

Service Manual: BASE BRAKES - SERVICE INFORMATION

WARNING > WARNING **WARNING:**

FCA US LLC does not manufacture any vehicles or replacement parts that contain asbestos. Aftermarket products may or may not contain asbestos. Refer to aftermarket product packaging for product information. Whether the product contains asbestos or not, dust and dirt can accumulate on brake parts during normal use. Follow practices prescribed by appropriate regulations for the handling, processing and disposing of dust and debris.

 WARNING:

When bleeding the brake system wear safety glasses. A clear bleed tube (1) must be attached to the bleeder screws and submerged in a clear container filled part way with clean brake fluid (2). Direct the flow of brake fluid away from yourself and the painted surfaces of the vehicle. Brake fluid at high pressure may come out of the bleeder screws when opened.

 WARNING:

DUST AND DIRT ACCUMULATING ON BRAKE PARTS DURING NORMAL USE MAY CONTAIN ASBESTOS FIBERS FROM PRODUCTION OR AFTERMARKET LININGS. BREATHING EXCESSIVE CONCENTRATIONS OF ASBESTOS FIBERS CAN CAUSE SERIOUS BODILY HARM. EXERCISE CARE WHEN SERVICING BRAKE PARTS. DO NOT CLEAN BRAKE PARTS WITH COMPRESSED AIR OR BY DRY BRUSHING. USE A VACUUM CLEANER SPECIFICALLY DESIGNED FOR THE REMOVAL OF ASBESTOS FIBERS FROM BRAKE COMPONENTS. IF A SUITABLE VACUUM CLEANER IS NOT AVAILABLE, CLEANING SHOULD BE DONE WITH A WATER DAMPENED CLOTH. DO NOT SAND, OR GRIND BRAKE LINING UNLESS EQUIPMENT USED IS DESIGNED TO CONTAIN THE DUST RESIDUE. DISPOSE OF ALL RESIDUE CONTAINING ASBESTOS FIBERS IN SEALED BAGS OR CONTAINERS TO MINIMIZE EXPOSURE TO YOURSELF AND OTHERS. FOLLOW PRACTICES PRESCRIBED BY THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION AND THE ENVIRONMENTAL PROTECTION AGENCY FOR THE HANDLING, PROCESSING, AND DISPOSITION OF DUST OR DEBRIS THAT MAY CONTAIN ASBESTOS FIBERS.

CAUTION > CAUTION **CAUTION:**

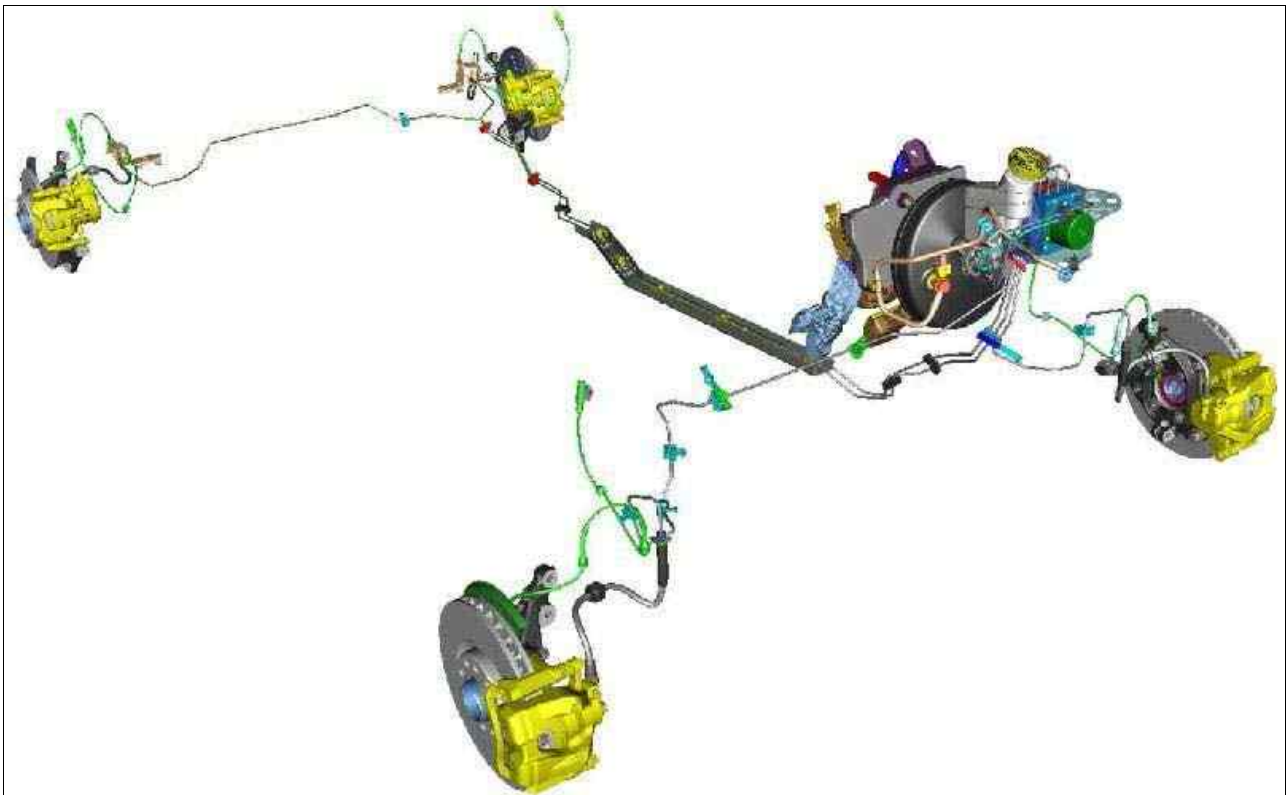
All the operations should be carried out taking great care to avoid damaging components.

To release parts that are sticking, tap gently using an aluminum or lead hammer if iron materials are involved; use a wooden or resin hammer for light alloy parts. When dismantling, check that components that should be marked have the appropriate references. When refitting, lubricate the parts, where necessary, to prevent seizing or binding during the initial operating period. When refitting it is vital to respect the adjustment nut tightening torques. Each time they are refitted, replace gaskets, oil seals, flexible washers, safety washers, self-locking nuts, pretreated screws, shear bolts and all parts that have deteriorated. Use adhesive paper or a clean cloth to suitably protect those parts of the engine which, if they remain uncovered after dismantling, will allow dust or foreign bodies to enter. Only genuine spare parts should be used to replace units or components that have been removed: this is the only way of ensuring the interchangeability and perfect operation of the various components.

DESCRIPTION > DESCRIPTION

The vehicle's braking system features ABS and TCS traction control as standard and is made by TRW Automotive.

Fig 1: Brake System Components

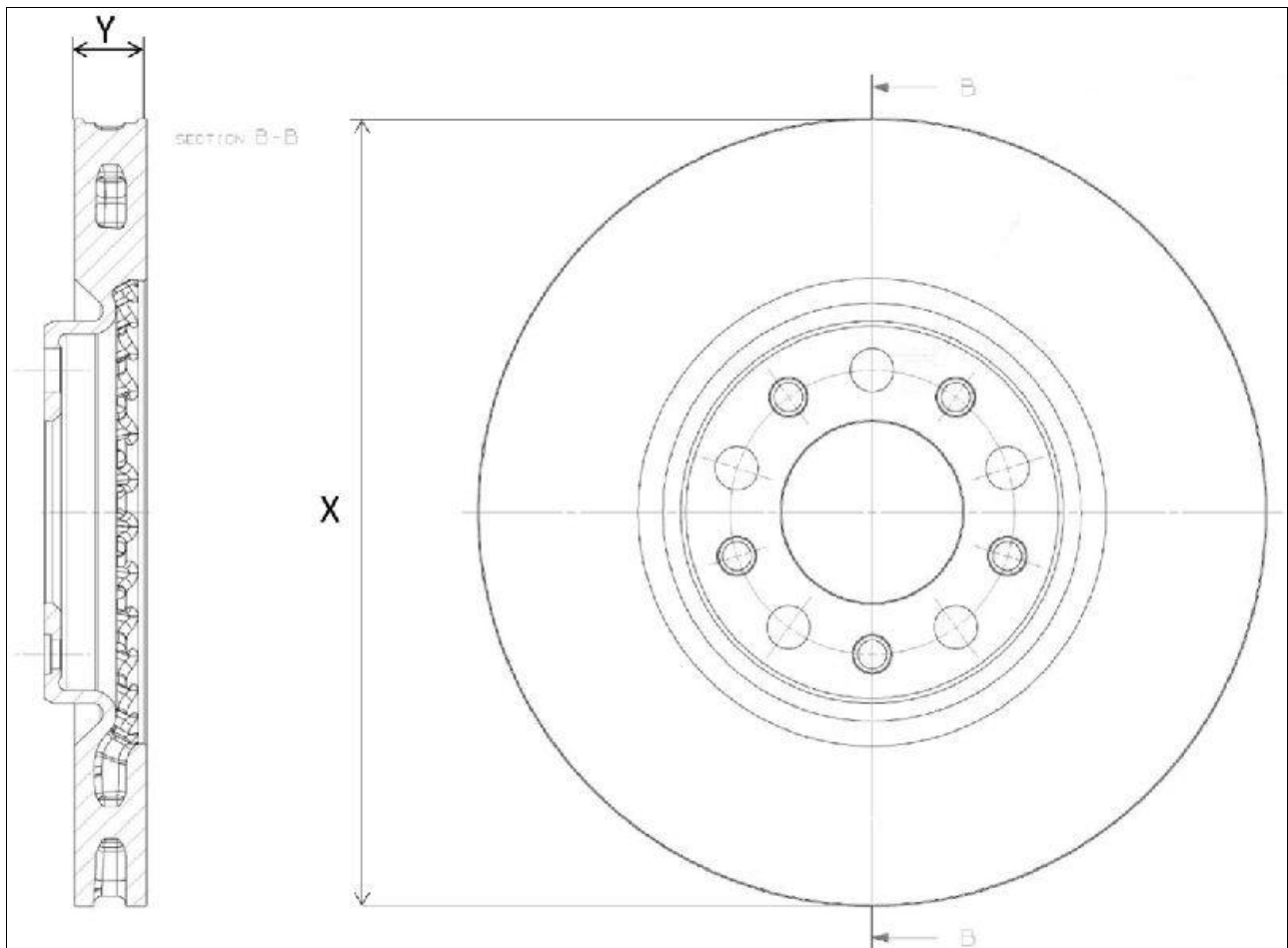


Courtesy of CHRYSLER GROUP, LLC

The system consists of the following components:

DESCRIPTION > DESCRIPTION > FRONT ROTORS

Fig 1: Front Rotor Dimensions



Courtesy of CHRYSLER GROUP, LLC

They are all by Brembo and ventilated type.

Two types of front disc are available (two different part numbers) :

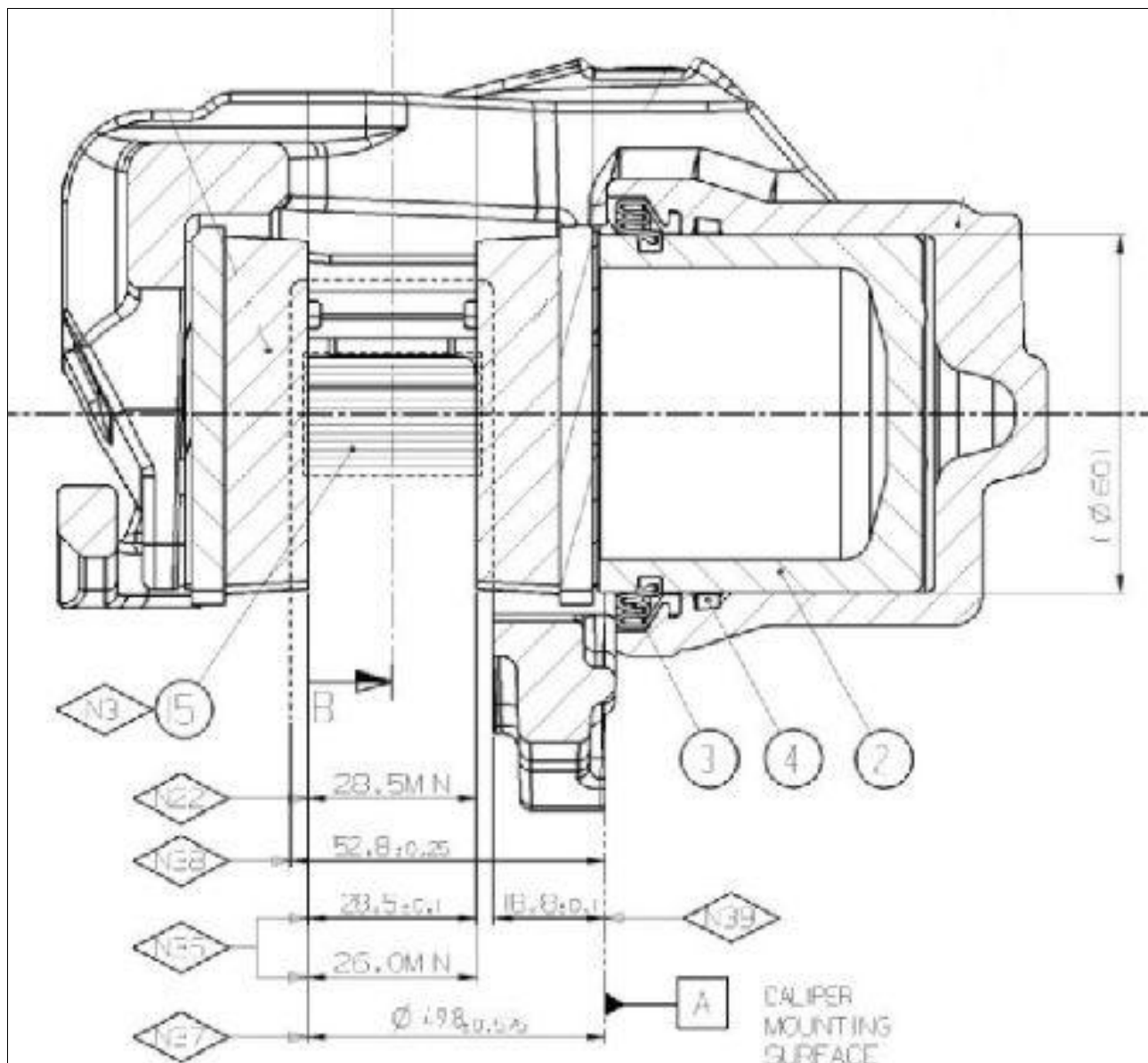
- X=305 mm; Y=28 mm fitted on models with 1.4 Turbo MultiAir (160 HP 170 HP), 2.0 MultiJet (170 HP and 140 HP) and 2.4 Tiger Shark engine versions.
- X=281 mm; Y= 26 mm fitted on models with 1.4 Turbo MultiAir 140 HP and 1.6 MultiJet 120 HP engine versions.

DESCRIPTION > DESCRIPTION > REAR ROTORS

Rear discs with the same geometrical characteristics are fitted on all models: X=278 mm; Y=12 mm.

DESCRIPTION > DESCRIPTION > FRONT BRAKE CALIPERS

Fig 1: Front Caliper Dimensions

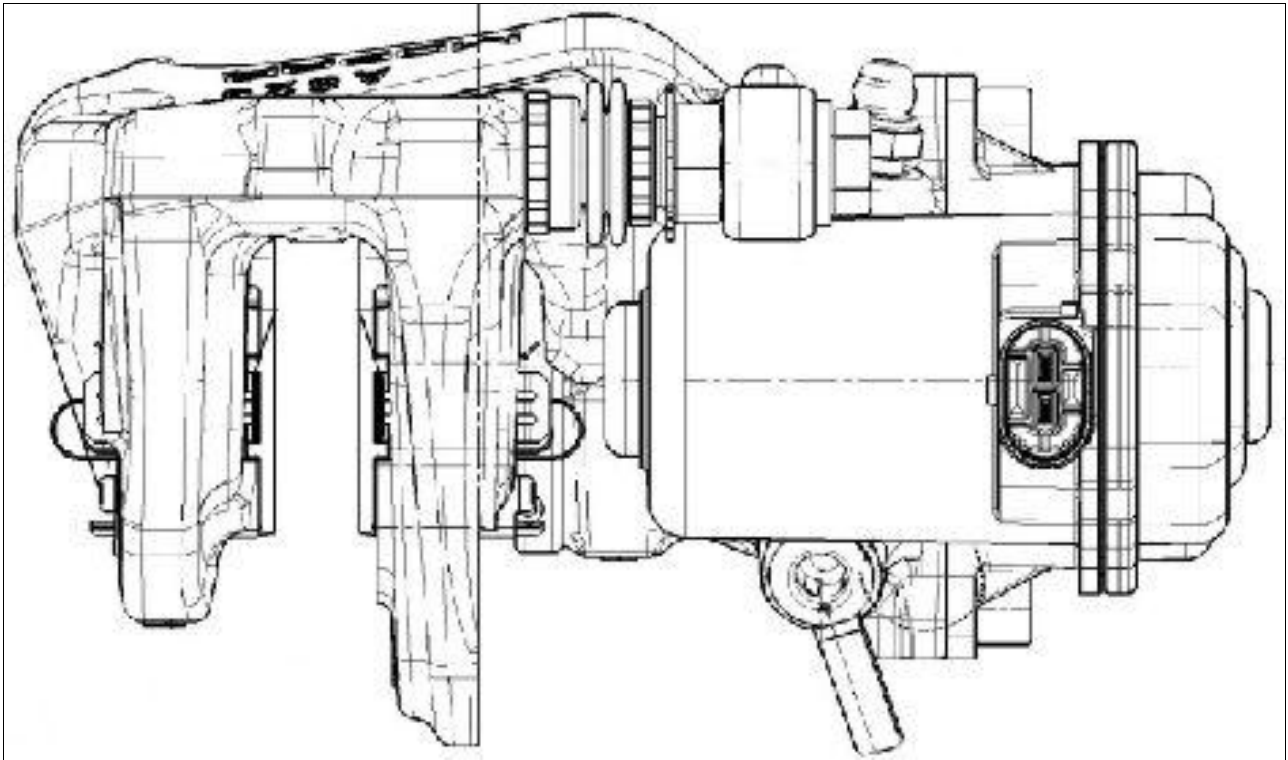


Courtesy of CHRYSLER GROUP, LLC

The front brake calipers are floating type with single 60 mm piston. The front brake calipers are made by Mando Corporation.

DESCRIPTION > DESCRIPTION > REAR BRAKE CALIPERS

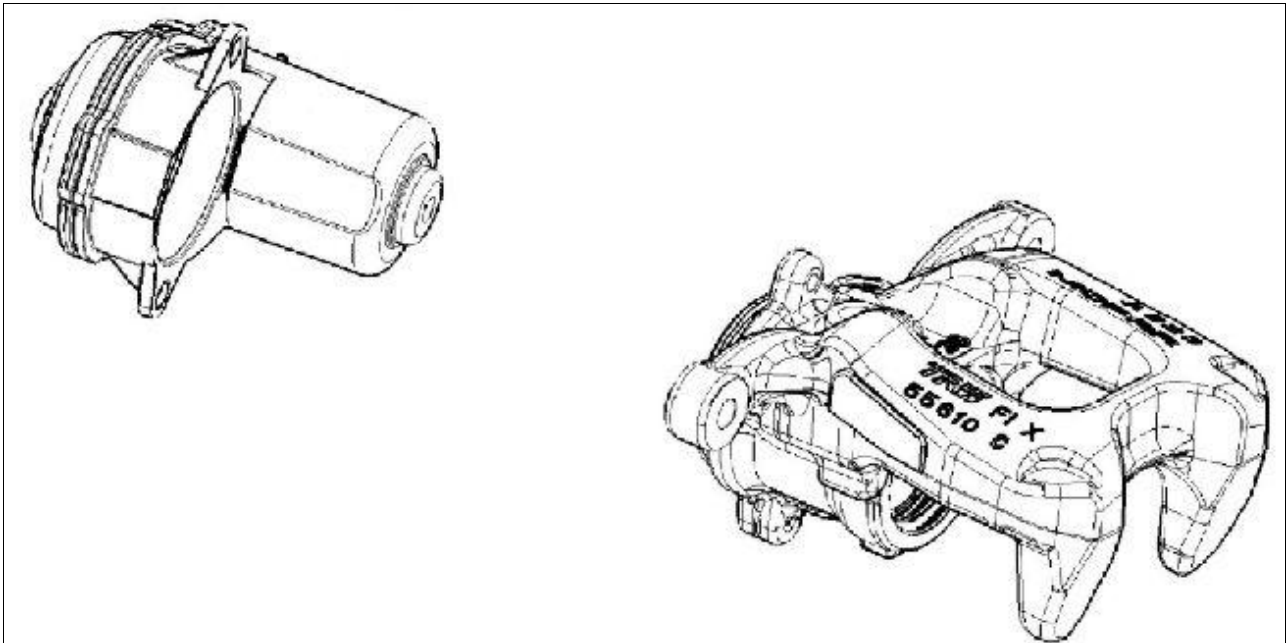
Fig 1: Rear Caliper (1 Of 3)



Courtesy of CHRYSLER GROUP, LLC

The rear calipers are floating type with single 38 mm piston. The rear calipers are produced by TRW.

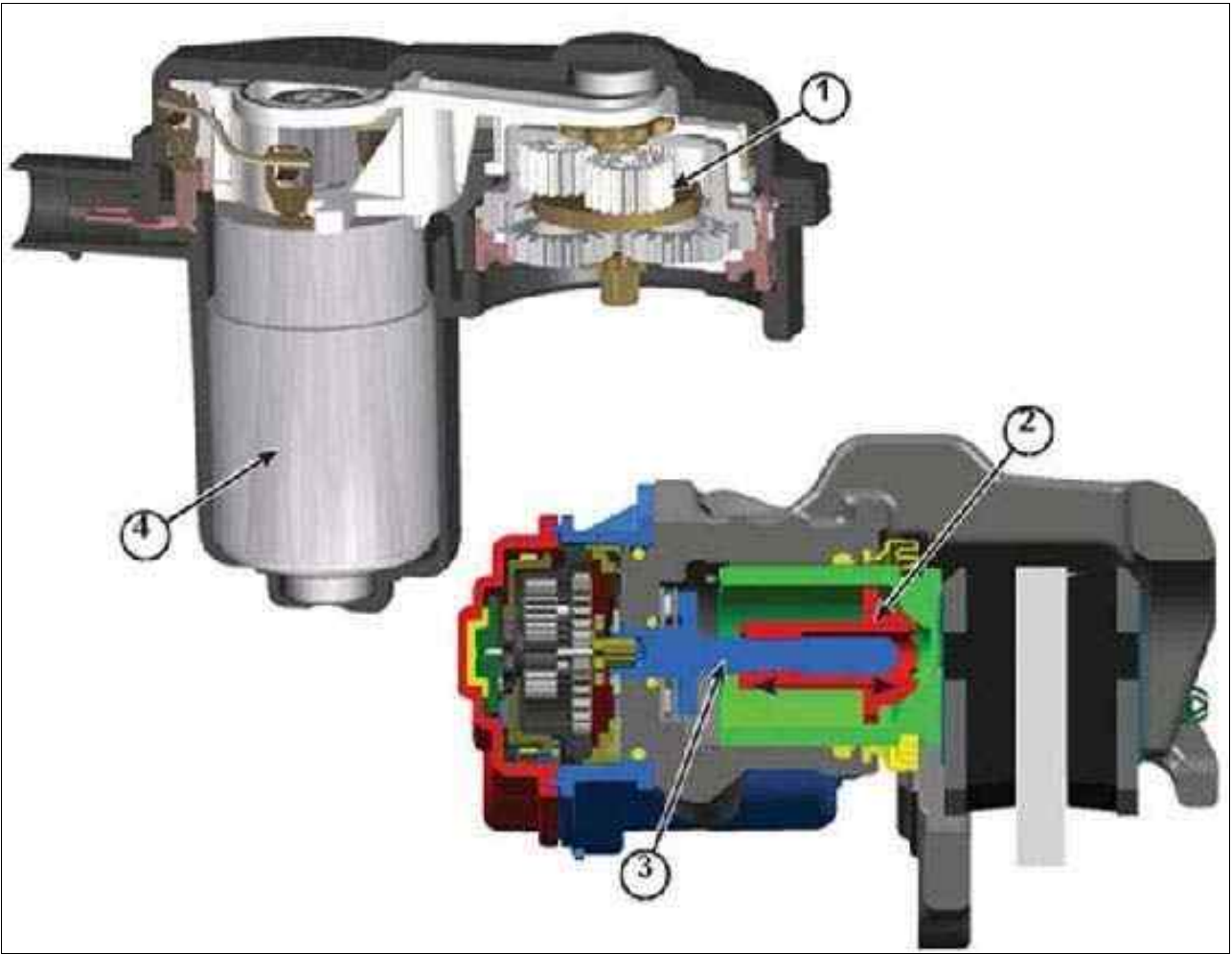
Fig 2: Rear Caliper (2 Of 3)



Courtesy of CHRYSLER GROUP, LLC

The rear caliper features an electric actuator through which the parking brake is engaged/released.

Fig 3: Rear Caliper (3 Of 3)



Courtesy of CHRYSLER GROUP, LLC

From the mechanical point of view, the actuator is fitted with an electric motor (4) which moves, through an epicyclic gear set (1), an output shaft which is in its turn fitted in a spindle (3). The spindle is screwed into a female screw (2). When the motor turns the spindle, the spindle drives the female screw (2) away (engages the brake) or brings it back (releases the brake) depending on the motor's direction of rotation.

DIAGNOSIS AND TESTING > DIAGNOSIS AND TESTING - BASE BRAKE SYSTEM
DIAGNOSIS CHARTS > BRAKE NOISE

CONDITION	POSSIBLE CAUSES	CORRECTION
DISC BRAKE CHIRP	1. Excessive brake rotor runout.	1. Diagnose and correct as necessary.
DISC BRAKE MOAN OR HOWL WHILE BRAKING IN REVERSE	1. Rear disc brake caliper guide pin bolts installed in incorrect	1. Remove lower guide pin bolt and inspect for special sleeve on tip. If sleeve is present, remove upper and lower guide pin bolts and install special sleeved bolt in upper location and standard guide pin bolt in lower location. Refer

	locations.	to CALIPER, DISC BRAKE, REMOVAL AND INSTALLATION and CALIPER, DISC BRAKE, REAR, REMOVAL AND INSTALLATION . Perform on both sides of vehicle as necessary.
DISC BRAKE RATTLE OR CLUNK	1. Broken or missing spring clips.	1. Replace brake pads.
	2. Caliper guide pin bolts loose.	2. Tighten guide pin bolts.
	3. Missing abutment shims.	3. Replace missing abutment shims.
DISC BRAKE SQUEAK AT LOW SPEED (WHILE APPLYING LIGHT BRAKE PEDAL EFFORT)	1. Brake pad linings.	1. Replace brake pads.
SCRAPING (METAL-TO-METAL).	1. Foreign object interference with brakes.	1. Inspect brakes and remove foreign object.
	2. Brake pads worn out.	2. Replace brake pads. Inspect rotors. Reface or replace as necessary.
SCRAPING OR WHIRRING	1. ABS wheel speed sensor hitting tone wheel.	1. Inspect, correct or replace faulty component(s).

DIAGNOSIS AND TESTING > DIAGNOSIS AND TESTING - BASE BRAKE SYSTEM

DIAGNOSIS CHARTS > OTHER BRAKE CONDITIONS

CONDITION	POSSIBLE CAUSES	CORRECTION
BRAKES CHATTER	1. Disc brake rotor has excessive thickness variation.	1. Isolate condition as rear or front. Reface or replace brake rotors as necessary.
BRAKES DRAG (FRONT OR ALL)	1. Contaminated brake fluid.	1. Check for swollen seals. Replace all system components containing rubber.
	2. Binding caliper pins or bushings.	2. Replace pins and bushings
	3. Mis-adjusted brake lamp switch.	3. Replace stop lamp switch. Refer to SWITCH, STOP LAMP, REMOVAL AND INSTALLATION .
	4. Master cylinder not fully returning.	4. Inspect master cylinder and replace as necessary.

	5. Binding brake pedal.	5. Replace brake pedal/bushings.
BRAKES DRAG (REAR ONLY)	1. Electric Parking Brake (EPB) caliper actuators (one or both) are not released. Or the EPB module or EPB actuators are not responding.	1. EPB module will set codes
BRAKES GRAB	1. Contaminated brake pad.	1. Inspect and clean, or replace pads. Repair source of contamination.
	2. Improper power brake booster assist.	2. Refer to BOOSTER, POWER BRAKE .
EXCESSIVE PEDAL EFFORT	1. Obstruction of brake pedal.	1. Inspect, remove or move obstruction.
	2. Low power brake booster assist.	2. Refer to BOOSTER, POWER BRAKE .
	3. Glazed brake linings.	3. Reface or replace brake rotors as necessary.
	4. Brake pad lining transfer to brake rotor.	4. Reface or replace brake rotors as necessary. Replace brake pads.
EXCESSIVE PEDAL EFFORT (HARD PEDAL - CAN'T SKID WHEELS)	1. Power brake booster (vacuum assist).	1. Check booster vacuum hose and engine tune for adequate vacuum supply. Refer to BOOSTER, POWER BRAKE .
EXCESSIVE PEDAL TRAVEL (VEHICLE STOPS OK)	1. Air in brake lines.	1. Bleed brakes.
	2. Brake fluid low in reservoir	2. Fill reservoir. Check entire system for leaks; repair or replace as required.
EXCESSIVE PEDAL TRAVEL (ONE FRONT WHEEL LOCKS UP DURING HARD BRAKING)	1. One of the two hydraulic circuits is malfunctioning.	1. Inspect system for leaks. Check master cylinder for internal malfunction.
PEDAL PULSATES/SURGES DURING BRAKING	1. Disc brake rotor has excessive thickness variation.	1. Isolate condition as rear or front. Reface or replace brake rotors as necessary.
PEDAL IS SPONGY	1. Air in brake lines.	1. Bleed brakes.
	2. ABS EVBP not functioning.	2. Refer to DIAGNOSIS AND TESTING and appropriate diagnostic information.
STOP LAMPS STAY ON	1. Brake lamp switch out of adjustment.	1. Replace stop lamp switch. Refer to SWITCH, STOP LAMP, REMOVAL AND INSTALLATION .

	2. Brake pedal binding.	2. Inspect and replace as necessary.
	3. Power brake booster not allowing pedal to return completely.	3. Replace power brake booster.
VEHICLE PULLS TO RIGHT OR LEFT ON BRAKING	1. Frozen brake caliper piston.	1. Replace frozen piston or caliper. Bleed brakes.
	2. Contaminated brake pad lining (most likely front lining).	2. Inspect and clean, or replace pads. Repair source of contamination.
	3. Pinched brake lines.	3. Replace pinched line.
	4. Leaking piston seal.	4. Replace piston seal or brake caliper.
	5. Suspension problem.	5. Refer to FRONT SUSPENSION & WHEEL ALIGNMENT or REAR SUSPENSION .

DIAGNOSIS AND TESTING > DIAGNOSIS AND TESTING - BASE BRAKE SYSTEM

DIAGNOSIS CHARTS > RED BRAKE WARNING INDICATOR

CONDITION	POSSIBLE CAUSES	CORRECTION
RED BRAKE WARNING INDICATOR ON	1. Electric Park brake not released.	1. Check EPB switch position.
	2. Electric Park Brake switch.	2. Check EPB switch position.
	3. Brake fluid level low in reservoir.	3. Fill reservoir. Check entire system for leaks. Repair or replace as required.
	4. Brake fluid level switch.	4. Disconnect switch wiring connector. If lamp goes out, replace switch.
	5. Mechanical instrument cluster (MIC) problem.	5. Refer to appropriate diagnostic information.
	6. ABS EVBP malfunction.	6. Refer to DIAGNOSIS AND TESTING and appropriate diagnostic information.

STANDARD PROCEDURE > STANDARD PROCEDURE - BRAKE FLUID LEVEL

Always clean the master cylinder reservoir and cap before checking fluid level.

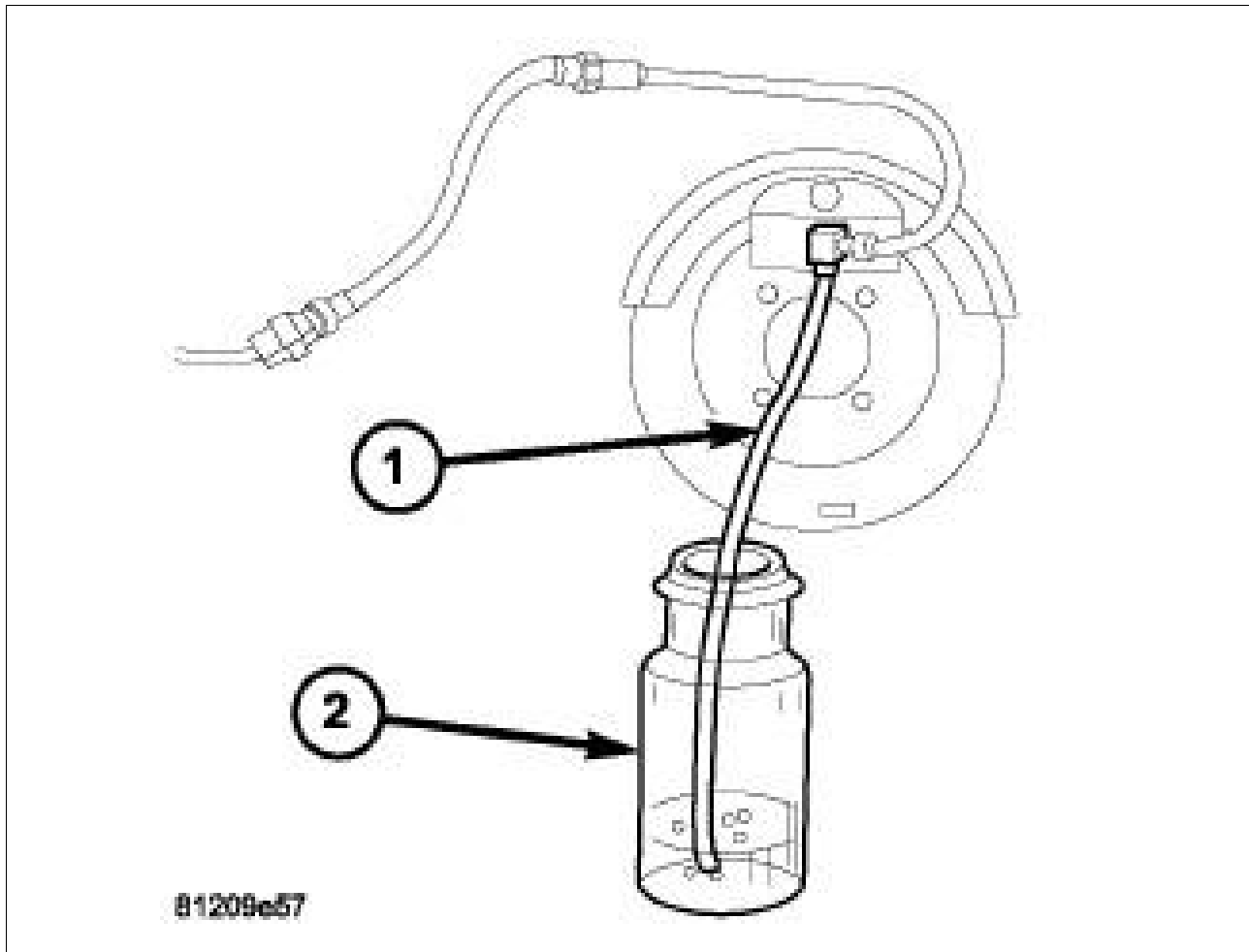
The fluid fill level is indicated on the side of the master cylinder reservoir.

The correct fluid level is to the MAX indicator on the side of the reservoir. If necessary, add fluid to the

proper level.

STANDARD PROCEDURE > STANDARD PROCEDURE - BRAKE FLUID LEVEL > MANUAL BLEEDING PROCEDURE

Fig 1: Bleeding Brakes



Courtesy of CHRYSLER GROUP, LLC



NOTE:

To bleed the brakes manually, the aid of a helper will be required.

1. Attach a clear plastic hose (1) to the bleeder screw and feed the hose into a clear jar (2) containing enough fresh brake fluid to submerge the end of the hose.
2. Have a helper pump the brake pedal three or four times and hold it in the down position.
3. With the pedal in the down position, open the bleeder screw at least one full turn.
4. Once the brake pedal has dropped, close the bleeder screw. After the bleeder screw is closed,

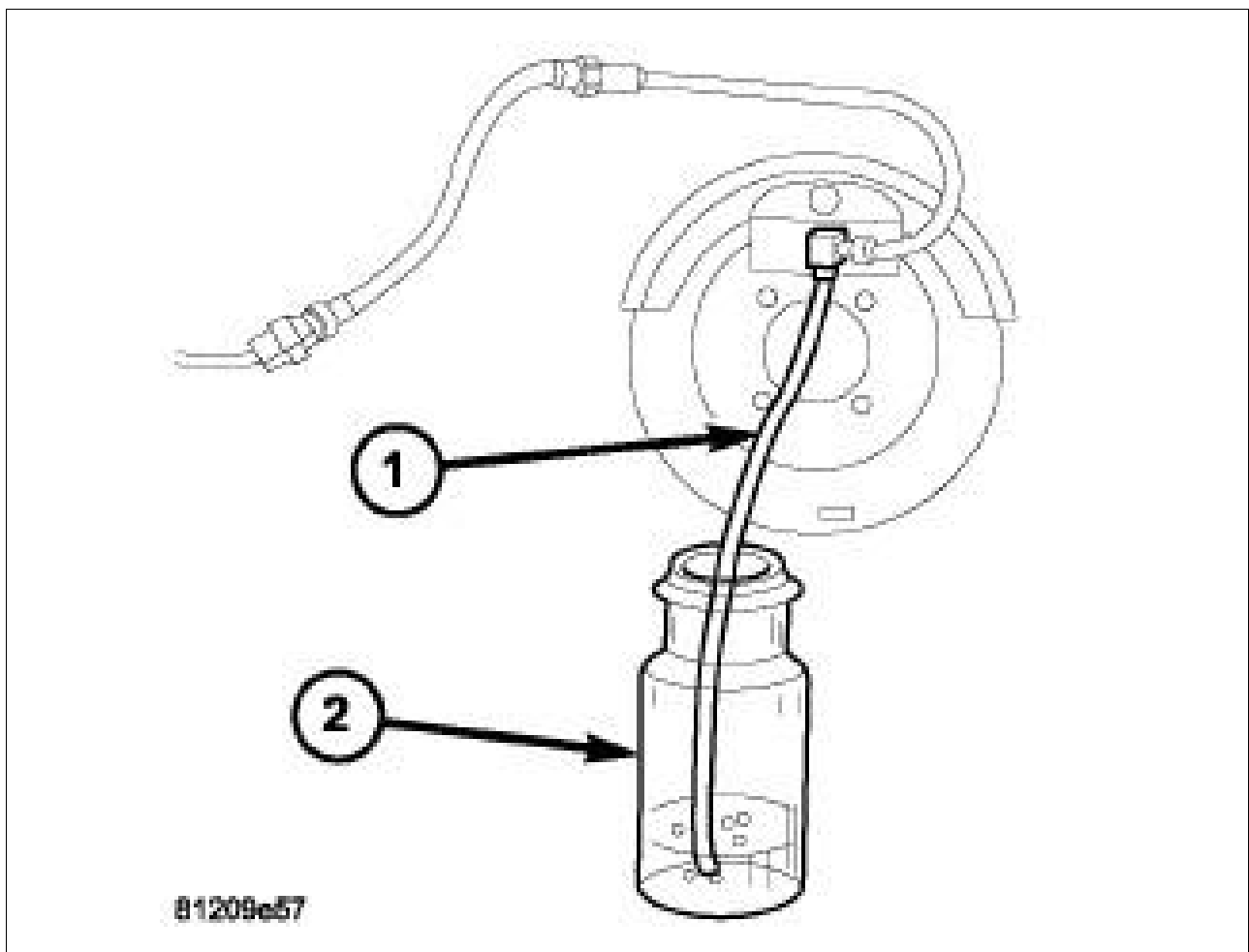
release the brake pedal.

5. Repeat the above steps until all trapped air is removed from that wheel circuit (usually four or five times).
6. Bleed the remaining wheel circuits in the same manner until all air is removed from the brake system. Monitor the fluid level in the master cylinder reservoir to make sure it does not go dry.
7. Check and adjust brake fluid level to the FULL mark.
8. Check brake pedal travel and feel. If pedal travel is excessive or if the pedal feels excessively spongy, some air may still be trapped in the system. Re-bleed the brakes as necessary including the IPB Caliper Brake Bleeding Procedure on the rear calipers as listed below.
9. Test drive the vehicle to verify the brakes are operating properly and pedal feel is correct.

STANDARD PROCEDURE > STANDARD PROCEDURE - BRAKE FLUID LEVEL > PRESSURE BLEEDING PROCEDURE

Follow the pressure bleeder manufacturer's instructions for use of the pressure bleeding equipment.

Fig 1: Bleeding Brakes



1. Install (special tool #6921, Cap, Master Cylinder) on the master cylinder fluid reservoir. Attach the fluid hose from the pressure bleeder to the fitting on (special tool #6921, Cap, Master Cylinder).
2. Attach a clear plastic hose (1) to the bleeder screw and feed the hose into a clear jar (2) containing enough fresh brake fluid to submerge the end of the hose.
3. Open the bleeder screw at least one full turn or more to obtain a steady stream of brake fluid.
4. After approximately 120-240 ml (4-8 ounces) of fluid have been bled through the brake circuit and an air-free flow is maintained in the clear plastic hose and jar, close the bleeder screw.
5. Repeat this procedure at all the remaining bleeder screws.
6. Check and adjust brake fluid level to the FULL mark on the reservoir.
7. Check brake pedal travel and feel. If pedal travel is excessive or if the pedal feels excessively spongy, some air may still be trapped in the system. Re-bleed the brakes as necessary including the IPB Caliper Brake Bleeding Procedure on the rear calipers as listed below.
8. Test drive the vehicle to verify the brakes are operating properly and pedal feel is correct.

SPECIAL TOOLS > SPECIAL TOOLS

Tool (EMEA)	Tool (NAFTA)	Name	Function
2000001400	*	Cap	Brake/clutch system depression
* Tool not available for NAFTA. Use a commercially available tool or contact Mopar Essential Tools to order the custom EMEA tool.			

SPECIFICATIONS > TECHNICAL SPECIFICATIONS

BRAKING SYSTEM

	1.4 MultiAir Turbo	2.4 MultiAir	1.6 16V Multijet	2.0 16V Multijet
Type	Hydraulic power steering. Front and rear disc			
Master cylinder diameter	15/16"			
Servo cylinder diameter	10"			

FRONT BRAKES

	1.4 MultiAir Turbo	2.4 MultiAir	1.6 16V Multijet	2.0 16V Multijet
Disc type	Self-venting			

Disc diameter (mm)	281 ± 0.2	305 ± 0.2	281 ± 0.2	305 ± 0.2
Minimal Thickness (mm)	26 ± 0.1	28 ± 0.1	26 ± 0.1	28 ± 0.1
Minimal Thickness allowed (mm)	26			
Caliper piston diameter (mm)	57	60	57	60

REAR BRAKES

	1.4 MultiAir Turbo	2.4 MultiAir	1.6 16V Multijet	2.0 16V Multijet
Disc type	Full			
Disc diameter (mm)	278 ± 0.2			
Minimal Thickness (mm)	12 ± 0.1			
Minimal Thickness allowed (mm)	10			
Caliper piston diameter (mm)	38			

SPECIFICATIONS > TORQUE SPECIFICATIONS

BRAKE SYSTEM TORQUE SPECIFICATIONS

DESCRIPTION	N.m	Ft. Lbs.	In. Lbs.	NEW FASTENER *
ABM mounting screws to the HCU	2	-	17	
Brake Caliper Adapter to Knuckle Bolts - Front	165	122	-	
Brake Caliper Adapter to Knuckle Bolts - Rear	57	42	-	
Brake Caliper to Caliper Adaptor Bolts - Front	35	26	-	
Brake Caliper to Caliper Adaptor Bolts - Rear	35	26	-	
Brake Hose to Brake Caliper - Front	17	13	-	
Brake Hose to Brake Caliper - Rear	17	13	-	
Brake Pedal/Booster Nuts	22	17	-	X

Brake Rotor to Hub Bolt - Front	7	-	61	
Brake Rotor to Hub Bolt - Rear	7	-	61	
Brake Tube to Brake Hose Nuts	17	13	-	
Brake Tube to ICU Nuts	17	13	-	
Brake Tube to Master Cylinder Nuts	17	13	-	
Dust Shield to Knuckle Bolts	7	-	61	
Electric Park Brake (EPB) Actuator to Caliper Bolts	12	9	-	
Electric Vacuum Pump to Cylinder Head Bolts	23	17	-	X
ICU to Bracket Nuts	8	-	71	
ICU Bracket to Body Bolt	25	18	-	
ICU Bracket to Body Nut	25	18	-	X
Master Cylinder to Brake Booster Nuts	17	13	-	X
Wheel Speed Sensor Head to Knuckle Bolt - Front	7	-	61	
Wheel Speed Sensor Head to Knuckle Bolt - Rear	7	-	61	
* New Fastener: Do not reuse these fasteners. If removed, a new fastener must be installed and tightened to specifications.				

ELECTRICAL > PUMP, ELECTRIC VACUUM > DIAGNOSIS AND TESTING > DIAGNOSIS AND TESTING - BRAKE VACUUM SYSTEM

OPERATION CHECK VACUUM PUMP AND VACUUM CIRCUIT FOR SERVO

Relieve the pressure in the brake servo motor has stopped by repeated forceful drives and releases the brake pedal.

With the brake pedal pressed to start the engine without accelerating.

Make sure that after a few seconds the brake pedal remains as a function of pressure due to the action of the brake booster.

Release the brake pedal and without further drives off the engine.

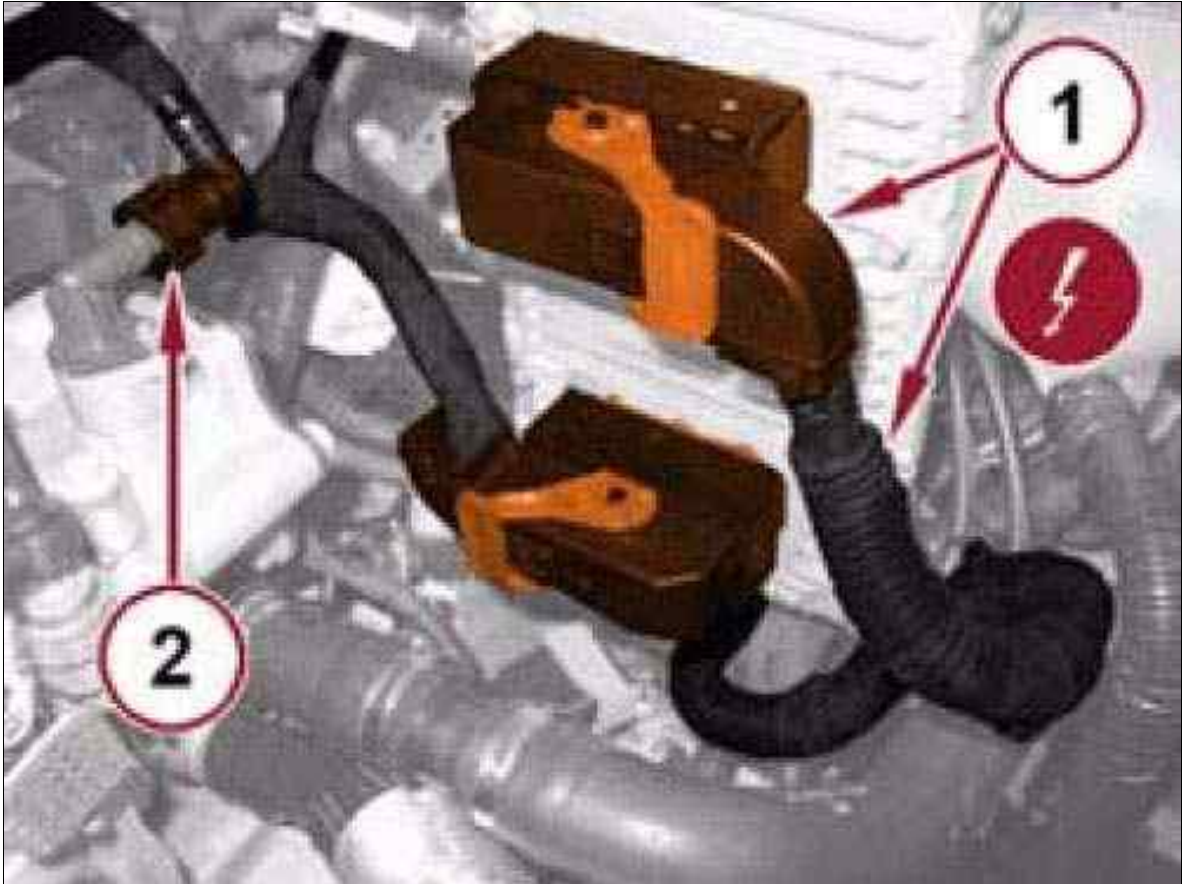
After about 10 minutes, with the engine off, pump the brake pedal and check on the first drive, lowering the corresponding contribution to the brake booster and subsequent drives the progressive hardening.

ELECTRICAL > PUMP, ELECTRIC VACUUM > REMOVAL AND INSTALLATION >

REMOVAL AND INSTALLATION > REMOVAL

1. Disconnect and isolate the negative battery cable.
2. Remove engine cover. For 1.6L/2.0L Diesel, refer to COVER, ENGINE, REMOVAL AND INSTALLATION . For 1.4L, refer to COVER, ENGINE, REMOVAL AND INSTALLATION . For 2.4L, refer to COVER, ENGINE, REMOVAL AND INSTALLATION .

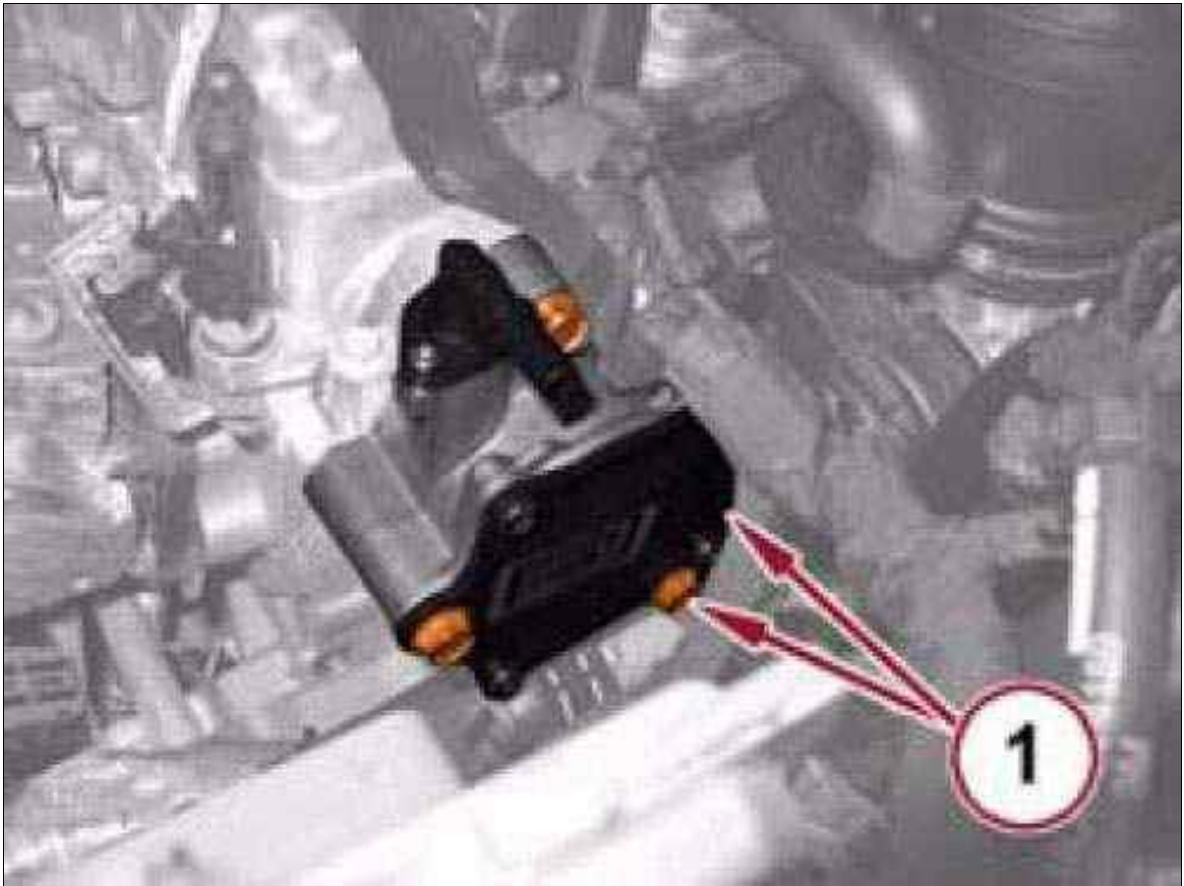
Fig 1: ECM Connectors & Quick Connect Fitting



Courtesy of CHRYSLER GROUP, LLC

3. Disconnect the engine control module electrical connectors (1).
4. Disconnect the quick connect fitting (2) at the vacuum pump.

Fig 2: Vacuum Pump Engine Bolts

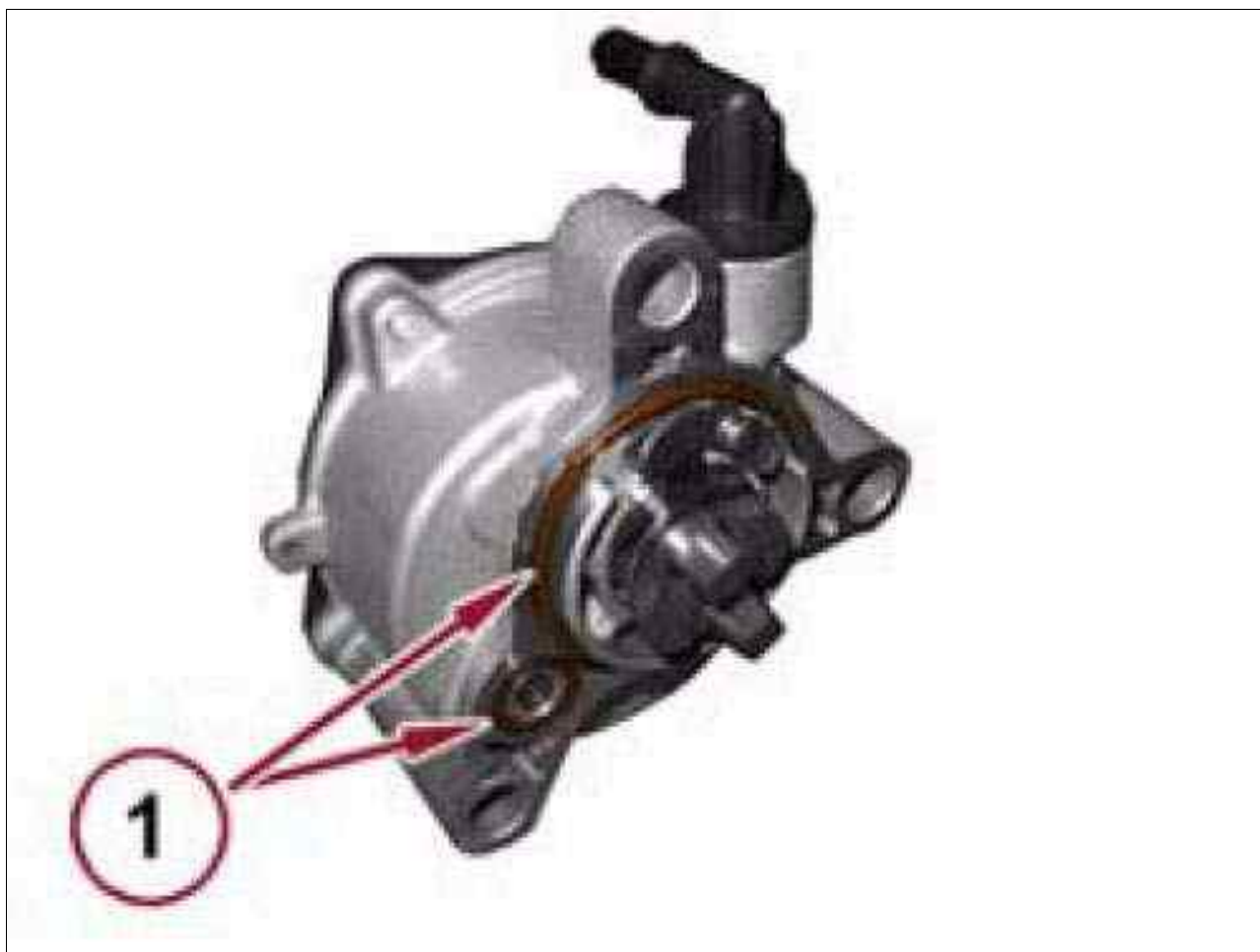


Courtesy of CHRYSLER GROUP, LLC

5. Remove the three vacuum pump to engine bolts (1), and remove the vacuum pump from the vehicle.

**ELECTRICAL > PUMP, ELECTRIC VACUUM > REMOVAL AND INSTALLATION >
REMOVAL AND INSTALLATION > INSTALLATION**

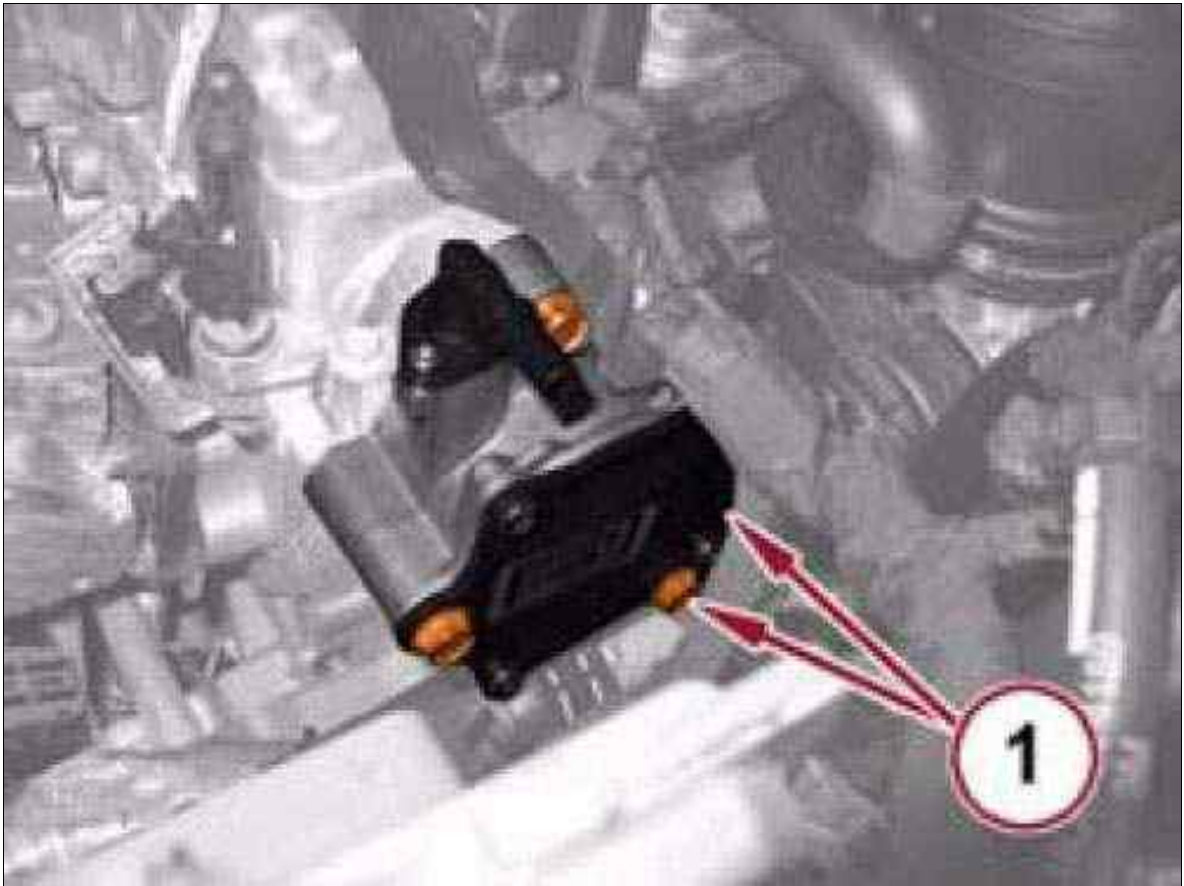
Fig 1: Vacuum Pump O-Rings



Courtesy of CHRYSLER GROUP, LLC

1. If removed or replaced, install both of the vacuum pump o-rings (1).

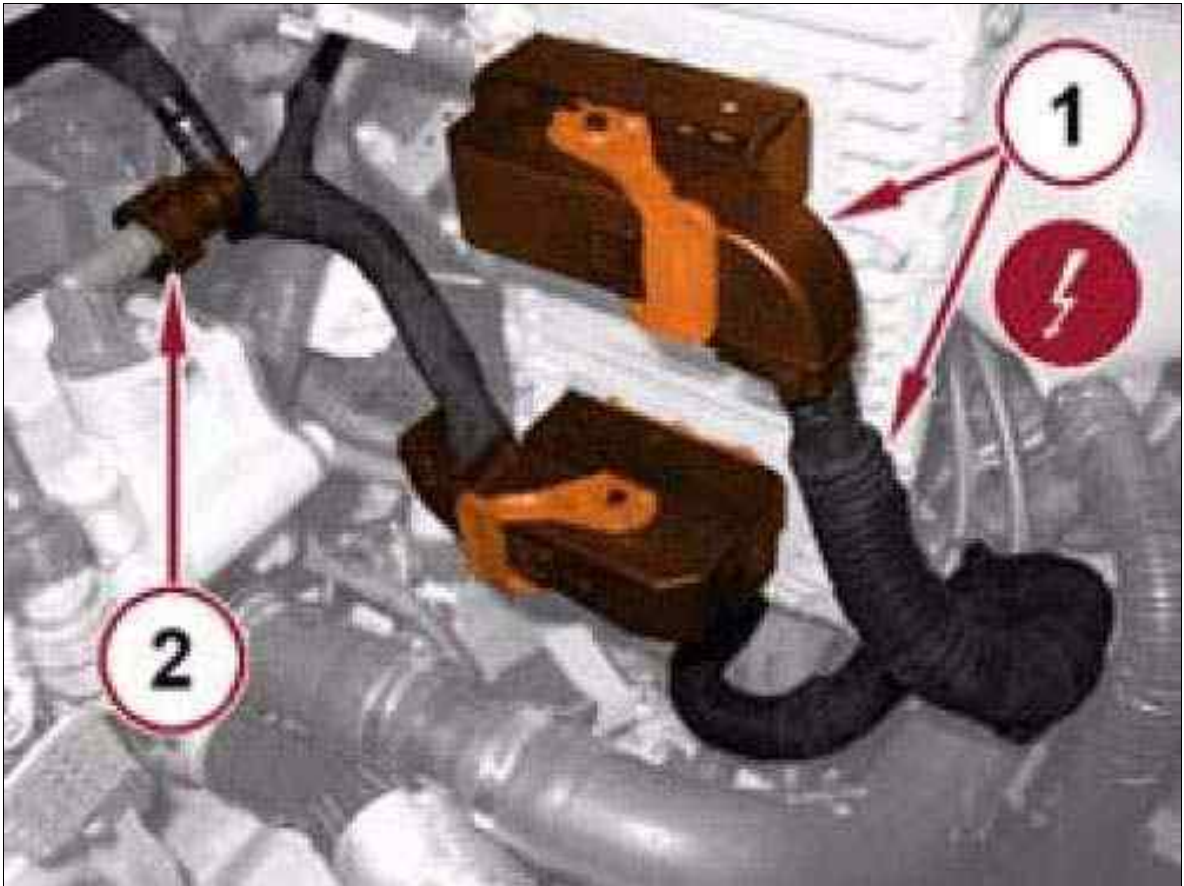
Fig 2: Vacuum Pump Engine Bolts



Courtesy of CHRYSLER GROUP, LLC

2. Install the three vacuum pump to engine bolts (1), and tighten to the proper specification. Refer to TORQUE SPECIFICATIONS .

Fig 3: ECM Connectors & Quick Connect Fitting



Courtesy of CHRYSLER GROUP, LLC

3. Connect the quick connect fitting (2) at the vacuum pump.
4. Connect the engine control module electrical connectors (1).
5. Install engine cover. For 1.6L/2.0L Diesel, refer to COVER, ENGINE, REMOVAL AND INSTALLATION . For 1.4L, refer to COVER, ENGINE, REMOVAL AND INSTALLATION . For 2.4L, refer to COVER, ENGINE, REMOVAL AND INSTALLATION .
6. Connect the negative battery cable.

ELECTRICAL > SWITCH, BRAKE FLUID LEVEL > REMOVAL AND INSTALLATION > REMOVAL AND INSTALLATION > REMOVAL

For the removal of the brake fluid level switch. Refer to RESERVOIR, BRAKE MASTER CYLINDER, REMOVAL AND INSTALLATION .

ELECTRICAL > SWITCH, BRAKE FLUID LEVEL > REMOVAL AND INSTALLATION > REMOVAL AND INSTALLATION > INSTALLATION

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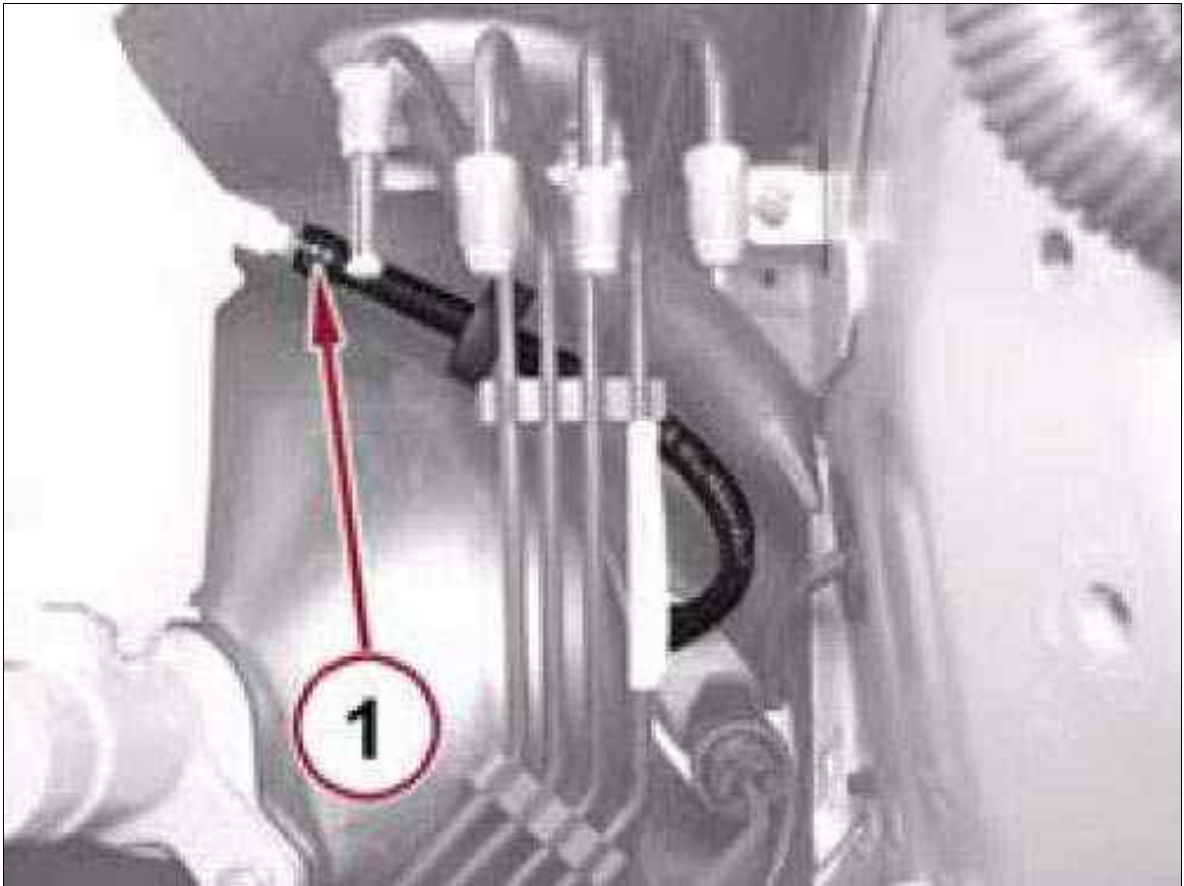
HYDRAULIC/MECHANICAL > BOOSTER, POWER BRAKE > DIAGNOSIS AND TESTING > DIAGNOSIS AND TESTING - MASTER CYLINDER/POWER BOOSTER

1. Start the engine and check the booster vacuum hose connections. A hissing noise indicates a vacuum leak. Correct any vacuum leaks before proceeding.
2. Stop the engine and pump the brake pedal until all vacuum reserve in the booster is depleted.
3. Press and hold the brake pedal under light foot pressure. The pedal should hold firm. If the pedal falls away, there may be an external leak or the master cylinder is faulty (internal leakage).
4. Start the engine and note pedal action. It should fall away slightly under light foot pressure, then hold firm. If no pedal action is discernible, the power booster, vacuum supply or vacuum check valve is faulty, proceed to the POWER BOOSTER VACUUM TEST.
5. If the POWER BOOSTER VACUUM TEST passes, rebuild the booster vacuum reserve as follows: Release the brake pedal. Increase engine speed to 1500 RPM, close the throttle and immediately turn off the ignition to stop the engine.
6. Wait a minimum of 90 seconds and try brake action again. The booster should provide two or more vacuum assisted pedal applications. If the vacuum assist is not provided, the booster is faulty.

HYDRAULIC/MECHANICAL > BOOSTER, POWER BRAKE > REMOVAL AND INSTALLATION > LHD > REMOVAL

1. Remove the engine cover. For 1.6L/2.0L Diesel, refer to COVER, ENGINE, REMOVAL AND INSTALLATION . For 1.4L, refer to COVER, ENGINE, REMOVAL AND INSTALLATION . For 2.4L, refer to COVER, ENGINE, REMOVAL AND INSTALLATION .
2. Remove the Integrated Control Unit (ICU). Refer to INTEGRATED CONTROL UNIT (ICU), REMOVAL AND INSTALLATION .

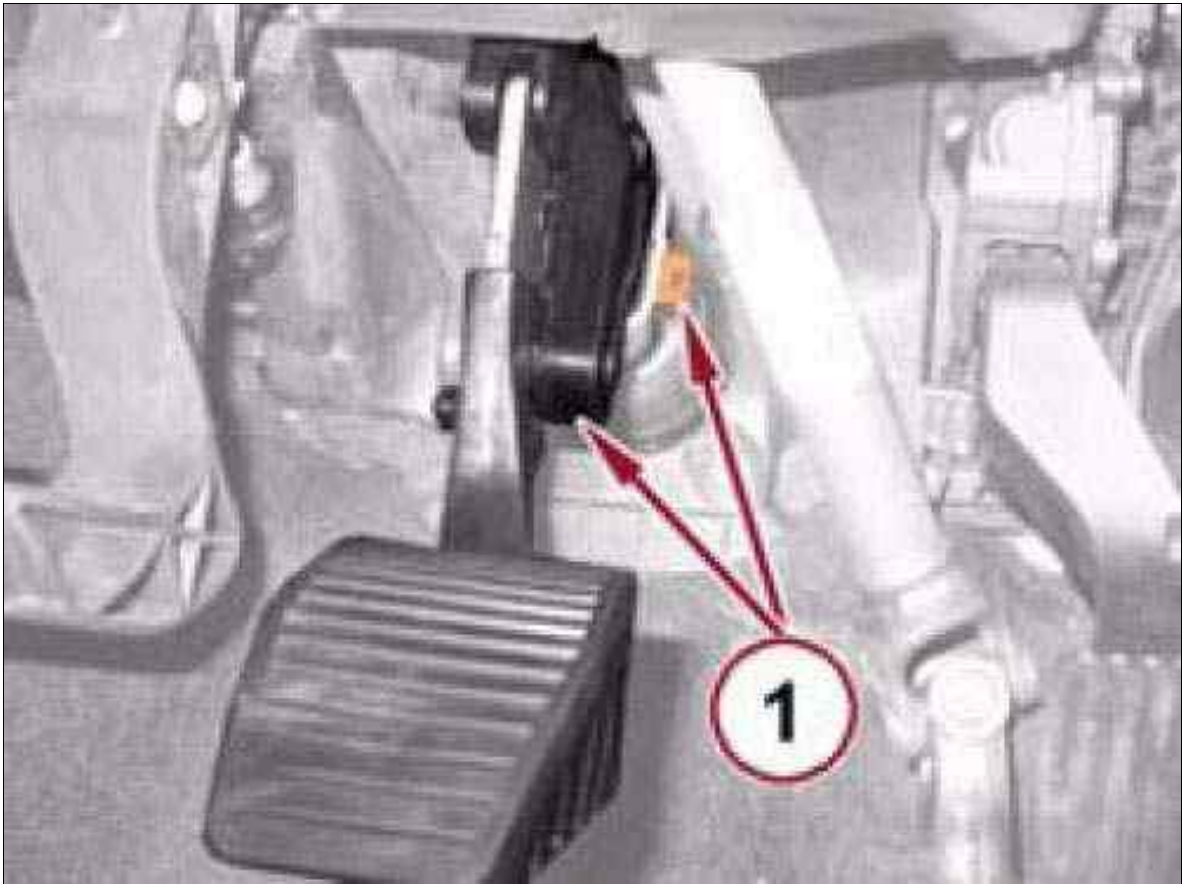
Fig 1: Master Cylinder To Clutch Pedal Hose



Courtesy of CHRYSLER GROUP, LLC

3. If equipped, disconnect the hose (1) from the master cylinder to clutch pedal.

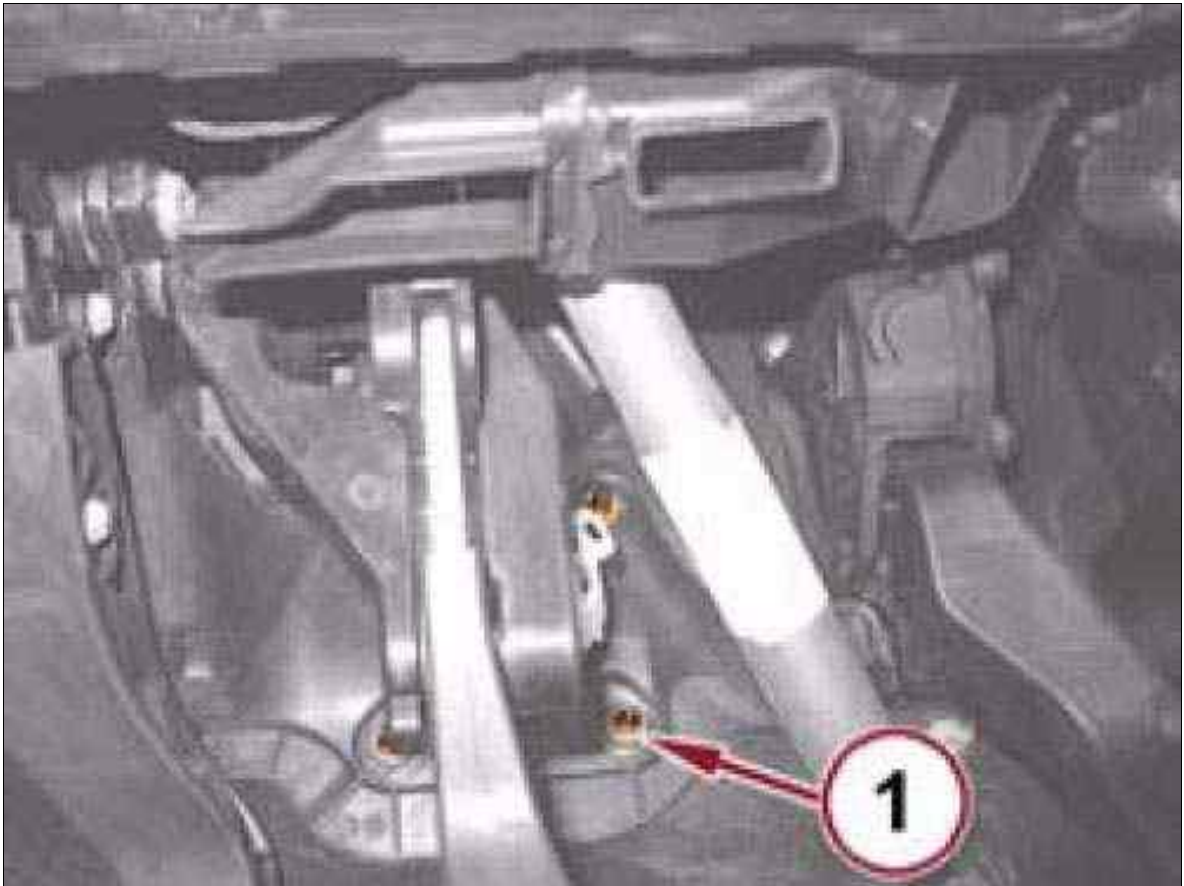
Fig 2: Brake Booster Push Rod Retaining Clip



Courtesy of CHRYSLER GROUP, LLC

4. Release the brake booster push rod retaining clip (1).

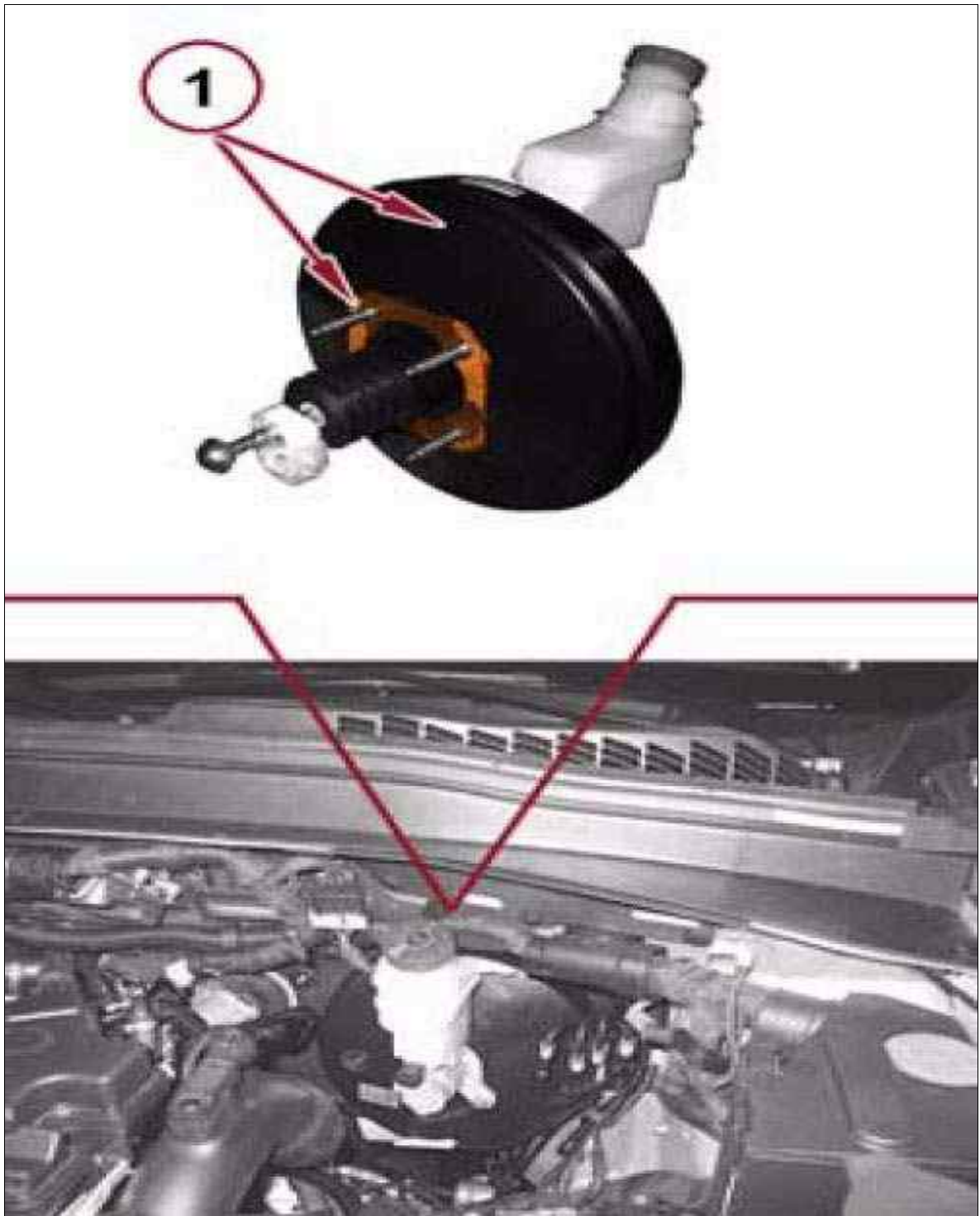
Fig 3: Brake Booster To Brake Pedal Nuts



Courtesy of CHRYSLER GROUP, LLC

5. Remove brake booster to brake pedal nuts (1).

Fig 4: Brake Booster Adhesive Gasket



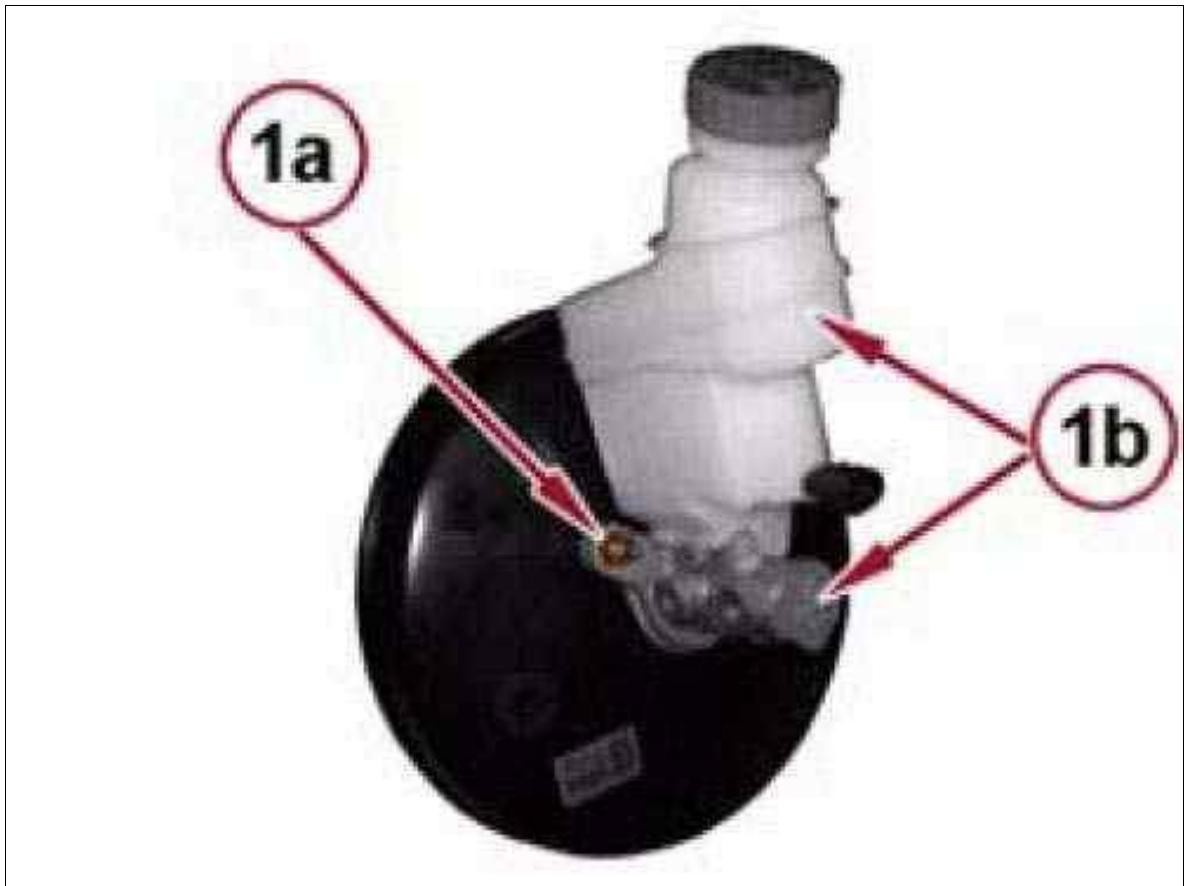
Courtesy of CHRYSLER GROUP, LLC

6. Remove the brake booster from the adhesive gasket (1), and remove it from the vehicle.

 **NOTE:**

Be sure to retrieve the cup off the end of the brake booster push rod.

