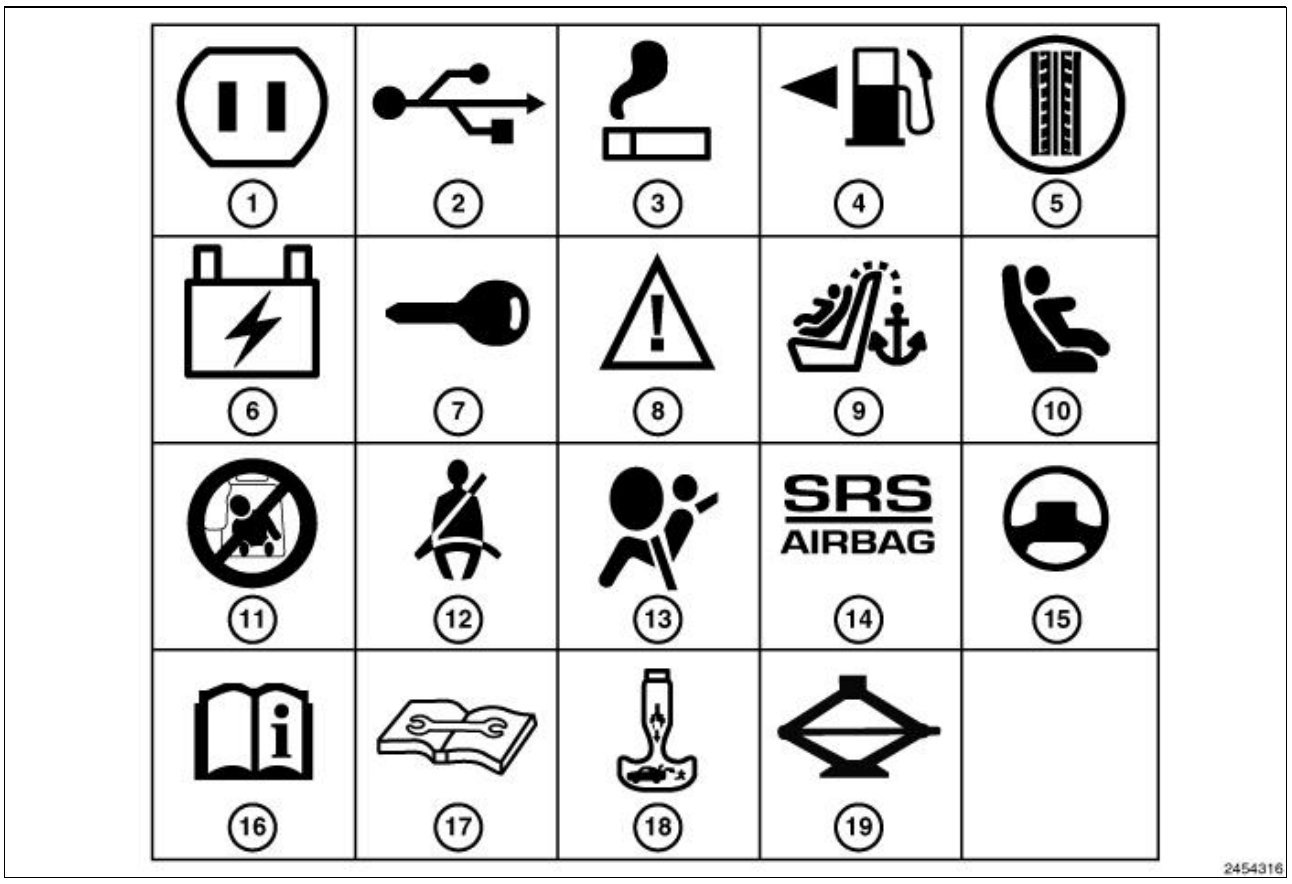
Service Manual: VEHICLE DATA

VEHICLE INFORMATION > INTERNATIONAL VEHICLE CONTROL AND DISPLAY SYMBOLS > DESCRIPTION > DESCRIPTION

FCA US LLC uses international symbols to identify various systems on the vehicle.

The graphic symbols illustrated are used to identify various instrument controls, vehicle controls and service information references. The symbols correspond to the controls and displays that are located on the instrument panel and throughout the vehicle.

