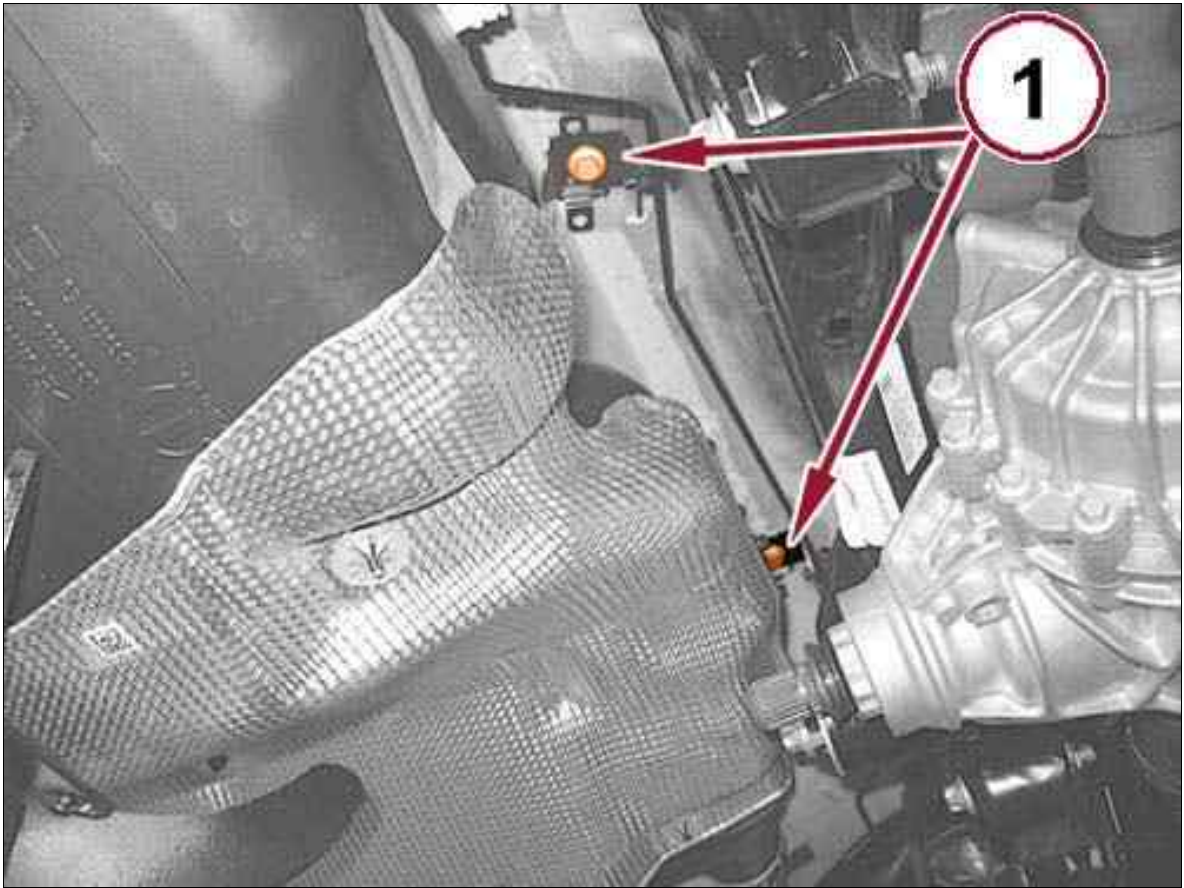
Fig 10: Hydraulic Lift & Mounting Bracket Bolts



Courtesy of CHRYSLER GROUP, LLC

22. Place a suitable hydraulic lift (1a) under the tank and remove the front bolts (1b) securing the mounting brackets.

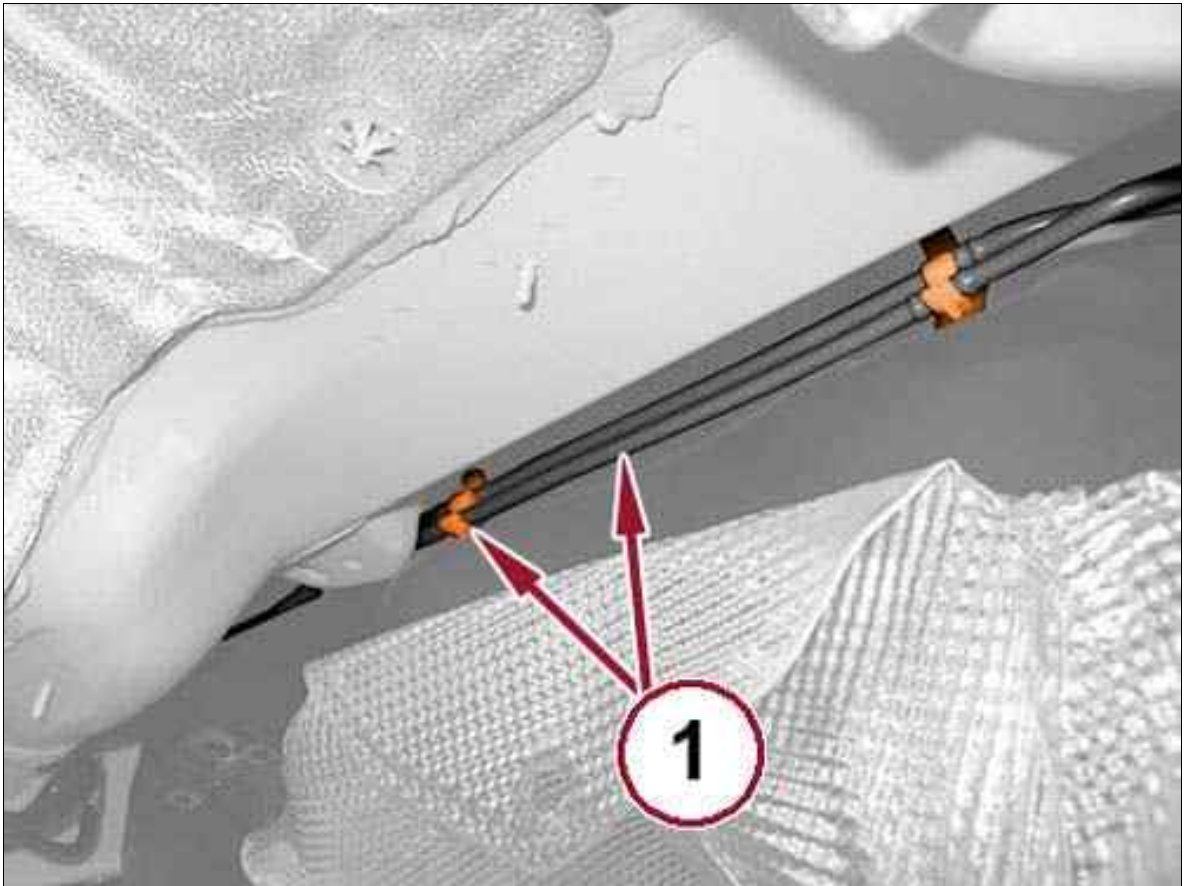
Fig 11: Rear Fuel Tank Support Bracket Bolts



Courtesy of CHRYSLER GROUP, LLC

23. Remove the rear fuel tank support bracket bolts (1).
24. Disconnect the quick coupling of the vapor hose from the fuel tank to the canister.

Fig 12: Fuel Delivery & Return Pipes Retaining Clips



Courtesy of CHRYSLER GROUP, LLC

25. Lower the tank and unhook the fuel delivery and return pipes from the retaining clips (1).

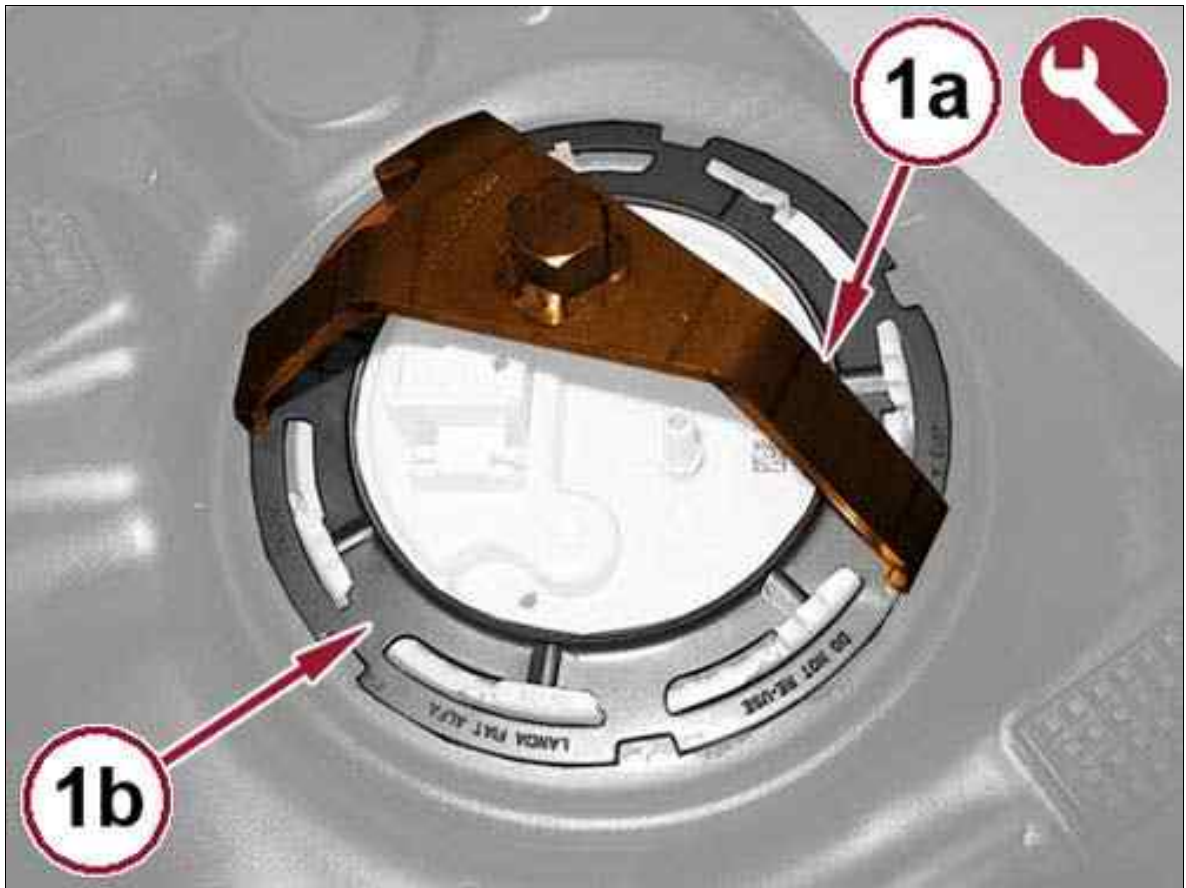
Fig 13: Fuel Tank & Support



Courtesy of CHRYSLER GROUP, LLC

26. Lower the support and remove the fuel tank (1).

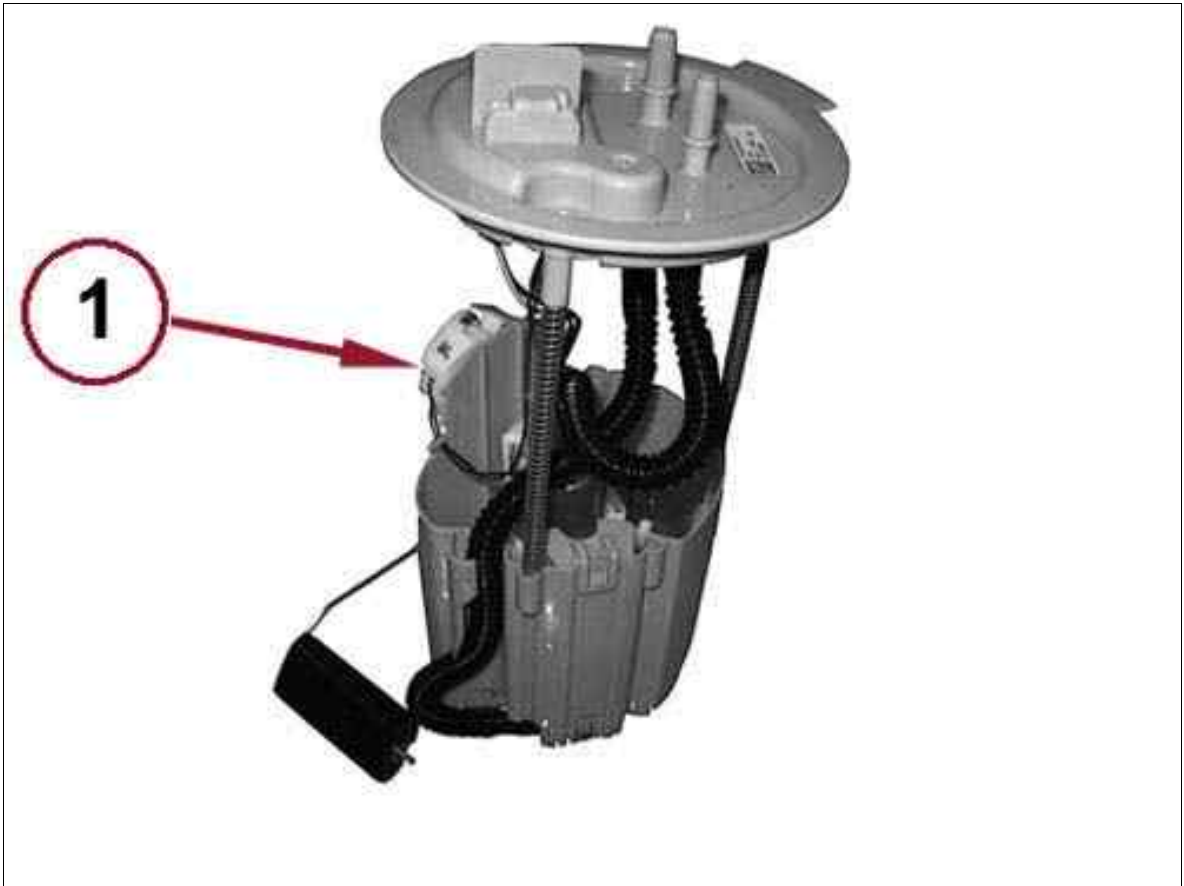
Fig 14: Fuel Pump Assembly Lock Nut & Special Tool



Courtesy of CHRYSLER GROUP, LLC

27. Install the 2000002100 (EMEA) or (special tool #9340, SAE Fuel Pump Lock Ring Wrench) (NAFTA) tool (1a) and remove the lock nut from the fuel pump assembly (1b).

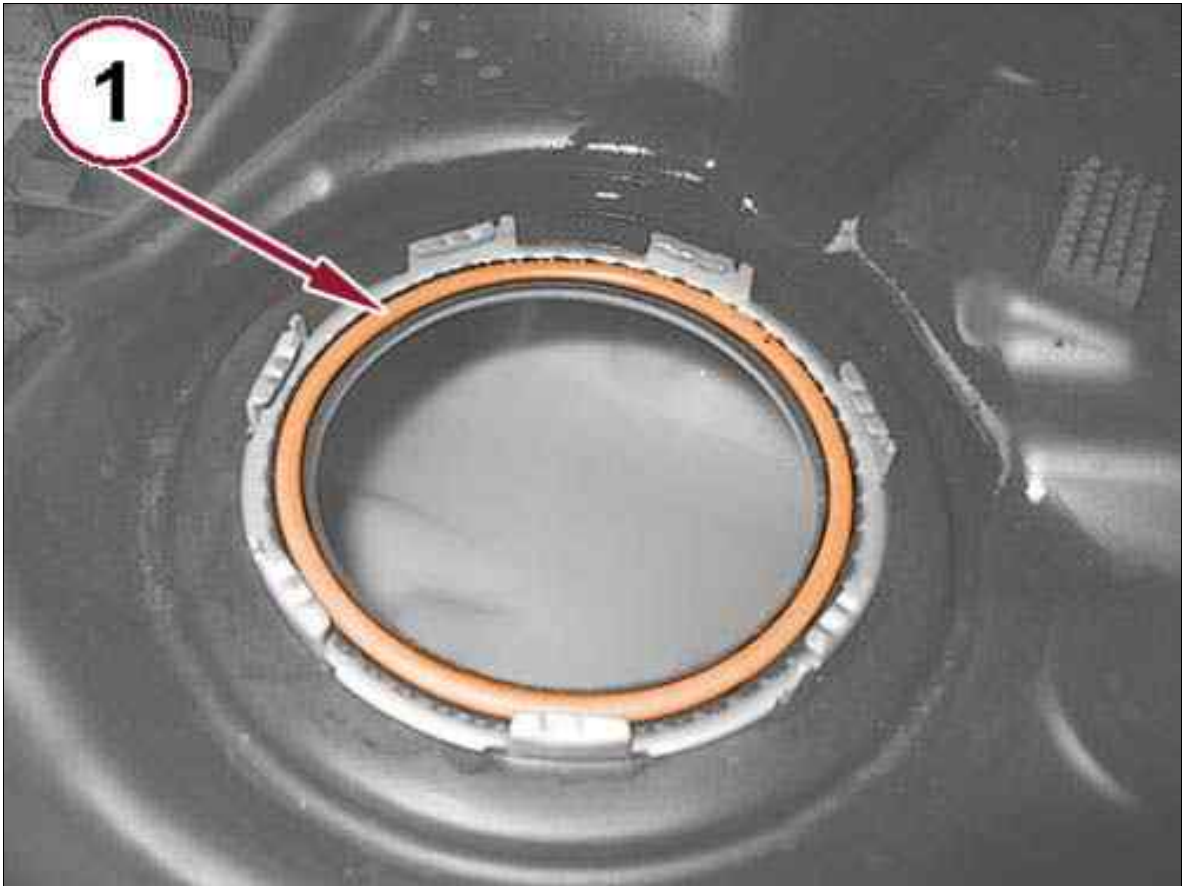
Fig 15: Fuel Pump Assembly



Courtesy of CHRYSLER GROUP, LLC

28. Remove the fuel pump assembly (1).

Fig 16: Fuel Tank Seal Ring



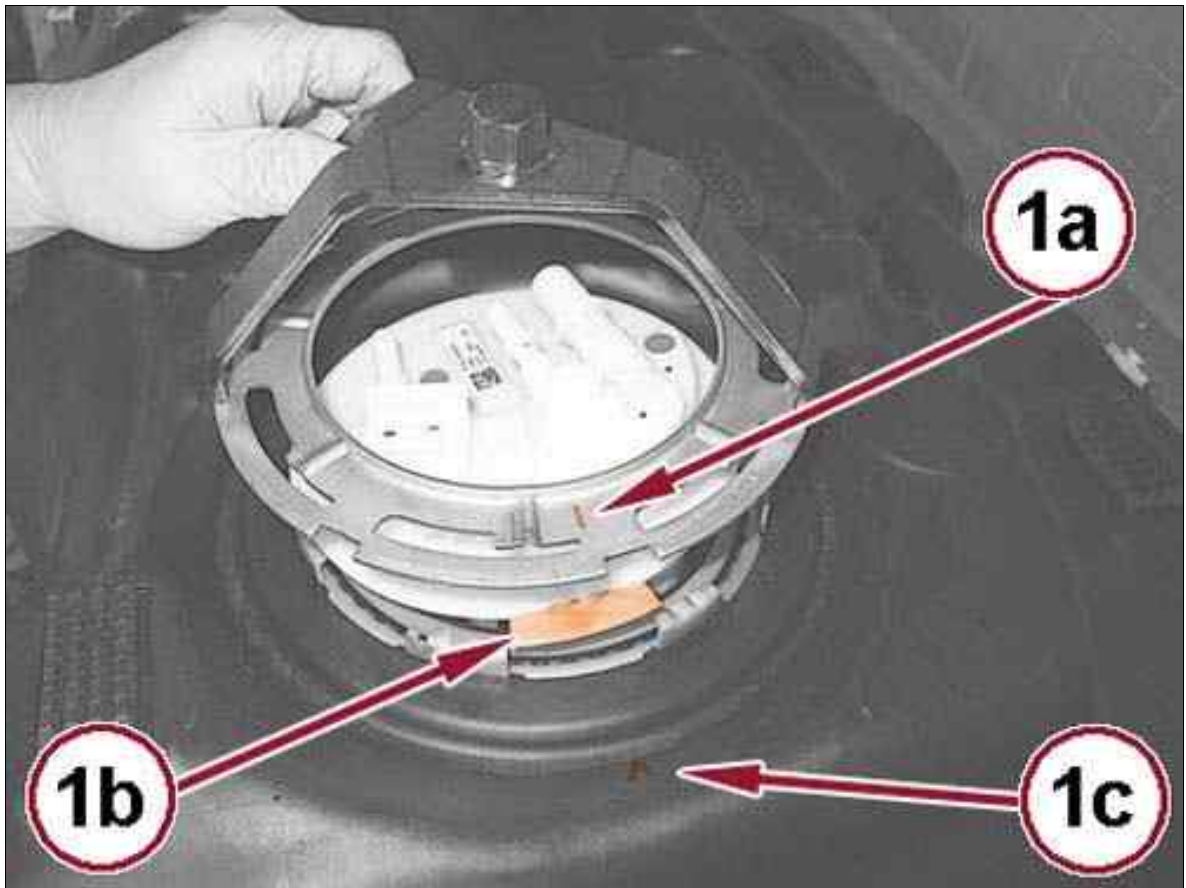
Courtesy of CHRYSLER GROUP, LLC

29. Remove the seal ring on the tank (1).

FUEL DELIVERY > TANK, FUEL > REMOVAL AND INSTALLATION > 2.0L > INSTALLATION

1. Install a new seal on the tank.

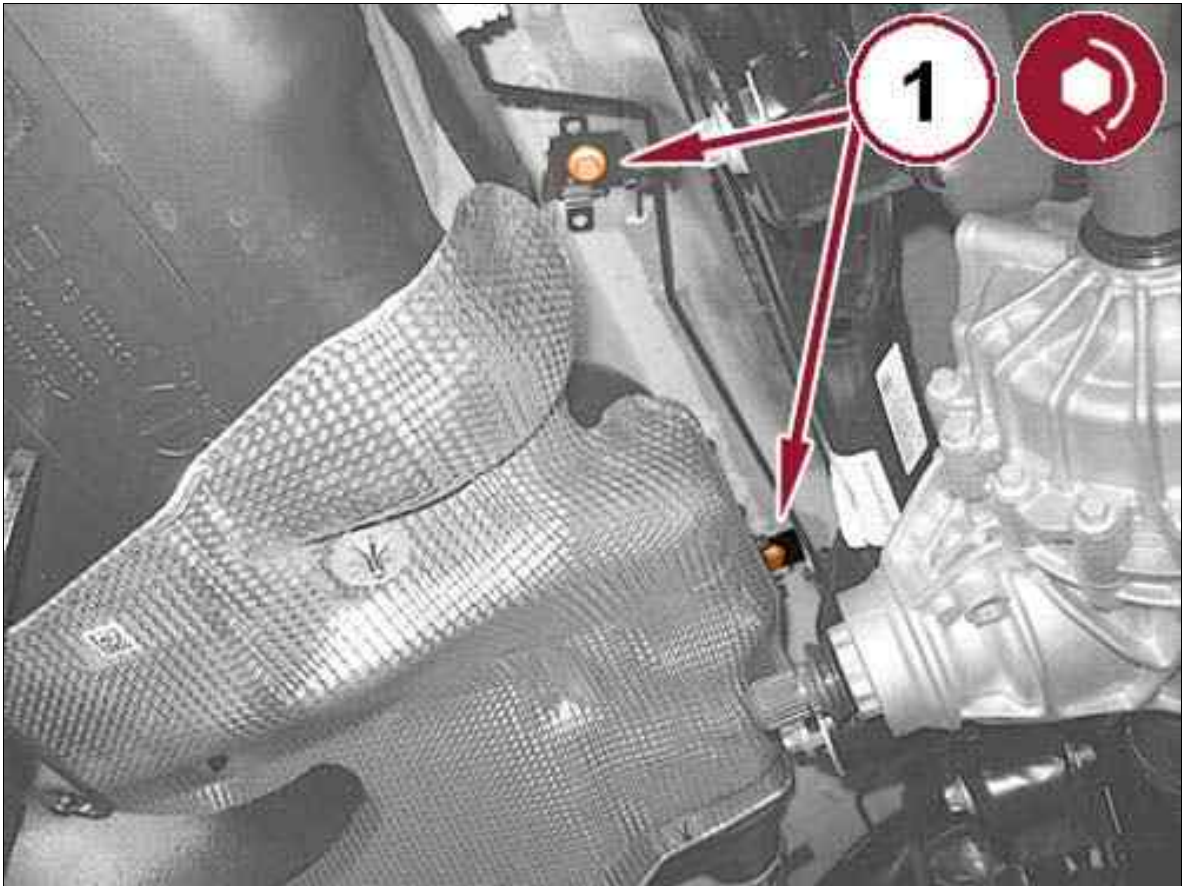
Fig 1: Fuel Pump Assembly Reference Points



Courtesy of CHRYSLER GROUP, LLC

2. Install the fuel pump assembly, taking care to match the references (1a), (1b) and (1c) indicated in the figure.
3. Securely tighten the fuel pump assembly lock nut.
4. Using the hydraulic lift, put the fuel tank into position.
5. Engage the fuel delivery pipe with the retaining clips.

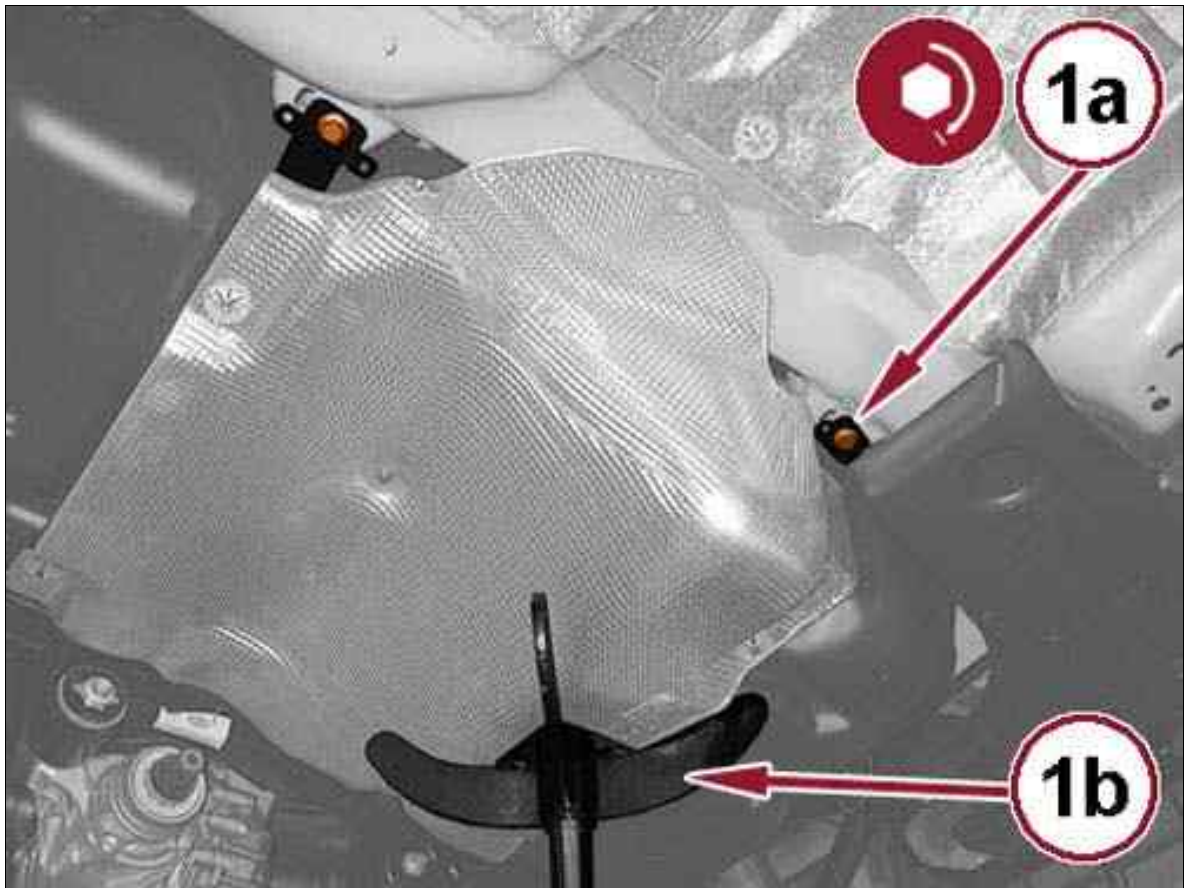
Fig 2: Rear Support Bracket Bolts



Courtesy of CHRYSLER GROUP, LLC

6. Install the rear support bracket bolts (1) and tighten to the proper torque specification. Refer to FUEL DELIVERY, SPECIFICATIONS .

Fig 3: Front Support Bracket Bolts & Hydraulic Lift



Courtesy of CHRYSLER GROUP, LLC

7. Install the front support bracket bolts (1a) and tighten to the proper torque specification. Refer to FUEL DELIVERY, SPECIFICATIONS .
8. Remove the hydraulic lift (1b).
9. Engage the right rear brake lines and close the retaining clips.
10. Engage the rear brake lines and close the retaining clips.
11. Install the toothed washer securing the heat shield to the body.
12. Connect the quick coupling and engage the vent pipe with the spring retainer on the fuel fill tube.
13. Install the fuel fill tube retaining screw and tighten to the proper torque specification. Refer to FUEL DELIVERY, SPECIFICATIONS .
14. Install the fuel door, engaging the retaining clips.
15. Position the door retaining device and turn the screw 90°.
16. Install the right rear splash shield. Refer to SHIELD, SPLASH, REAR WHEELHOUSE, REMOVAL AND INSTALLATION .
17. Connect the quick coupling of the vent pipe.

18. Connect the quick connector of the return pipe.
19. Connect the quick coupling of the fuel delivery pipe.
20. Connect the electrical connection of the electric fuel pump.
21. Install the access covers for the fuel pump and the vent pipe, securely tighten the screws.
22. Install the rear seat cushion. Refer to SEAT CUSHION, REMOVAL AND INSTALLATION .
23. Install the propeller shaft assembly. Refer to REMOVAL AND INSTALLATION .
24. Install the muffler assembly. Refer to MUFFLER, EXHAUST, REMOVAL AND INSTALLATION .
25. Remove the vehicle from the lift.

FUEL DELIVERY > TANK, FUEL > REMOVAL AND INSTALLATION > 2.4L > REMOVAL

1. Place the vehicle on a lift.
2. Open the cover of the fuse box in the engine compartment and remove the fuse F21 (15 A) of the fuel pump.
3. Start the engine and run until the fuel in the lines is depleted.
4. Install the fuse removed earlier and close the fuse box cover.
5. Remove the underbody shields. Refer to UNDER BODY PROTECTION .
6. Remove the rear seat cushion. Refer to SEAT CUSHION, REMOVAL AND INSTALLATION .

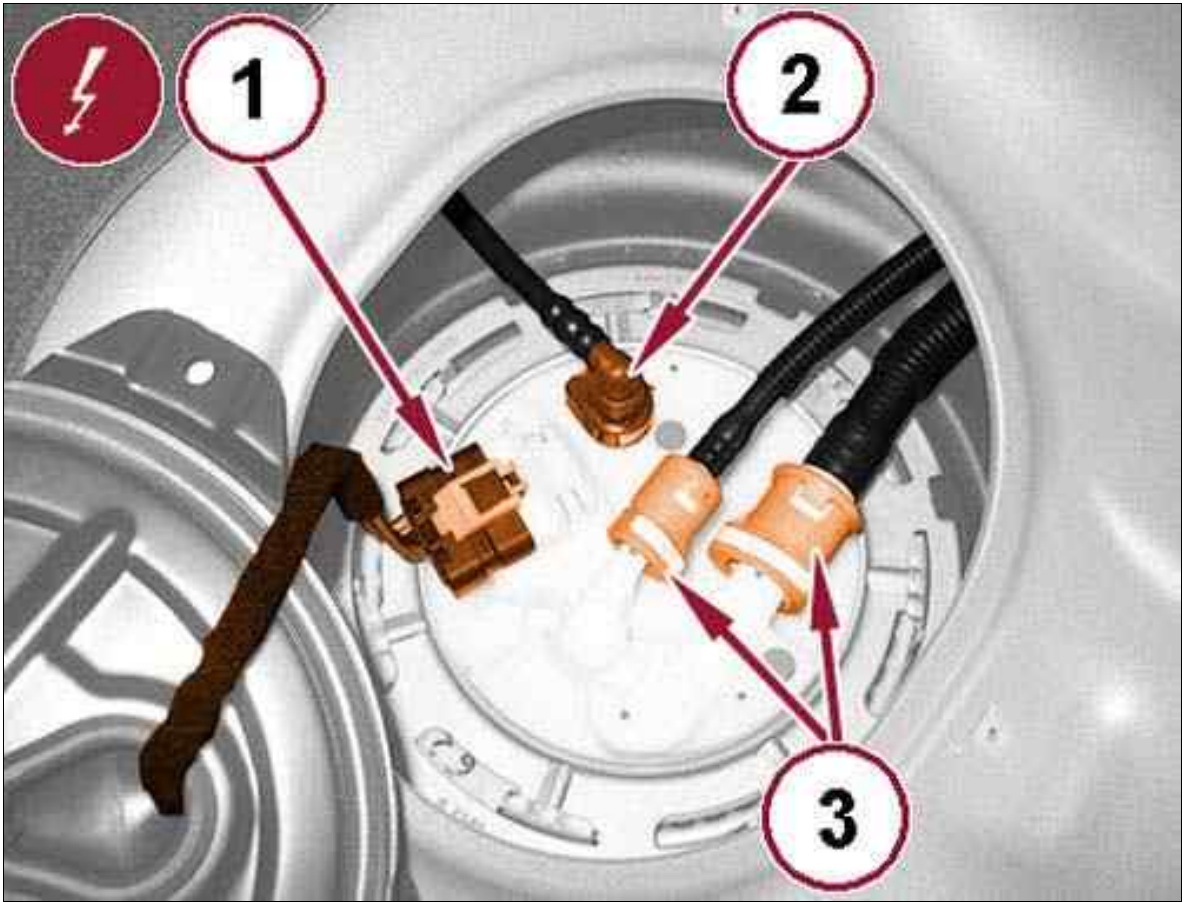
Fig 1: Fuel Pump Access Cover & Screws



Courtesy of CHRYSLER GROUP, LLC

7. Lift the cover, remove the screws and the access cover to the fuel pump (1).

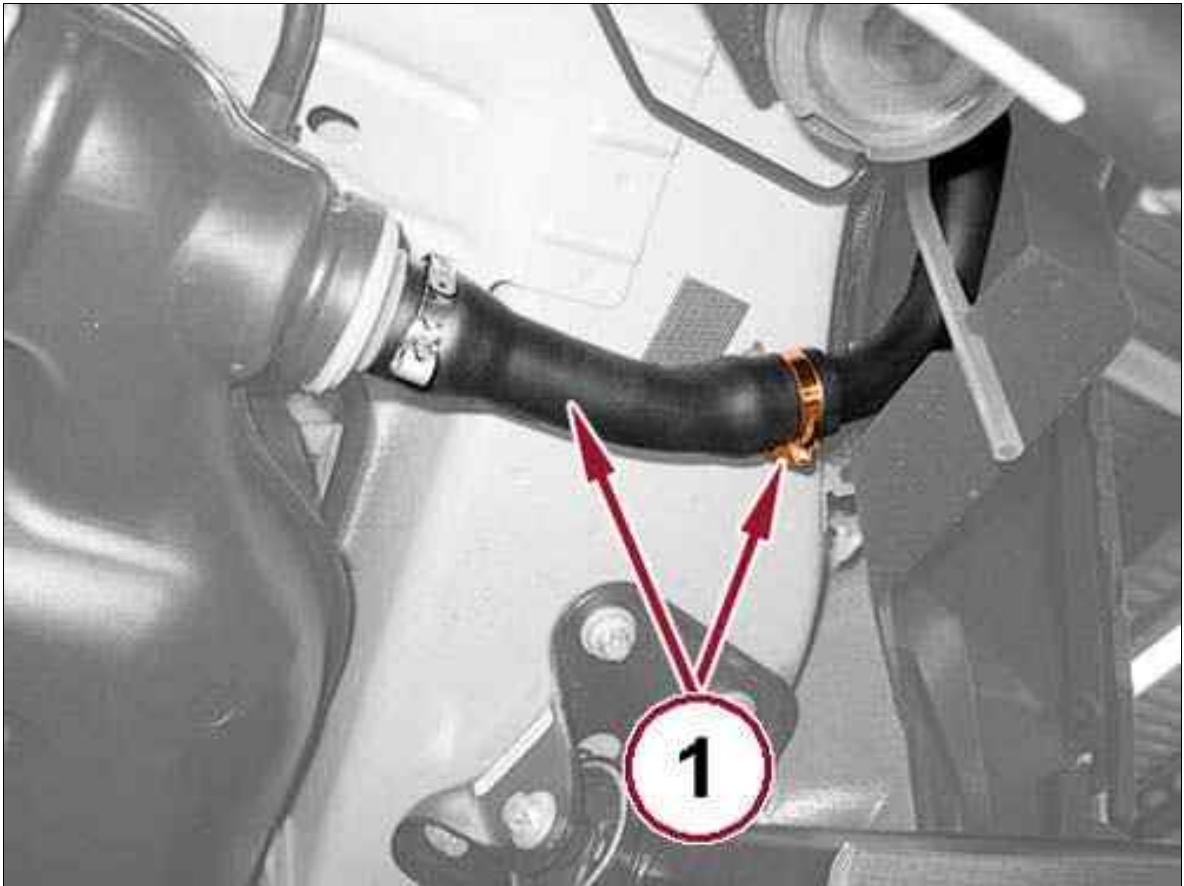
Fig 2: Connector, Fuel Delivery Pipe & Fuel Vapor Pipe Quick Coupling



Courtesy of CHRYSLER GROUP, LLC

8. Disconnect the electrical connection (1) of the electric pump fuel.
9. Disconnect the fuel vapor quick connect couplings (3).
10. Disconnect the quick coupling of the fuel delivery pipe (2).

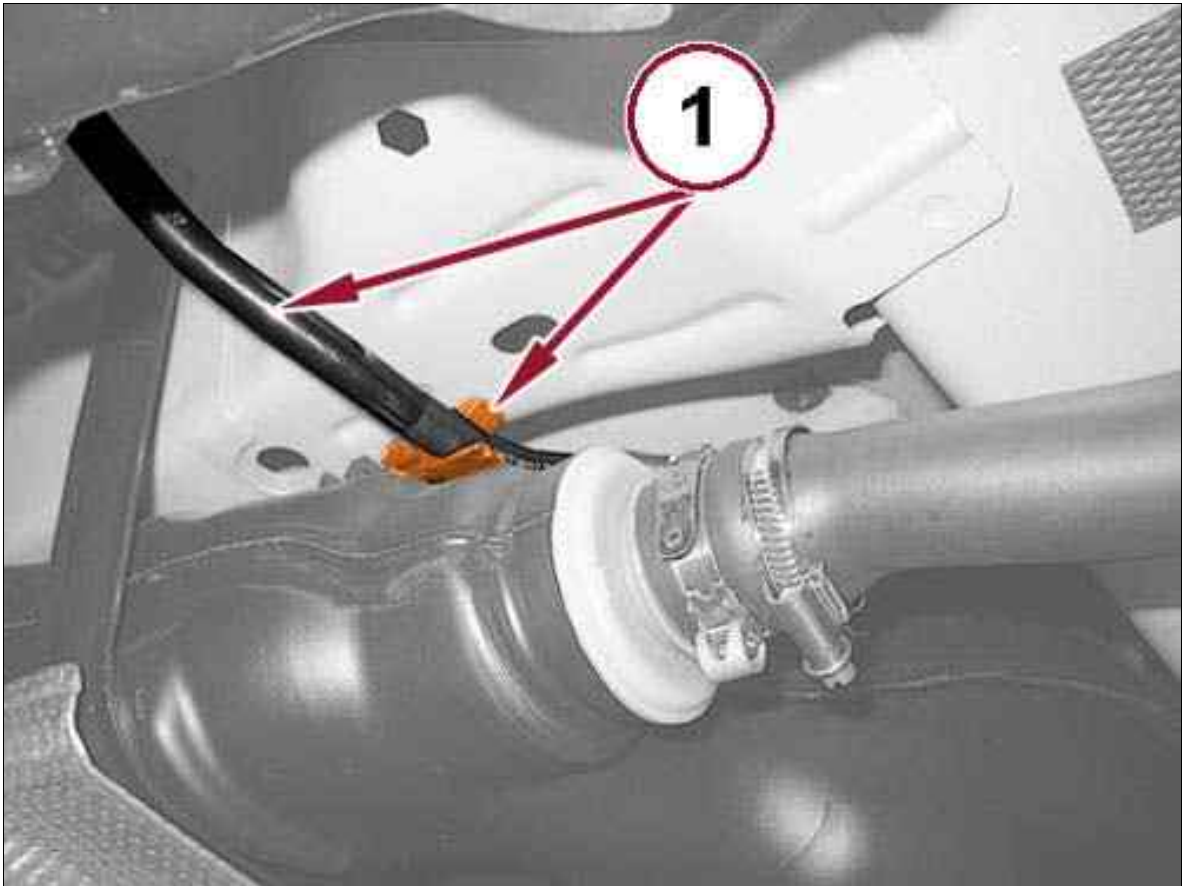
Fig 3: Fuel Fill Tube Hose & Clamp



Courtesy of CHRYSLER GROUP, LLC

11. Loosen the clamp and disconnect the hose from the fuel fill tube (1).

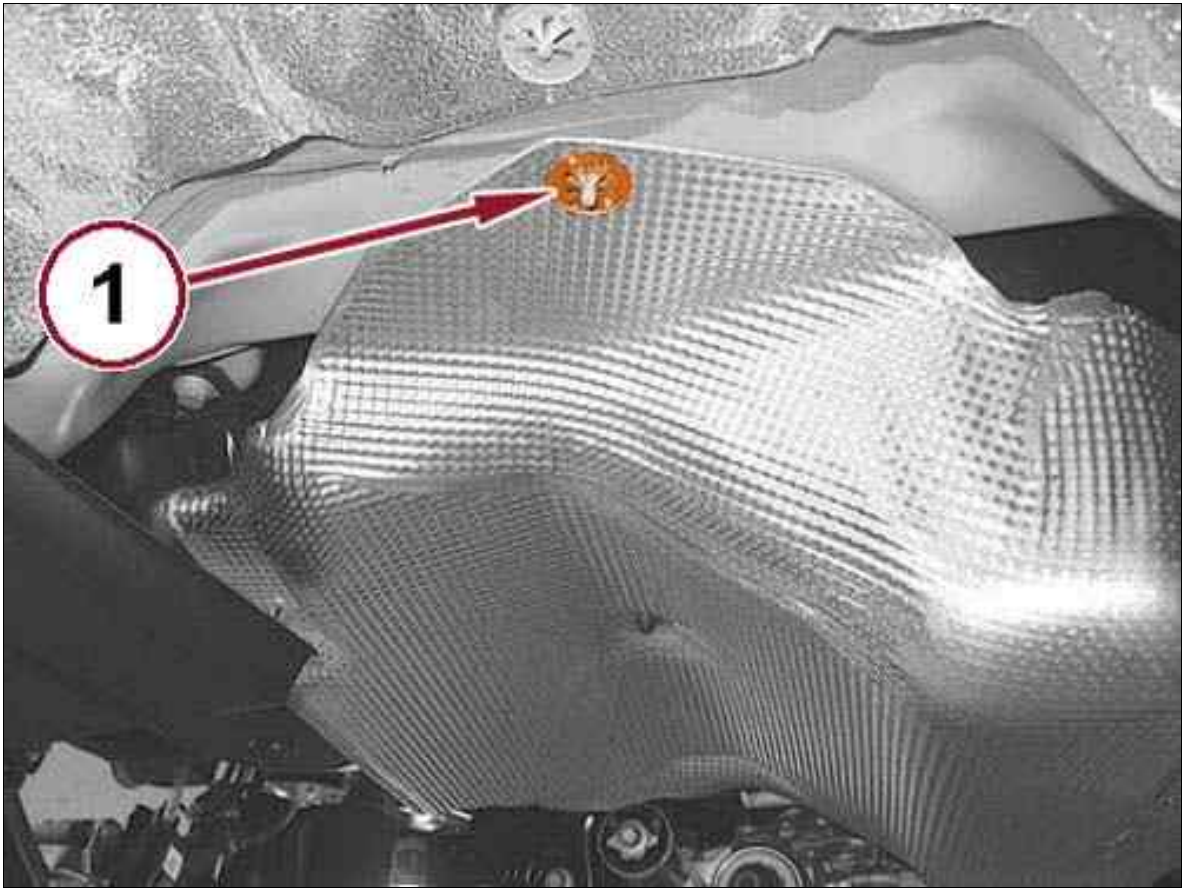
Fig 4: Fuel Vapor Hose & Retaining Clip



Courtesy of CHRYSLER GROUP, LLC

12. Disengage the fuel vapor hose from the retaining clips (1).

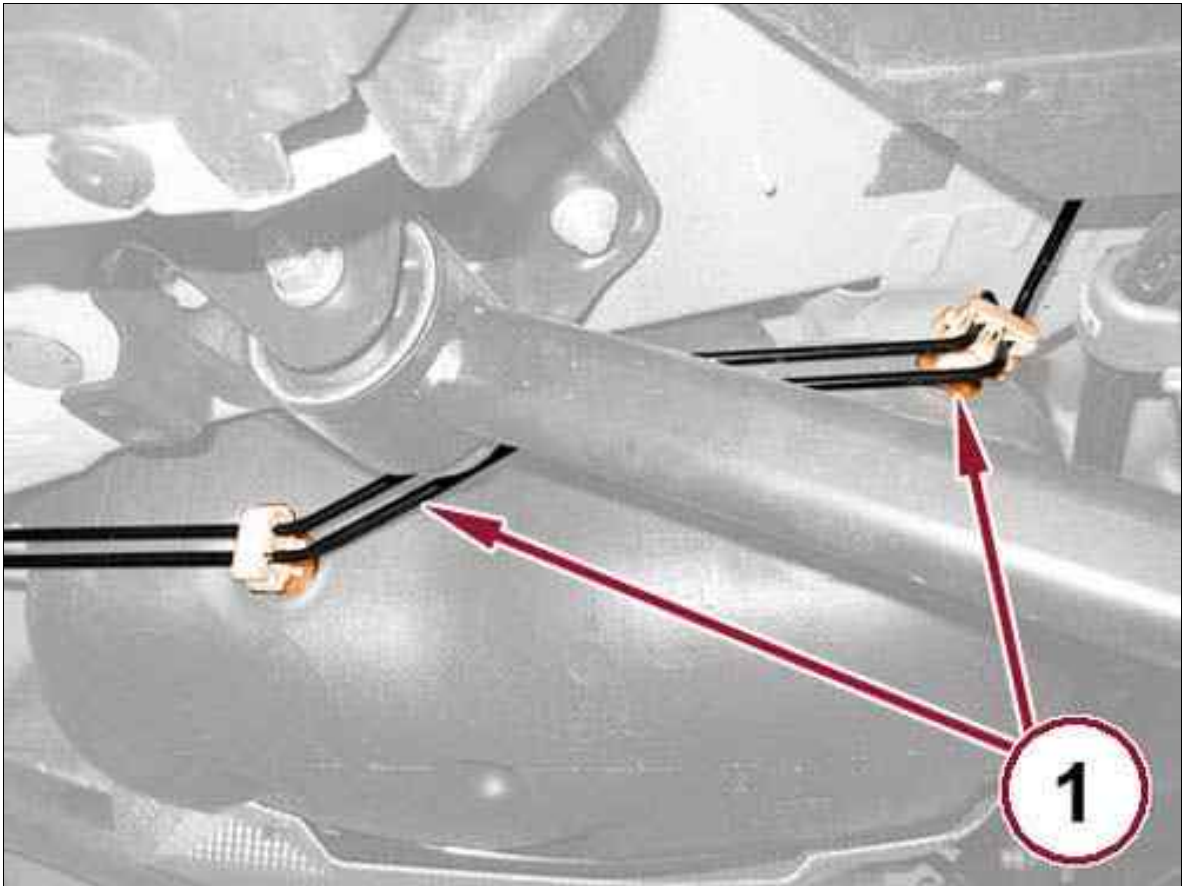
Fig 5: Heat Shield Toothed Washer



Courtesy of CHRYSLER GROUP, LLC

13. Unscrew the toothed washer (1) securing the heat shield to the body.

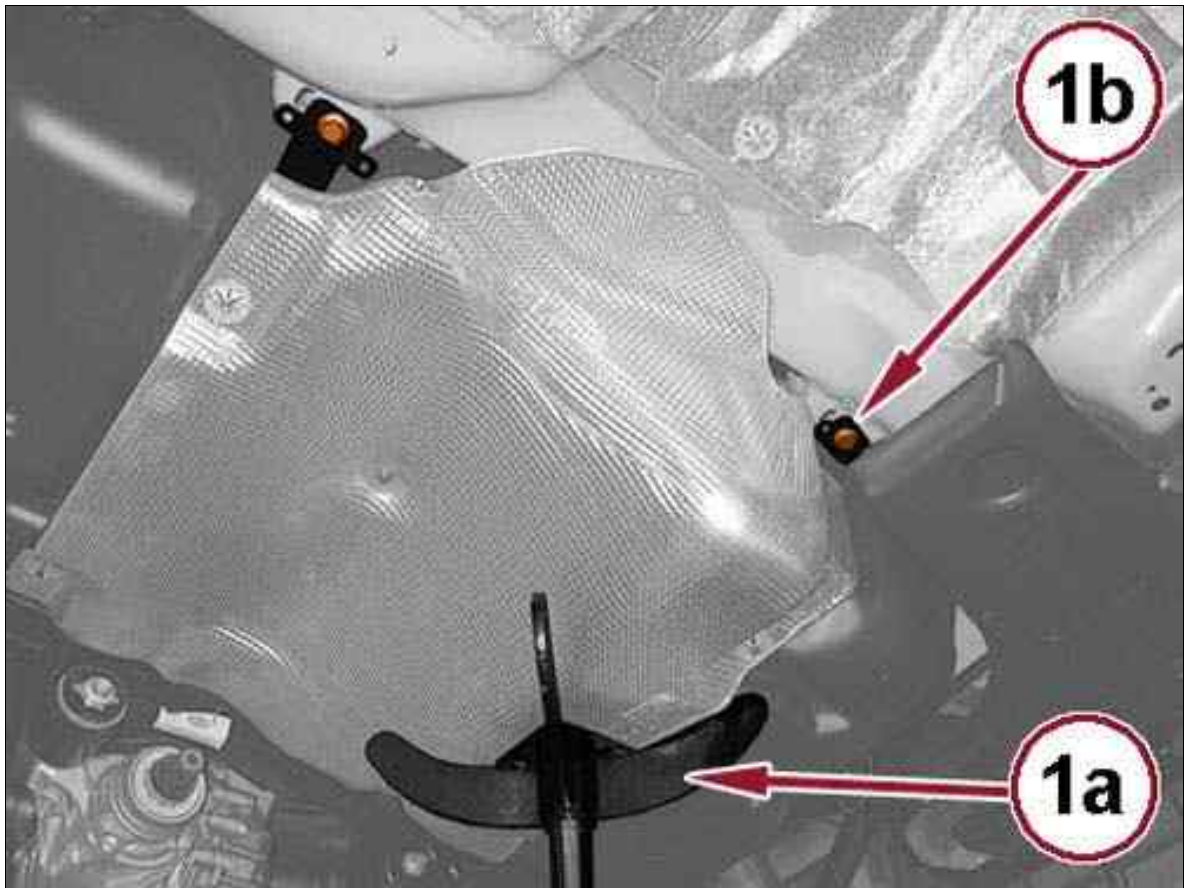
Fig 6: Rear Brake Lines & Retaining Clips



Courtesy of CHRYSLER GROUP, LLC

14. Open the retaining clips and disengage the rear brake lines (1).

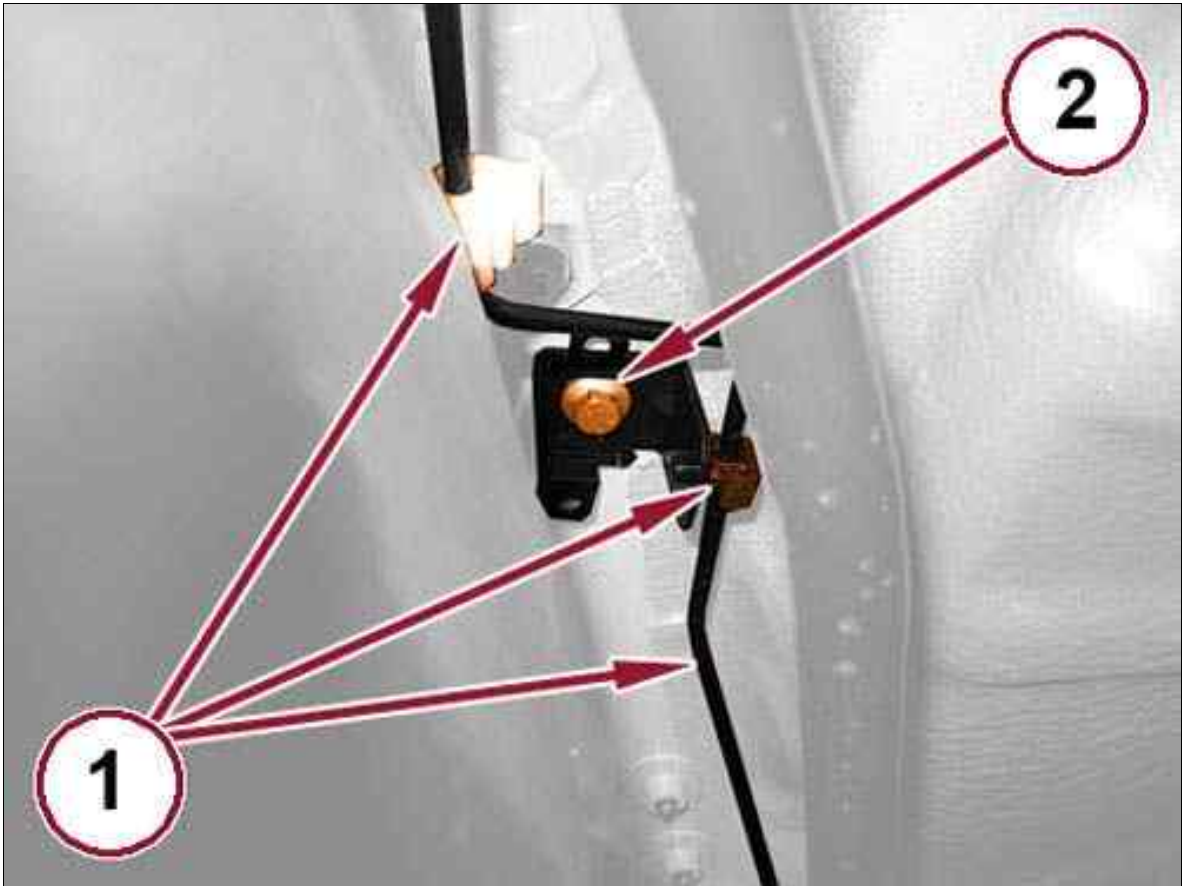
Fig 7: Hydraulic Lift & Mounting Bracket Bolts



Courtesy of CHRYSLER GROUP, LLC

15. Place a suitable hydraulic lift (1a) under the tank and remove the front bolts (1b) securing the mounting brackets.

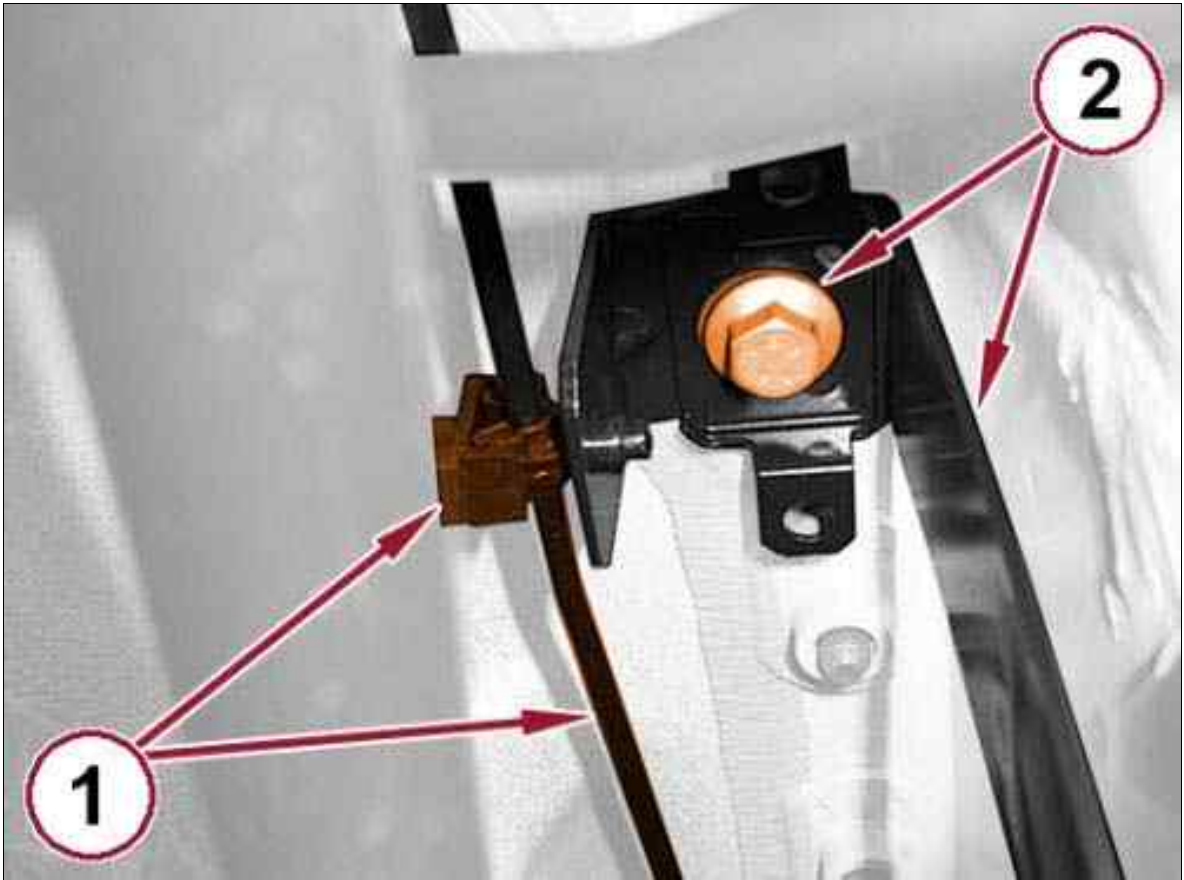
Fig 8: Rear Fuel Tank Support Bracket Bolt & Retaining Clips



Courtesy of CHRYSLER GROUP, LLC

16. Disengage the brake line from the retaining clips (1).
17. Remove the rear fuel tank support bracket bolt (2).

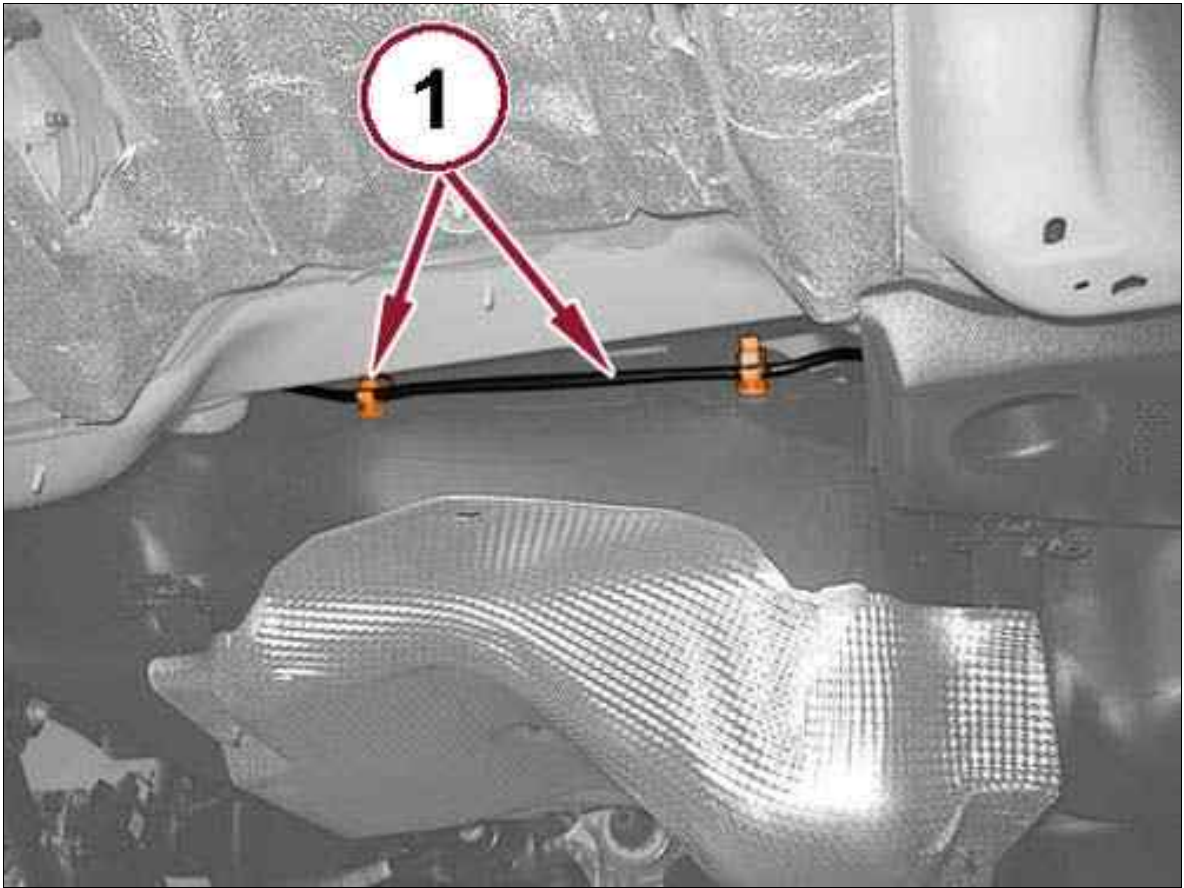
Fig 9: Right Rear Fuel Tank Support Bracket Bolt & Retaining Clips



Courtesy of CHRYSLER GROUP, LLC

18. Disengage the brake line from the retaining clips (1).
19. Remove the right rear fuel tank support bracket bolt (2).

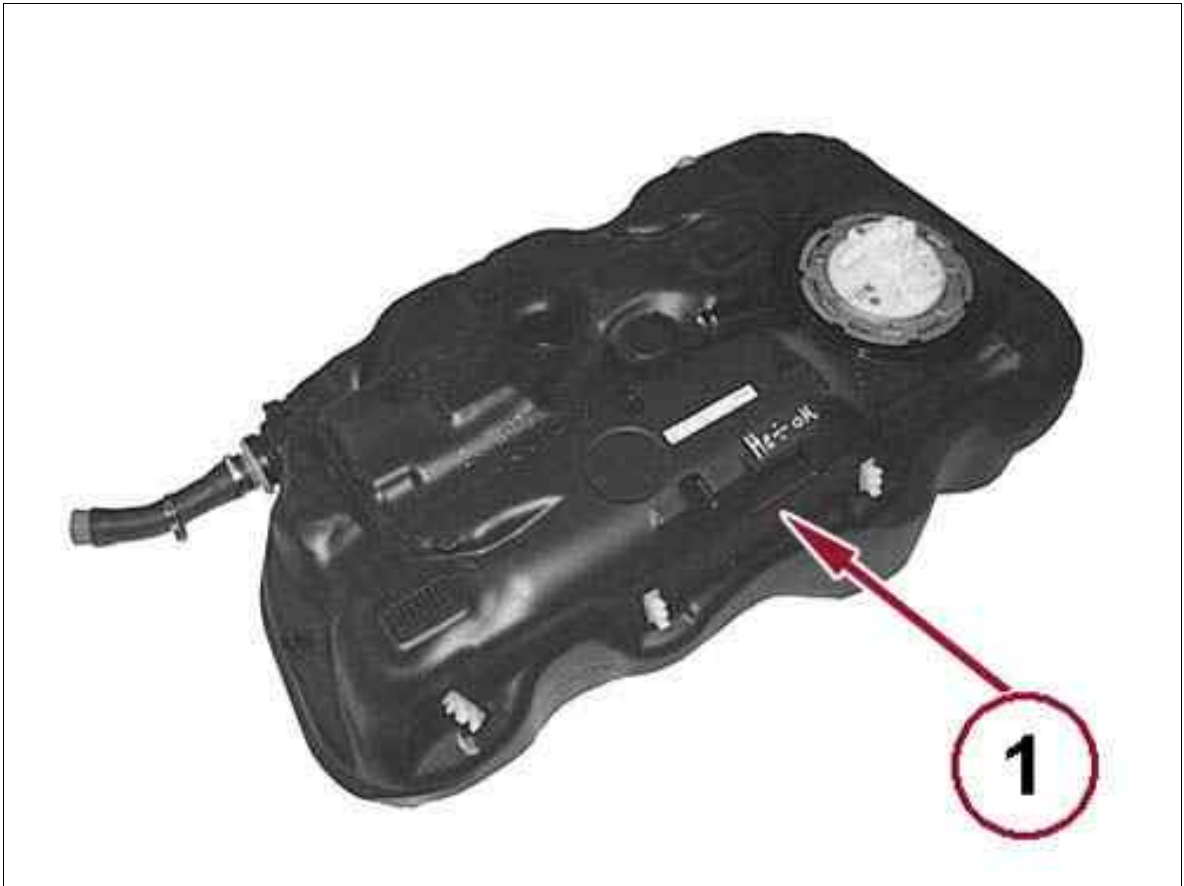
Fig 10: Fuel Delivery Pipe & Retaining Clips



Courtesy of CHRYSLER GROUP, LLC

20. Lower the tank and unhook the fuel delivery pipe from the retaining clips (1).

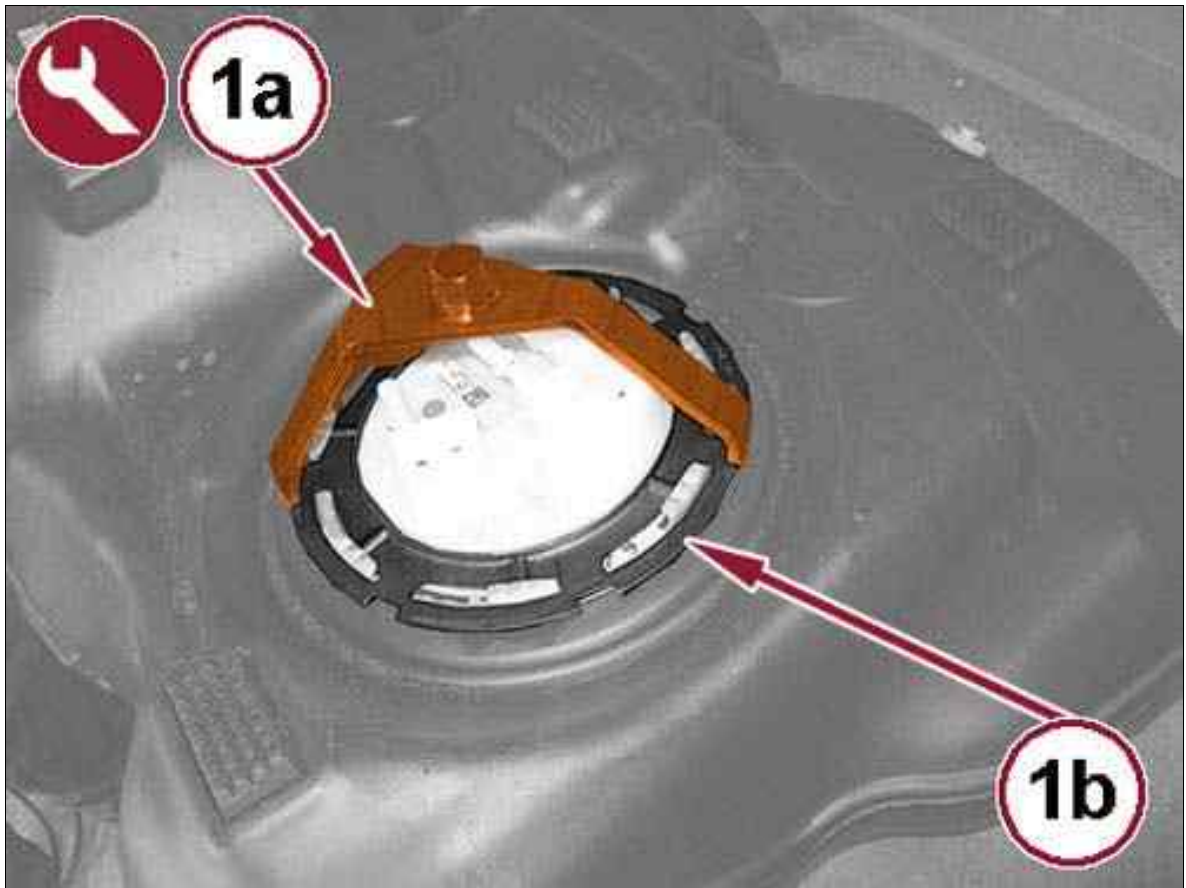
Fig 11: Fuel Tank & Support



Courtesy of CHRYSLER GROUP, LLC

21. Lower the support and remove the fuel tank (1).

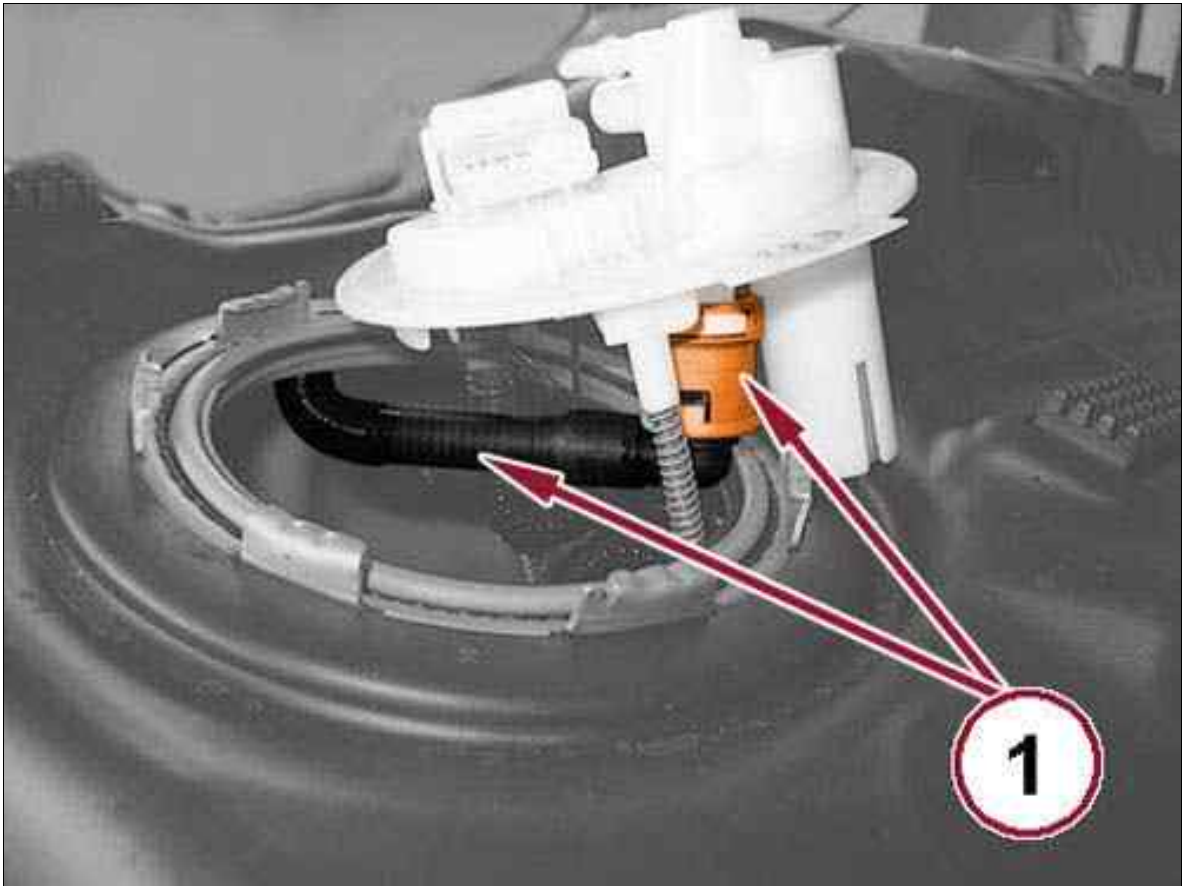
Fig 12: Fuel Pump Assembly Lock Nut & Special Tool



Courtesy of CHRYSLER GROUP, LLC

22. Install the 2000002100 (EMEA) or (special tool #9340, SAE Fuel Pump Lock Ring Wrench) (NAFTA) tool (1a) and remove the lock nut from the fuel pump assembly (1b).