Fig 5: Brake Booster Nuts



Courtesy of CHRYSLER GROUP, LLC

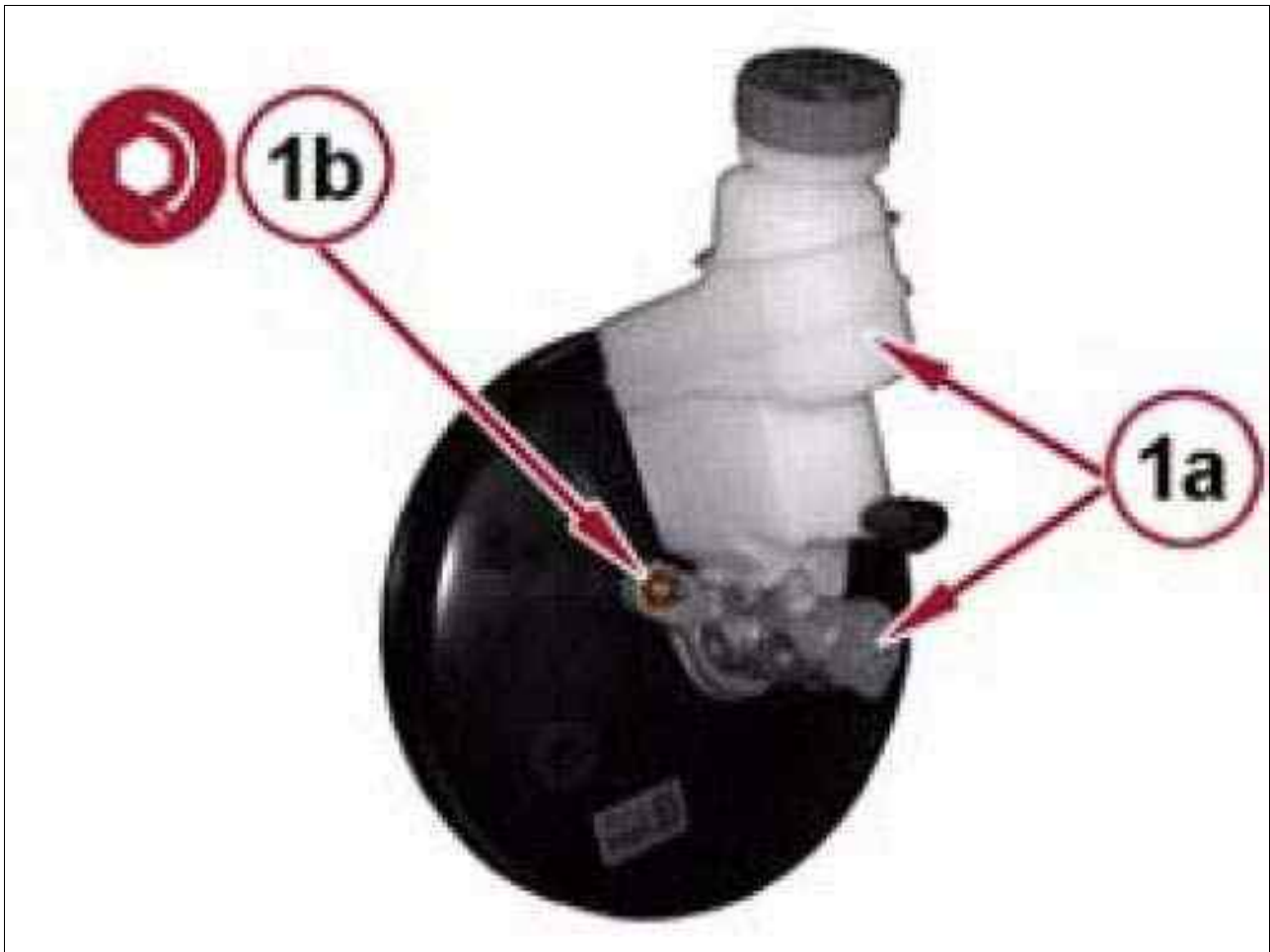
7. Remove the master cylinder to brake booster nuts (1a).

 NOTE:

Remove any sealant from the body. In case of replacement of the brake booster, be sure to remove and residue from the adhesive seal.

**HYDRAULIC/MECHANICAL > BOOSTER, POWER BRAKE > REMOVAL AND
INSTALLATION > LHD > INSTALLATION**

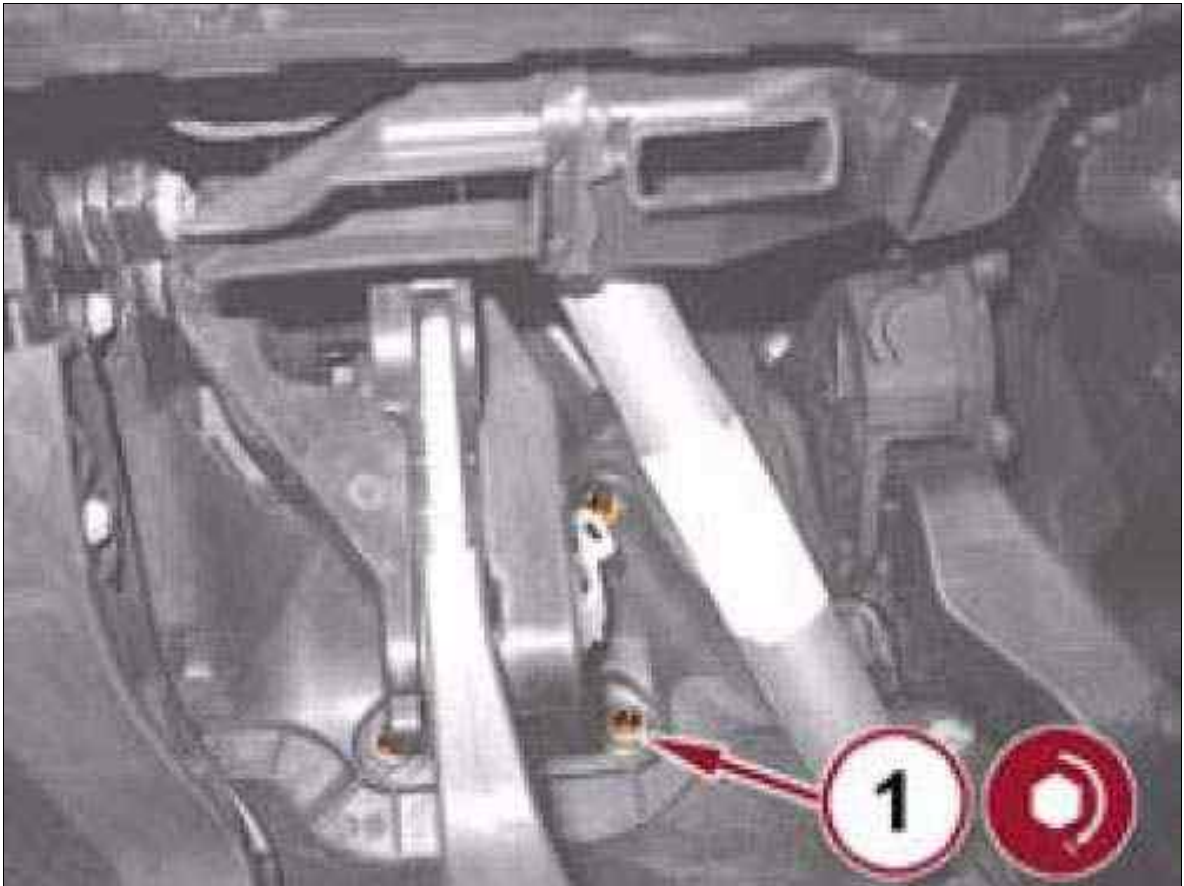
Fig 1: Brake Booster Nuts



Courtesy of CHRYSLER GROUP, LLC

1. Position the master cylinder on the brake booster, install and tighten the master cylinder to brake booster nuts (1b) to the proper specification. Refer to TORQUE SPECIFICATIONS .
2. Place the cup on to the end of the brake booster push rod, then install the brake booster with a **NEW** gasket into the vehicle.

Fig 2: Brake Booster To Brake Pedal Nuts



Courtesy of CHRYSLER GROUP, LLC

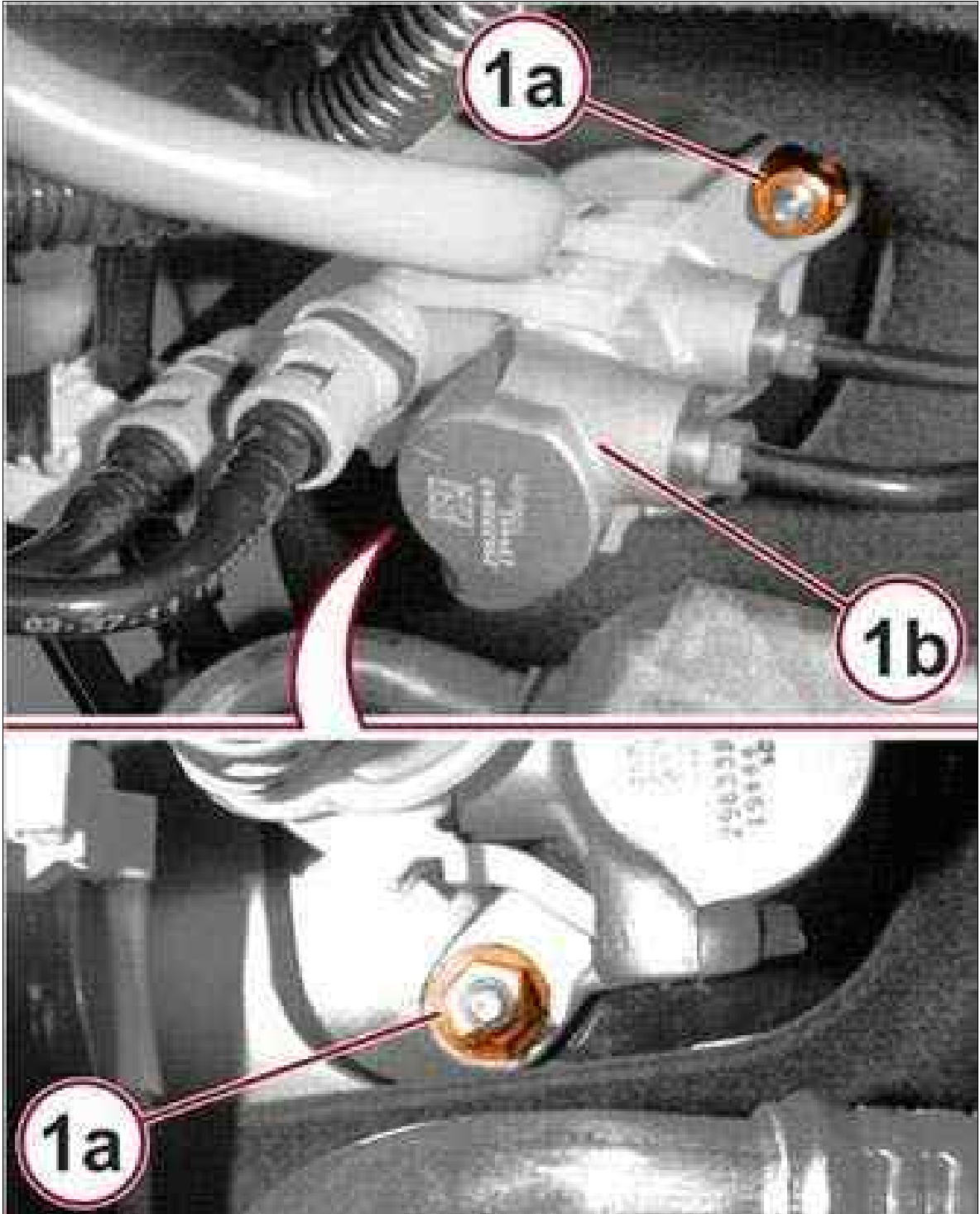
3. Install and tighten the brake booster to brake pedal nuts (1) to the proper specification. Refer to TORQUE SPECIFICATIONS .
4. Install a **NEW** push rod retaining clip on the brake servo push rod, then install the push rod on the brake pedal.
5. If equipped, connect the hose from the master cylinder to clutch pedal.
6. Install the Integrated Control Unit (ICU). Refer to INTEGRATED CONTROL UNIT (ICU), REMOVAL AND INSTALLATION .
7. Install the engine cover. For 1.6L/2.0L Diesel, refer to COVER, ENGINE, REMOVAL AND INSTALLATION . For 1.4L, refer to COVER, ENGINE, REMOVAL AND INSTALLATION . For 2.4L, refer to COVER, ENGINE, REMOVAL AND INSTALLATION .

HYDRAULIC/MECHANICAL > BOOSTER, POWER BRAKE > REMOVAL AND INSTALLATION > RHD > REMOVAL

1. Remove the engine cover. For 1.6L/2.0L Diesel, refer to COVER, ENGINE, REMOVAL AND INSTALLATION . For 1.4L, refer to COVER, ENGINE, REMOVAL AND INSTALLATION . For 2.4L, refer to COVER, ENGINE, REMOVAL AND INSTALLATION .

2. Disconnect and isolate the negative battery cable. If equipped with an Intelligent Battery Sensor (IBS), disconnect the IBS connector first before disconnecting the negative battery cable.
3. Remove the pedal assembly. Refer to PEDAL(S), BRAKE AND/OR ACCELERATOR, REMOVAL AND INSTALLATION .

Fig 1: Master Cylinder & Nuts



Courtesy of CHRYSLER GROUP, LLC

4. Working from the engine compartment, remove the nuts (1a) securing the master cylinder (1b).

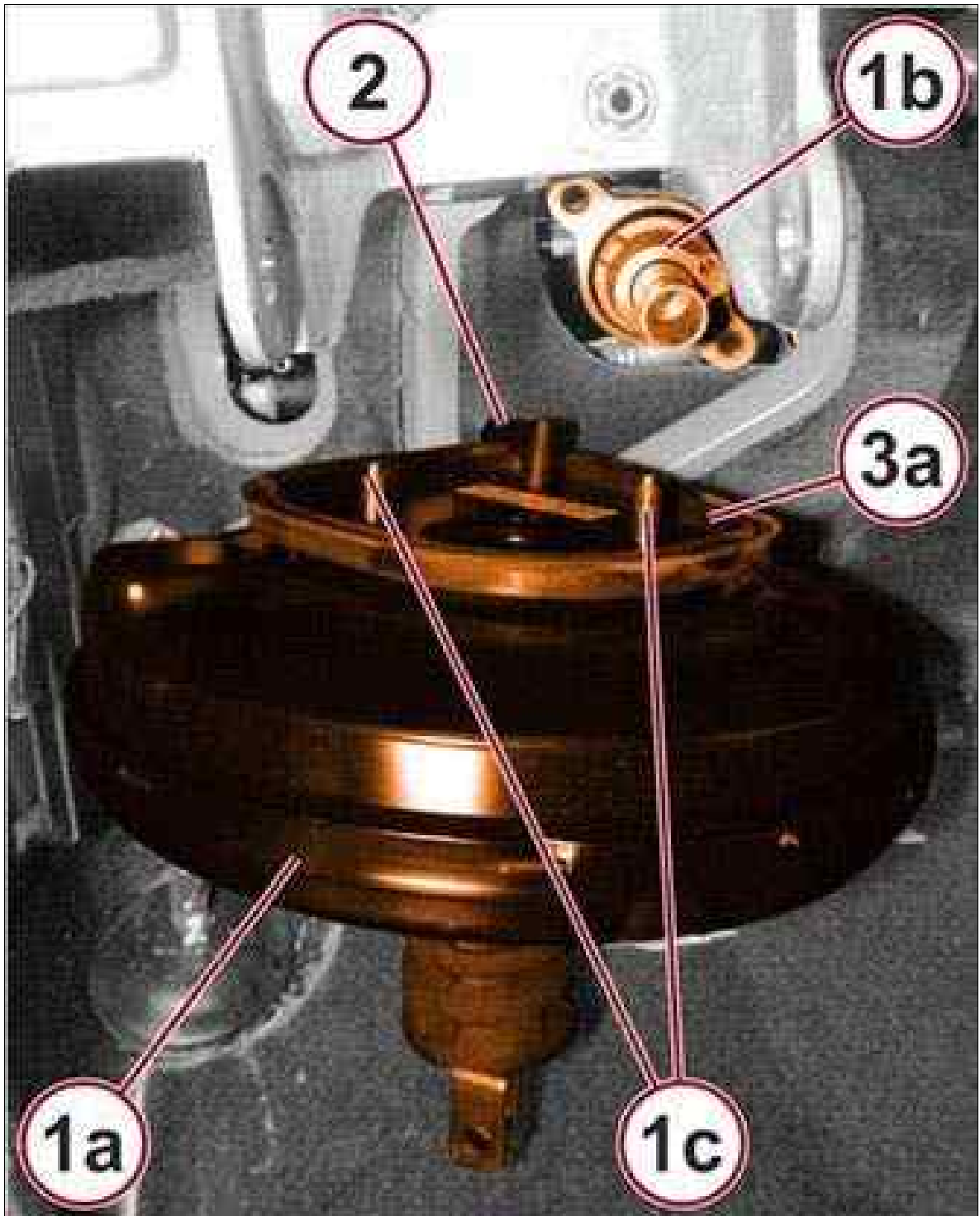
Fig 2: Brake Booster Spacer



Courtesy of CHRYSLER GROUP, LLC

5. Remove the brake booster spacer (1).

Fig 3: Brake Booster, Master Cylinder, Studs, Vacuum Tube & Seal



Courtesy of CHRYSLER GROUP, LLC

6. Remove the brake booster (1a) releasing the master cylinder (1b) and its stud bolts (1c).
7. Disconnect the vacuum tube (2).
8. Remove the brake booster (1a) and the seal (3b).

HYDRAULIC/MECHANICAL > BOOSTER, POWER BRAKE > REMOVAL AND INSTALLATION > RHD > INSTALLATION

1. Position the seal on the brake booster.
2. Connect the vacuum tube to the brake booster.



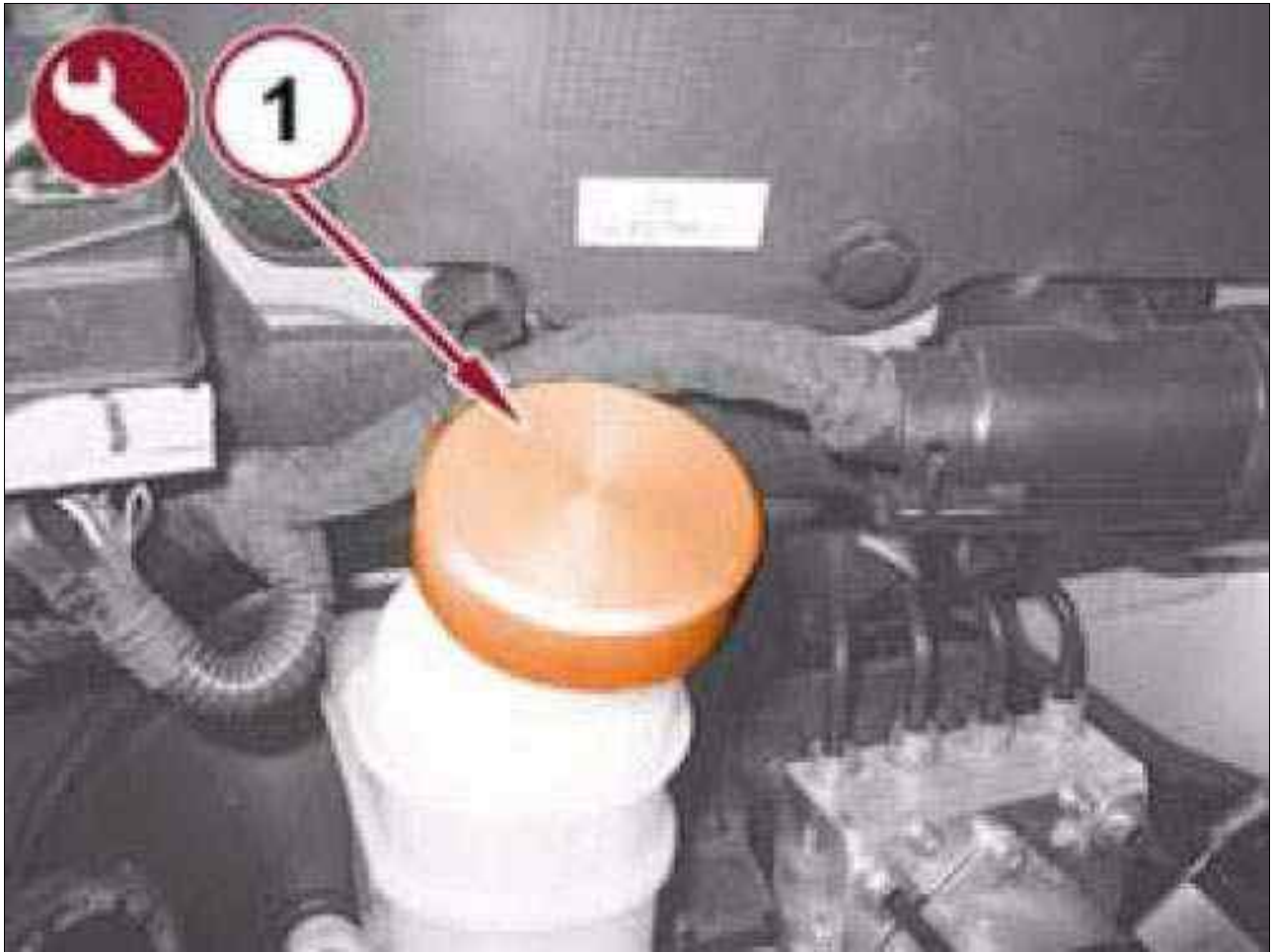
NOTE:

Take care not to damage the vacuum tube.

3. With the help of another person, position the brake booster and its seal to the master cylinder, install and tighten the master cylinder to brake booster nuts to the proper specification. Refer to TORQUE SPECIFICATIONS .
4. Install the brake booster spacer onto the booster.
5. Install the pedal assembly. Refer to PEDAL(S), BRAKE AND/OR ACCELERATOR, REMOVAL AND INSTALLATION .
6. Connect the negative battery cable. If equipped with an Intelligent Battery Sensor (IBS), connect the IBS connector.
7. Install the engine cover. For 1.6L/2.0L Diesel, refer to COVER, ENGINE, REMOVAL AND INSTALLATION . For 1.4L, refer to COVER, ENGINE, REMOVAL AND INSTALLATION . For 2.4L, refer to COVER, ENGINE, REMOVAL AND INSTALLATION .

HYDRAULIC/MECHANICAL > CALIPER, DISC BRAKE > REMOVAL AND INSTALLATION > 1.4L - 1.6L > REMOVAL - 1.4L - 1.6L

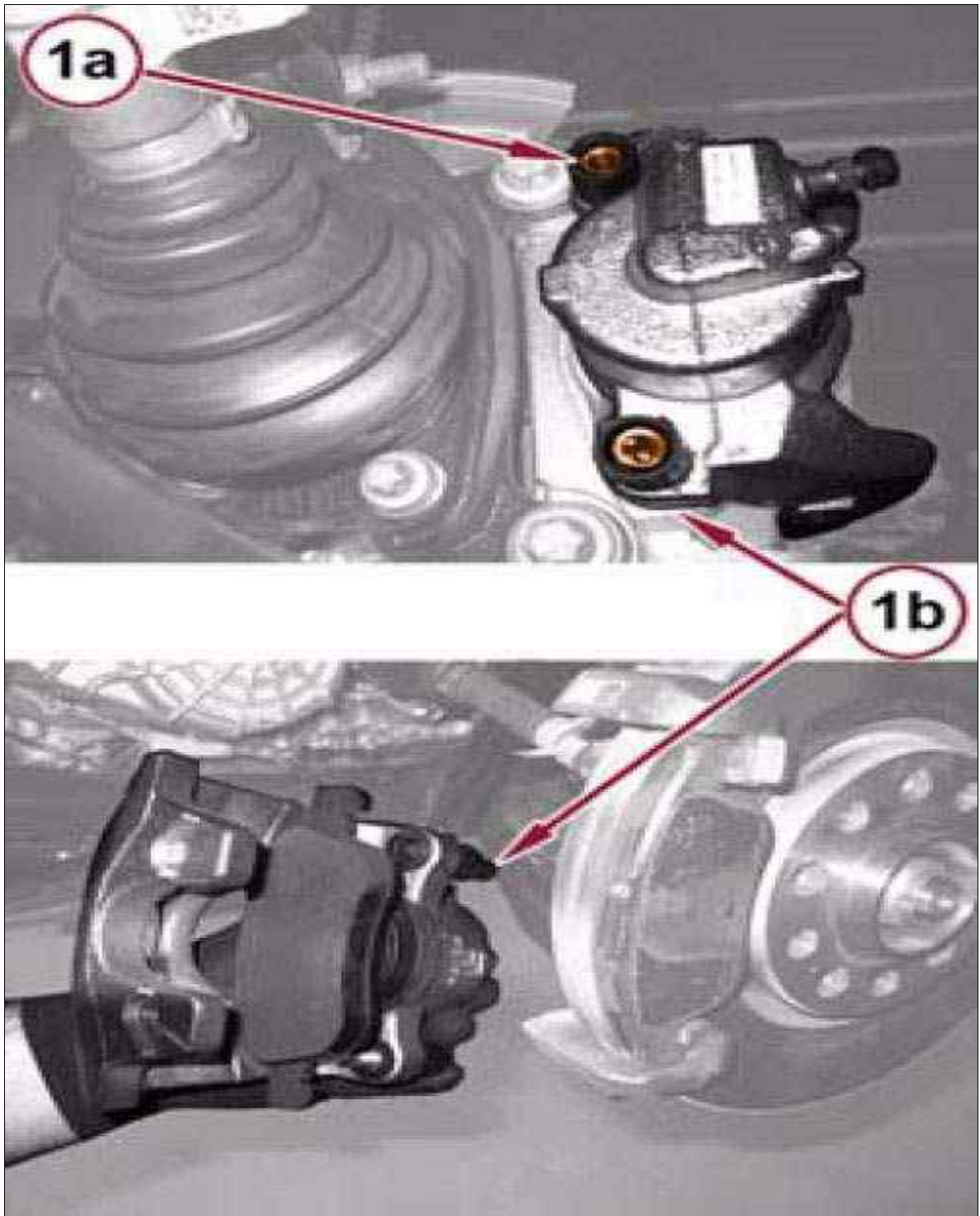
Fig 1: Master Cylinder Cap



Courtesy of CHRYSLER GROUP, LLC

1. Remove the master cylinder cap (1), and install the vacuum tool 2000001400.
2. Raise and support the vehicle. Refer to HOISTING, STANDARD PROCEDURE .
3. Remove the tire and wheel assembly. Refer to REMOVAL AND INSTALLATION .
4. Remove the appropriate brake hose from the caliper. Refer to TUBES AND HOSES, BRAKE, REMOVAL AND INSTALLATION .

Fig 2: Caliper Bolts



Courtesy of CHRYSLER GROUP, LLC

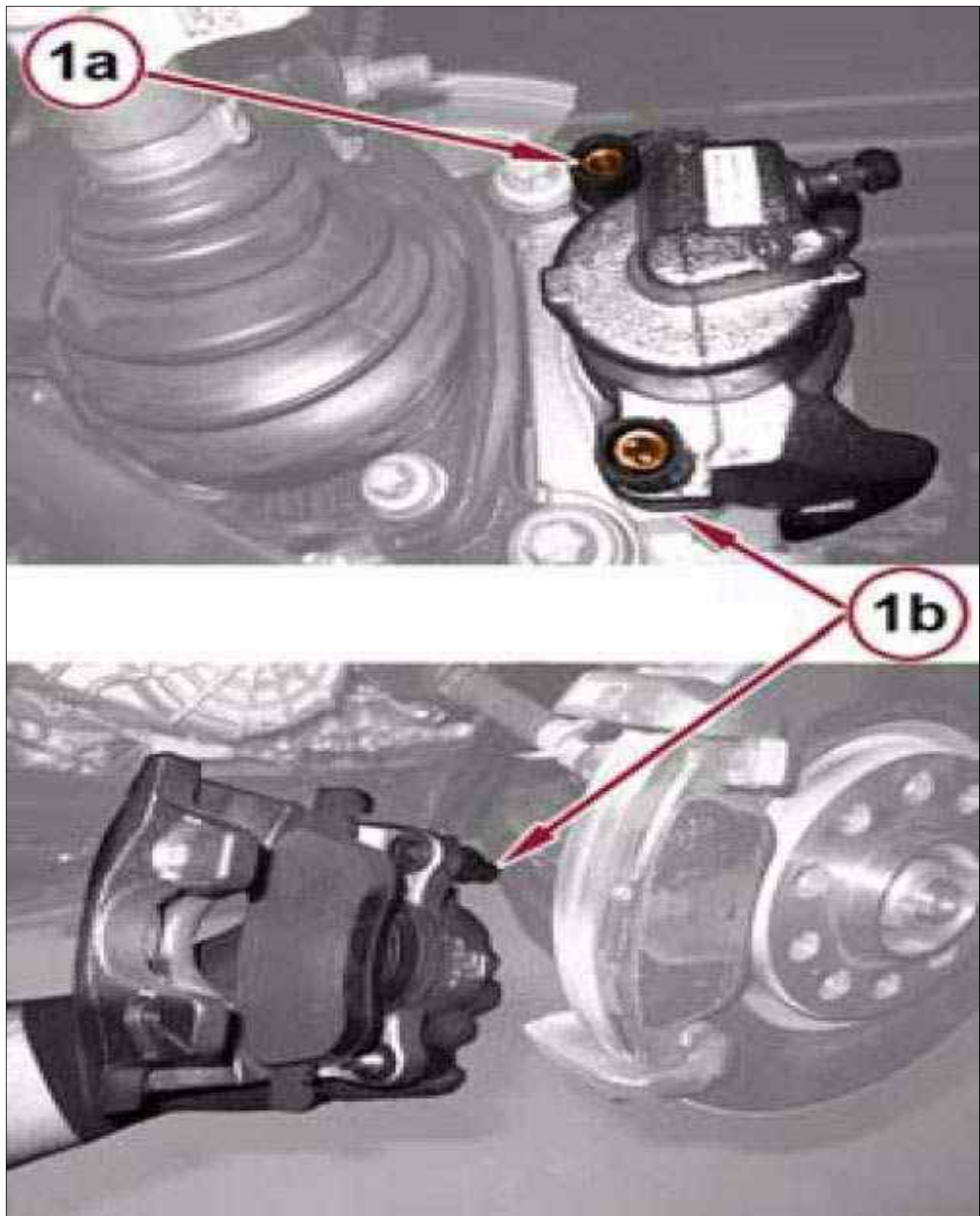
5. Remove the caliper to caliper adaptor bolts (1a), and remove the caliper.
6. If necessary, transfer the brake pads.

HYDRAULIC/MECHANICAL > CALIPER, DISC BRAKE > REMOVAL AND

INSTALLATION > 1.4L - 1.6L > INSTALLATION - 1.4L - 1.6L

1. If removed, install the brake pads onto the caliper.

Fig 1: Caliper Bolts



Courtesy of CHRYSLER GROUP, LLC

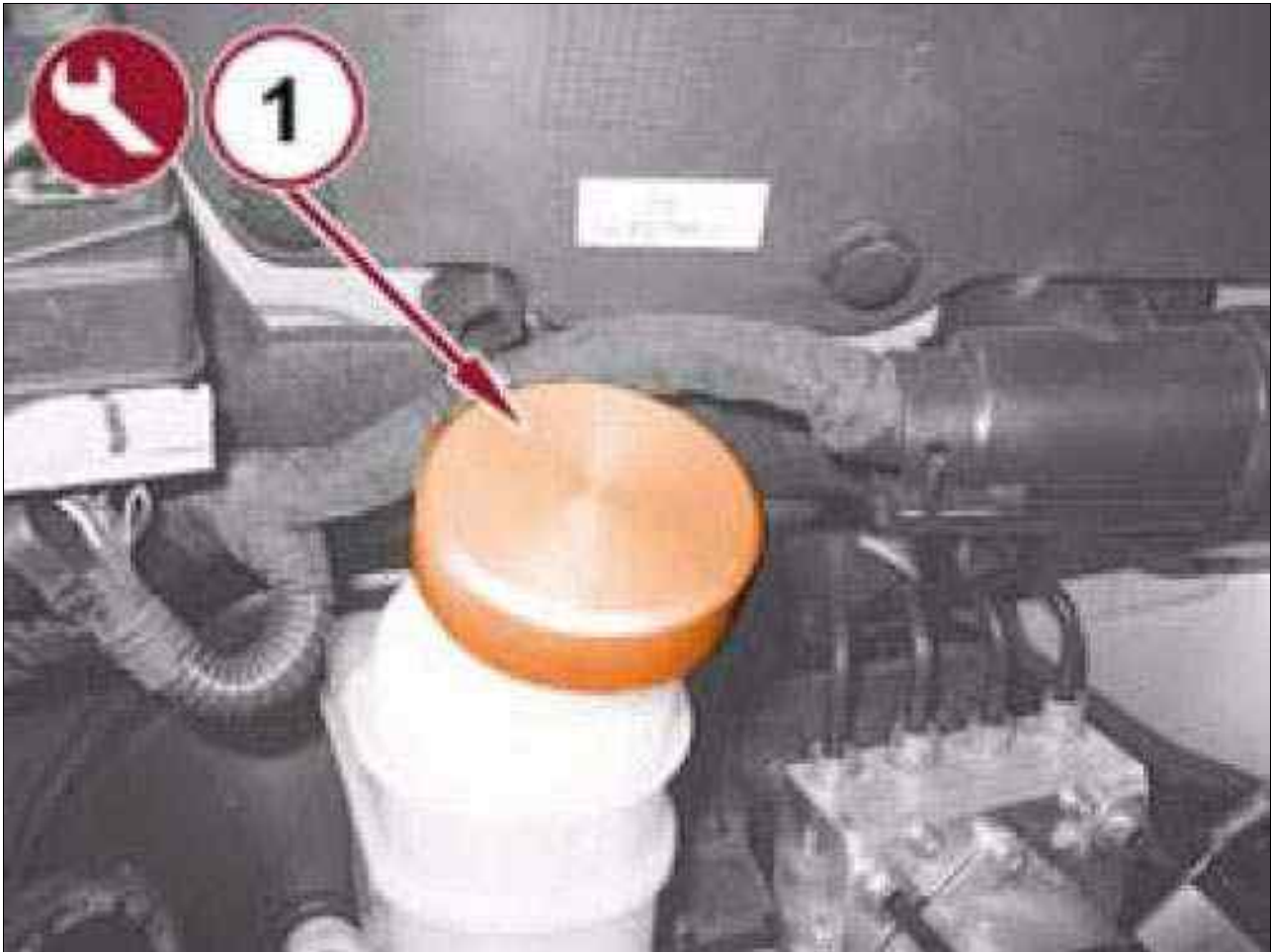
2. Install the caliper onto the caliper adaptor, and tighten both caliper to caliper adaptor bolts (1a) to the proper specification. Refer to TORQUE SPECIFICATIONS .
3. Install the removed brake hose to the caliper. Refer to TUBES AND HOSES, BRAKE,

REMOVAL AND INSTALLATION .

4. Install the tire and wheel assembly. Refer to REMOVAL AND INSTALLATION .
5. Remove the support and lower the vehicle.
6. Fill and bleed the braking system. Refer to STANDARD PROCEDURE .

HYDRAULIC/MECHANICAL > CALIPER, DISC BRAKE > REMOVAL AND INSTALLATION > 1.4L 4X4 - 2.0L - 2.4L > REMOVAL - 1.4L 4X4 - 2.0L - 2.4L

Fig 1: Master Cylinder Cap



Courtesy of CHRYSLER GROUP, LLC

1. Remove the master cylinder cap (1), and install the vacuum tool 2000001400.
2. Raise and support the vehicle. Refer to HOISTING, STANDARD PROCEDURE .
3. Remove the tire and wheel assembly. Refer to REMOVAL AND INSTALLATION .
4. Remove the appropriate brake hose from the caliper. Refer to TUBES AND HOSES, BRAKE, REMOVAL AND INSTALLATION .

Fig 2: Removing Caliper Bolts



Courtesy of CHRYSLER GROUP, LLC

5. While holding the inside nut, remove the caliper to caliper adaptor bolts (1).

Fig 3: Caliper



Courtesy of CHRYSLER GROUP, LLC

6. Remove the caliper (1) from the caliper adaptor.

**HYDRAULIC/MECHANICAL > CALIPER, DISC BRAKE > REMOVAL AND
INSTALLATION > 1.4L 4X4 - 2.0L - 2.4L > INSTALLATION - 1.4L 4X4 - 2.0L - 2.4L**

Fig 1: Caliper



Courtesy of CHRYSLER GROUP, LLC

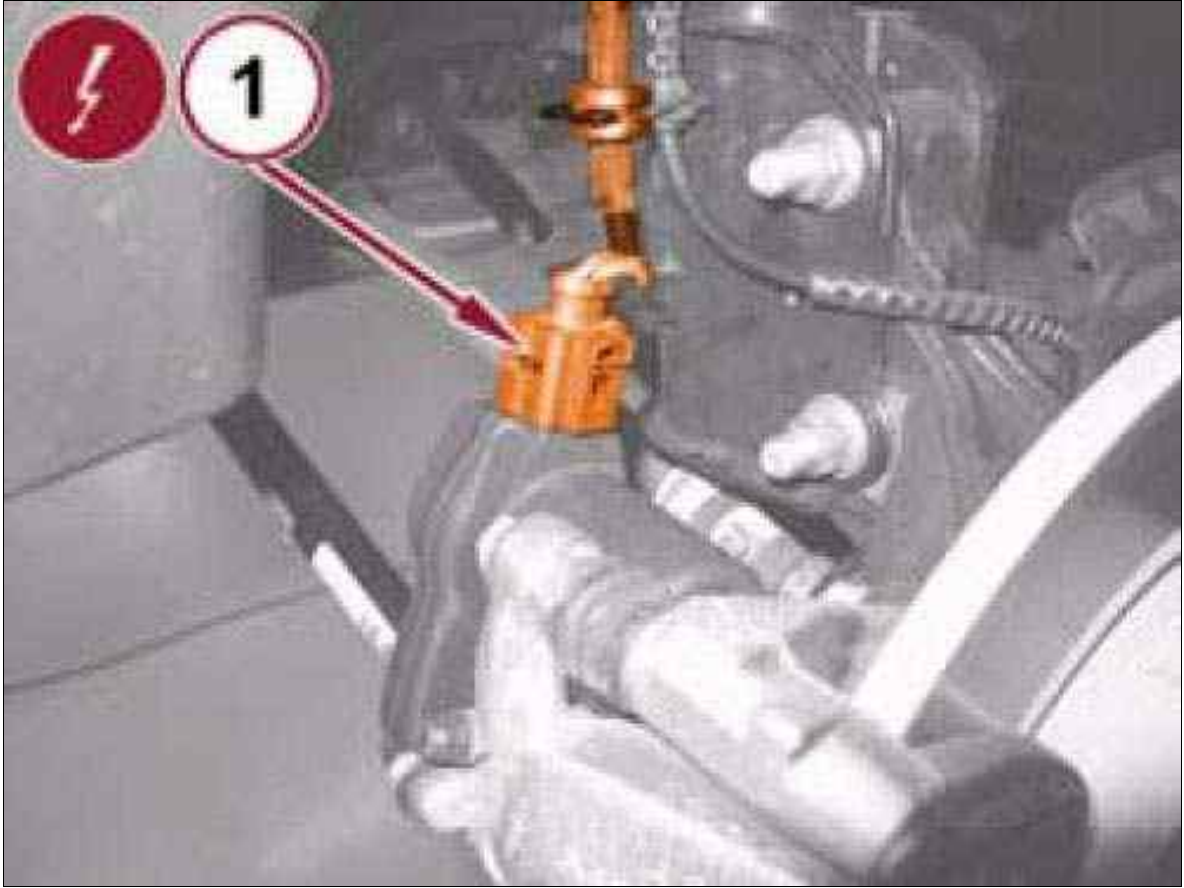
1. Install the caliper (1) onto the caliper adaptor, and tighten both caliper to caliper adaptor bolts to the proper specification. Refer to TORQUE SPECIFICATIONS .
2. Install the removed brake hose to the caliper. Refer to TUBES AND HOSES, BRAKE, REMOVAL AND INSTALLATION .
3. Install the tire and wheel assembly. Refer to REMOVAL AND INSTALLATION .
4. Remove the support and lower the vehicle.
5. Fill and bleed the braking system. Refer to STANDARD PROCEDURE .

HYDRAULIC/MECHANICAL > CALIPER, DISC BRAKE, REAR > REMOVAL AND INSTALLATION > REMOVAL AND INSTALLATION > REMOVAL

1. Raise and support the vehicle. Refer to HOISTING, STANDARD PROCEDURE .
2. Remove the tire and wheel assembly. Refer to REMOVAL AND INSTALLATION .
3. Remove the correct brake hose from the caliper. Refer to TUBES AND HOSES, BRAKE,

REMOVAL AND INSTALLATION .

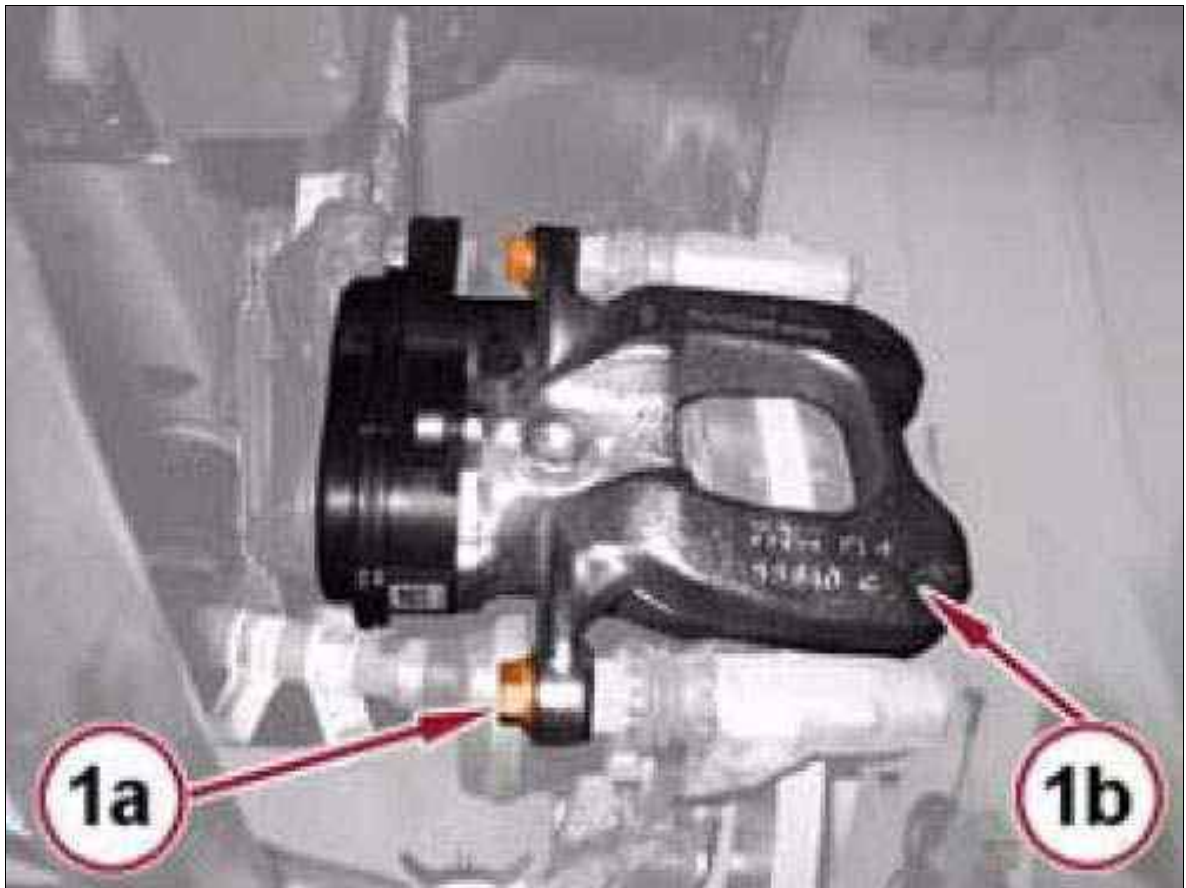
Fig 1: Electric Park Brake Connector



Courtesy of CHRYSLER GROUP, LLC

4. Disconnect the Electric Park Brake (EPB) actuator electrical connector (1).

Fig 2: Caliper & Adaptor Bolts

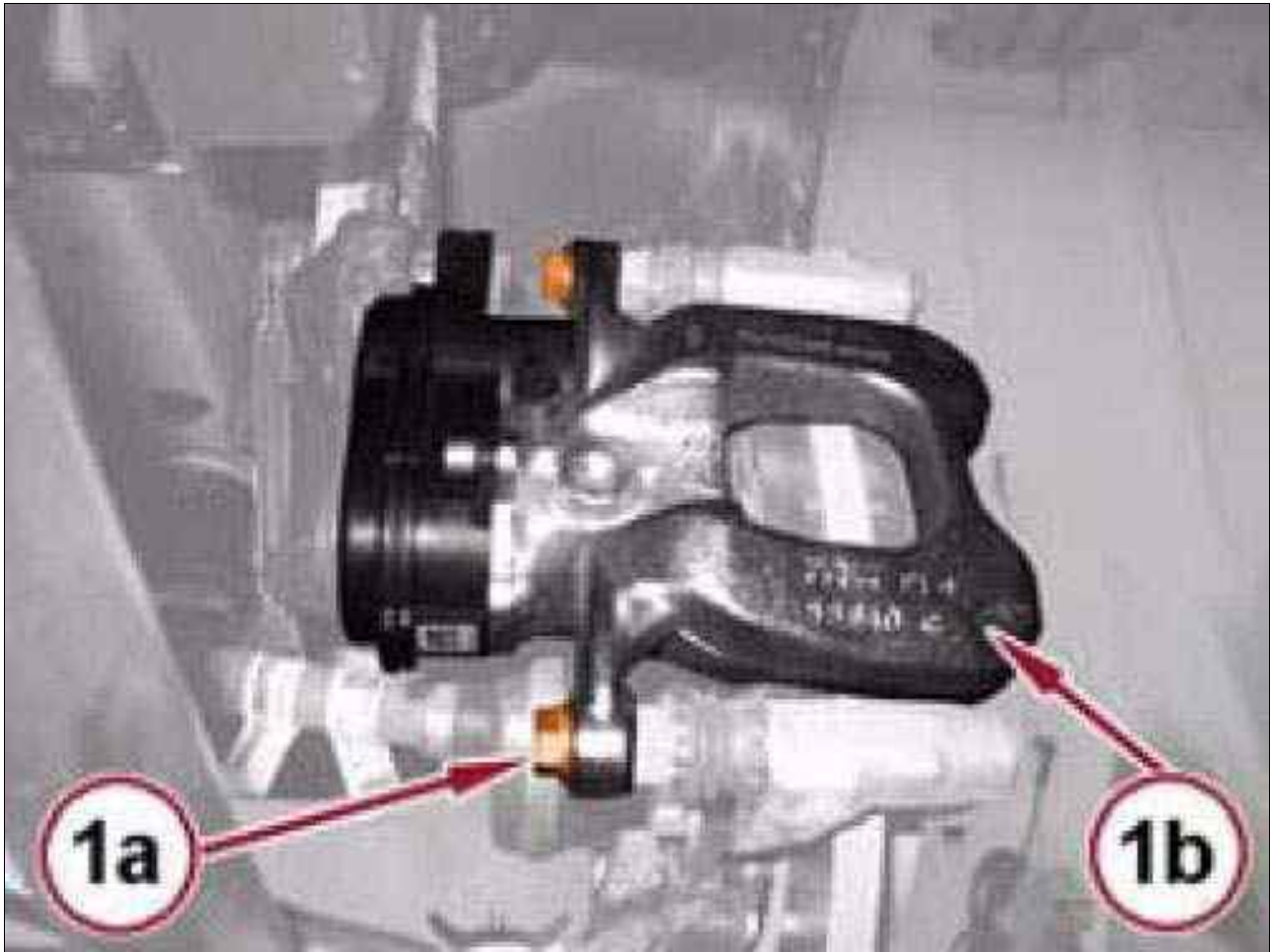


Courtesy of CHRYSLER GROUP, LLC

5. Remove both the caliper to caliper adaptor bolts (1a), and remove the caliper (1b).
6. If necessary, remove the EPB actuator from the caliper. Refer to ACTUATOR, ELECTRIC PARK BRAKE, REMOVAL AND INSTALLATION .

HYDRAULIC/MECHANICAL > CALIPER, DISC BRAKE, REAR > REMOVAL AND INSTALLATION > REMOVAL AND INSTALLATION > INSTALLATION

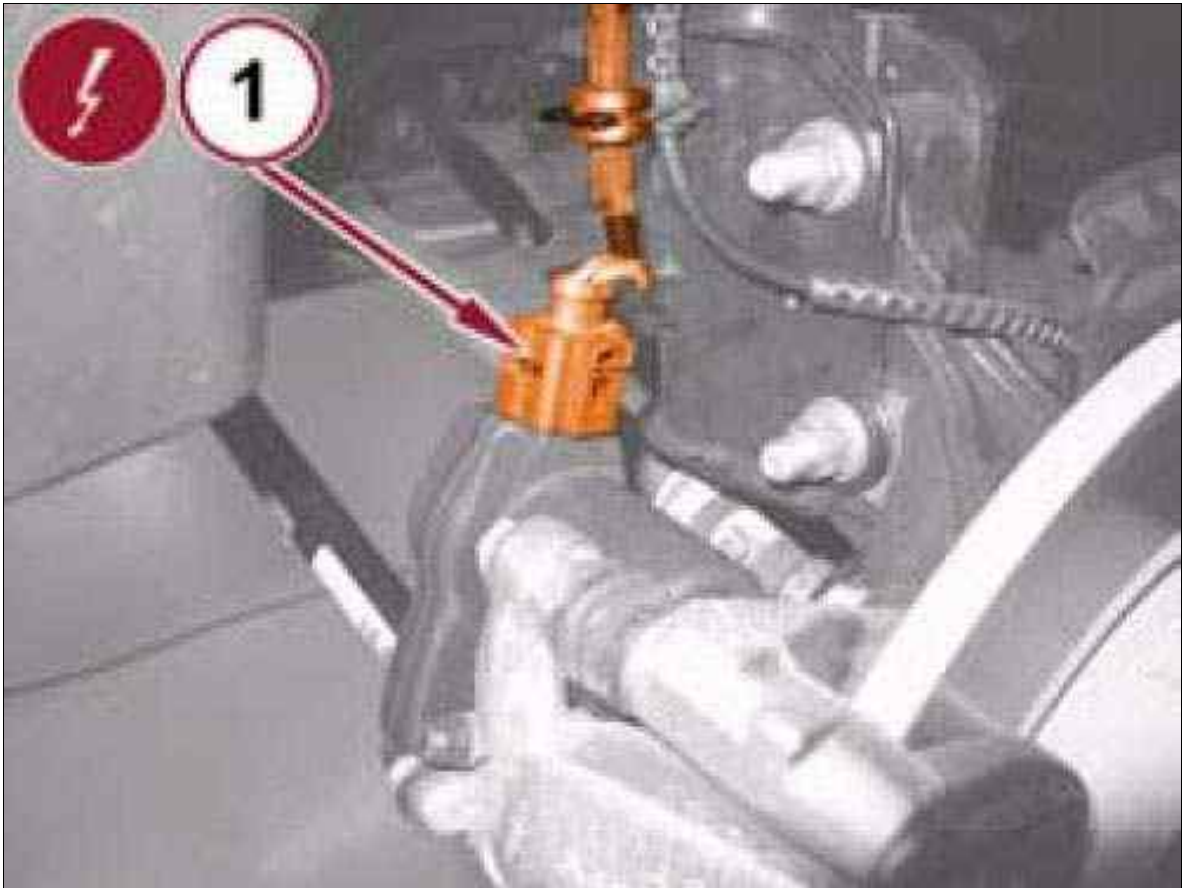
Fig 1: Caliper & Adaptor Bolts



Courtesy of CHRYSLER GROUP, LLC

1. If removed, install the Electric Park Brake (EPB) actuator onto the caliper. Refer to ACTUATOR, ELECTRIC PARK BRAKE, REMOVAL AND INSTALLATION .
2. Install the caliper (1b) onto the caliper adaptor, and tighten both caliper to caliper adaptor bolts (1a) to the proper specification. Refer to TORQUE SPECIFICATIONS .

Fig 2: Electric Park Brake Connector



Courtesy of CHRYSLER GROUP, LLC

3. Connect the EPB actuator electrical connector (1).
4. Install the removed brake hose to the caliper. Refer to TUBES AND HOSES, BRAKE, REMOVAL AND INSTALLATION .
5. Install the tire and wheel assembly. Refer to REMOVAL AND INSTALLATION .
6. Remove the support and lower the vehicle.
7. Fill and bleed the braking system. Refer to STANDARD PROCEDURE .

HYDRAULIC/MECHANICAL > FLUID > DIAGNOSIS AND TESTING > DIAGNOSIS AND TESTING - BRAKE FLUID CONTAMINATION

Indications of fluid contamination are swollen or deteriorated rubber parts. Swelling indicates the presence of petroleum in the brake fluid.

To test for contamination, put a small amount of drained brake fluid in clear glass jar. If the fluid separates into layers, there is mineral oil or other fluid contamination of the brake fluid.

If the brake fluid is contaminated, drain and thoroughly flush the brake system. Replace all the rubber parts or components containing rubber coming into contact with the brake fluid including: the master

cylinder and reservoir; caliper seals; ABS hydraulic control unit; and all hydraulic fluid hoses.

HYDRAULIC/MECHANICAL > FLUID > SPECIFICATIONS > SPECIFICATIONS

The brake fluid used in this vehicle must conform to DOT 4 specifications and SAE J1703 standards. No other type of brake fluid is recommended or approved for usage in the vehicle brake system. Use only Mopar® Brake Fluid DOT 4 Motor Vehicle or equivalent from a tightly sealed container.

 CAUTION:

Never use reclaimed brake fluid or fluid from a container which has been left open. An open container will absorb moisture from the air and contaminate the fluid.

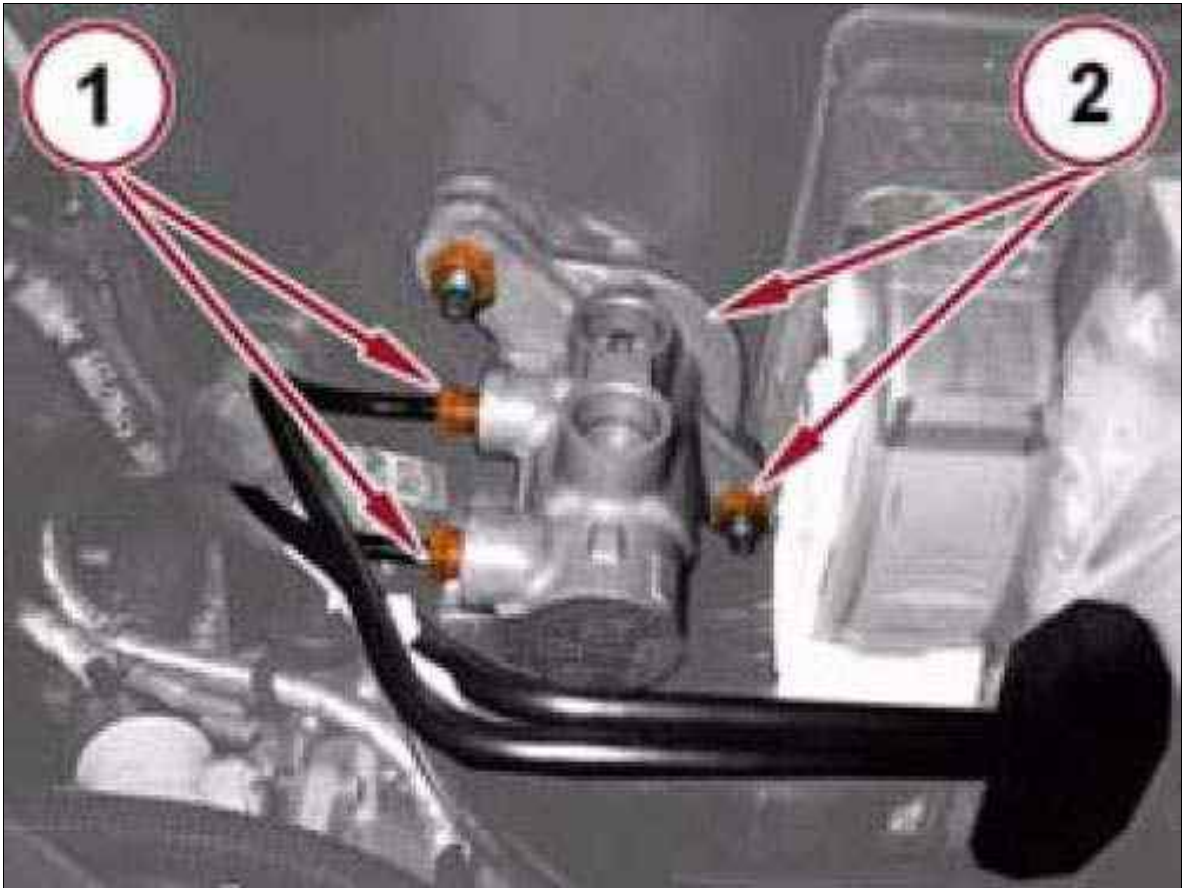
 CAUTION:

Never use any type of a petroleum-based fluid in the brake hydraulic system. Use of such type fluids will result in seal damage of the vehicle brake hydraulic system causing a failure of the vehicle brake system. Petroleum based fluids would be items such as engine oil, transmission fluid, power steering fluid, etc.

HYDRAULIC/MECHANICAL > MASTER CYLINDER, BRAKE > REMOVAL AND INSTALLATION > LHD > REMOVAL

1. Remove the brake fluid reservoir. Refer to RESERVOIR, BRAKE MASTER CYLINDER, REMOVAL AND INSTALLATION .

Fig 1: Primary And Secondary Brake Tubes & Brake Booster Nuts



Courtesy of CHRYSLER GROUP, LLC

2. Remove the primary and secondary brake tubes from the master cylinder (1).
3. Loosen the master cylinder to brake booster nuts (2), and remove the master cylinder.

Fig 2: Master Cylinder O-Ring

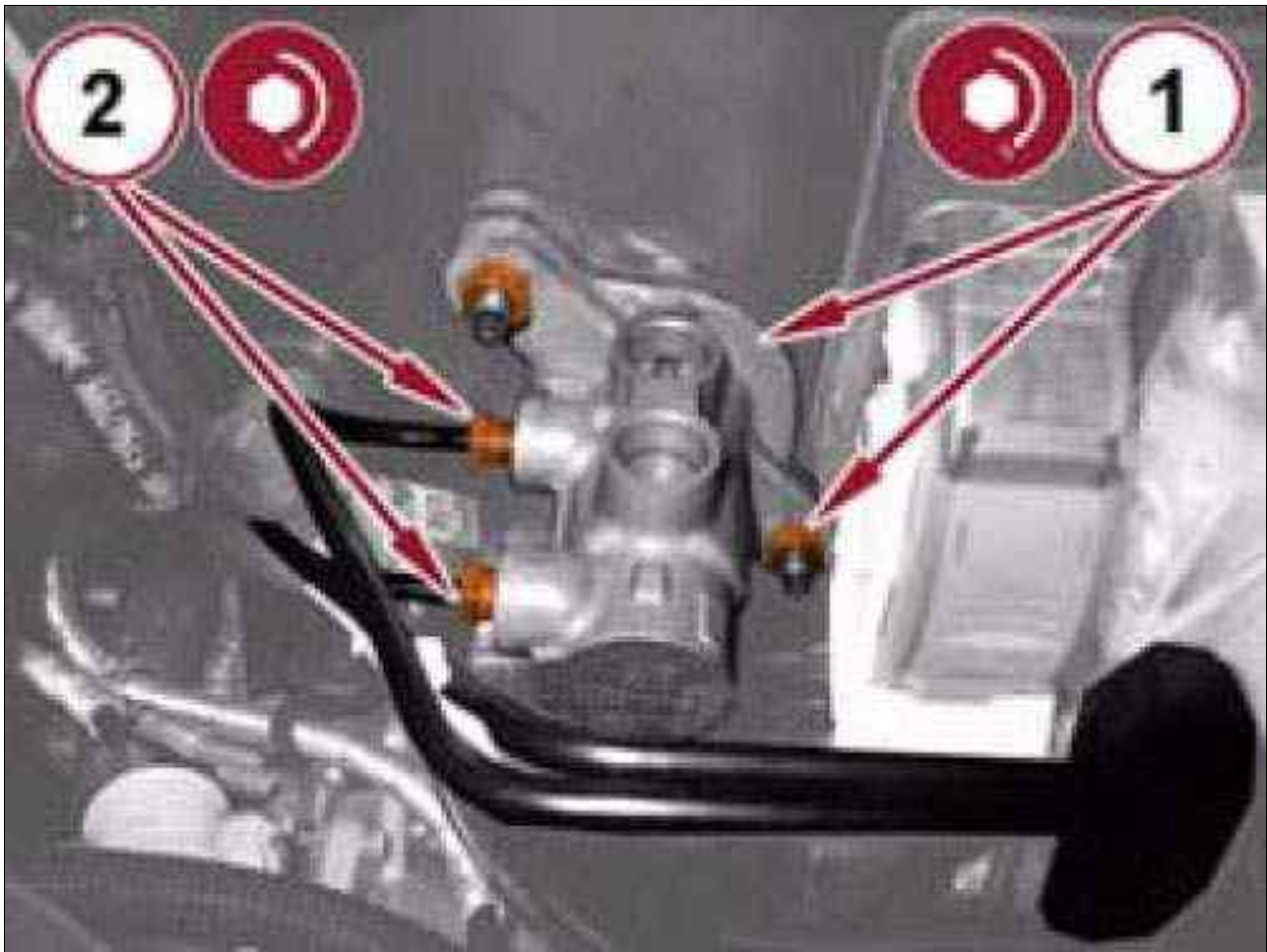


Courtesy of CHRYSLER GROUP, LLC

4. Remove the master cylinder o-ring, and discard.

**HYDRAULIC/MECHANICAL > MASTER CYLINDER, BRAKE > REMOVAL AND
INSTALLATION > LHD > INSTALLATION**

Fig 1: Primary And Secondary Brake Tubes & Brake Booster Nuts



Courtesy of CHRYSLER GROUP, LLC

1. Install the master cylinder with a **NEW** o-ring, and tighten the master cylinder to brake booster nuts (1) to the proper specification. Refer to TORQUE SPECIFICATIONS .
2. Install and tighten the primary and secondary brake tubes (2) to the proper specification. Refer to TORQUE SPECIFICATIONS .
3. Install the brake fluid reservoir. Refer to RESERVOIR, BRAKE MASTER CYLINDER, REMOVAL AND INSTALLATION .
4. Fill and bleed the brake fluid reservoir. Refer to STANDARD PROCEDURE .
5. Start engine and let idle for approximately 30 seconds, then turn off and wait about 1 minute. Fully stroke brake pedal to assure there are several strokes with assist prior to depletion of vacuum. If not, check for missing seal between master cylinder and booster.

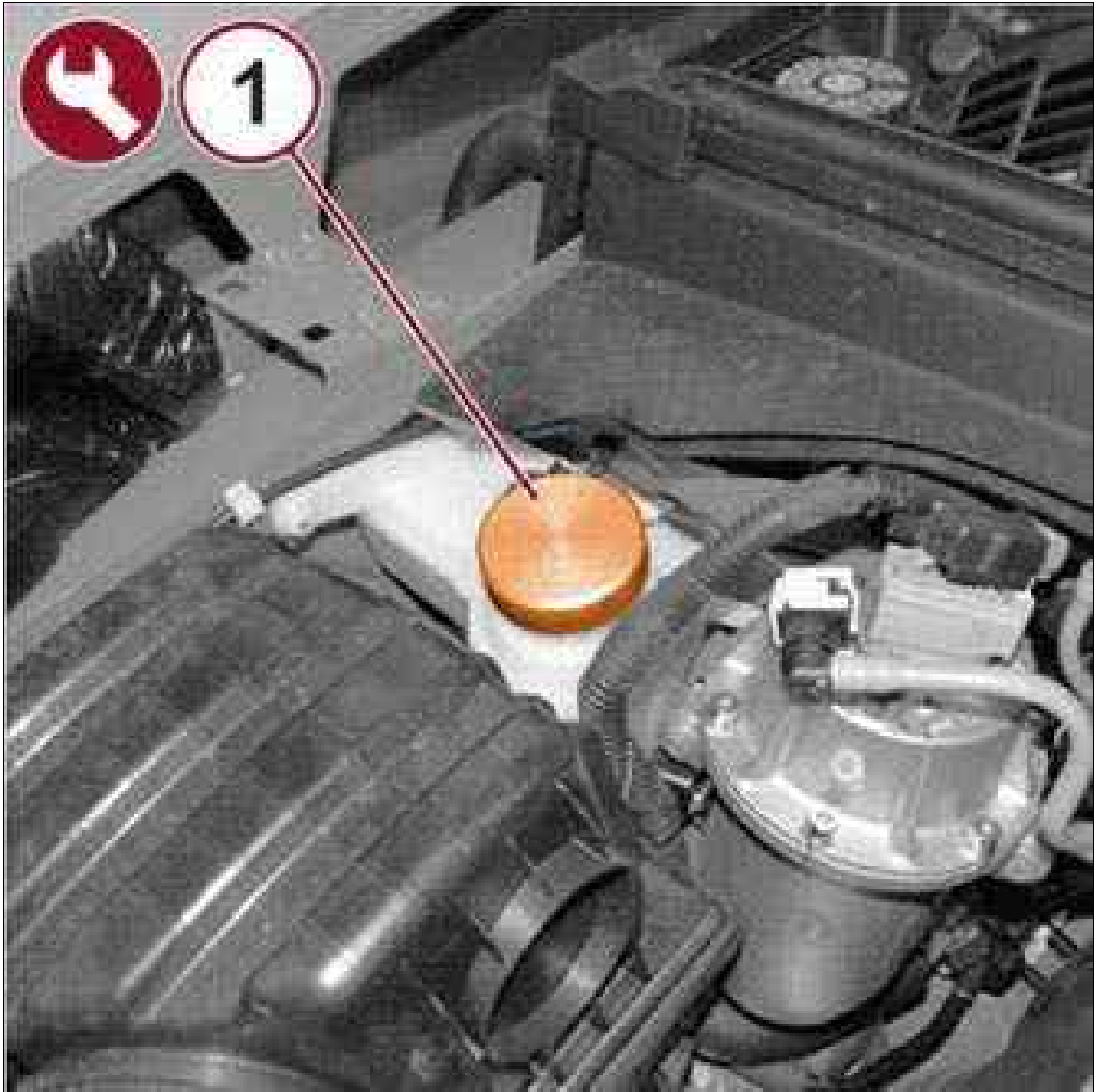
HYDRAULIC/MECHANICAL > MASTER CYLINDER, BRAKE > REMOVAL AND INSTALLATION > RHD > REMOVAL

1. Remove the engine cover. For 1.6L/2.0L Diesel, refer to COVER, ENGINE, REMOVAL AND INSTALLATION . For 1.4L, refer to COVER, ENGINE, REMOVAL AND INSTALLATION . For

2.4L, refer to COVER, ENGINE, REMOVAL AND INSTALLATION .

2. Disconnect and isolate the negative battery cable. If equipped with an Intelligent Battery Sensor (IBS), disconnect the IBS connector first before disconnecting the negative battery cable.

Fig 1: Brake-Clutch Fluid Reservoir Cap



Courtesy of CHRYSLER GROUP, LLC

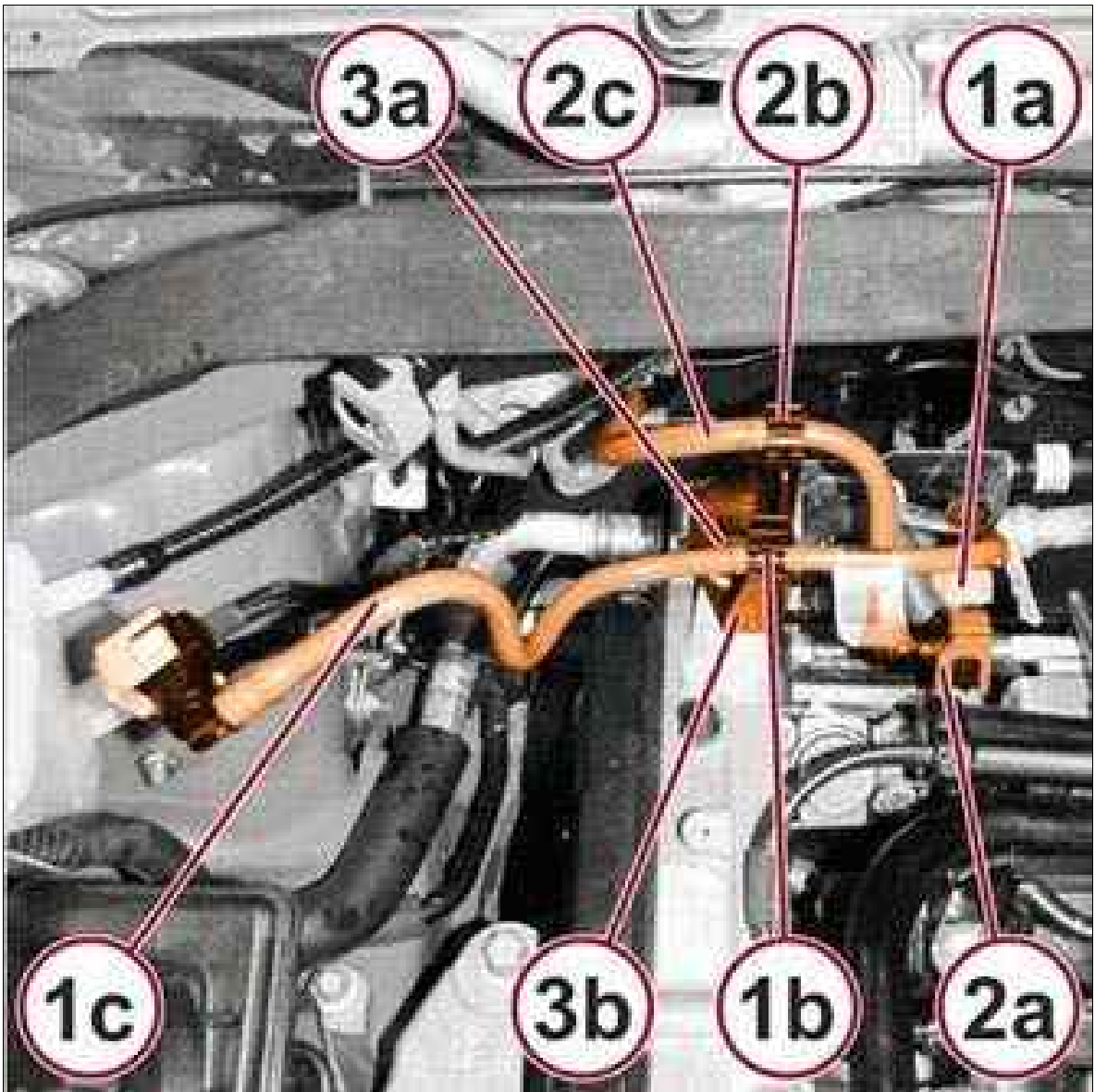
3. Remove the brake-clutch fluid reservoir cap (1) and install the special tool 2000001400.

 NOTE:

To prevent impurities from entering the brake-clutch fluid reservoir, before undoing the cap clean it and the entire upper surface of the reservoir next to the filler thoroughly.

4. Remove the fuel filter and mounting bracket. Refer to FILTER, FUEL, REMOVAL AND INSTALLATION .

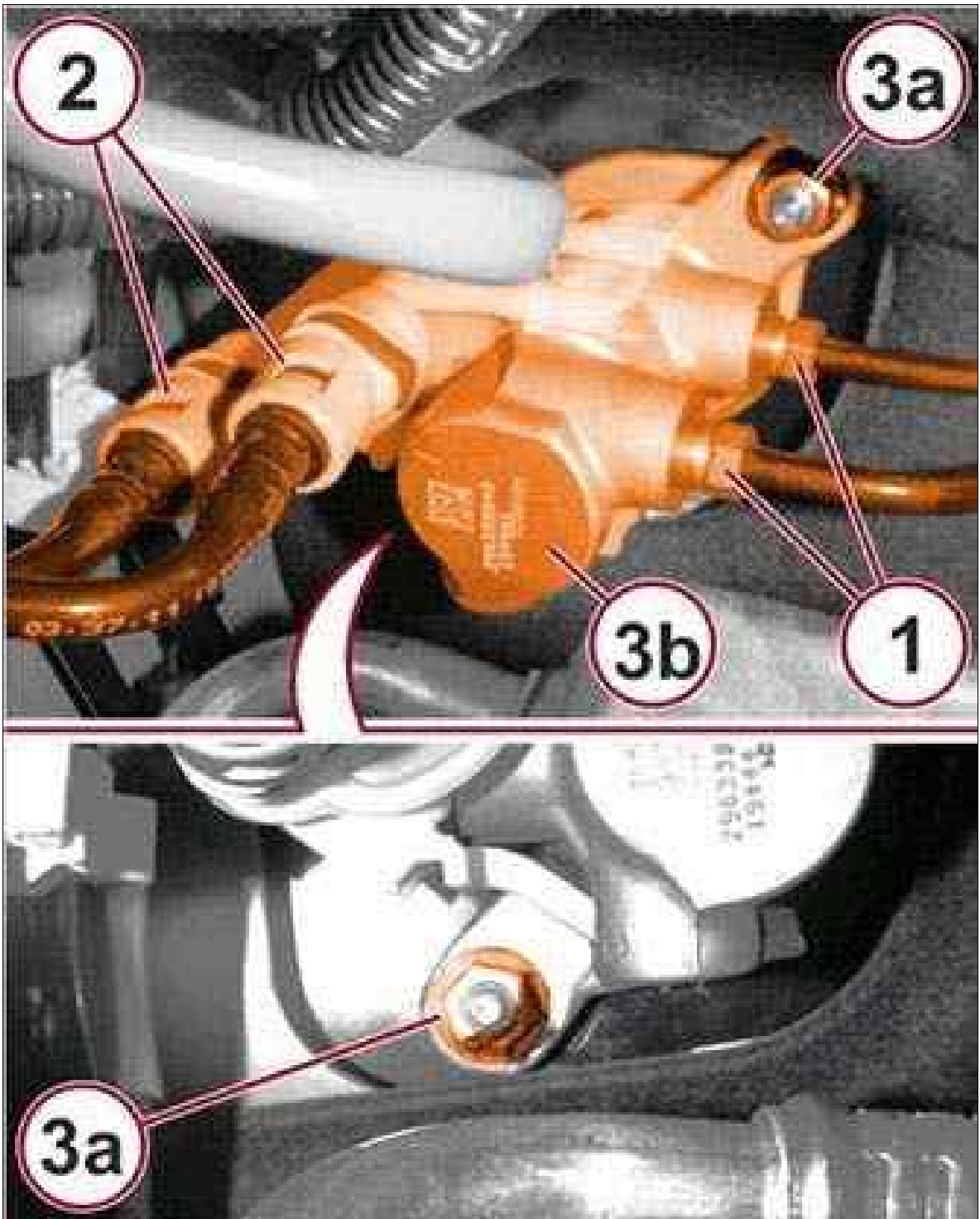
Fig 2: Fuel Tubes, Quick Couplings, Retaining Clips, Bracket & Screw



Courtesy of CHRYSLER GROUP, LLC

5. Disconnect the quick coupling (1a), open the retaining clip (1b) and remove the fuel supply tube (1c).
6. Disconnect the quick coupling (2a), open the retaining clip (2b) and move the fuel return tube (2c) to the side.
7. Remove the fixing screw (3a) and remove the fuel pipe mounting bracket (3b).

Fig 3: Master Cylinder, Quick Couplings, Brake Tubes & Nuts



Courtesy of CHRYSLER GROUP, LLC

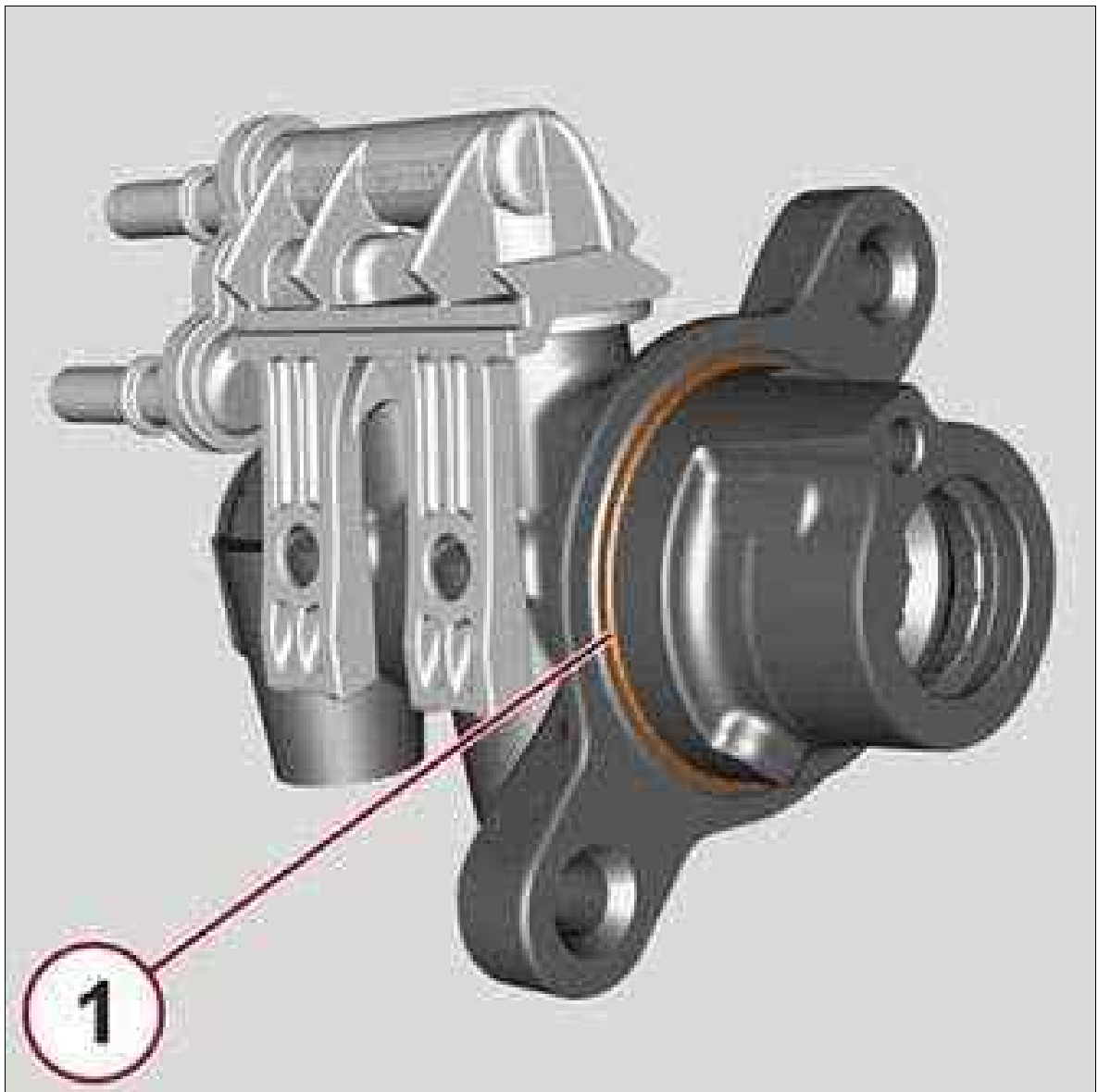
8. Remove both the primary and secondary brake tubes (1) from master cylinder to hydraulic control unit.
9. Disconnect the quick couplings for the hoses (2) from the reservoir.

 **NOTE:**

Seal the pipes to prevent the brake-clutch fluid from escaping, even in part.

10. Remove the fixing nuts (3a) and remove the master cylinder (3b).

Fig 4: O-Ring



Courtesy of CHRYSLER GROUP, LLC

11. Remove and discard the o-ring (1).

HYDRAULIC/MECHANICAL > MASTER CYLINDER, BRAKE > REMOVAL AND INSTALLATION > RHD > INSTALLATION

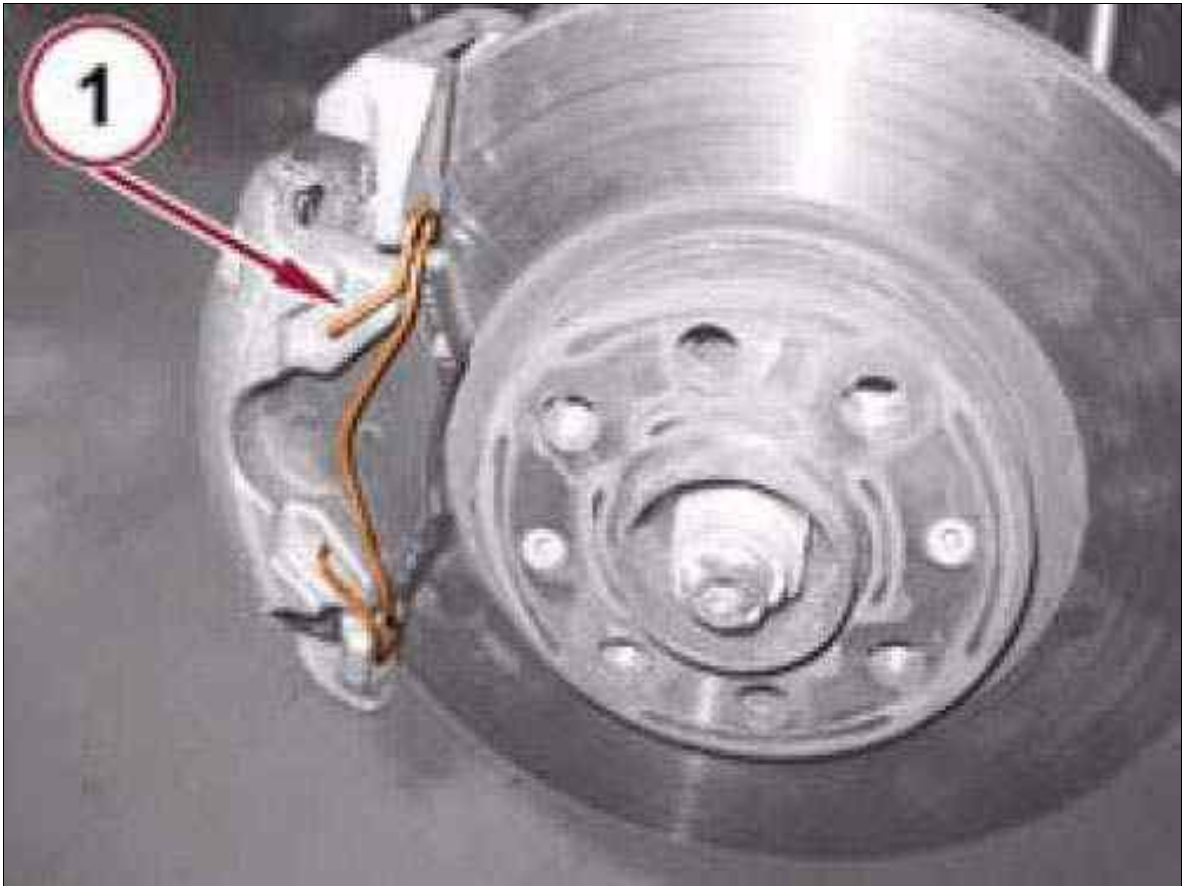
1. Install the master cylinder with a **NEW** o-ring, and tighten the master cylinder to brake booster nuts to the proper specification. Refer to TORQUE SPECIFICATIONS .
2. Connect the quick couplings for the hoses from the reservoir.

3. Install and tighten the primary and secondary brake tubes (2) to the proper specification. Refer to TORQUE SPECIFICATIONS .
4. Position the fuel pipe mounting bracket in its housing and tighten the fixing screw.
5. Position the fuel return pipe, connect the quick coupling and engage the retaining clip.
6. Position the fuel supply pipe, connect the quick coupling and engage the retaining clip.
7. Install the fuel filter and bracket. Refer to FILTER, FUEL, REMOVAL AND INSTALLATION .
8. Remove the special tool fitted previously and tighten the cap for the brake-clutch fluid reservoir.
9. Connect the negative battery cable. If equipped with an Intelligent Battery Sensor (IBS), connect the IBS connector.
10. Install the engine cover. For 1.6L/2.0L Diesel, refer to COVER, ENGINE, REMOVAL AND INSTALLATION . For 1.4L, refer to COVER, ENGINE, REMOVAL AND INSTALLATION . For 2.4L, refer to COVER, ENGINE, REMOVAL AND INSTALLATION .
11. Fill and bleed the brake fluid reservoir. Refer to STANDARD PROCEDURE .
12. Start engine and let idle for approximately 30 seconds, then turn off and wait about 1 minute. Fully stroke brake pedal to assure there are several strokes with assist prior to depletion of vacuum. If not, check for missing seal between master cylinder and booster.

HYDRAULIC/MECHANICAL > PADS, BRAKE, FRONT > REMOVAL AND INSTALLATION > 1.4L - 1.6L > REMOVAL 1.4L - 1.6L

1. Raise and support the vehicle. Refer to HOISTING, STANDARD PROCEDURE .
2. Remove tire and wheel assembly. Refer to REMOVAL AND INSTALLATION .

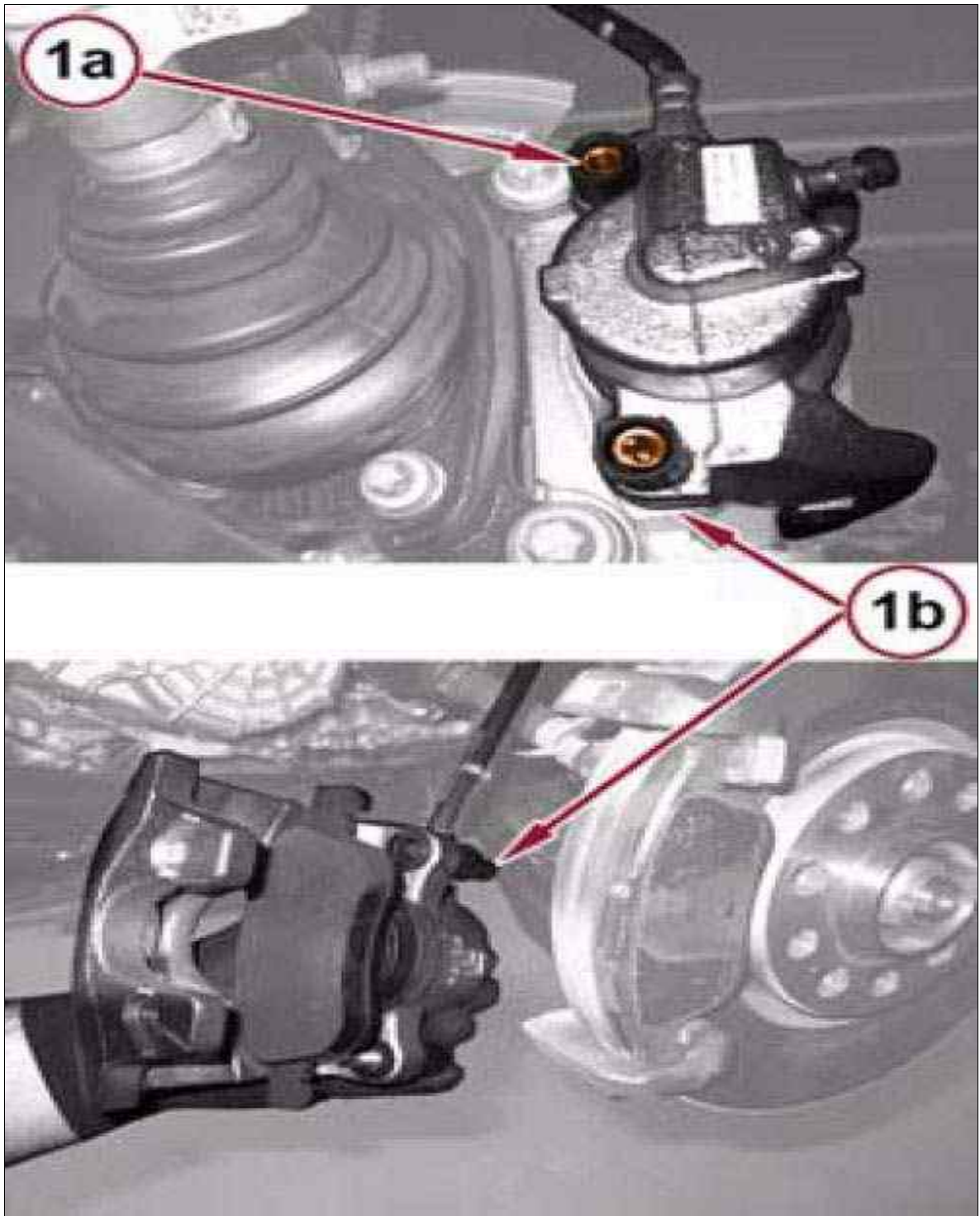
Fig 1: Brake Caliper Retainer Spring



Courtesy of CHRYSLER GROUP, LLC

3. Remove the brake caliper retainer spring (1).

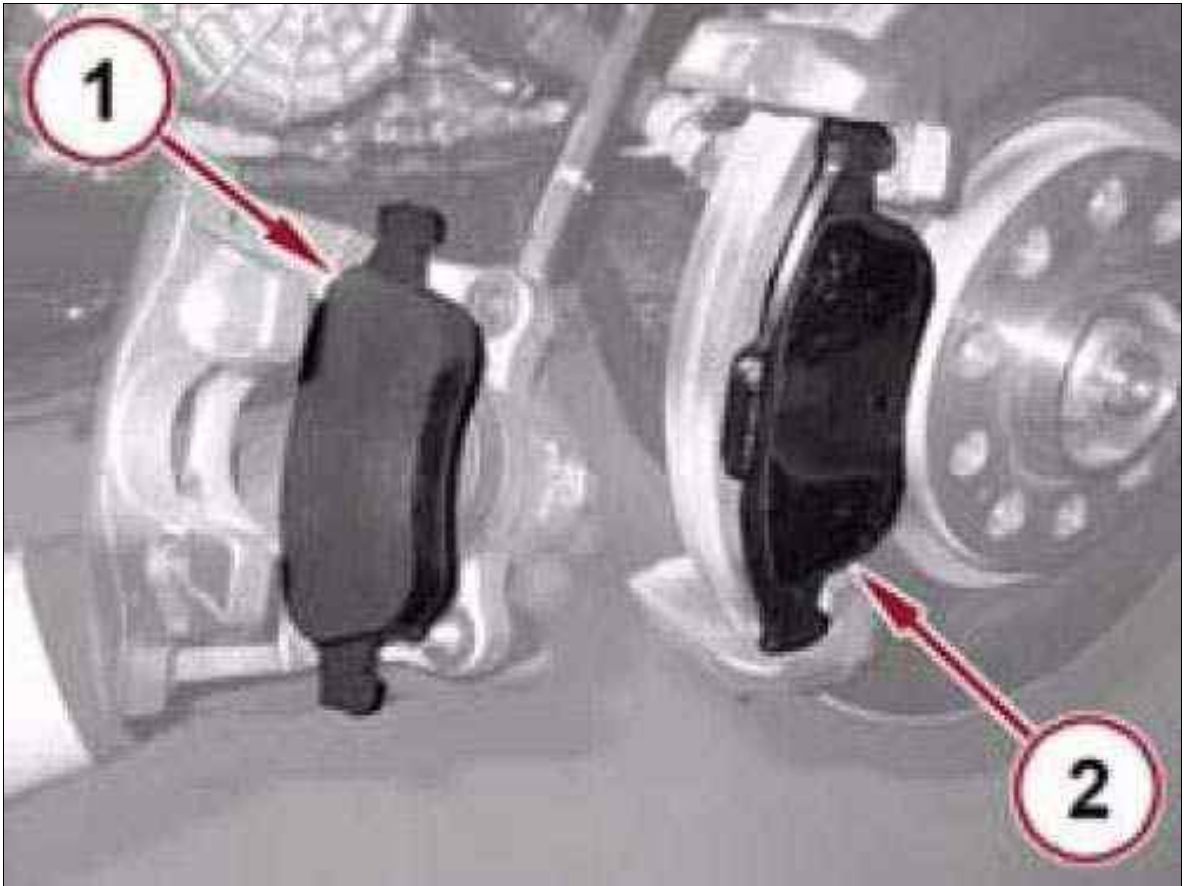
Fig 2: Caliper Bolts



Courtesy of CHRYSLER GROUP, LLC

4. Remove the dust caps from the caliper mounting bolts.
5. Remove the caliper to caliper adaptor bolts (1a).

Fig 3: Brake Pads



Courtesy of CHRYSLER GROUP, LLC

6. Remove the inner brake pad (1) from the caliper.
7. Remove the outer brake pad (2) from the caliper adaptor.

**HYDRAULIC/MECHANICAL > PADS, BRAKE, FRONT > REMOVAL AND
INSTALLATION > 1.4L - 1.6L > INSTALLATION 1.4L - 1.6L**

1. Using a suitable tool, push the brake caliper piston into the caliper housing.
2. On the brake pad contacting surfaces, grease the brake caliper and adaptor

Fig 1: Brake Pads & Mounting Hardware



Courtesy of CHRYSLER GROUP, LLC

3. Position the outer brake pad (1a) onto caliper adaptor as shown in illustration.
4. Position the inner brake pad (2a) into the caliper as shown in illustration.
5. Position the brake caliper onto the caliper adaptor. Tighten the caliper to caliper adaptor bolts to the proper specification. Refer to TORQUE SPECIFICATIONS .
6. Install the dust caps for the caliper mounting bolts.

7. Install the tire and wheel assembly. Refer to REMOVAL AND INSTALLATION .
8. Remove the support and lower the vehicle.
9. Pump brake pedal several times to set pads to caliper and brake rotor.



CAUTION:

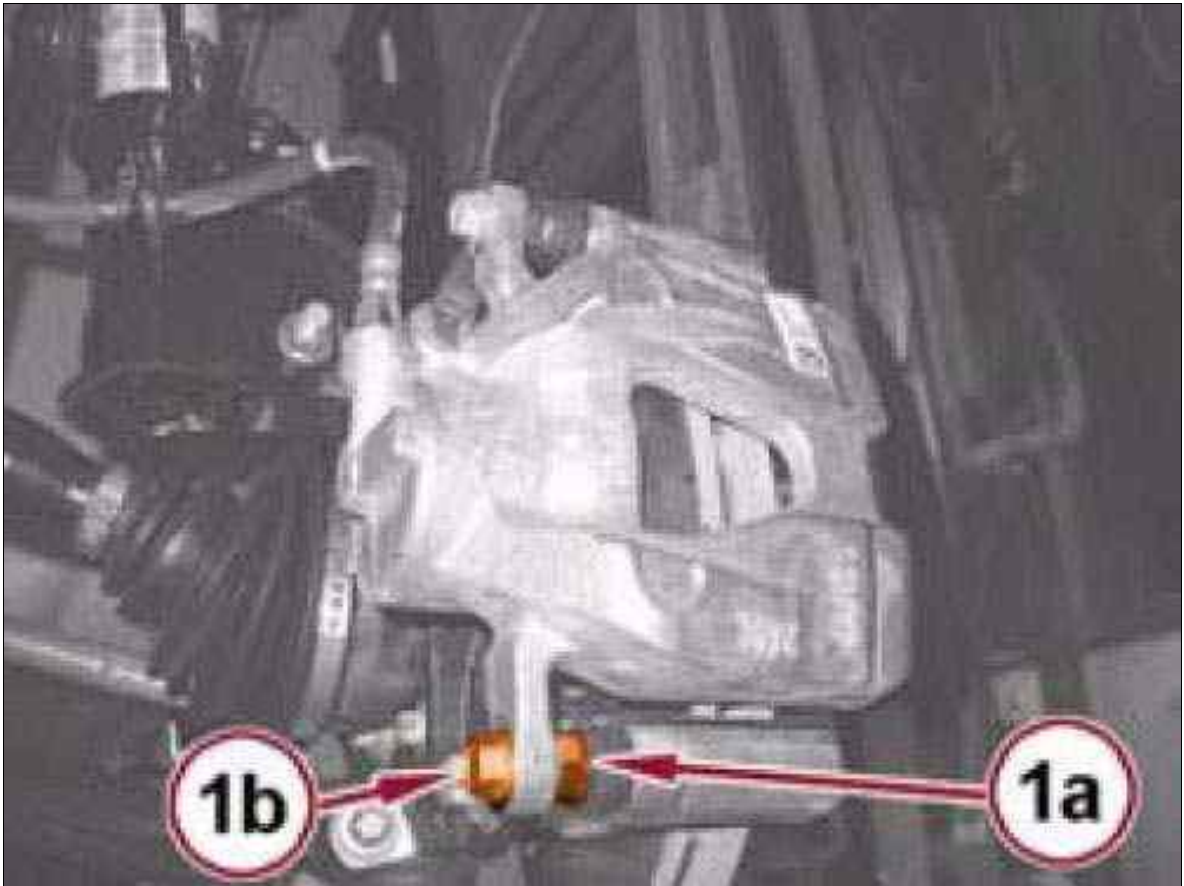
When NEW brake pads have been installed, keep in mind that braking effectiveness might be somewhat reduced during the first brake applications following installation.

10. Check and adjust brake fluid level in reservoir.
11. Road test vehicle making several stops to wear off any foreign material on brakes and to seat brake shoes.

**HYDRAULIC/MECHANICAL > PADS, BRAKE, FRONT > REMOVAL AND
INSTALLATION > 1.4L 4X4 - 2.0L - 2.4L > REMOVAL - 1.4L 4X4 - 2.0L - 2.4L**

1. Raise and support the vehicle. Refer to HOISTING, STANDARD PROCEDURE .
2. Remove the tire and wheel assembly. Refer to REMOVAL AND INSTALLATION .

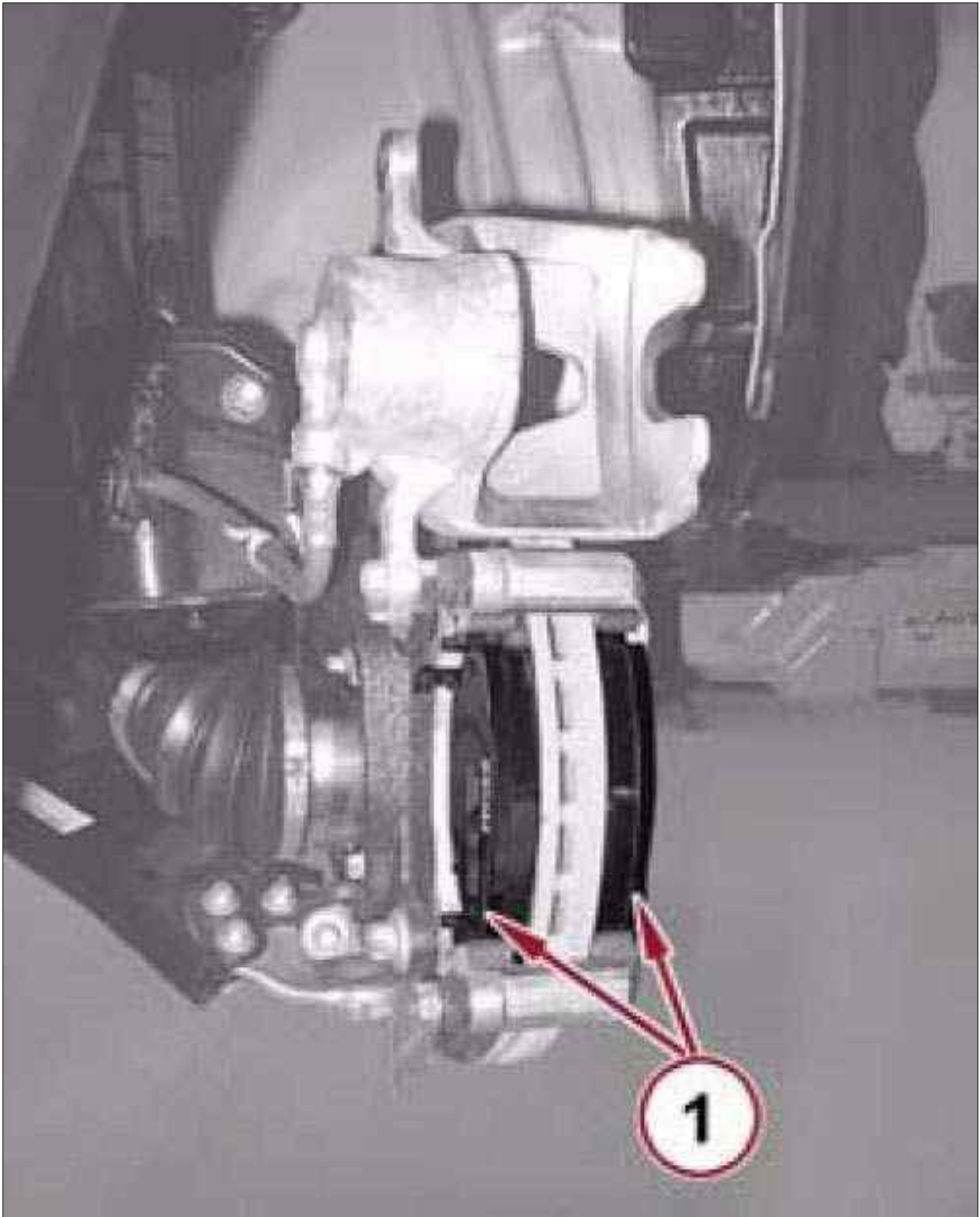
Fig 1: Caliper Adaptor Bolt & Nut



Courtesy of CHRYSLER GROUP, LLC

3. While holding the nut (1a), remove the caliper to caliper adaptor bolt (1b).

Fig 2: Brake Pads



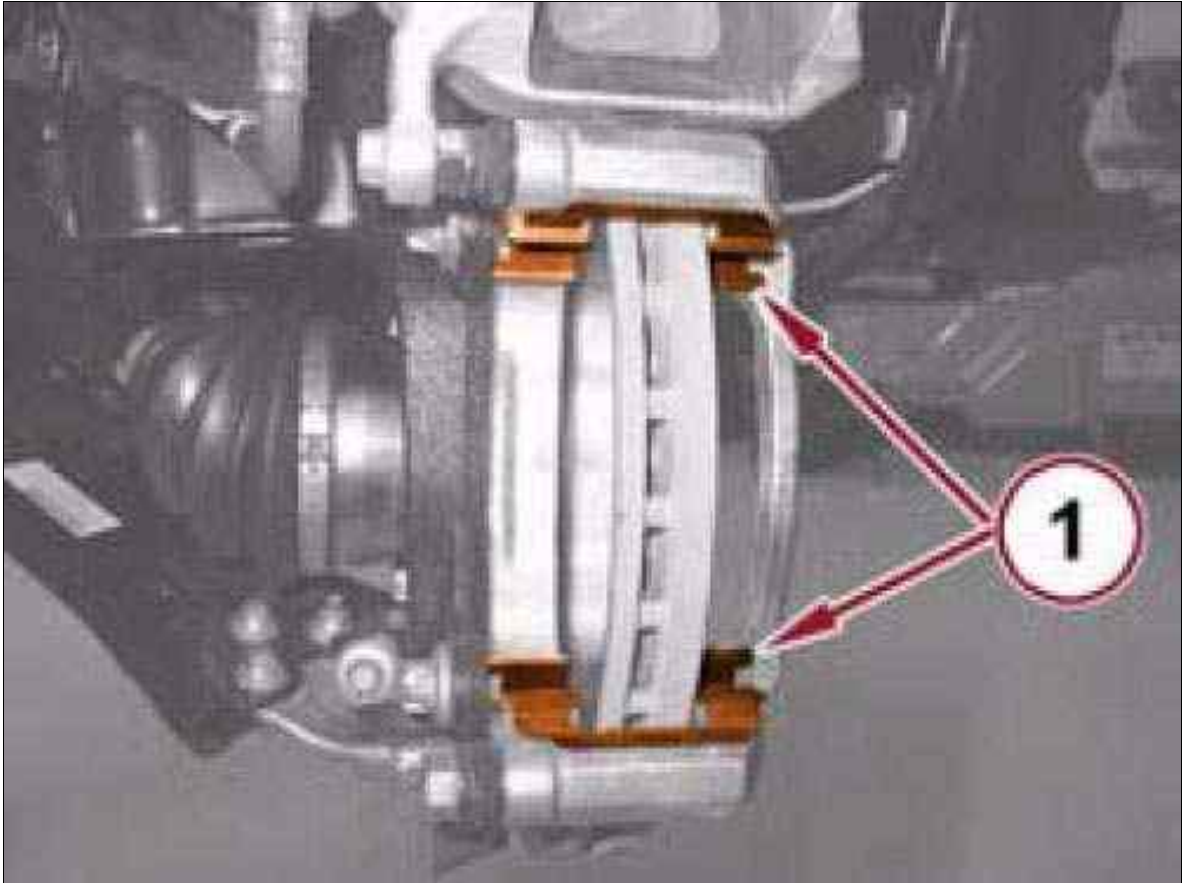
Courtesy of CHRYSLER GROUP, LLC

4. Rotate the caliper upwards and remove the brake pads (1).

 NOTE:

Remove all traces of glue on the brake caliper. Avoid the use of degreasers not compatible with the rubber parts of the brake caliper.

Fig 3: Abutment Shims

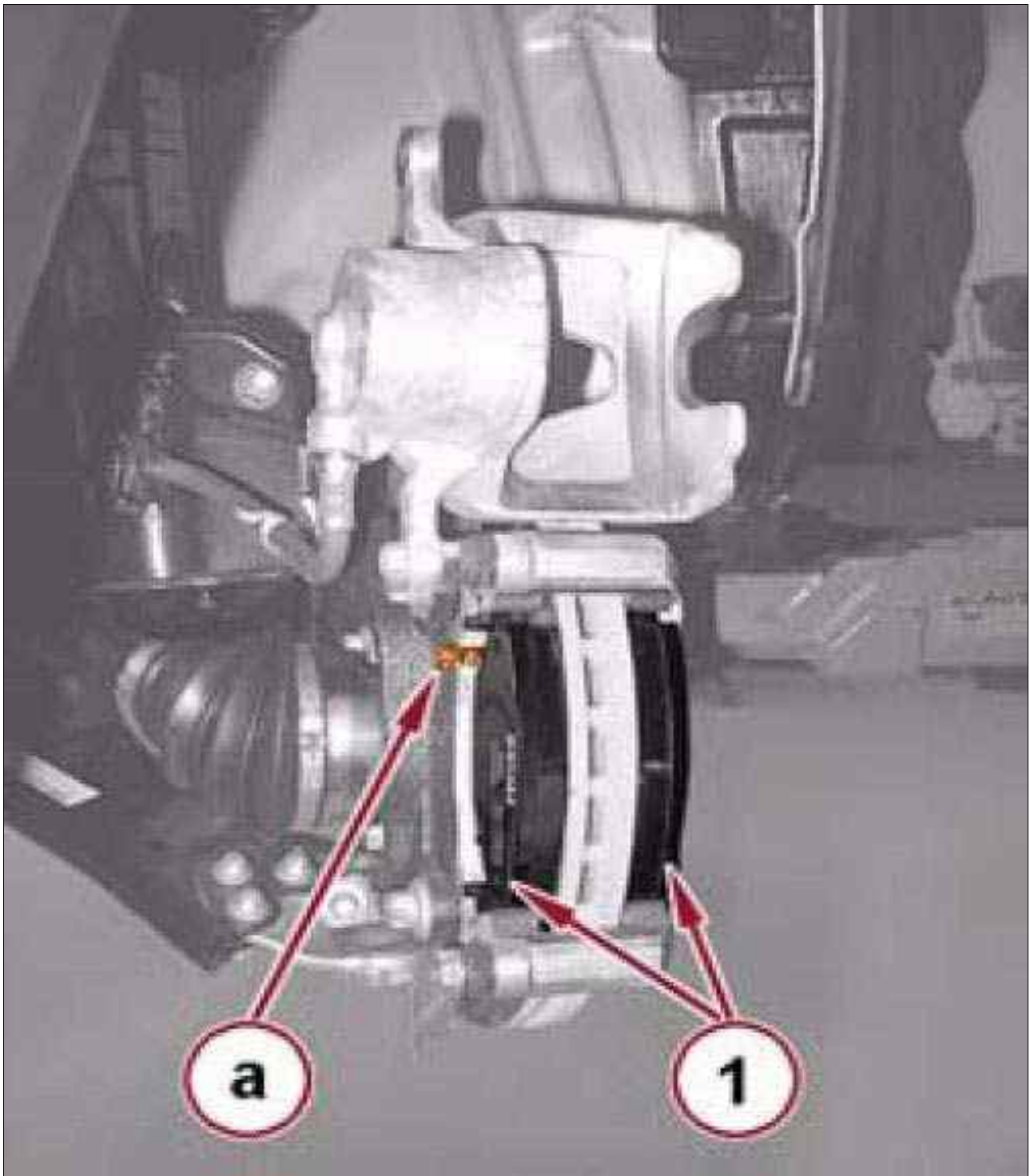


Courtesy of CHRYSLER GROUP, LLC

5. Remove the abutment shims (1) from the caliper adaptor.
6. Using the appropriate cleaner, clean the seats of the shims on the caliper bracket.

**HYDRAULIC/MECHANICAL > PADS, BRAKE, FRONT > REMOVAL AND
INSTALLATION > 1.4L 4X4 - 2.0L - 2.4L > INSTALLATION - 1.4L 4X4 - 2.0L - 2.4L**

Fig 1: Brake Pads & Wear Sensor



Courtesy of CHRYSLER GROUP, LLC

1. Install the new abutment shims on the brake caliper adaptor
2. Install the new brake pads (1) onto the caliper adaptor.

 **NOTE:**

The inner brake pad has the wear sensor (a) mounted to the pad.

3. Position the brake caliper back onto the caliper adaptor, install and tighten the caliper to caliper adaptor bolt to the proper specification. Refer to TORQUE SPECIFICATIONS .
4. Install the tire and wheel assembly. Refer to REMOVAL AND INSTALLATION .
5. Remove the support and lower the vehicle.
6. Pump brake pedal several times to set pads to caliper and brake rotor.



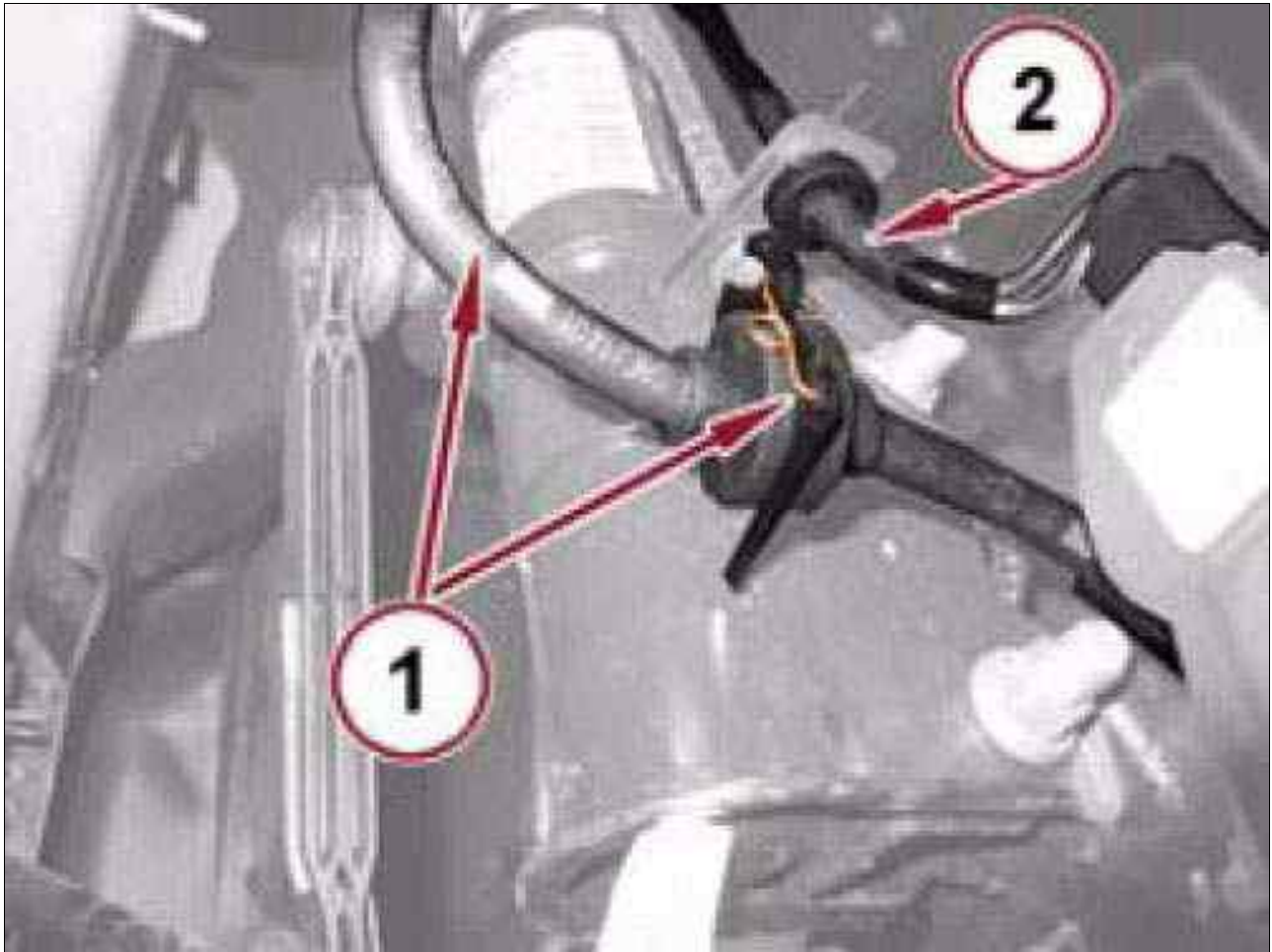
CAUTION:

When NEW brake pads have been installed, keep in mind that braking effectiveness might be somewhat reduced during the first brake applications following installation.

7. Check and adjust brake fluid level in reservoir.
8. Road test vehicle making several stops to wear off any foreign material on brakes and to seat brake shoes.

**HYDRAULIC/MECHANICAL > PADS, BRAKE, REAR > REMOVAL AND INSTALLATION
> REMOVAL AND INSTALLATION > REMOVAL**

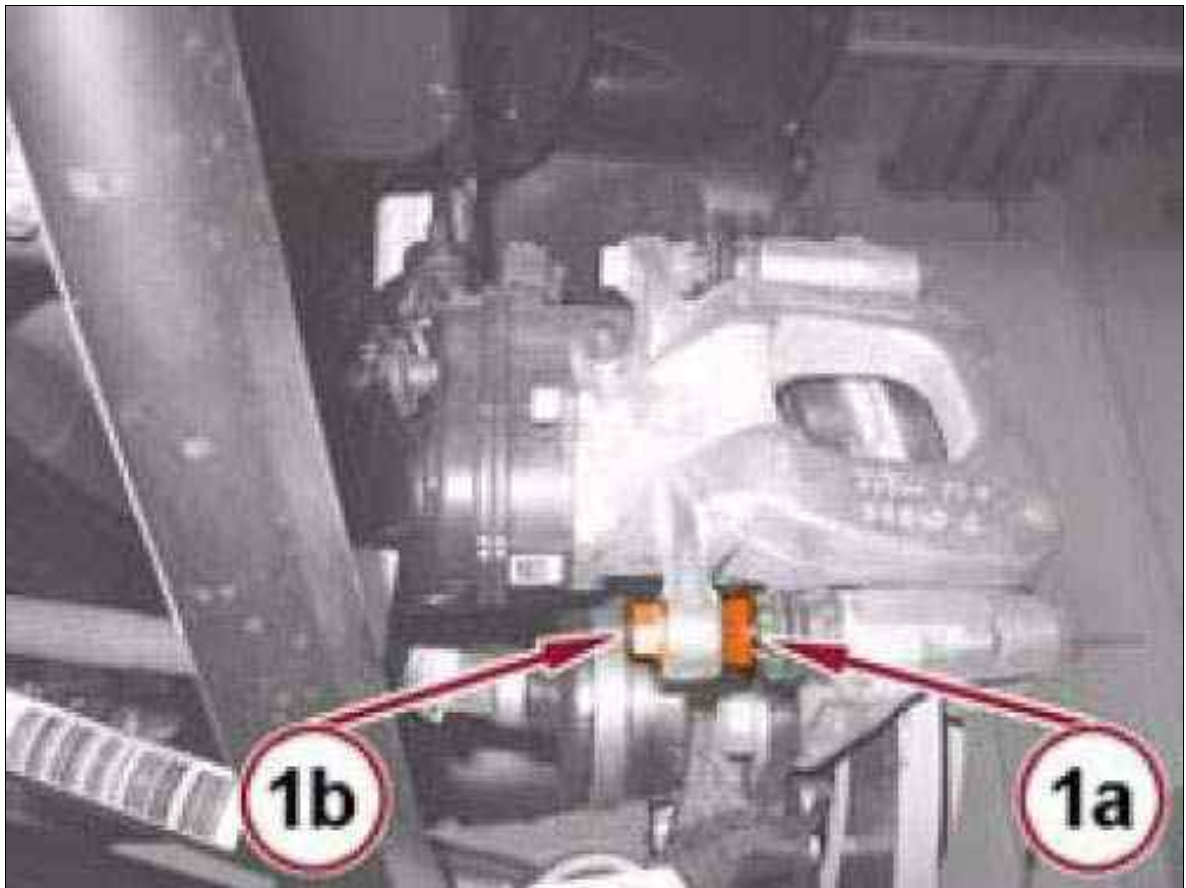
Fig 1: Electric Park Brake Harness & Clip



Courtesy of CHRYSLER GROUP, LLC

1. Raise and support the vehicle. Refer to HOISTING, STANDARD PROCEDURE .
2. Remove the tire and wheel assembly. Refer to REMOVAL AND INSTALLATION .
3. Remove the brake hose retainer clip (1) and remove the brake hose from the strut.
4. Remove the Electric Park Brake (EPB) harness (2) from the strut.

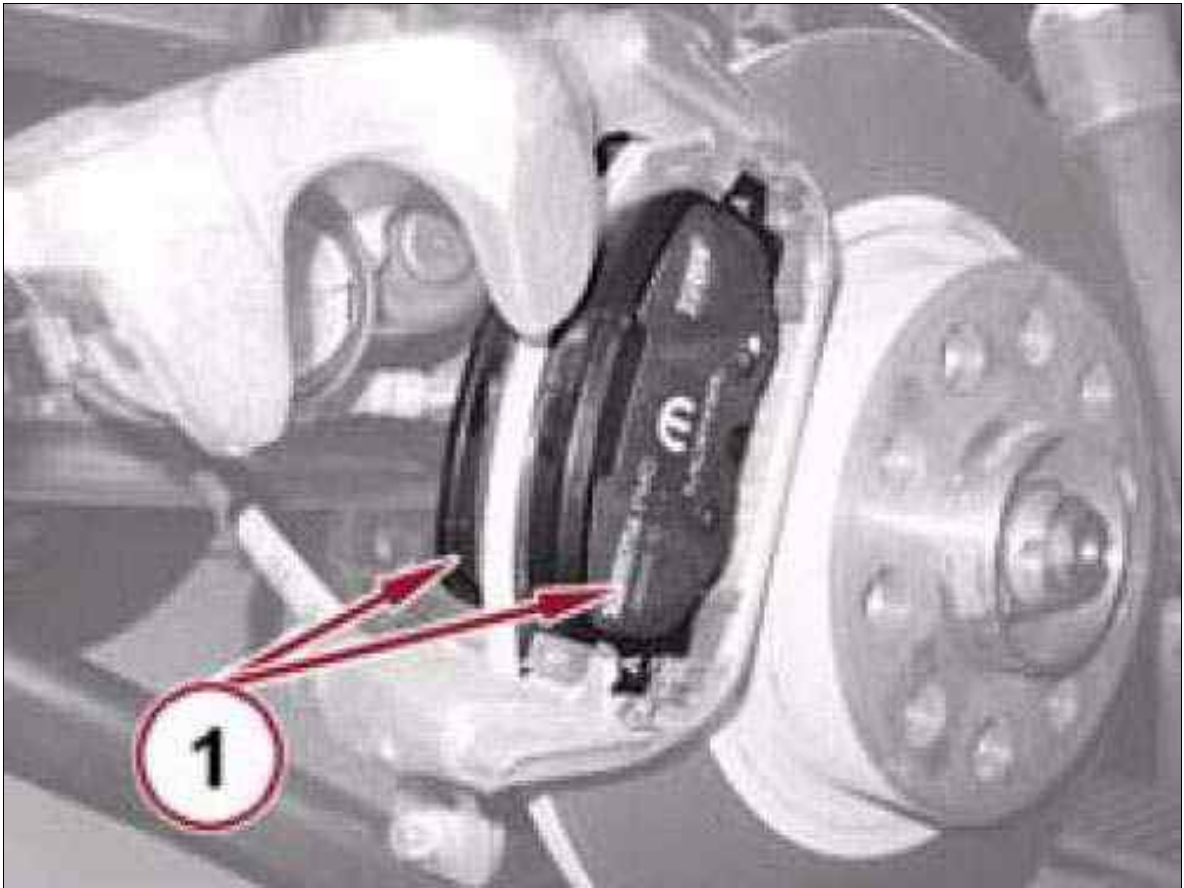
Fig 2: Caliper Adaptor Bolt



Courtesy of CHRYSLER GROUP, LLC

5. While holding the nut (1a), remove the lower caliper to caliper adaptor bolt (1b)

Fig 3: Brake Pads



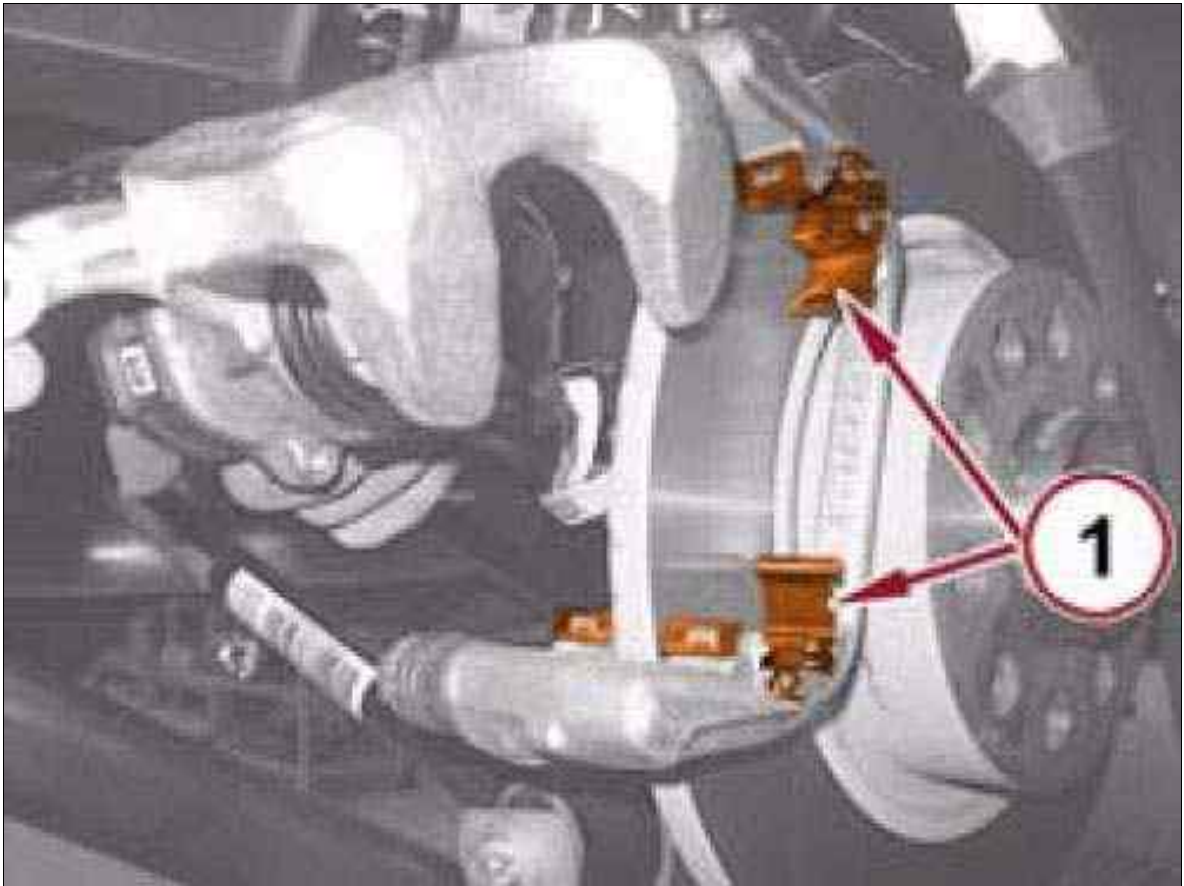
Courtesy of CHRYSLER GROUP, LLC

6. Rotate the brake caliper upwards and remove the brake pads (1).

 NOTE:

Remove all traces of glue on the brake caliper. Avoid the use of degreasers not compatible with the rubber parts of the brake caliper.

Fig 4: Abutment Shims

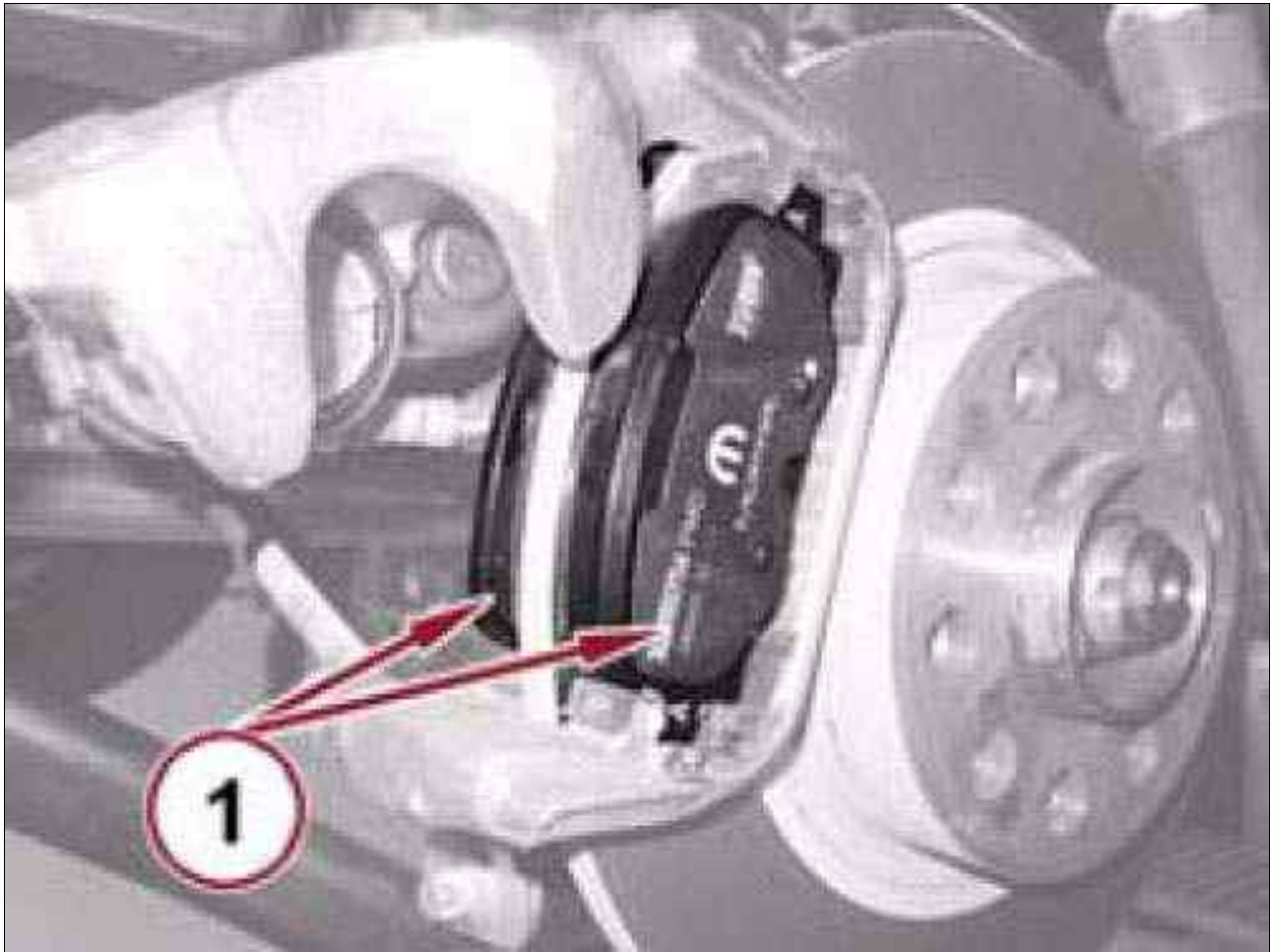


Courtesy of CHRYSLER GROUP, LLC

7. Remove the abutment shims (1).
8. Using the appropriate cleaner, clean the seats of the shims on the caliper bracket.

**HYDRAULIC/MECHANICAL > PADS, BRAKE, REAR > REMOVAL AND INSTALLATION
> REMOVAL AND INSTALLATION > INSTALLATION**

Fig 1: Brake Pads



Courtesy of CHRYSLER GROUP, LLC

1. Install the new abutment shims on the caliper bracket.
2. Install the new brake pads (1) onto the caliper bracket

Fig 2: Brake Pad Identification



Courtesy of CHRYSLER GROUP, LLC

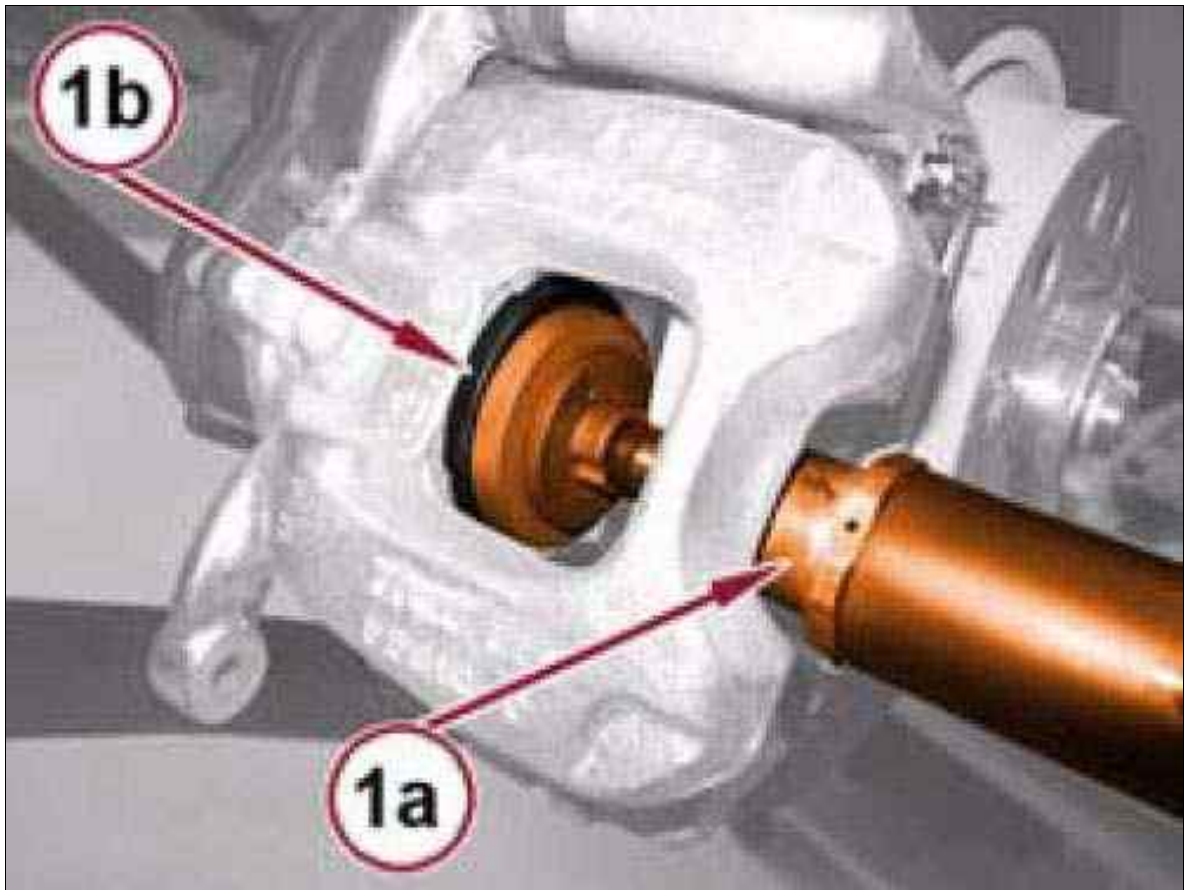
 NOTE:

The inner pad is marked by the letter "B" stamped on the ends for attachment to slide pegs.

 NOTE:

The outer pad is marked by the letters "A" stamped on the ends for attachment to slide pegs.

Fig 3: Pneumatic Tool & Piston



Courtesy of CHRYSLER GROUP, LLC

 NOTE:

Connect The diagnostic tool to the diagnostic socket of the car and go to the "unit BSM / EPB." Go to the menu "actuators" and launch the procedure "maintenance mode".

 NOTE:

Run the procedure "setback piston brake calipers."

 NOTE:

At The end of the brake caliper assembly, launch the procedure "check assembly electric parking brake."

3. Using the pneumatic tool (1a) retract the piston (1b) of the rear brake caliper.

4. Position the brake caliper back onto the caliper adaptor, install and tighten the caliper to caliper adaptor bolt to the proper specification. Refer to TORQUE SPECIFICATIONS .
5. Install the Electric Park Brake (EPB) harness to the strut.
6. Install the brake hose to the strut, and install the retainer clip.
7. Install the tire and wheel assembly. Refer to REMOVAL AND INSTALLATION .
8. Remove the support and lower the vehicle.
9. Pump brake pedal several times to set pads to caliper and brake rotor.



CAUTION:

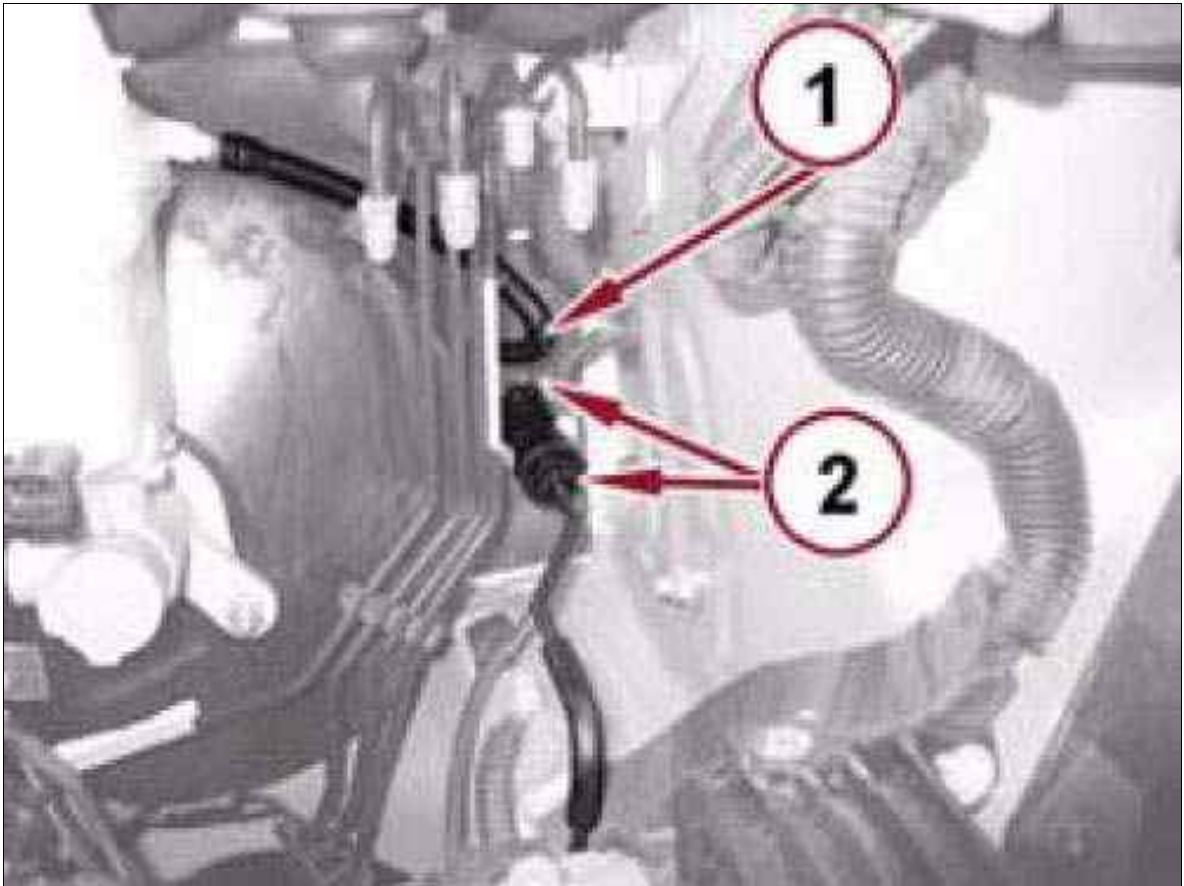
When NEW brake pads have been installed, keep in mind that braking effectiveness might be somewhat reduced during the first brake applications following installation.

10. Check and adjust brake fluid level in reservoir.
11. Road test vehicle making several stops to wear off any foreign material on brakes and to seat brake shoes.

HYDRAULIC/MECHANICAL > PEDAL(S), BRAKE AND/OR ACCELERATOR > REMOVAL AND INSTALLATION > LHD > REMOVAL

1. If equipped with a manual transmission, remove the Integrated Control Unit (ICU). Refer to INTEGRATED CONTROL UNIT (ICU), REMOVAL AND INSTALLATION .
2. Remove the drivers knee airbag. Refer to AIR BAG, KNEE BLOCKER, REMOVAL AND INSTALLATION .
3. Remove the drivers lower air duct.

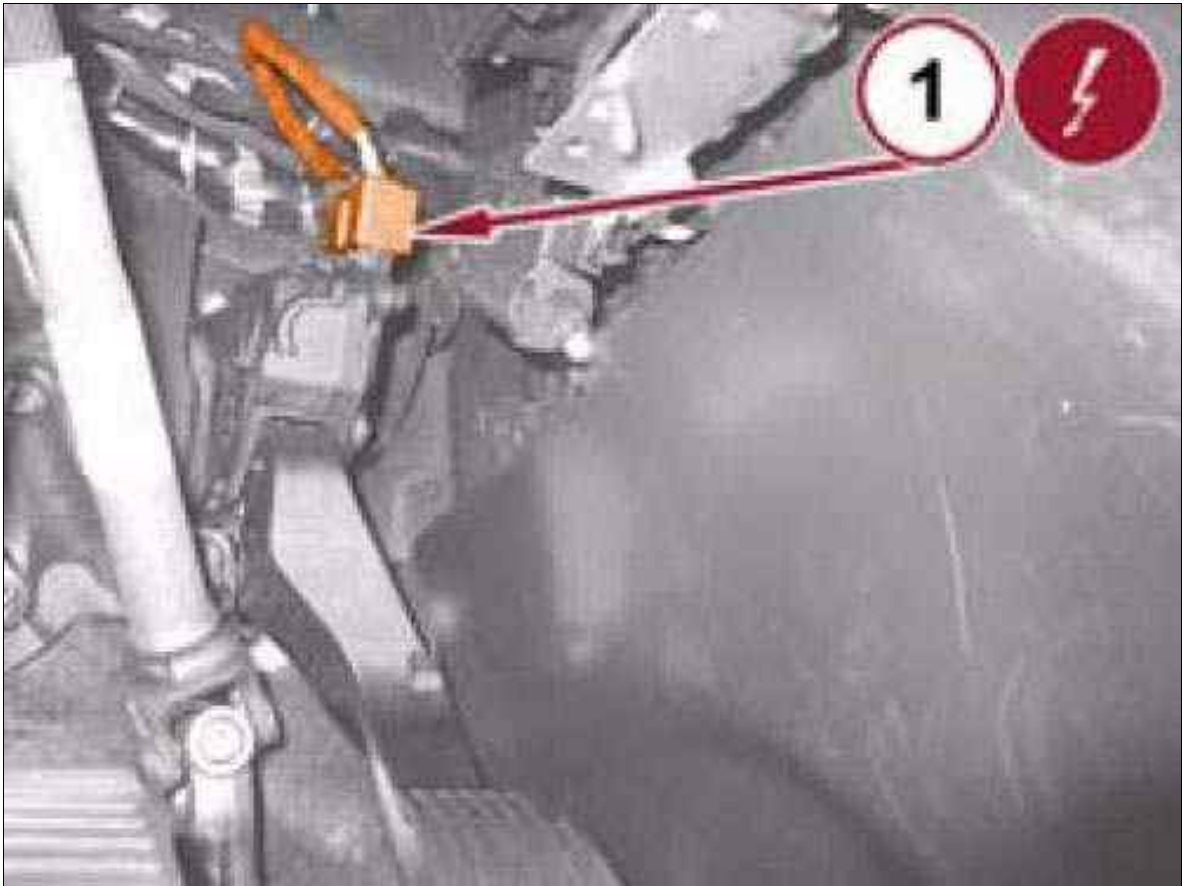
Fig 1: Brake Fluid Reservoir To Clutch Pedal Hose & Damper From The Clutch Pedal



Courtesy of CHRYSLER GROUP, LLC

4. If equipped, disconnect the brake fluid reservoir to clutch pedal hose (1).
5. Lift the clip and disconnect the damper from the clutch pedal (2).

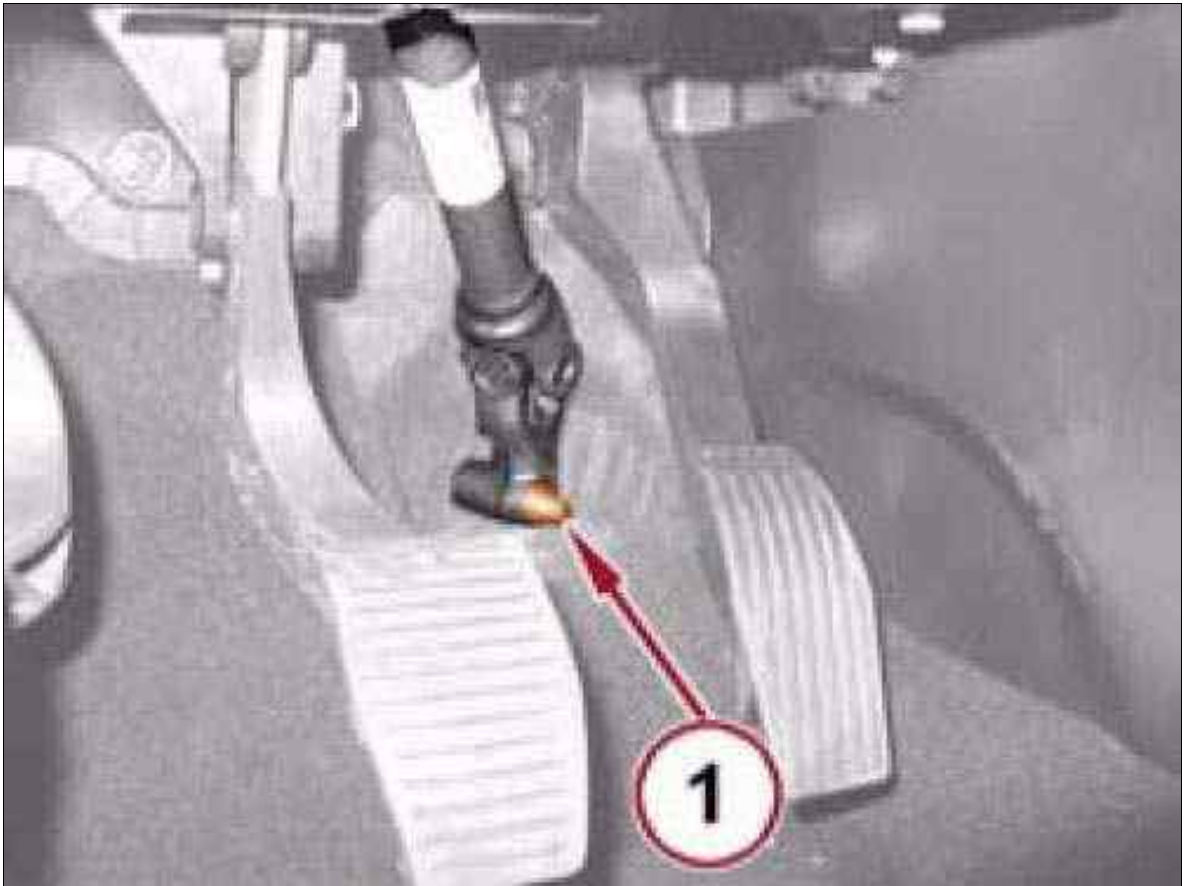
Fig 2: Accelerator Pedal Connector



Courtesy of CHRYSLER GROUP, LLC

6. Disconnect the accelerator pedal electrical connector (1).

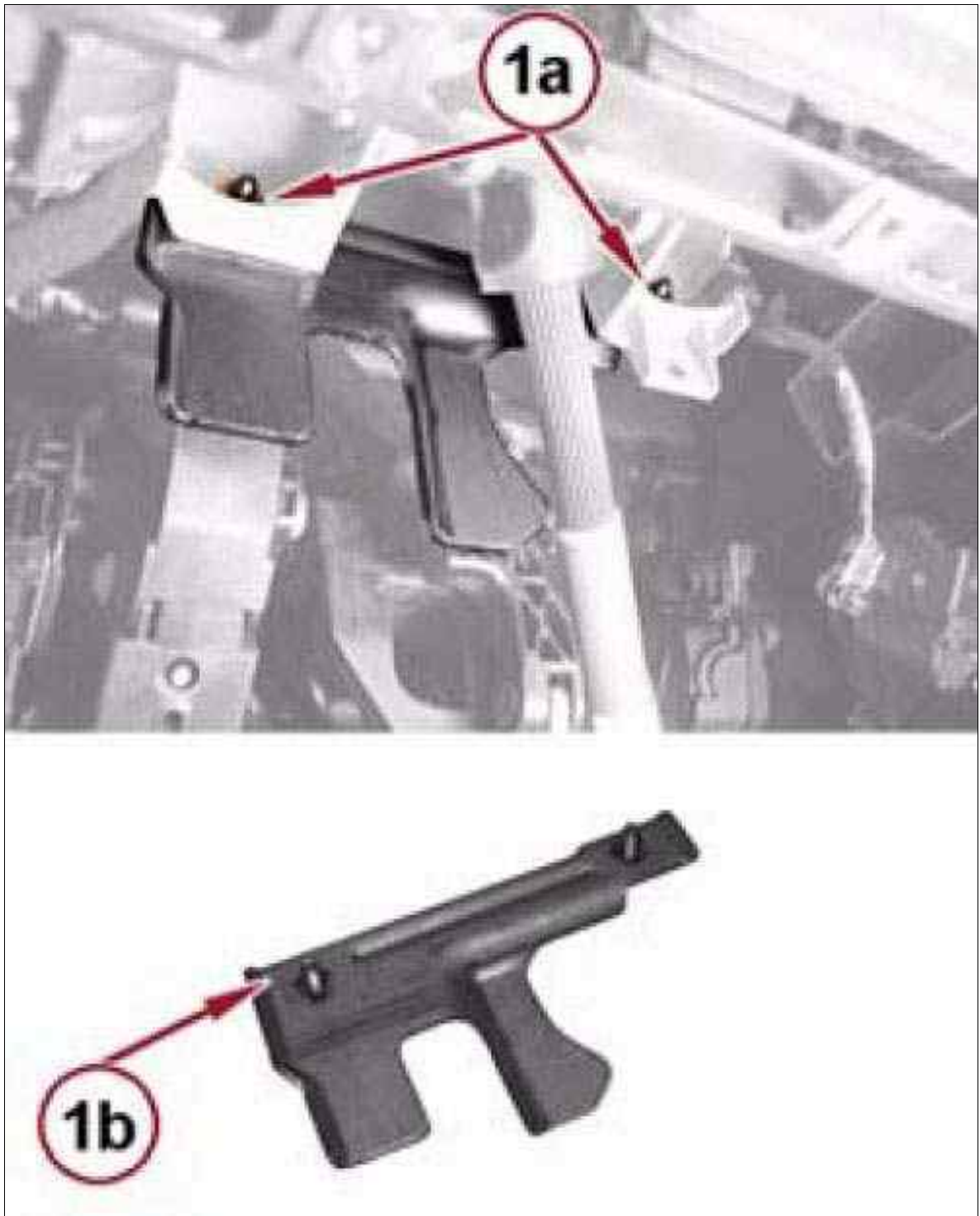
Fig 3: Intermediate Shaft Pinch Bolt



Courtesy of CHRYSLER GROUP, LLC

7. Remove the intermediate shaft pinch bolt (1), and remove the intermediate shaft from the steering gear.

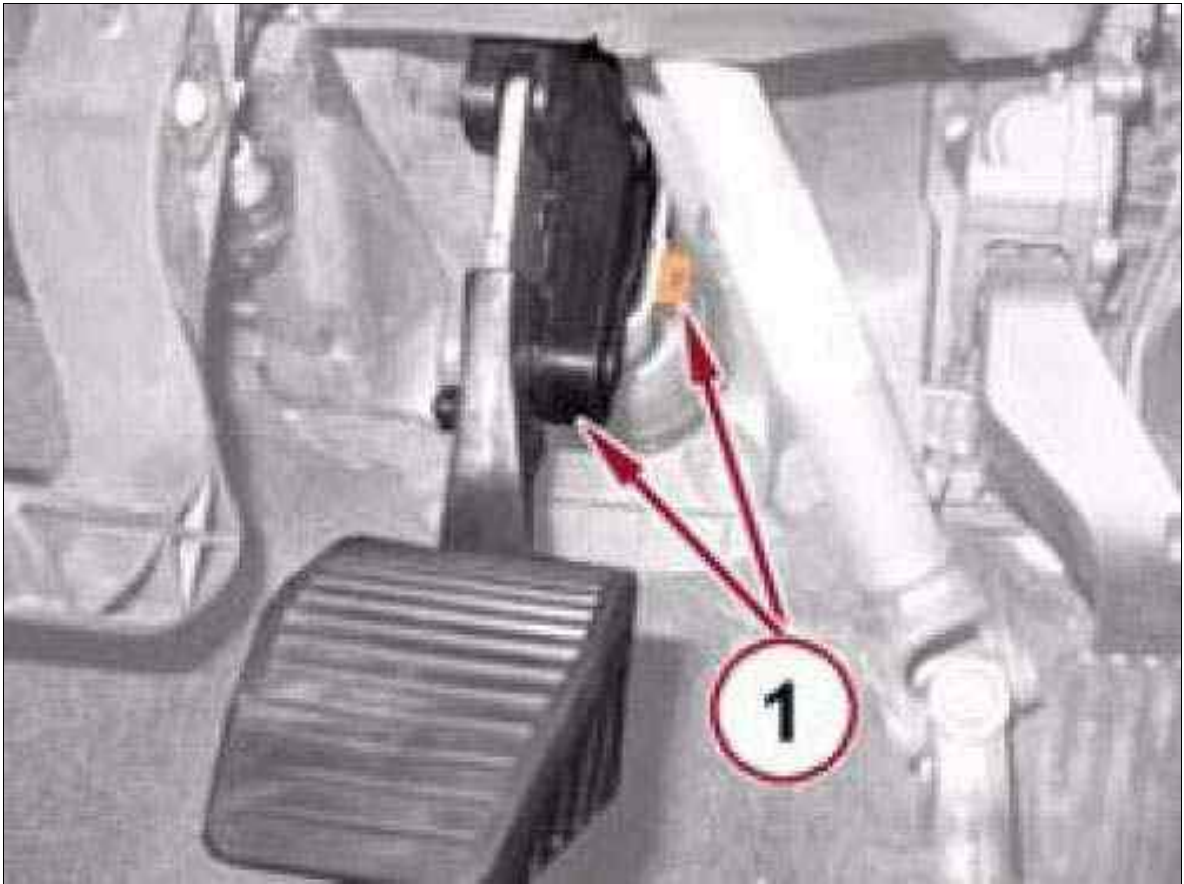
Fig 4: Reinforcement Plate & Nuts



Courtesy of CHRYSLER GROUP, LLC

8. Remove the reinforcement plate nuts (1a), and remove the reinforcement plate (1b).

Fig 5: Retaining Tabs



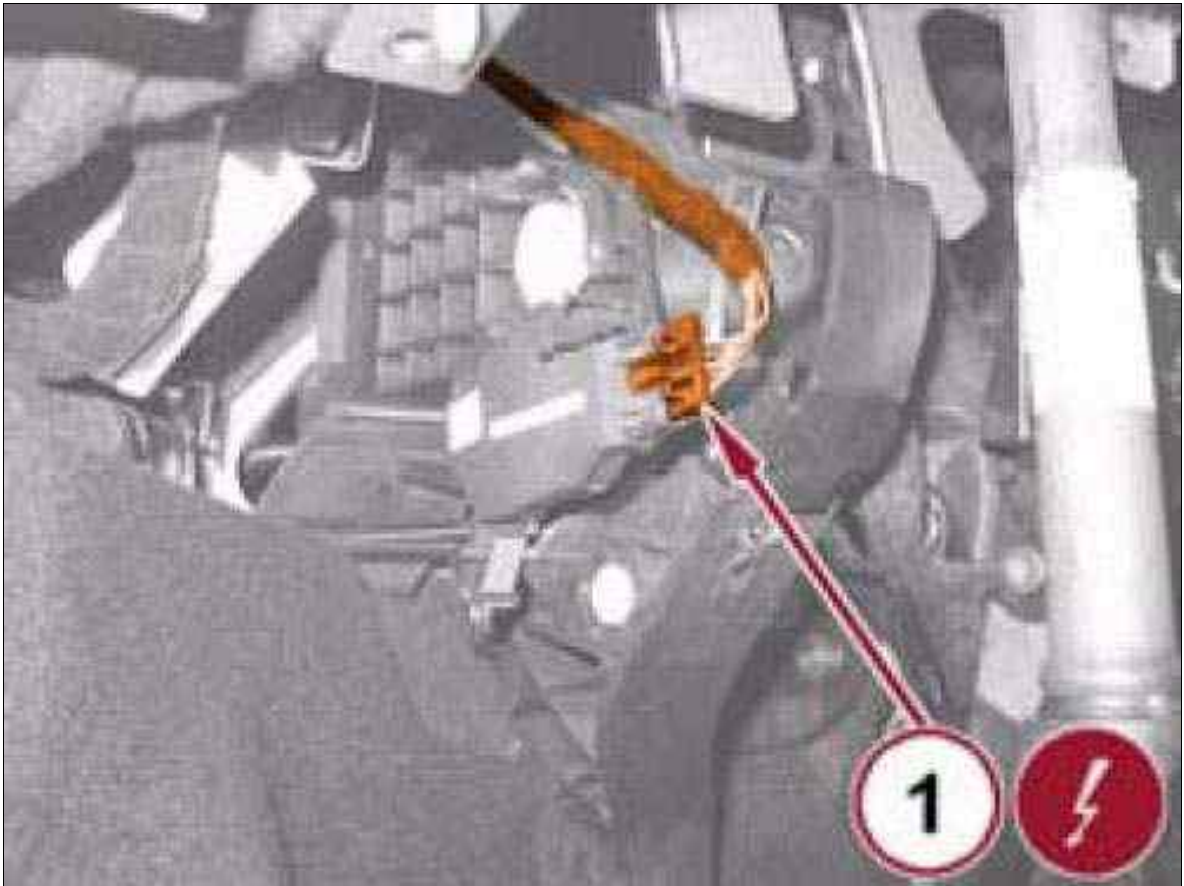
Courtesy of CHRYSLER GROUP, LLC

9. Push back on the retaining tabs (1) of the brake booster push rod to disengage from the brake pedal.

 NOTE:

Do not reuse the brake booster push rod retainer. Also, be sure to save the brake booster push rod cup upon removal.

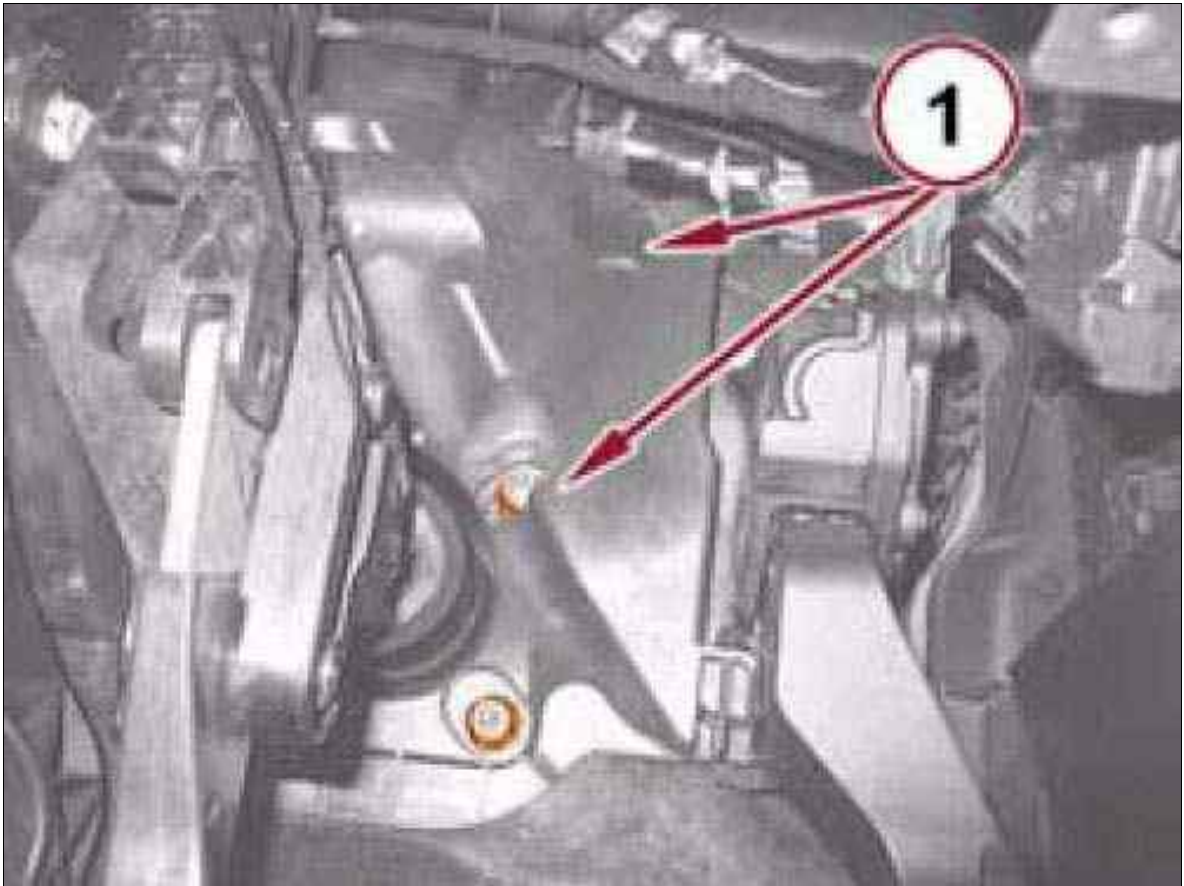
Fig 6: Clutch Pedal Position Switch Connector



Courtesy of CHRYSLER GROUP, LLC

10. If equipped, disconnect the clutch pedal position switch electrical connector (1).
11. Remove the brake pedal switch by rotating the it 45°.

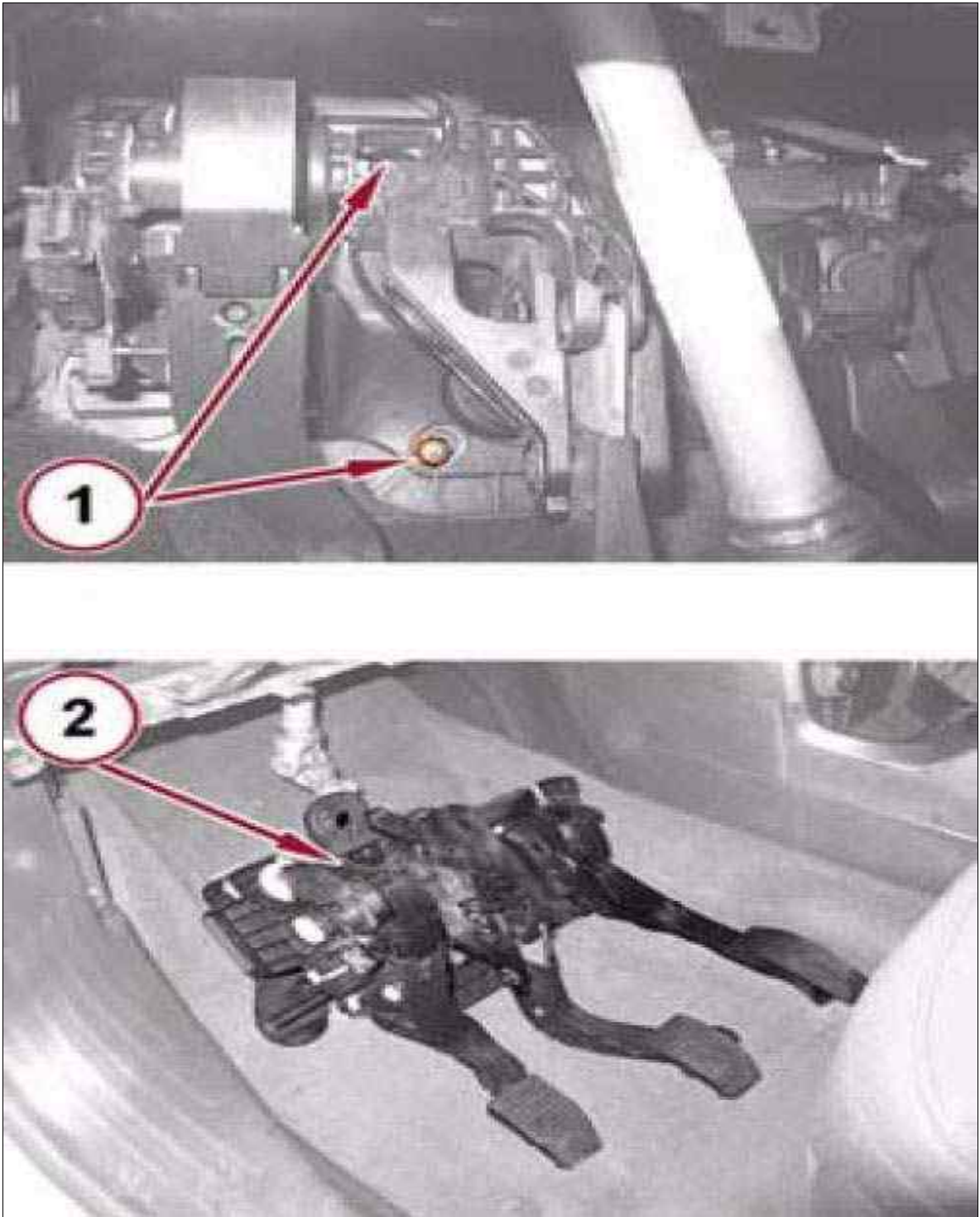
Fig 7: Brake Booster Nuts



Courtesy of CHRYSLER GROUP, LLC

12. Remove the pedal assembly to brake booster nuts (1) on the accelerator pedal side.

Fig 8: Pedal Assembly & Brake Booster Nuts



Courtesy of CHRYSLER GROUP, LLC

13. Remove the pedal assembly to brake booster nuts (1) on the clutch pedal side.

14. Remove the pedal assembly (2) from the vehicle.

HYDRAULIC/MECHANICAL > PEDAL(S), BRAKE AND/OR ACCELERATOR >

REMOVAL AND INSTALLATION > LHD > INSTALLATION

1. Install and tighten the pedal assembly to brake booster nuts to the proper specification. Refer to TORQUE SPECIFICATIONS .
2. Install the brake pedal switch by rotating it in 45°.



NOTE:

The brake pedal switch must be installed with the brake pedal in the rest position.

3. If equipped, connect the clutch pedal position switch electrical connector.
4. Install the brake booster push rod cup, and install the **NEW** brake booster push rod to brake pedal retainer.

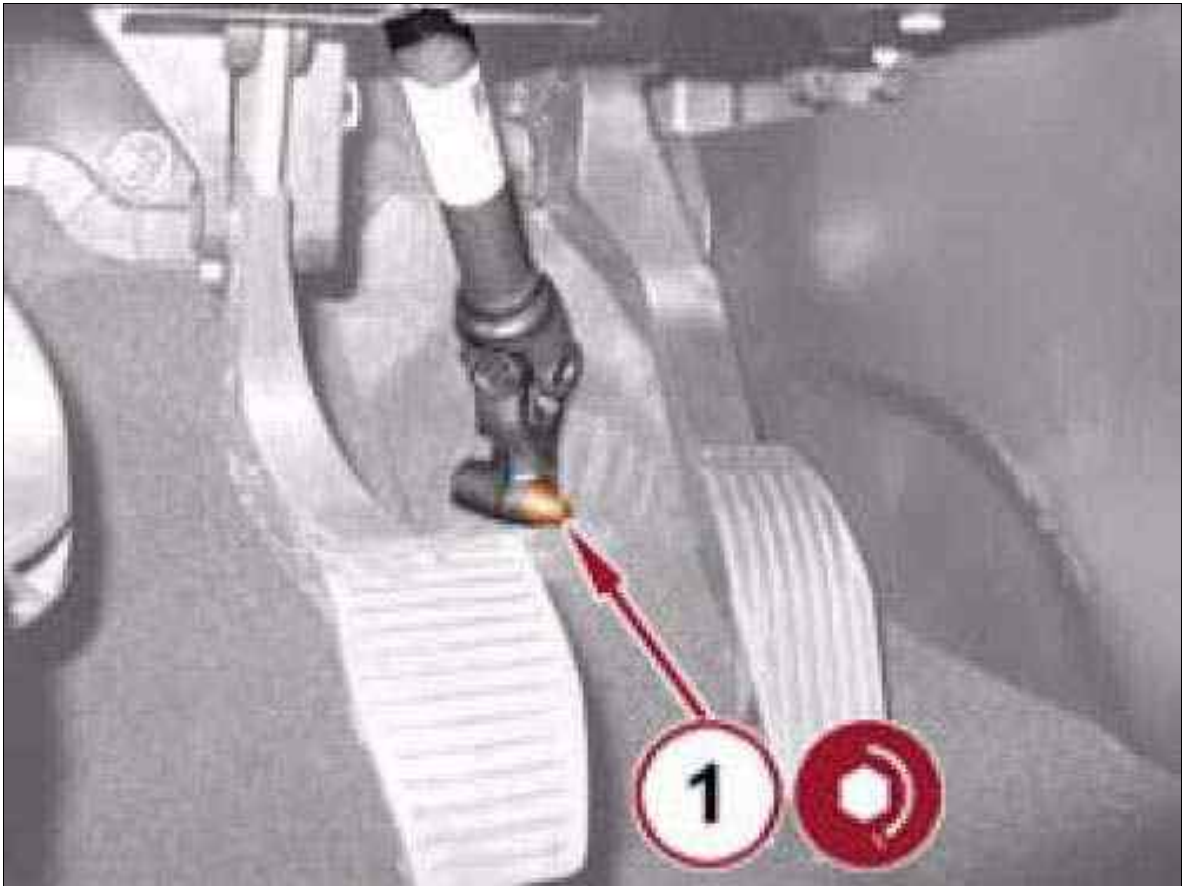


NOTE:

It will be necessary to press down on the brake pedal to connect the retainer.

5. Install the reinforcement plate, and tighten the reinforcement plate nuts to the proper specification. Refer to TORQUE SPECIFICATIONS .

Fig 1: Intermediate Shaft Pinch Bolt



Courtesy of CHRYSLER GROUP, LLC

6. Position the intermediate shaft to the steering gear. Install the intermediate shaft pinch bolt (1), and tighten bolt to the proper specification. Refer to TORQUE SPECIFICATIONS .
7. Connect the accelerator pedal electrical connector.
8. If equipped, install the brake fluid reservoir to clutch pedal hose.
9. Install the drivers lower air duct.
10. Install the drivers knee airbag. Refer to AIR BAG, KNEE BLOCKER, REMOVAL AND INSTALLATION .
11. If equipped with a manual transmission, install the Integrated Control Unit (ICU). Refer to INTEGRATED CONTROL UNIT (ICU), REMOVAL AND INSTALLATION .

HYDRAULIC/MECHANICAL > PEDAL(S), BRAKE AND/OR ACCELERATOR > REMOVAL AND INSTALLATION > RHD > REMOVAL

⊗ WARNING:

To avoid serious or fatal injury on vehicles equipped with airbags, disable the Supplemental

Restraint System (SRS) before attempting any steering wheel, steering column, airbags, airbag curtains, knee blocker, seat belt tensioner, impact sensor or instrument panel component diagnosis or service. Refer to WARNING . Disconnect the IBS/negative battery cable assembly from the negative battery post, then wait two minutes for the system capacitor to discharge before performing further diagnosis or service. This is the only sure way to disable the SRS. Failure to take the proper precautions could result in accidental airbag deployment.



NOTE:

Straighten the front wheels, engage the first steering lock towards the right and remove the ignition key.

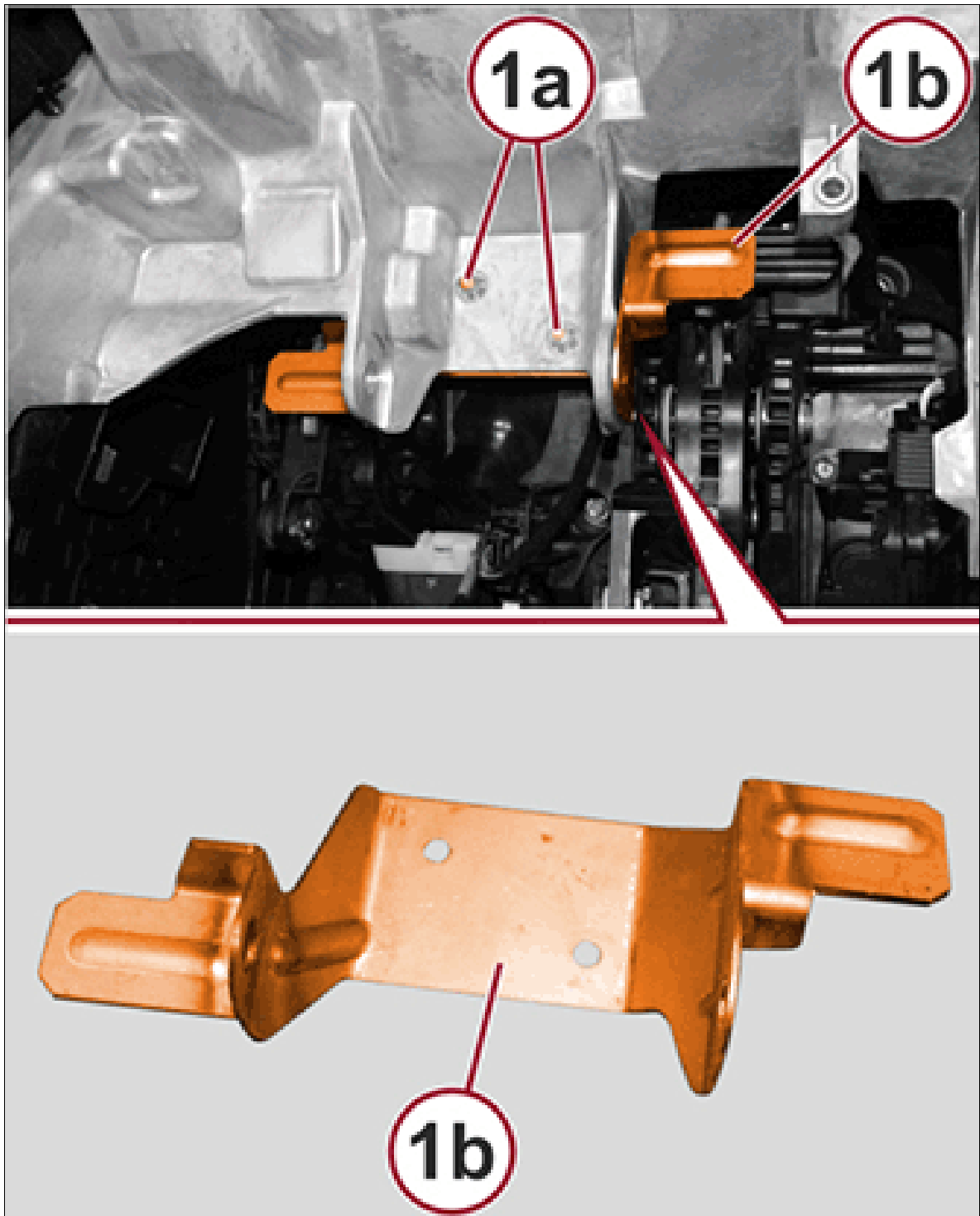


NOTE:

Keep the steering column adjustment lever closed during all the removal and installation stages.

1. Disconnect and isolate the negative battery cable.
2. Remove the electric steering column from the vehicle. Refer to COLUMN, REMOVAL AND INSTALLATION .

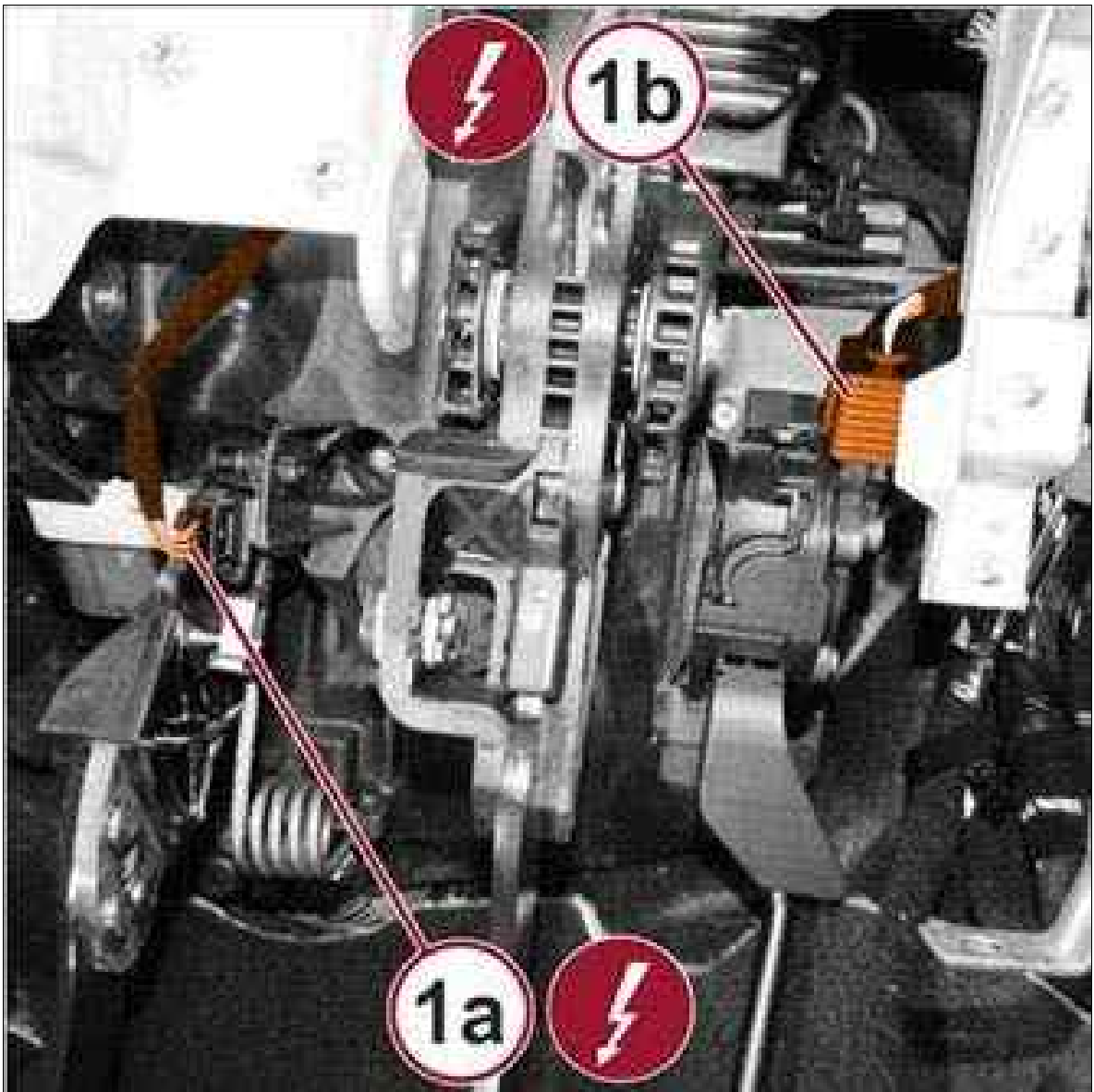
Fig 1: Reinforcement Plate & Screws



Courtesy of CHRYSLER GROUP, LLC

3. Remove the fixing screws (1a) and remove the reinforcement plate (1b).

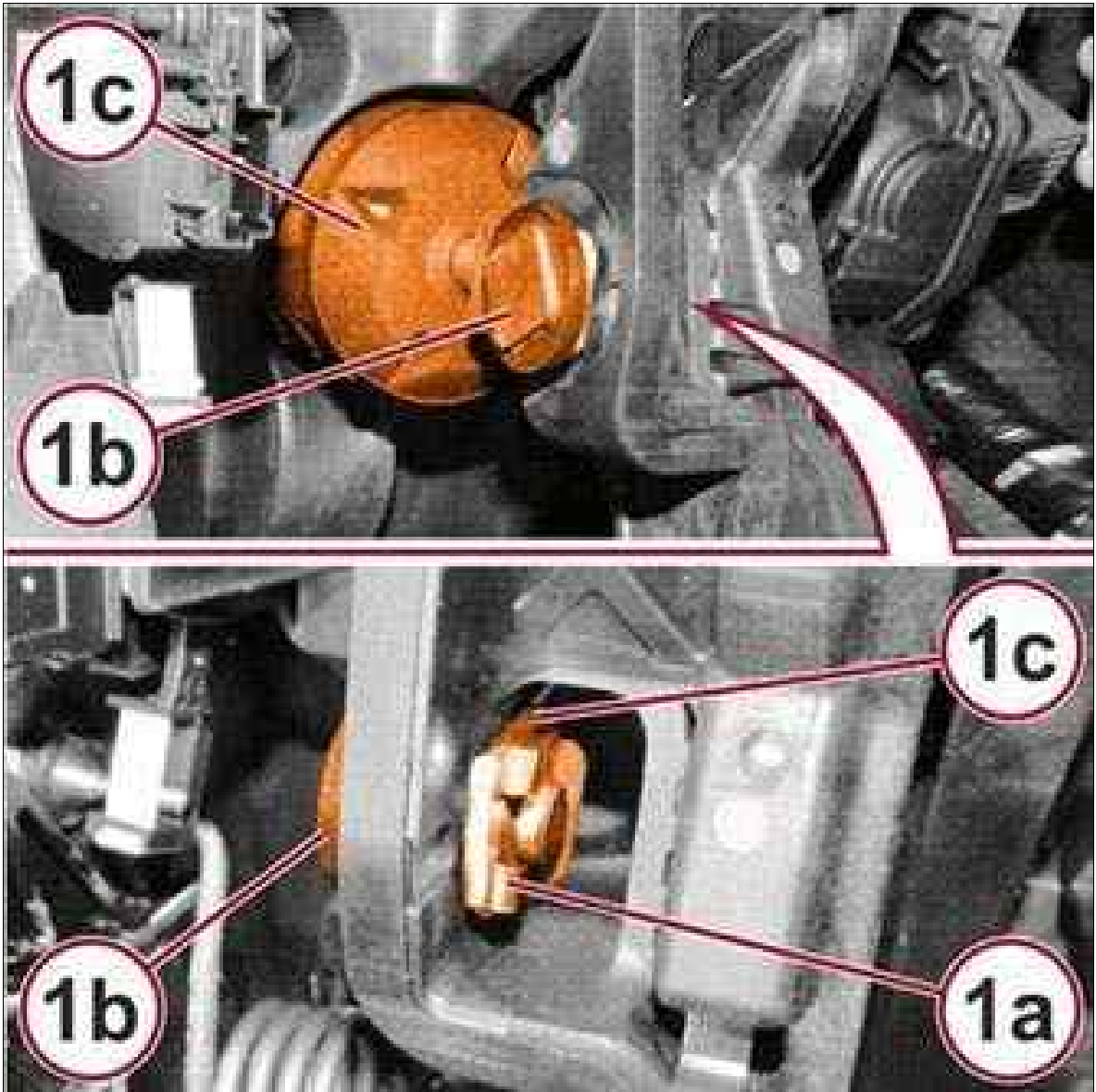
Fig 2: Clutch Pedal & Accelerator Pedal Bolts



Courtesy of CHRYSLER GROUP, LLC

4. Disconnect the electrical connection of the clutch pedal (1a) and of the accelerator pedal (1b).

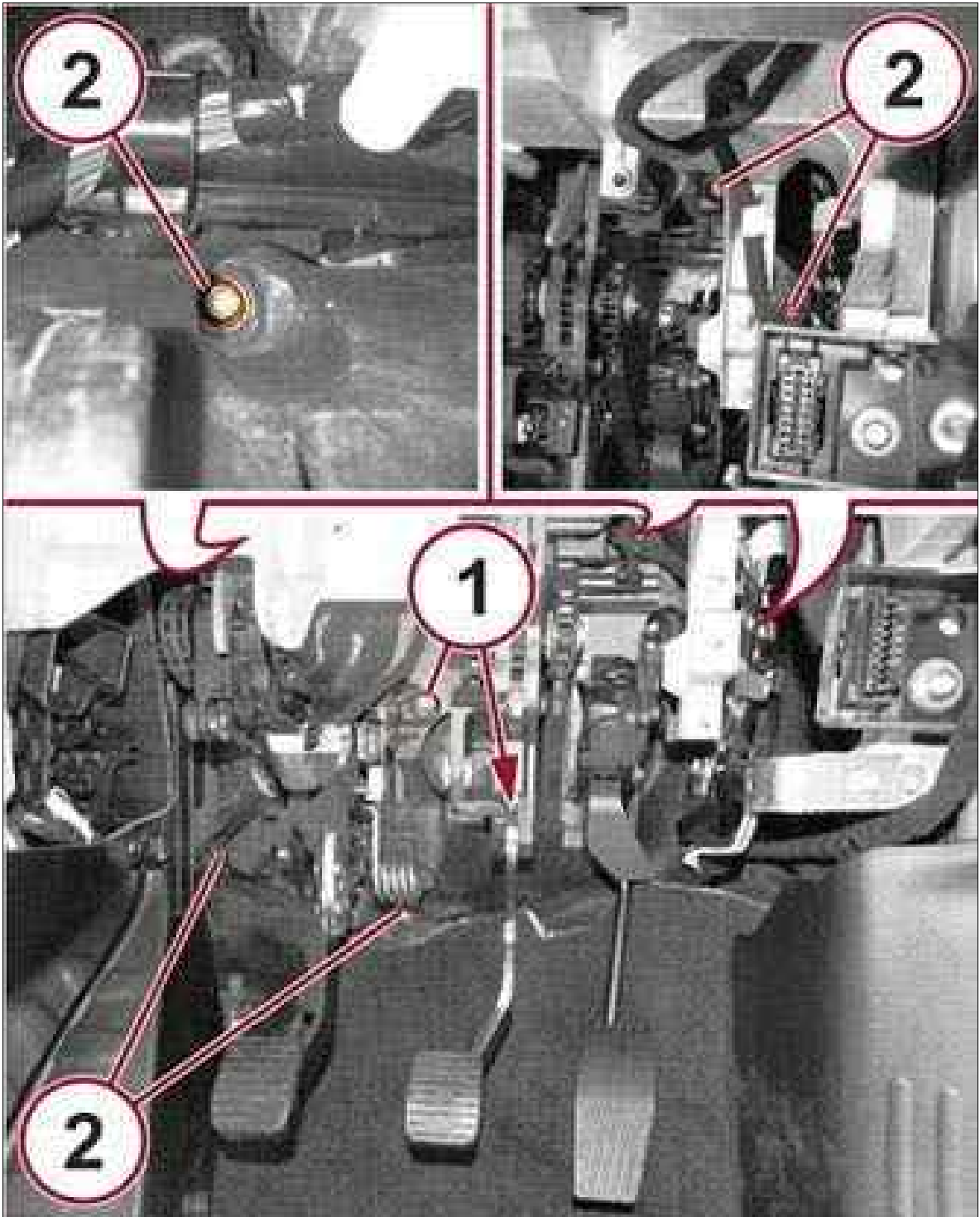
Fig 3: Brake Servo Push Rod Fork, Clip & Pin



Courtesy of CHRYSLER GROUP, LLC

5. Pry up the clip (1a), remove the pin (1b) and disconnect the brake servo push rod fork (1c) from the brake pedal.

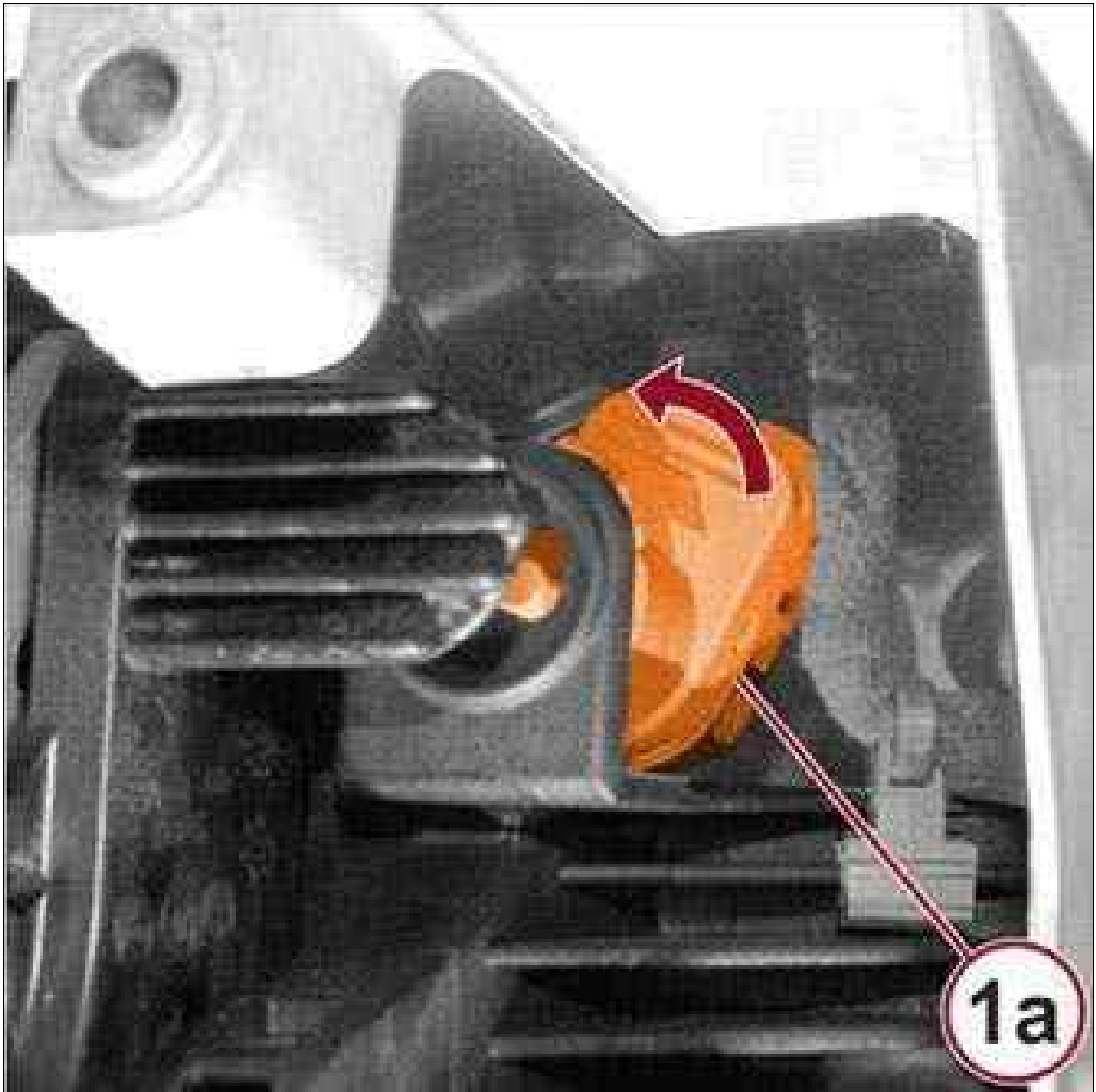
Fig 4: Pedal Unit Mounting Nuts



Courtesy of CHRYSLER GROUP, LLC

6. Remove the nuts securing the brake servo to the pedal unit support.
7. Remove the nuts fixing the pedal unit mounting to the body.

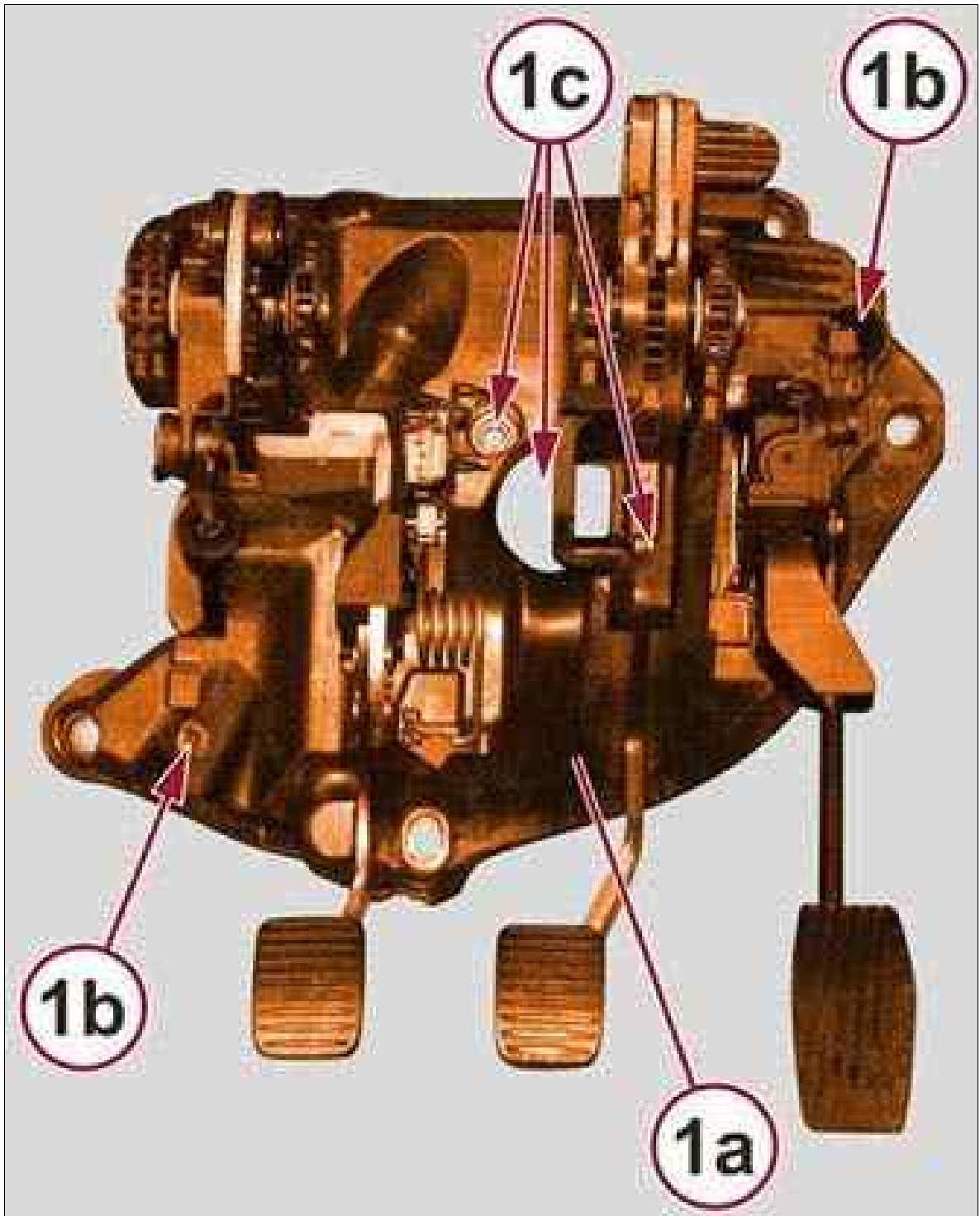
Fig 5: Removing Brake Pedal Switch



Courtesy of CHRYSLER GROUP, LLC

8. Release the brake pedal switch (1a) from the pedal unit support, rotating it through 45° towards the clutch pedal and release the relevant wiring section from the pedal unit support.
9. Loosen the instrument panel carrier assembly following the procedure, and move the assembly back until there is enough room to remove the pedal assembly. Refer to CARRIER, INSTRUMENT PANEL, REMOVAL AND INSTALLATION .

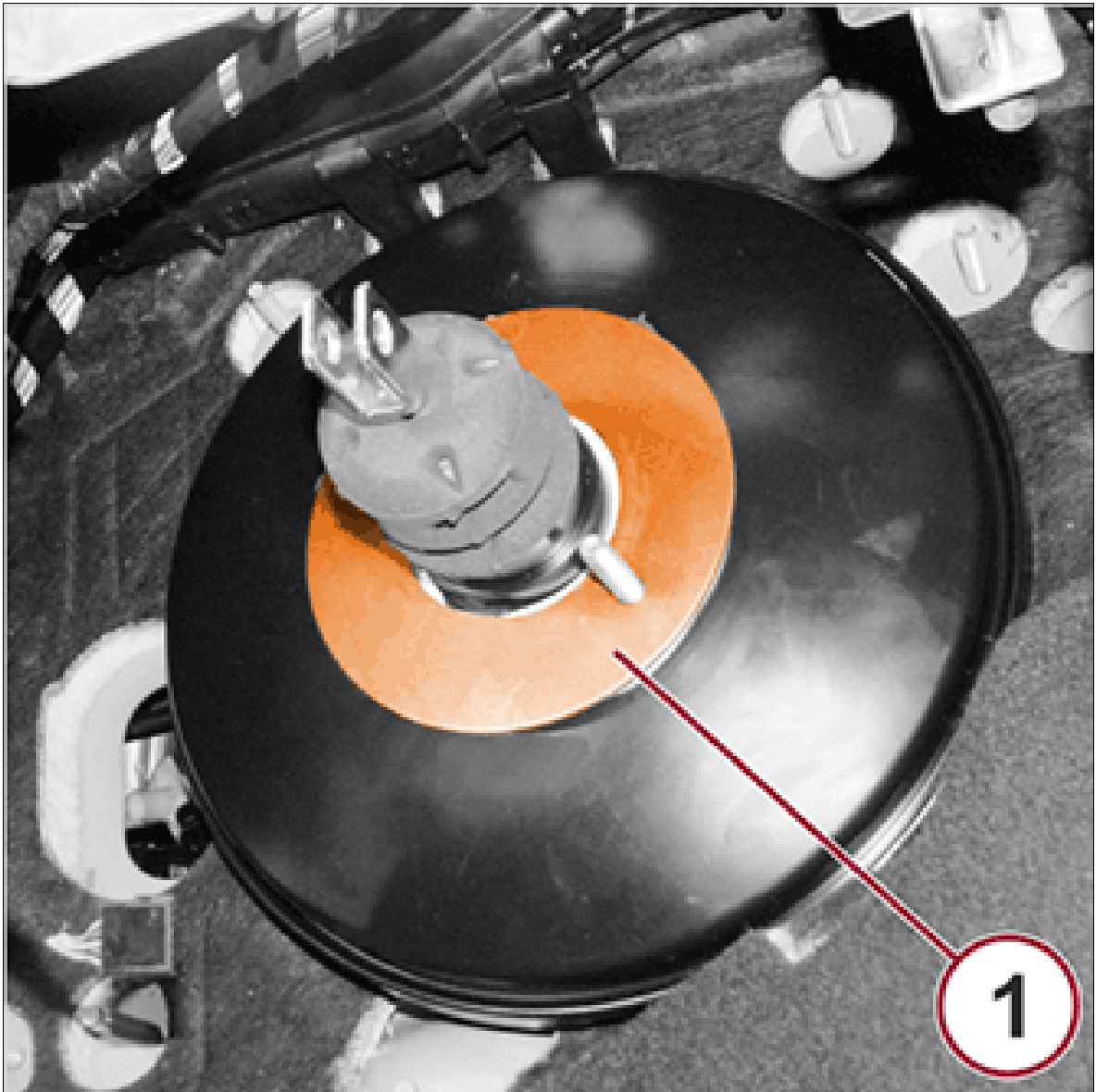
Fig 6: Pedal Unit Support & Stud Bolts



Courtesy of CHRYSLER GROUP, LLC

10. Release the pedal unit support (1a) from the stud bolts on the body (1b), from the brake servo and their stud bolts (1c) and remove it from its housing.

Fig 7: Brake Servo Spacer



Courtesy of CHRYSLER GROUP, LLC

11. If necessary, remove the brake servo spacer (1).

HYDRAULIC/MECHANICAL > PEDAL(S), BRAKE AND/OR ACCELERATOR > REMOVAL AND INSTALLATION > RHD > INSTALLATION

1. If removed, place the brake servo spacer in its housing.
2. Install and tighten the **NEW** pedal assembly to brake booster nuts to the proper specification. Refer to TORQUE SPECIFICATIONS .
3. Tighten the **NEW** nuts securing the brake booster to the pedal unit support to the proper specification. Refer to TORQUE SPECIFICATIONS .

4. Connect the fork of the brake booster push rod to the brake pedal, fit the pin and the clip.
5. Position the brake pedal switch in its housing and secure it to the pedal unit support, rotating it through 45° towards the accelerator pedal; secure the relevant wiring section to the pedal unit support.



NOTE:

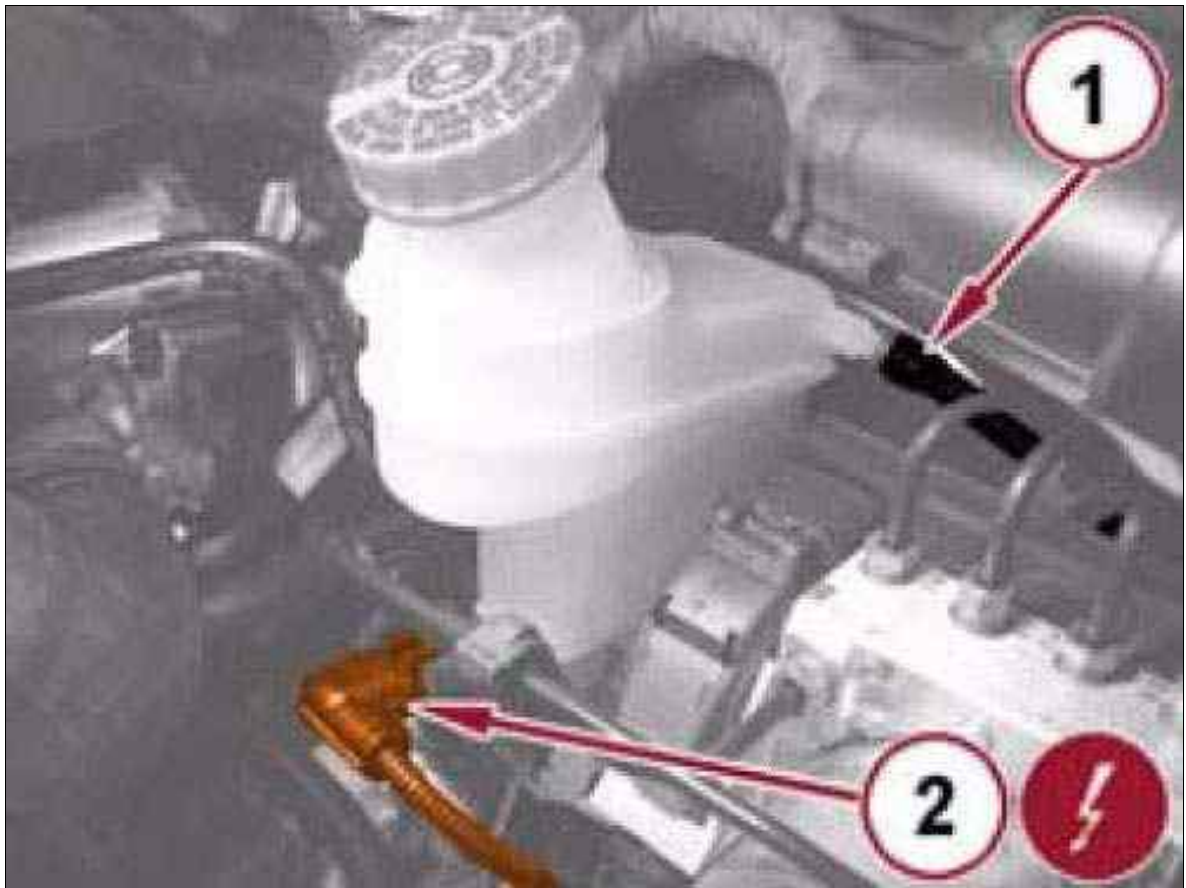
The brake pedal switch must be fitted with the brake pedal in rest position.

6. Position the instrument panel carrier assembly back into place, and follow the procedure to install related components. Refer to CARRIER, INSTRUMENT PANEL, REMOVAL AND INSTALLATION .
7. Connect the electrical connection of the clutch pedal and of the accelerator pedal.
8. Install the reinforcement plate, and tighten the reinforcement plate nuts to the proper specification. Refer to TORQUE SPECIFICATIONS .
9. Install the electric steering column. Refer to COLUMN, REMOVAL AND INSTALLATION .
10. Connect the negative battery cable.

HYDRAULIC/MECHANICAL > RESERVOIR, BRAKE MASTER CYLINDER > REMOVAL AND INSTALLATION > LHD > REMOVAL

1. Remove the battery. Refer to BATTERY, REMOVAL AND INSTALLATION .
2. Remove the engine cover. For 1.6L/2.0L Diesel, refer to COVER, ENGINE, REMOVAL AND INSTALLATION . For 1.4L, refer to COVER, ENGINE, REMOVAL AND INSTALLATION . For 2.4L, refer to COVER, ENGINE, REMOVAL AND INSTALLATION .
3. Siphon the brake fluid from the reservoir. Refer to STANDARD PROCEDURE .

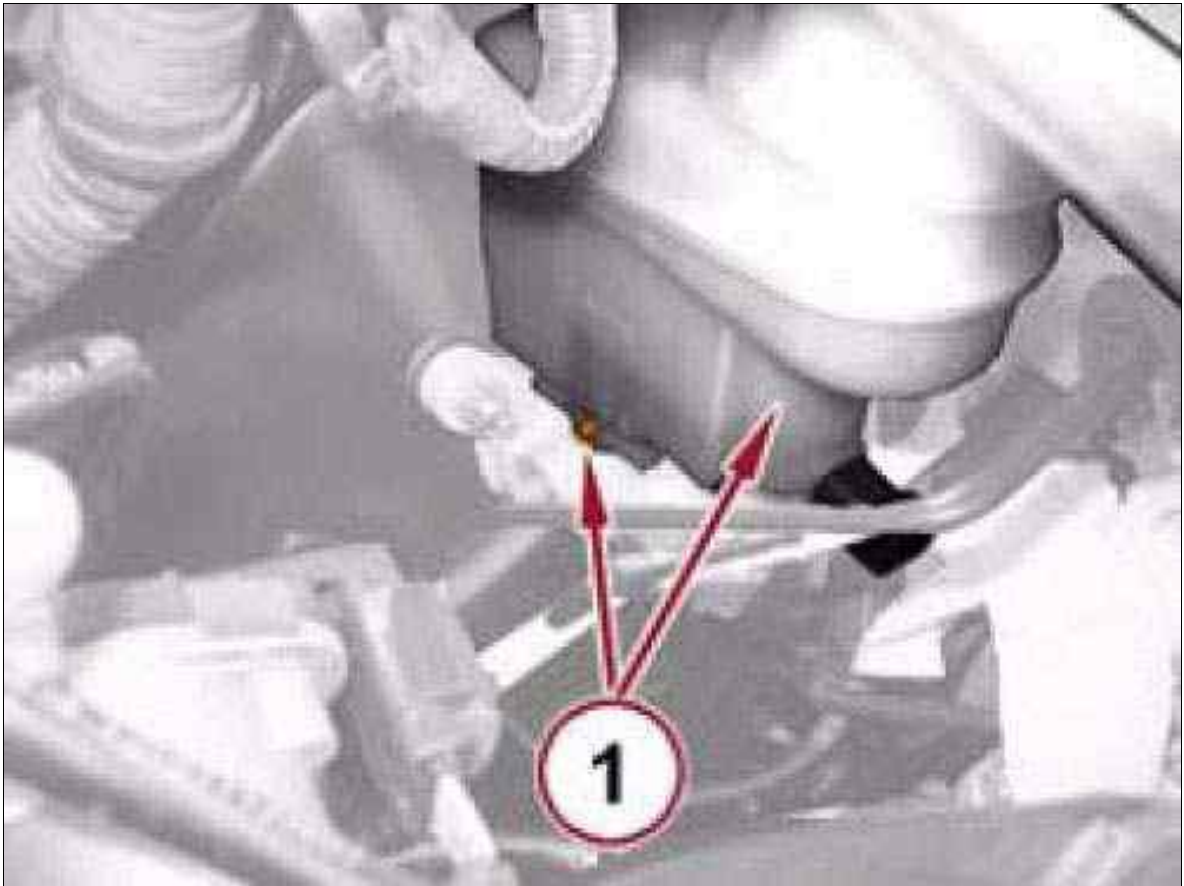
Fig 1: Brake Reservoir To Clutch Pedal Hose & Brake Fluid Level Switch Connector



Courtesy of CHRYSLER GROUP, LLC

4. If equipped, remove the brake reservoir to clutch pedal hose (1).
5. Disconnect the brake fluid level switch electrical connector (2).

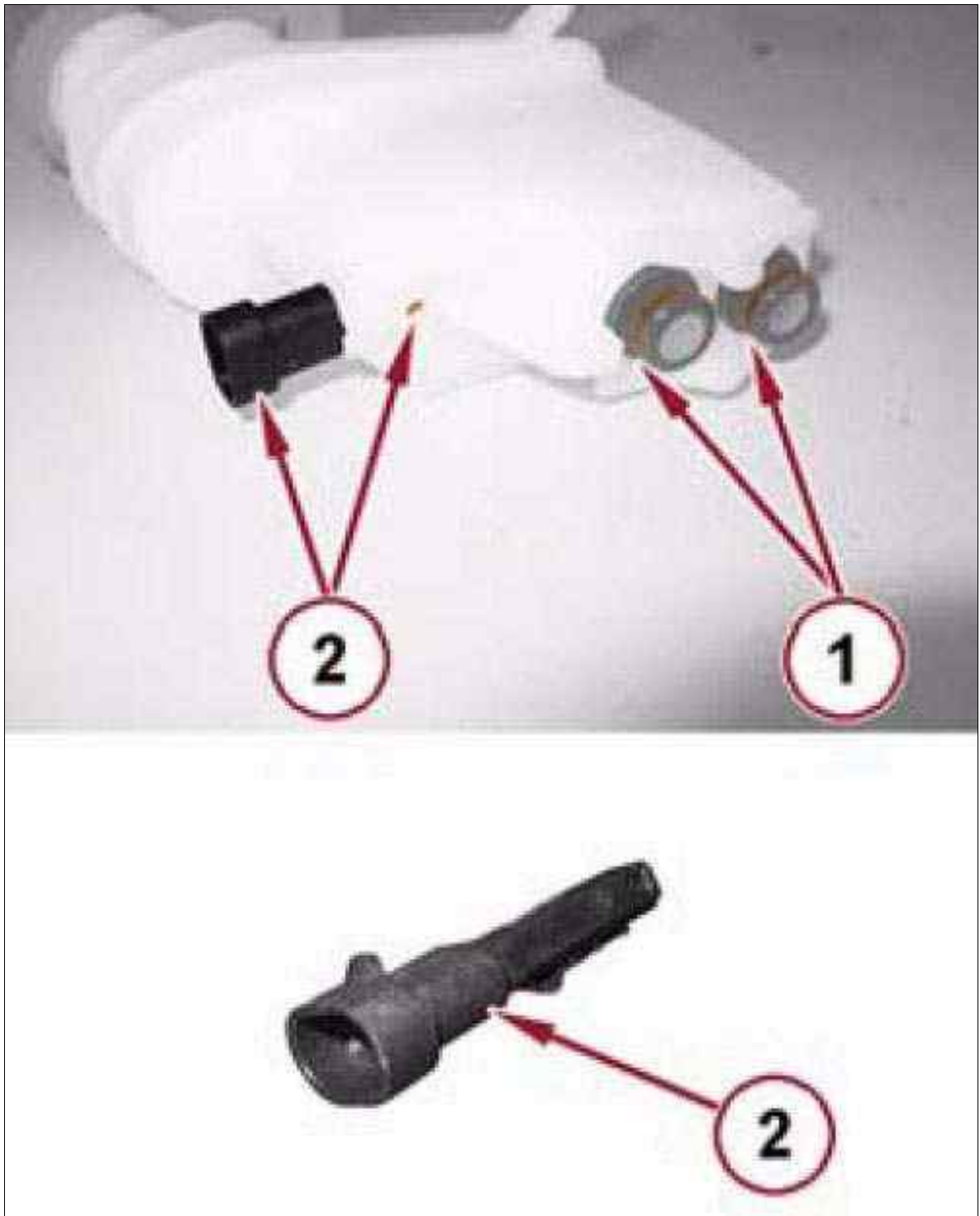
Fig 2: Brake Reservoir To Master Cylinder Screw



Courtesy of CHRYSLER GROUP, LLC

6. Remove the brake reservoir to master cylinder screw (1).

Fig 3: Brake Fluid Reservoir Seals & Brake Fluid Level Switch Clip



Courtesy of CHRYSLER GROUP, LLC

7. Remove and discard the brake fluid reservoir seals (1).
8. Compress the brake fluid level switch clip (2) and remove the switch.

HYDRAULIC/MECHANICAL > RESERVOIR, BRAKE MASTER CYLINDER > REMOVAL

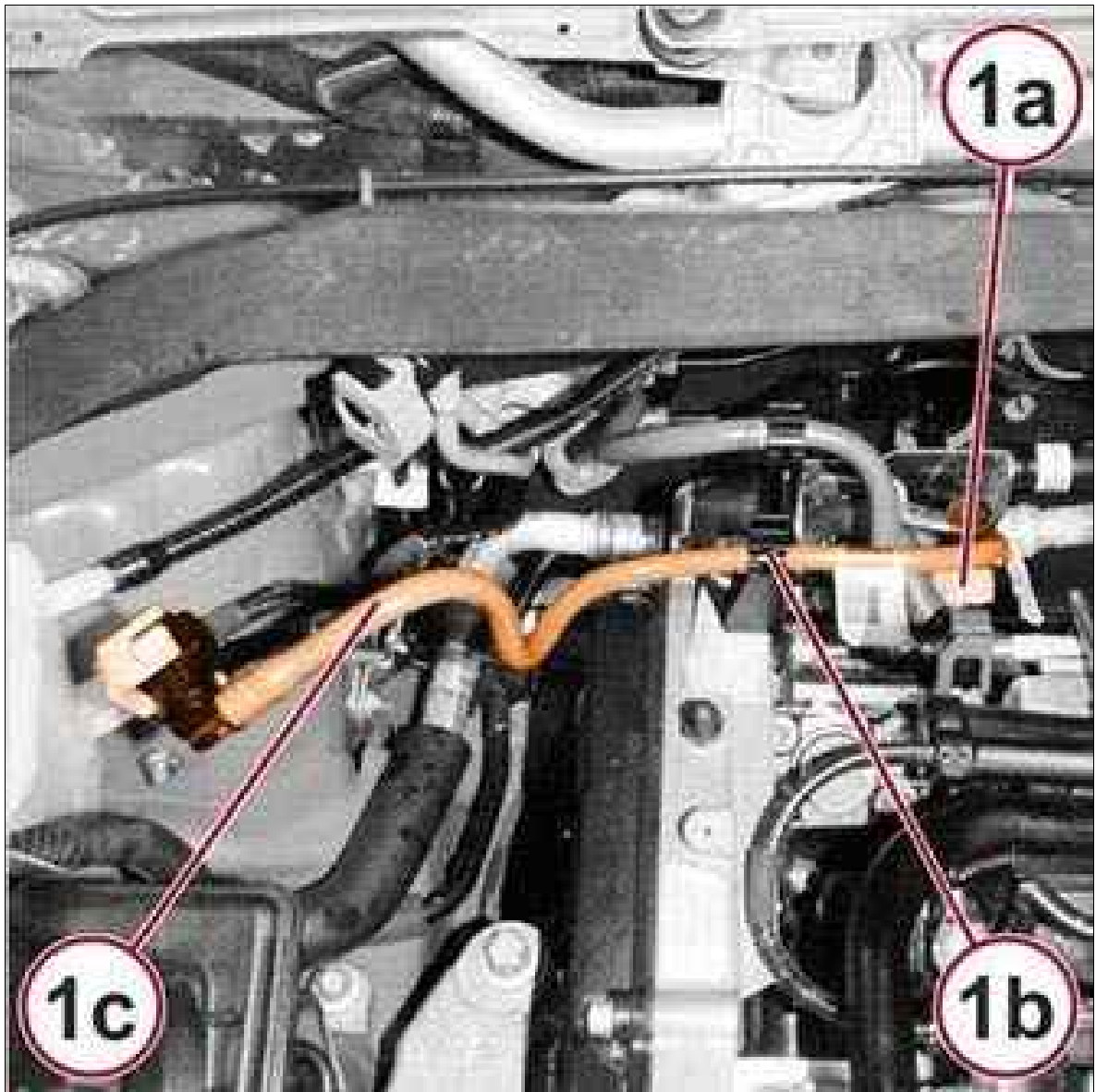
AND INSTALLATION > LHD > INSTALLATION

1. Install the brake fluid level switch into the brake fluid reservoir.
2. Install the brake fluid reservoir with **NEW** seals, and tighten the brake fluid reservoir to master cylinder screw.
3. Connect the brake fluid level switch electrical connector.
4. If equipped, connect the brake reservoir to clutch pedal hose.
5. Install the engine cover. For 1.6L/2.0L Diesel, refer to COVER, ENGINE, REMOVAL AND INSTALLATION . For 1.4L, refer to COVER, ENGINE, REMOVAL AND INSTALLATION . For 2.4L, refer to COVER, ENGINE, REMOVAL AND INSTALLATION .
6. Install the battery. Refer to BATTERY, REMOVAL AND INSTALLATION .
7. Fill and bleed the braking system. Refer to STANDARD PROCEDURE .

HYDRAULIC/MECHANICAL > RESERVOIR, BRAKE MASTER CYLINDER > REMOVAL AND INSTALLATION > RHD > REMOVAL

1. Disconnect and isolate the negative battery cable.
2. Remove the engine cover. For 1.6L/2.0L Diesel, refer to COVER, ENGINE, REMOVAL AND INSTALLATION . For 1.4L, refer to COVER, ENGINE, REMOVAL AND INSTALLATION . For 2.4L, refer to COVER, ENGINE, REMOVAL AND INSTALLATION .
3. Siphon the brake fluid from the reservoir. Refer to STANDARD PROCEDURE .
4. Remove the fuel filter and mounting bracket. Refer to FILTER, FUEL, REMOVAL AND INSTALLATION .

Fig 1: Fuel Supply Pipe, Quick Coupling & Clip



Courtesy of CHRYSLER GROUP, LLC

5. Disconnect the quick coupling (1a), open the retaining clip (1b) and remove the fuel supply pipe (1c).

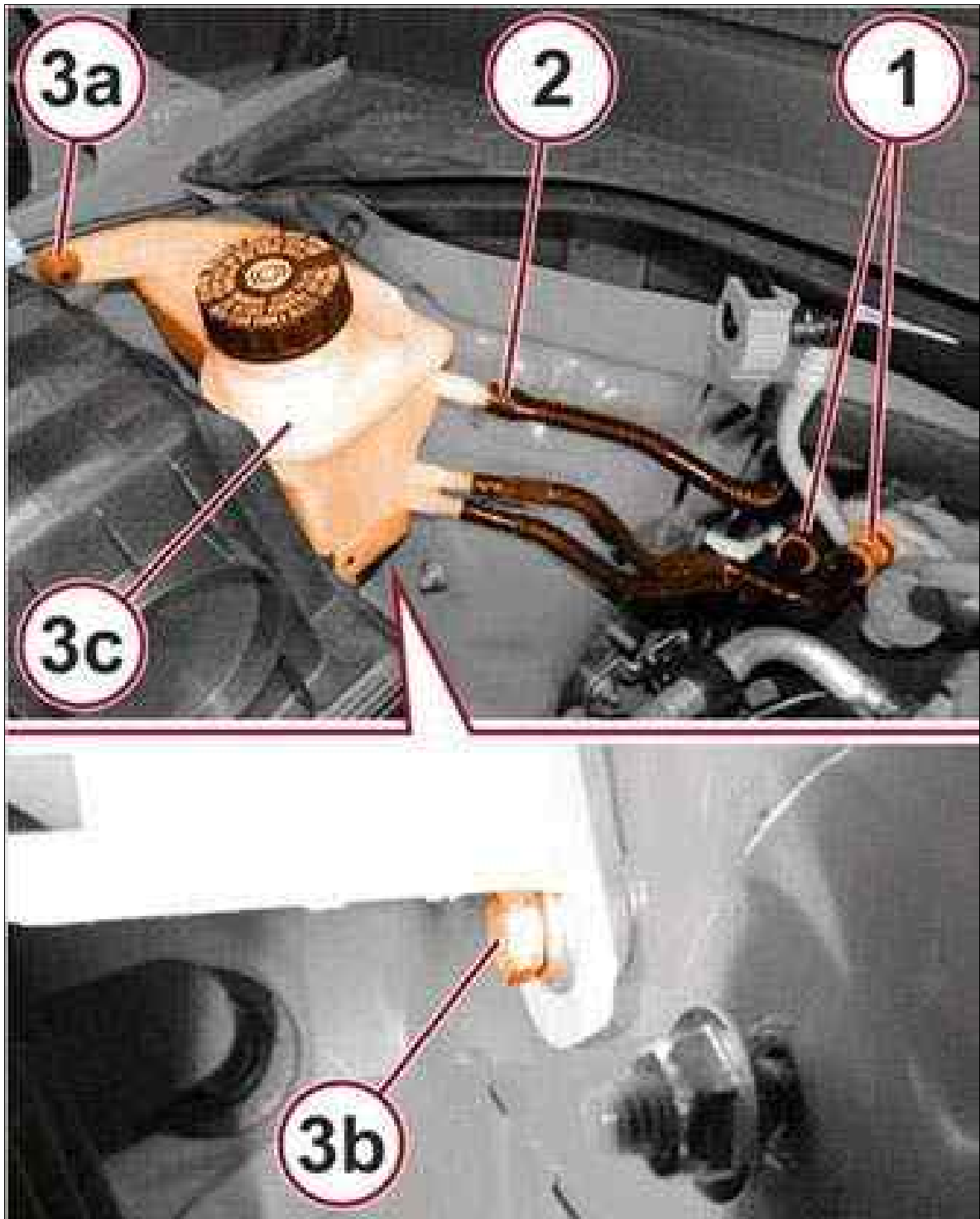
Fig 2: Brake Fluid Level Switch Connector



Courtesy of CHRYSLER GROUP, LLC

6. Disconnect the brake fluid level switch electrical connector (1).

Fig 3: Brake-Clutch Fluid Reservoir, Hoses, Quick Couplings, Nut & Screw



Courtesy of CHRYSLER GROUP, LLC

7. Disconnect the quick couplings of the hoses (1) from the brake master cylinder.
8. Disconnect the hose (2) of the clutch master cylinder.
9. Remove the fixing nut (3a) and screw (3b) and remove the brake-clutch fluid reservoir (3c).

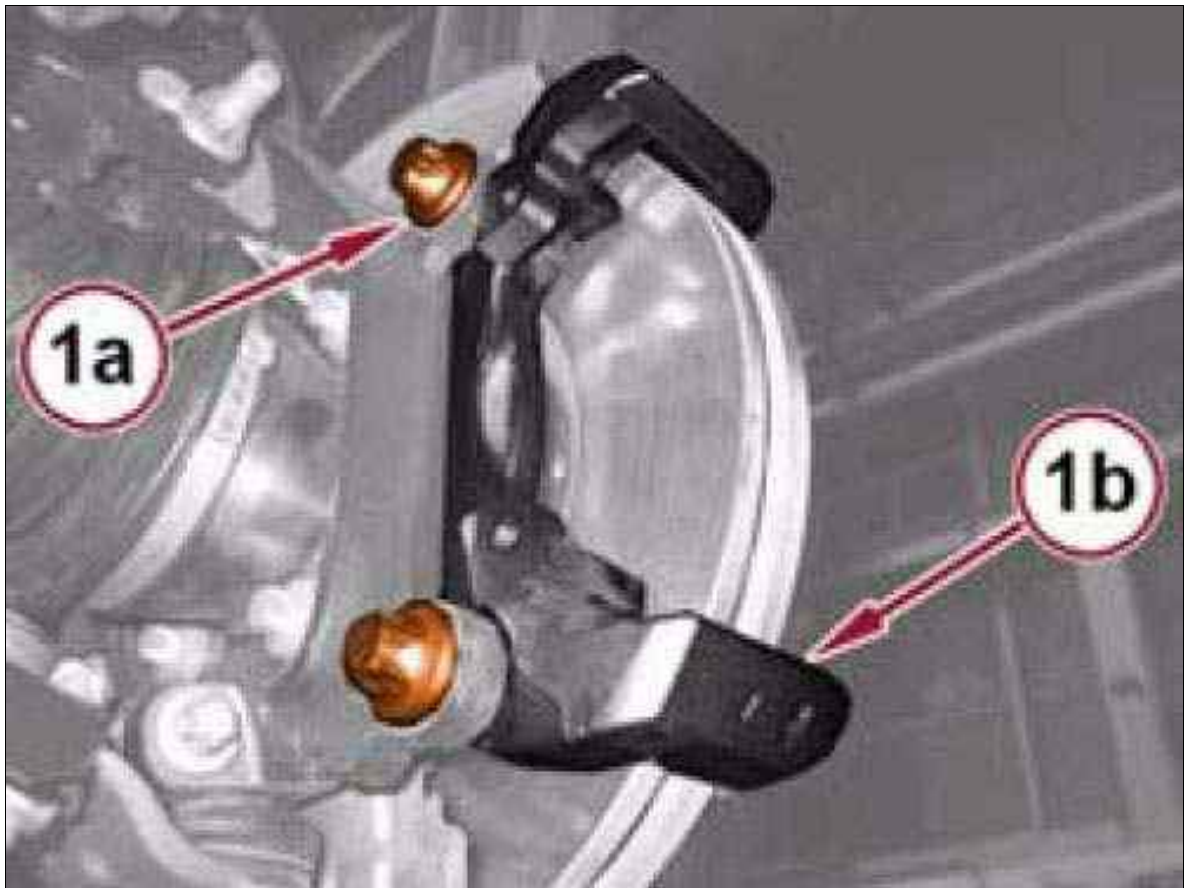
HYDRAULIC/MECHANICAL > RESERVOIR, BRAKE MASTER CYLINDER > REMOVAL AND INSTALLATION > RHD > INSTALLATION

1. Place the brake-clutch fluid reservoir in its housing and tighten the fixing nut and screw.
2. Connect the hose of the clutch master cylinder.
3. Connect the quick couplings of the hoses to the brake master cylinder.
4. Connect the brake fluid level switch electrical connector.
5. Position the fuel supply pipe, connect the quick coupling and lock the retaining clip.
6. Install the fuel filter and mounting bracket. Refer to FILTER, FUEL, REMOVAL AND INSTALLATION .
7. Install the engine cover. For 1.6L/2.0L Diesel, refer to COVER, ENGINE, REMOVAL AND INSTALLATION . For 1.4L, refer to COVER, ENGINE, REMOVAL AND INSTALLATION . For 2.4L, refer to COVER, ENGINE, REMOVAL AND INSTALLATION .
8. Connect the negative battery cable.
9. Fill and bleed the braking system. Refer to STANDARD PROCEDURE .

HYDRAULIC/MECHANICAL > ROTOR, BRAKE > REMOVAL AND INSTALLATION > FRONT > FRONT ROTOR REMOVAL

1. Raise and support the vehicle. Refer to HOISTING, STANDARD PROCEDURE .
2. Remove the tire and wheel assembly. Refer to REMOVAL AND INSTALLATION .
3. Remove the front brake pads. Refer to PADS, BRAKE, FRONT, REMOVAL AND INSTALLATION .

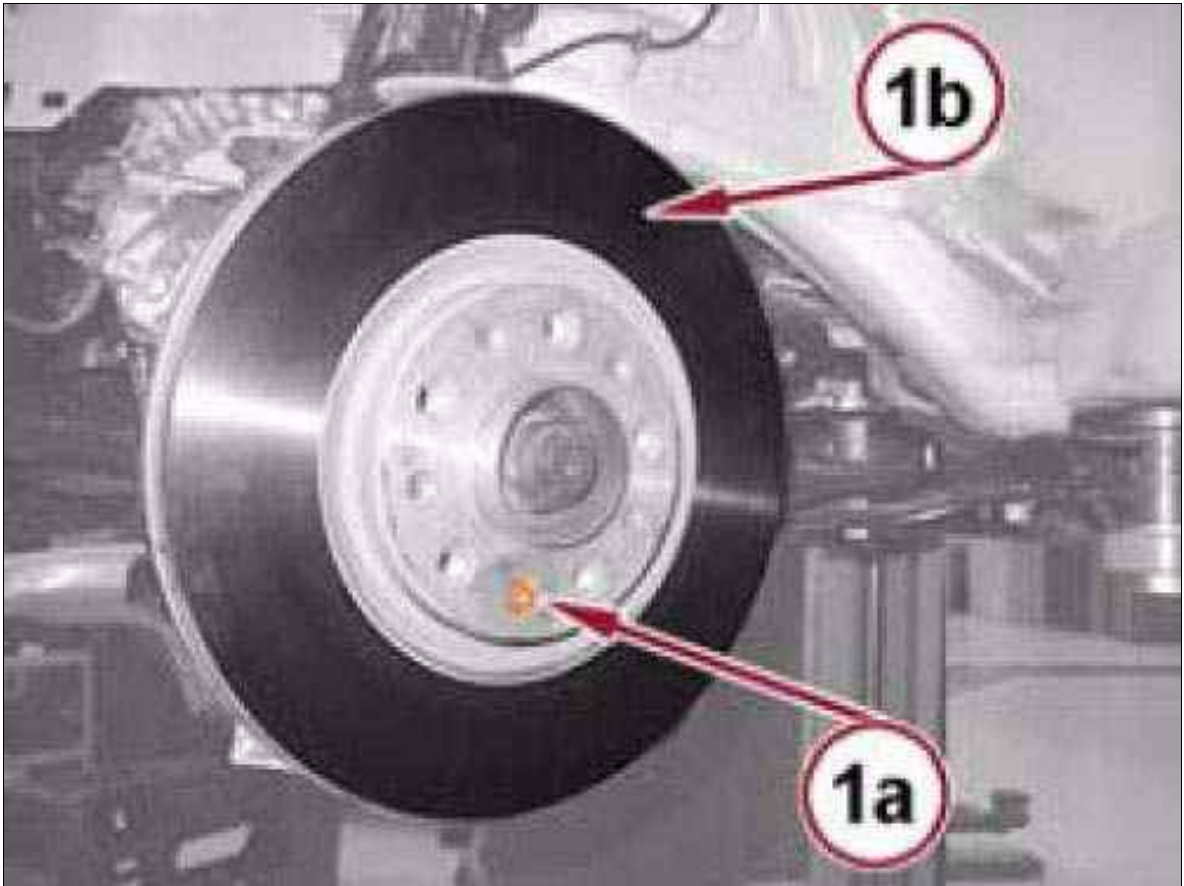
Fig 1: Caliper Adaptor & Bolts



Courtesy of CHRYSLER GROUP, LLC

4. Remove the caliper adaptor to front knuckle bolts (1a), and remove the caliper adaptor (1b)

Fig 2: Brake Rotor & Retaining Bolt

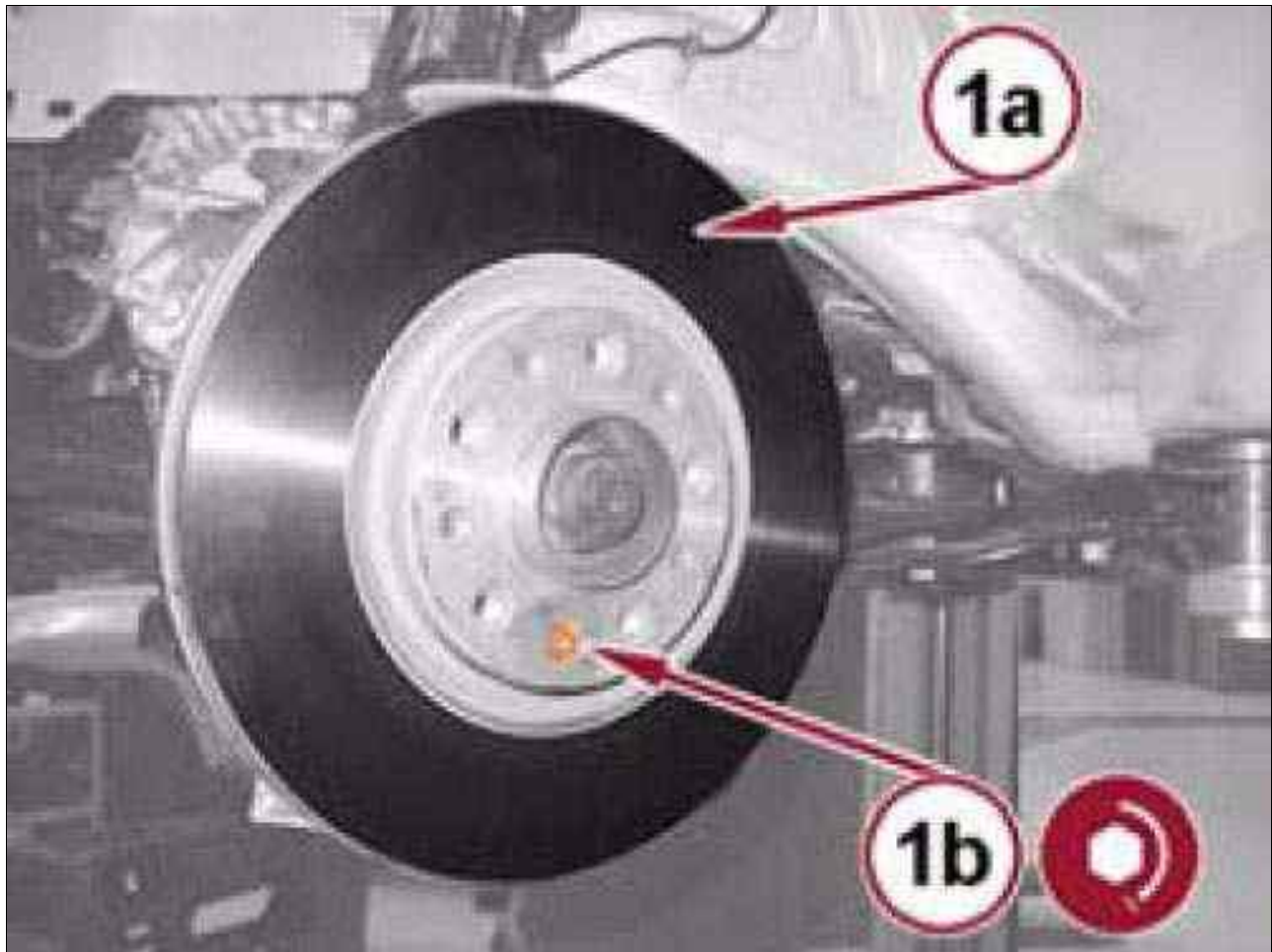


Courtesy of CHRYSLER GROUP, LLC

5. Remove the brake rotor retaining bolt (1a), and remove the rotor (1b).

**HYDRAULIC/MECHANICAL > ROTOR, BRAKE > REMOVAL AND INSTALLATION >
FRONT > FRONT ROTOR INSTALLATION**

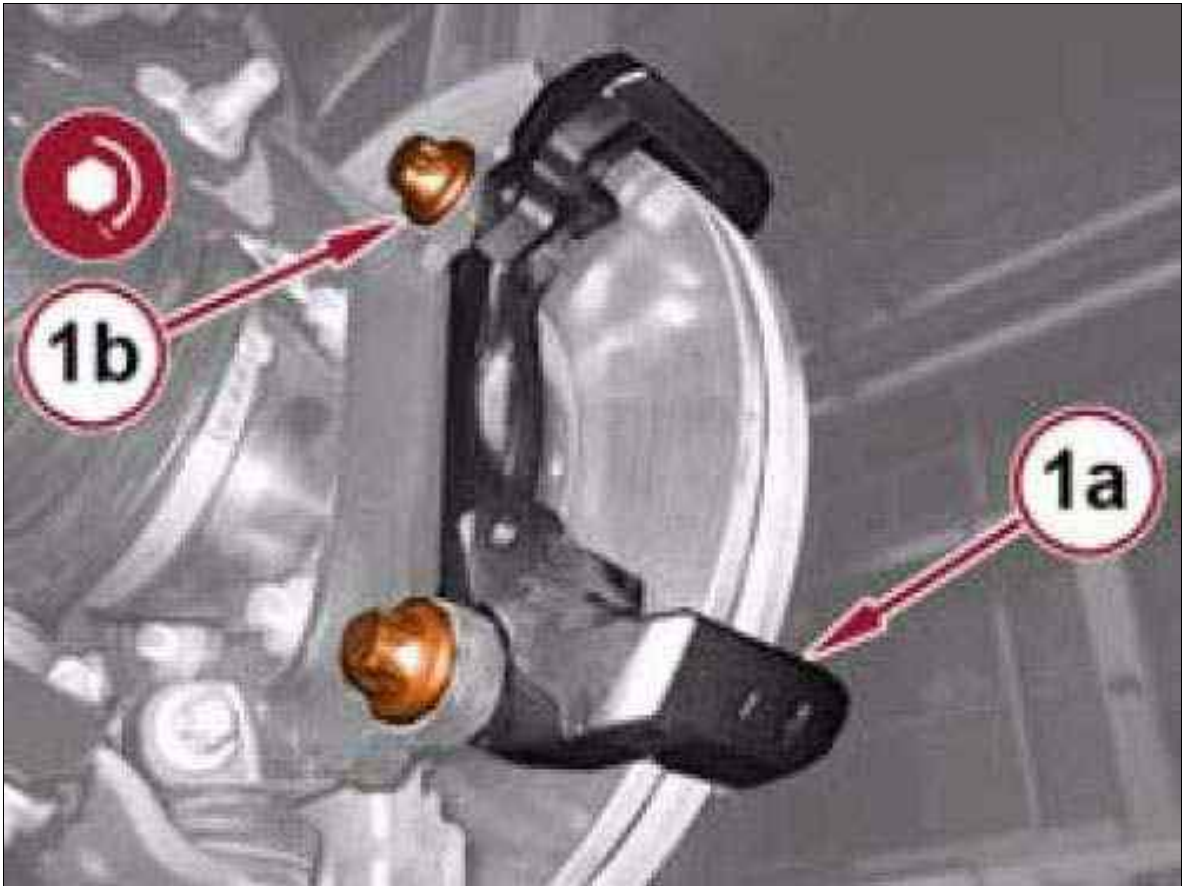
Fig 1: Brake Rotor & Retaining Bolt



Courtesy of CHRYSLER GROUP, LLC

1. Install the brake rotor (1a).
2. Install and tighten the brake rotor retaining pin (1b) to the proper specification. Refer to TORQUE SPECIFICATIONS .

Fig 2: Caliper Adaptor & Bolts



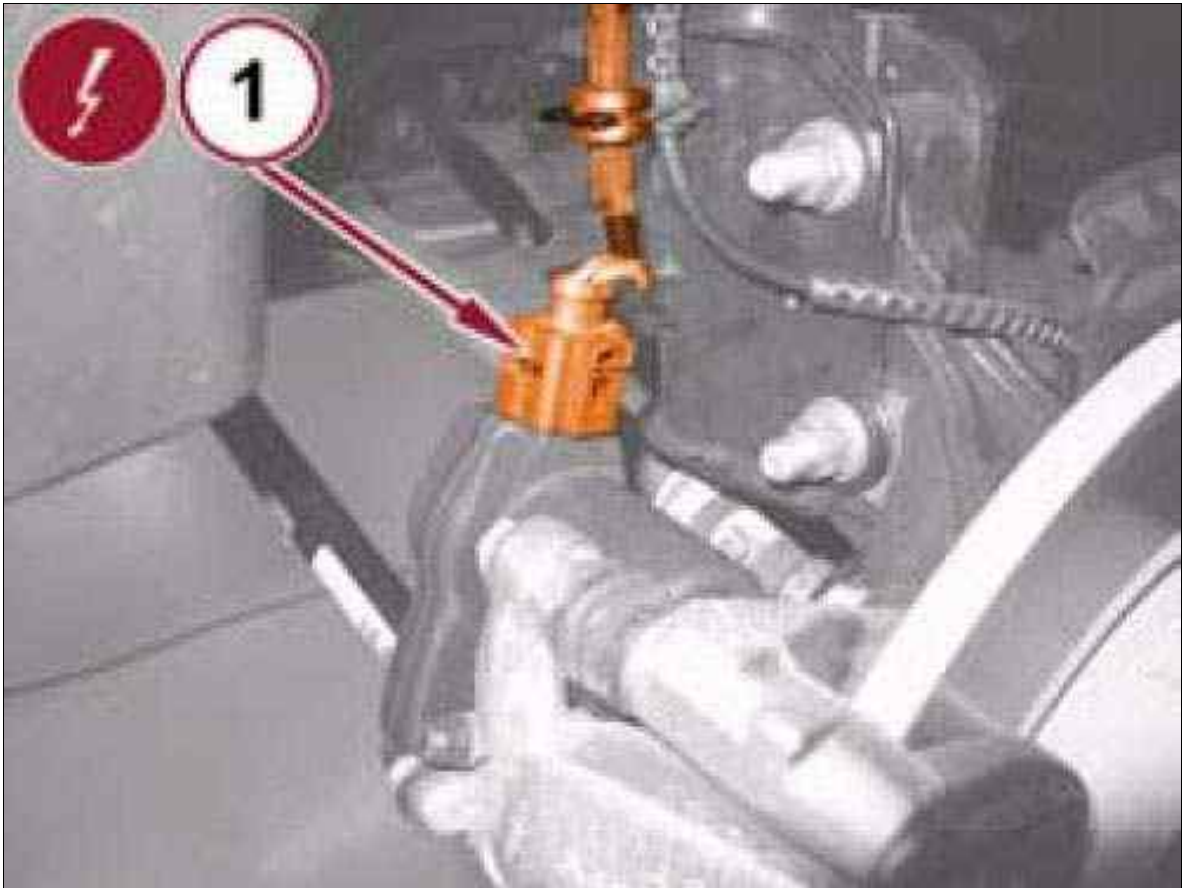
Courtesy of CHRYSLER GROUP, LLC

3. Install the brake caliper adaptor (1a) and tighten the caliper adaptor to rear knuckle bolts (1b) to the proper specification. Refer to TORQUE SPECIFICATIONS .
4. Install the front brake pads. Refer to PADS, BRAKE, FRONT, REMOVAL AND INSTALLATION .
5. Install the tire and wheel assembly. Refer to REMOVAL AND INSTALLATION .
6. Remove the support and lower the vehicle.

HYDRAULIC/MECHANICAL > ROTOR, BRAKE > REMOVAL AND INSTALLATION > REAR > REAR ROTOR REMOVAL

1. Raise and support the vehicle. Refer to HOISTING, STANDARD PROCEDURE .
2. Remove the tire and wheel assembly. Refer to REMOVAL AND INSTALLATION .

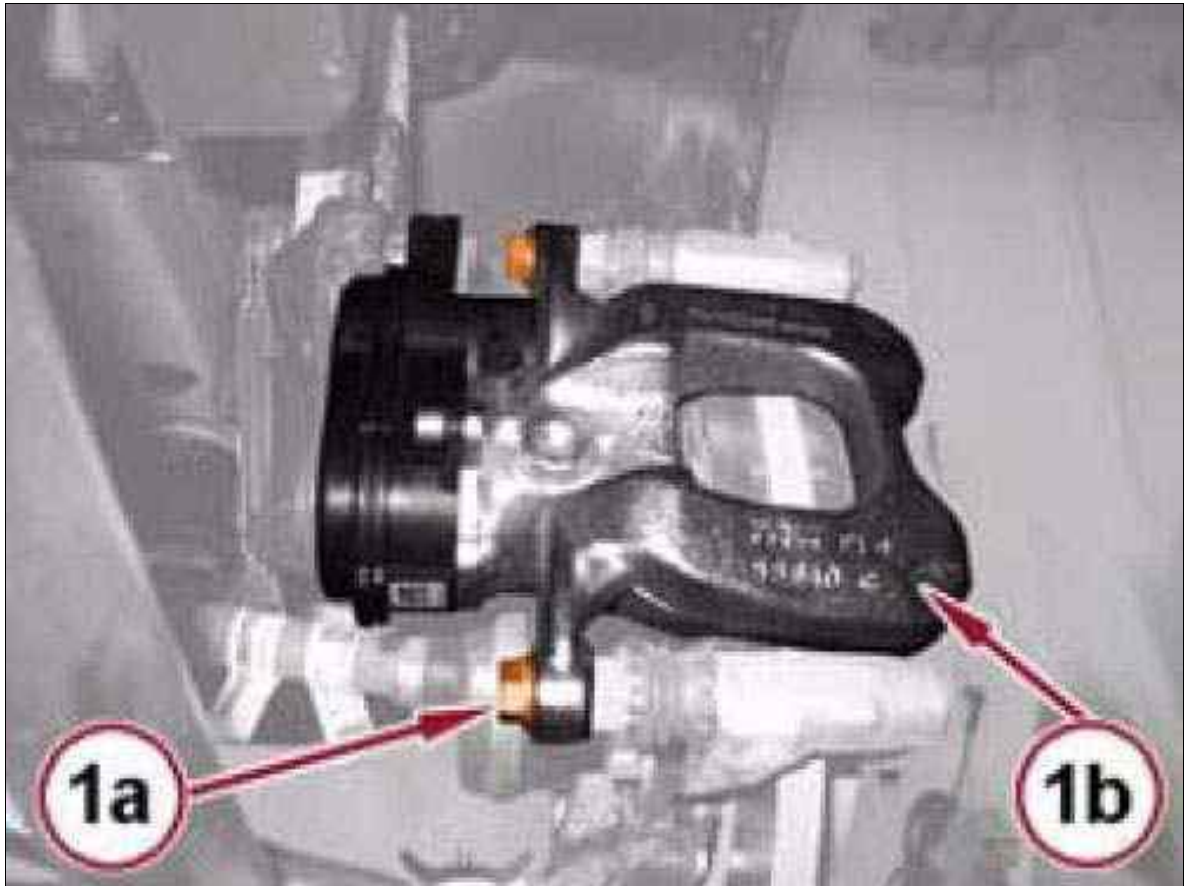
Fig 1: Electric Park Brake Connector



Courtesy of CHRYSLER GROUP, LLC

3. Disconnect the Electric Park Brake (EPB) electrical connector (1).

Fig 2: Caliper & Adaptor Bolts



Courtesy of CHRYSLER GROUP, LLC

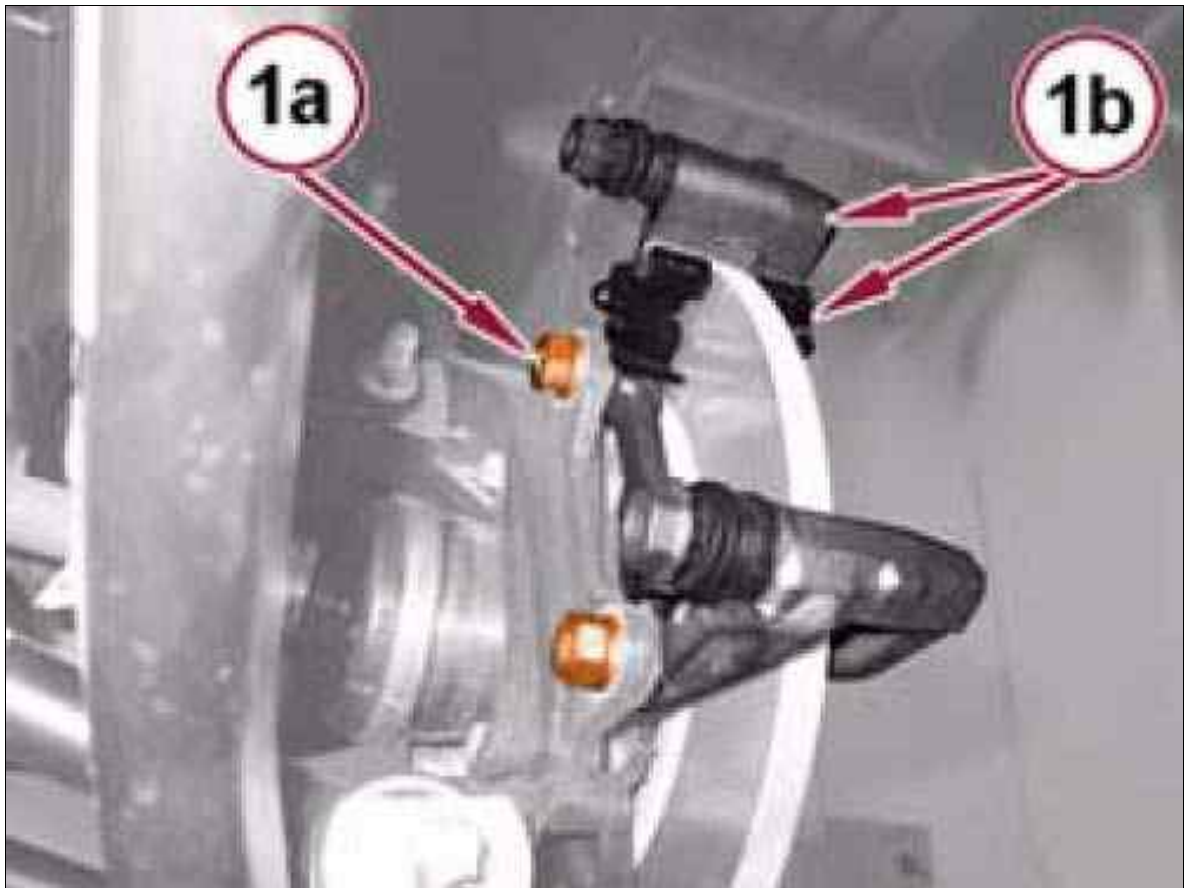
4. Remove the caliper to caliper adaptor bolts (1a), and remove the caliper (1b) from the adaptor.

 NOTE:

Make sure that the brake caliper is suitably supported.

5. Remove the rear brake pads. Refer to PADS, BRAKE, REAR, REMOVAL AND INSTALLATION .

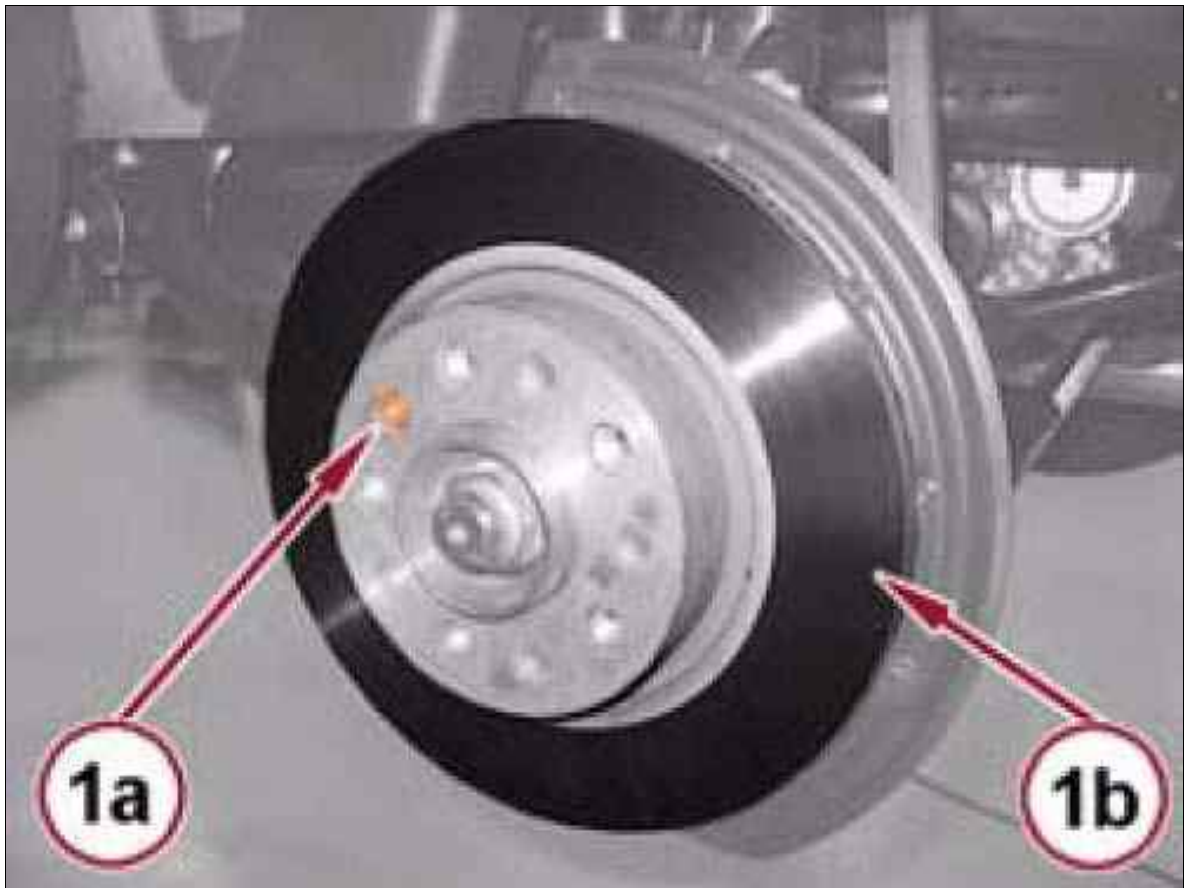
Fig 3: Caliper Adaptor & Bolts



Courtesy of CHRYSLER GROUP, LLC

6. Remove the caliper adaptor to rear knuckle bolts (1a), and remove the caliper adaptor (1b)

Fig 4: Brake Rotor & Retaining Bolt

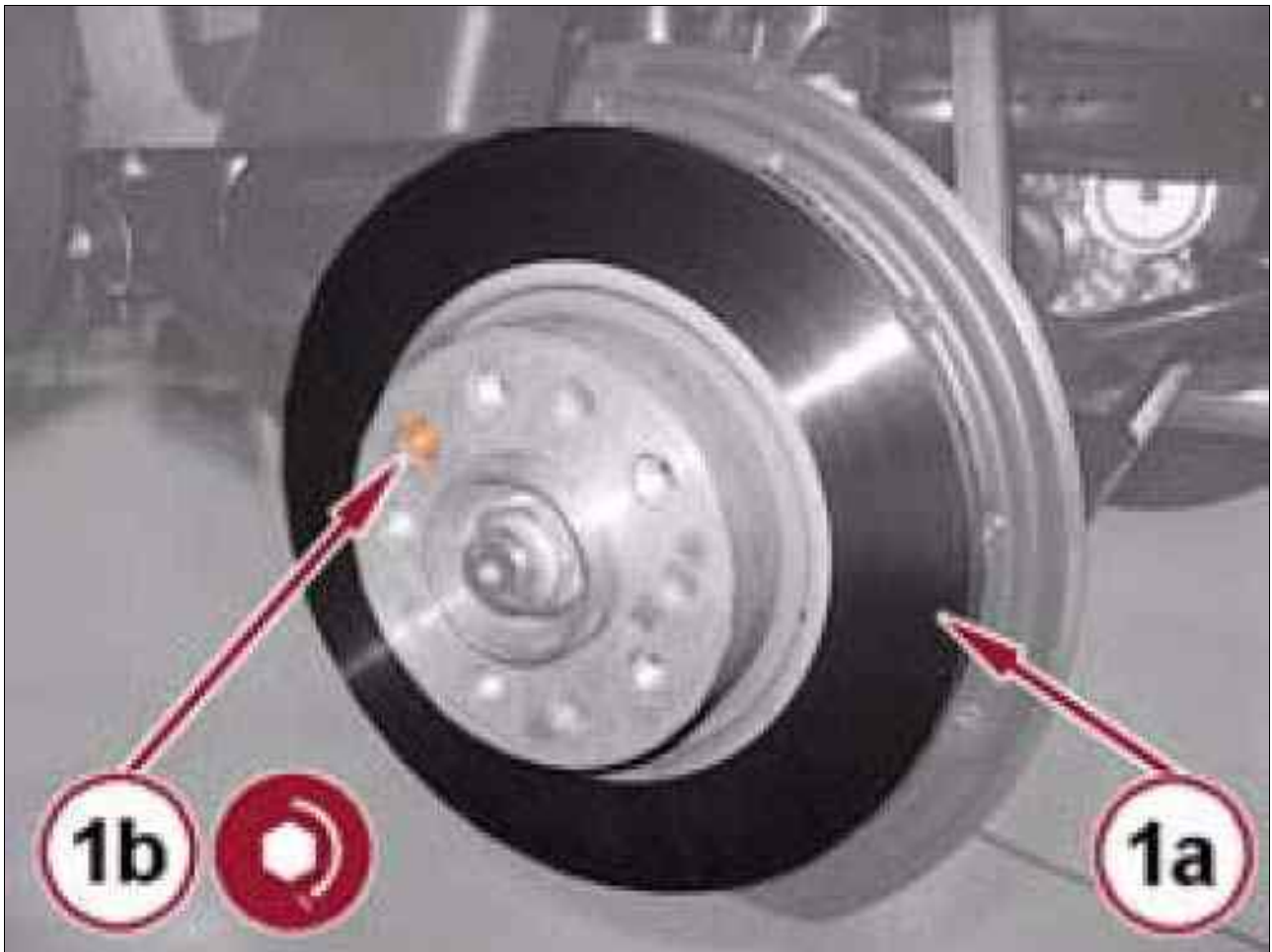


Courtesy of CHRYSLER GROUP, LLC

7. Remove the brake rotor retaining bolt (1a), and remove the rotor (1b).

**HYDRAULIC/MECHANICAL > ROTOR, BRAKE > REMOVAL AND INSTALLATION >
REAR > REAR ROTOR INSTALLATION**

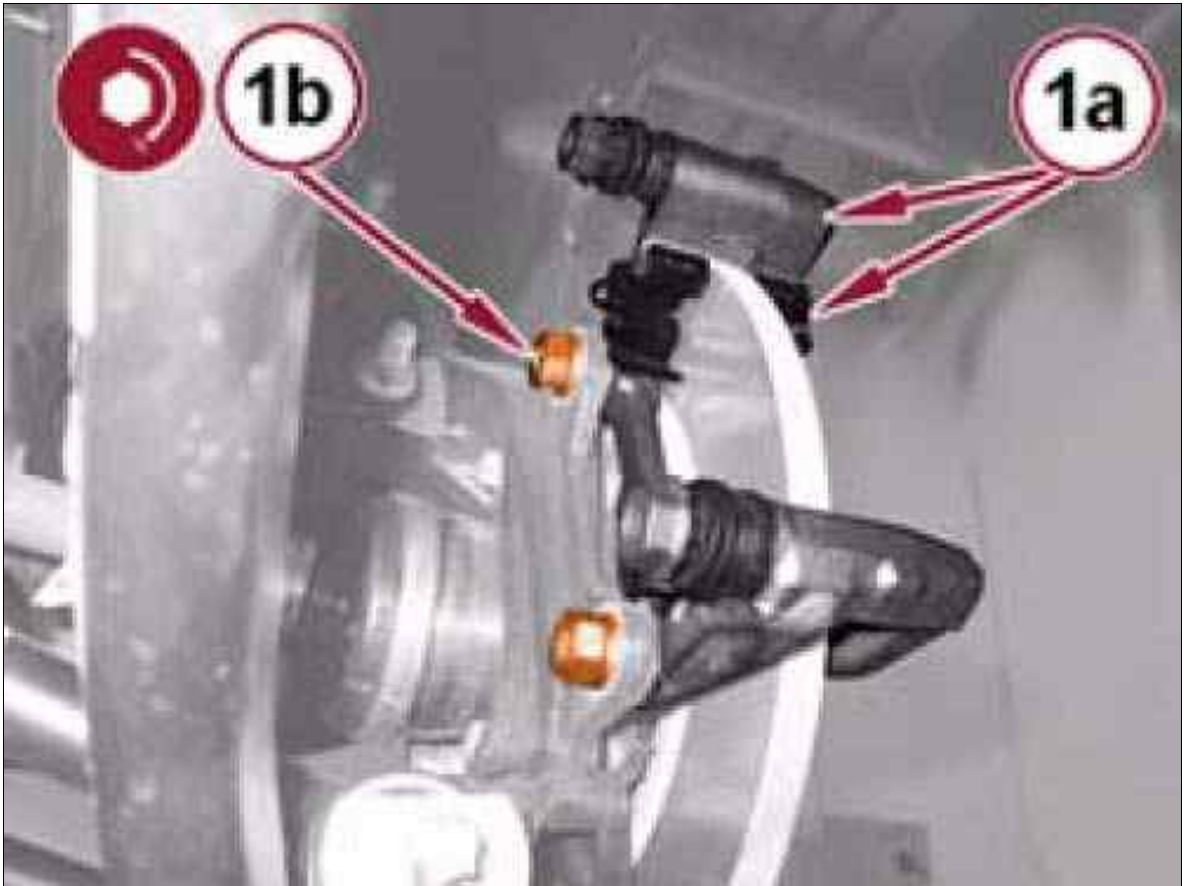
Fig 1: Brake Rotor & Retaining Bolt



Courtesy of CHRYSLER GROUP, LLC

1. Install the brake rotor (1a).
2. Install and tighten the brake rotor retaining pin (1b) to the proper specification. Refer to TORQUE SPECIFICATIONS .

Fig 2: Caliper Adaptor & Bolts

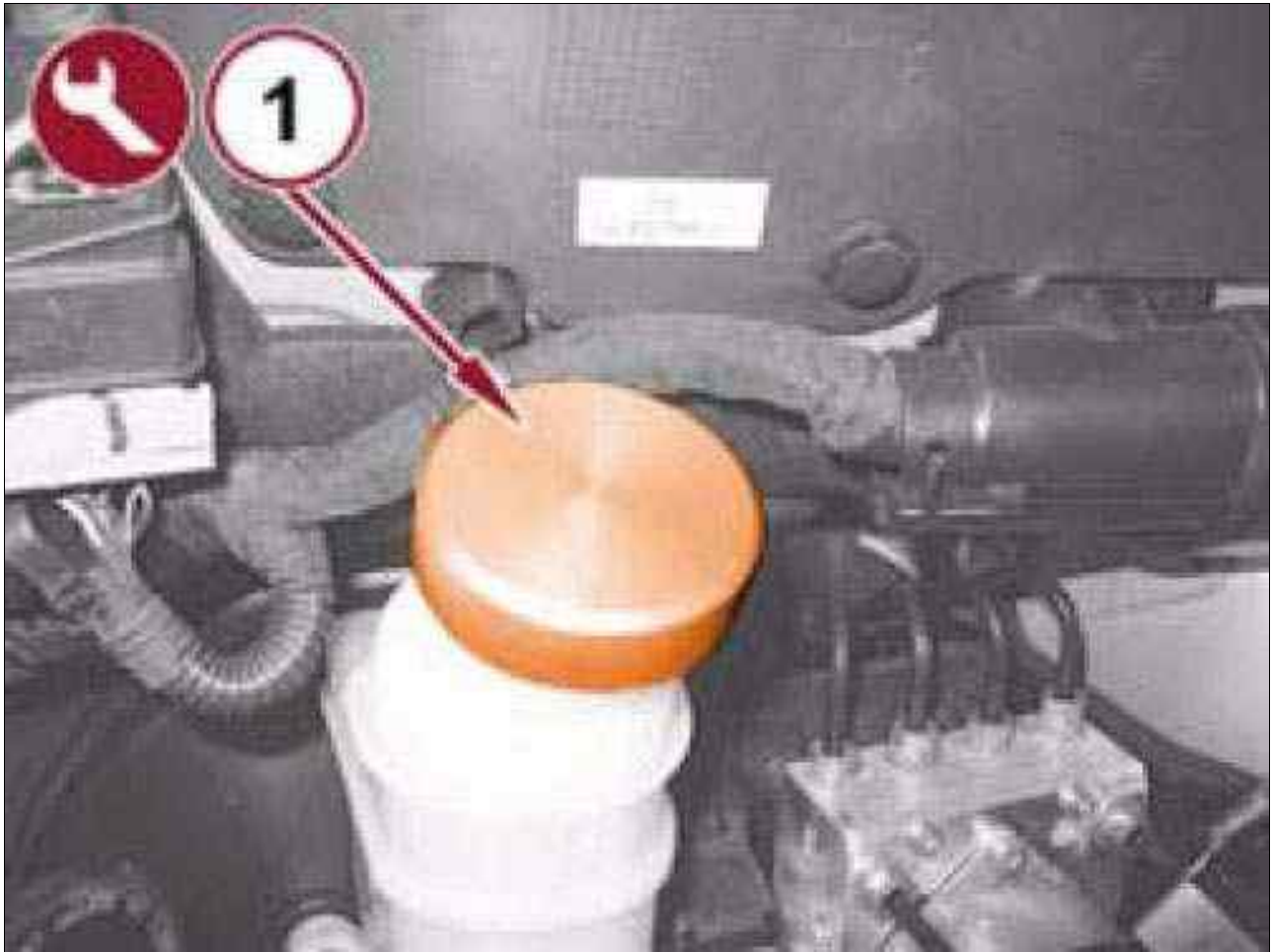


Courtesy of CHRYSLER GROUP, LLC

3. Install the brake caliper adaptor (1a) and tighten the caliper adaptor to rear knuckle bolts (1b) to the proper specification. Refer to TORQUE SPECIFICATIONS .
4. Install the rear brake pads. Refer to PADS, BRAKE, REAR, REMOVAL AND INSTALLATION .
5. Connect the Electric Park Brake (EPB) electrical connector.
6. Install the tire and wheel assembly. Refer to REMOVAL AND INSTALLATION .
7. Remove the support and lower the vehicle.

**HYDRAULIC/MECHANICAL > TUBES AND HOSES, BRAKE > REMOVAL AND
INSTALLATION > FRONT BRAKE FLEXIBLE HOSE > REMOVAL - FRONT BRAKE
FLEXIBLE HOSE**

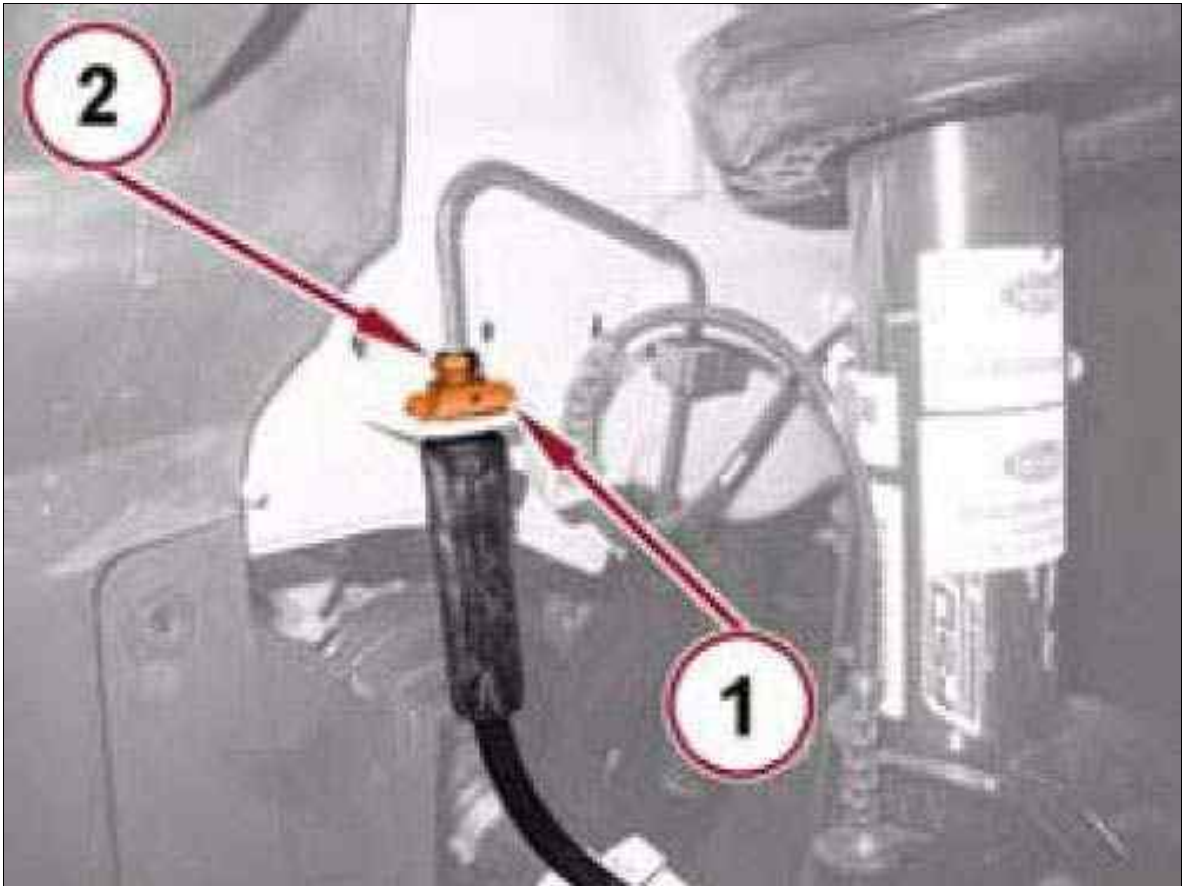
Fig 1: Master Cylinder Cap



Courtesy of CHRYSLER GROUP, LLC

1. Remove the master cylinder cap (1), and install the vacuum tool 2000001400.
2. Raise and support the vehicle. Refer to HOISTING, STANDARD PROCEDURE .
3. Remove the tire and wheel assembly. Refer to REMOVAL AND INSTALLATION .

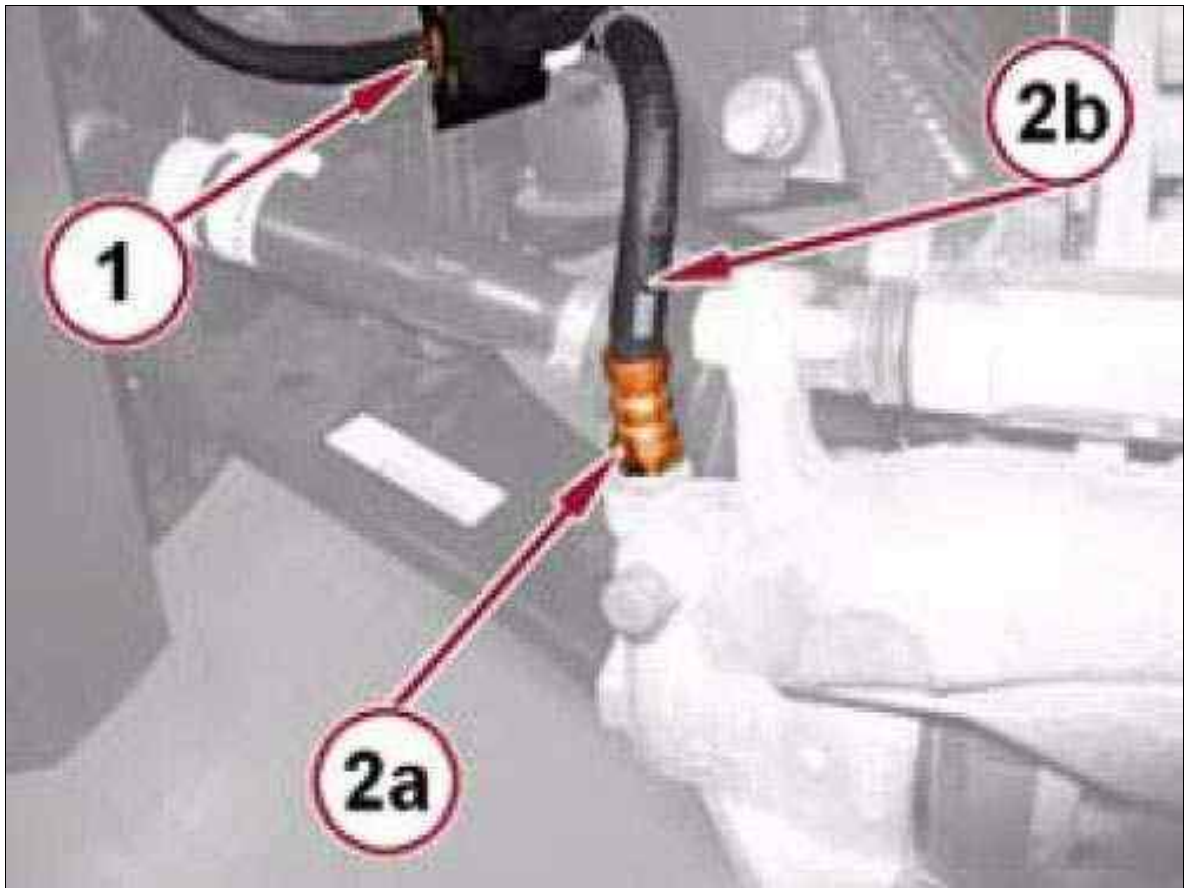
Fig 2: Brake Line Nut & Retainer Clip



Courtesy of CHRYSLER GROUP, LLC

4. Remove the front brake hose to body retainer clip (1).
5. Loosen the brake line nut (2), then remove the brake line from the hose.

Fig 3: Brake Hose, Nut & Strut Retainer Spring

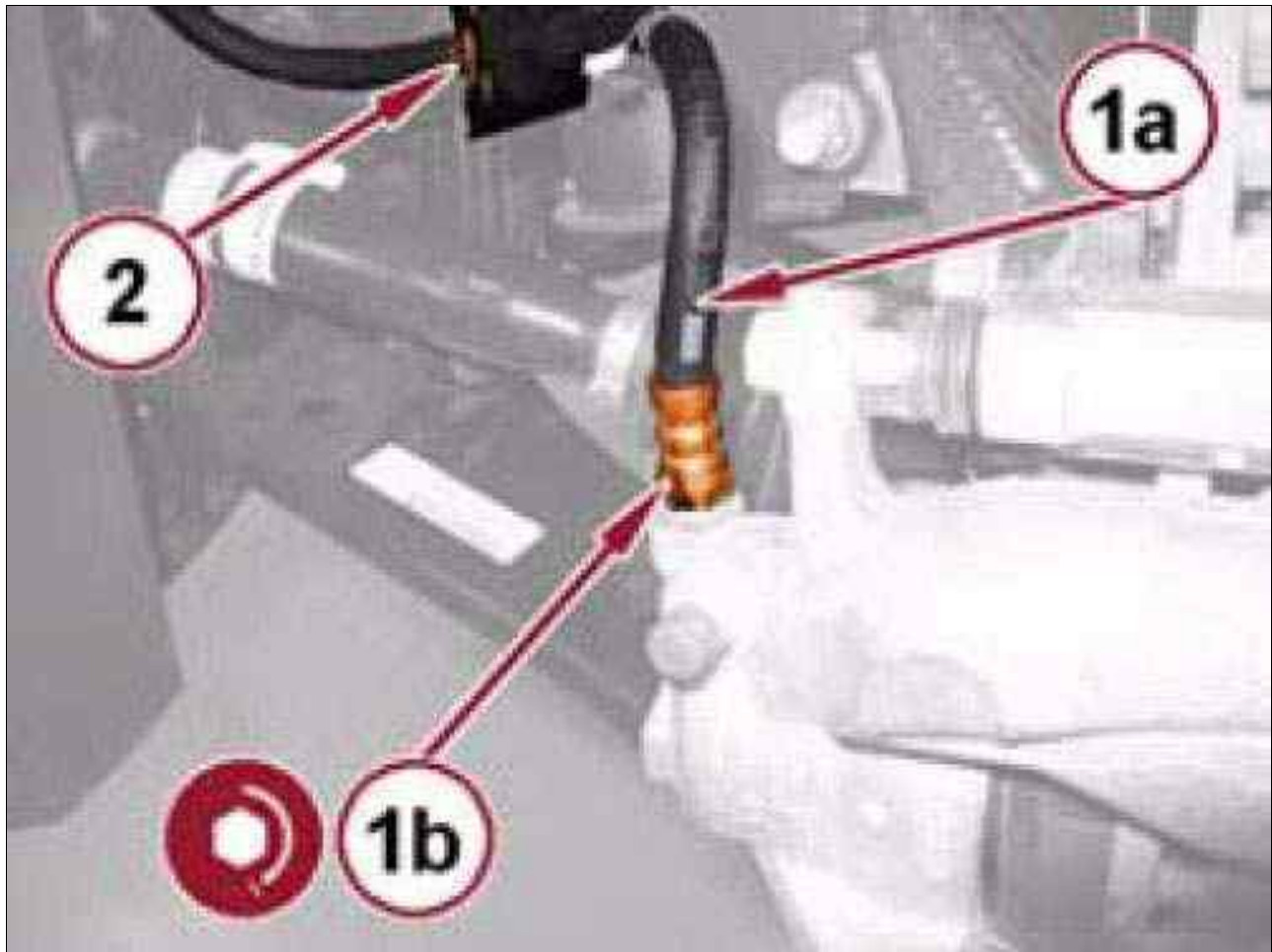


Courtesy of CHRYSLER GROUP, LLC

6. Remove the brake hose to strut retainer spring (1), then remove hose from strut.
7. Loosen and remove the brake hose (2b) from the caliper.

**HYDRAULIC/MECHANICAL > TUBES AND HOSES, BRAKE > REMOVAL AND
INSTALLATION > FRONT BRAKE FLEXIBLE HOSE > INSTALLATION - FRONT BRAKE
FLEXIBLE HOSE**

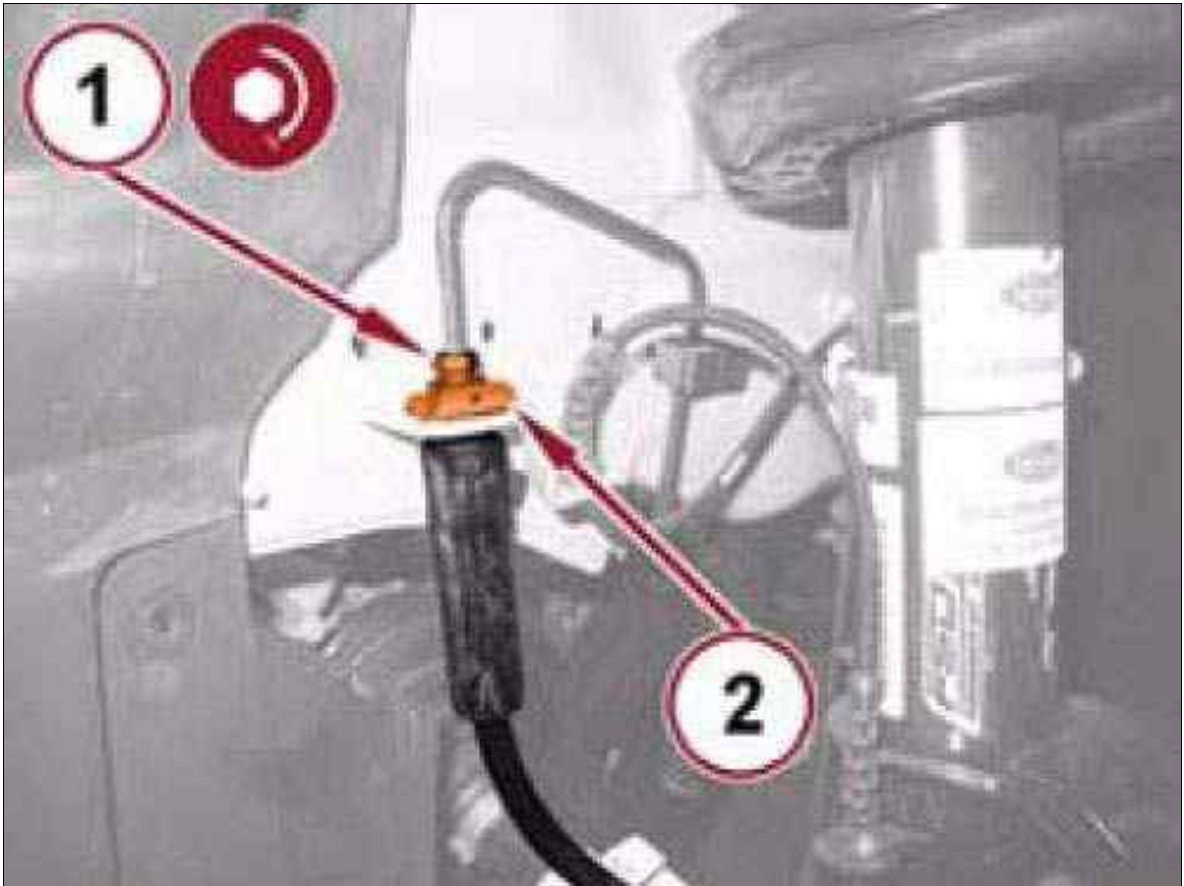
Fig 1: Brake Hose, Nut & Strut Retainer Spring



Courtesy of CHRYSLER GROUP, LLC

1. Position the brake hose (1a) to the caliper, and tighten the brake hose nut (1b) to the proper specification. Refer to TORQUE SPECIFICATIONS .
2. Install the brake hose onto the strut retainer and install retainer clip (2).

Fig 2: Brake Line Nut & Retainer Clip

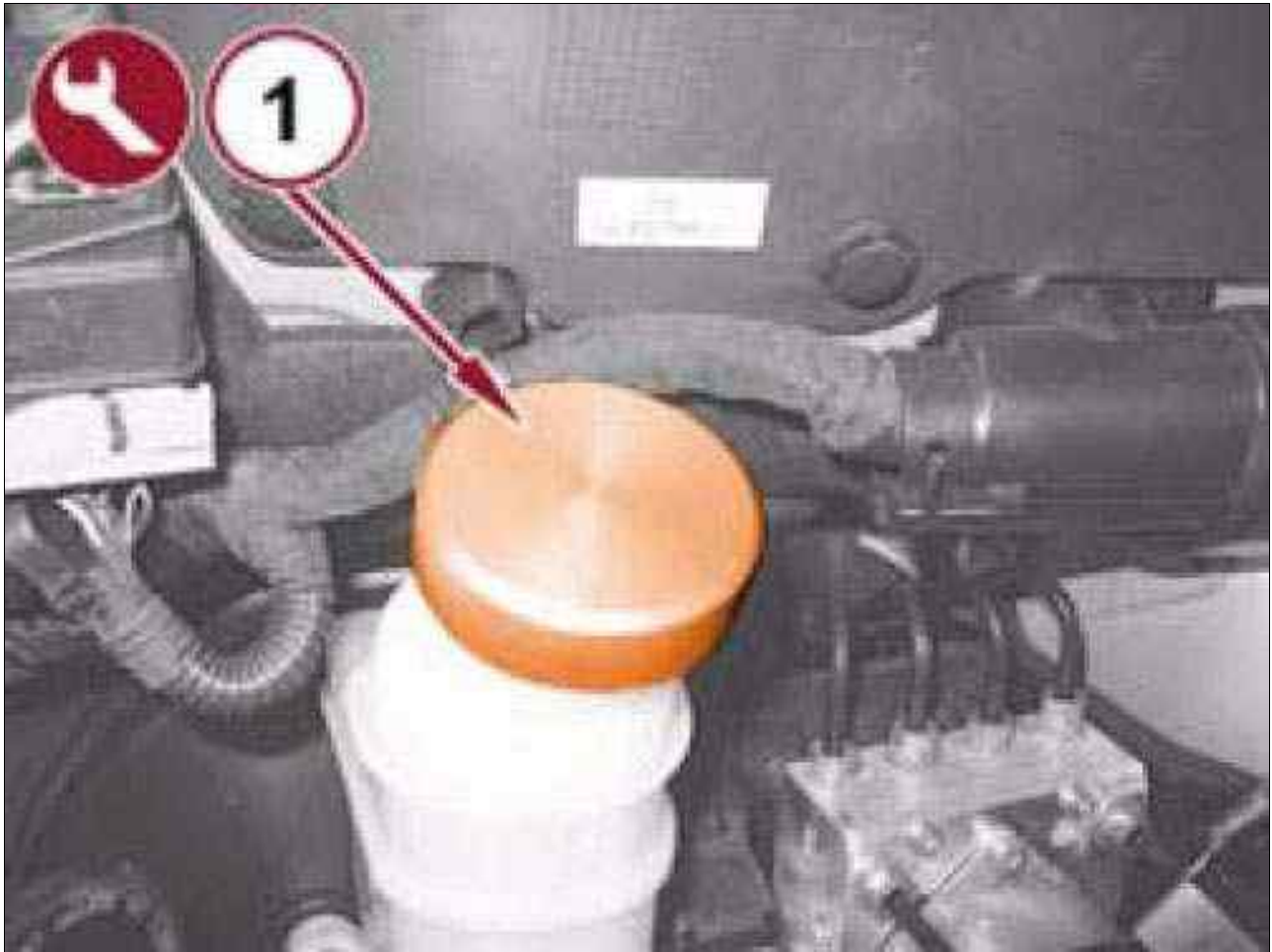


Courtesy of CHRYSLER GROUP, LLC

3. Position the brake line to the hose, and tighten the brake line nut (1) to the proper specification. Refer to TORQUE SPECIFICATIONS .
4. Install the brake hose to body retainer clip (1).
5. Install the tire and wheel assembly. Refer to REMOVAL AND INSTALLATION .
6. Remove the support and lower the vehicle.
7. Bleed the out the braking system. Refer to STANDARD PROCEDURE .

**HYDRAULIC/MECHANICAL > TUBES AND HOSES, BRAKE > REMOVAL AND
INSTALLATION > REAR BRAKE FLEXIBLE HOSE > REMOVAL - REAR BRAKE
FLEXIBLE HOSE**

Fig 1: Master Cylinder Cap



Courtesy of CHRYSLER GROUP, LLC

1. Remove the master cylinder cap (1), and install the vacuum tool 2000001400.
2. Raise and support the vehicle. Refer to HOISTING, STANDARD PROCEDURE .
3. Remove the tire and wheel assembly. Refer to REMOVAL AND INSTALLATION .

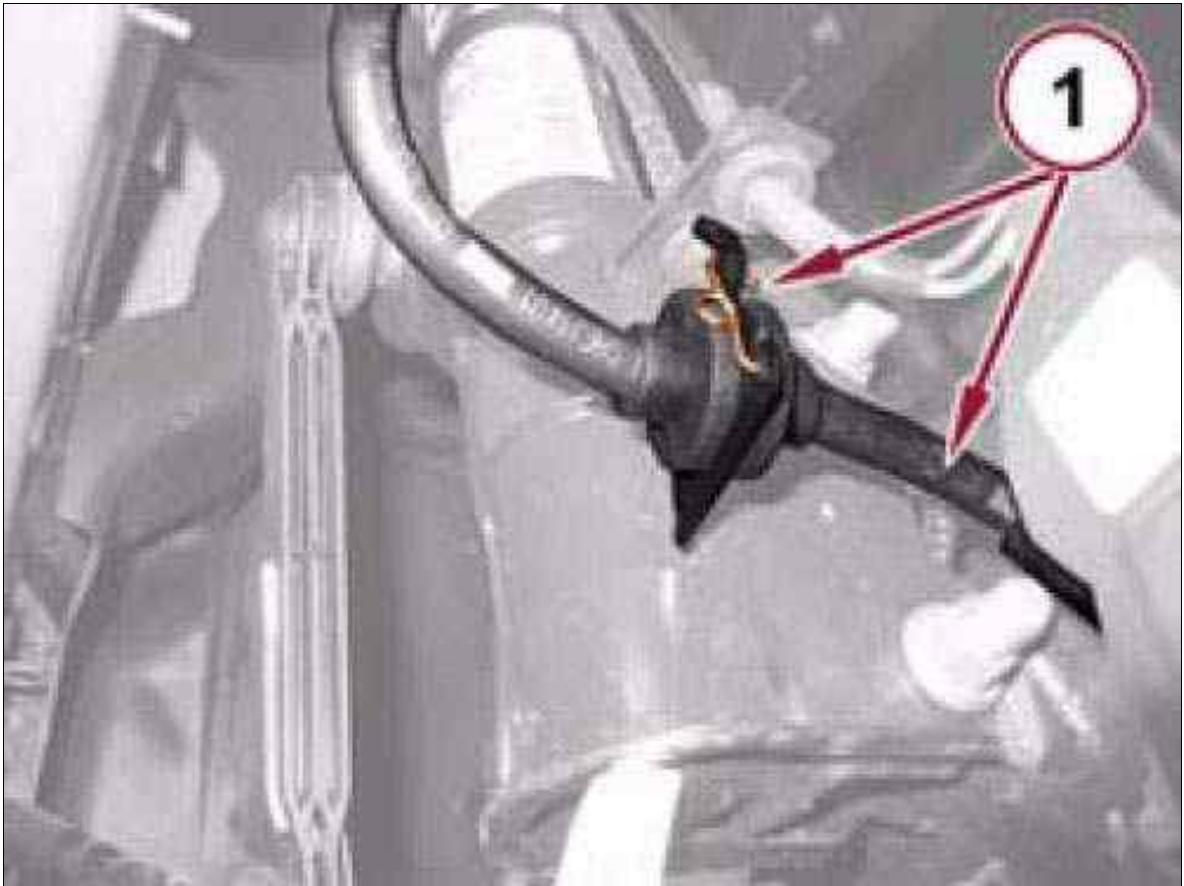
Fig 2: Brake Line Nut & Retainer Clip



Courtesy of CHRYSLER GROUP, LLC

4. Remove the rear brake hose to body retainer clip (1a).
5. Loosen the brake line nut (1b), then remove the brake line from the hose.

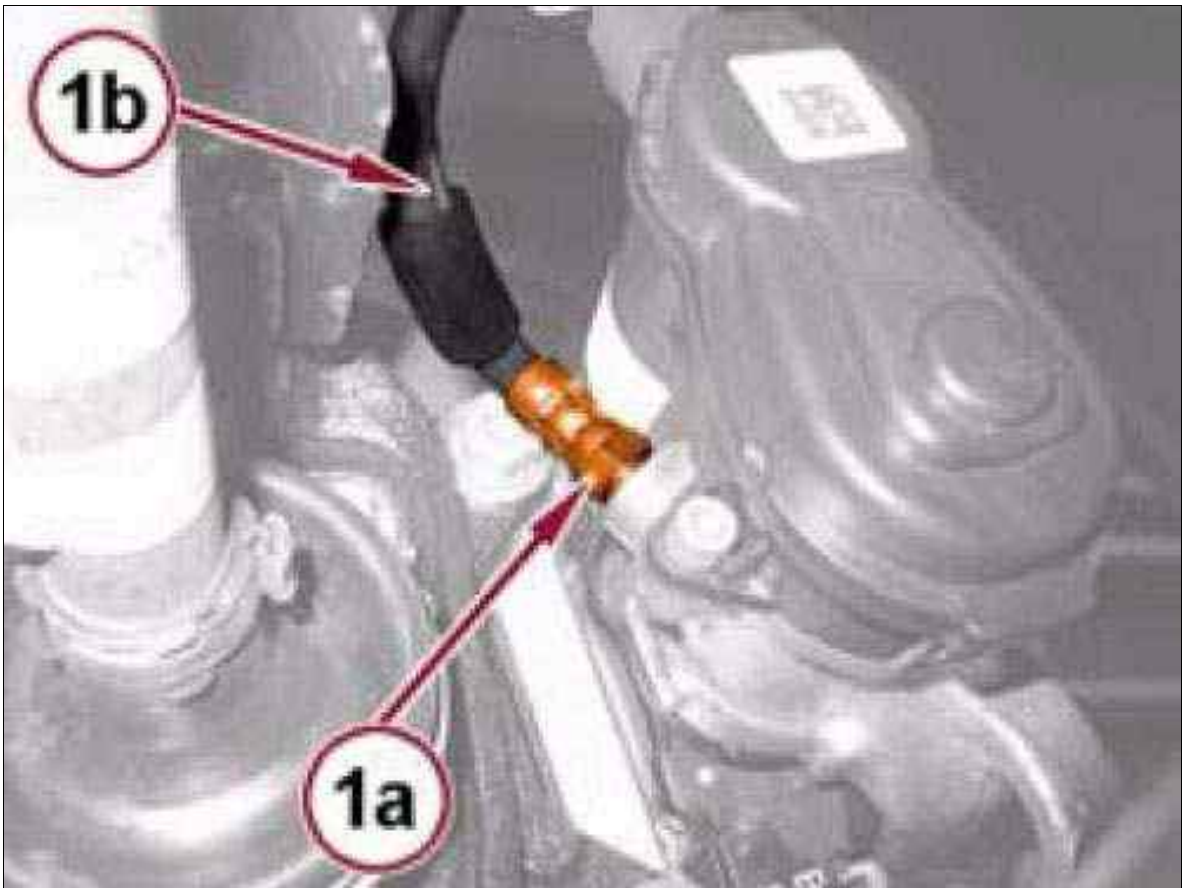
Fig 3: Brake Hose To Strut Retainer Spring



Courtesy of CHRYSLER GROUP, LLC

6. Remove the brake hose to strut retainer spring (1), then remove the hose from strut.

Fig 4: Brake Hose & Nut

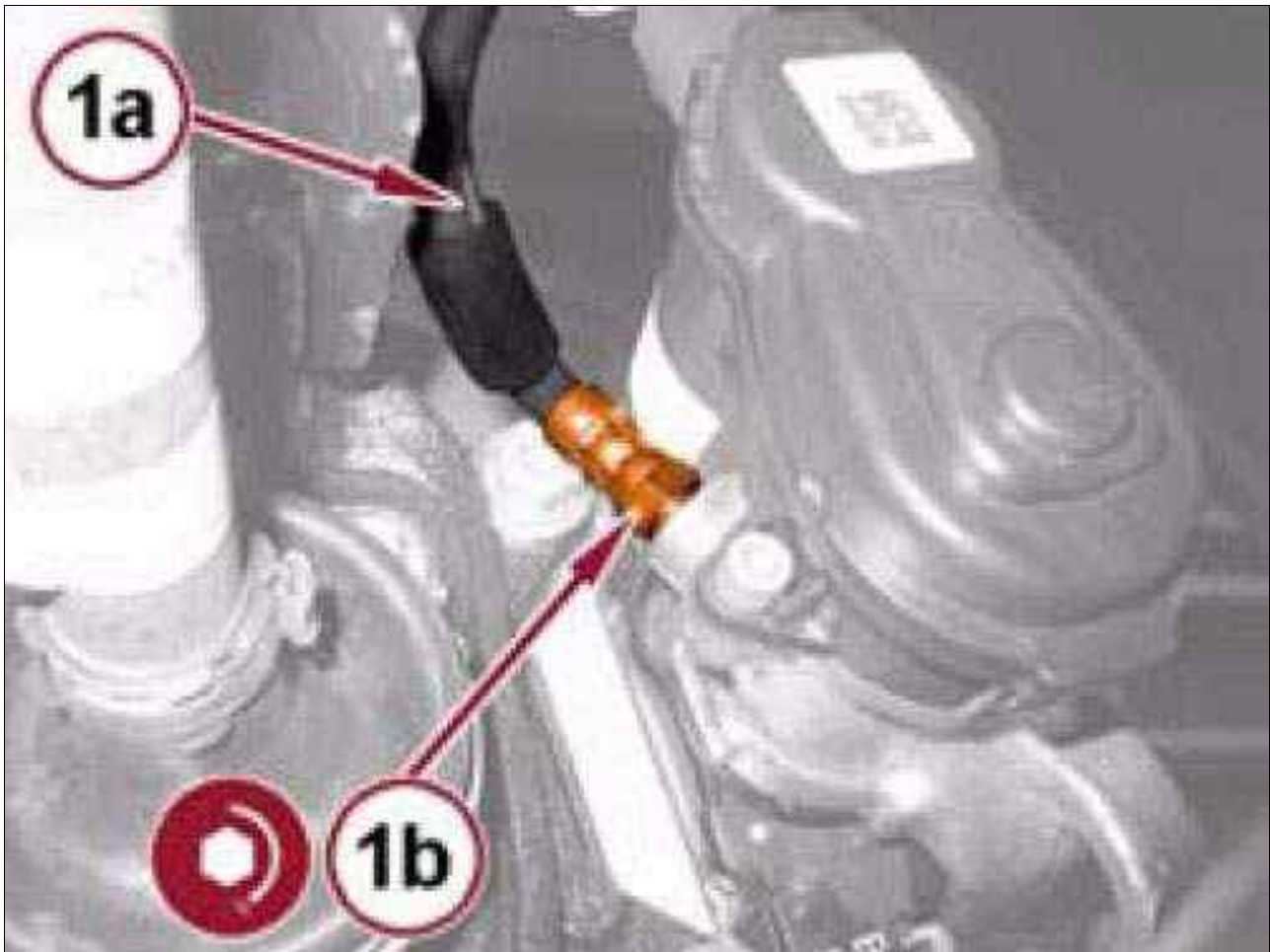


Courtesy of CHRYSLER GROUP, LLC

7. Loosen and remove the brake hose (1b) from the caliper.

**HYDRAULIC/MECHANICAL > TUBES AND HOSES, BRAKE > REMOVAL AND
INSTALLATION > REAR BRAKE FLEXIBLE HOSE > INSTALLATION - REAR BRAKE
FLEXIBLE HOSE**

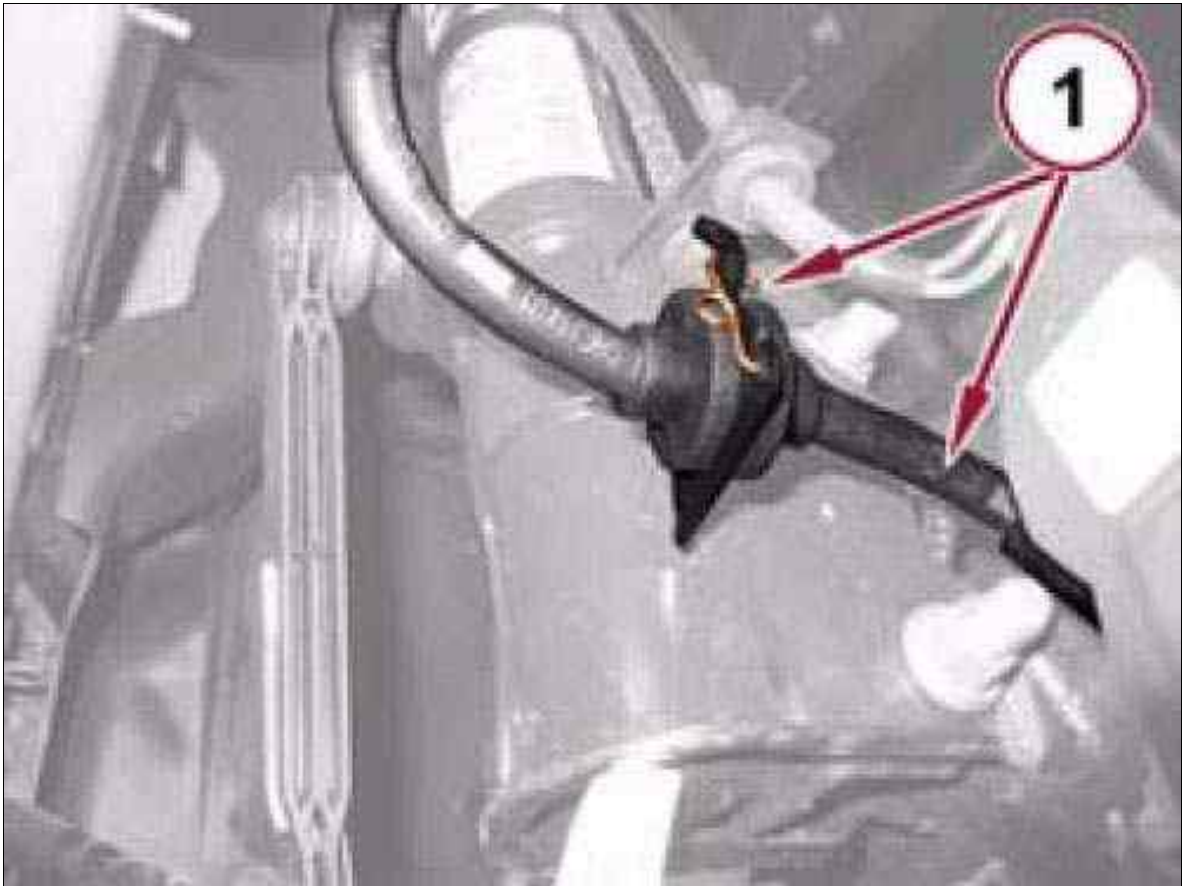
Fig 1: Brake Hose & Nut



Courtesy of CHRYSLER GROUP, LLC

1. Position the brake hose (1a) to the caliper, and tighten the brake hose nut (1b) to the proper specification. Refer to TORQUE SPECIFICATIONS .

Fig 2: Brake Hose To Strut Retainer Spring



Courtesy of CHRYSLER GROUP, LLC

2. Install the brake onto the strut retainer and install the retainer clip (1).

Fig 3: Brake Line Nut & Retainer Clip

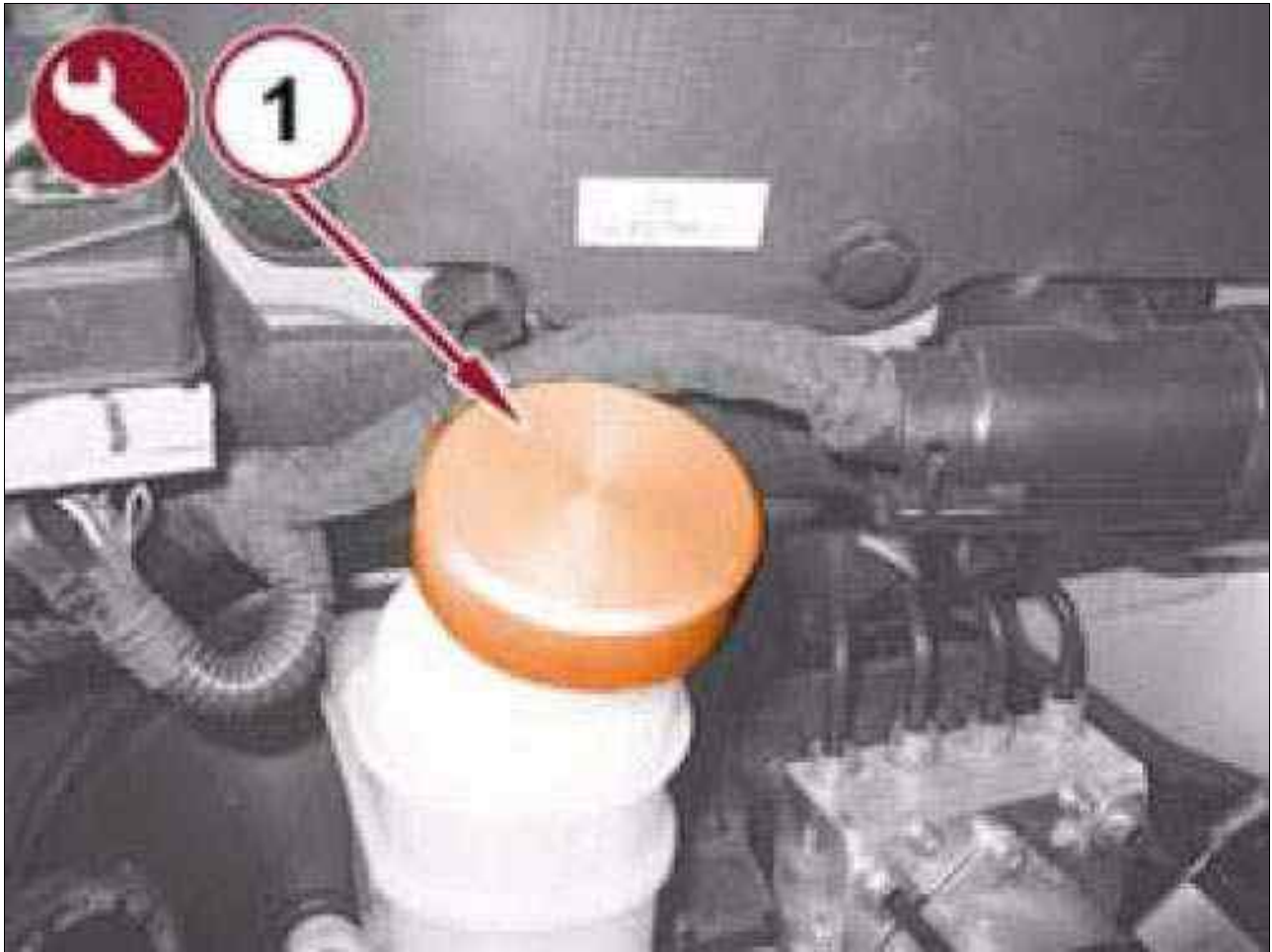


Courtesy of CHRYSLER GROUP, LLC

3. Position the brake line to the hose, and tighten the brake line nut (1a) to the proper specification. Refer to TORQUE SPECIFICATIONS .
4. Install the brake hose to body retainer clip (1b).
5. Install the tire and wheel assembly. Refer to REMOVAL AND INSTALLATION .
6. Remove the support and lower the vehicle.
7. Bleed out the braking system. Refer to STANDARD PROCEDURE .

**HYDRAULIC/MECHANICAL > TUBES AND HOSES, BRAKE > REMOVAL AND
INSTALLATION > MASTER CYLINDER TO ICU BRAKE LINE > REMOVAL - MASTER
CYLINDER TO ICU BRAKE LINE**

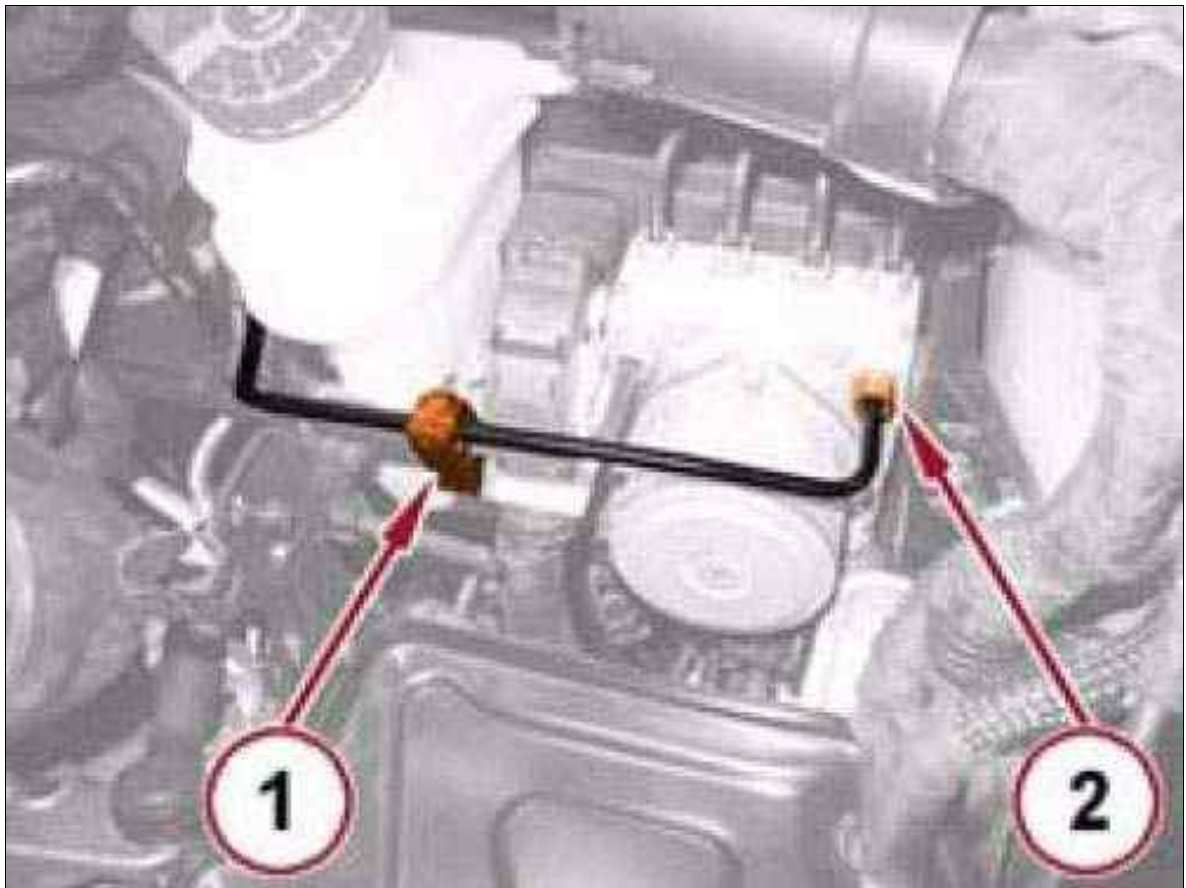
Fig 1: Master Cylinder Cap



Courtesy of CHRYSLER GROUP, LLC

1. Remove the battery. Refer to BATTERY, REMOVAL AND INSTALLATION .
2. Remove the master cylinder cap (1), and install the vacuum tool 2000001400.

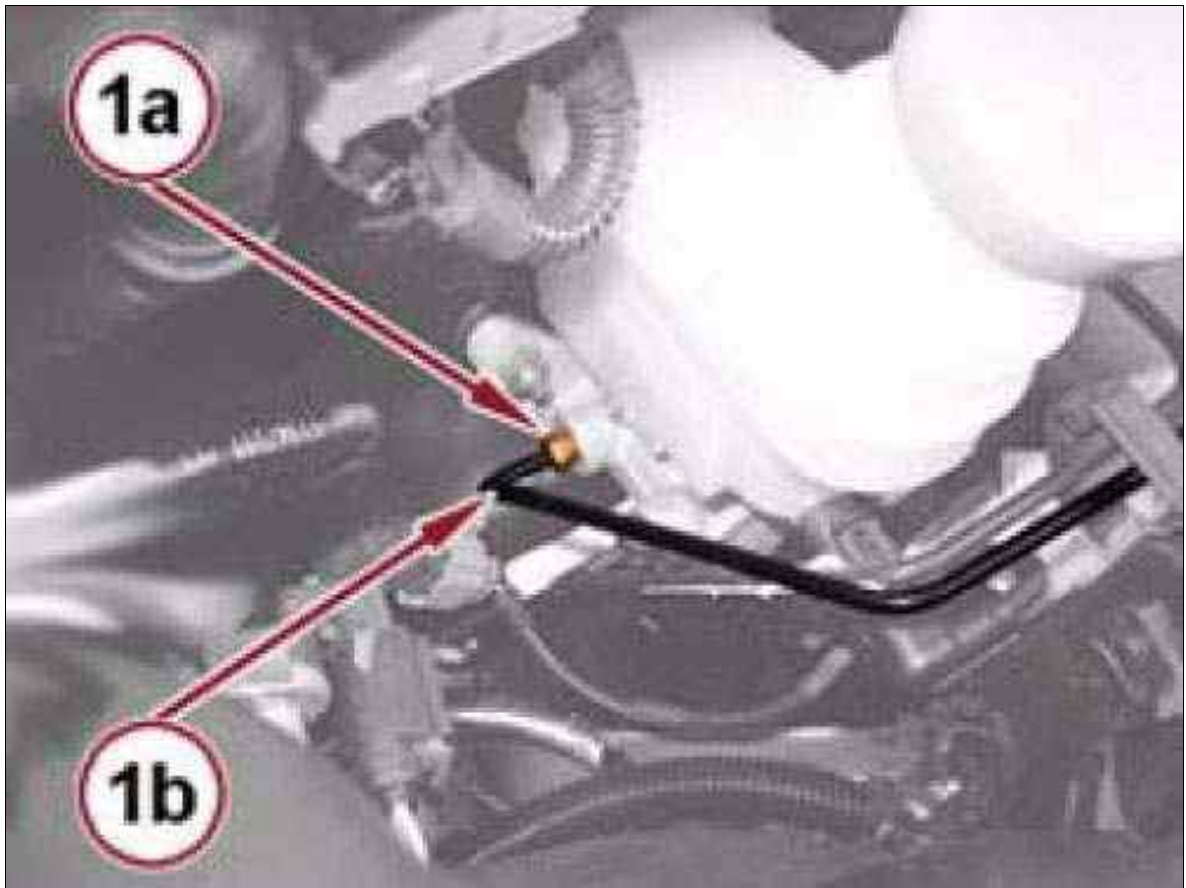
Fig 2: Integrated Control Unit Nut & Retainer Clip



Courtesy of CHRYSLER GROUP, LLC

3. Remove the brake line retainer clip (1).
4. Loosen and remove the brake line to Integrated Control Unit (ICU) nut (2).

Fig 3: Brake Line & Nut

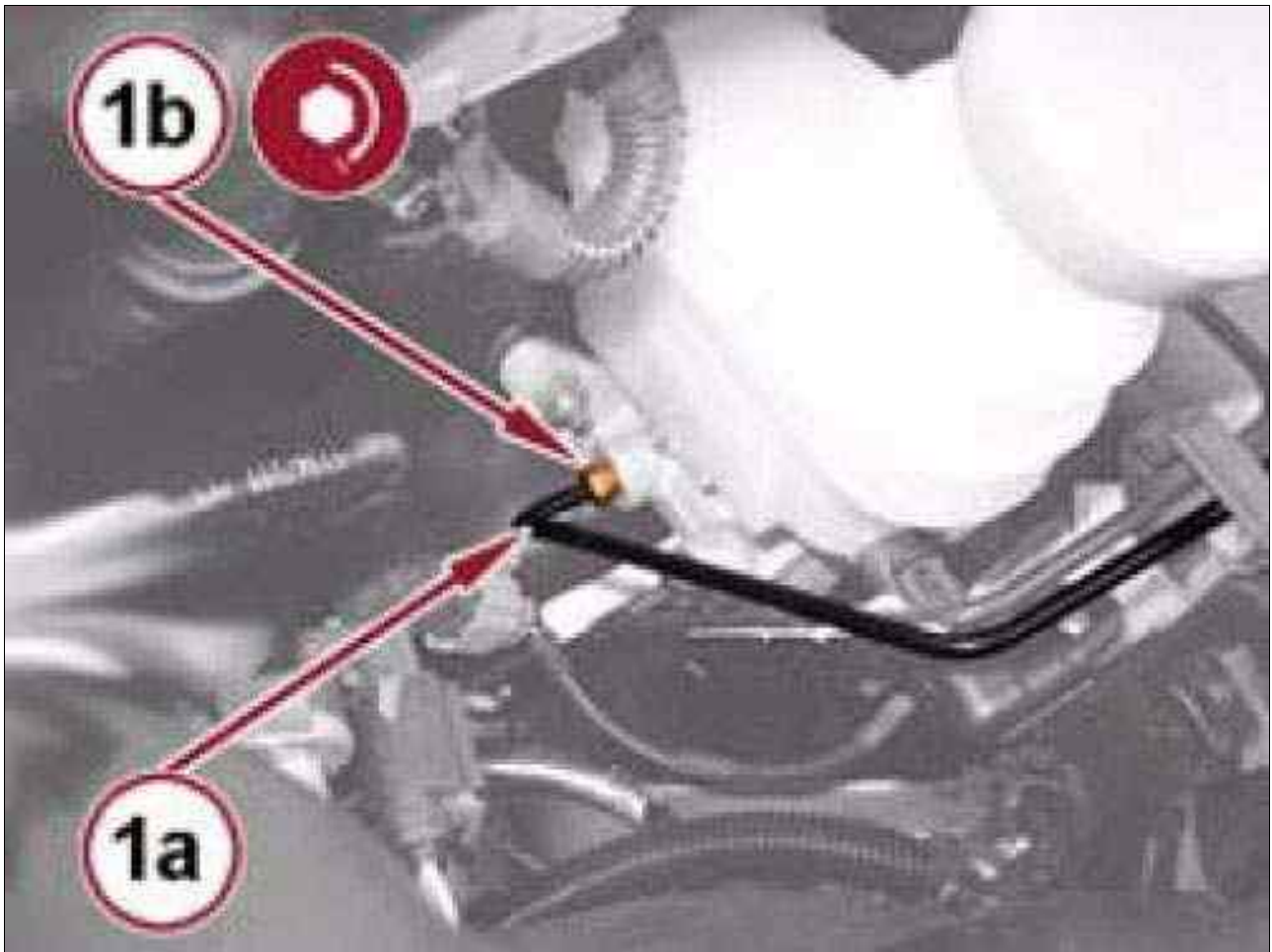


Courtesy of CHRYSLER GROUP, LLC

5. Loosen and remove the brake line to master cylinder nut (1a).
6. Remove the brake line (1b) from the vehicle.

**HYDRAULIC/MECHANICAL > TUBES AND HOSES, BRAKE > REMOVAL AND
INSTALLATION > MASTER CYLINDER TO ICU BRAKE LINE > INSTALLATION -
MASTER CYLINDER TO ICU BRAKE LINE**

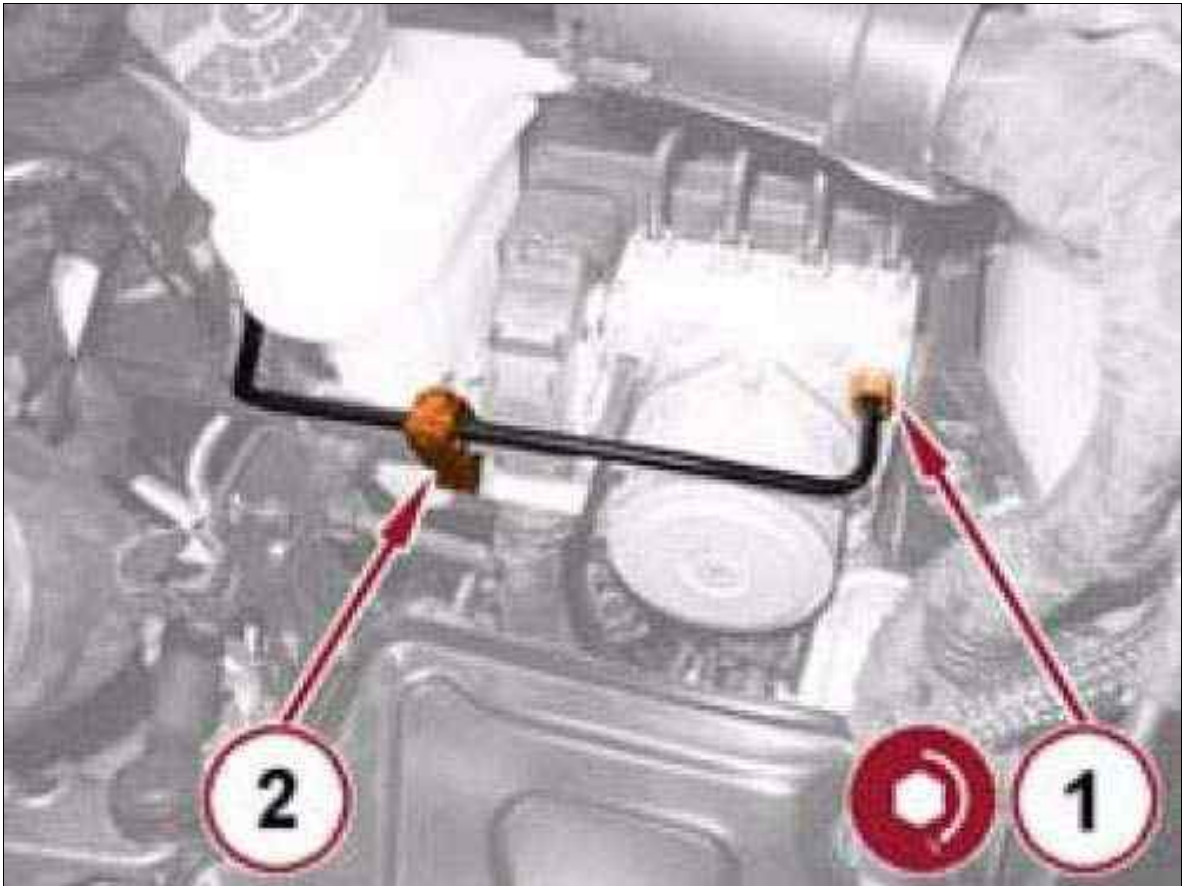
Fig 1: Brake Line & Nut



Courtesy of CHRYSLER GROUP, LLC

1. Position the brake line (1a) into the vehicle.
2. Install and tighten the brake line to master cylinder nut (1b) to the proper specification. Refer to TORQUE SPECIFICATIONS .

