

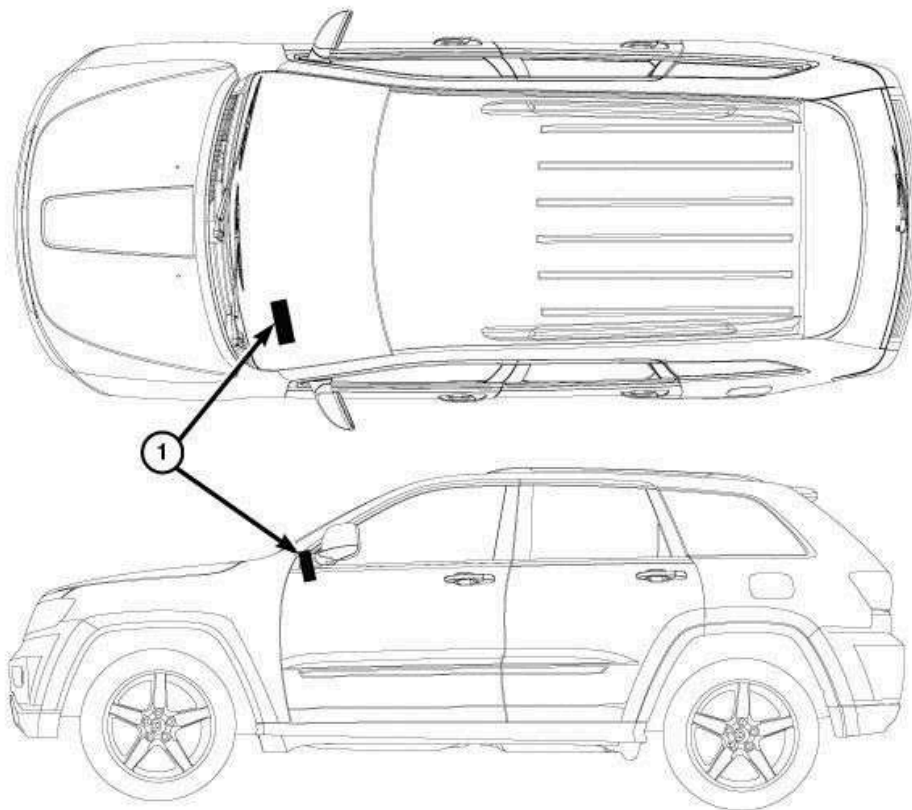
Electronic Vehicle Information Center (EVIC) within the Instrument Cluster (IC) (also known as the Common Instrument Cluster/CIC) may display textual warnings and error messages related to the current operating status of the BSM system.

- **Radio Receiver Module** - The virtual buttons in the touch screen of the optional premium Radio Receiver Module (RRM) (also known as the radio or the head unit) provide an interface that allows the vehicle operator to enable, disable and modify certain BSM system settings using the customer programmable features option.

Hard wired circuitry connects the various BSM system components to each other through the electrical system of the vehicle. These hard wired circuits are integral to several wire harnesses, which are routed throughout the vehicle and retained by many different methods. These circuits may be connected to each other and to the vehicle electrical system through the use of a combination of soldered splices, splice block connectors, and many different types of wire harness terminal connectors and insulators. Refer to the appropriate wiring information. The wiring information includes wiring diagrams, proper wire and connector repair procedures, further details on wire harness routing and retention, as well as pin out and location views for the various wire harness connectors, splices and grounds.

The BSM system components cannot be adjusted or repaired. If any of the BSM system components becomes damaged or ineffective, that component must be replaced.

CHIME WARNING SYSTEM



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Fig. 1: Chime Warning System

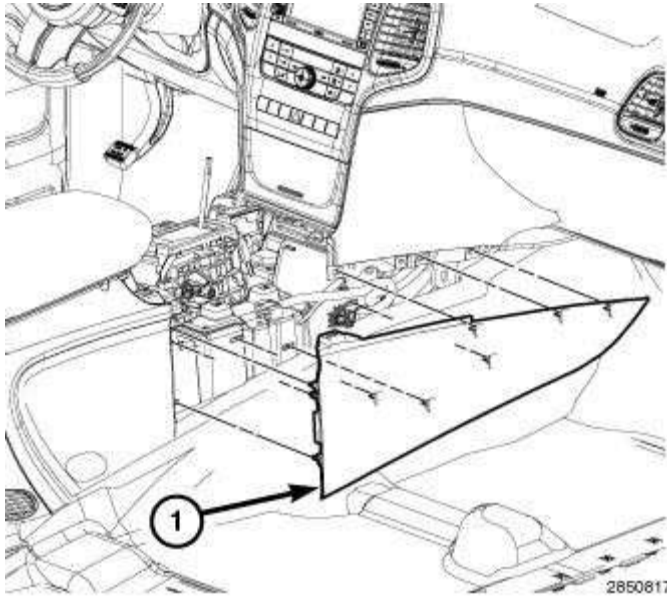


Fig. 348: Floor Console Side Cover
Courtesy of CHRYSLER GROUP, LLC

8. Position the side covers (1) back into place and seat the clip fasteners fully.
9. Install the shift bezel. Refer to **BEZEL, SHIFTER, INSTALLATION**.