Fig 1: Information Symbols

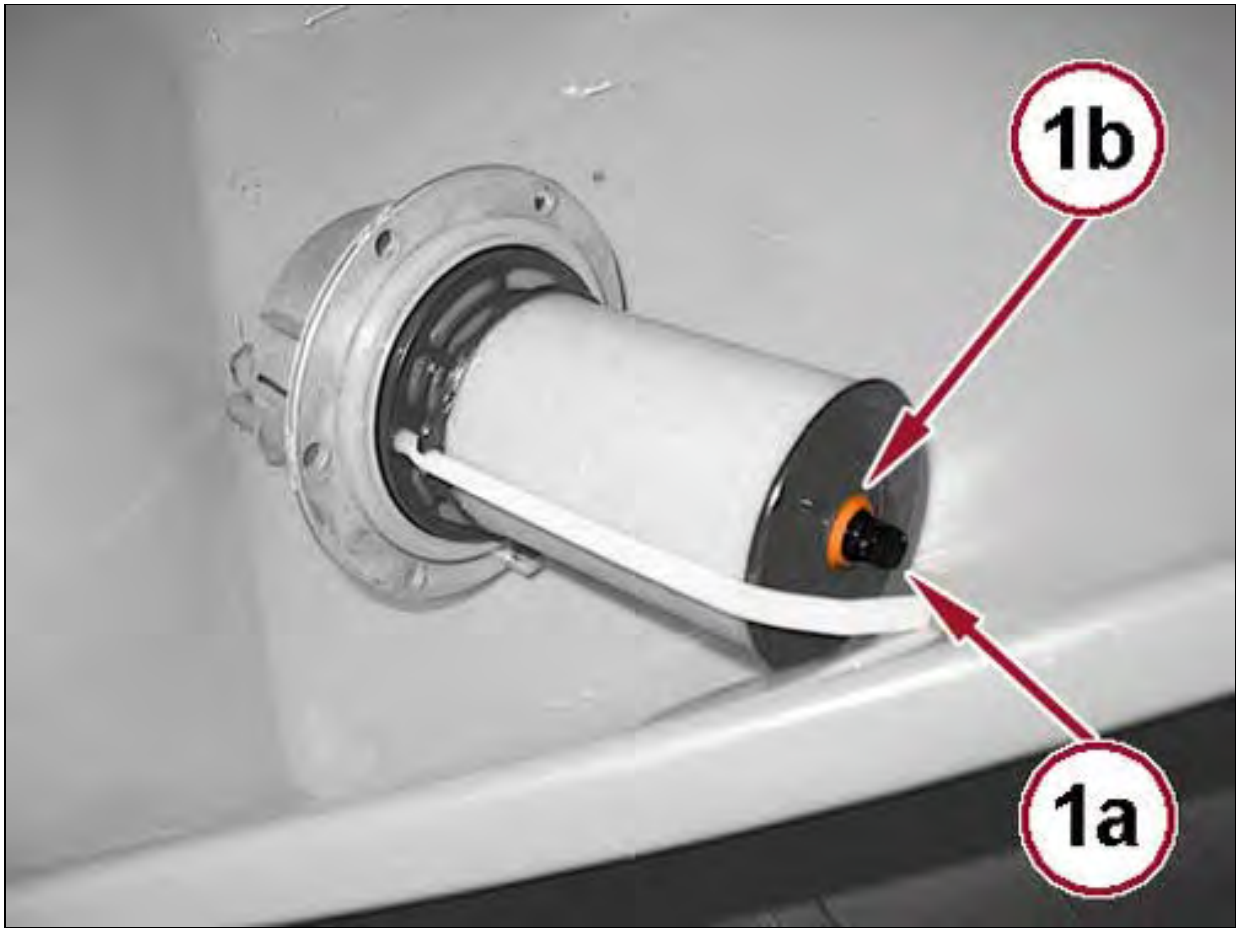


Courtesy of CHRYSLER GROUP, LLC

INTERNATIONAL INFORMATION SYMBOL IDENTIFICATION

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
1	115-Volt Power Inverter	11	Side Airbag
2	USB Connector	12	Seat Belt
3	Lighter	13	Airbag
4	Fuel Fill Side	14	Supplemental Restraint System

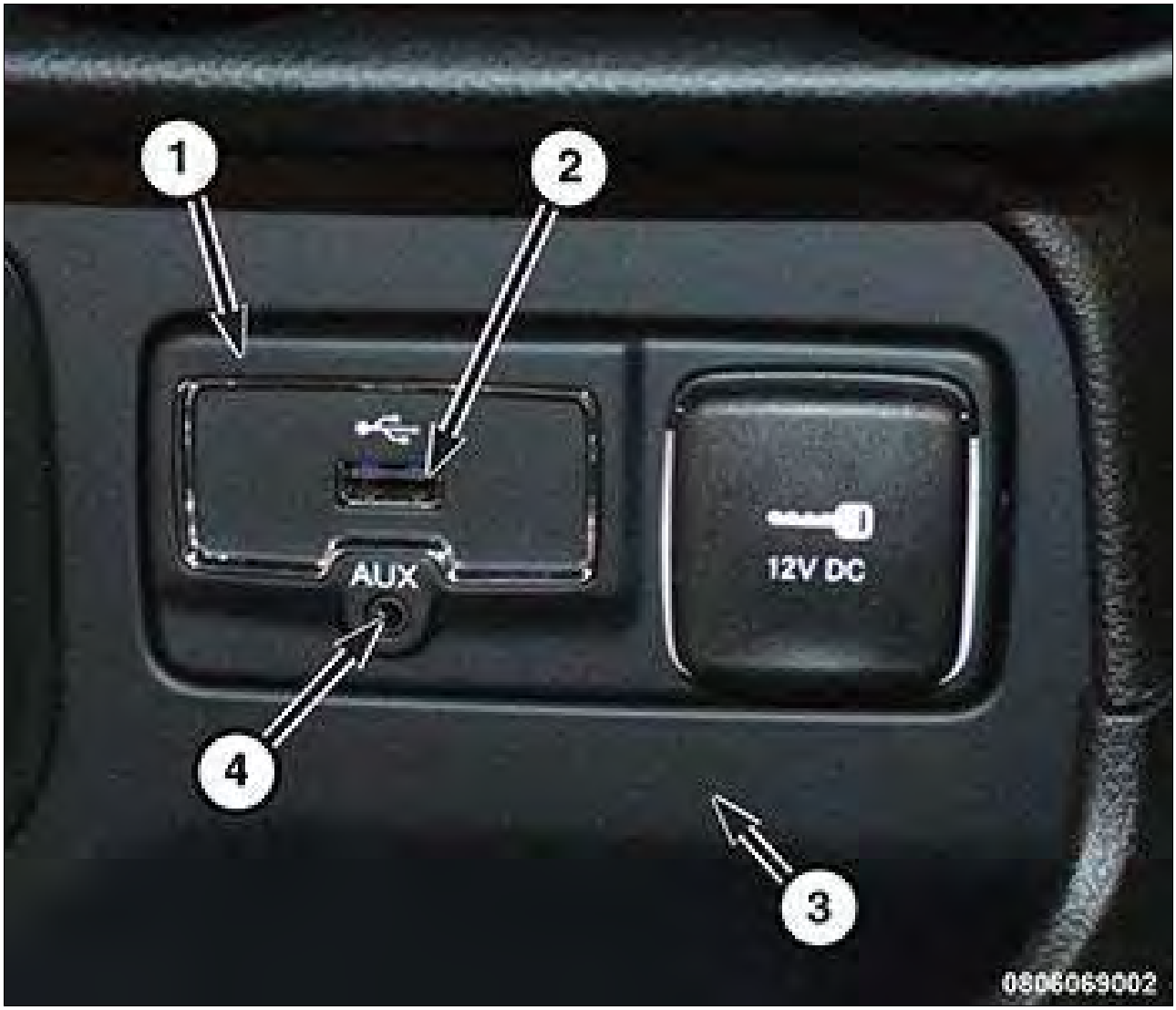
Fig 8: Water Presence Sensor & Seal Ring



Courtesy of CHRYSLER GROUP, LLC

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

Fig 1: Media Hub



Courtesy of CHRYSLER GROUP, LLC

The possibility of connecting devices for audio playback on the car can be performed by means of:

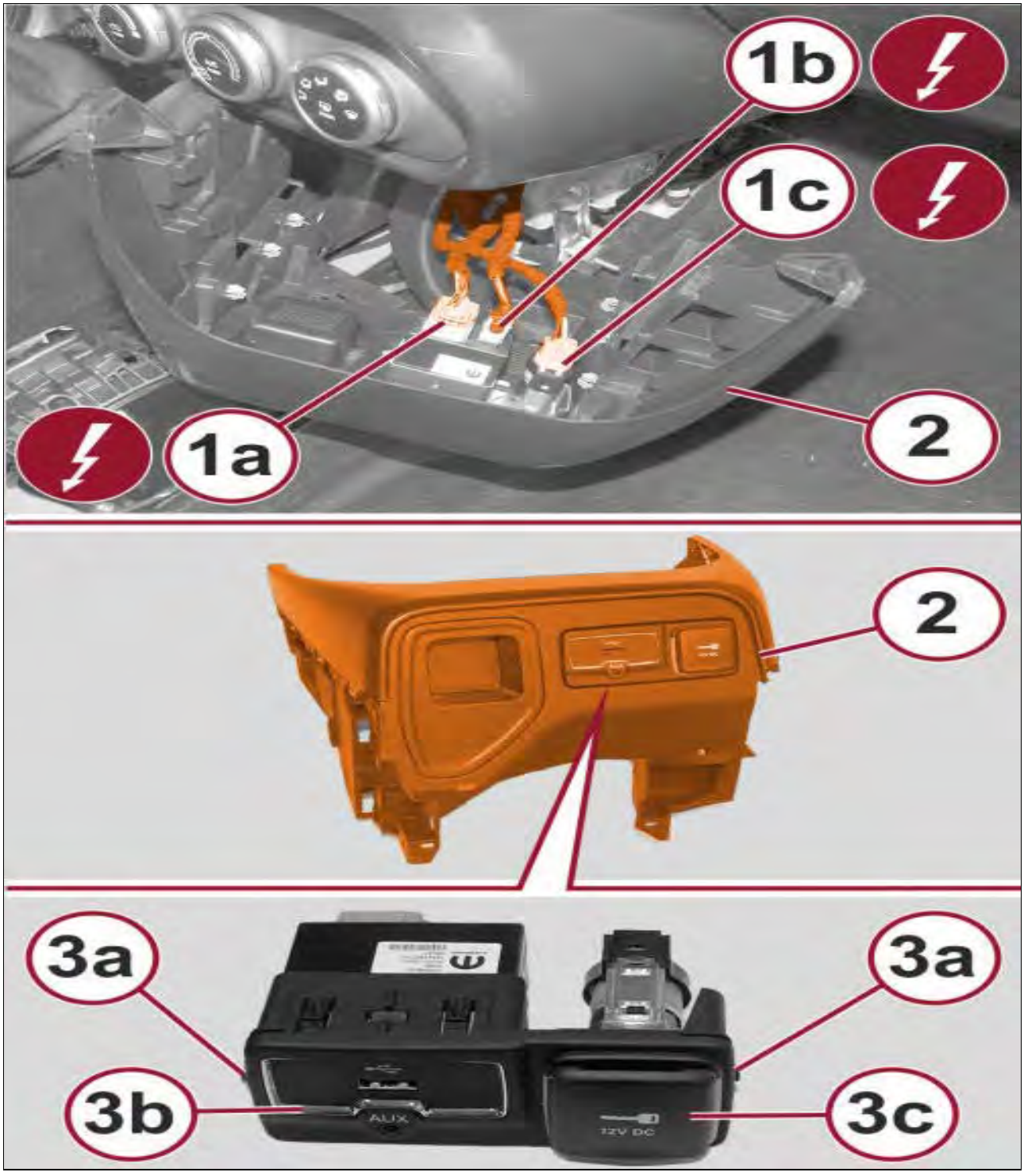
- a Universal Serial Bus (USB) port (1.5V) in the center console (standard)
- a USB in the center console but available only with VP2 NAV and VP4
- auxiliary power outlets (APO) placed in front and rear load areas

The media hub (1) is located in the forward surface of the center console (3). The media hub is a centralized connection point in the vehicle that contains:

- a 3.5 millimeter auxiliary audio input jack (4)
- a powered USB port (2)

> *NOTE:*
>
> *The powered USB port provides 5 volts at 1.5 amperes to charge the battery of a*

Fig 1: Remove/Install Media Hub

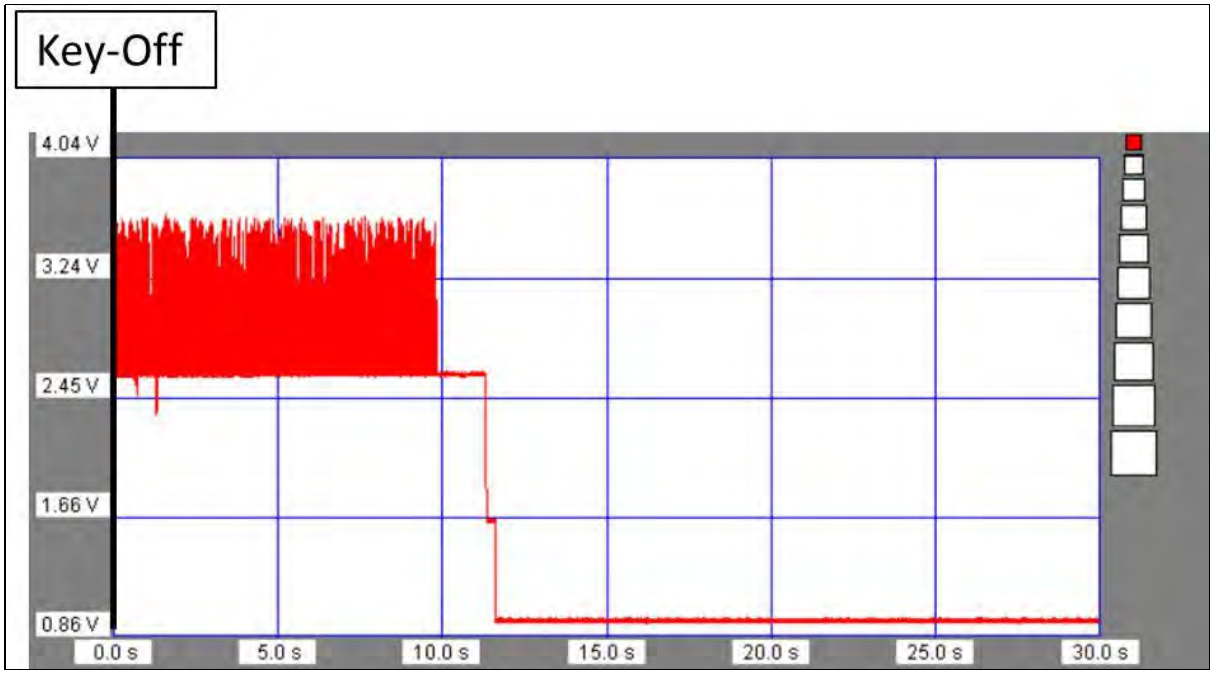


Courtesy of CHRYSLER GROUP, LLC

1. 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.

> *NOTE:*

Fig 9: CAN System Waveform - Key Off



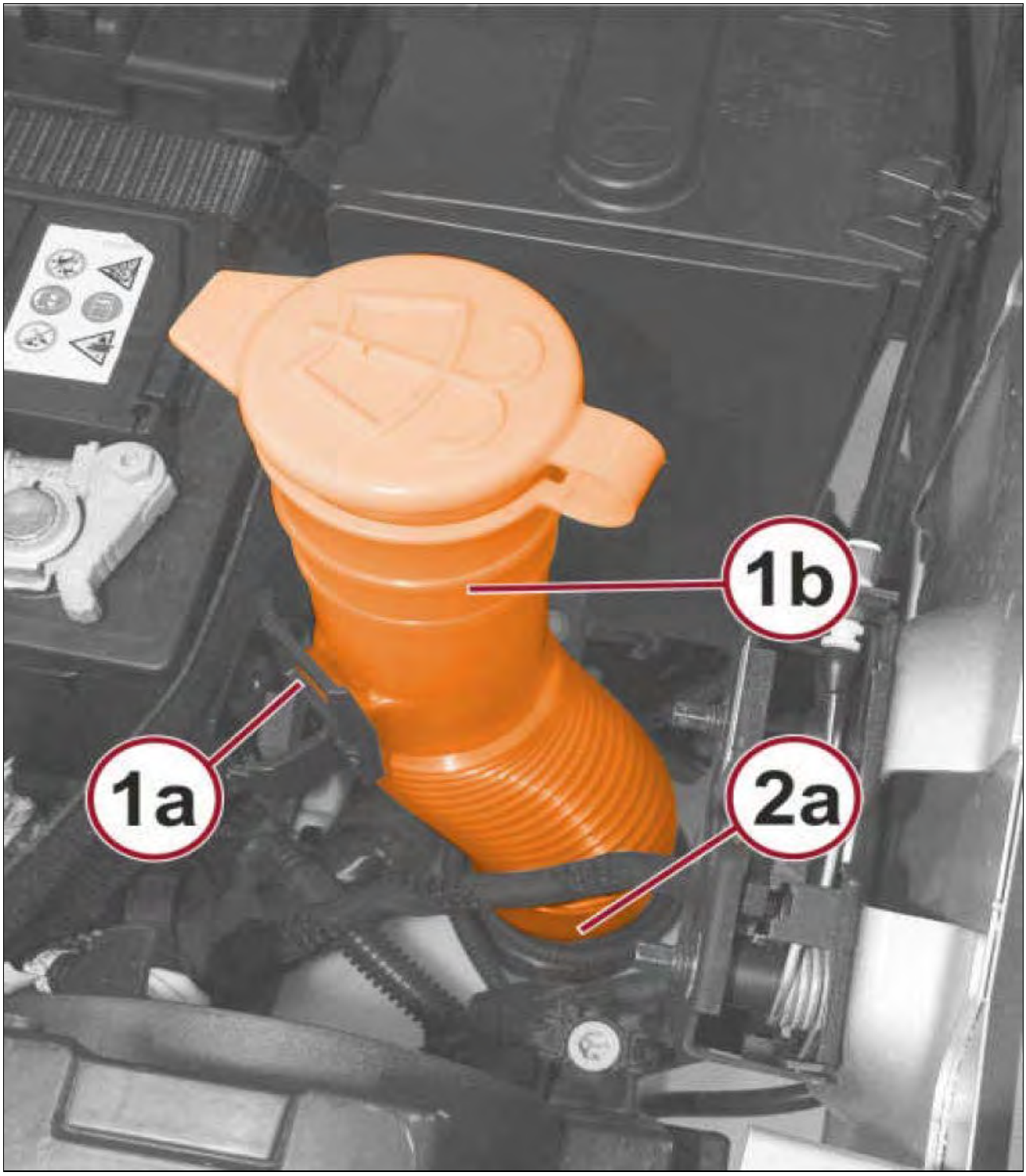
Courtesy of CHRYSLER GROUP, LLC

The CAN-C1, CAN-C2 and CAN-BH enter Sleep mode approximately 10-12 seconds after the key is turned to OFF. The networks "wake up" with the key at OFF when one of the vehicle's doors passes from "Closed" status to "Open" status.

The ACC module is connected to the Half module via a dedicated CAN-C line. The reason behind the dedicated data transmission line between the two modules is the continuous exchange of information between them during operation of the cruise control and of the FCW function.

Electrical continuity of the networks

Fig 1: Filler Neck, Base & Latch Tabs

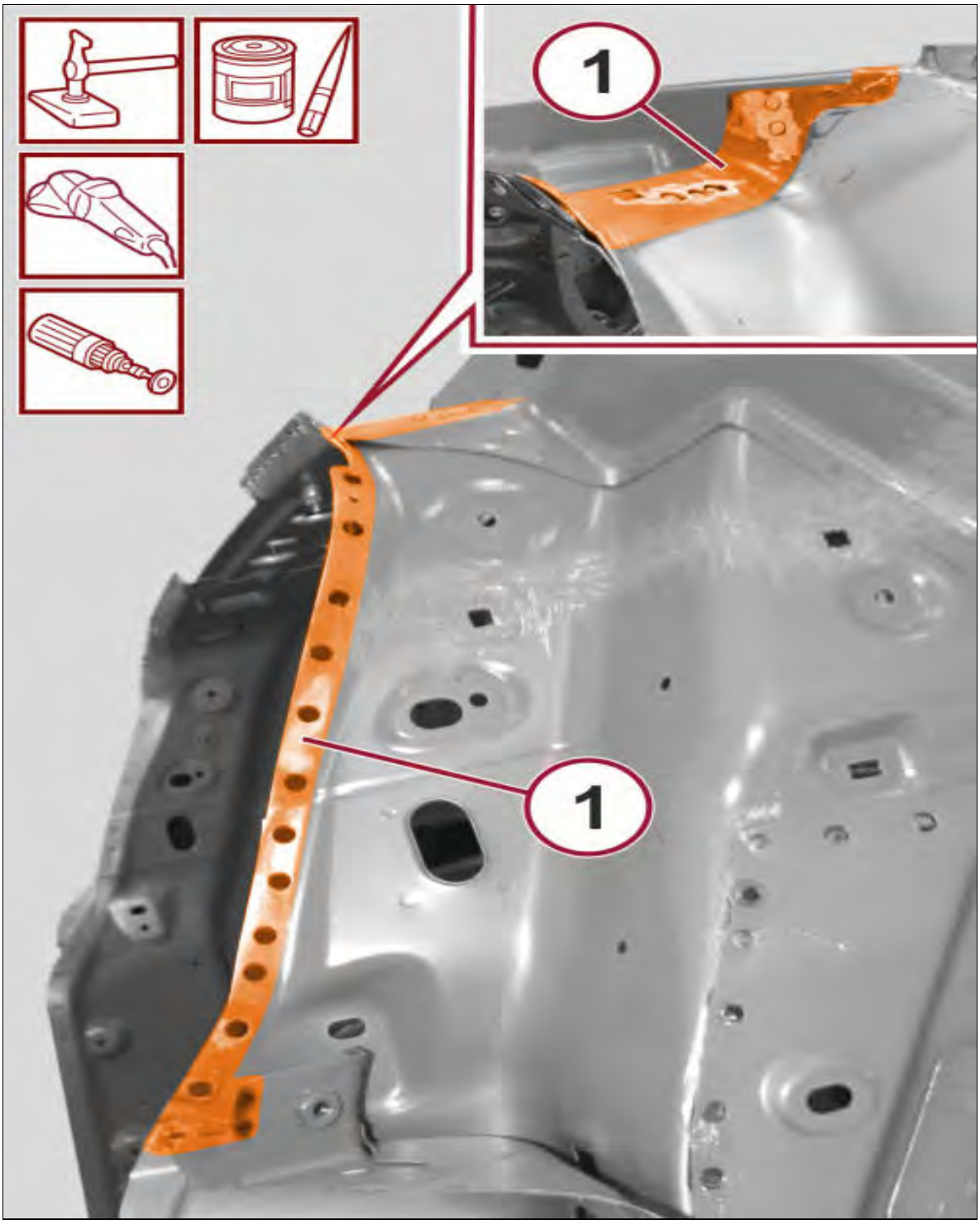


Courtesy of CHRYSLER GROUP, LLC

1. Be certain that the two O-ring seals on the base of the filler neck are properly positioned and in good condition.
2. Position the filler neck (1b), retainer and filler cap into the left front corner of the engine compartment as a unit.
3. Align the base of the filler neck (2a) with the filler neck fitting on the top of the reservoir.

5. With the use of a rotary brush, remove the paint and gain access to the spot welds.
6. With the use of a spot weld cutting tool, release the spot welds (1) shown in the illustration.
7. With the use of a drill, release the spot welds (2) shown in the illustration.
8. With the use of a chisel and hammer, remove the spot welds previously released.
9. Remove the liftgate opening trough and cut-outs from the vehicle.

Fig 2: Liftgate Opening Trough Removal (2 Of 2)



Courtesy of CHRYSLER GROUP, LLC

hydroxide is formed in the presence of moisture) or combustible compounds. An airbag inflator unit may also contain a gas canister pressurized to over 17.24 kPa (2500 psi). Failure to follow these instructions may result in possible serious or fatal injury.

WARNING:

To avoid serious or fatal injury when handling a seat belt tensioner retractor. Exercise proper care to keep fingers out from under the retractor cover and away from the seat belt webbing where it exits from the retractor cover. Failure to follow these instructions may result in possible serious or fatal injury.

WARNING:

To avoid serious or fatal injury, replace all Supplemental Restraint System (SRS) components only with parts specified in the Mopar® Parts Catalog. Substitute parts may appear interchangeable, but internal differences may result in inferior occupant protection.

WARNING:

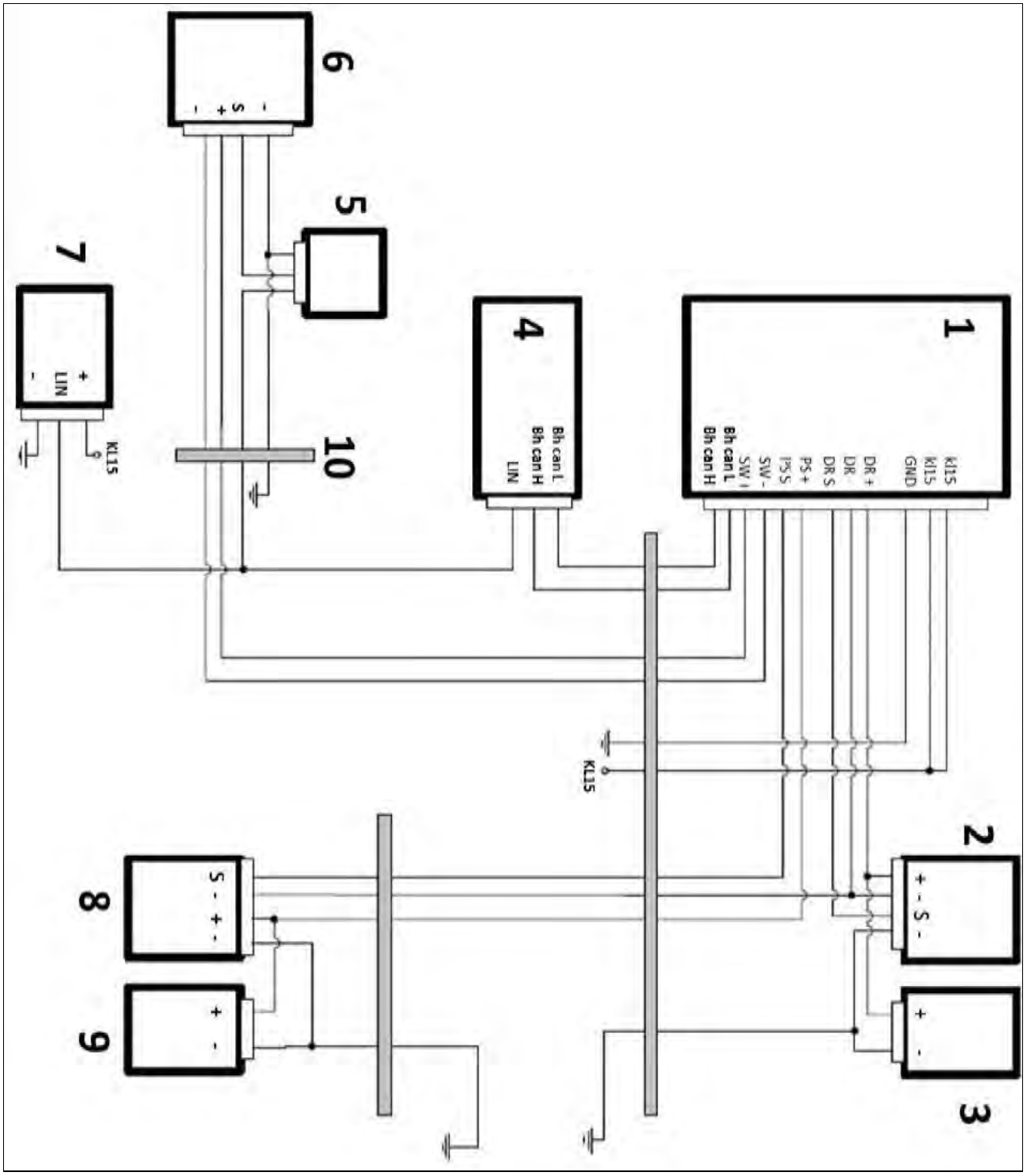
To avoid serious or fatal injury, the fasteners, screws, and bolts originally used for the Supplemental Restraint System (SRS) components must never be replaced with any substitutes. These fasteners have special coatings and are specifically designed for the SRS. Anytime a new fastener is needed, replace it with the correct fasteners provided in the service package or specified in the Mopar® Parts Catalog.

WARNING:

To avoid serious or fatal injury when a steering column has an airbag unit attached, never place the column on the floor or any other surface with the steering wheel or airbag unit face down. Failure to follow these instructions may result in possible serious or fatal injury.

FRAME > CROSSMEMBER, FRONT SUSPENSION > REMOVAL AND INSTALLATION > 2.0L TURBO DIESEL 120HP/140HP > REMOVAL

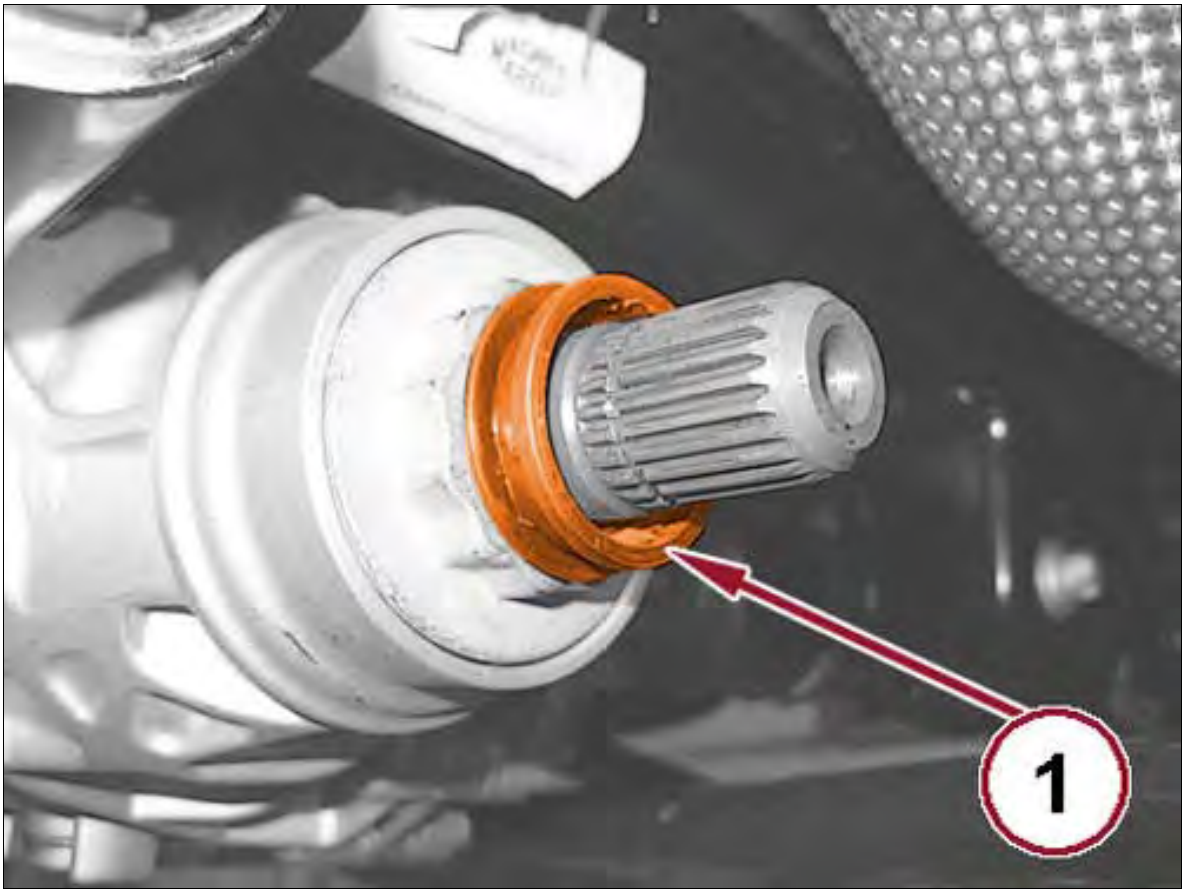
Fig 1: Heated Systems Circuit Diagram



Courtesy of CHRYSLER GROUP, LLC

1. CSWM
2. Cushion heater
3. Backrest heater
4. BCM

Fig 3: Dust Seal



Courtesy of CHRYSLER GROUP, LLC

5. Install a new dust seal (1) on the pinion shaft of the RDU.

2. Gasoline contaminated with diesel fuel
3. Restricted air intake
4. Excessive idling

10. **Contaminated Cooling Systems**

    Corrosion, rust, scale, sediment or other formations in the water jacket and radiator will prevent a cooling system from extracting heat efficiently. This is likely to cause cylinder distortion thus leading to higher oil consumption.

11. **Oil Viscosity**

    The use of oil with a viscosity that is too light may result in high oil consumption. Refer to the vehicle owner's manual for the proper oil viscosity to be used under specific driving conditions and/or ambient temperatures.

12. **Dirty Engine Oil**

    Failure to change the oil and filter at proper intervals may cause the oil to be so dirty that it will promote accumulation of sludge and varnish and restrict oil passages in the piston rings and pistons. This will increase oil consumption; dirty oil by nature is also consumed at a higher rate than clean oil.

13. **Crankcase Overfull**

    Due to an error in inserting the oil dip stick so that it does not come to a seat on its shoulder, a low reading may be obtained. Additional oil may be added to make the reading appear normal with the stick in this incorrect position which will actually make the oil level too high. If the oil level is so high that the lower ends of the connecting rods touch the oil in the oil pan excessive quantities of oil will be thrown on the cylinder walls and some of it will work its way up into the combustion chamber.

14. **Excessively High Oil Pressure**

    A faulty oil pressure relief valve may cause the oil pressure to be too high. The result will be that the engine will be flooded with an abnormally large amount of oil in a manner similar to that which occurs with worn bearings. This condition may also cause the oil filter to burst.

15. **Aftermarket Performance Chips and Modification**

    Increasing performance through the use of performance/power enhancement products to a stock or factory engine will increase the chance of excessive oil consumption.

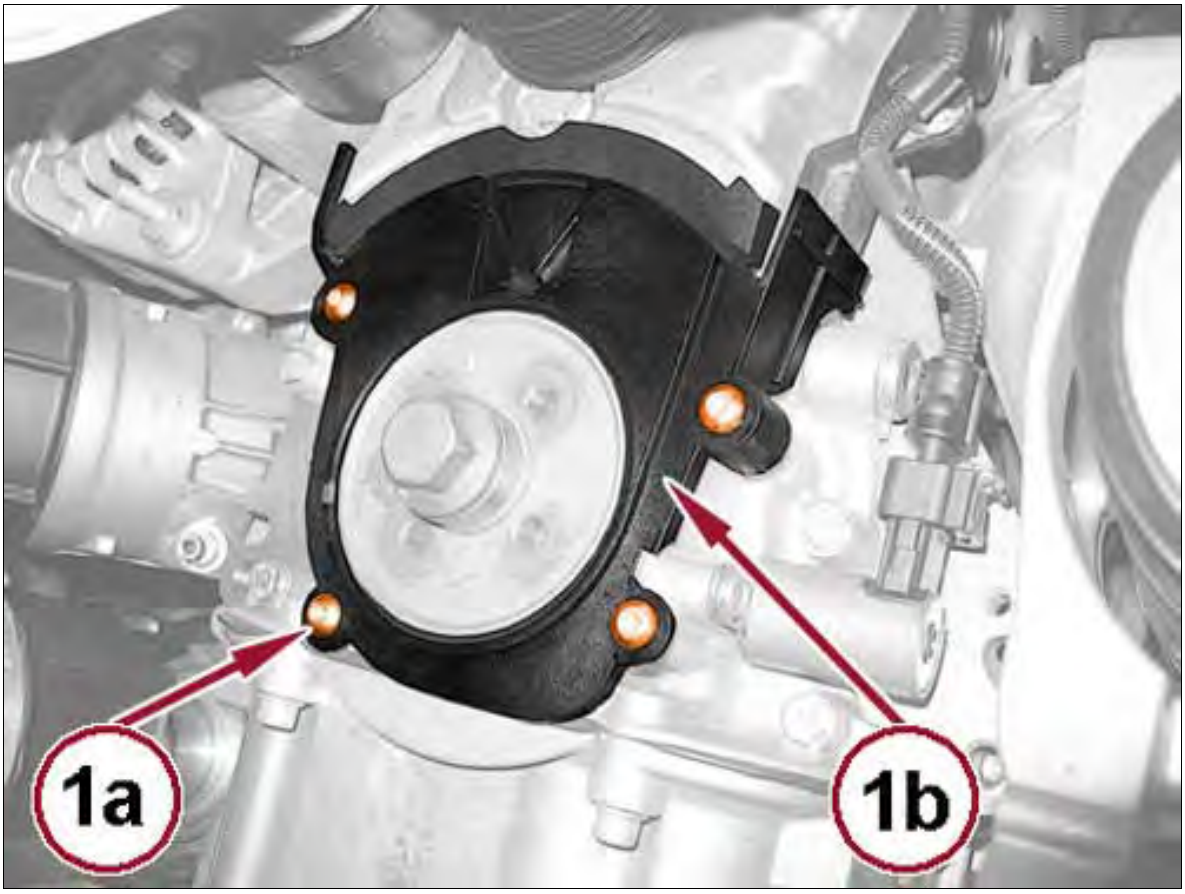
16. **Lugging Engine**

    Lugging is running the engine at a lower RPM in a condition where a higher RPM (more power/torque) should be implemented. Especially susceptible on vehicles equipped with a manual transmission. This driving habit causes more stress loading on the piston and can lead to increases in engine oil consumption.

17. **Turbocharged Engines**

    There is a possibility for PCV "push-over" due to higher crankcase pressure (as compared to naturally aspirated engines) which is normal for turbocharged engines. This condition causes varying amounts of engine oil to enter the intake manifold, charge air cooler and associated

Fig 1: Timing Belt Lower Guard & Bolts



Courtesy of CHRYSLER GROUP, LLC

9. Remove the screws (1a) and remove the timing belt lower guard (1b).

- Oil leak or excessive cam bearing wear in the cylinder head.
- Faulty lash adjuster. Check lash adjusters for "sponginess" while installed in the cylinder head and cam lobe at base circle. Depress part of rocker arm over the adjuster. Normal adjusters should feel firm when pressed quickly. When pressed very slowly, lash adjusters should collapse. Remove suspected lash adjusters, and replace. Before installation, make sure adjusters are full of oil. This can be verified by little plunger travel when lash adjuster is depressed quickly.

CYLINDER HEAD > CLEANING > CLEANING

> ⚠ *CAUTION:*
>
> *When cleaning cylinder head and cylinder block surfaces, DO NOT use a metal scraper because the surfaces could be cut or ground. Use ONLY a wooden or plastic scraper.*

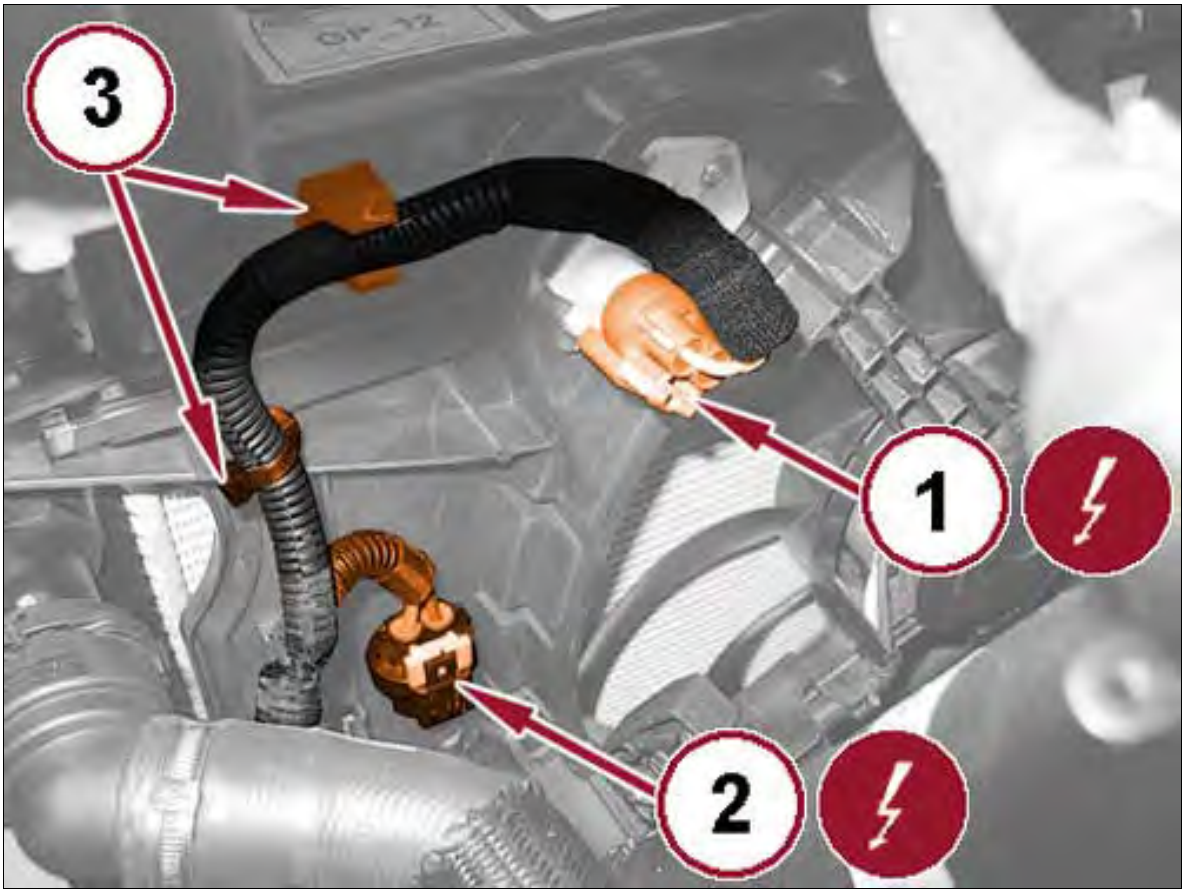
To ensure engine gasket sealing, proper surface preparation must be performed, especially with the use of aluminum engine components and multi-layer steel cylinder head gaskets.

> *NOTE:*
>
> *Multi-Layer Steel (MLS) head gaskets require a scratch free sealing surface.*

1. Remove all gasket material from cylinder head and block. Refer to ENGINE GASKET SURFACE PREPARATION . Do not damage the aluminum head sealing surface.
2. Clean all the engine oil passages.
3. Clean out the cylinder head bolt holes in the engine block.

CYLINDER HEAD > INSPECTION > INSPECTION

Fig 5: Cooling Fan Wire Harness Connectors & Clips



Courtesy of CHRYSLER GROUP, LLC

6. Attach the wire harness and close the retainer clips (3).
7. Connect the cooling fan wire harness connector (1).
8. Connect the resistor wire harness connector (1).

Fig 6: Passenger Power Seat Circuit