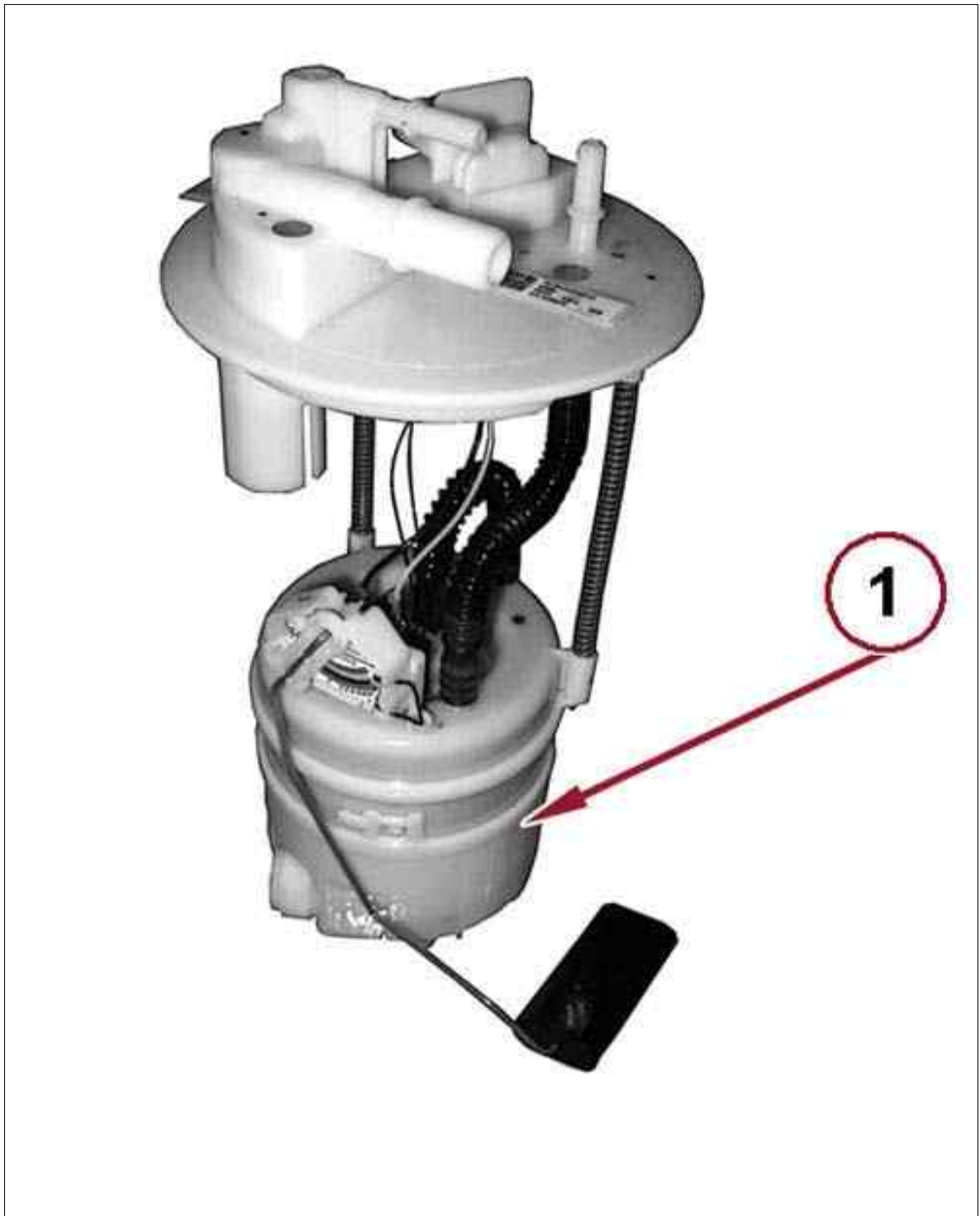
Fig 13: Fuel Vapor Recovery Pipe & Quick Coupling



Courtesy of CHRYSLER GROUP, LLC

23. Raise the fuel pump assembly.
24. Disconnect the quick coupling of the fuel vapor recovery pipe (1).

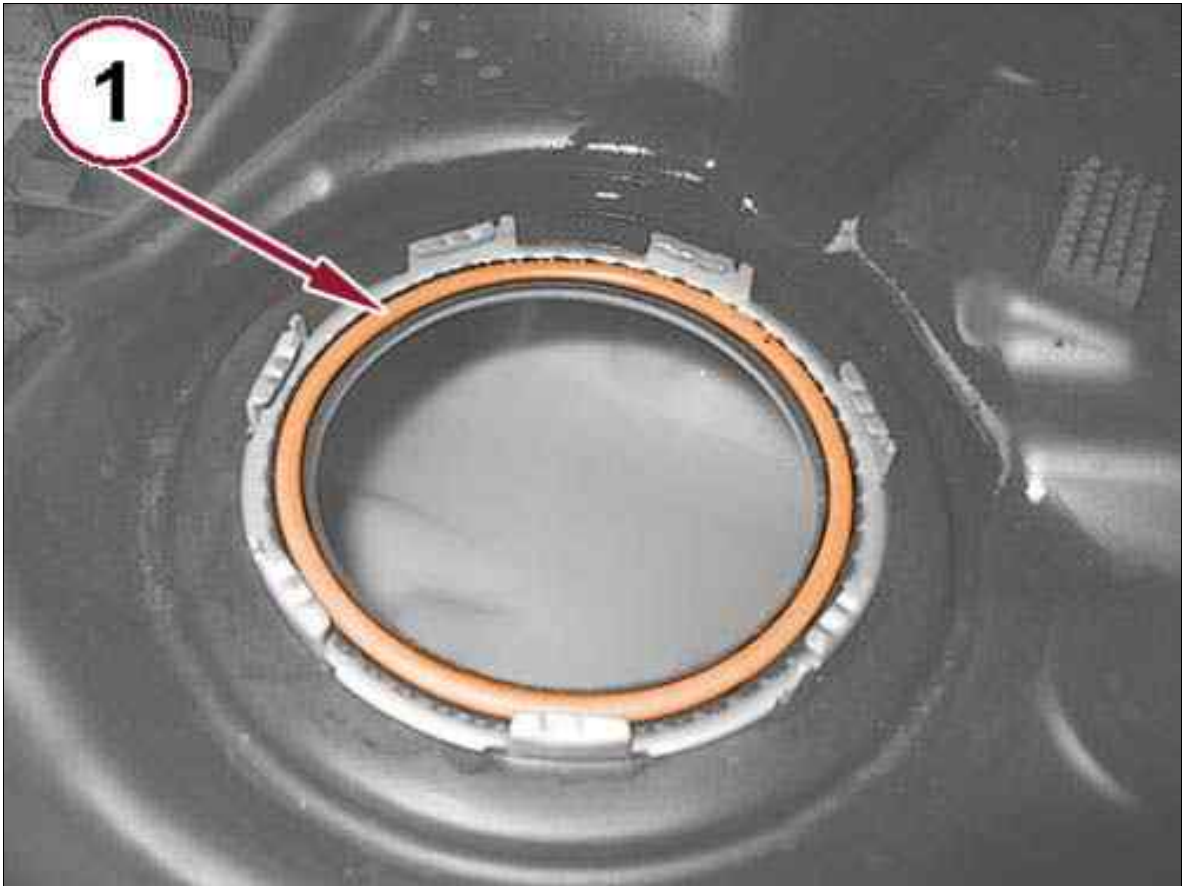
Fig 14: Fuel Pump Assembly



Courtesy of CHRYSLER GROUP, LLC

25. Remove the fuel pump assembly (1).

Fig 15: Fuel Tank Seal Ring



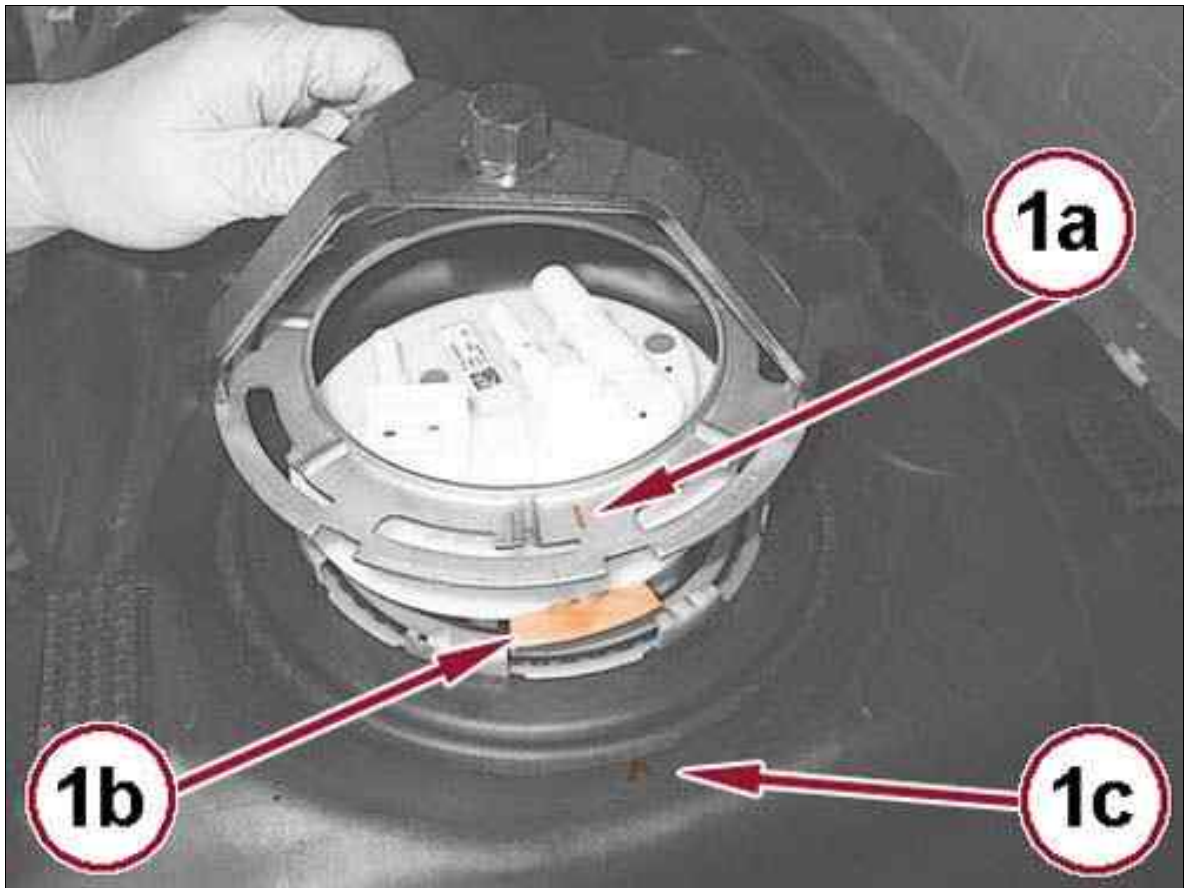
Courtesy of CHRYSLER GROUP, LLC

26. Remove the seal ring on the tank (1).

FUEL DELIVERY > TANK, FUEL > REMOVAL AND INSTALLATION > 2.4L > INSTALLATION

1. Install a new seal on the tank.

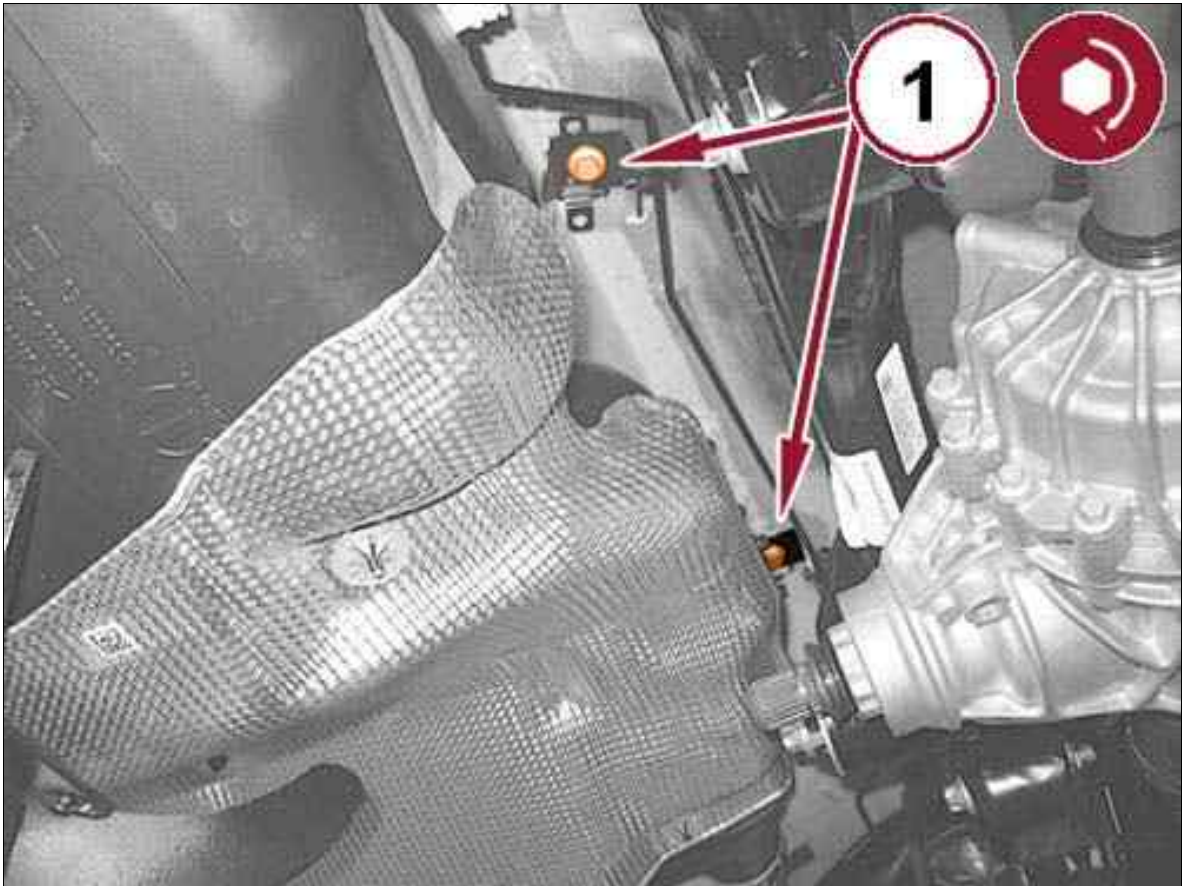
Fig 1: Fuel Pump Assembly Reference Points



Courtesy of CHRYSLER GROUP, LLC

2. Install the fuel pump assembly, taking care to match the references (1a), (1b) and (1c) indicated in the figure.
3. Tighten the fuel pump assembly lock nut.
4. Using the hydraulic lift, put the fuel tank into position.
5. Engage the fuel delivery pipe with the retaining clips.
6. Connect the quick coupling of the vapor hose from the fuel tank to the canister.

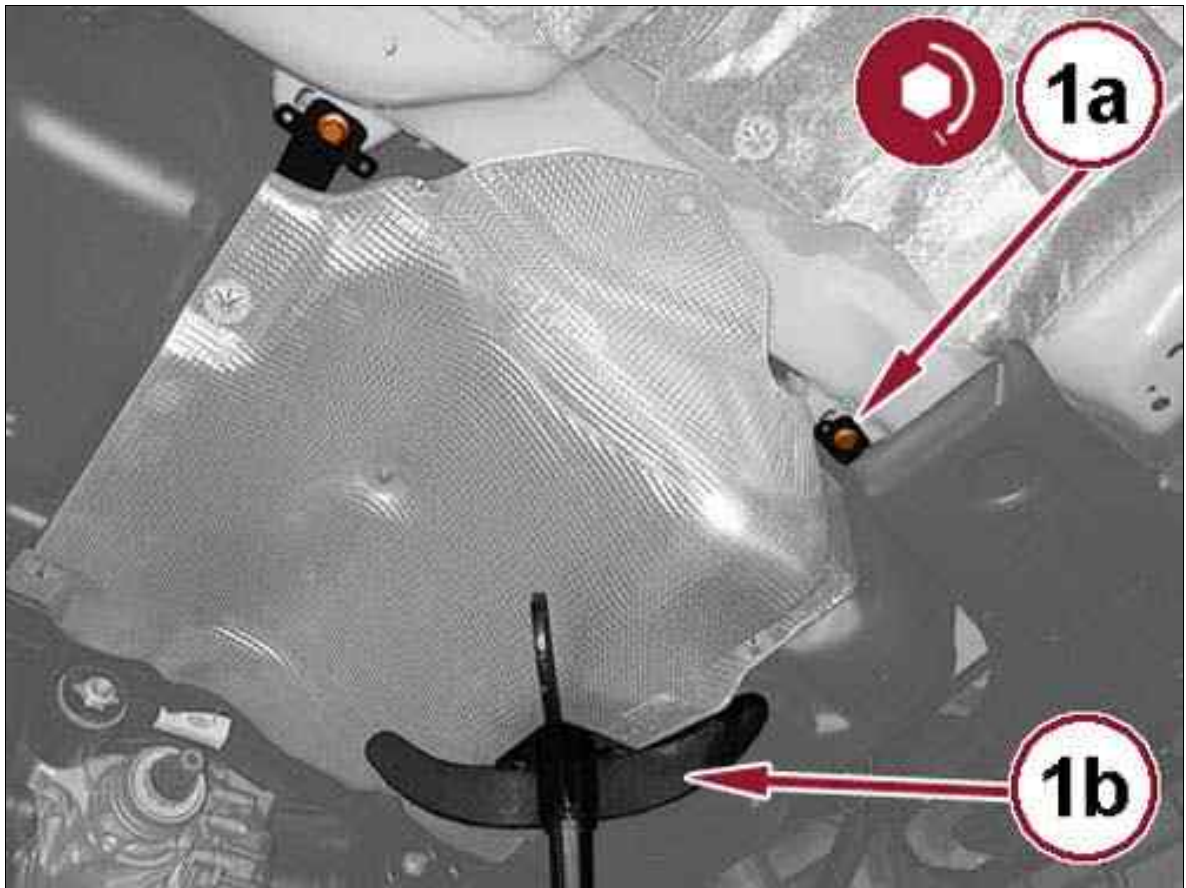
Fig 2: Rear Support Bracket Bolts



Courtesy of CHRYSLER GROUP, LLC

7. Install the rear support bracket bolts (1) and tighten to the proper torque specification. Refer to FUEL DELIVERY, SPECIFICATIONS .

Fig 3: Front Support Bracket Bolts & Hydraulic Lift



Courtesy of CHRYSLER GROUP, LLC

8. Install the front support bracket bolts (1a) and tighten to the proper torque specification. Refer to FUEL DELIVERY, SPECIFICATIONS .
9. Remove the hydraulic lift (1b).
10. Engage the right rear brake lines and close the retaining clips.
11. Engage the rear brake lines and close the retaining clips.
12. Install the toothed washer securing the heat shield to the body.
13. Install the right side cover, tighten the hardware and install the retainer buttons.
14. Engage the fuel vapor hose with the retaining clips.
15. Connect the hose to the fuel fill tube and tighten the clamp.
16. Connect the quick coupling of the vapor pipe.
17. Connect the quick coupling of the fuel delivery pipe.
18. Connect the electrical connection of the electric fuel pump.
19. Install the access covers for the fuel pump and securely tighten the screws.
20. Install the rear seat cushion. Refer to SEAT CUSHION, REMOVAL AND INSTALLATION .

21. Install the underbody shields. Refer to UNDER BODY PROTECTION .

22. Remove the vehicle from the lift.

FUEL DELIVERY > TUBE, FUEL TANK FILLER > REMOVAL AND INSTALLATION > 1.4 FWD, 1.6L, 2.0L > REMOVAL AND INSTALLATION

Fig 1: Fuel Tank & Support



Courtesy of CHRYSLER GROUP, LLC

The fuel filler tube is integrated into the fuel tank (1). For removal and installation, refer to TANK, FUEL, REMOVAL AND INSTALLATION .

FUEL DELIVERY > TUBE, FUEL TANK FILLER > REMOVAL AND INSTALLATION > 1.4L 4X4 > REMOVAL

1. Place the car on a lift.

2. Remove the right rear splash shield. Refer to SHIELD, SPLASH, REAR WHEELHOUSE, REMOVAL AND INSTALLATION .

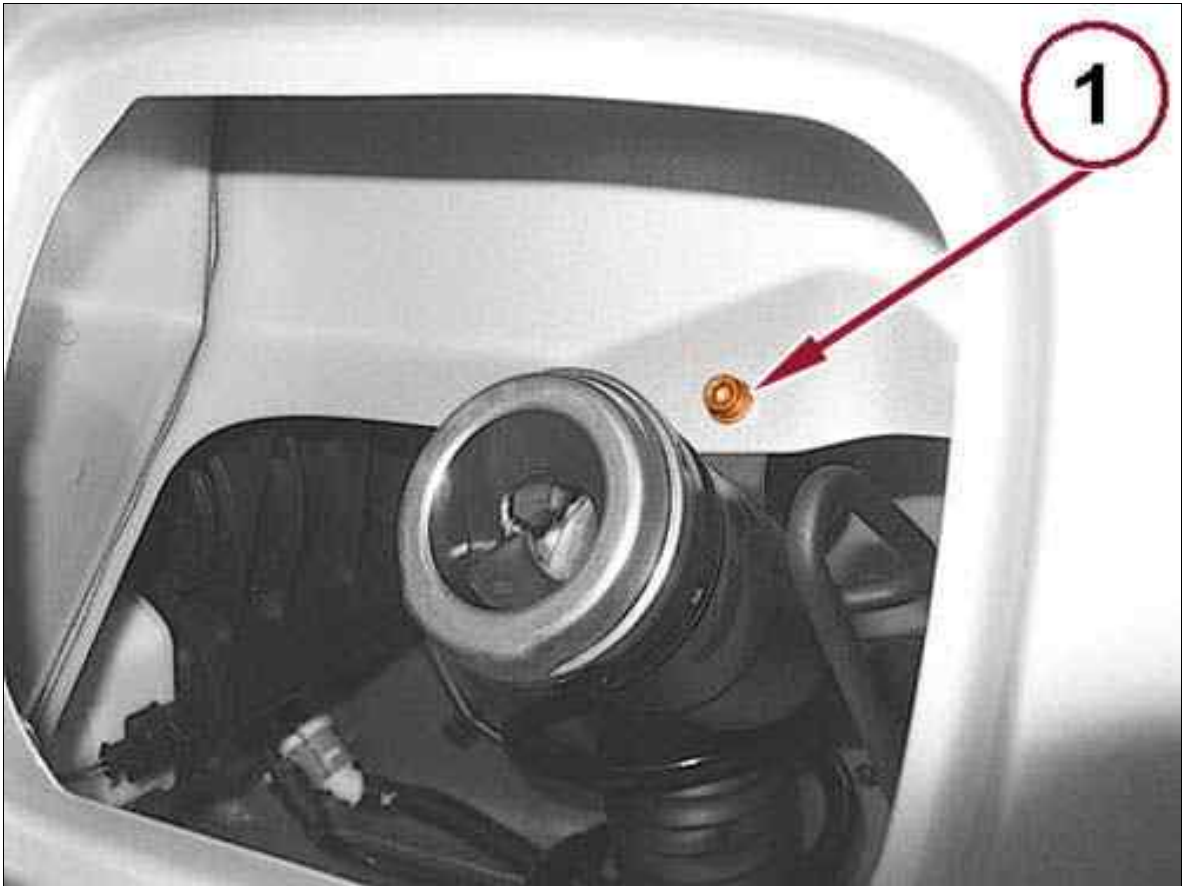
Fig 1: Door Retention Device, Fuel Door, Clips & Screw



Courtesy of CHRYSLER GROUP, LLC

3. Rotate the screw (1a) 90° and remove the door retention device (1b).
4. Disengage the clips (2a) and remove the fuel door (2b).

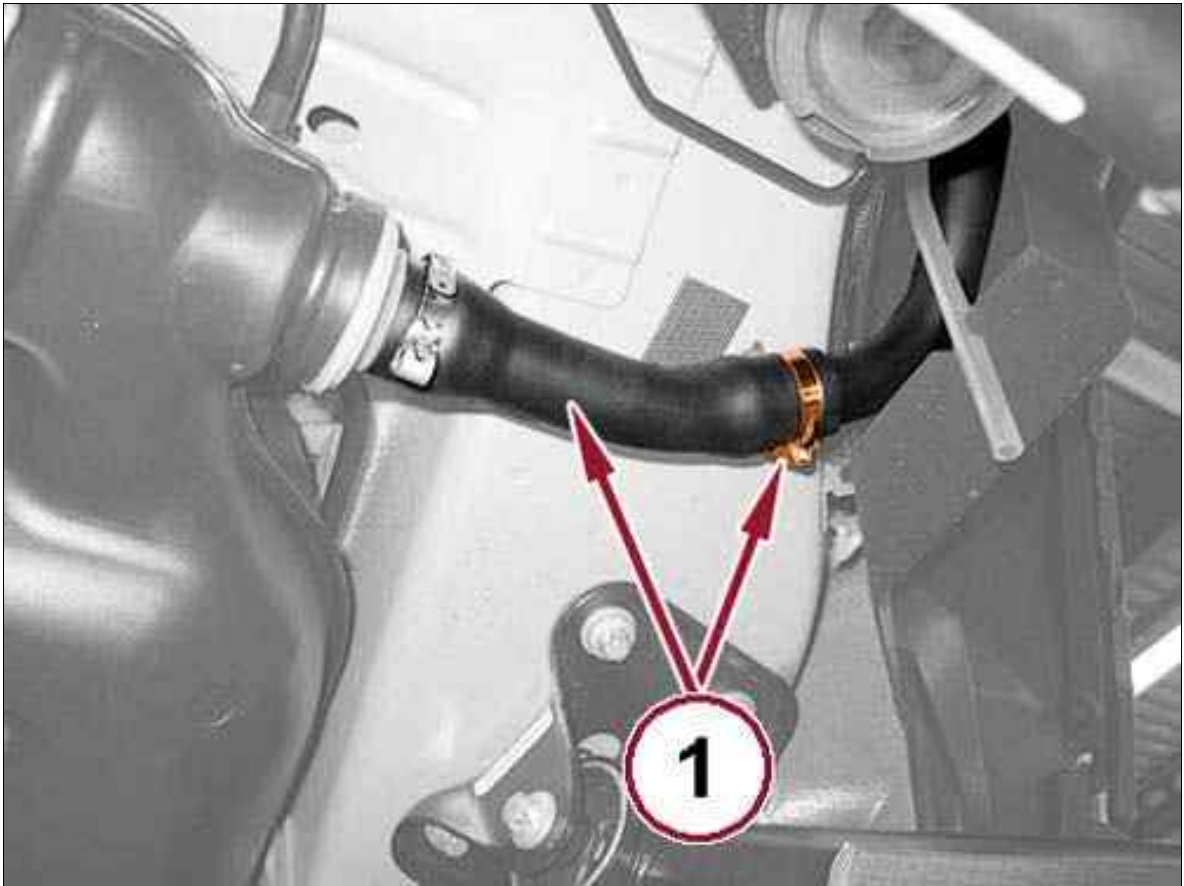
Fig 2: Fuel Filler Tube Retaining Screw



Courtesy of CHRYSLER GROUP, LLC

5. Remove the fuel filler tube retaining screw (1).

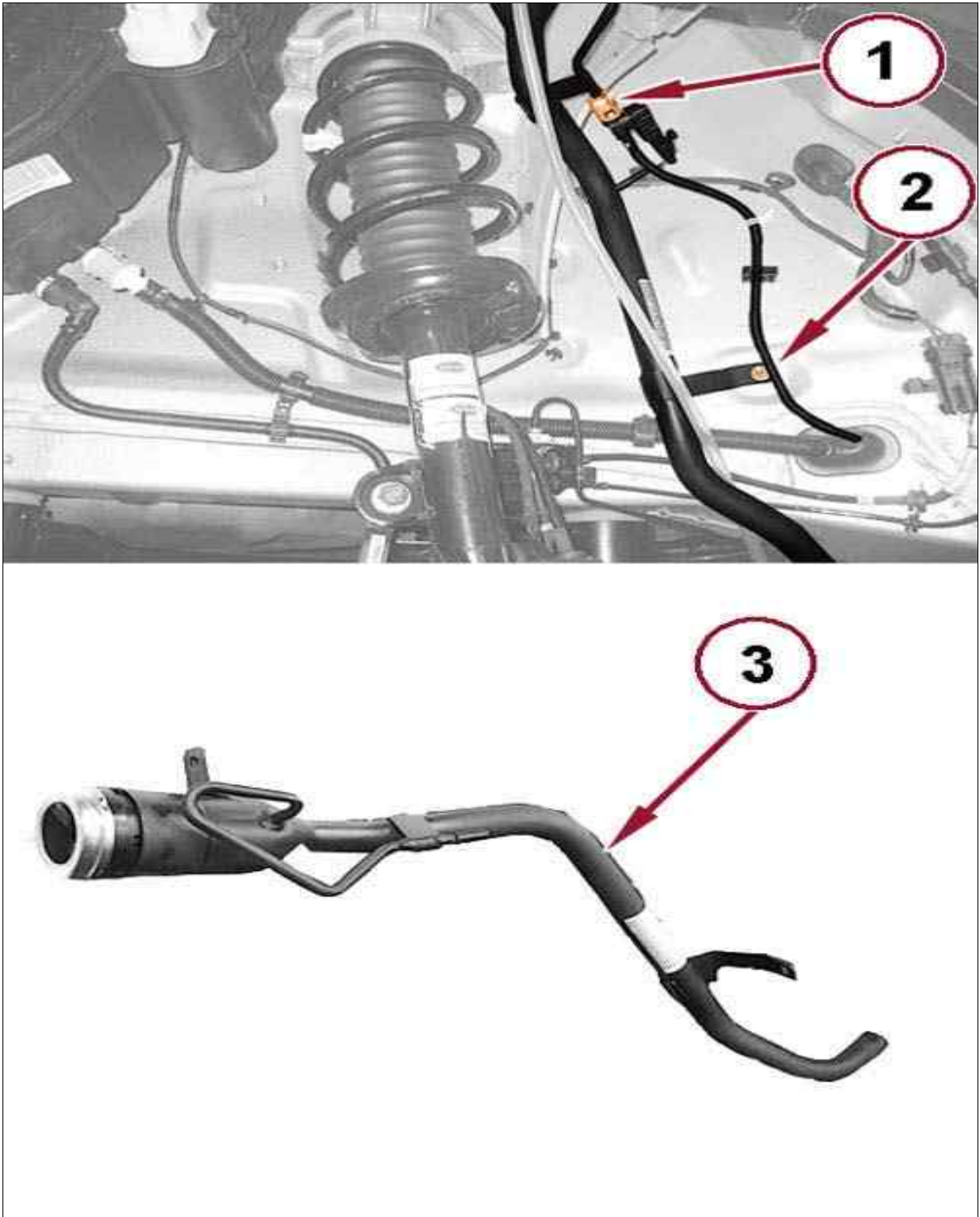
Fig 3: Fuel Fill Tube Hose & Clamp



Courtesy of CHRYSLER GROUP, LLC

6. Loosen the clamp and disconnect the hose from the fuel filler tube (1).

Fig 4: Fuel Vapor Line Quick Connector, Retaining Nut & Fuel Filler Tube



Courtesy of CHRYSLER GROUP, LLC

7. Disconnect the fuel vapor line quick connector (1).
8. Remove the retaining nut (2), securing the fuel filler tube to the body.
9. Remove the fuel filler tube (3).

FUEL DELIVERY > TUBE, FUEL TANK FILLER > REMOVAL AND INSTALLATION >

1.4L 4X4 > INSTALLATION

1. Position the fuel filler tube and install the tube to body retaining nut.
2. Connect the fuel vapor line quick connector.
3. Connect the hose to fuel filler tube and securely tighten the clamp.
4. Securely tighten the filler tube retaining screw.
5. Install the fuel door, engaging the retaining clips.
6. Position the door retention device and turn the screw 90°.
7. Install the right rear splash shield. Refer to SHIELD, SPLASH, REAR WHEELHOUSE, REMOVAL AND INSTALLATION .
8. Remove the car from the lift.

FUEL DELIVERY > TUBE, FUEL TANK FILLER > REMOVAL AND INSTALLATION >

2.4L > REMOVAL

1. Place the car on a lift.
2. Remove the right rear splash shield. Refer to SHIELD, SPLASH, REAR WHEELHOUSE, REMOVAL AND INSTALLATION .

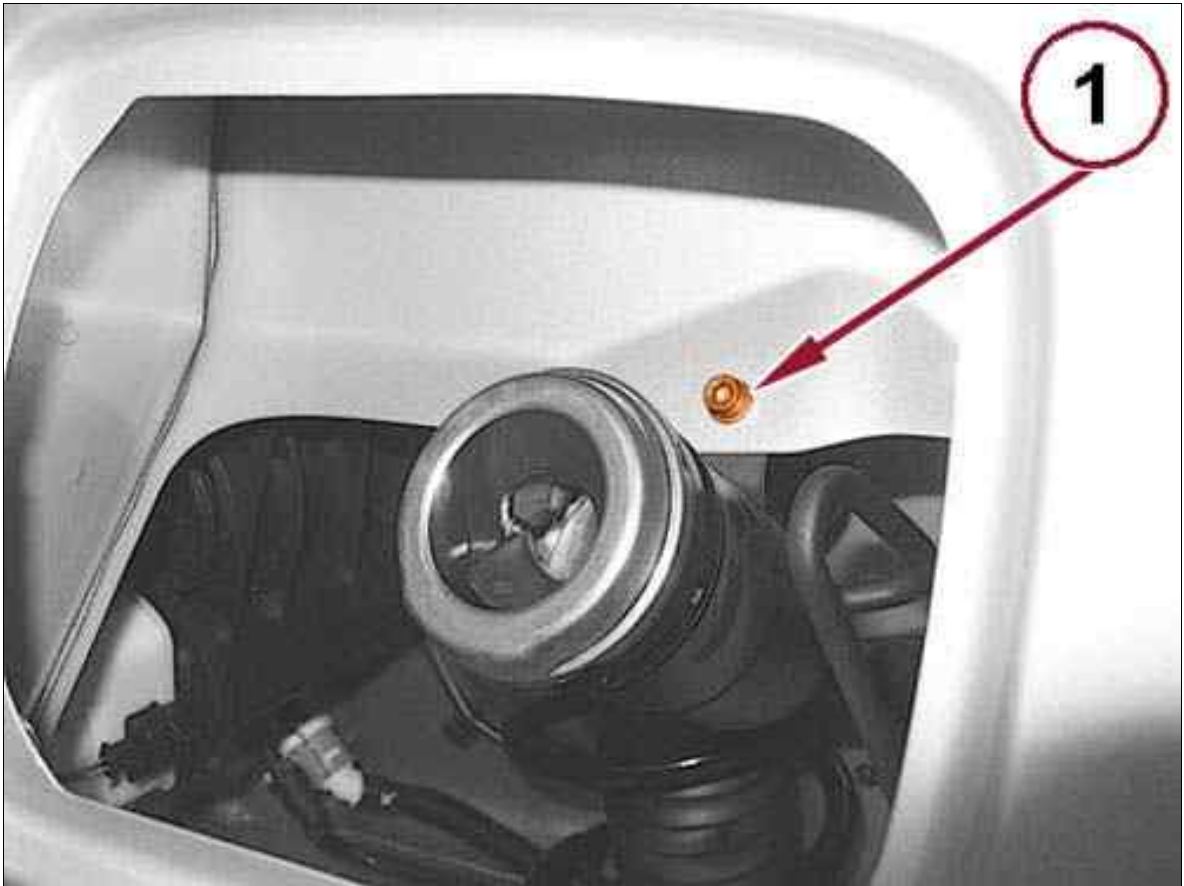
Fig 1: Door Retention Device, Fuel Door, Clips & Screw



Courtesy of CHRYSLER GROUP, LLC

3. Rotate the screw (1a) 90° and remove the door retention device (1b).
4. Disengage the clips (2a) and remove the fuel door (2b).

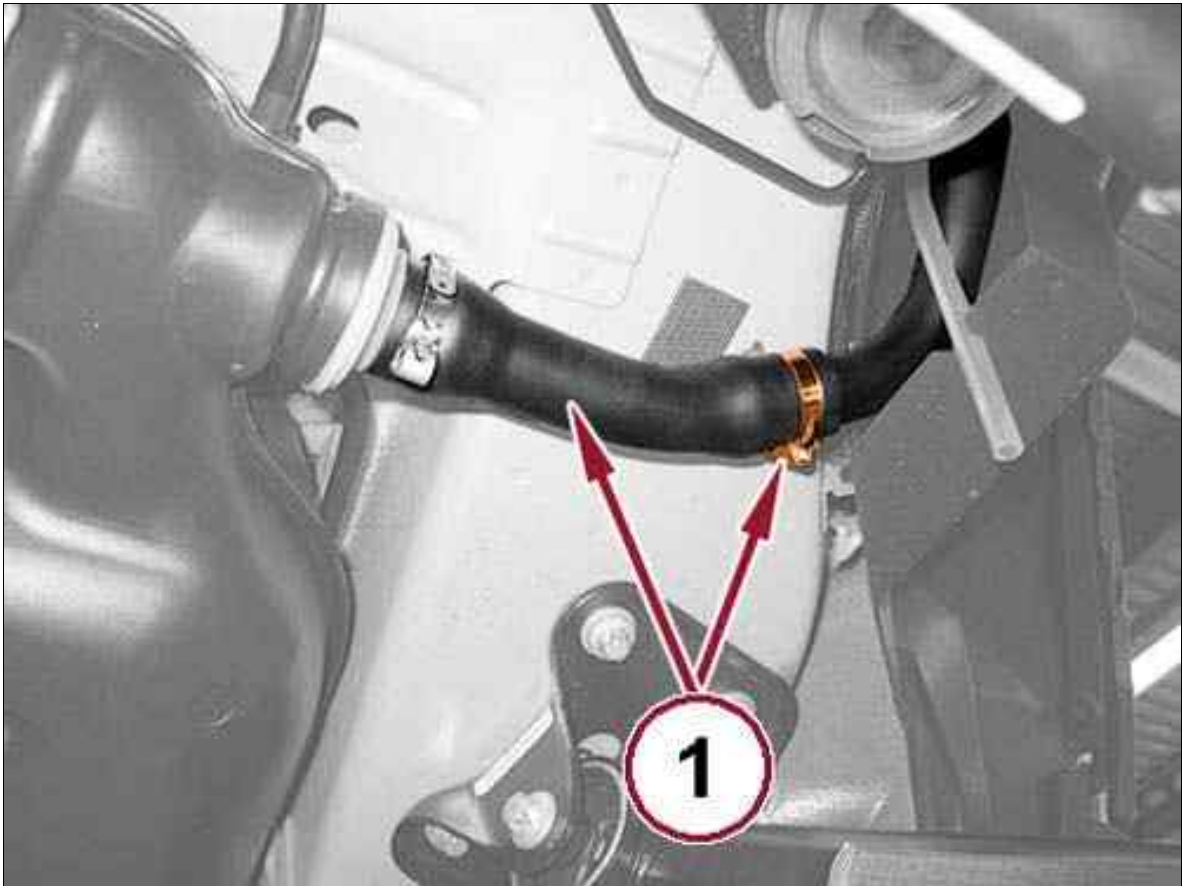
Fig 2: Fuel Filler Tube Retaining Screw



Courtesy of CHRYSLER GROUP, LLC

5. Remove the fuel filler tube retaining screw (1).

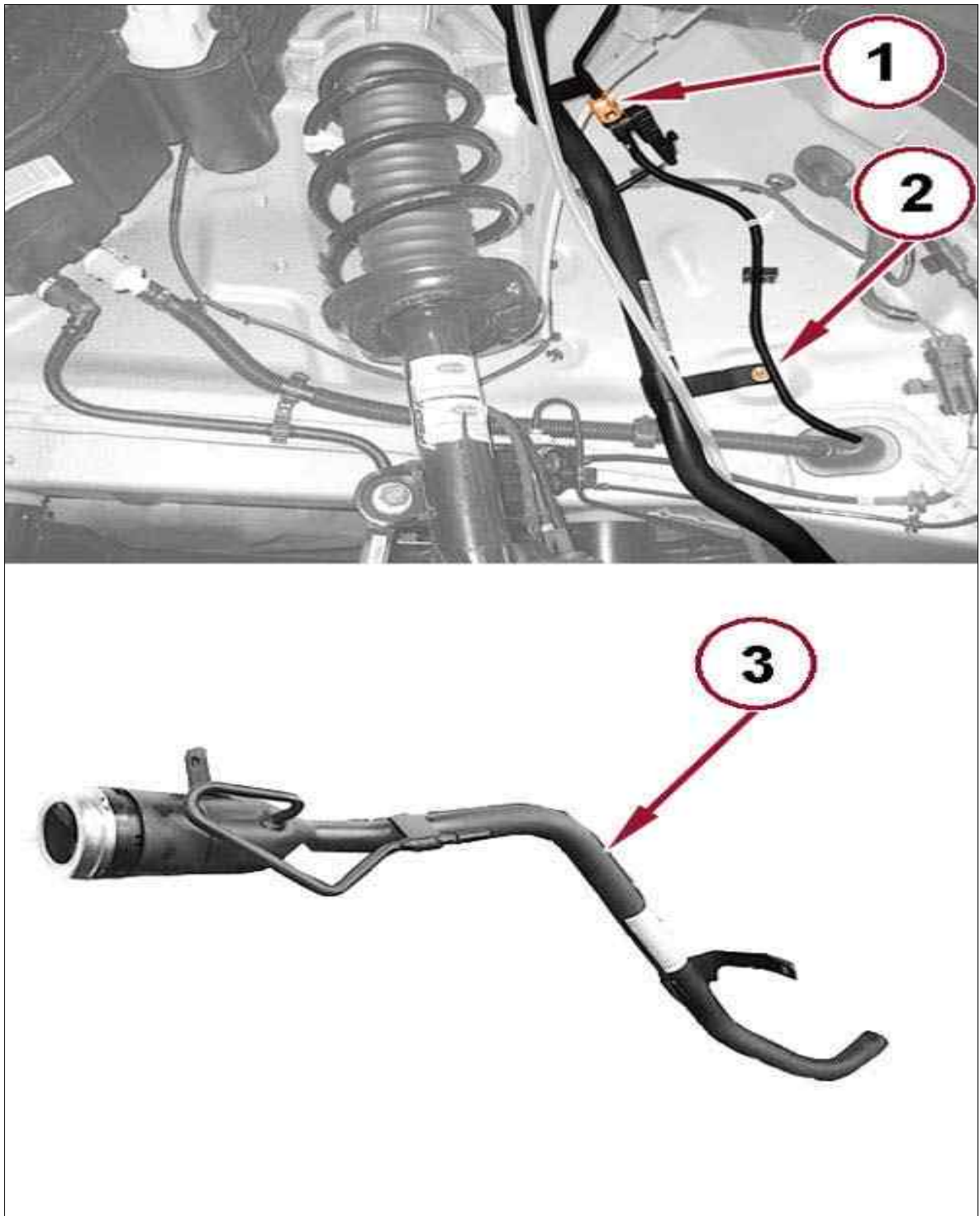
Fig 3: Fuel Fill Tube Hose & Clamp



Courtesy of CHRYSLER GROUP, LLC

6. Loosen the clamp and disconnect the hose from the fuel filler tube (1).

Fig 4: Fuel Vapor Line Quick Connector, Retaining Nut & Fuel Filler Tube



Courtesy of CHRYSLER GROUP, LLC

7. Disconnect the fuel vapor line quick connector (1).
8. Remove the retaining nut (2), securing the fuel filler tube to the body.
9. Remove the fuel filler tube (3).

FUEL DELIVERY > TUBE, FUEL TANK FILLER > REMOVAL AND INSTALLATION >

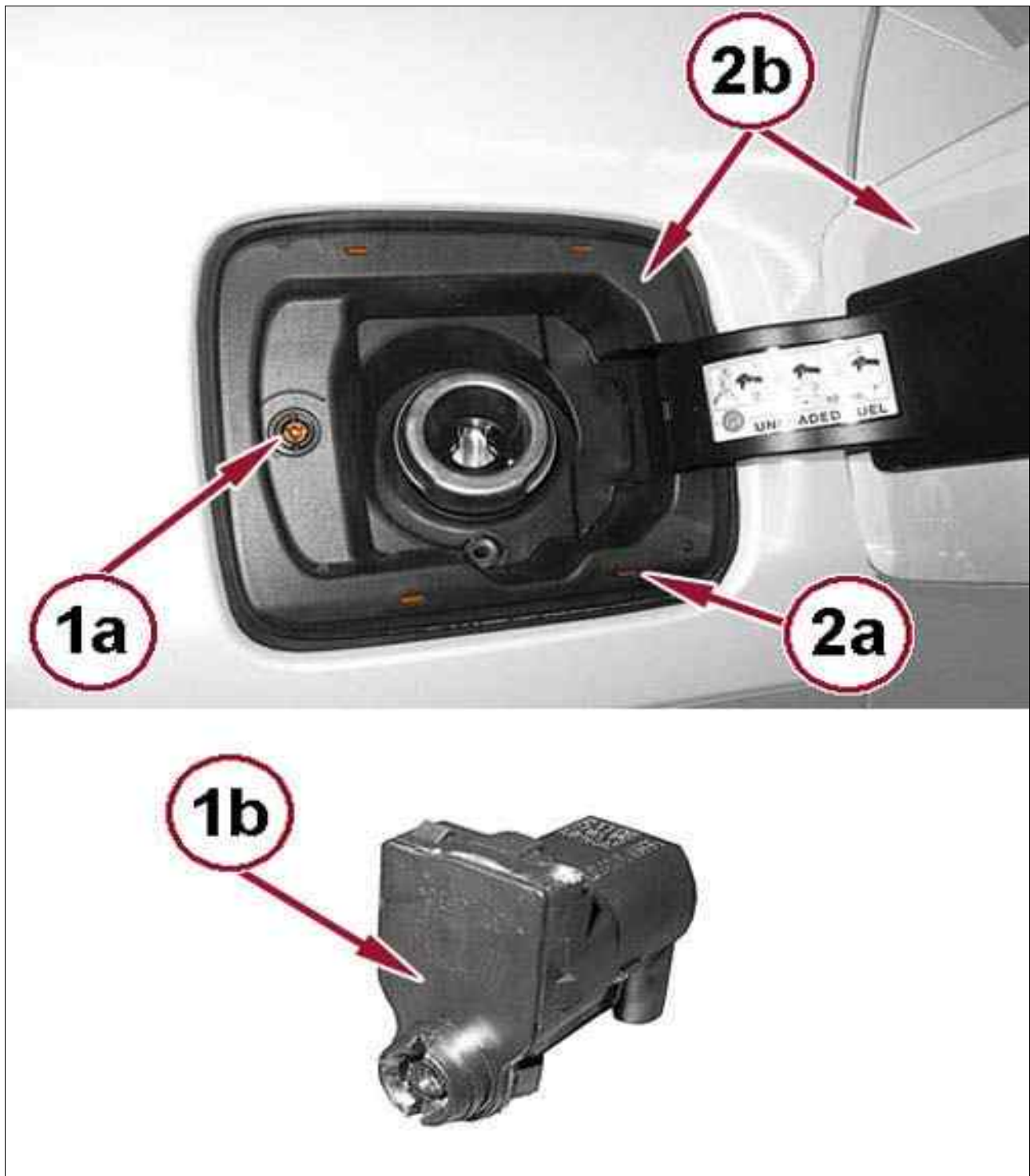
2.4L > INSTALLATION

1. Position the fuel filler tube and install the tube to body retaining nut.
2. Connect the fuel vapor line quick connector.
3. Connect the hose to fuel filler tube and securely tighten the clamp.
4. Securely tighten the filler tube retaining screw.
5. Install the fuel door, engaging the retaining clips.
6. Position the door retention device and turn the screw 90°.
7. Install the right rear splash shield. Refer to SHIELD, SPLASH, REAR WHEELHOUSE, REMOVAL AND INSTALLATION .
8. Remove the car from the lift.

FUEL DELIVERY > RECEPTACLE, FUEL FILL > REMOVAL AND INSTALLATION >

1.4L, 1.6L, 2.0L > REMOVAL

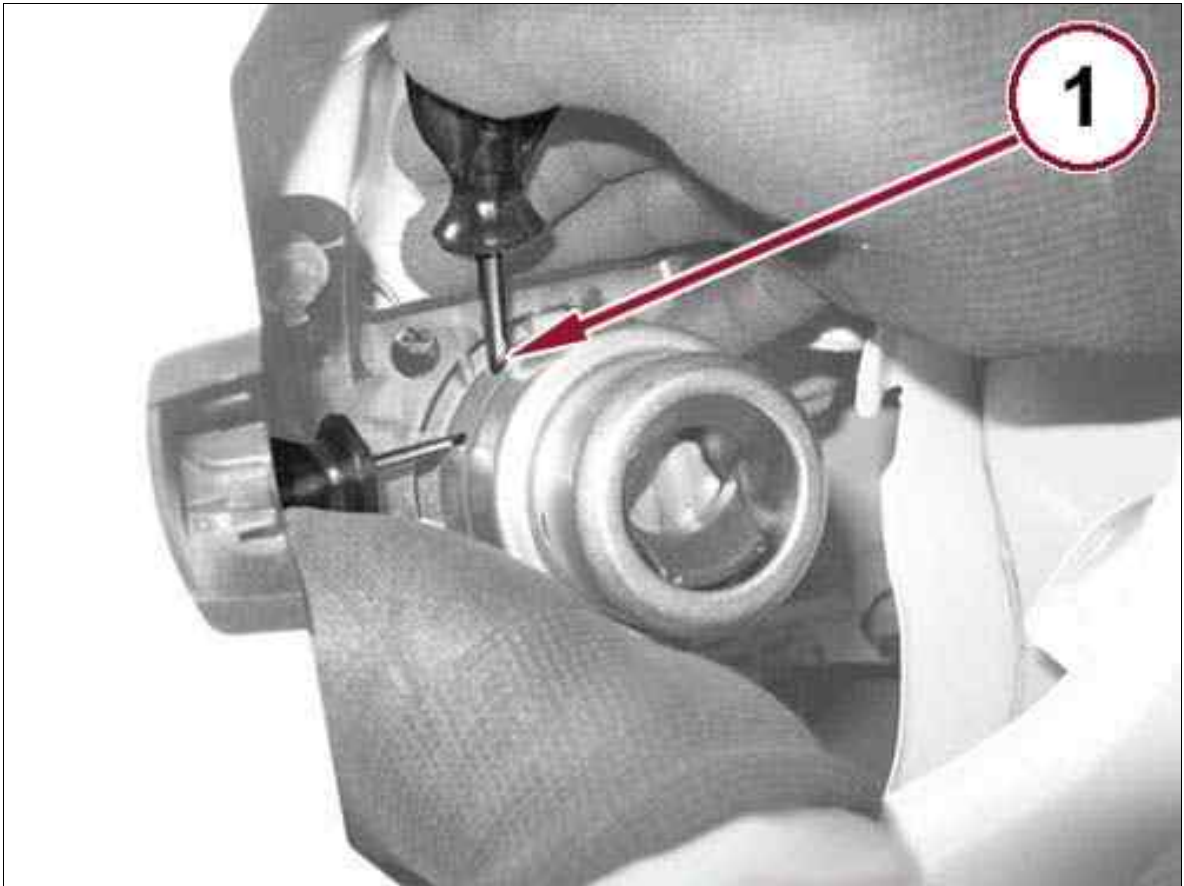
Fig 1: Fuel Fill Door, Screw, Clips & Door Retaining Device



Courtesy of CHRYSLER GROUP, LLC

1. Rotate the screw (1a) 90° and remove the device for retaining the door (1b).
2. Detach the clips (2a) and remove the fuel fill door (2b).

Fig 2: Retaining Clips Of Capless Fuel Fill Receptacle



Courtesy of CHRYSLER GROUP, LLC

3. Working with suitable screwdriver, lift the four retaining clips of the capless fuel fill receptacle (1).
4. With the tool unseat capless fuel fill receptacle.
5. Remove the capless fuel fill receptacle to replace.

FUEL DELIVERY > RECEPTACLE, FUEL FILL > REMOVAL AND INSTALLATION > 1.4L, 1.6L, 2.0L > INSTALLATION

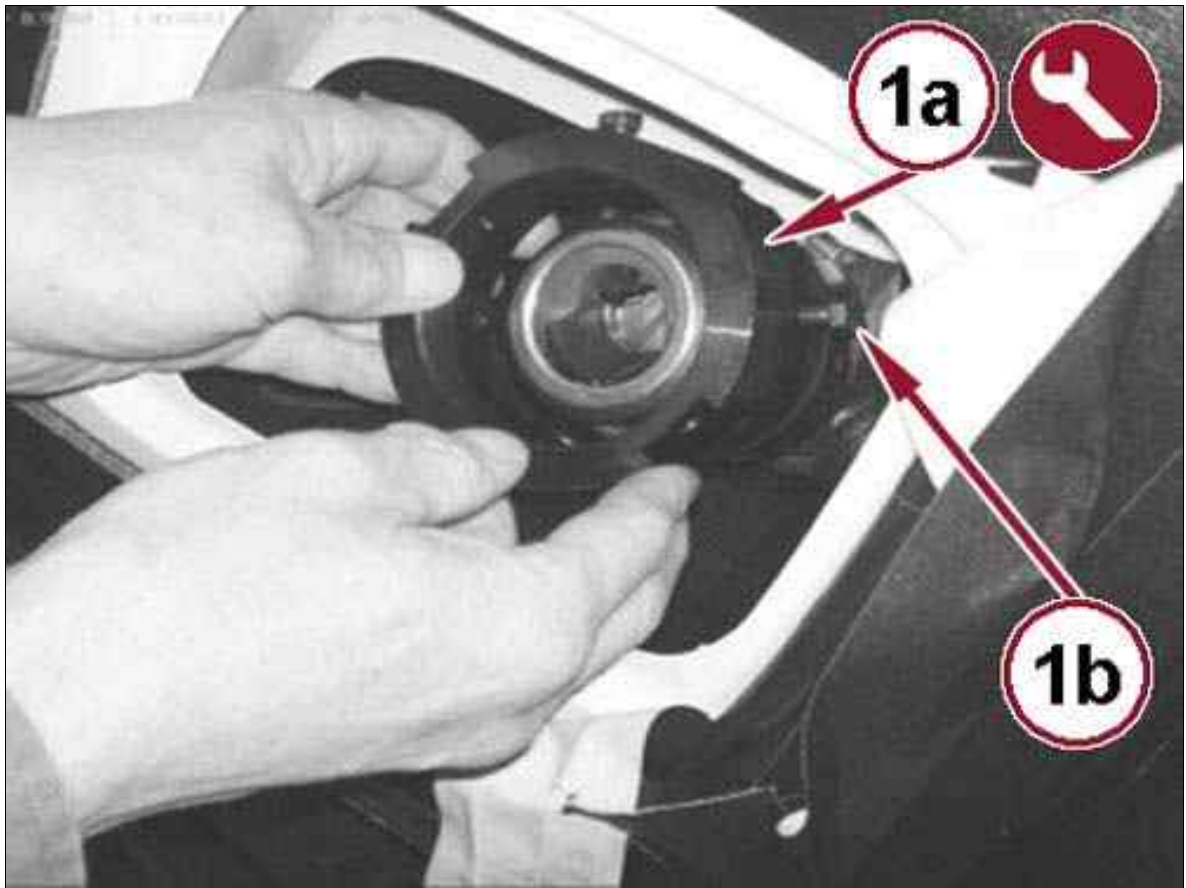
1. Install a new O-ring, supplied with the new capless fuel fill receptacle.

NOTE:

Make sure that the O-ring is properly positioned in the throat of the fuel fill tube.

2. Place in its seat the new capless fuel fill receptacle aligning the groove with the tooth of the fuel fill tube.

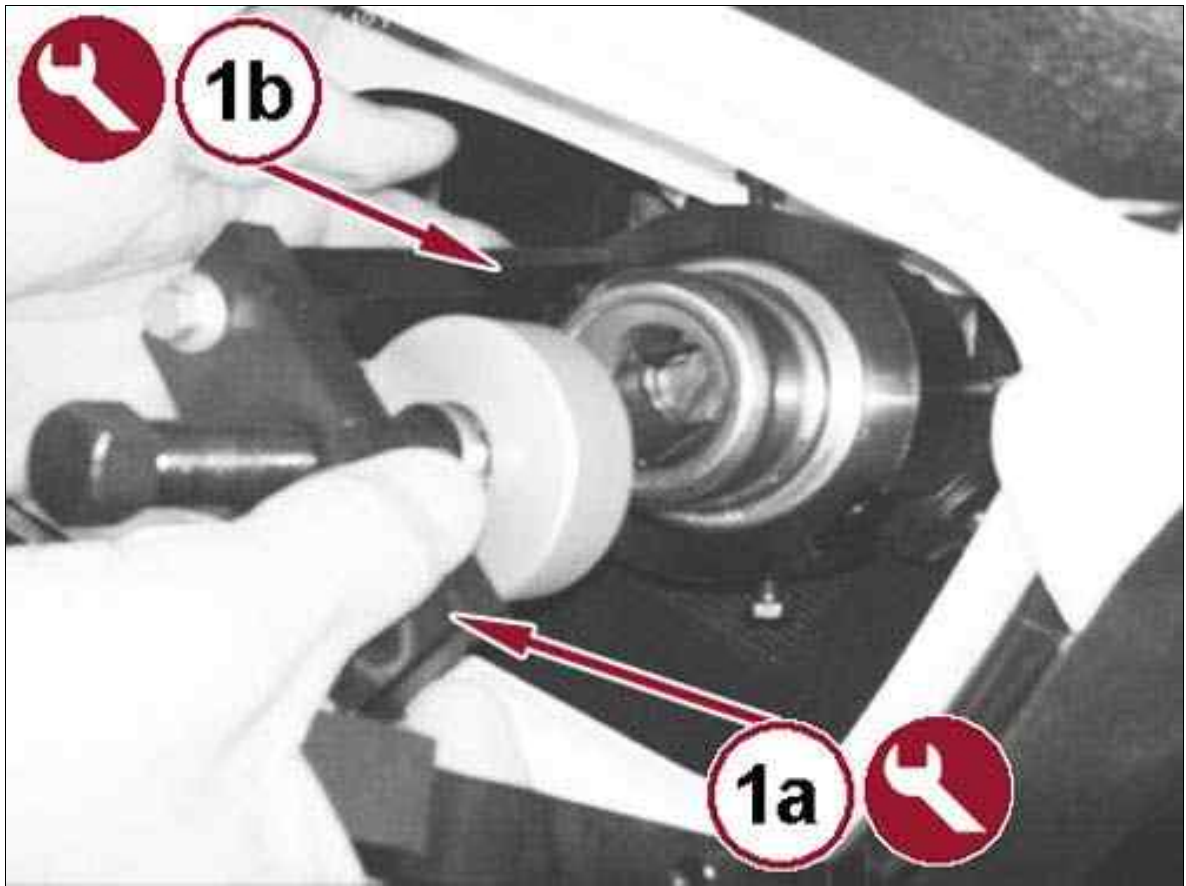
Fig 1: Ring & Screws



Courtesy of CHRYSLER GROUP, LLC

3. Place the ring (1a) of the installation tool (2000039800) so that the screws (1b) coincide with the four fastening clips of the capless fuel fill receptacle.

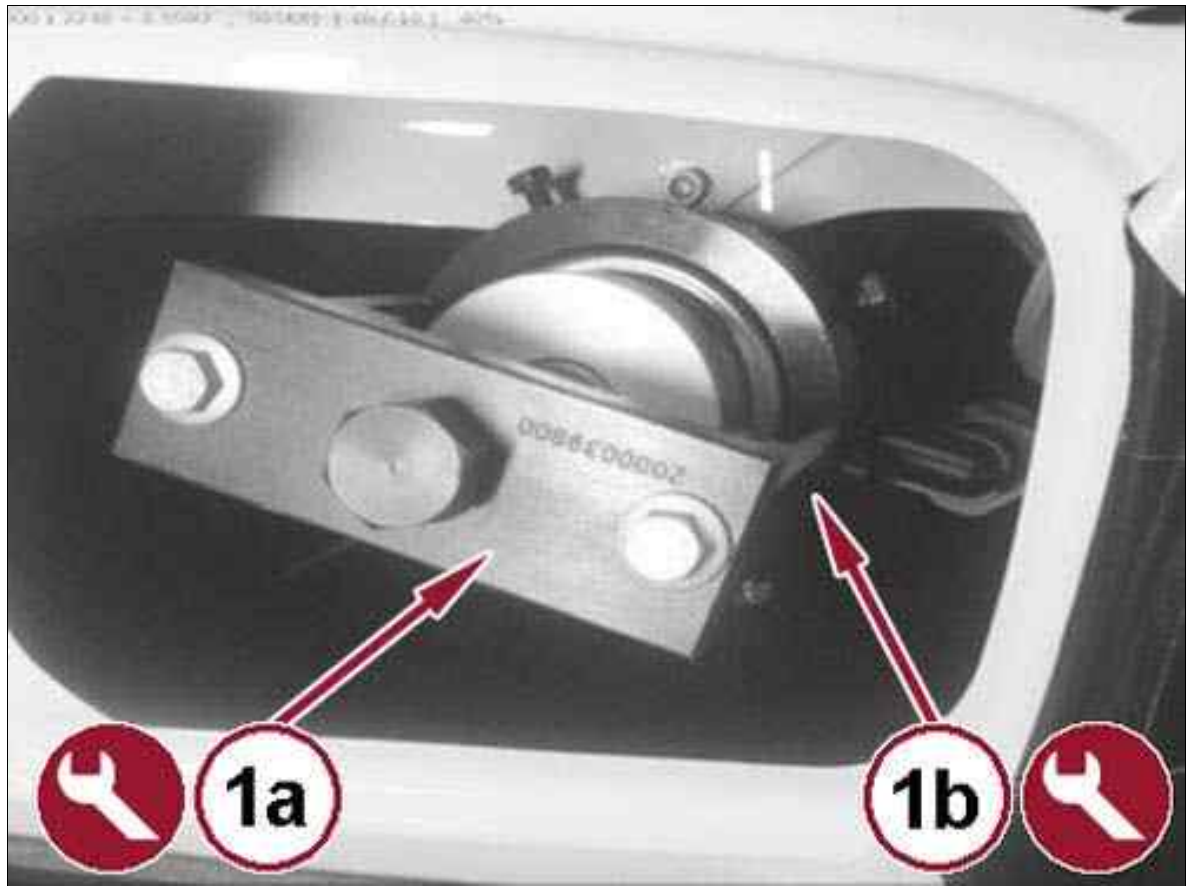
Fig 2: Preparing The Installation Tools



Courtesy of CHRYSLER GROUP, LLC

4. Prepare the installation tool (2000042900) (1a) and (1b) as shown in the illustration.

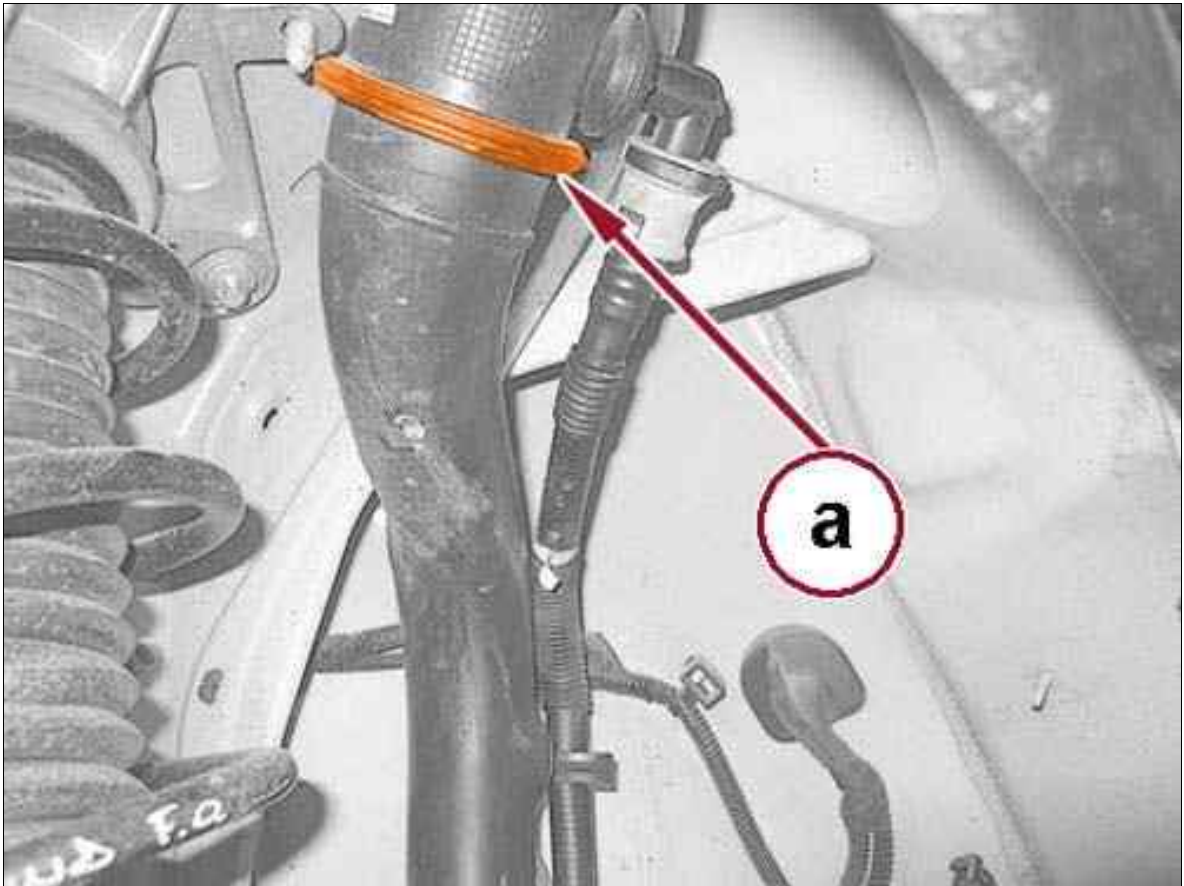
Fig 3: Positioning Special Tools



Courtesy of CHRYSLER GROUP, LLC

5. Position the tools (1a) and (1b) as shown in the illustration.

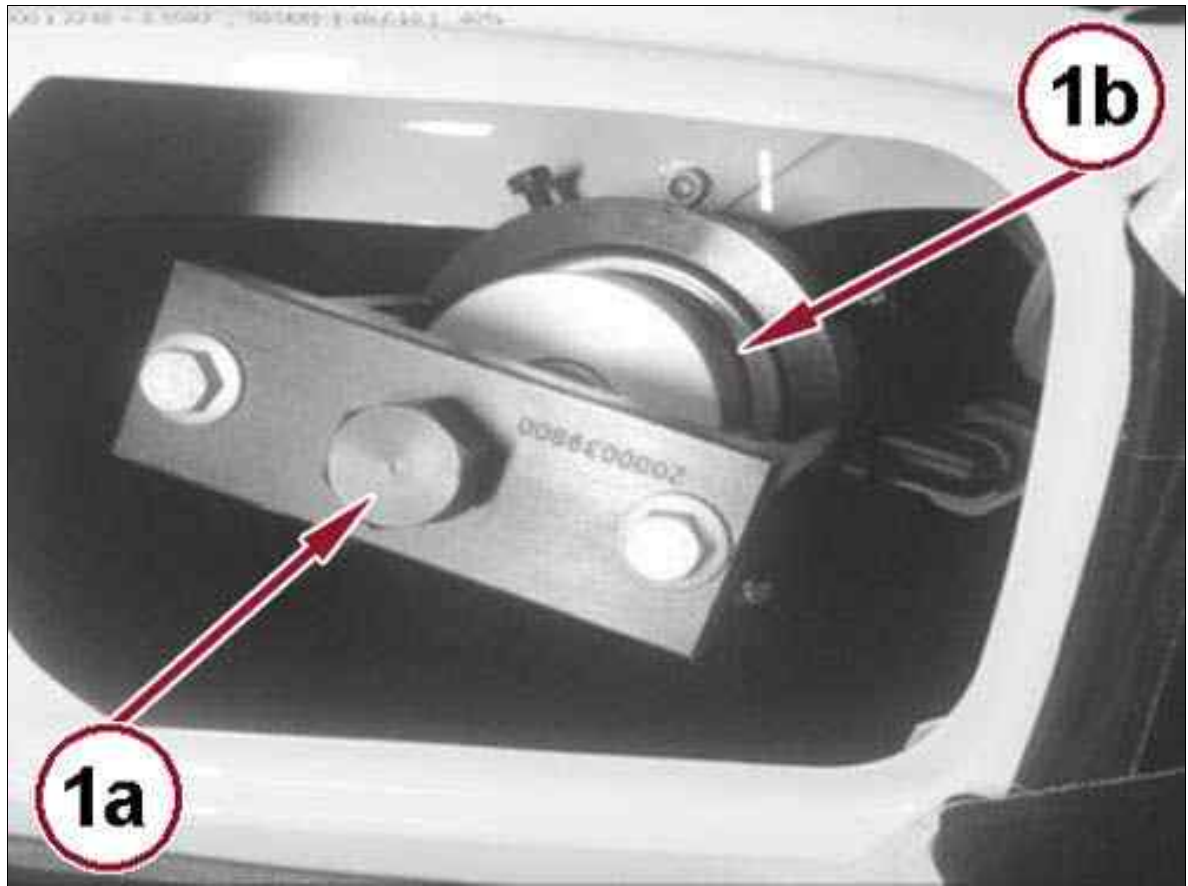
Fig 4: Fuel Fill Tube Ring & Collar



Courtesy of CHRYSLER GROUP, LLC

6. Check that the jaws have engaged the ring and the collar "a" of the fuel fill tube.

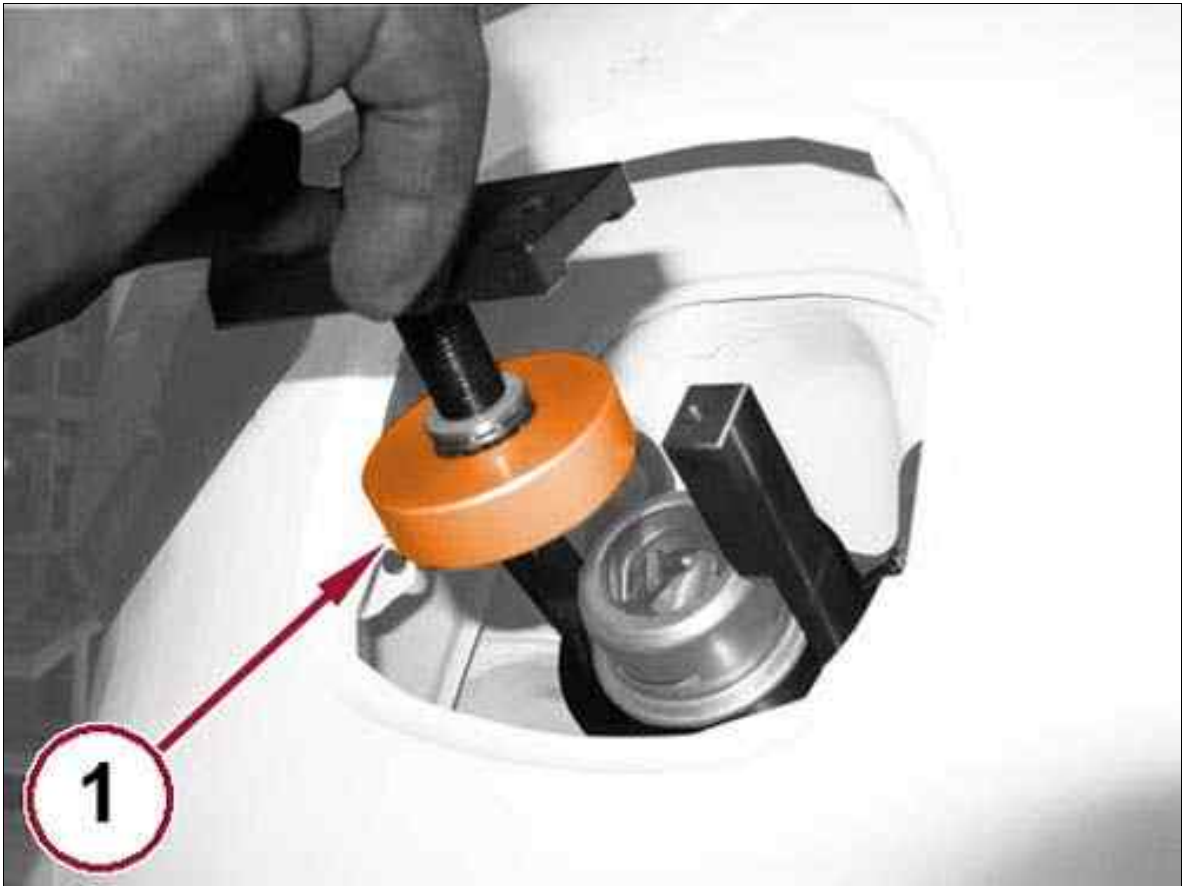
Fig 5: Capless Fuel Fill Receptacle & Screw



Courtesy of CHRYSLER GROUP, LLC

7. Tighten the screw (1a) to engage the capless fuel fill receptacle (1b) on the collar of the fuel fill tube.

Fig 6: Unscrewing The Screws And Remove The Driver



Courtesy of CHRYSLER GROUP, LLC

8. Unscrew the screws and remove the driver shown in the figure (1).
9. Tighten the screws into the rings to crush the four fasteners.
10. Remove the tools and verify that the four pegs of the capless fuel fill receptacle are properly installed.
11. Install the fuel fill door, engaging the retaining clips.
12. Install the fuel door retaining device and rotate the screw 90°.

FUEL DELIVERY > SENSOR, WATER IN FUEL > REMOVAL AND INSTALLATION > 1.6L, 2.0L > REMOVAL

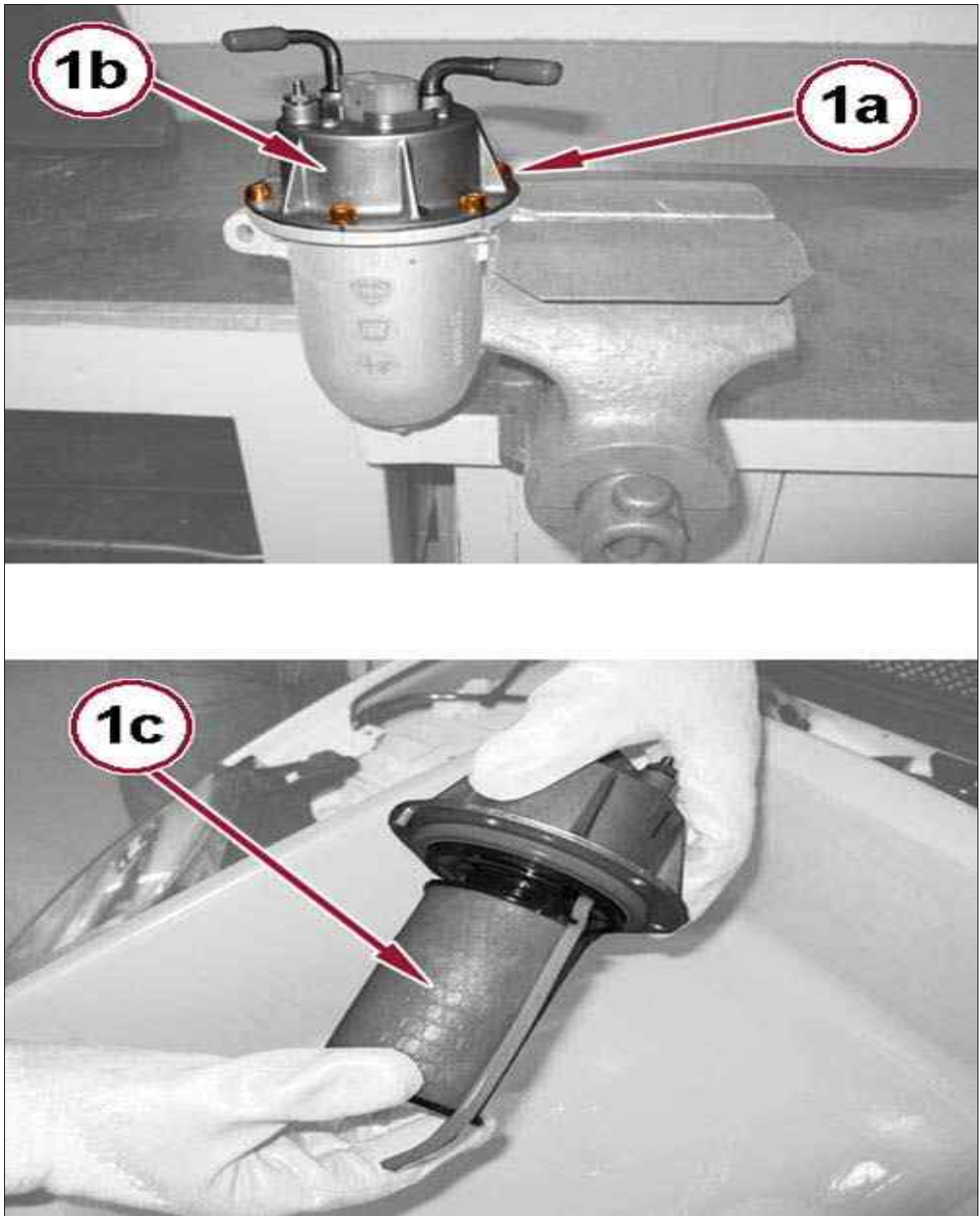


NOTE:

The water presence sensor is integrated in the filter of the fuel filter and therefore proceed as described below.

1. Remove the fuel filter. Refer to FILTER, FUEL, REMOVAL AND INSTALLATION .

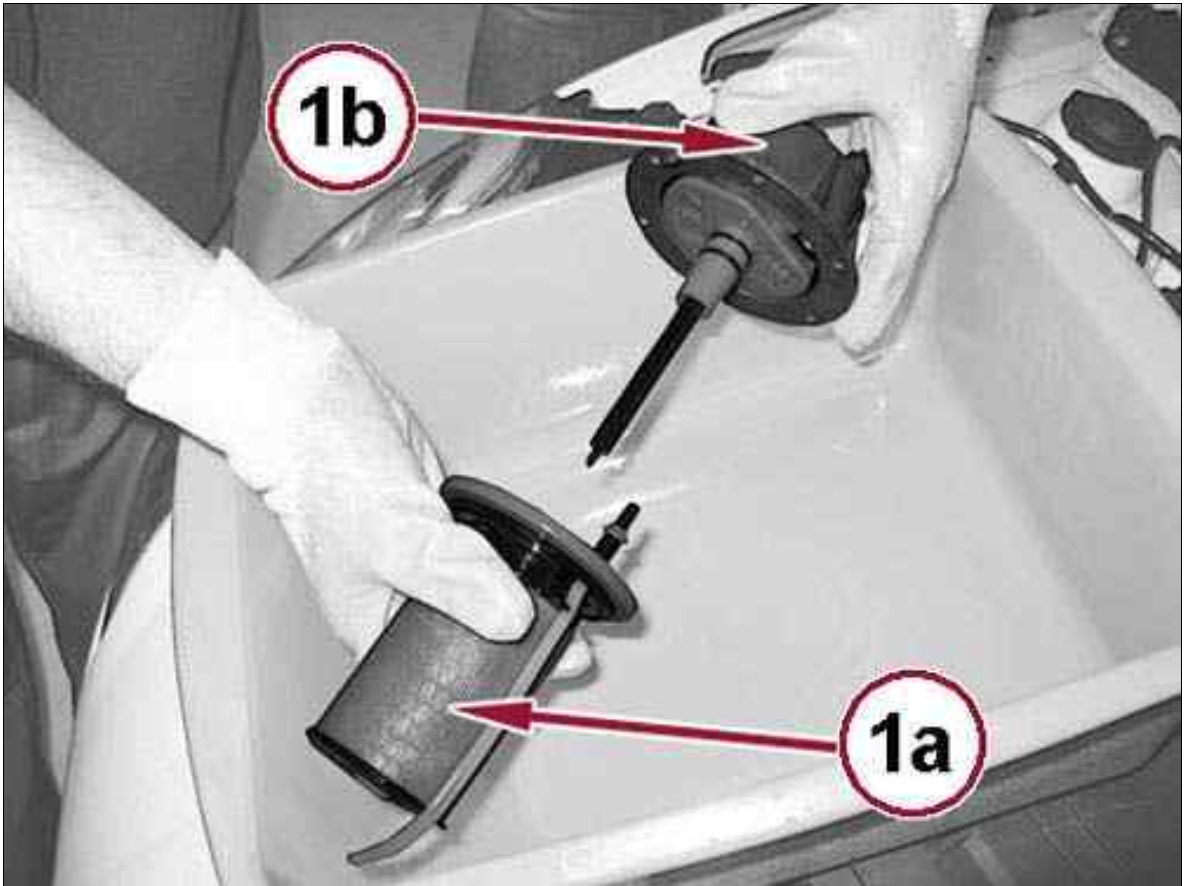
Fig 1: Fuel Filter Element, End Cover & Screws



Courtesy of CHRYSLER GROUP, LLC

2. Locate the fuel filter in a vice fitted with protective jaws.
3. Remove the screws (1a), remove the end cover (1b) complete with filter element (1c) and store it in a suitable container.

Fig 2: Filter Element & Cover



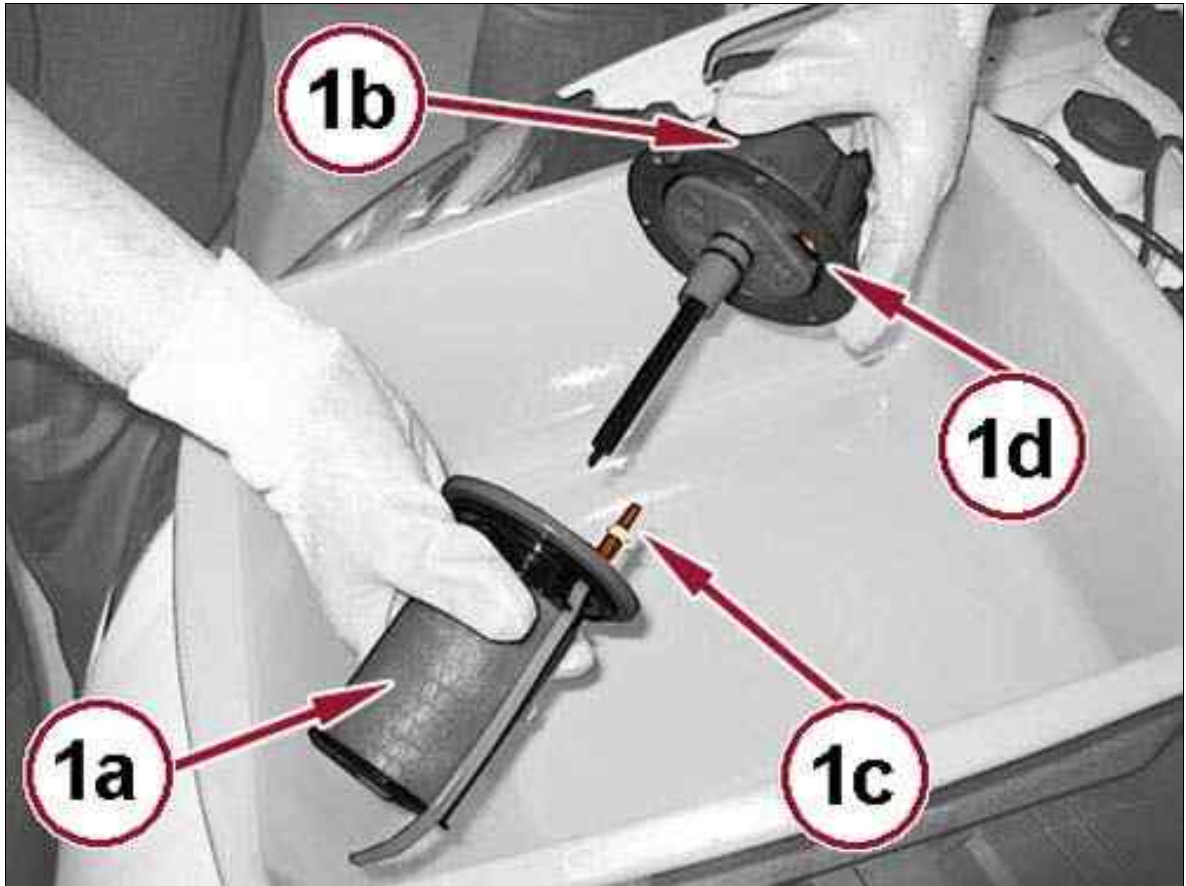
Courtesy of CHRYSLER GROUP, LLC

4. Remove the filter element (1a) from the cover (1b).

FUEL DELIVERY > SENSOR, WATER IN FUEL > REMOVAL AND INSTALLATION > 1.6L, 2.0L > INSTALLATION

1. In order not to compromise the functionality of the new filter element, it is recommended that you protect your hands with suitable gloves during all stages of assembly.

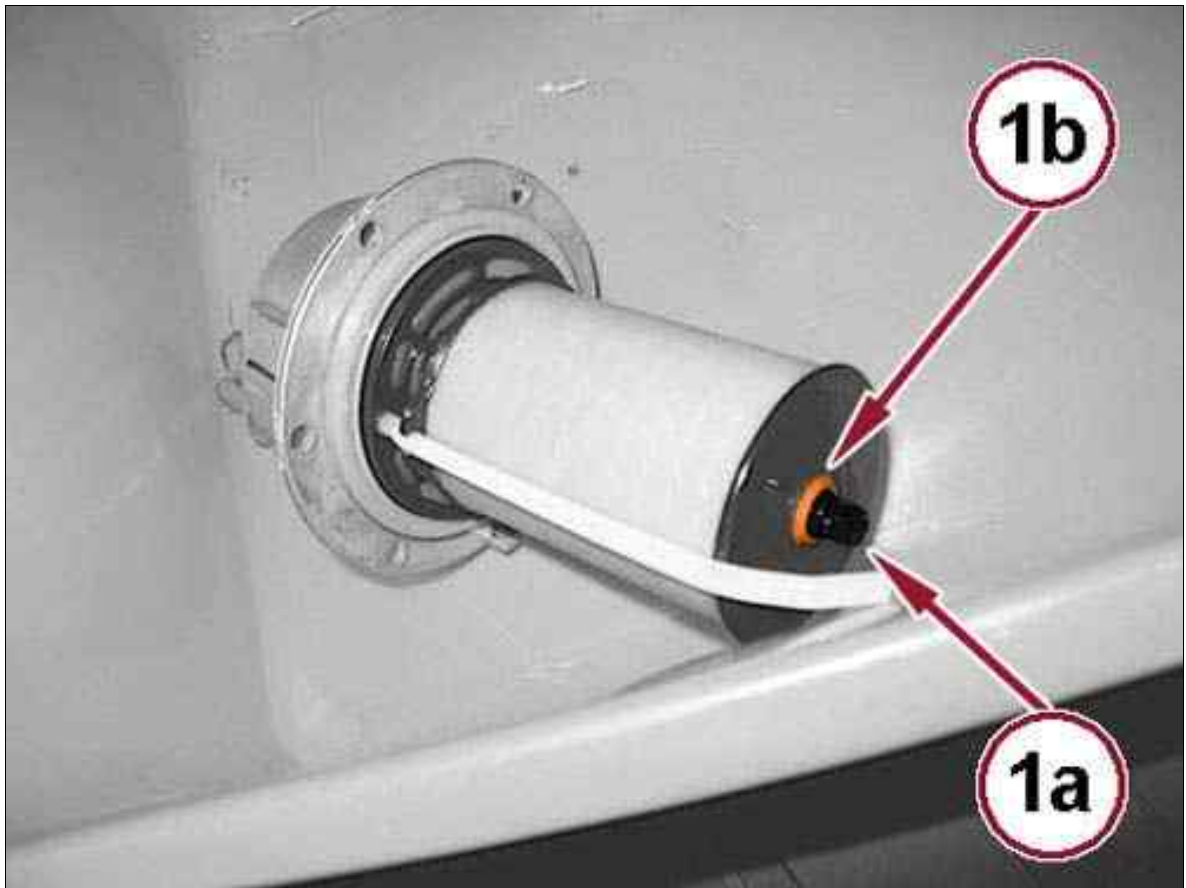
Fig 1: Filter Element, Lid, Water Drain Hose & Hole



Courtesy of CHRYSLER GROUP, LLC

2. Fit the new filter element (1a) in the lid (1b) engaging the water drain hose (1) into hole (1d) of the bleed valve.

Fig 2: Water Presence Sensor & Sealing Ring



Courtesy of CHRYSLER GROUP, LLC

3. Check the correct position of the water presence sensor (1a) and sealing ring (1b).

Fig 3: Filter Element Cover Tooth & Base Groove



Courtesy of CHRYSLER GROUP, LLC

4. Install the filter element cover, taking care to bind the tooth with the groove of the base (1).
5. Securely tighten the fuel filter cover fastening screws.
6. Remove the fuel filter from the vise.
7. Install the fuel filter. Refer to FILTER, FUEL, REMOVAL AND INSTALLATION .