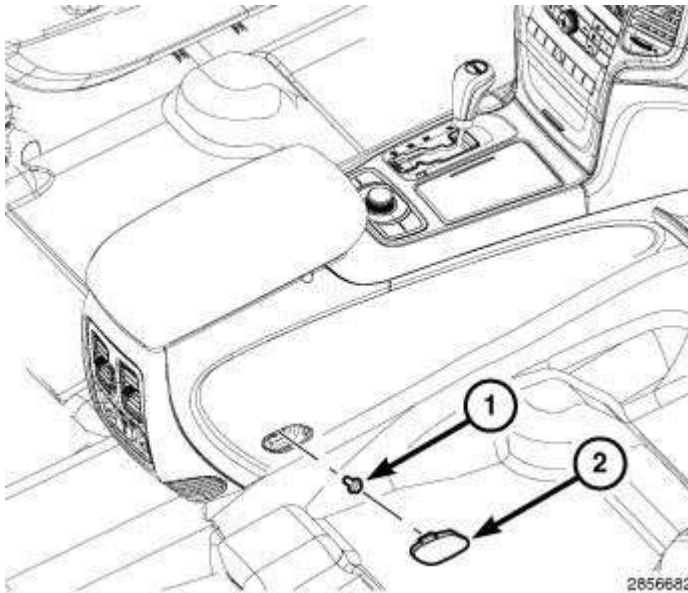
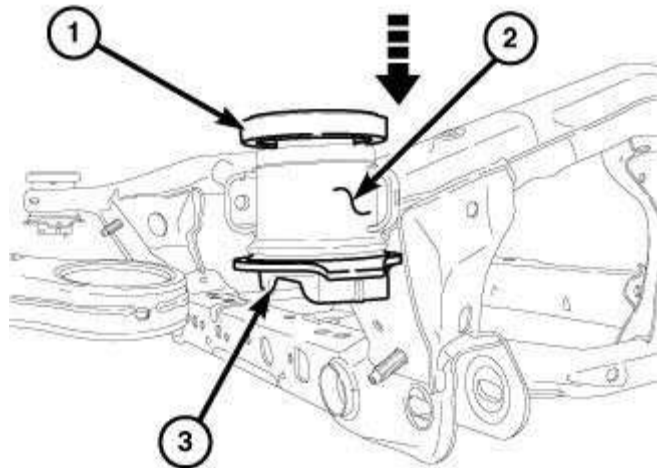


Fig. 349: Screw Covers & Screws
Courtesy of CHRYSLER GROUP, LLC

10. Place the seats into the full forward positions.
11. Install the screws and tighten to 7 N.m (62 in. lbs.).
12. Install the screw covers (2) and seat fully.



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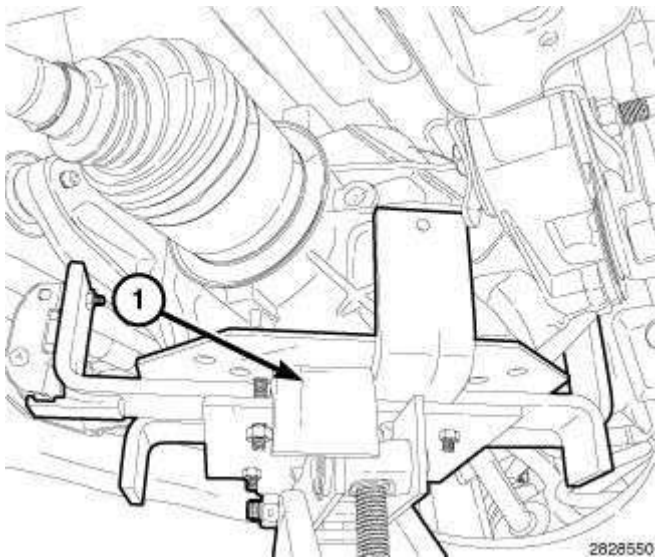
Fig. 102: Spacer & Engine Cradle Crossmember
Courtesy of CHRYSLER GROUP, LLC

5. Install the spacer (1).
6. Install the engine cradle crossmember (2). Refer to **CROSSMEMBER, CRADLE, ENGINE AND SUSPENSION, INSTALLATION.**

ISOLATOR, REAR CROSSMEMBER, DIFFERENTIAL

REMOVAL

REMOVAL



2828550

Fig. 103: Transmission Jack at Rear Axle
Courtesy of CHRYSLER GROUP, LLC

THERMISTOR

The thermistor portion of the right pinch sensor provides a temperature sense input to the Power LiftGate Module (PLGM) (also known as the Power LiftGate/PLG control module). The temperature input is only provided when the pinch sensor is in a non-pinched (contacts are open) condition. When the pinch sensor contacts are closed (sensor is pinched) this input is unavailable because the thermistor is shorted. Remove the lower trim from the inside of the liftgate to access and disconnect the right pinch sensor pigtail wire connector from the liftgate wire harness. Refer to the **Right Pinch Sensor Thermistor Resistance** table and check between the two terminals of the sensor connector for the proper thermistor resistance at the listed temperatures. If the sensor fails this test, replace the right pinch sensor unit.