Fig 2: Integrated Control Unit Nut & Retainer Clip



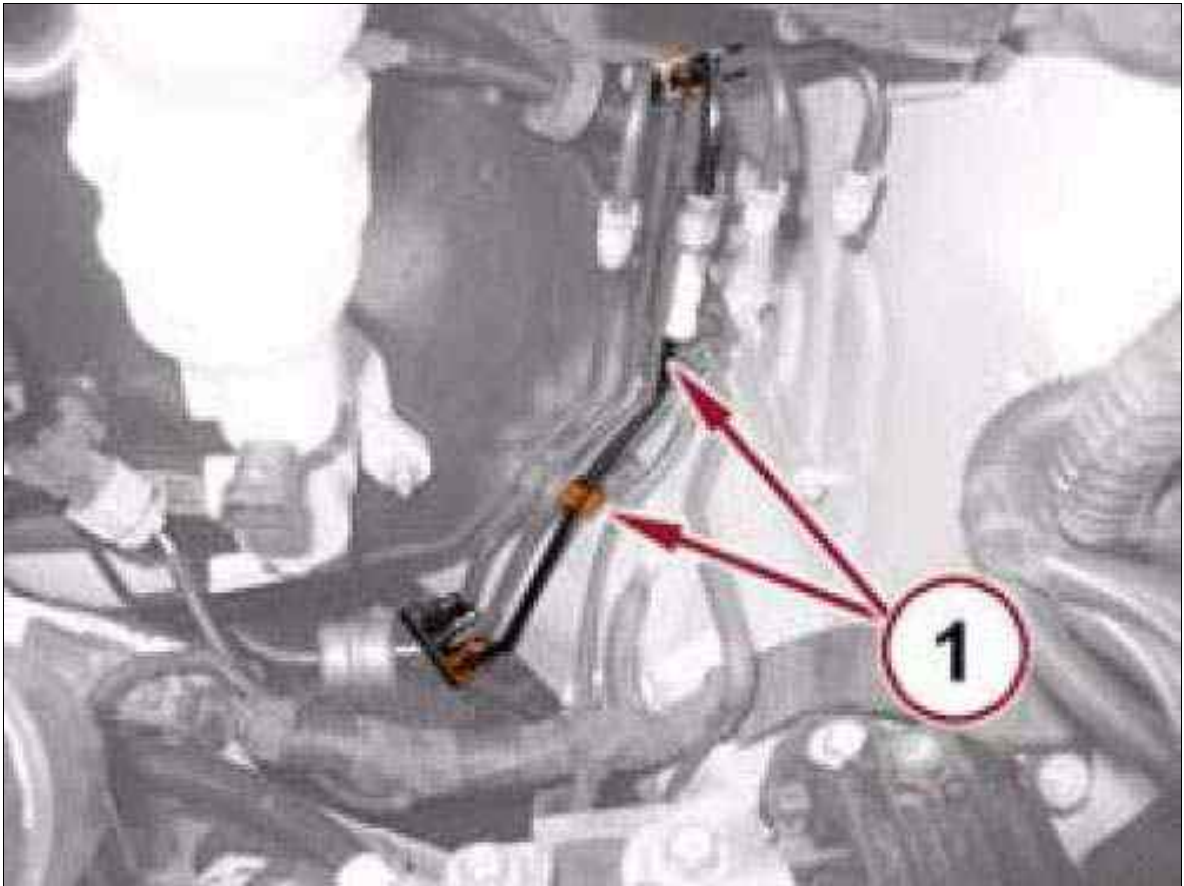
Courtesy of CHRYSLER GROUP, LLC

3. Install and tighten the brake line to Integrated Control Unit (ICU) nut (1) to the proper specification. Refer to TORQUE SPECIFICATIONS .
4. Install the brake line retainer clip (2).
5. Install the battery. Refer to BATTERY, REMOVAL AND INSTALLATION .
6. Bleed out the braking system. Refer to STANDARD PROCEDURE .

HYDRAULIC/MECHANICAL > TUBES AND HOSES, BRAKE > REMOVAL AND INSTALLATION > LEFT FRONT BRAKE TUBE > REMOVAL - LEFT FRONT BRAKE TUBE

1. Remove the Integrated Control Unit (ICU). Refer to INTEGRATED CONTROL UNIT (ICU), REMOVAL AND INSTALLATION .

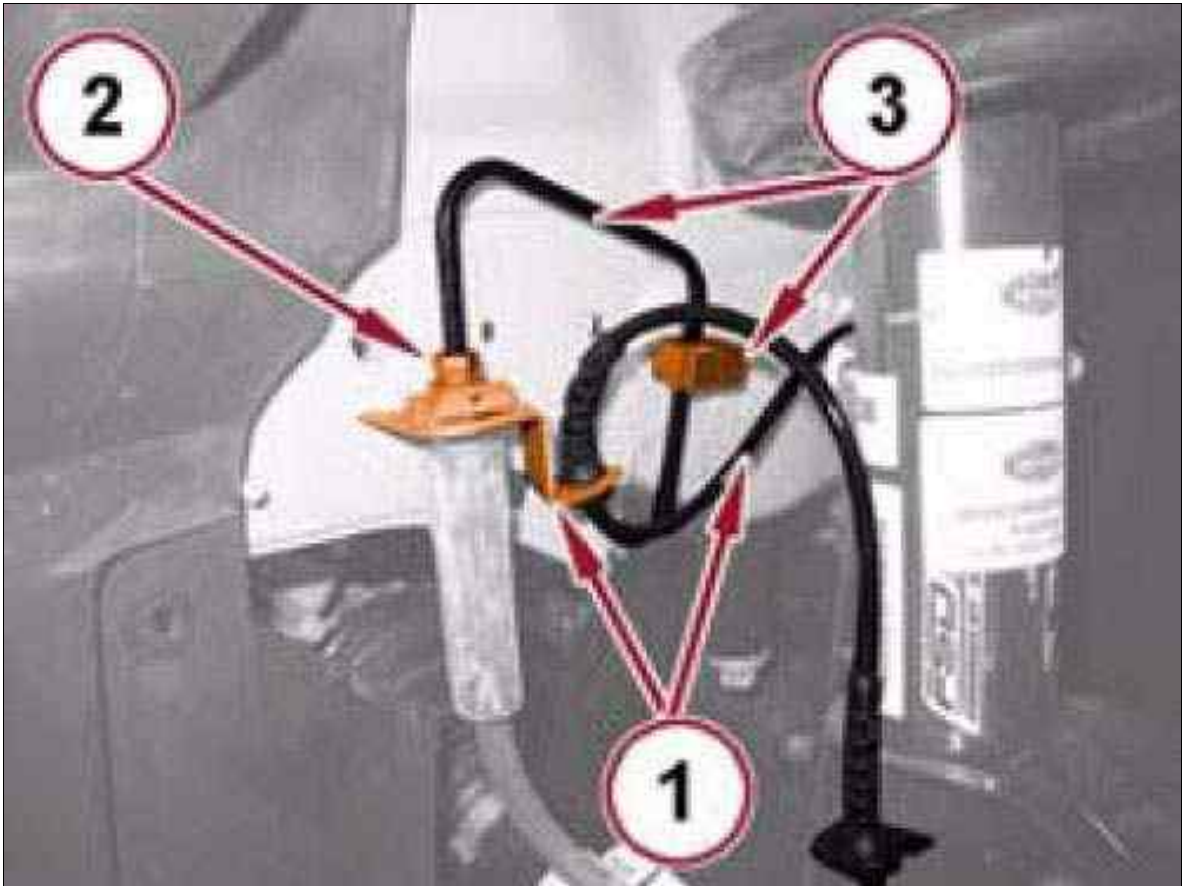
Fig 1: Brake Line & Retainer Clip



Courtesy of CHRYSLER GROUP, LLC

2. Remove the brake line from the retainer clips (1).
3. Raise and support the vehicle. Refer to HOISTING, STANDARD PROCEDURE .
4. Remove the tire and wheel assembly. Refer to REMOVAL AND INSTALLATION .
5. Remove the engine belly pan. Refer to BELLY PAN, REMOVAL AND INSTALLATION .

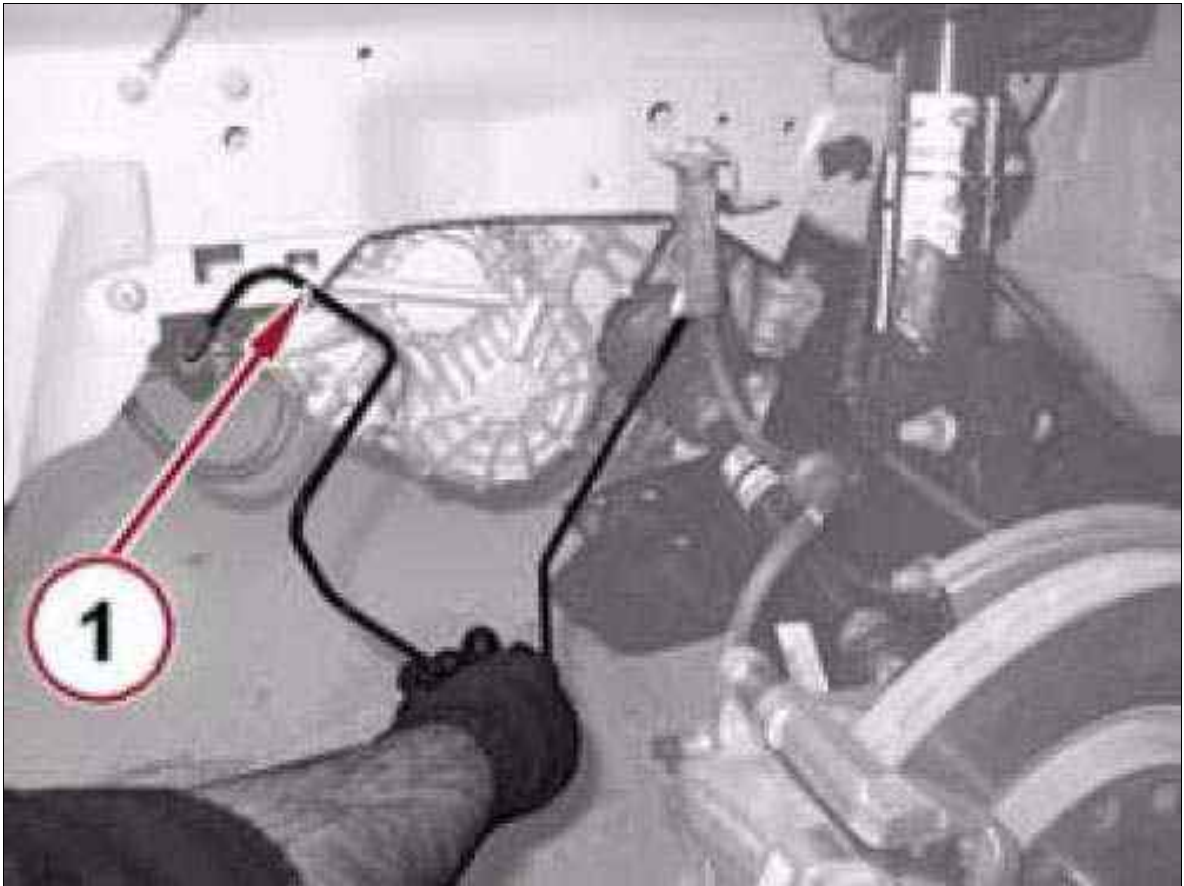
Fig 2: Wheel Speed Sensor Wiring, Brake Line To Brake Hose Nut & Retainer Clip



Courtesy of CHRYSLER GROUP, LLC

6. Remove the wheel speed sensor wiring (1) from the routing retainer.
7. Loosen and remove the brake line to brake hose nut (2).
8. Remove the brake line from the body retainer clip (3).

Fig 3: Left Front Brake Tube



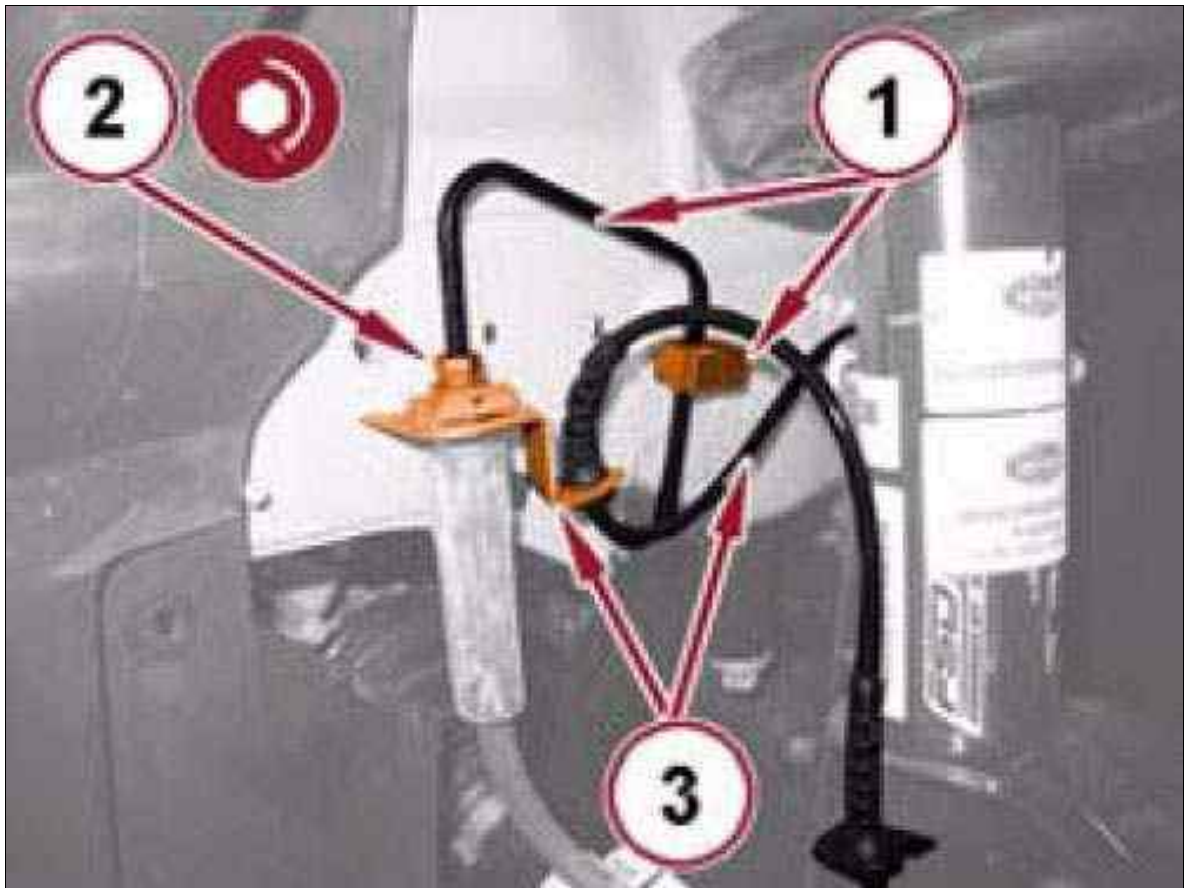
Courtesy of CHRYSLER GROUP, LLC

9. From inside the left front wheel well, remove the left front brake tube (1) from the vehicle.

**HYDRAULIC/MECHANICAL > TUBES AND HOSES, BRAKE > REMOVAL AND
INSTALLATION > LEFT FRONT BRAKE TUBE > INSTALLATION - LEFT FRONT
BRAKE TUBE**

1. Position the left front brake tube into the vehicle.

Fig 1: Wheel Speed Sensor Wiring, Brake Line To Brake Hose Nut & Retainer Clip



Courtesy of CHRYSLER GROUP, LLC

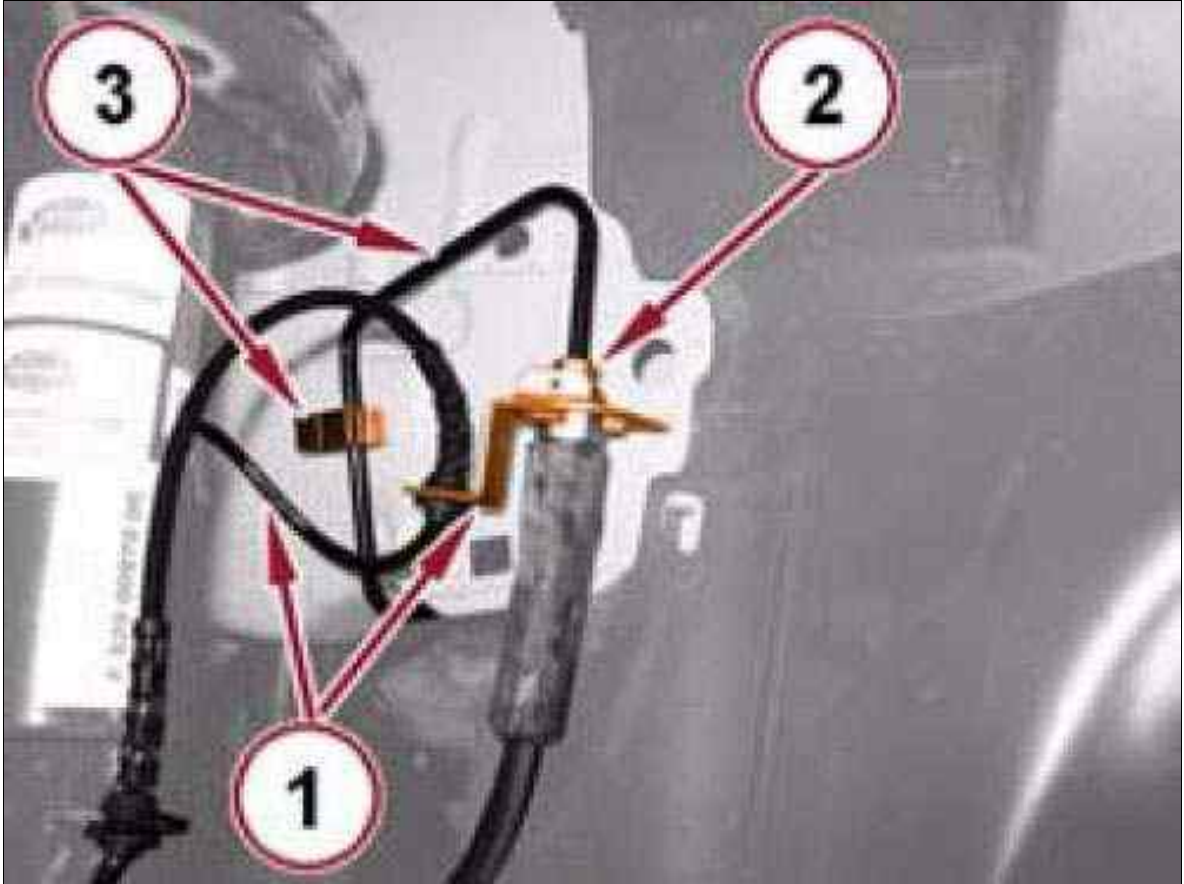
2. Install the brake line into the body retainer clip (1).
3. Install and tighten the brake line to brake hose nut (2) to the proper specification. Refer to TORQUE SPECIFICATIONS .
4. Install the wheel speed sensor wiring (3) into the routing retainer (3).
5. Install the engine belly pan Refer to BELLY PAN, REMOVAL AND INSTALLATION .
6. Install the tire and wheel assembly. Refer to REMOVAL AND INSTALLATION .
7. Remove the support and lower the vehicle.
8. Install the brake line into the remaining retainer clips.
9. Install the Integrated Control Unit (ICU). Refer to INTEGRATED CONTROL UNIT (ICU), REMOVAL AND INSTALLATION .

HYDRAULIC/MECHANICAL > TUBES AND HOSES, BRAKE > REMOVAL AND INSTALLATION > RIGHT FRONT BRAKE TUBE - 1.4L > REMOVAL

1. Remove the Integrated Control Unit (ICU). Refer to INTEGRATED CONTROL UNIT (ICU), REMOVAL AND INSTALLATION .

2. Remove the engine cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .
3. Evacuate the A/C system. Refer to STANDARD PROCEDURE .
4. Drain the engine coolant. Refer to STANDARD PROCEDURE .
5. Raise and support the vehicle. Refer to HOISTING, STANDARD PROCEDURE .

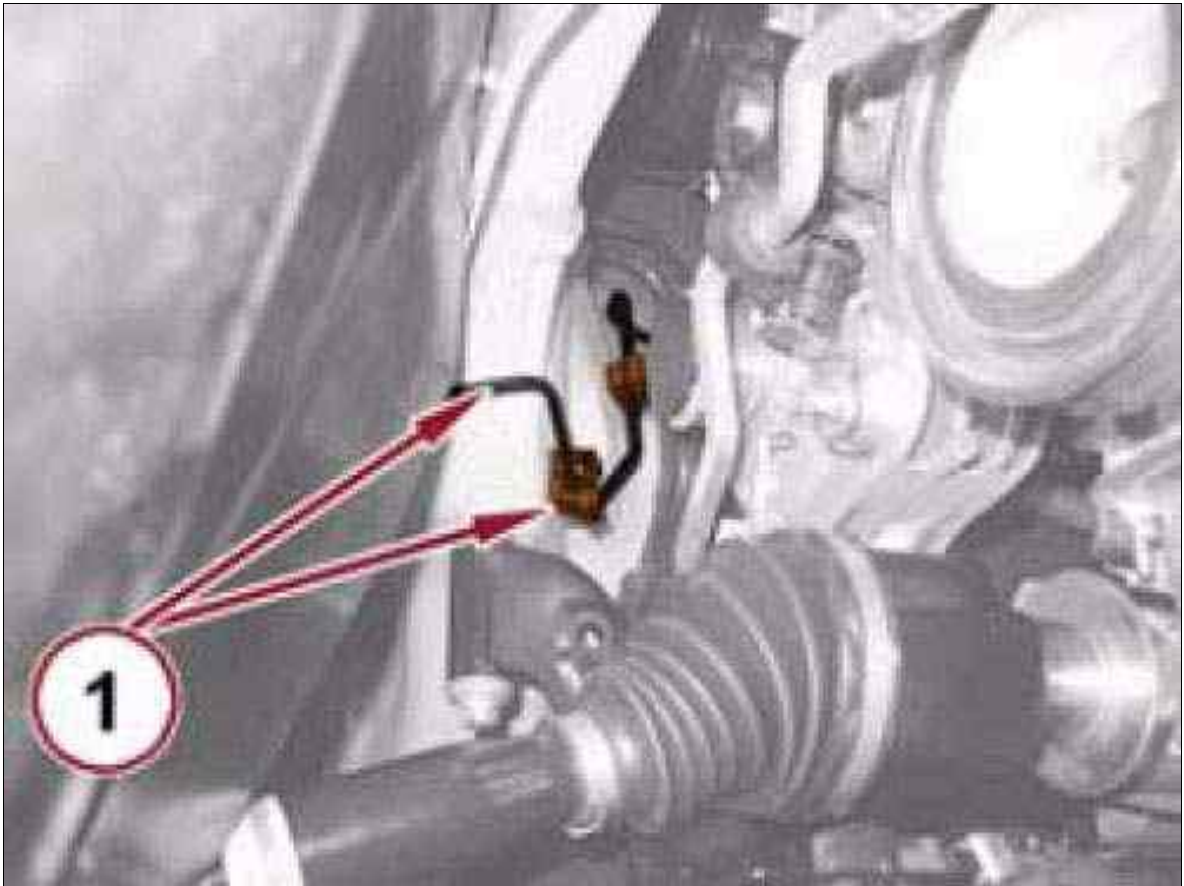
Fig 1: Wheel Speed Sensor Wiring, Brake Line To Brake Hose Nut & Retainer Clip



Courtesy of CHRYSLER GROUP, LLC

6. Remove the tire and wheel assembly. Refer to REMOVAL AND INSTALLATION .
7. Remove the wheel speed sensor wiring (1) from the routing retainer.
8. Loosen and remove the brake line to brake hose nut (2).
9. Remove the brake line from the body retainer clip (3).

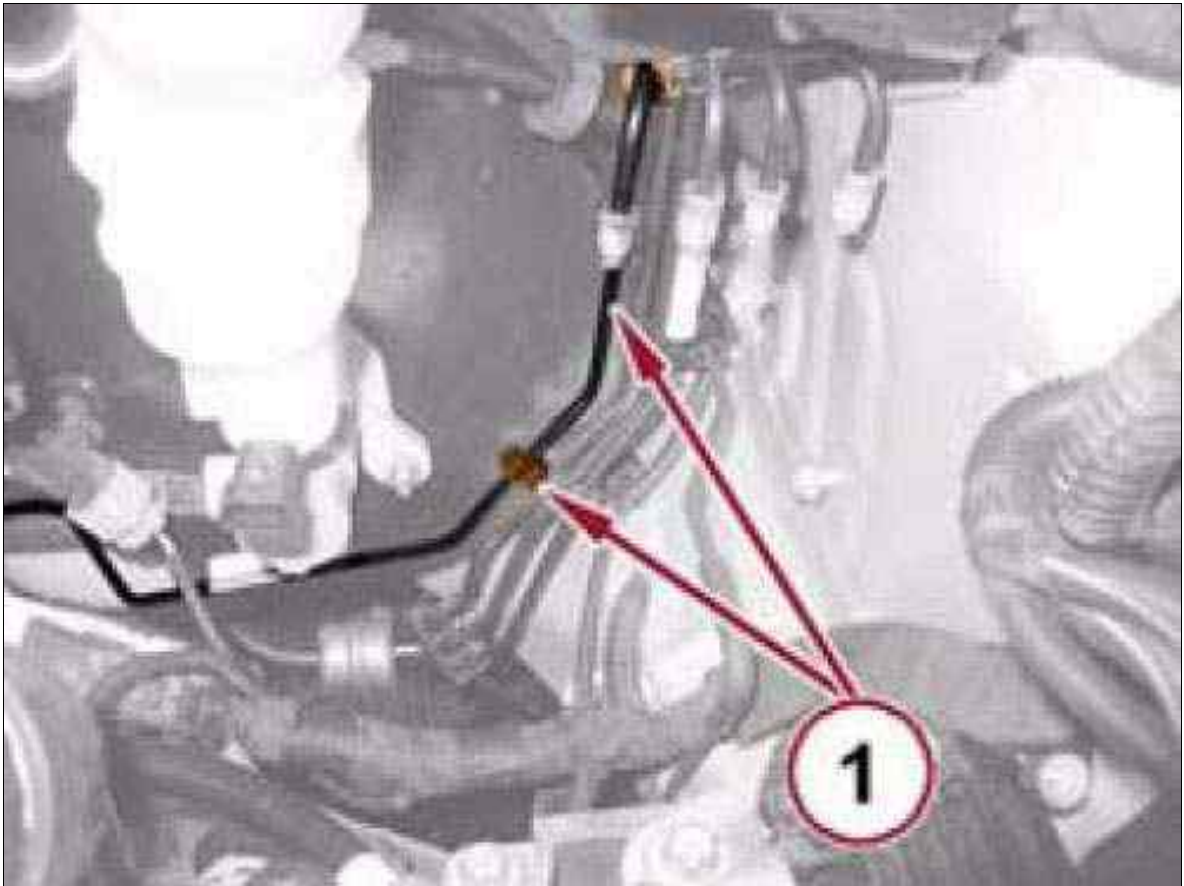
Fig 2: Brake Line & Two Inside Body Retainer Clips



Courtesy of CHRYSLER GROUP, LLC

10. Remove the brake line from the two inside body retainer clips (1).
11. Lower the vehicle.

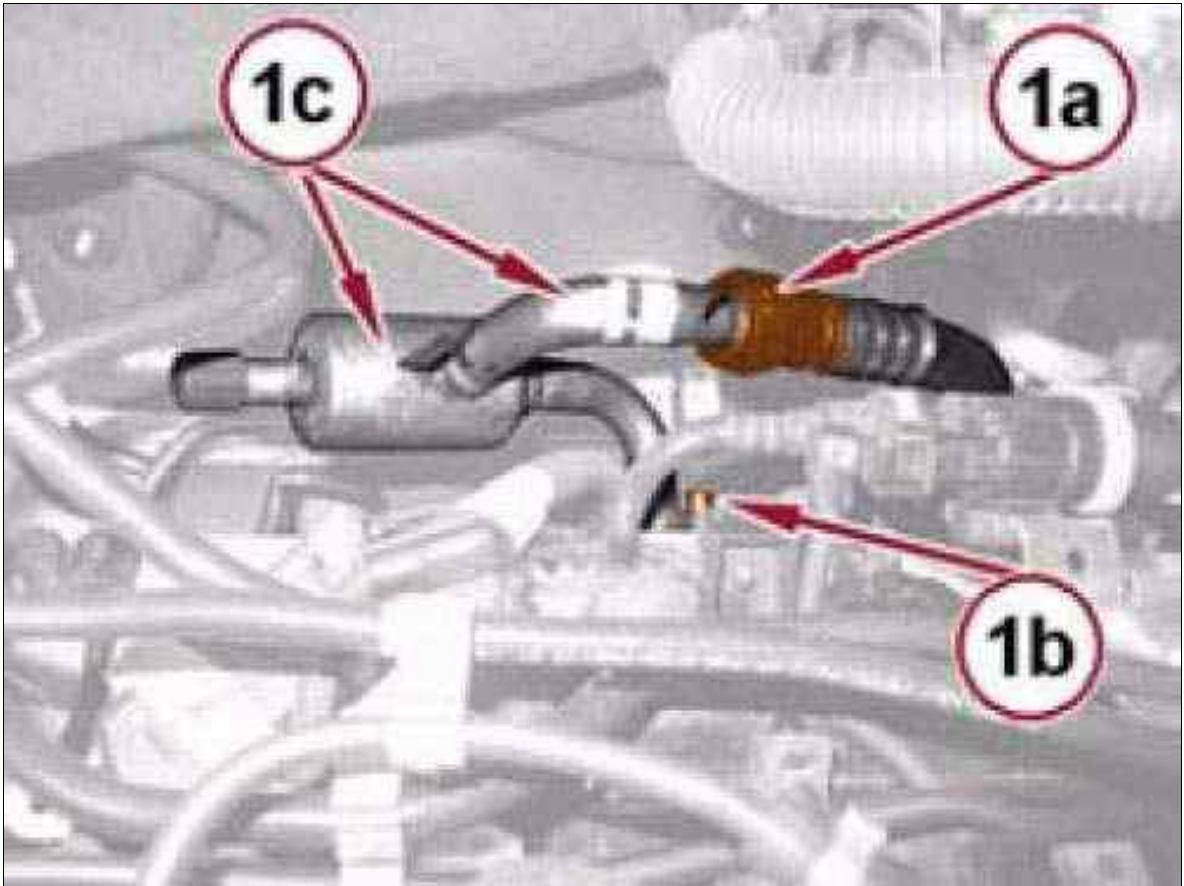
Fig 3: Brake Line & Body Retainer Clips



Courtesy of CHRYSLER GROUP, LLC

12. Remove the remaining brake line to body retainer clips (1).

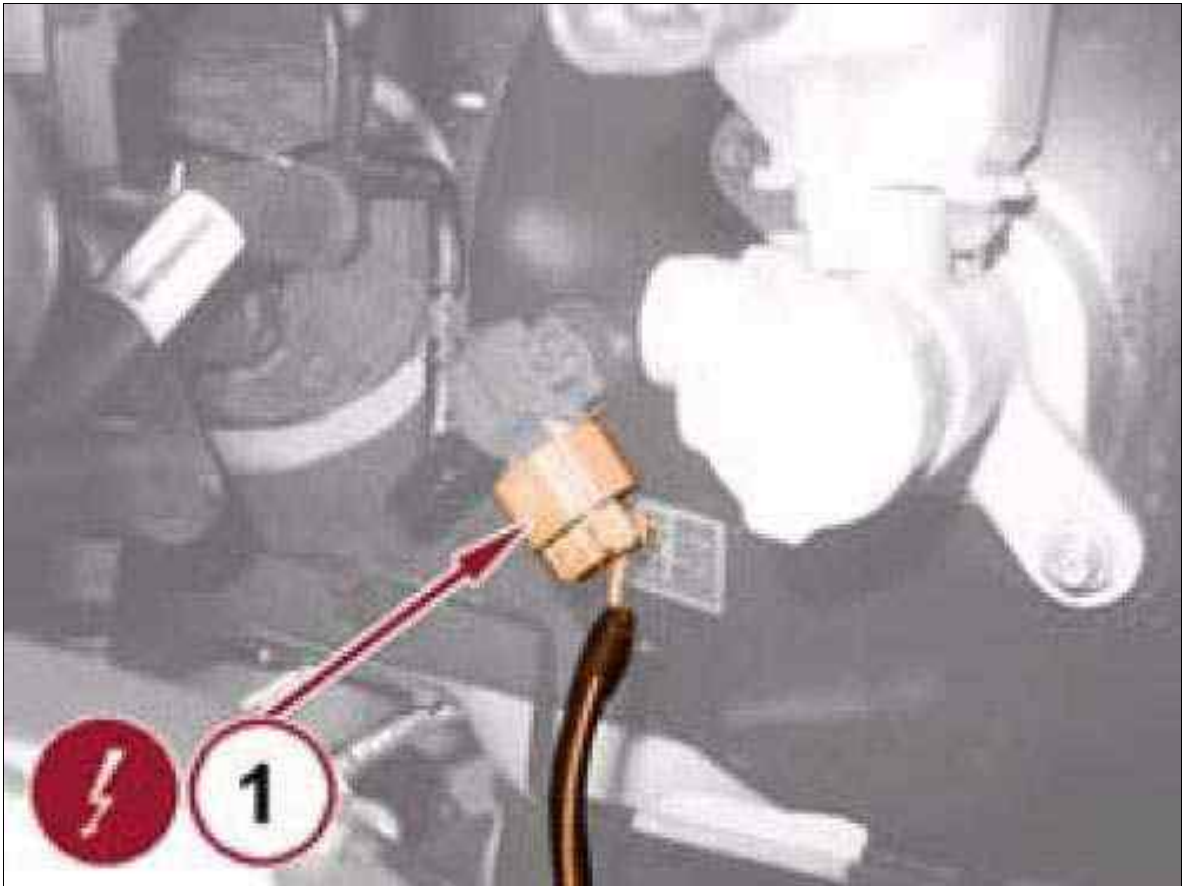
Fig 4: Return Pipe, Quick Coupling & Screw



Courtesy of CHRYSLER GROUP, LLC

13. Disconnect the quick coupling (1a), loosen the screw (1b) and remove the return pipe of the cooling fluid from evaporator (1c).

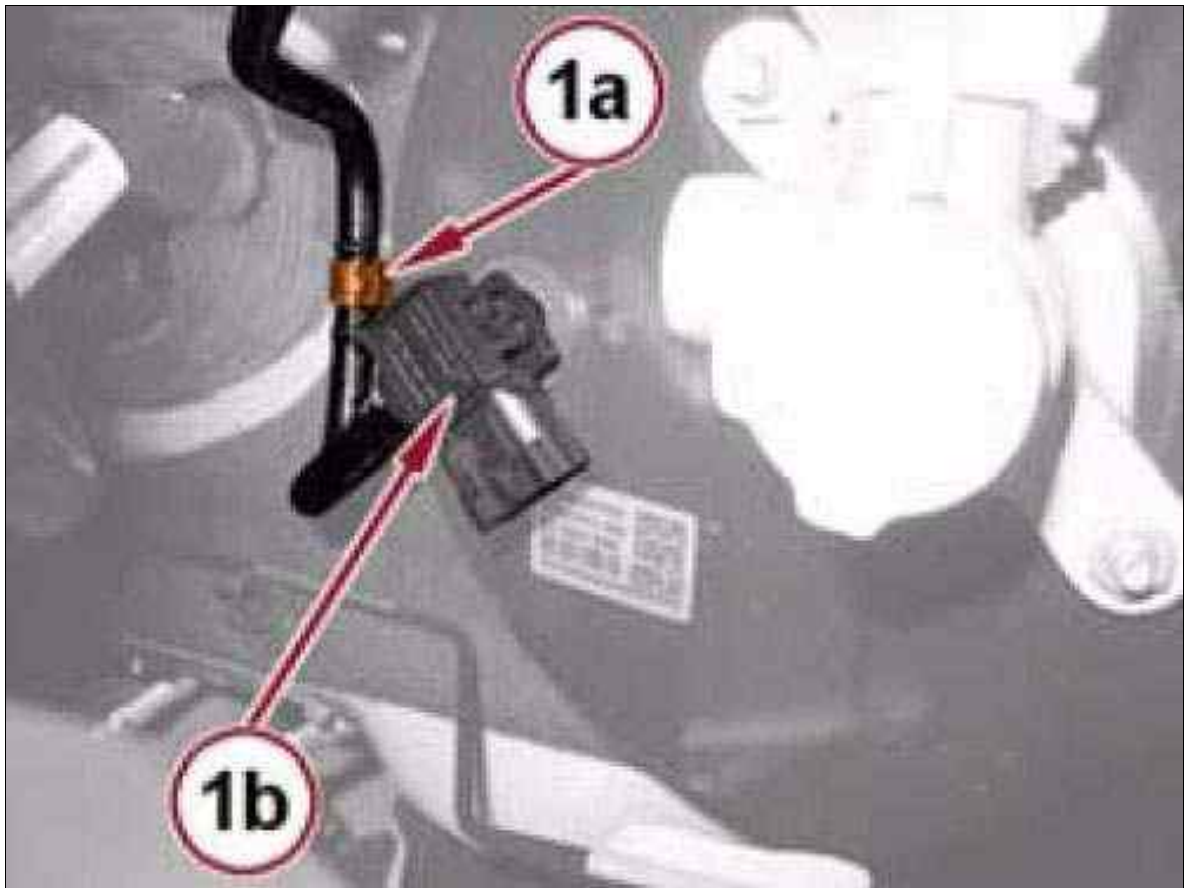
Fig 5: Vacuum Sensor Connector



Courtesy of CHRYSLER GROUP, LLC

14. Disconnect the vacuum sensor electrical connector (1).

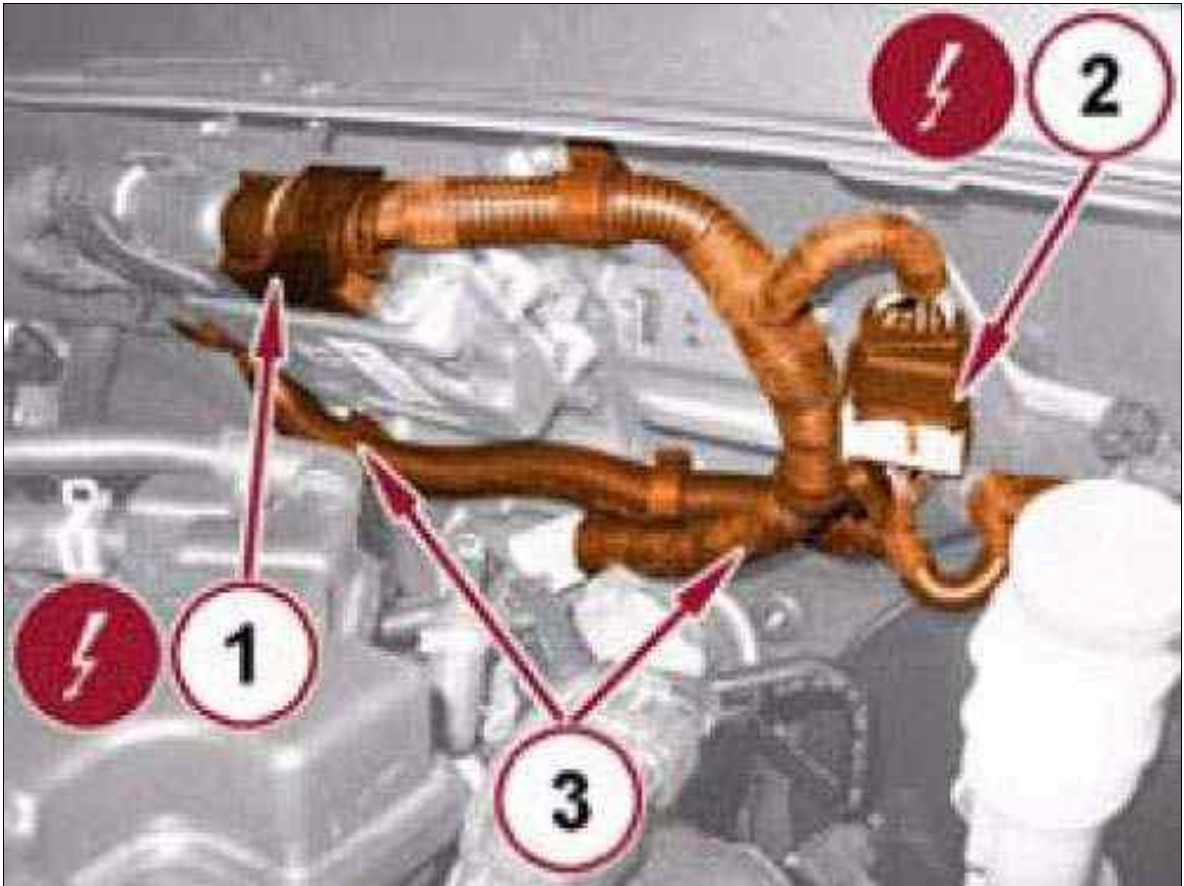
Fig 6: Vacuum Sensor & Retaining Clip



Courtesy of CHRYSLER GROUP, LLC

15. Open the retaining clip (1a) and remove the vacuum sensor (1b) from the brake booster.

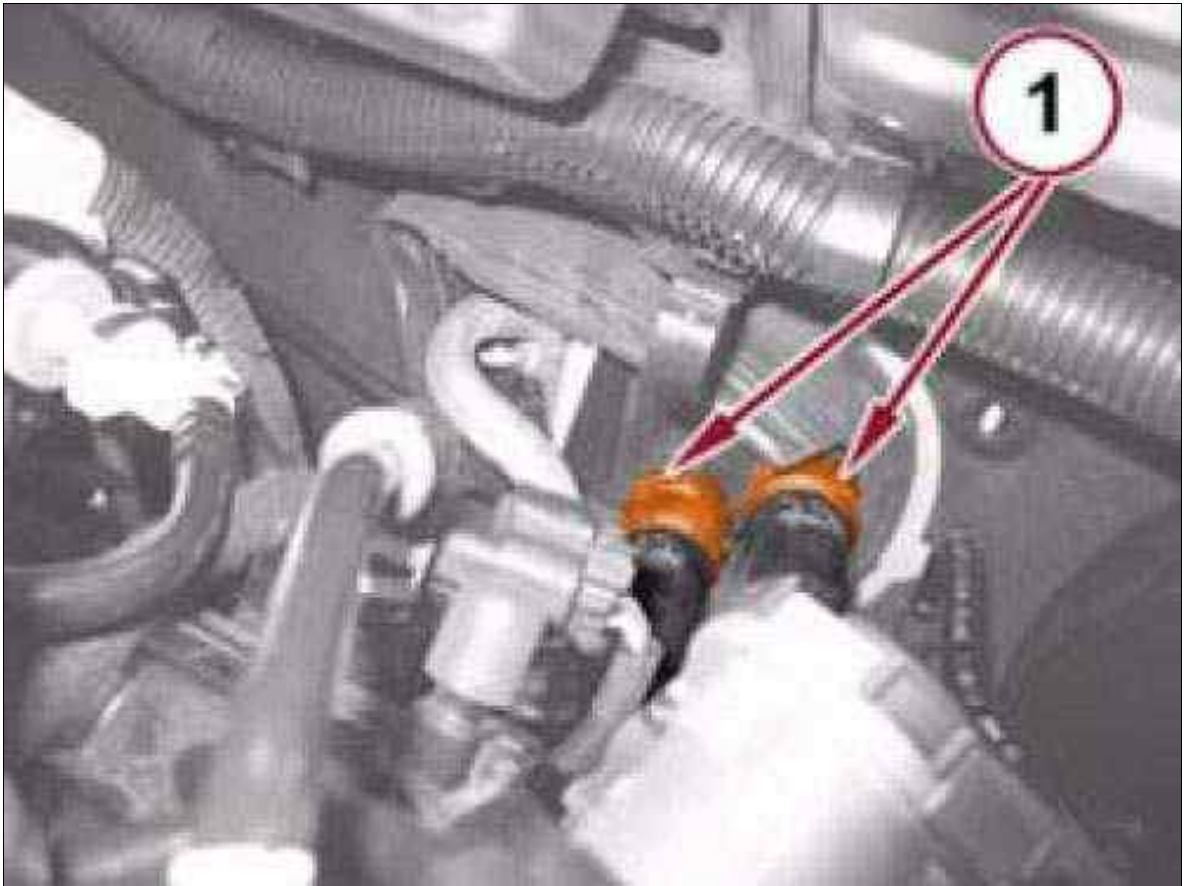
Fig 7: PCM Wiring & Connectors



Courtesy of CHRYSLER GROUP, LLC

16. Disconnect the Powertrain Control Module (PCM) electrical connector (1).
17. Disconnect the engine wiring harness connector (2).
18. Open the retaining clips and remove the wiring (3).

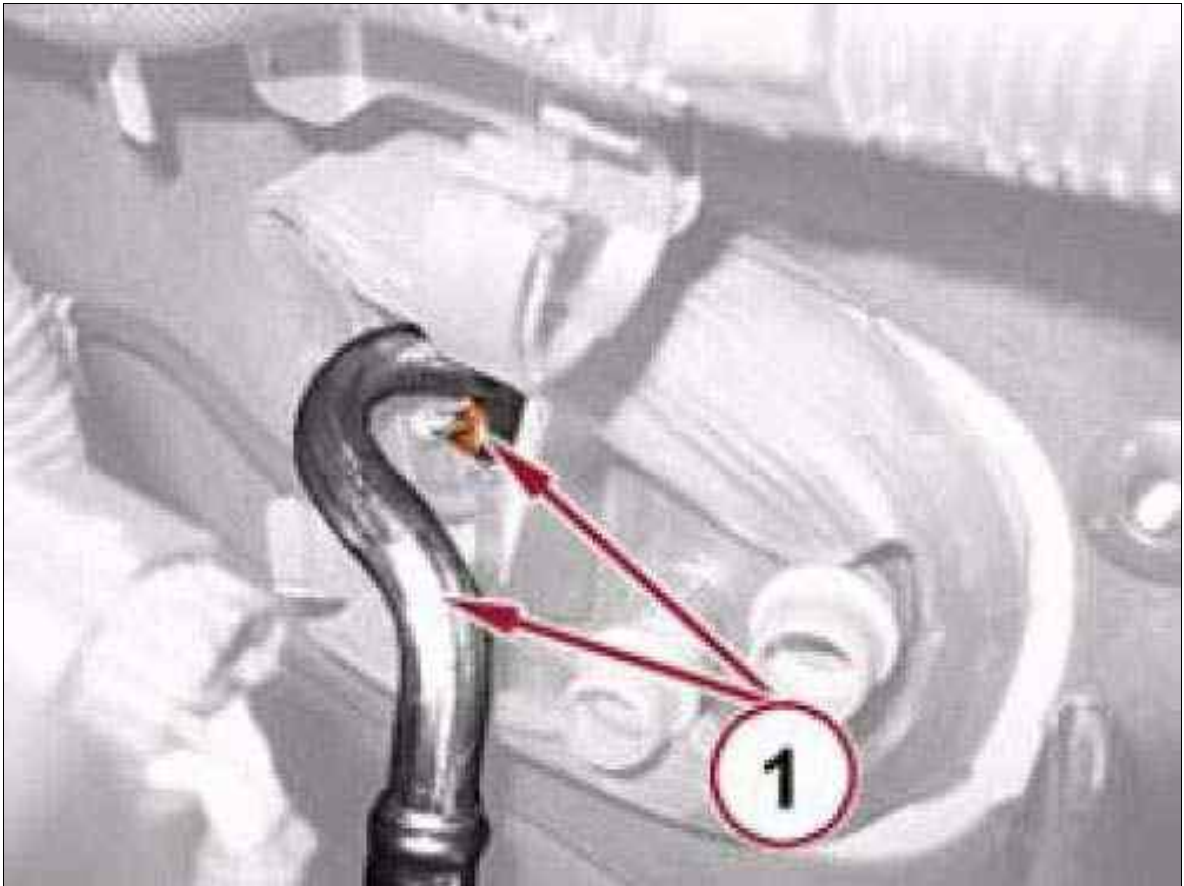
Fig 8: Heater Core Couplings



Courtesy of CHRYSLER GROUP, LLC

19. Disconnect the quick connect couplings at the heater core (1).

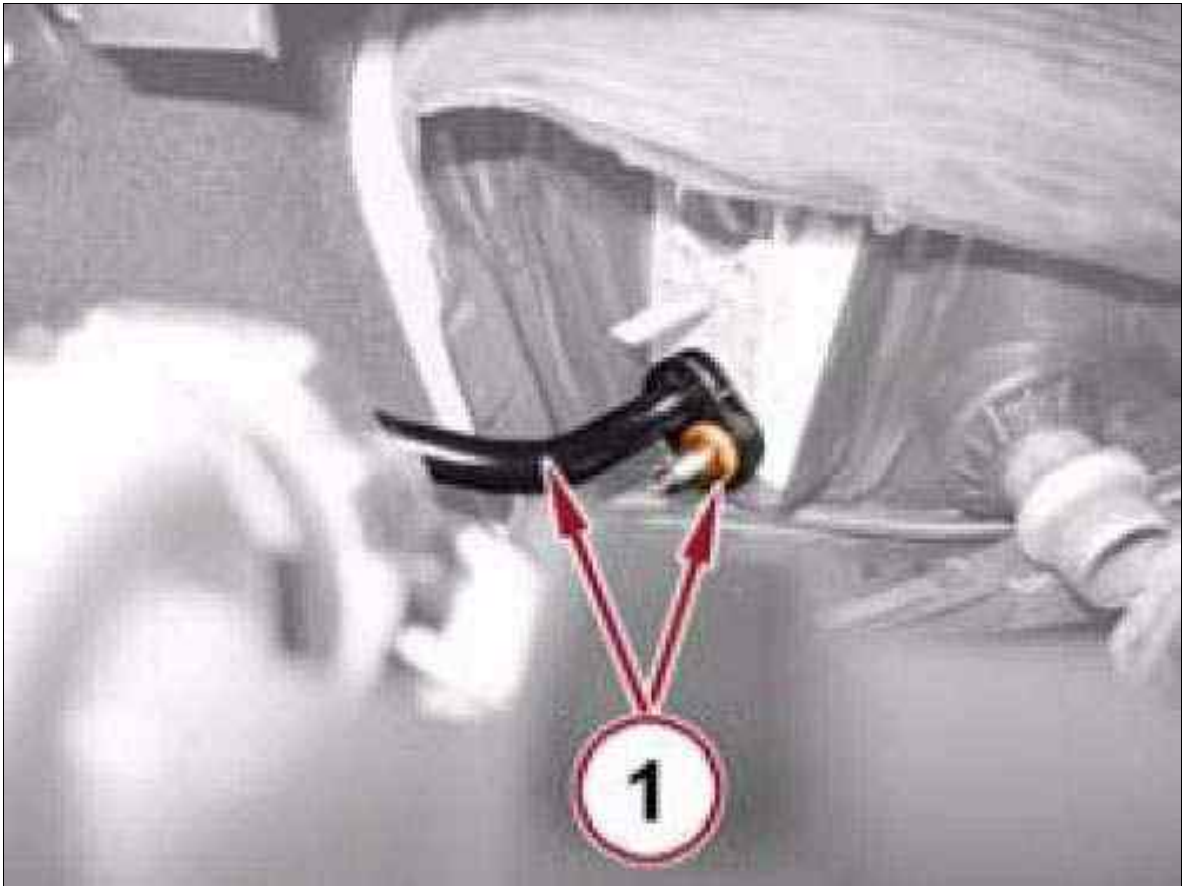
Fig 9: Refrigerant Return Nut



Courtesy of CHRYSLER GROUP, LLC

20. Loosen the nut (1) and remove the refrigerant return from the evaporator.

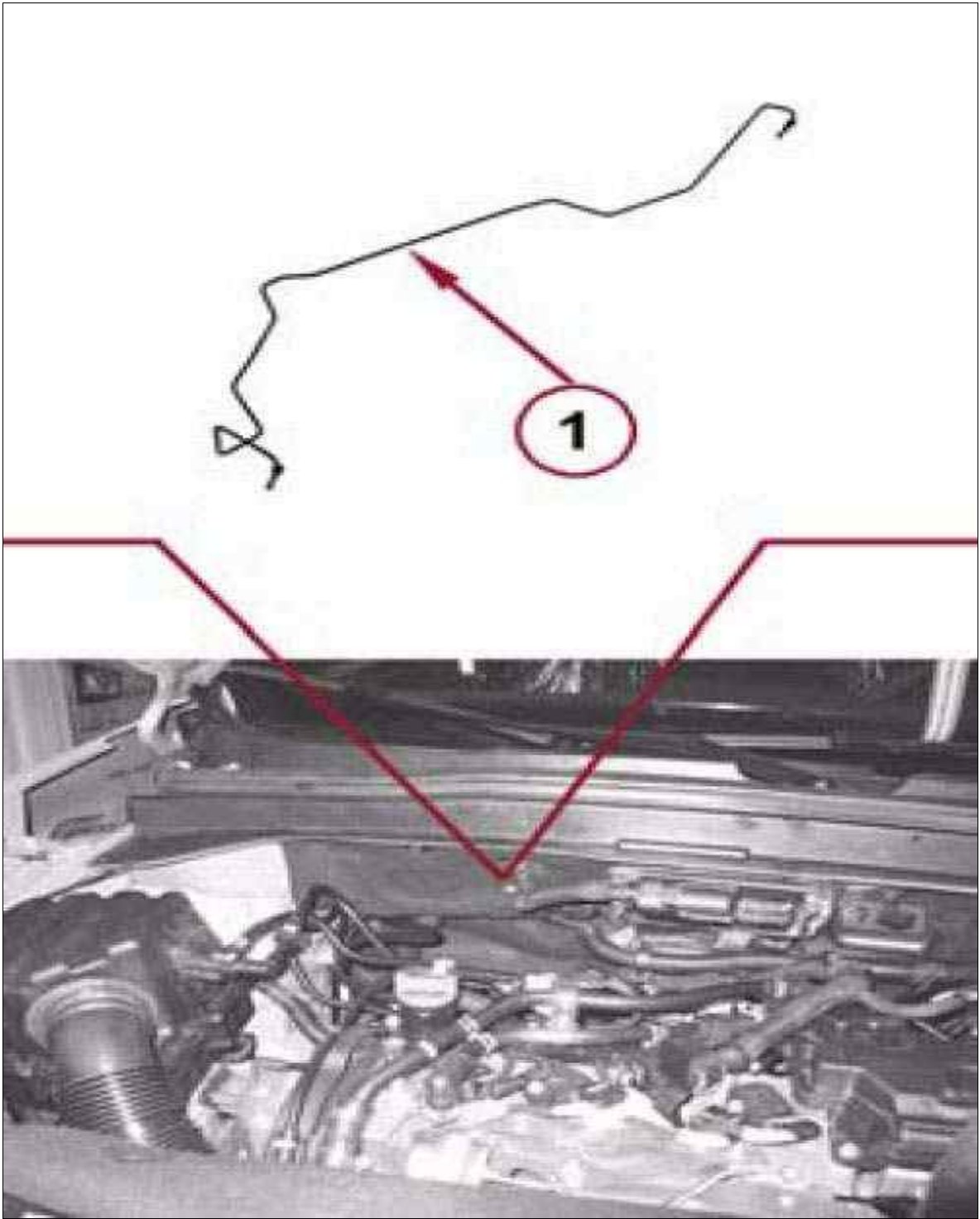
Fig 10: Refrigerant Delivery Pipe Nut



Courtesy of CHRYSLER GROUP, LLC

21. Loosen the nut (1) and gently move aside the refrigerant delivery pipe.

Fig 11: Right Front Brake Line



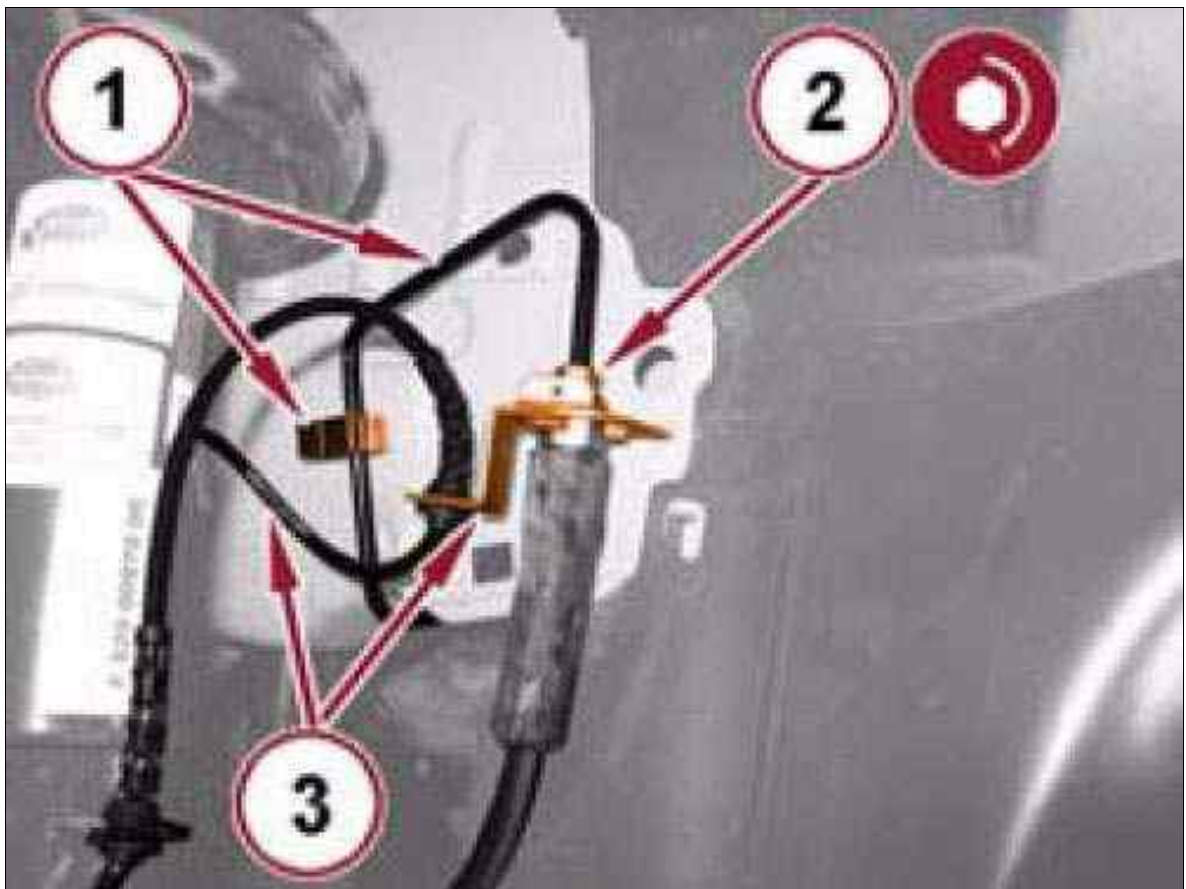
Courtesy of CHRYSLER GROUP, LLC

22. From inside the engine bay, remove the right front brake line (1) from the vehicle.

**HYDRAULIC/MECHANICAL > TUBES AND HOSES, BRAKE > REMOVAL AND
INSTALLATION > RIGHT FRONT BRAKE TUBE - 1.4L > INSTALLATION**

1. Position the right front brake line into the vehicle.
2. Install the refrigerant delivery tube to the evaporator and tighten the nut to the proper specification. Refer to SPECIFICATIONS .
3. Install the refrigerant return tube to the evaporator with **NEW** O-ring and tighten the nut to the proper specification. Refer to SPECIFICATIONS .
4. Connect the quick couplings to the heater core.
5. Connect the engine wiring harness electrical connector.
6. Connect the Powertrain Control Module (PCM) electrical connector, and install wiring harness retaining clips.
7. Install the vacuum sensor and engage the retaining clip.
8. Connect the vacuum sensor electrical connector.
9. Install the refrigerant return line to the the evaporator with **NEW** O-ring and tighten the screw.
10. Engage all the brake line retaining clips.

Fig 1: Wheel Speed Sensor Wiring, Brake Line To Brake Hose Nut & Retainer Clip



Courtesy of CHRYSLER GROUP, LLC

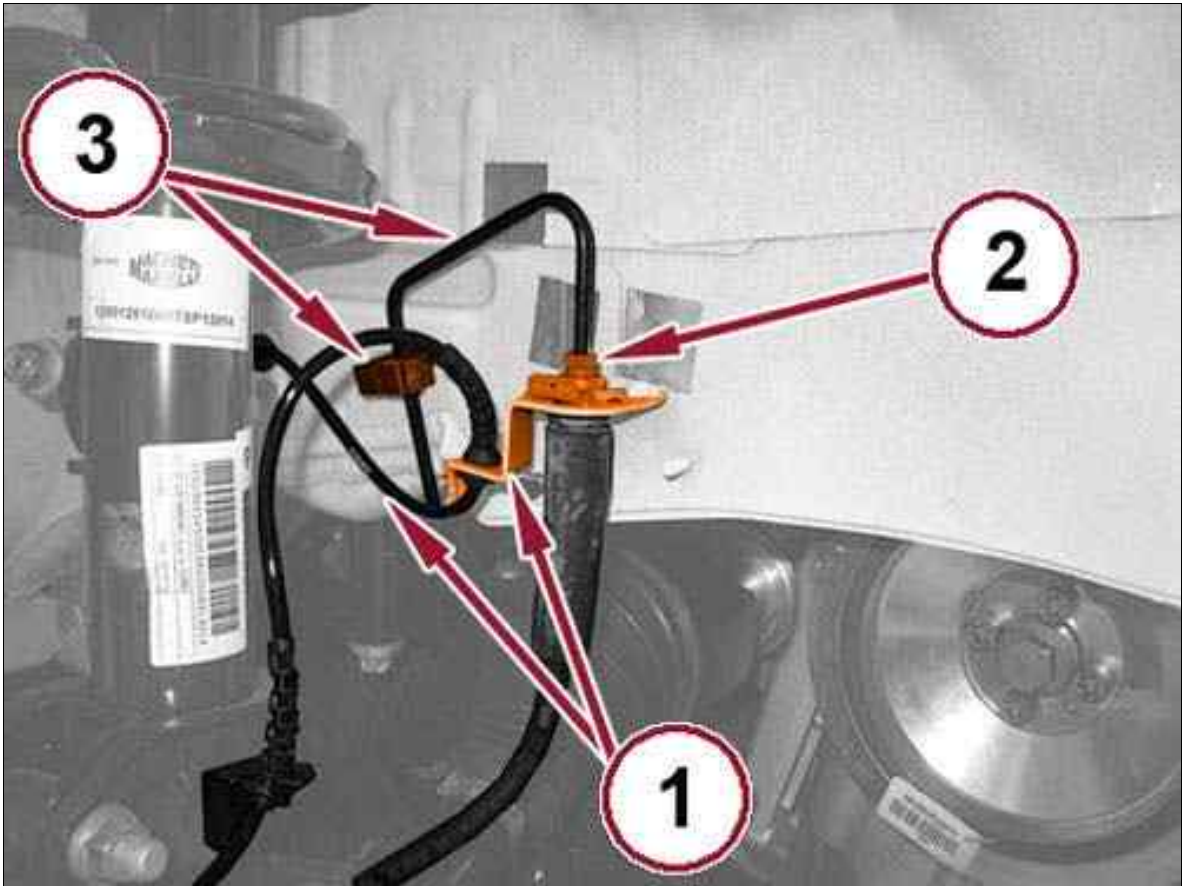
11. Raise the vehicle.
12. Install the brake line into the body retainer clip (1).

13. Install and tighten the brake line to brake hose nut (2) to the proper specification. Refer to TORQUE SPECIFICATIONS .
14. Install the wheel speed sensor wiring (3) into the routing retainer (3).
15. Install the tire and wheel assembly. Refer to REMOVAL AND INSTALLATION .
16. Remove the support and lower the vehicle.
17. Fill and bleed the engine coolant. Refer to STANDARD PROCEDURE .
18. Recharge the A/C system. Refer to STANDARD PROCEDURE .
19. Install the engine cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .
20. Install the Integrated Control Unit (ICU). Refer to INTEGRATED CONTROL UNIT (ICU), REMOVAL AND INSTALLATION .

HYDRAULIC/MECHANICAL > TUBES AND HOSES, BRAKE > REMOVAL AND INSTALLATION > RIGHT FRONT BRAKE TUBE - 1.6L - 2.0L > REMOVAL

1. Remove the Integrated Control Unit (ICU). Refer to INTEGRATED CONTROL UNIT (ICU), REMOVAL AND INSTALLATION .
2. Remove the engine cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .
3. Remove the air cleaner assembly.
4. Remove the fuel filter assembly and bracket. Refer to FILTER, FUEL, REMOVAL AND INSTALLATION .
5. Evacuate the A/C system. Refer to STANDARD PROCEDURE .
6. Drain the engine coolant. Refer to STANDARD PROCEDURE .
7. Raise and support the vehicle. Refer to HOISTING, STANDARD PROCEDURE .
8. Remove the belly pan. Refer to BELLY PAN, REMOVAL AND INSTALLATION .
9. Remove the tire and wheel assembly. Refer to REMOVAL AND INSTALLATION .

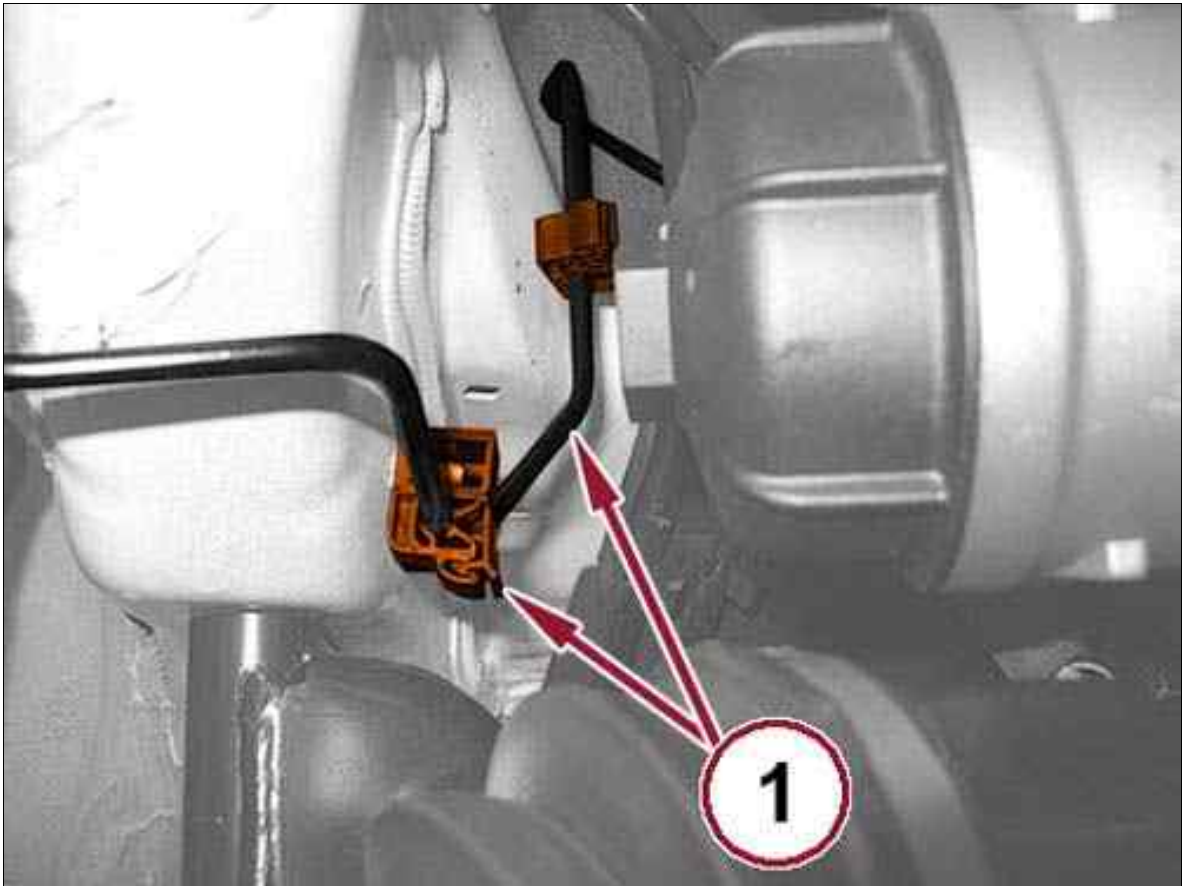
Fig 1: Wheel Speed Sensor Wiring, Brake Hose Nut & Retainer Clip



Courtesy of CHRYSLER GROUP, LLC

10. Remove the wheel speed sensor wiring (1) from the routing retainer.
11. Loosen and remove the brake line to brake hose nut (2).
12. Remove the brake line from the body retainer clip (3).

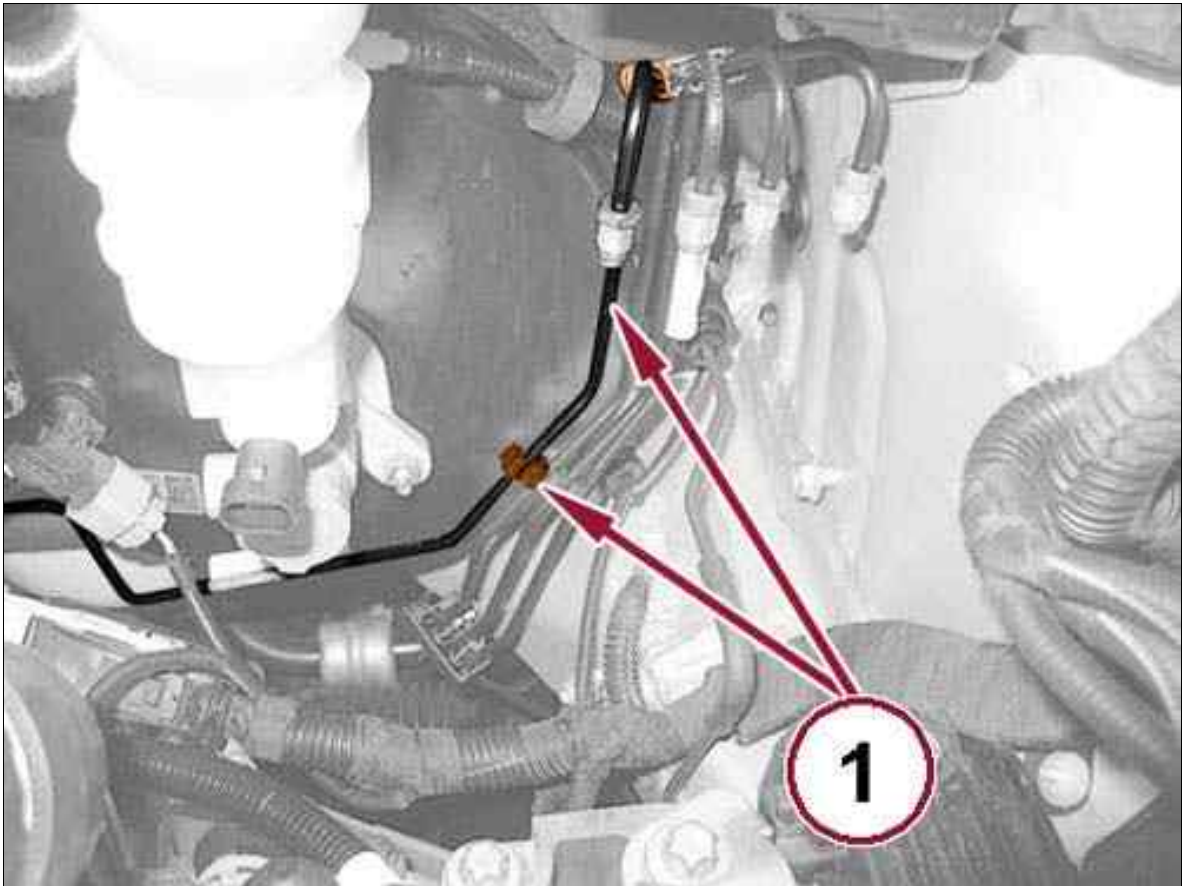
Fig 2: Brake Line Body Retainer Clips



Courtesy of CHRYSLER GROUP, LLC

13. Remove the brake line from the two inside body retainer clips (1).
14. Lower the vehicle.

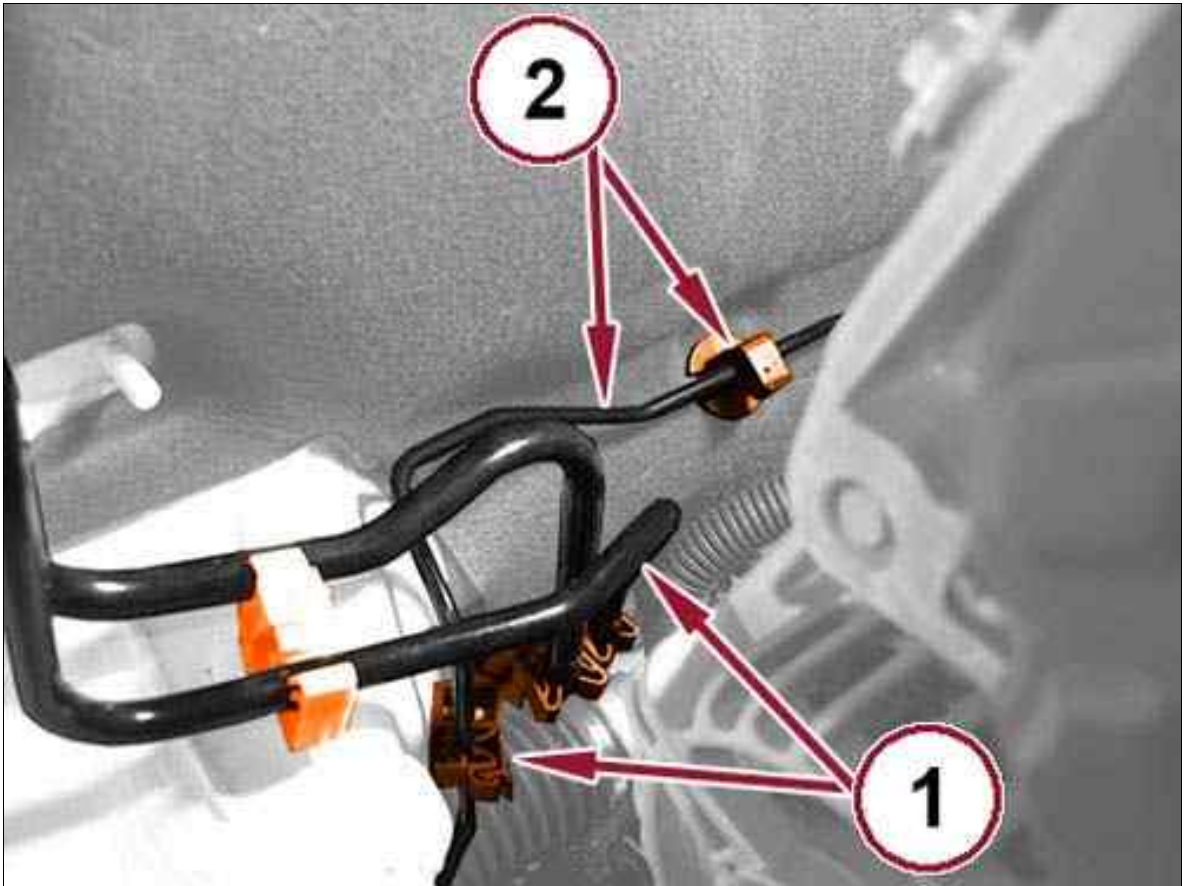
Fig 3: Remaining Brake Line Body Retainer Clip



Courtesy of CHRYSLER GROUP, LLC

15. Remove the remaining brake line to body retainer clips (1).

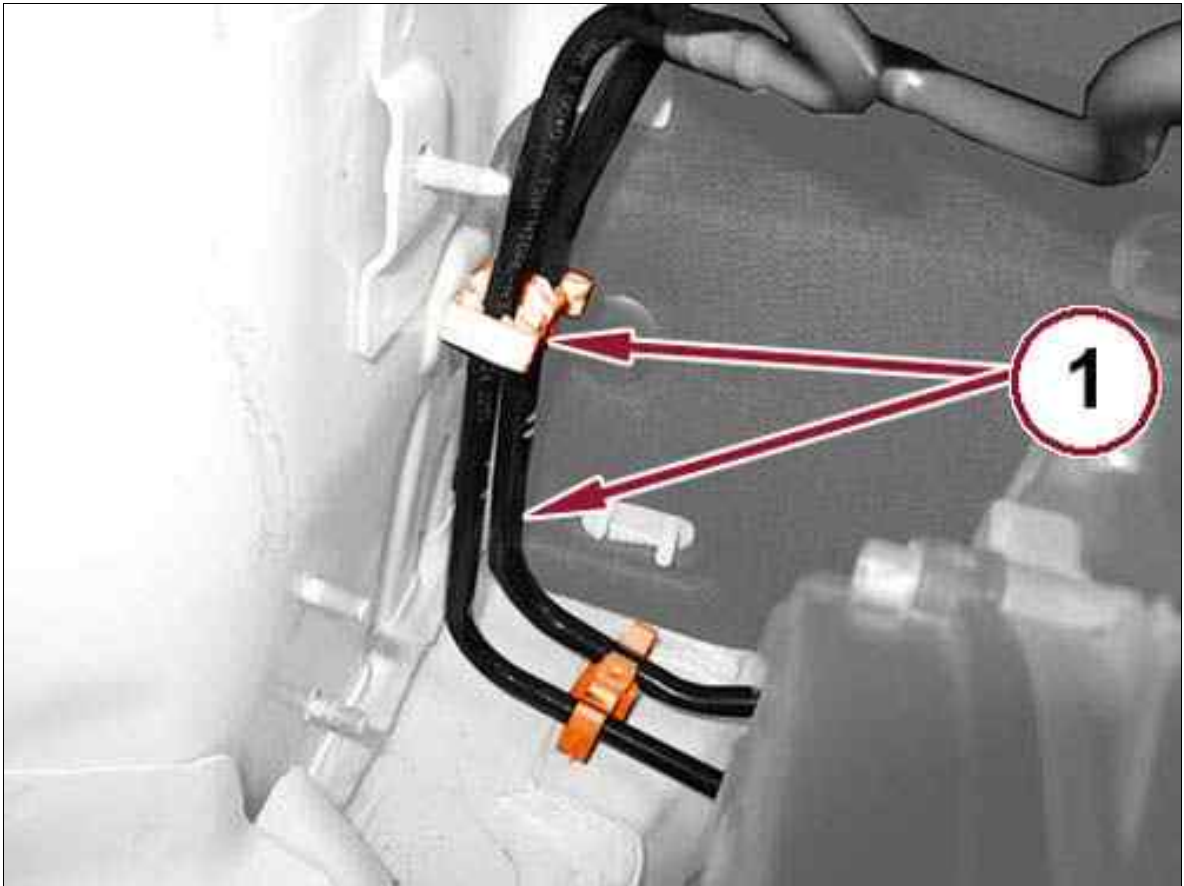
Fig 4: Brake Tube & Retainer



Courtesy of CHRYSLER GROUP, LLC

16. Remove the brake tube from the retainer (1) (2).

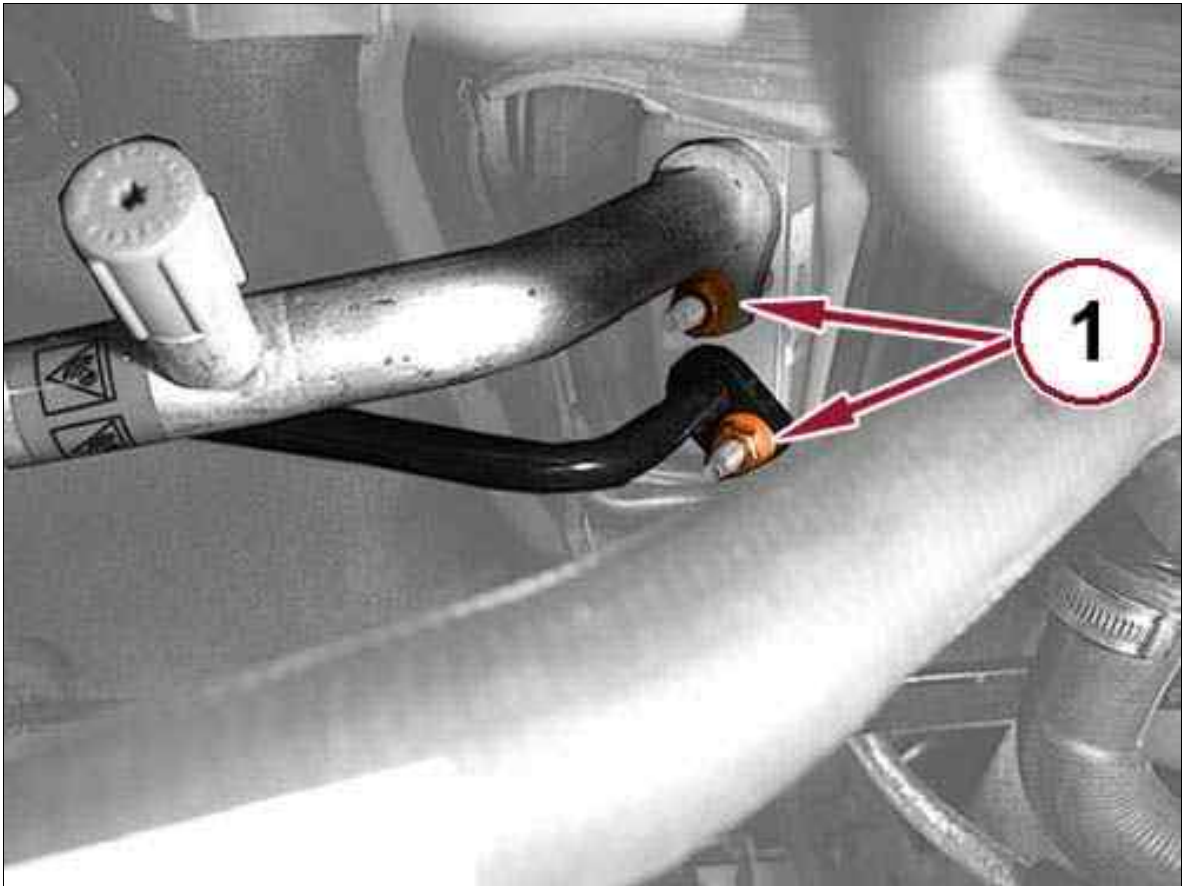
Fig 5: Brake Tube Retainer



Courtesy of CHRYSLER GROUP, LLC

17. Remove the brake tube from the retainer (1).

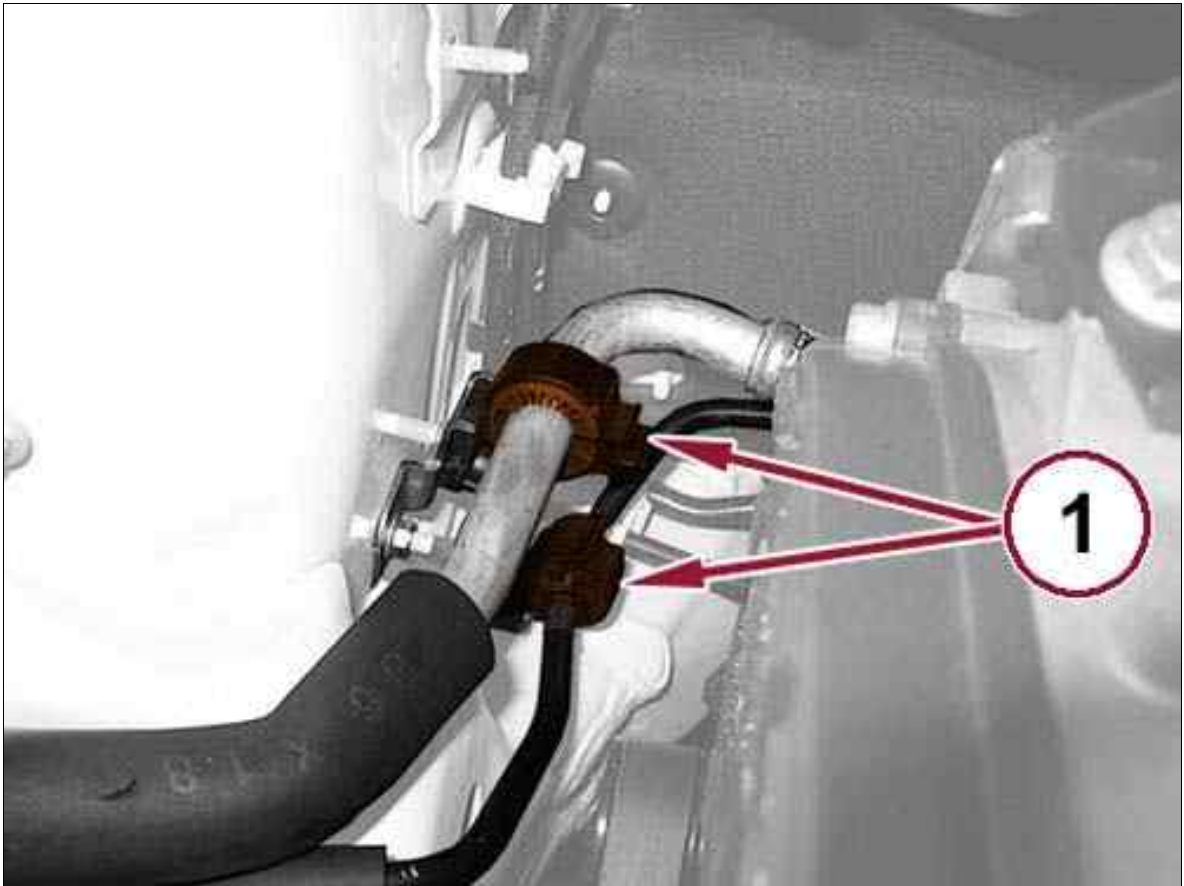
Fig 6: Suction And Liquid Line Nuts



Courtesy of CHRYSLER GROUP, LLC

18. Remove the suction and liquid line nuts (1) from the expansion valve.

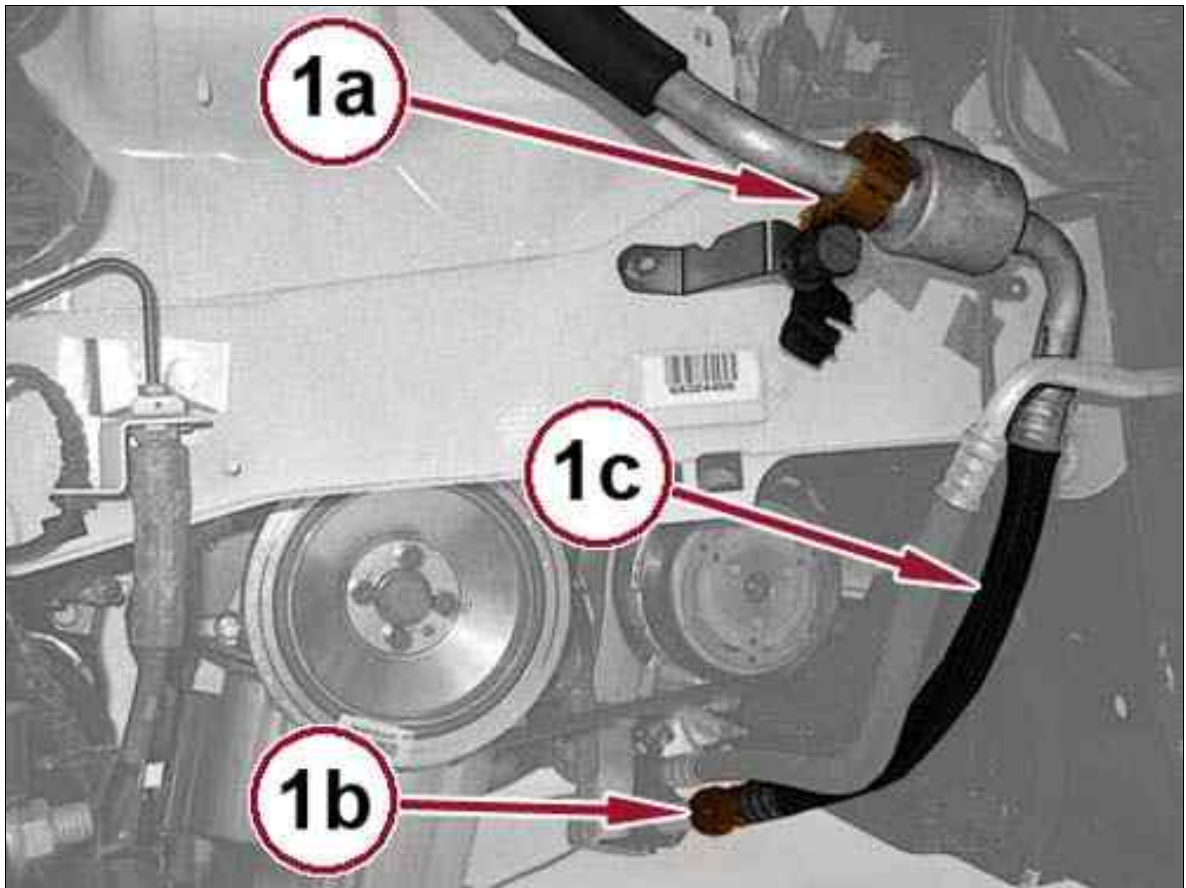
Fig 7: A/C Line Retainers



Courtesy of CHRYSLER GROUP, LLC

19. Open and remove the A/C lines from the retainers (1).

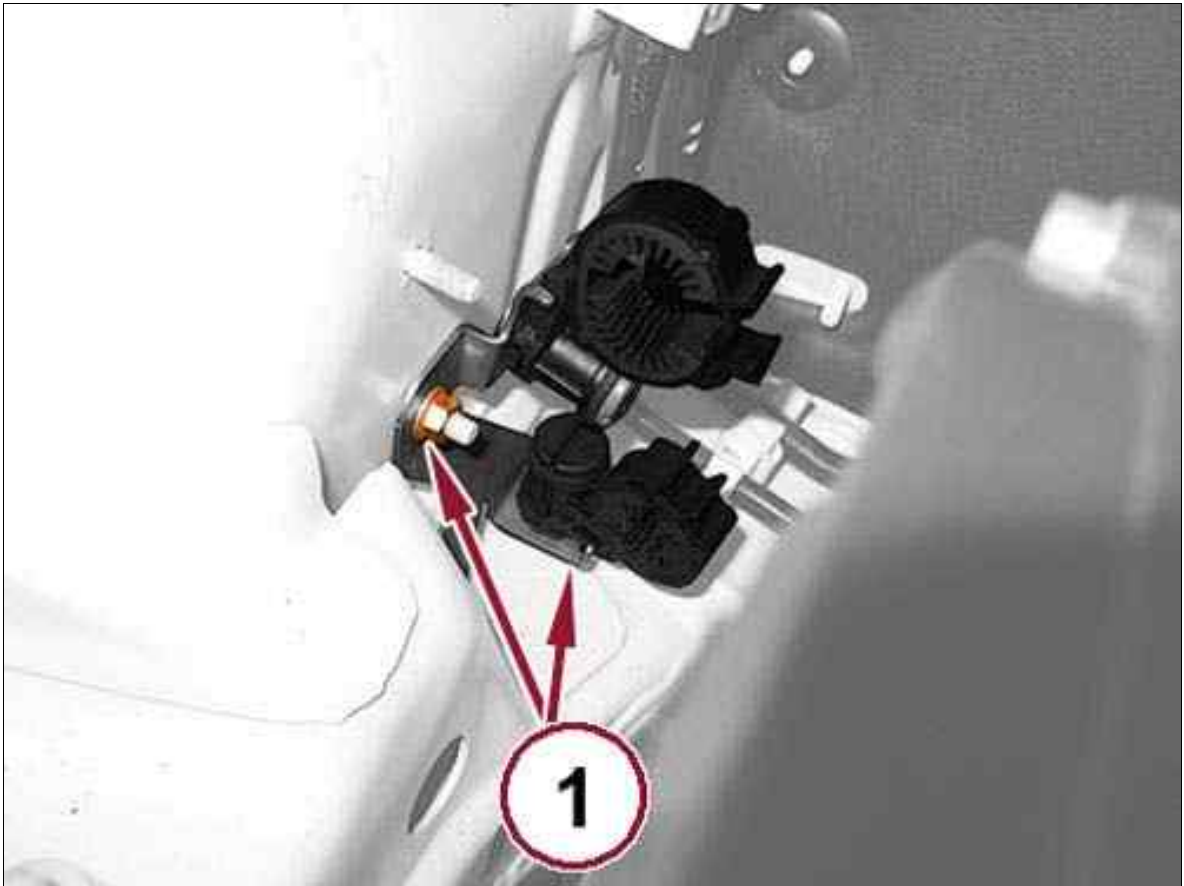
Fig 8: A/C Line, Coupling & Clip



Courtesy of CHRYSLER GROUP, LLC

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

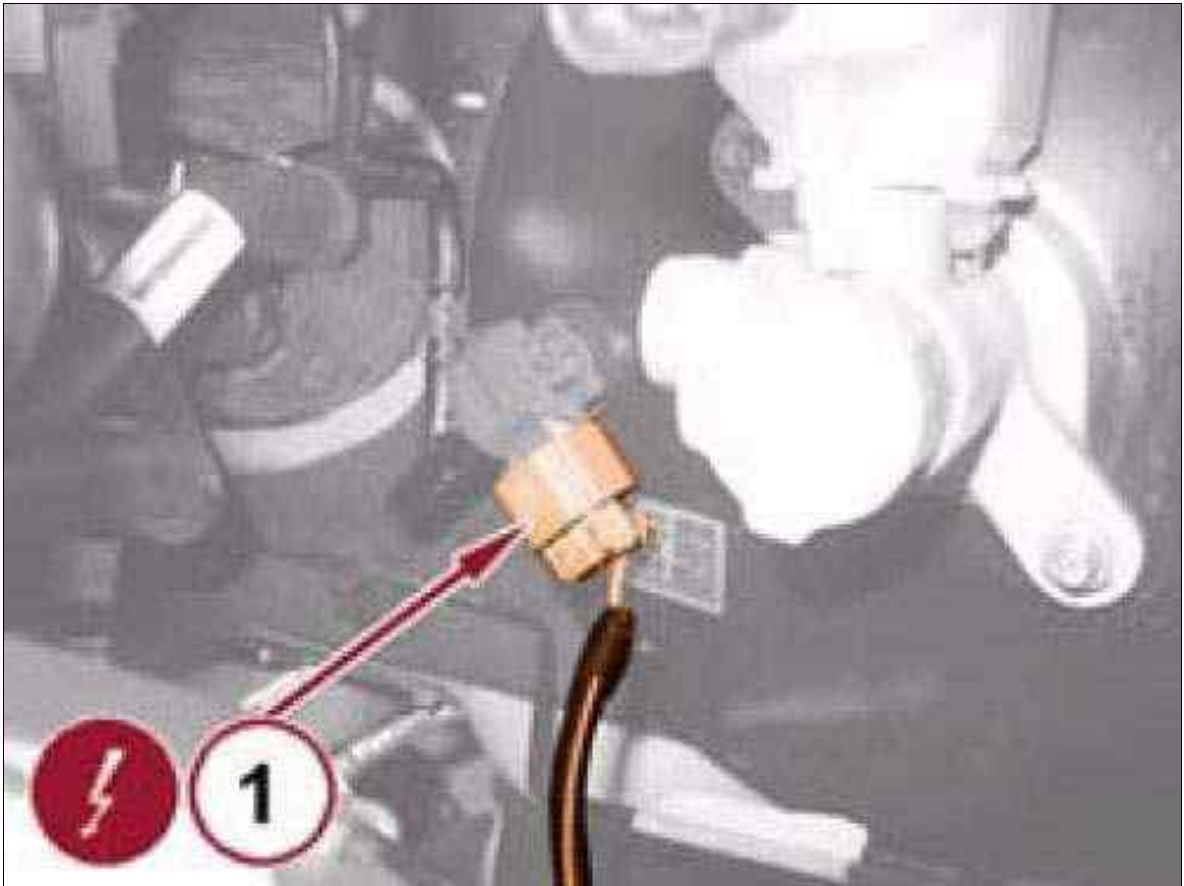
Fig 9: A/C Line Retainer Bracket



Courtesy of CHRYSLER GROUP, LLC

21. Remove the A/C line retainer bracket (1).

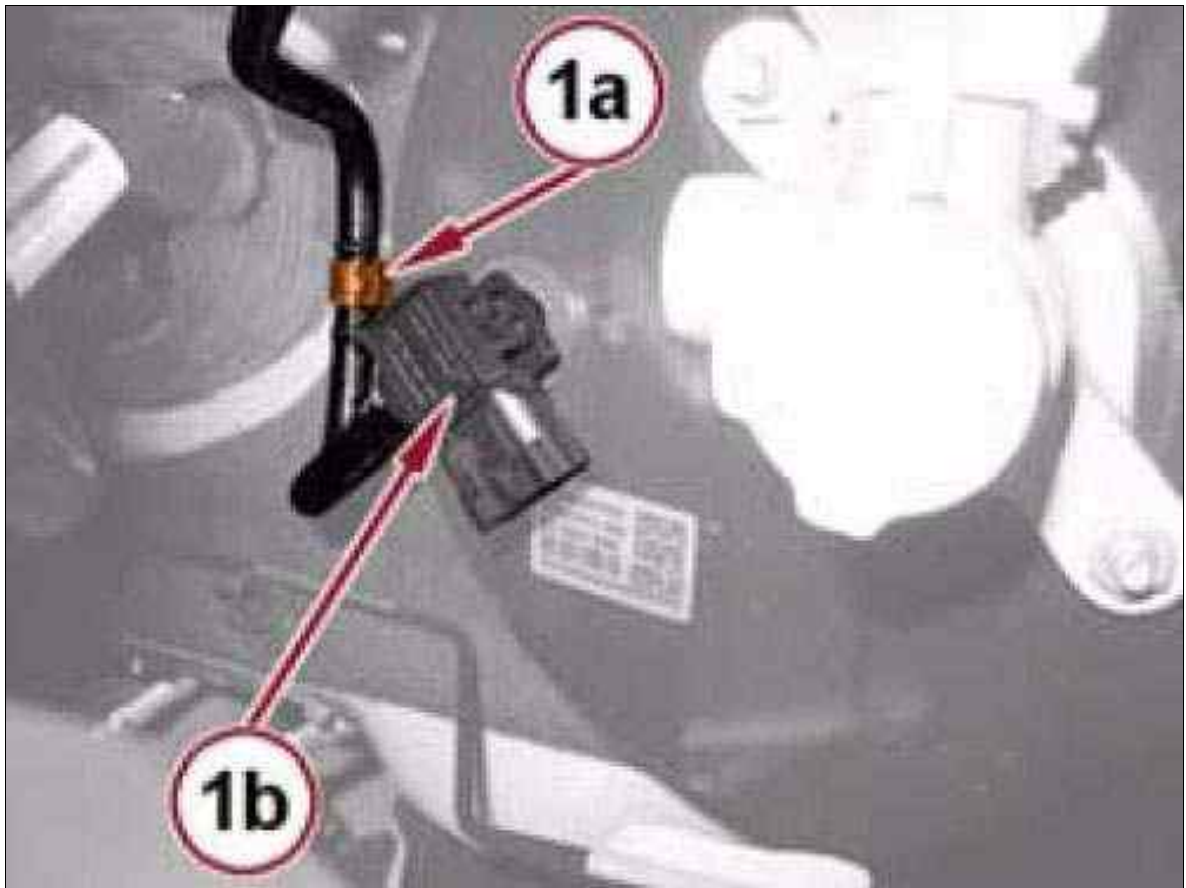
Fig 10: Vacuum Sensor Connector



Courtesy of CHRYSLER GROUP, LLC

22. Disconnect the vacuum sensor electrical connector (1).

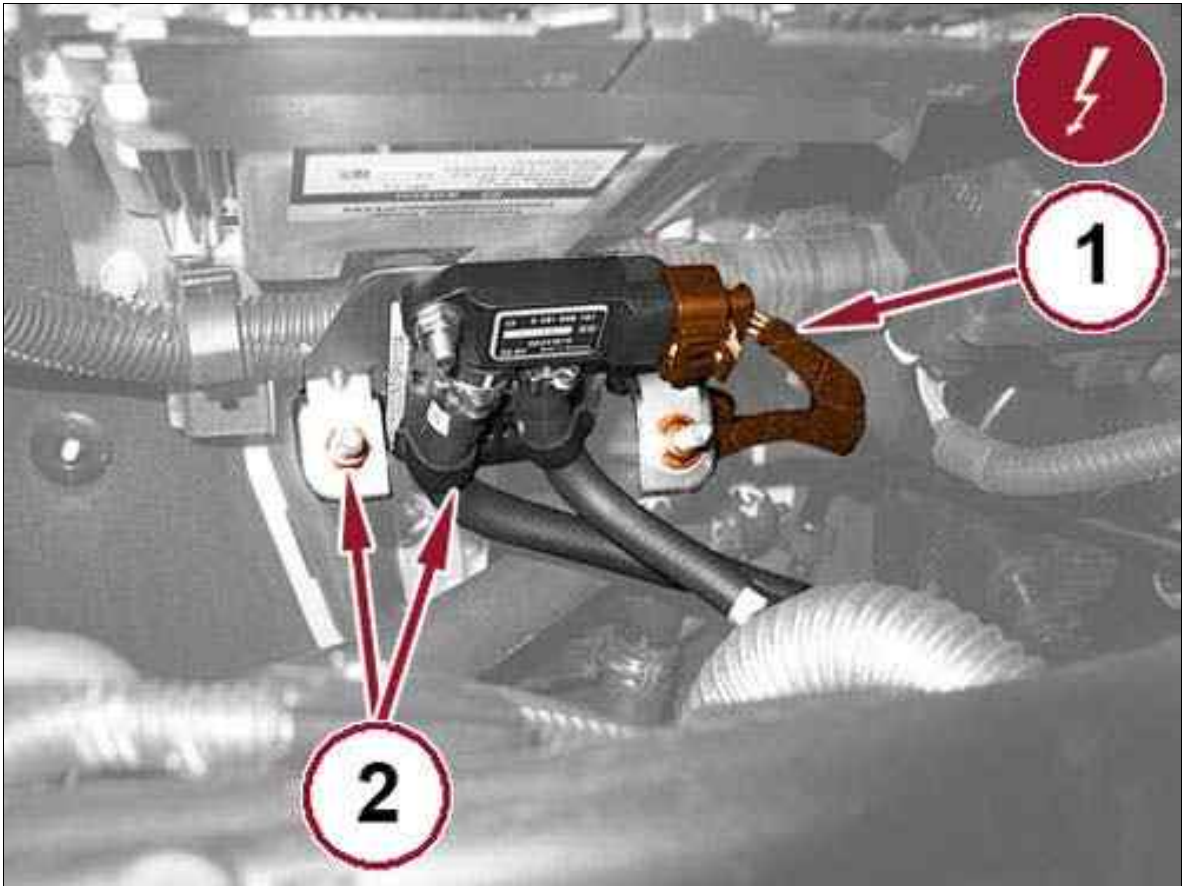
Fig 11: Vacuum Sensor & Retaining Clip



Courtesy of CHRYSLER GROUP, LLC

23. Open the retaining clip (1a) and remove the vacuum sensor (1b) from the brake booster.

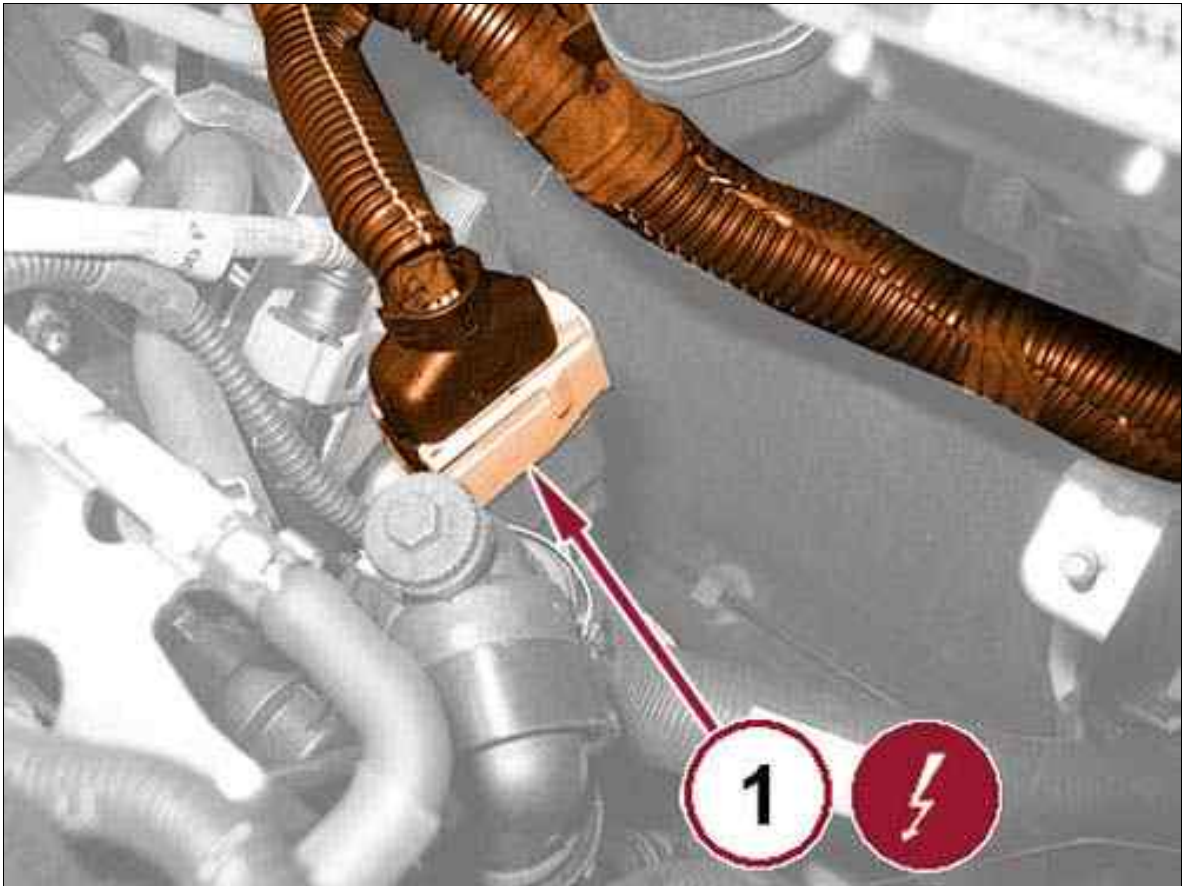
Fig 12: Differential Pressure Sensor Connector & Mounting Nuts



Courtesy of CHRYSLER GROUP, LLC

24. Disconnect the differential pressure sensor electrical connector (1).
25. Remove the differential pressure sensor mounting nuts (2) and position aside.
26. Remove the Powertrain Control Module (PCM). Refer to MODULE, POWERTRAIN CONTROL, REMOVAL AND INSTALLATION .

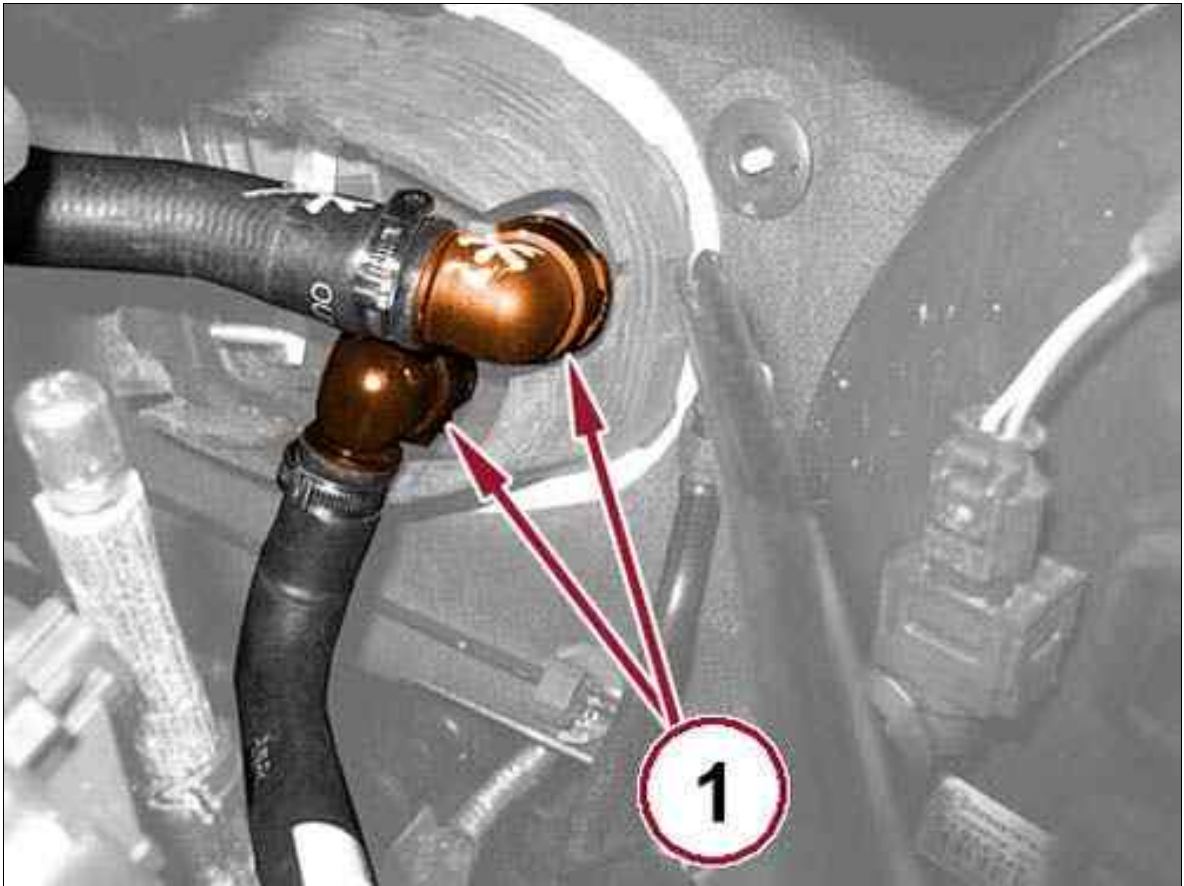
Fig 13: PTO Electrical Connector



Courtesy of CHRYSLER GROUP, LLC

27. Disconnect the PTO electrical connector (1).

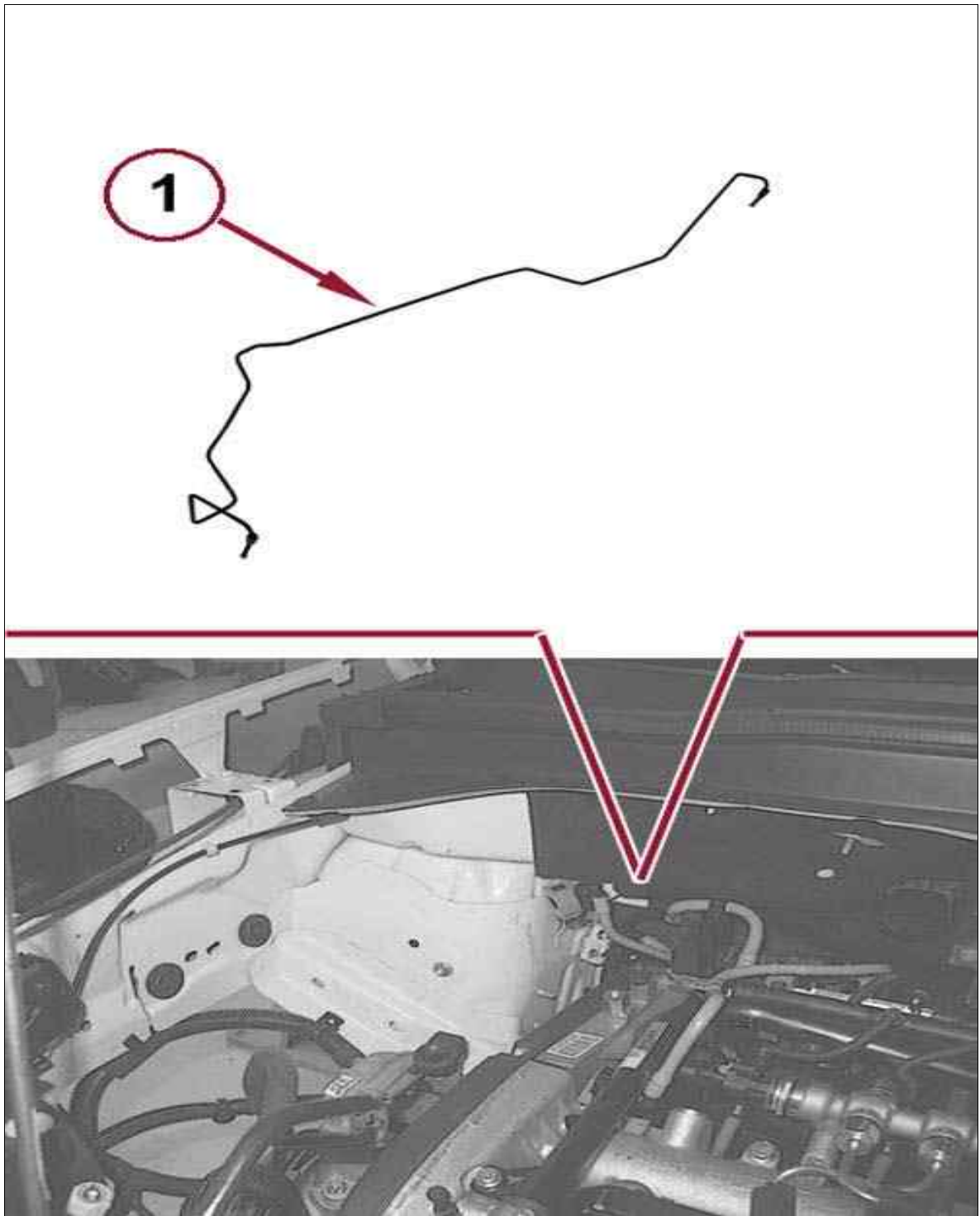
Fig 14: Heater Core Hoses



Courtesy of CHRYSLER GROUP, LLC

28. Disconnect the heater core supply and return hoses from the heater core.

Fig 15: Right Front Brake Line



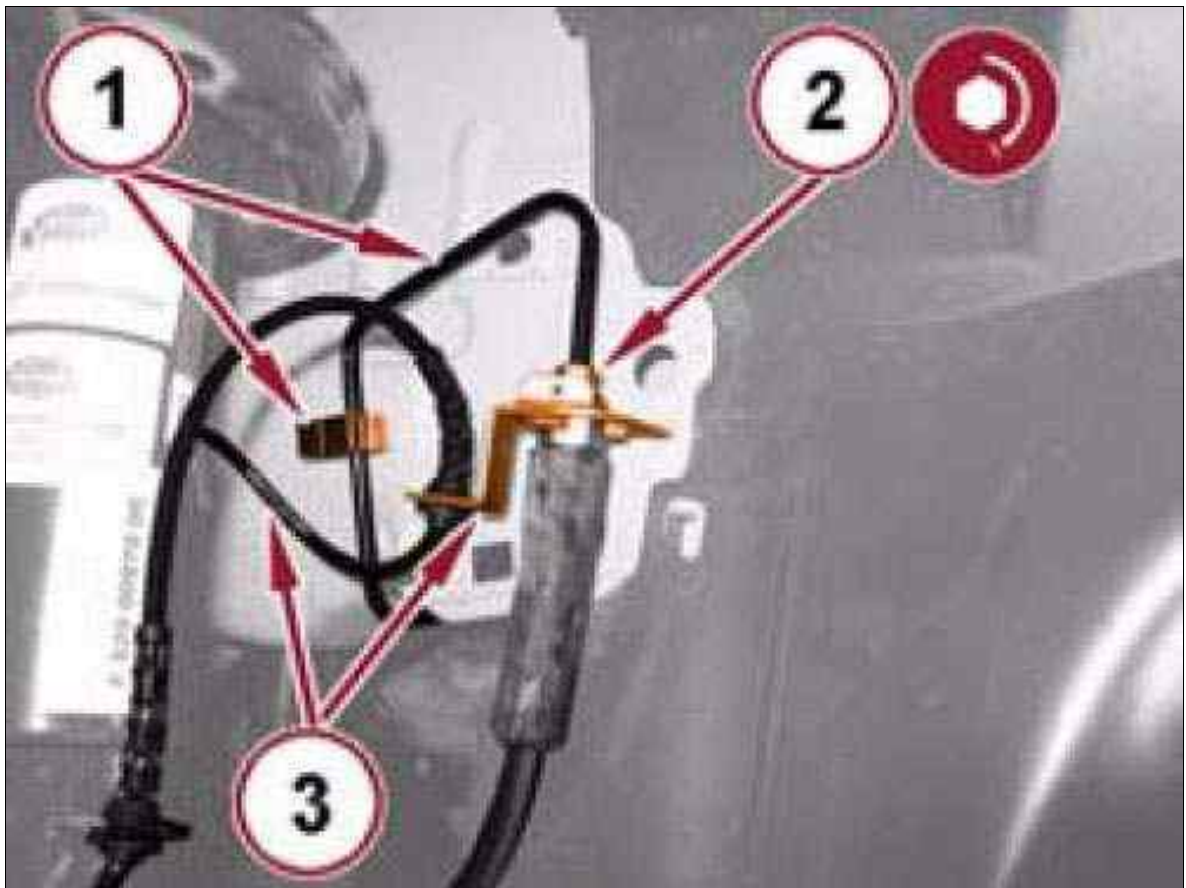
Courtesy of CHRYSLER GROUP, LLC

29. From inside the engine bay, remove the right front brake line (1) from the vehicle.

**HYDRAULIC/MECHANICAL > TUBES AND HOSES, BRAKE > REMOVAL AND
INSTALLATION > RIGHT FRONT BRAKE TUBE - 1.6L - 2.0L > INSTALLATION**

1. Position the right front brake line into the vehicle.
2. Install the heater core supply and return hoses.
3. Connect the PTO electrical connector.
4. Install the Powertrain Control Module (PCM). Refer to MODULE, POWERTRAIN CONTROL, REMOVAL AND INSTALLATION .
5. Position the differential pressure sensor and install the mounting nuts.
6. Connect the differential connector electrical connector.
7. Install the vacuum sensor and engage the retaining clip.
8. Connect the vacuum sensor electrical connector.
9. Install the A/C line retainer bracket.
10. Install the A/C line and secure the line in the retainers.
11. Install the suction and liquid line to the expansion valve and tighten to the proper specification. Refer to SPECIFICATIONS .
12. Install the brake line into the remaining retainers.

Fig 1: Wheel Speed Sensor Wiring, Brake Line To Brake Hose Nut & Retainer Clip



Courtesy of CHRYSLER GROUP, LLC

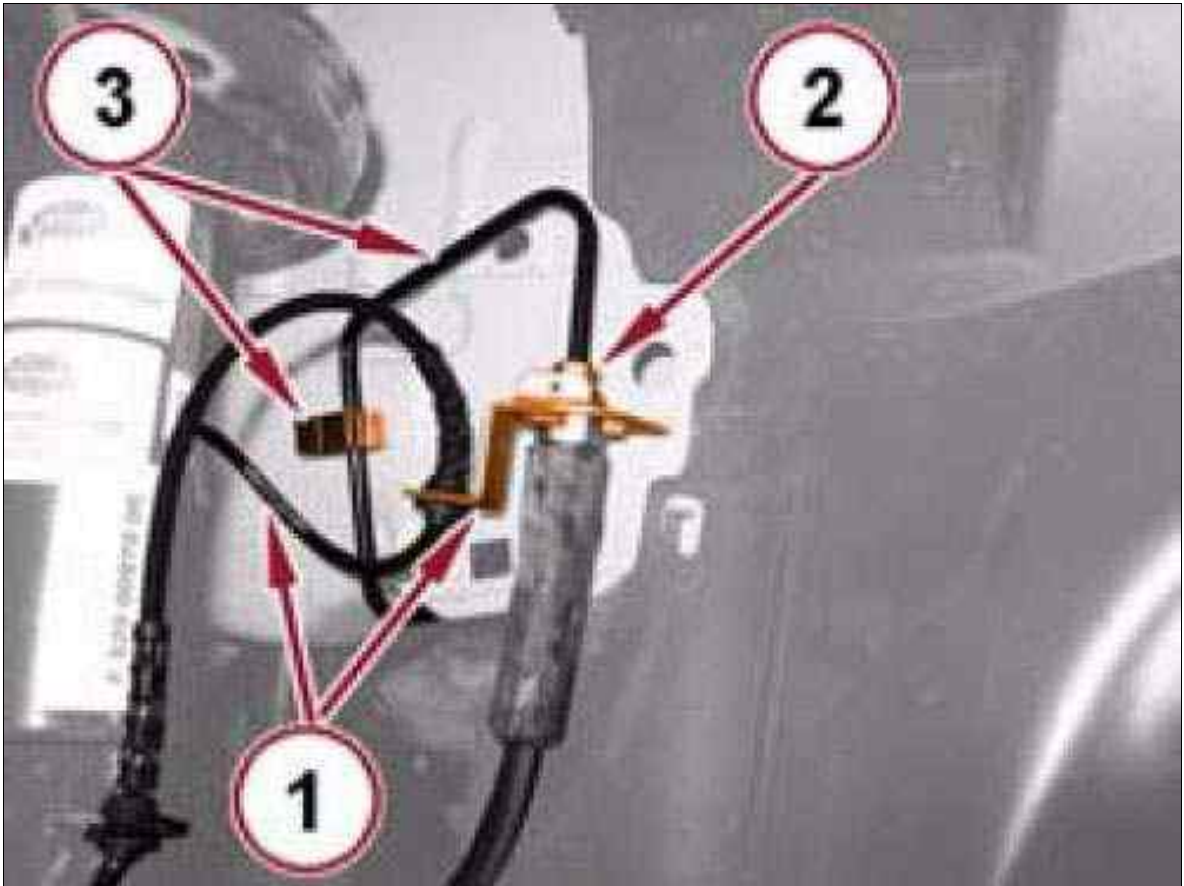
13. Raise the vehicle.

14. Install the brake line into the body retainer clip (1).
15. Install and tighten the brake line to brake hose nut (2) to the proper specification. Refer to TORQUE SPECIFICATIONS .
16. Install the wheel speed sensor wiring (3) into the routing retainer (3).
17. Install the tire and wheel assembly. Refer to REMOVAL AND INSTALLATION .
18. Install the belly pan. Refer to BELLY PAN, REMOVAL AND INSTALLATION .
19. Remove the support and lower the vehicle.
20. Install the fuel filter assembly and bracket. Refer to FILTER, FUEL, REMOVAL AND INSTALLATION .
21. Install the air cleaner assembly.
22. Fill and bleed the engine coolant. Refer to STANDARD PROCEDURE .
23. Recharge the A/C system. Refer to STANDARD PROCEDURE .
24. Install the engine cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .
25. Install the Integrated Control Unit (ICU). Refer to INTEGRATED CONTROL UNIT (ICU), REMOVAL AND INSTALLATION .

HYDRAULIC/MECHANICAL > TUBES AND HOSES, BRAKE > REMOVAL AND INSTALLATION > RIGHT FRONT BRAKE TUBE - 2.4L > REMOVAL

1. Depressurize the fuel system. Refer to FUEL DELIVERY, STANDARD PROCEDURE .
2. Remove the Integrated Control Unit (ICU). Refer to INTEGRATED CONTROL UNIT (ICU), REMOVAL AND INSTALLATION .
3. Remove the engine cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .
4. Evacuate the A/C system. Refer to STANDARD PROCEDURE .
5. Drain the engine coolant. Refer to STANDARD PROCEDURE .
6. Remove the air cleaner intake tube.
7. Raise and support the vehicle. Refer to HOISTING, STANDARD PROCEDURE .
8. Remove the belly pan. Refer to BELLY PAN, REMOVAL AND INSTALLATION .

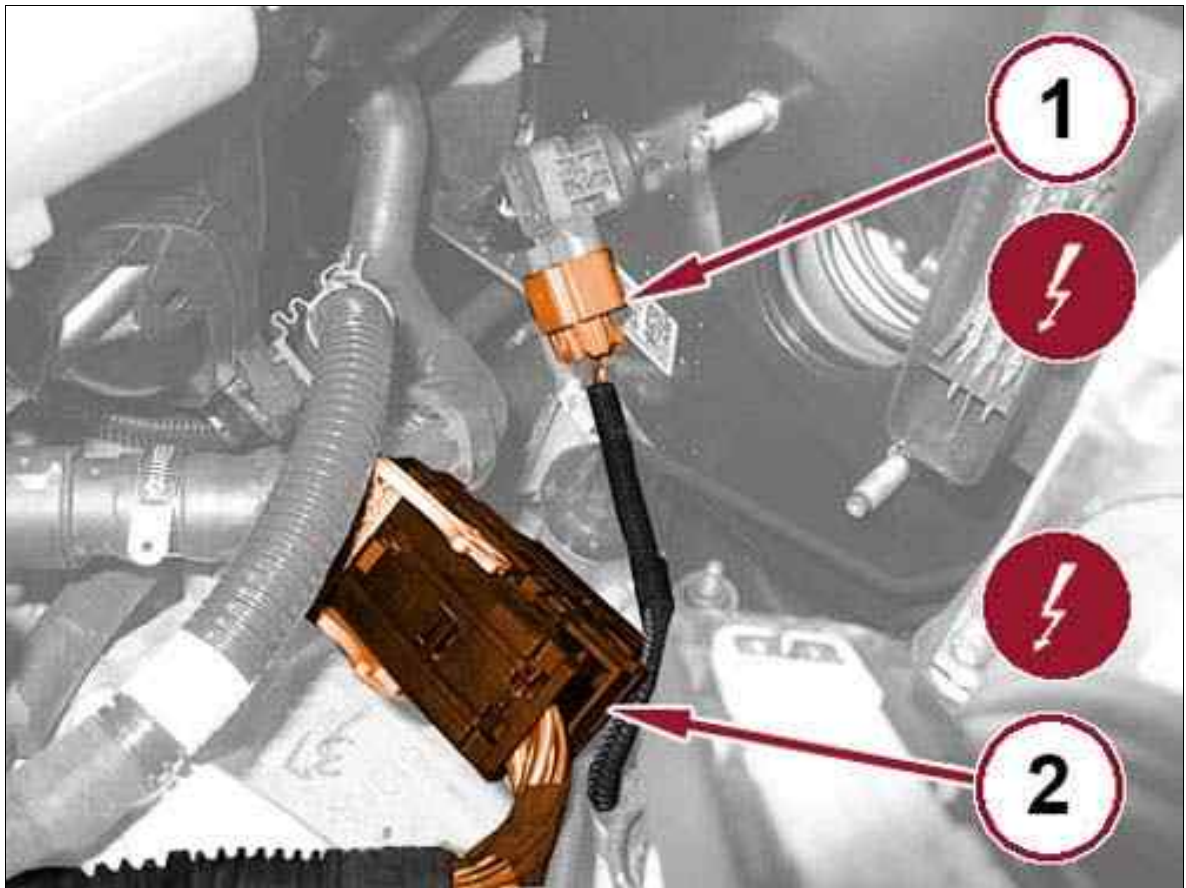
Fig 1: Wheel Speed Sensor Wiring, Brake Line To Brake Hose Nut & Retainer Clip



Courtesy of CHRYSLER GROUP, LLC

9. Remove the tire and wheel assembly. Refer to REMOVAL AND INSTALLATION .
10. Remove the wheel speed sensor wiring (1) from the routing retainer.
11. Loosen and remove the brake line to brake hose nut (2).
12. Remove the brake line from the body retainer clip (3).

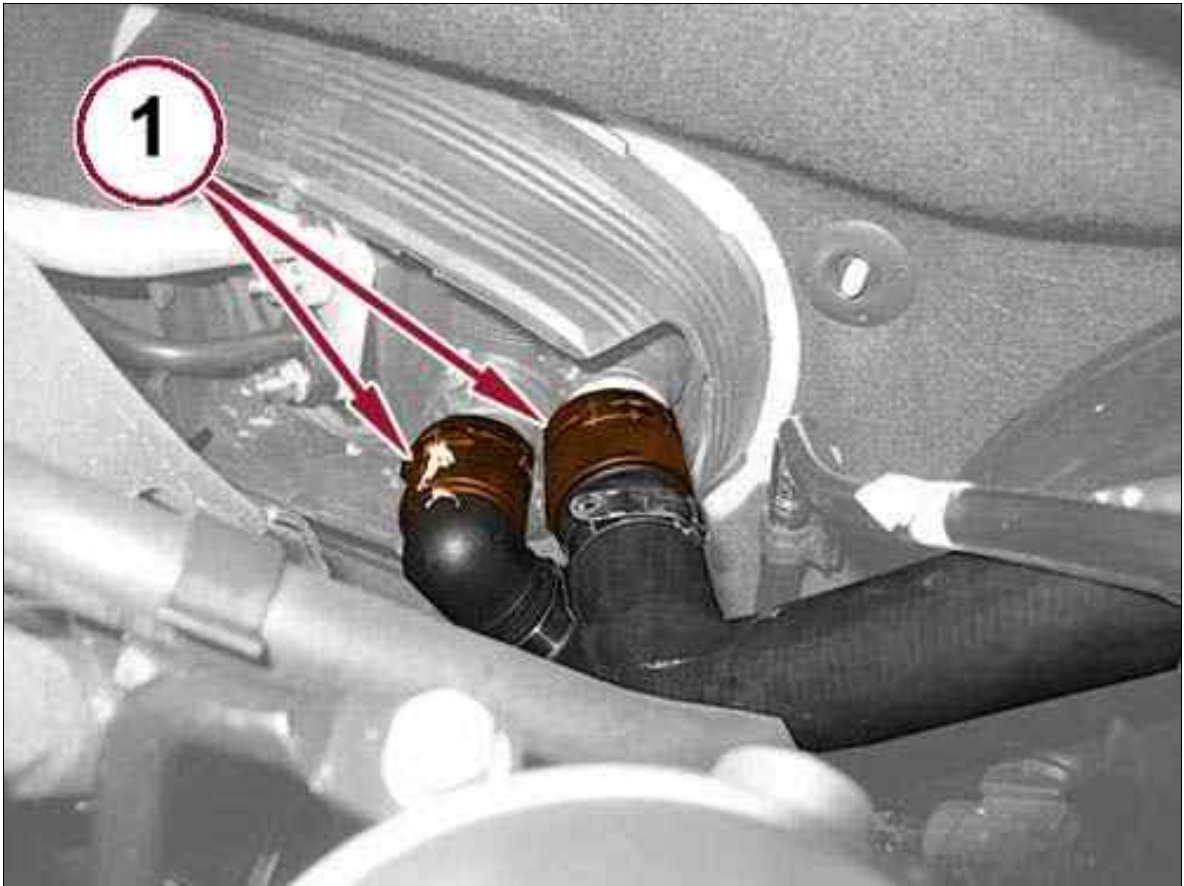
Fig 2: Vacuum Sensor & Transmission Connectors



Courtesy of CHRYSLER GROUP, LLC

13. Disconnect the vacuum sensor electrical connector (1).
14. Disconnect the transmission electrical connector (2).

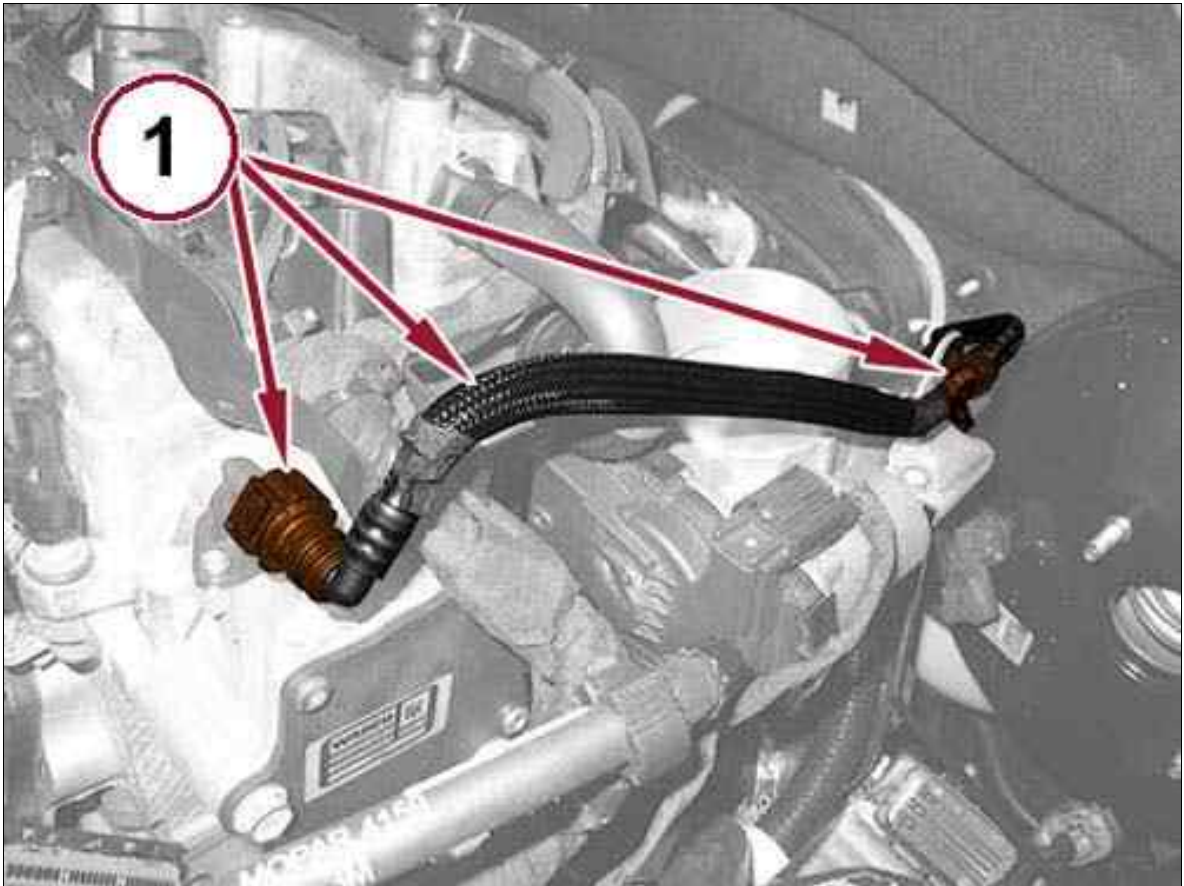
Fig 3: Heater Core Hoses



Courtesy of CHRYSLER GROUP, LLC

15. Disconnect the heater core supply and return hoses.

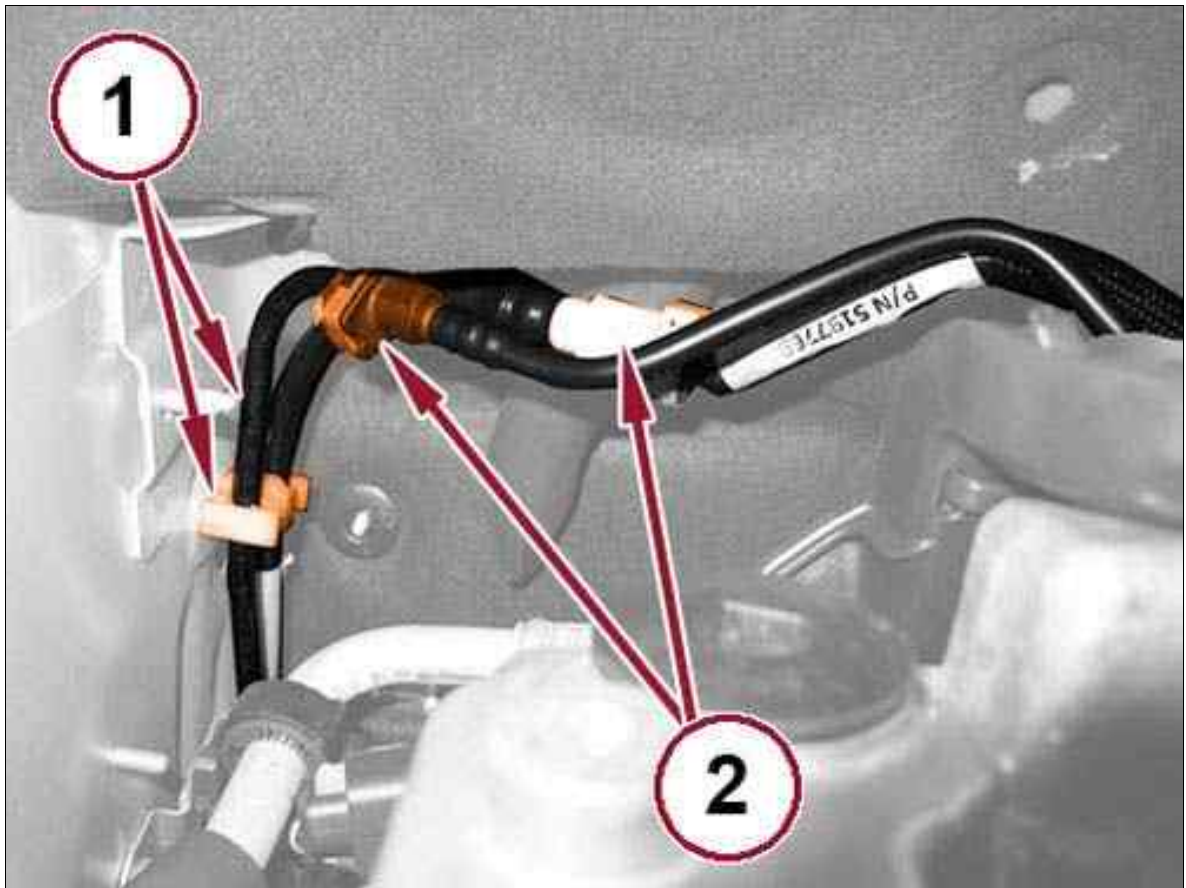
Fig 4: Vacuum Servo Hose



Courtesy of CHRYSLER GROUP, LLC

16. Disconnect and remove the vacuum servo hose (1).

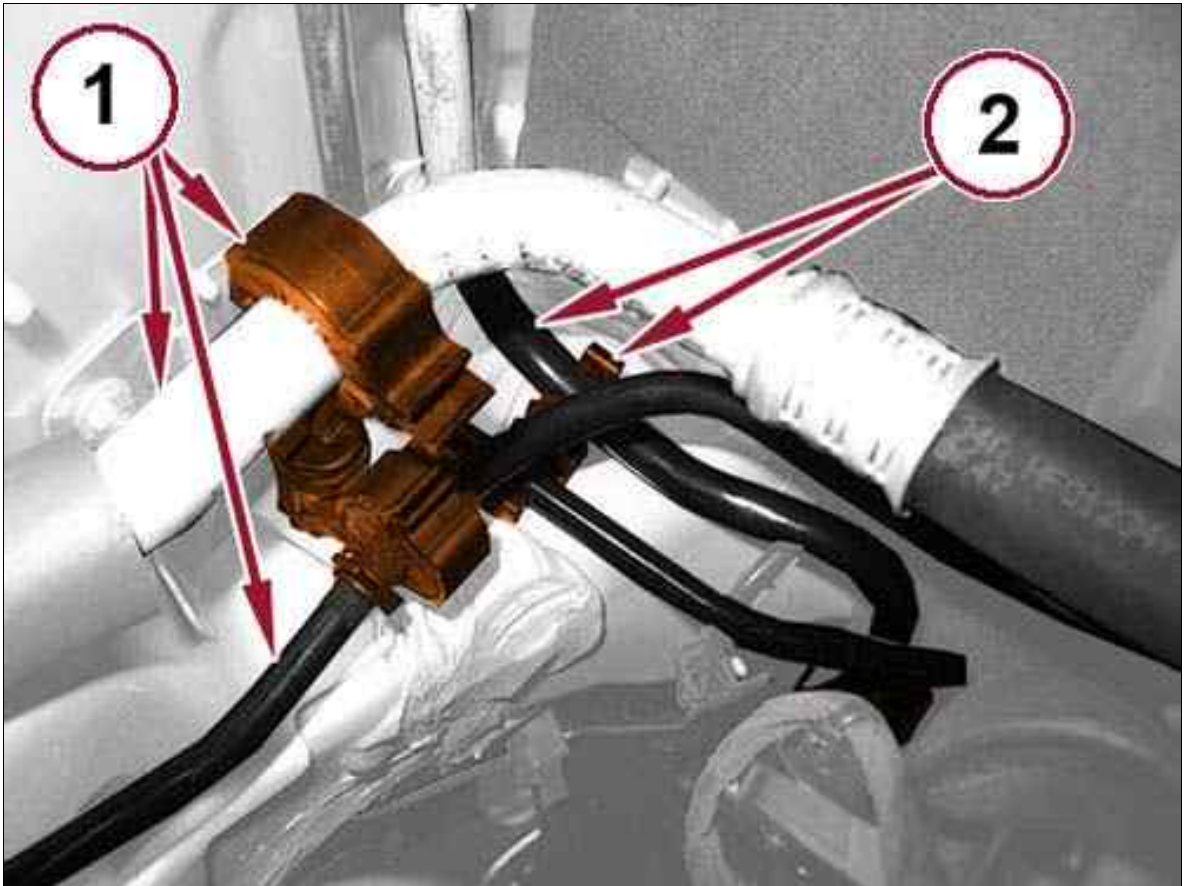
Fig 5: Fuel Line Retainers & Couplings



Courtesy of CHRYSLER GROUP, LLC

17. Disconnect the fuel lines from the retainers (1), and disconnect the quick couplings (2).

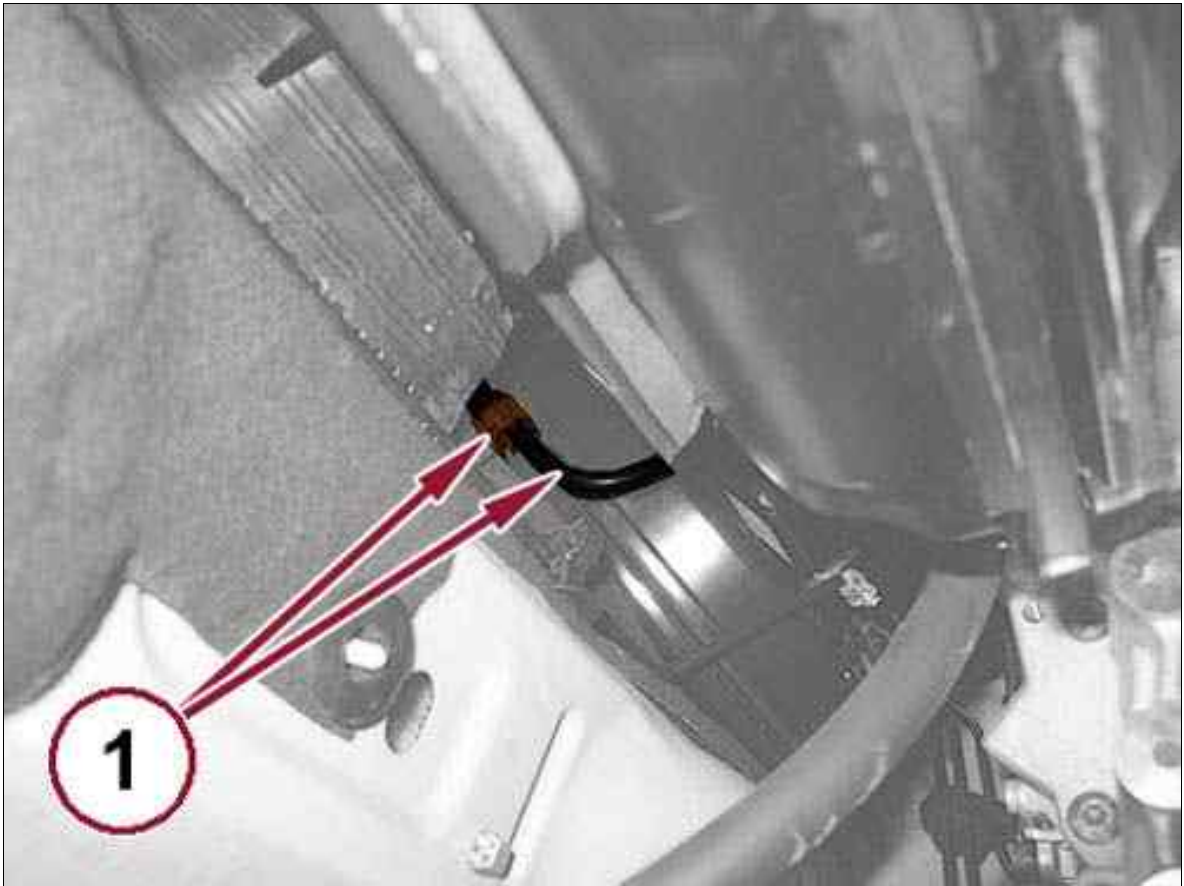
Fig 6: A/C & Fuel Lines Retaining Clips



Courtesy of CHRYSLER GROUP, LLC

18. Open the retaining clips and remove the A/C lines (1) and fuel lines (2).

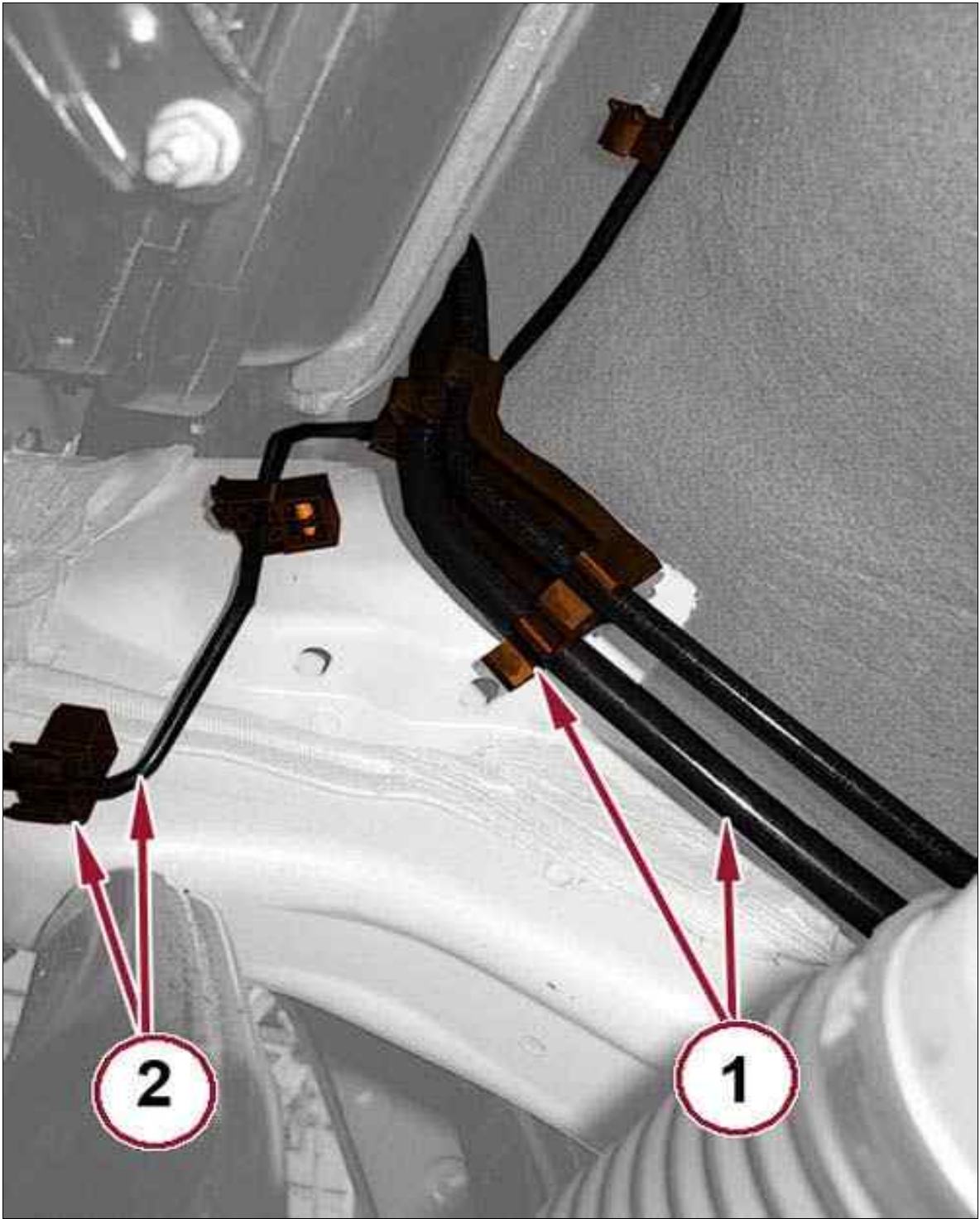
Fig 7: Brake Line Retainer



Courtesy of CHRYSLER GROUP, LLC

19. Remove the brake line from the retainer (1).

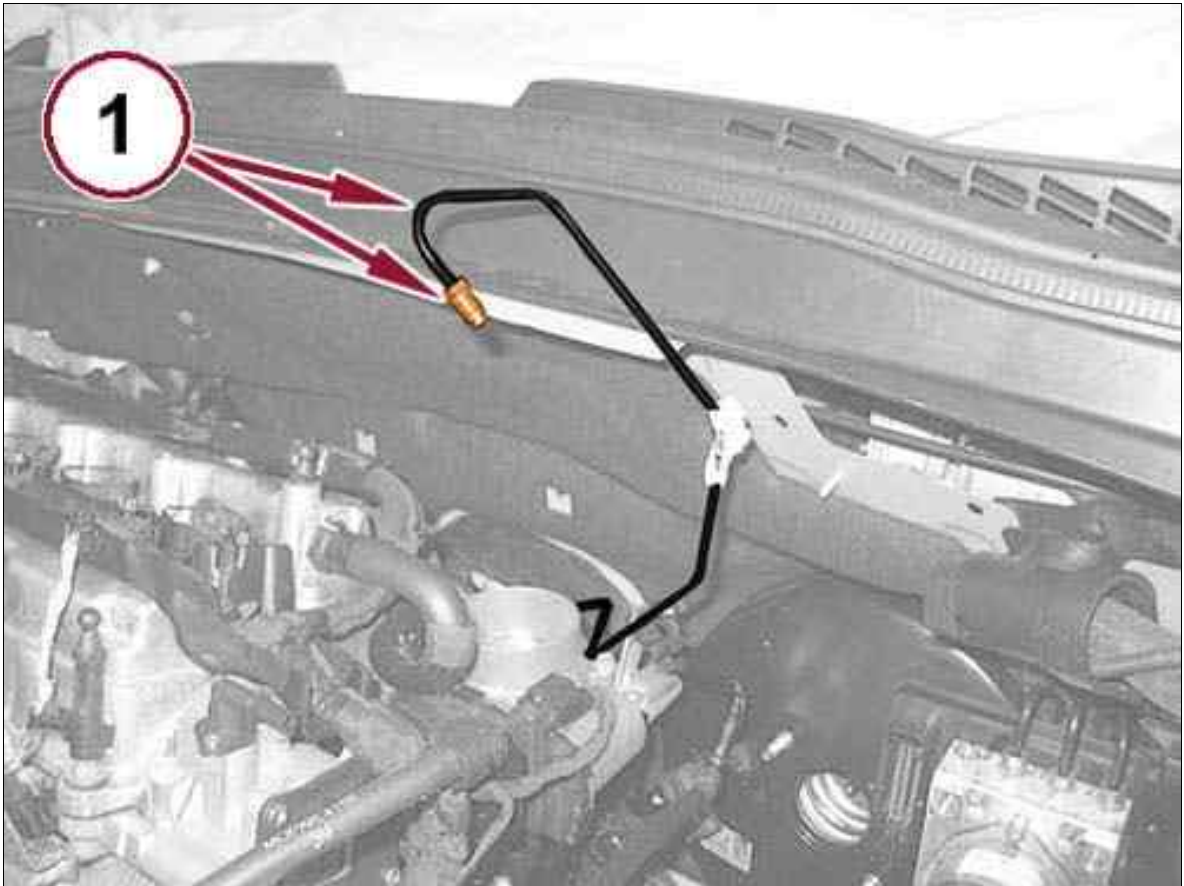
Fig 8: Fuel & Brake Lines Retaining Clips



Courtesy of CHRYSLER GROUP, LLC

- 20. Disconnect the fuel lines from the retainer clips (1).
- 21. Remove the brake line (2) from the retainer clip.

Fig 9: Right Front Brake Line



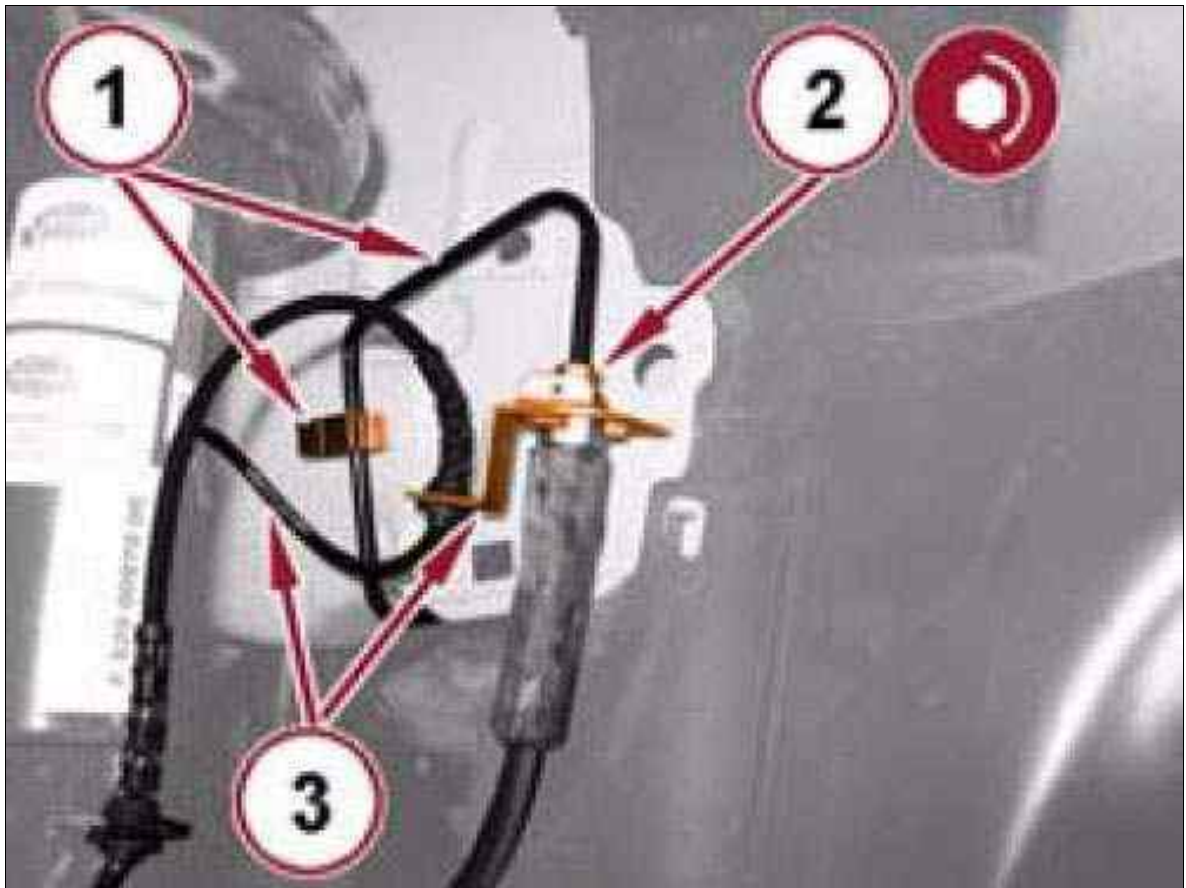
Courtesy of CHRYSLER GROUP, LLC

22. From inside the engine bay, remove the right front brake line (1) from the vehicle.

HYDRAULIC/MECHANICAL > TUBES AND HOSES, BRAKE > REMOVAL AND INSTALLATION > RIGHT FRONT BRAKE TUBE - 2.4L > INSTALLATION

1. Position the right front brake line into the vehicle.
2. Install all the fuel lines in the retaining clips.
3. Install all the A/C lines in the retaining clips.
4. Connect all the fuel line couplings.
5. Install the vacuum servo hose.
6. Connect the heater core supply and return hoses.
7. Connect the transmission electrical connector.
8. Connect the vacuum sensor electrical connector.
9. Engage all the brake line retaining clips.

Fig 1: Wheel Speed Sensor Wiring, Brake Line To Brake Hose Nut & Retainer Clip



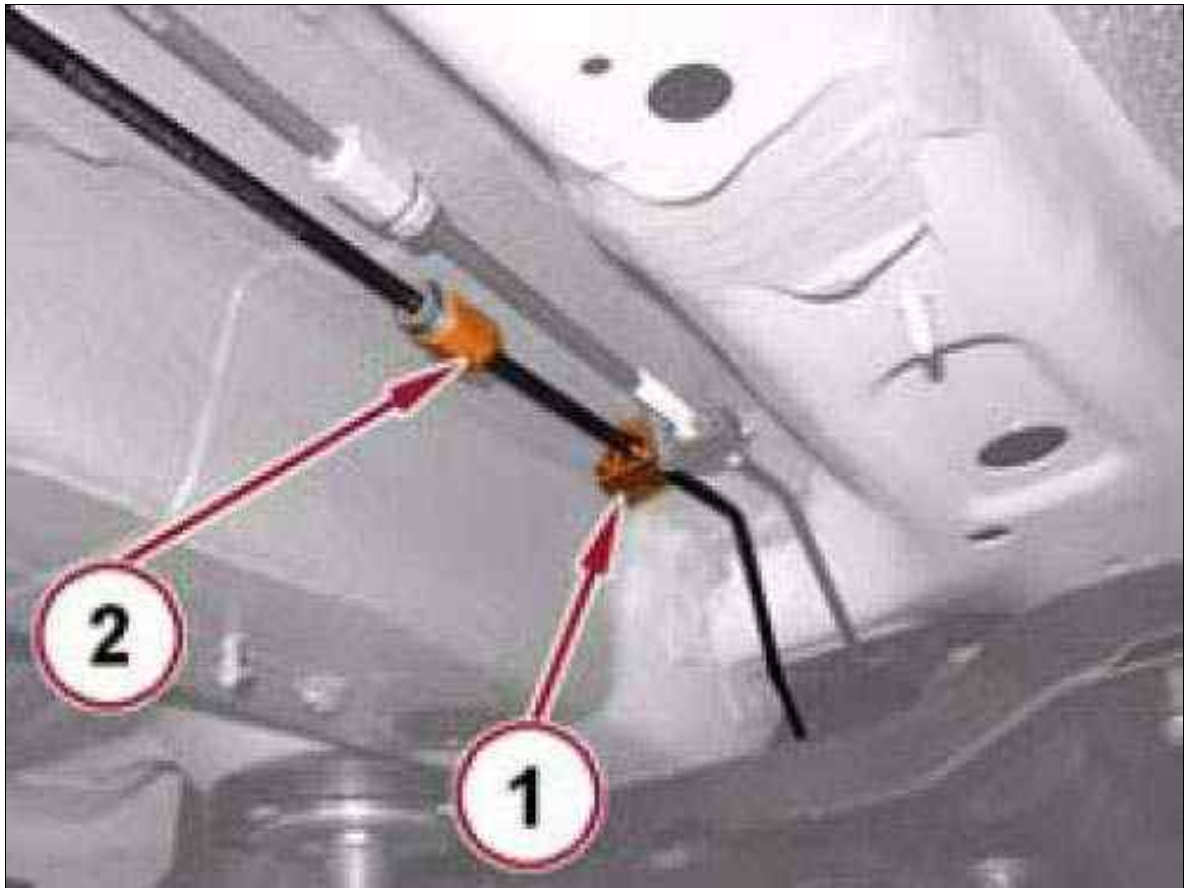
Courtesy of CHRYSLER GROUP, LLC

10. Raise the vehicle.
11. Install the brake line into the body retainer clip (1).
12. Install and tighten the brake line to brake hose nut (2) to the proper specification. Refer to TORQUE SPECIFICATIONS .
13. Install the wheel speed sensor wiring (3) into the routing retainer (3).
14. Install the tire and wheel assembly. Refer to REMOVAL AND INSTALLATION .
15. Install the belly pan. Refer to BELLY PAN, REMOVAL AND INSTALLATION .
16. Remove the support and lower the vehicle.
17. Install the air cleaner intake tube.
18. Fill and bleed the engine coolant. Refer to STANDARD PROCEDURE .
19. Recharge the A/C system. Refer to STANDARD PROCEDURE .
20. Install the engine cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .
21. Install the Integrated Control Unit (ICU). Refer to INTEGRATED CONTROL UNIT (ICU), REMOVAL AND INSTALLATION .

HYDRAULIC/MECHANICAL > TUBES AND HOSES, BRAKE > REMOVAL AND INSTALLATION > ICU TO REAR CONNECTOR > REMOVAL - ICU TO REAR CONNECTOR

1. Remove the Integrated Control Unit. Refer to INTEGRATED CONTROL UNIT (ICU), REMOVAL AND INSTALLATION .
2. Remove the engine cover. For 1.6L/2.0L Diesel, refer to COVER, ENGINE, REMOVAL AND INSTALLATION . For 1.4L, refer to COVER, ENGINE, REMOVAL AND INSTALLATION . For 2.4L, refer to COVER, ENGINE, REMOVAL AND INSTALLATION .
3. Raise and support the vehicle. Refer to HOISTING, STANDARD PROCEDURE .
4. Remove the left front tire and wheel assembly. Refer to REMOVAL AND INSTALLATION .

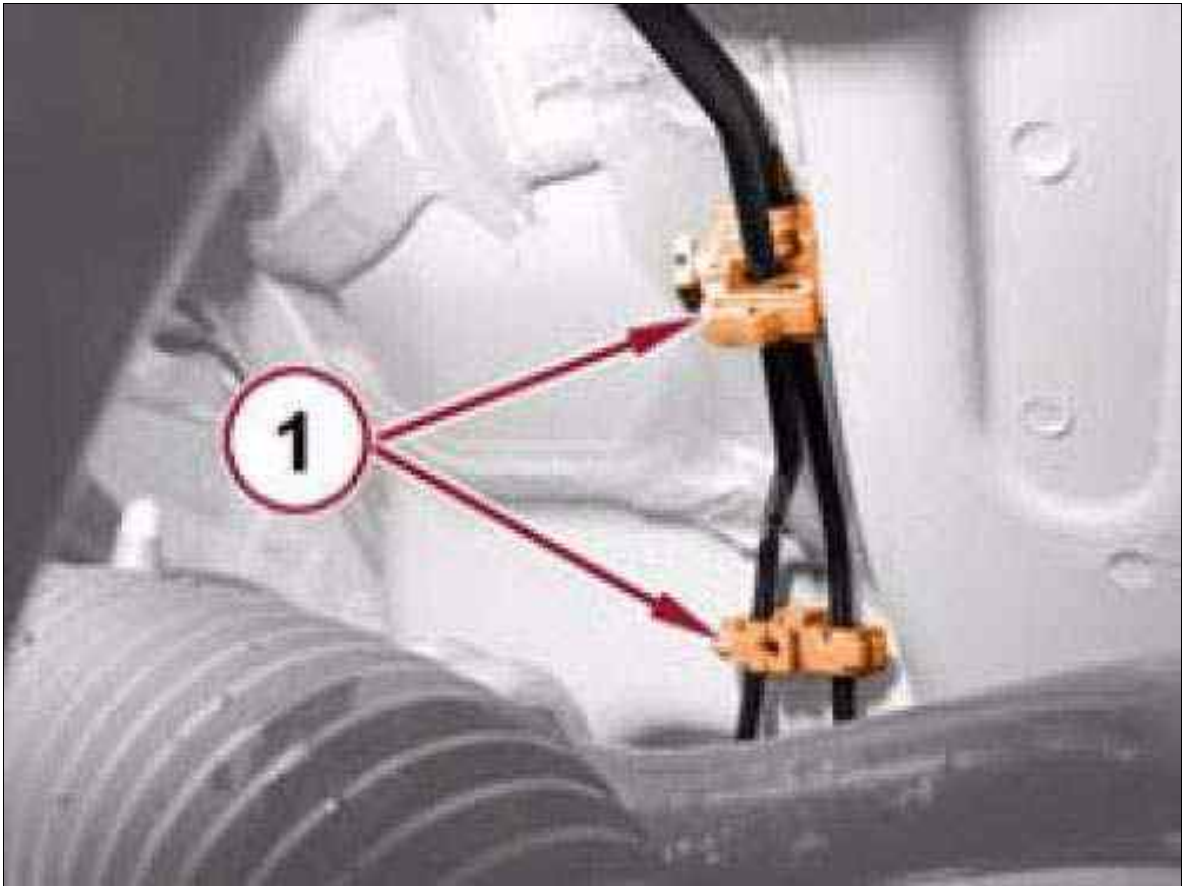
Fig 1: Brake Line Rear Fitting & Retainer Clip



Courtesy of CHRYSLER GROUP, LLC

5. Remove the brake line from the retainer clip (1) and loosen the rear fitting (2).

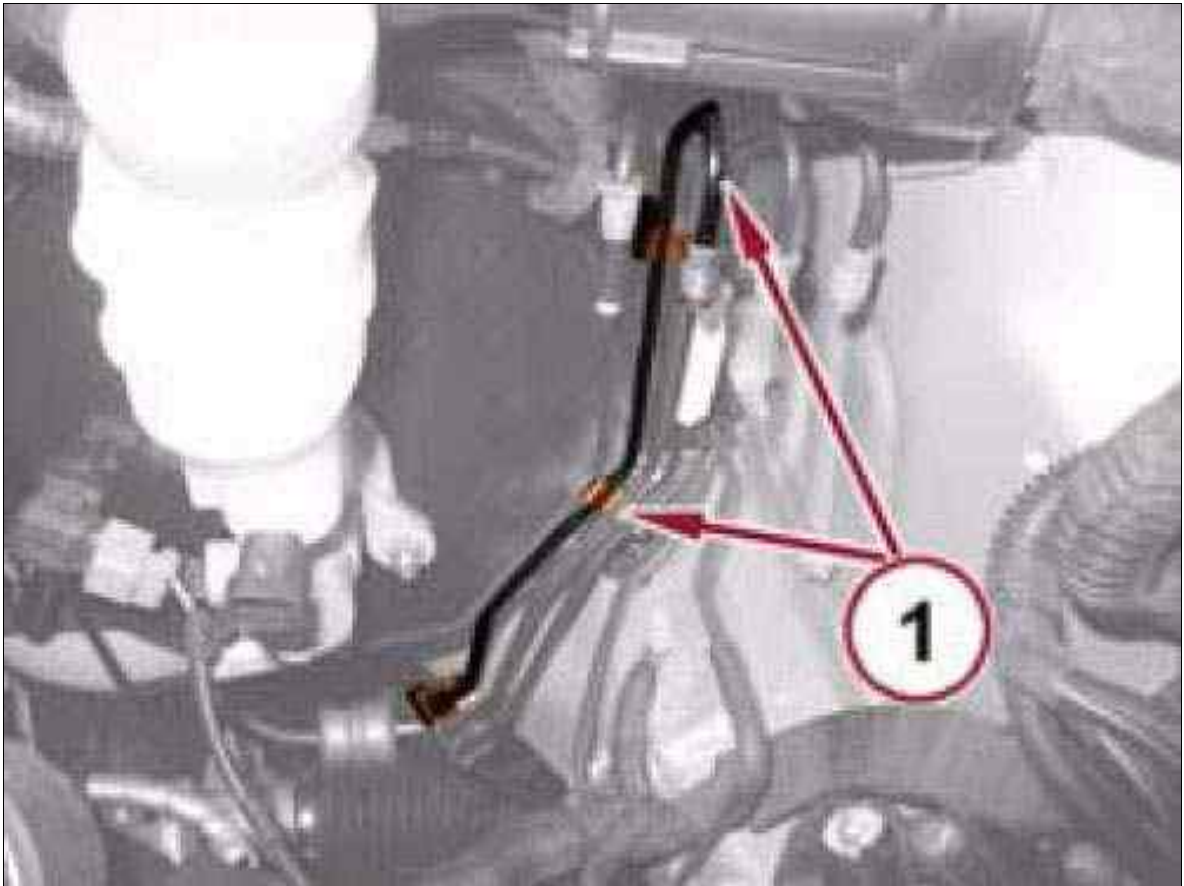
Fig 2: Brake Line Retainer Clips



Courtesy of CHRYSLER GROUP, LLC

6. Remove the retainer clips (1) securing the rear brake lines.
7. Lower the vehicle.

Fig 3: Retainer Clips



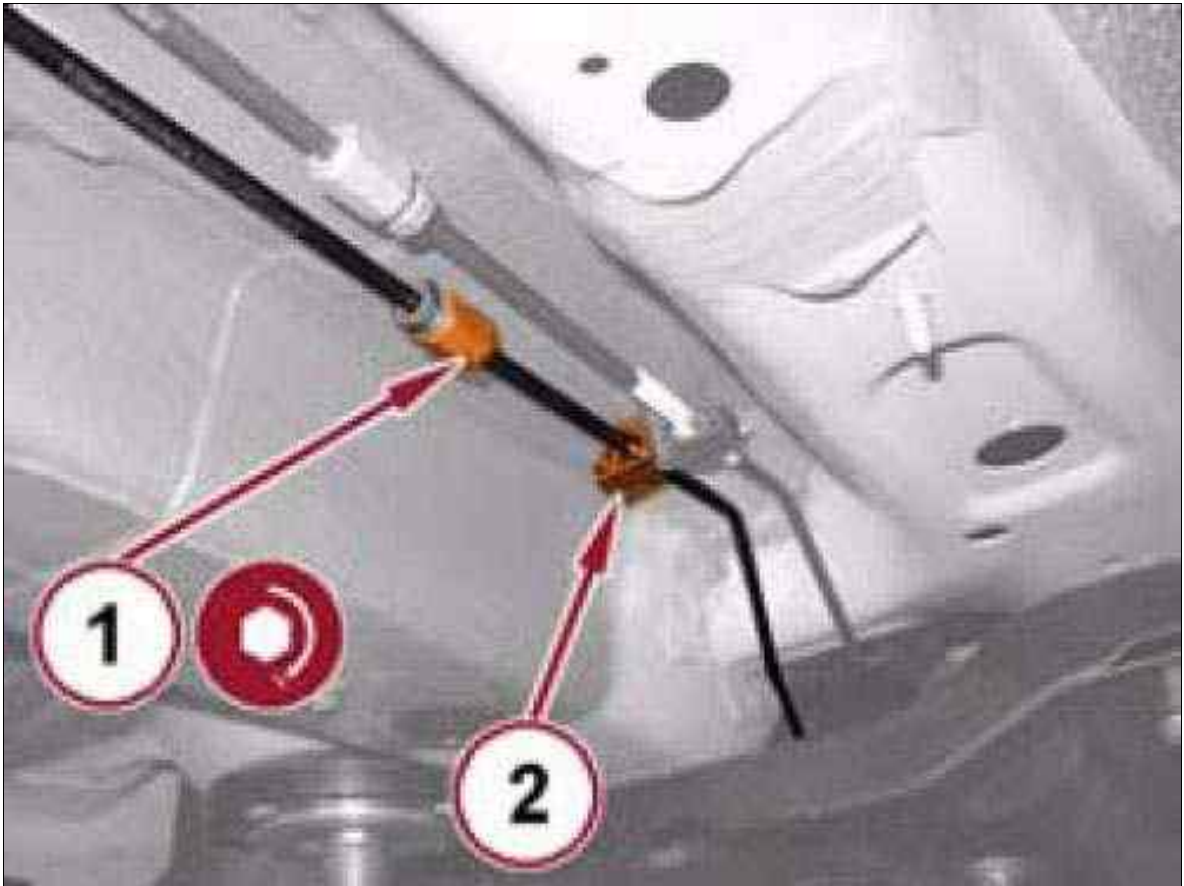
Courtesy of CHRYSLER GROUP, LLC

8. Remove the retainer clips (1) securing the brake line, and remove the brake line from the vehicle.

**HYDRAULIC/MECHANICAL > TUBES AND HOSES, BRAKE > REMOVAL AND
INSTALLATION > ICU TO REAR CONNECTOR > INSTALLATION - ICU TO REAR
CONNECTOR**

1. Position the brake line into the vehicle.
2. Install all brake line retainer clips.

Fig 1: Brake Line Rear Fitting & Retainer Clip

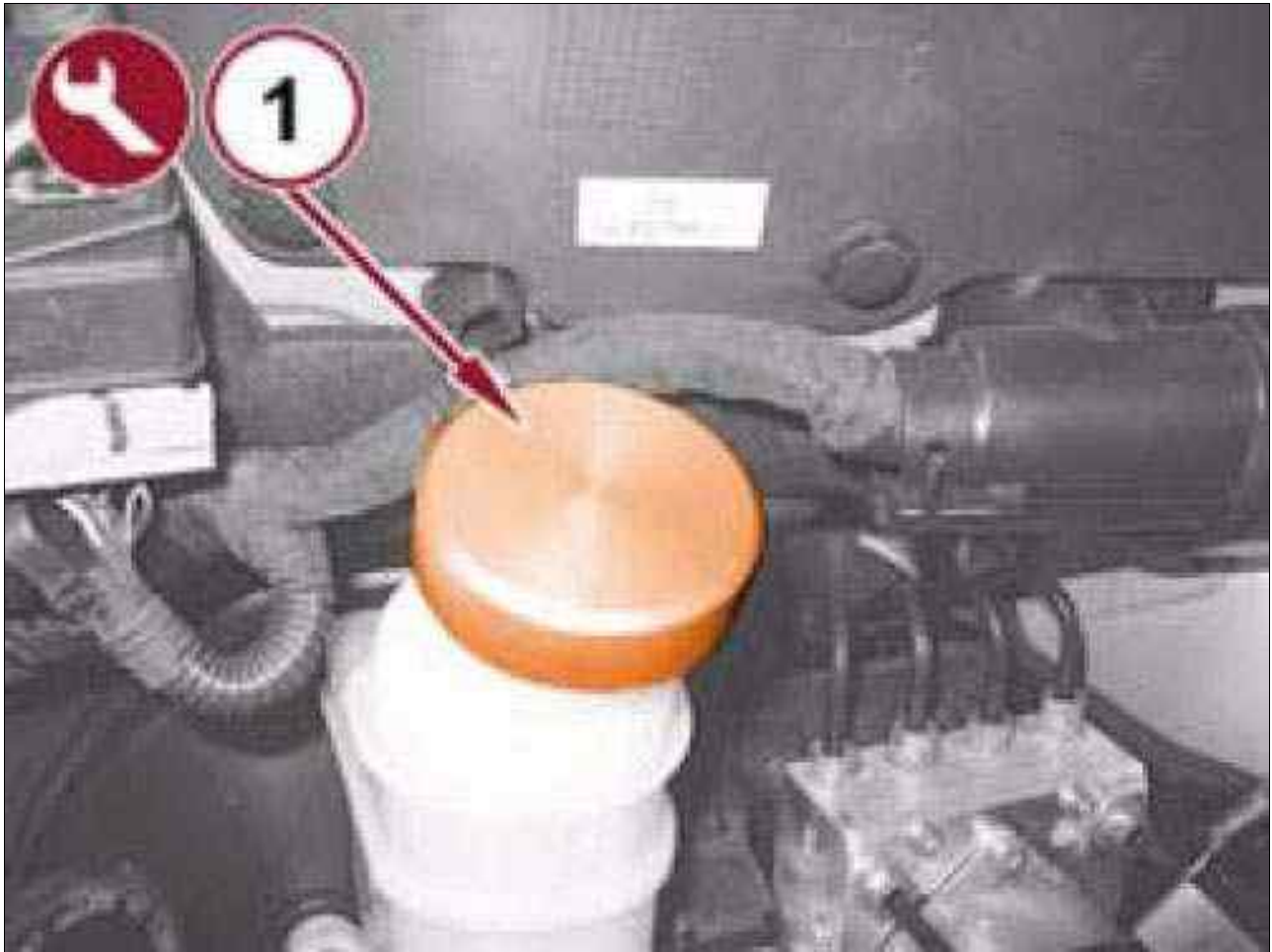


Courtesy of CHRYSLER GROUP, LLC

3. Tighten the rear brake line fitting (1) to the proper specification, and install brake line into retainer clip (2). Refer to TORQUE SPECIFICATIONS .
4. Install the left front tire and wheel assembly. Refer to REMOVAL AND INSTALLATION .
5. Remove the support and lower the vehicle.
6. Install the engine cover. For 1.6L/2.0L Diesel, refer to COVER, ENGINE, REMOVAL AND INSTALLATION . For 1.4L, refer to COVER, ENGINE, REMOVAL AND INSTALLATION . For 2.4L, refer to COVER, ENGINE, REMOVAL AND INSTALLATION .
7. Install the Integrated Control Unit (ICU). Refer to INTEGRATED CONTROL UNIT (ICU), REMOVAL AND INSTALLATION .

**HYDRAULIC/MECHANICAL > TUBES AND HOSES, BRAKE > REMOVAL AND
INSTALLATION > BOTH REAR BRAKE TUBES > REMOVAL - BOTH REAR BRAKE
TUBES**

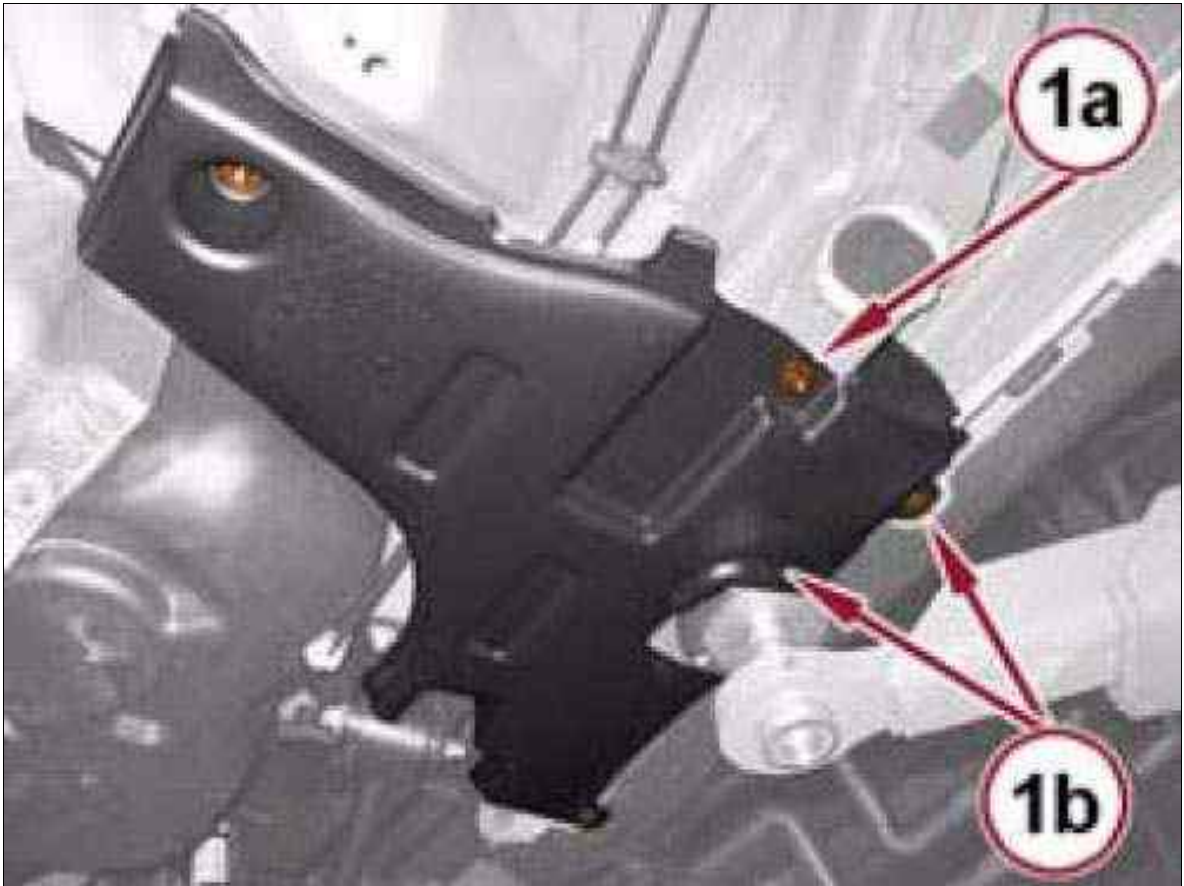
Fig 1: Master Cylinder Cap



Courtesy of CHRYSLER GROUP, LLC

1. Remove the master cylinder cap (1), and install the vacuum tool 2000001400.
2. Raise and support the vehicle. Refer to HOISTING, STANDARD PROCEDURE .
3. Remove the tire and wheel assembly. Refer to REMOVAL AND INSTALLATION .

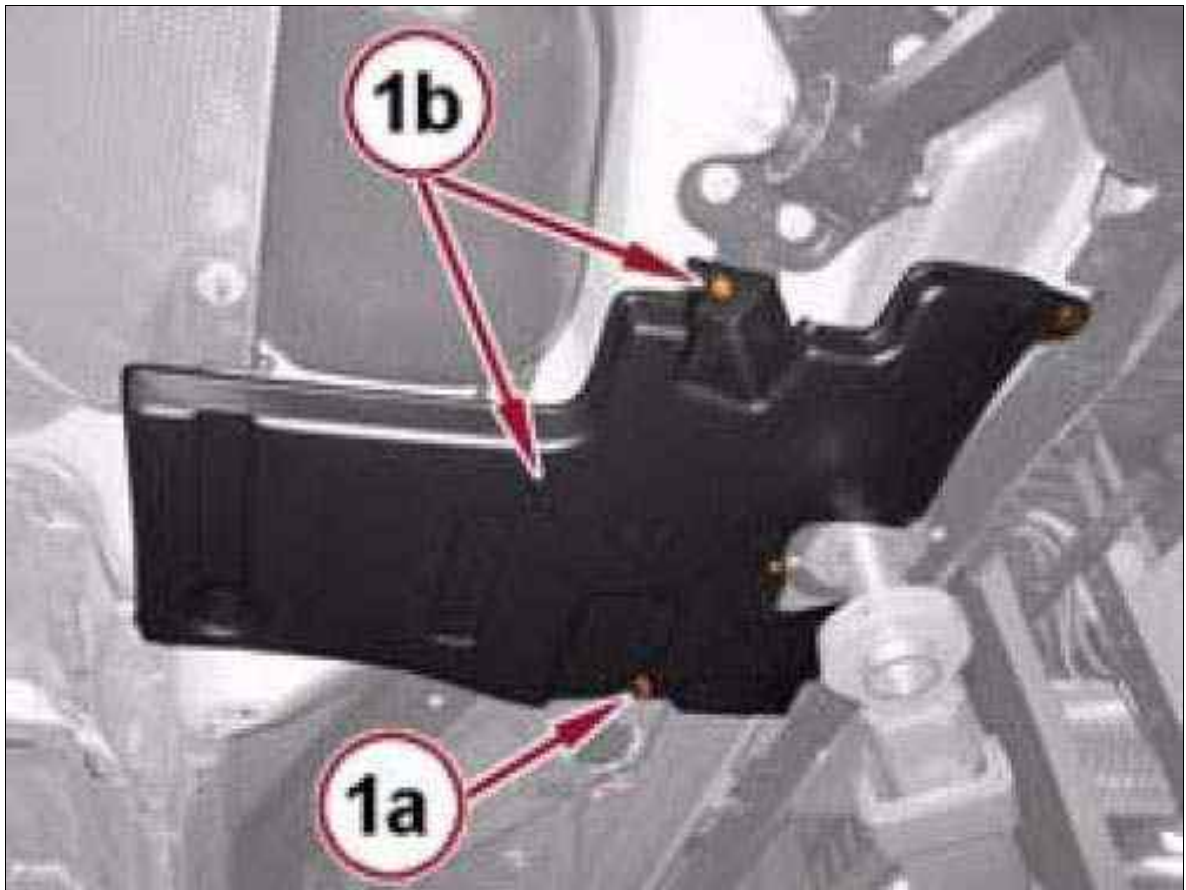
Fig 2: Left Side Protection Shield & Nuts



Courtesy of CHRYSLER GROUP, LLC

4. If equipped, loosen the nuts (1a), release the buttons and remove the left side protection shield (1b).

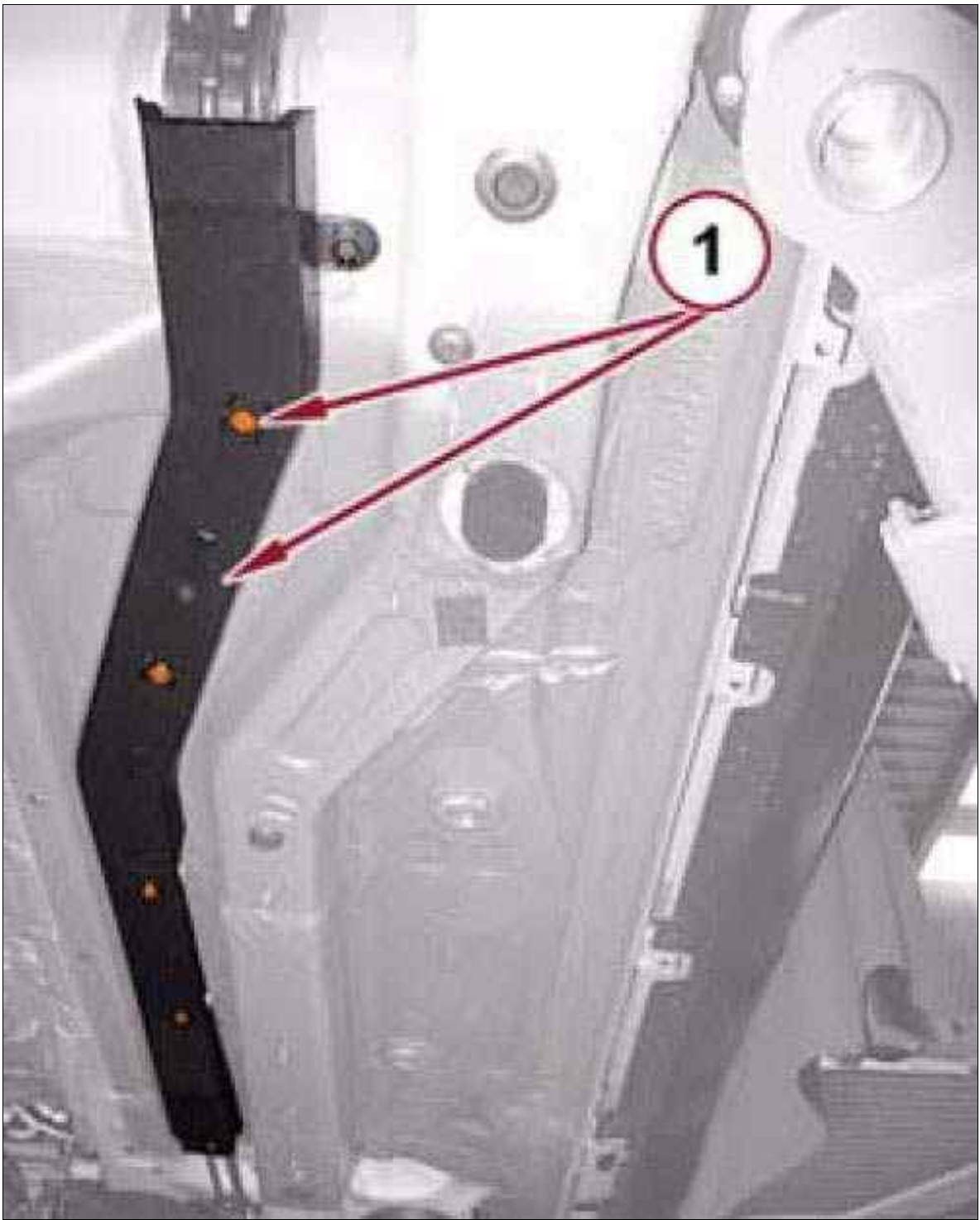
Fig 3: Right Side Cover & Nuts



Courtesy of CHRYSLER GROUP, LLC

5. If equipped, loosen the nuts (1a), release the buttons and remove the right side cover (1b).

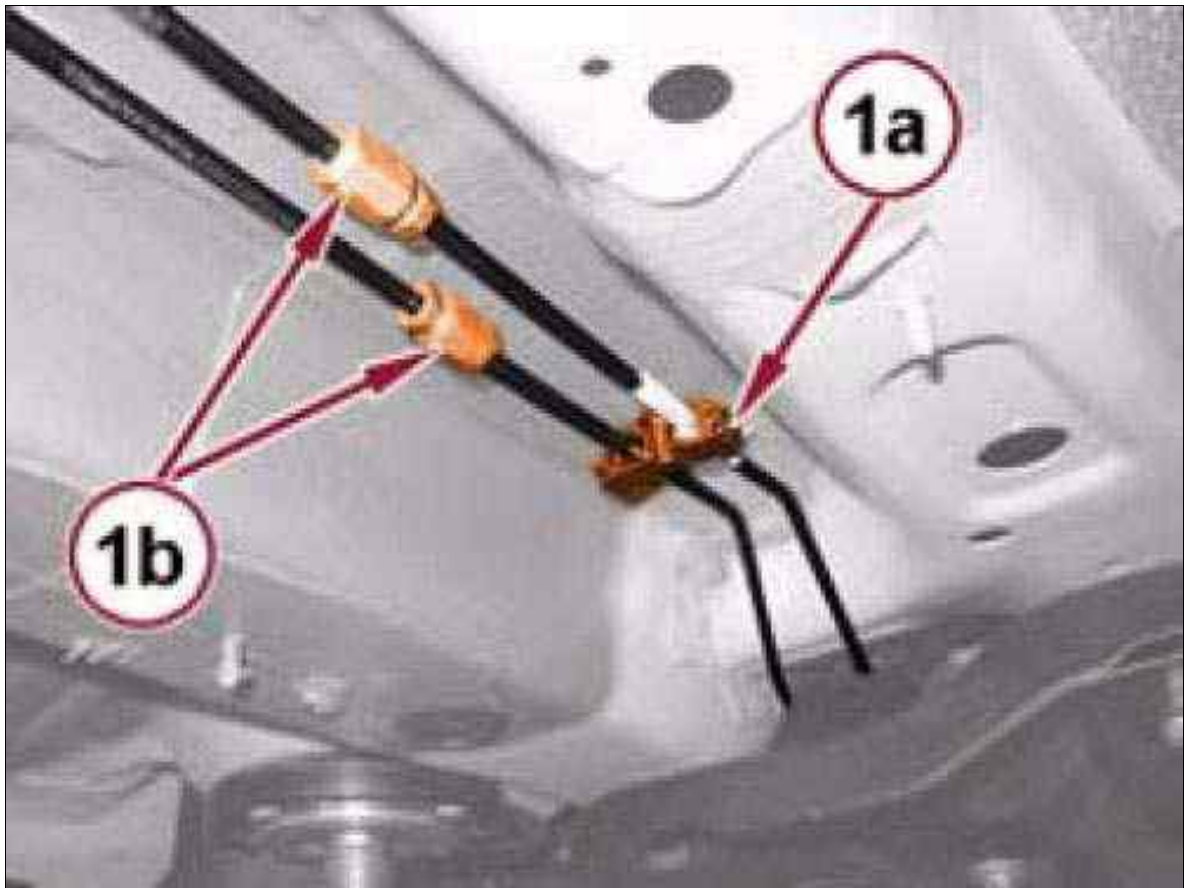
Fig 4: Guard & Screws



Courtesy of CHRYSLER GROUP, LLC

6. Loosen the screws and remove the guards (1).

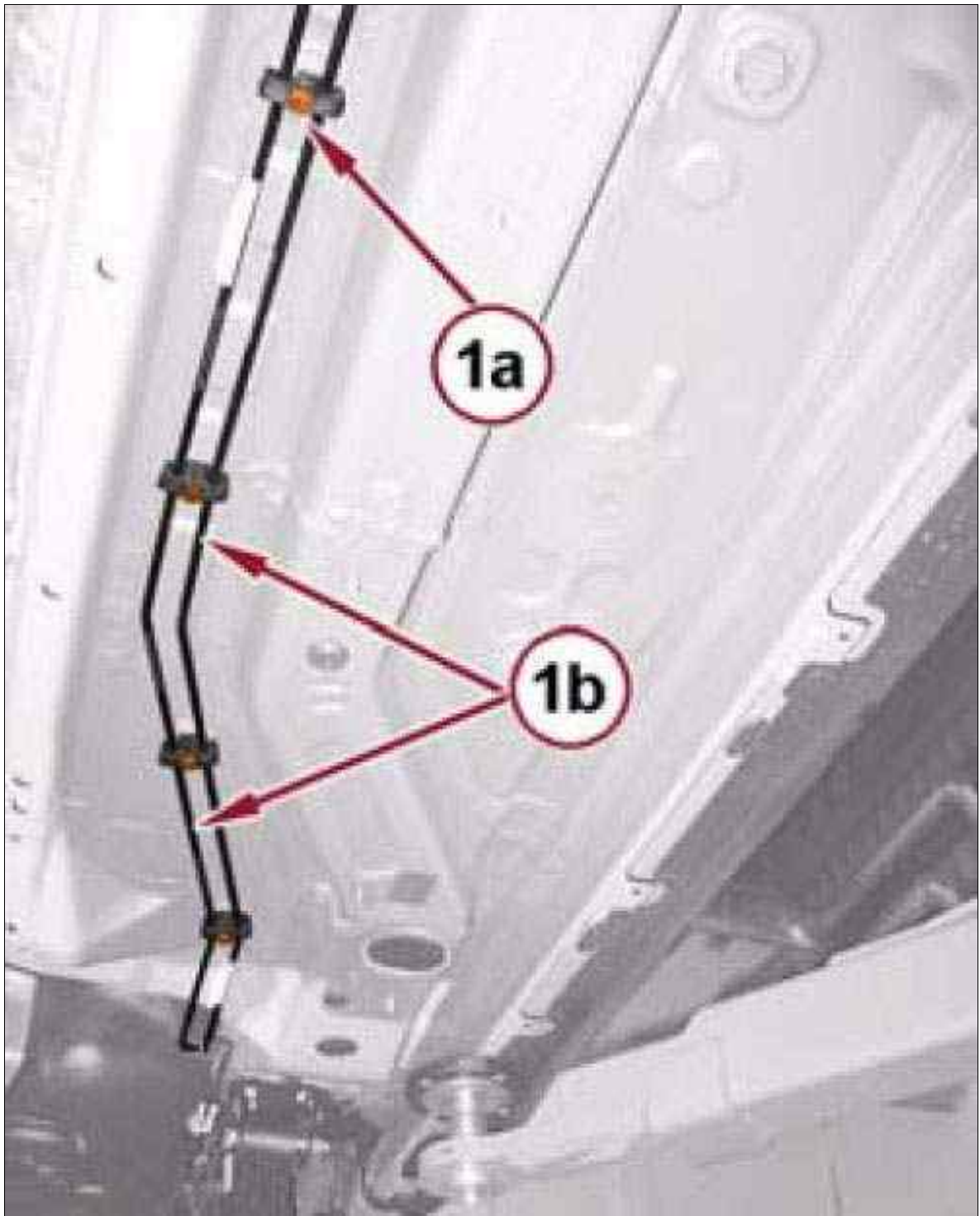
Fig 5: Brake Line Fittings & Clip



Courtesy of CHRYSLER GROUP, LLC

7. Open the clip (1a) and loosen the rear brake line fittings (1b).

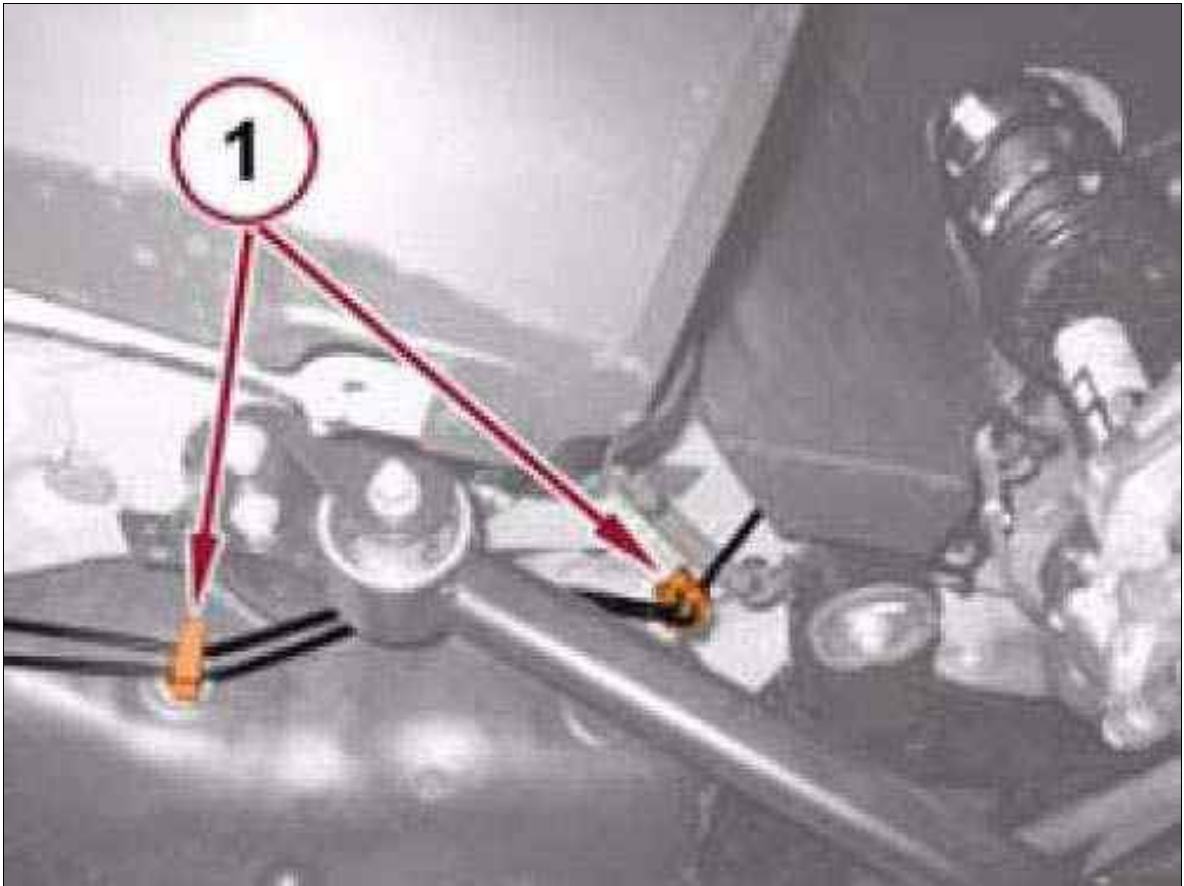
Fig 6: Brake Lines & Retainer Clip Screws



Courtesy of CHRYSLER GROUP, LLC

8. Loosen the retainer clip screws (1a), and disengage the brake lines (1b).

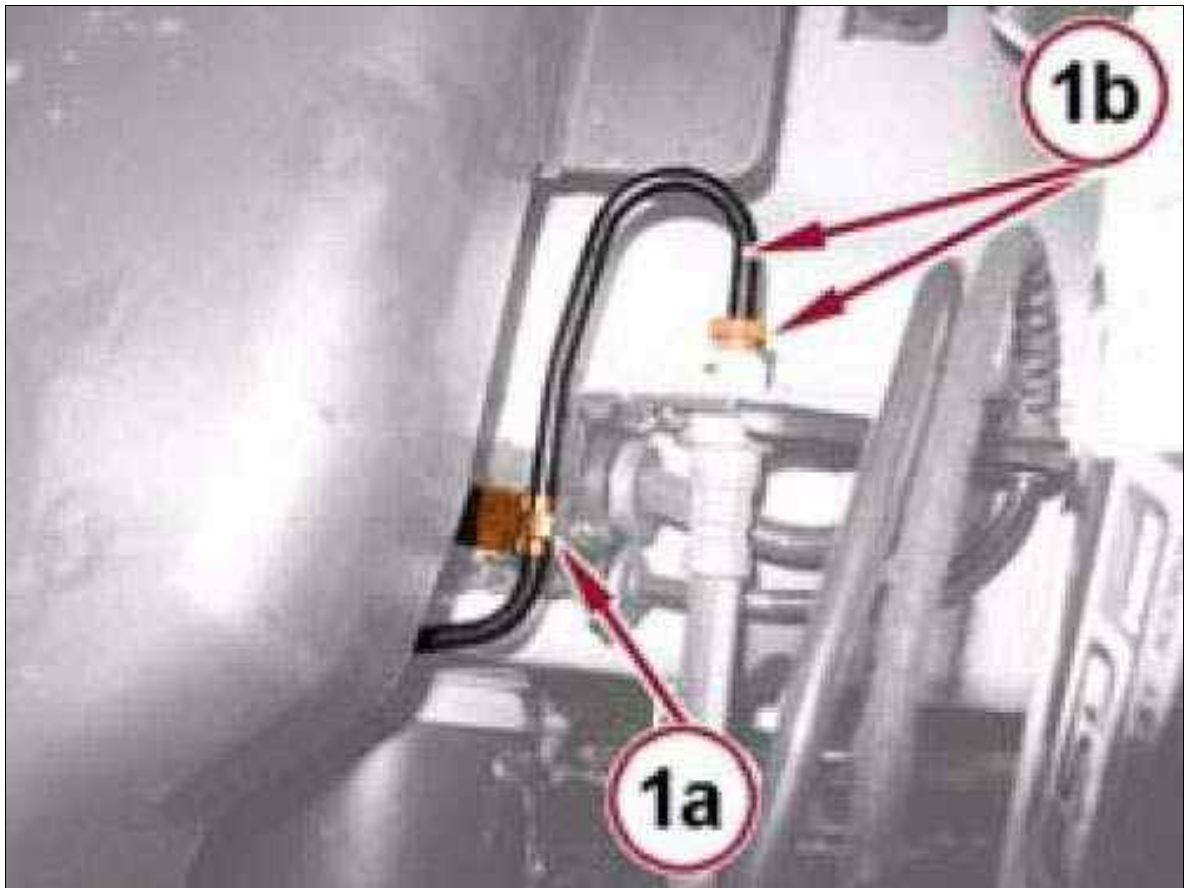
Fig 7: Brake Line Clips On Fuel Tank



Courtesy of CHRYSLER GROUP, LLC

9. Disengage the brake lines from the retainer clips (1) on the fuel tank.

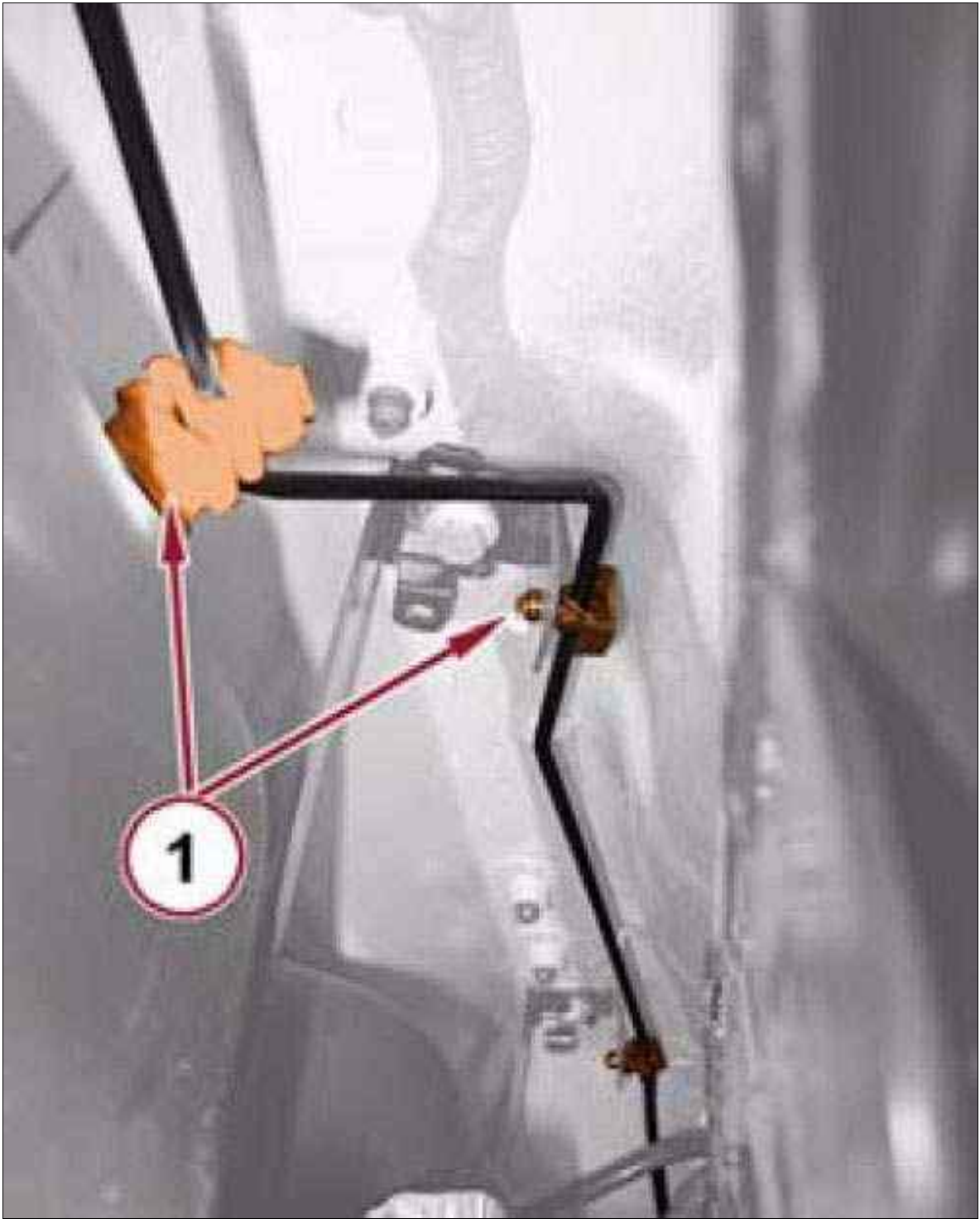
Fig 8: Brake Line To Brake Hose Nut & Spring



Courtesy of CHRYSLER GROUP, LLC

10. Disengage the spring (1a), loosen and remove the brake line to brake hose nut (1b).

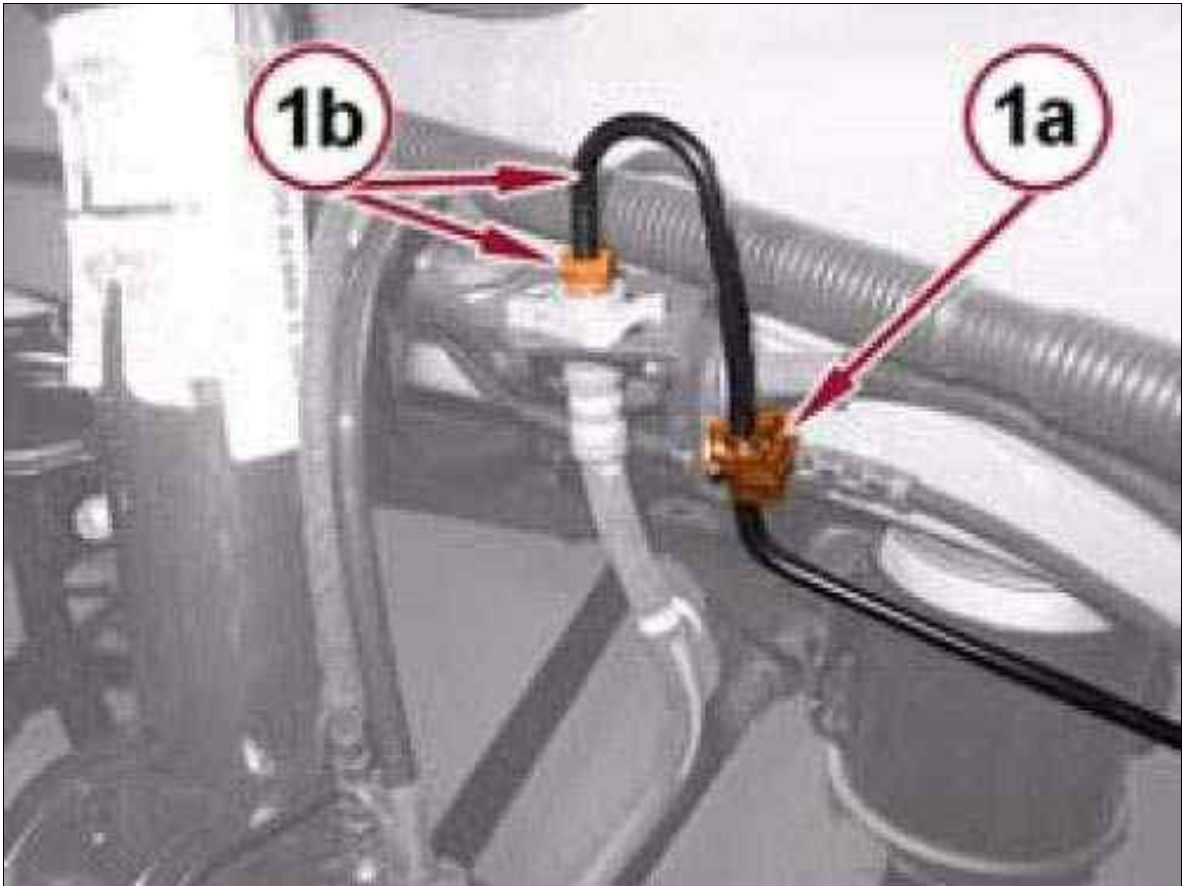
Fig 9: Brake Line Retaining Clips



Courtesy of CHRYSLER GROUP, LLC

11. Disengage the brake lines from the retaining clips (1).

Fig 10: Brake Line To Brake Hose Nut & Clip

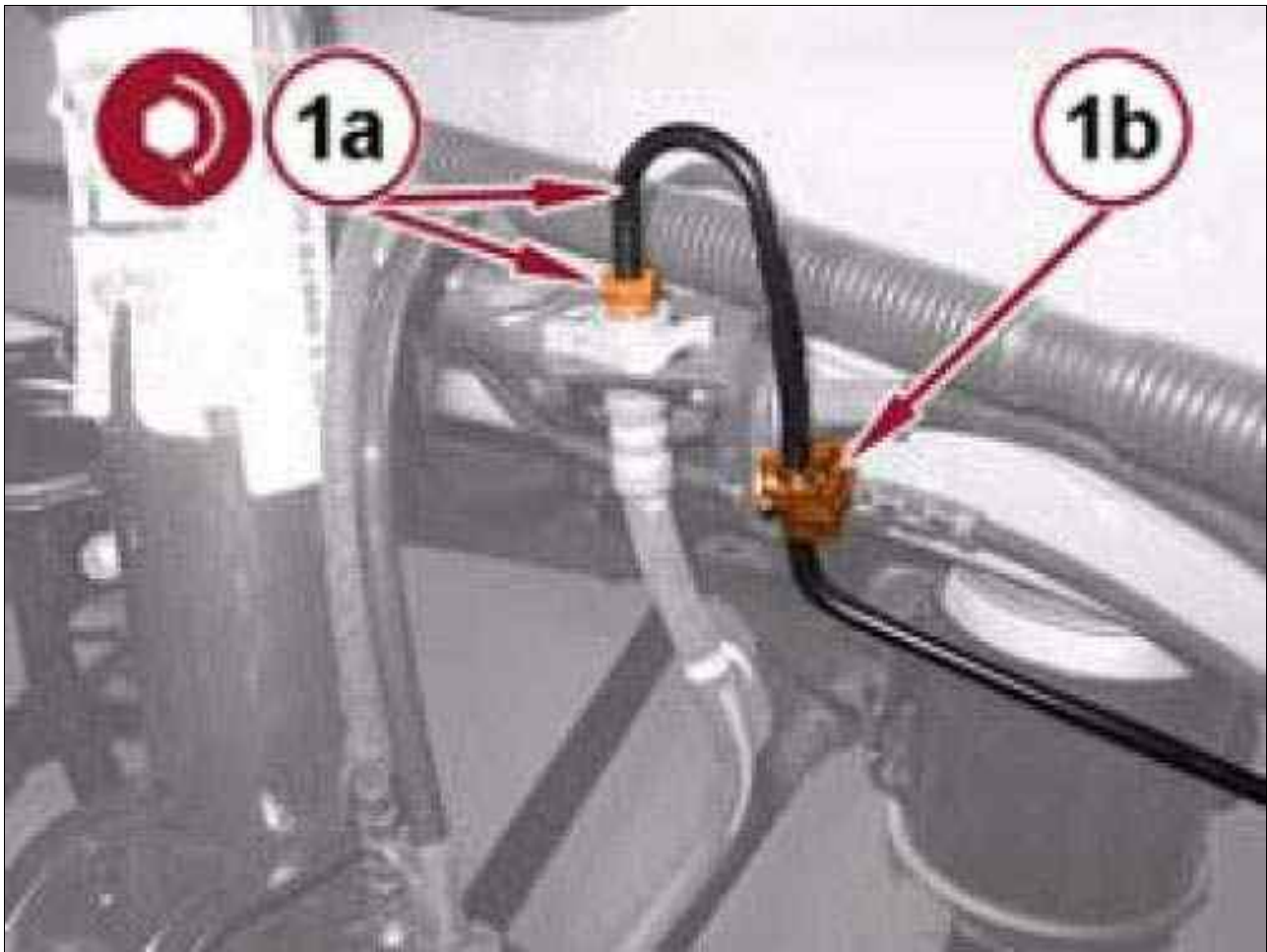


Courtesy of CHRYSLER GROUP, LLC

12. Open the clip (1a), loosen and remove the brake line to brake hose nut (1b).

**HYDRAULIC/MECHANICAL > TUBES AND HOSES, BRAKE > REMOVAL AND
INSTALLATION > BOTH REAR BRAKE TUBES > INSTALLATION - BOTH REAR
BRAKE TUBES**

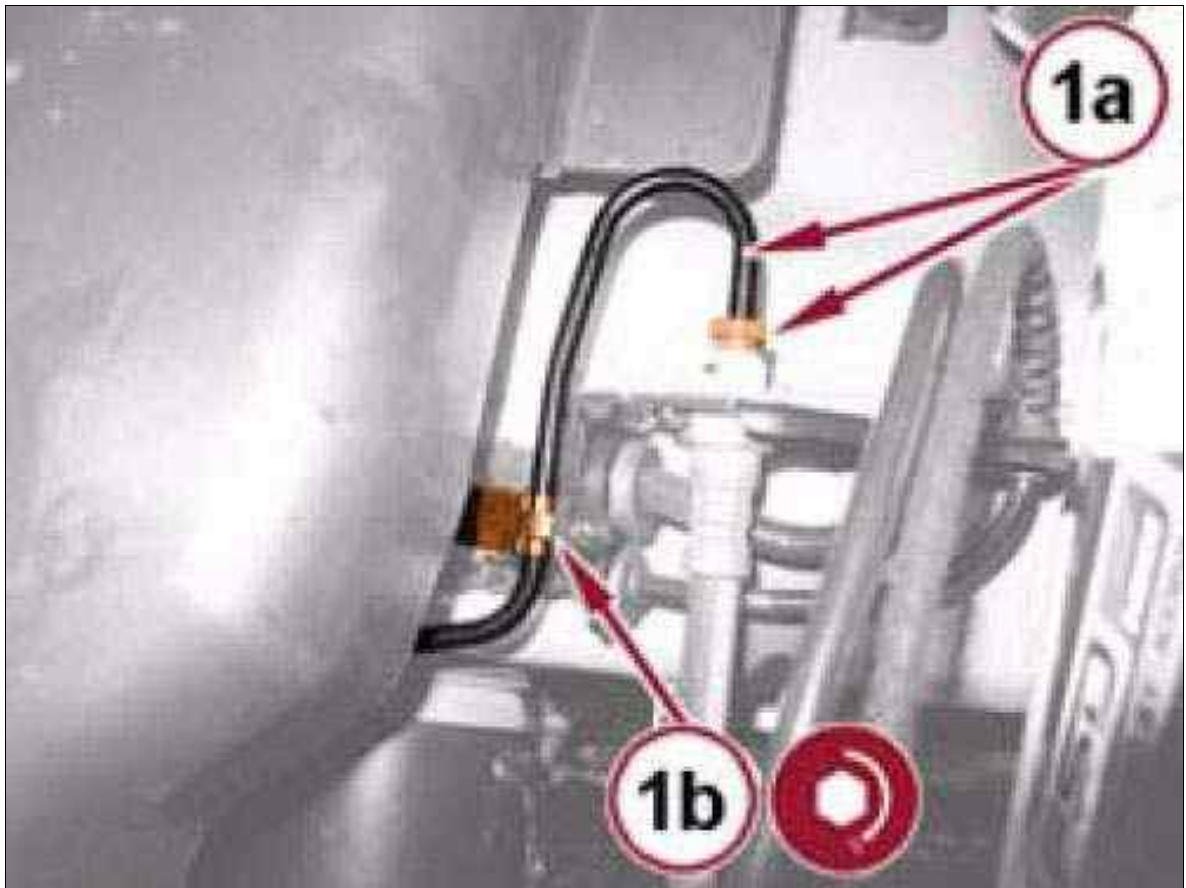
Fig 1: Brake Line To Brake Hose Nut & Clip



Courtesy of CHRYSLER GROUP, LLC

1. Position the right rear brake line in the vehicle, tighten the brake line to brake hose nut (1a) to the proper specification and engage the retainer clip (1b). Refer to TORQUE SPECIFICATIONS .
2. Engage all the right rear brake line retainer clips.

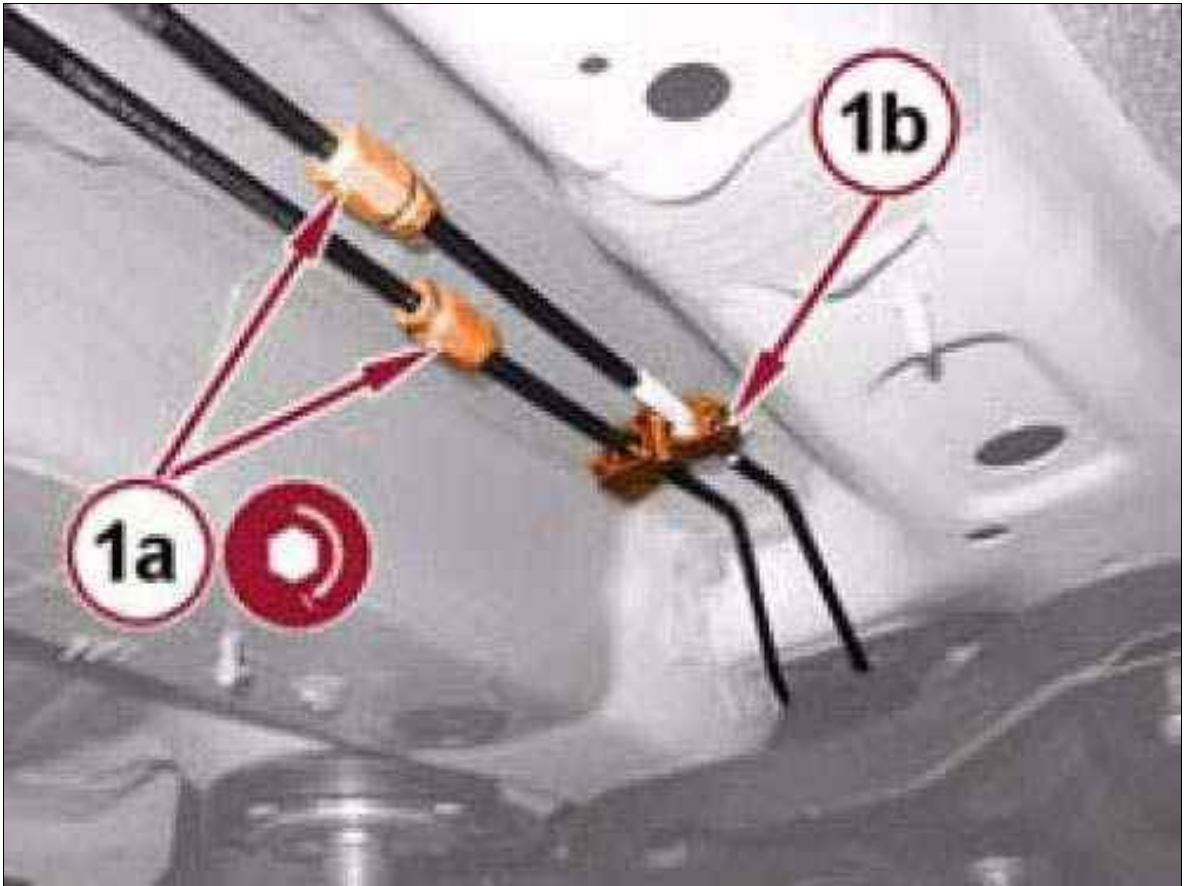
Fig 2: Brake Line To Brake Hose Nut & Spring



Courtesy of CHRYSLER GROUP, LLC

3. Position the left rear brake line in the vehicle, tighten the brake line to brake hose nut (1a) to the proper specification and engage the retainer clip (1b). Refer to TORQUE SPECIFICATIONS .
4. Engage all the left rear brake line retainer clips.

Fig 3: Brake Line Fittings & Clip



Courtesy of CHRYSLER GROUP, LLC

5. Install and tighten both brake line fittings (1a) to the proper specification and engage the retainer clips (1b). Refer to TORQUE SPECIFICATIONS .
6. If equipped, install all protection shields.
7. Install the tire and wheel assembly. Refer to REMOVAL AND INSTALLATION .
8. Remove the support and lower the vehicle.
9. Bleed out the braking system. Refer to STANDARD PROCEDURE .

PARKING BRAKE > DESCRIPTION AND OPERATION > DESCRIPTION AND OPERATION

Fig 1: Electric Parking Brake Switch



Courtesy of CHRYSLER GROUP, LLC

PARKING BRAKE > DESCRIPTION AND OPERATION > DESCRIPTION AND OPERATION > DESCRIPTION

The car is equipped with an electric parking brake (EPB), which ensures the best use and performance compared to a manually operated.

The electric parking brake is equipped with a:

- Switch, on the floor console
- Actuator, on each rear caliper
- Electric control module

PARKING BRAKE > DESCRIPTION AND OPERATION > DESCRIPTION AND OPERATION > OPERATION

- The system uses the switch on the central tunnel and two electromechanical actuators, each installed on a rear brake caliper.

- If the vehicle is in motion, pull up and hold the button to engage the parking brake for any eventuality. The system will operate by increasing the hydraulic pressure.
- If the vehicle is stationary, it is only necessary to pull the button upwards once to engage the parking brake. To release the parking brake, press the brake pedal and press the parking brake button downwards.
- The Drive Away Release function automatically releases the electric parking brake if the seat belt is fastened, a gear is engaged and the accelerator is pressed in order to move the vehicle.
- The Safe Hold function, when the vehicle speed is lower than 5 km/h, but not in Parking, and the driver detection algorithm determines that the user is about to exit the vehicle, causes the EPB to apply the parking brake to stop the vehicle safely.
- The Auto Apply function, when the vehicle speed is lower than approximately 3 km/h and the automatic transmission is set to parking, causes the EPM to apply the parking brake automatically. With manual gearbox, the parking brake will engage automatically when the ignition switch is set to OFF.
- The status of the EPB functions can be configured in the dedicated Uconnect system menu.

PARKING BRAKE > DIAGNOSIS AND TESTING > HANDBRAKE INEFFECTIVE



NOTE:

Using the handbrake, do not block the rear wheels.

STEP	WHAT TO DO	THE RESULTS OF THE CHECKS		
1	CHECK WITH DIAGNOSTIC TOOL	EVERYTHING OK	PROBLEMS ENCOUNTERED	INTERVENTION
	Connect the diagnosis tool and check on the BSM/EPB unit running errors: • the absence of anomalies;	Continue to step 2	1. Failure to communicate with the BSM/EPB	1. Restore the correct feeding of the BSM/EPB
	in parameters: • plausibility of all parameters		2. The presence of errors in BSM/EPB unit	2. Continue as directed by the diagnosis tool
2	CHECK WITH	EVERYTHING OK	PROBLEMS	INTERVENTION

	DIAGNOSTIC TOOL		ENCOUNTERED	
	With diagnostic tool connected, run under actuators diagnosis of rear brake calipers	Continue to step 4	Actuators do not turn on	Continue to step 3

3	CHECK WITH DIAGNOSTIC TOOL	EVERYTHING OK	PROBLEMS ENCOUNTERED	INTERVENTION
	Check the continuity/isolation of electrical connections between BSM/EPB unit and actuators rear calipers	Continue to step 4	1. Faulty electrical connections 2. Electrical connections are correct: actuator anomaly	1. Restore electrical connections 2. Replace rear brake calipers actuators. Refer to ACTUATOR, ELECTRIC PARK BRAKE, REMOVAL AND INSTALLATION .

4	CHECK WITH DIAGNOSTIC TOOL	EVERYTHING OK	PROBLEMS ENCOUNTERED	INTERVENTION
	Verify the correct operation of the static and dynamic brake	End of diagnosis	Problem persists	Replace ABS controller. Refer to INTEGRATED CONTROL UNIT (ICU), REMOVAL AND INSTALLATION .

PARKING BRAKE > DIAGNOSIS AND TESTING > HANDBRAKE INEFFECTIVE > HANDBRAKE BLOCK



NOTE:

In the case of manual operation of the system, if required, via button, a change of status (off/insert) the system indicates any anomaly (inability to change of State) with acoustic signalling (buzzer).

The handbrake is stuck on;

The anomaly is normally signalled by indicator light malfunction parking brake;

STEP	WHAT TO DO	THE RESULTS OF THE CHECKS
------	------------	---------------------------

1	CHECK WITH DIAGNOSTIC TOOL	EVERYTHING OK	PROBLEMS ENCOUNTERED	INTERVENTION
	Connect the diagnosis tool and check on CAN network information: • absence of inactive control; • absence of control in error; • absence of control unit CAN dial in error	Continue to step 2	1. Error Control 2. Dial Controllers CAN fail	1. Continue as indicated by the diagnostic tool 2. Continue as indicated by the diagnostic tool

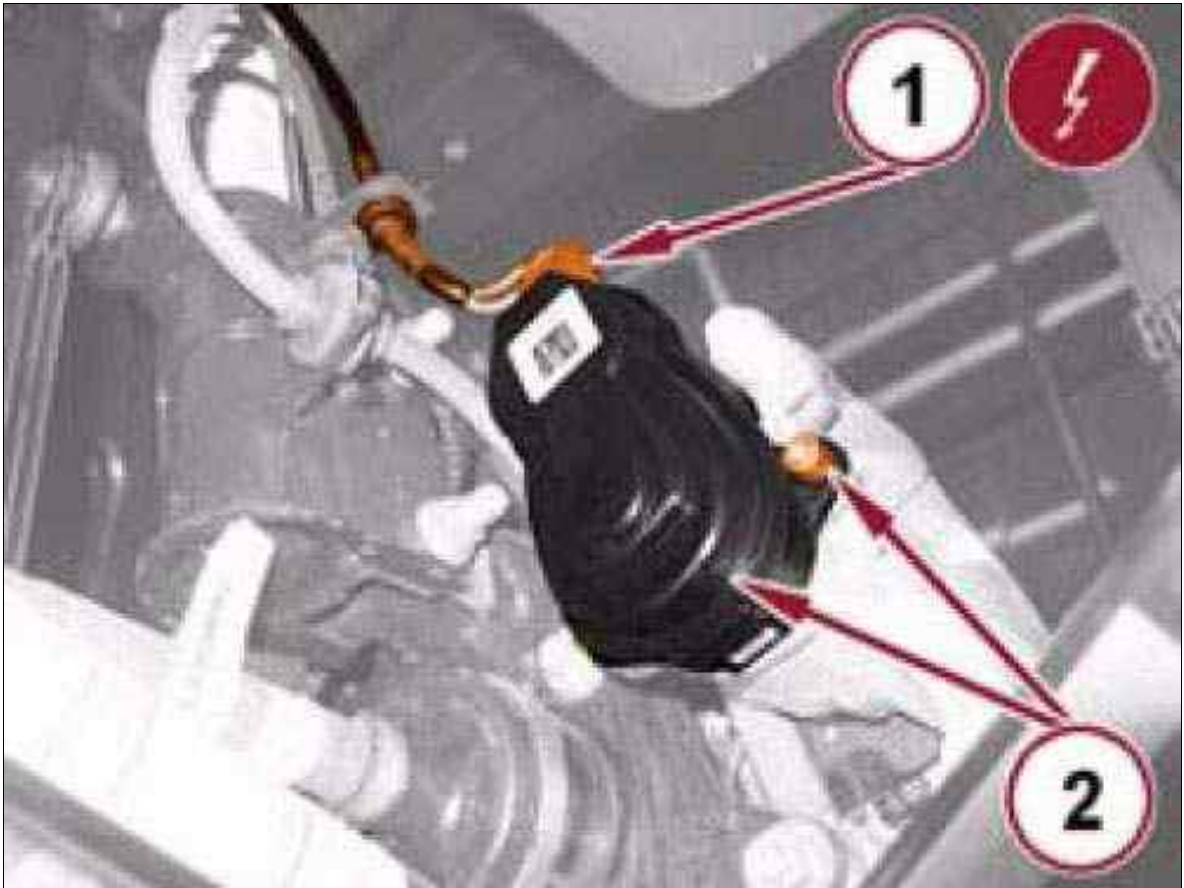
2	CHECK WITH DIAGNOSTIC TOOL	EVERYTHING OK	PROBLEMS ENCOUNTERED	INTERVENTION
	Connect the diagnosis tool and check on the BSM/EPB unit in errors: • the absence of anomalies	End of diagnosis	1. The presence of errors 2. Handbrake switch error	1. Continue as indicated by the diagnostic tool 2. Continue to step 3

3	CHECK ELECTRICAL SYSTEM	EVERYTHING OK	PROBLEMS ENCOUNTERED	INTERVENTION
	Verify the functionality of the handbrake and switch the wiring insulation/continuity between circuit-breaker and BSM/EPB unit	End of diagnosis	1. Switch malfunction 2. Broken links/non-insulated	1. Replace switch. Refer to SWITCH, ELECTRIC PARK BRAKE, REMOVAL AND INSTALLATION . 2. Restore electrical connections

PARKING BRAKE > ACTUATOR, ELECTRIC PARK BRAKE > REMOVAL AND INSTALLATION > REMOVAL AND INSTALLATION > REMOVAL

1. Disconnect and isolate the negative battery cable.

Fig 1: Electric Park Brake Actuator, Connector & Screws



Courtesy of CHRYSLER GROUP, LLC

2. Raise and support the vehicle. Refer to HOISTING, STANDARD PROCEDURE .
3. Disconnect the Electric Park Brake (EPB) actuator electrical connector (1).
4. Remove the EPB actuator screws (2), and remove the EPB actuator from the caliper.

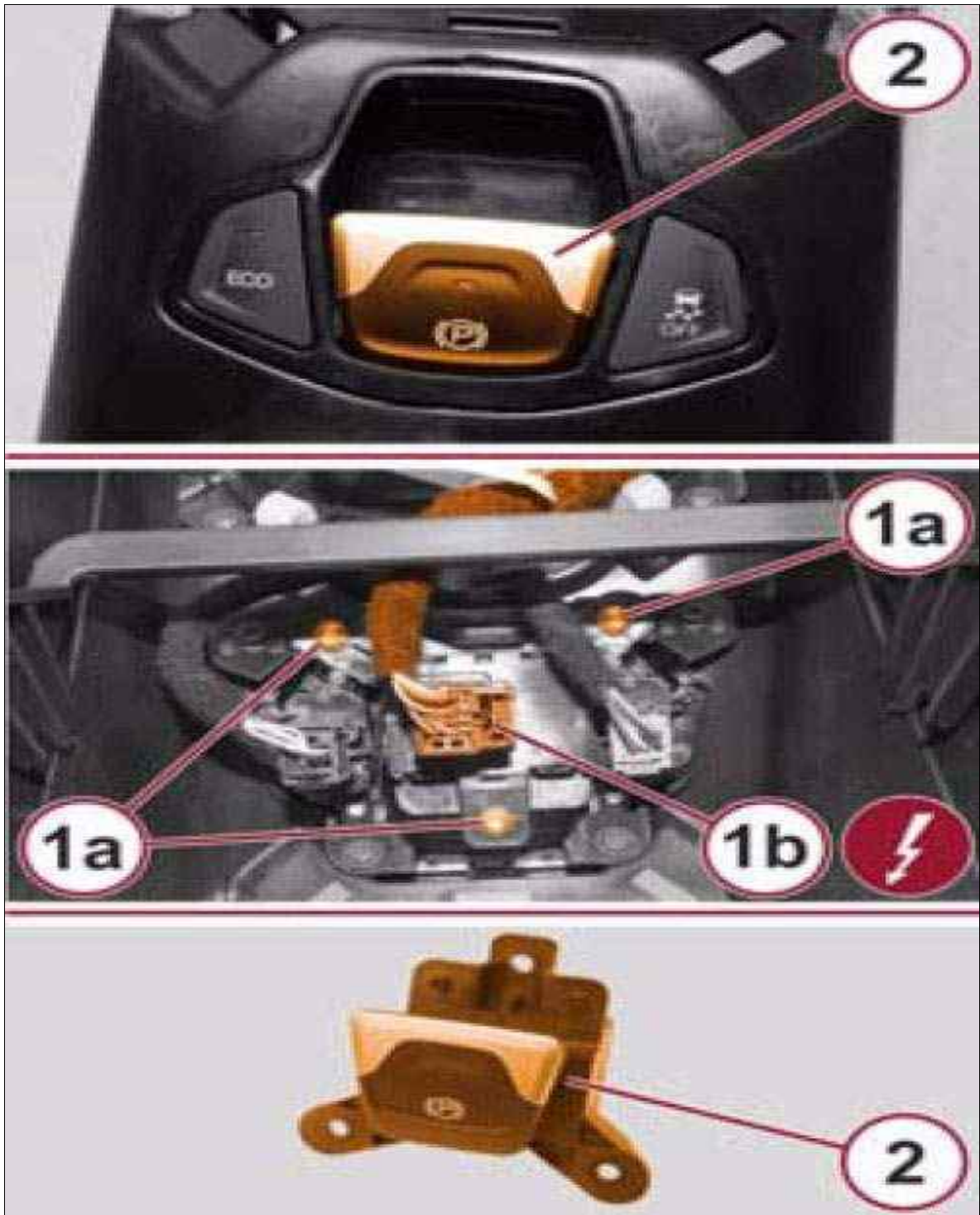
PARKING BRAKE > ACTUATOR, ELECTRIC PARK BRAKE > REMOVAL AND INSTALLATION > REMOVAL AND INSTALLATION > INSTALLATION

1. Position the Electric Park Brake (EPB) actuator to the caliper and tighten the screws.
2. Connect the EPB actuator electrical connector.
3. Remove the support and lower the vehicle.
4. Connect the negative battery cable.

PARKING BRAKE > SWITCH, ELECTRIC PARK BRAKE > REMOVAL AND INSTALLATION > REMOVAL AND INSTALLATION > REMOVAL

1. Disconnect and isolate the negative battery cable.
2. Remove the floor console. Refer to CONSOLE, FLOOR, REMOVAL AND INSTALLATION .

Fig 1: Electric Park Brake Switch, Connector & Screws



Courtesy of CHRYSLER GROUP, LLC

3. Remove the screws (1a) and disconnect the Electric Park Brake (EPB) switch electrical connector (1b).
4. Remove the EPB switch from the floor console.

PARKING BRAKE > SWITCH, ELECTRIC PARK BRAKE > REMOVAL AND INSTALLATION > REMOVAL AND INSTALLATION > INSTALLATION

1. Position the Electric Park Brake (EPB) switch to the floor console, and tighten the EPB to floor console screws.
2. Connect the EPB switch electrical connector.
3. Install the floor console. Refer to CONSOLE, FLOOR, REMOVAL AND INSTALLATION .
4. Connect the negative battery cable.