FUEL INJECTION > SPECIFICATIONS > TORQUE SPECIFICATIONS

TORQUE SPECIFICATIONS

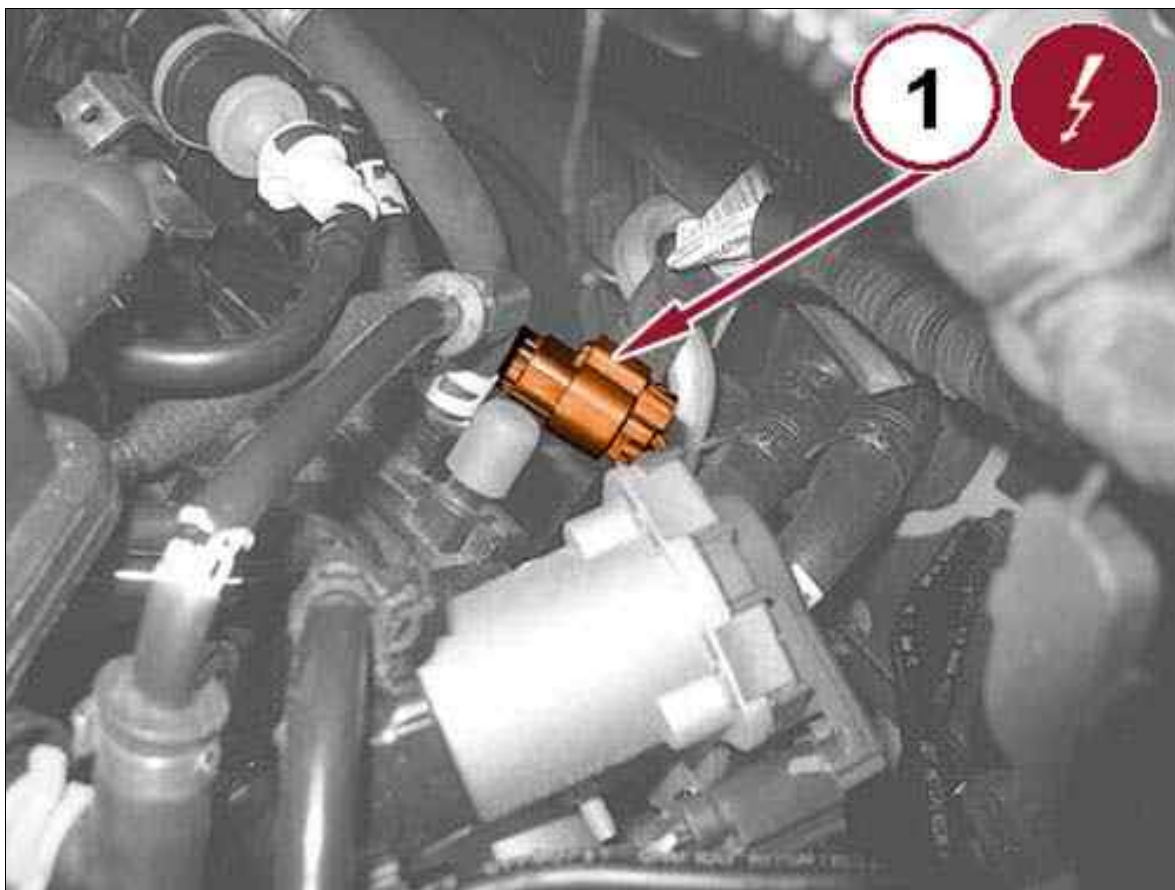
DESCRIPTION	N.m	Ft. Lbs.	In. Lbs.	NEW FASTENER*
Accelerator Pedal	6	-	53	
Crankshaft Position Sensor Bolt	9	-	80	
Fuel Injector Lines To Rail	19	14	-	
Fuel Injector Lines To Injector	23	17	-	
Injector Bracket Nuts	25	18	-	

Oxygen Sensors	50	37	-	
Throttle Body Bolts - Gas	8	-	71	
Throttle Body Nut - Gas	8		71	
Throttle Body Bolts - Diesel	25	18	-	
*NEW FASTENER: Do not reuse these fasteners. If removed, a new fastener must be installed and tightened to specifications.				

FUEL INJECTION > INJECTOR(S), FUEL > REMOVAL AND INSTALLATION > 1.4L > REMOVAL

1. Open the cover of the fuse box in the engine compartment and remove the fuse F21 (15 A) of the fuel pump.
2. Start the engine and run until the fuel in the lines is depleted.
3. Install the fuse removed earlier and close the fuse box cover.
4. Remove the engine cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .

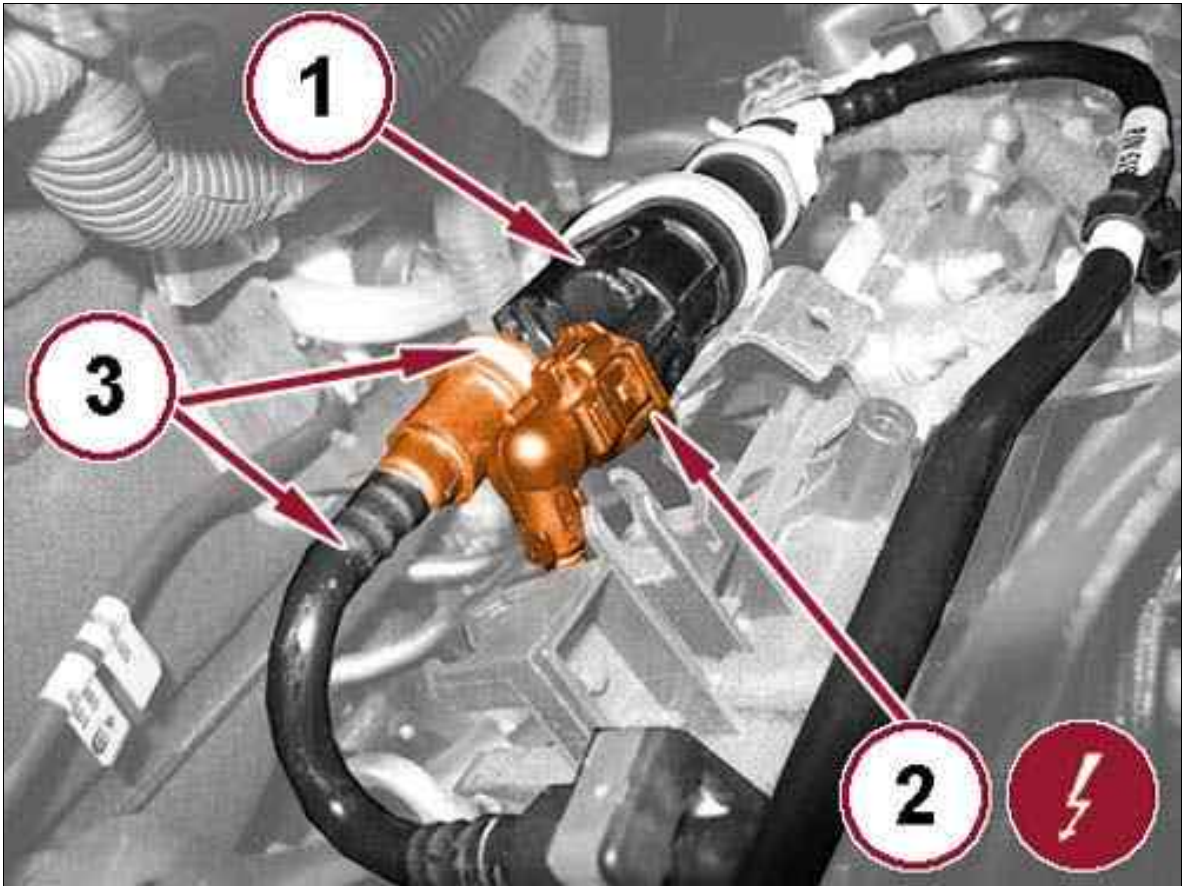
Fig 1: Wire Harness Connector



Courtesy of CHRYSLER GROUP, LLC

5. Disconnect the wire harness connector.

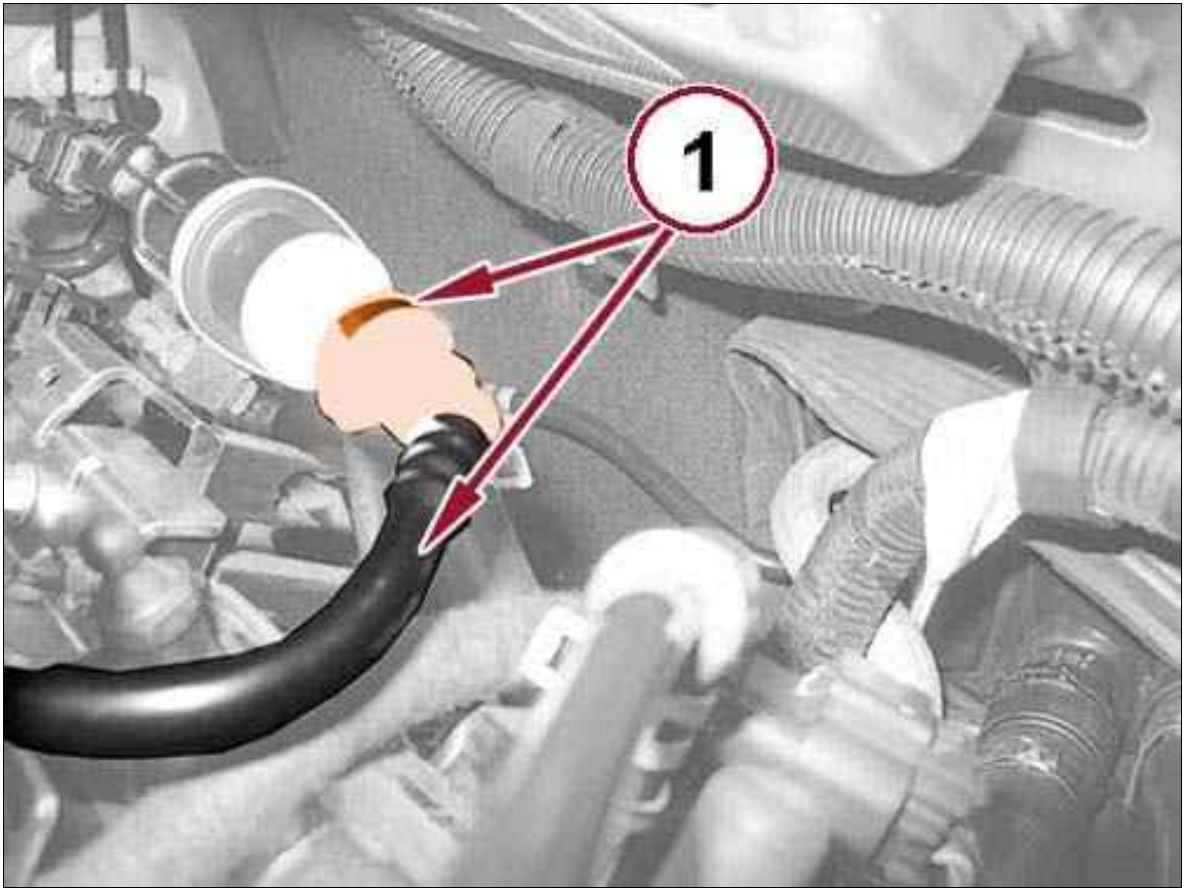
Fig 2: Fuel Vapor Solenoid Retaining Bracket, Connector & Quick Connect Inlet Hose



Courtesy of CHRYSLER GROUP, LLC

6. Remove the fuel vapor solenoid from the retaining bracket (1).
7. Disconnect the electrical connection of the fuel vapor solenoid (2).
8. Squeeze the clamp and disconnect the quick connect inlet hose to the vapor valve solenoid.

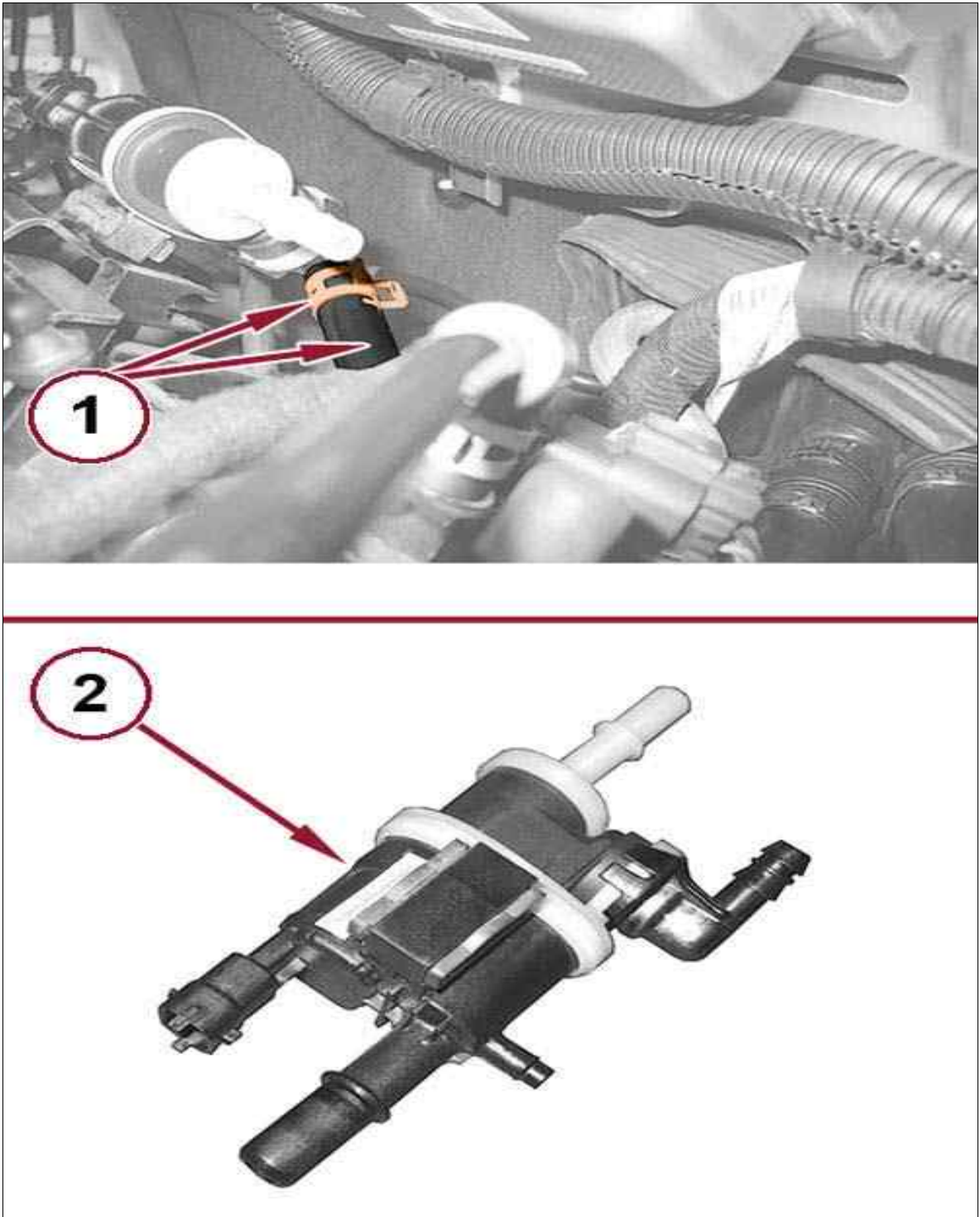
Fig 3: Turbocharger Fuel Vapor Intake Quick Coupling



Courtesy of CHRYSLER GROUP, LLC

9. Squeeze the clamp and disconnect the quick coupling of the hose to the inlet of the fuel vapor intake of the turbocharger (1).

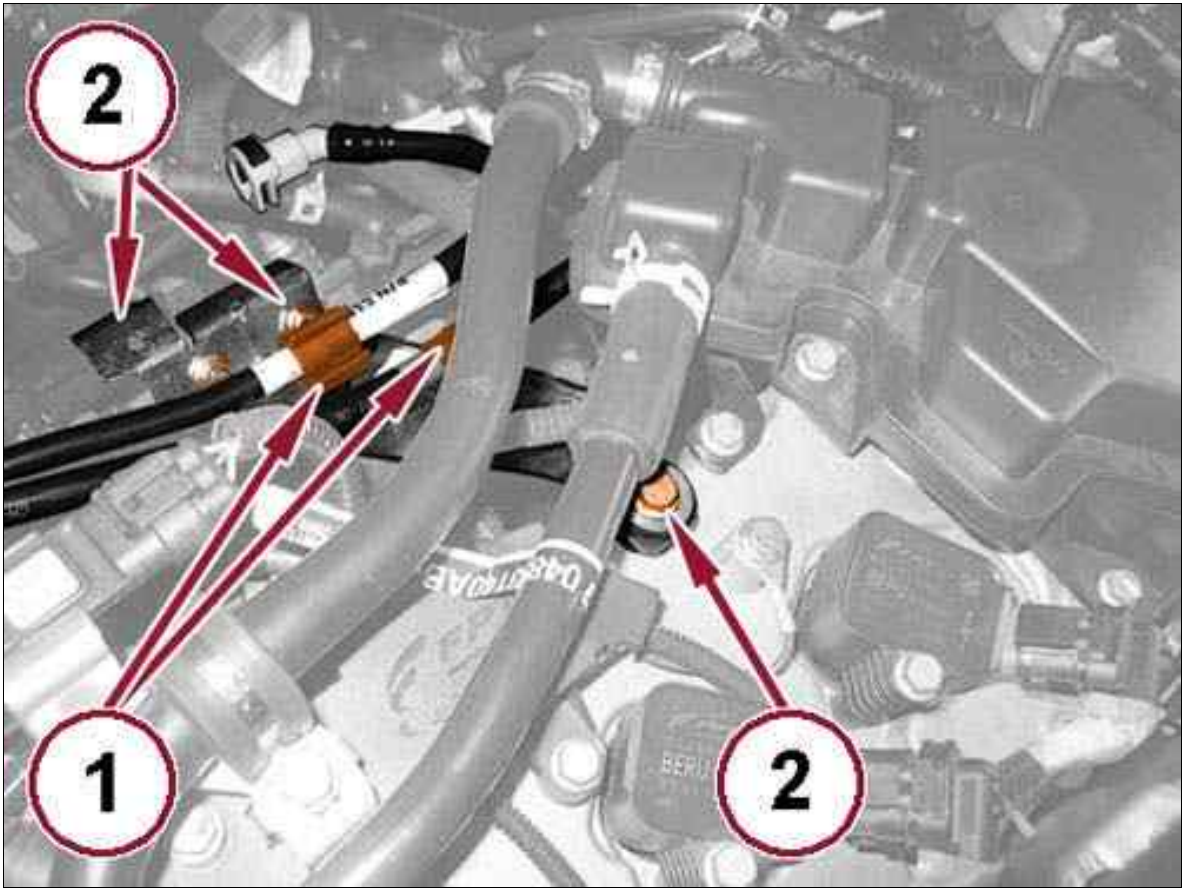
Fig 4: Fuel Vapor Solenoid & Fuel Vapor Vacuum Hose Clamp



Courtesy of CHRYSLER GROUP, LLC

10. Loosen the clamp and disconnect the fuel vapor vacuum hose.
11. Remove the fuel vapor solenoid.

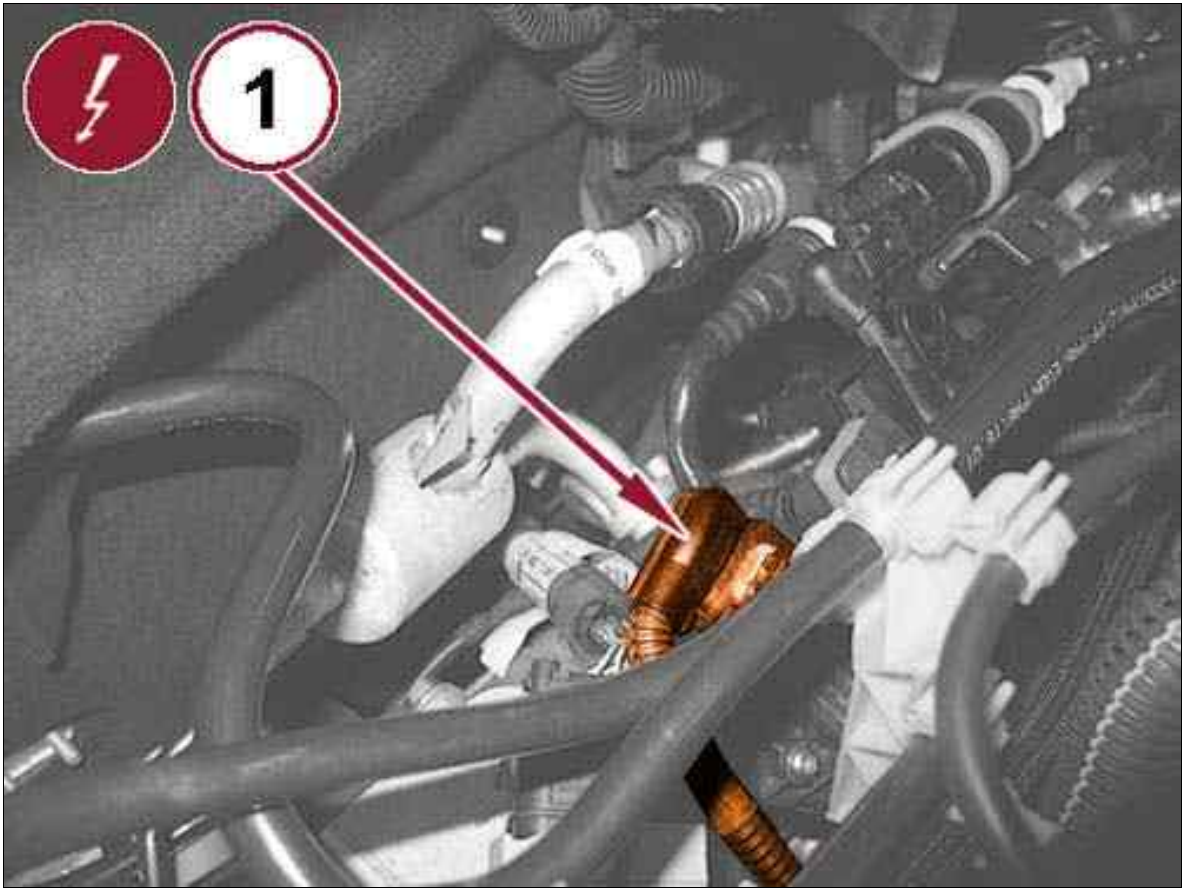
Fig 5: Reinforcement Bracket, Fasteners, Retaining Clips & Pipes



Courtesy of CHRYSLER GROUP, LLC

12. Open the retaining clips and disengage the pipes (1).
13. Unscrew the fasteners and remove the reinforcement bracket (2).

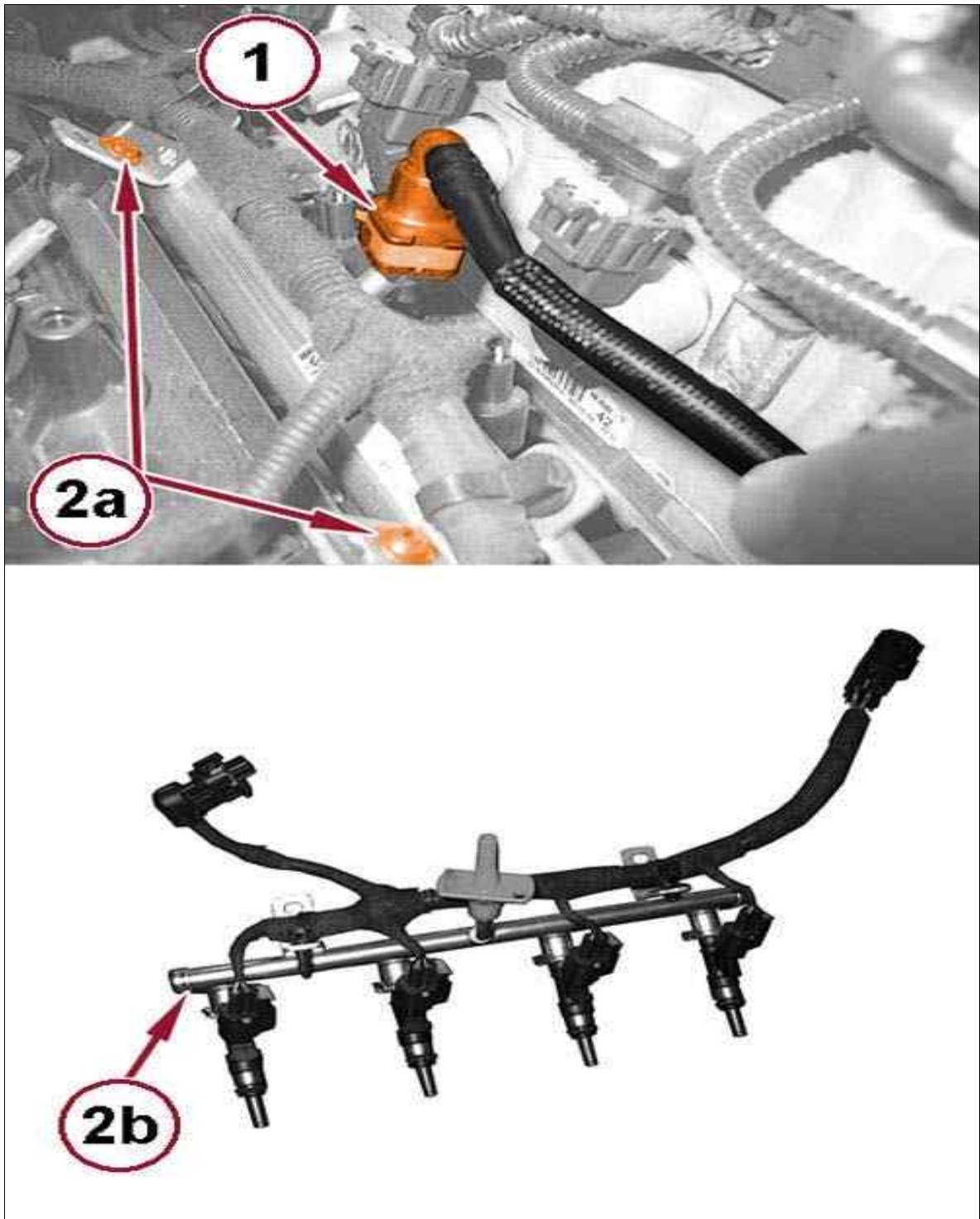
Fig 6: Electrical Connection Of The Pressure And Temperature Sensor



Courtesy of CHRYSLER GROUP, LLC

14. Disconnect the electrical connection of the pressure and temperature sensor and disengage the retaining clip.

Fig 7: Fuel Rail, Screws & Fuel Injector



Courtesy of CHRYSLER GROUP, LLC

15. Disconnect the quick coupling of the fuel delivery pipe.

16. Remove the screws (2a) and remove the fuel rail (2b) complete with the fuel injectors.

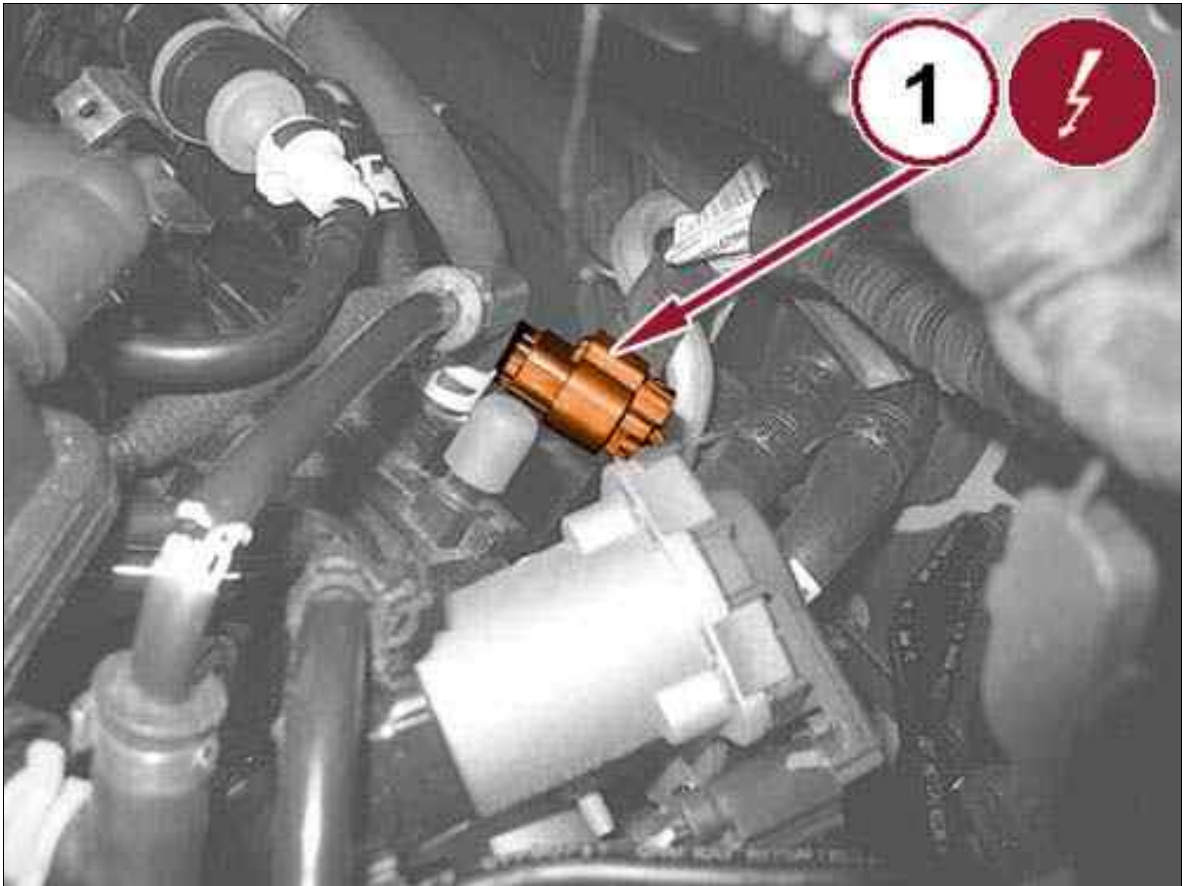
INSTALLATION

1. Install the fuel rail complete with injectors and tighten the screws.
2. Connect the quick coupling of the fuel delivery pipe.
3. Connect the electrical connection of the pressure sensor, intake air temperature and engage the clip retaining the wiring harness.
4. Install the reinforcement bracket and securely tighten the retainers.
5. Engage the pipes and close the retaining clips.
6. Install the fuel vapor solenoid.
7. Connect the vacuum hose to the fuel vapor solenoid and secure the clamp.
8. Connect the delivery pipe quick coupling to the turbocharger.
9. Connect the quick coupling of the vapor solenoid inlet hose.
10. Connect the electrical connection of the fuel vapor solenoid.
11. Engage the fuel vapor solenoid to the retaining bracket.
12. Connect the fuel injector wiring harness.
13. Install the engine cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .

FUEL INJECTION > INJECTOR(S), FUEL > REMOVAL AND INSTALLATION > 1.4L 4X4 > REMOVAL

1. Open the cover of the fuse box in the engine compartment and remove the fuse F21 (15 A) of the fuel pump.
2. Start the engine and run until the fuel in the lines is depleted.
3. Install the fuse removed earlier and close the fuse box cover.
4. Remove the engine cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .

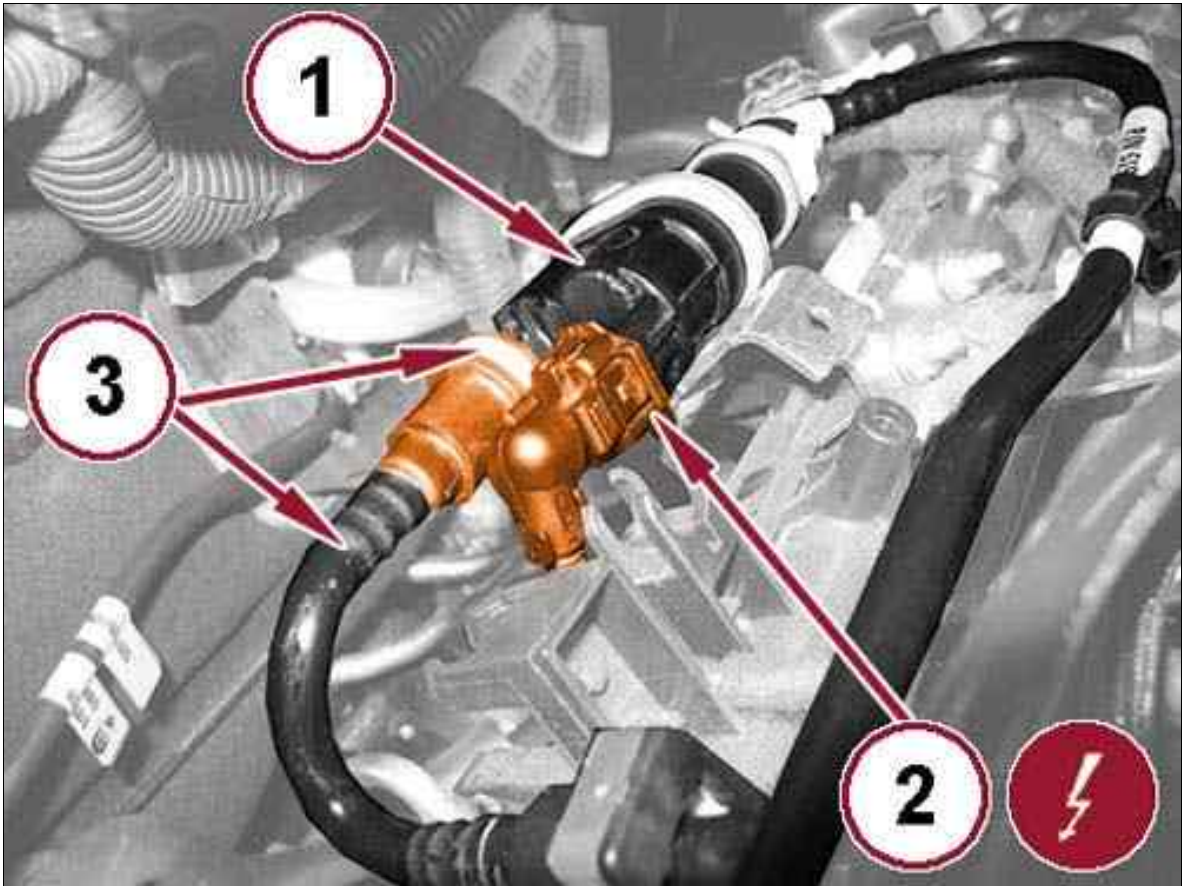
Fig 1: Wire Harness Connector



Courtesy of CHRYSLER GROUP, LLC

5. Disconnect the wire harness connector.

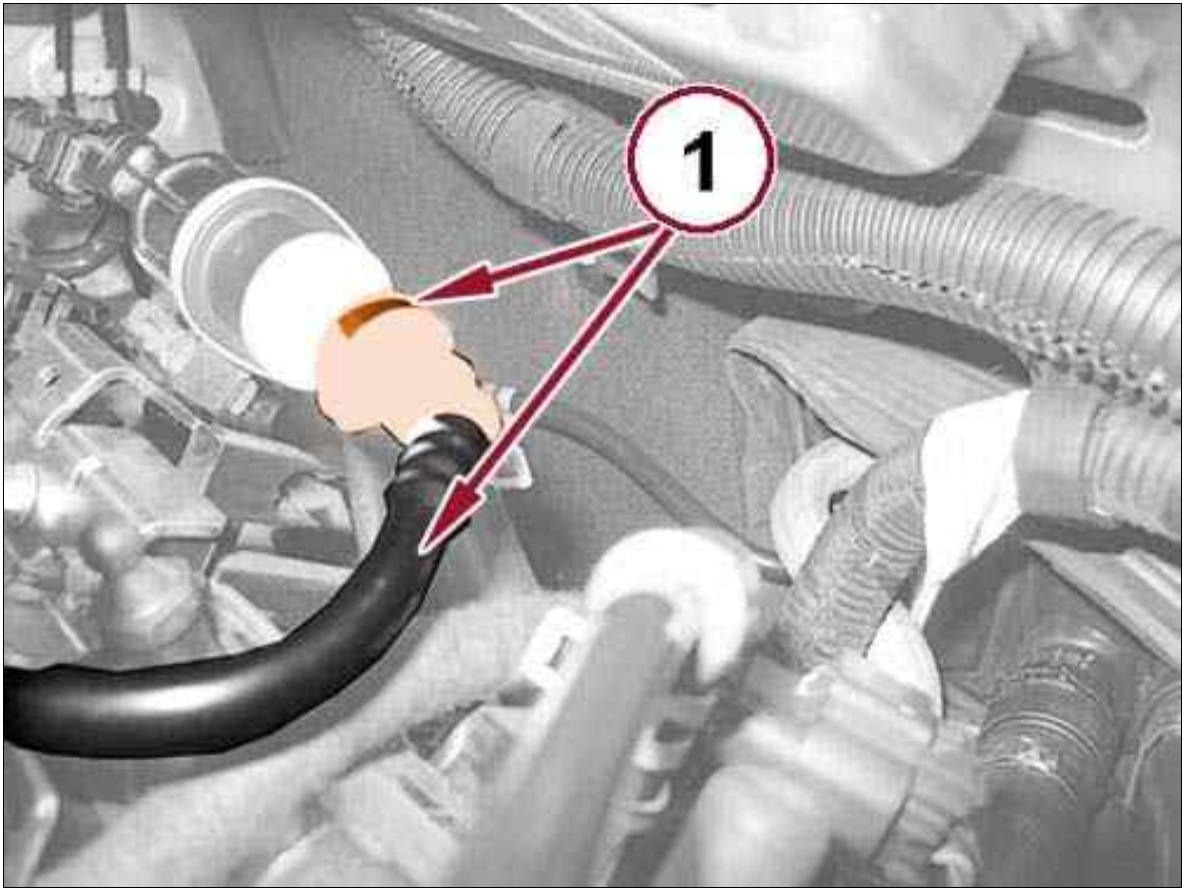
Fig 2: Fuel Vapor Solenoid Retaining Bracket, Connector & Quick Connect Inlet Hose



Courtesy of CHRYSLER GROUP, LLC

6. Remove the fuel vapor solenoid from the retaining bracket (1).
7. Disconnect the electrical connection of the fuel vapor solenoid (2).
8. Squeeze the clamp and disconnect the quick connect inlet hose to the vapor valve solenoid.

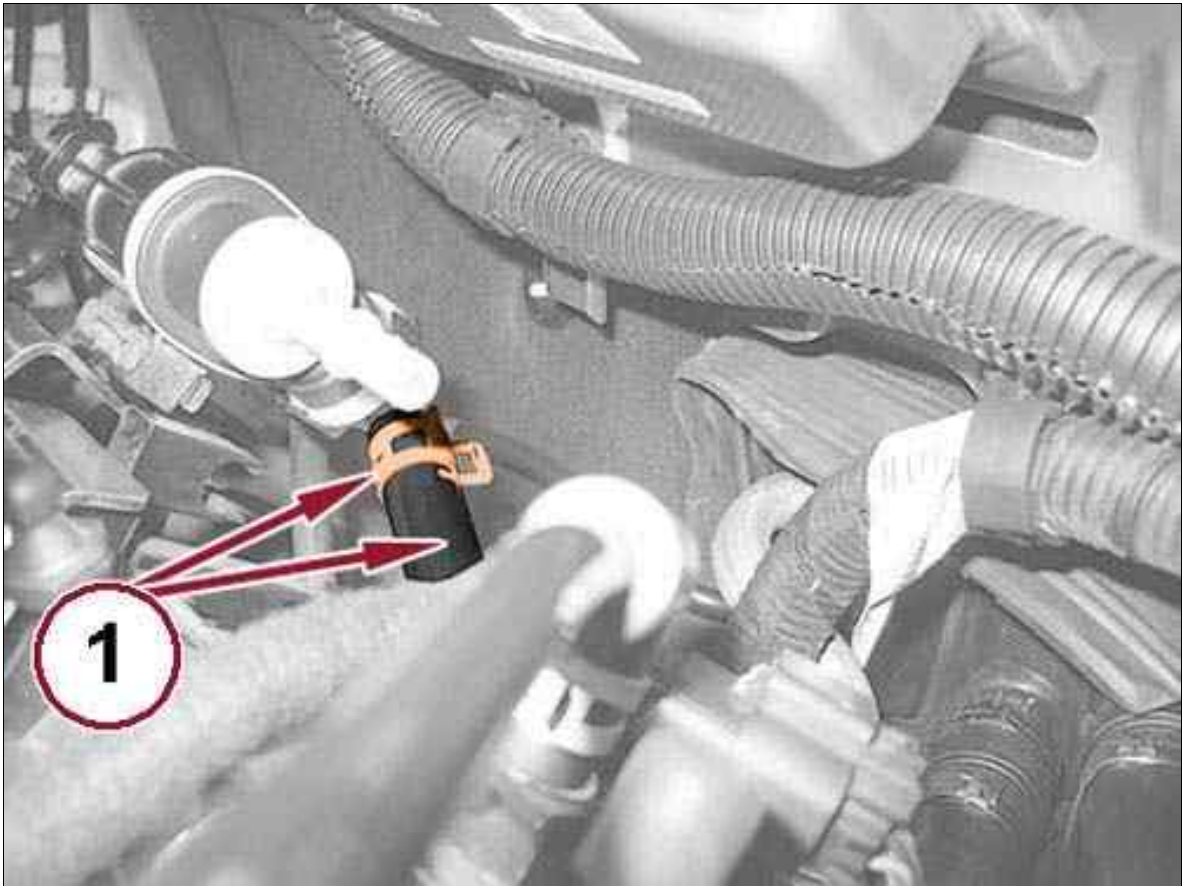
Fig 3: Turbocharger Fuel Vapor Intake Quick Coupling



Courtesy of CHRYSLER GROUP, LLC

9. Squeeze the clamp and disconnect the quick coupling of the hose to the inlet of the fuel vapor intake of the turbocharger (1).

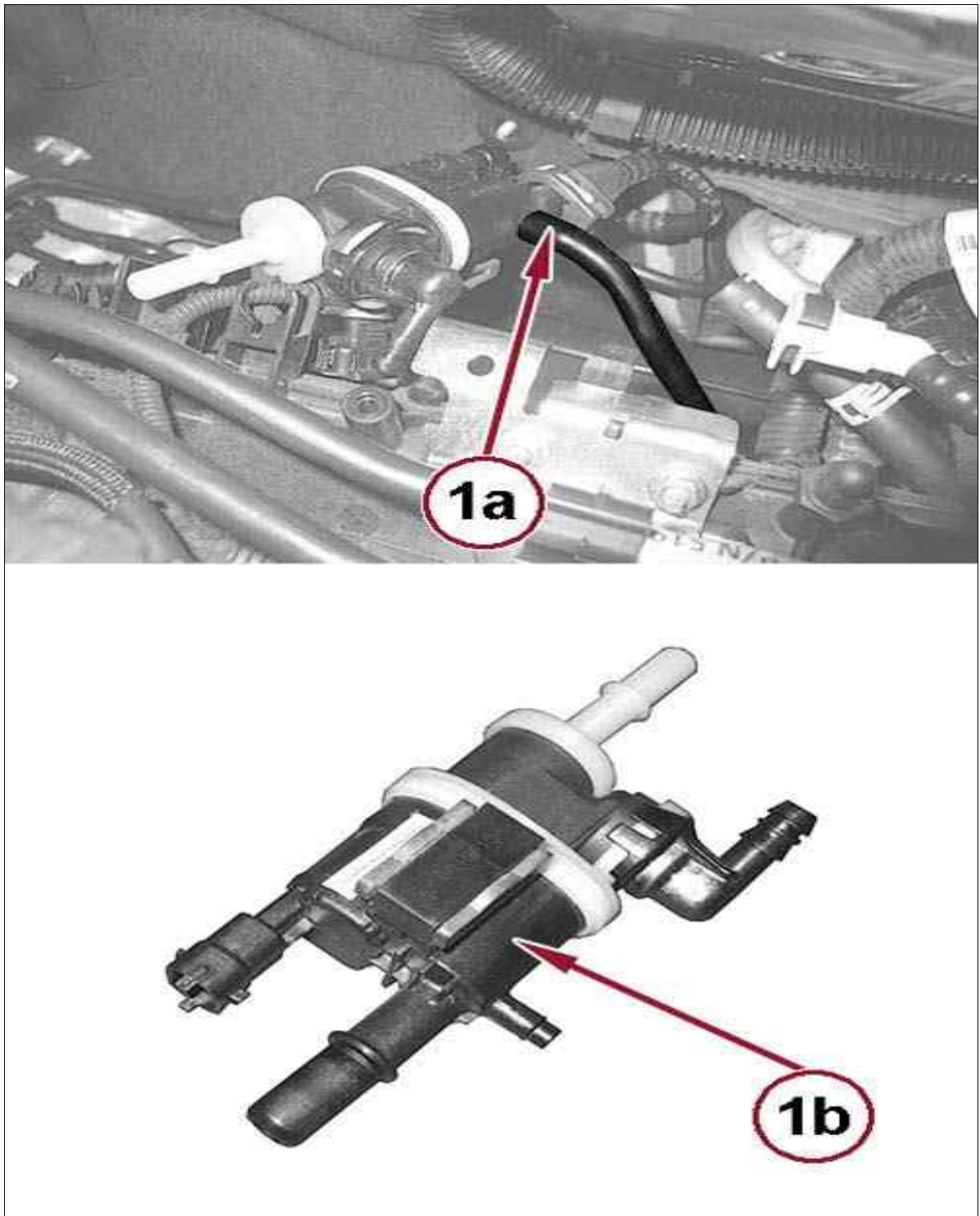
Fig 4: Fuel Vapor Vacuum Hose & Clamp



Courtesy of CHRYSLER GROUP, LLC

10. Loosen the clamp and disconnect the fuel vapor vacuum hose.

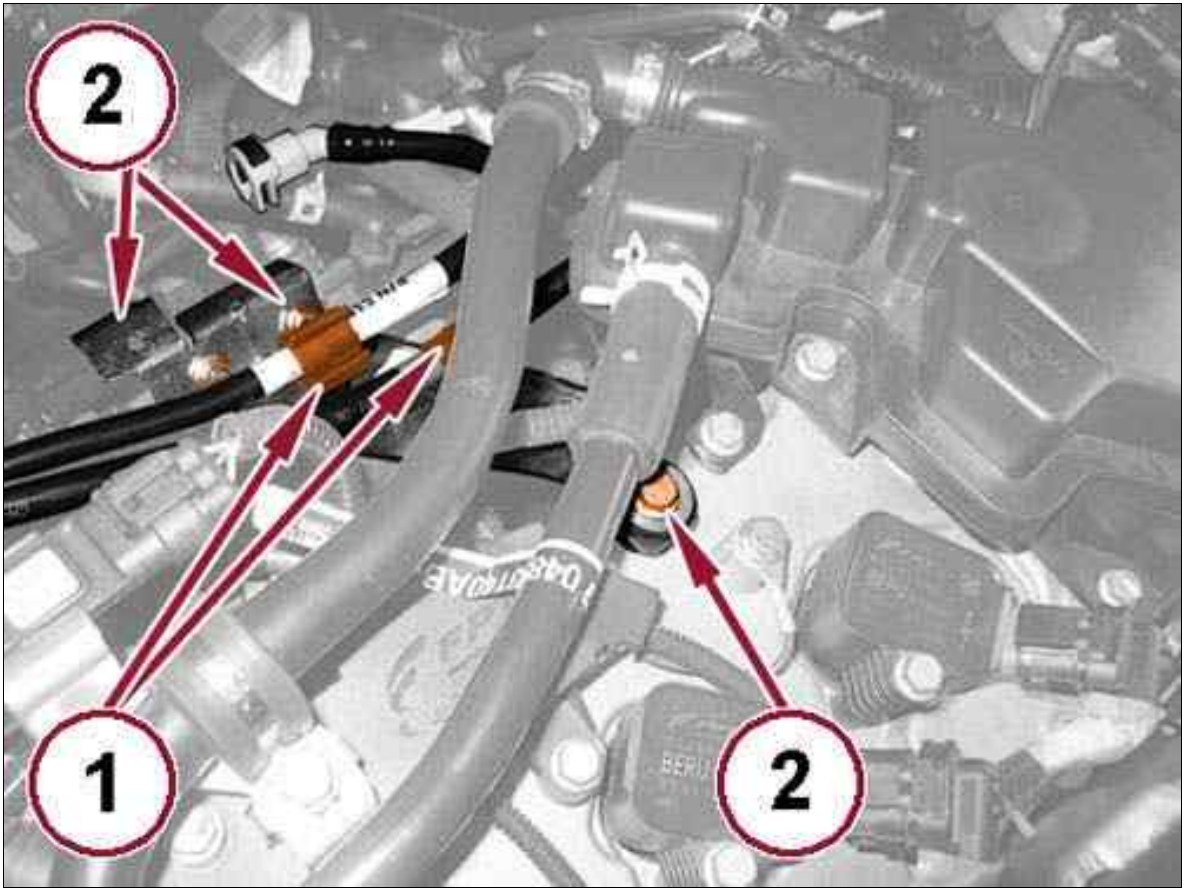
Fig 5: Vapor Hose & Fuel Vapor Solenoid



Courtesy of CHRYSLER GROUP, LLC

11. Disconnect the vapor hose (1a).
12. Remove the fuel vapor solenoid (1b).

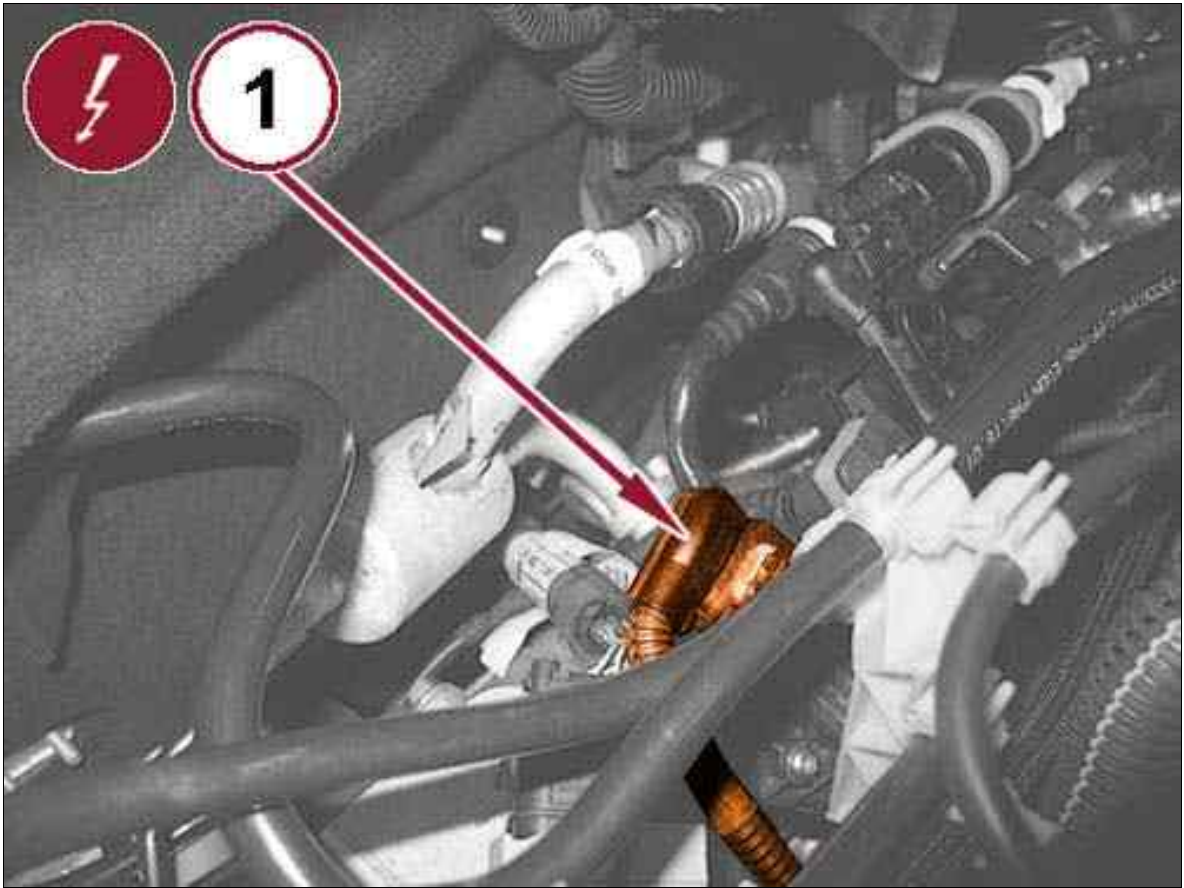
Fig 6: Reinforcement Bracket, Fasteners, Retaining Clips & Pipes



Courtesy of CHRYSLER GROUP, LLC

13. Open the retaining clips and disengage the pipes (1).
14. Unscrew the fasteners and remove the reinforcement bracket (2).

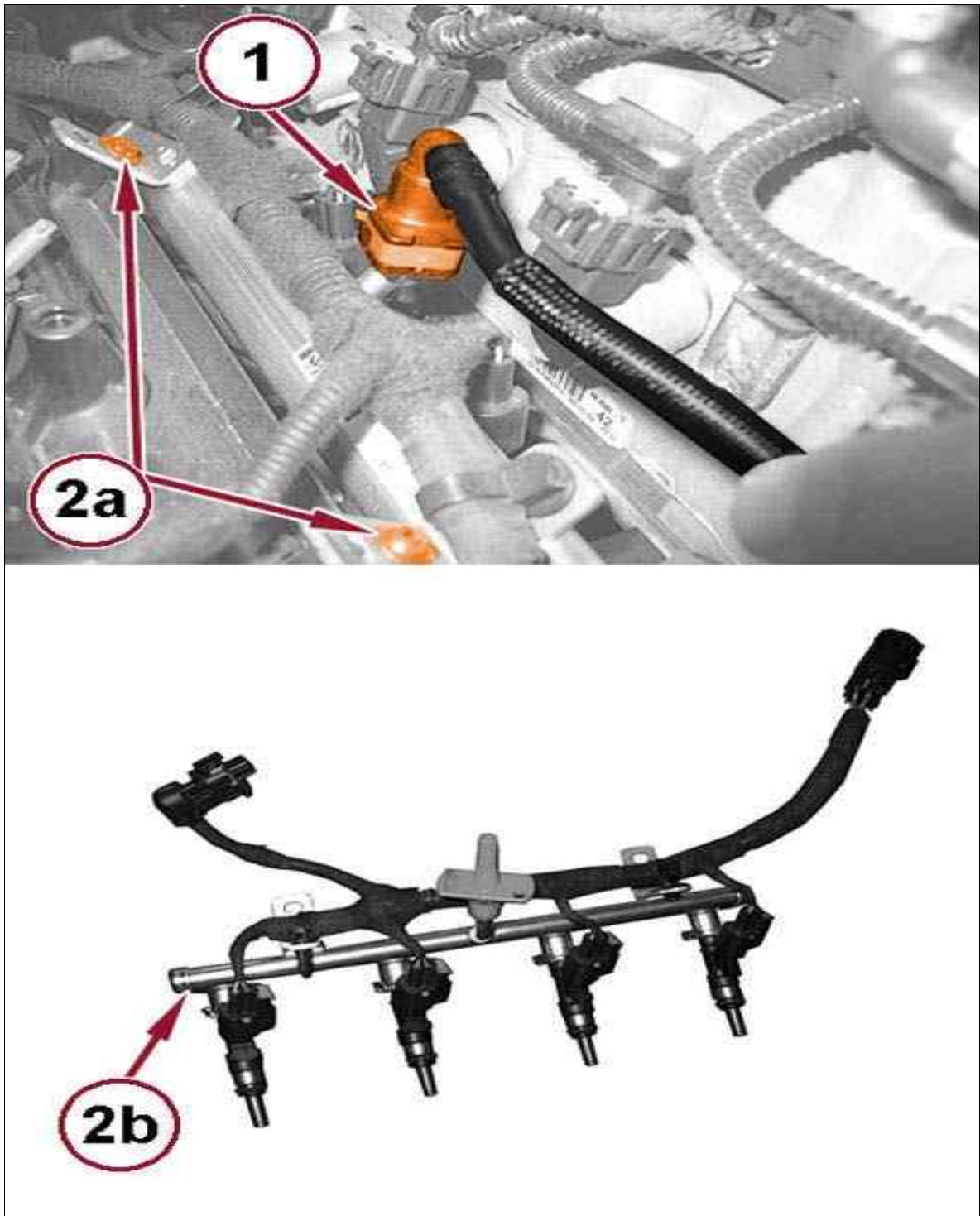
Fig 7: Electrical Connection Of The Pressure And Temperature Sensor



Courtesy of CHRYSLER GROUP, LLC

15. Disconnect the electrical connection of the pressure and temperature sensor and disengage the retaining clip.

Fig 8: Fuel Rail, Screws & Fuel Injector



Courtesy of CHRYSLER GROUP, LLC

16. Disconnect the quick coupling of the fuel delivery pipe.

17. Remove the screws (2a) and remove the fuel rail (2b) complete with the fuel injectors.

FUEL INJECTION > INJECTOR(S), FUEL > REMOVAL AND INSTALLATION > 1.4L 4X4

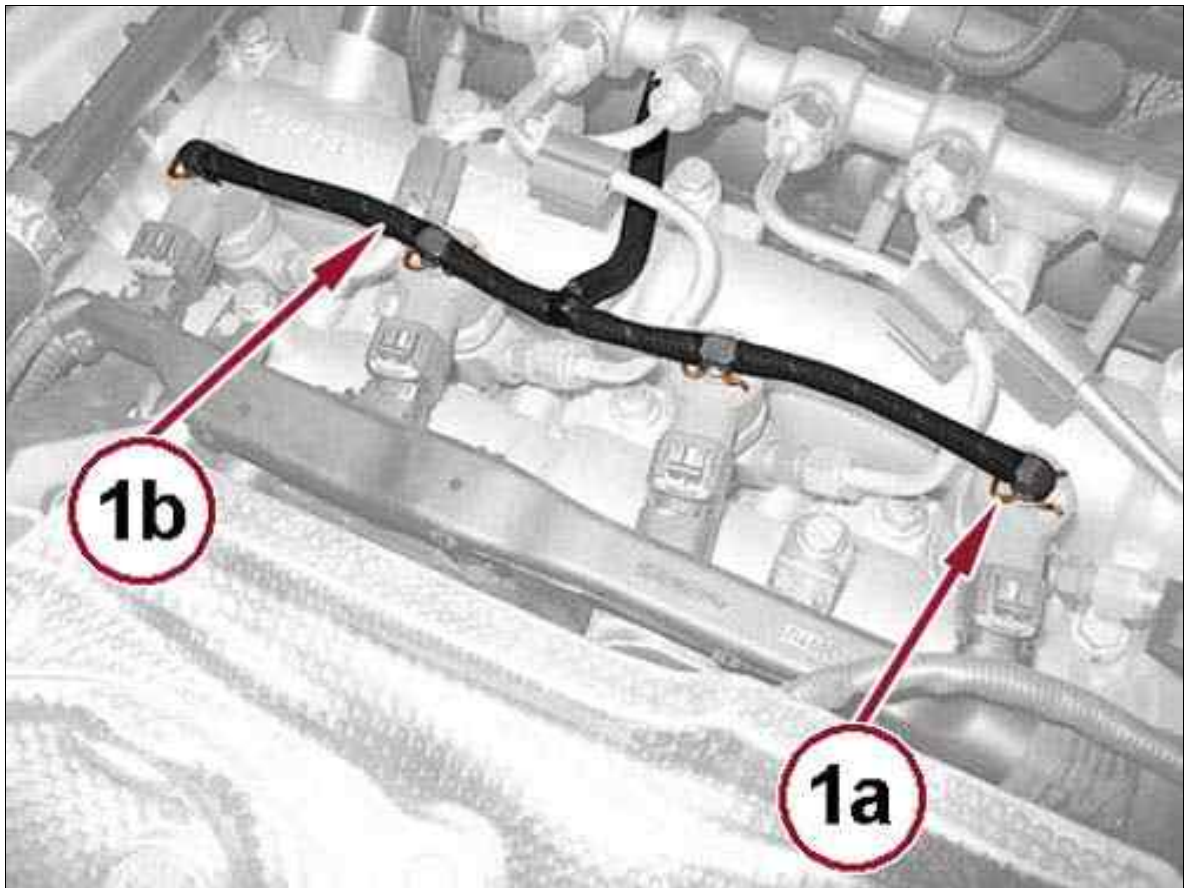
> INSTALLATION

1. Install the fuel rail complete with injectors and tighten the screws.
2. Connect the quick coupling of the fuel delivery pipe.
3. Connect the electrical connection of the pressure sensor, intake air temperature and engage the clip retaining the wiring harness.
4. Install the reinforcement bracket and securely tighten the retainers.
5. Engage the pipes and close the retaining clips.
6. Install the fuel vapor solenoid.
7. Connect the vacuum hose to the fuel vapor solenoid and secure the clamp.
8. Connect the delivery pipe quick coupling.
9. Connect the quick coupling of the vapor solenoid inlet hose.
10. Connect the electrical connection of the fuel vapor solenoid.
11. Engage the fuel vapor solenoid to the retaining bracket.
12. Connect the fuel injector wiring harness.
13. Install the engine cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .

FUEL INJECTION > INJECTOR(S), FUEL > REMOVAL AND INSTALLATION > 1.6L > REMOVAL

1. Remove the engine cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .

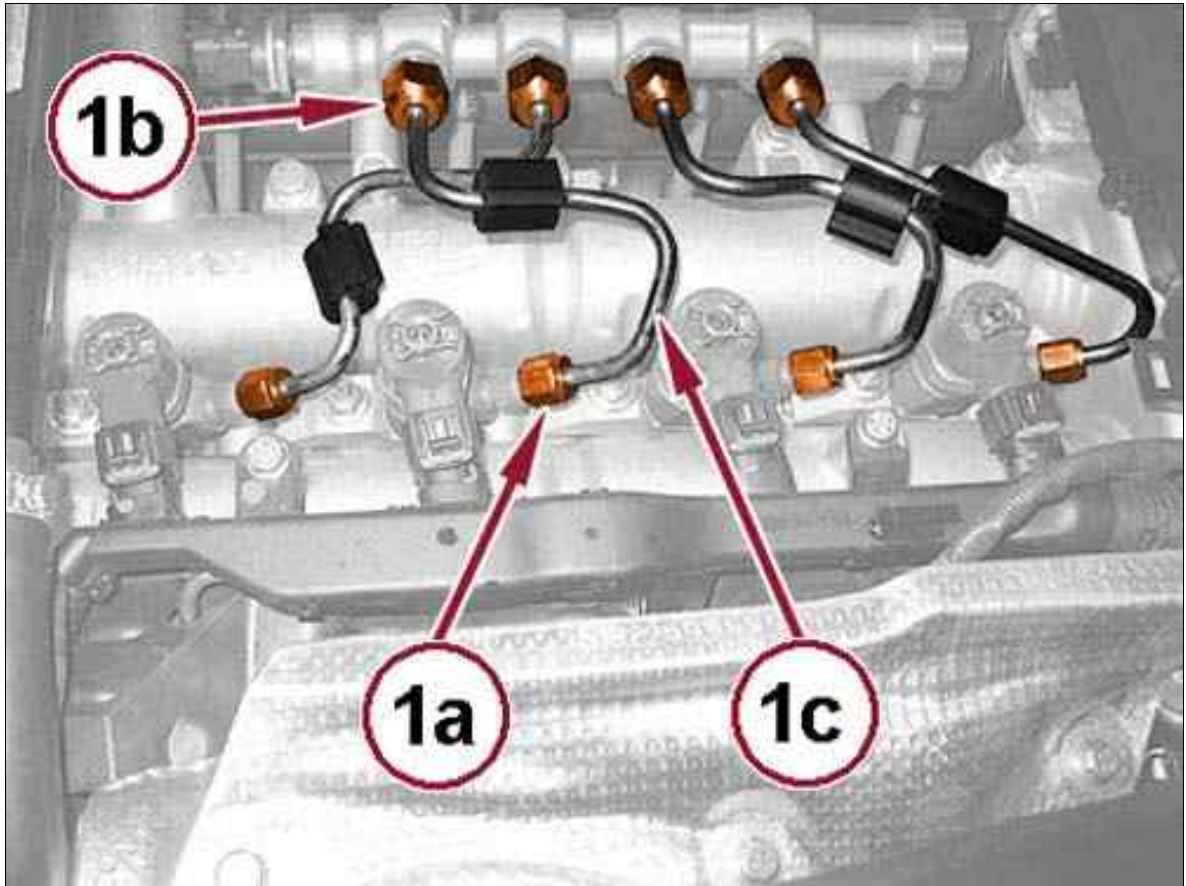
Fig 1: Fuel Return Line From Injectors & Clips



Courtesy of CHRYSLER GROUP, LLC

2. Push the clips (1a), disconnect and remove the fuel return line from injectors (1b).

Fig 2: Fuel Pipes & Fittings



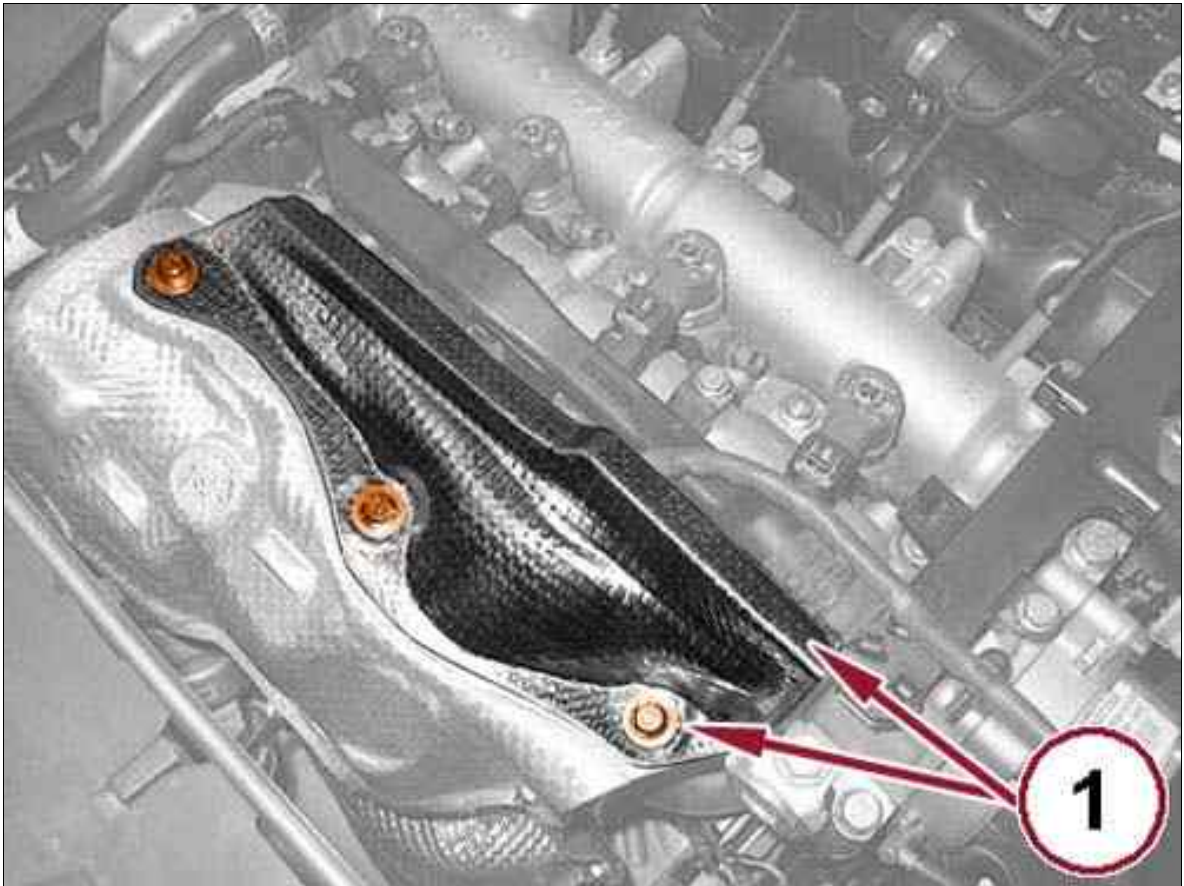
Courtesy of CHRYSLER GROUP, LLC

3. Unscrew the fittings (1a), (1b) and remove the pipes from the manifold to the fuel injectors (1c).

 **NOTE:**

Use new replacement fuel injector to manifold piping.

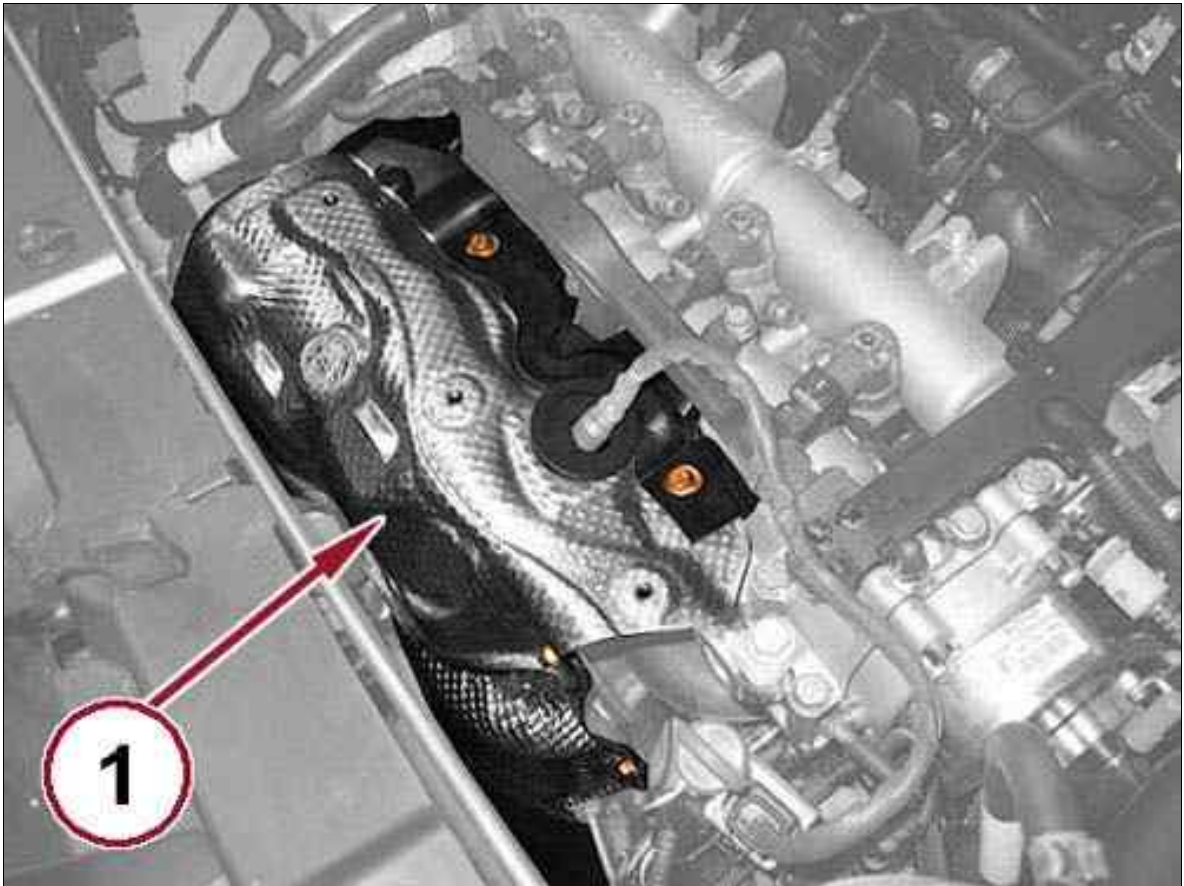
Fig 3: Upper Turbo Heat Shield & Screws



Courtesy of CHRYSLER GROUP, LLC

4. Unscrew the screws and remove the upper turbo heat shield (1).

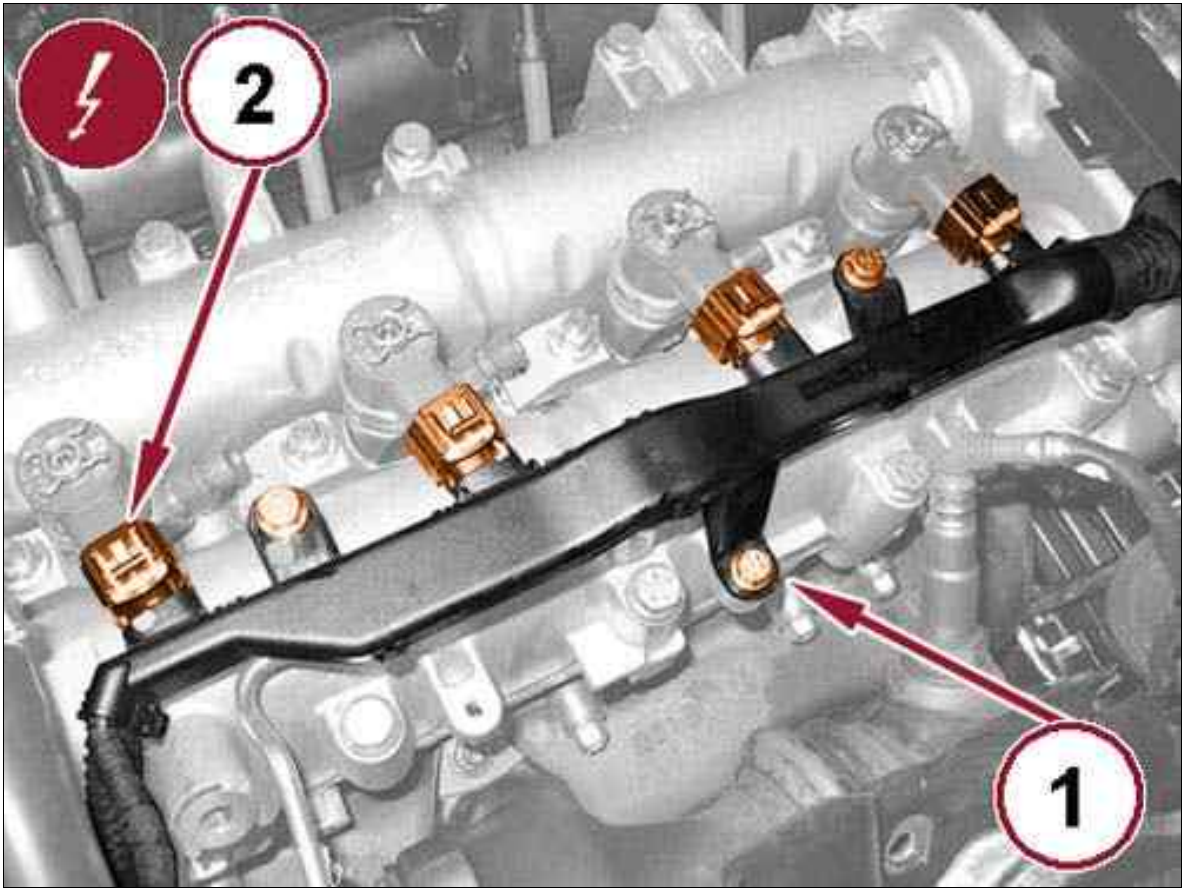
Fig 4: Turbocharger Heat Shield & Fasteners



Courtesy of CHRYSLER GROUP, LLC

5. Unscrew the fasteners and move the heat shield to the side of the turbocharger (1).

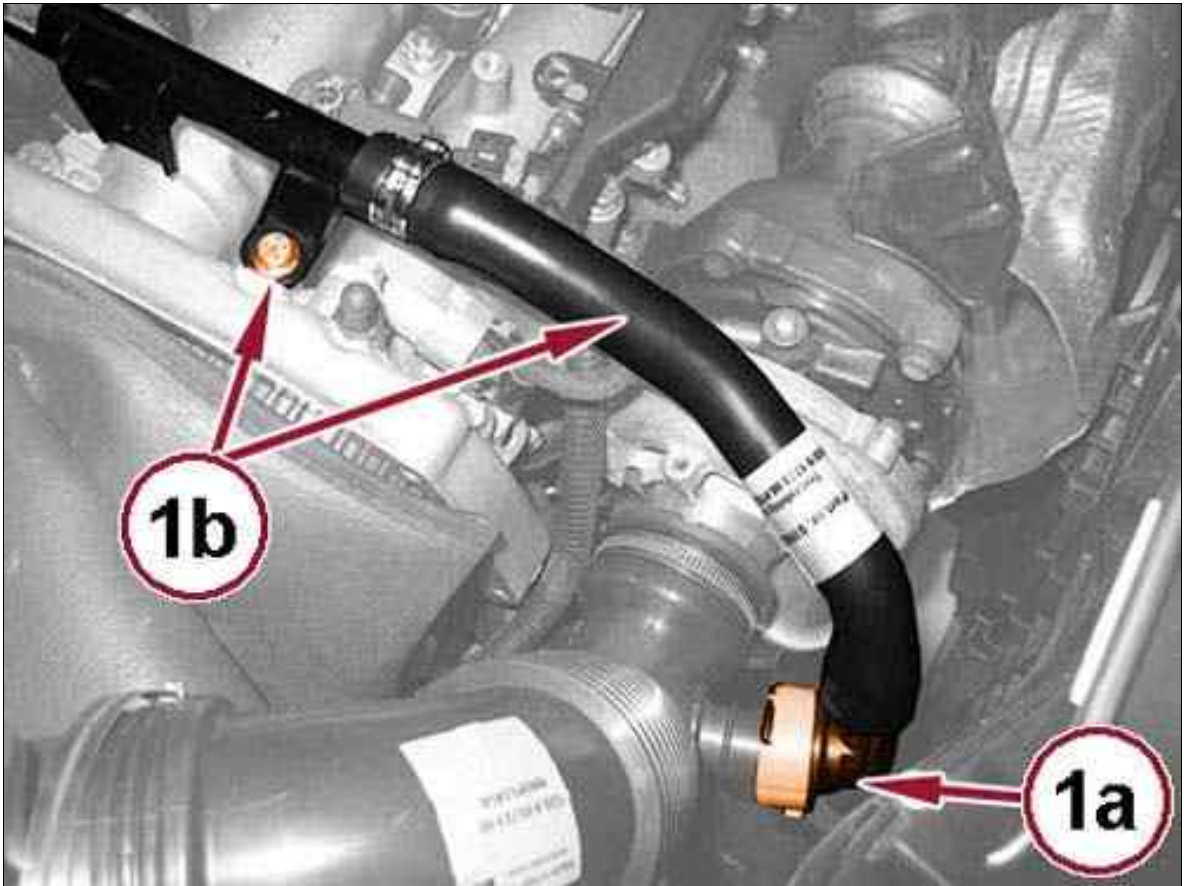
Fig 5: Engine Wiring Duct Screws & Fuel Injector Electrical Connectors



Courtesy of CHRYSLER GROUP, LLC

6. Remove the screws securing the engine wiring duct (1).
7. Disconnect the electrical connections of the fuel injectors (2).