RIGHT PINCH SENSOR THERMISTOR RESISTANCE

RIGHT PINCH SENSOR THERMISTOR RESISTANCE	
TEMPERATURE	RESISTANCE
0°C (32°F)	29330 - 35990 Ohms
25°C (77°F)	9120 - 10880 Ohms
40°C (104°F)	4900 - 5750 Ohms

REMOVAL

REMOVAL

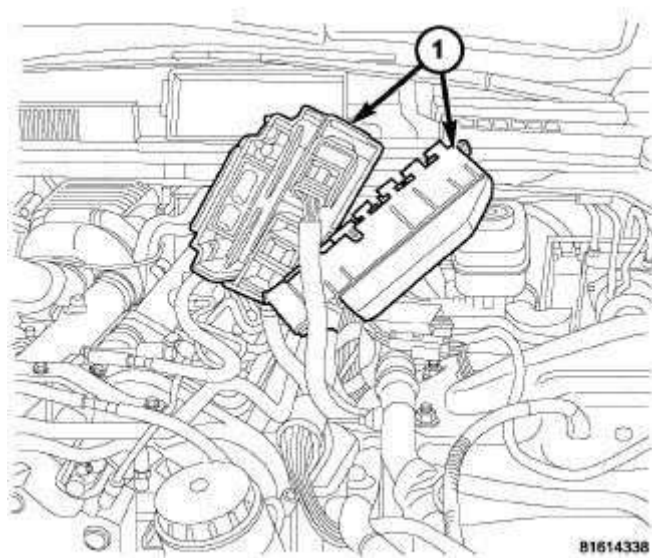


Fig. 15: Liftgate, Pigtail Wire Connector, Harness Connector & Pinch Sensor
 Courtesy of CHRYSLER GROUP, LLC

1. Open the liftgate (2).
2. Disconnect and isolate the battery negative cable.
3. Remove the lower trim from the liftgate inner panel. Refer to **PANEL, TRIM, REMOVAL** .
4. Reach through the access hole in the liftgate inner panel to access and disconnect the pinch sensor pigtail

serrated with a threaded stud formation at the tip.

The front wiper motor and crank arm unit is available for separate service replacement. Any other component of the front wiper linkage module cannot be adjusted or repaired. If any component of the module other than the motor is ineffective or damaged, the entire front wiper linkage module unit must be replaced.

OPERATION

OPERATION

The front wiper linkage module operation is controlled by the battery current inputs received by the wiper motor through the Power Distribution Center (PDC). The wiper motor speed is controlled by current flow to either the low speed or the high speed set of brushes. The park switch is a single pole, single throw, momentary switch within the wiper motor that is mechanically actuated by the wiper motor transmission components. The park switch alternately closes the wiper park switch sense circuit to ground or to battery current, depending upon the position of the wipers on the glass. This feature allows the motor to complete its current wipe cycle after the wiper system has been turned Off, and to park the wiper blades in the lowest portion of the wipe pattern. The automatic resetting circuit breaker protects the motor from overloads.

The wiper motor crank arm, the two wiper linkage members and the two wiper pivots mechanically convert the rotary output of the wiper motor to the back and forth wiping motion of the wiper arms and blades on the glass.

The hard wired inputs and outputs of the front wiper motor may be diagnosed using conventional diagnostic tools and procedures. Refer to the appropriate wiring information. However, conventional diagnostic methods will not prove conclusive in the diagnosis of the front wiper motor or the electronic controls and communication between other modules and devices that provide some features of the front wiper and washer system. The most reliable, efficient and accurate means to diagnose the front wiper motor or the electronic controls and communication related to front wiper motor operation requires the use of a diagnostic scan tool. Refer to the appropriate diagnostic information.

REMOVAL

REMOVAL

following these instructions may result in damage to the TCM/TCMA.

NOTE: If the transmission is being reconditioned (clutch/seal replacement) or replaced, it is necessary to perform the TCM Adaptation Procedure. Refer to TCM ADAPTATION - 8HP70.

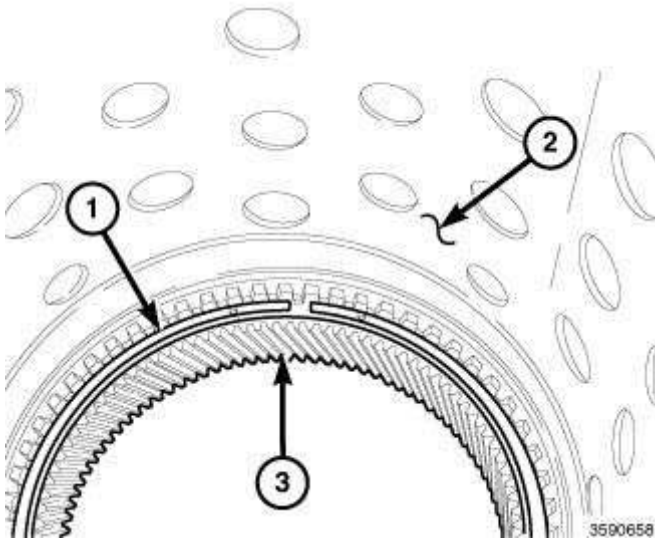


Fig. 98: Snap Ring & P4 Annulus Drum & P4 Annulus
 Courtesy of CHRYSLER GROUP, LLC

1. Insert the P4 annulus (3) into the P4 annulus drum (2).
2. Install the snap ring (1) into the P4 annulus drum (2).

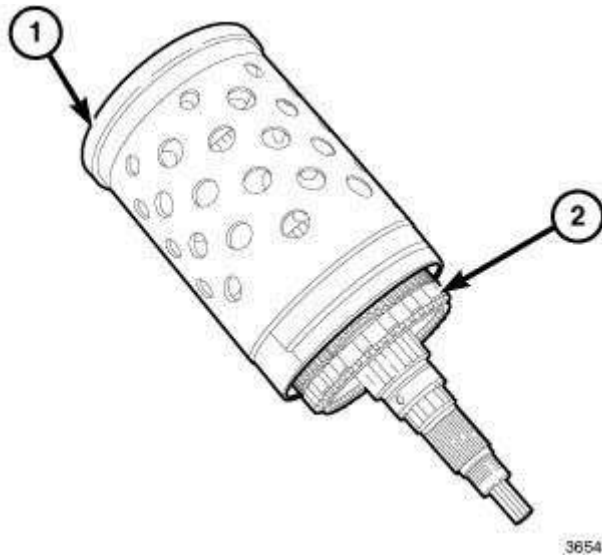


Fig. 99: P4 Planetary Carrier/Output Shaft & P4 Annulus Drum
 Courtesy of CHRYSLER GROUP, LLC

2014 DRIVELINE/AXLES

Front Axle - 195FIA - Grand Cherokee

DIAGNOSIS AND TESTING

DIAGNOSIS AND TESTING - FRONT AXLE - 195FIA

DIAGNOSTIC CHART

Condition	Possible Causes	Correction
Wheel Noise	1. Wheel loose.	1. Tighten loose nuts.
	2. Worn wheel bearing.	2. Replace bearing.
Axle Noise	1. Insufficient lubricant.	1. Fill differential with the correct fluid type and quantity.
	2. End-play in pinion.	2. Replace axle assembly.
	3. Excessive gear backlash between the ring gear and pinion.	3. Replace axle assembly.
	4. Loose pinion yoke nut.	4. Replace axle assembly.
	5. Scuffed gear tooth contact surfaces.	5. Replace axle assembly.
Axle Whine	1. Cross member cradle dampers not positioned correctly.	1. Positioned cross member cradle dampers correctly.
Loss Of Lubricant	1. Lubricant level too high.	1. Drain lubricant to the correct level.
	2. Worn axle shaft seals.	2. Replace seals.
	3. Worn pinion seal.	3. Replace seal.
	4. Worn/scored yoke.	4. Replace axle assembly.
	5. Axle cover not properly sealed.	5. Replace axle assembly.
Axle Overheating	1. Lubricant level low.	1. Fill differential to correct level.
	2. Improper grade of lubricant.	2. Fill differential with the correct fluid type and quantity.
	3. Bearing pre-loads too high.	3. Replace axle assembly.
	4. Insufficient ring gear backlash.	4. Replace axle assembly.
Gear Teeth Broke	1. Overloading.	1. Replace axle assembly.
	2. Erratic clutch operation.	2. Replace axle assembly.
	3. Ice-spotted pavement.	3. Replace axle assembly.
	4. Improper adjustments.	4. Replace axle assembly.

GEAR NOISE

Axle gear noise can be caused by insufficient lubricant, incorrect backlash, tooth contact, worn/damaged gears or the carrier housing not having the proper offset and squareness.

crankshaft to top-dead-center.

11. Verify that the camshafts are set at TDC by positioning the alignment holes (1) vertically.

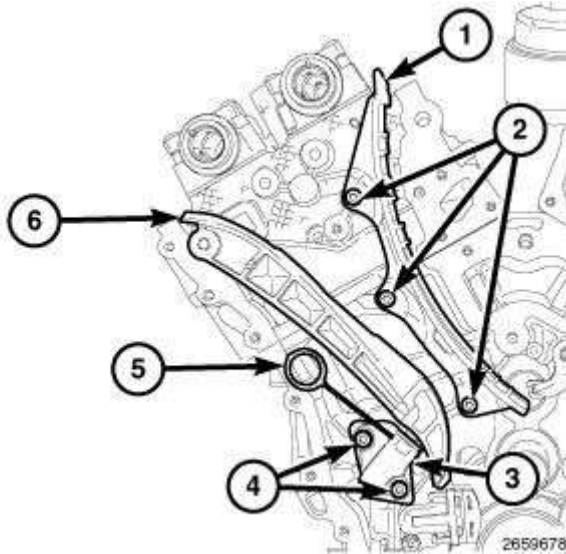


Fig. 194: Right Cam Chain Tensioner, Arm, Guide & Bolts
 Courtesy of CHRYSLER GROUP, LLC

12. Install the RH cam chain guide (1) with three bolts (2). Tighten the T30 bolts (2) to 12 N.m (106 in. lbs.).
13. Install the RH cam chain tensioner (3) to the engine block with two bolts (4). Tighten the T30 bolts (4) to 12 N.m (106 in. lbs.).
14. Reset the RH cam chain tensioner (3) by pushing back the tensioner piston and installing Tensioner Pin (special tool #8514, Pins, Tensioner) (5).
15. Install the RH tensioner arm (6).

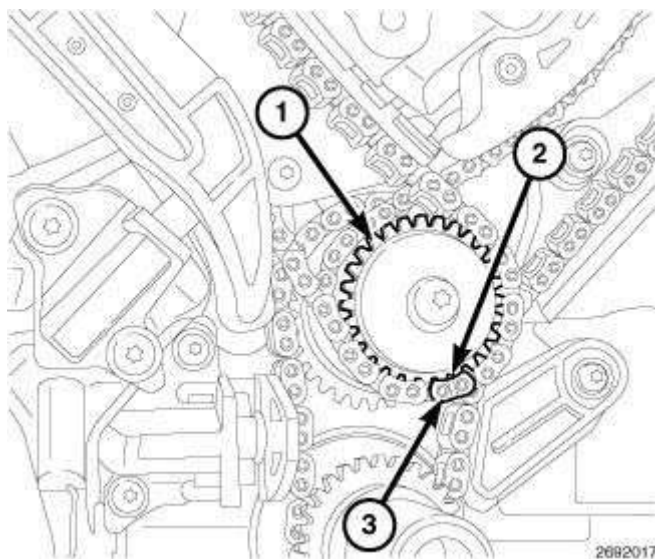
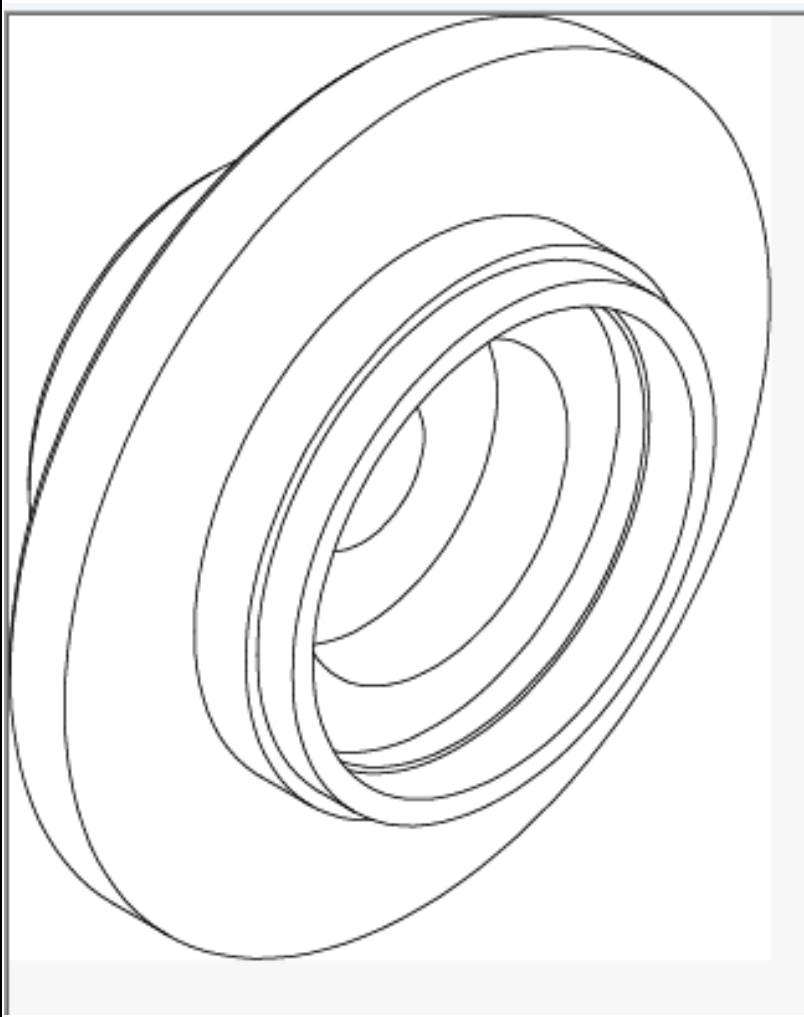
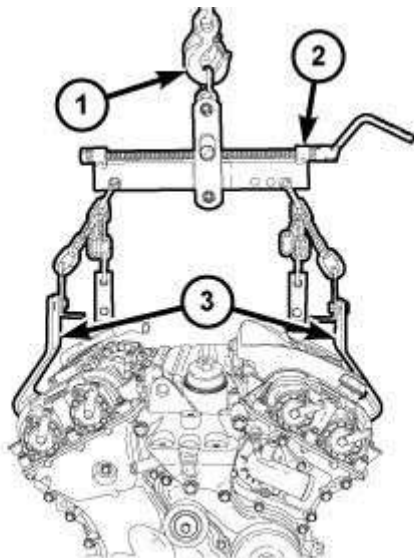


Fig. 195: Idler Sprocket, Dimple & Plated Link



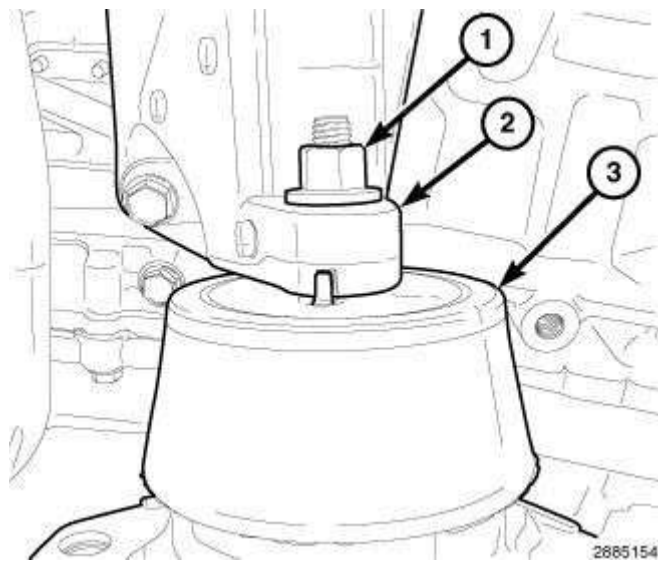
VM.10341-1 - Guide, Rear Seal



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Fig. 57: Lifting Sling, Engine Lifting Brackets & Engine Hoist
 Courtesy of CHRYSLER GROUP, LLC

4. Position a load-leveling lifting sling (2), such as OTC® 4305 Engine Load Leveler or equivalent, between the engine lifting brackets (3) and an engine hoist (1).
5. Reposition the starter wire harness and the main wire harness to the rear of the engine compartment.



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Fig. 58: Left Engine Mount Isolator & Upper Retaining Nut
 Courtesy of CHRYSLER GROUP, LLC

NOTE: Left engine mount shown in illustration, right engine mount similar.

6. Position the engine in the vehicle while aligning the two locator dowels into the transmission housing.
7. Align the tab on the isolators (3) with the notch in the engine mount brackets (2) and lower the engine so the weight is resting on the isolators.

2014 Jeep Grand Cherokee SRT

2014 ENGINE 5.7L - Service Information - Grand Cherokee

FOR EXAMPLE: Input air at 552 kPa (80 psi), the primary gauge factory set at 207 kPa (30 psi) input pressure. The secondary gauge should have no more than 176 kPa (25.5 psi) loss, when connected to the cylinder.

Refer to **CYLINDER COMBUSTION PRESSURE LEAKAGE DIAGNOSIS CHART.**

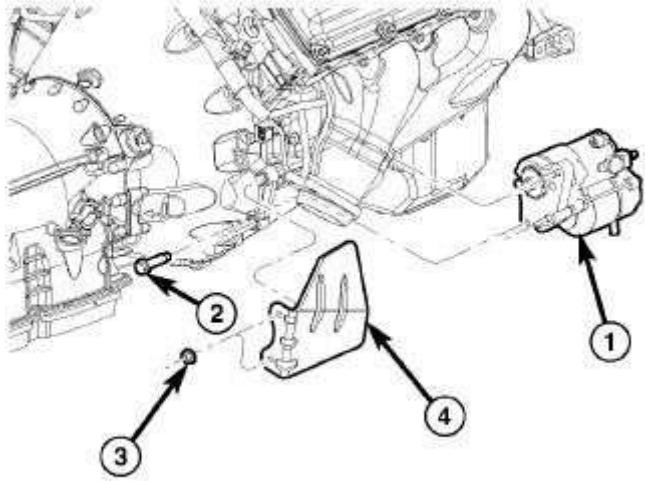
CYLINDER COMBUSTION PRESSURE LEAKAGE DIAGNOSIS CHART

CONDITION	POSSIBLE CAUSE	CORRECTION
AIR ESCAPES THROUGH THROTTLE BODY	Intake valve bent, burnt, or not seated properly	Inspect valve and valve seat. Reface or replace, as necessary. Inspect valve springs. Replace as necessary.
AIR ESCAPES THROUGH TAILPIPE	Exhaust valve bent, burnt, or not seated properly	Inspect valve and valve seat. Reface or replace, as necessary. Inspect valve springs. Replace as necessary.
AIR ESCAPES THROUGH RADIATOR	Head gasket leaking or cracked cylinder head or block	Remove cylinder head and inspect. Replace defective part.
MORE THAN 50% LEAKAGE FROM ADJACENT CYLINDERS	Head gasket leaking or crack in cylinder head or block between adjacent cylinders	Remove cylinder head and inspect. Replace gasket, head, or block as necessary.
MORE THAN 25% LEAKAGE AND AIR ESCAPES THROUGH OIL FILLER CAP OPENING ONLY	Stuck or broken piston rings; cracked piston; worn rings and/or cylinder wall	Inspect for broken rings or piston. Measure ring gap and cylinder diameter, taper and out-of-round. Replace defective part as necessary.

LUBRICATION

CONDITION	POSSIBLE CAUSES	CORRECTION
OIL LEAKS	1. Gaskets and O-Rings.	1. Replace as necessary.
	a. Misaligned or damaged.	a. Replace as necessary.
	b. Loose fasteners, broken or porous metal parts.	b. Tighten fasteners, Repair or replace metal parts.
	2. Crankshaft rear seal.	2. Replace as necessary.
	3. Crankshaft seal flange. Scratched, nicked or grooved.	3. Polish or replace crankshaft.
	4. Oil pan flange cracked.	4. Replace oil pan.
	5. Front cover seal, damaged or misaligned.	5. Replace seal.
	6. Scratched or damaged vibration damper hub.	6. Polish or replace damper.
	7. Crankshaft Rear Flange Microporosity.	7. Replace Crankshaft.
OIL PRESSURE DROP	1. Low oil level.	1. Check and correct oil level.
	2. Faulty oil pressure sending unit.	2. Replace sending unit.

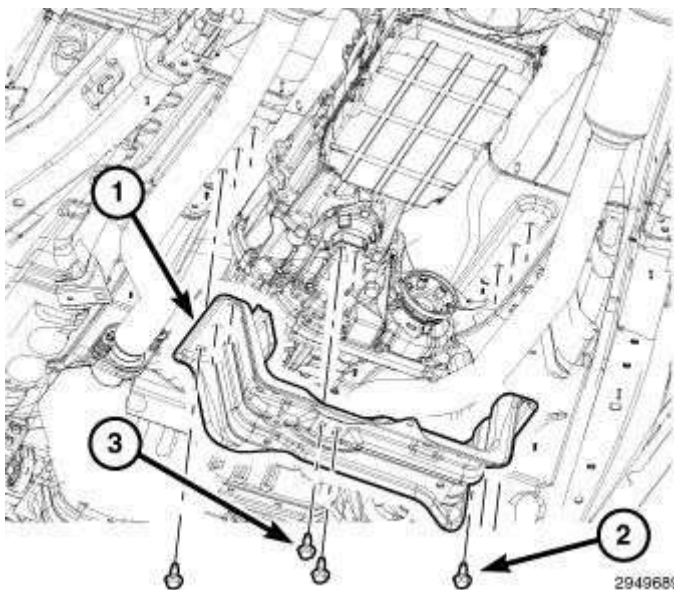
41. Remove the transmission oil fill tube.



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Fig. 28: Removing/Installing Starter
 Courtesy of CHRYSLER GROUP, LLC

42. Remove the starter motor (1) heat shield (4).
43. Disconnect the starter wires, remove the starter motor retaining bolts (2) and remove the starter (1). Refer to **STARTER, REMOVAL** .



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Fig. 29: Crossmember, Crossmember Bolts & Transmission Mount Bolts

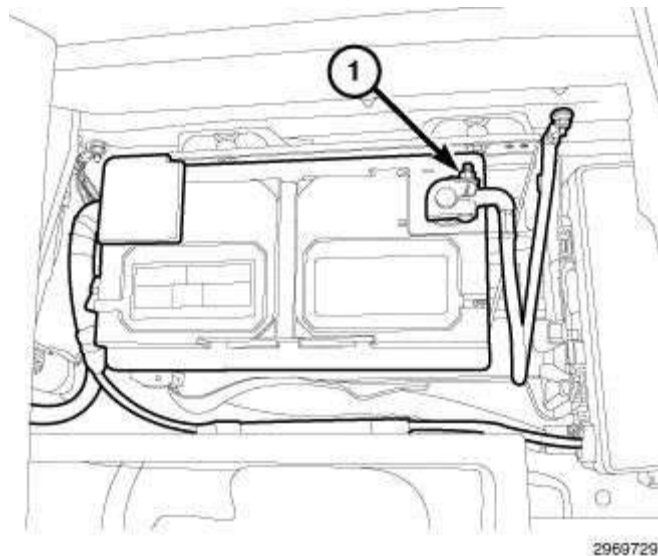


Fig. 430: Negative Battery Cable
 Courtesy of CHRYSLER GROUP, LLC

3. Disconnect the negative battery cable (1).

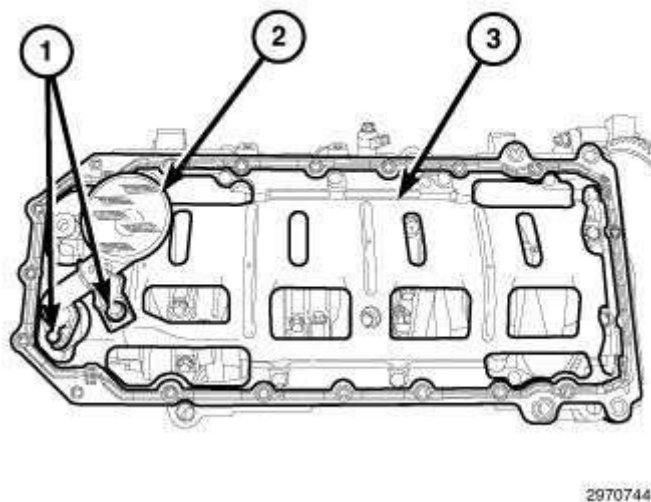
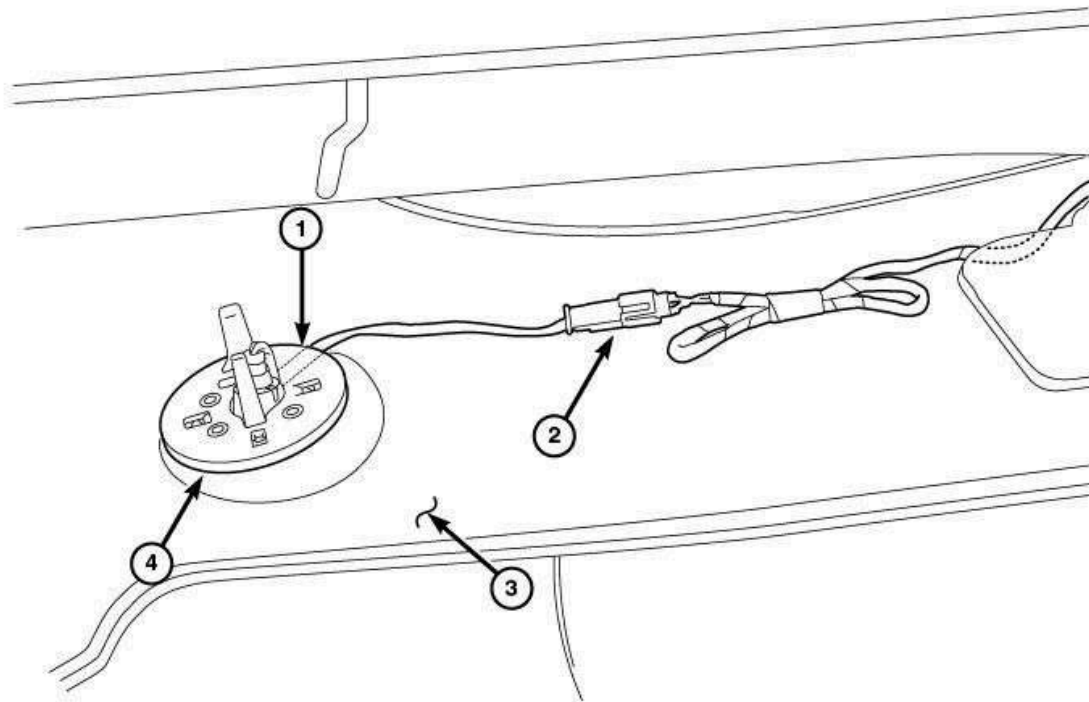


Fig. 431: Integral Windage Tray, Oil Pump Pickup Tube & Bolts
 Courtesy of CHRYSLER GROUP, LLC

NOTE: When the oil pan is removed, a new oil pan gasket and the integral windage tray assembly must be installed, the old gasket cannot be reused.

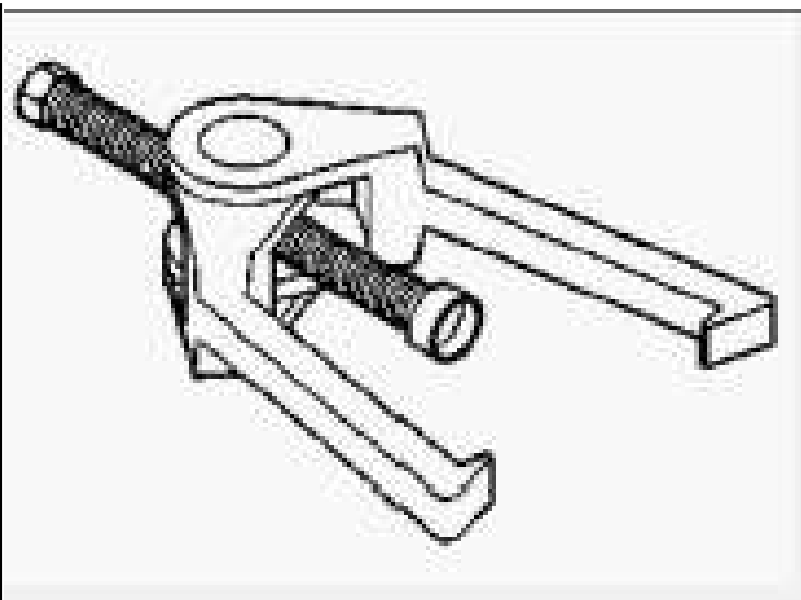
4. Remove the oil pan. Refer to **PAN, OIL, REMOVAL**.
5. Remove the oil pump pickup tube retaining bolt and nut (1).
6. Remove the oil pump pickup tube (2).
7. Remove and discard the oil pan gasket/windage tray (3).



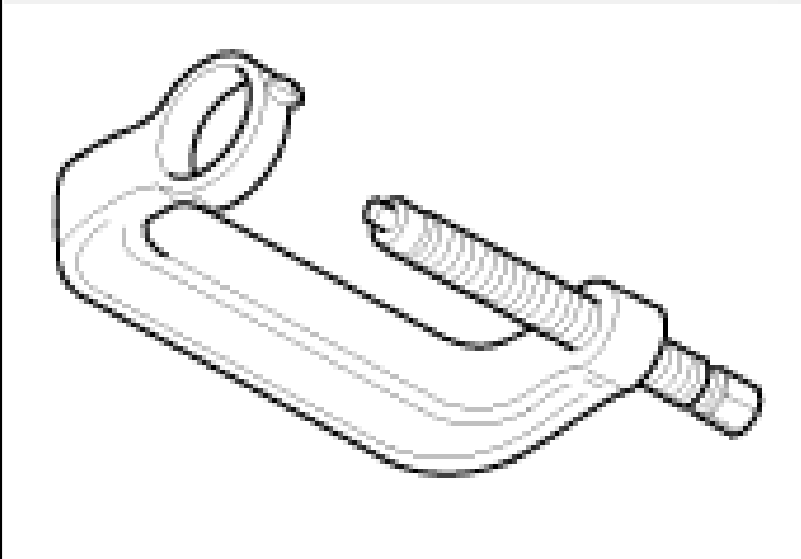
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Fig. 392: Electrical Connector
Courtesy of CHRYSLER GROUP, LLC

5. Disconnect the electrical connector (1) from the crankshaft position (CKP) sensor.



C-4150A - Press, Ball Joint
(Originally Shipped In Kit Number(s)
6672, 6745.)



C-4212F - Press, Ball Joint
(Originally Shipped In Kit Number(s)
6745, 6880, 6881, MLR-C03.)

WHEEL ALIGNMENT

DESCRIPTION

DESCRIPTION

CAUTION: The steering column module is centered to the vehicles steering system. Failure to keep the system and steering column module centered and locked/inhibited from rotating can result in steering column module damage.