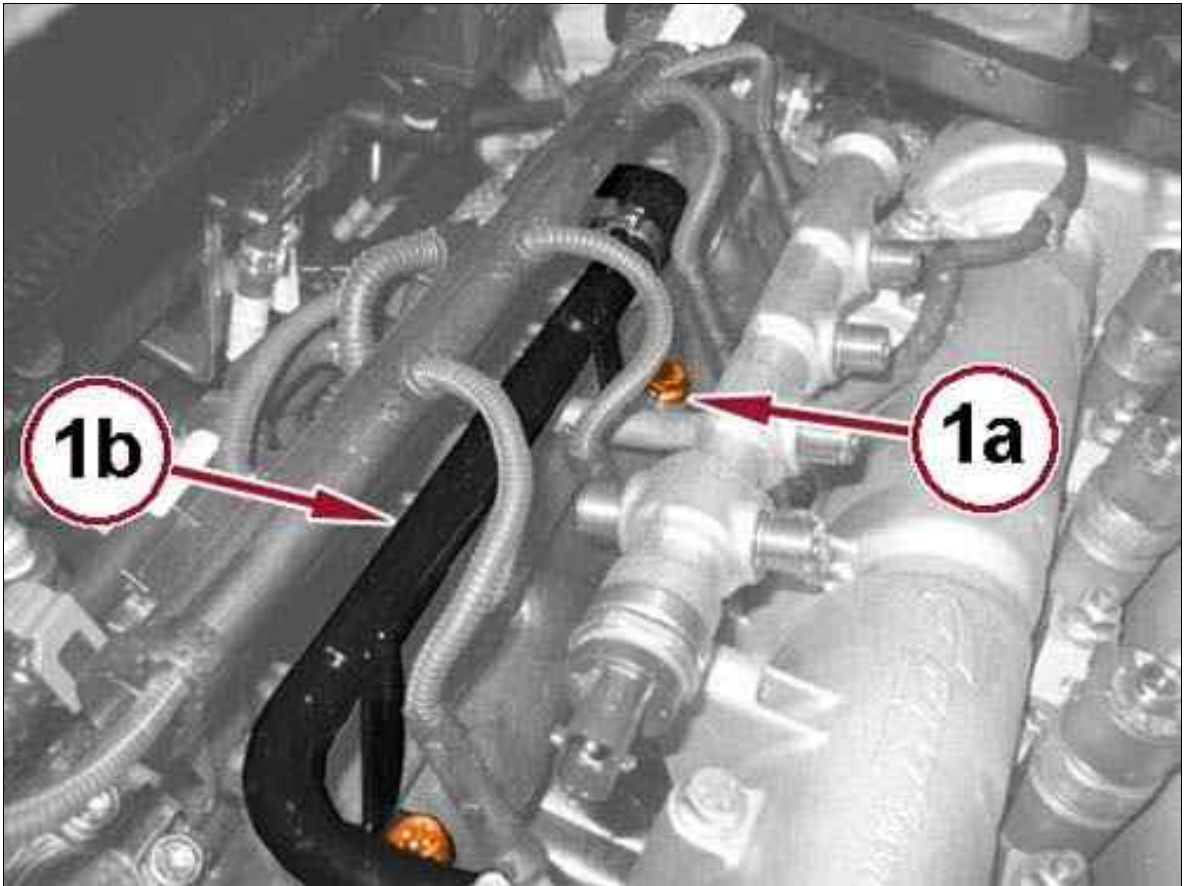
Fig 6: Oil Vapor Delivery Pipe, Quick Coupling & Screw



Courtesy of CHRYSLER GROUP, LLC

8. Disconnect the quick coupling (1a) and unscrew the screw fixing the oil vapor delivery pipe to the turbocharger (1b).

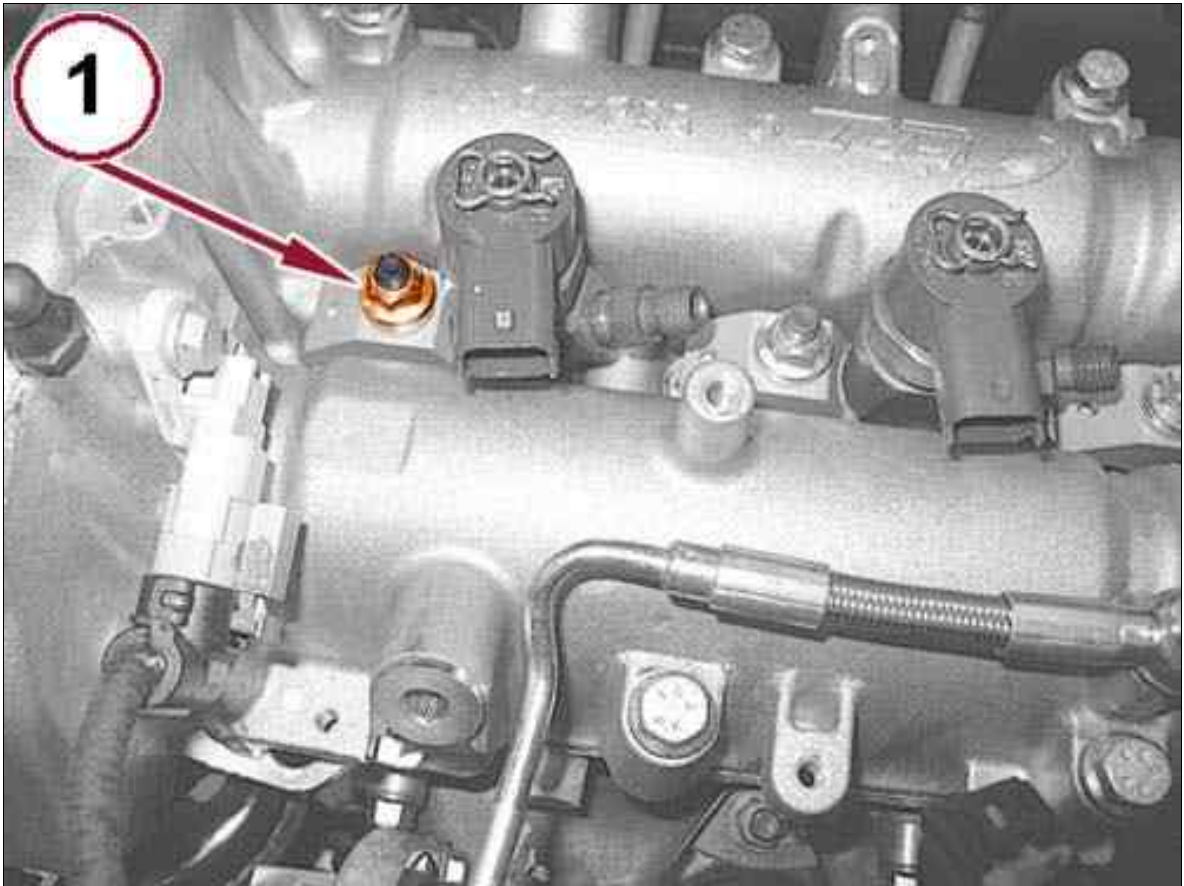
Fig 7: Oil Vapor Inlet Pipe & Screws



Courtesy of CHRYSLER GROUP, LLC

9. Remove the screws (1a) and remove the oil vapor inlet pipe (1b).

Fig 8: Injector Bracket Retaining Nuts



Courtesy of CHRYSLER GROUP, LLC

10. Remove the injector bracket retaining nuts (1).

Fig 9: Extractor, Adapter & Fuel Injectors



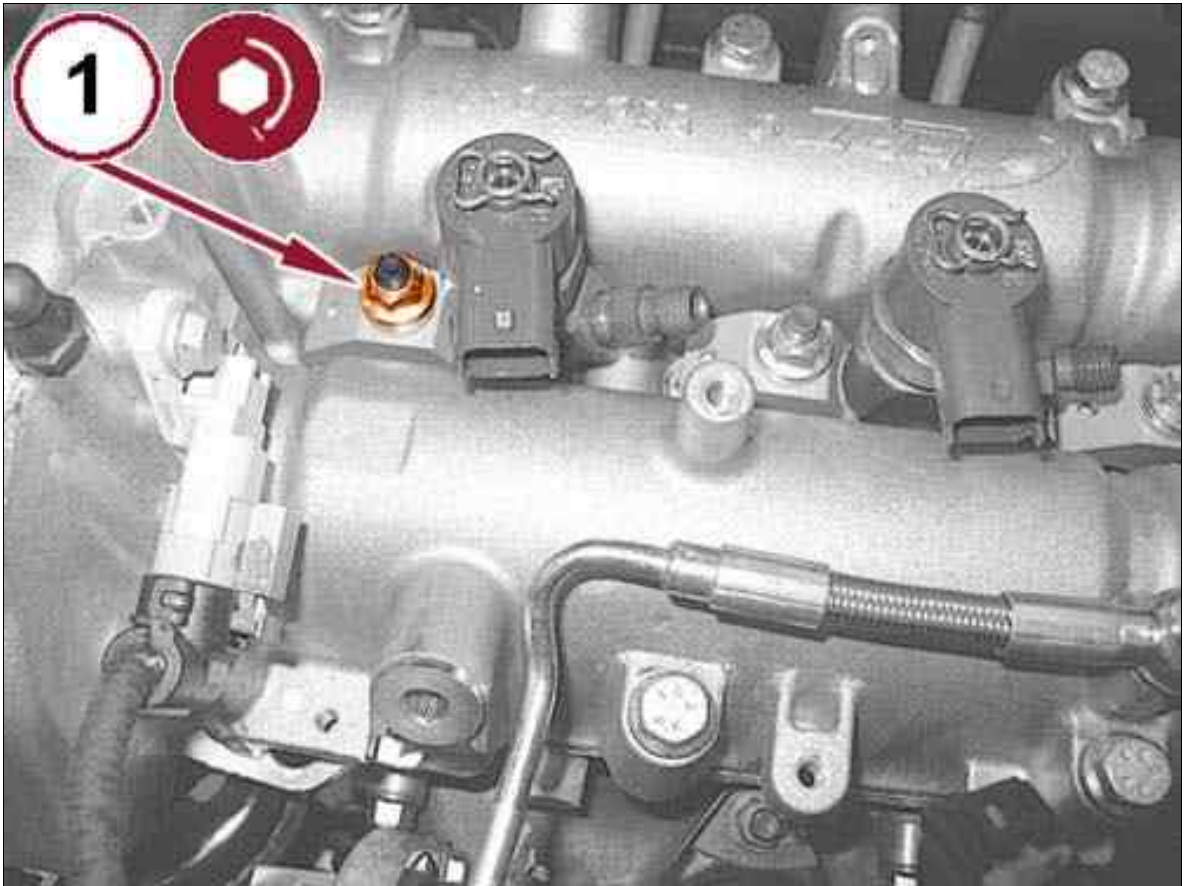
Courtesy of CHRYSLER GROUP, LLC

11. Using the extractor 187073900 (1b) and the adapter 1870897300 (1a), remove the fuel injectors (1c) complete with brackets and gaskets.
12. Start with removing the cylinder 1 injector, and continuing with 2, 3, and then 4.

FUEL INJECTION > INJECTOR(S), FUEL > REMOVAL AND INSTALLATION > 1.6L > INSTALLATION

1. When installing new injectors, verify the identification code printed on the upper surface is correct.
2. Verify that the old seals from the injectors have been removed from the cylinder head.

Fig 1: Injector Nut



Courtesy of CHRYSLER GROUP, LLC

3. Install the injectors with new gaskets, flanges and tighten the nuts (1) to the proper torque specification. Refer to FUEL INJECTION, SPECIFICATIONS .

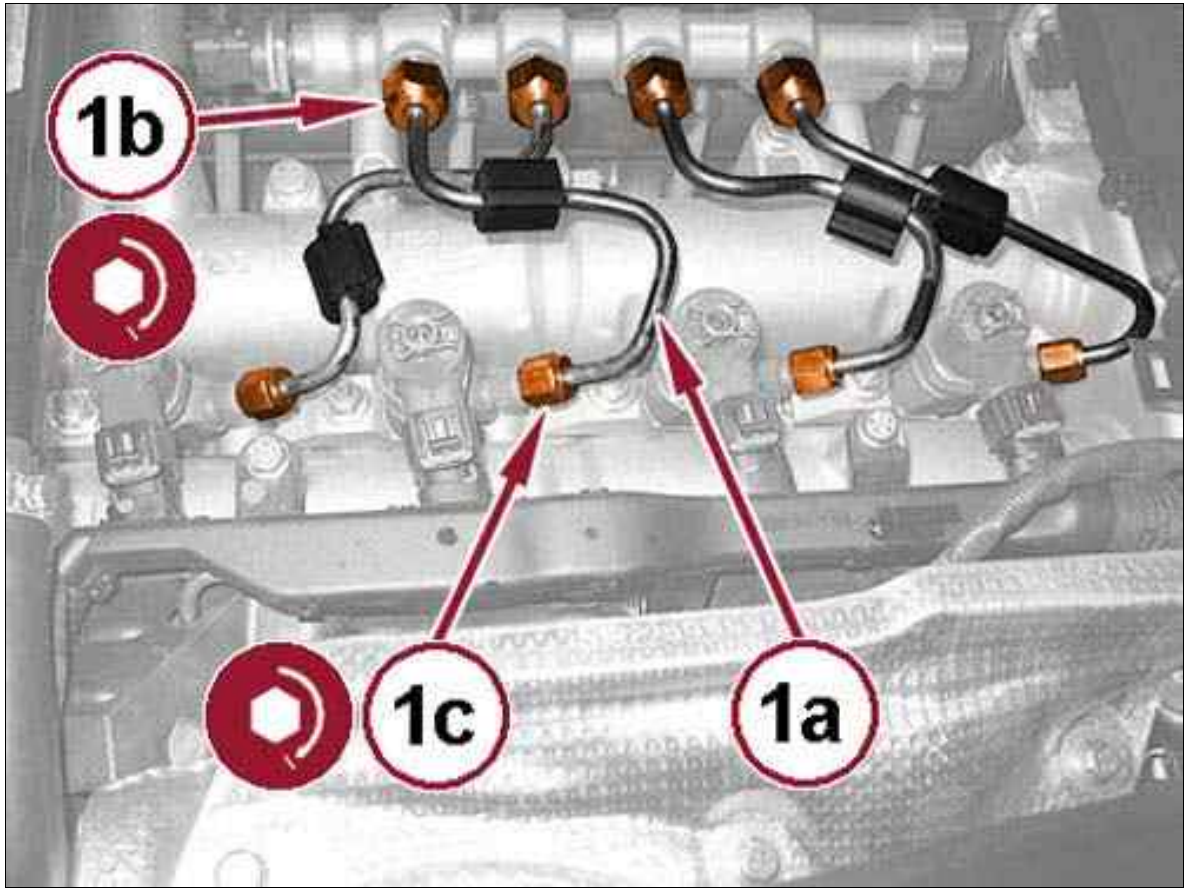
 NOTE:

Install cylinder 4 injector first, then continue with 3, 2, then 1.

4. Install the oil vapor delivery pipe to the turbocharger and securely tighten the screws.
5. Install the oil vapor delivery pipe to the turbocharger, connect the quick connector and securely tighten the screw.
6. Connect the electrical connections of the injectors.
7. Install and securely tighten the engine harness mounting screws.

8. Install the bottom of the turbocharger heat shield and securely tighten its hardware.
9. Install the top of the turbocharger heat shield and securely tighten the screws.

Fig 2: Fuel Injector Piping & Fittings



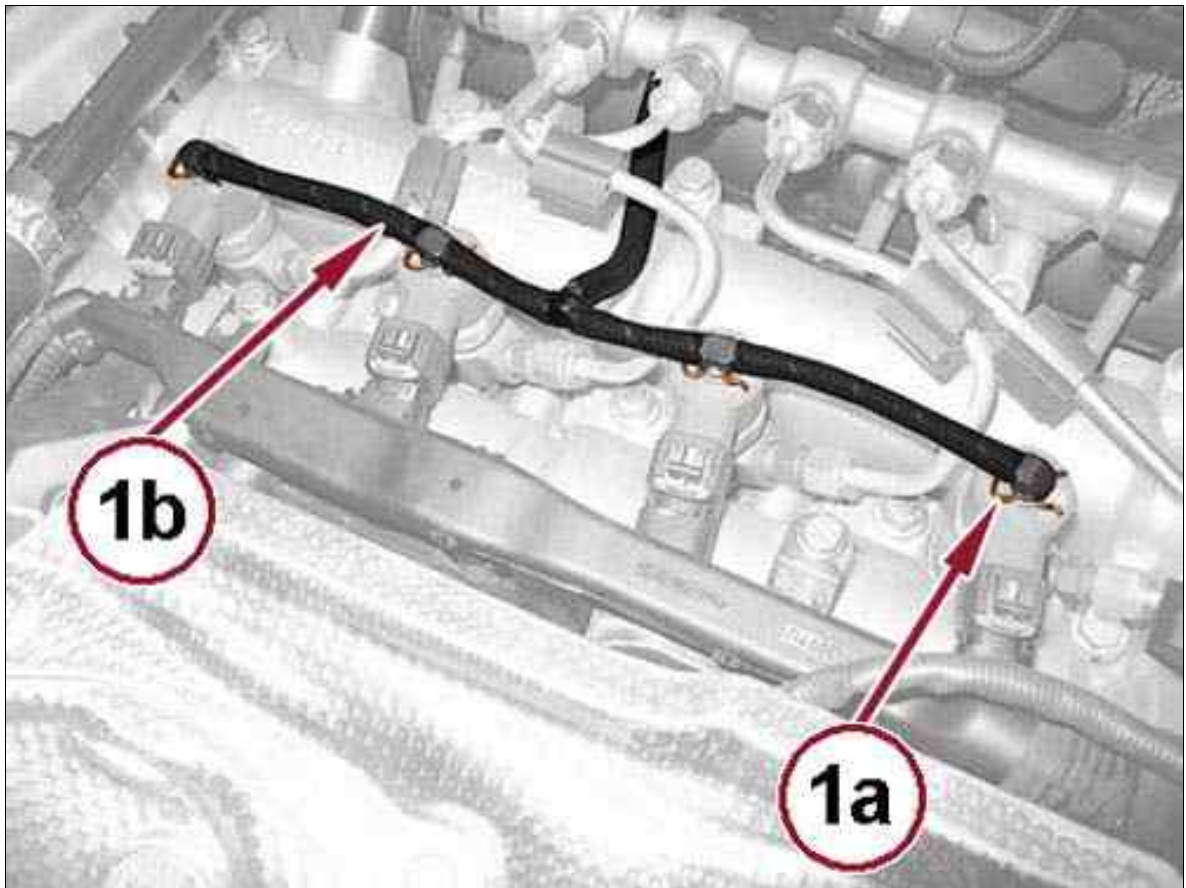
Courtesy of CHRYSLER GROUP, LLC

10. Install the new fuel injector piping (1a), tighten the fittings (1b) and (1c) to the proper torque specification. Refer to FUEL INJECTION, SPECIFICATIONS .
11. Install the return line to the fuel injectors and fasten it to the injectors until you hear the click of the retaining clips.
12. Install the engine cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .

FUEL INJECTION > INJECTOR(S), FUEL > REMOVAL AND INSTALLATION > 2.0L > REMOVAL - 2.0 L TURBO DIESEL 120 HP AND 140 HP

1. Remove the engine cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .

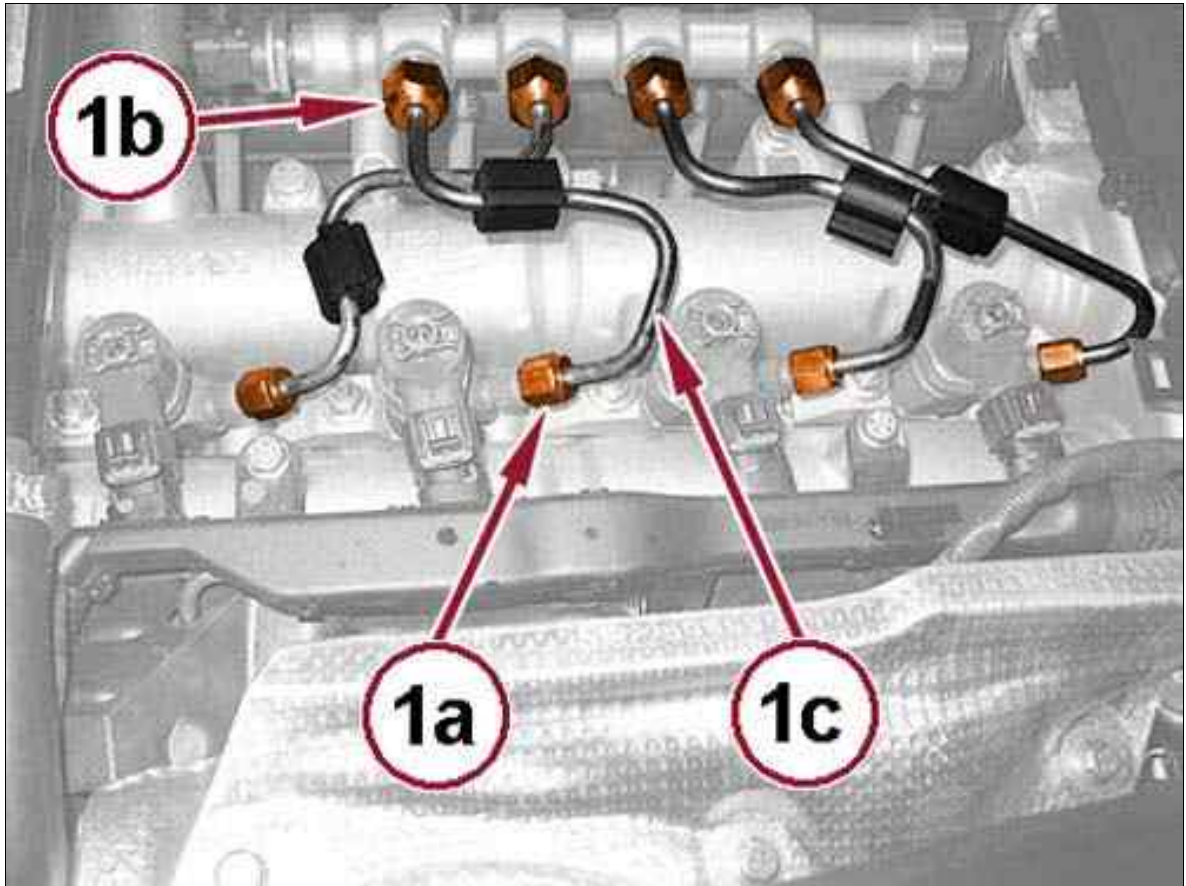
Fig 1: Fuel Return Line From Injectors & Clips



Courtesy of CHRYSLER GROUP, LLC

2. Push the clips (1a), disconnect and remove the fuel return line from injectors (1b).

Fig 2: Fuel Pipes & Fittings



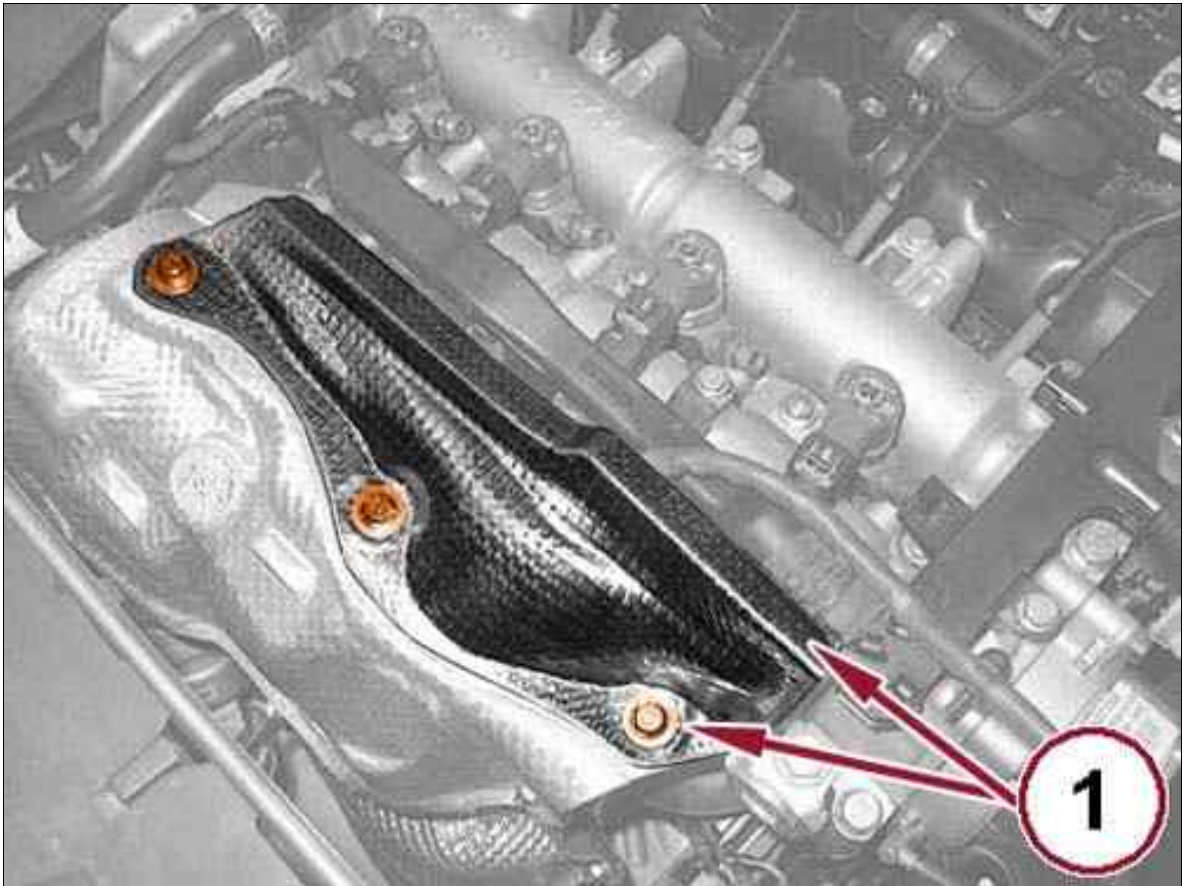
Courtesy of CHRYSLER GROUP, LLC

3. Unscrew the fittings (1a), (1b) and remove the pipes from the manifold to the fuel injectors (1c).

 **NOTE:**

Use new replacement fuel injector to manifold piping.

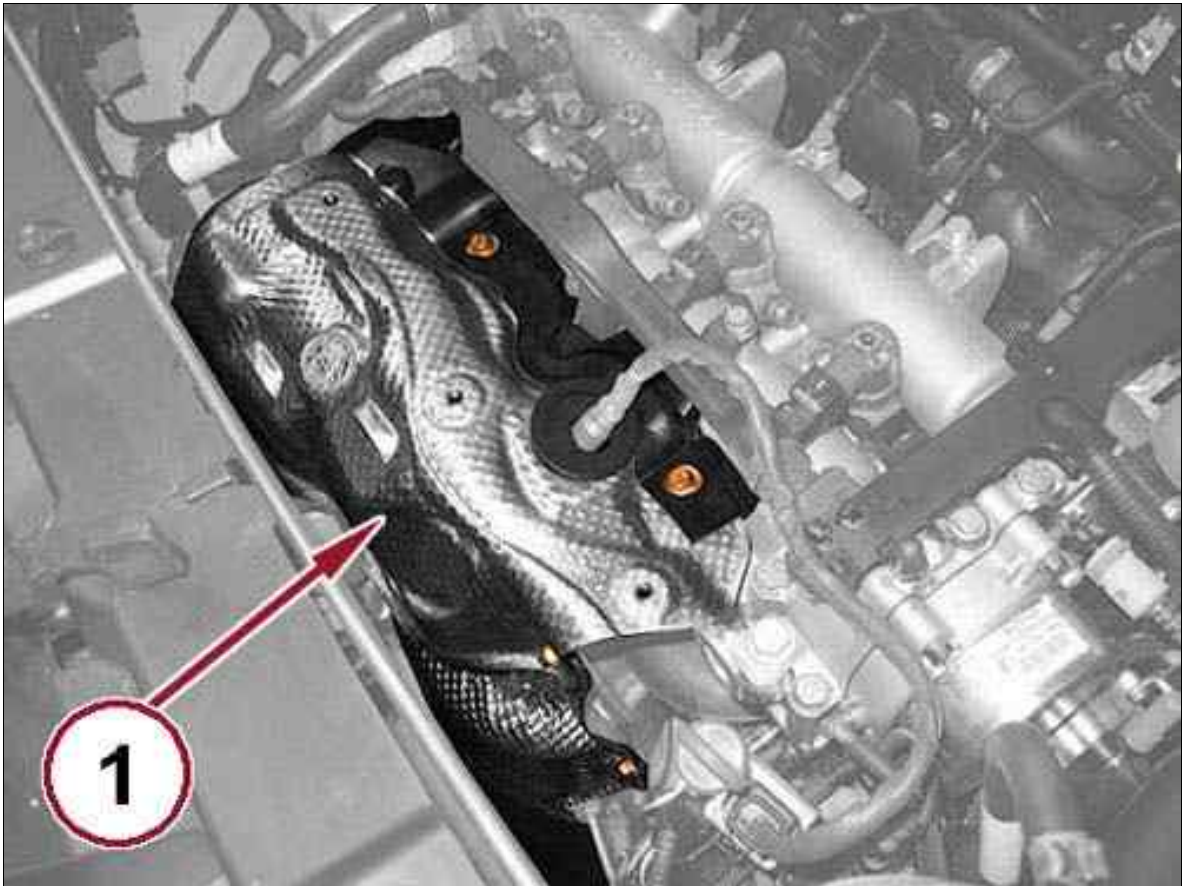
Fig 3: Upper Turbo Heat Shield & Screws



Courtesy of CHRYSLER GROUP, LLC

4. Unscrew the screws and remove the upper turbo heat shield (1).

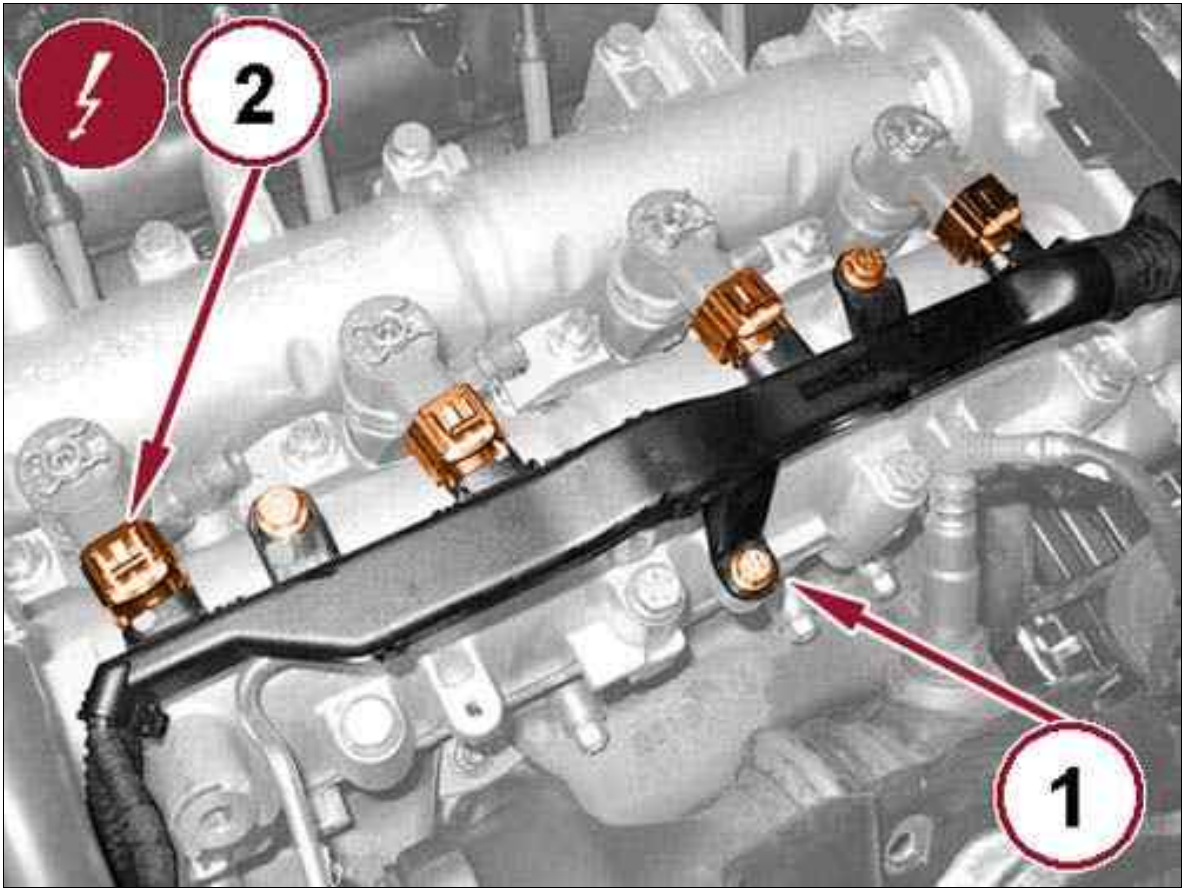
Fig 4: Turbocharger Heat Shield & Fasteners



Courtesy of CHRYSLER GROUP, LLC

5. Unscrew the fasteners and move the heat shield to the side of the turbocharger (1).

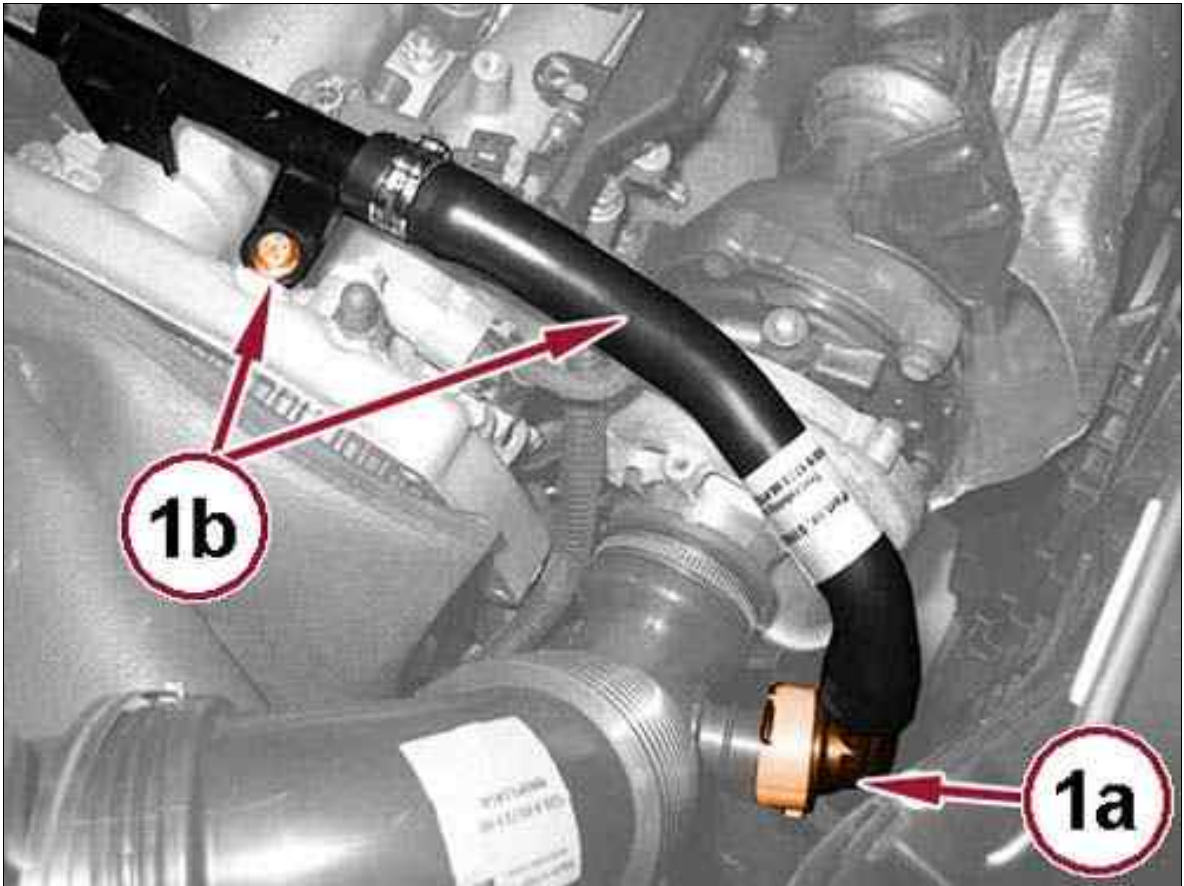
Fig 5: Engine Wiring Duct Screws & Fuel Injector Electrical Connectors



Courtesy of CHRYSLER GROUP, LLC

6. Remove the screws securing the engine wiring duct (1).
7. Disconnect the electrical connections of the fuel injectors (2).

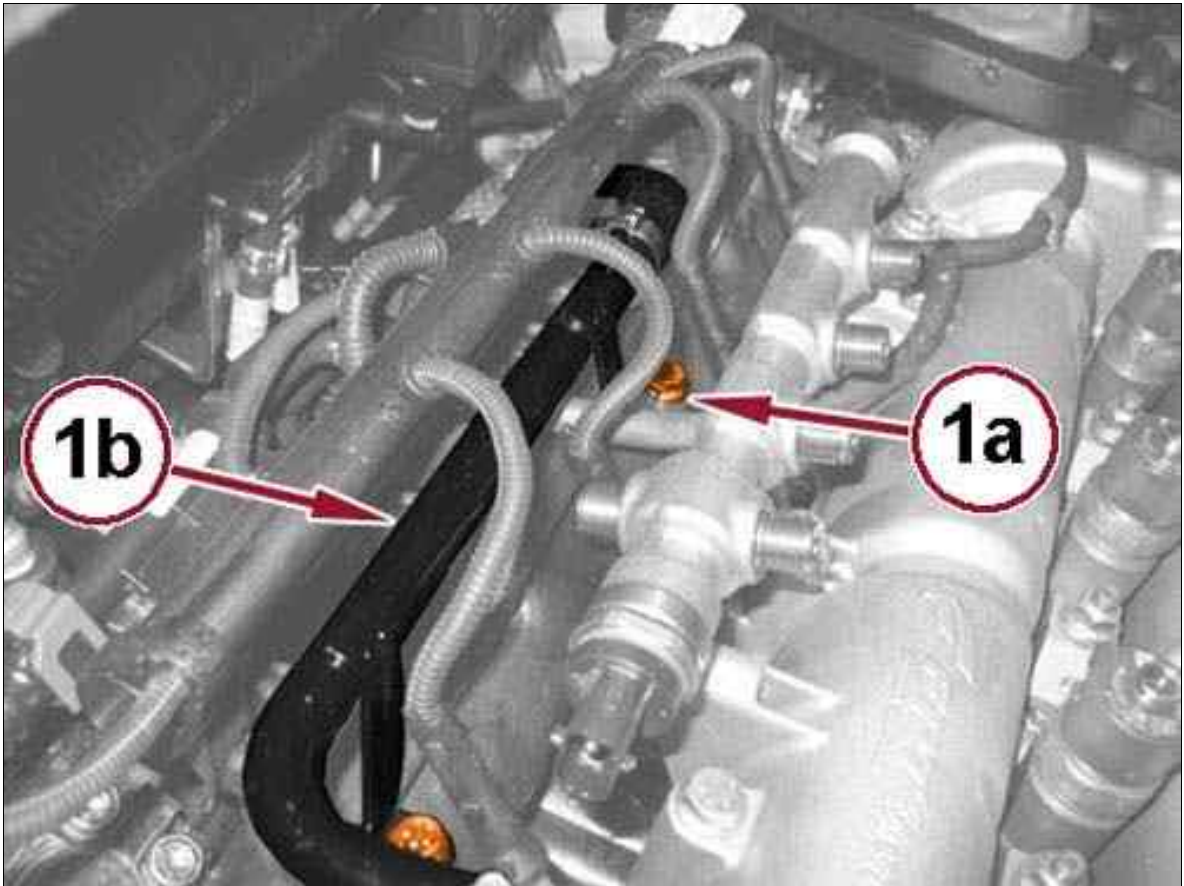
Fig 6: Oil Vapor Delivery Pipe, Quick Coupling & Screw



Courtesy of CHRYSLER GROUP, LLC

8. Disconnect the quick coupling (1a) and unscrew the screw fixing the oil vapor delivery pipe to the turbocharger (1b).

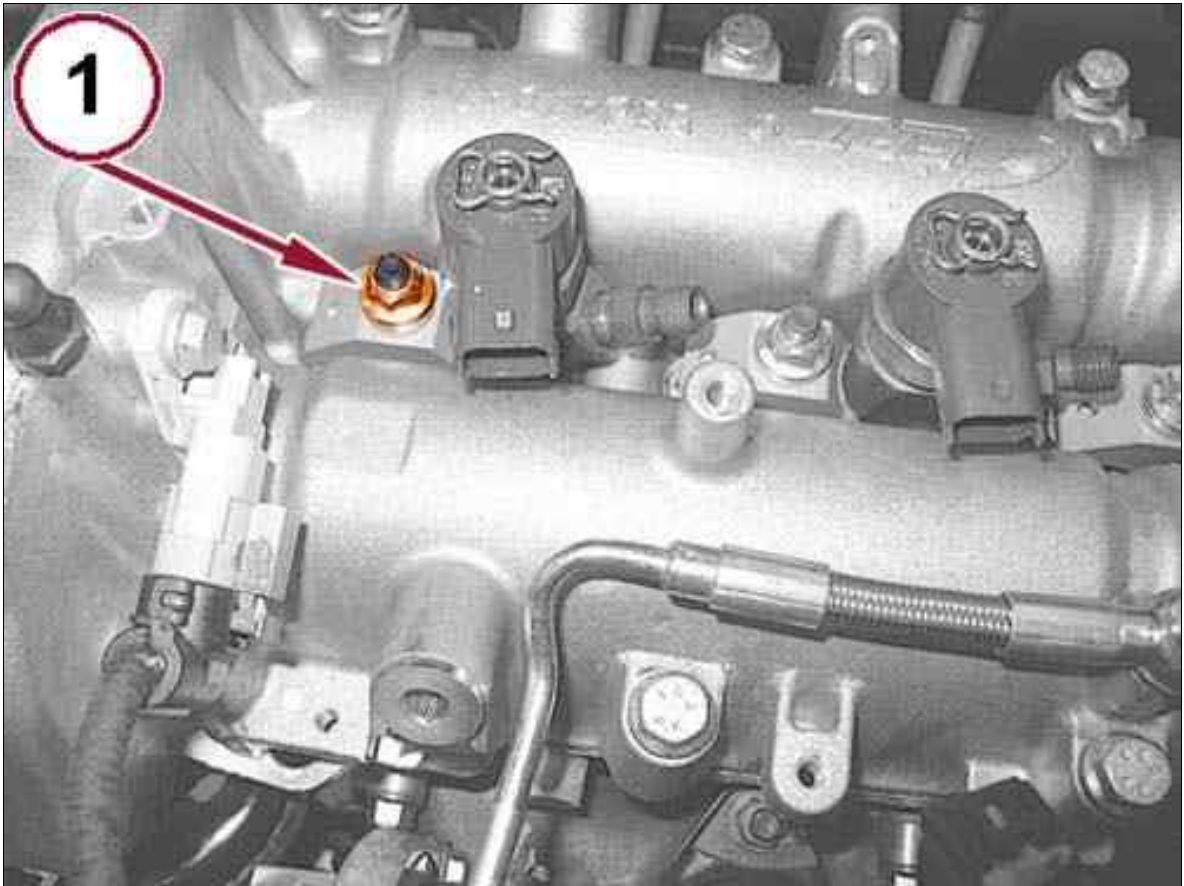
Fig 7: Oil Vapor Inlet Pipe & Screws



Courtesy of CHRYSLER GROUP, LLC

9. Remove the screws (1a) and remove the oil vapor inlet pipe (1b).

Fig 8: Injector Bracket Retaining Nuts



Courtesy of CHRYSLER GROUP, LLC

10. Remove the injector bracket retaining nuts (1).

Fig 9: Extractor, Adapter & Fuel Injectors



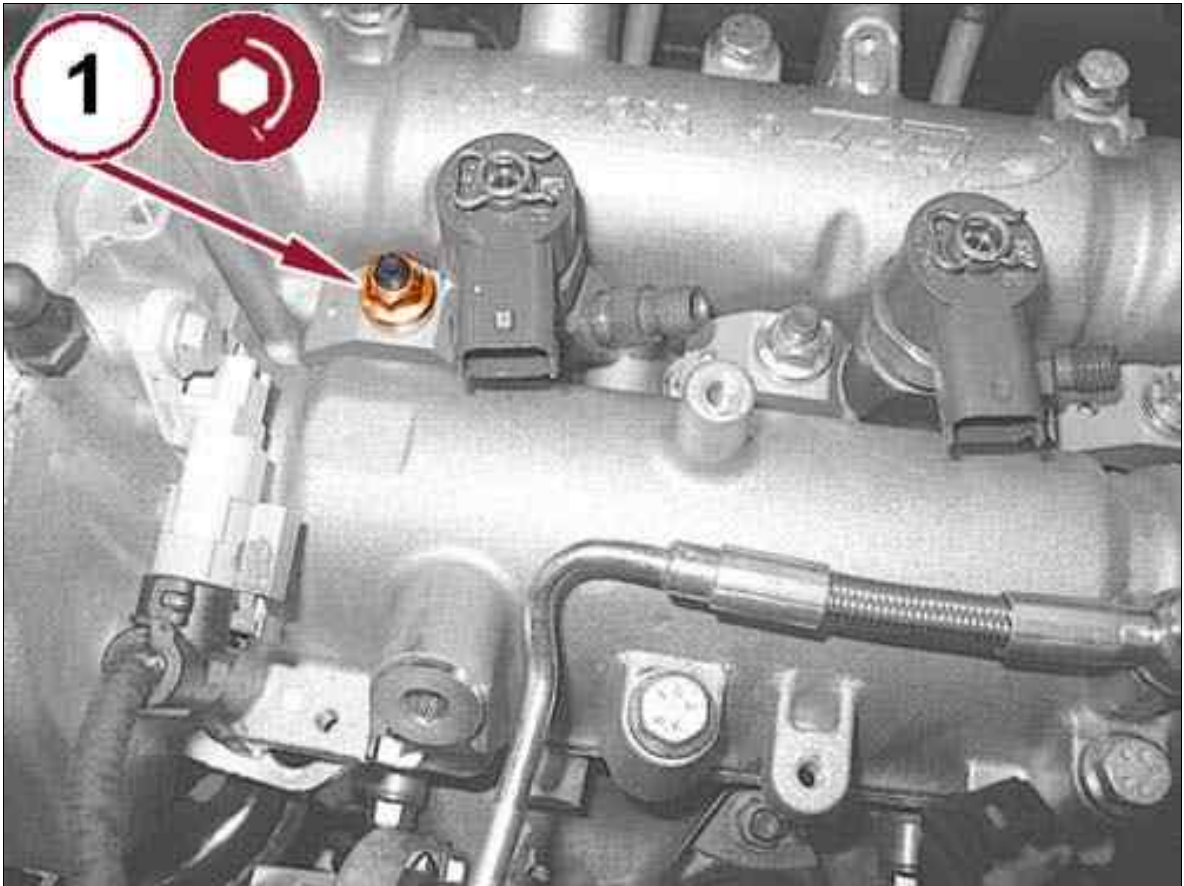
Courtesy of CHRYSLER GROUP, LLC

11. Using the extractor 187073900 (1b) and the adapter 1870897300 (1a), remove the fuel injectors (1c) complete with brackets and gaskets.
12. Start with removing the cylinder 1 injector, and continuing with 2, 3, and then 4.

FUEL INJECTION > INJECTOR(S), FUEL > REMOVAL AND INSTALLATION > 2.0L > INSTALLATION - 2.0 L TURBO DIESEL 120 HP AND 140 HP

1. When installing new injectors, verify the identification code printed on the upper surface is correct.
2. Verify that the old seals from the injectors have been removed from the cylinder head.

Fig 1: Injector Nut



Courtesy of CHRYSLER GROUP, LLC

3. Install the injectors with new gaskets, flanges and tighten the nuts (1) to the proper torque specification. Refer to FUEL INJECTION, SPECIFICATIONS .

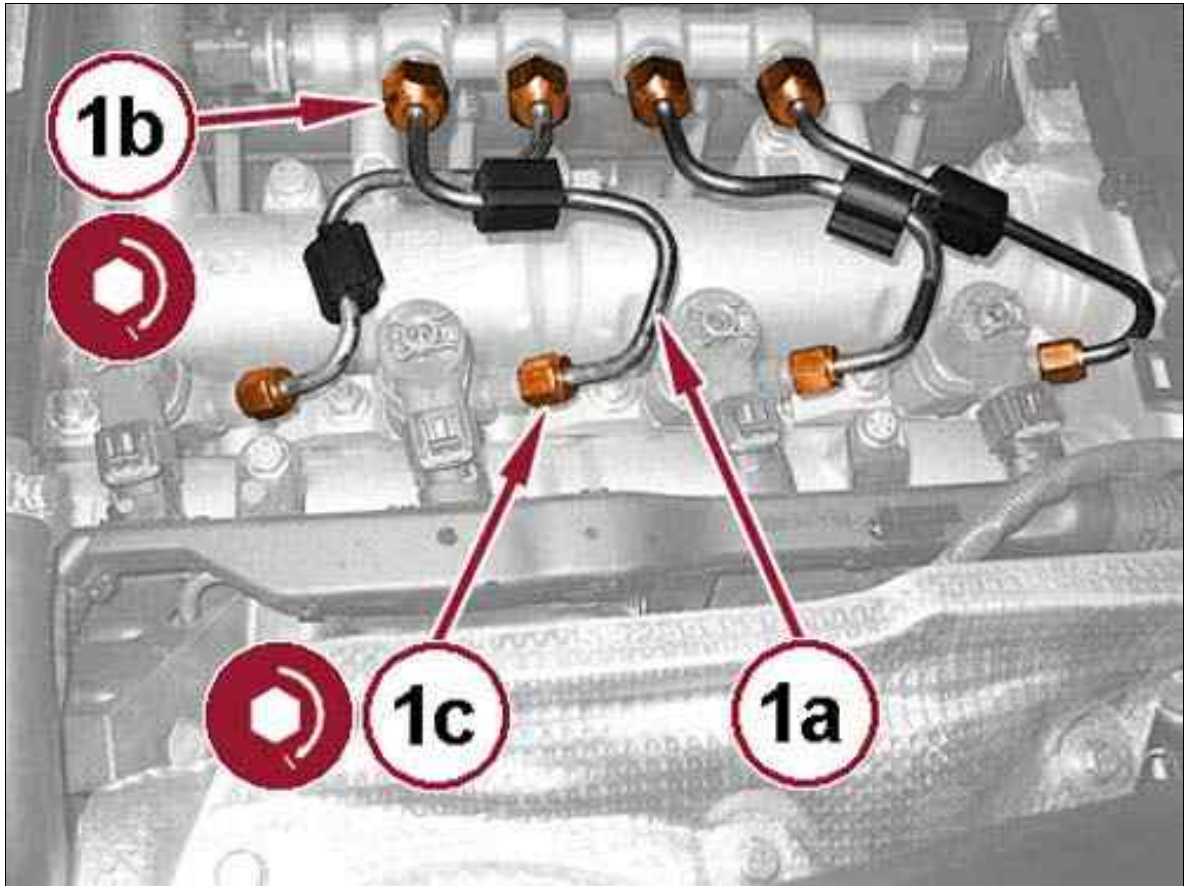
 NOTE:

Install cylinder 4 injector first, then continue with 3, 2, then 1.

4. Install the oil vapor delivery pipe to the turbocharger and securely tighten the screws.
5. Install the oil vapor delivery pipe to the turbocharger, connect the quick connector and securely tighten the screw.
6. Connect the electrical connections of the injectors.
7. Install and securely tighten the engine harness mounting screws.

8. Install the bottom of the turbocharger heat shield and securely tighten its hardware.
9. Install the top of the turbocharger heat shield and securely tighten the screws.

Fig 2: Fuel Injector Piping & Fittings



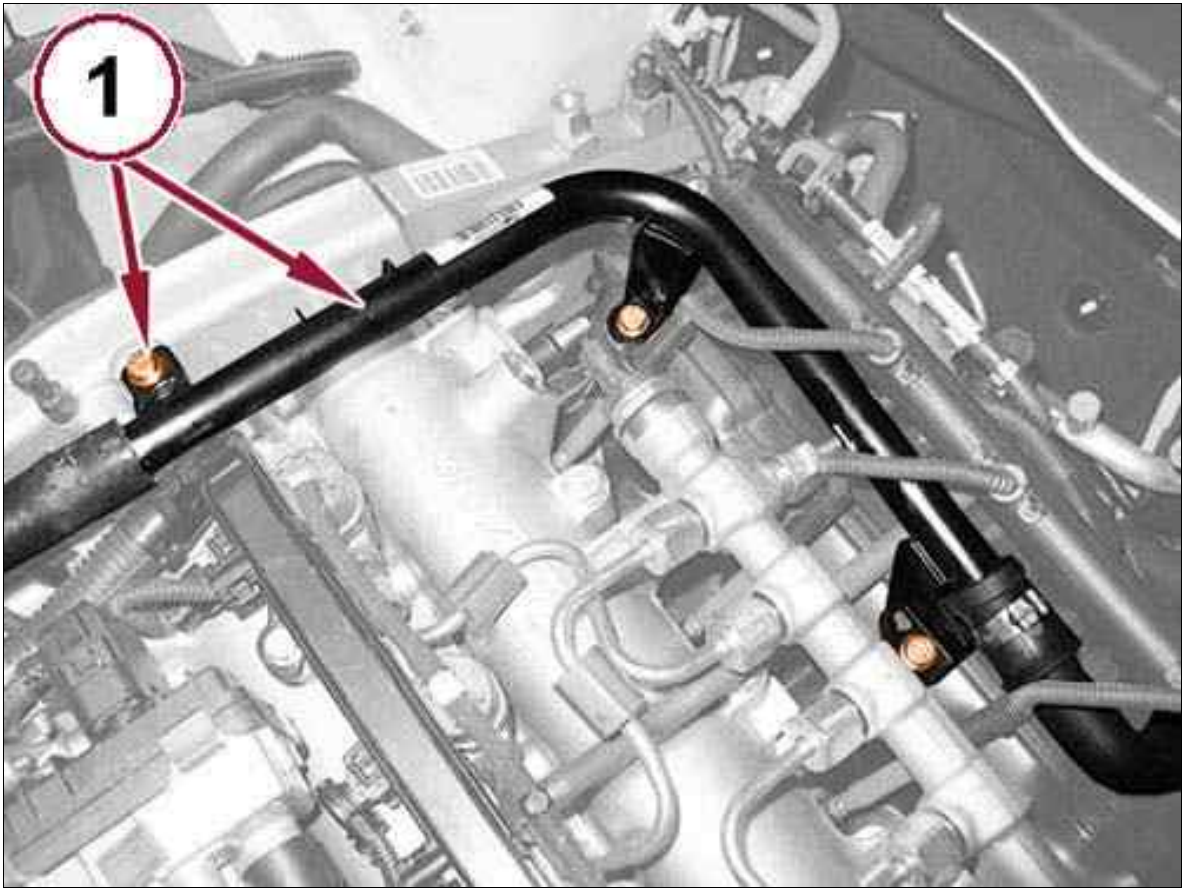
Courtesy of CHRYSLER GROUP, LLC

10. Install the new fuel injector piping (1a), tighten the fittings (1b) and (1c) to the proper torque specification. Refer to FUEL INJECTION, SPECIFICATIONS .
11. Install the return line to the fuel injectors and fasten it to the injectors until you hear the click of the retaining clips.
12. Install the engine cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .

FUEL INJECTION > INJECTOR(S), FUEL > REMOVAL AND INSTALLATION > 2.0L > REMOVAL - 2.0L TURBO DIESEL 170 HP

1. Open the cover of the fuse box in the engine compartment and remove the fuse F21 (15 A) of the fuel pump.
2. Start the engine and run until the fuel in the lines is depleted.
3. Install the fuse removed earlier and close the fuse box cover.
4. Remove the engine cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .

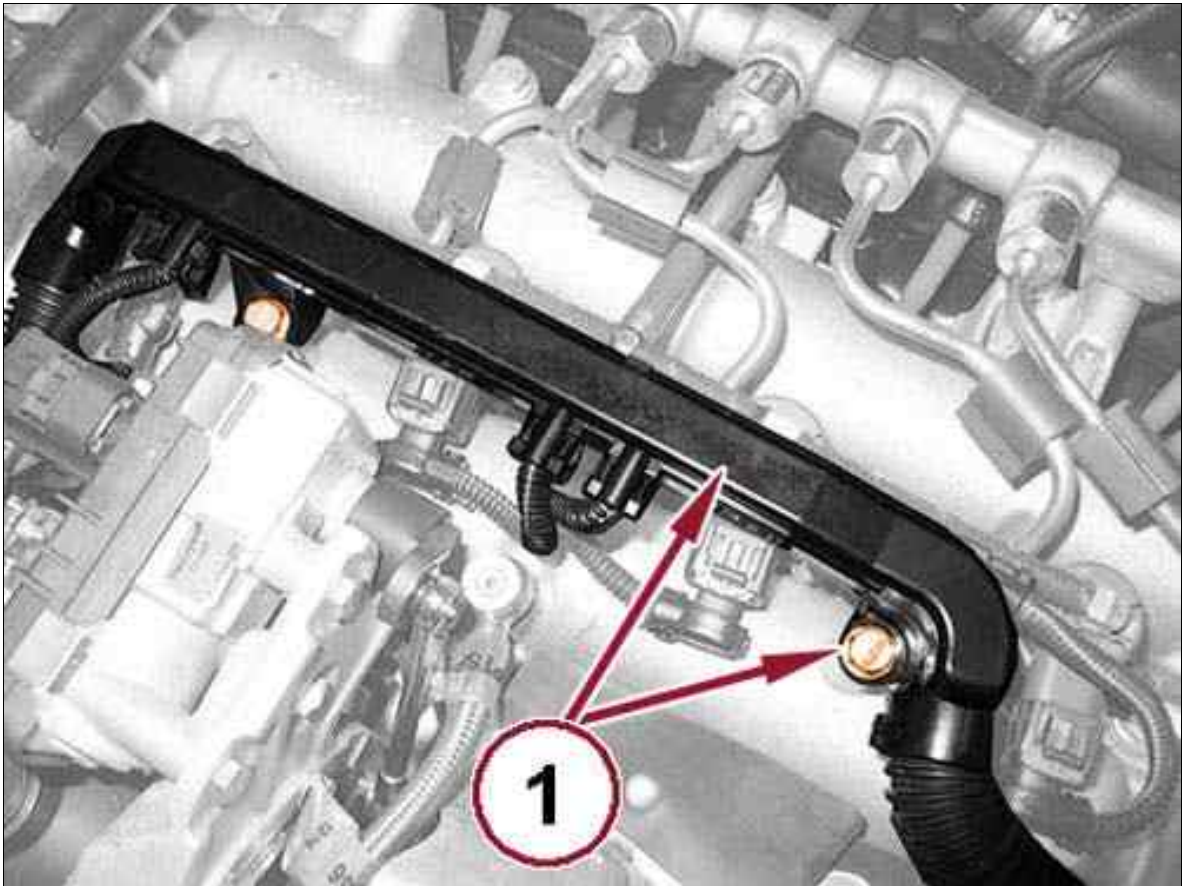
Fig 1: Oil Vapor Inlet Pipe & Nut



Courtesy of CHRYSLER GROUP, LLC

5. Loosen the screws and move the oil vapor inlet pipe to the side (1).

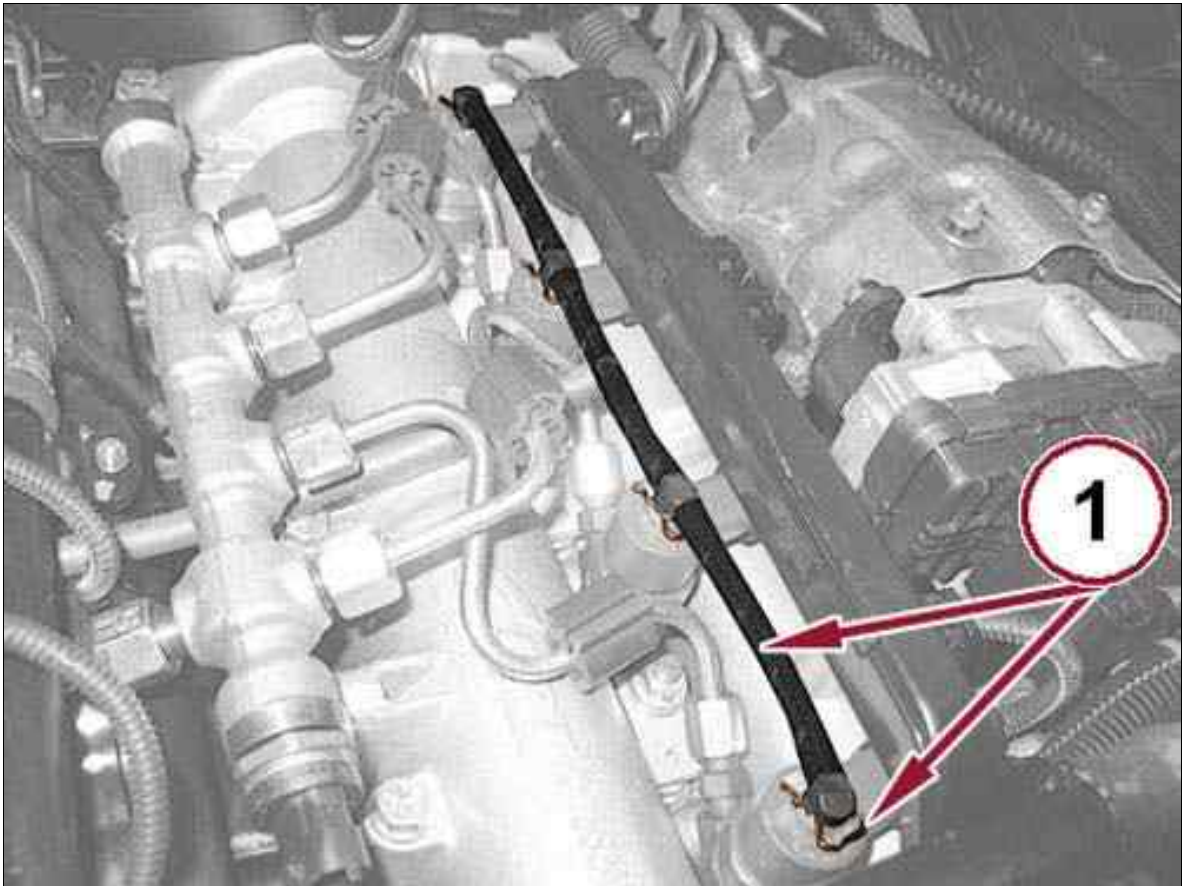
Fig 2: Wiring Conduit & Screws



Courtesy of CHRYSLER GROUP, LLC

6. Unscrew the screws securing the wiring conduit (1).

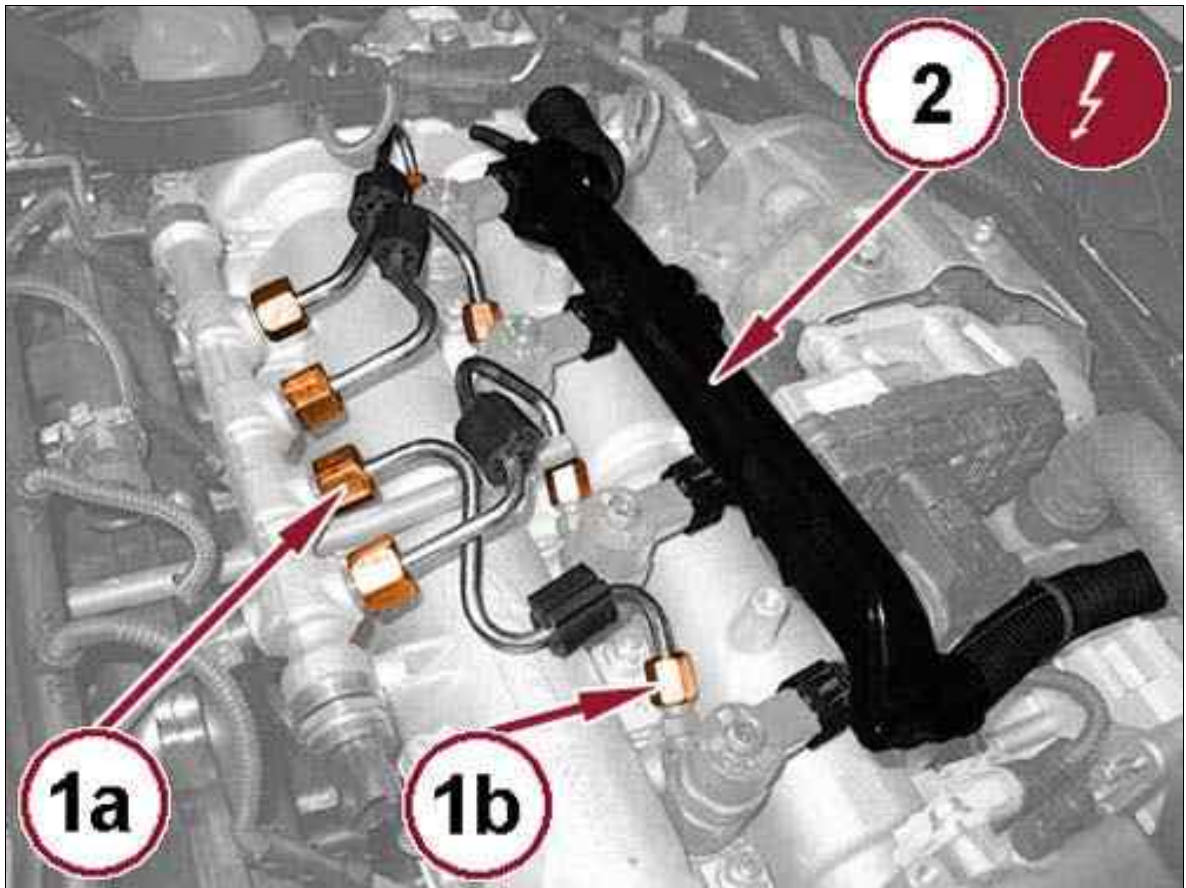
Fig 3: Fuel Return Pipe Clips



Courtesy of CHRYSLER GROUP, LLC

7. Disengage the clips and disconnect the fuel return pipe from injectors.

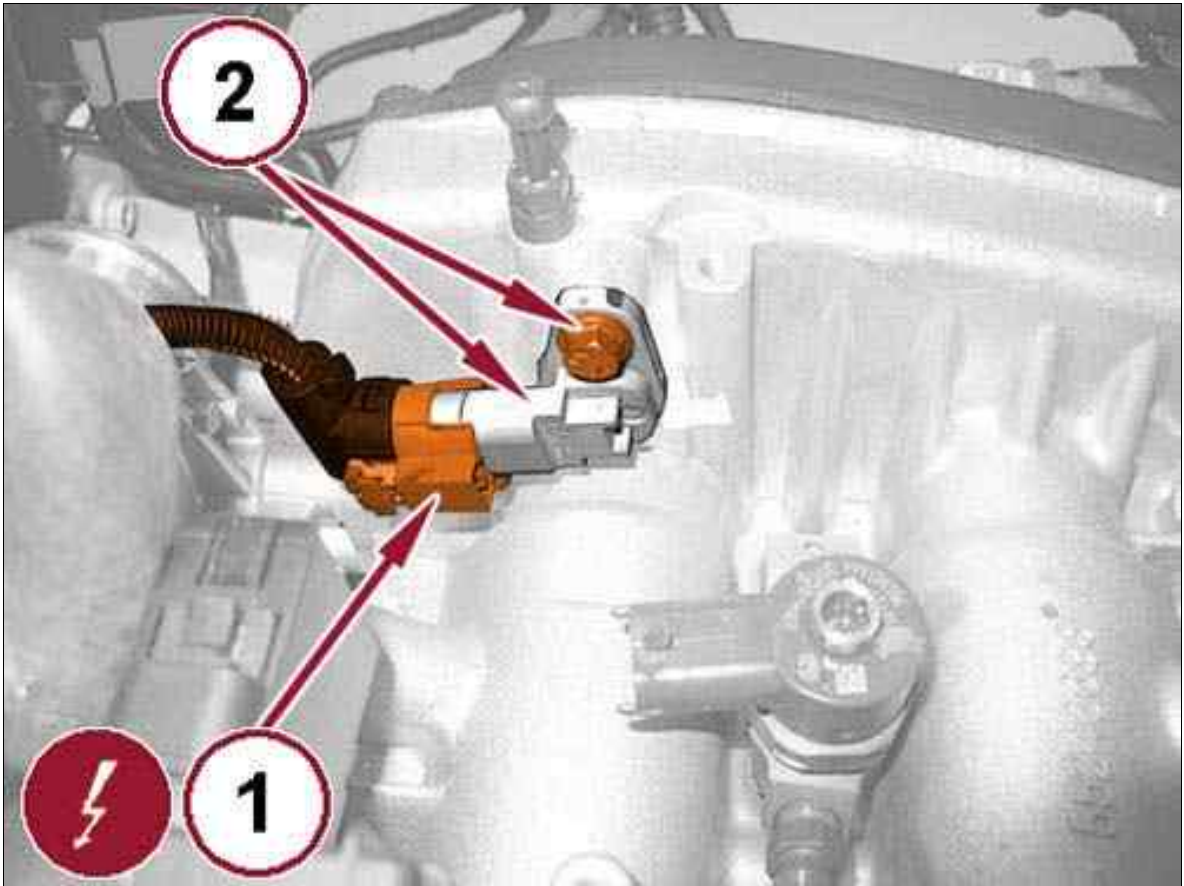
Fig 4: Fuel Injector Connectors & Fuel Pressure Line Fittings



Courtesy of CHRYSLER GROUP, LLC

8. Unscrew the fittings (1a), (1b) and remove the fuel pressure lines to the injectors.
9. Disconnect the electrical connections of the fuel injectors (2).

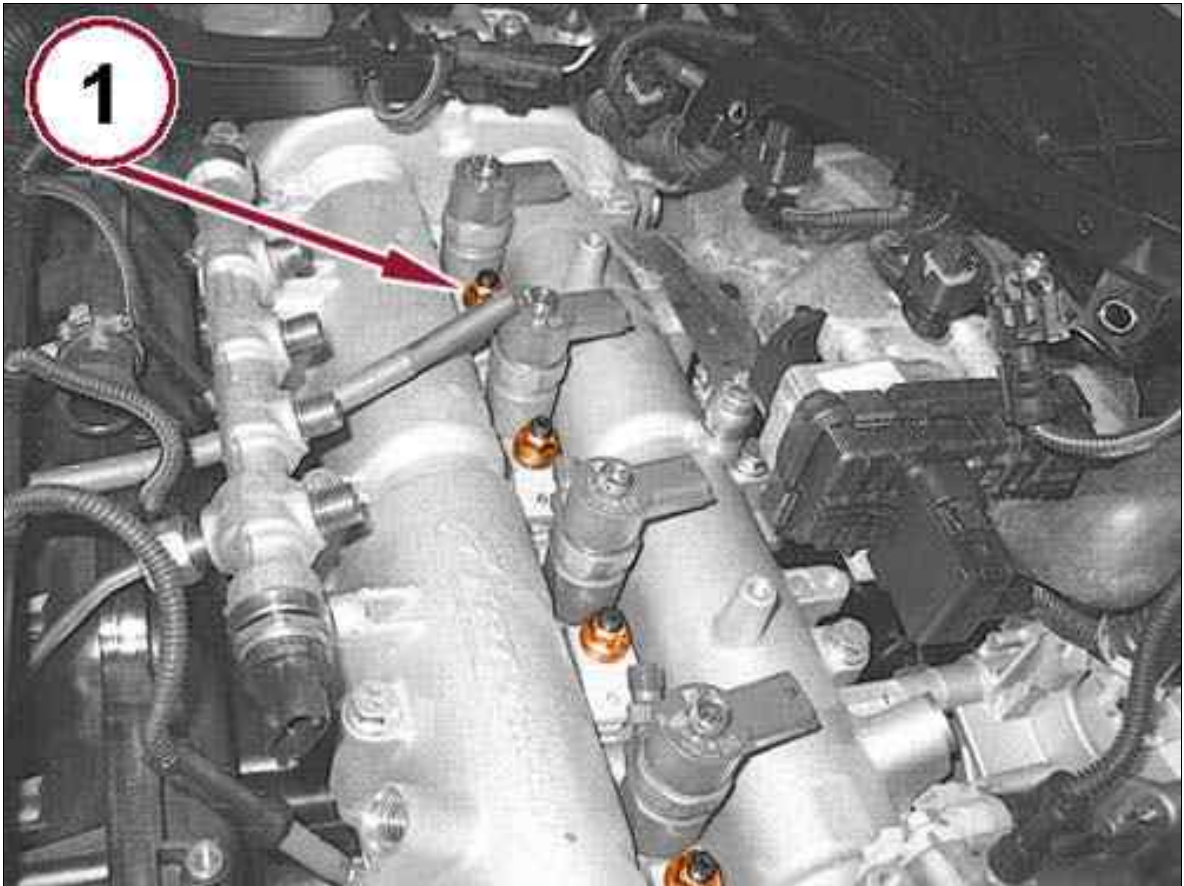
Fig 5: Electrical Connection, Timing Sensor & Screw



Courtesy of CHRYSLER GROUP, LLC

10. Disconnect the electrical connection (1), remove the screw and remove the timing sensor.

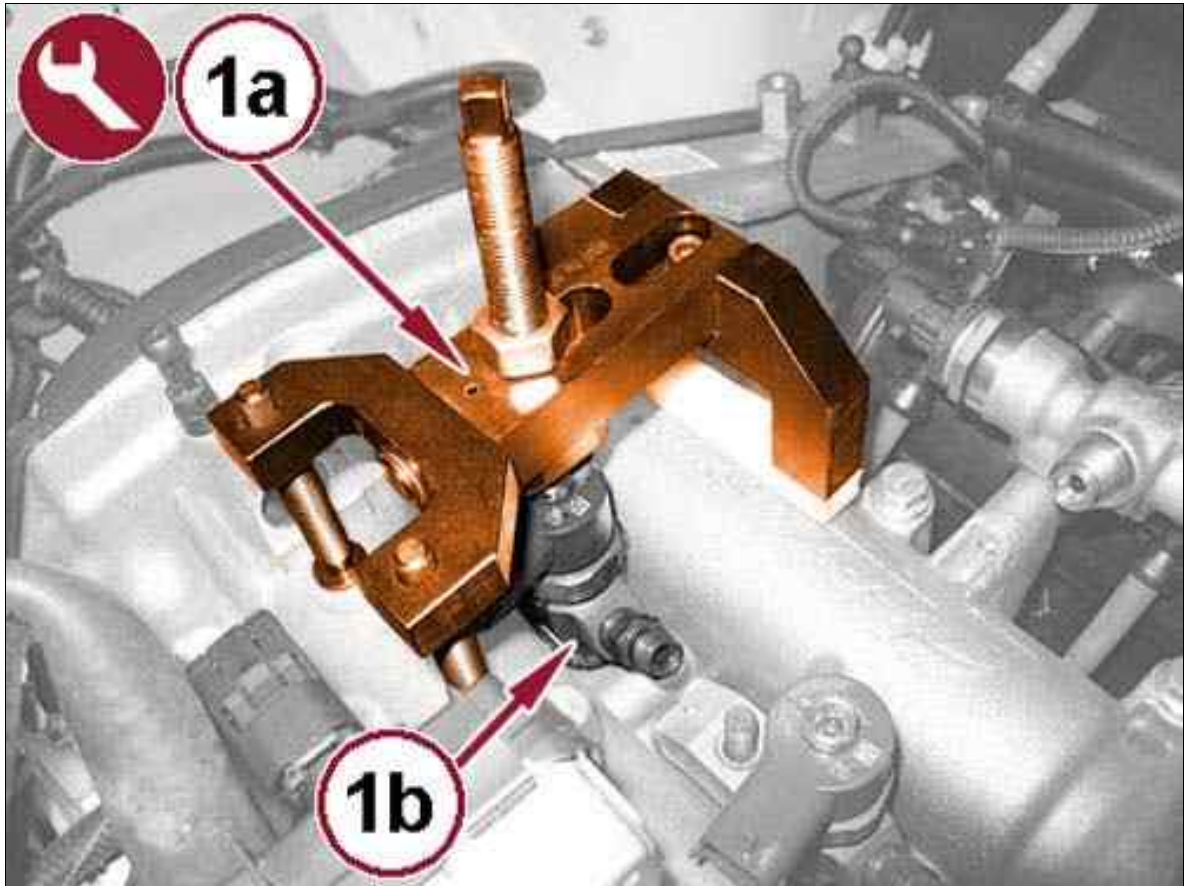
Fig 6: Injector Bracket Retaining Nuts



Courtesy of CHRYSLER GROUP, LLC

11. Remove the injector bracket retaining nuts (1).

Fig 7: Extractor, Adapter & Fuel Injectors



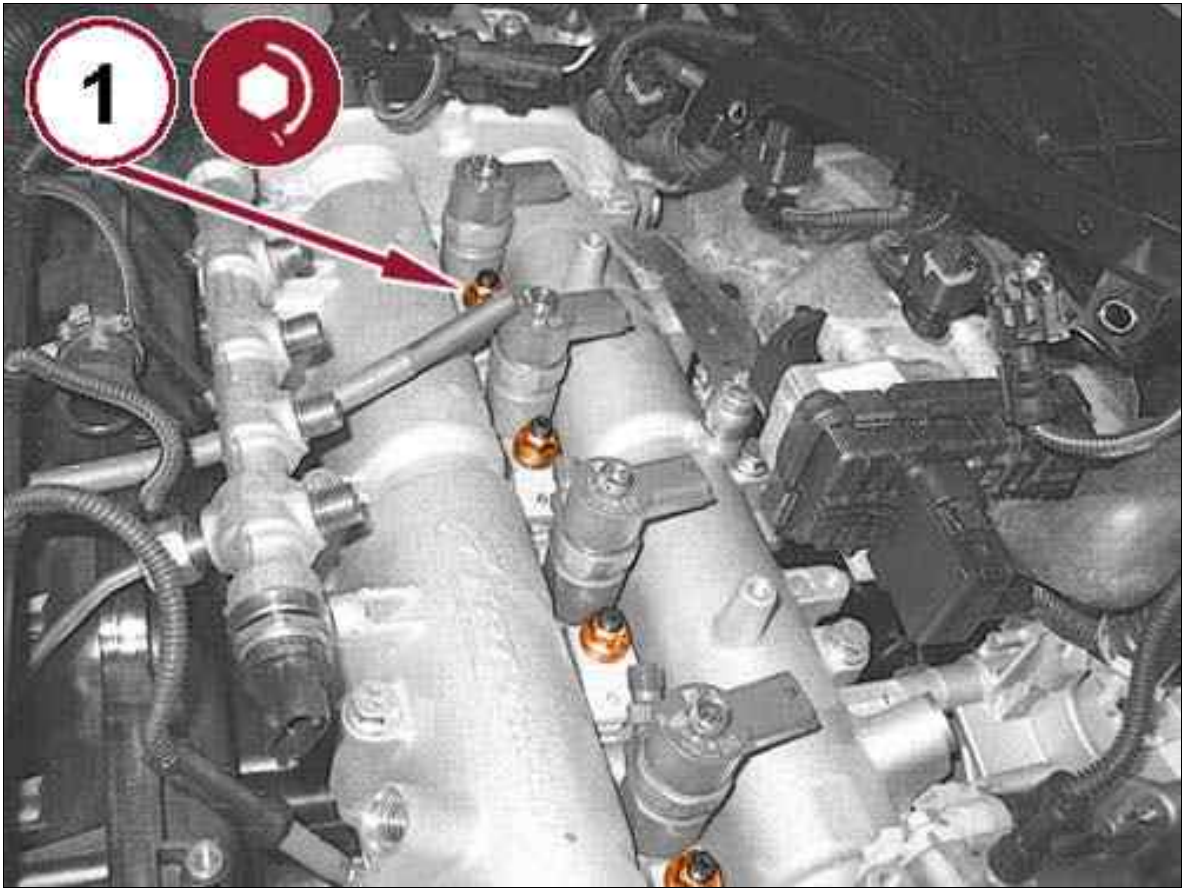
Courtesy of CHRYSLER GROUP, LLC

12. Using the extractor 187073900 (1b) and the adapter 1870897300 (1a), remove the fuel injectors (1c) complete with brackets and gaskets.
13. Start with removing the cylinder 1 injector, and continuing with 2, 3, and then 4.

FUEL INJECTION > INJECTOR(S), FUEL > REMOVAL AND INSTALLATION > 2.0L > INSTALLATION - 2.0L TURBO DIESEL 170 HP

1. When installing new injectors, verify the identification code printed on the upper surface is correct.
2. Verify that the old seals from the injectors have been removed from the cylinder head.

Fig 1: Injector Bracket Retaining Nuts



Courtesy of CHRYSLER GROUP, LLC

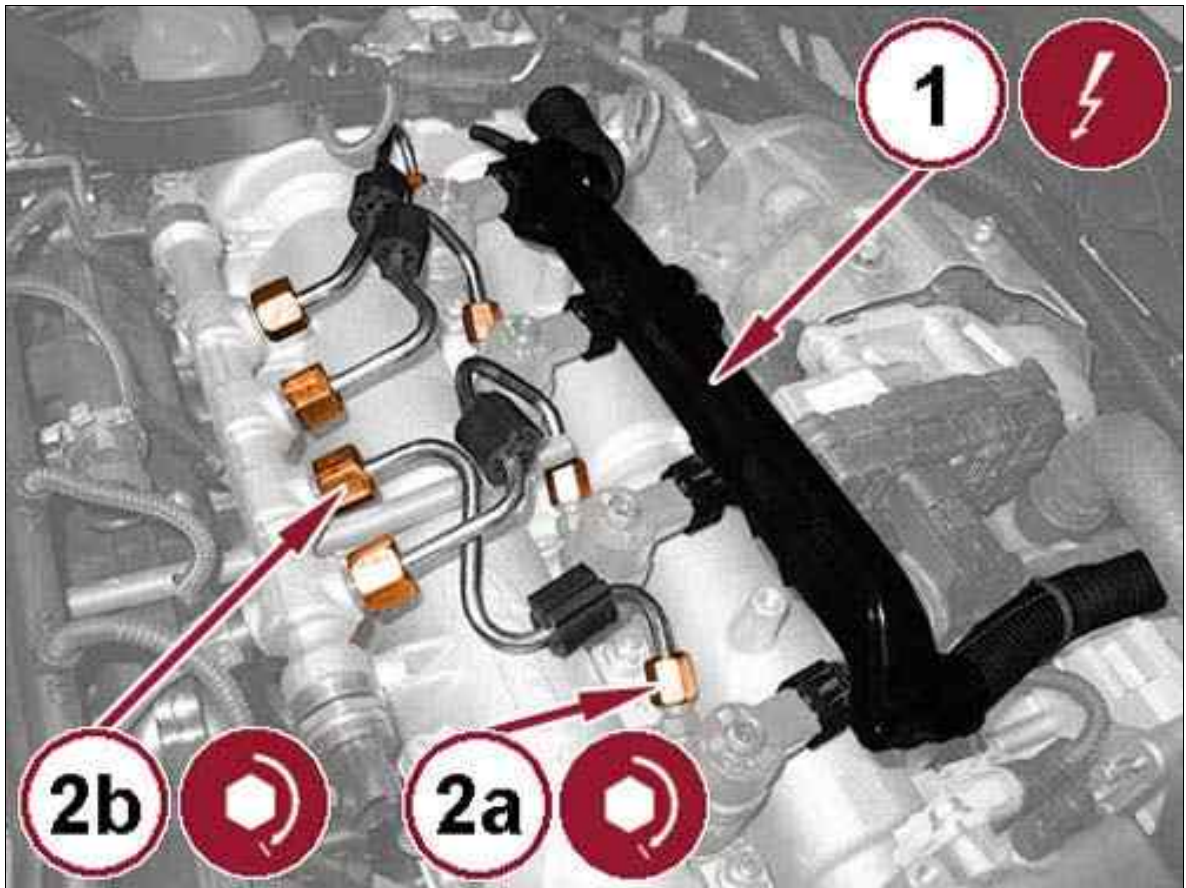
3. Install the injectors with new gaskets, flanges and tighten the nuts (1) to the proper torque specification. Refer to FUEL INJECTION, SPECIFICATIONS .

 **NOTE:**

Install cylinder 4 injector first, then continue with 3, 2, then 1.

4. Install the timing sensor, tighten the fixing screw and connect the electrical connection.

Fig 2: Injector Electrical Connections & Fuel Injector Piping Fittings



Courtesy of CHRYSLER GROUP, LLC

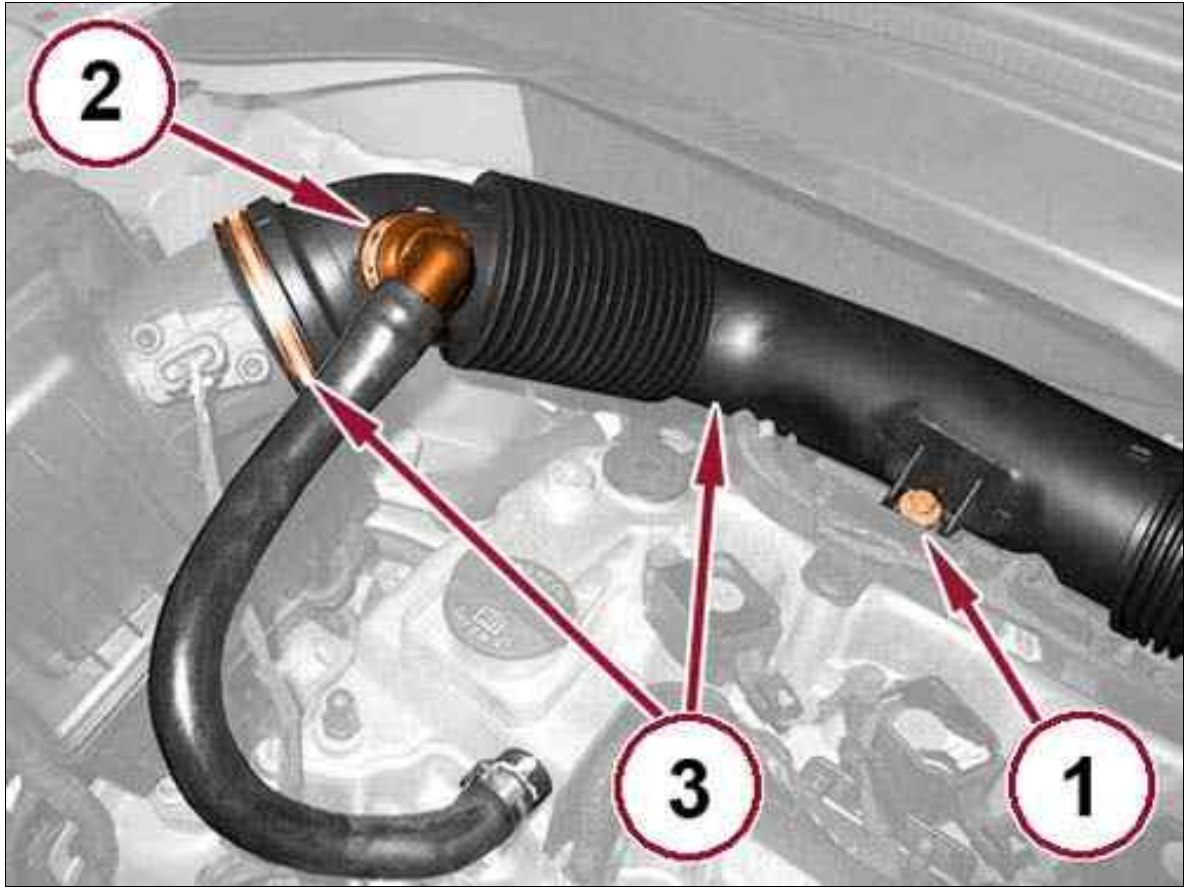
5. Connect the electrical connections of the injectors (1).
6. Install the new fuel injector piping and tighten the fittings (2a) and (2b) to the proper torque specification. Refer to FUEL INJECTION, SPECIFICATIONS .
7. Install the return line to the fuel injectors and fasten it to the injectors until you hear the click of the retaining clips.
8. Install and securely tighten the wire harness duct.
9. Install the oil vapor delivery pipe to the turbocharger and securely tighten the screws.
10. Install the engine cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .

FUEL INJECTION > INJECTOR(S), FUEL > REMOVAL AND INSTALLATION > 2.4L > REMOVAL

1. Open the cover of the fuse box in the engine compartment and remove the fuse F21 (15 A) of the fuel pump.
2. Start the engine and run until the fuel in the lines is depleted.
3. Install the fuse removed earlier and close the fuse box cover.

4. Remove the engine cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .

Fig 1: Air Hose Screw & Engine Oil Vapor Tube Quick Coupling



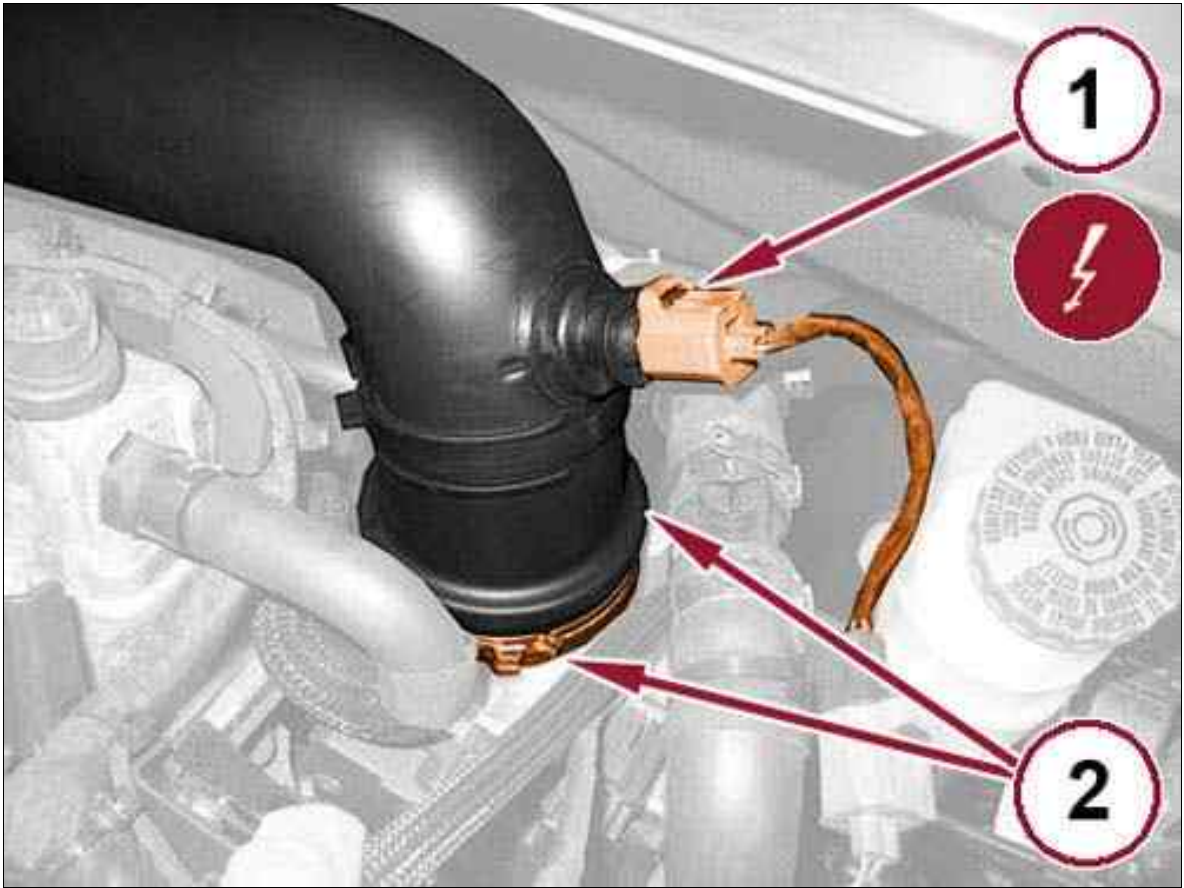
Courtesy of CHRYSLER GROUP, LLC

5. Remove the screw (1) securing the air hose from the filter to the throttle body.

6. Disconnect the engine oil vapor tube quick coupling (2).

7. Loosen the clamp and disconnect the hose from the air filter to the throttle body.

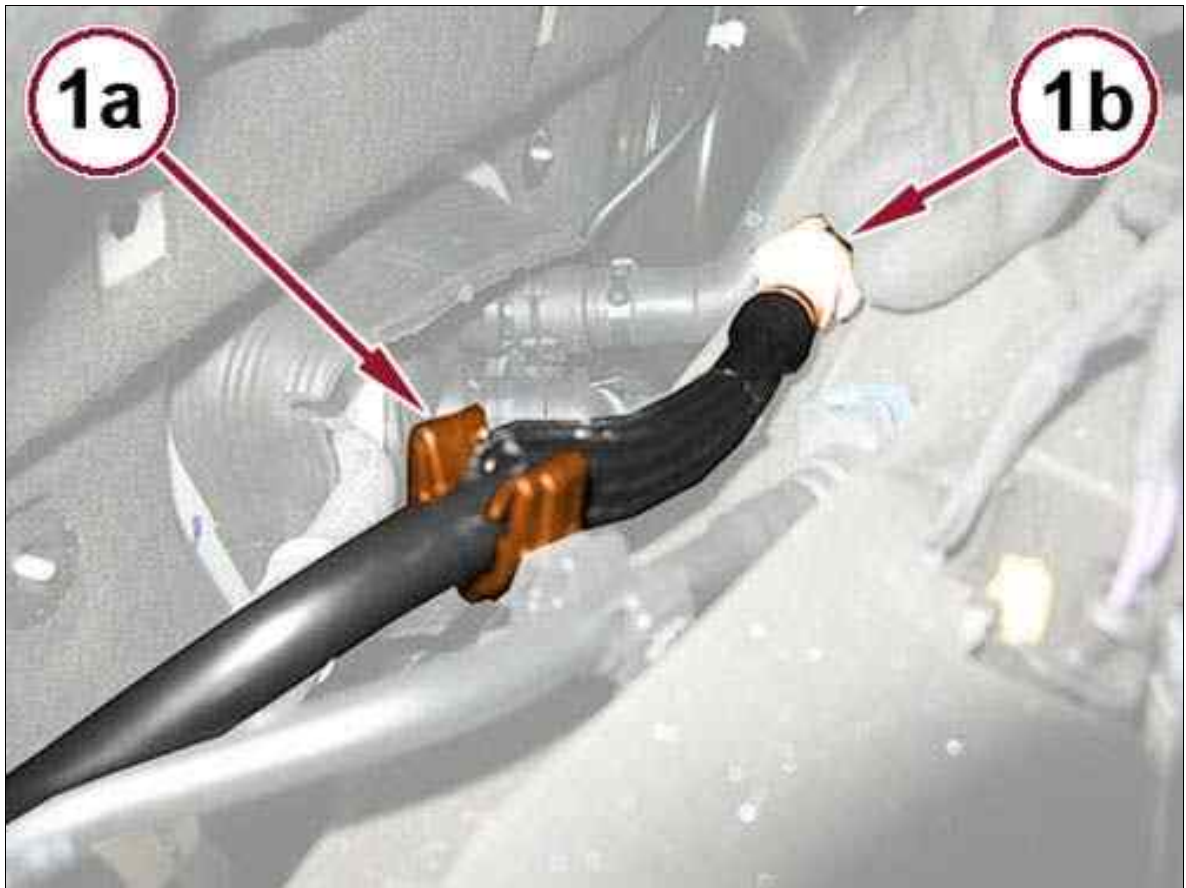
Fig 2: Air Temperature Sensor Electrical Connection & Air Filter Hose Clamp



Courtesy of CHRYSLER GROUP, LLC

8. Disconnect the electrical connection of the air temperature sensor (1).
9. Loosen the clamp and remove the hose from the air filter to the throttle body (2).

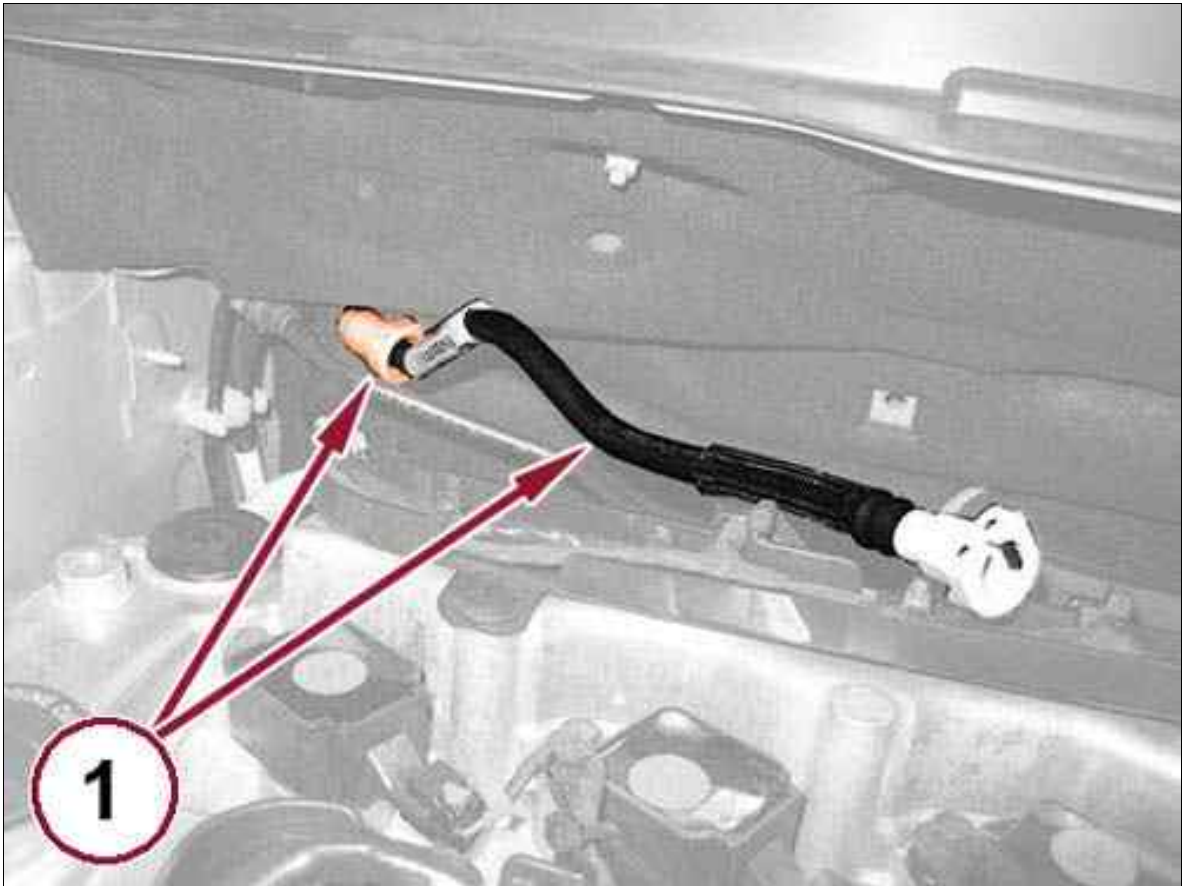
Fig 3: Fuel Vapor Hose Retaining Clip & Quick Coupling



Courtesy of CHRYSLER GROUP, LLC

10. Open the retaining clip (1a) and disconnect the quick coupling (1b) of the pipe fuel vapor hose.

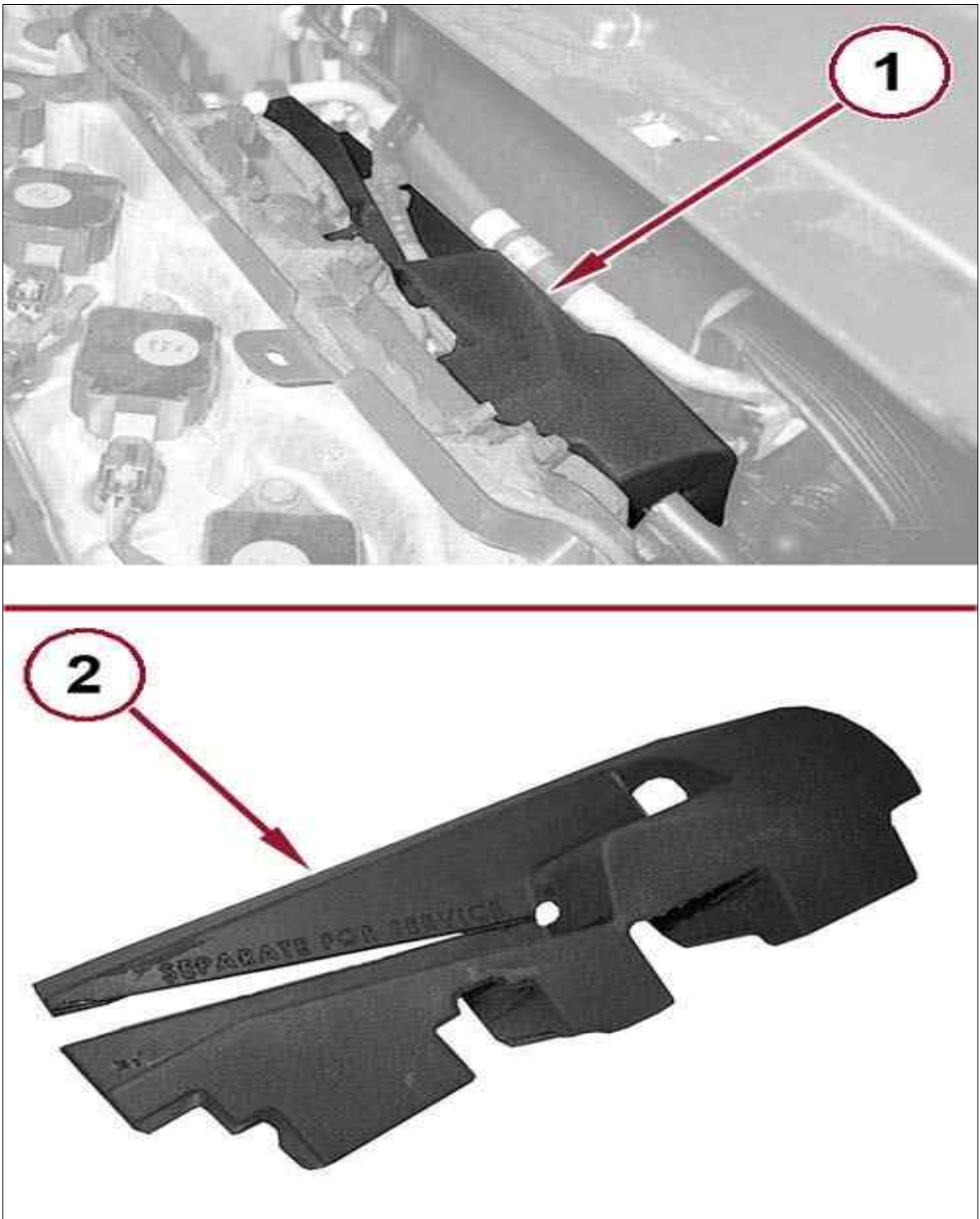
Fig 4: Fuel Vapor Tube & Quick Connect



Courtesy of CHRYSLER GROUP, LLC

11. Disconnect the quick connect and remove the fuel vapor tube (1).

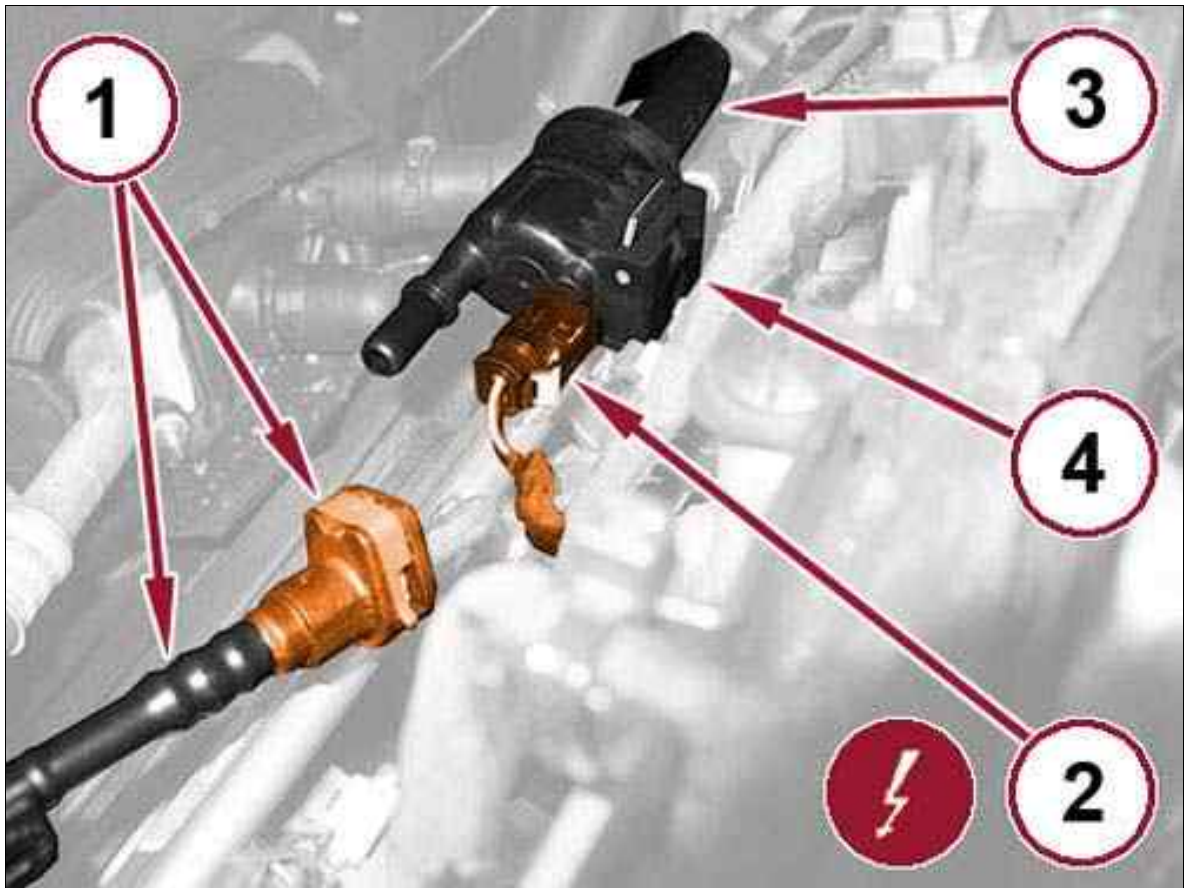
Fig 5: Acoustic Insulation Panel & Sound Absorbing Panel



Courtesy of CHRYSLER GROUP, LLC

12. Separate the two edges of the precut sound absorbing panel as shown in the illustration (1).
13. Remove the acoustic insulation panel (2).

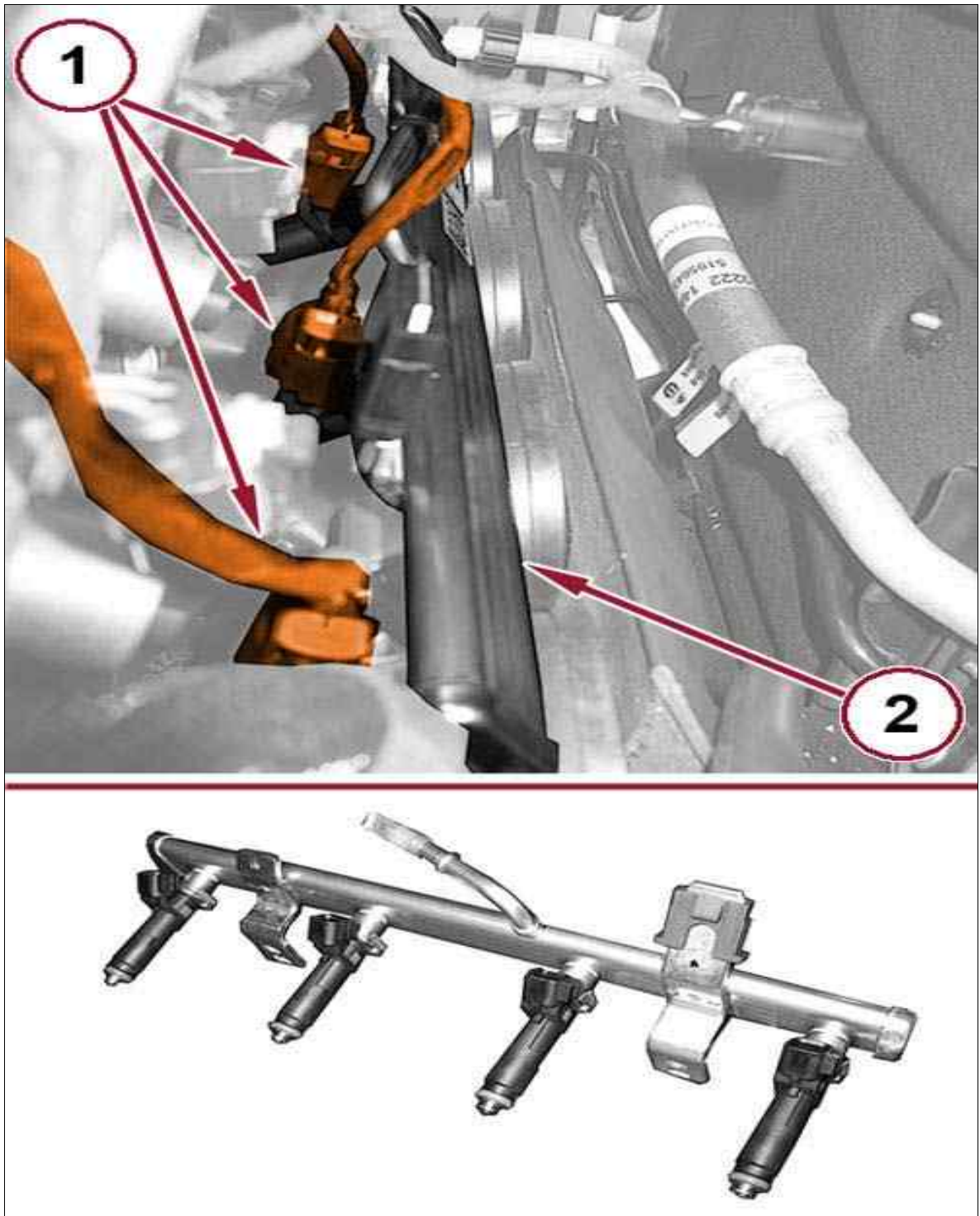
Fig 6: Fuel Vapor Solenoid, Quick Connect, Electrical Connector & Fuel Vapor Discharge Tube



Courtesy of CHRYSLER GROUP, LLC

14. Disconnect the quick connect and move to the side (1).
15. Disconnect the electrical connection from the fuel vapor solenoid (2).
16. Disconnect the fuel vapor discharge tube (3).
17. Remove the fuel vapor solenoid (4).

Fig 7: Fuel Injector Wire Harness Connectors & Fuel Rail



Courtesy of CHRYSLER GROUP, LLC

18. Disconnect the fuel injector wire harness connectors (1).

19. Remove the retaining screws and remove the fuel rail, complete with injectors (2).

FUEL INJECTION > INJECTOR(S), FUEL > REMOVAL AND INSTALLATION > 2.4L >

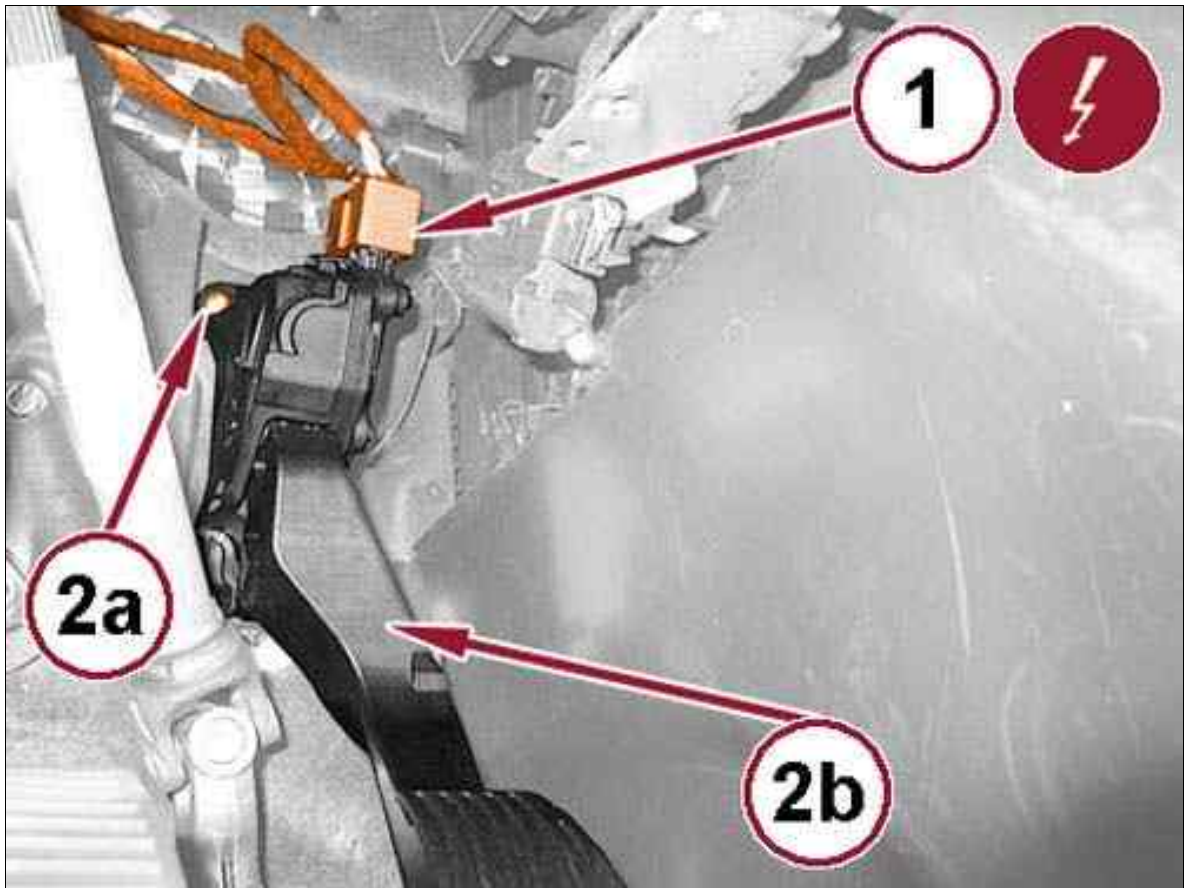
INSTALLATION

1. Install the fuel rail with injectors and securely tighten the retaining screws.
2. Connect the fuel injector wire harness connectors.
3. Install the fuel vapor solenoid.
4. Connect the fuel vapor delivery pipe to the air box.
5. Connect the electrical connection of the fuel vapor solenoid.
6. Connect the quick coupling of the fuel delivery pipe.
7. Install the sound absorber.
8. Connect the fuel vapor quick coupling hose.
9. Engage the fuel vapor tube in its retaining clip and connect the quick coupling.
10. Put in place the tubing from the air filter to the throttle body, and securely tighten the throttle body side clamp.
11. Connect the electrical connection of the air temperature sensor.
12. Connect the air hose from the filter to the throttle body, and securely tighten the filter side clamp.
13. Connect the engine oil vapor quick connect coupling.
14. Securely tighten the air hose retaining screw.
15. Install the engine cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .

FUEL INJECTION > SENSOR, ACCELERATOR PEDAL POSITION > REMOVAL AND INSTALLATION > REMOVAL AND INSTALLATION > REMOVAL

1. Disconnect and isolate the negative battery cable.
2. Remove the left cabin air filter. Refer to FILTER, CABIN AIR, REMOVAL AND INSTALLATION .

Fig 1: Accelerator Pedal, Electrical Connection & Screw



Courtesy of CHRYSLER GROUP, LLC

3. Disconnect the electrical connection (1) to the accelerator pedal.
4. Remove the screw (2a), push up to release and remove the accelerator pedal (2b) from the pedal support.

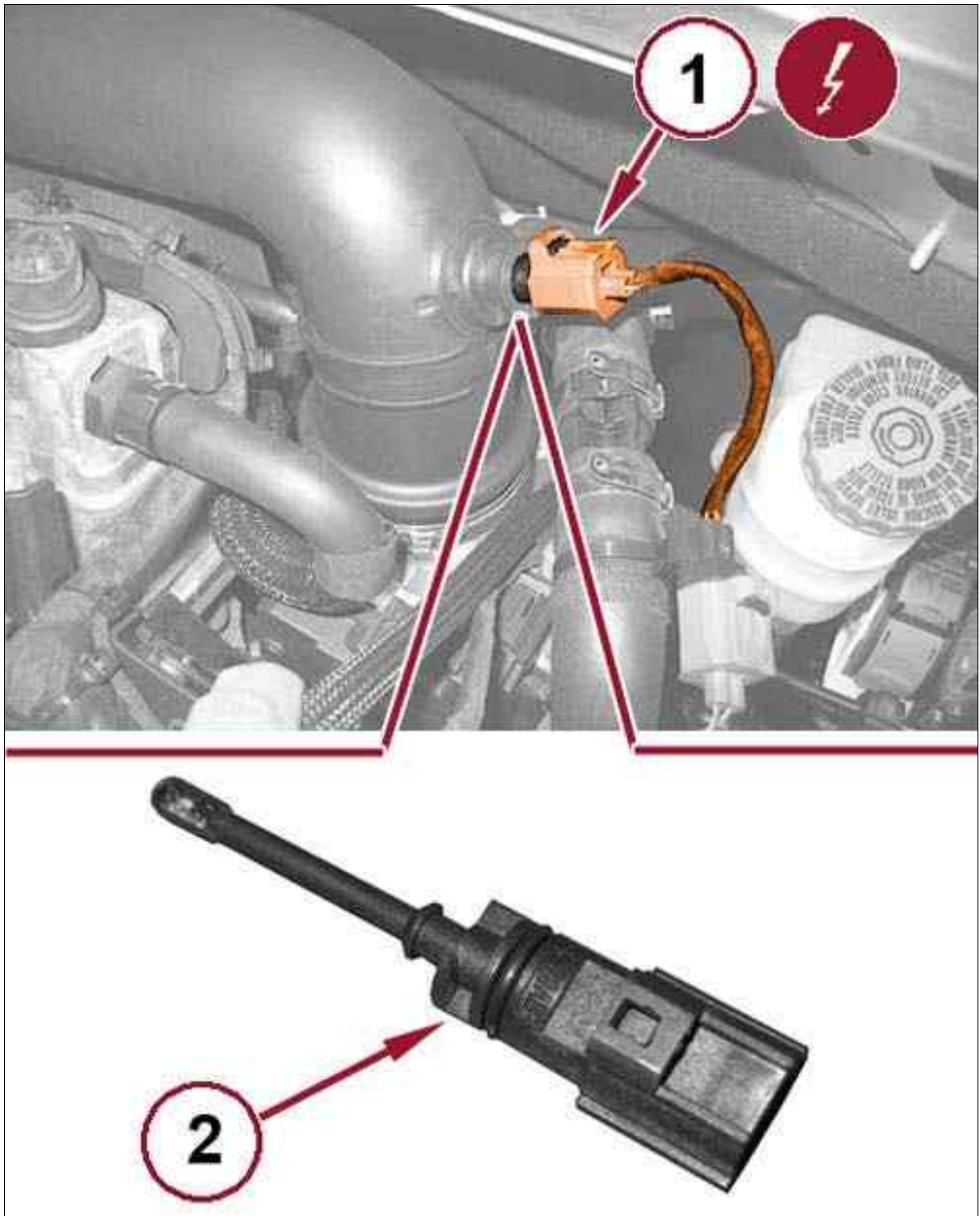
FUEL INJECTION > SENSOR, ACCELERATOR PEDAL POSITION > REMOVAL AND INSTALLATION > REMOVAL AND INSTALLATION > INSTALLATION

1. Install the accelerator pedal and tighten the screw.
2. Connect the electrical connector to the accelerator pedal.
3. Install the left cabin air filter. Refer to FILTER, CABIN AIR, REMOVAL AND INSTALLATION .
4. Connect the negative battery cable.

FUEL INJECTION > SENSOR, AIR TEMPERATURE, INTAKE > REMOVAL AND INSTALLATION > 2.4L > REMOVAL

1. Remove the engine cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .

Fig 1: Intake Air Temperature Sensor & Electrical Connector



Courtesy of CHRYSLER GROUP, LLC

2. Disconnect the electrical connector (1) from the intake air temperature sensor (2).
3. Rotate the intake air temperature sensor 1/4 turn counter clockwise and remove the sensor from the clean air hose.
4. The sensor O-ring seal can be reused if not damaged.

FUEL INJECTION > SENSOR, AIR TEMPERATURE, INTAKE > REMOVAL AND INSTALLATION > 2.4L > INSTALLATION

1. Install the intake air temperature sensor into the clean air housing and rotate to lock into place.
2. Connect the electrical connection.
3. Install the engine cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .

FUEL INJECTION > SENSOR, CRANKSHAFT POSITION > DESCRIPTION AND OPERATION > 1.4L MULTIAIR TURBO (EMEA)

Fig 1: Crankshaft Position Sensor

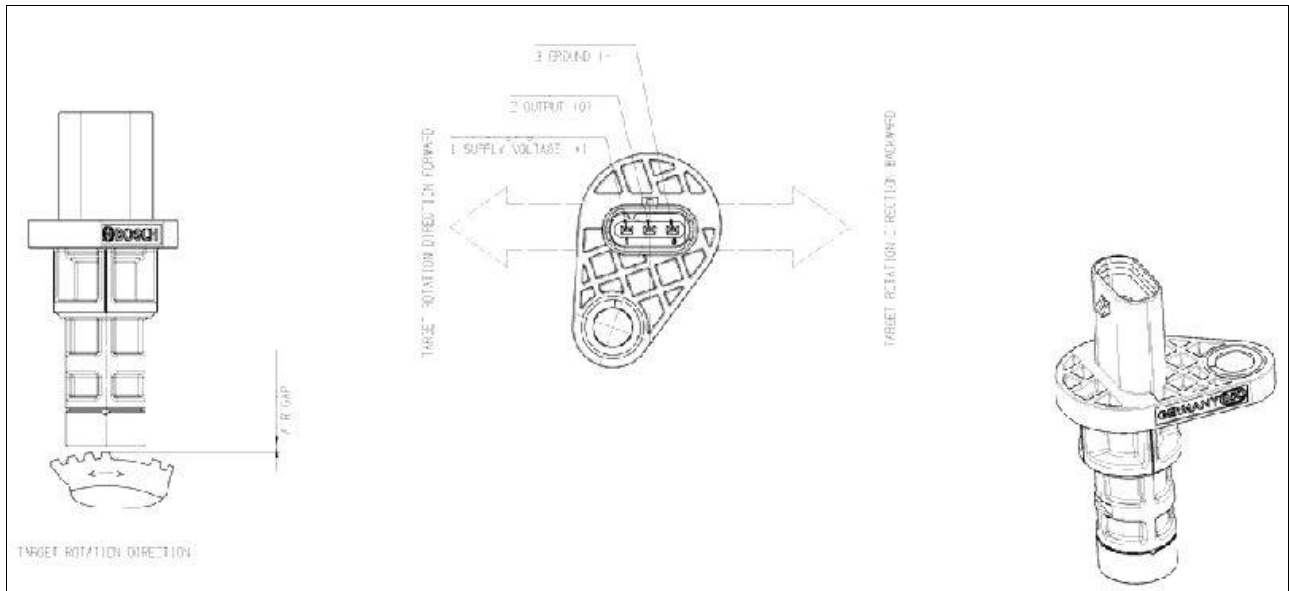


Courtesy of CHRYSLER GROUP, LLC

MultiAir engines are fitted with a new "Hall effect" engine rpm sensor. Besides its conventional function, it can also store the end position of the toothed wheel in one piece with the crankshaft during the engine stopping phase.

By remembering the last position detected during the previous engine stopping, it is possible to decrease the starting time at the next start-up.

Fig 2: Crankshaft Position Sensor Electrical Specifications



Courtesy of CHRYSLER GROUP, LLC

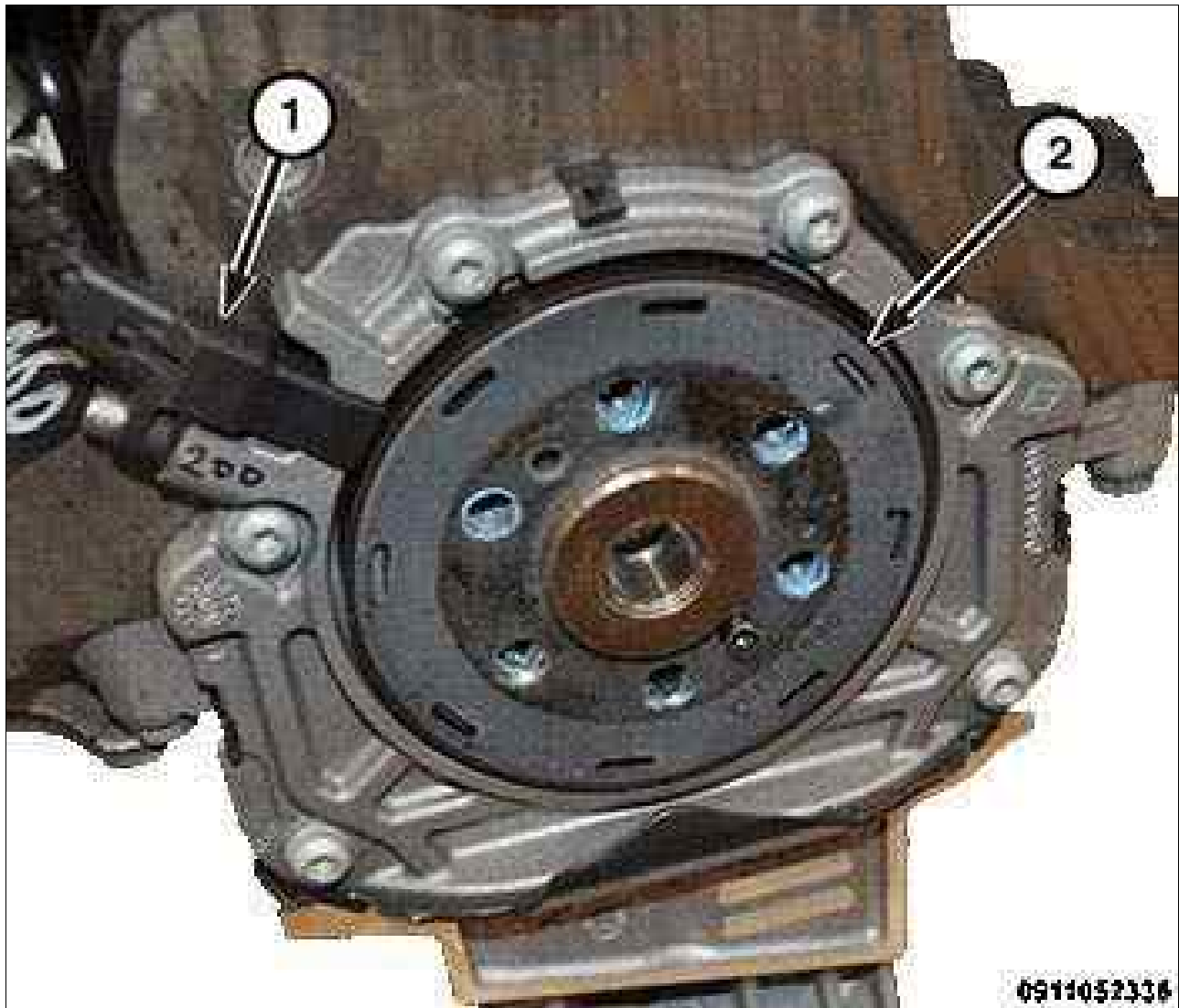
Electrical specifications:

- Power supply 5 V
- Air gap 0.2 - 1.5 mm
- Current 10 mA
- Signal Variable frequency square wave

(frequency from 0 to ≤ 10 kHz, voltage from 0.4 V to < 5 V)

FUEL INJECTION > SENSOR, CRANKSHAFT POSITION > DESCRIPTION AND OPERATION > 1.4L MULTIAIR TURBO (NAFTA)

Fig 1: Crankshaft Position Sensor & Tone Wheel



Courtesy of CHRYSLER GROUP, LLC

The Crankshaft Position (CKP) sensor (1) is mounted into the rear crankshaft oil seal retainer. It is positioned to read the tone wheel (2) mounted on the rear of the crankshaft. The sensor is accessed from behind the catalytic converter and is located at the transmission and cylinder block interface.

Engine speed and crankshaft position are provided through the CKP (Crankshaft Position) sensor. The sensor generates pulses that are the input sent to the Powertrain Control Module (PCM). The PCM interprets the sensor input to determine the crankshaft position. The PCM then uses this position, along with other inputs, to determine injector sequence and ignition timing.

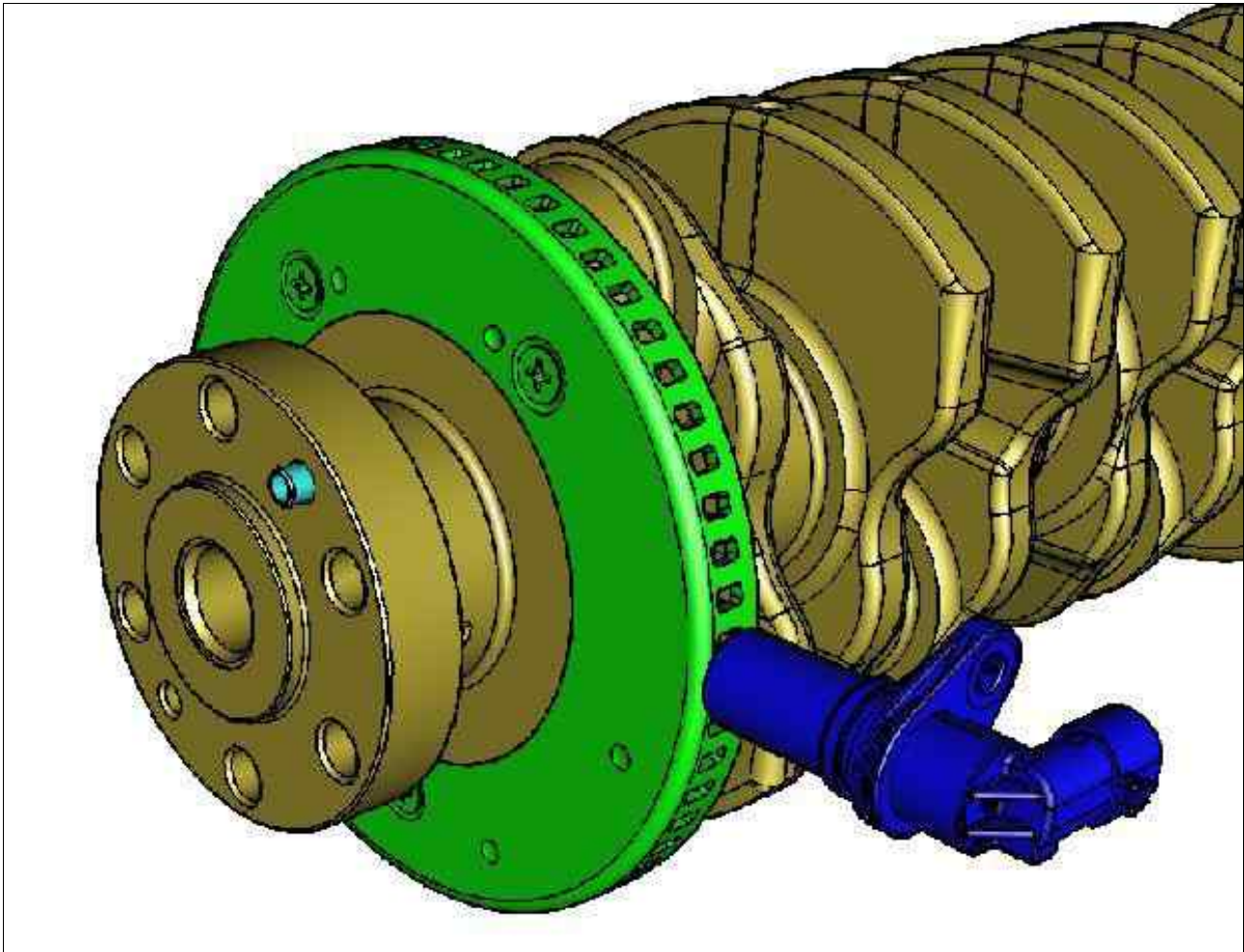
The sensor is a hall effect device.

A tonewheel (targetwheel) is located on the rear of the crankshaft.

This tonewheel causes a pulse to be generated when passing under the sensor. The pulses are the input to the PCM.

FUEL INJECTION > SENSOR, CRANKSHAFT POSITION > DESCRIPTION AND OPERATION > 2.0L DIESEL

Fig 1: RPM Sensor



Courtesy of CHRYSLER GROUP, LLC

Type

The rpm sensor is an inductive sensor, i.e. its operation is determined by magnetic field changes generated by the teeth passing in front of the toothed wheel (60-2 teeth).

Function

The rpm sensor is used by the Powertrain Control Module to:

- Determine the rotational speed of the crankshaft
- Determine the angular position of the crankshaft.

Location

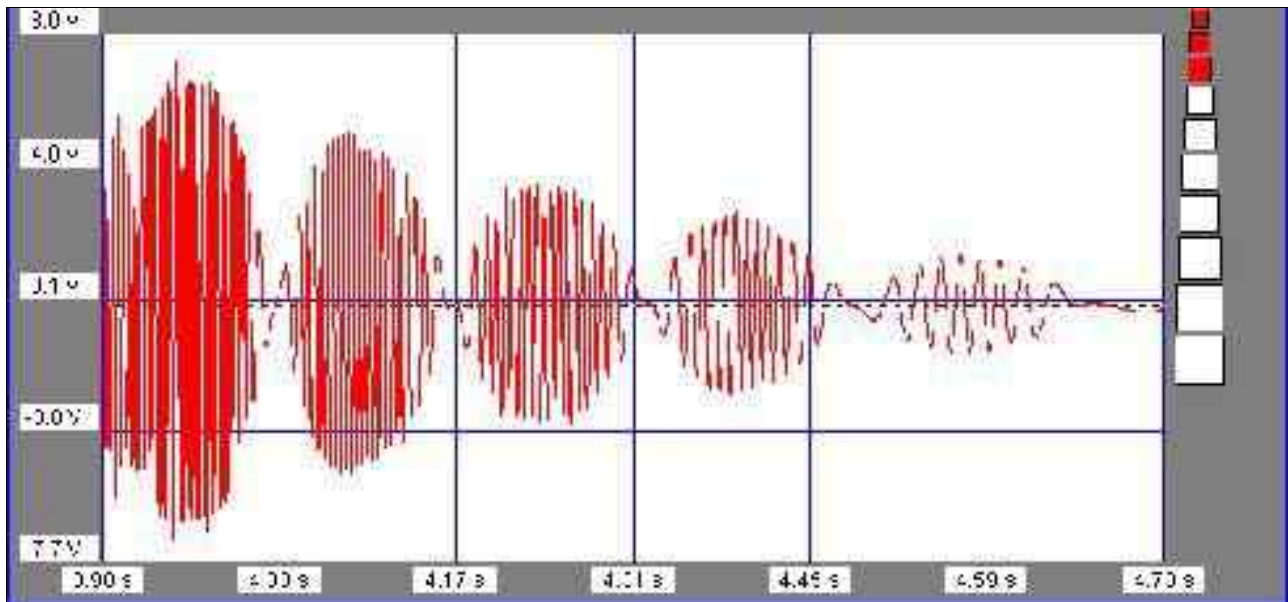
The rpm sensor is fitted on one side of the block and faces the toothed wheel on the crankshaft pulley.

Technical specifications

Winding resistance	790 ohm $\pm$ 20%
Winding inductance	680 mH $\pm$ 20% (f=1 kHz)
Resistance of insulation between the terminals and sensor body	> 1 megohm
Operating temperature	40°C - 150°C
Air gap	0.5 - 1.5 mm
M6 fixing screw tightening torque	8 Nm $\pm$ 20%

Rpm sensor electrical specifications

Fig 2: RPM Sensor Electrical Specifications

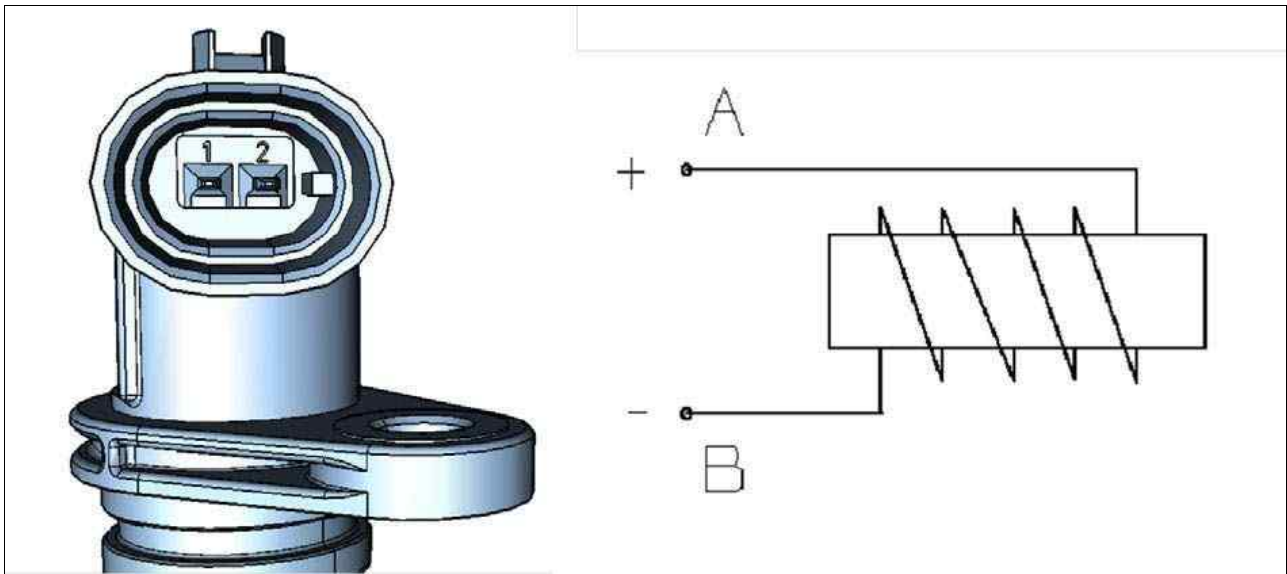


Courtesy of CHRYSLER GROUP, LLC

Sensor specifications	Electrical resistance equal to around 1 kilohm.
Type of output signal	Alternating voltage with variable maximum value and frequency proportional to flywheel speed
Measuring method	Given the signal type, an OSCILLOSCOPE or an Examiner equipped with an SMA module (for Examiner Smart) must be used to display the signal. Connect an Examiner in voltmeter mode and read the signal for about 2 - 5 seconds. The graph should have the following specifications: wave amplitude and frequency proportional to each other and to the flywheel speed; the signal should change when the sensor reads the missing tooth (every 58 signal peaks).

Electrical connections

Fig 3: RPM Sensor Connector Pin Out



Courtesy of CHRYSLER GROUP, LLC

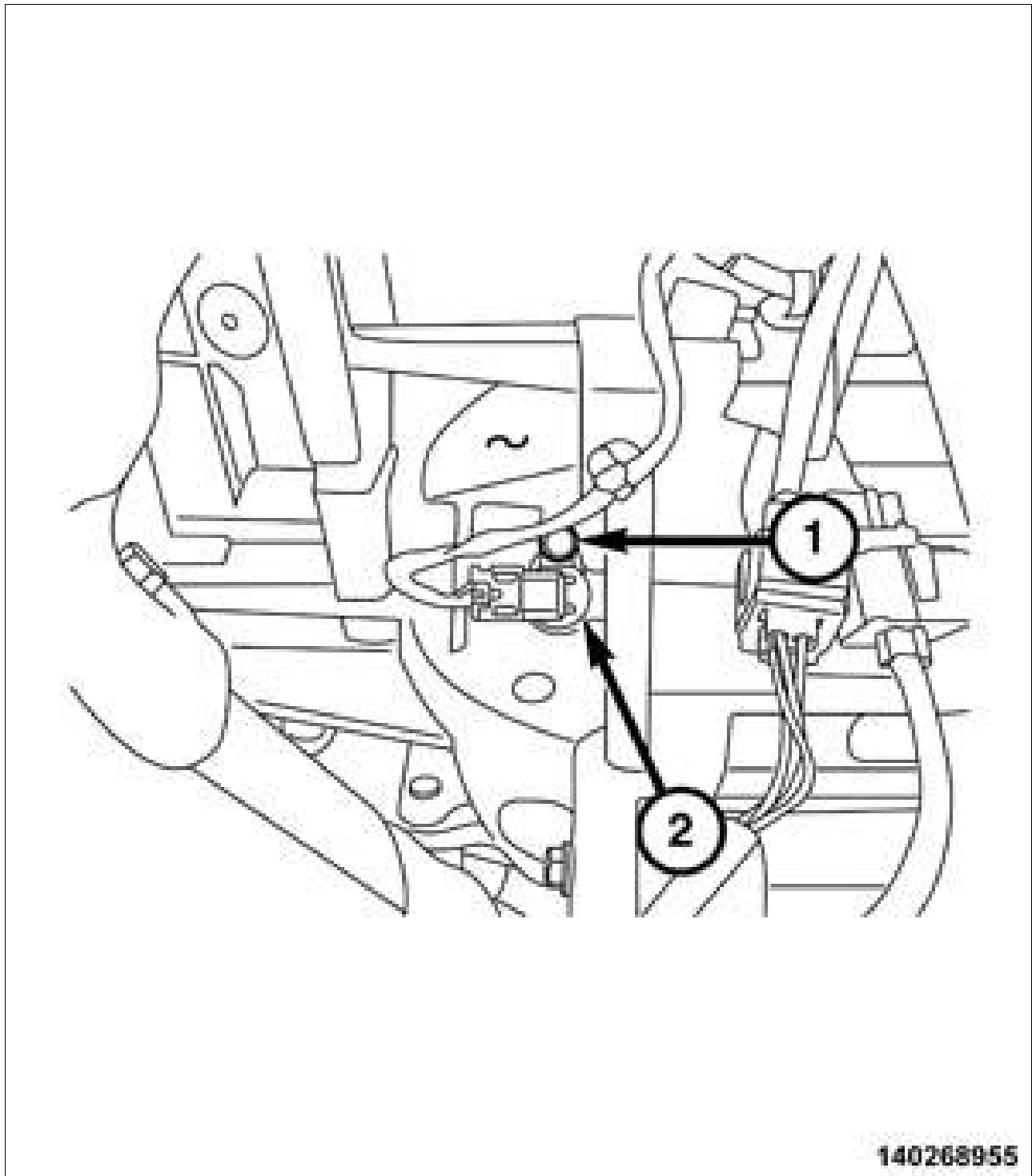
Key:

1 - Positive (A)

2 - Earth (B)

**FUEL INJECTION > SENSOR, CRANKSHAFT POSITION > DESCRIPTION AND
OPERATION > 2.4L MULTIAIR**

Fig 1: Crankshaft Position Sensor & Bolt



Courtesy of CHRYSLER GROUP, LLC

The Crankshaft Position (CKP) sensor (2) is mounted into the left side of the cylinder block at the rear of the engine. It is positioned to read the tonewheel mounted on the crankshaft.

Engine speed and crankshaft position are provided through the CKP (Crankshaft Position) sensor. The sensor generates pulses that are the input sent to the Powertrain Control Module (PCM). The PCM interprets the sensor input to determine the crankshaft position. The PCM then uses this position, along with other inputs, to determine injector sequence and ignition timing.

The sensor is a hall effect device.

A tonewheel (targetwheel) is located on the rear of the crankshaft.

This tonewheel causes a pulse to be generated when passing under the sensor. The pulses are the input to the PCM.

FUEL INJECTION > SENSOR, CRANKSHAFT POSITION > REMOVAL AND INSTALLATION > 1.4L - EMEA > REMOVAL

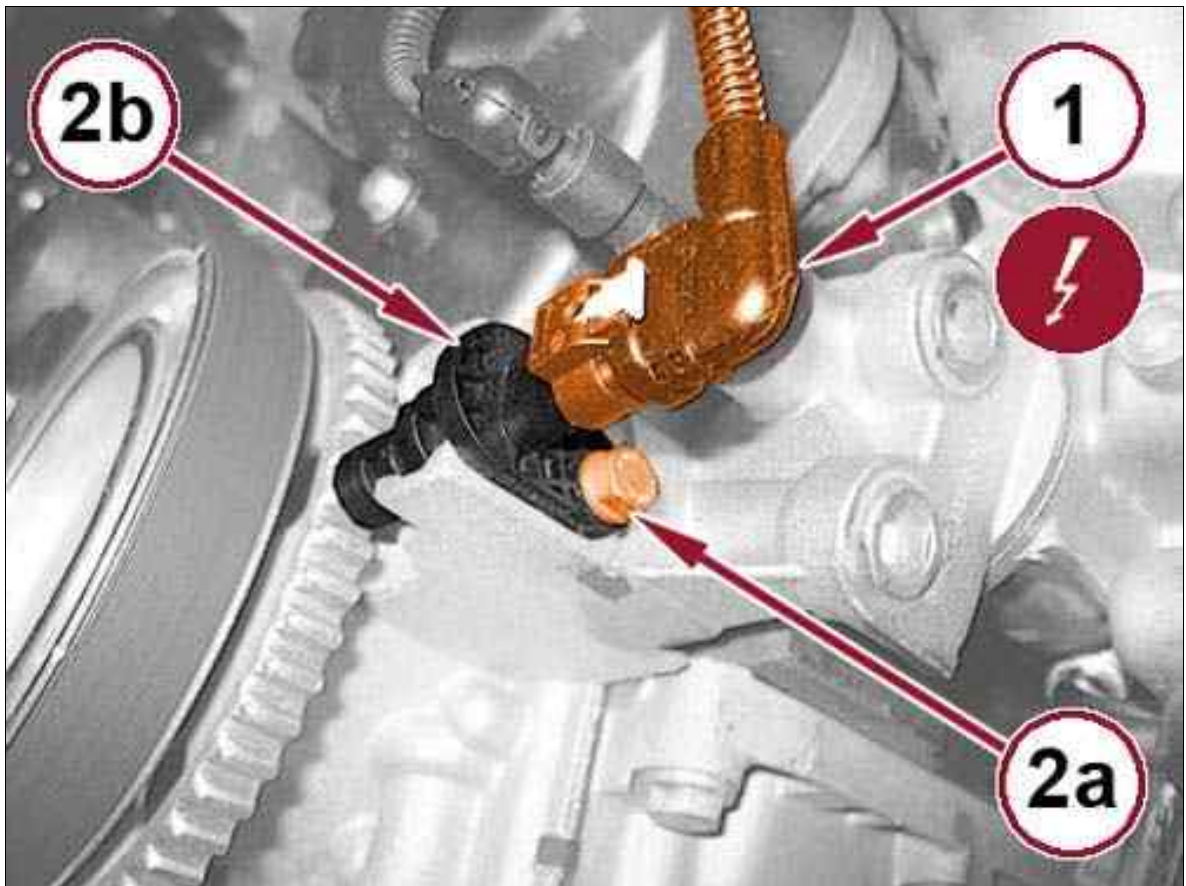


NOTE:

When replacing the sensor, connect the diagnostic tool, enter "Diagnosis active" and run the self-learning procedure.

1. Raise and support the vehicle.
2. Remove the belly pan. Refer to BELLY PAN, REMOVAL AND INSTALLATION .

Fig 1: Crank Sensor Electrical Connector, Screw & Sensor



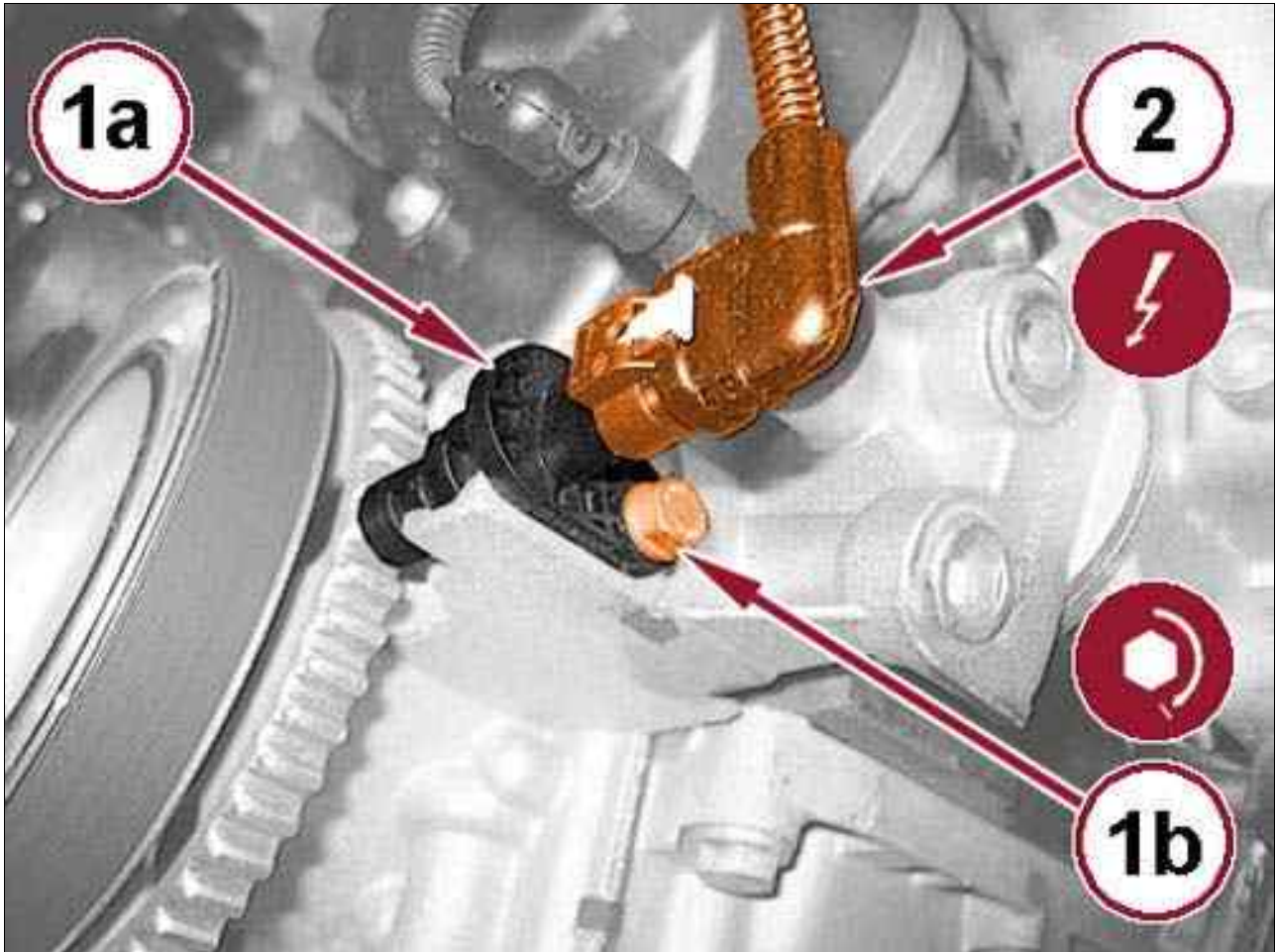
Courtesy of CHRYSLER GROUP, LLC

3. Disconnect crank sensor electrical connector (1).

4. Remove the screw (2a) and remove the sensor (2b).

FUEL INJECTION > SENSOR, CRANKSHAFT POSITION > REMOVAL AND INSTALLATION > 1.4L - EMEA > INSTALLATION

Fig 1: Crank Sensor, Electrical Connection & Screw



Courtesy of CHRYSLER GROUP, LLC

1. Install the crank sensor (1a) and tighten the screw (1b) to the proper torque specification. Refer to FUEL INJECTION, SPECIFICATIONS .
2. Connect the electrical connection (2) of the crank sensor.

FUEL INJECTION > SENSOR, CRANKSHAFT POSITION > REMOVAL AND INSTALLATION > 1.4L - NAFTA > REMOVAL



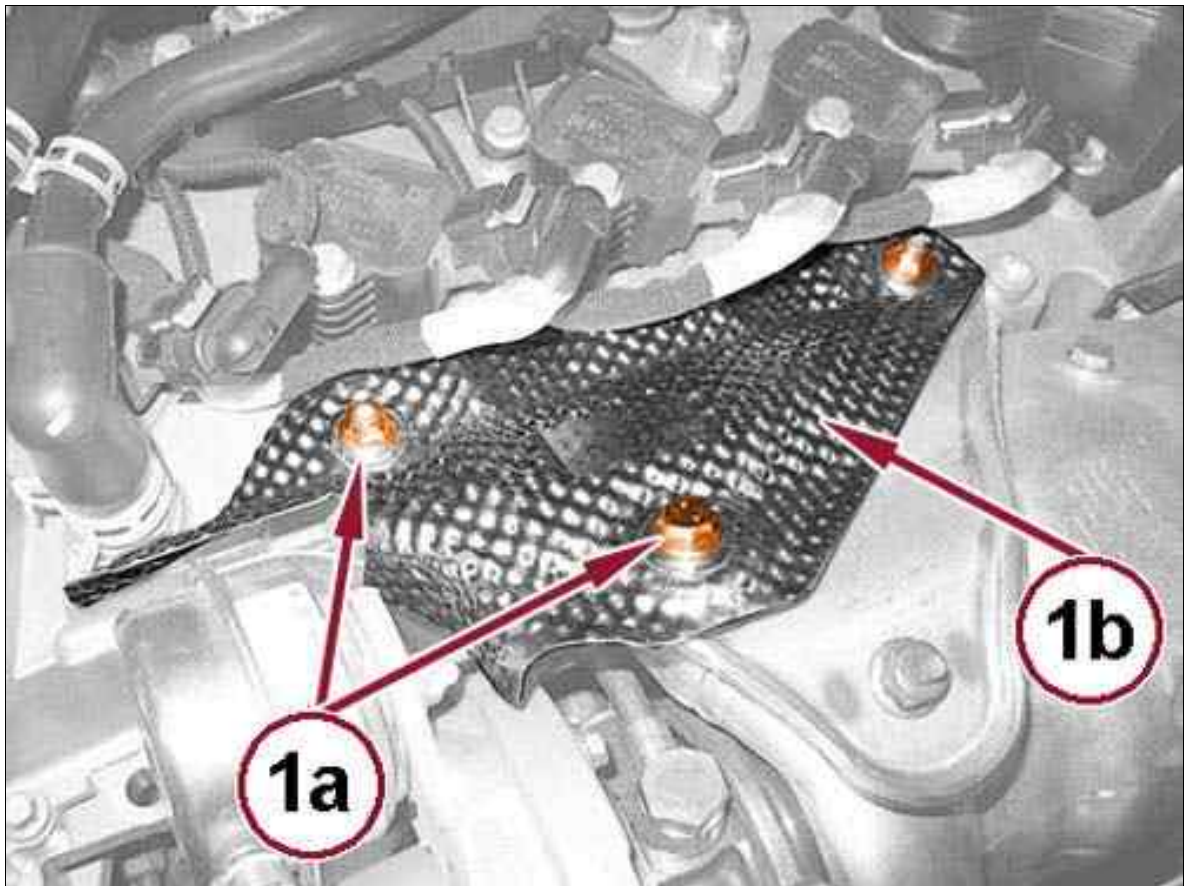
NOTE:

When replacing the sensor, connect the diagnostic tool, enter "Diagnosis active" and run the

self-learning procedure.

1. Raise and support the vehicle.
2. Remove the engine beauty cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .
3. Remove the battery. Refer to BATTERY, REMOVAL AND INSTALLATION .
4. Remove the belly pan. Refer to BELLY PAN, REMOVAL AND INSTALLATION or BELLY PAN, SIDE, REMOVAL AND INSTALLATION .

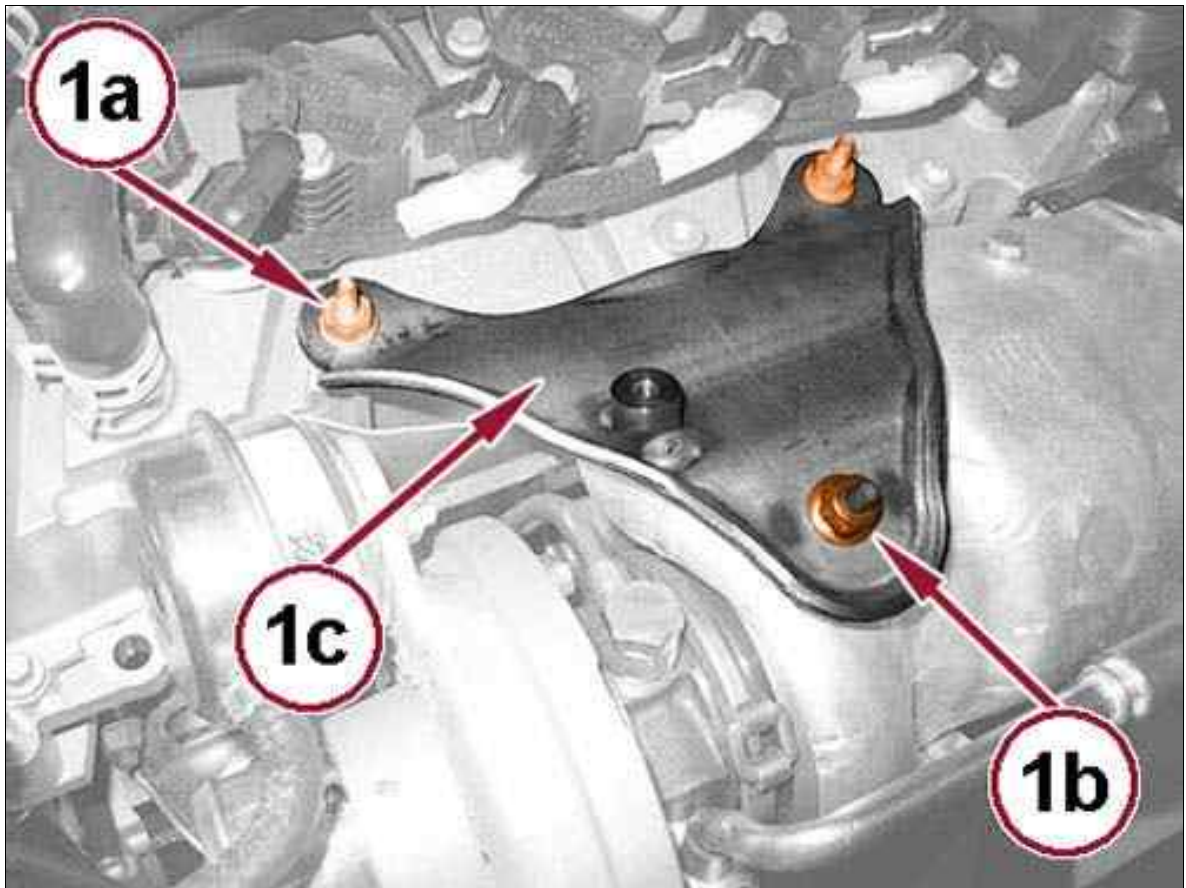
Fig 1: Ignition Coils Heat Shield & Clamps



Courtesy of CHRYSLER GROUP, LLC

5. Remove the clamps (1a) and remove the ignition coils heat shield (1b).

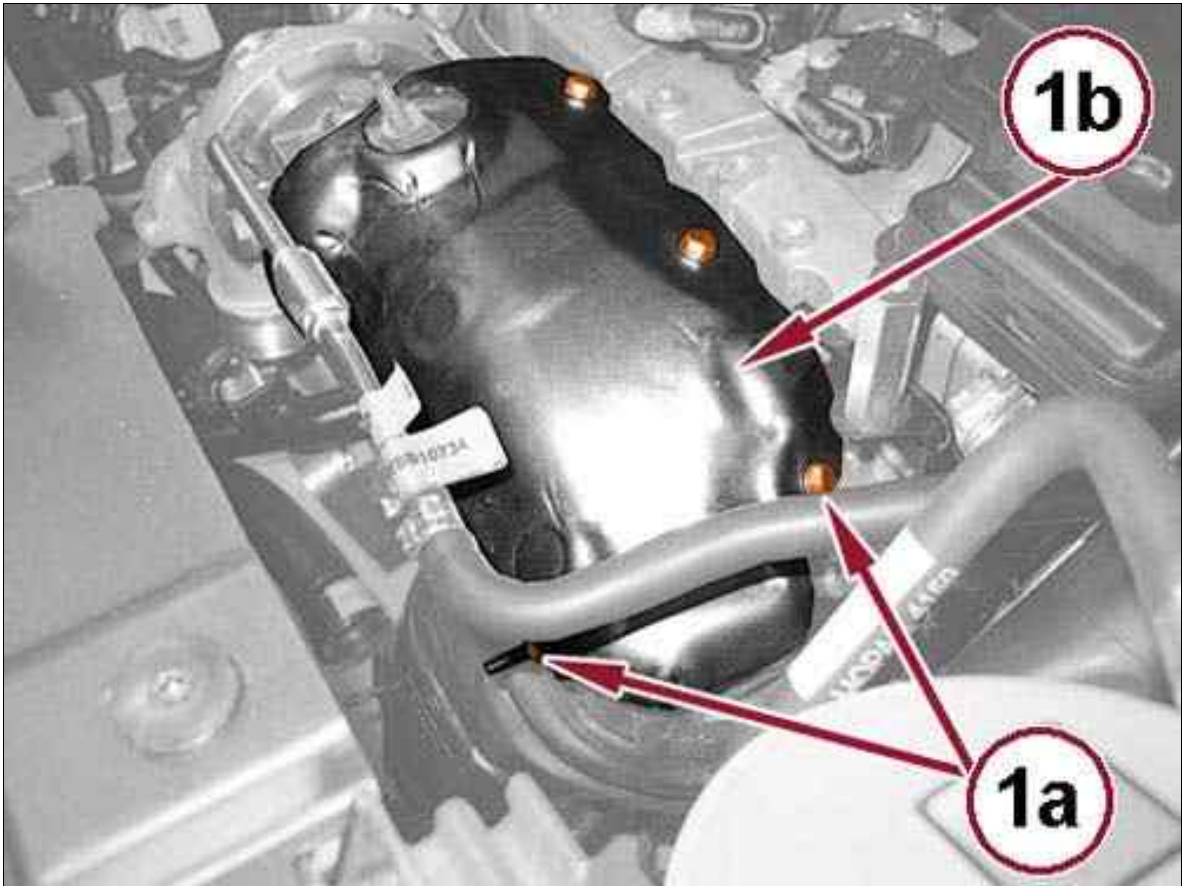
Fig 2: Turbocharger Support Bracket, Screws & Nut



Courtesy of CHRYSLER GROUP, LLC

6. Remove the screws (1a), the nut (1b) and remove the turbocharger support bracket (1c).

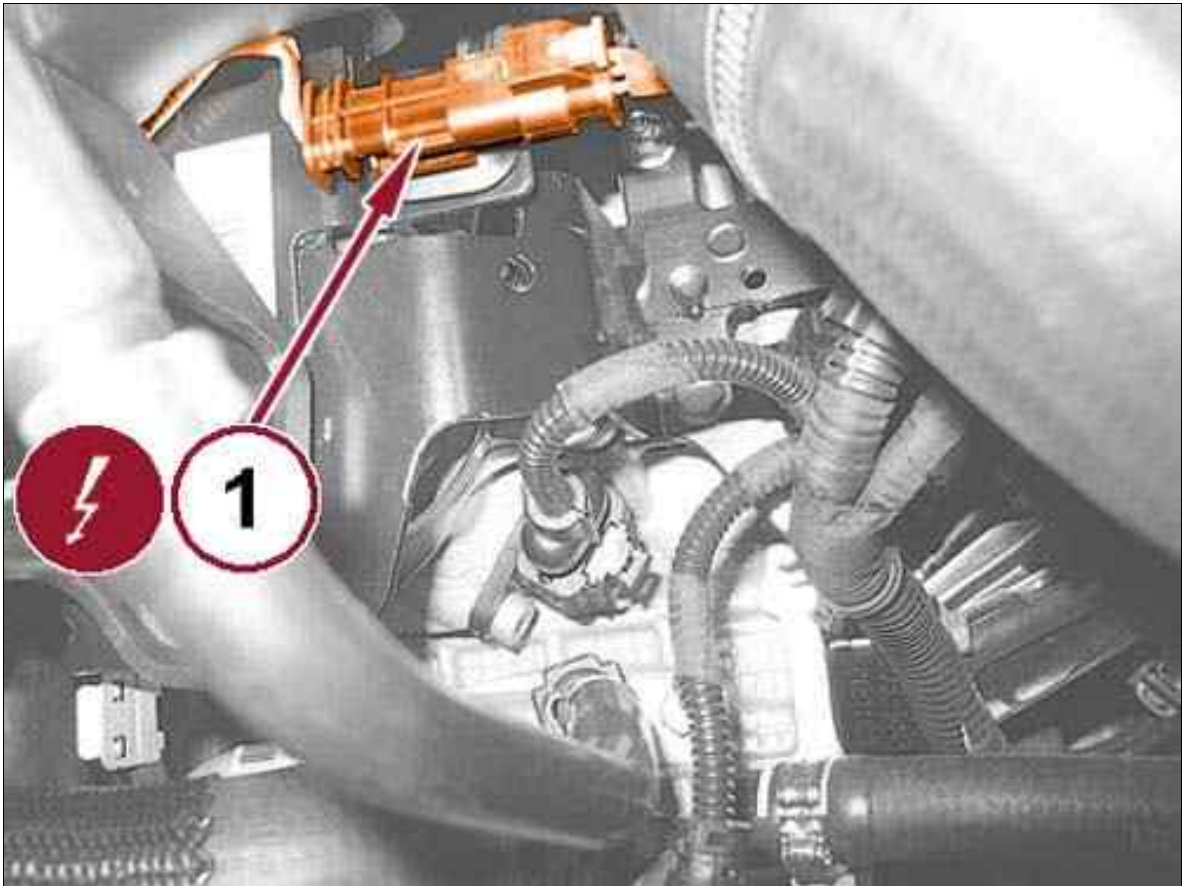
Fig 3: Turbocharger Heat Shield & Clamps



Courtesy of CHRYSLER GROUP, LLC

7. Remove the clamps (1a) and remove the turbocharger heat shield (1b).
8. Disconnect crank sensor electrical connector (1).
9. Remove the screw (2a) and remove the sensor (2b).
10. Remove the catalytic converter. Refer to CONVERTER, CATALYTIC, REMOVAL AND INSTALLATION .

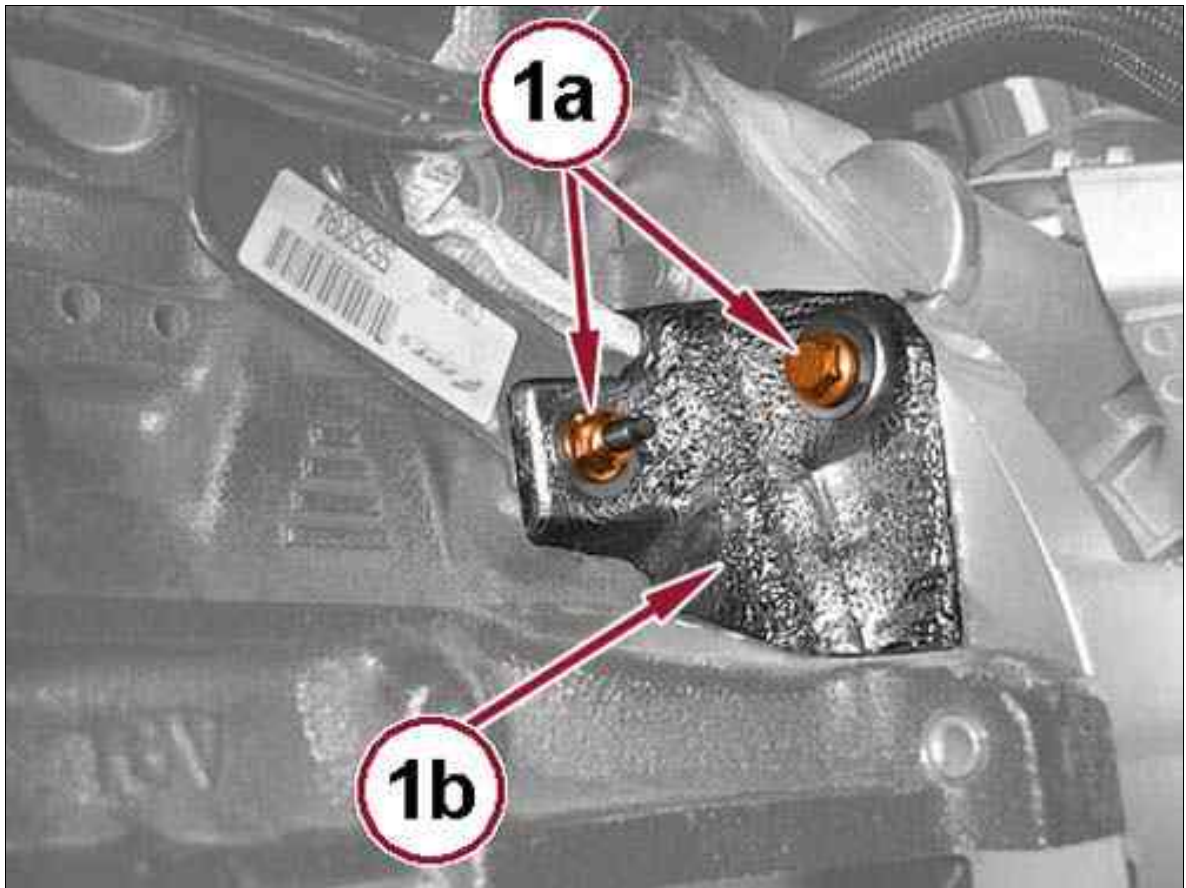
Fig 4: Crank Sensor Electrical Connection



Courtesy of CHRYSLER GROUP, LLC

11. Disconnect the crank sensor electrical connection (1).

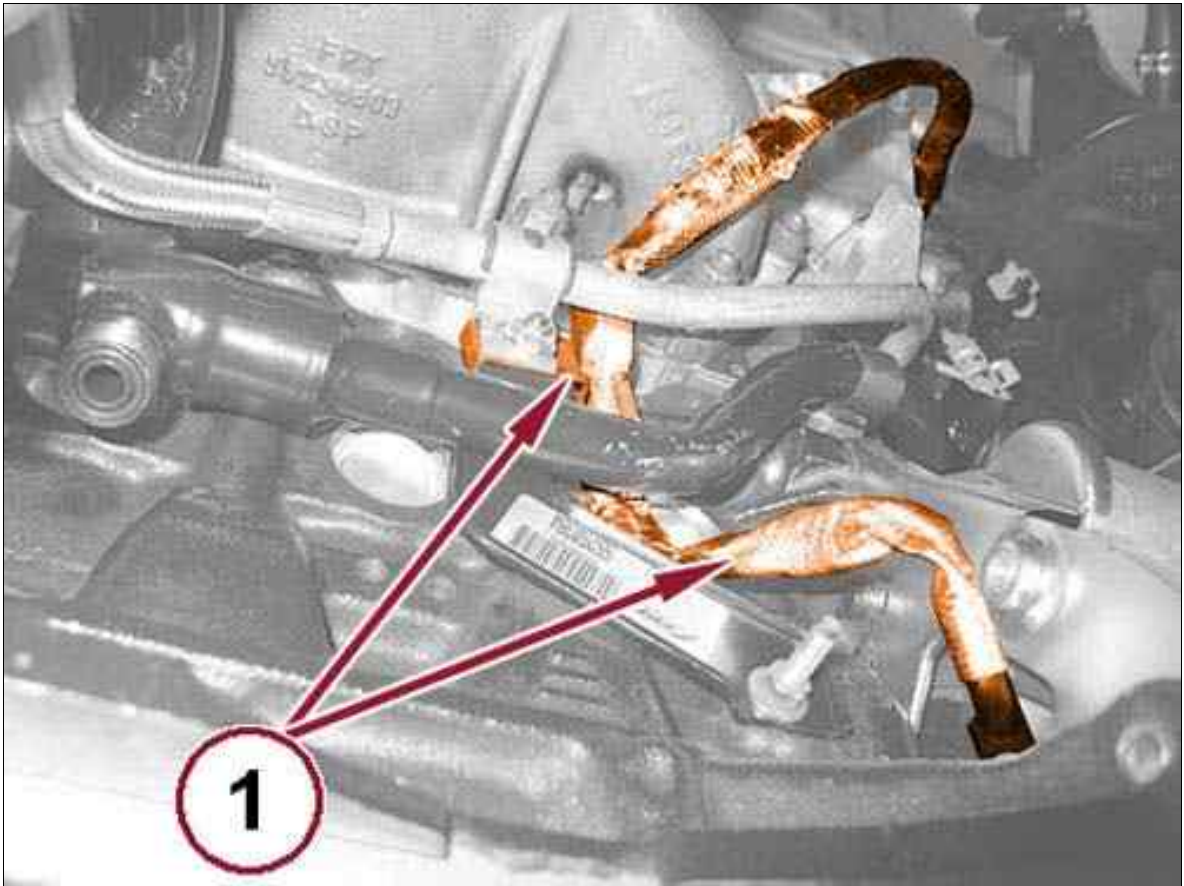
Fig 5: Heat Shield & Clamps



Courtesy of CHRYSLER GROUP, LLC

12. Remove the clamps (1a) and remove the heat shield (1b).

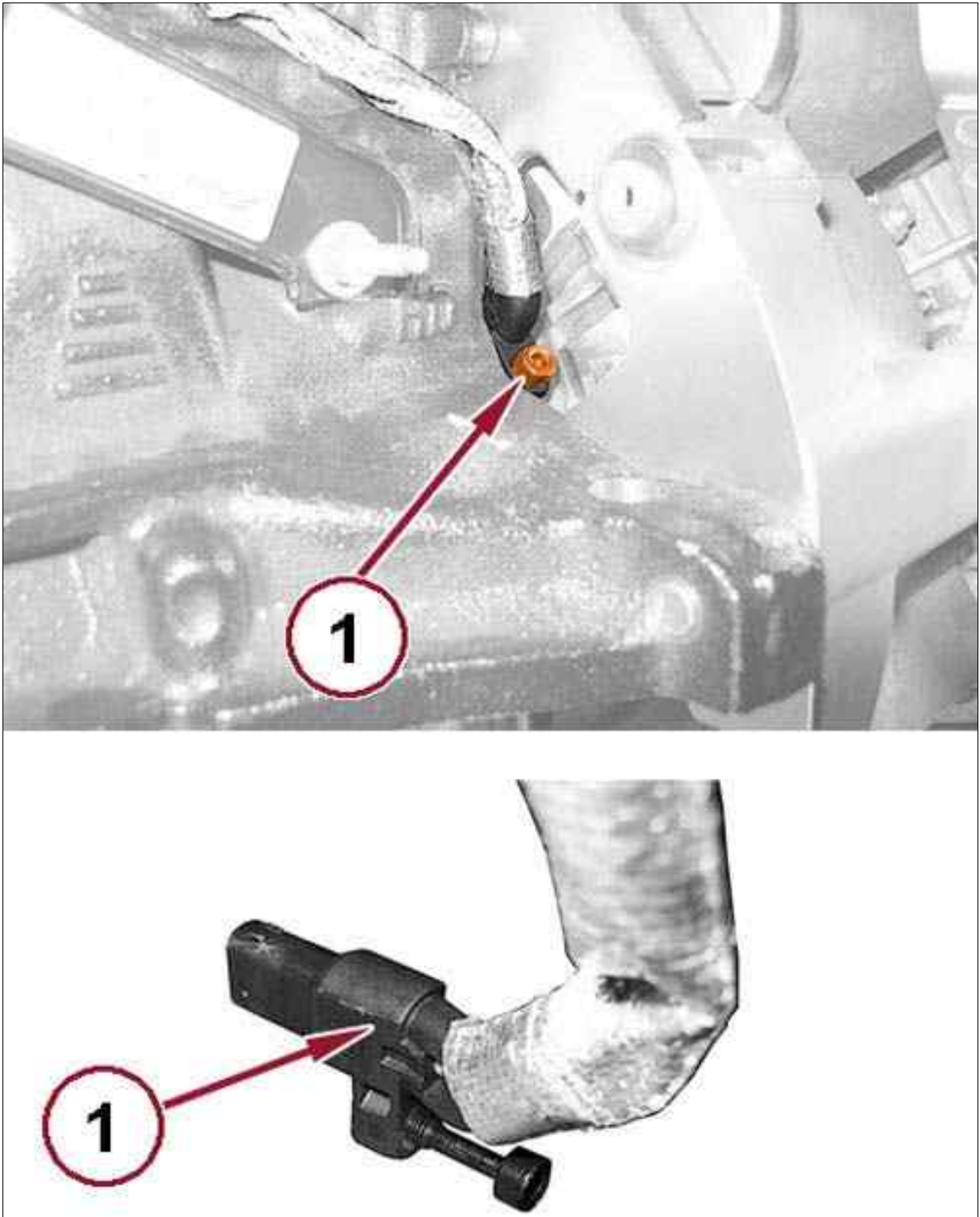
Fig 6: Spring Retainer



Courtesy of CHRYSLER GROUP, LLC

13. Disengage the wiring from the spring retainer (1).

Fig 7: Crank Sensor & Screw



Courtesy of CHRYSLER GROUP, LLC

14. Remove the screw and remove the crank sensor.

**FUEL INJECTION > SENSOR, CRANKSHAFT POSITION > REMOVAL AND
INSTALLATION > 1.4L - NAFTA > INSTALLATION**



NOTE:

When replacing the sensor, connect the diagnostic tool, enter "Diagnosis active" and run the self-learning procedure.

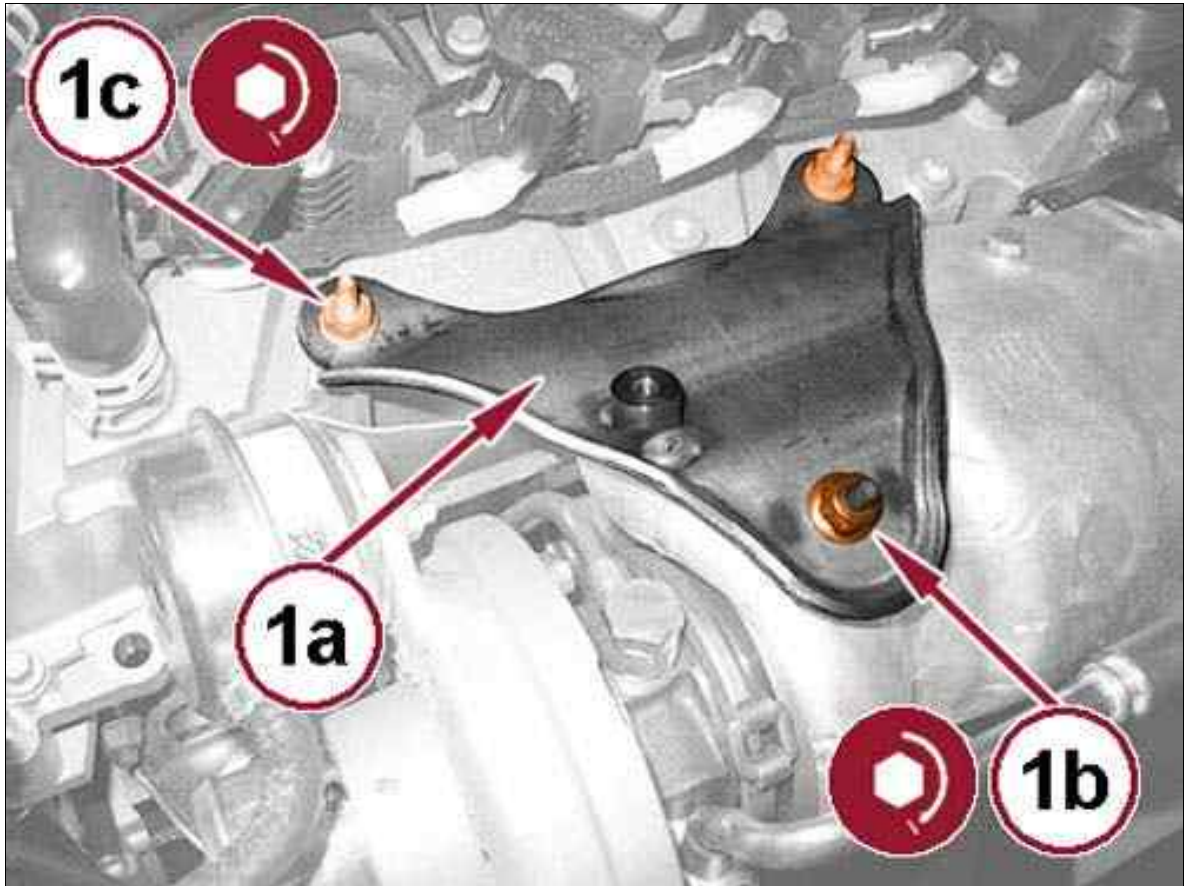


NOTE:

Avoid approaching the sensor to magnetic fields.

1. Install the sensor and tighten the screw to the proper torque specification. Refer to FUEL INJECTION, SPECIFICATIONS .
2. Engage the wiring to the spring retainer.
3. Install the heat shield and tighten its hardware.
4. Connect the electrical connection of the sensor.
5. Install the catalytic converter. Refer to CONVERTER, CATALYTIC, REMOVAL AND INSTALLATION .
6. Install the turbocharger heat shield and tighten its hardware.

Fig 1: Turbocharger Support Bracket, Nut & Screws



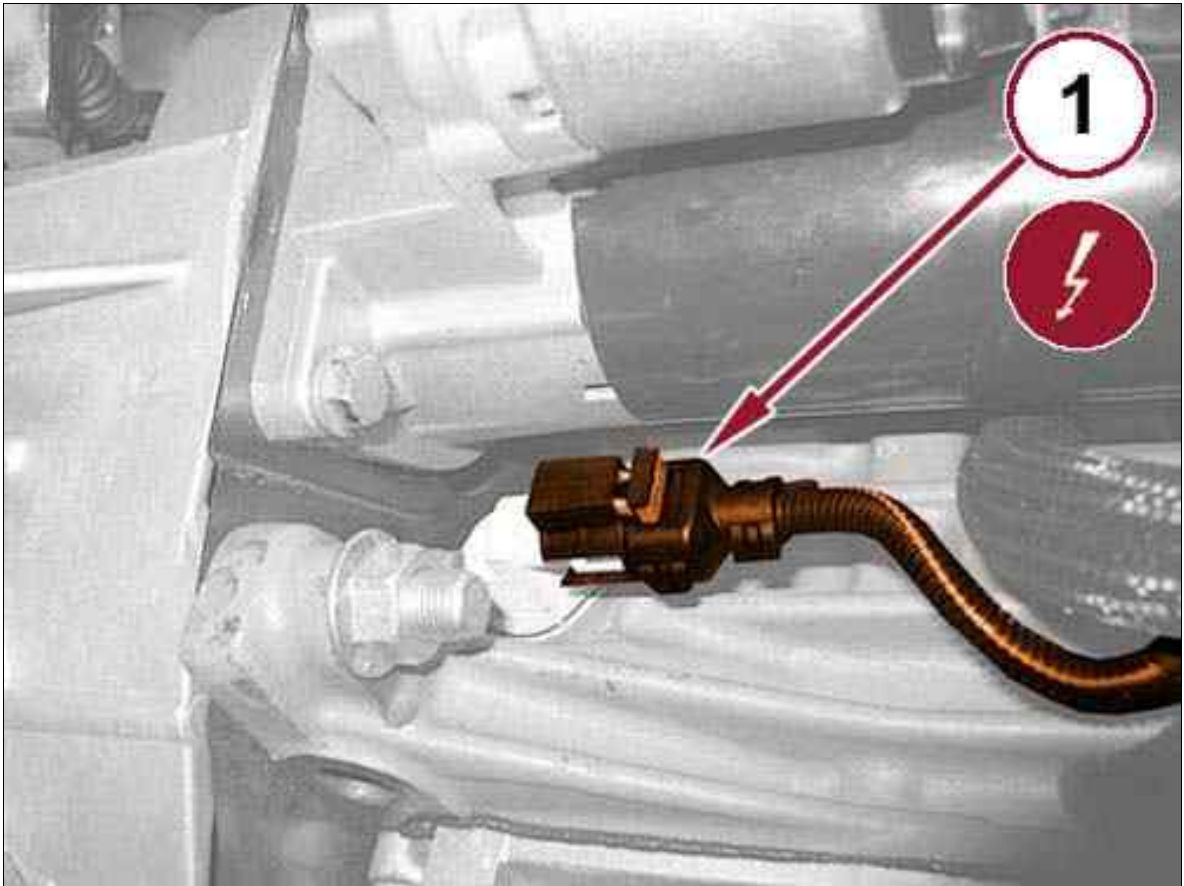
Courtesy of CHRYSLER GROUP, LLC

7. Install the turbocharger support bracket (1a), tighten the new nut (1b) and screws (1c) to the proper torque specification. Refer to FUEL INJECTION, SPECIFICATIONS .
8. Install the ignition coils heat shield and tighten its hardware.
9. Install the belly pan. Refer to BELLY PAN, REMOVAL AND INSTALLATION .
10. Install the battery. Refer to BATTERY, REMOVAL AND INSTALLATION .
11. Install the engine beauty cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .

FUEL INJECTION > SENSOR, CRANKSHAFT POSITION > REMOVAL AND INSTALLATION > 1.6L > REMOVAL

1. Raise and support the vehicle.
2. Remove the belly pan. Refer to BELLY PAN, REMOVAL AND INSTALLATION .

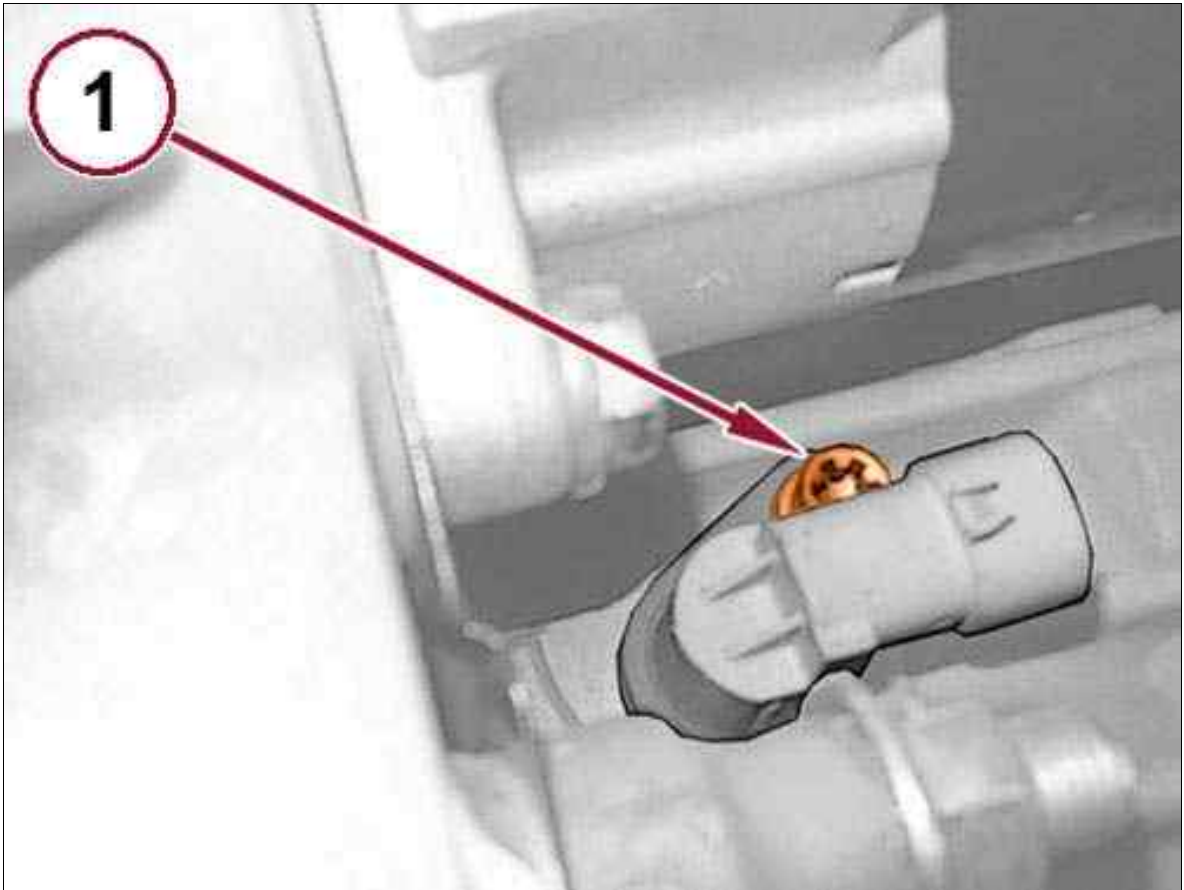
Fig 1: Crank Sensor Electrical Connector



Courtesy of CHRYSLER GROUP, LLC

3. Disconnect the crank sensor electrical connector (1).

Fig 2: Crank Sensor & Screw

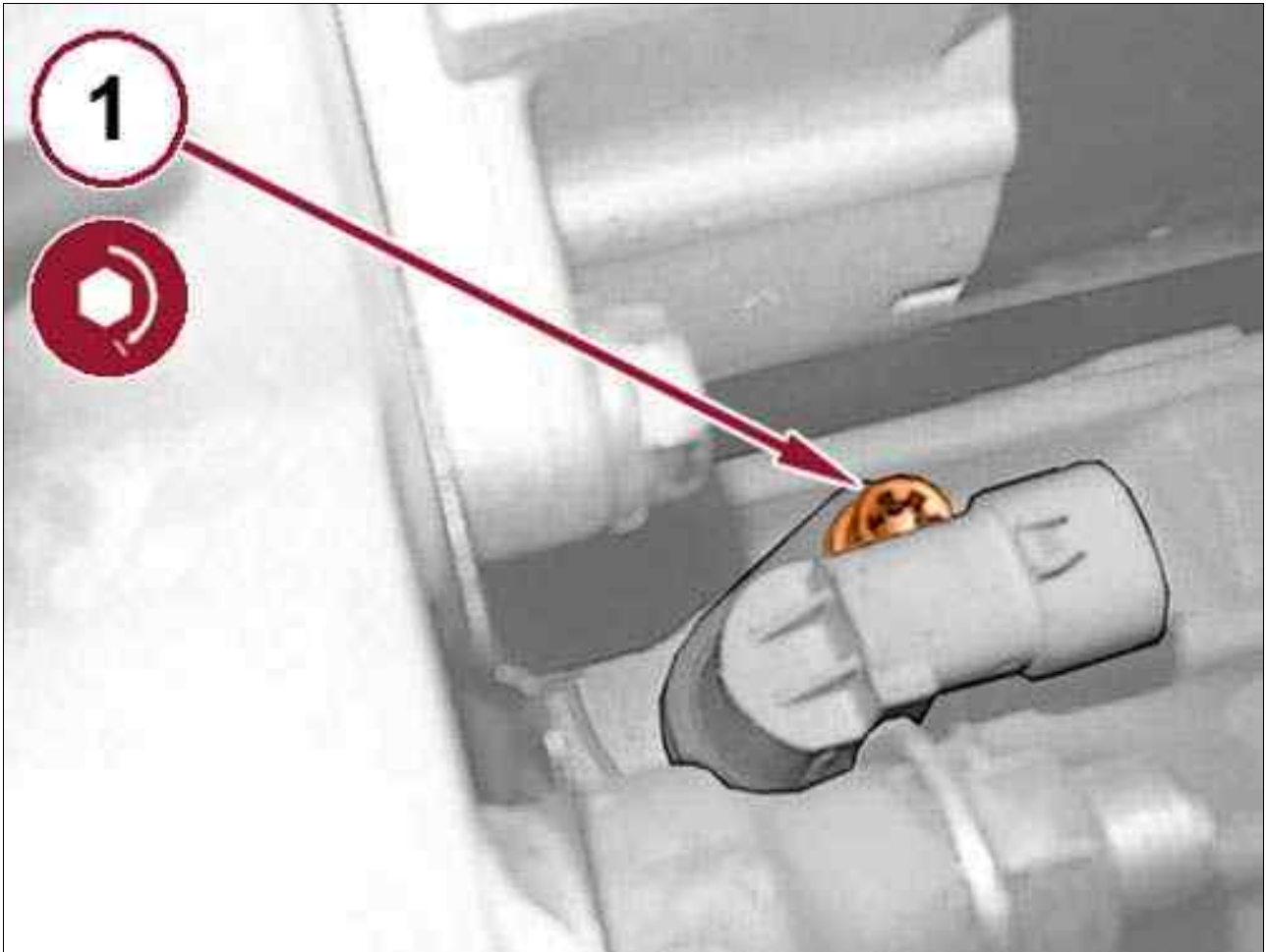


Courtesy of CHRYSLER GROUP, LLC

4. Remove the screw (1) and remove the crank sensor.

**FUEL INJECTION > SENSOR, CRANKSHAFT POSITION > REMOVAL AND
INSTALLATION > 1.6L > INSTALLATION**

Fig 1: Crank Sensor & Screw



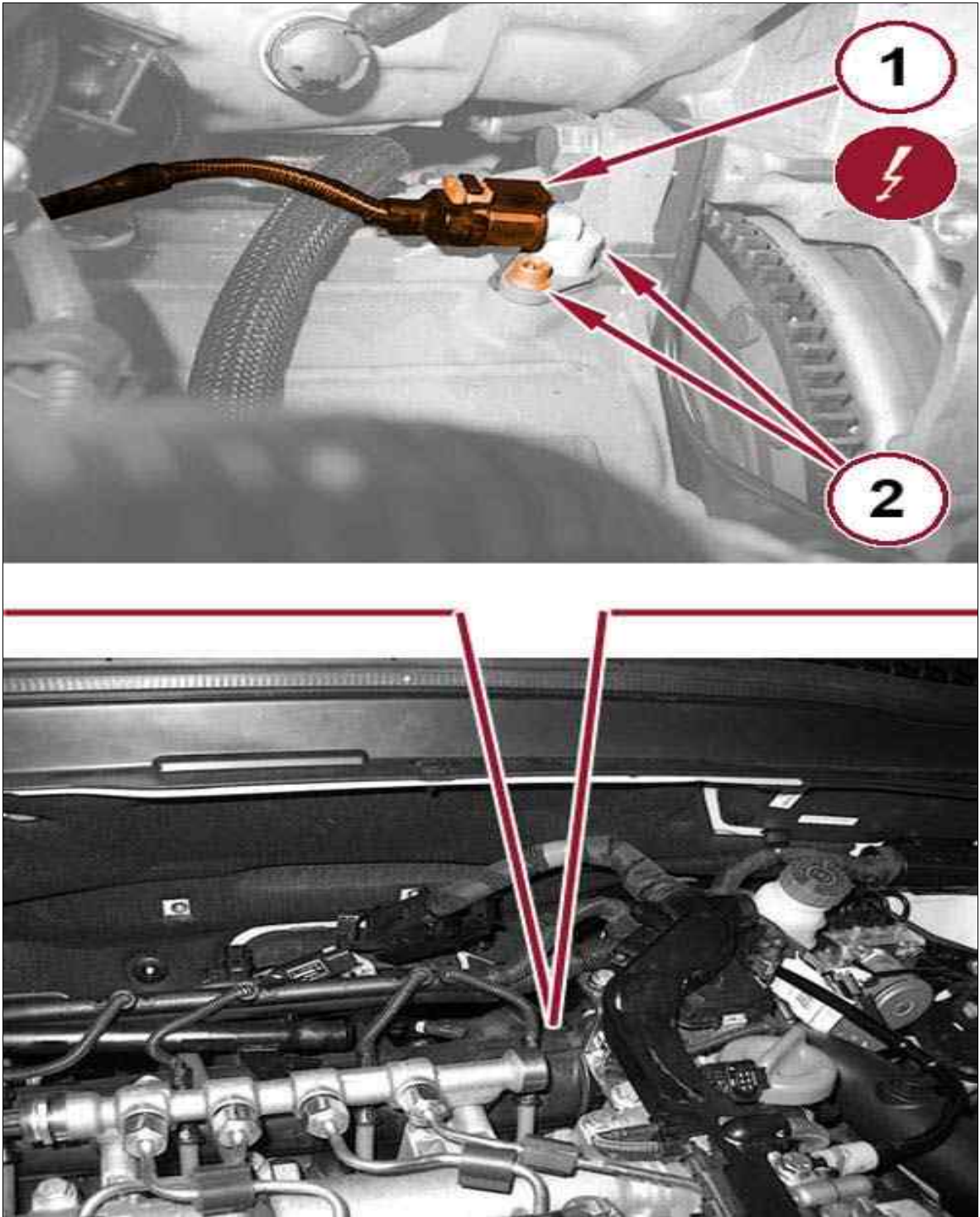
Courtesy of CHRYSLER GROUP, LLC

1. Install the crank sensor and tighten the screw (1) to the proper torque specification. Refer to FUEL INJECTION, SPECIFICATIONS .
2. Connect the crank sensor electrical connection.
3. Install the belly pan. Refer to BELLY PAN, REMOVAL AND INSTALLATION .

FUEL INJECTION > SENSOR, CRANKSHAFT POSITION > REMOVAL AND INSTALLATION > 2.0L > REMOVAL

1. Raise and support the vehicle.
2. Remove the engine beauty cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .

Fig 1: Crank Sensor Electrical Connector & Screw



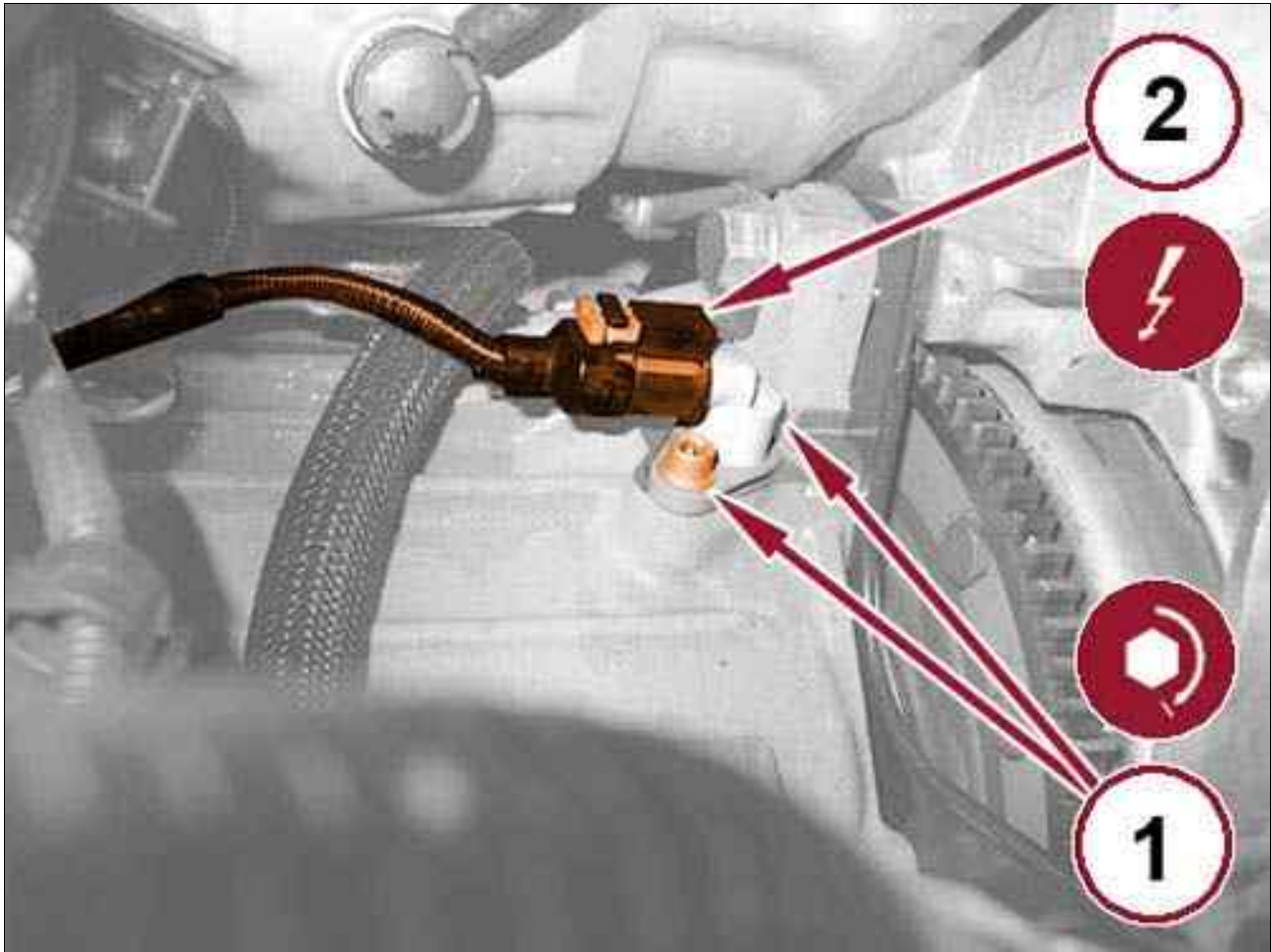
Courtesy of CHRYSLER GROUP, LLC

3. Disconnect the crank sensor electrical connector (1).
4. Remove the screw (2) and remove the crank sensor.

FUEL INJECTION > SENSOR, CRANKSHAFT POSITION > REMOVAL AND

INSTALLATION > 2.0L > INSTALLATION

Fig 1: Crank Sensor, Screw & Electrical Connection



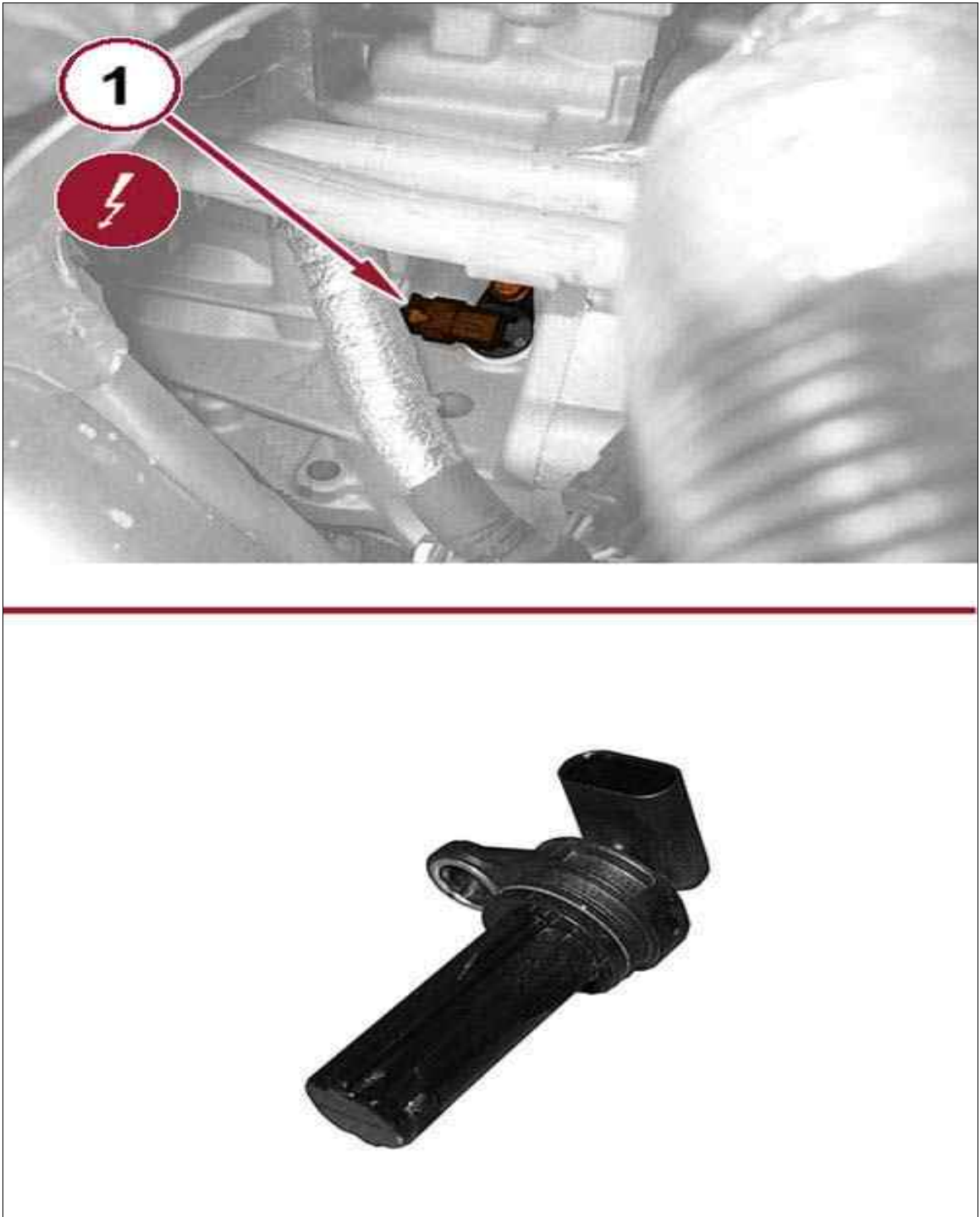
Courtesy of CHRYSLER GROUP, LLC

1. Install the crank sensor and tighten the screw (1) to the proper torque specification. Refer to FUEL INJECTION, SPECIFICATIONS .
2. Connect the crank sensor electrical connection (2).
3. Install the engine beauty cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .

FUEL INJECTION > SENSOR, CRANKSHAFT POSITION > REMOVAL AND INSTALLATION > 2.4L > REMOVAL

1. Remove the engine beauty cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .

Fig 1: Crank Sensor & Electrical Connection



Courtesy of CHRYSLER GROUP, LLC

2. Disconnect the crank sensor (1) electrical connection, loosen the screw and remove the crank sensor.

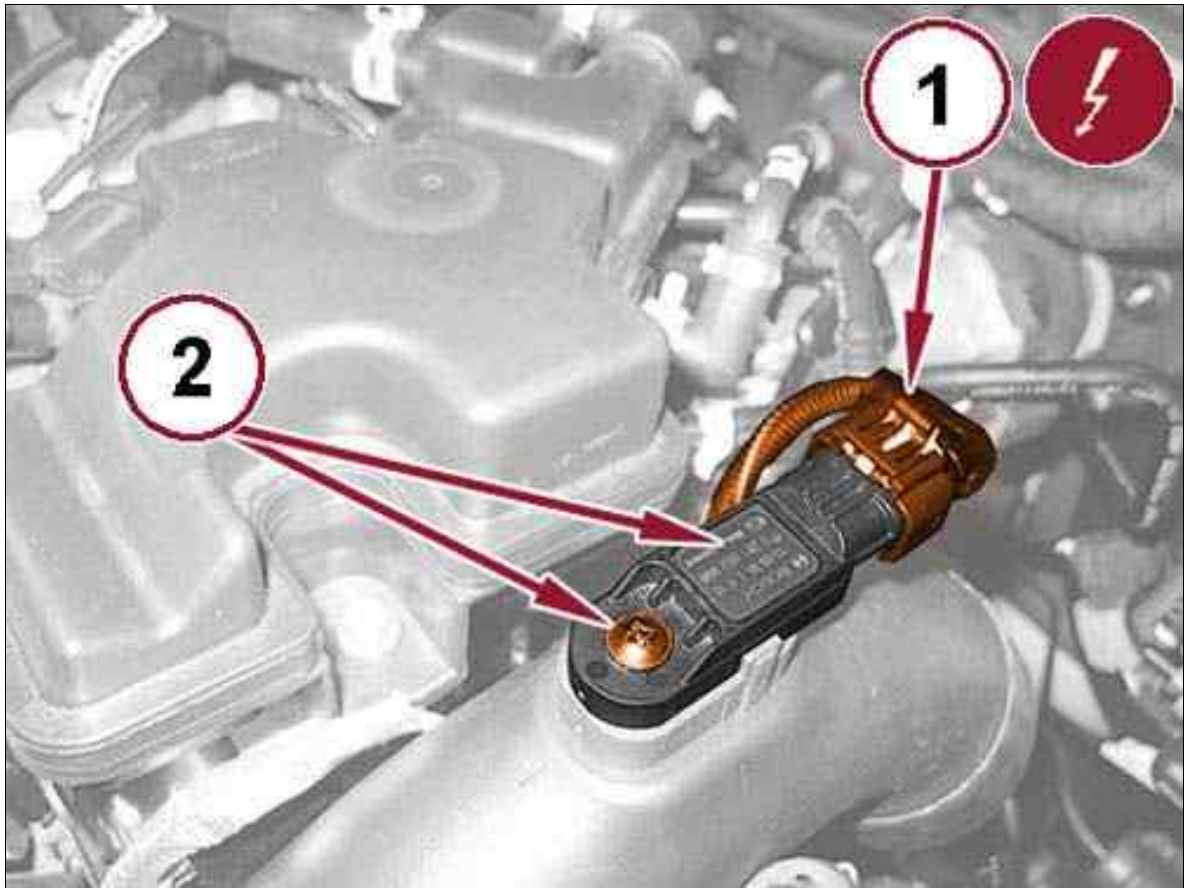
**FUEL INJECTION > SENSOR, CRANKSHAFT POSITION > REMOVAL AND
INSTALLATION > 2.4L > INSTALLATION**

1. Install the crankshaft position sensor and tighten the screw to the proper torque specification. Refer to FUEL INJECTION, SPECIFICATIONS .
2. Connect and lock the wire harness connector.
3. Install the engine cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .

FUEL INJECTION > SENSOR, MANIFOLD AIR PRESSURE (MAP) > REMOVAL AND INSTALLATION > 1.4L > REMOVAL

1. Remove the engine cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .

Fig 1: Air Pressure Sensor & Wire Harness Connection



Courtesy of CHRYSLER GROUP, LLC

2. Disconnect the wire harness connection (1).
3. Remove the screw and remove the air pressure sensor (2).

FUEL INJECTION > SENSOR, MANIFOLD AIR PRESSURE (MAP) > REMOVAL AND INSTALLATION > 1.4L > INSTALLATION

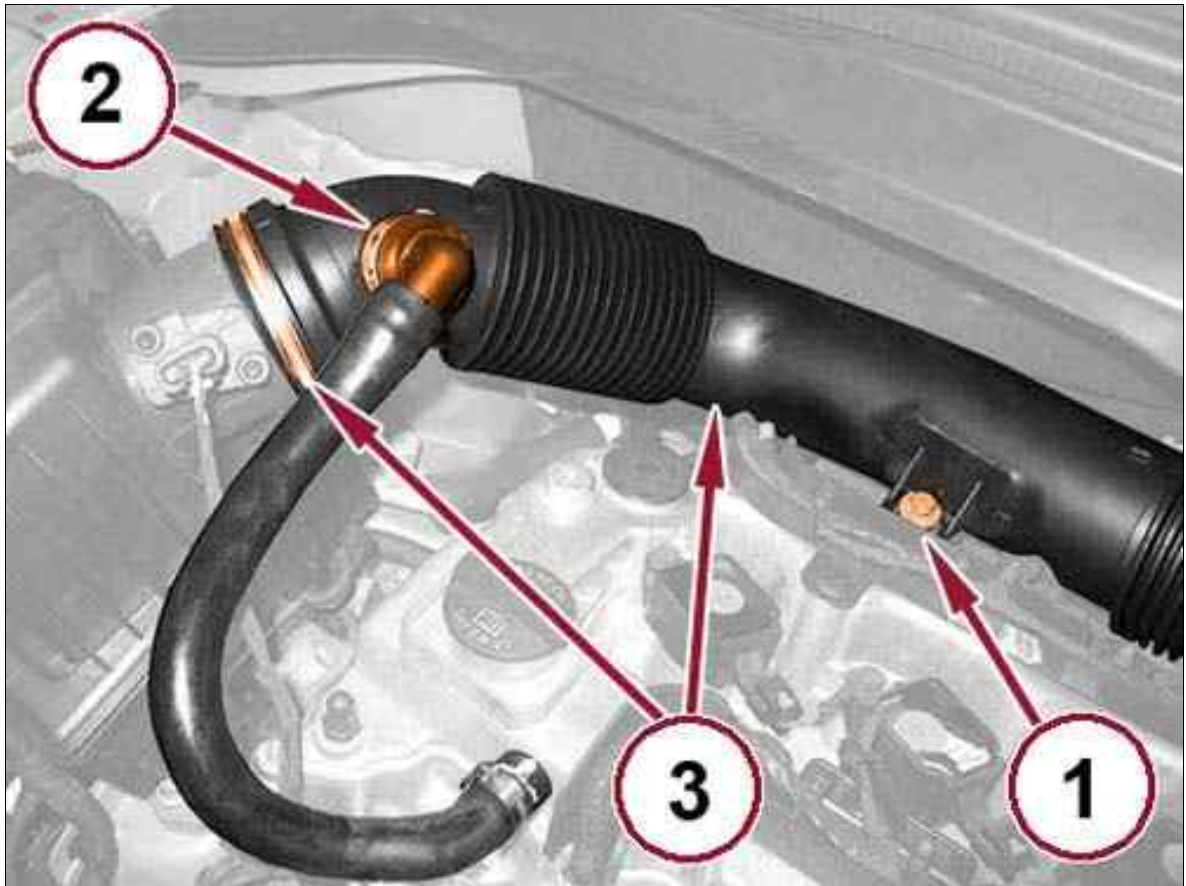
1. Install the air pressure sensor and securely tighten the screw.

2. Connect the wire harness connector.
3. Install the engine cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .

FUEL INJECTION > SENSOR, MANIFOLD AIR PRESSURE (MAP) > REMOVAL AND INSTALLATION > 2.4L > REMOVAL

1. Remove the engine cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .

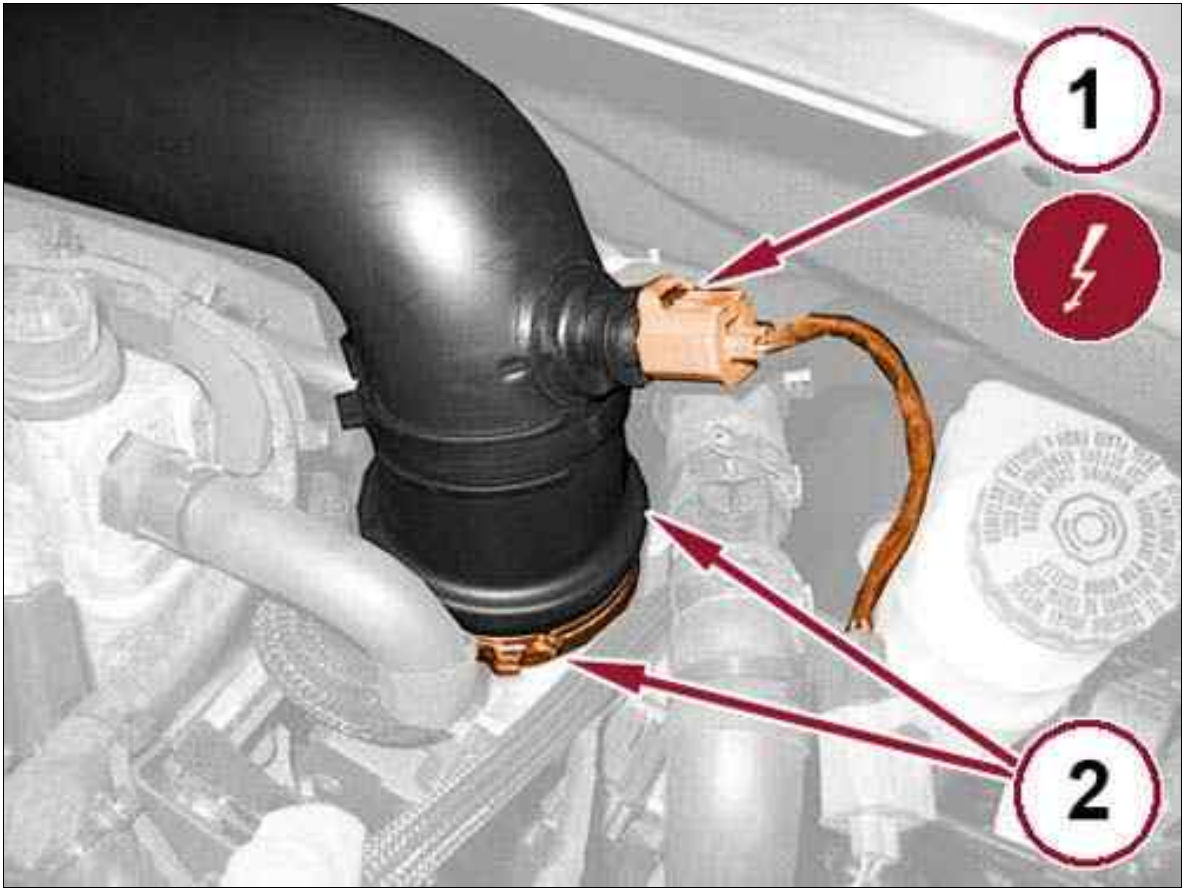
Fig 1: Engine Oil Vapor Hose Quick Coupling, Air Tubing & Screw



Courtesy of CHRYSLER GROUP, LLC

2. Remove the screw securing the air tube to the throttle body (1).
3. Disconnect the engine oil vapor hose quick coupling (2).
4. Loosen the hose clamp and disconnect the air tubing (3).

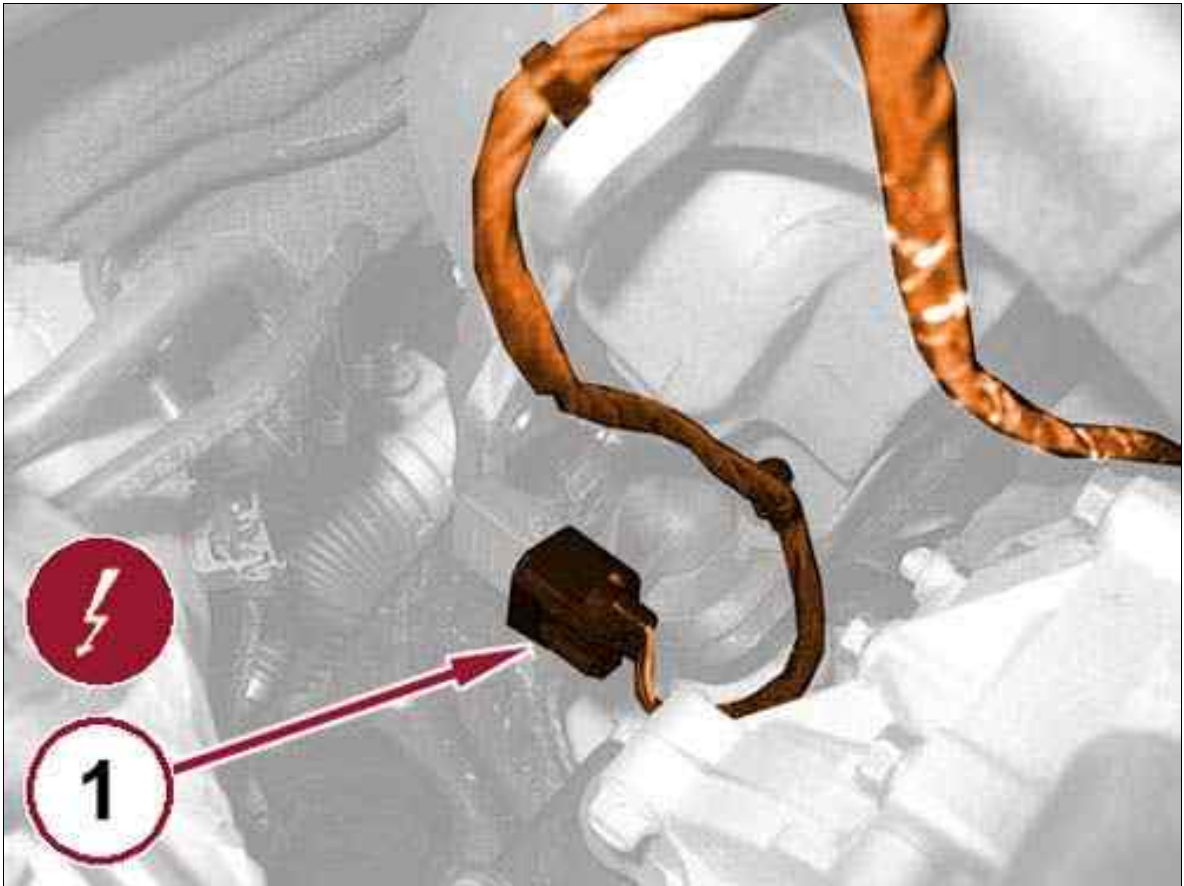
Fig 2: Air Temperature Sensor Connector, Hose & Clamp



Courtesy of CHRYSLER GROUP, LLC

5. Disconnect the electrical connection of the air temperature sensor (1).
6. Loosen clamp and remove the hose from the air filter to the throttle body (2).

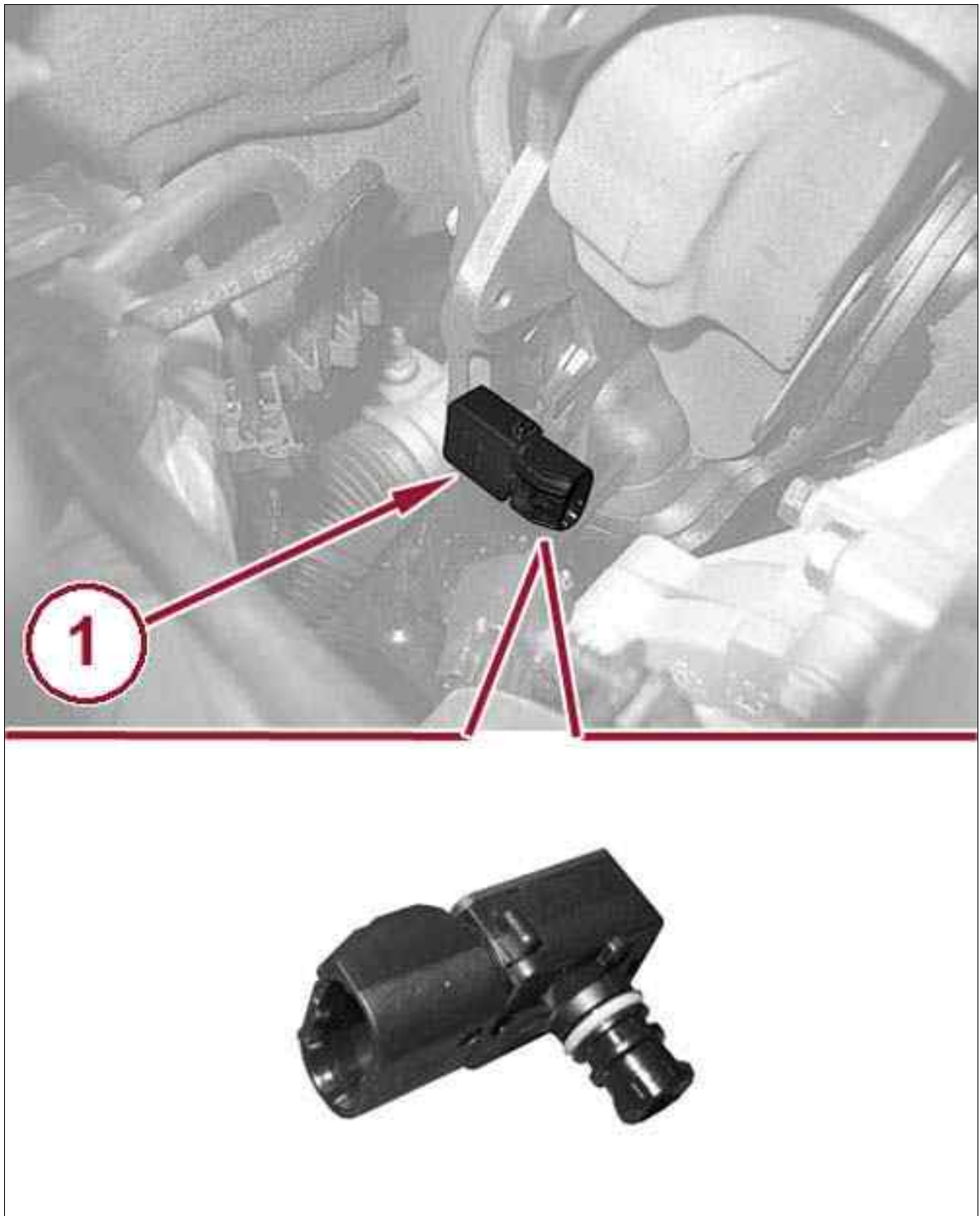
Fig 3: Air Pressure Sensor Electrical Connection



Courtesy of CHRYSLER GROUP, LLC

7. Disconnect the electrical connection air pressure sensor.

Fig 4: Air Pressure Sensor



Courtesy of CHRYSLER GROUP, LLC

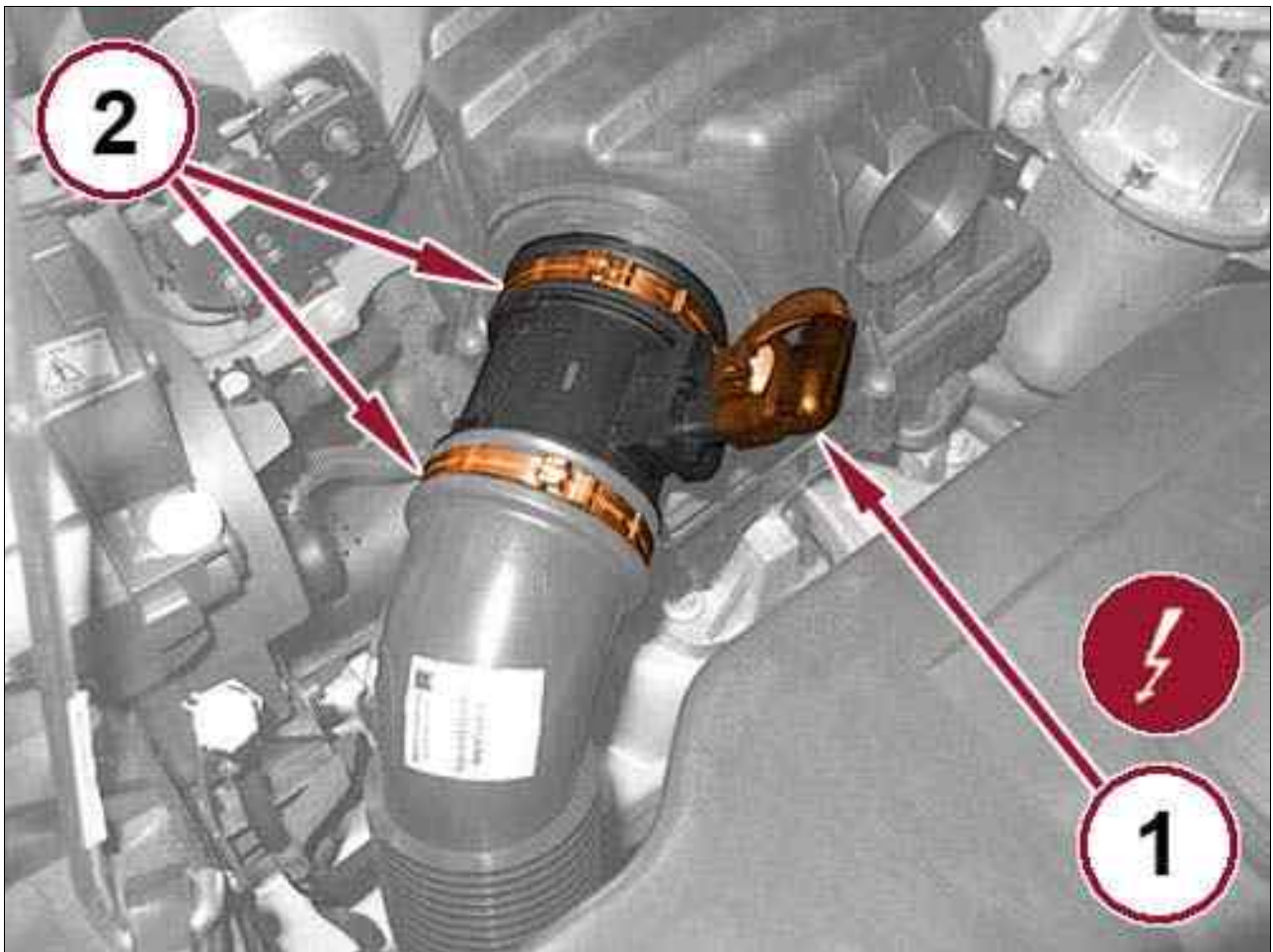
8. Rotate 90° counter clockwise and remove the air pressure sensor (1).

**FUEL INJECTION > SENSOR, MANIFOLD AIR PRESSURE (MAP) > REMOVAL AND
INSTALLATION > 2.4L > INSTALLATION**

1. Install the pressure sensor air and turn it 90 degrees clockwise.
2. Connect the electrical connection of the air pressure sensor.
3. Install the tubing from the air filter to the throttle body, throttle body side, and securely tighten the clamp.
4. Connect the electrical connection of the air temperature sensor.
5. Connect the air hose from the filter to the throttle body, filter side, and securely tighten the clamp.
6. Connect the engine oil vapor hose quick coupling.
7. Securely tighten the air tube to the throttle body clamp.
8. Install the engine cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .

FUEL INJECTION > SENSOR, MASS AIRFLOW (MAF) > REMOVAL AND INSTALLATION > 1.6L, 2.0L > REMOVAL

Fig 1: Flow Meter Electrical Connection & Air Tubing Clamps



1. Disconnect the electrical connection of the flow meter (1).
2. Loosen the clamps, disconnect and remove the mass air flow sensor from the air tubing (2).

FUEL INJECTION > SENSOR, MASS AIRFLOW (MAF) > REMOVAL AND INSTALLATION > 1.6L, 2.0L > INSTALLATION

1. Install the mass air flow sensor, connect the air pipes and securely tighten the clamps.

Fig 1: Mass Air Flow Sensor



Courtesy of CHRYSLER GROUP, LLC

2. When refitting make sure that the arrow on the flow meter is facing exhaust side.
3. Connect the electrical connection of the mass air flow sensor.

FUEL INJECTION > SENSOR, OXYGEN > REMOVAL AND INSTALLATION > 1.4L 2WD DOWNSTREAM > 1.4L 2WD REMOVAL

WARNING:

The exhaust manifold, exhaust pipes and catalytic converter(s) become very hot during

engine operation. Allow engine to cool before removing oxygen sensor. Failure to allow engine to cool before removal may result in personal injury caused by burns.

 CAUTION:

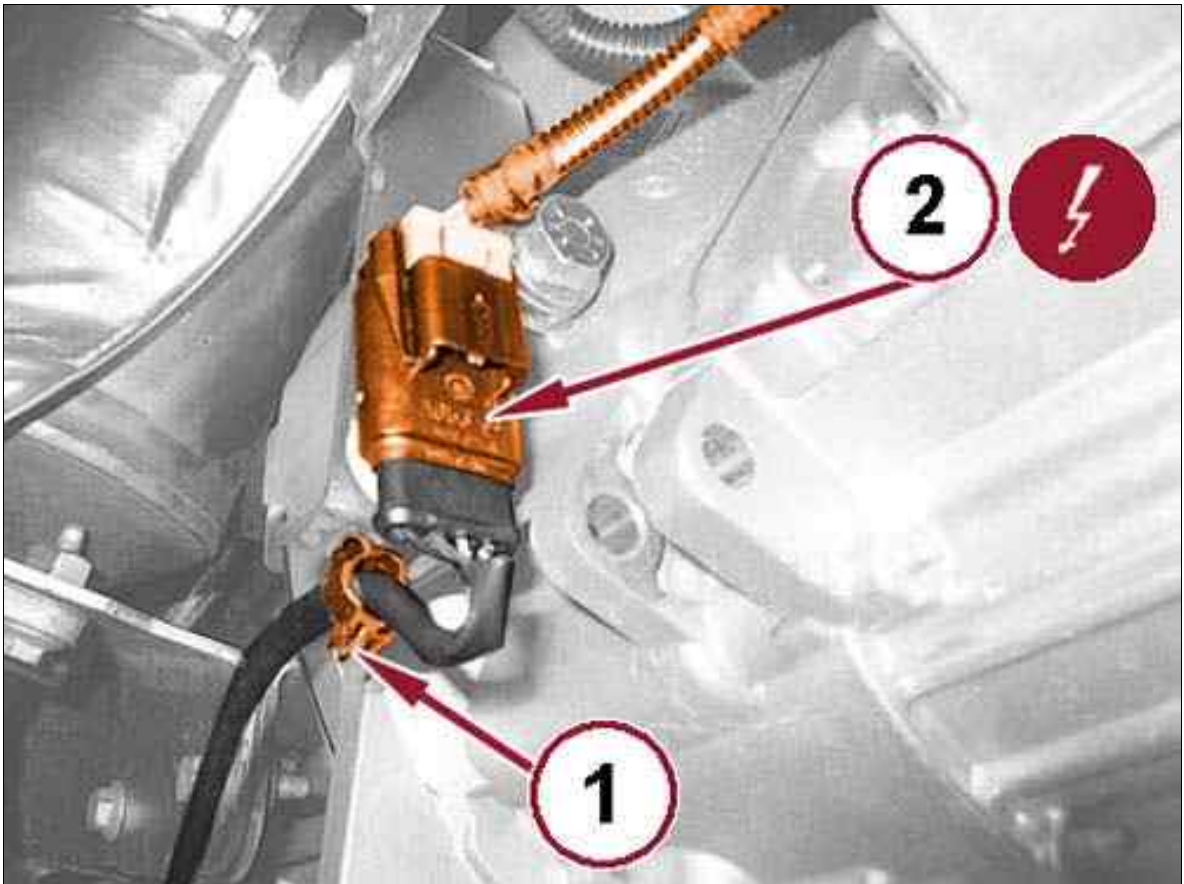
When disconnecting sensor electrical connector, do not pull directly on wires going into oxygen sensor (O2S). Damage to the oxygen sensor may occur.

 NOTE:

When replacing the oxygen sensor, connect the diagnostic tool, enter "actuators" and run the self-learning procedure.

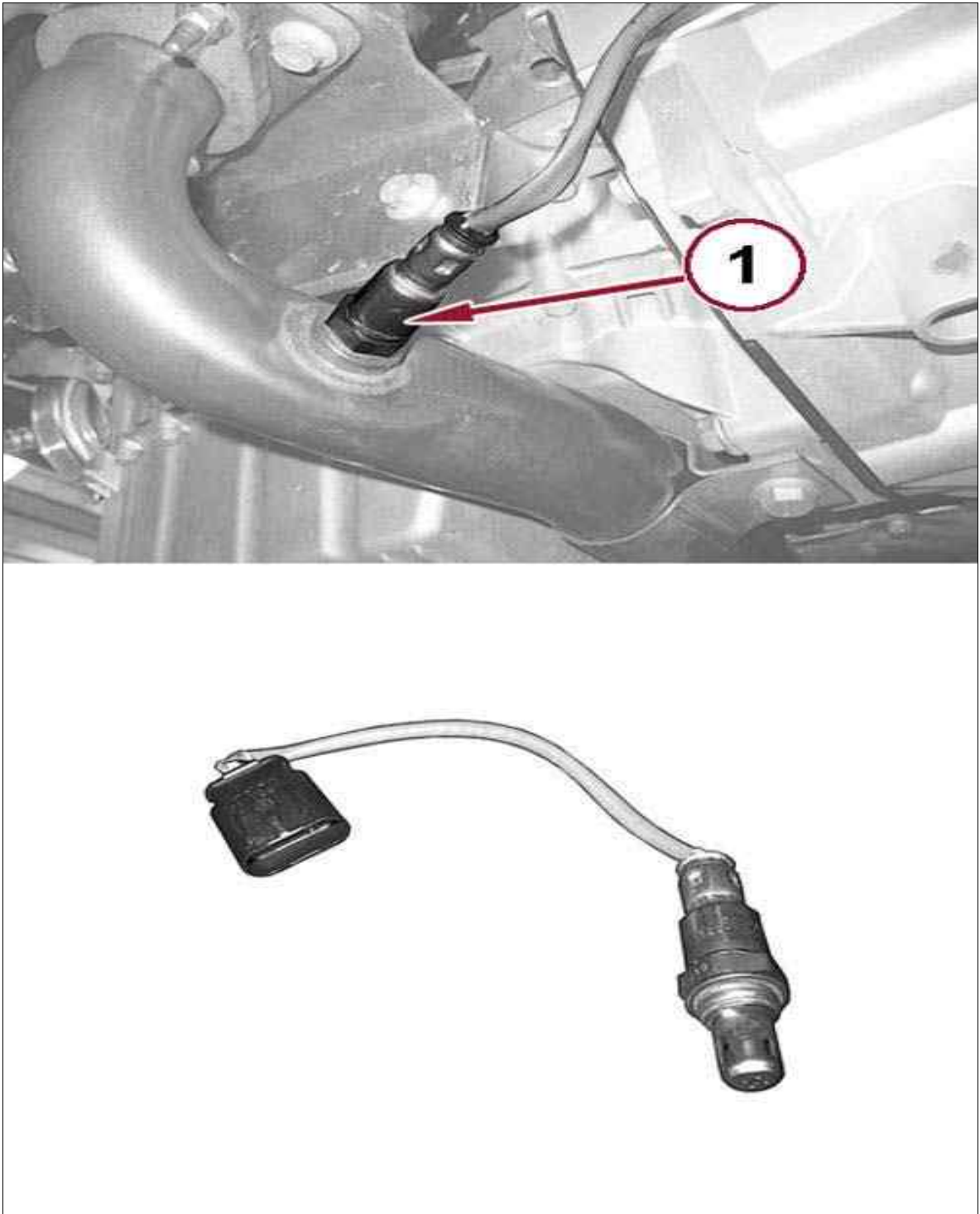
1. Disconnect and isolate the negative battery cable.
2. Remove the belly pan. Refer to BELLY PAN, REMOVAL AND INSTALLATION or BELLY PAN, SIDE, REMOVAL AND INSTALLATION .
3. Raise and support the vehicle.

Fig 1: Downstream Oxygen Sensor Wire Harness Connector & Routing Clip



4. Open the wiring harness retainer (1).
5. Disconnect the connector (2) from the downstream oxygen sensor.

Fig 2: Oxygen Sensor



Courtesy of CHRYSLER GROUP, LLC

6. Unscrew and remove the oxygen sensor (1).

FUEL INJECTION > SENSOR, OXYGEN > REMOVAL AND INSTALLATION > 1.4L 2WD DOWNSTREAM > 1.4L 2WD INSTALLATION

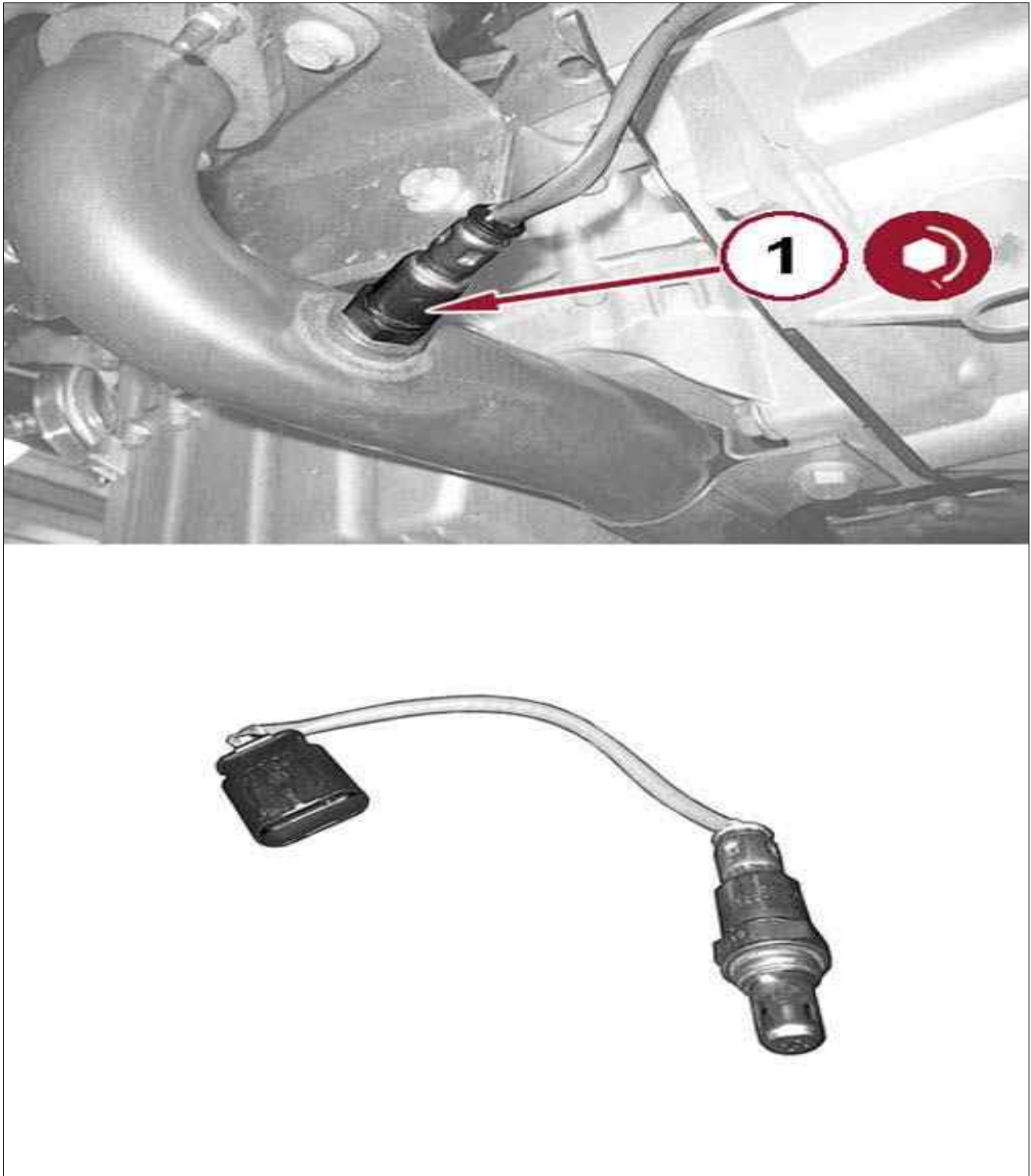
WARNING:

The exhaust manifold, exhaust pipes and catalytic converter(s) become very hot during engine operation. Allow engine to cool before removing oxygen sensor. Failure to allow engine to cool before removal may result in personal injury caused by burns.

CAUTION:

When Equipped: The oxygen sensor (O2S) pigtail harness must be clipped and/or bolted back to their original positions on engine or body to prevent mechanical damage to wiring.

Fig 1: Oxygen Sensor



Courtesy of CHRYSLER GROUP, LLC

1. Install the front oxygen sensor (1) to the catalytic converter and tighten it to the proper torque specification. Refer to FUEL INJECTION, SPECIFICATIONS .
2. Connect the electrical connection of the front oxygen sensor at the catalytic converter.
3. Install the belly pan. Refer to BELLY PAN, REMOVAL AND INSTALLATION or BELLY PAN, SIDE, REMOVAL AND INSTALLATION .

4. Connect the negative battery cable.

FUEL INJECTION > SENSOR, OXYGEN > REMOVAL AND INSTALLATION > 1.4L 2WD UPSTREAM > 1.4L 2WD REMOVAL

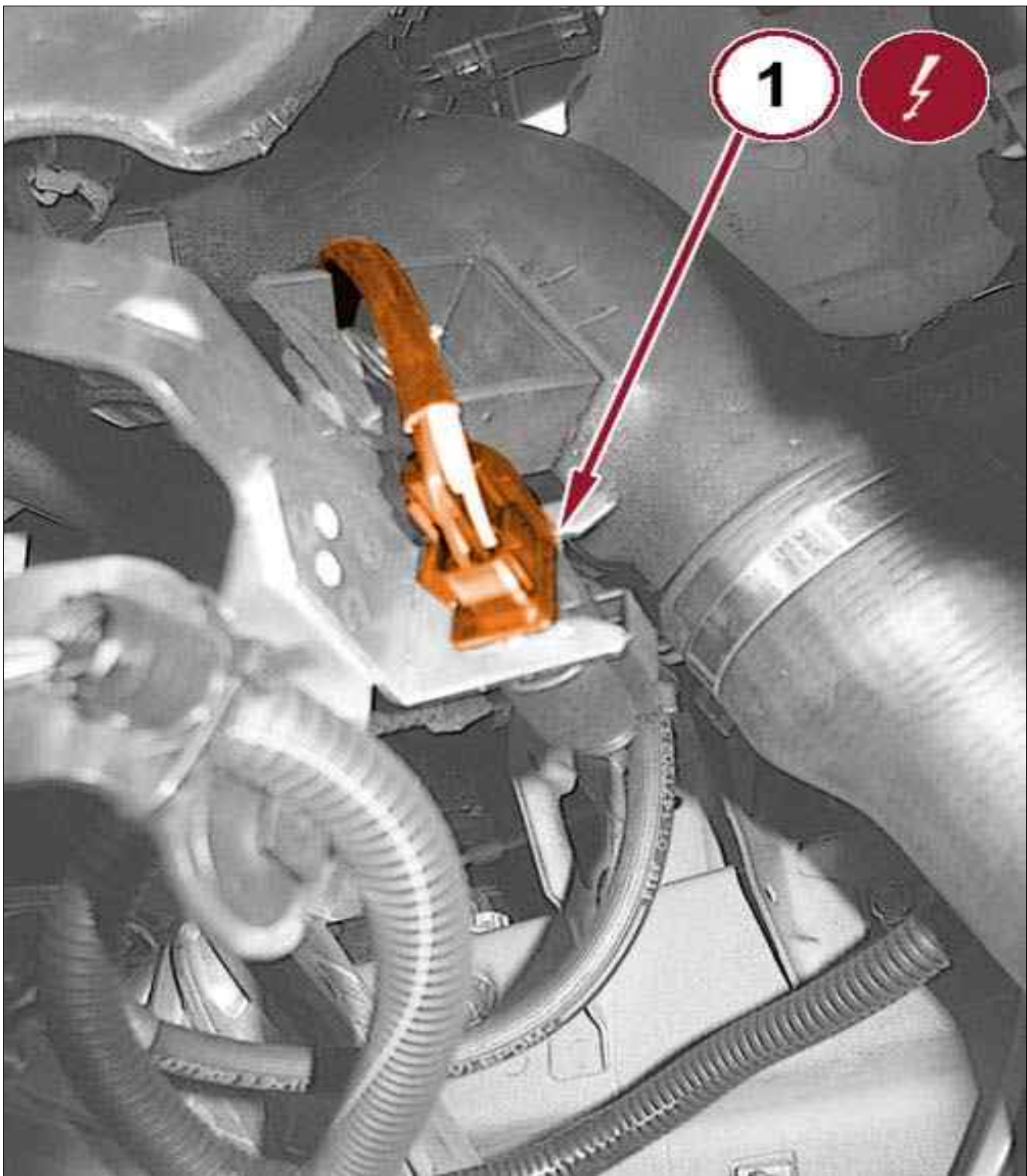
WARNING:

The exhaust manifold, exhaust pipes and catalytic converter(s) become very hot during engine operation. Allow engine to cool before removing oxygen sensor. Failure to allow engine to cool before removal may result in personal injury caused by burns.

CAUTION:

When disconnecting sensor electrical connector, do not pull directly on wires going into oxygen sensor (O2S). Damage to the oxygen sensor may occur.

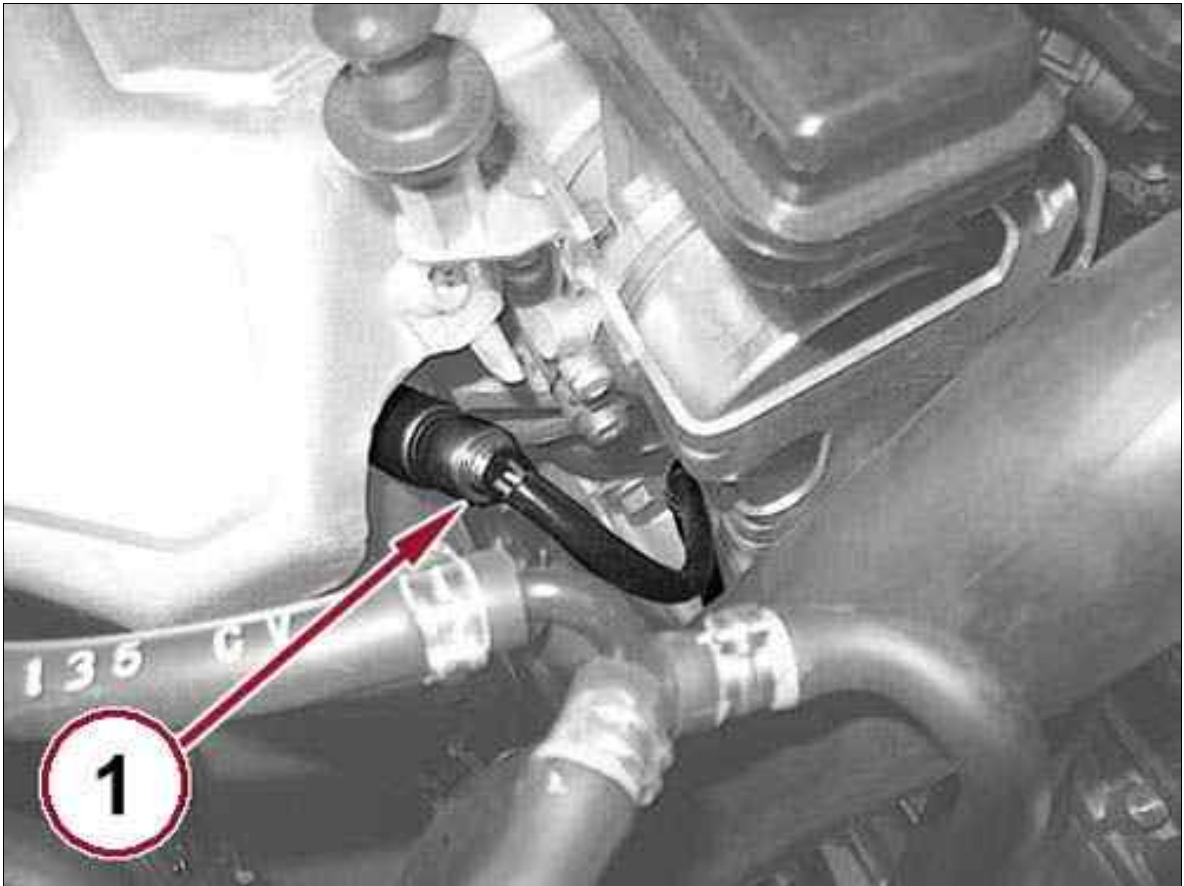
Fig 1: Oxygen Sensor Electrical Connection



Courtesy of CHRYSLER GROUP, LLC

1. Disconnect the electrical connection (1) of the front oxygen sensor at the catalytic converter.

Fig 2: Oxygen Sensor At The Catalytic Converter



Courtesy of CHRYSLER GROUP, LLC

2. Unscrew and remove the front oxygen sensor (1) at the catalytic converter.

FUEL INJECTION > SENSOR, OXYGEN > REMOVAL AND INSTALLATION > 1.4L 2WD UPSTREAM > 1.4L 2WD INSTALLATION

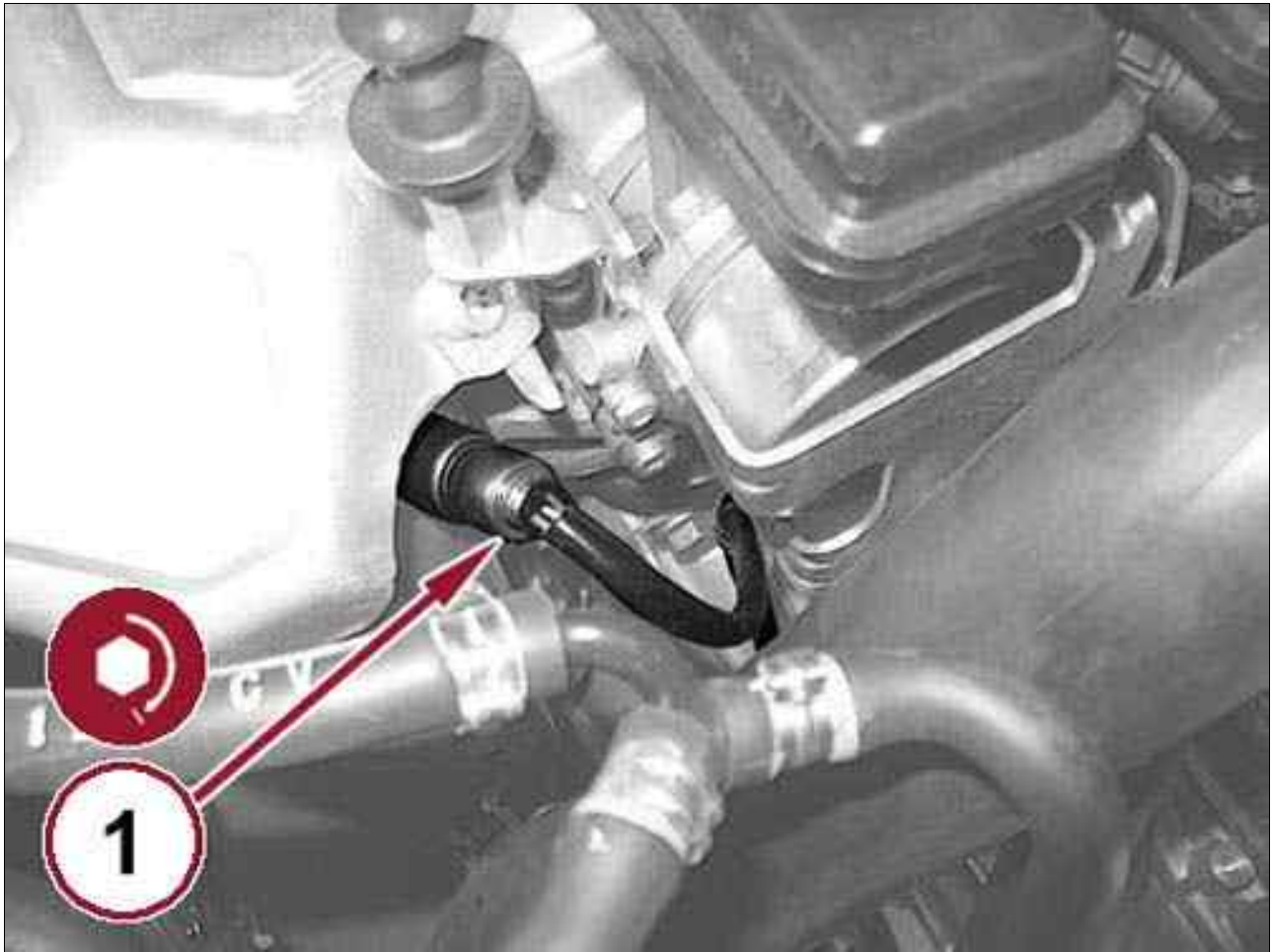
WARNING:

The exhaust manifold, exhaust pipes and catalytic converter(s) become very hot during engine operation. Allow engine to cool before removing oxygen sensor. Failure to allow engine to cool before removal may result in personal injury caused by burns.

CAUTION:

When Equipped: The oxygen sensor (O2S) pigtail harness must be clipped and/or bolted back to their original positions on engine or body to prevent mechanical damage to wiring.

Fig 1: Oxygen Sensor



Courtesy of CHRYSLER GROUP, LLC

1. Install the front oxygen sensor (1) to the catalytic converter and tighten it to the proper torque specification. Refer to FUEL INJECTION, SPECIFICATIONS .
2. Connect the electrical connection of the front oxygen sensor at the catalytic converter.

FUEL INJECTION > SENSOR, OXYGEN > REMOVAL AND INSTALLATION > 1.4L 4WD > 1.4L 4WD REMOVAL

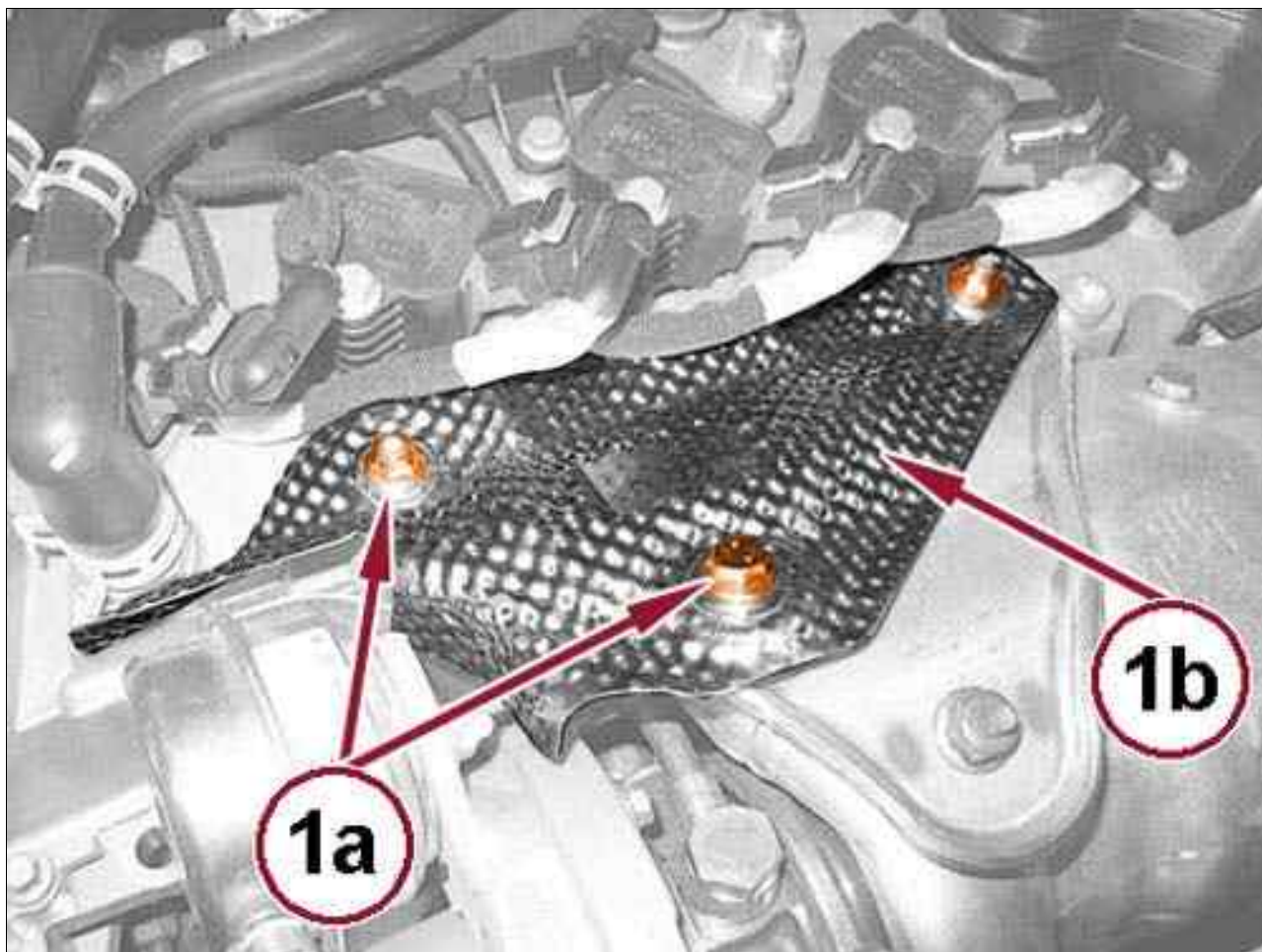
WARNING:

The exhaust manifold, exhaust pipes and catalytic converter(s) become very hot during engine operation. Allow engine to cool before removing oxygen sensor. Failure to allow engine to cool before removal may result in personal injury caused by burns.

CAUTION:

When disconnecting sensor electrical connector, do not pull directly on wires going into oxygen sensor (O2S). Damage to the oxygen sensor may occur.

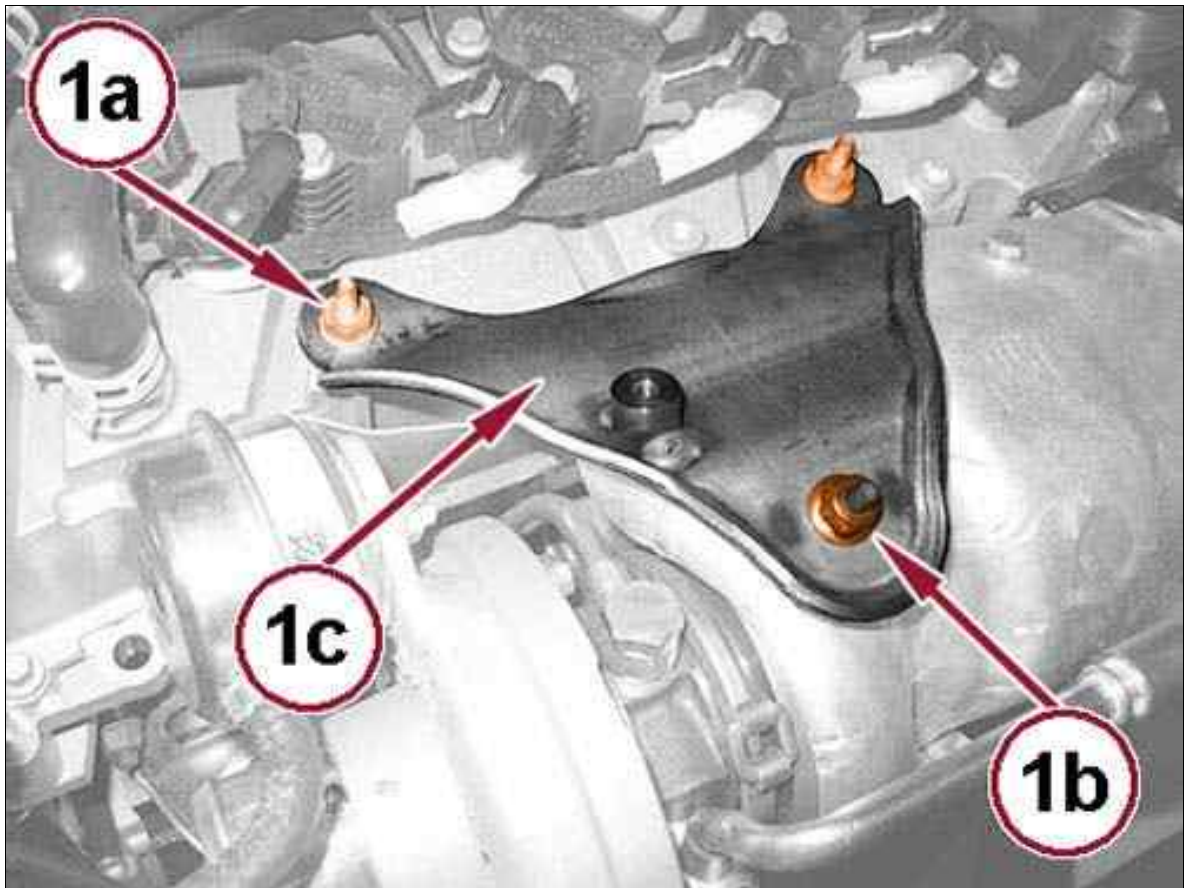
Fig 1: Ignition Coil Heat Shield & Clamps



Courtesy of CHRYSLER GROUP, LLC

1. Remove the clamps (1a) and remove the ignition coils heat shield (1b).

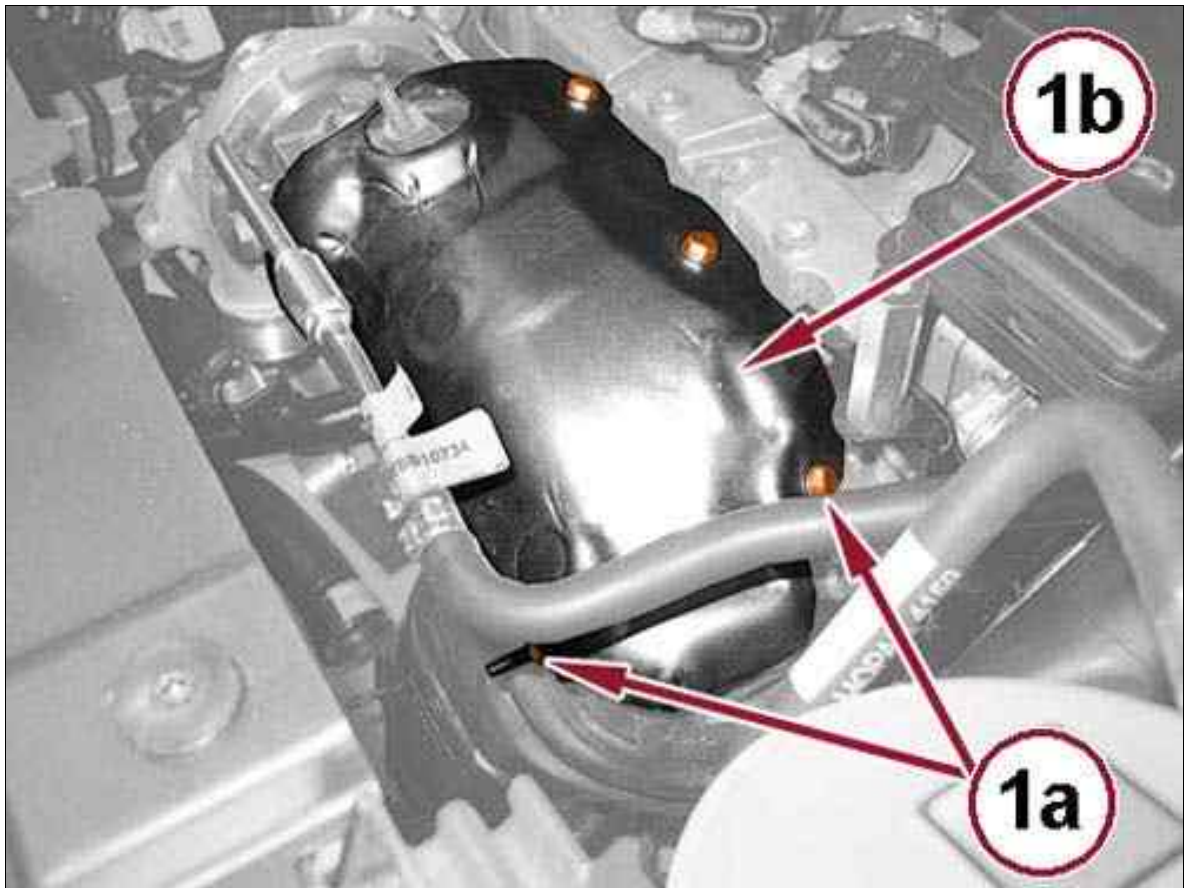
Fig 2: Turbocharger Bracket Support, Screws & Nut



Courtesy of CHRYSLER GROUP, LLC

2. Remove the screws (1a), the nut (1b) and remove the turbocharger bracket support (1c).

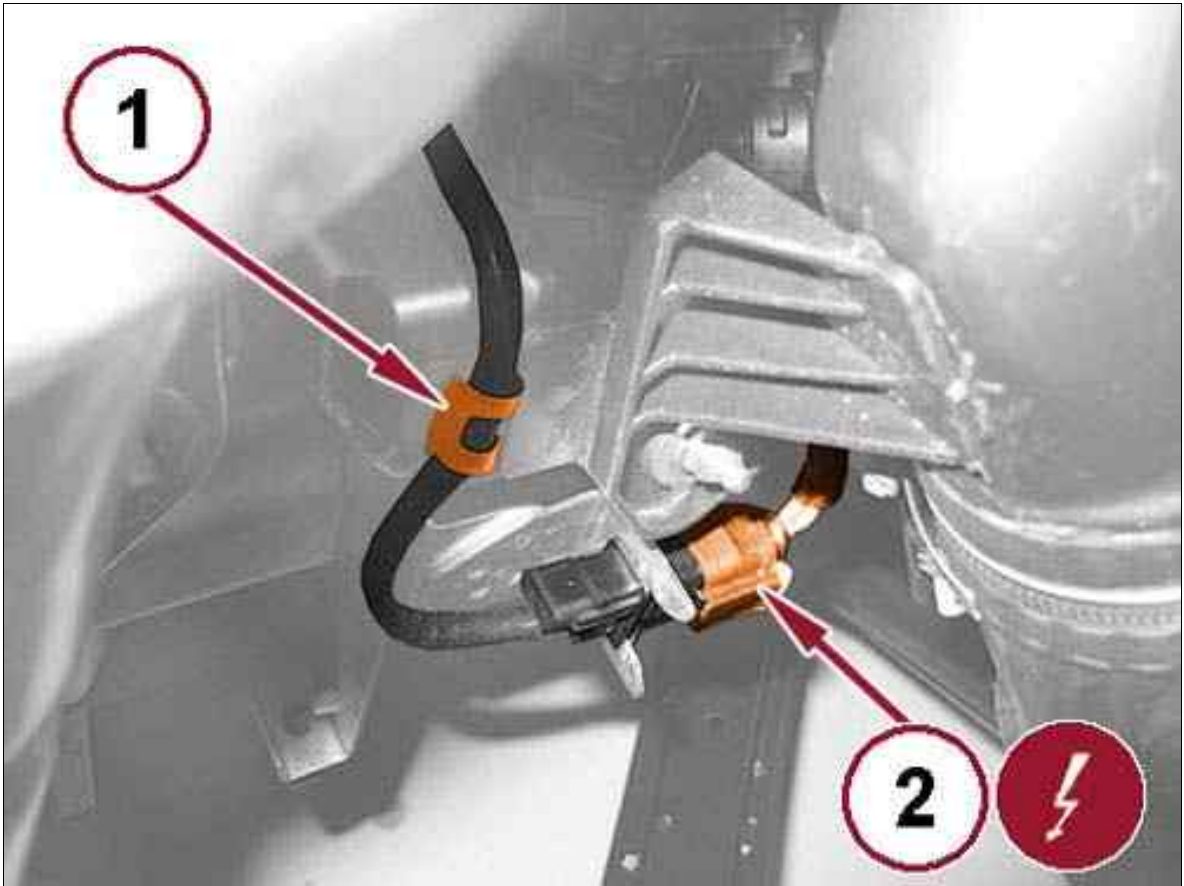
Fig 3: Turbocharger Heat Shield & Clamps



Courtesy of CHRYSLER GROUP, LLC

3. Remove the clamps (1a) and remove the turbocharger heat shield (1b).

Fig 4: Spring Retainer & Upstream Oxygen Sensor Electrical Connection



Courtesy of CHRYSLER GROUP, LLC

4. Detach the wiring from the spring retainer (1).
5. Disconnect the electrical connection (2) of the upstream oxygen sensor at the catalytic converter.

Fig 5: Upstream Oxygen Sensor At The Catalytic Converter



Courtesy of CHRYSLER GROUP, LLC

6. Disengage the wiring from the upper retaining clip, unscrew and remove the upstream oxygen sensor at the catalytic converter (1).

**FUEL INJECTION > SENSOR, OXYGEN > REMOVAL AND INSTALLATION > 1.4L 4WD
> 1.4L 4WD INSTALLATION**

 WARNING:

The exhaust manifold, exhaust pipes and catalytic converter(s) become very hot during engine operation. Allow engine to cool before removing oxygen sensor. Failure to allow engine to cool before removal may result in personal injury caused by burns.

 CAUTION:

When Equipped: The oxygen sensor (O2S) pigtail harness must be clipped and/or bolted back to their original positions on engine or body to prevent mechanical damage to wiring.

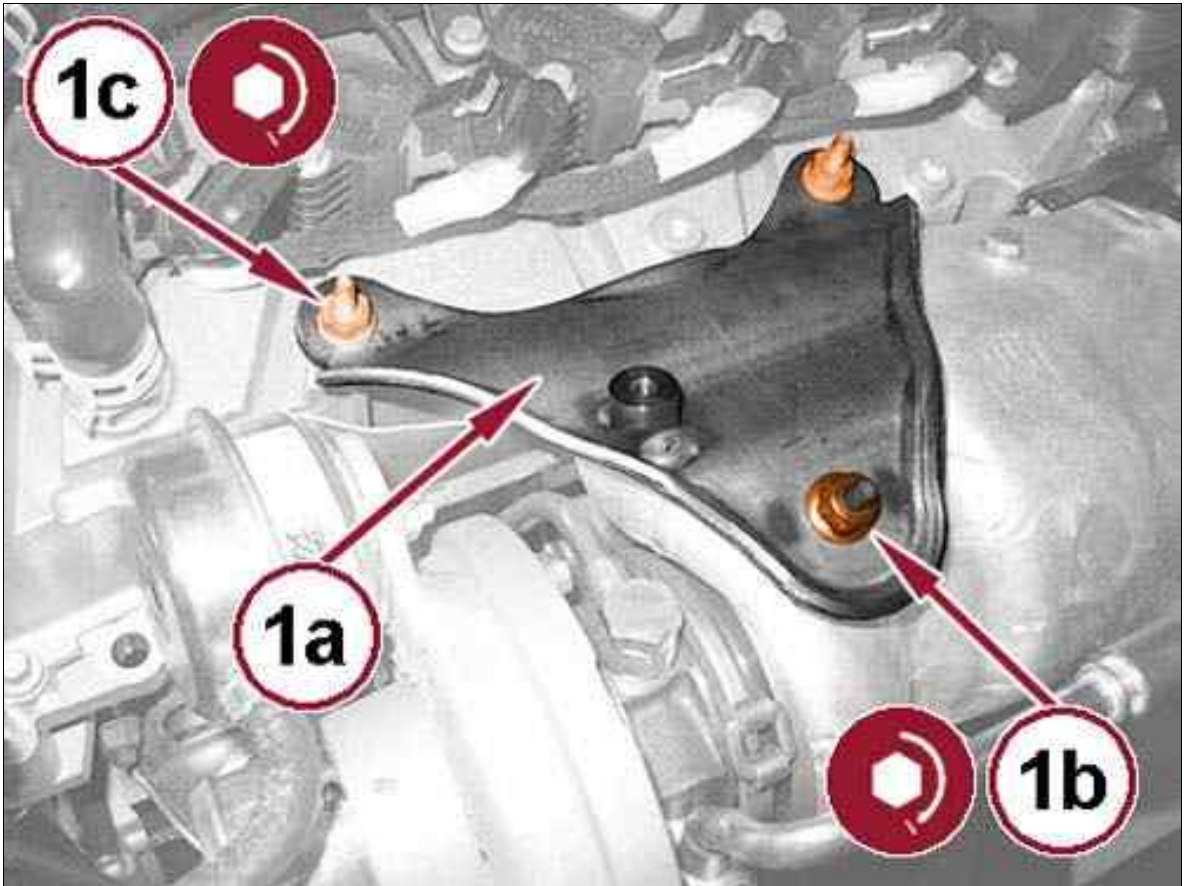
Fig 1: Upstream Oxygen Sensor



Courtesy of CHRYSLER GROUP, LLC

1. Install the upstream oxygen sensor (1) to the catalytic converter and tighten it to the proper torque specification. Refer to FUEL INJECTION, SPECIFICATIONS .
2. Connect the electrical connection of the upstream oxygen sensor at the catalytic converter.
3. Engage the wiring with the retaining clips.
4. Put into place the heat shield of the turbocharger and tighten its hardware.

Fig 2: Turbocharger Support Bracket & Nuts



Courtesy of CHRYSLER GROUP, LLC

5. Install the turbocharger support bracket (1a), tighten to torque the new nut (1b) and screws (1c).
6. Install the ignition coils cover and tighten its hardware.

FUEL INJECTION > SENSOR, OXYGEN > REMOVAL AND INSTALLATION > 1.6L > 1.6L REMOVAL

WARNING:

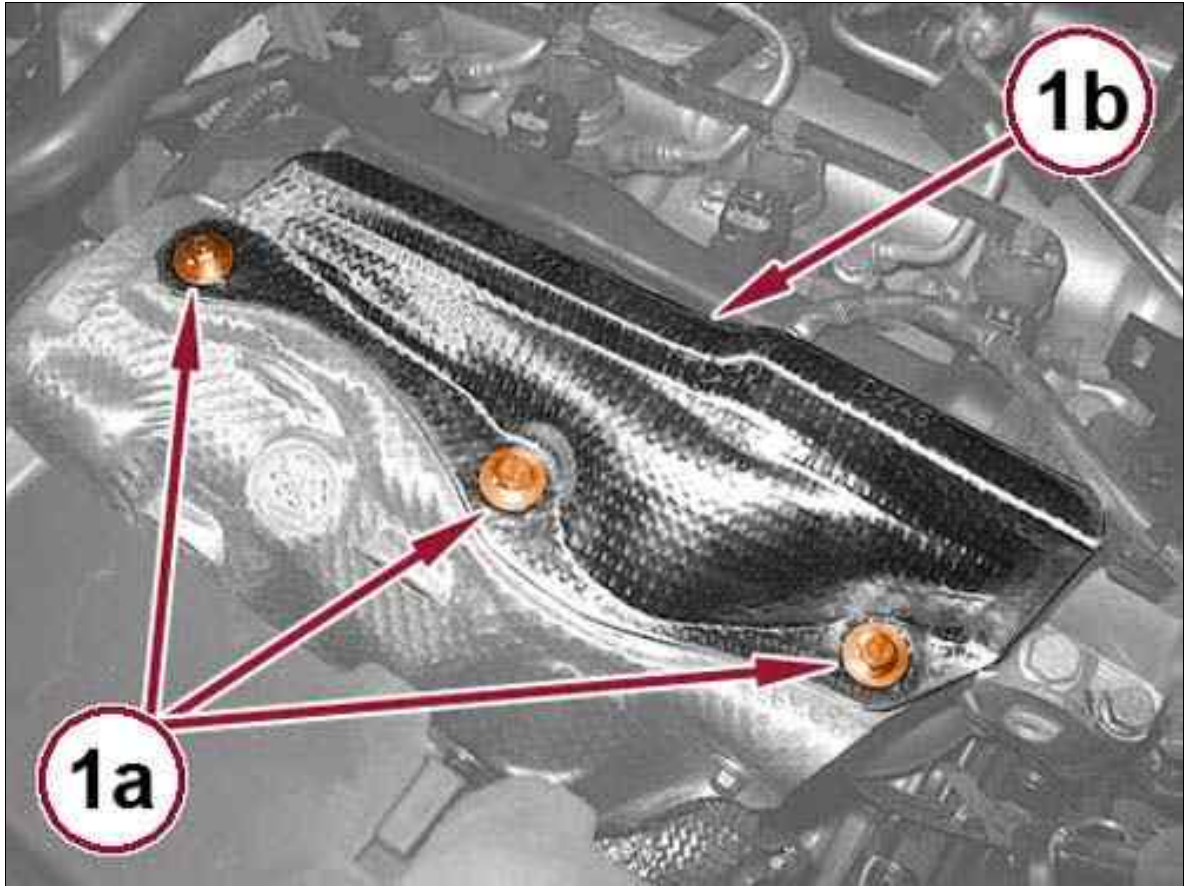
The exhaust manifold, exhaust pipes and catalytic converter(s) become very hot during engine operation. Allow engine to cool before removing oxygen sensor. Failure to allow engine to cool before removal may result in personal injury caused by burns.

⚠ CAUTION:

When disconnecting sensor electrical connector, do not pull directly on wires going into oxygen sensor (O2S). Damage to the oxygen sensor may occur.

1. Disconnect and isolate the negative battery cable.
2. Remove the engine beauty cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .

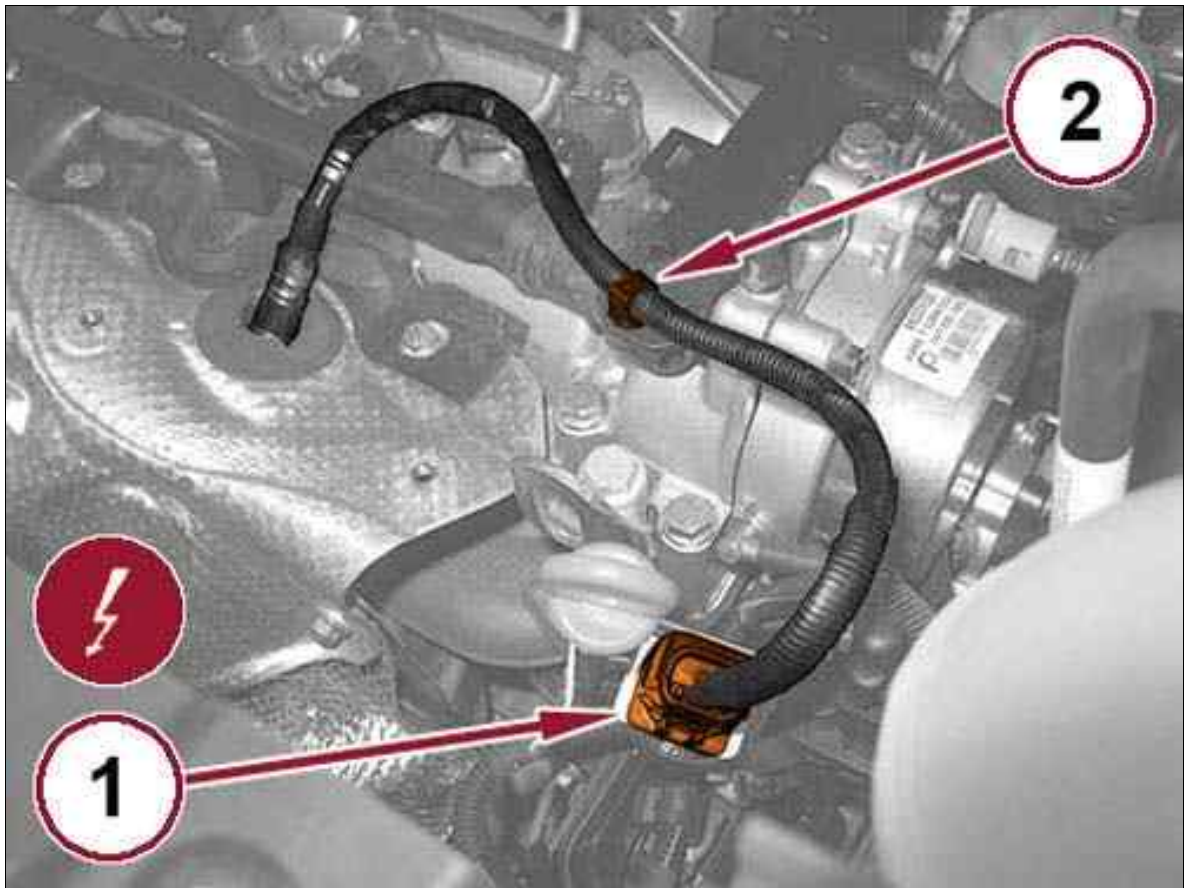
Fig 1: Turbocharger Top Cover & Screws



Courtesy of CHRYSLER GROUP, LLC

3. Remove the screws (1a) and remove the turbocharger top cover (1b).

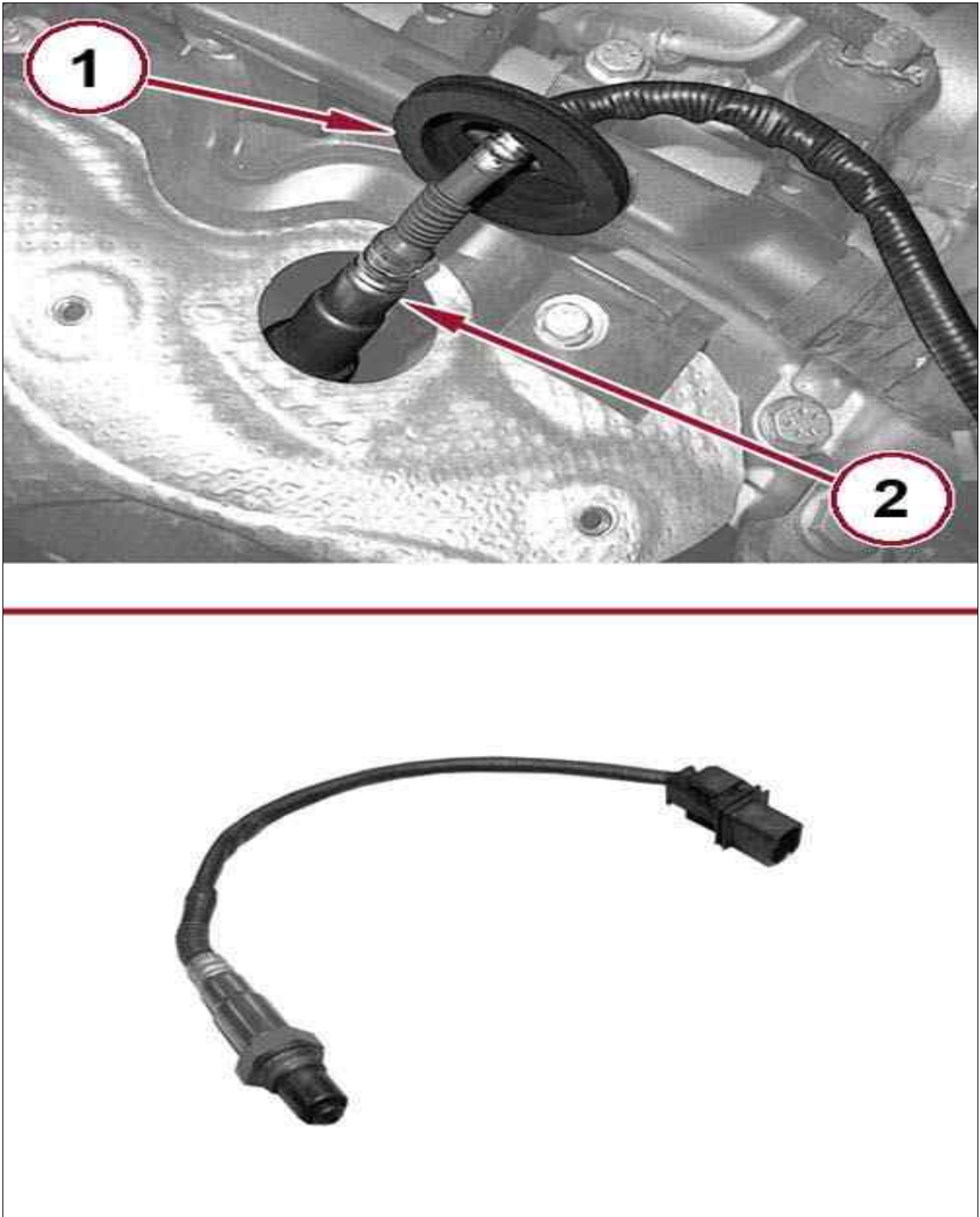
Fig 2: Oxygen Sensor & Electrical Connection



Courtesy of CHRYSLER GROUP, LLC

4. Disconnect the electrical connection (1) for the oxygen sensor.
5. Open the wiring retaining clips (2).

Fig 3: Oxygen Sensor & Gasket



Courtesy of CHRYSLER GROUP, LLC

6. Disengage the gasket (1).
7. Unscrew and remove the oxygen sensor (2).

1.6L INSTALLATION

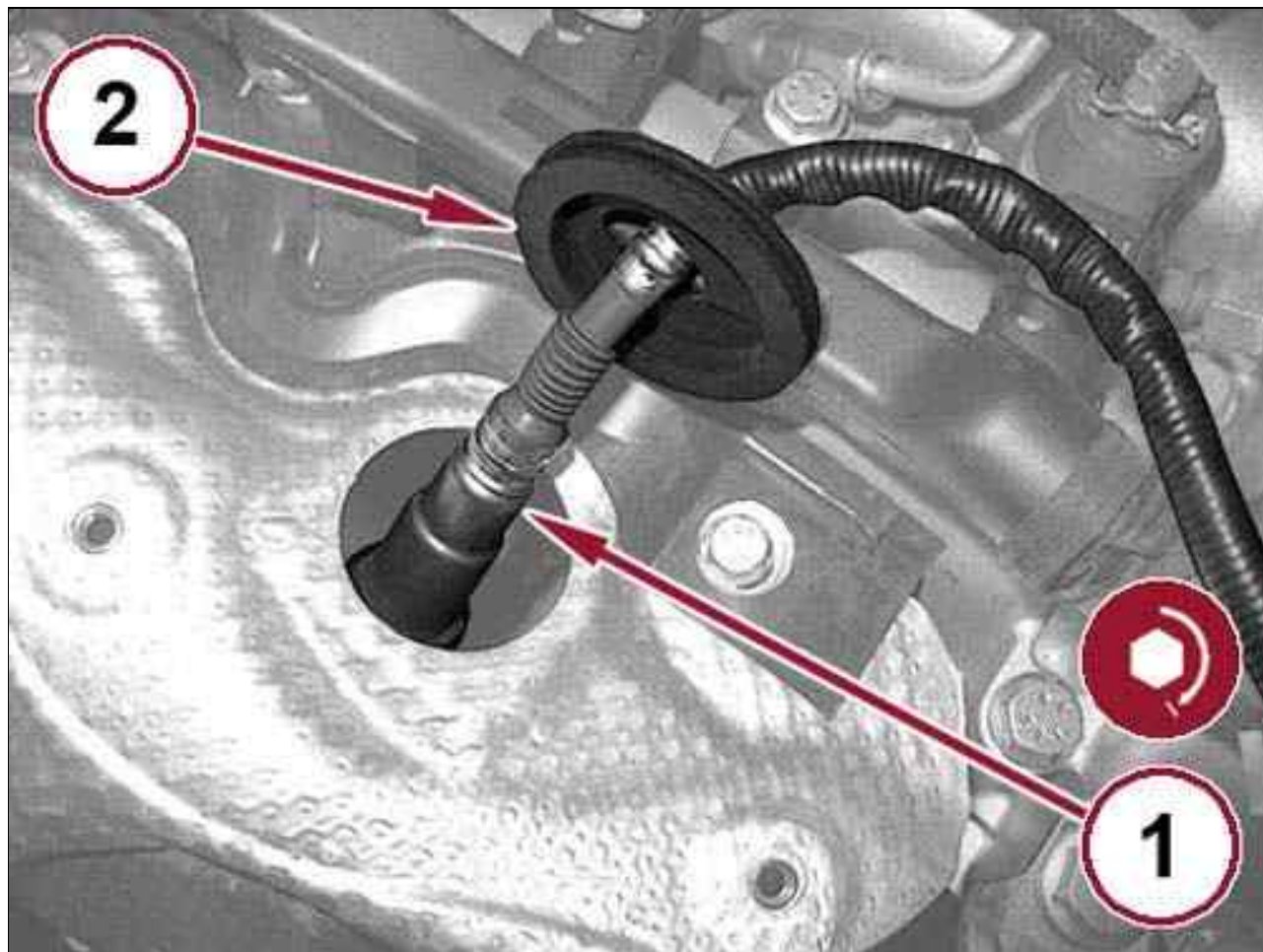
⚠ WARNING:

The exhaust manifold, exhaust pipes and catalytic converter(s) become very hot during engine operation. Allow engine to cool before removing oxygen sensor. Failure to allow engine to cool before removal may result in personal injury caused by burns.

⚠ CAUTION:

When Equipped: The oxygen sensor (O2S) pigtail harness must be clipped and/or bolted back to their original positions on engine or body to prevent mechanical damage to wiring.

Fig 1: Oxygen Sensor & Gasket



Courtesy of CHRYSLER GROUP, LLC

1. Put into place the oxygen sensor (1) and tighten it to the proper torque specification. Refer to FUEL INJECTION, SPECIFICATIONS .
2. Engage the gasket (2).

3. Insert the wiring and close shut the retaining clips.
4. Connect the oxygen sensor electrical connection.
5. Install turbocharger cover and tighten the screws.
6. Install the engine beauty cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .
7. Connect the negative battery cable.

FUEL INJECTION > SENSOR, OXYGEN > REMOVAL AND INSTALLATION > 2.0L - 120HP / 140 HP > 2.0L REMOVAL



WARNING:

The exhaust manifold, exhaust pipes and catalytic converter(s) become very hot during engine operation. Allow engine to cool before removing oxygen sensor. Failure to allow engine to cool before removal may result in personal injury caused by burns.

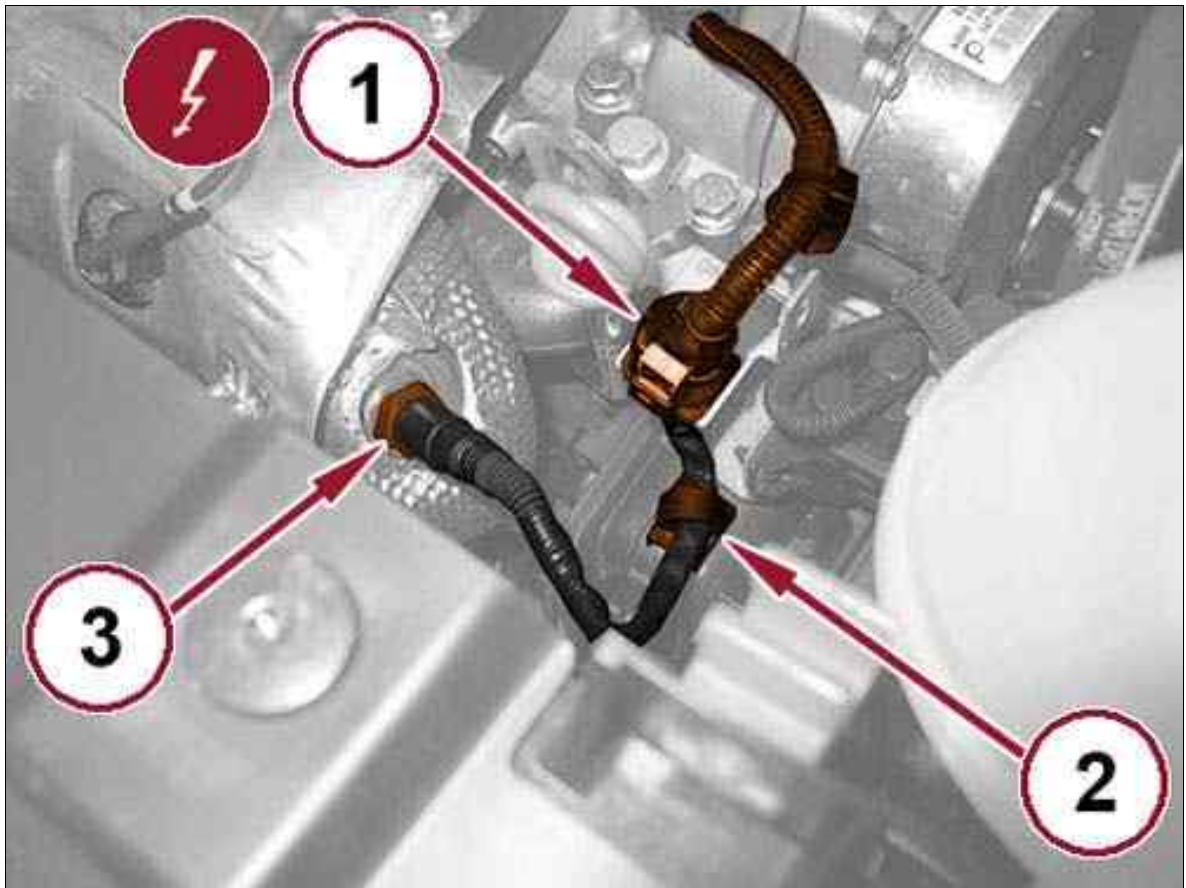


CAUTION:

When disconnecting sensor electrical connector, do not pull directly on wires going into oxygen sensor (O2S). Damage to the oxygen sensor may occur.

1. Disconnect and isolate the negative battery cable.
2. Remove the engine beauty cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION

Fig 1: Oxygen Sensor, Electrical Connector & Retaining Clip



Courtesy of CHRYSLER GROUP, LLC

3. Disconnect the oxygen sensor electrical connector (1).
4. Open the wiring retainer clip (2).
5. Unscrew and remove the oxygen sensor (3).

FUEL INJECTION > SENSOR, OXYGEN > REMOVAL AND INSTALLATION > 2.0L - 120HP / 140 HP > 2.0L INSTALLATION

WARNING:

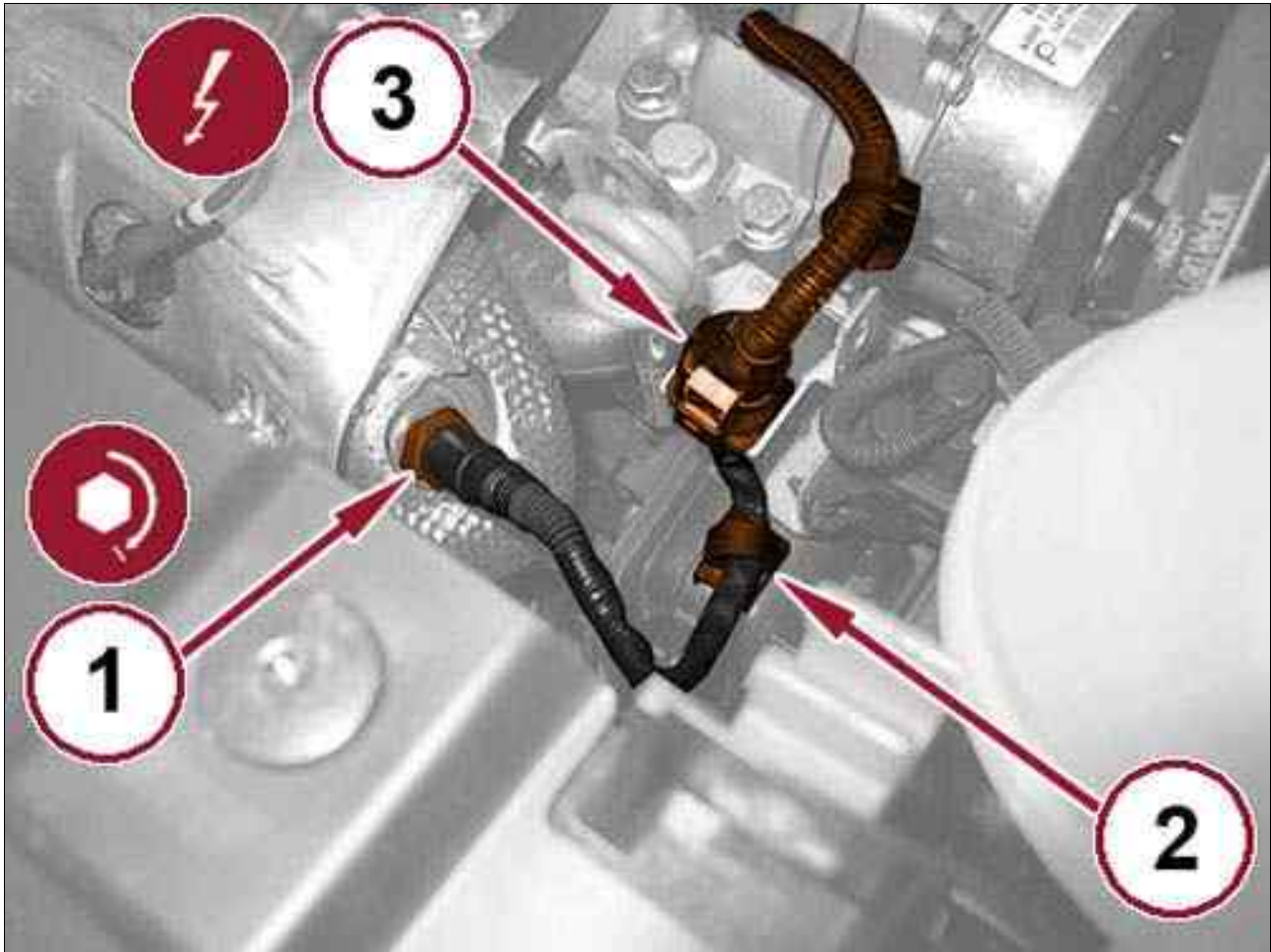
The exhaust manifold, exhaust pipes and catalytic converter(s) become very hot during engine operation. Allow engine to cool before removing oxygen sensor. Failure to allow engine to cool before removal may result in personal injury caused by burns.

CAUTION:

When Equipped: The oxygen sensor (O2S) pigtail harness must be clipped and/or bolted

back to their original positions on engine or body to prevent mechanical damage to wiring.

Fig 1: Oxygen Sensor, Electrical Connector & Retaining Clip



Courtesy of CHRYSLER GROUP, LLC

1. Install the oxygen sensor (1) and tighten it to the proper torque specification. Refer to FUEL INJECTION, SPECIFICATIONS .
2. Connect the wiring to the wiring retainer (2).
3. Connect the oxygen sensor wiring harness (3).
4. Install the engine beauty cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .
5. Connect the negative battery cable.

FUEL INJECTION > SENSOR, OXYGEN > REMOVAL AND INSTALLATION > 2.0L - 170HP > 2.0L 170HP REMOVAL

 **WARNING:**

The exhaust manifold, exhaust pipes and catalytic converter(s) become very hot during engine operation. Allow engine to cool before removing oxygen sensor. Failure to allow engine to cool before removal may result in personal injury caused by burns.

 CAUTION:

When disconnecting sensor electrical connector, do not pull directly on wires going into oxygen sensor (O2S). Damage to the oxygen sensor may occur.

1. Disconnect and isolate the negative battery cable.
2. Remove the engine beauty cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .

Fig 1: Oxygen Sensor Electrical connection



Courtesy of CHRYSLER GROUP, LLC

3. Disconnect the electrical connection (1) of the upstream oxygen sensor at the catalytic converter.

Fig 2: Upstream Oxygen Sensor & Retaining Clips



Courtesy of CHRYSLER GROUP, LLC

4. Disengage the wiring from the spring retainer, unscrew and remove the upstream oxygen sensor (1) at the catalytic converter.

FUEL INJECTION > SENSOR, OXYGEN > REMOVAL AND INSTALLATION > 2.0L - 170HP > 2.0L 170HP INSTALLATION

WARNING:

The exhaust manifold, exhaust pipes and catalytic converter(s) become very hot during engine operation. Allow engine to cool before removing oxygen sensor. Failure to allow engine to cool before removal may result in personal injury caused by burns.

CAUTION:

When disconnecting sensor electrical connector, do not pull directly on wires going into oxygen sensor (O2S). Damage to the oxygen sensor may occur.

Fig 1: Upstream Oxygen Sensor & Retaining Clips



Courtesy of CHRYSLER GROUP, LLC

1. Install the upstream oxygen sensor at the catalytic converter, tighten it to the proper torque specification and engage the wiring in its retaining clips. Refer to FUEL INJECTION, SPECIFICATIONS .
2. Connect the electrical connection of the upstream oxygen sensor at the catalytic converter.
3. Install the engine beauty cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .
4. Connect the negative battery cable.

**FUEL INJECTION > SENSOR, OXYGEN > REMOVAL AND INSTALLATION > 2.4L
DOWNSTREAM > 2.4L REMOVAL**

⚠ WARNING:

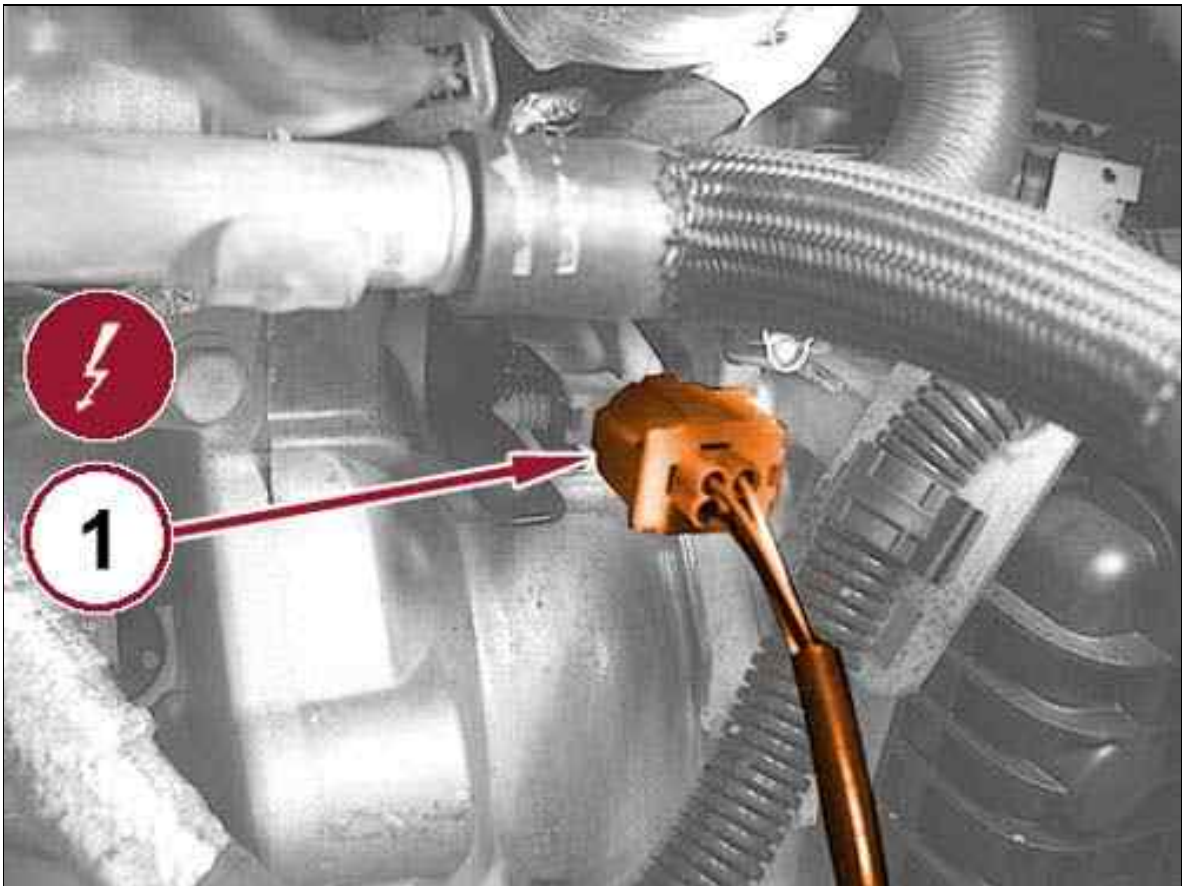
The exhaust manifold, exhaust pipes and catalytic converter(s) become very hot during engine operation. Allow engine to cool before removing oxygen sensor. Failure to allow engine to cool before removal may result in personal injury caused by burns.

⚠ CAUTION:

When disconnecting sensor electrical connector, do not pull directly on wires going into oxygen sensor (O2S). Damage to the oxygen sensor may occur.

1. Disconnect and isolate the negative battery cable.
2. Remove the engine cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .

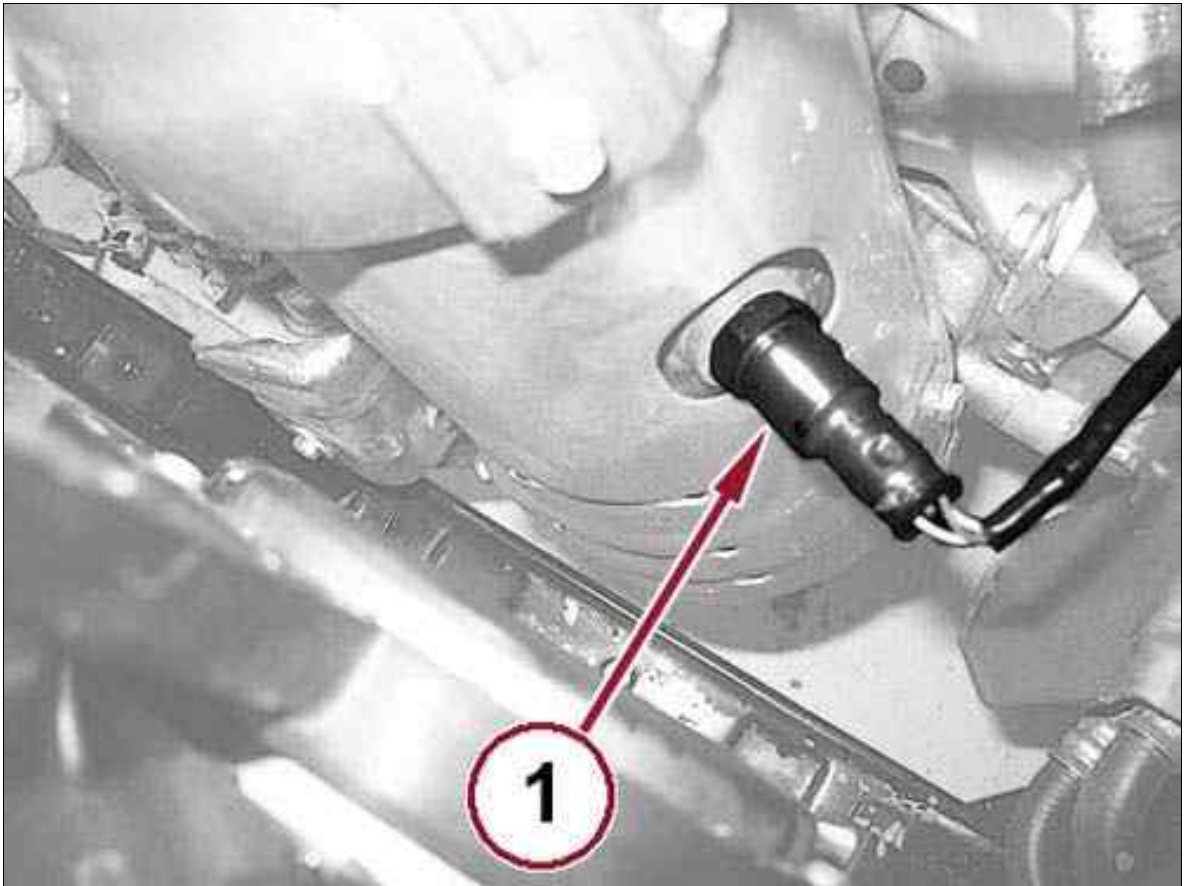
Fig 1: Downstream Oxygen Sensor Electrical Connection



Courtesy of CHRYSLER GROUP, LLC

3. Disconnect the electrical connection (1) of the downstream oxygen sensor to catalytic converter.

Fig 2: Oxygen Sensor



Courtesy of CHRYSLER GROUP, LLC

4. Unscrew and remove the oxygen sensor (1).

FUEL INJECTION > SENSOR, OXYGEN > REMOVAL AND INSTALLATION > 2.4L DOWNSTREAM > 2.4L INSTALLATION

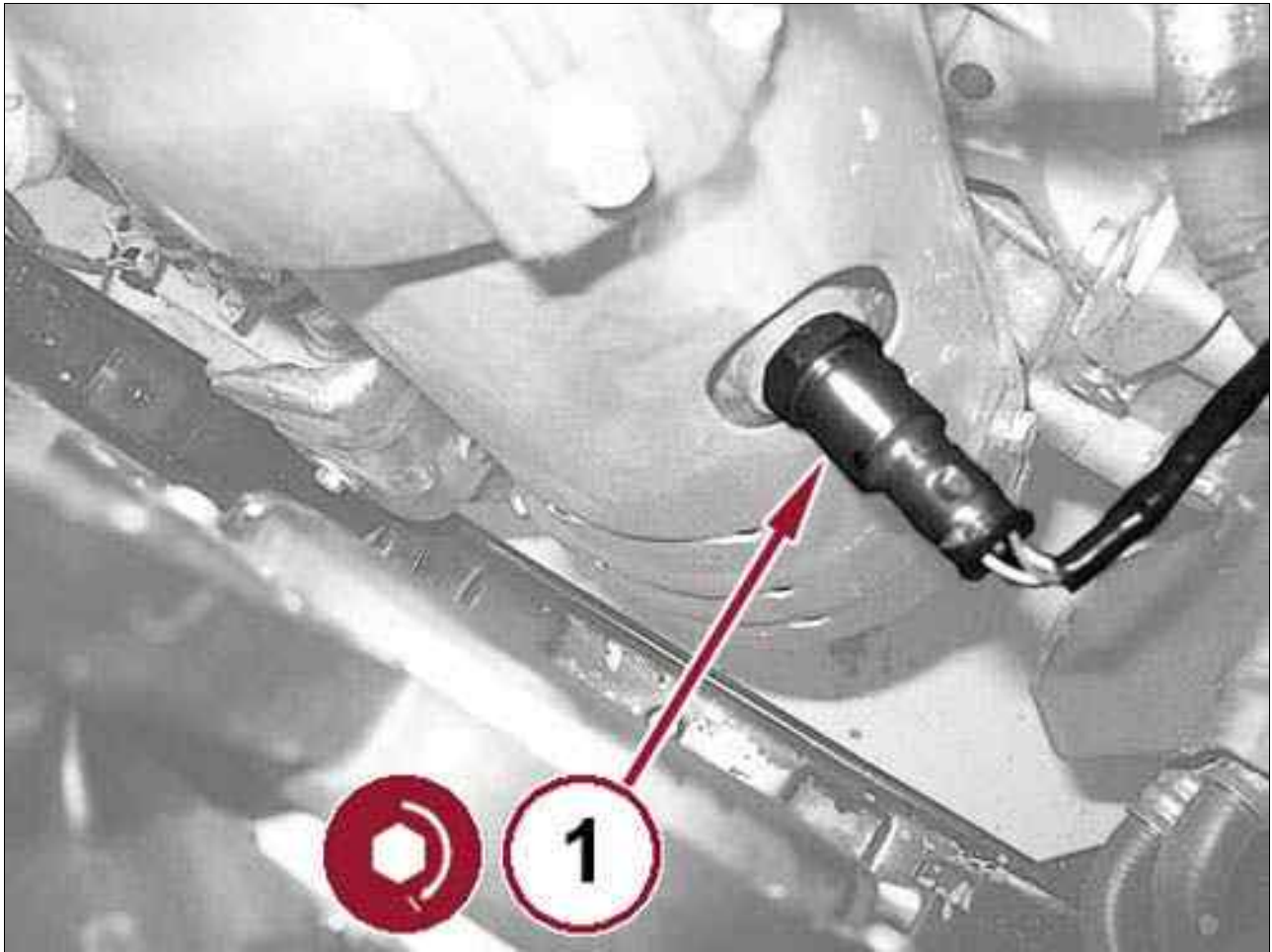
WARNING:

The exhaust manifold, exhaust pipes and catalytic converter(s) become very hot during engine operation. Allow engine to cool before removing oxygen sensor. Failure to allow engine to cool before removal may result in personal injury caused by burns.

CAUTION:

When Equipped: The oxygen sensor (O2S) pigtail harness must be clipped and/or bolted back to their original positions on engine or body to prevent mechanical damage to wiring.

Fig 1: Oxygen Sensor



Courtesy of CHRYSLER GROUP, LLC

1. Install the downstream oxygen sensor at the catalytic converter (1), tighten it to the proper torque specification. Refer to FUEL INJECTION, SPECIFICATIONS .
2. Connect the electrical connection of the downstream oxygen sensor at the catalytic converter.
3. Install the engine cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .
4. Connect the negative battery cable.

FUEL INJECTION > SENSOR, OXYGEN > REMOVAL AND INSTALLATION > 2.4L UPSTREAM > 2.4L REMOVAL

WARNING:

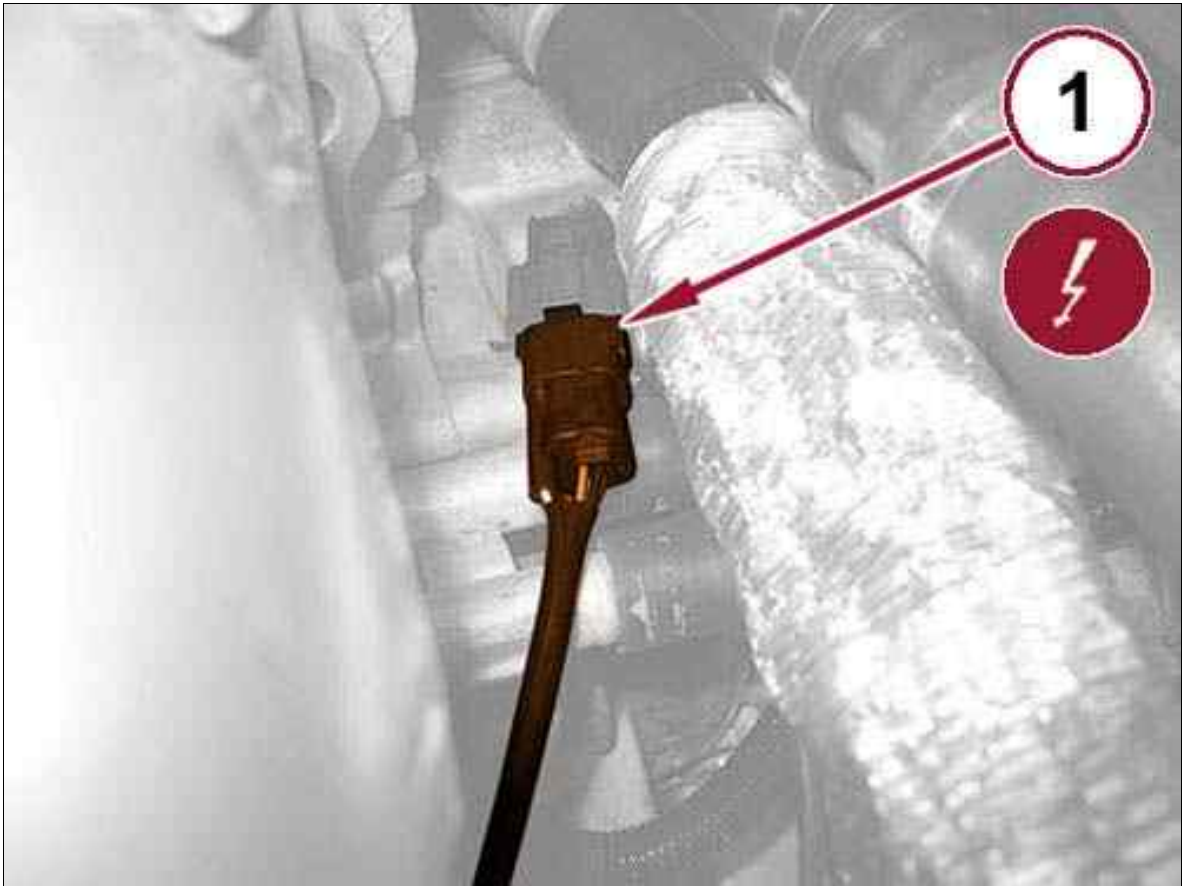
The exhaust manifold, exhaust pipes and catalytic converter(s) become very hot during engine operation. Allow engine to cool before removing oxygen sensor. Failure to allow engine to cool before removal may result in personal injury caused by burns.

 CAUTION:

When disconnecting sensor electrical connector, do not pull directly on wires going into oxygen sensor (O2S). Damage to the oxygen sensor may occur.

1. Disconnect and isolate the negative battery cable.
2. Remove the engine cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .

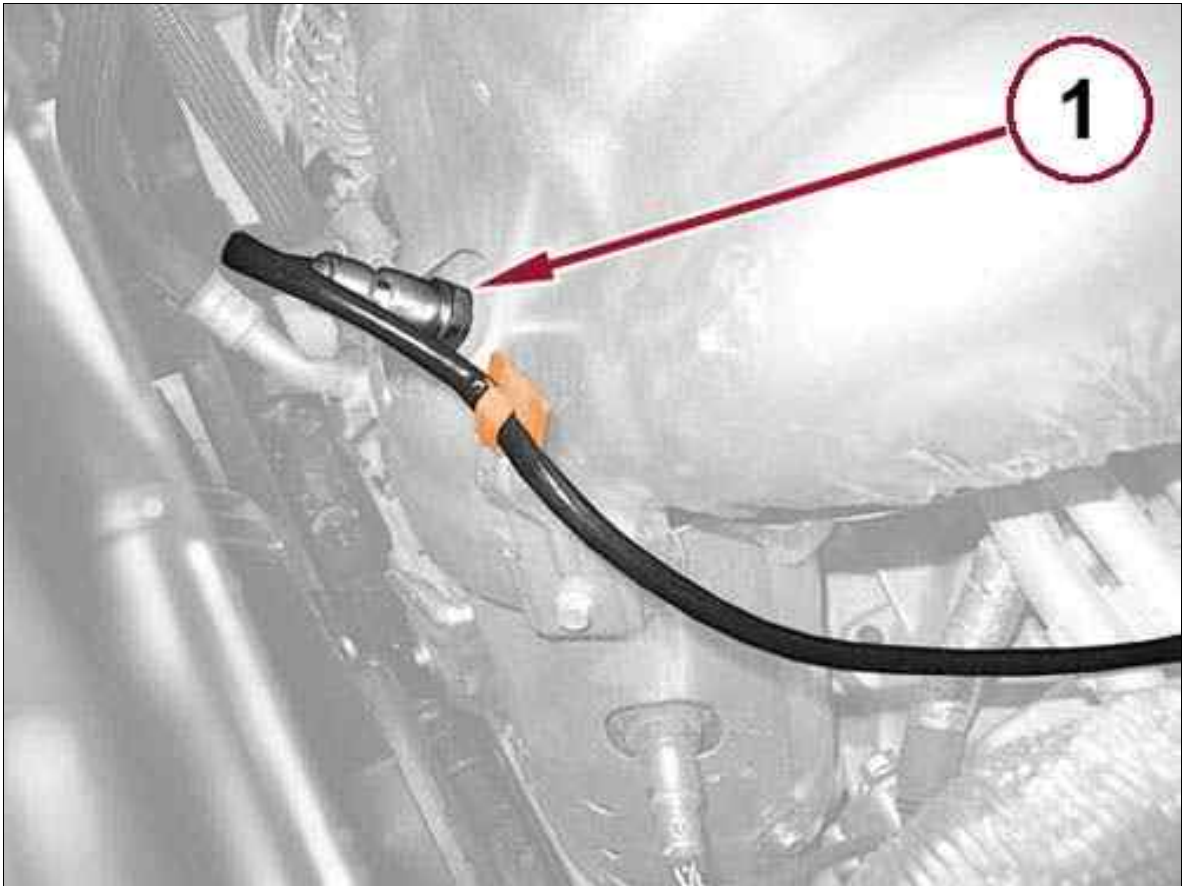
Fig 1: Upstream Oxygen Sensor To Catalytic Converter Electrical Connection



Courtesy of CHRYSLER GROUP, LLC

3. Disconnect the electrical connection (1) of the upstream oxygen sensor to catalytic converter.

Fig 2: Upstream Oxygen Sensor & Retaining Clip



Courtesy of CHRYSLER GROUP, LLC

4. Disengage the wiring from the spring retainer, unscrew and remove the upstream oxygen sensor (1) at the catalytic converter.

FUEL INJECTION > SENSOR, OXYGEN > REMOVAL AND INSTALLATION > 2.4L UPSTREAM > 2.4L INSTALLATION

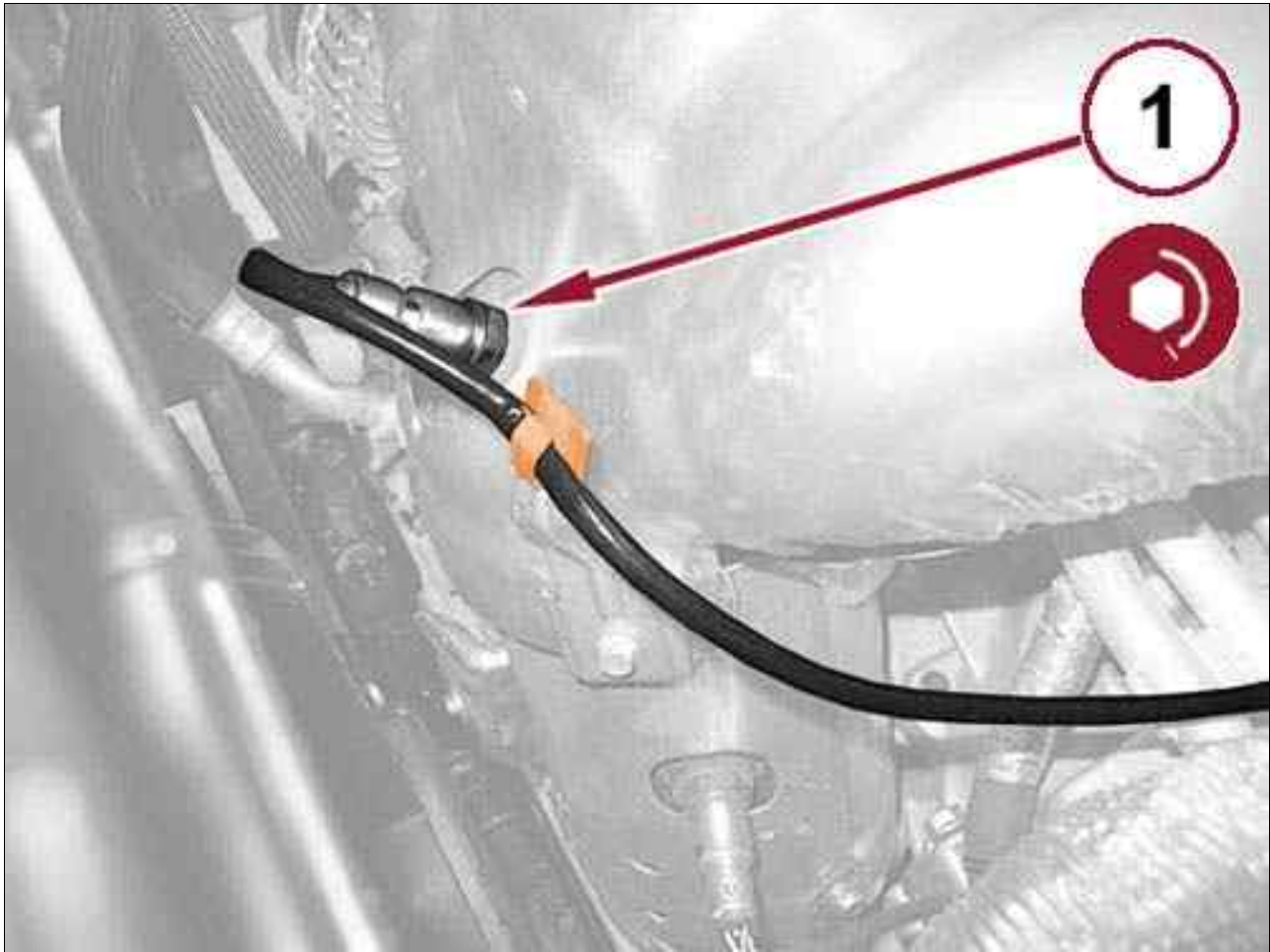
WARNING:

The exhaust manifold, exhaust pipes and catalytic converter(s) become very hot during engine operation. Allow engine to cool before removing oxygen sensor. Failure to allow engine to cool before removal may result in personal injury caused by burns.

CAUTION:

When Equipped: The oxygen sensor (O2S) pigtail harness must be clipped and/or bolted back to their original positions on engine or body to prevent mechanical damage to wiring.

Fig 1: Upstream Oxygen Sensor & Retaining Clip



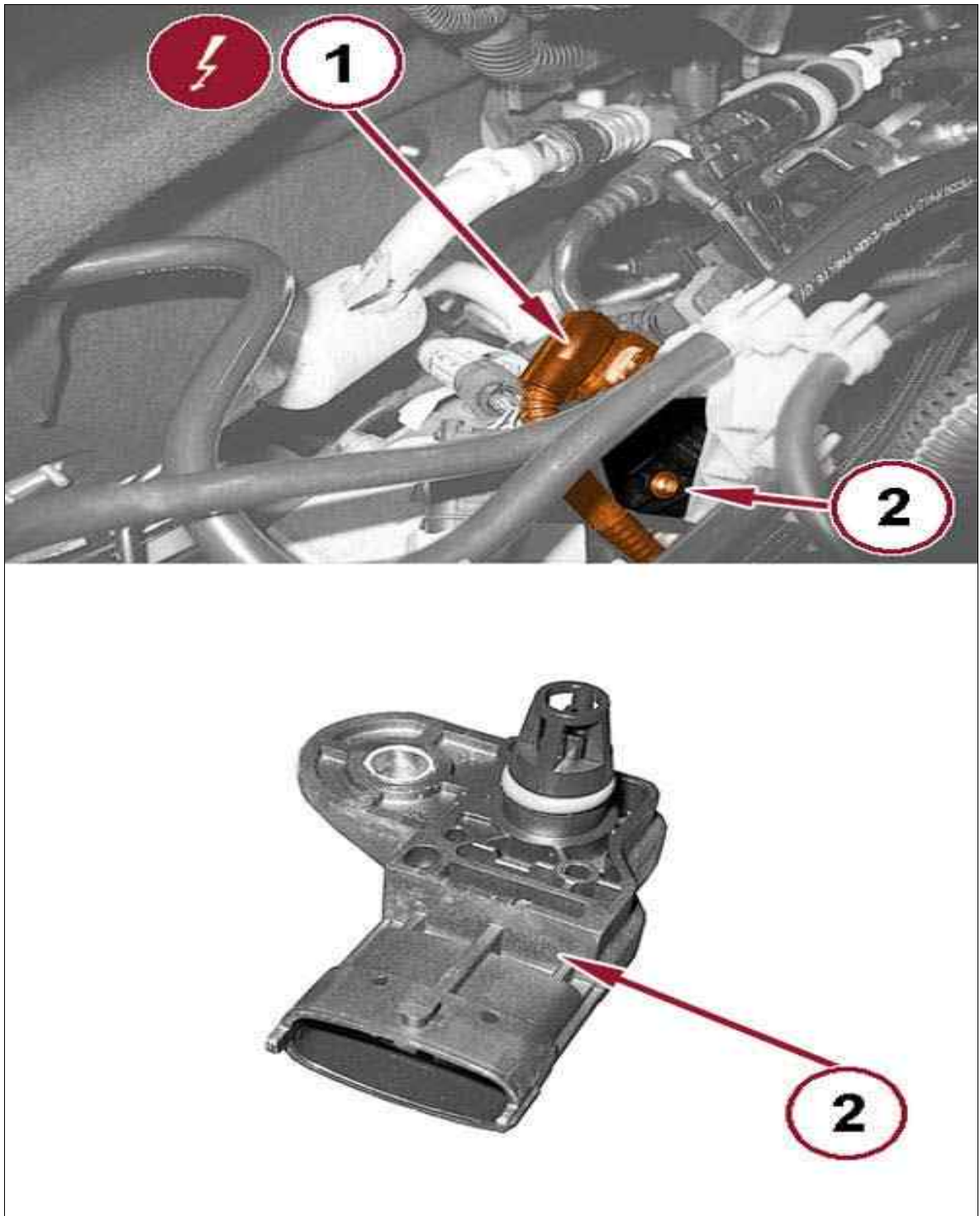
Courtesy of CHRYSLER GROUP, LLC

1. Install the upstream oxygen sensor at the catalytic converter (1), tighten it to the proper torque specification and engage the wiring in its retaining clip. Refer to FUEL INJECTION, SPECIFICATIONS .
2. Connect the electrical connection of the upstream oxygen sensor (1) at the catalytic converter.
3. Install the engine cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .
4. Connect the negative battery cable.

FUEL INJECTION > SENSOR, TMAP-INTAKE MANIFOLD > REMOVAL AND INSTALLATION > 1.4L > REMOVAL

1. Remove the engine cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .

Fig 1: Manifold Pressure/Intake Air Temperature Sensor & Electrical Connection



Courtesy of CHRYSLER GROUP, LLC

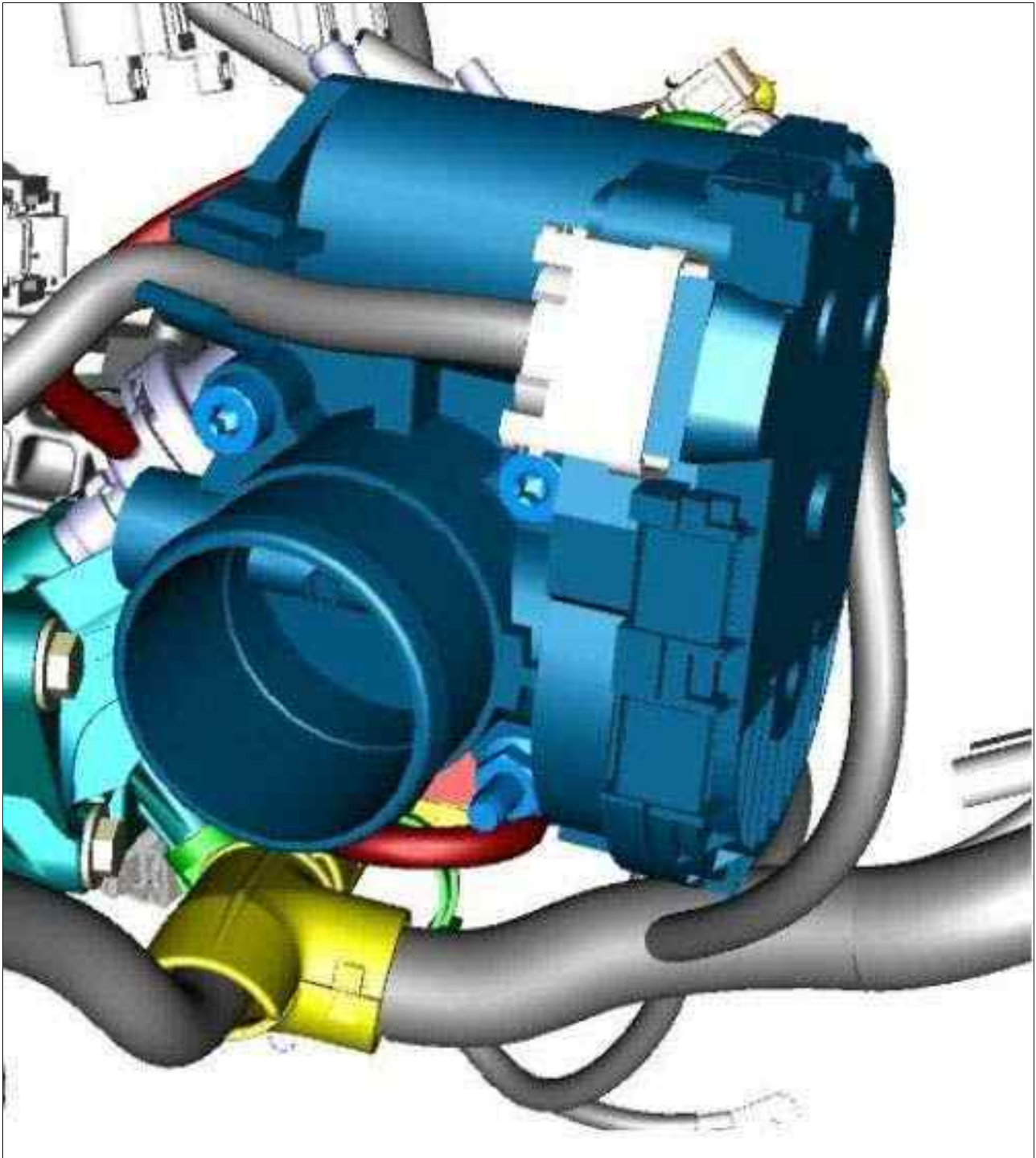
2. Disconnect the electrical connection of the manifold pressure and intake air temperature sensor (1).
3. Remove the manifold pressure and intake air temperature sensor mounting fastener (2).
4. Remove the manifold pressure and intake air temperature sensor (2).

FUEL INJECTION > SENSOR, TMAP-INTAKE MANIFOLD > REMOVAL AND INSTALLATION > 1.4L > INSTALLATION

1. Install the manifold pressure and intake air temperature sensor and securely tighten the retaining screw.
2. Connect the electrical connection of the manifold pressure and temperature air sensor.
3. Install the engine cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .

FUEL INJECTION > THROTTLE BODY > DESCRIPTION AND OPERATION > 1.4L MULTIAIR TURBO

Fig 1: Throttle Body



Courtesy of CHRYSLER GROUP, LLC

The throttle body or motorized throttle, with motorized throttle control and position sensors, is used by the Magneti Marelli 8GMK Engine Control Module with MultiAir module to adjust the quantity of air taken in by the engine in particular conditions:

- During recirculation of recovered petrol vapor
- To recover the oil vapors from the blow-by

- During the cut-off phase, the throttle is closed to facilitate engine slowdown
- During the recovery strategy, if MultiAir module components break.

The throttle body is equipped with two built-in potentiometers, each of which controls the other. In the event of the failure of both potentiometers or a power supply failure, the Engine Management Module reduces the drive torque according to the position of the accelerator pedal:

- Fully depressed, it cuts off the supply to one or more injectors until a maximum speed of 2500 rpm is reached.
- In intermediate positions, the supply is cut to one or more injectors, until an engine speed of less than 1,200 rpm is reached.



NOTE:

Replacing the throttle body or Engine Management Module requires the self-learning procedure to be carried out

FUEL INJECTION > THROTTLE BODY > REMOVAL AND INSTALLATION > 1.4L > REMOVAL

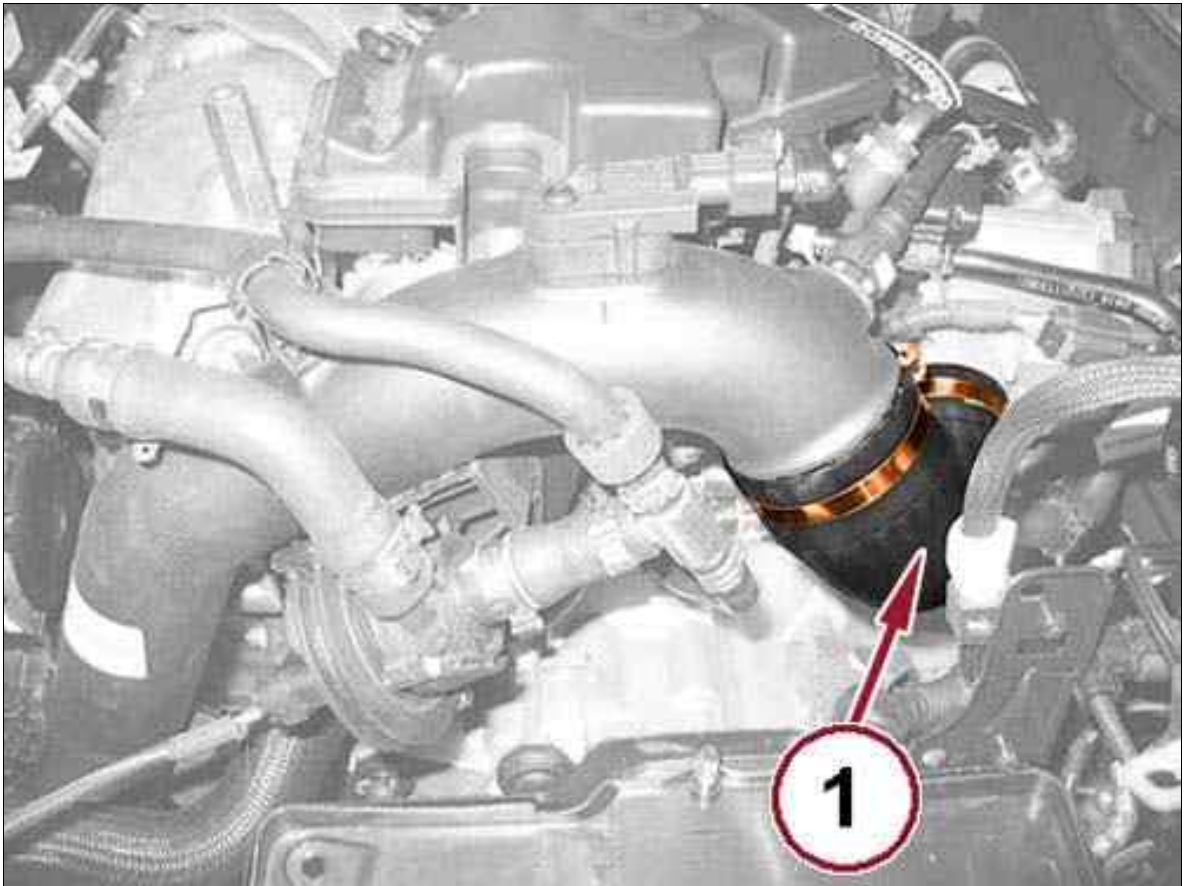


NOTE:

In case of replacement of the throttle body, connect the diagnosis tool, enter "actuators" and execute the self-learning procedure.

1. Disconnect and isolate the negative battery cable.
2. Remove the engine cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .

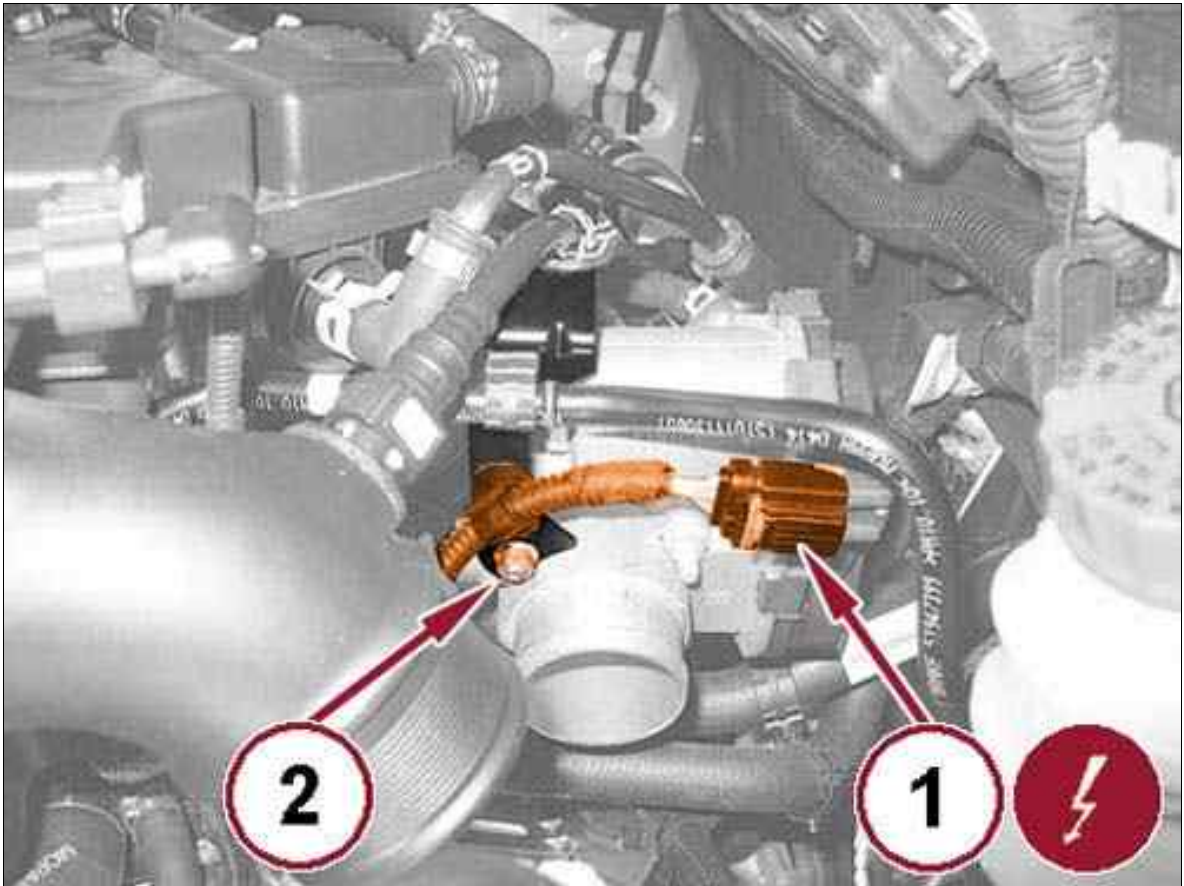
Fig 1: Air Supply Hose & Clamps



Courtesy of CHRYSLER GROUP, LLC

3. Loosen the clamps and remove the air supply hose from throttle body to rigid pipe (1).

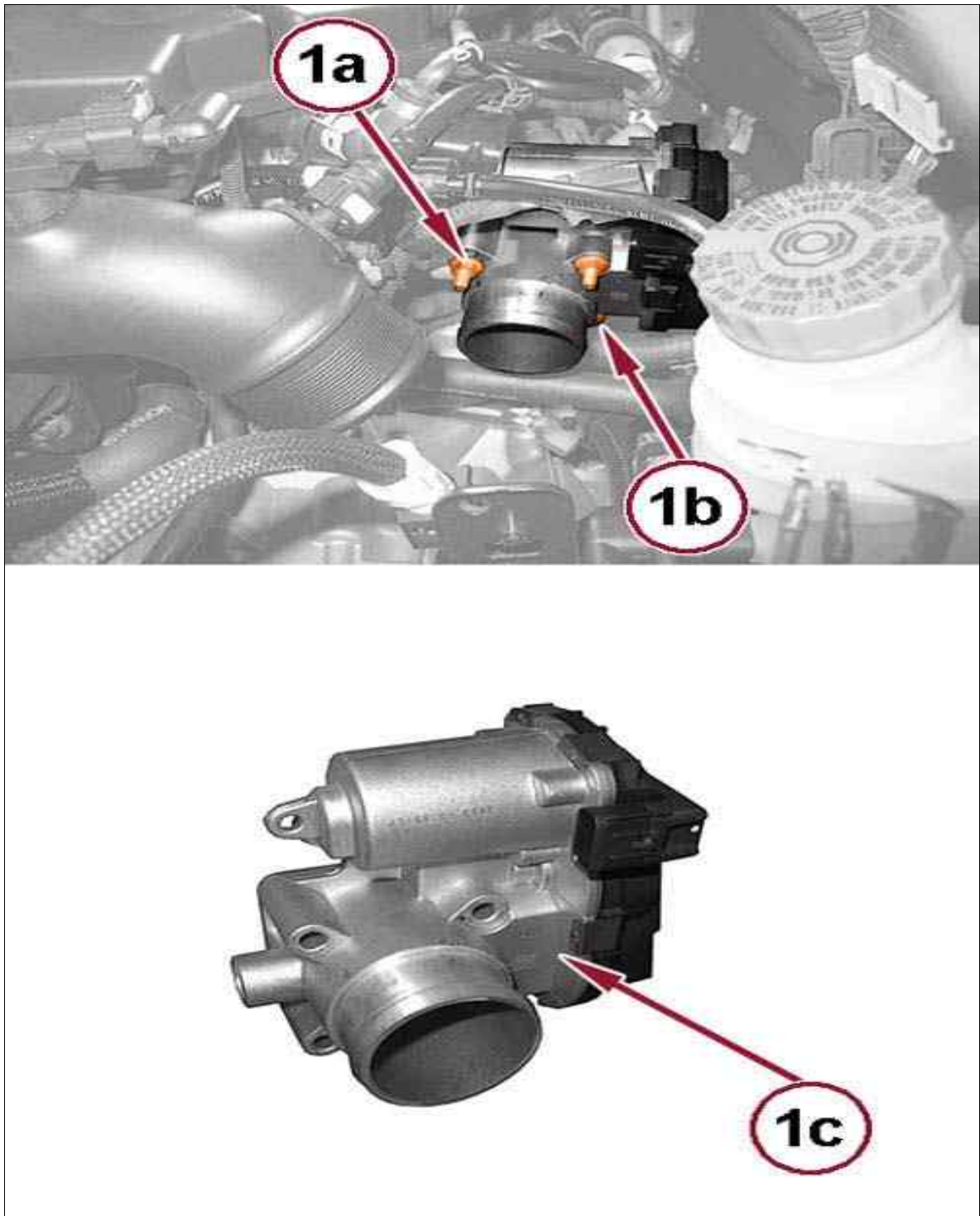
Fig 2: Throttle Body Electrical Connection, Nut & Bracket



Courtesy of CHRYSLER GROUP, LLC

4. Disconnect the electrical connection of the throttle body (1).
5. Remove the nut and move the bracket to the side (2).

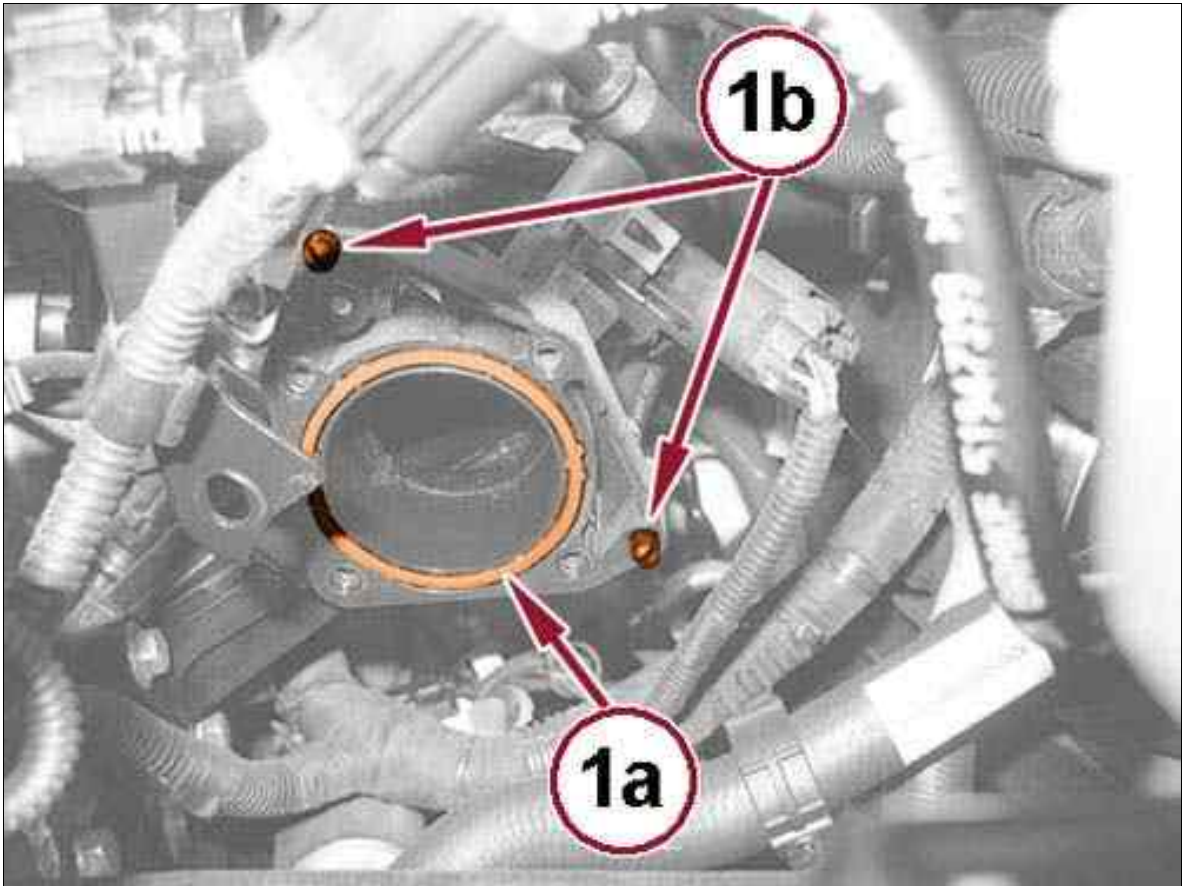
Fig 3: Throttle Body & Screws



Courtesy of CHRYSLER GROUP, LLC

6. Remove the screws (1a), (1b) and remove the throttle body (1c).

Fig 4: Gasket & Centering Pins



Courtesy of CHRYSLER GROUP, LLC

7. Remove the gasket (1a) and verify the integrity of the centering pin (1b).

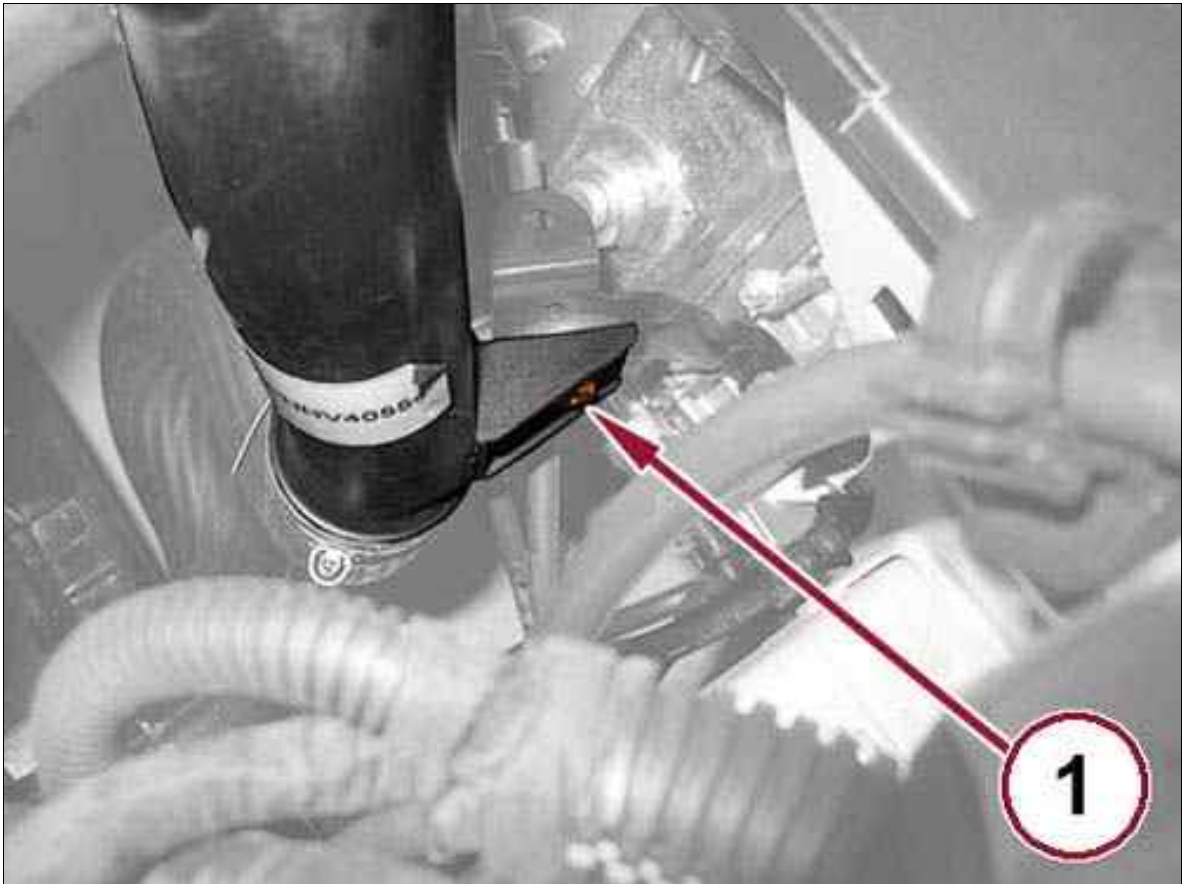
FUEL INJECTION > THROTTLE BODY > REMOVAL AND INSTALLATION > 1.4L > INSTALLATION

1. Install a new gasket on the inlet plenum.
2. Install the throttle body positioning it correctly on the centering pin.
3. Install the throttle body retaining screws and tighten to the proper torque specification. Refer to FUEL INJECTION, SPECIFICATIONS .
4. Install the bracket and securely tighten the nut.
5. Connect the electrical connection of the throttle body.
6. Install the air supply hose from throttle body to rigid pipe and securely tighten the clamp.
7. Install the negative battery cable.
8. Install the engine cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .

FUEL INJECTION > THROTTLE BODY > REMOVAL AND INSTALLATION > 1.6L, 2.0L > REMOVAL

1. Disconnect and isolate the negative battery cable.
2. Remove the engine cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .

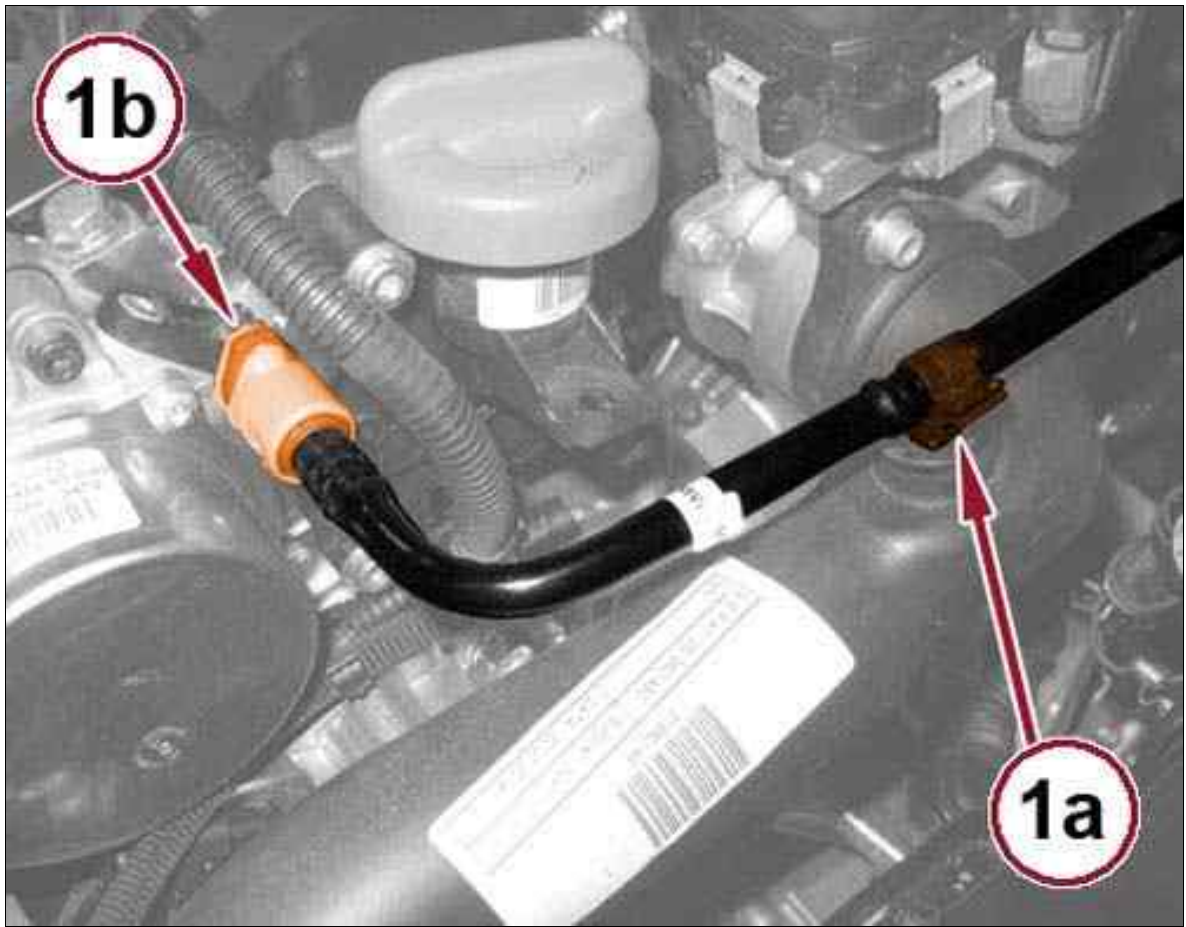
Fig 1: Air Tube Retaining Bolt



Courtesy of CHRYSLER GROUP, LLC

3. Remove the air tube retaining bolt (1).

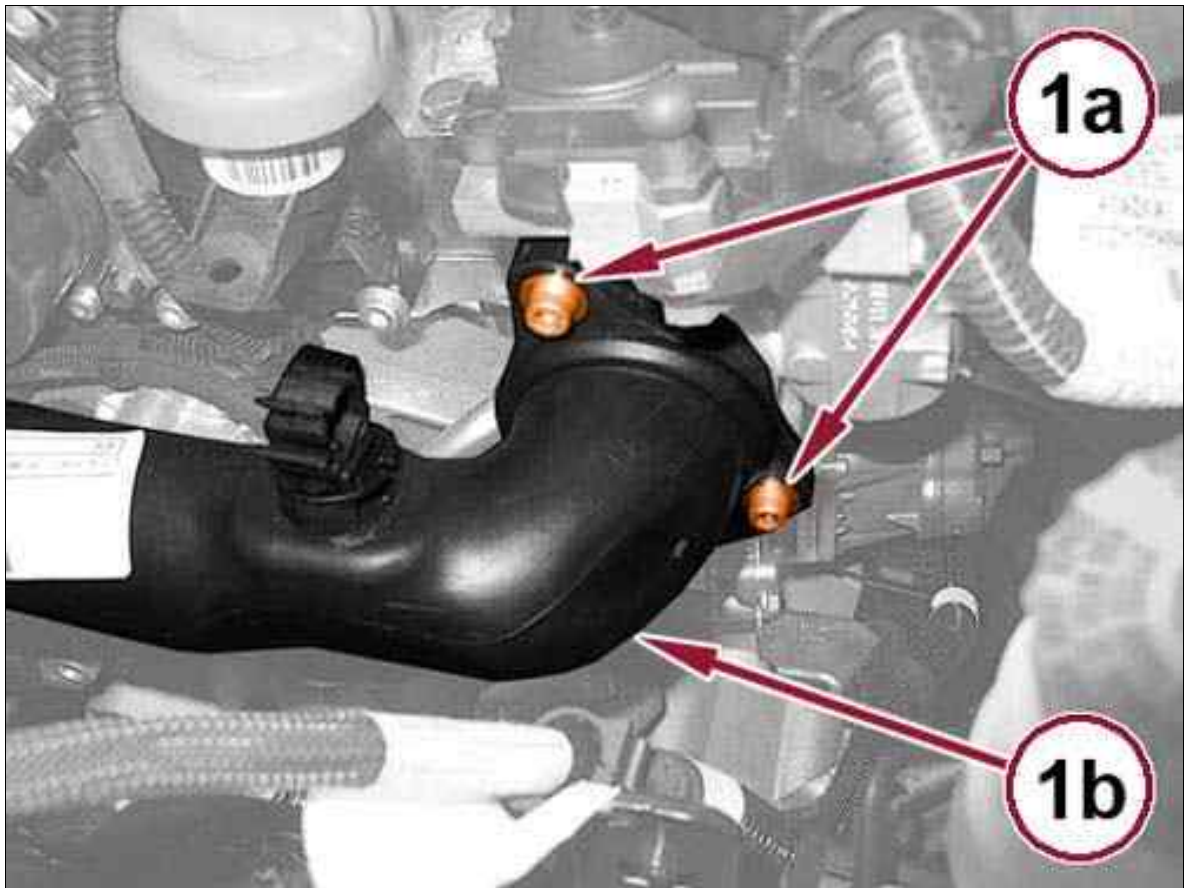
Fig 2: Retaining Clip & Quick-Disconnect Fitting



Courtesy of CHRYSLER GROUP, LLC

4. Open the clamp (1a) and disconnect the air hose quick coupling for the vacuum servo (1b).

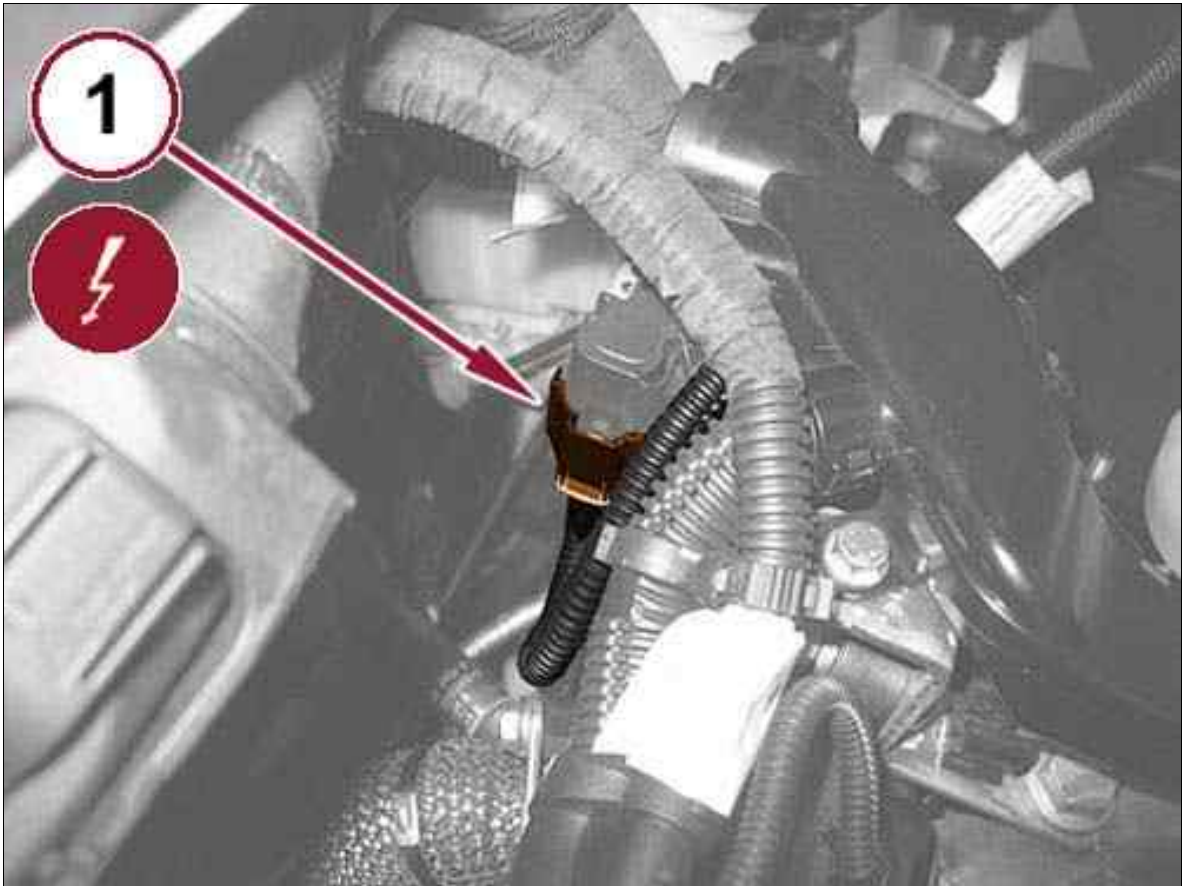
Fig 3: Bolts & Air Supply Tube



Courtesy of CHRYSLER GROUP, LLC

5. Remove the screws (1a) and disconnect the air supply tube from the throttle body (1b) complete with o-ring.

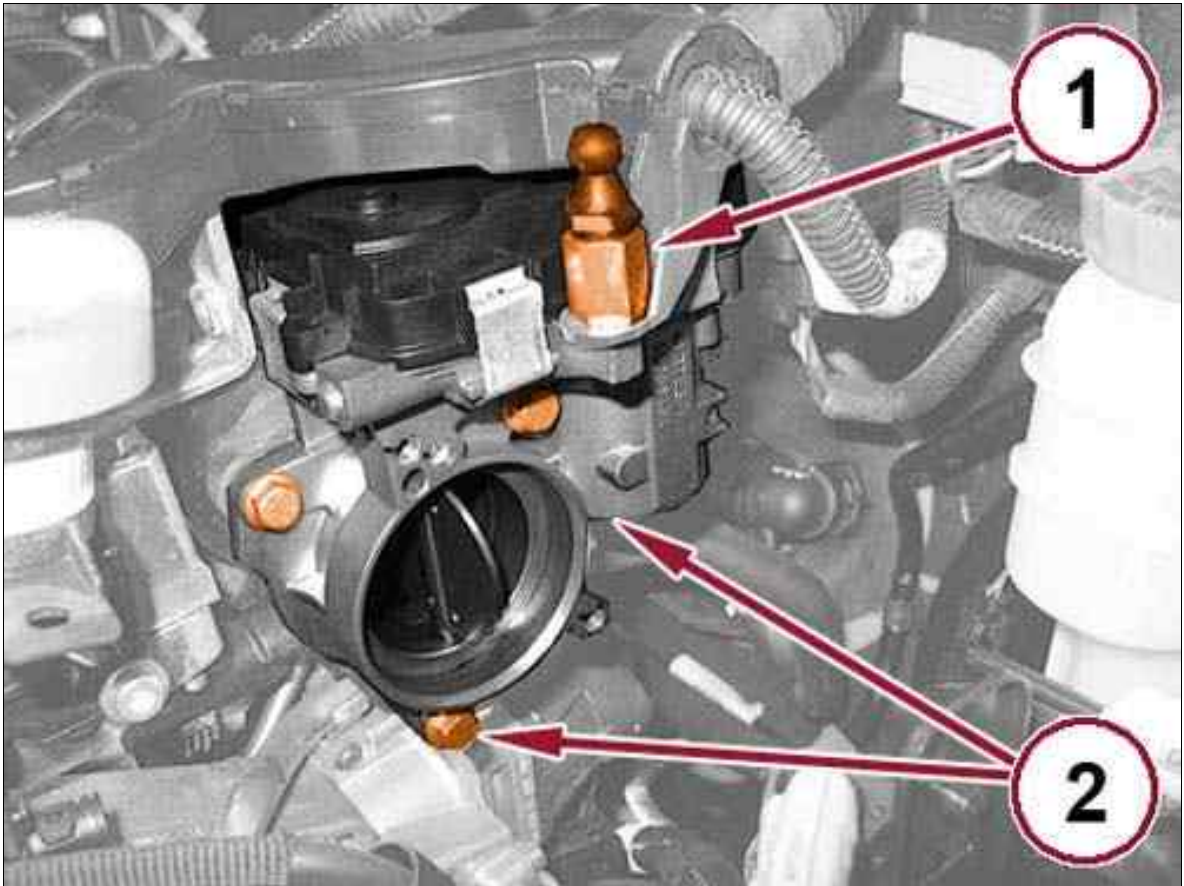
Fig 4: Throttle Body & Electrical Connection



Courtesy of CHRYSLER GROUP, LLC

6. Disconnect the electrical connection of the throttle body (1).

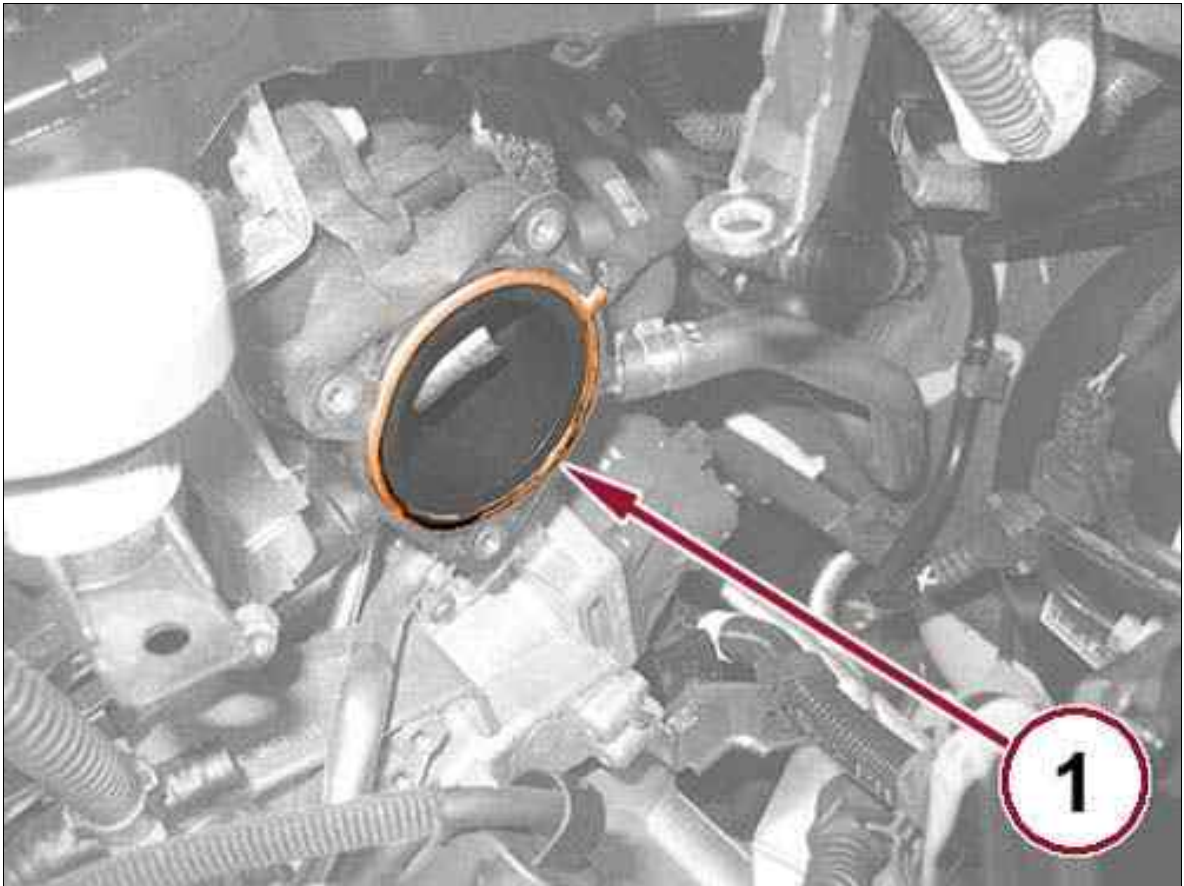
Fig 5: Throttle Body, Screws & Pin Retainer Bracket



Courtesy of CHRYSLER GROUP, LLC

7. Remove the pin retainer bracket on the engine harness (1).
8. Remove the screws and remove the throttle body (2).

Fig 6: Intake Plenum Gasket



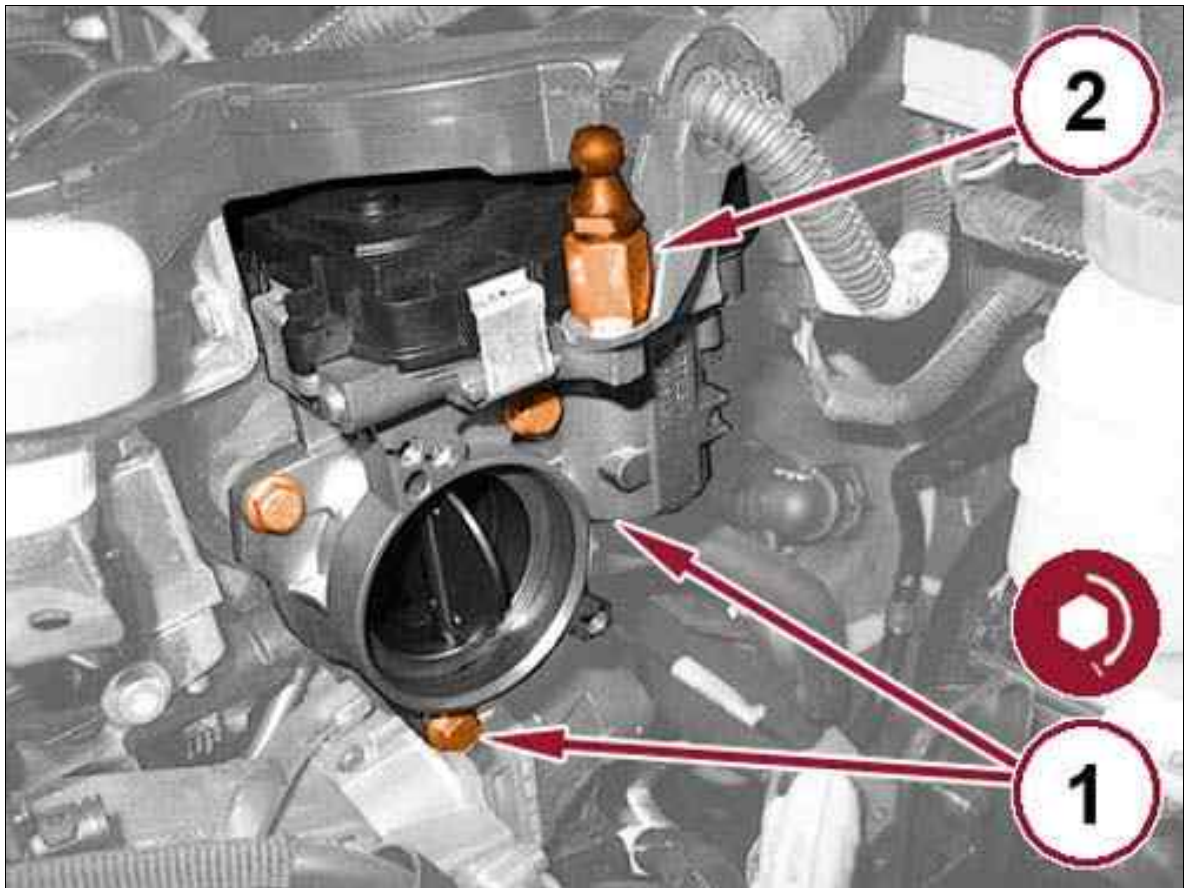
Courtesy of CHRYSLER GROUP, LLC

9. Remove the gasket from the intake plenum (1).

FUEL INJECTION > THROTTLE BODY > REMOVAL AND INSTALLATION > 1.6L, 2.0L > INSTALLATION

1. Install a new gasket onto the intake plenum.

Fig 1: Throttle Body, Screws & Pin Retainer Bracket



Courtesy of CHRYSLER GROUP, LLC

2. Install the throttle body and tighten the retaining bolts to the proper torque specification. Refer to FUEL INJECTION, SPECIFICATIONS .
3. Install and securely tighten the retaining peg (2).
4. Connect the electrical connection of the throttle body.
5. Install the air supply tube to the throttle body, complete with o-ring and tighten the screw to the proper torque specification. Refer to FUEL INJECTION, SPECIFICATIONS .
6. Close the clamp and connect the vacuum servo air hose quick coupling.
7. Install the air tube retaining bolt and tighten to the proper torque specification. Refer to FUEL INJECTION, SPECIFICATIONS .
8. Connect the negative battery cable.
9. Install the engine cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .

FUEL INJECTION > THROTTLE BODY > REMOVAL AND INSTALLATION > 2.4L > REMOVAL

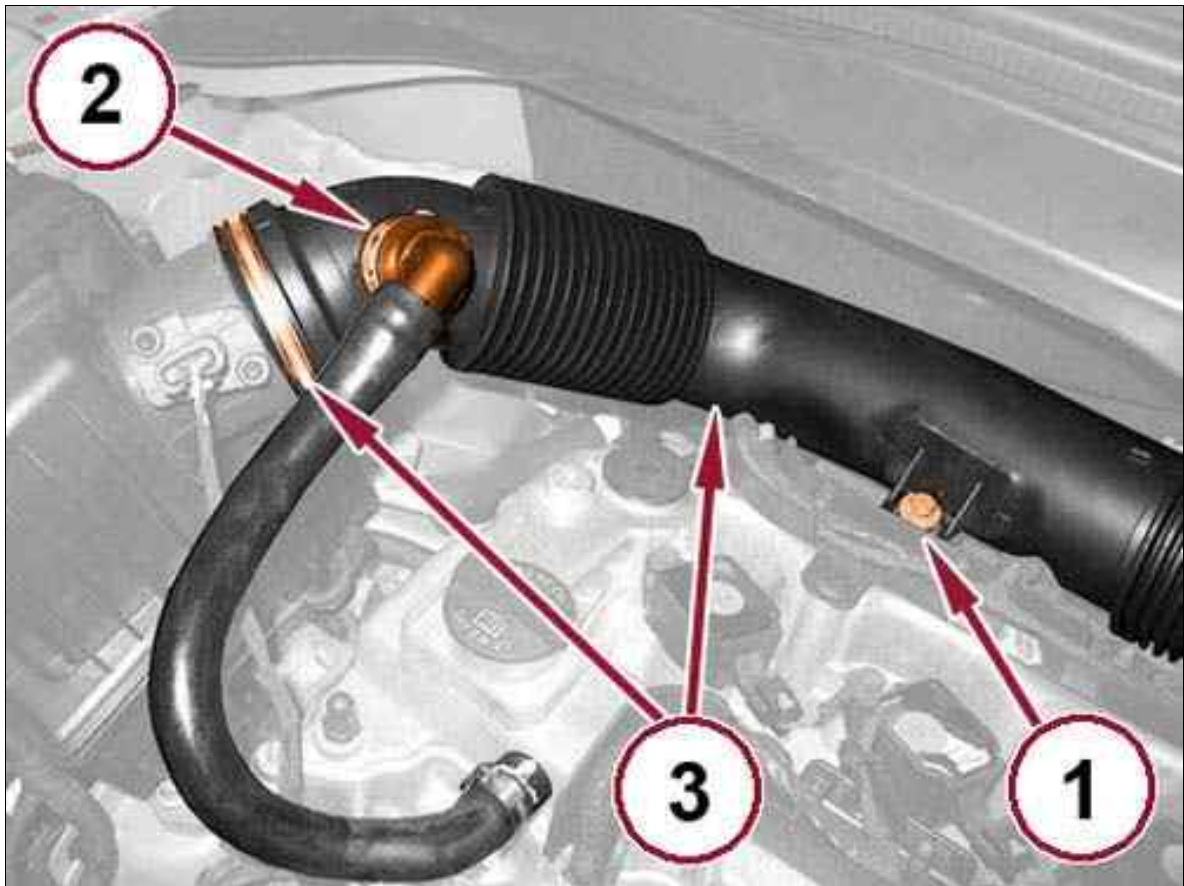


NOTE:

In case of replacement of the throttle body, connect the diagnosis tool, enter "actuators" and execute the self-learning procedure.

1. Remove the engine cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .
2. Disconnect and isolate the negative battery cable.

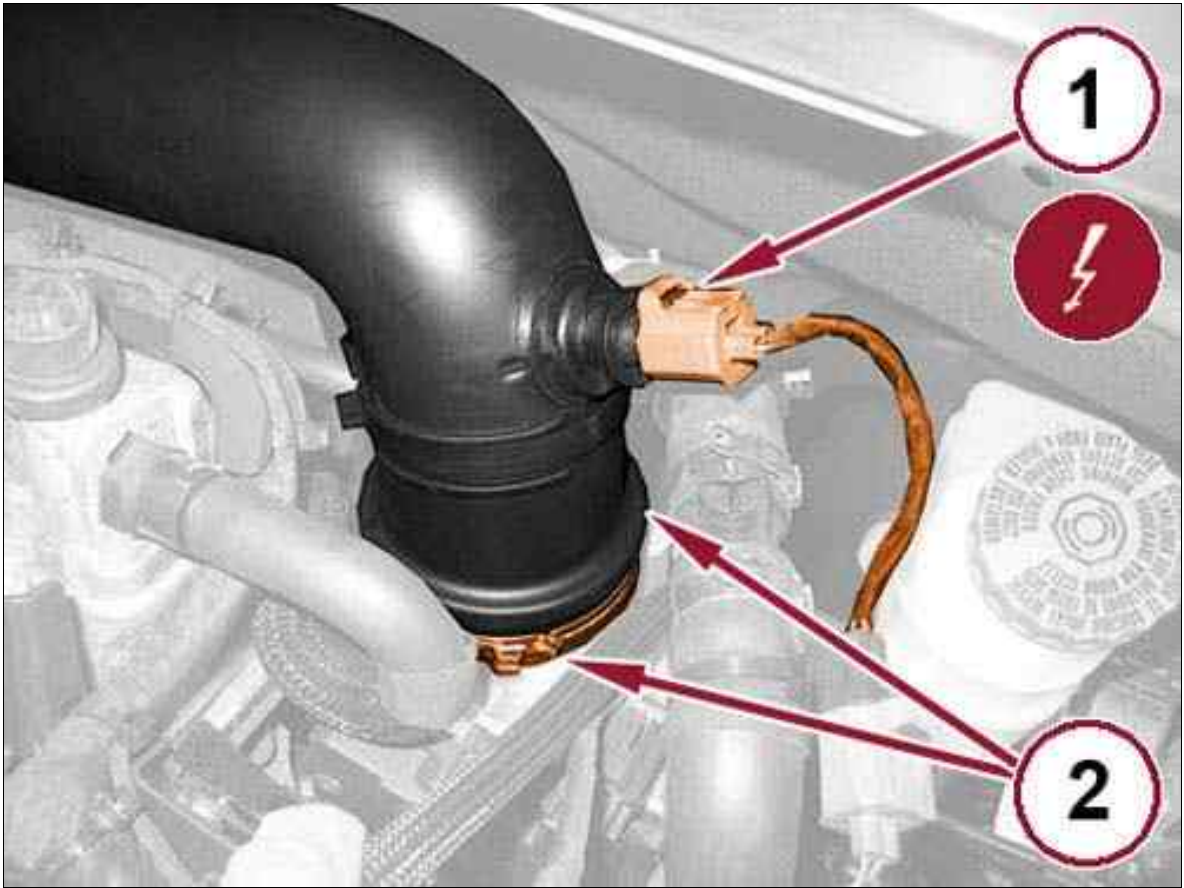
Fig 1: Engine Oil Vapor Hose Quick Coupling, Air Hose & Screw



Courtesy of CHRYSLER GROUP, LLC

3. Remove the screw securing the air hose from the filter to the throttle body (1).
4. Disconnect the engine oil vapor hose quick coupling (2).
5. Loosen the hose clamp and disconnect the air tubing from the filter to the throttle body.

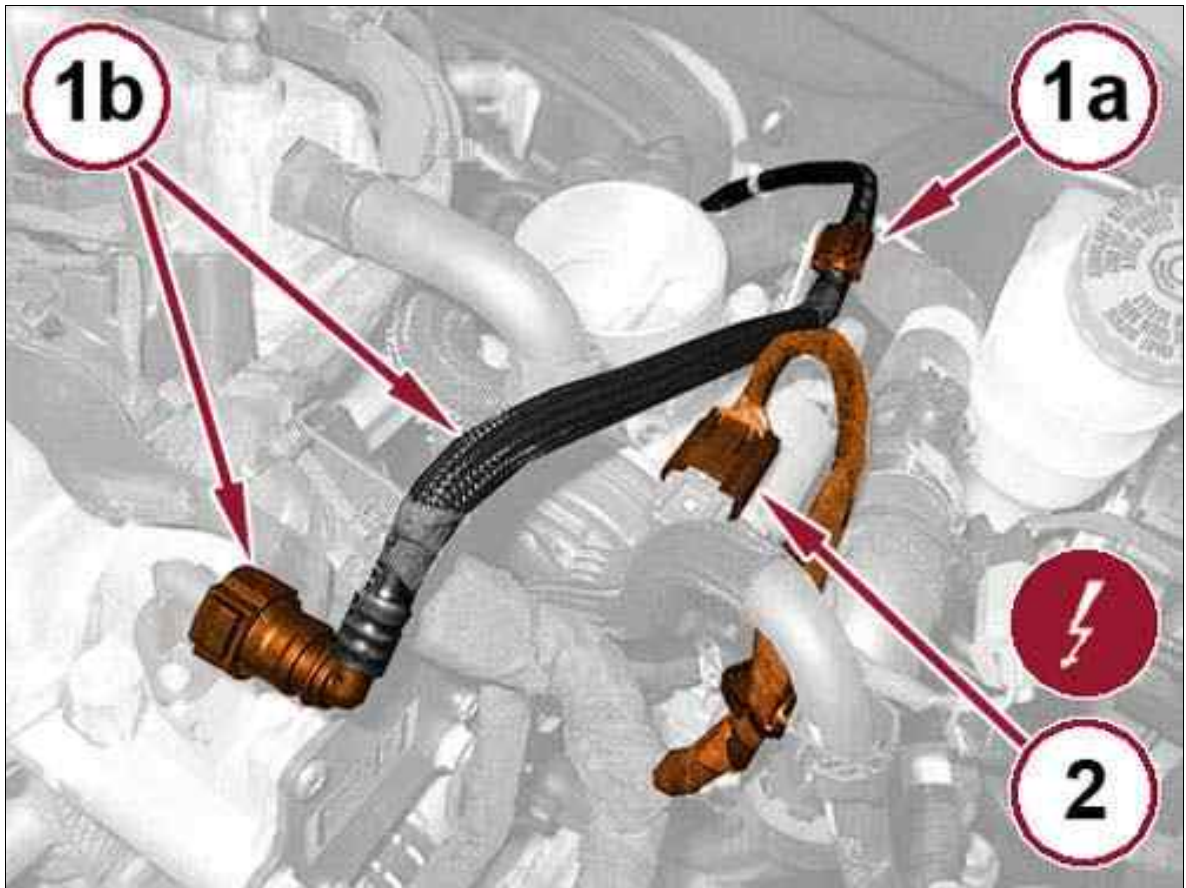
Fig 2: Air Temperature Sensor Electrical Connection, Air Hose & Clamps



Courtesy of CHRYSLER GROUP, LLC

6. Disconnect the electrical connection of the air temperature sensor (1).
7. Loosen clamp and remove the hose from the air filter to the throttle body.

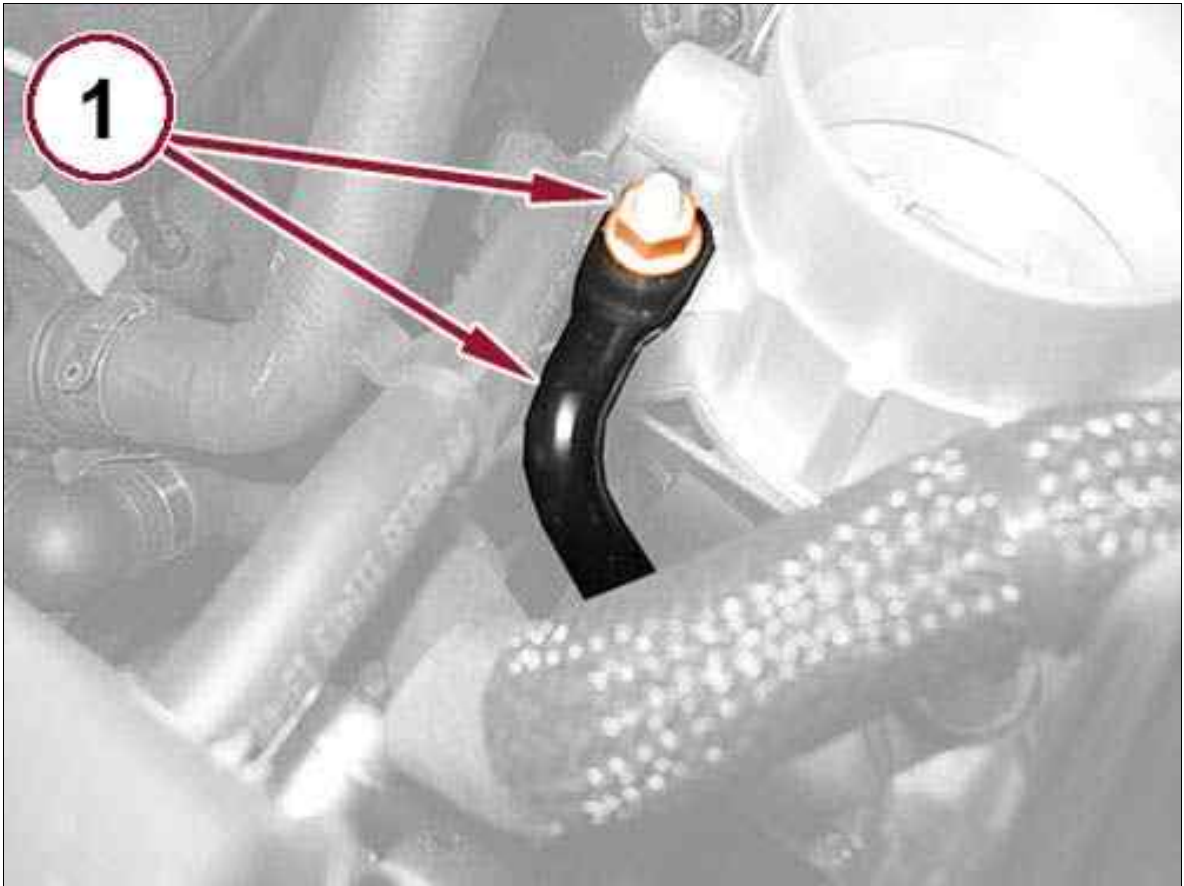
Fig 3: Quick Coupling, Clip & Electrical Connection Of The Throttle Body



Courtesy of CHRYSLER GROUP, LLC

8. Open the clip (1a), disconnect the quick coupling (1b) and move the hose for the vacuum brake booster to the side.
9. Disconnect the electrical connection of the throttle body (2).

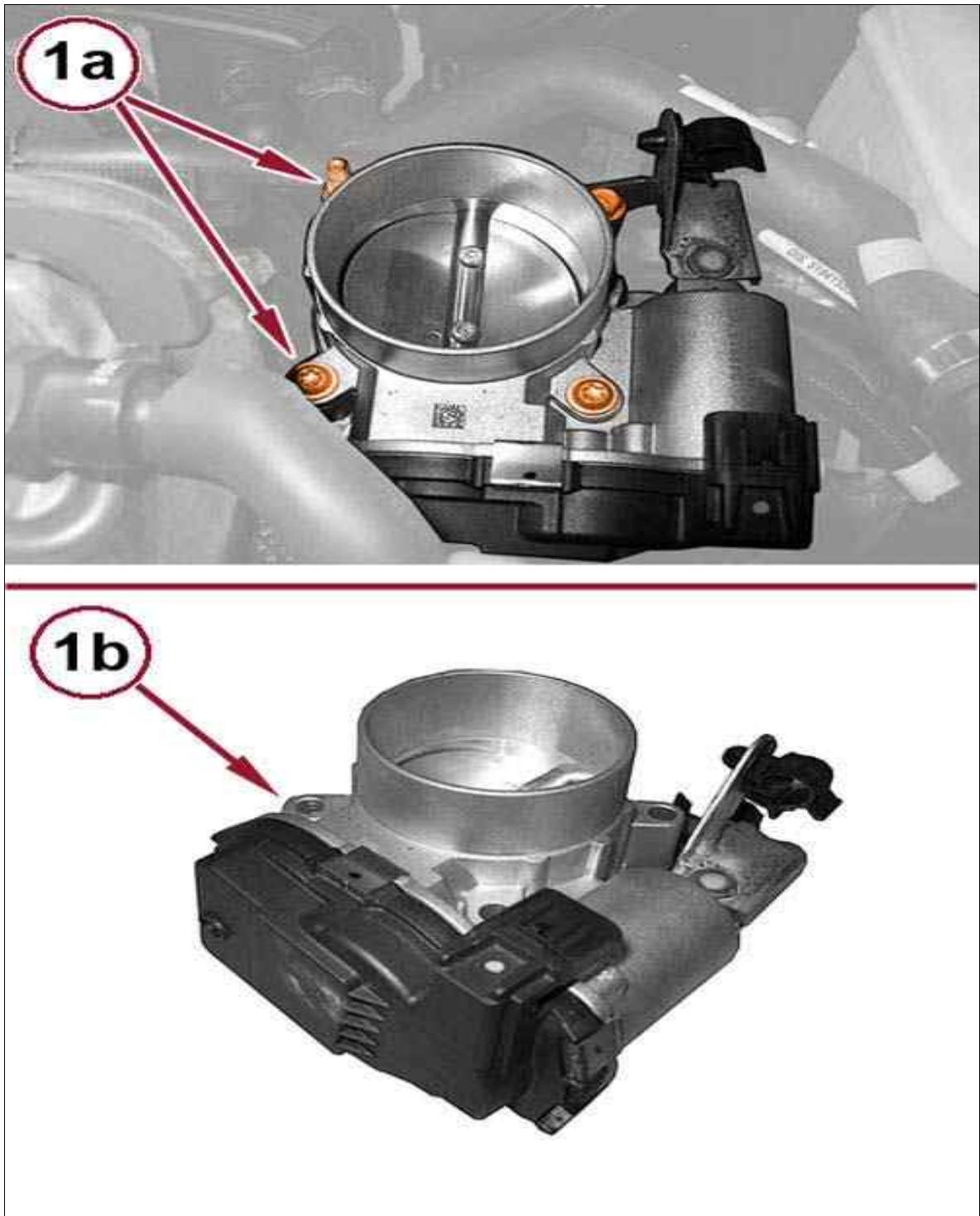
Fig 4: Reinforcement Bracket At Throttle Body & Fastener



Courtesy of CHRYSLER GROUP, LLC

10. Remove the fastener and the reinforcement bracket from the throttle body (1).

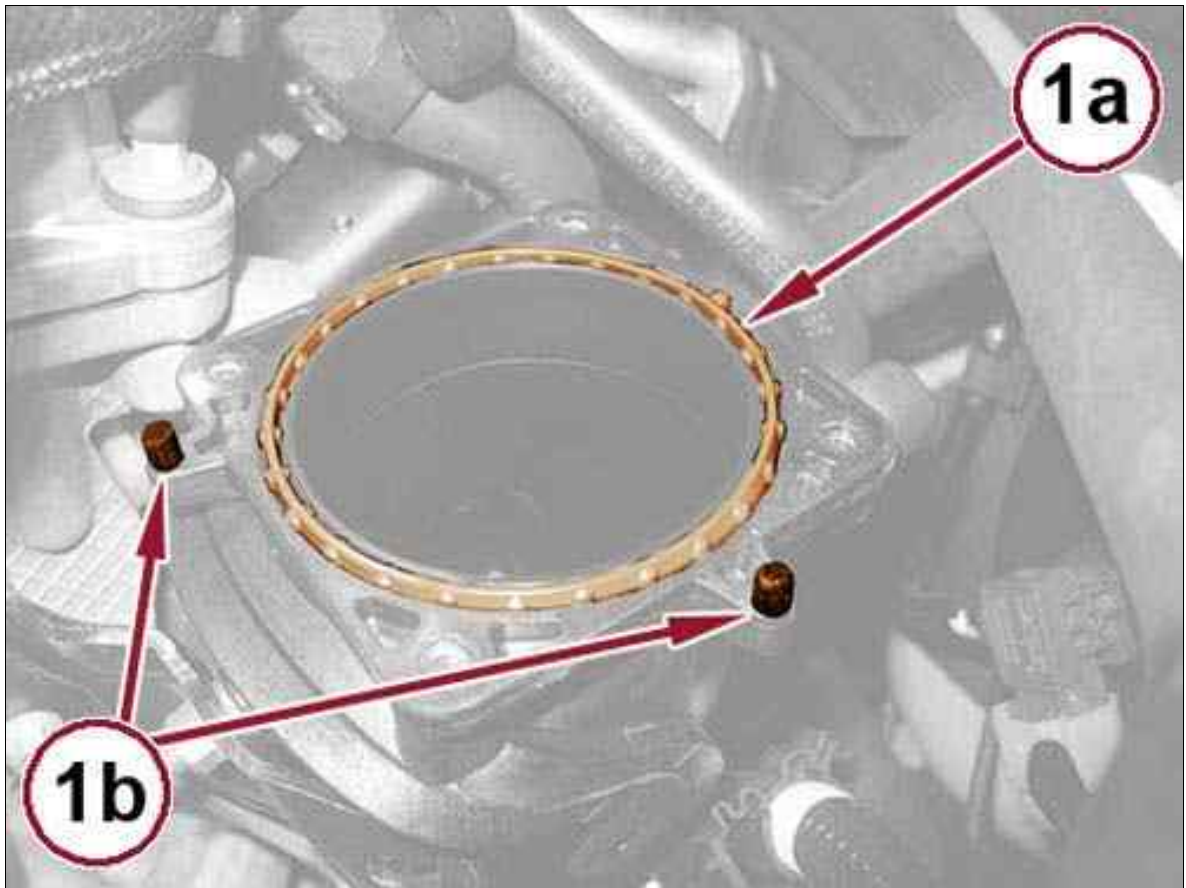
Fig 5: Throttle Body & Fasteners



Courtesy of CHRYSLER GROUP, LLC

11. Remove the fasteners (1a) and remove the throttle body (1b).

Fig 6: Centering Pins & Gasket



Courtesy of CHRYSLER GROUP, LLC

12. Remove the gasket (1a) and verify the integrity of the centering pin (1b).

FUEL INJECTION > THROTTLE BODY > REMOVAL AND INSTALLATION > 2.4L > INSTALLATION

1. Install a new gasket on the inlet plenum.
2. Install the throttle body, positioning it correctly on the centering pin.
3. Install the throttle body fasteners and tighten to the proper torque specification. Refer to FUEL INJECTION, SPECIFICATIONS .
4. Install the throttle body reinforcement bracket and tighten the fastener to the proper torque specification. Refer to FUEL INJECTION, SPECIFICATIONS .
5. Connect the electrical connection of the throttle body.
6. Install the hose for the vacuum brake booster, engage it in its clip and connect the quick coupling.
7. Install the tubing from the air filter to the throttle body, and securely tighten the clamp.
8. Connect the electrical connection of the air temperature sensor.

9. Connect the air hose from the filter to the throttle body, and securely tighten its strap.
10. Connect the quick coupling of engine oil vapor hose.
11. Securely tighten the air hose to the throttle body filter fastener.
12. Install the engine cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .