

2009 Chrysler Town & Country LX

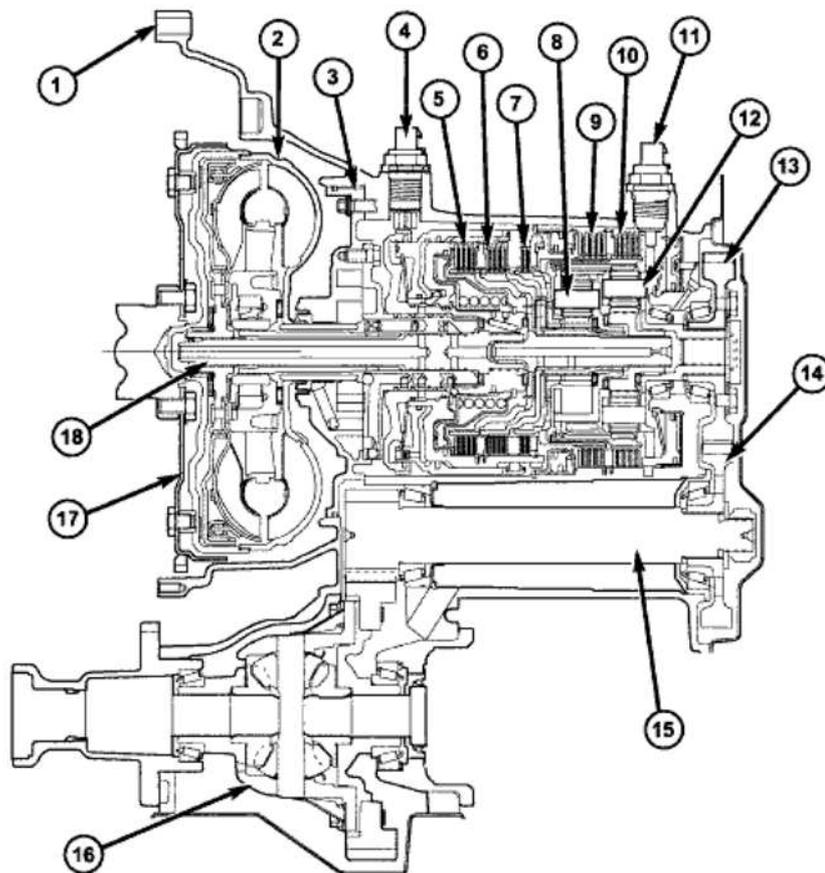
2009 AUTOMATIC TRANSMISSION 41TE - Service Information - Grand Caravan, Town & Country

2009 AUTOMATIC TRANSMISSION

41TE - Service Information - Grand Caravan, Town & Country

DESCRIPTION

DESCRIPTION



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Fig. 1: Identifying 41TE Automatic Transaxle Components

Courtesy of CHRYSLER LLC

1 - TRANSAXLE CASE	7 - REVERSE CLUTCH	13 - OUTPUT SHAFT GEAR
2 - TORQUE CONVERTER	8 - FRONT PLANET CARRIER	14 - TRANSFER SHAFT GEAR
3 - OIL PUMP	9 - 2/4 CLUTCH	15 - TRANSFER SHAFT
4 - INPUT SPEED SENSOR	10 - L/R CLUTCH	16 - DIFFERENTIAL
5 - UNDERDRIVE CLUTCH	11 - OUTPUT SPEED SENSOR	17 - CONVERTER DRIVE PLATE
6 - OVERDRIVE CLUTCH	12 - REAR PLANET CARRIER/OUTPUT SHAFT	18 - INPUT SHAFT

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The 41TE is a four-speed transaxle that is a conventional hydraulic/mechanical assembly with an integral differential, and is controlled with adaptive electronic controls and monitors. The hydraulic system of the transaxle consists of the transaxle fluid, fluid passages, hydraulic valves, and various line pressure control components. An input clutch assembly which houses the underdrive, overdrive, and reverse clutches is used. It also utilizes separate holding clutches: 2nd/4th gear and Low/Reverse. The primary mechanical components of the transaxle consist of the following:

- Three multiple disc input clutches
- Two multiple disc holding clutches
- Four hydraulic accumulators
- Two planetary gear sets
- Hydraulic oil pump
- Valve body
- Solenoid/Pressure switch assembly
- Integral differential assembly

Control of the transaxle is accomplished by fully adaptive electronics. Optimum shift scheduling is accomplished through continuous real-time sensor feedback information provided to the Powertrain Control Module (PCM) or Transmission Control Module (TCM).

The PCM/TCM is the heart of the electronic control system and relies on information from various direct and indirect inputs (sensors, switches, etc.) to determine driver demand and vehicle operating conditions. With this information, the PCM/TCM can calculate and perform timely and quality shifts through various output or control devices (solenoid pack, transmission control relay, etc.).

The PCM/TCM also performs certain self-diagnostic functions and provides comprehensive information (sensor data, DTC's, etc.) which is helpful in proper diagnosis and repair. This information can be viewed with the scan tool.

TRANSAXLE IDENTIFICATION

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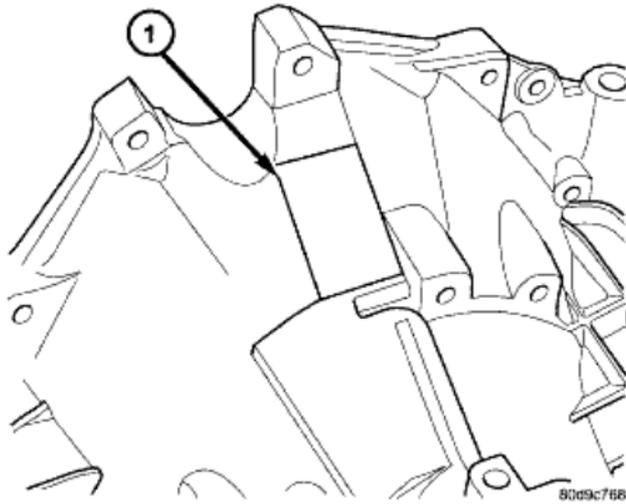
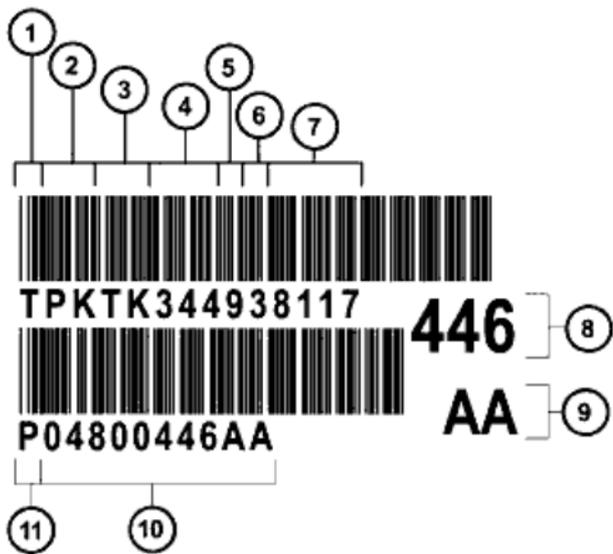


Fig. 2: Locating Transaxle Identification Label
 Courtesy of CHRYSLER LLC

1 - IDENTIFICATION LABEL

The 41TE transaxle is identified by a barcode label (1) that is fixed to the transaxle.



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Fig. 3: Identification Label Breakdown
 Courtesy of CHRYSLER LLC

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- 1 - T=TRACEABILITY
- 2 - SUPPLIER CODE (PK=KOKOMO)
- 3 - COMPONENT CODE (TK=KOKOMO TRANSMISSION)
- 4 - BUILD DAY (344=DEC. 9)
- 5 - BUILD YEAR (9=1999)
- 6 - LINE/SHIFT CODE (3=3RD SHIFT)
- 7 - BUILD SEQUENCE NUMBER
- 8 - LAST THREE OF P/N
- 9 - ALPHA
- 10 - TRANSAXLE PART NUMBER
- 11 - P=PART NUMBER

The label contains a series of digits that can be translated into useful information such as transaxle part number, date of manufacture, manufacturing origin, plant shift number, build sequence number, etc. Refer to **Fig. 3** for identification label breakdown.

If the tag is not legible or missing, the "PK" number, which is stamped into the transaxle case behind the transfer gear cover, can be referred to for identification. This number differs slightly in that it contains the entire transaxle part number, rather than the last three digits.

OPERATION

OPERATION

Transmission output is directed to an integral differential by a transfer gear system in the following input-to-output ratios:

First

2.84 : 1

Second

1.57 : 1

Third

1.00 : 1

Overdrive

0.69 : 1

Reverse

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2.21 : 1

DIAGNOSIS AND TESTING

40/41TE TRANSAXLE GENERAL DIAGNOSIS

NOTE: Before attempting any repair on a 40/41TE four-speed automatic transaxle, check for Diagnostic Trouble Codes (DTC's) using the scan tool. Refer to **POWERTRAIN CONTROL MODULE (PCM) - ELECTRICAL DIAGNOSTICS - 40/41TE** .

Transaxle malfunctions may be caused by these general conditions:

- Poor engine performance
- Improper adjustments
- Hydraulic malfunctions
- Mechanical malfunctions
- Electronic malfunctions

Diagnosis of these problems should always begin by checking the easily accessible variables: fluid level and condition, gearshift cable adjustment. Then perform a road test to determine if the problem has been corrected or that more diagnosis is necessary. If the problem persists after the preliminary tests and corrections are completed, hydraulic pressure checks should be performed.

ROAD TEST

Prior to performing a road test, verify that the fluid level, fluid condition, and linkage adjustment have been approved.

During the road test, the transaxle should be operated in each position to check for slipping and any variation in shifting.

If the vehicle operates properly at highway speeds, but has poor acceleration, the converter stator overrunning clutch may be slipping. If acceleration is normal, but high throttle opening is needed to maintain highway speeds, the converter stator clutch may have seized. Both of these stator defects require replacement of the torque converter and thorough transaxle cleaning.

Slipping clutches can be isolated by comparing the "Elements in Use" chart with clutch operation encountered on a road test. This chart identifies which clutches are applied at each position of the selector lever.

A slipping clutch may also set a DTC and can be determined by operating the transaxle in all selector positions.

ELEMENTS IN USE AT EACH POSITION OF SELECTOR LEVER

SHIFT LEVER POSITION	INPUT CLUTCHES			HOLDING CLUTCHES	
	Underdrive	Overdrive	Reverse	2/4	Low/Reverse

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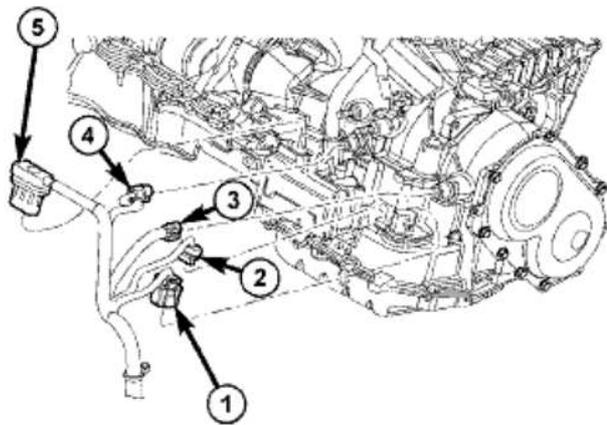
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P - PARK	-	-	-	-	X
R - REVERSE	-	-	X	-	X
N - NEUTRAL	-	-	-	-	X
OD - OVERDRIVE	-	-	-	-	-
First	X	-	-	-	X
Second	X	-	-	X	-
Direct	X	X	-	-	-
Overdrive	-	X	-	X	-
D - DRIVE*	-	-	-	-	-
First	X	-	-	-	X
Second	X	-	-	X	-
Direct	X	X	-	-	-
L - LOW*	-	-	-	-	-
First	X	-	-	-	X
Second	X	-	-	X	-
Direct	X	X	-	-	-

* Vehicle upshift and downshift speeds are increased when in these selector positions.

The process of elimination can be used to detect any unit which slips and to confirm proper operation of good units. Road test analysis can diagnose slipping units, but the cause of the malfunction cannot be determined. Practically any condition can be caused by leaking hydraulic circuits or sticking valves.

HYDRAULIC PRESSURE TESTS



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Fig. 4: Identifying Transmission Electrical Connectors

Courtesy of CHRYSLER LLC

NOTE: Before performing the hydraulic pressure tests be certain to disconnect the Variable Line Pressure (VLP) electrical connector (2) at the transmission. Check for and clear any codes that may have been set after performing any hydraulic pressure tests and connecting the Variable Line Pressure (VLP) electrical connector.

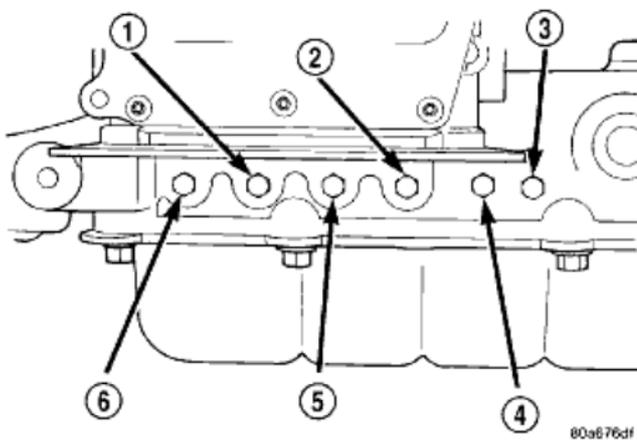


Fig. 5: Identifying Pressure Ports

Courtesy of CHRYSLER LLC

1 - OVERDRIVE CLUTCH
2 - TORQUE CONVERTER OFF
3 - LOW/REVERSE CLUTCH
4 - 2/4 CLUTCH
5 - REVERSE CLUTCH
6 - UNDERDRIVE CLUTCH

Pressure testing is a very important step in the diagnostic procedure. These tests usually reveal the cause of most hydraulic transaxle problems.

Before performing pressure tests, be certain that fluid level and condition, and shift cable adjustments have been checked and approved. Fluid must be at operating temperature 150 to 200 ° F. (66 to 93 ° C).

Install an engine tachometer, raise vehicle on hoist which allows front wheels to turn, and position tachometer so it can be read.

Attach 300 psi Gauge C-3293SP to port(s) (1) overdrive clutch, (2) torque converter off, (3) low/reverse clutch, (4) 2/4 clutch, (5) reverse clutch, (6) underdrive clutch required for test(s) being conducted. Use Adapter Set L-4559 to adapt gauge(s) to transaxle.

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TEST ONE-SELECTOR IN LOW (1st GEAR)

1. Attach pressure gauge to the low/reverse clutch tap.
2. Move selector lever to the (L) position.
3. Allow vehicle wheels to turn and increase throttle opening to achieve an indicated vehicle speed to 20 mph.
4. Low/reverse clutch pressure should read 115 to 145 psi.
5. This test checks pump output, pressure regulation and condition of the low/reverse clutch hydraulic circuit and shift schedule.

TEST TWO-SELECTOR IN DRIVE (2nd GEAR)

NOTE: This test checks the underdrive clutch hydraulic circuit as well as the shift schedule.

1. Attach gauge to the underdrive clutch tap.
2. Move selector lever to the 3 position.
3. Allow vehicle wheels to turn and increase throttle opening to achieve an indicated vehicle speed of 30 mph.
4. In second gear the underdrive clutch pressure should read 110 to 145 psi.

TEST TWO A-SELECTOR IN OD (4th Gear)

NOTE: This test checks the underdrive clutch hydraulic circuit as well as the shift schedule.

1. Attach gauge to the underdrive clutch tap.
2. Move selector lever to the (OD) position.
3. Allow wheels to rotate freely and increase throttle opening to achieve an indicated speed of 40 mph.
4. Underdrive clutch pressure should read below 5 psi. If not, then either the solenoid assembly or PCM/TCM is at fault.

TEST THREE-OVERDRIVE CLUTCH CHECK (3rd and 2nd Gear)

1. Attach gauge to the overdrive clutch tap.
2. Move selector lever to the (OD) position.
3. Allow vehicle wheels to turn and increase throttle opening to achieve an indicated vehicle speed of 20 mph. Vehicle should be in 3rd gear.
4. Overdrive clutch pressure should read 74 to 95 psi.
5. Move selector lever to the (3) position and increase indicated vehicle speed to 30 mph.
6. The vehicle should be in second gear and overdrive clutch pressure should be less than 5 psi.
7. This test checks the overdrive clutch hydraulic circuit as well as the shift schedule.

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TEST FOUR-SELECTOR IN OVERDRIVE (4th Gear)

1. Attach gauge to the 2/4 clutch tap.
2. Move selector lever to the (OD) position.
3. Allow vehicle front wheels to turn and increase throttle opening to achieve an indicated vehicle speed of 30 mph. Vehicle should be in 4th gear.
4. The 2/4 clutch pressure should read 75 to 95 psi.
5. This test checks the 2/4 clutch hydraulic circuit.

TEST FIVE-SELECTOR IN OVERDRIVE (4th Gear-CC on)

1. Attach gauge to the torque converter clutch off pressure tap.
2. Move selector lever to the (OD) position.
3. Allow vehicle wheels to turn and increase throttle opening to achieve an indicated vehicle speed of 50 mph. Vehicle should be in 4th gear, CC on.

CAUTION: Both wheels must turn at the same speed.

4. Torque converter clutch off pressure should be less than 5 psi.
5. This test checks the torque converter clutch hydraulic circuit.

TEST SIX-SELECTOR IN REVERSE

1. Attach gauges to the reverse and LR clutch tap.
2. Move selector lever to the (R) position.
3. Read reverse clutch pressure with output stationary (foot on brake) and throttle opened to achieve 1500 RPM.
4. Reverse and LR clutch pressure should read 165 to 235 psi.
5. This test checks the reverse clutch hydraulic circuit.

TEST RESULT INDICATIONS

1. If proper line pressure is found in any one test, the pump and pressure regulator are working properly.
2. Low pressure in all positions indicates a defective pump, a clogged filter, or a stuck pressure regulator valve.
3. Clutch circuit leaks are indicated if pressures do not fall within the specified pressure range.
4. If the overdrive clutch pressure is greater than 5 psi in 4 of Test Three, a worn reaction shaft seal ring or a defective solenoid assembly is indicated.
5. If the underdrive clutch pressure is greater than 5 psi in 4 of Test Two A, a defective solenoid assembly or PCM/TCM is the cause.

PRESSURE CHECK SPECIFICATIONS

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GEAR SELECTOR POSITION	ACTUAL GEAR	PRESSURE TAPS					Low/Reverse Clutch
		Underdrive Clutch	Overdrive Clutch	Reverse Clutch	Torque Converter Clutch Off	2/4 Clutch	
PARK 0 mph *	PARK	0-2	0-5	0-2	60-110	0-2	115-145
REVERSE 0 mph *	REVERSE	0-2	0-7	165-235	50-100	0-2	165-235
NEUTRAL 0 mph *	NEUTRAL	0-2	0-5	0-2	60-110	0-2	115-145
LOW 20 mph #	FIRST	110-145	0-5	0-2	60-110	0-2	115-145
3 30 mph #	SECOND	110-145	0-5	0-2	60-110	115-145	0-2
3 45 mph #	DIRECT	75-95	75-95	0-2	60-90	0-2	0-2
OD 30 mph #	OVERDRIVE	0-2	75-95	0-2	60-90	75-95	0-2
OD 50 mph #	OVERDRIVE WITH TCC	0-2	75-95	0-2	0-5	75-95	0-2

* Engine speed at 1500 RPM
CAUTION: Both front wheels must be turning at the same speed.

CLUTCH AIR PRESSURE TESTS

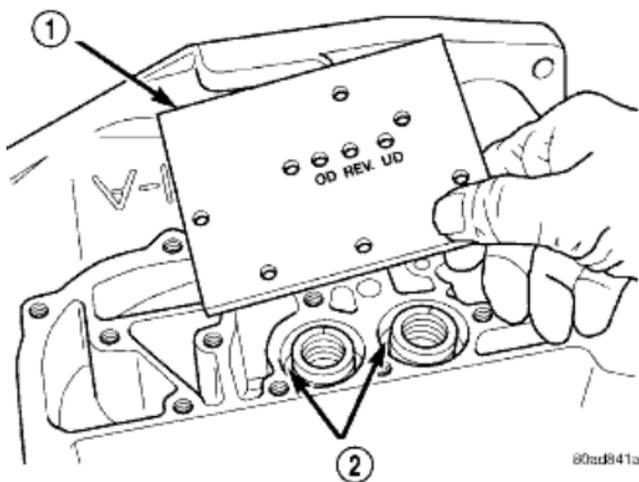


Fig. 6: Identifying Air Pressure Test Plate Tool 6056
Courtesy of CHRYSLER LLC

1 - AIR PRESSURE TEST PLATE TOOL 6056

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2 - ACCUMULATORS

Inoperative clutches can be located using a series of tests by substituting air pressure for fluid pressure using Air Pressure Test Plate 6056 (1).

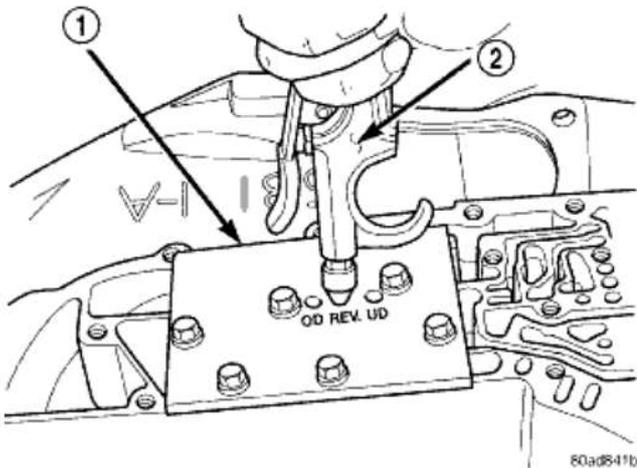


Fig. 7: Testing Clutches Using Air Pressure Test Plate 6056
Courtesy of CHRYSLER LLC

1 - AIR PRESSURE TEST PLATE 6056

2 - AIR NOZZLE

The clutches may be tested by applying air pressure (2) to their respective passages. The valve body must be removed and Air Pressure Test Plate 6056 (1) installed. To make air pressure tests, proceed as follows:

NOTE: The compressed air supply must be free of all dirt and moisture. Use a pressure of 30 psi.

Remove oil pan and valve body. See [Transmission and Transfer Case/Automatic - 41TE/VALVE BODY - Removal](#).

OVERDRIVE CLUTCH

Apply air pressure to the overdrive clutch apply passage and watch for the push/pull piston to move forward. The piston should return to its starting position when the air pressure is removed.

REVERSE CLUTCH

Apply air pressure to the reverse clutch apply passage and watch for the push/pull piston to move rearward. The piston should return to its starting position when the air pressure is removed.

2/4 CLUTCH

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Apply air pressure to the feed hole located on the 2/4 clutch retainer. Look in the area where the 2/4 piston contacts the first separator plate and watch carefully for the 2/4 piston to move rearward. The piston should return to its original position after the air pressure is removed.

LOW/REVERSE CLUTCH

Apply air pressure to the low/reverse clutch feed hole (rear of case, between 2 bolt holes). Then, look in the area where the low/reverse piston contacts the first separator plate. Watch carefully for the piston to move forward. The piston should return to its original position after the air pressure is removed.

UNDERDRIVE CLUTCH

Because this clutch piston cannot be seen, its operation is checked by function. Air pressure is applied to the low/reverse and the 2/4 clutches. This locks the output shaft. Use a piece of rubber hose wrapped around the input shaft and a pair of clamp-on pliers to turn the input shaft. Next apply air pressure to the underdrive clutch. The input shaft should not rotate with hand torque. Release the air pressure and confirm that the input shaft will rotate.

TORQUE CONVERTER HOUSING FLUID LEAKAGE

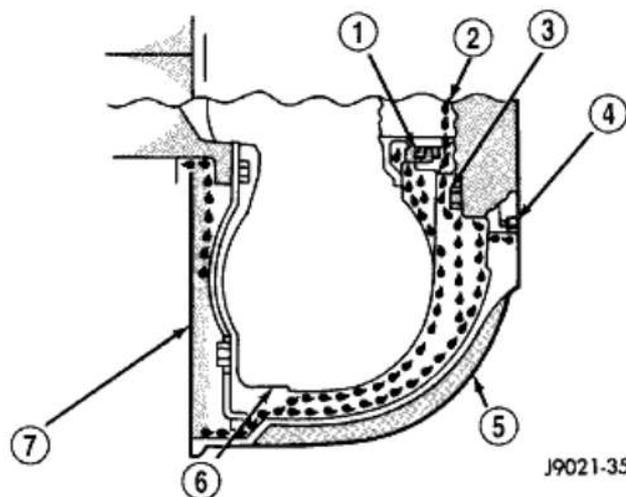


Fig. 8: Identifying Converter Housing Leak Paths
Courtesy of CHRYSLER LLC

1 - PUMP SEAL
2 - PUMP VENT
3 - PUMP BOLT
4 - PUMP GASKET
5 - CONVERTER HOUSING
6 - CONVERTER
7 - REAR MAIN SEAL LEAK

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When diagnosing converter housing fluid leaks, three actions must be taken before repair:

1. Verify proper transmission fluid level.
2. Verify that the leak originates from the converter housing area and is transmission fluid.
3. Determine the true source of the leak.

Fluid leakage at or around the torque converter area may originate from an engine oil leak. The area should be examined closely. Factory fill fluid is red and, therefore, can be distinguished from engine oil.

Some suspected converter housing fluid leaks may not be leaks at all. They may only be the result of residual fluid in the converter housing, or excess fluid spilled during factory fill, or fill after repair. Converter housing leaks have several potential sources inspect pump seal (1), pump vent (2), pump bolts (3), pump gasket (4), converter housing (5), converter (6) and a rear main seal leak (7). Through careful observation, a leak source can be identified before removing the transmission for repair.

Pump seal leaks tend to move along the drive hub and onto the rear of the converter. Pump O-ring or pump body leaks follow the same path as a seal leak. Pump attaching bolt leaks are generally deposited on the inside of the converter housing and not on the converter itself. Pump seal or gasket leaks usually travel down the inside of the converter housing.

TORQUE CONVERTER LEAKAGE

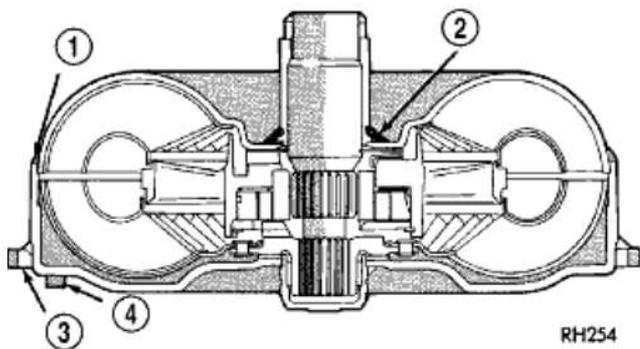


Fig. 9: Identifying Torque Converter Leak Points
Courtesy of CHRYSLER LLC

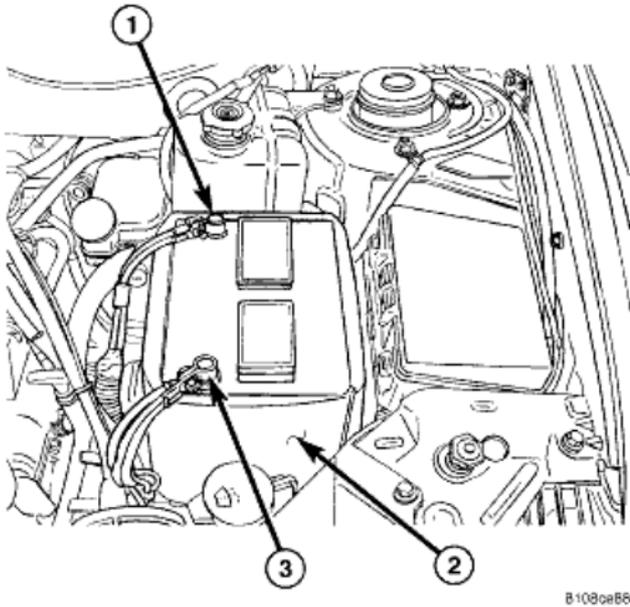
1 - OUTSIDE DIAMETER WELD
2 - TORQUE CONVERTER HUB WELD
3 - STARTER RING GEAR
4 - LUG

Possible sources of torque converter leakage are:

- Torque converter weld leaks at the outside diameter weld (1).
- Torque converter hub weld (2).

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REMOVAL**REMOVAL**

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Fig. 10: Identifying Battery Cables

Courtesy of CHRYSLER LLC

NOTE: If transaxle assembly is being replaced or overhauled (clutch and/or seal replacement), it is necessary to perform the "Quick-Learn" Procedure. Refer to Electrical - Electronic Control Modules/Electronic Control Modules/MODULE, Powertrain Control - Standard Procedure .

1. Open hood.
2. Disconnect the battery cables (1).
3. Remove the battery hold down bolt and remove the battery (2).

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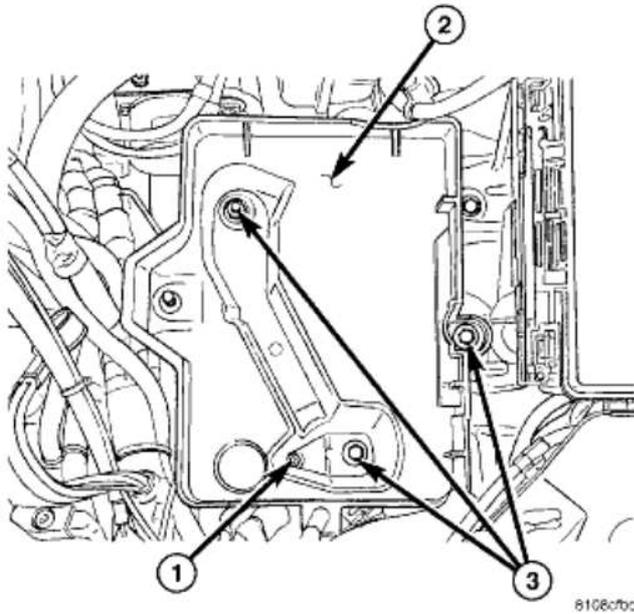


Fig. 11: Removing/Installing Battery Tray
Courtesy of CHRYSLER LLC

4. Remove the clips holding harness and ground cable to the battery tray.
5. Remove the battery tray hold down bolts (3) and remove the battery tray (2).

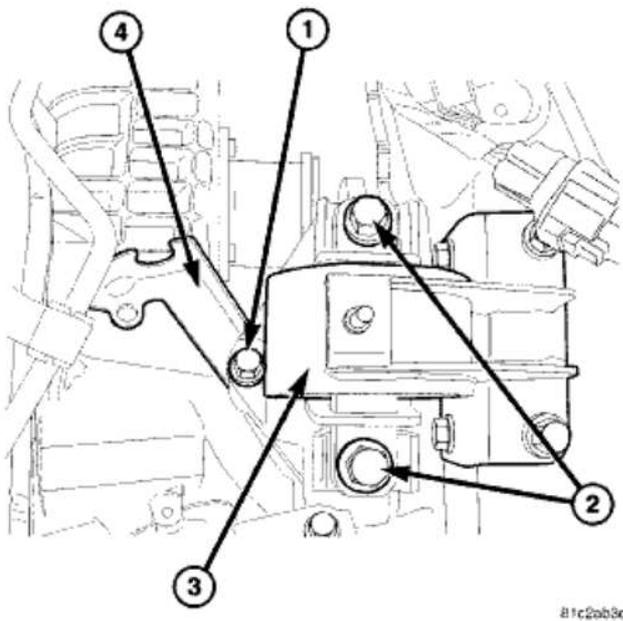


Fig. 12: Identifying Left Mount Bolts

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Courtesy of CHRYSLER LLC

6. Remove the bolts at left mount (1, 2).

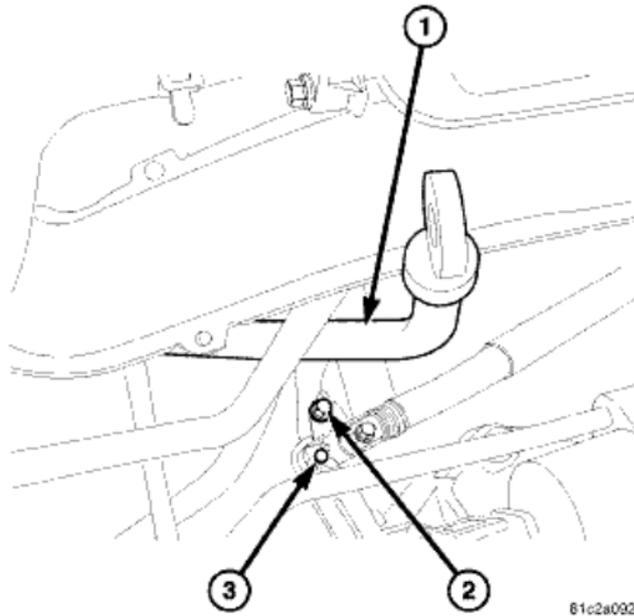
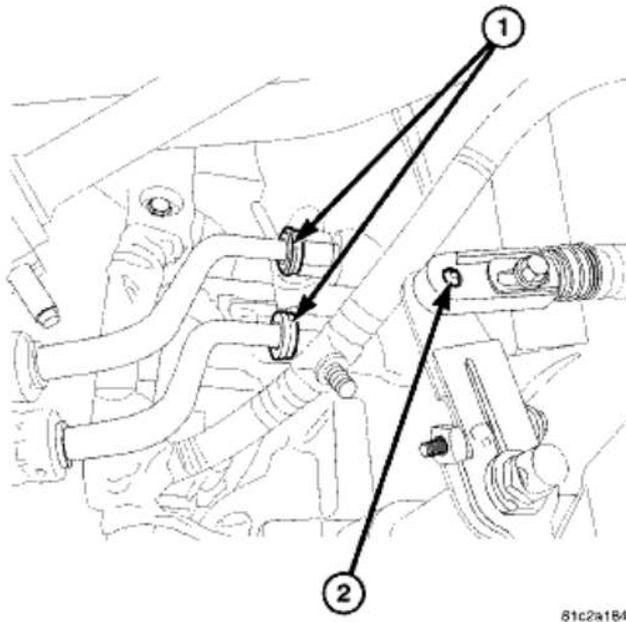


Fig. 13: Removing/Installing Fluid Level Indicator/Tube Assembly
Courtesy of CHRYSLER LLC

7. Remove the bolt (2) at the fluid level indicator/tube assembly.
8. Remove fluid level indicator/tube assembly (1). Plug opening to prevent debris from entering transaxle.

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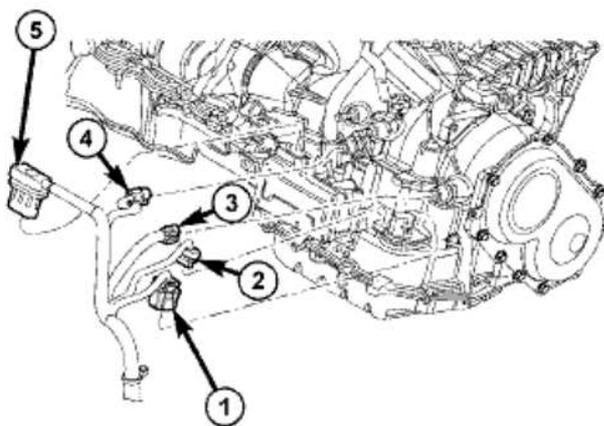
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Fig. 14: Identifying Oil Cooler Lines
Courtesy of CHRYSLER LLC

9. Disconnect oil cooler lines (1) from transaxle using Disconnect Tool 8875A.



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Fig. 15: Identifying Transmission Electrical Connectors
Courtesy of CHRYSLER LLC

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10. Disconnect the electrical connectors at transmission (1, 2, 3, 4 and 5).

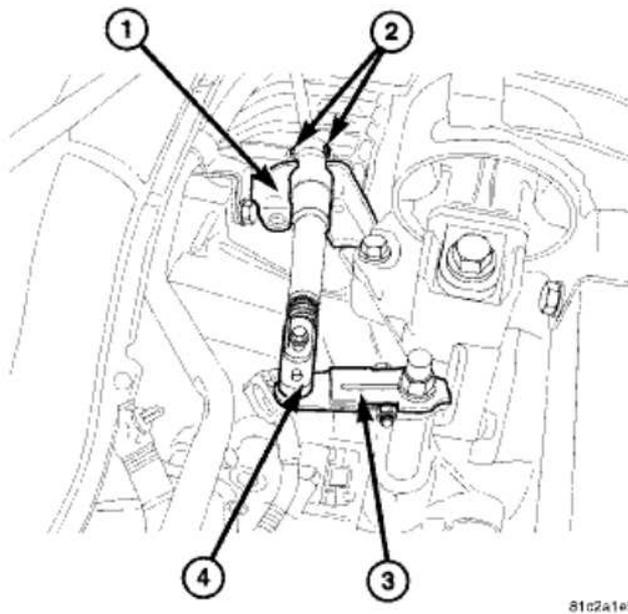
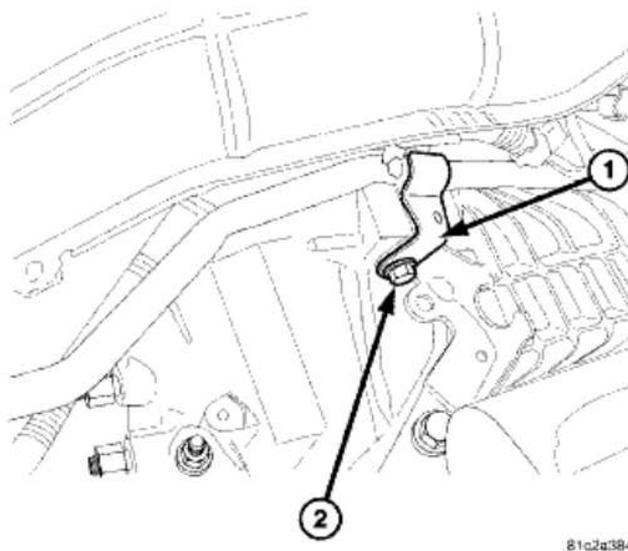


Fig. 16: Identifying Shift Cable At Manual Valve & Cable Bracket
Courtesy of CHRYSLER LLC

11. Disconnect gear shift cable from manual valve (4) lever and cable bracket (2).

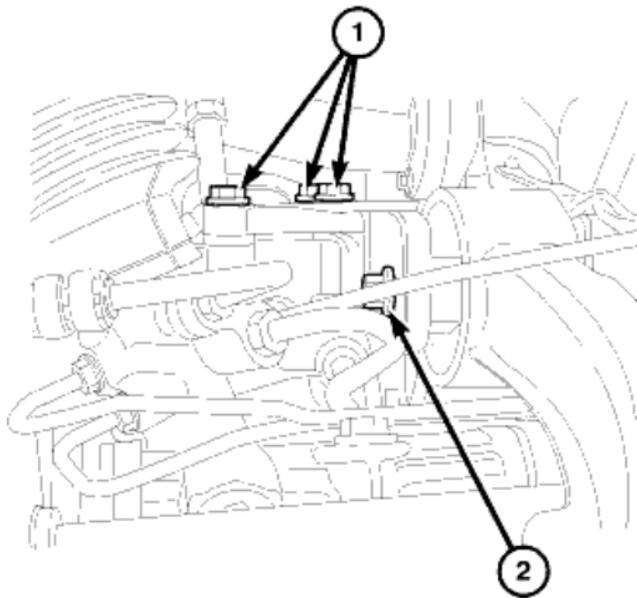


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Fig. 17: Identifying Heater Tube Bolt At Bellhousing
Courtesy of CHRYSLER LLC

12. Remove the heater tube bolt (1) at the bellhousing.
13. Move the heater tube out of the way to gain access to the bellhousing bolts.



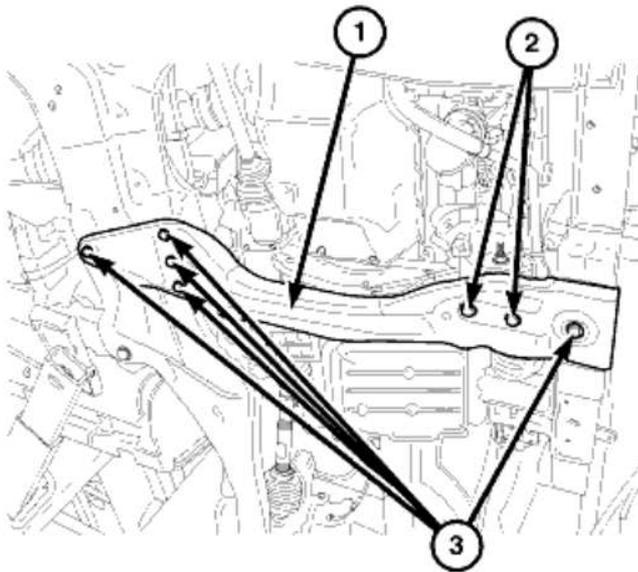
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Fig. 18: Identifying Rear Mount Bracket-To-Transaxle Case Bolts
Courtesy of CHRYSLER LLC

14. Remove rear mount bracket-to-transaxle case bolts (1).
15. Raise vehicle on hoist.
16. Remove transaxle oil pan and drain fluid into suitable container.
17. Remove front wheel/tire assemblies.
18. Remove left and right halfshaft assemblies. Refer to **Differential and Driveline/Half Shaft - Removal**.

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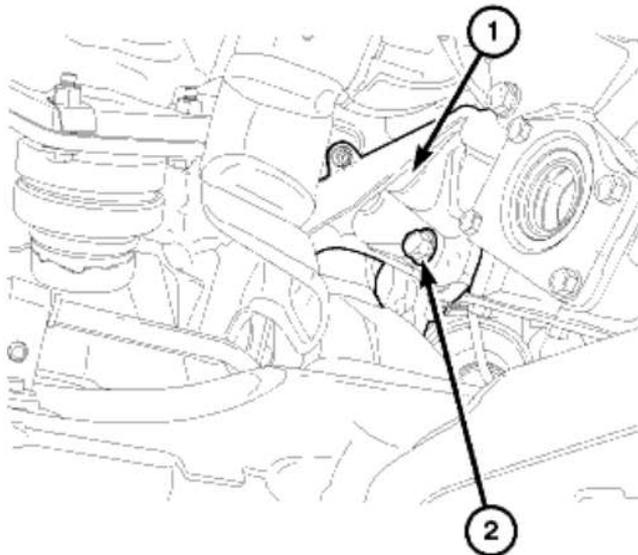
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Fig. 19: Removing/Installing Crossmember
Courtesy of CHRYSLER LLC

19. Support engine with a screw jack and transmission with a transmission jack.
20. Remove the bolts at the crossmember (2, 3).
21. Remove the crossmember (1).



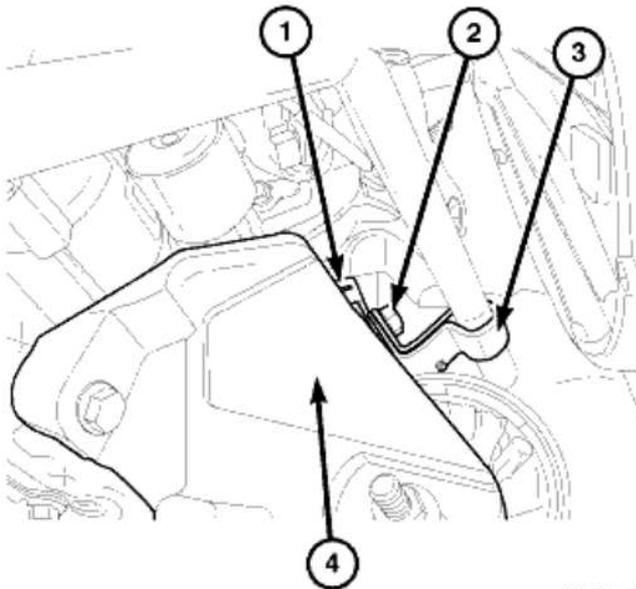
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Fig. 20: Removing/Installing Rear Mount Side Bolt
Courtesy of CHRYSLER LLC

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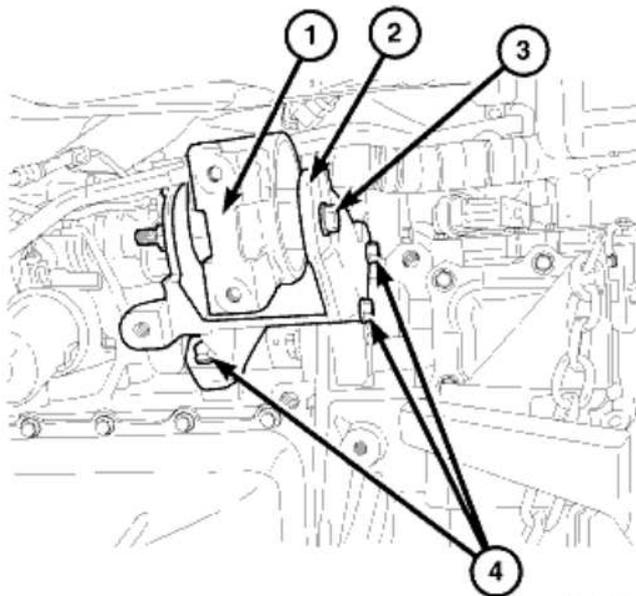
22. Remove the rear mount (1) side bolt (2).



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Fig. 21: Identifying Heater Tube & Ground Cable Bolt At Front Mount
Courtesy of CHRYSLER LLC

23. Remove the bolt (2) holding the ground cable (1) and the heater tube bracket (3) to the front mount (4).



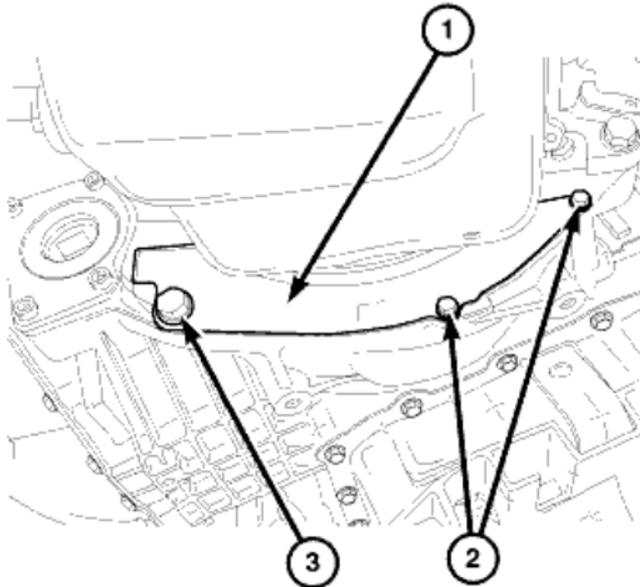
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Fig. 22: Removing/Installing Front Transmission Mount
Courtesy of CHRYSLER LLC

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24. Remove the bolts (4) at the front mount (2)
25. Remove the front mount (2).
26. Remove the starter motor. Refer to **Electrical - Engine Systems/Starting/STARTER - Removal** .



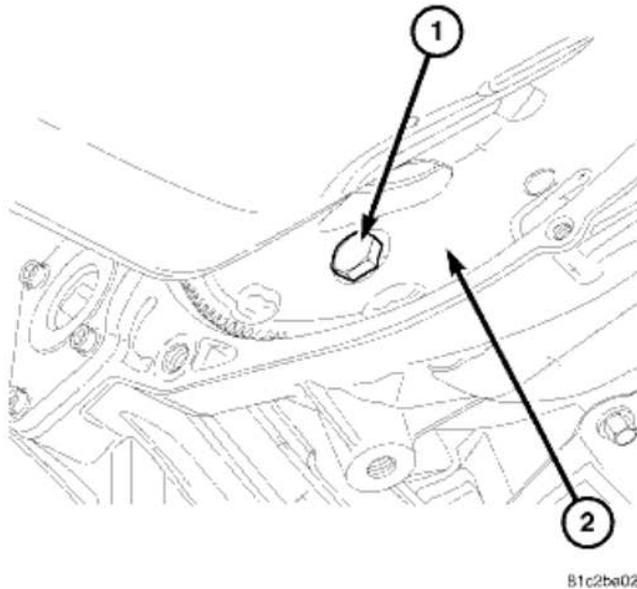
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Fig. 23: Removing/Installing Inspection Cover
Courtesy of CHRYSLER LLC

27. Remove inspection cover bolts (2, 3).
28. Remove inspection cover (1).

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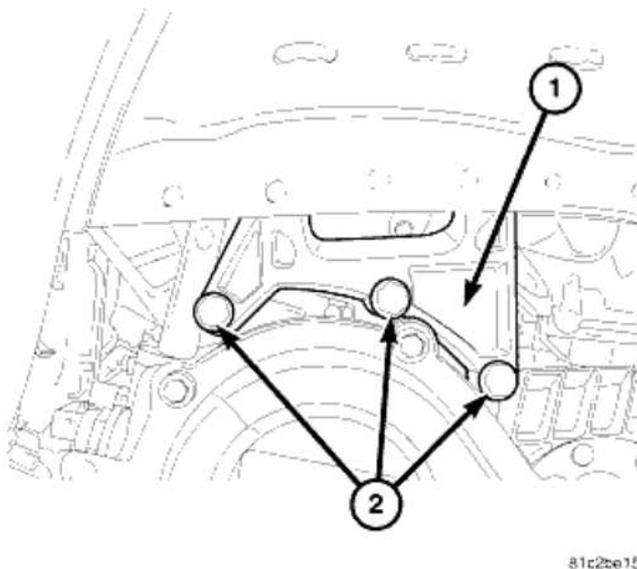
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81c2be02

Fig. 24: Removing/Installing Torque Converter-To-Drive Plate Bolts
Courtesy of CHRYSLER LLC

29. Remove torque converter-to-drive plate bolts (1).



81c2be15

Fig. 25: Removing/Installing Left Mount To Block Bolts
Courtesy of CHRYSLER LLC

30. Lower engine and transmission enough to gain access to the left mount to block bolts.
31. Remove left mount to block bolts (2).

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32. Remove left mount.

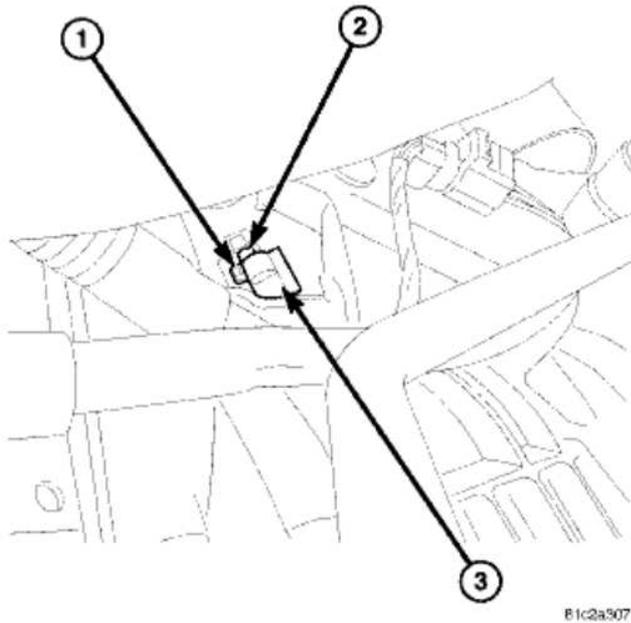


Fig. 26: Removing/Installing CKP Sensor
Courtesy of CHRYSLER LLC

33. Unplug the electrical connector (3) at the CKP sensor (2).
34. Remove the bolt (1) at the CKP sensor.
35. Remove CKP sensor (2).

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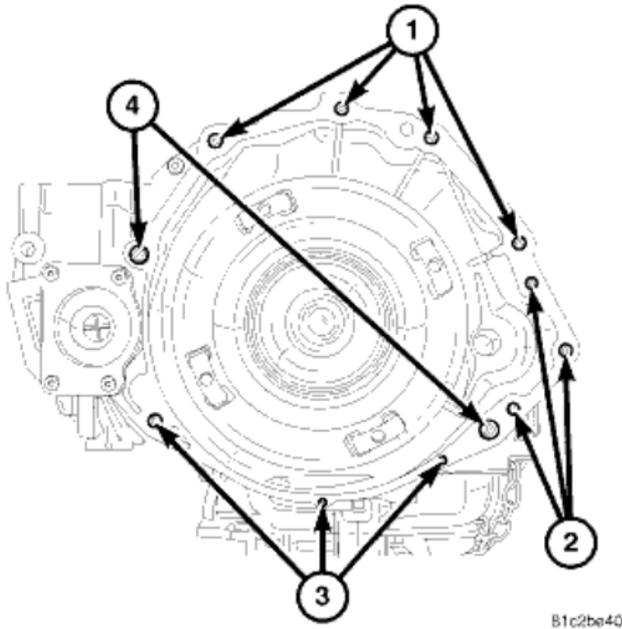


Fig. 27: Removing/Installing Bellhousing Upper & Lower Bolts
Courtesy of CHRYSLER LLC

36. Remove the bellhousing upper (1) and lower bolts (2) from transmission.
37. Remove transaxle assembly from vehicle.

DISASSEMBLY**DISASSEMBLY**

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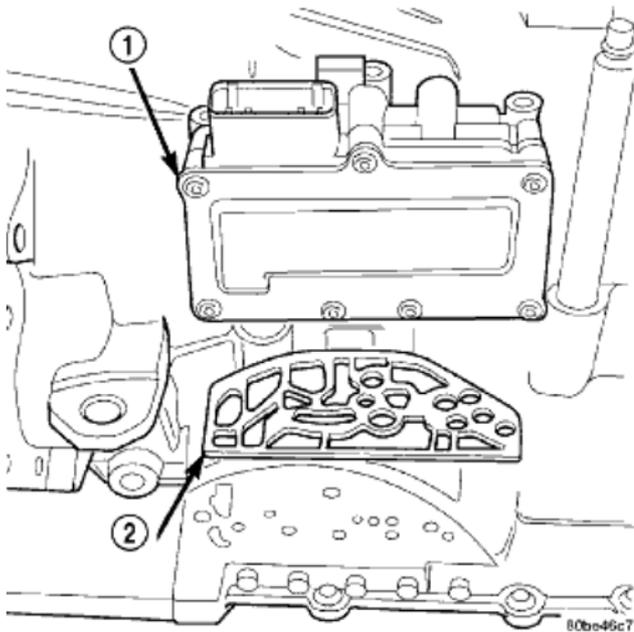


Fig. 28: Identifying Solenoid/Pressure Switch Assembly & Gasket
Courtesy of CHRYSLER LLC

- | |
|---------------------------------------|
| 1 - SOLENOID/PRESSURE SWITCH ASSEMBLY |
| 2 - GASKET |

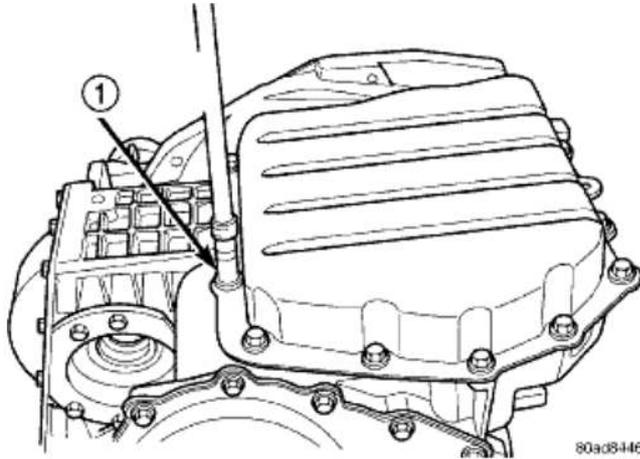
NOTE: If transaxle is being overhauled (clutch and/or seal replacement) or replaced, it is necessary to perform the PCM/TCM Quick Learn Procedure. Refer to Electrical - Electronic Control Modules/Electronic Control Modules/MODULE, Powertrain Control - Standard Procedure .

NOTE: This procedure does not include final drive (differential) disassembly.

1. Remove input and output speed sensors.
2. Remove the solenoid/pressure switch assembly-to-case bolts.
3. Remove solenoid/pressure switch assembly and gasket (2).

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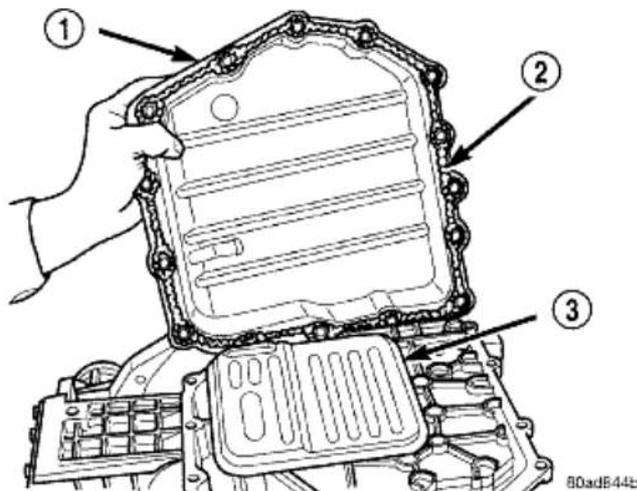


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Fig. 29: Identifying Oil Pan Bolts
Courtesy of CHRYSLER LLC

1 - OIL PAN BOLTS (USE RTV UNDER BOLT HEADS)

4. Remove oil pan-to-case bolts (1) .



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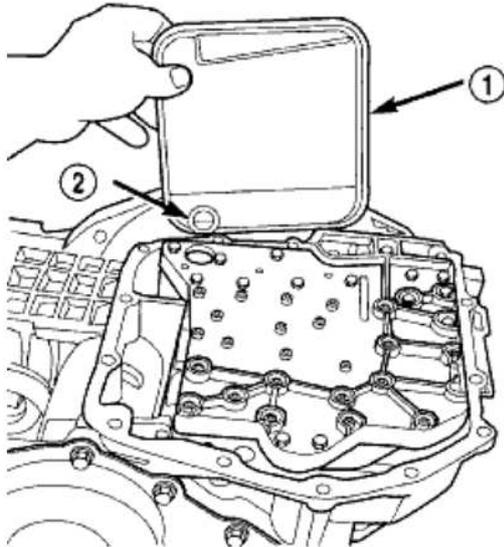
Fig. 30: Removing/Installing Oil Pan
Courtesy of CHRYSLER LLC

1 - OIL PAN
2 - 1/8 INCH BEAD OF MOPAR® ATF RTV (MS-GF41)
3 - OIL FILTER

5. Remove oil pan (1) .

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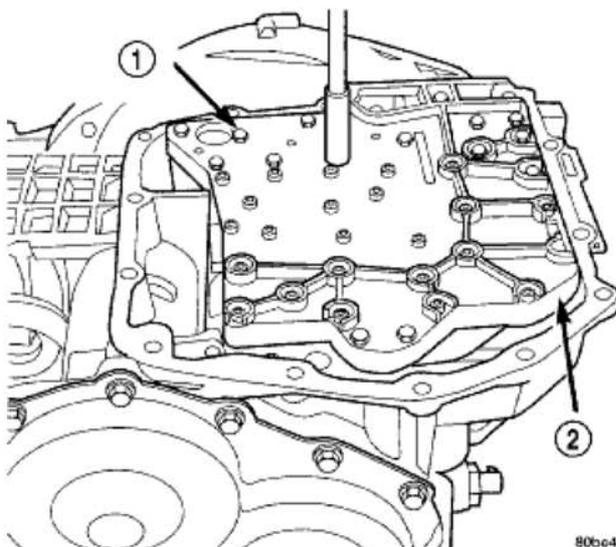


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Fig. 31: Removing/Installing Oil Filter
Courtesy of CHRYSLER LLC

- | |
|----------------|
| 1 - OIL FILTER |
| 2 - O-RING |

6. Remove oil filter (1) .



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Fig. 32: Removing/Installing Valve Body-To-Case Bolts
Courtesy of CHRYSLER LLC

- | |
|-------------------------------------|
| 1 - VALVE BODY ATTACHING BOLTS (18) |
|-------------------------------------|

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2 - VALVE BODY

7. Turn manual valve fully clockwise to get park rod into position for removal.
8. Remove valve body-to-case bolts (1) .

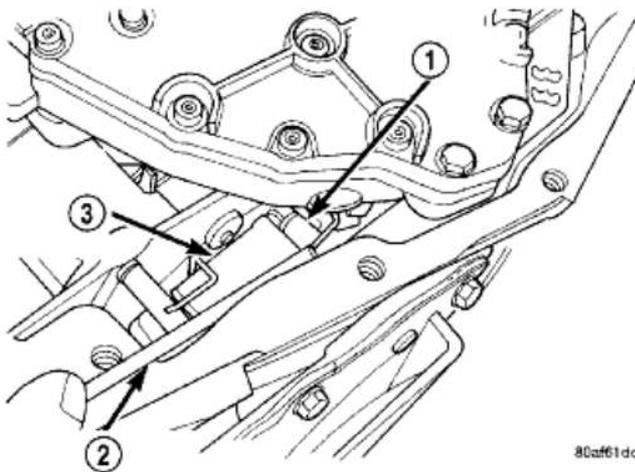


Fig. 33: Identifying Push Park Rod Rollers & Guide Bracket
Courtesy of CHRYSLER LLC

- | |
|------------------------------|
| 1 - PARK SPRAG ROLLERS |
| 2 - SCREWDRIVER |
| 3 - PARK SPRAG GUIDE BRACKET |

9. Using a screwdriver (2), push park rod rollers away from guide bracket (3) .

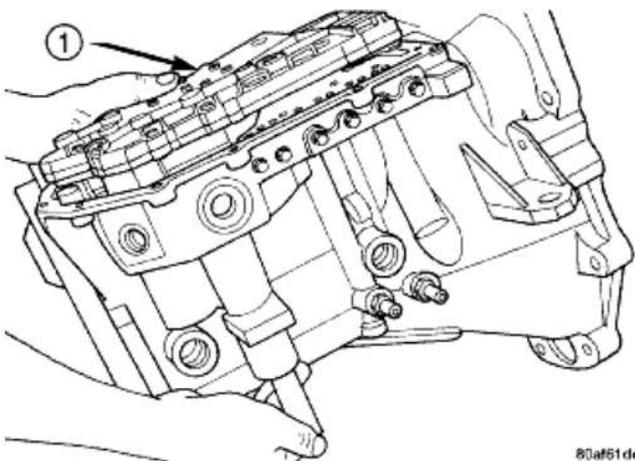


Fig. 34: Removing/Installing Valve Body Assembly
Courtesy of CHRYSLER LLC

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1 - VALVE BODY

CAUTION: Do not handle the valve body assembly from the manual valve.
Damage can result.

10. Remove valve body assembly (1).

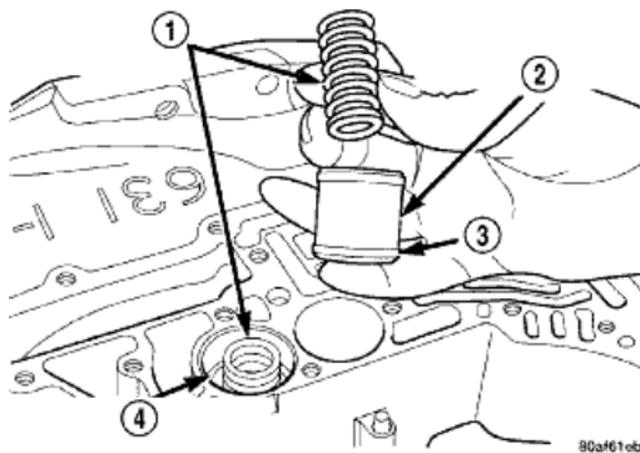


Fig. 35: Removing/Installing Underdrive & Overdrive Accumulators
Courtesy of CHRYSLER LLC

1 - RETURN SPRING
2 - UNDERDRIVE CLUTCH ACCUMULATOR
3 - SEAL RING (2)
4 - OVERDRIVE CLUTCH ACCUMULATOR

NOTE: Depending on engine application, some accumulators will have two springs and others will have one spring. The springs are color-coded according to application and year. When disassembling, mark accumulator spring location to ease assembly.

11. Remove underdrive (2) and overdrive (4) accumulators.

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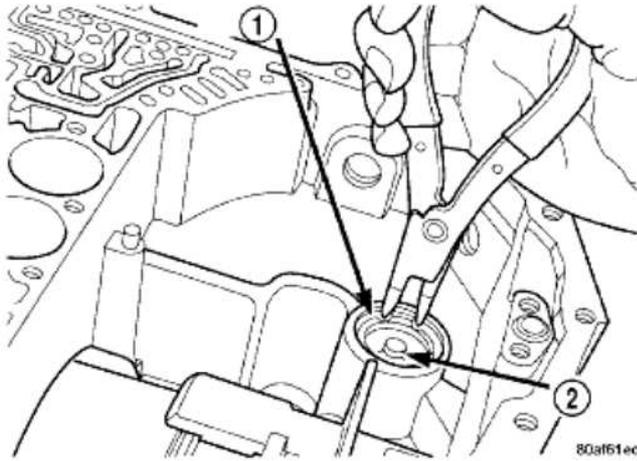


Fig. 36: Removing/Installing Low/Reverse Accumulator Snap Ring
Courtesy of CHRYSLER LLC

1 - SNAP RING
2 - PLUG

12. Remove low/reverse accumulator snap ring (1) .

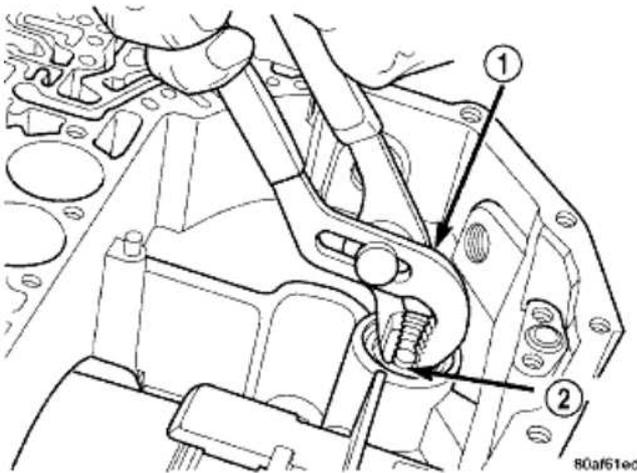


Fig. 37: Removing/Installing Low/Reverse Accumulator Plug
Courtesy of CHRYSLER LLC

1 - ADJUSTABLE PLIERS
2 - PLUG

13. Remove low/reverse accumulator plug (2) .

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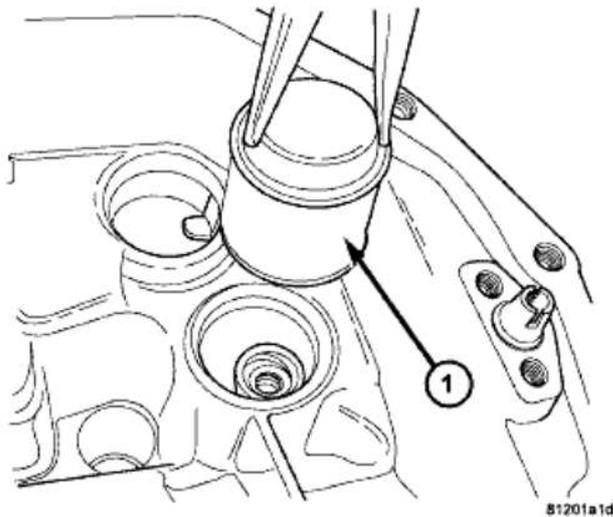


Fig. 38: Removing/Installing Low/Reverse Accumulator Piston
Courtesy of CHRYSLER LLC

1 - ACCUMULATOR PISTON

14. Remove low/reverse accumulator piston (1) using suitable pliers.

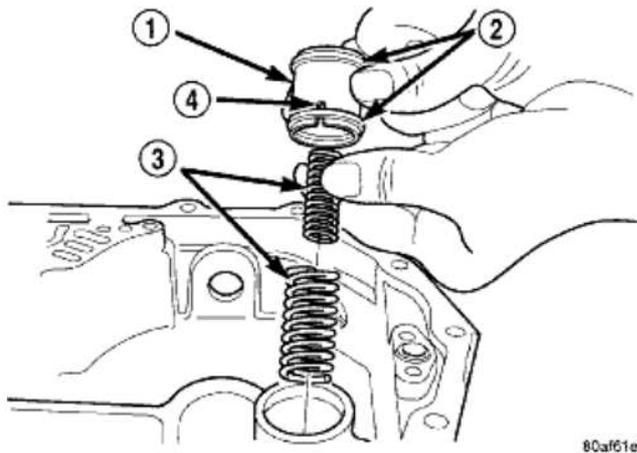


Fig. 39: Removing/Installing Low/Reverse Accumulator Return Springs
Courtesy of CHRYSLER LLC

1 - ACCUMULATOR PISTON

2 - SEAL RINGS

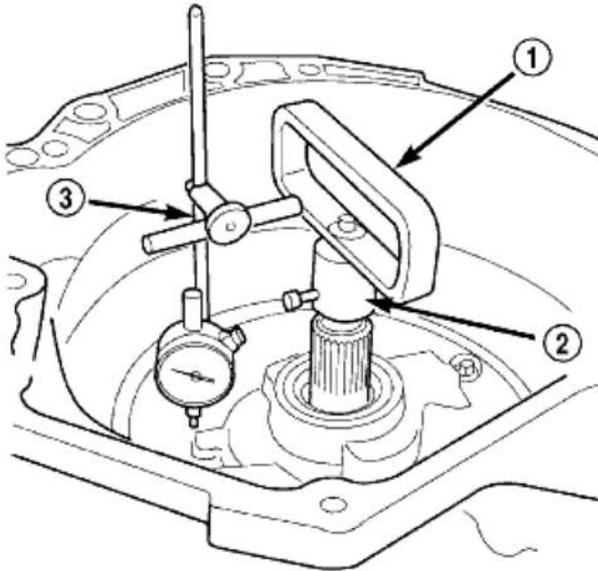
3 - RETURN SPRINGS

4 - (NOTE NOTCH)

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15. Remove low/reverse accumulator return springs (3) .



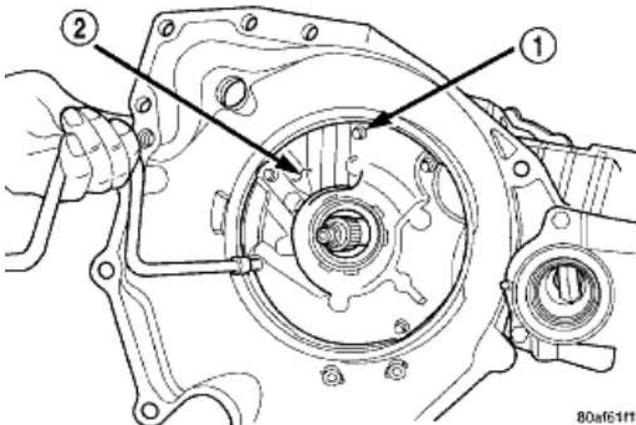
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Fig. 40: Measuring Input Shaft End Play Using End Play Fixtures 8266 & Dial Indicator C-3339A
Courtesy of CHRYSLER LLC

1 - END PLAY FIXTURES 8266A

2 - DIAL INDICATOR C-3339A

16. Measure input shaft end play. Place transaxle so input shaft is vertical. Set up End Play fixture and dial indicator (2,3) . **Input shaft end play should be within 0.13-0.64 mm (0.005-0.025 in.)**. If outside of this range, a #4 thrust plate change is required. Record indicator reading for reference upon reassembly.



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Fig. 41: Removing/Installing Oil Pump-To-Case Bolts
Courtesy of CHRYSLER LLC

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- | |
|--------------------------|
| 1 - PUMP ATTACHING BOLTS |
| 2 - PUMP HOUSING |

17. Remove oil pump-to-case bolts (1) .

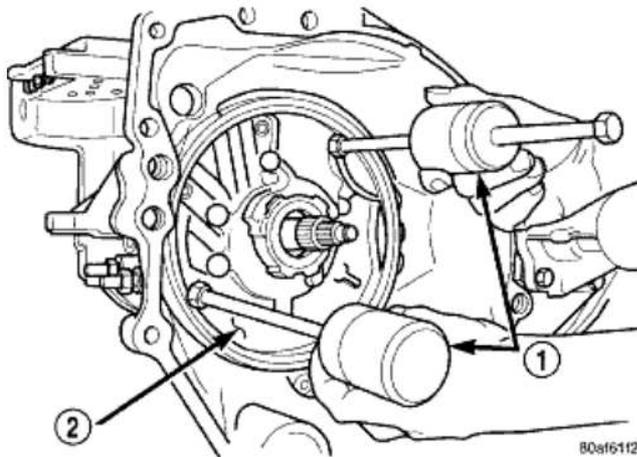


Fig. 42: Identifying Slide Hammers C-3752 & Oil Pump
Courtesy of CHRYSLER LLC

- | |
|--------------------------|
| 1 - SLIDE HAMMERS C-3752 |
| 2 - PUMP |

CAUTION: Be sure input speed sensor is removed before removing oil pump.

18. Install slide hammers C-3752 (1) .

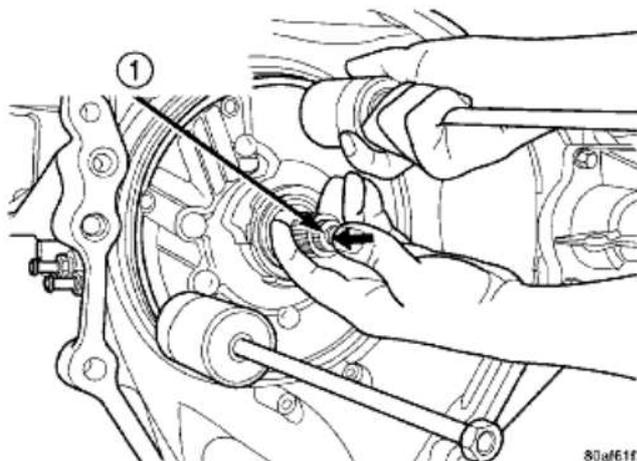


Fig. 43: Removing/Installing Oil Pump Assembly

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Courtesy of CHRYSLER LLC

1 - "PUSH IN" ON INPUT SHAFT WHILE REMOVING PUMP

19. Remove oil pump assembly (1) .

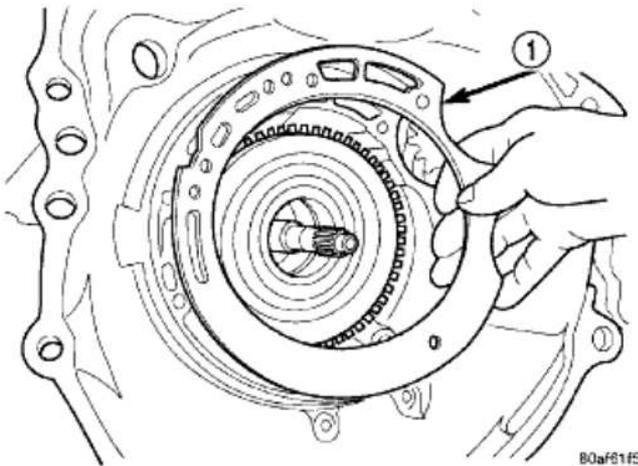


Fig. 44: Removing/Installing Oil Pump Gasket
Courtesy of CHRYSLER LLC

1 - PUMP GASKET

20. Remove oil pump gasket (1) .

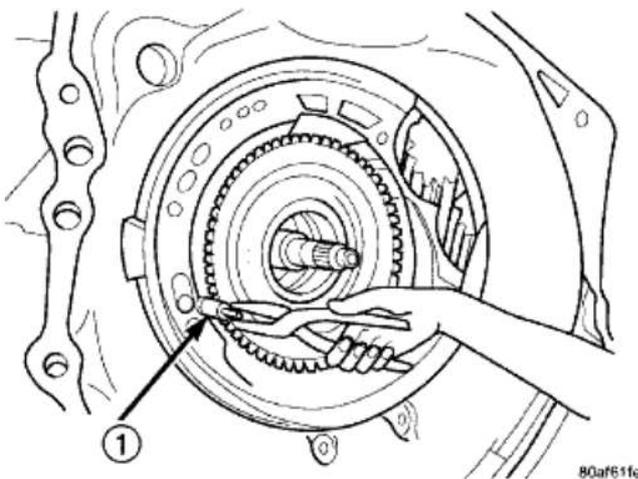


Fig. 45: Removing/Installing Cooler Bypass Valve
Courtesy of CHRYSLER LLC

1 - COOLER BYPASS VALVE

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CAUTION: If transaxle failure has occurred, the cooler bypass valve must be replaced. Do not re-use or attempt to clean valve.

21. Remove cooler bypass valve (1) .

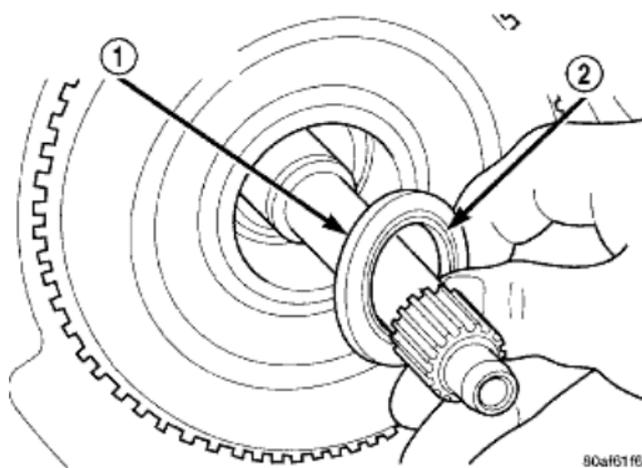


Fig. 46: Removing/Installing #1 Caged Needle Bearing
Courtesy of CHRYSLER LLC

- | |
|-----------------------------|
| 1 - #1 CAGED NEEDLE BEARING |
| 2 - NOTE: TANGED SIDE OUT |

22. Remove #1 needle bearing (1) .

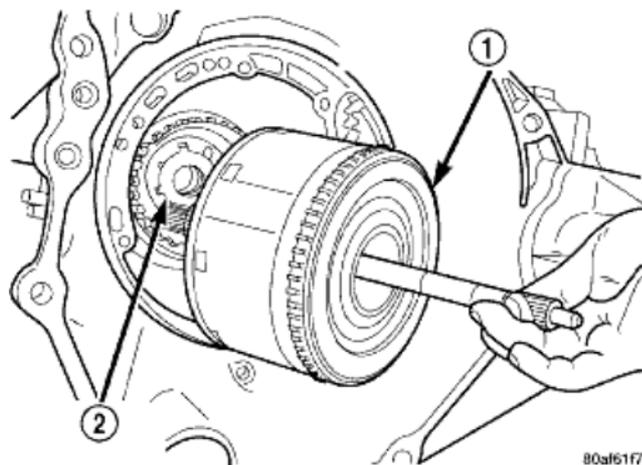


Fig. 47: Removing/Installing Input Clutch Assembly
Courtesy of CHRYSLER LLC

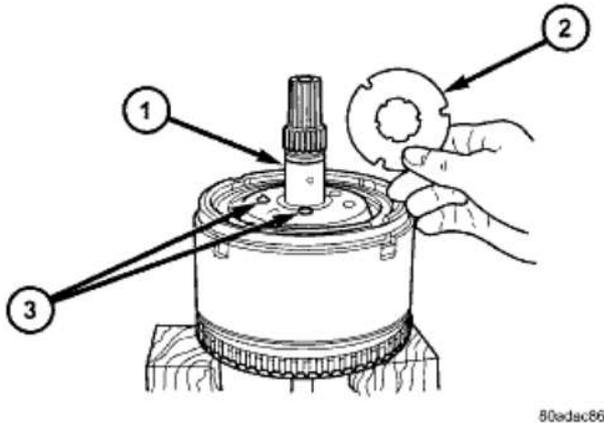
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|---------------------------|
| 1 - INPUT CLUTCH ASSEMBLY |
|---------------------------|

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2 - #4 THRUST WASHER

23. Remove input clutch assembly (1) .

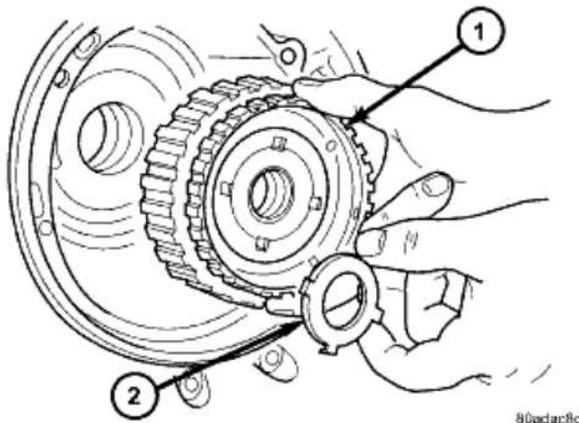


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Fig. 48: Removing/Installing #4 Thrust Plate
Courtesy of CHRYSLER LLC

1 - OVERDRIVE SHAFT ASSEMBLY
2 - #4 THRUST PLATE (SELECT)
3 - 3 DABS OF PETROLATUM FOR RETENTION

24. Remove #4 thrust plate (2) .



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Fig. 49: Removing/Installing Front Sun Gear Assembly
Courtesy of CHRYSLER LLC

1 - FRONT SUN GEAR ASSEMBLY

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2 - #4 THRUST WASHER (FOUR TABS)

25. Remove front sun gear assembly (1) and #4 thrust washer (2).

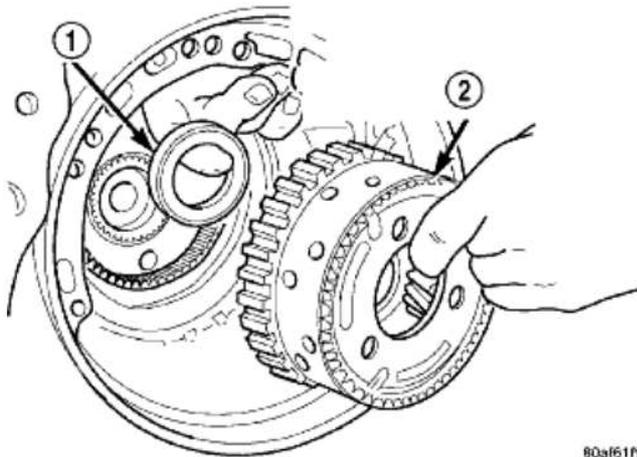


Fig. 50: Removing/Installing Front Carrier/Rear Annulus Assembly
Courtesy of CHRYSLER LLC

1 - #6 NEEDLE BEARING

2 - FRONT CARRIER AND REAR ANNULUS ASSEMBLY (TWIST AND PULL OR PUSH TO REMOVE OR INSTALL).

26. Remove front carrier/rear annulus assembly (2) and #6 needle bearing (1).

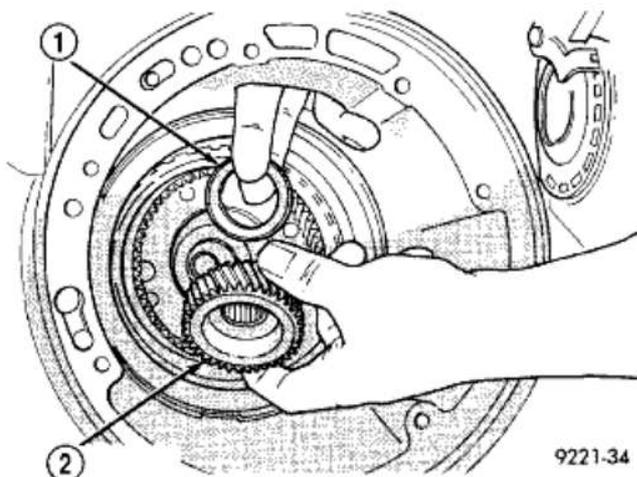


Fig. 51: Removing/Installing Rear Sun Gear
Courtesy of CHRYSLER LLC

1 - #7 NEEDLE BEARING

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2 - REAR SUN GEAR

27. Remove rear sun gear (2) and #7 needle bearing (1).

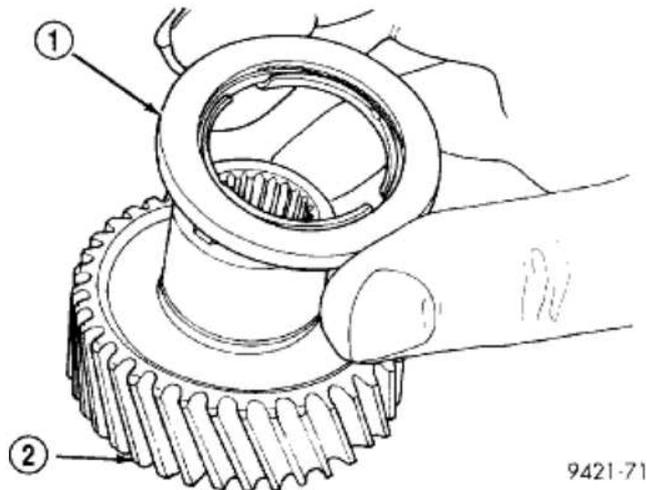


Fig. 52: Removing/Installing #7 Needle Bearing
Courtesy of CHRYSLER LLC

1 - #7 NEEDLE BEARING
2 - REAR SUN GEAR

NOTE: The number 7 needle bearing (1) has three anti-reversal tabs and is common with the number five and number two position. The orientation should allow the bearing to seat flat against the rear sun gear (2). A small amount of petrolatum can be used to hold the bearing to the rear sun gear.

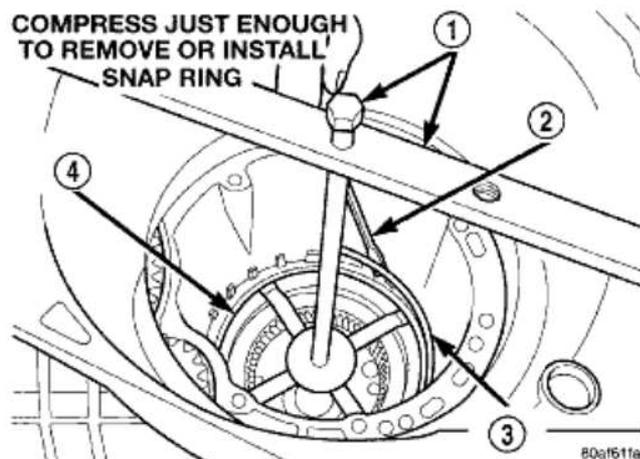


Fig. 53: Removing/Installing Snap Ring
Courtesy of CHRYSLER LLC

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- | |
|-----------------------------|
| 1 - SPRING COMPRESSOR 5058A |
| 2 - SCREWDRIVER |
| 3 - SNAP RING |
| 4 - 2/4 CLUTCH RETAINER |

28. Setup spring compressor 5058A (1) , Compress 2/4 clutch return spring (4) (just enough to remove snap ring) and remove snap ring (3).

NOTE: Verify that spring compressor 5058A is centered properly over the 2/4 clutch retainer before compressing. If necessary, fasten the 5058A bar to the bellhousing flange with any combination of locking pliers and bolts to center the tool properly.

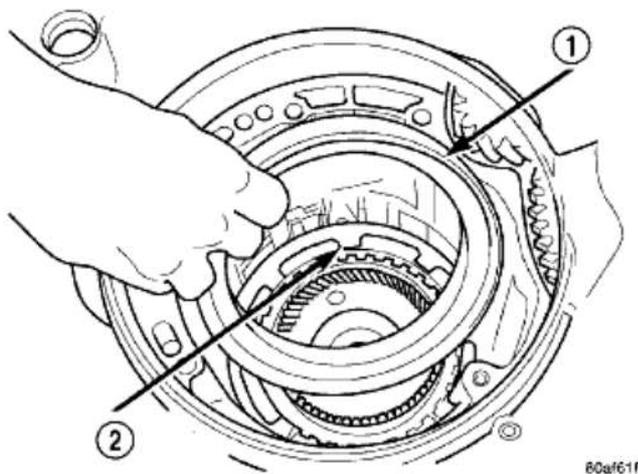


Fig. 54: Removing/Installing 2/4 Clutch Retainer
Courtesy of CHRYSLER LLC

- | |
|------------------------------|
| 1 - 2/4 CLUTCH RETAINER |
| 2 - 2/4 CLUTCH RETURN SPRING |

NOTE: The 2/4 Clutch Piston has bonded seals which are not individually serviceable. Seal replacement requires replacement of the piston assembly.

29. Remove 2/4 clutch retainer (1) .

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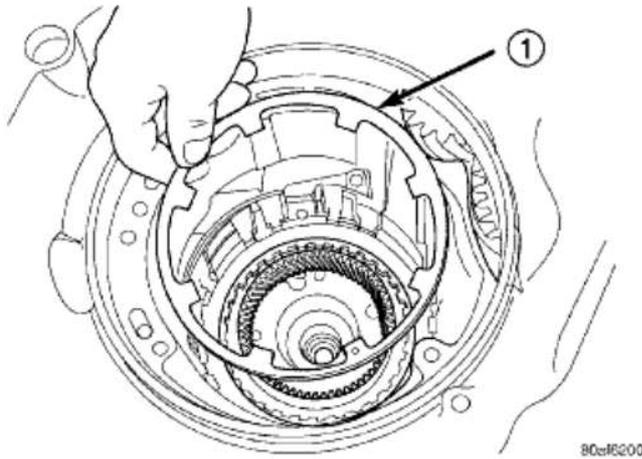


Fig. 55: Removing/Installing 2/4 Clutch Return Spring
Courtesy of CHRYSLER LLC

1 - 2/4 CLUTCH RETURN SPRING

30. Remove 2/4 clutch return spring (1) .

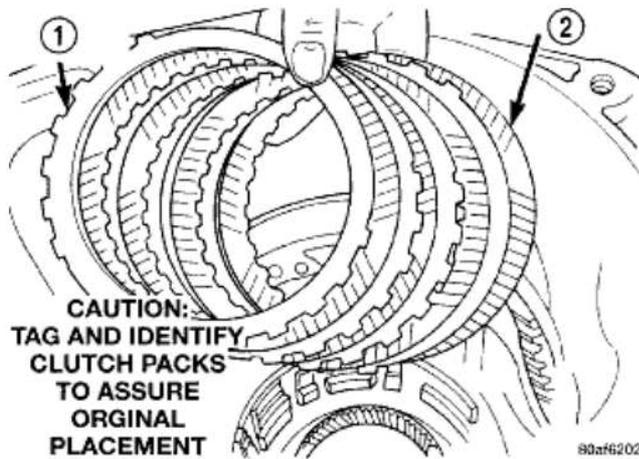


Fig. 56: Removing/Installing 2/4 Clutch Pack
Courtesy of CHRYSLER LLC

1 - CLUTCH PLATE (4)

2 - CLUTCH DISC (4)

31. Remove 2/4 clutch pack (1,2) . **Tag 2/4 clutch pack for reassembly identification.**

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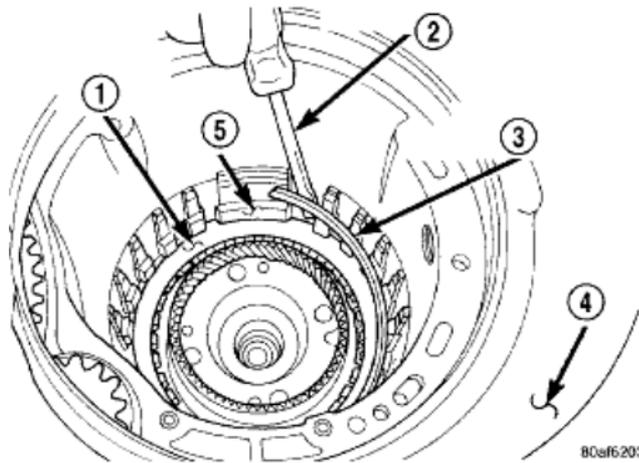


Fig. 57: Removing/Installing Tapered Snap Ring
Courtesy of CHRYSLER LLC

1 - LOW/REVERSE CLUTCH REACTION PLATE
2 - SCREWDRIVER
3 - LOW/REVERSE TAPERED SNAP RING (TAPERED SIDE UP)
4 - OIL PAN FACE
5 - LONG TAB

32. Remove tapered snap ring (3) .

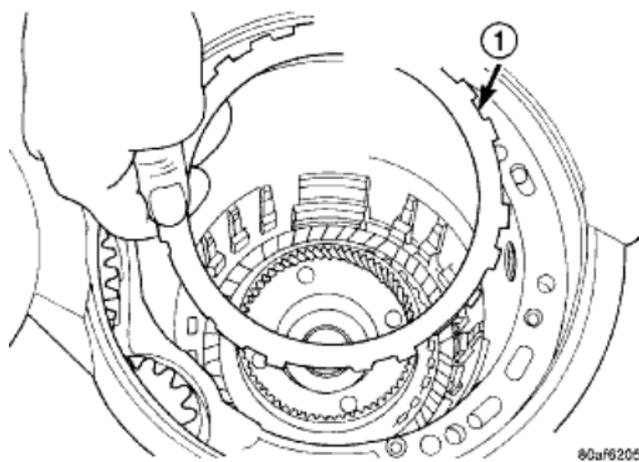


Fig. 58: Removing/Installing Low/Reverse Reaction Plate
Courtesy of CHRYSLER LLC

1 - LOW/REVERSE REACTION PLATE (FLAT SIDE UP)

33. Remove low/reverse reaction plate (1) .

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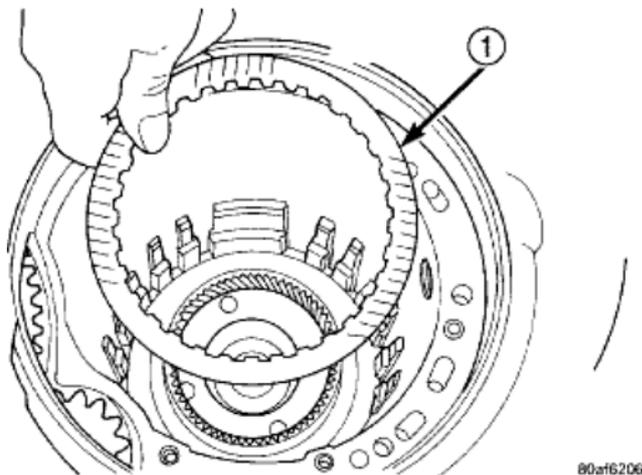


Fig. 59: Removing/Installing Low/Reverse Clutch Disc
Courtesy of CHRYSLER LLC

1 - ONE DISC FROM LOW/REVERSE CLUTCH

34. Remove one low/reverse clutch disc (1) .

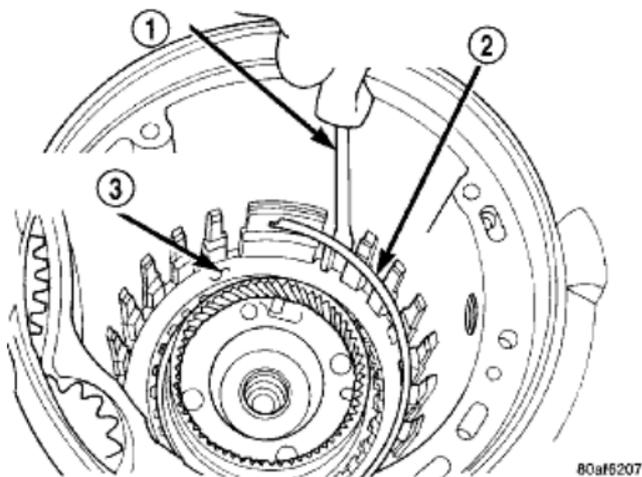


Fig. 60: Removing/Installing Low/Reverse Reaction Plate Snap Ring
Courtesy of CHRYSLER LLC

1 - SCREWDRIVER
2 - LOW/REVERSE REACTION PLATE FLAT SNAP RING
3 - DO NOT SCRATCH CLUTCH PLATE

35. Remove low/reverse reaction plate snap ring (2) .

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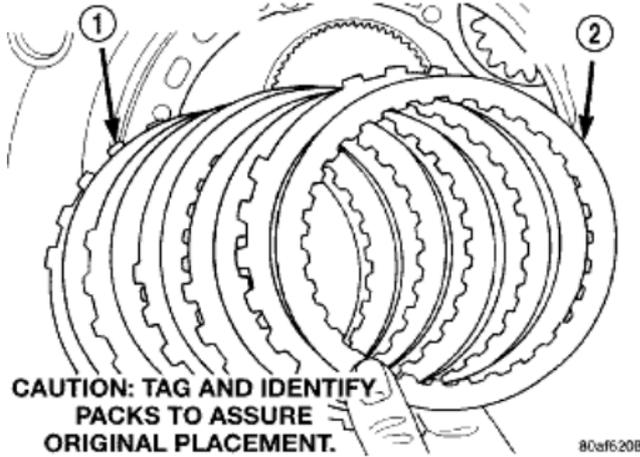


Fig. 61: Removing/Installing Low/Reverse Clutch Pack
Courtesy of CHRYSLER LLC

- | |
|-----------------------|
| 1 - CLUTCH PLATES (5) |
| 2 - CLUTCH DISCS (5) |

36. Remove low/reverse clutch pack (1,2) .

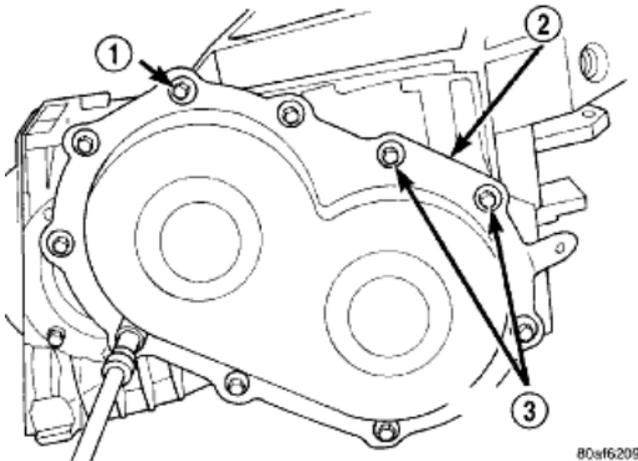


Fig. 62: Removing/Installing Transfer Gear Cover-To-Case Bolts
Courtesy of CHRYSLER LLC

- | |
|--------------------------|
| 1 - REAR COVER BOLTS |
| 2 - REAR COVER |
| 3 - USE SEALANT ON BOLTS |

37. Remove transfer gear cover-to-case bolts (1) .

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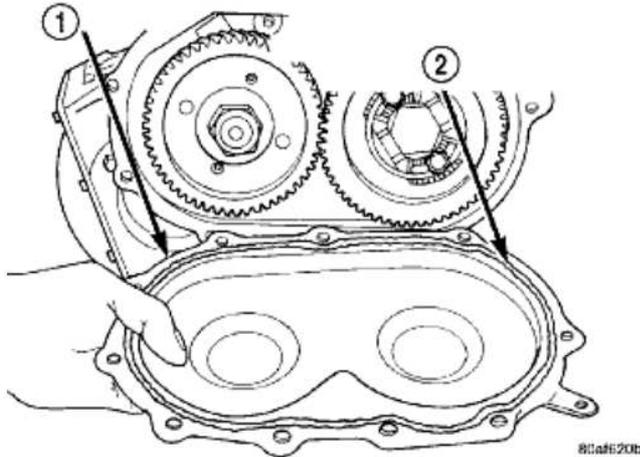


Fig. 63: Removing/Installing Transfer Gear Cover
Courtesy of CHRYSLER LLC

1 - REAR COVER

2 - 1/8 INCH BEAD OF MOPAR® ATF RTV (MS-GF41)

38. Remove transfer gear cover (1) .

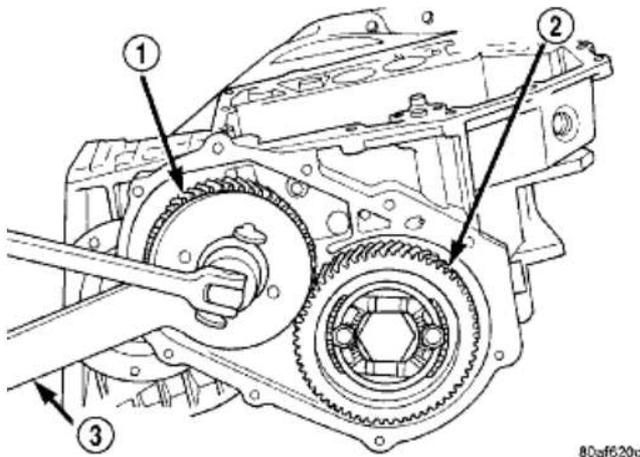


Fig. 64: Identifying Holder 6259
Courtesy of CHRYSLER LLC

1 - TRANSFER SHAFT GEAR

2 - OUTPUT GEAR

3 - HOLDER 6259

39. Install holder 6259 (3) .

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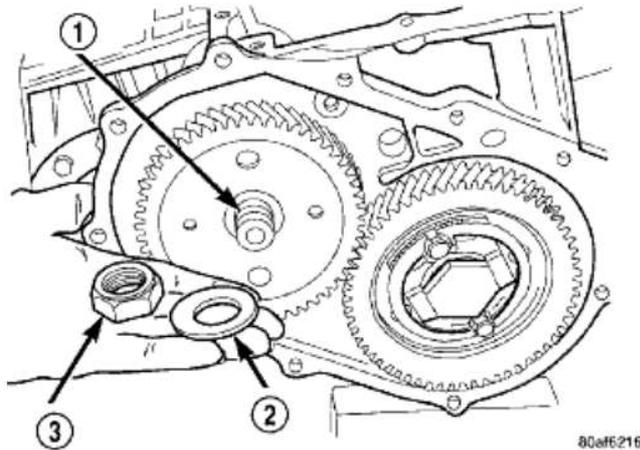


Fig. 65: Removing/Installing Transfer Shaft Gear Nut & Coned Washer
Courtesy of CHRYSLER LLC

- | |
|--------------------|
| 1 - TRANSFER SHAFT |
| 2 - LOCK WASHER |
| 3 - NUT |

40. Remove transfer shaft gear-to-shaft nut (3) and coned washer (2).

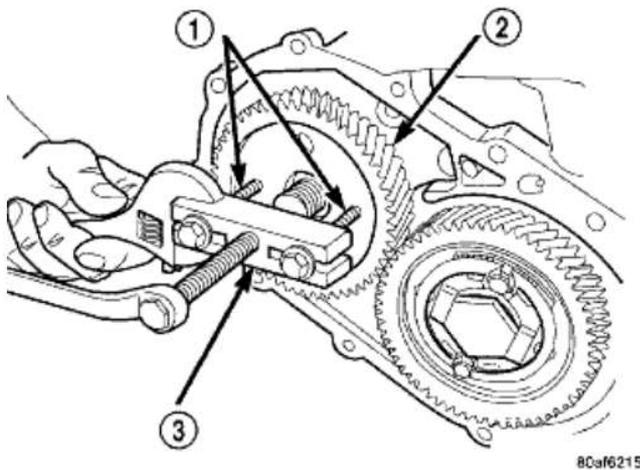


Fig. 66: Removing/Installing Transfer Shaft Gear
Courtesy of CHRYSLER LLC

- | |
|-------------------------|
| 1 - GEAR PULLER L-4407A |
| 2 - TRANSFER SHAFT GEAR |

41. Using Gear Puller L-4407A (3) remove transfer shaft gear (2).

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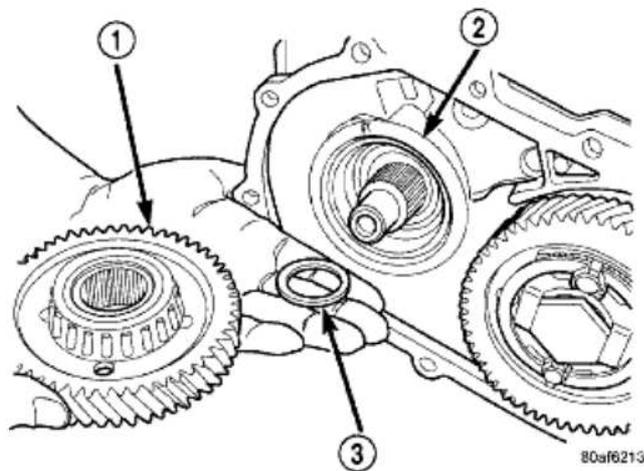


Fig. 67: Removing/Installing Transfer Gear Shim (Select)
Courtesy of CHRYSLER LLC

- | |
|--------------------------|
| 1 - TRANSFER SHAFT GEAR |
| 2 - BEARING CUP RETAINER |
| 3 - SHIM (SELECT) |

42. Remove transfer gear shim (select) (3) .

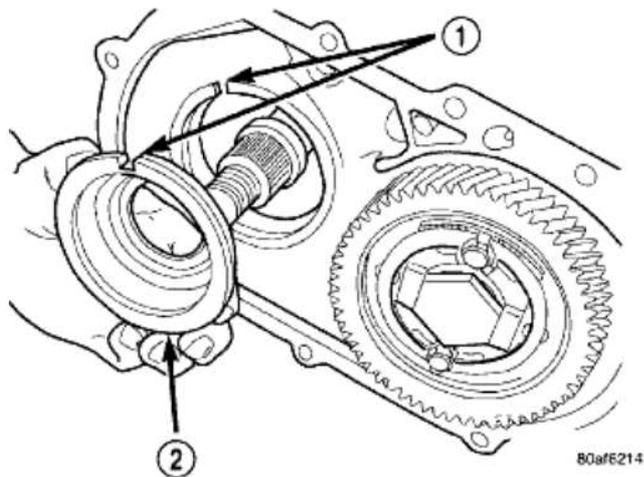


Fig. 68: Removing/Installing Bearing Cup Retainer
Courtesy of CHRYSLER LLC

- | |
|--------------------------------|
| 1 - ALIGN INDEXING TAB TO SLOT |
| 2 - BEARING CUP RETAINER |

43. Remove bearing cup retainer (2) .

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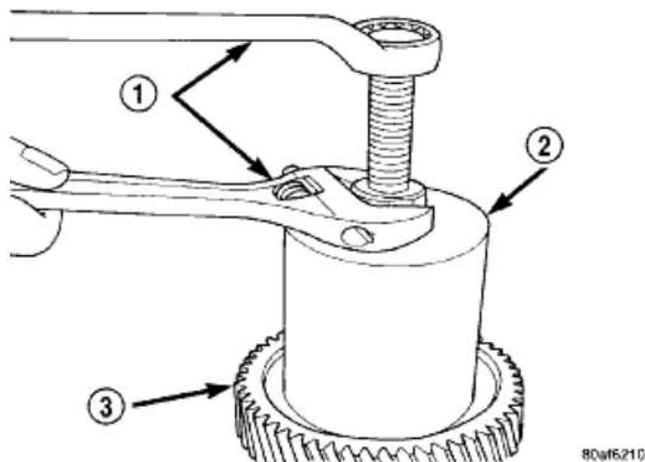


Fig. 69: Removing Transfer Gear Bearing Cone
Courtesy of CHRYSLER LLC

1 - WRENCHES

2 - BEARING PULLER 5048 WITH JAWS 5048-4 AND THRUST PAD L-4539-2

3 - TRANSFER SHAFT GEAR

44. Remove transfer gear bearing cone using setup using bearing puller 5048 with jaws 5048-4 and thrust pad L-4539-2 (2) .

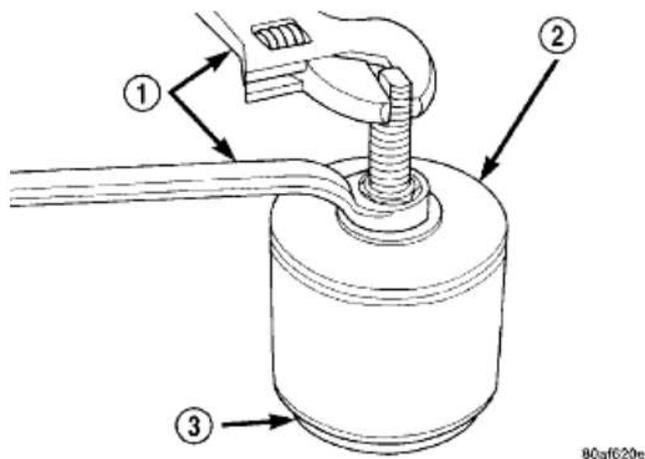


Fig. 70: Removing Transfer Shaft Bearing Cup
Courtesy of CHRYSLER LLC

1 - WRENCHES

2 - BEARING CUP PULLER 6062A

3 - TRANSFER SHAFT BEARING CUP RETAINER

45. Remove transfer shaft bearing cup from retainer (3) using bearing cup puller 6062A (2).

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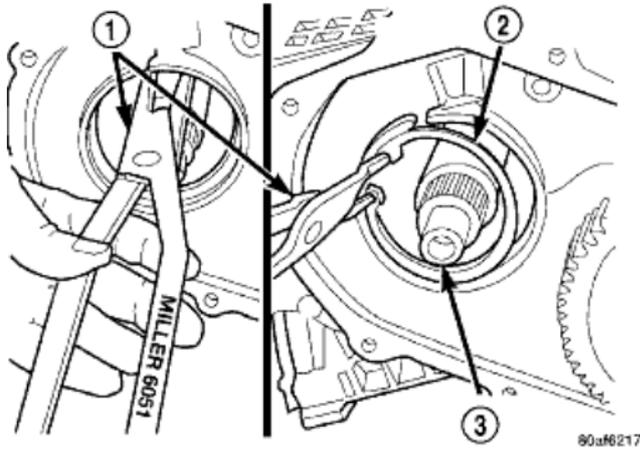


Fig. 71: Removing/Installing Transfer Shaft Bearing Snap Ring
Courtesy of CHRYSLER LLC

1 - SNAP RING PLIERS 6051A
2 - TRANSFER SHAFT BEARING SNAP RING
3 - TRANSFER SHAFT

46. Using Snap Ring Pliers 6051A (1) remove transfer shaft bearing snap ring (2).

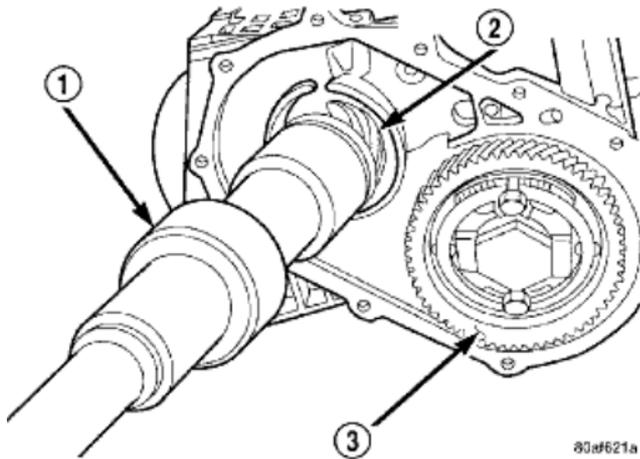


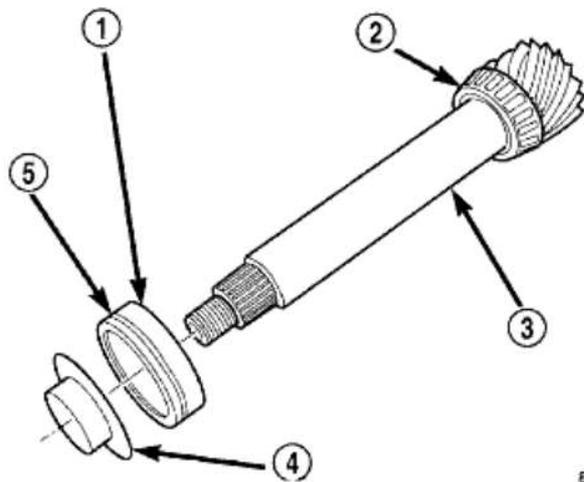
Fig. 72: Removing/Installing Transfer Shaft
Courtesy of CHRYSLER LLC

1 - REMOVER/INSTALLER 5049-A
2 - TRANSFER SHAFT
3 - OUTPUT GEAR

47. Using the Remover/Installer 5049-A (1) remove transfer shaft (2) from transaxle.

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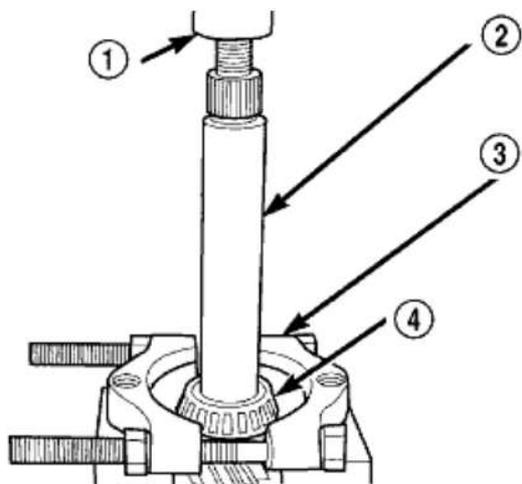
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Fig. 73: Identifying Bearing Cup Retainer & Oil Baffle

Courtesy of CHRYSLER LLC

- | |
|--------------------|
| 1 - BEARING CUP |
| 2 - BEARING CONE |
| 3 - TRANSFER SHAFT |
| 4 - OIL BAFFLE |
| 5 - O-RING |

48. Slip bearing cup retainer (1) and oil baffle (4) off of shaft.



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Fig. 74: Identifying Bearing Splitter P-334, Transfer Shaft Bearing Cone, & Transfer Shaft

Courtesy of CHRYSLER LLC

- | |
|----------------------------|
| 1 - ARBOR PRESS RAM |
| 2 - TRANSFER SHAFT |
| 3 - BEARING SPLITTER P-334 |

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4 - BEARING CONE

49. Using Bearing Splitter P-334 (3) press transfer shaft bearing cone (4) off of shaft (2).

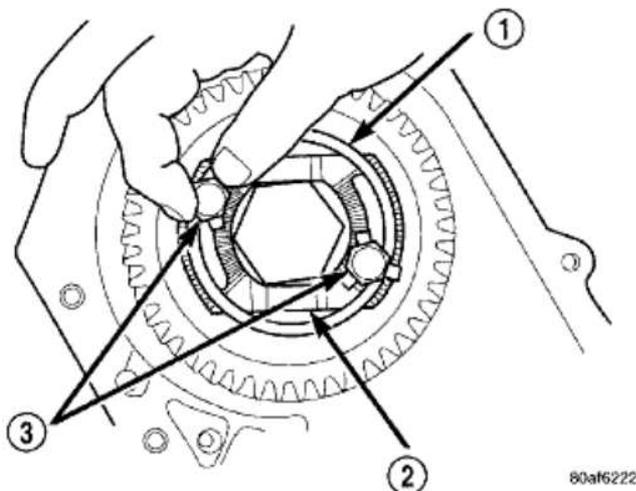


Fig. 75: Removing/Installing Retaining Strap Bolts

Courtesy of CHRYSLER LLC

1 - RETAINING STRAP

2 - STIRRUP

3 - RETAINING STRAP BOLTS

50. Bend output gear retaining strap (1) ears flat to allow bolt removal.
51. Remove output shaft stirrup strap bolts (3).

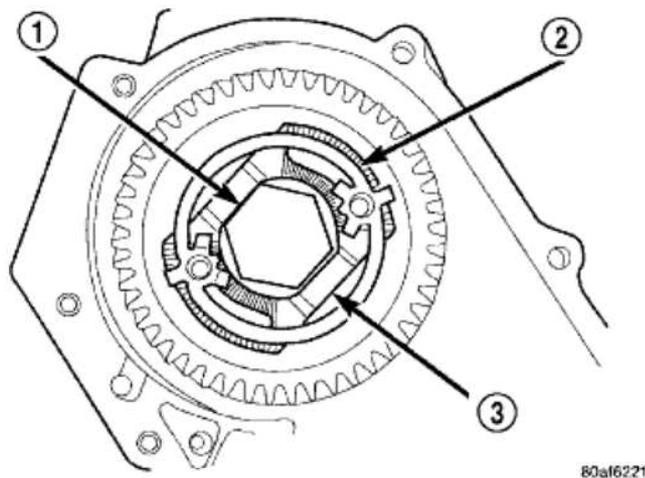


Fig. 76: Removing/Installing Stirrup & Strap

Courtesy of CHRYSLER LLC

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- | |
|----------------------|
| 1 - OUTPUT GEAR BOLT |
| 2 - RETAINING STRAP |
| 3 - STIRRUP |

52. Remove stirrup (3) and strap (2).

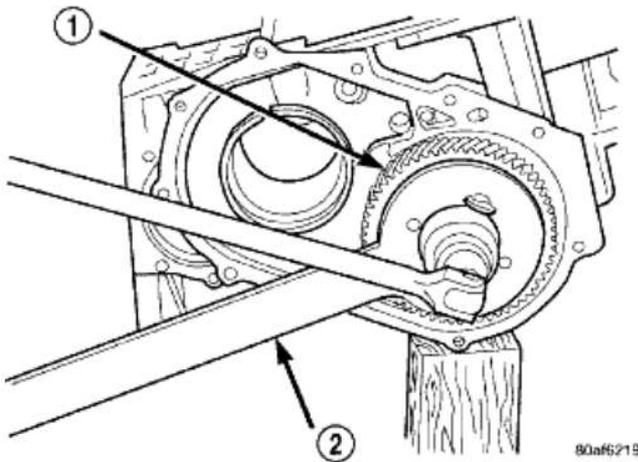


Fig. 77: Identifying Holder 6259
Courtesy of CHRYSLER LLC

- | |
|-----------------|
| 1 - OUTPUT GEAR |
| 2 - HOLDER 6259 |

53. Install Holder 6259 (2).

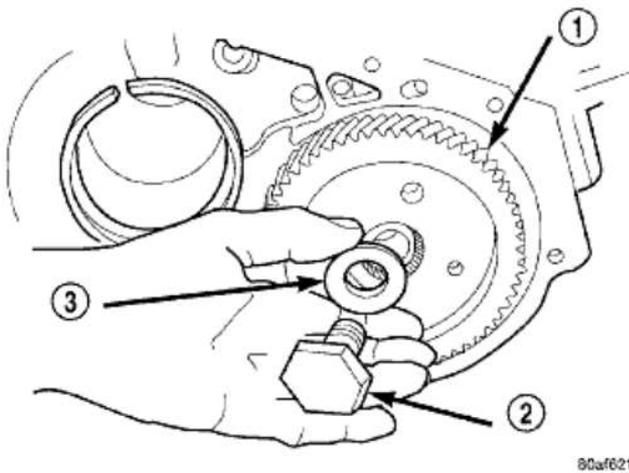


Fig. 78: Removing/Installing Output Gear Bolt & Washer
Courtesy of CHRYSLER LLC

- | |
|-----------------|
| 1 - OUTPUT GEAR |
|-----------------|

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2 - BOLT

3 - CONED LOCK WASHER

54. Remove output shaft gear-to-shaft bolt (2) and washer (3).

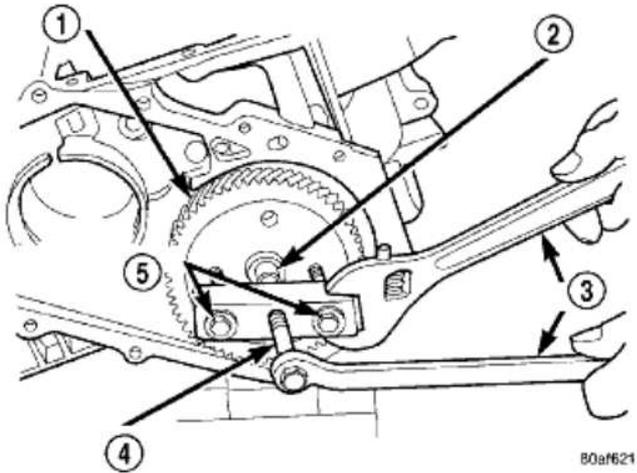


Fig. 79: Removing Output Gear
Courtesy of CHRYSLER LLC

1 - OUTPUT GEAR

2 - THRUST BUTTON 6055

3 - WRENCHES

4 - GEAR PULLER L4407A

5 - BOLTS L4407-6

55. Using Gear Puller L4407A (4) and thrust button 6055 (2), remove output gear (1) from shaft.

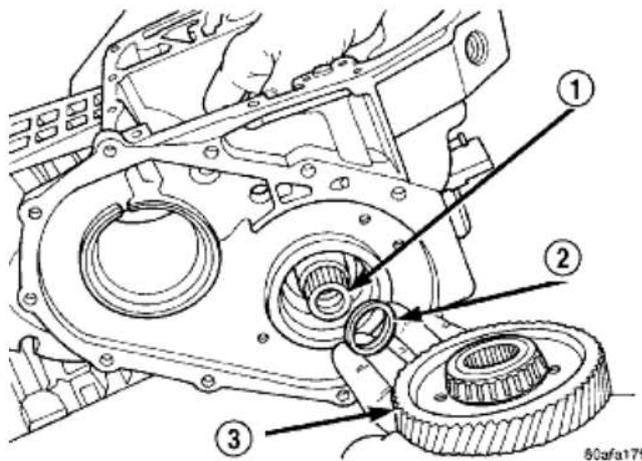


Fig. 80: Removing Output Gear Bearing Shim (Select)

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Courtesy of CHRYSLER LLC

- | |
|---------------------------|
| 1 - REAR CARRIER ASSEMBLY |
| 2 - SHIM (SELECT) |
| 3 - OUTPUT GEAR |

56. Remove output gear bearing shim (select) (2) .

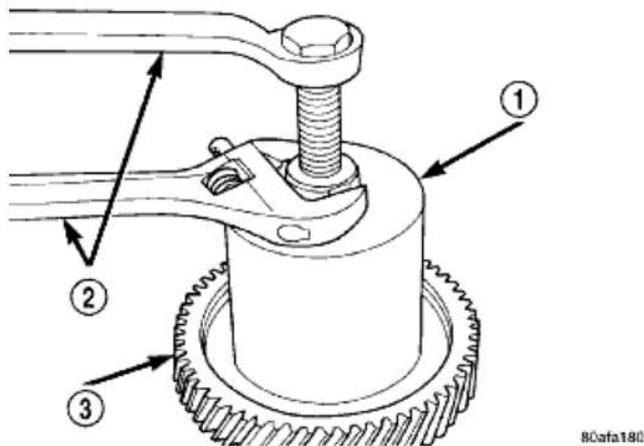
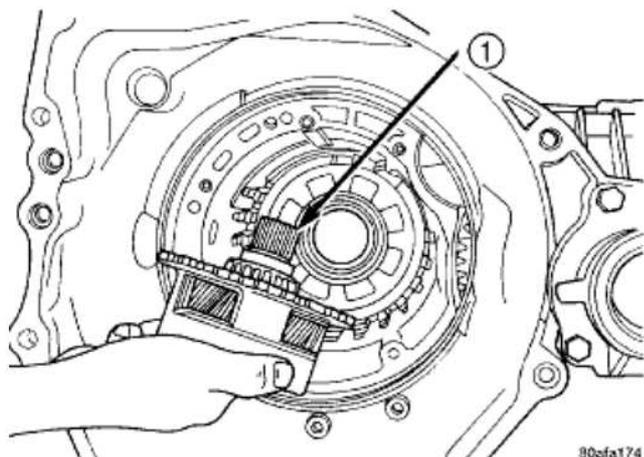


Fig. 81: Removing Output Gear Bearing Cone
Courtesy of CHRYSLER LLC

- | |
|--|
| 1 - BEARING PULLER 5048 WITH JAWS 5048-5 AND THRUST PAD L-4539-2 |
| 2 - WRENCHES |
| 3 - OUTPUT GEAR |

57. Using bearing puller 5048 with jaws 5048-5 and thrust pad L-4539-2 (1) Remove output gear bearing cone.



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Fig. 82: Removing/Installing Rear Carrier Assembly
Courtesy of CHRYSLER LLC

1 - REAR CARRIER ASSEMBLY

58. Remove rear carrier assembly (1) from transaxle.

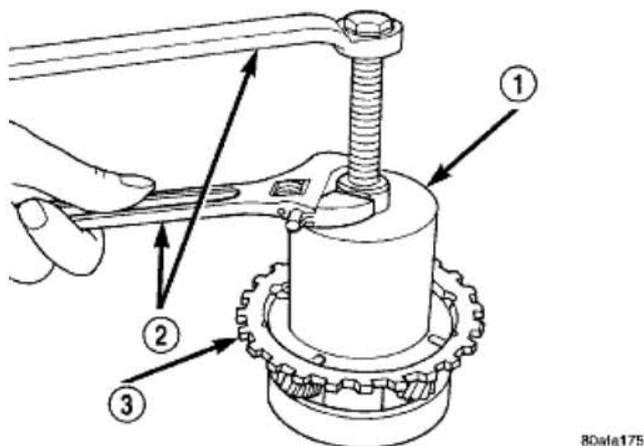


Fig. 83: Removing Rear Carrier Assembly Bearing Cone
Courtesy of CHRYSLER LLC

1 - BEARING PULLER 5048 WITH JAWS 5048-3 AND THRUST BUTTON 6055

2 - WRENCHES

3 - REAR CARRIER ASSEMBLY

59. Remove rear carrier assembly (3) bearing cone using bearing puller 5048 with jaws 5048-3 and thrust button 6055.

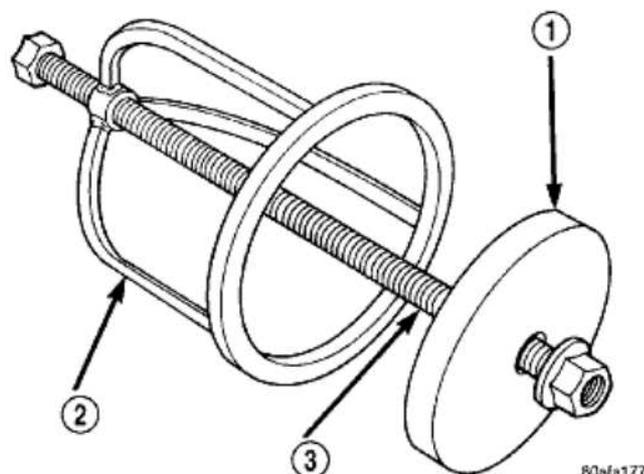


Fig. 84: Identifying Spring Compressor 5059-A, Spring Compressor Disc 6057, & Forcing Screw

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5058A-3

Courtesy of CHRYSLER LLC

1 - SPRING COMPRESSOR DISC 6057
2 - SPRING COMPRESSOR 5059-A
3 - FORCING SCREW 5058A-3

60. Install disk 6057 (1) , spring compressor 5059-A (2) and forcing screw 5058A-3 (3).

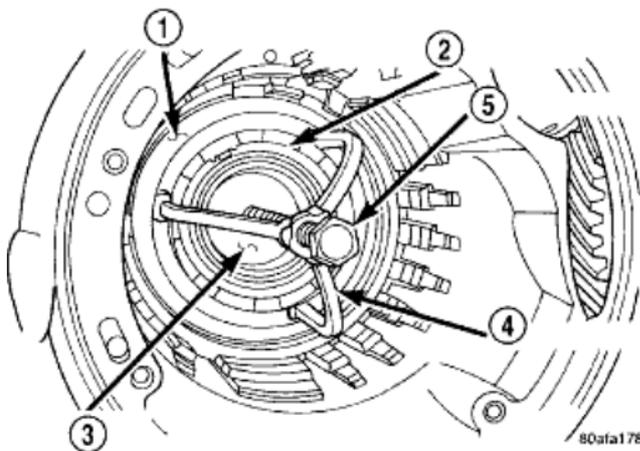


Fig. 85: Removing/Installing Low/Reverse Spring Compressor
Courtesy of CHRYSLER LLC

1 - LOW/REVERSE CLUTCH RETURN SPRING
2 - SNAP RING (INSTALL AS SHOWN IN ILLUSTRATION)
3 - SPRING COMPRESSOR DISC 6057
4 - SPRING COMPRESSOR 5059-A
5 - FORCING SCREW 5058A-3

61. Install low/reverse spring compressor .

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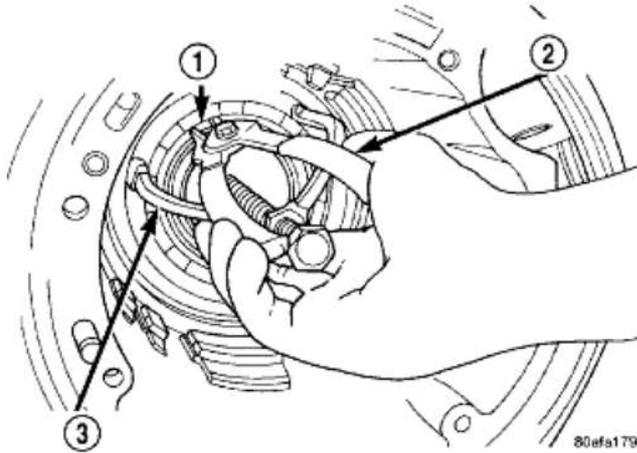


Fig. 86: Removing/Installing Remove Snap Ring
Courtesy of CHRYSLER LLC

1 - SNAP RING OPENING MUST BE BETWEEN SPRING LEVERS (AS SHOWN IN ILLUSTRATION)

2 - SNAP RING PLIERS

3 - SPRING COMPRESSOR DISC 6057

62. Compress low/reverse piston return spring and remove snap ring (1) .

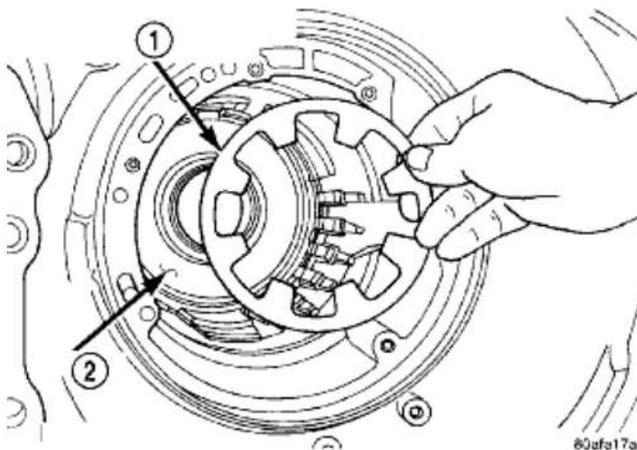


Fig. 87: Removing/Installing Low/Reverse Piston Return Spring
Courtesy of CHRYSLER LLC

1 - LOW/REVERSE PISTON RETURN SPRING

2 - PISTON

63. Remove low/reverse spring compressor tool and low reverse piston return spring (1) .

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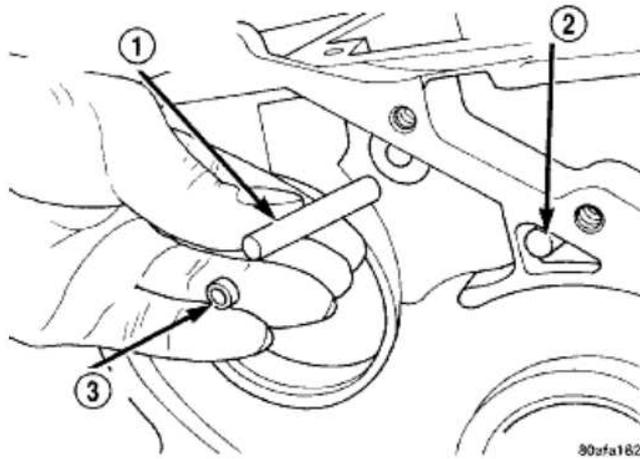


Fig. 88: Driving Out Park Guide Bracket Pivot Shaft Plug
Courtesy of CHRYSLER LLC

- | |
|--------------------------------|
| 1 - GUIDE BRACKET ANCHOR SHAFT |
| 2 - PIVOT SHAFT |
| 3 - ANCHOR SHAFT PLUG |

64. Using a suitable punch , drive out park guide bracket pivot shaft plug (3) .

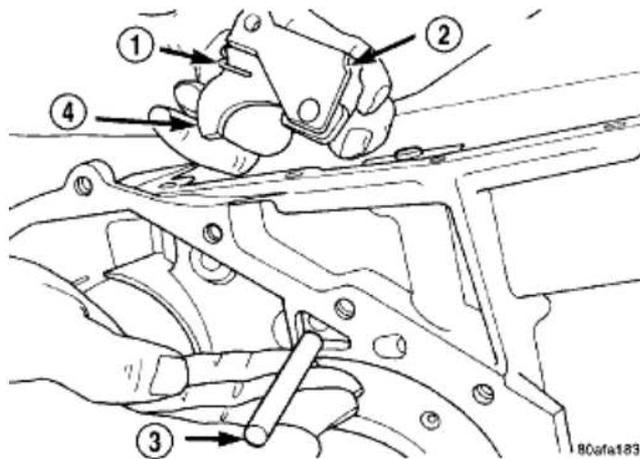


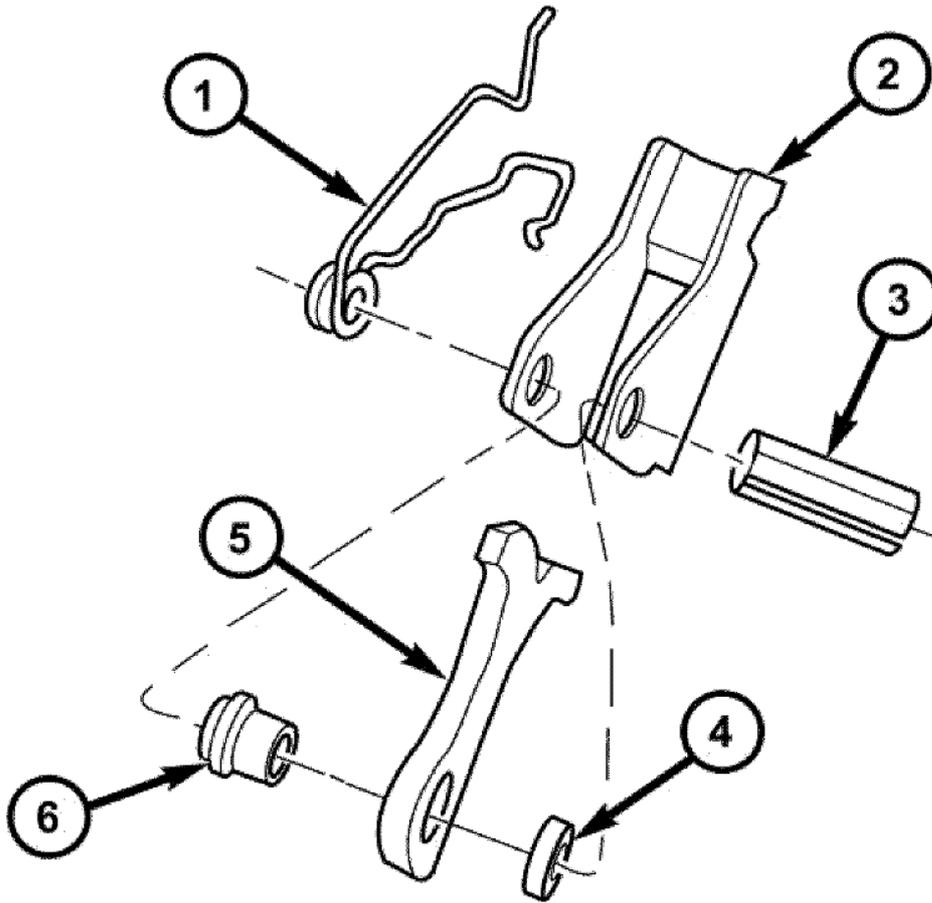
Fig. 89: Removing/Installing Pivot Shaft & Guide Bracket Assembly
Courtesy of CHRYSLER LLC

- | |
|-----------------------|
| 1 - ANTIRACHET SPRING |
| 2 - GUIDE BRACKET |
| 3 - PIVOT SHAFT |
| 4 - PAWL |

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65. Using ordinary pliers, remove pivot shaft (3) and guide bracket assembly (2).



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Fig. 90: Identifying Guide Bracket Components

Courtesy of CHRYSLER LLC

66. Inspect guide bracket components for excessive wear and replace Anti-ratcheting spring (1), guide bracket (2), Split sleeve (3), spacer (4), pawl (5) and stepped spacer (6) if necessary.

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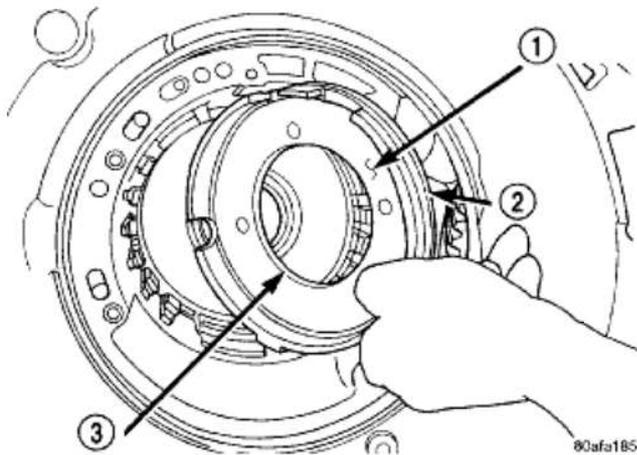


Fig. 91: Identifying Low/Reverse Clutch Piston & Bonded Seals
Courtesy of CHRYSLER LLC

- | |
|-------------------------------|
| 1 - LOW/REVERSE CLUTCH PISTON |
| 2 - BONDED SEAL |
| 3 - BONDED SEAL |

NOTE: The Low/Reverse Clutch Piston has bonded seals which are not individually serviceable. Seal replacement requires replacement of the piston assembly.

67. Remove low/reverse clutch piston (1) .

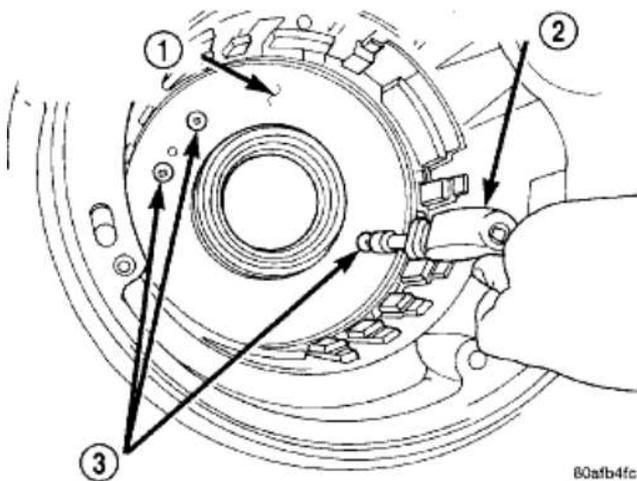


Fig. 92: Removing/Installing Low/Reverse Piston Retainer-To-Case Screws
Courtesy of CHRYSLER LLC

- | |
|--|
| 1 - LOW/REVERSE CLUTCH PISTON RETAINER |
|--|

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2 - SCREWDRIVER
3 - TORX-LOC SCREWS

68. Remove low/reverse piston retainer-to-case screws (3) .

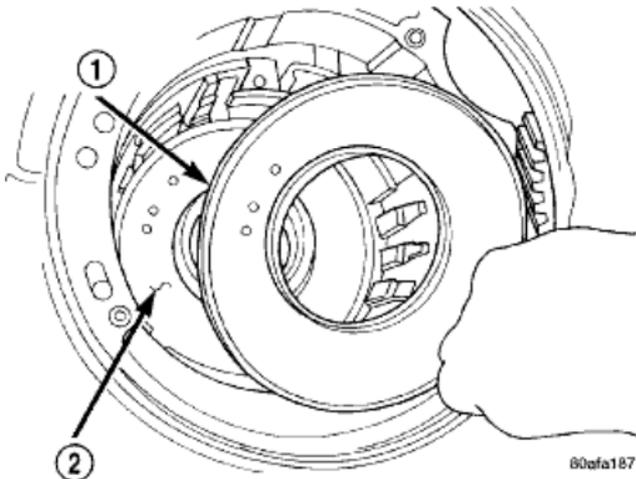


Fig. 93: Removing/Installing Low/Reverse Piston Retainer
Courtesy of CHRYSLER LLC

1 - LOW/REVERSE CLUTCH PISTON RETAINER
2 - GASKET

69. Remove low/reverse piston retainer (1) .

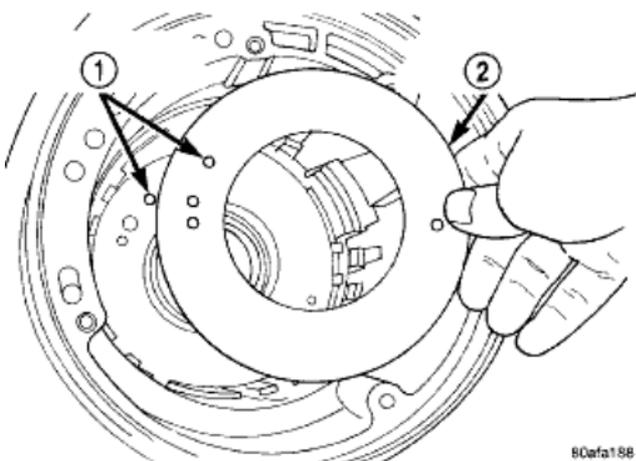


Fig. 94: Removing/Installing Low/Reverse Piston Retainer-To-Case Gasket
Courtesy of CHRYSLER LLC

1 - GASKET HOLES MUST LINE UP

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2 - LOW/REVERSE CLUTCH PISTON RETAINER GASKET

70. Remove low/reverse piston retainer-to-case gasket (2) , gasket holes must line up (1).

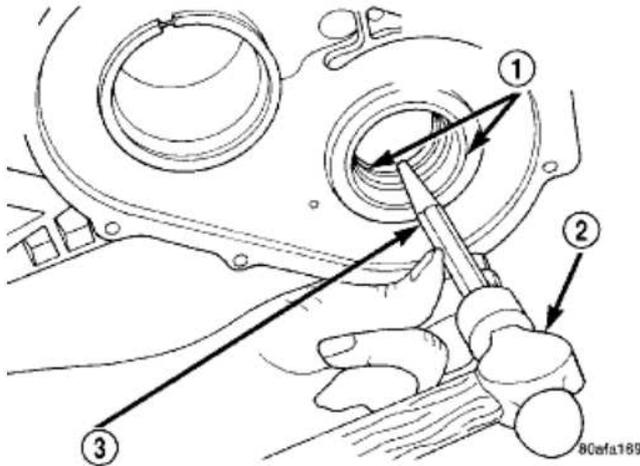


Fig. 95: Removing Inner Output Bearing Cup
Courtesy of CHRYSLER LLC

- | |
|--|
| 1 - OUTPUT BEARING CUPS (REPLACE IN PAIRS) |
| 2 - HAMMER |
| 3 - BRASS DRIFT |

71. Using a hammer (2) and suitable drift (3), drive out inner output bearing cup (1).

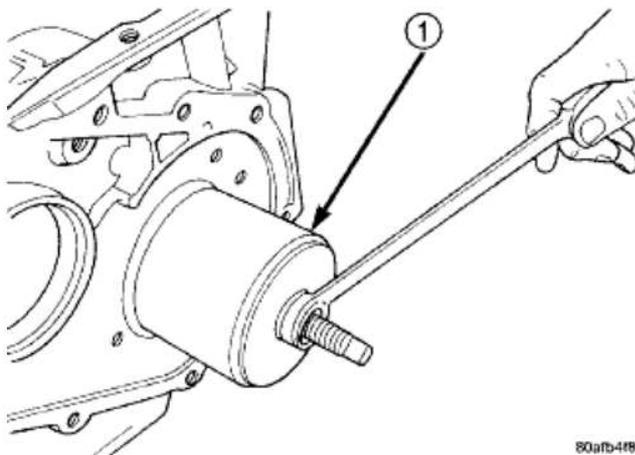


Fig. 96: Removing Outer Output Bearing Cup
Courtesy of CHRYSLER LLC

- | |
|------------------------------|
| 1 - BEARING CUP PULLER 6062A |
|------------------------------|

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72. Using bearing cup puller 6062A (1) , remove outer output bearing cup.

ASSEMBLY

ASSEMBLY

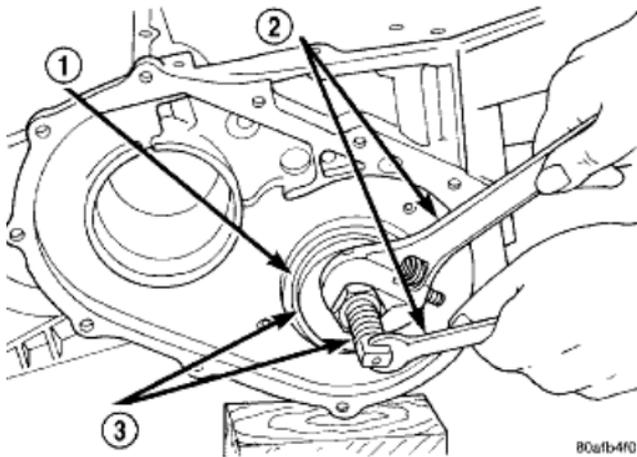


Fig. 97: Installing Output Bearing Cups
Courtesy of CHRYSLER LLC

1 - OUTPUT BEARING CUPS
2 - WRENCHES
3 - INSTALLER - 5050A

CAUTION: The cooler bypass valve must be replaced if transaxle failure has occurred. Do not attempt to reuse or clean old valve.

NOTE: If transaxle is being overhauled (clutch and/or seal replacement), the TCM/PCM Quick Learn procedure must be performed. Refer to Electrical - Electronic Control Modules/Electronic Control Modules/MODULE, Powertrain Control - Standard Procedure .

1. Install both output bearing cups (1) using Installer 5050A (3).

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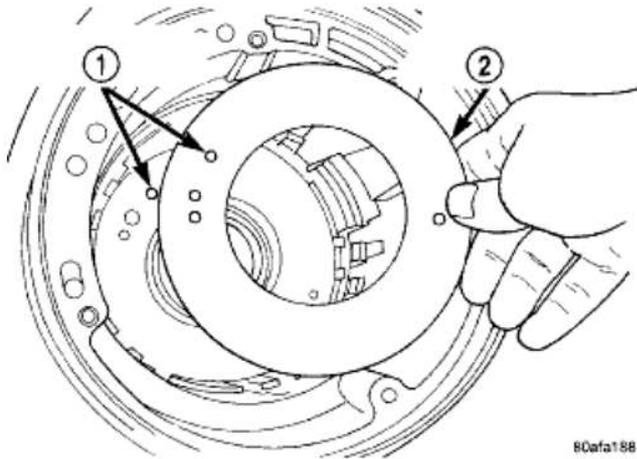


Fig. 98: Removing/Installing Low/Reverse Piston Retainer-To-Case Gasket
Courtesy of CHRYSLER LLC

- | |
|---|
| 1 - GASKET HOLES MUST LINE UP |
| 2 - LOW/REVERSE CLUTCH PISTON RETAINER GASKET |

2. Install low/reverse piston retainer gasket (2) . Make sure gasket holes line up with case (1).

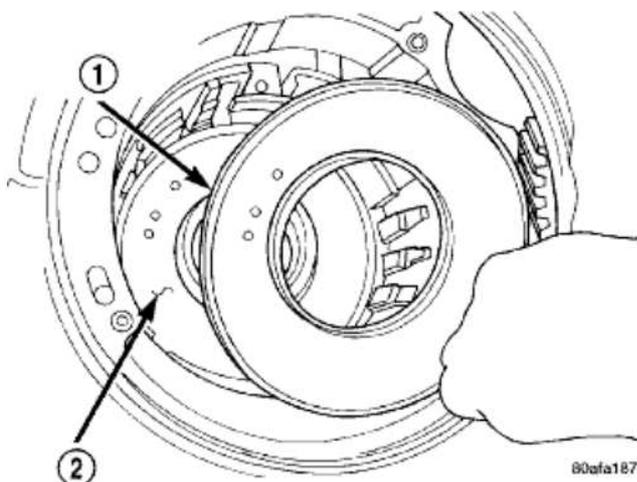


Fig. 99: Removing/Installing Low/Reverse Piston Retainer
Courtesy of CHRYSLER LLC

- | |
|--|
| 1 - LOW/REVERSE CLUTCH PISTON RETAINER |
| 2 - GASKET |

3. Install low/reverse piston retainer (1) .

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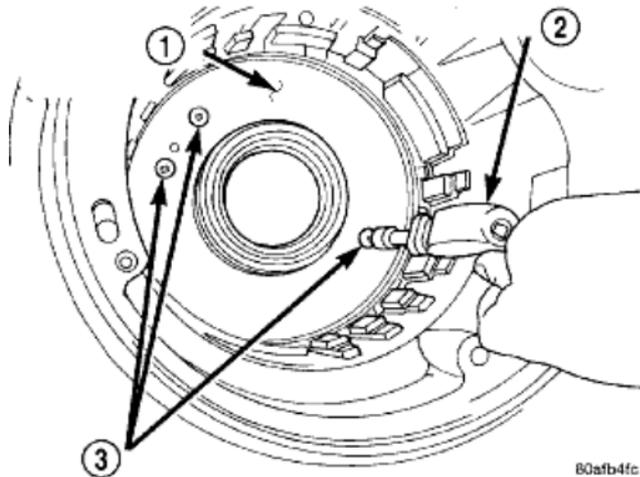


Fig. 100: Removing/Installing Low/Reverse Piston Retainer-To-Case Screws
Courtesy of CHRYSLER LLC

- | |
|--|
| 1 - LOW/REVERSE CLUTCH PISTON RETAINER |
| 2 - SCREWDRIVER |
| 3 - TORX-LOC SCREWS |

4. Install low/reverse piston retainer-to-case screws (3) and torque to 5 N.m (45 in. lbs.).

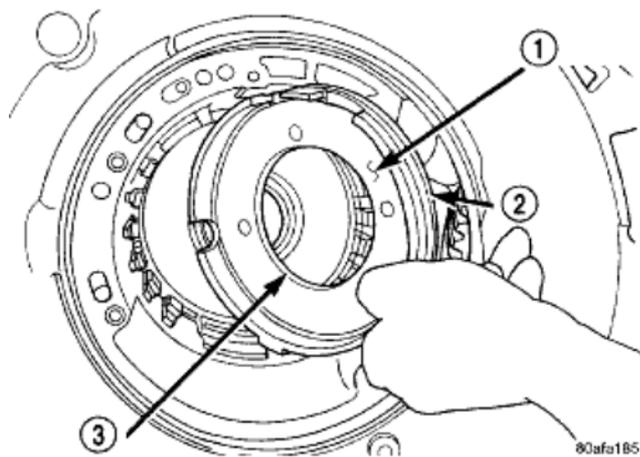


Fig. 101: Identifying Low/Reverse Clutch Piston & Bonded Seals
Courtesy of CHRYSLER LLC

- | |
|-------------------------------|
| 1 - LOW/REVERSE CLUTCH PISTON |
| 2 - BONDED SEAL |
| 3 - BONDED SEAL |

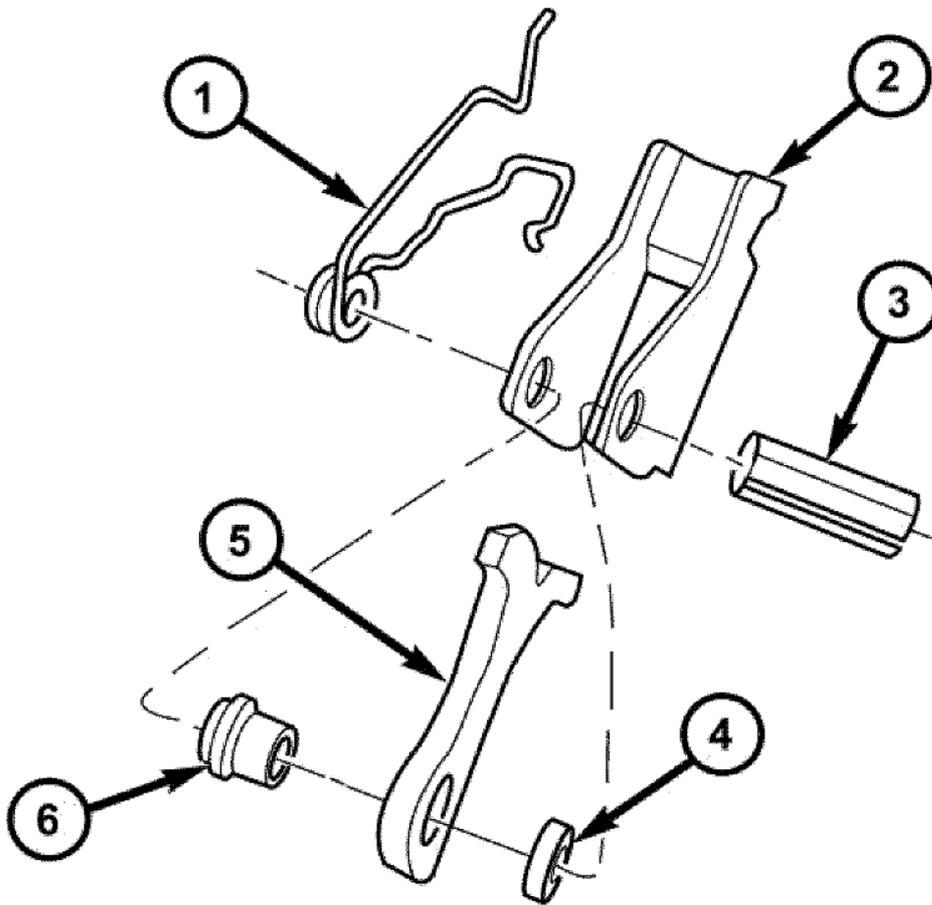
NOTE: The Low/Reverse Clutch Piston has bonded seals which are not

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individually serviceable. Seal replacement requires replacement of the piston assembly.

5. Install low/reverse clutch piston (1) .



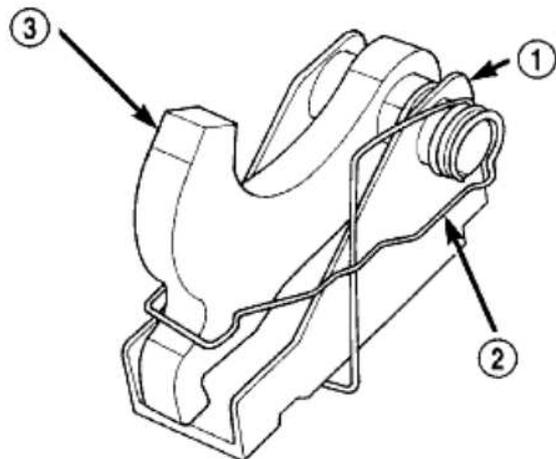
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Fig. 102: Identifying Guide Bracket Components
Courtesy of CHRYSLER LLC

6. Use figure Anti-ratching spring (1), guide bracket (2), Split sleeve (3), spacer (4), pawl (5) and stepped spacer (6) as a reference while assembling park guide bracket assembly.

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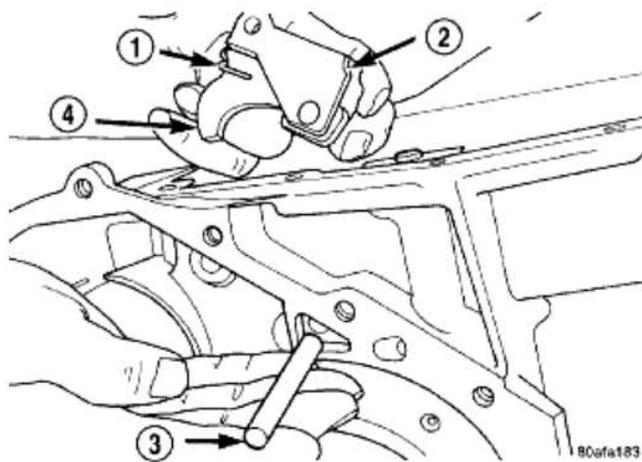


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Fig. 103: Identifying Guide Bracket Assembly
Courtesy of CHRYSLER LLC

1 - GUIDE BRACKET
2 - ANTIRATCHET SPRING (MUST BE ASSEMBLED AS SHOWN IN ILLUSTRATION)
3 - PAWL

7. Assemble park guide bracket assembly .



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Fig. 104: Removing/Installing Pivot Shaft & Guide Bracket Assembly
Courtesy of CHRYSLER LLC

1 - ANTIRACHET SPRING
2 - GUIDE BRACKET
3 - PIVOT SHAFT
4 - PAWL

8. Install guide bracket (2) into position and insert pivot shaft (3)

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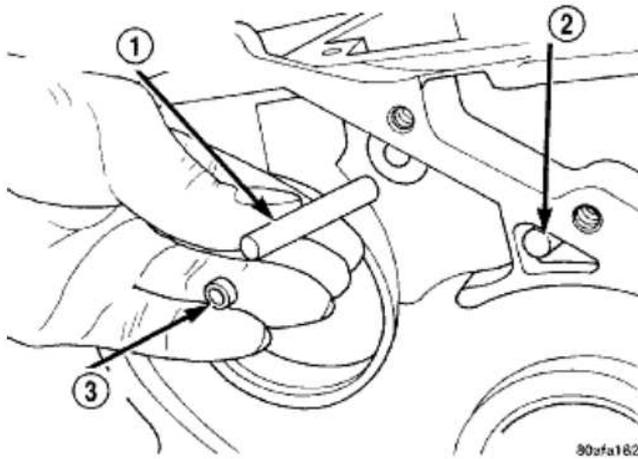


Fig. 105: Installing Anchor Shaft & Plug
Courtesy of CHRYSLER LLC

- | |
|--------------------------------|
| 1 - GUIDE BRACKET ANCHOR SHAFT |
| 2 - PIVOT SHAFT |
| 3 - ANCHOR SHAFT PLUG |

9. Install anchor shaft (1) and plug (3). Make sure guide bracket and split sleeve are in contact with the rear of the transaxle case.

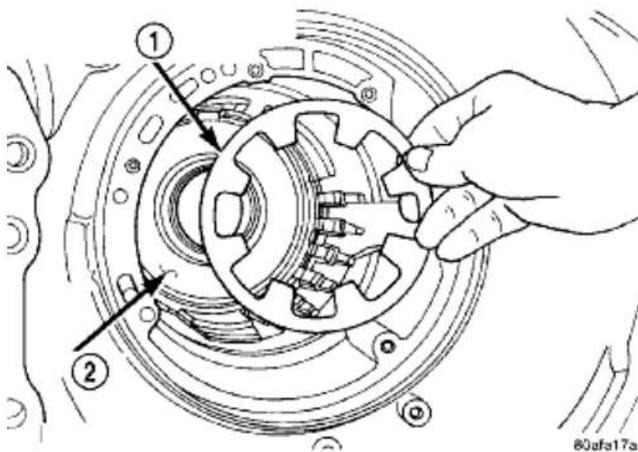


Fig. 106: Removing/Installing Low/Reverse Piston Return Spring
Courtesy of CHRYSLER LLC

- | |
|--------------------------------------|
| 1 - LOW/REVERSE PISTON RETURN SPRING |
| 2 - PISTON |

10. Install low/reverse piston return spring (1) .

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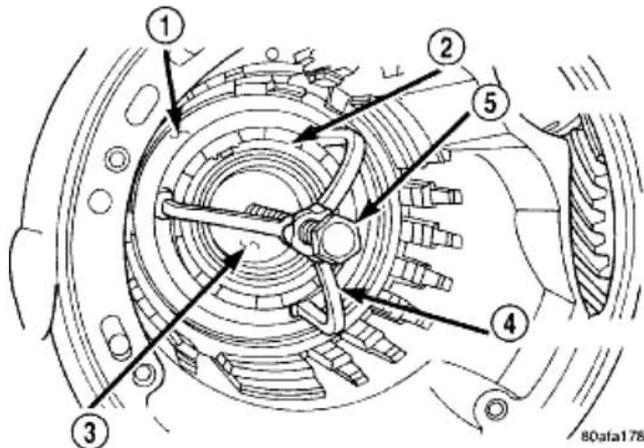


Fig. 107: Removing/Installing Low/Reverse Spring Compressor
Courtesy of CHRYSLER LLC

1 - LOW/REVERSE CLUTCH RETURN SPRING
2 - SNAP RING (INSTALL AS SHOWN IN ILLUSTRATION)
3 - DISC 6057
4 - COMPRESSOR 5059-A
5 - COMPRESSOR BAR 5058A-3

11. Install low/reverse spring compressor into position .

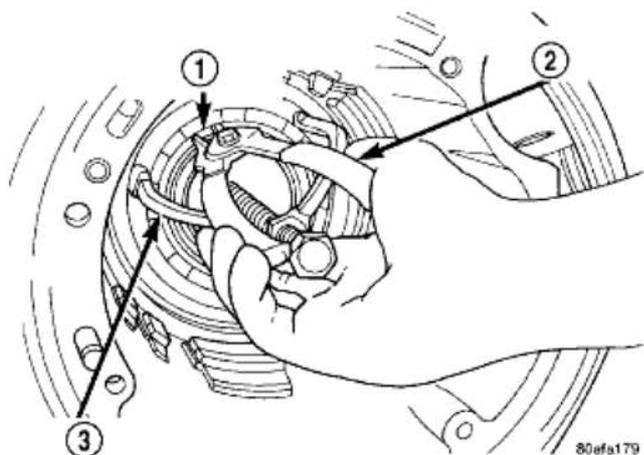


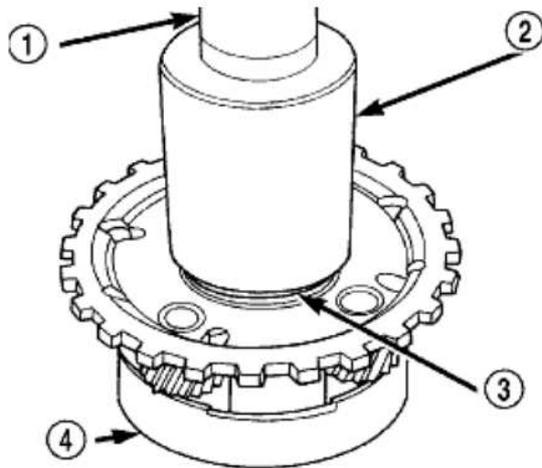
Fig. 108: Removing/Installing Remove Snap Ring
Courtesy of CHRYSLER LLC

1 - SNAP RING OPENING MUST BE BETWEEN SPRING LEVERS (AS SHOWN IN ILLUSTRATION)
2 - SNAP RING PLIERS
3 - DISC 6057

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12. Compress low/reverse piston and install snap ring (1) .

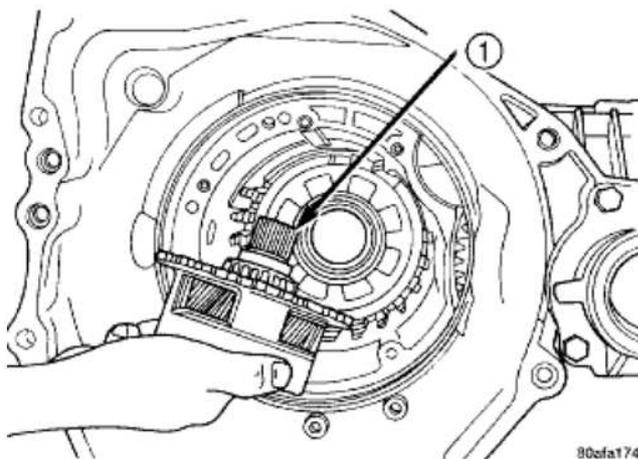


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Fig. 109: Installing Rear Carrier Bearing Cone
Courtesy of CHRYSLER LLC

- | |
|---------------------------|
| 1 - ARBOR PRESS RAM |
| 2 - INSTALLER 6053 |
| 3 - NEW BEARING CONE |
| 4 - REAR CARRIER ASSEMBLY |

13. Install rear carrier bearing cone (3) using Installer 6053 (1).



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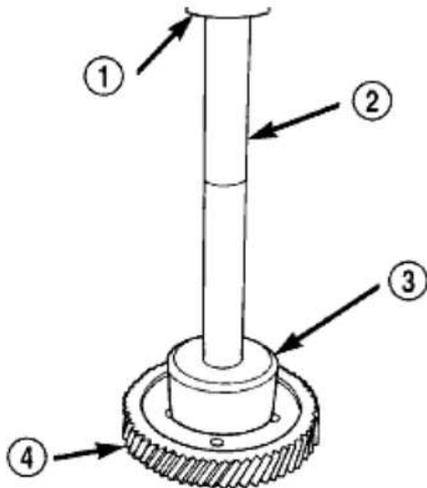
Fig. 110: Removing/Installing Rear Carrier Assembly
Courtesy of CHRYSLER LLC

- | |
|---------------------------|
| 1 - REAR CARRIER ASSEMBLY |
|---------------------------|

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14. Install rear carrier assembly (1) to transaxle case.

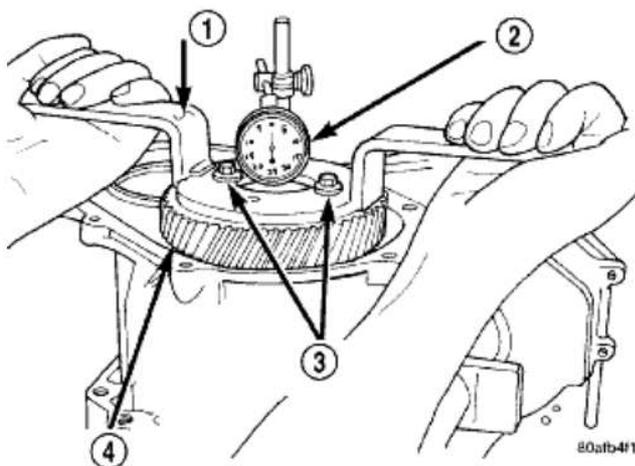


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Fig. 111: Installing Output Gear Bearing Cone
Courtesy of CHRYSLER LLC

- | |
|---------------------|
| 1 - ARBOR PRESS RAM |
| 2 - HANDLE C-4171 |
| 3 - INSTALLER 5052 |
| 4 - OUTPUT GEAR |

15. Install output gear bearing cone using Installer 5052 (3) .



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Fig. 112: Measuring End Play Of Output Gear Bearings
Courtesy of CHRYSLER LLC

- | |
|--------------------------------|
| 1 - GEAR CHECKING PLATE L-4432 |
| 2 - DIAL INDICATOR |

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3 - SPECIAL SCREWS 6260

4 - OUTPUT GEAR

16. OUTPUT GEAR BEARING ADJUSTMENT:

- a. With output gear removed, install a 4.50 mm (0.177 in.) gauging shim on the rear carrier assembly hub, using grease to hold the shim in place.
- b. Using Holder 6259, install output gear and bearing assembly. Torque to 271 N.m (200 ft. lbs.).
- c. Measure bearing end play. Attach Gear Checking Plate L-4432 (1) to the gear.
- d. Push and pull the gear while rotating back and forth to ensure seating of bearing rollers.
- e. Using a dial indicator mounted to the transaxle case, measure output gear end play.
- f. Refer to **OUTPUT GEAR BEARING SHIM CHART** for the required shim to obtain proper bearing setting.
- g. Use Holder 6259 to remove the output gear retaining bolt and washer. To remove the output gear, use Gear Puller L-4407A.
- h. Remove the gauging shim and install the proper shim determined by the chart. Use grease to hold the shim in place.

OUTPUT GEAR BEARING SHIM CHART

End Play	Shim Needed	Part Number	-	End Play	Shim Needed	Part Number
0.05mm (0.002 in.)	4.42mm (0.174 in.)	4412830AB	-	0.53mm (0.021 in.)	3.94mm (0.155 in.)	4412818AB
0.08mm (0.003 in.)	4.38mm (0.172 in.)	4412829AB	-	0.56mm (0.022 in.)	3.90mm (0.154 in.)	4412817AB
0.10mm (0.004 in.)	4.38mm (0.172 in.)	4412829AB	-	0.58mm (0.023 in.)	3.90mm (0.154 in.)	4412817AB
0.13mm (0.005 in.)	4.34mm (0.171 in.)	4412828AB	-	0.61mm (0.024 in.)	3.86mm (0.152 in.)	4412816AB
0.15mm (0.006 in.)	4.30mm (0.169 in.)	4412827AB	-	0.64mm (0.025 in.)	3.82mm (0.150 in.)	4412815AB
0.18mm (0.007 in.)	4.30mm (0.169 in.)	4412827AB	-	0.66mm (0.026 in.)	3.82mm (0.150 in.)	4412815AB
0.20mm (0.008 in.)	4.26mm (0.168 in.)	4412826AB	-	0.69mm (0.027 in.)	3.78mm (0.149 in.)	4412814AB
0.23mm (0.009 in.)	4.22mm (0.166 in.)	4412825AB	-	0.71mm (0.028 in.)	3.74mm (0.147 in.)	4412813AB
0.25mm (0.010 in.)	4.22mm (0.166 in.)	4412825AB	-	0.74mm (0.029 in.)	3.74mm (0.147 in.)	4412813AB
0.28mm (0.011 in.)	4.18mm (0.165 in.)	4412824AB	-	0.76mm (0.030 in.)	3.70mm (0.146 in.)	4412812AB
0.30mm (0.012 in.)	4.14mm (0.163 in.)	4412823AB	-	0.79mm (0.031 in.)	3.66mm (0.144 in.)	4412811AB
0.33mm	4.14mm (0.163	4412823AB	-	0.81mm (0.032	3.66mm (0.144	4412811AB

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(0.013 in.)	in.)		in.)	in.)	
0.36mm (0.014 in.)	4.10mm (0.161 in.)	4412822AB	-	0.84mm (0.033 in.)	3.62mm (0.143 in.)
0.38mm (0.015 in.)	4.10mm (0.161 in.)	4412822AB	-	0.86mm (0.034 in.)	3.62mm (0.143 in.)
0.41mm (0.016 in.)	4.06mm (0.160 in.)	4412821AB	-	0.89mm (0.035 in.)	3.58mm (0.141)
0.43mm (0.017 in.)	4.02mm (0.158 in.)	4412820AB	-	0.91mm (0.036in.)	3.54mm (0.139 in.)
0.46mm (0.018 in.)	4.02mm (0.158 in.)	4412820AB	-	0.94mm (0.037 in.)	3.54mm (0.139 in.)
0.48mm (0.019 in.)	3.98mm (0.157 in.)	4412819AB	-	0.97mm (0.038 in.)	3.50mm (0.138 in.)
0.51mm (0.020 in.)	3.94mm (0.155 in.)	4412818AB	-	-	-

17. Install the output gear (3) and bearing assembly using Installer 6261 (2).

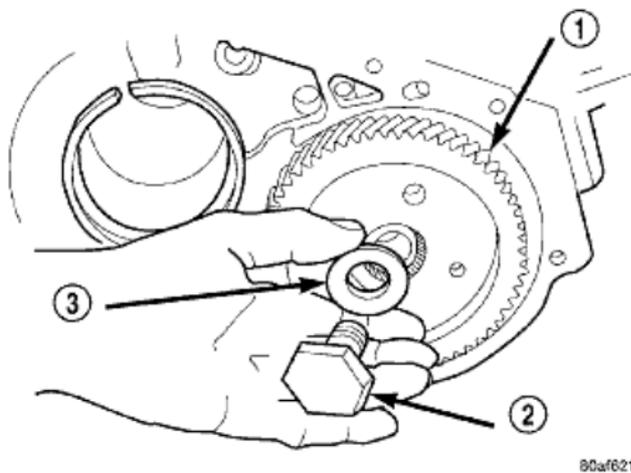


Fig. 113: Removing/Installing Output Gear Bolt & Washer
Courtesy of CHRYSLER LLC

1 - OUTPUT GEAR
2 - BOLT
3 - CONED LOCK WASHER

18. Install NEW output gear retaining bolt (2) and washer (3).

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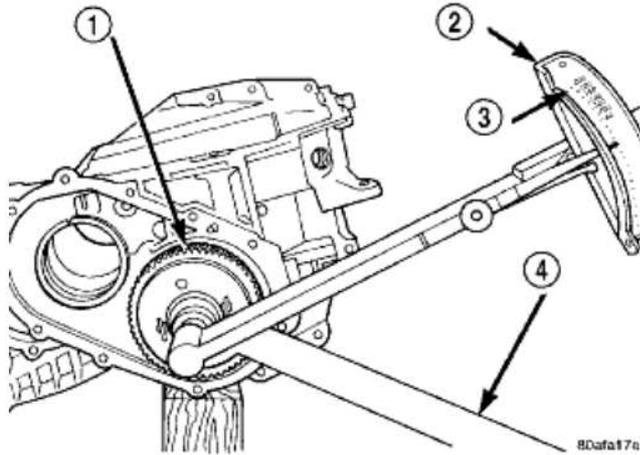


Fig. 114: Tightening Output Gear Retaining Bolt
Courtesy of CHRYSLER LLC

- | |
|-------------------|
| 1 - OUTPUT GEAR |
| 2 - TORQUE WRENCH |
| 3 - 200 FT. LBS. |
| 4 - HOLDER 6259 |

19. Using Holder 6259 (4) , torque output gear (1) retaining bolt to 271 N.m (200 ft. lbs.).

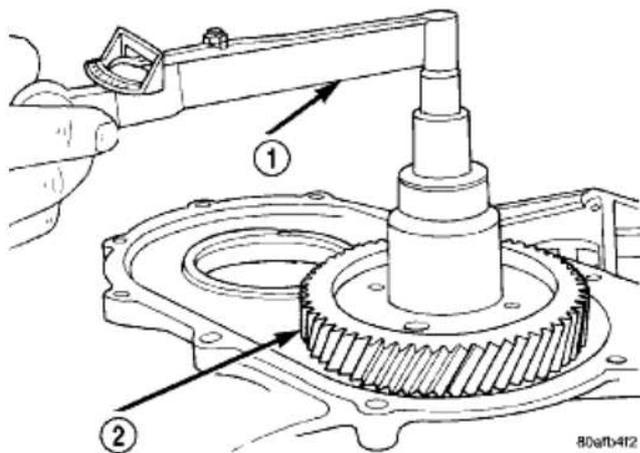


Fig. 115: Checking Output Shaft Turning Torque
Courtesy of CHRYSLER LLC

- | |
|------------------------------|
| 1 - INCH-POUND TORQUE WRENCH |
| 2 - OUTPUT GEAR |

20. Using an inch pound torque wrench (1) , check output shaft turning torque. **Output shaft turning torque should be within 3-8 in. lbs.** If the turning torque is too high install a 0.04 mm (0.0016 in) thicker shim

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If the turning torque is too low, install a 0.04 mm (0.0016 in.) thinner shim. Repeat until the proper turning torque of 3-8 in. lbs. is obtained.

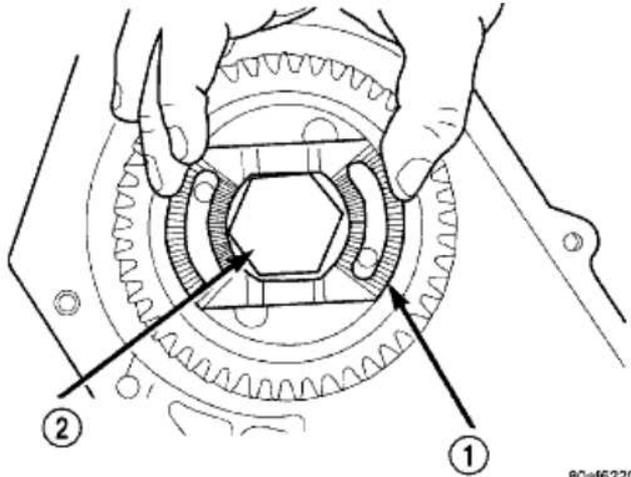


Fig. 116: Installing Output Gear Stirrup
Courtesy of CHRYSLER LLC

1 - STIRRUP
2 - OUTPUT GEAR RETAINING BOLT

21. Install output gear stirrup (1) with serrated side out.

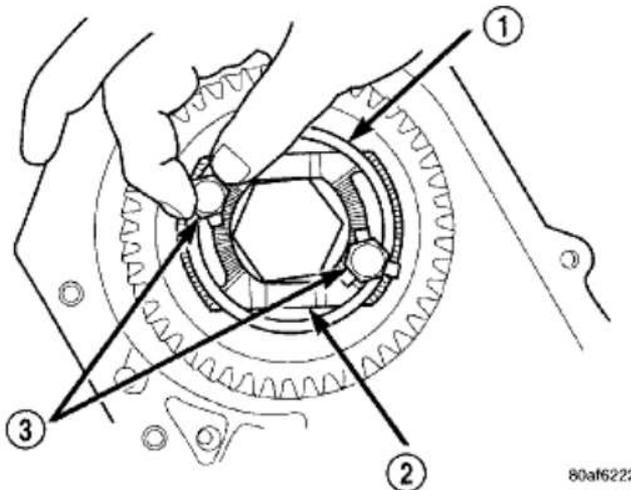


Fig. 117: Removing/Installing Retaining Strap Bolts
Courtesy of CHRYSLER LLC

1 - RETAINING STRAP
2 - STIRRUP
3 - RETAINING STRAP BOLTS

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22. Install retaining strap (1) .
23. Install strap bolts (3) but do not tighten at this time.

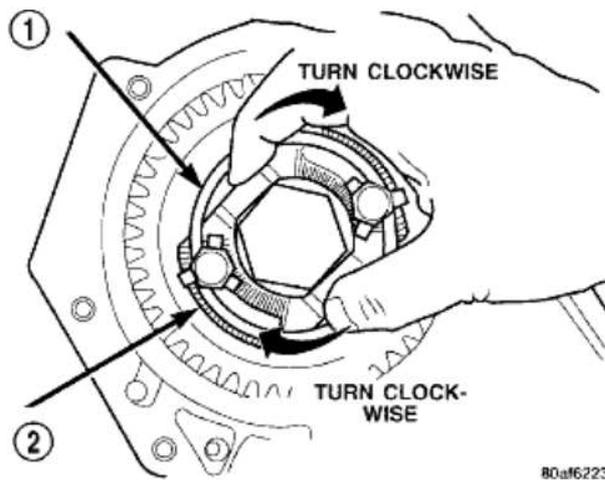


Fig. 118: Rotating Stirrup Clockwise Against Flats Of Retaining Bolt
Courtesy of CHRYSLER LLC

1 - RETAINING STRAP
2 - STIRRUP

24. Rotate stirrup (2) clockwise against flats of retaining bolt.

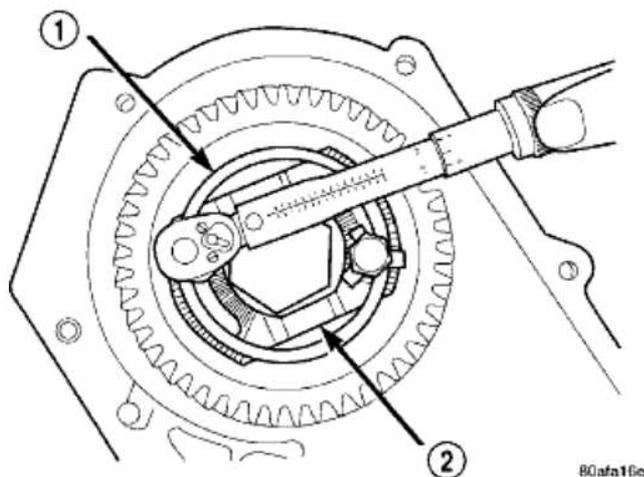


Fig. 119: Tightening Stirrup Strap Bolts
Courtesy of CHRYSLER LLC

1 - RETAINING STRAP
2 - STIRRUP

25. Torque stirrup strap bolts to 23 N.m (204 in. lbs.) .

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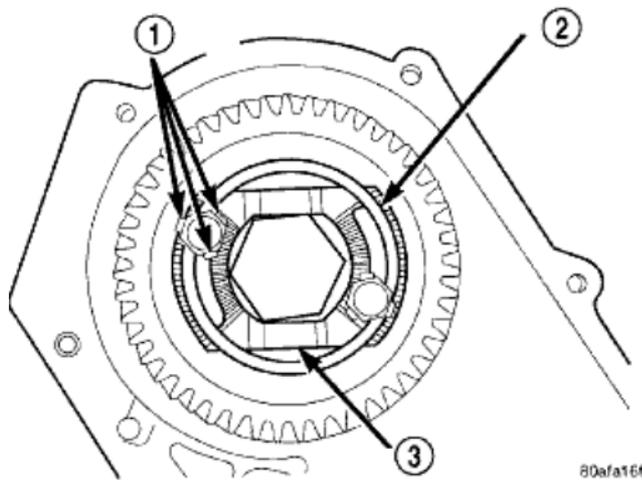


Fig. 120: Bending Tabs On Strap Up Against Flats Of Bolts
Courtesy of CHRYSLER LLC

- | |
|--------------------------|
| 1 - RETAINING STRAP TABS |
| 2 - RETAINING STRAP |
| 3 - STIRRUP |

26. Bend tabs (1) on strap up against flats of bolts.

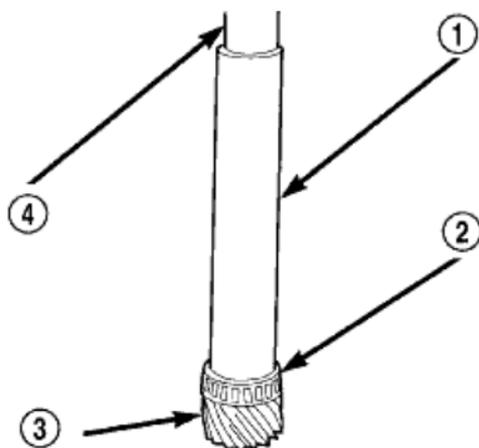


Fig. 121: Installing Transfer Shaft Bearing Cone
Courtesy of CHRYSLER LLC

- | |
|----------------------|
| 1 - INSTALLER 6052 |
| 2 - NEW BEARING CONE |
| 3 - TRANSFER SHAFT |
| 4 - ARBOR PRESS RAM |

27. Install new transfer shaft bearing cone (2) using Installer 6052 (1).

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28. Using Remover/Installer 5049-A (1) , install transfer shaft (2).

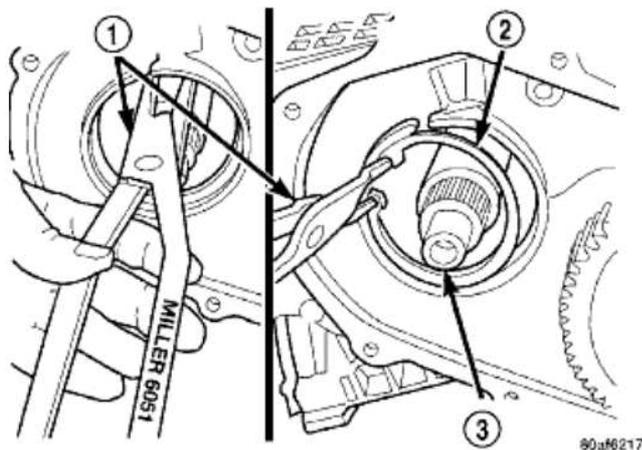


Fig. 122: Removing/Installing Transfer Shaft Bearing Snap Ring
Courtesy of CHRYSLER LLC

- | |
|--------------------------------------|
| 1 - SNAP RING PLIERS 6051A |
| 2 - TRANSFER SHAFT BEARING SNAP RING |
| 3 - TRANSFER SHAFT |

29. Using Snap Ring Pliers 6051A (1) , install transfer shaft bearing snap ring (2).

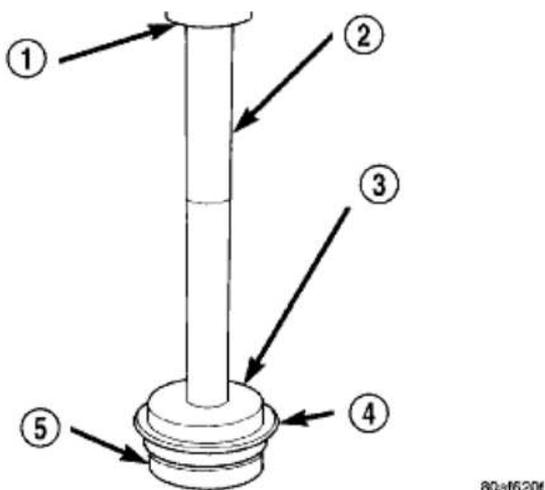


Fig. 123: Installing Transfer Shaft Bearing Cup Into Retainer
Courtesy of CHRYSLER LLC

- | |
|---------------------|
| 1 - ARBOR PRESS RAM |
| 2 - HANDLE C-4171 |
| 3 - INSTALLER 6061 |

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4 - TRANSFER SHAFT BEARING CUP RETAINER

5 - USE REMOVED BEARING CUP TO SUPPORT RETAINER

30. Using an arbor press (1) install transfer shaft bearing cup into retainer using Installer 6061(3). Use removed bearing cup to support retainer (4).

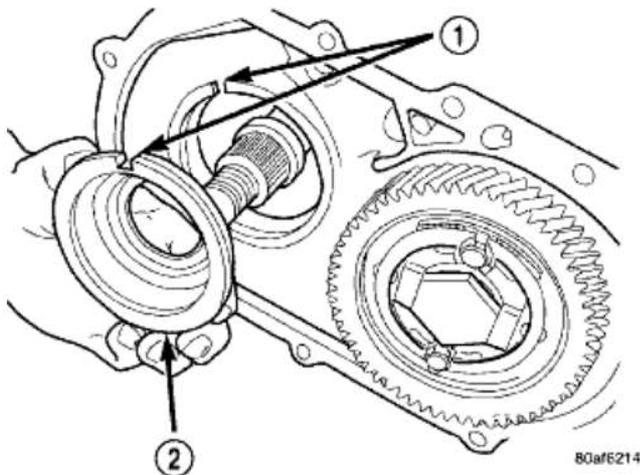


Fig. 124: Removing/Installing Bearing Cup Retainer
Courtesy of CHRYSLER LLC

1 - ALIGN INDEXING TAB TO SLOT

2 - BEARING CUP RETAINER

31. Install bearing cup retainer (2) to transaxle.

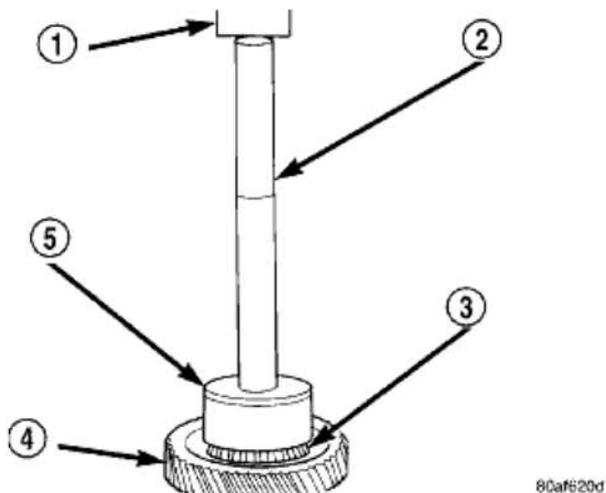


Fig. 125: Installing Transfer Gear Bearing Cone
Courtesy of CHRYSLER LLC

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- | |
|-------------------------|
| 1 - ARBOR PRESS RAM |
| 2 - HANDLE C-4171 |
| 3 - NEW BEARING CONE |
| 4 - TRANSFER SHAFT GEAR |
| 5 - INSTALLER 5052 |

32. Install new transfer gear bearing cone (3) to transfer gear (4) using Installer 5052 (5).

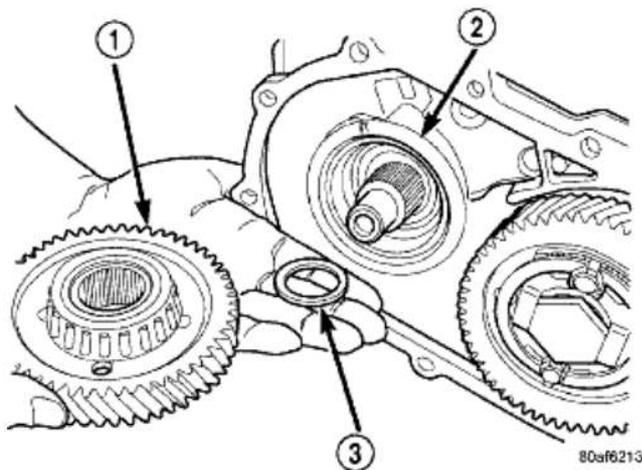


Fig. 126: Removing/Installing Transfer Gear Shim (Select)
Courtesy of CHRYSLER LLC

- | |
|--------------------------|
| 1 - TRANSFER SHAFT GEAR |
| 2 - BEARING CUP RETAINER |
| 3 - SHIM (SELECT) |

33. TRANSFER GEAR BEARING ADJUSTMENT:

- a. Install a 4.66 mm (0.183 in.) gauging shim on the transfer shaft .
- b. Install transfer shaft gear using Installer 6261. Using Holder 6259, install transfer shaft gear retaining nut to 271 N.m (200 ft. lbs.).
- c. Measure end play. Attach Gear Checking Plate L-4432 to the transfer gear.
- d. Mount a steel ball with grease into the end of the transfer shaft.
- e. Push and pull the gear while rotating back and forth to ensure seating of the bearing rollers.
- f. Using a dial indicator, measure transfer shaft end play.
- g. Refer to **TRANSFER SHAFT BEARING SHIM CHART** for the required shim combination to obtain the proper bearing setting.
- h. Use Holder 6259 to remove the retaining nut and washer. Remove the transfer shaft gear using Gear Puller L-4407A.
- i. Remove the gauging shim and install the proper shim indicated by the chart.

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TRANSFER SHAFT BEARING SHIM CHART

End Play	Shim Needed	Part Number	-	End Play	Shim Needed	Part Number
0.05mm (0.002 in.)	4.66mm (0.183 in.)	4505588AB	-	0.76mm (0.030 in.)	3.94mm (0.155 in.)	4412818AB
0.08mm (0.003 in.)	4.62mm (0.182 in.)	4412835AB	-	0.79mm (0.031 in.)	3.90mm (0.154 in.)	4412817AB
0.10mm (0.004 in.)	4.58mm (0.180 in.)	4412834AB	-	0.81mm (0.032 in.)	3.90mm (0.154 in.)	4412817AB
0.13mm (0.005 in.)	4.58mm (0.180 in.)	4412834AB	-	0.84mm (0.033 in.)	3.86mm (0.152 in.)	4412816AB
0.15mm (0.006 in.)	4.54mm (0.178 in.)	4412833AB	-	0.86mm (0.034 in.)	3.82mm (0.150 in.)	4412815AB
0.18mm (0.007 in.)	4.50mm (0.177 in.)	4412832AB	-	0.89mm (0.035 in.)	3.82mm (0.150 in.)	4412815AB
0.20mm (0.008 in.)	4.50mm (0.177 in.)	4412832AB	-	0.91mm (0.036 in.)	3.78mm (0.149 in.)	4412814AB
0.23mm (0.009 in.)	4.46mm (0.175 in.)	4412831AB	-	0.94mm (0.037 in.)	3.74mm (0.147 in.)	4412813AB
0.25mm (0.010 in.)	4.46mm (0.175 in.)	4412831AB	-	0.97mm (0.038 in.)	3.74mm (0.147 in.)	4412813AB
0.28mm (0.011 in.)	4.42mm (0.174 in.)	4412830AB	-	0.99mm (0.039 in.)	3.70mm (0.146 in.)	4412812AB
0.30mm (0.012 in.)	4.38mm (0.172 in.)	4412829AB	-	1.02mm (0.040 in.)	3.66mm (0.144 in.)	4412811AB
0.33mm (0.013 in.)	4.38mm (0.172 in.)	4412829AB	-	1.04mm (0.041 in.)	3.66mm (0.144 in.)	4412811AB
0.36mm (0.014 in.)	4.34mm (0.171 in.)	4412828AB	-	1.07mm (0.042 in.)	3.62mm (0.143 in.)	4412810AB
0.38mm (0.015 in.)	4.30mm (0.169 in.)	4412827AB	-	1.08mm (0.043 in.)	3.62mm (0.143 in.)	4412810AB
0.41mm (0.016 in.)	4.30mm (0.169 in.)	4412827AB	-	1.12mm (0.044 in.)	3.58mm (0.141)	4412809AB
0.43mm (0.017 in.)	4.26mm (0.168 in.)	4412826AB	-	1.14mm (0.045 in.)	3.54mm (0.139 in.)	4412808AB
0.46mm (0.018 in.)	4.22mm (0.166 in.)	4412825AB	-	1.17mm (0.046 in.)	3.54mm (0.139 in.)	4412808AB
0.48mm (0.019 in.)	4.22mm (0.166 in.)	4412825AB	-	1.19mm (0.047 in.)	3.50mm (0.138 in.)	4412807AB
0.50mm (0.020 in.)	4.18mm (0.165 in.)	4412824AB	-	1.22mm (0.048 in.)	3.46mm (0.136 in.)	4412806AB
0.53mm (0.021 in.)	4.18mm (0.165 in.)	4412824AB	-	1.24mm (0.049 in.)	3.46mm (0.136 in.)	4412806AB
0.56mm (0.022 in.)	4.14mm (0.163 in.)	4412823AB	-	1.27mm (0.050 in.)	3.42mm (0.135 in.)	4412805AB

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0.58mm (0.023 in.)	4.10mm (0.161 in.)	4412822AB	-	1.30mm (0.051 in.)	3.38mm (0.133 in.)	4412804AB
0.61mm (0.024 in.)	4.10mm (0.161 in.)	4412822AB	-	1.32mm (0.052 in.)	3.38mm (0.133 in.)	4412804AB
0.64mm (0.025 in.)	4.06mm (0.160 in.)	4412821AB	-	1.35mm (0.053 in.)	3.34mm (0.132 in.)	4412803AB
0.66mm (0.026 in.)	4.02mm (0.158 in.)	4412820AB	-	1.37mm (0.054 in.)	3.34mm (0.132 in.)	4412803AB
0.69mm (0.027 in.)	4.02mm (0.158 in.)	4412820AB	-	1.40mm (0.055 in.)	3.30mm (0.130 in.)	4412802AB
0.71mm (0.028 in.)	3.98mm (0.157 in.)	4412819AB	-	1.45mm (0.057 in.)	3.26mm (0.128 in.)	4412801AB
0.74mm (0.029 in.)	3.94mm (0.155 in.)	4412818AB	-	1.47mm (0.058 in.)	2.22mm (0.127 in.)	4505570AB

34. Install the transfer shaft gear (4) using Installer 6261 (2).

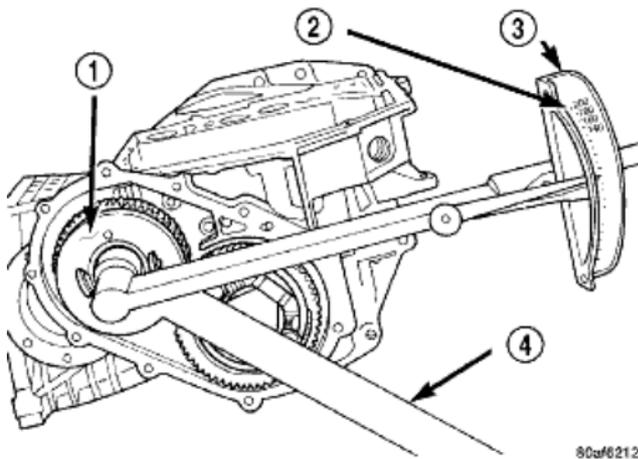


Fig. 127: Tightening Transfer Gear Retaining Nut
Courtesy of CHRYSLER LLC

1 - TRANSFER SHAFT GEAR
2 - 200 FT. LBS.
3 - TORQUE WRENCH
4 - HOLDER 6259

CAUTION: Install a **NEW** retaining nut, as the original nut **MUST NOT** be reused.

35. Install the new retaining nut and washer.
36. Using Holder 6259 (4) , torque transfer gear retaining nut to 271 N.m (200 ft. lbs.).

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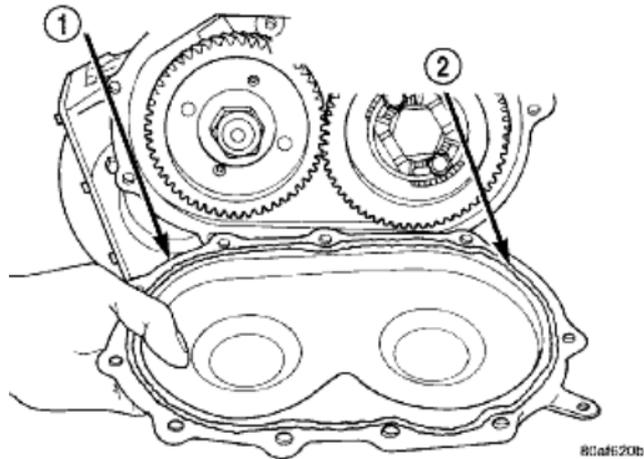


Fig. 128: Removing/Installing Transfer Gear Cover
Courtesy of CHRYSLER LLC

- | |
|---|
| 1 - REAR COVER |
| 2 - 1/8 INCH BEAD OF MOPAR® ATF RTV (MS-GF41) |

37. Measure transfer shaft end play. **Transfer shaft end play should be within 0.05-0.10 mm (0.002-0.004 in.).** If the end play is too high, install a 0.04 mm (0.0016 in.) thicker shim. If the end play is too low, install a 0.04 mm (0.0016 in.) thinner shim. Repeat until 0.05-0.10 mm (0.002-0.004 in.) end play is obtained.
38. Install a bead of Mopar® ATF RTV (MS-GF41) (2) to transfer gear cover (1).

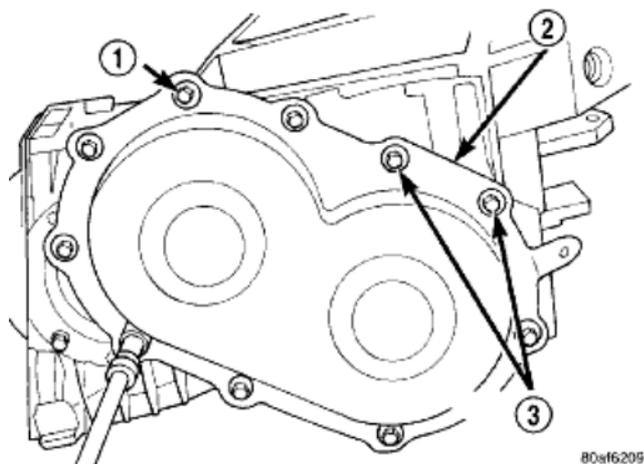


Fig. 129: Removing/Installing Transfer Gear Cover-To-Case Bolts
Courtesy of CHRYSLER LLC

- | |
|----------------------|
| 1 - REAR COVER BOLTS |
| 2 - REAR COVER |

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3 - USE SEALANT ON BOLTS

39. Use sealant on bolts (3) , install transfer gear cover-to-case bolts (1) and torque to 20 N.m (175 in. lbs.) torque.

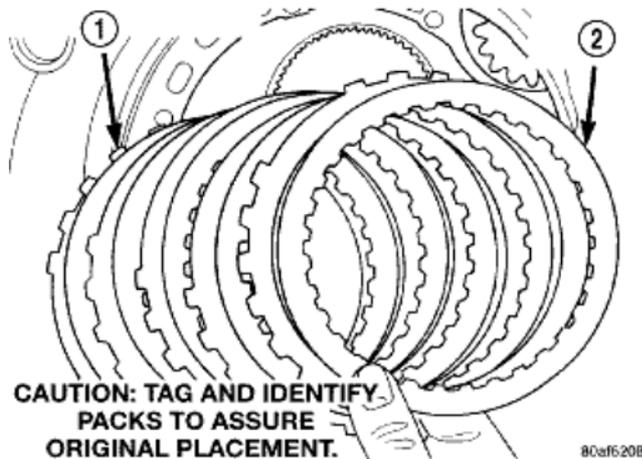


Fig. 130: Removing/Installing Low/Reverse Clutch Pack
Courtesy of CHRYSLER LLC

1 - CLUTCH PLATES (5)

2 - CLUTCH DISCS (5)

40. Install low/reverse clutch pack (1,2) . Leave uppermost disc out until snap ring is installed.

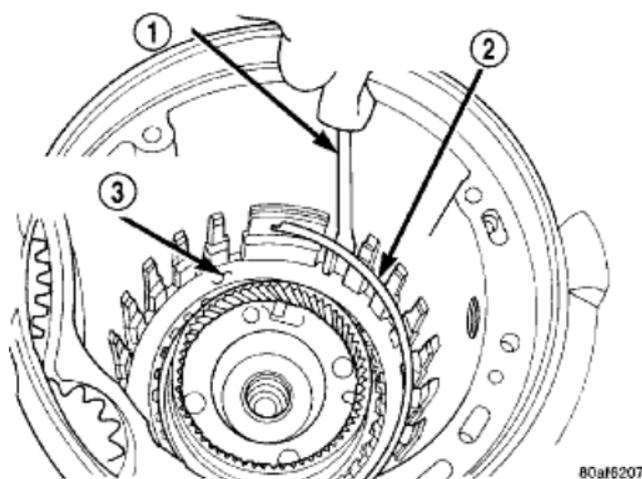


Fig. 131: Removing/Installing Low/Reverse Reaction Plate Snap Ring
Courtesy of CHRYSLER LLC

1 - SCREWDRIVER

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- | |
|---|
| 2 - LOW/REVERSE REACTION PLATE FLAT SNAP RING |
| 3 - DO NOT SCRATCH CLUTCH PLATE |

41. Install low/reverse reaction plate flat snap ring (2) insure you do not scratch clutch plate (3).

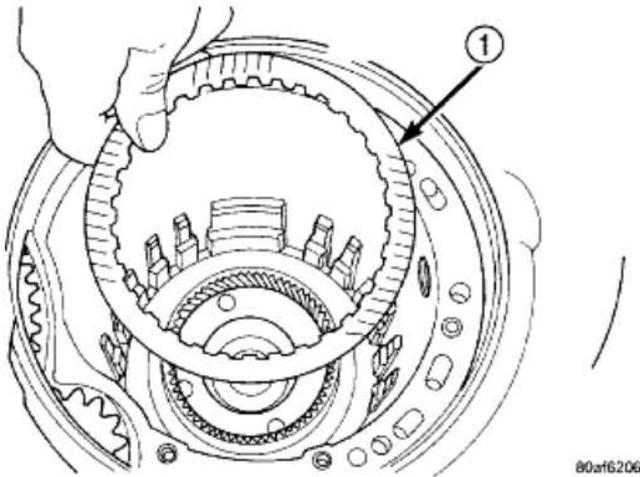


Fig. 132: Removing/Installing Low/Reverse Clutch Disc
Courtesy of CHRYSLER LLC

- | |
|--------------------------------------|
| 1 - ONE DISC FROM LOW/REVERSE CLUTCH |
|--------------------------------------|

42. Install remaining low/reverse clutch disc (1) .

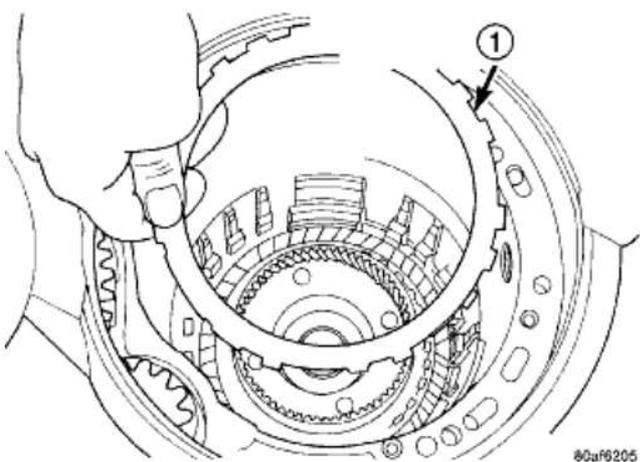


Fig. 133: Removing/Installing Low/Reverse Reaction Plate
Courtesy of CHRYSLER LLC

- | |
|---|
| 1 - LOW/REVERSE REACTION PLATE (FLAT SIDE UP) |
|---|

43. Install low/reverse reaction plate with flat side up (1) .

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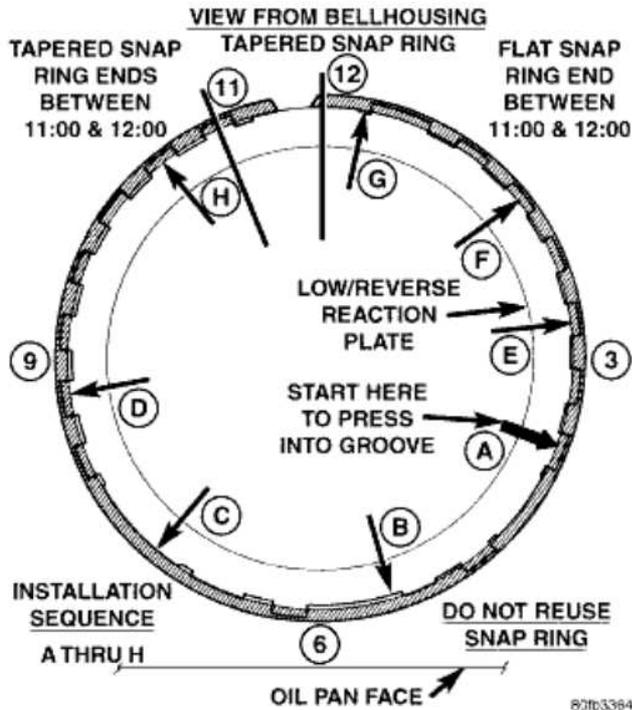


Fig. 134: Installing Tapered Snap Ring
 Courtesy of CHRYSLER LLC

44. Use as a reference while installing tapered snap ring .

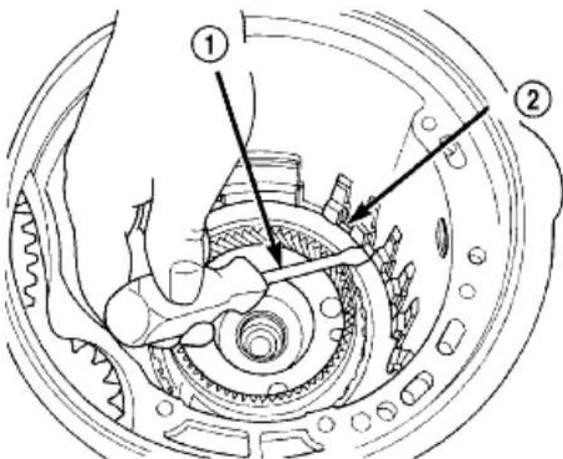


Fig. 135: Installing Tapered Snap Ring With Tapered Side Up
 Courtesy of CHRYSLER LLC

- | |
|--|
| 1 - SCREWDRIVER |
| 2 - TAPERED SNAP RING (INSTALL AS SHOWN IN ILLUSTRATION) |

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45. Install tapered snap ring (with tapered side up) (2) .

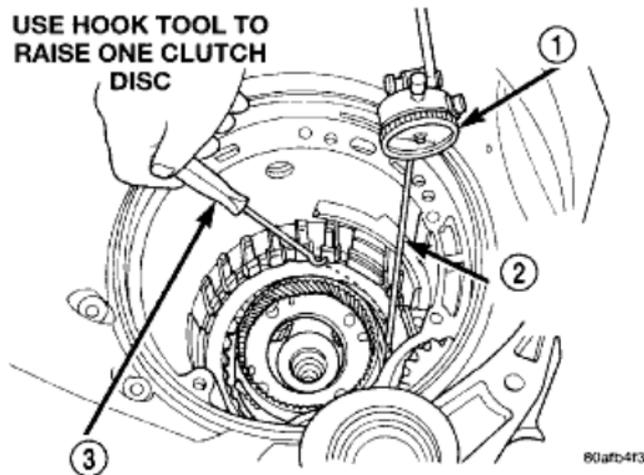


Fig. 136: Measuring Low/Reverse Clutch Clearance
Courtesy of CHRYSLER LLC

1 - DIAL INDICATOR
2 - DIAL INDICATOR TIP TOOL 6268
3 - HOOK TOOL

46. Set up dial indicator (1) to measure low/reverse clutch clearance. Press down on clutch pack with finger and zero dial indicator. **Low/Reverse clutch pack clearance is 0.89-1.47 mm (0.035-0.058 in.)** . Set up indicator and record measurement in four places. Take average of readings and select the proper low/reverse reaction plate to achieve specifications.

LOW/REVERSE REACTION PLATE CHART

PART NUMBER	THICKNESS
4799846AA	5.88 mm (0.232 in.)
4799847AA	6.14 mm (0.242 in.)
4799848AA	6.40 mm (0.252 in.)
4799849AA	6.66 mm (0.262 in.)
4799855AA	6.92 mm (0.273 in.)

47. Install 2/4 clutch pack (1, 2) .

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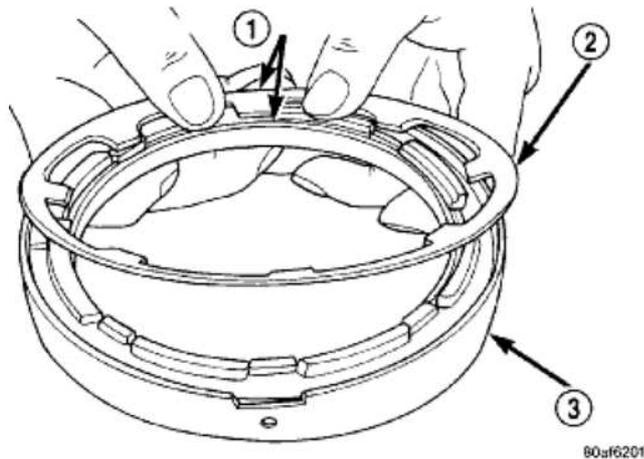


Fig. 137: Identifying Proper Orientation Of 2/4 Clutch Retainer & Return Spring
Courtesy of CHRYSLER LLC

- | |
|-------------------------|
| 1 - NOTE POSITION |
| 2 - RETURN SPRING |
| 3 - 2/4 CLUTCH RETAINER |

NOTE: The 2/4 Clutch Piston has bonded seals which are not individually serviceable. Seal replacement requires replacement of the piston assembly.

48. Orient 2/4 clutch return spring to retainer (3) .

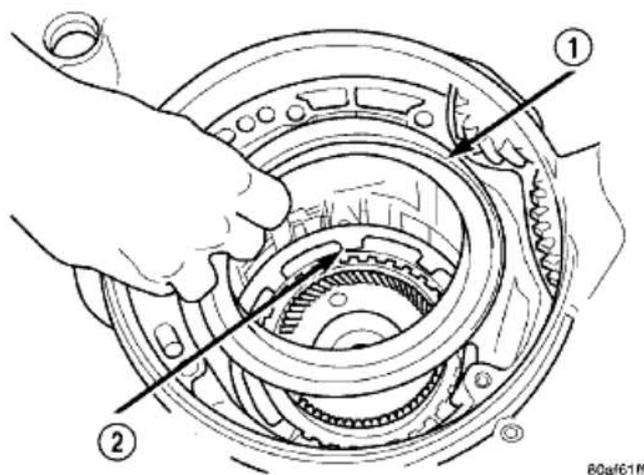


Fig. 138: Removing/Installing 2/4 Clutch Retainer
Courtesy of CHRYSLER LLC

- | |
|-------------------------|
| 1 - 2/4 CLUTCH RETAINER |
|-------------------------|

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2 - 2/4 CLUTCH RETURN SPRING

49. Install 2/4 clutch retainer to transaxle (1, 2) .

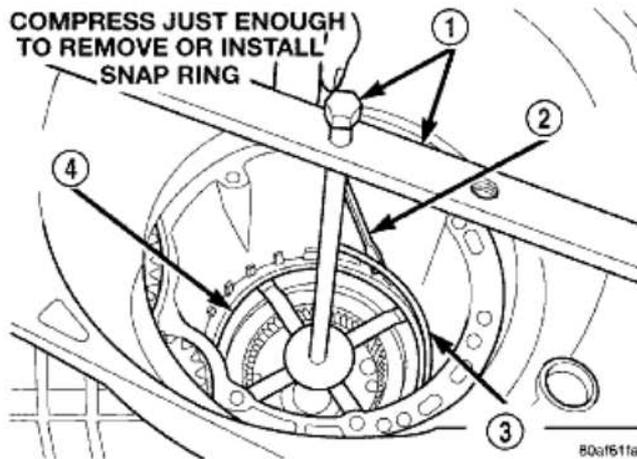


Fig. 139: Removing/Installing Snap Ring

Courtesy of CHRYSLER LLC

1 - COMPRESSING TOOL 5058A
2 - SCREWDRIVER
3 - SNAP RING
4 - 2/4 CLUTCH RETAINER

50. Using Compressing Tool 5058A (1) , compress 2/4 clutch return spring just enough to install snap ring (3).
51. Install snap ring.

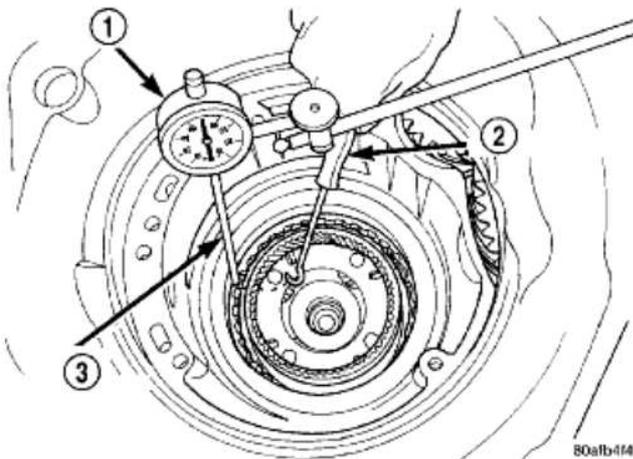


Fig. 140: Measuring 2/4 Clutch Clearance

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Courtesy of CHRYSLER LLC

- | |
|-----------------------------|
| 1 - DIAL INDICATOR |
| 2 - HOOK TOOL |
| 3 - DIAL INDICATOR TIP 6268 |

52. Set up dial indicator (1) and measure 2/4 clutch clearance. Press down on clutch pack with finger and zero dial indicator. **2/4 clutch pack clearance is 0.76-2.64 mm (0.030-0.104 in.)**. Set up indicator and record measurement in four (4) places. Take average of readings. If clearance is outside this range, the clutch is assembled improperly. **There is no adjustment for 2/4 clutch clearance.**

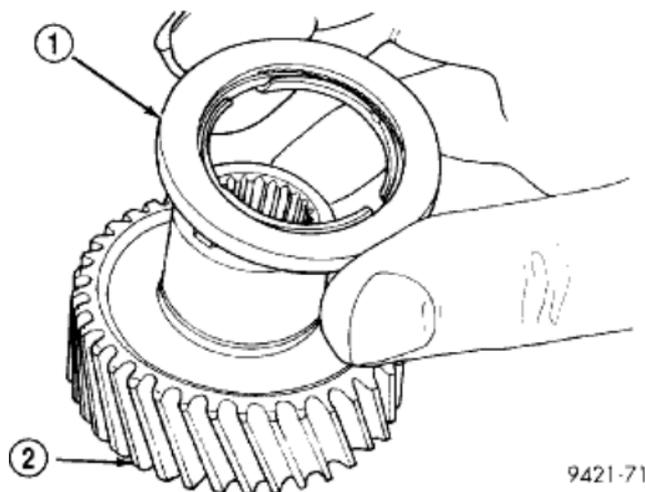


Fig. 141: Removing/Installing #7 Needle Bearing
Courtesy of CHRYSLER LLC

- | |
|-----------------------|
| 1 - #7 NEEDLE BEARING |
| 2 - REAR SUN GEAR |

NOTE: The number seven needle (1) bearing has three anti-reversal tabs and is common with the number five and number two position. The orientation should allow the bearing to seat flat against the rear sun gear. A small amount of petrolatum can be used to hold the bearing to the rear sun gear (2).

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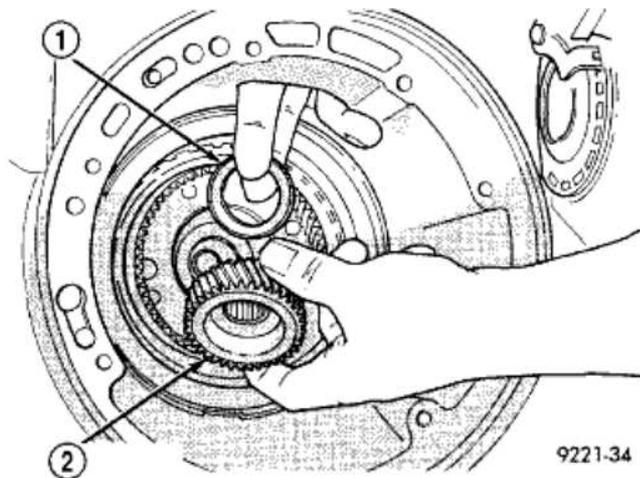


Fig. 142: Removing/Installing Rear Sun Gear
Courtesy of CHRYSLER LLC

1 - #7 NEEDLE BEARING
2 - REAR SUN GEAR

53. Install rear sun gear (2) and #7 needle bearing (1).

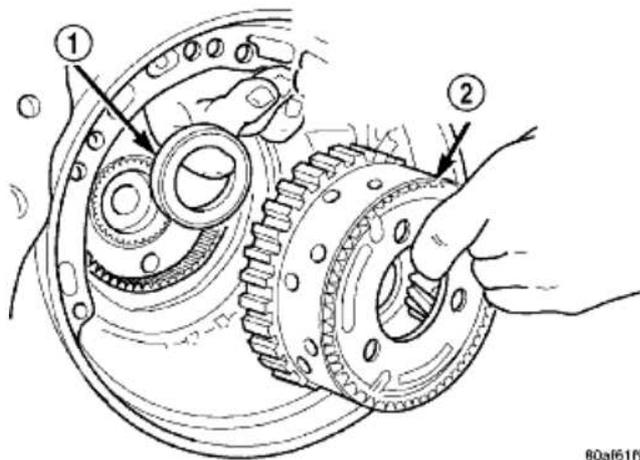


Fig. 143: Removing/Installing Front Carrier/Rear Annulus Assembly
Courtesy of CHRYSLER LLC

1 - #6 NEEDLE BEARING
2 - FRONT CARRIER AND REAR ANNULUS ASSEMBLY (TWIST AND PULL OR PUSH TO REMOVE OR INSTALL).

54. Install front carrier/rear annulus assembly (2) and #6 needle bearing (1).

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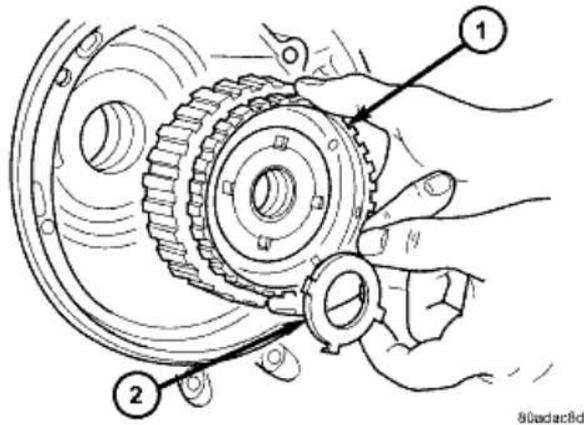


Fig. 144: Removing/Installing Front Sun Gear Assembly
Courtesy of CHRYSLER LLC

- | |
|----------------------------------|
| 1 - FRONT SUN GEAR ASSEMBLY |
| 2 - #4 THRUST WASHER (FOUR TABS) |

55. Install front sun gear assembly (1) and #4 thrust washer (2).

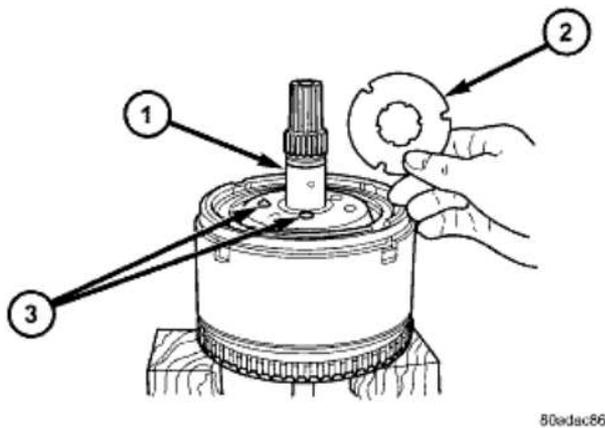


Fig. 145: Removing/Installing #4 Thrust Plate
Courtesy of CHRYSLER LLC

- | |
|--|
| 1 - OVERDRIVE SHAFT ASSEMBLY |
| 2 - #4 THRUST PLATE (SELECT) |
| 3 - 3 DABS OF PETROLATUM FOR RETENTION |

56. Select the thinnest #4 thrust plate thickness (2) and install to input clutch assembly. Use petrolatum to retain (3).

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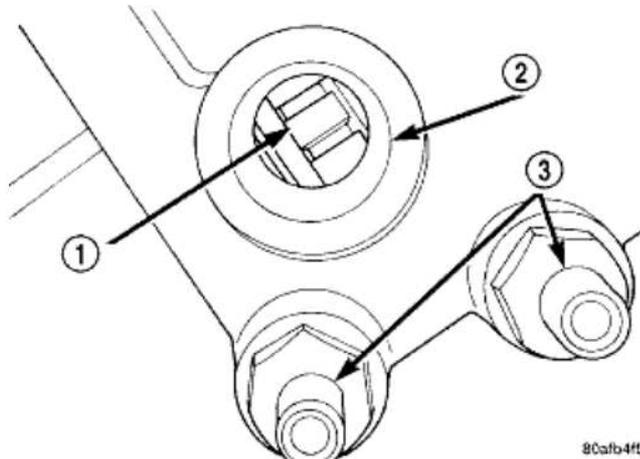


Fig. 146: Verifying Proper Seating Of Input Clutch Assembly
Courtesy of CHRYSLER LLC

- | |
|-----------------------------|
| 1 - INPUT CLUTCH RETAINER |
| 2 - INPUT SPEED SENSOR HOLE |
| 3 - OIL COOLER FITTINGS |

57. Install input clutch assembly into position and verify that it is completely seated by viewing through input speed sensor hole (2) . If view through input speed sensor hole is not as shown in **Fig. 146**, the input clutch assembly is not seated properly.

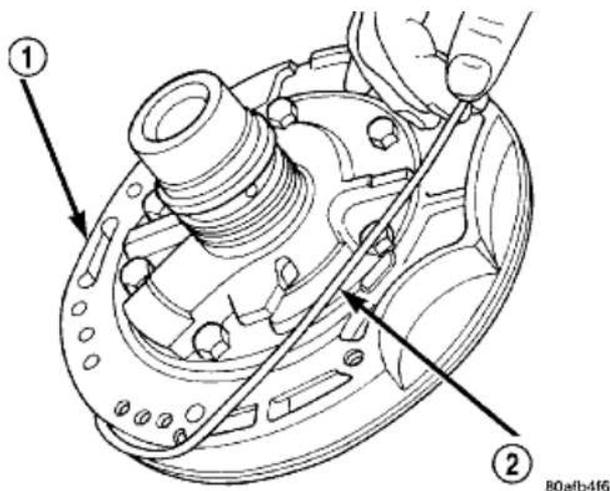


Fig. 147: Removing/Installing Oil Pump O-Ring
Courtesy of CHRYSLER LLC

- | |
|-----------------------|
| 1 - OIL PUMP ASSEMBLY |
| 2 - O-RING |

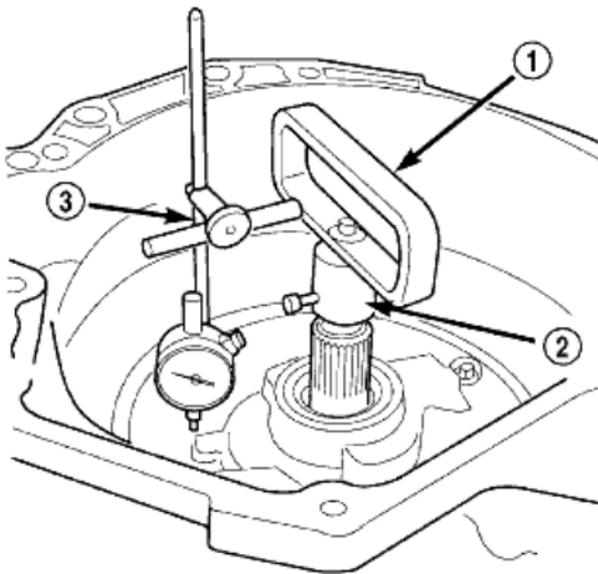
58. Remove oil pump o-ring (2) . **Be sure to reinstall oil pump o-ring after selecting the proper #4 thrust**

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plate.

59. Install pump and gasket to transmission. Install and torque bolts.



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Fig. 148: Measuring Input Shaft End Play
Courtesy of CHRYSLER LLC

1 - END PLAY SOCKET SET 8266A

2 - DIAL INDICATOR C-3339A

-

60. Set up input shaft for measurement with Indicator Set C-3339A (3) and End Play Set 8266A (1) .
61. Measure the input shaft end play with the transaxle in the vertical position. **Input shaft end play must be within 0.005 to 0.025 inch.** For example, if end play reading is 0.055 inch, select No. 4 Thrust Plate which is 0.071 to 0.074 thick. This should provide an input shaft end play reading of 0.020 inch which is within specifications.
62. Refer to **NO. 4 THRUST PLATE CHART** to select the proper No. 4 thrust plate.

NO. 4 THRUST PLATE CHART

PART NUMBER	THICKNESS
4431665AB	1.60mm (0.063 in.)
3836237AB	1.73mm (0.068 in.)
4431666AB	1.80mm (0.071 in.)
3836238AB	1.96mm (0.077 in.)
4431667AB	2.03mm (0.080 in.)
3836239AB	2.16mm (0.085 in.)
4431668AB	2.24mm (0.088 in.)

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3836240AB	2.39mm (0.094 in.)
4431669AB	2.46mm (0.097 in.)
3836241AB	2.62mm (0.103 in.)
4446670AB	2.67mm (0.105 in.)
4446671AB	2.90mm (0.114 in.)

63. Install input clutch assembly (1) .

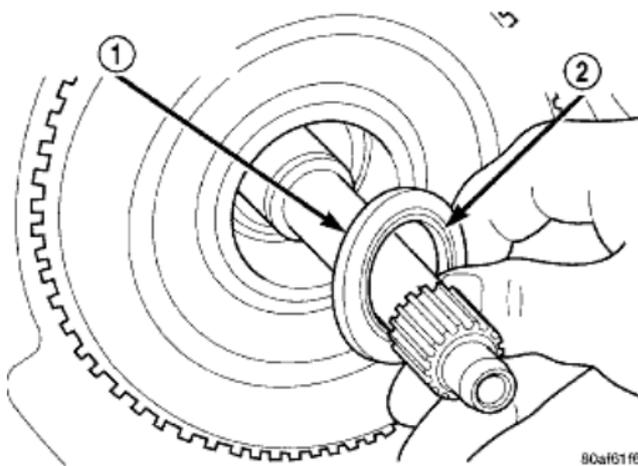


Fig. 149: Removing/Installing #1 Caged Needle Bearing
Courtesy of CHRYSLER LLC

1 - #1 CAGED NEEDLE BEARING
2 - NOTE: TANGED SIDE OUT

64. Install #1 caged needle bearing (1) note: tapered side out (2).

CAUTION: The cooler bypass valve must be replaced if transaxle failure has occurred. Do not attempt to reuse or clean old valve.

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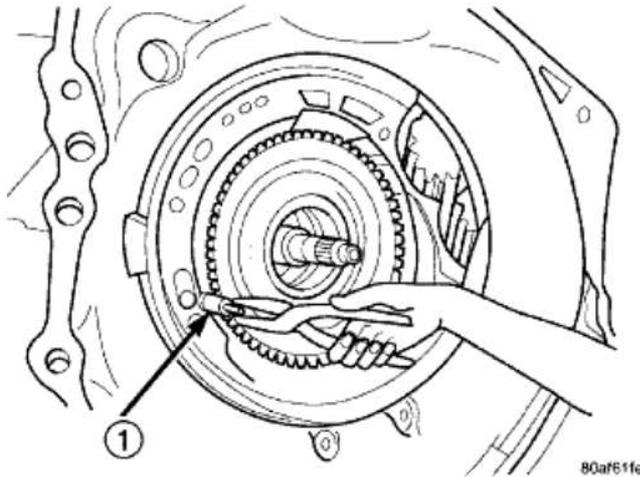


Fig. 150: Removing/Installing Cooler Bypass Valve
Courtesy of CHRYSLER LLC

1 - COOLER BYPASS VALVE

65. Install cooler bypass valve (1) with o-ring end towards rear of case.

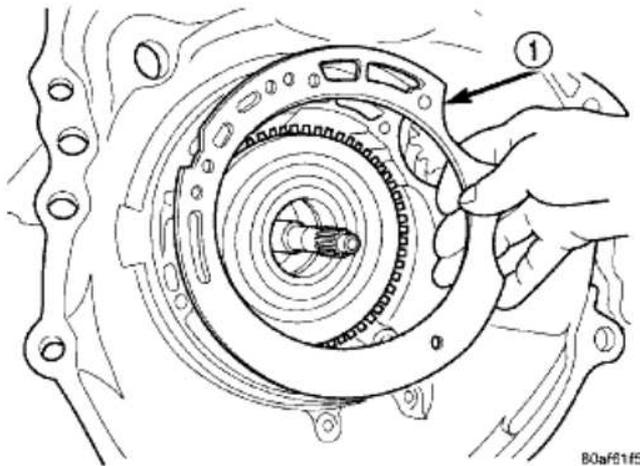


Fig. 151: Removing/Installing Oil Pump Gasket
Courtesy of CHRYSLER LLC

1 - PUMP GASKET

66. Install oil pump gasket (1) .

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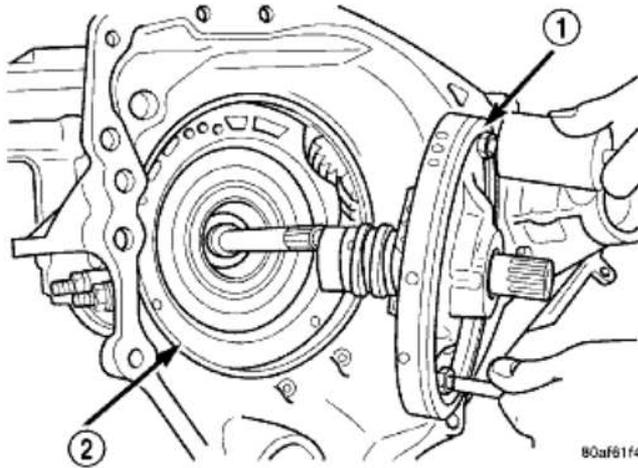


Fig. 152: Installing Oil Pump
Courtesy of CHRYSLER LLC

- | |
|--------------|
| 1 - OIL PUMP |
| 2 - GASKET |

67. Install oil pump (1) .

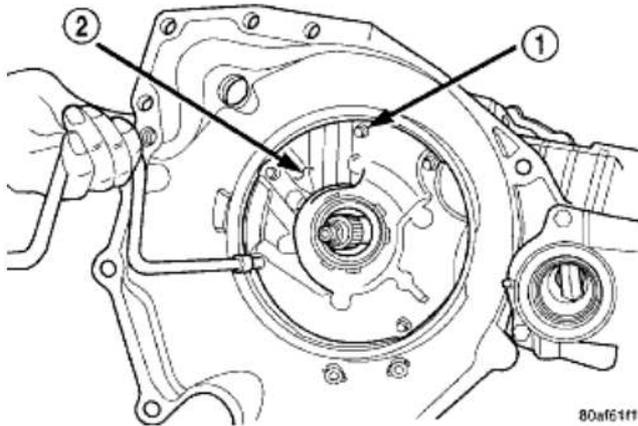


Fig. 153: Removing/Installing Oil Pump-To-Case Bolts
Courtesy of CHRYSLER LLC

- | |
|--------------------------|
| 1 - PUMP ATTACHING BOLTS |
| 2 - PUMP HOUSING |

68. Install oil pump-to-case bolts (1) and torque to 27 N.m (20 ft. lbs.).

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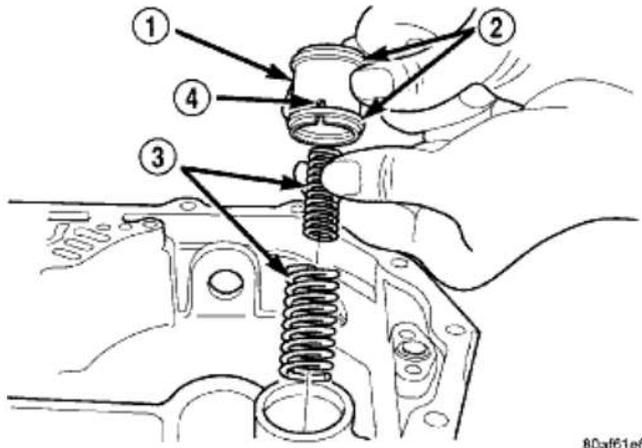


Fig. 154: Installing Low/Reverse Accumulator
Courtesy of CHRYSLER LLC

- | |
|------------------------|
| 1 - ACCUMULATOR PISTON |
| 2 - SEAL RINGS |
| 3 - RETURN SPRINGS |
| 4 - (NOTE NOTCH) |

69. Install low/reverse accumulator (1) .

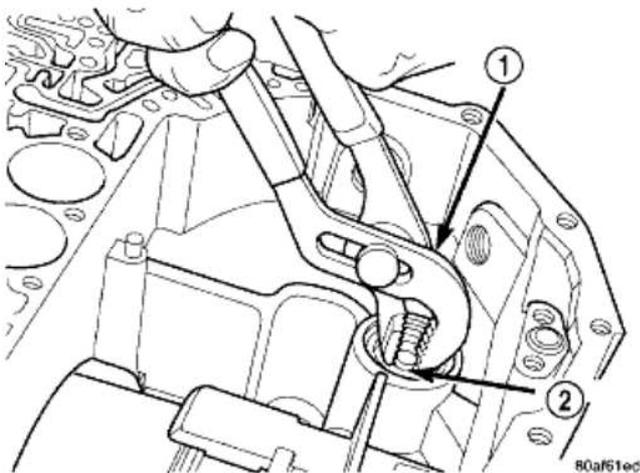


Fig. 155: Removing/Installing Low/Reverse Accumulator Plug
Courtesy of CHRYSLER LLC

- | |
|-----------------------|
| 1 - ADJUSTABLE PLIERS |
| 2 - PLUG |

70. Install low/reverse accumulator plug (2) .

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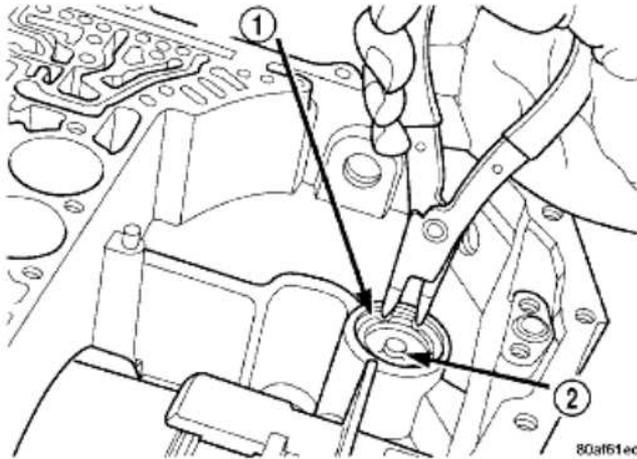


Fig. 156: Removing/Installing Low/Reverse Accumulator Snap Ring
Courtesy of CHRYSLER LLC

- | |
|---------------|
| 1 - SNAP RING |
| 2 - PLUG |

71. Install low/reverse accumulator snap ring (1) .

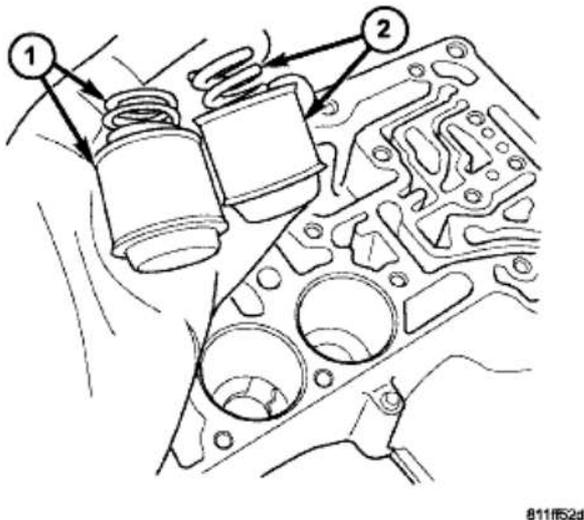


Fig. 157: Installing Underdrive & Overdrive Accumulators
Courtesy of CHRYSLER LLC

- | |
|----------------------------------|
| 1 - OVERDRIVE PISTON AND SPRING |
| 2 - UNDERDRIVE PISTON AND SPRING |

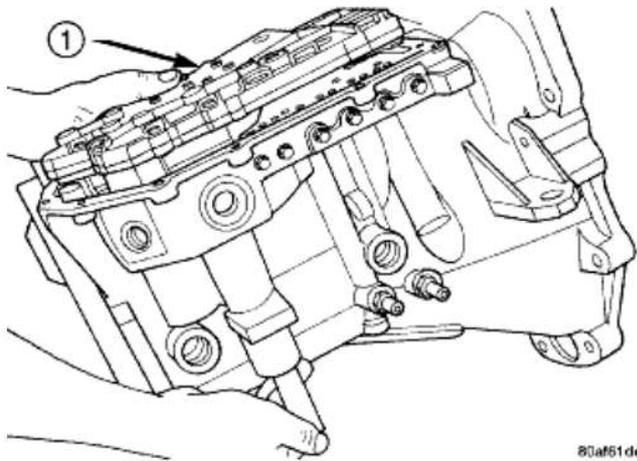
NOTE: Depending on engine application, some accumulators will have two

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springs, and others will have one spring. The springs are color-coded for application and year.

72. Install underdrive and overdrive accumulators (1, 2) .

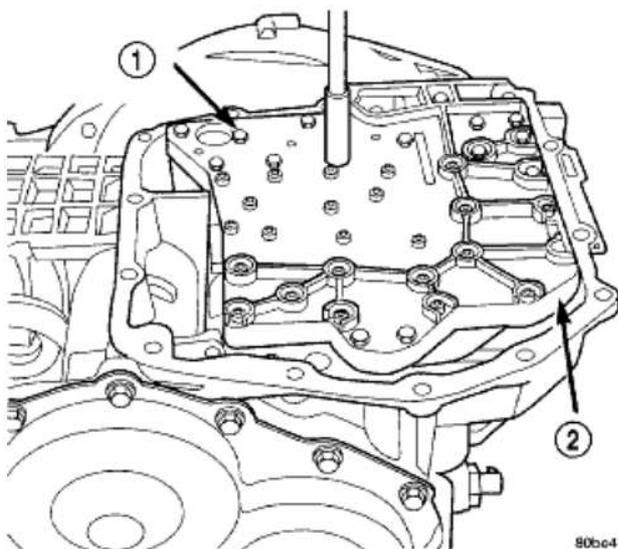


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Fig. 158: Removing/Installing Valve Body Assembly
Courtesy of CHRYSLER LLC

1 - VALVE BODY

73. Install valve body (1) to transaxle. Rotate manual valve shaft fully clockwise to ease installation. Make sure park rod rollers are positioned within park guide bracket.



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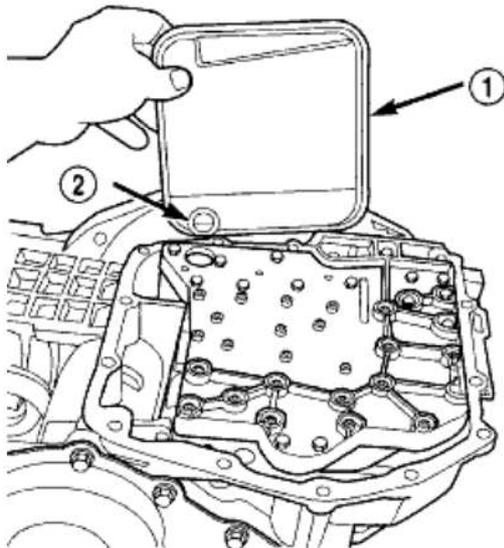
Fig. 159: Removing/Installing Valve Body-To-Case Bolts
Courtesy of CHRYSLER LLC

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- | |
|-------------------------------------|
| 1 - VALVE BODY ATTACHING BOLTS (18) |
| 2 - VALVE BODY |

74. Install and torque valve body-to-case bolts (1) to 12 N.m (105 in. lbs.).

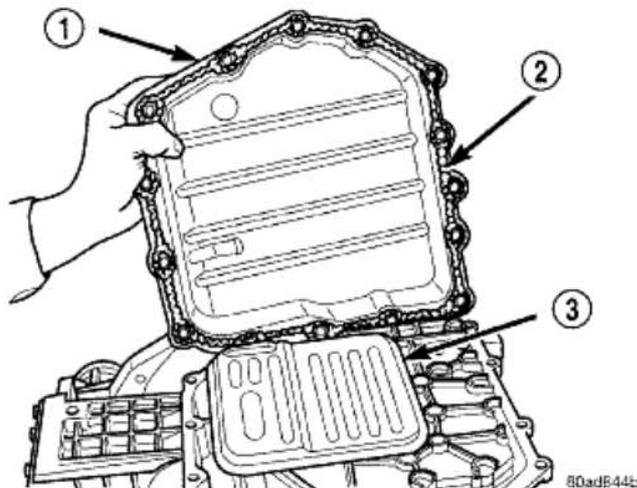


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Fig. 160: Removing/Installing Oil Filter
Courtesy of CHRYSLER LLC

- | |
|----------------|
| 1 - OIL FILTER |
| 2 - O-RING |

75. Install oil filter (1) and new o-ring (2).



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Fig. 161: Removing/Installing Oil Pan
Courtesy of CHRYSLER LLC

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- | |
|---|
| 1 - OIL PAN |
| 2 - 1/8 INCH BEAD OF MOPAR® ATF RTV (MS-GF41) |
| 3 - OIL FILTER |

76. Apply an 1/8" bead of Mopar® ATF RTV (MS-GF41) (2) to oil pan (1) and immediately install to case.

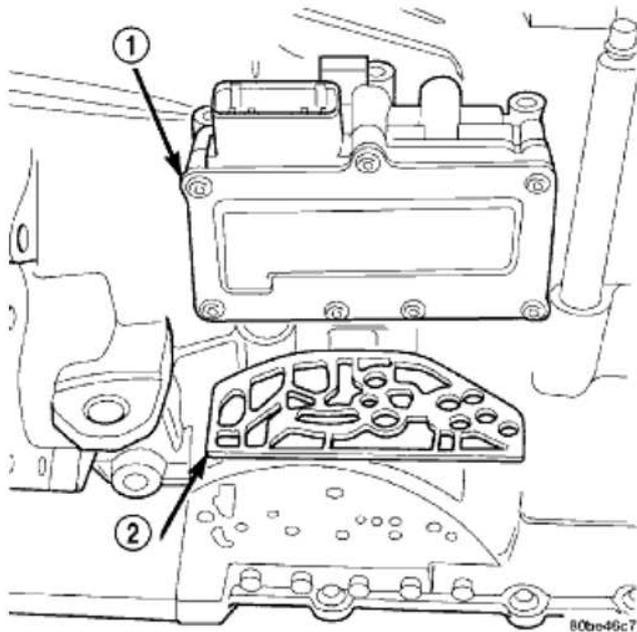


Fig. 162: Identifying Solenoid/Pressure Switch Assembly & Gasket
Courtesy of CHRYSLER LLC

- | |
|---------------------------------------|
| 1 - SOLENOID/PRESSURE SWITCH ASSEMBLY |
| 2 - GASKET |

77. Install oil pan-to-case bolts and torque to 19 N.m (165 in. lbs.).
78. Install solenoid/pressure switch assembly (1) and gasket (2) to case.

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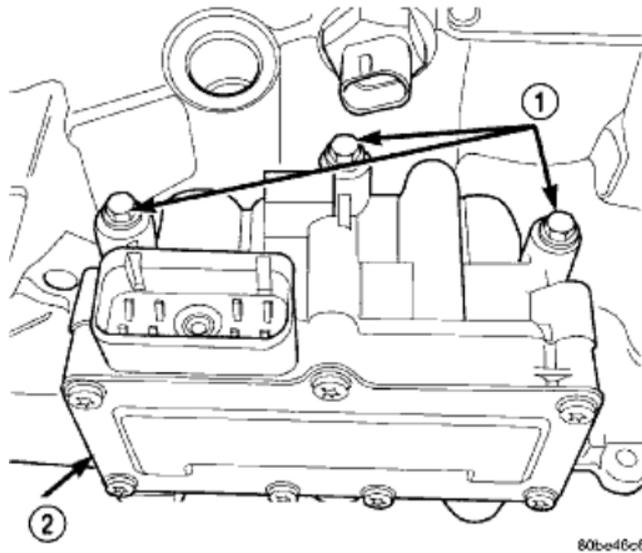


Fig. 163: Identifying Solenoid/Pressure Switch Assembly-To-Transaxle Case Bolts
Courtesy of CHRYSLER LLC

1 - BOLTS

2 - SOLENOID AND PRESSURE SWITCH ASSEMBLY

79. Install and tighten solenoid/pressure switch assembly-to-transaxle case bolts (1) to 12 N.m (110 in. lbs.) .
80. Install and torque input and output speed sensors to case to 27 N.m (20 ft. lbs.).

INSTALLATION

INSTALLATION

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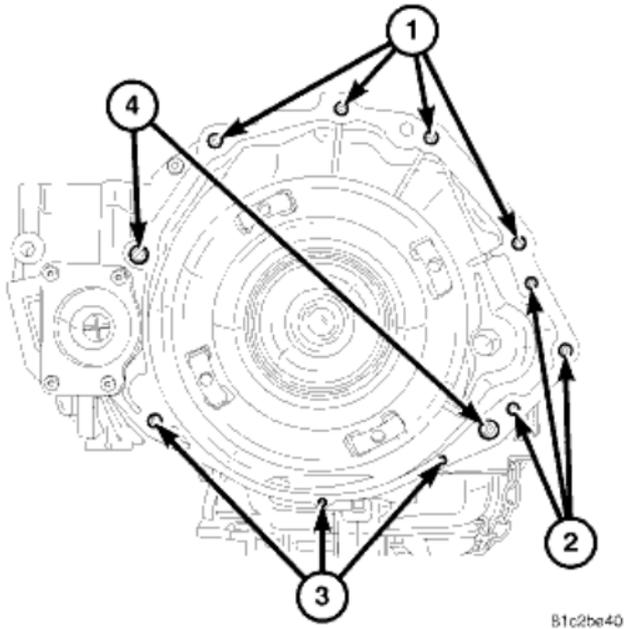


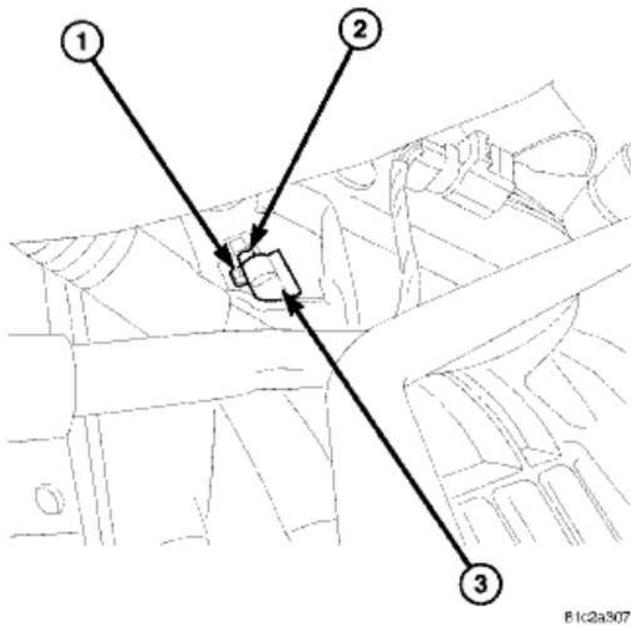
Fig. 164: Removing/Installing Bellhousing Upper & Lower Bolts
Courtesy of CHRYSLER LLC

NOTE: If transaxle assembly is being replaced or overhauled (clutch and/or seal replacement), it is necessary to perform the "Quick-Learn" Procedure. Refer to Electrical - Electronic Control Modules/Electronic Control Modules/MODULE, Powertrain Control - Standard Procedure .

1. Install the transaxle assembly into vehicle.
2. Install the bellhousing upper (1) and lower bolts (2) and tighten to 75 N.m (55 ft. lbs.).

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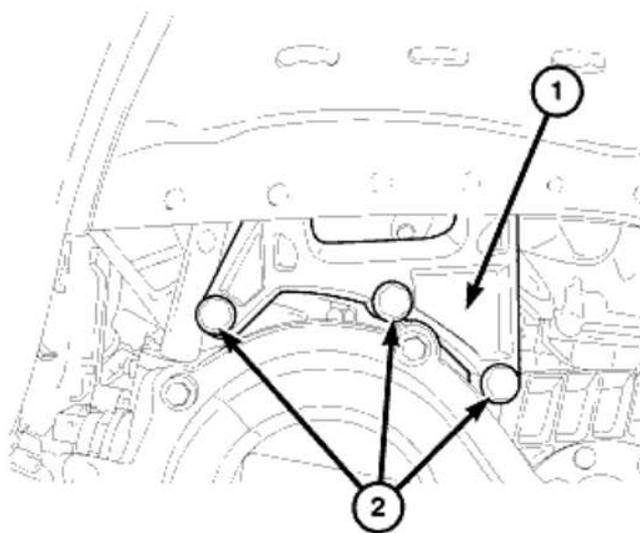
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Fig. 165: Removing/Installing CKP Sensor
Courtesy of CHRYSLER LLC

3. Install and connect crank position sensor and tighten bolt to 12 N.m (106 in. lbs.). Refer to **Electrical - Ignition Control/Ignition Control/SENSOR, Camshaft Position - Installation**.



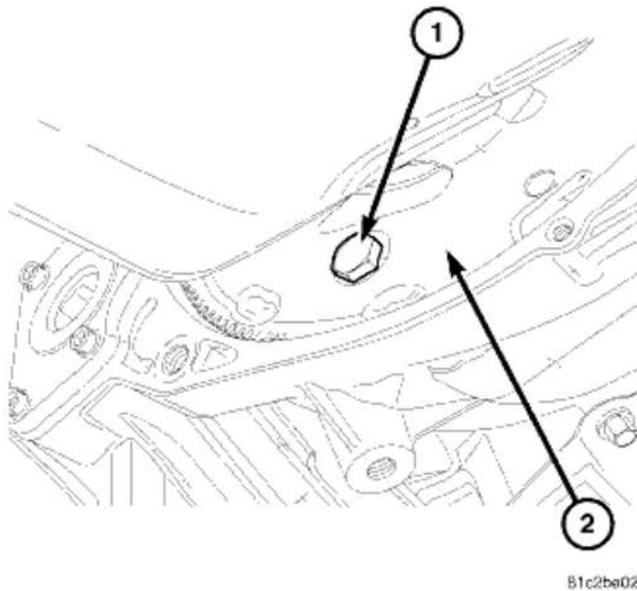
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Fig. 166: Removing/Installing Left Mount To Block Bolts
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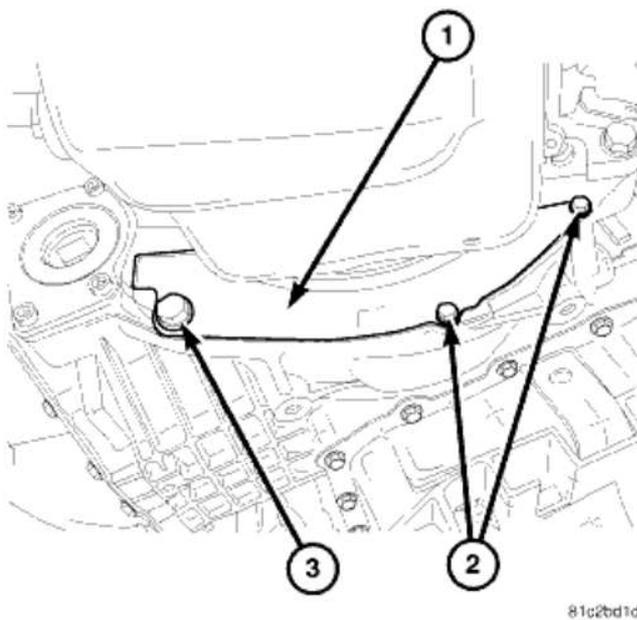
4. Install left mount bracket assembly (1) to transaxle and tighten bolts (2) to 54 N.m (40 ft. lbs.).



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Fig. 167: Removing/Installing Torque Converter-To-Drive Plate Bolts
Courtesy of CHRYSLER LLC

5. Raise engine/transaxle assembly into position.
6. Install torque converter-to-drive plate bolts and tighten to 88 N.m (65 ft. lbs.)



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Fig. 168: Removing/Installing Inspection Cover
Courtesy of CHRYSLER LLC

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7. Install inspection cover.
8. Install inspection cover (1) and tighten the larger fastener (3) to 95 N.m (70 ft. lbs.) and the smaller fasteners (2) to 12 Nm (70 ft. lbs.).

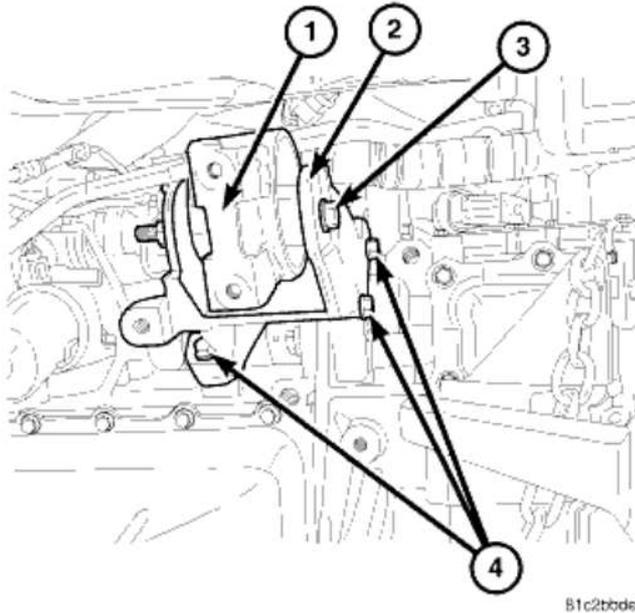
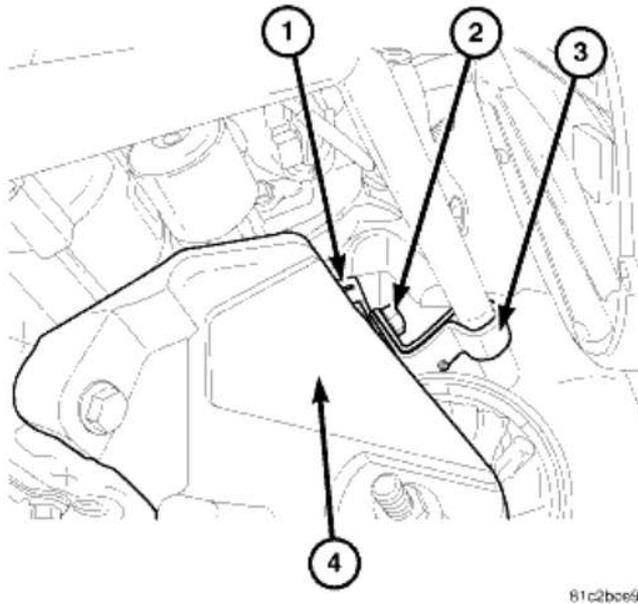


Fig. 169: Removing/Installing Front Transmission Mount
Courtesy of CHRYSLER LLC

9. Install front mount to transmission (2).
10. Install front mount bolts (4) and tighten to 95 N.m (70 ft. lbs.).
11. Install the starter motor. Refer to **Electrical - Engine Systems/Starting/STARTER - Installation**.

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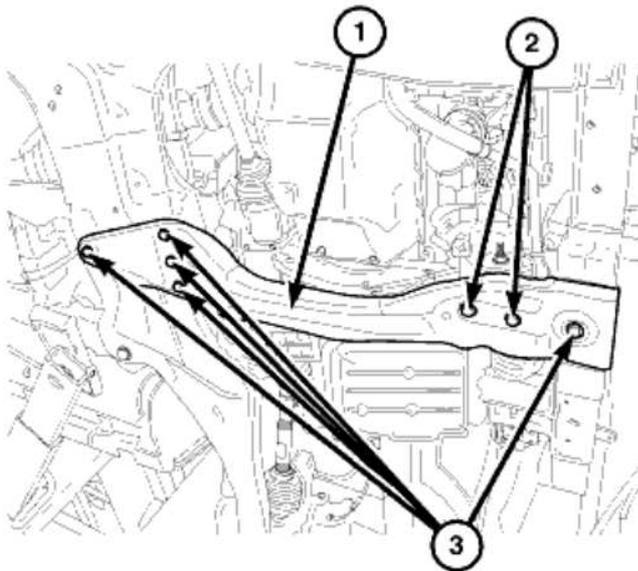
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Fig. 170: Identifying Heater Tube & Ground Cable Bolt At Front Mount
Courtesy of CHRYSLER LLC

12. Install the bolt (2) holding the ground cable (1) and the heater tube bracket (3) to the front mount (4).



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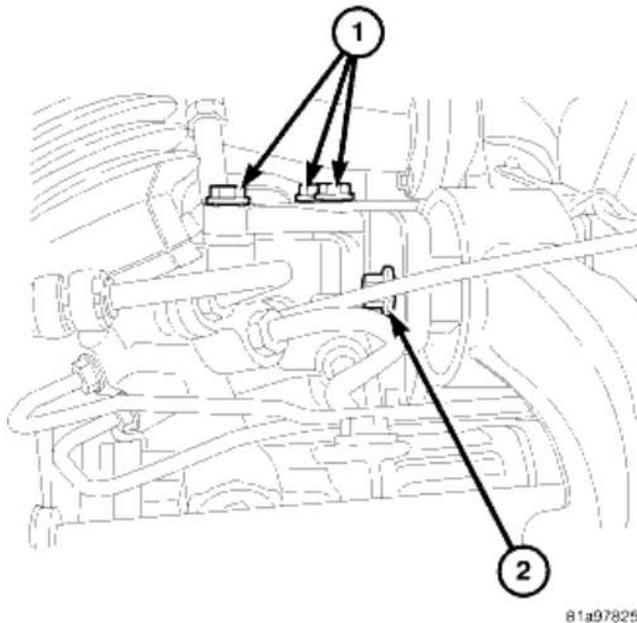
Fig. 171: Removing/Installing Crossmember
Courtesy of CHRYSLER LLC

13. Install the crossmember (1).
14. Install the bolts at the crossmember (2, 3) and tighten to 40 N.m (30 ft. lbs.).

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15. Remove the transmission jack and screw jack at engine.



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Fig. 172: Identifying Rear Mount Bracket-To-Transaxle Case Bolts
 Courtesy of CHRYSLER LLC

16. Lower the hoist.
17. Install left and right halfshaft assemblies. Refer to **Differential and Driveline/Half Shaft - Installation**.
18. Install front wheel/tire assemblies.
19. install rear mount bracket-to-transaxle case bolts (1) and tighten to 75 N.m (55 ft. lbs.).

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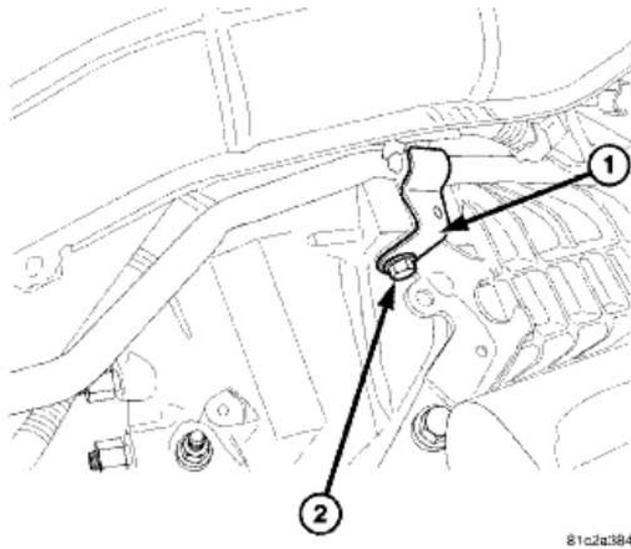


Fig. 173: Identifying Heater Tube Bolt At Bellhousing
Courtesy of CHRYSLER LLC

20. Install the heater tube bolt (1) at the bellhousing and tighten to 5 N.m (44 in. lbs.).

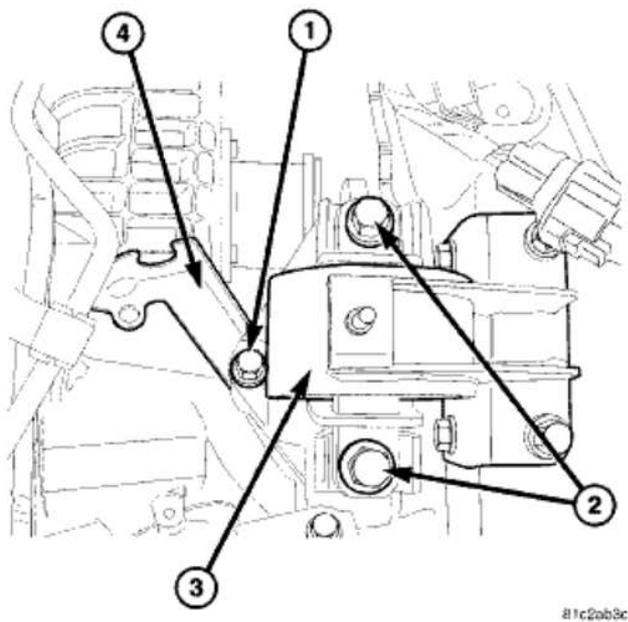


Fig. 174: Identifying Left Mount Bolts
Courtesy of CHRYSLER LLC

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21. Insure that the shift cable bracket (4) is in place.
22. Install the bolts at left mount (1, 2) and tighten to 95 N.m (70 ft. lbs.).

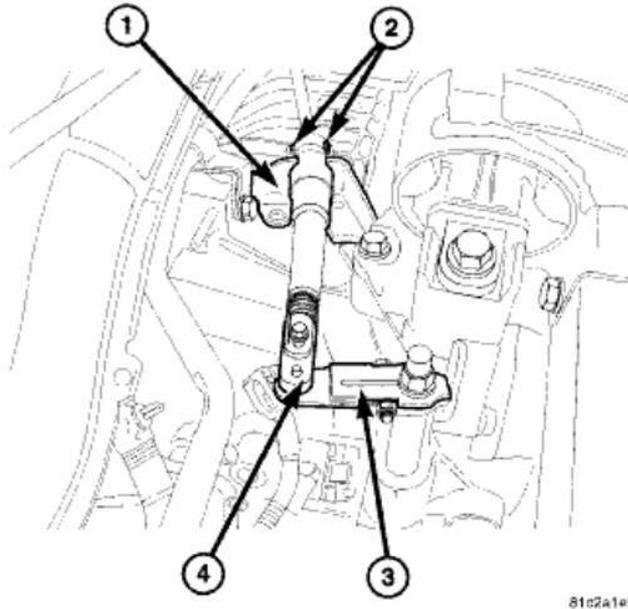
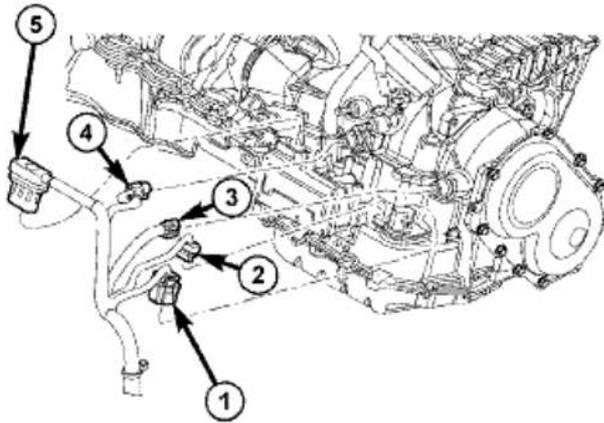


Fig. 175: Identifying Shift Cable At Manual Valve & Cable Bracket
Courtesy of CHRYSLER LLC

23. Connect gear shift cable to the manual valve lever (4) and shift cable bracket (2).

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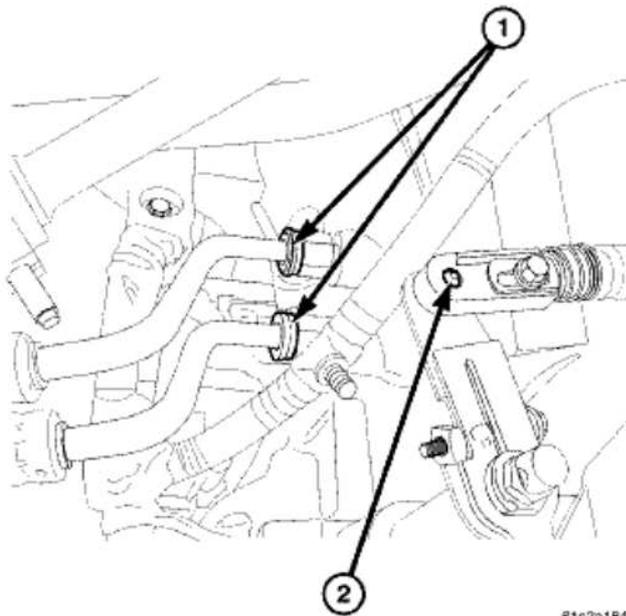
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Fig. 176: Identifying Transmission Electrical Connectors
Courtesy of CHRYSLER LLC

24. Connect the electrical connectors at transmission (1, 2, 3, 4 and 5).



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Fig. 177: Identifying Oil Cooler Lines
Courtesy of CHRYSLER LLC

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25. Connect oil cooler lines (1) to transaxle.

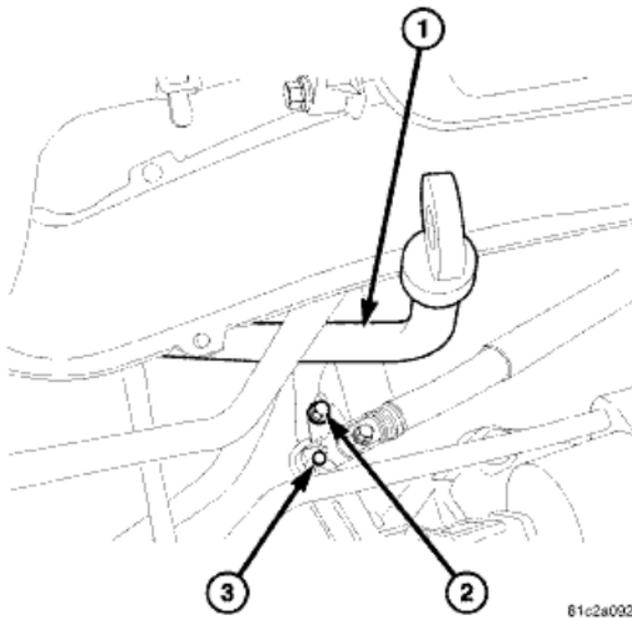
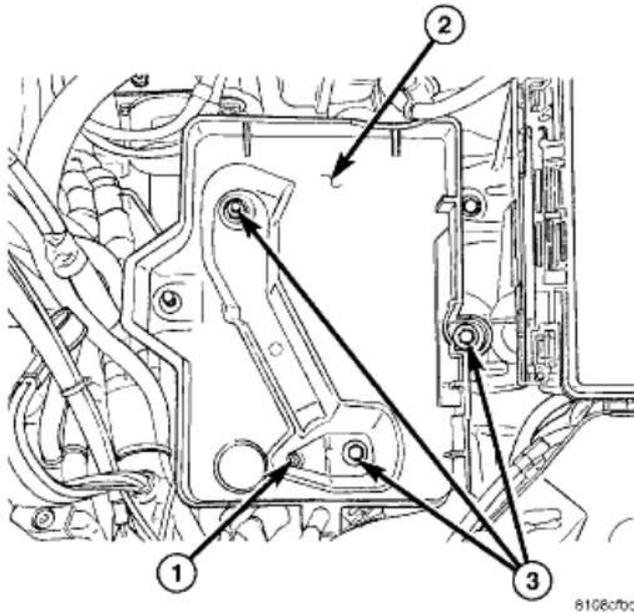


Fig. 178: Removing/Installing Fluid Level Indicator/Tube Assembly
Courtesy of CHRYSLER LLC

26. Install fluid level indicator/tube assembly (1).
27. Install the bolt (2) at the fluid level indicator/tube assembly and tighten to 5 N.m (44 in. lbs.).

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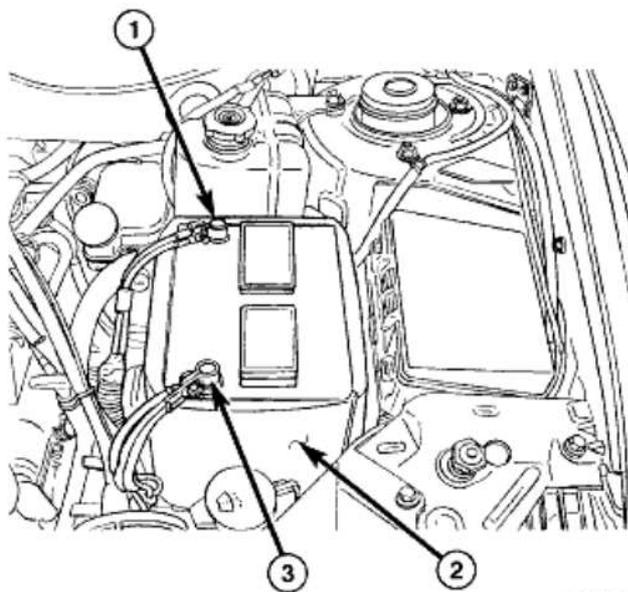
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Fig. 179: Removing/Installing Battery Tray
Courtesy of CHRYSLER LLC

28. Install the battery tray (2). Refer to **Electrical - Engine Systems/Battery System/TRAY, Battery - Installation**.
29. Install the tie straps holding harness and ground cable to the battery tray.



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Fig. 180: Identifying Battery Cables
Courtesy of CHRYSLER LLC

30. Install the battery (2) and battery hold down bolt (3).
31. Connect battery cables.
32. Fill transaxle. See **FLUID AND FILTER SERVICE**.

SCHEMATICS AND DIAGRAMS

40/41TE - WITH VARIABLE LINE PRESSURE

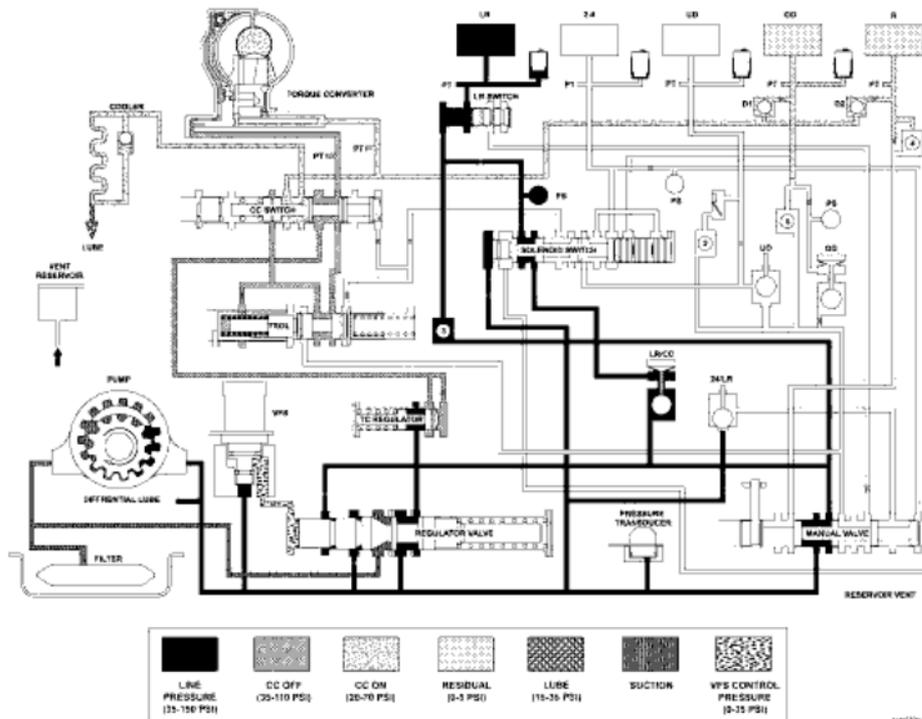


Fig. 181: Identifying Line Pressure - Park & Neutral
Courtesy of CHRYSLER LLC

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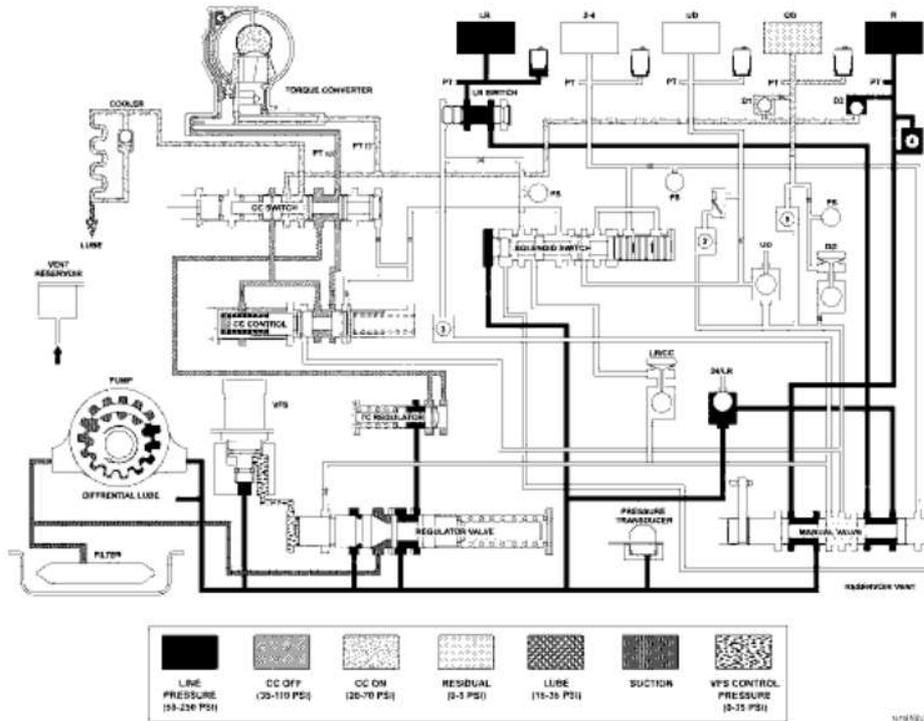


Fig. 182: Identifying Line Pressure - Reverse
 Courtesy of CHRYSLER LLC

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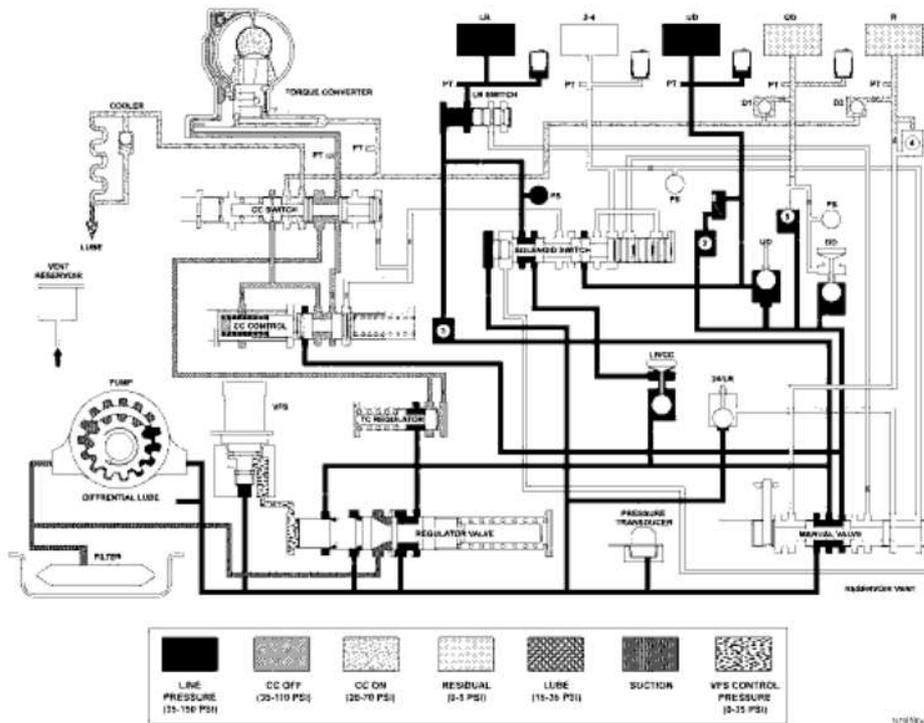


Fig. 183: Identifying Line Pressure - First Gear (Drive)
 Courtesy of CHRYSLER LLC

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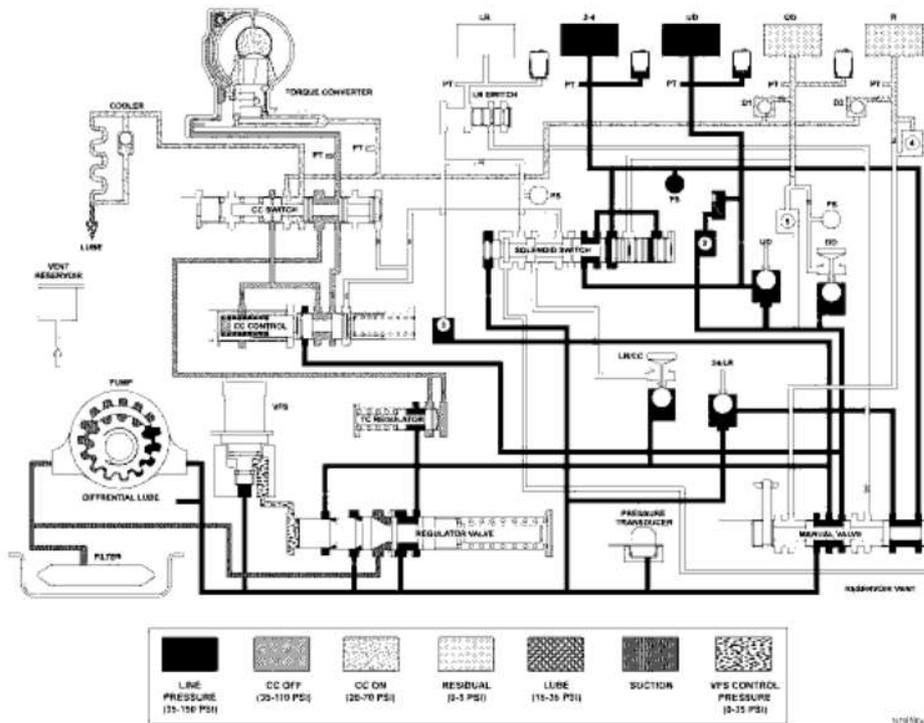


Fig. 184: Identifying Line Pressure - Second Gear (Drive)
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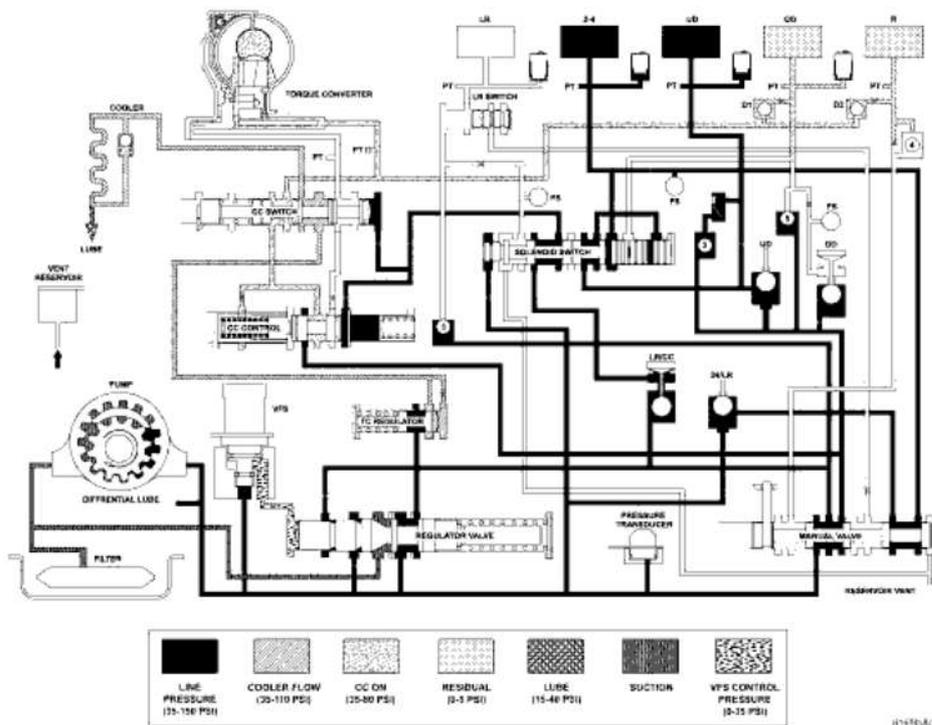


Fig. 185: Identifying Line Pressure - Second Gear EMCC (Drive)
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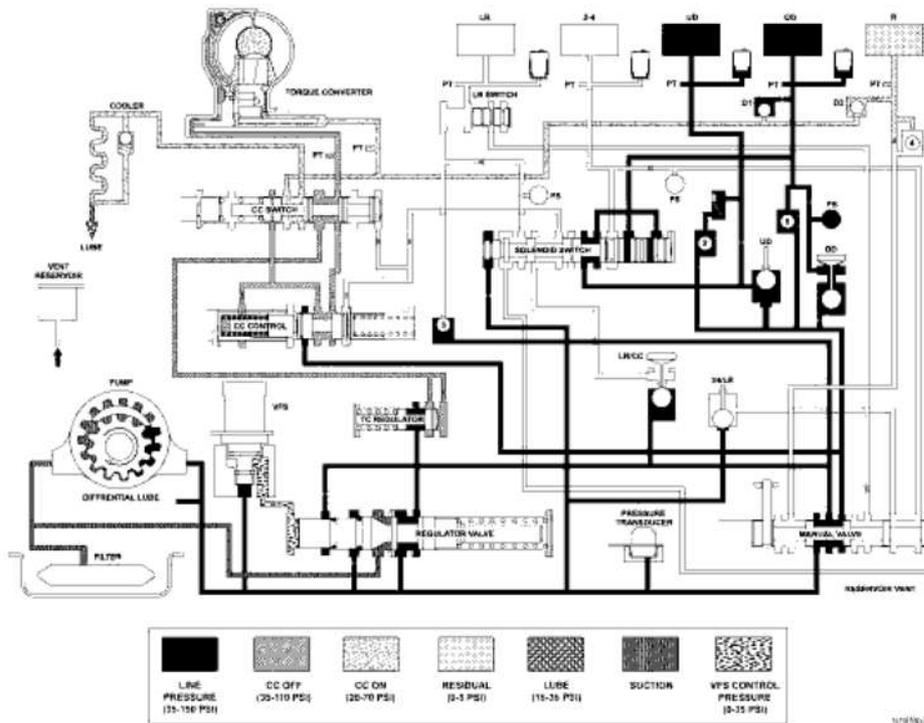


Fig. 186: Identifying Line Pressure - Direct Gear (Drive)
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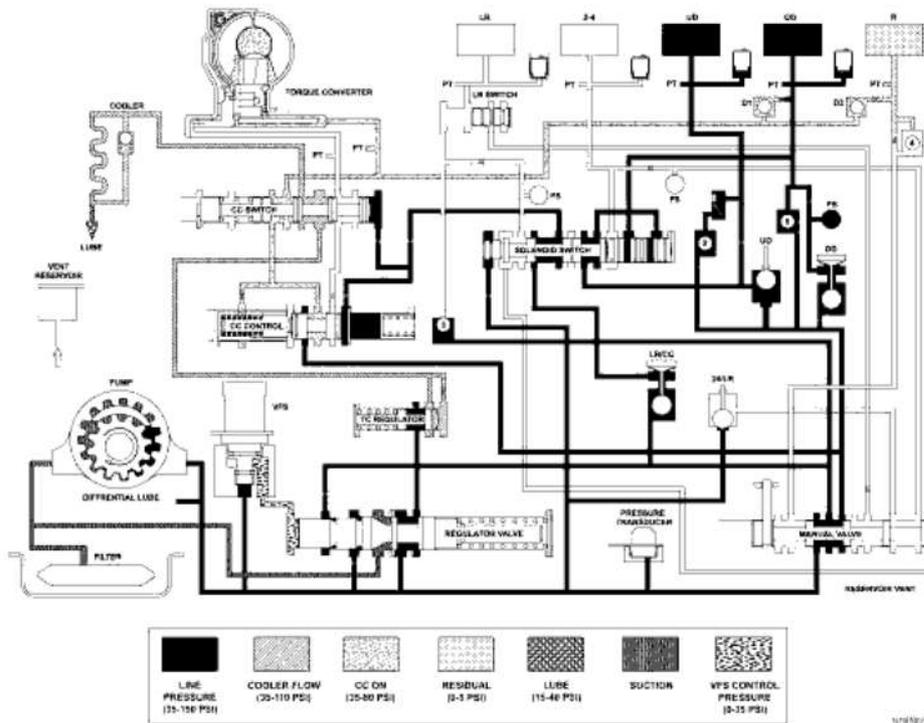


Fig. 187: Identifying Line Pressure - Direct Gear EMCC (Drive)
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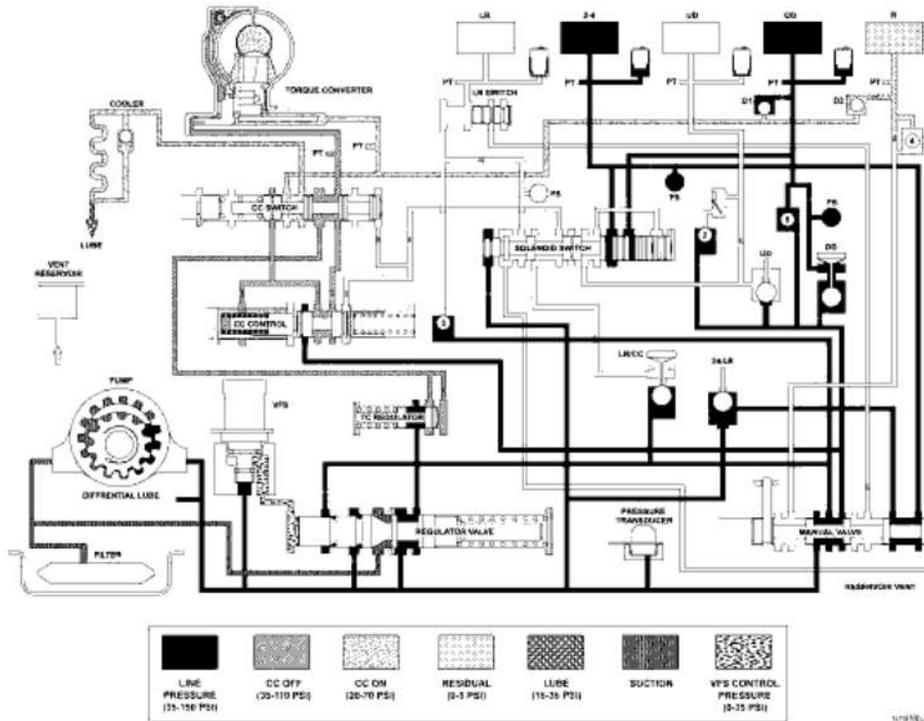


Fig. 188: Identifying Line Pressure - Fourth Gear Overdrive (Drive)
 Courtesy of CHRYSLER LLC

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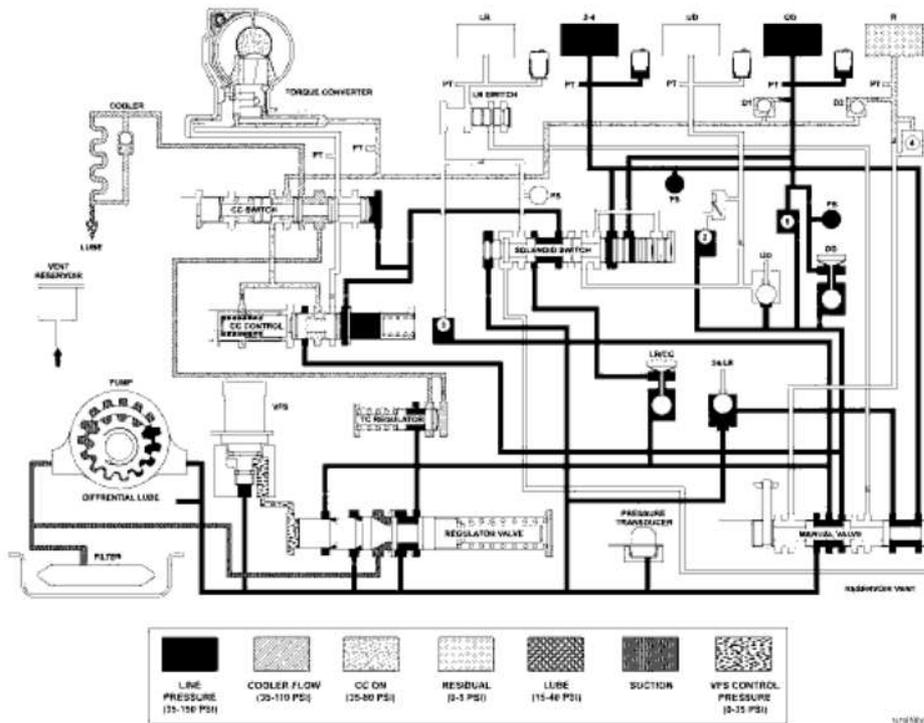


Fig. 189: Identifying Line Pressure - Fourth Gear Overdrive EMCC (Drive)
 Courtesy of CHRYSLER LLC

SPECIFICATIONS

SPECIFICATIONS

GENERAL SPECIFICATIONS

DESCRIPTION	SPECIFICATION
Transaxle Type	Fully adaptive, electronically controlled, four speed automatic with torque converter and integral differential
Cooling Method	Air-to-oil heat exchanger
Lubrication	Pump (internal-external gear-type)

GEAR RATIOS

DESCRIPTION	SPECIFICATION
First Gear	2.84
Second Gear	1.57
Direct Gear	1.00
Overdrive Gear	0.69

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Reverse Gear

2.21

BEARING SETTINGS (END PLAY AND TURNING TORQUE)

DESCRIPTION	METRIC	STANDARD
Differential Assembly	0.6-2 N.m	5-18 in. lbs.
Output Hub	0.3-2 N.m	3-8 in. lbs.
Transfer Shaft (End Play)	0.051-0.102 mm	0.002-0.004 in.
Overall Drag At Output Hub	0.3-1.9 N.m	3-16 in. lbs.

CLUTCH CLEARANCES

DESCRIPTION	METRIC	STANDARD
Low/Rev Clutch (Select Reaction Plate)	0.89-1.47 mm	0.035-0.058 in.
Two/Four Clutch (No Selection)	0.76-2.64 mm	0.030-0.104 in.
Reverse Clutch (Select Snap Ring)	0.89-1.37 mm	0.035-0.054 in.
Overdrive Clutch (No Selection)	1.07-3.25 mm	0.042-0.128 in.
Underdrive Clutch (Select Pressure Plate)	0.94-1.50 mm	0.037-0.059 in.

OIL PUMP CLEARANCES

DESCRIPTION	METRIC	STANDARD
Outer Gear-to-Crescent	0.060-0.298 mm	0.0023-0.0117 in.
Inner Gear-to-Crescent	0.093-0.385 mm	0.0036-0.0151 in.
Outer Gear-to-Pocket	0.089-0.202 mm	0.0035-0.0079 in.
Outer Gear Side Clearance	0.020-0.046 mm	0.0008-0.0018 in.
Inner Gear Side Clearance	0.020-0.046 mm	0.0008-0.0018 in.
Reaction shaft support bearing sleeve	45.22 - 45.23 mm	1.780 - 1.781 in.

INPUT SHAFT

DESCRIPTION	METRIC	SPECIFICATION
End Play	0.127-0.635mm	0.005-0.025 in.

TORQUE SPECIFICATIONS

DESCRIPTION	N.m	Ft. Lbs.	In. Lbs.
Bolt, Differential Cover-to-Case	19	-	165
Bolt, Differential Ring Gear-to-Case	95	70	-
Bolt, Differential Bearing Retainer-to-Case	28	21	-
Bolt, Driveplate-to-Crankshaft	95	70	-
Bolt, Extension Housing/Plate-to-Case	28	21	-
Bolt, Oil Pan-to-Case	19	-	165
Bolt, Output Gear	271	200	-

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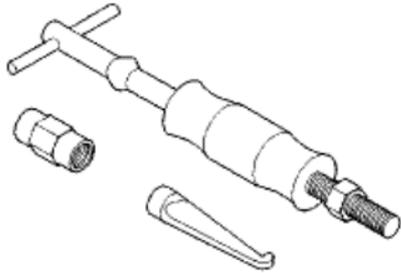
Bolt, Output Gear Stirrup/Strap	23	-	204
Bolt, Oil Pump-to-Case	27	20	-
Bolt, Reaction Support-to-Case	27	20	-
Bolts, Solenoid/Pressure Switch Assembly-to-Case	12	-	110
Bolt, Torque Converter-to-Driveplate	88	65	-
Bolt, Transfer Gear Cover	20	-	175
Bolt, Valve Body-to-Case	12	-	105
Fitting, Oil Cooler Line	12	-	105
Nut, Transfer Gear	271	200	-
Tap, Transaxle Pressure	5	-	45
Screw, L/R Clutch Retainer	5	-	45
Screw, Valve Body-to-Transfer Plate	5	-	45
Sensor, Input Speed	27	20	-
Sensor, Output Speed	27	20	-
Sensor, Transmission Range Sensor	5	-	45
Bolts, Engine Front Mount	95	70	-
Bolts, Cradle-to-Body	162	120	-
Nuts, Rear Mount-to-Cradle	54	40	-
Line, Power Steering-to-Steering Gear	31	23	-
Nuts, Torque Strut	54	40	-
Nuts, Link-to-Strut	88	65	-
Screw, Solenoid/Pressure Switch-to-Case Connector	5	-	35
Bolts, Differential Bearing Retainer	28	-	250
Screw, Cable Adjustment	8	-	70
Nuts, Mechanism-to-Console Base	12	-	105
Bolts, Bellhousing- to-Engine	95	70	-
Bolt, Crank Position Sensor	12	-	106
Bolts, Left Mount Bracket Assembly-to- transaxle	54	40	-
Bolt - Inspection Cover, Large	95	70	-
Bolts, Inspection Cover, Small	12	-	105
Bolts, Rear Mount Bracket-to-Transaxle Case	75	55	-
Bolt, Heater Tube- to -Bellhousing	5	-	44
Bolts, Left Mount -to-Bracket	95	70	-
Bolt, Fluid Level Indicator-to-Transmission	5	-	44

SPECIAL TOOLS

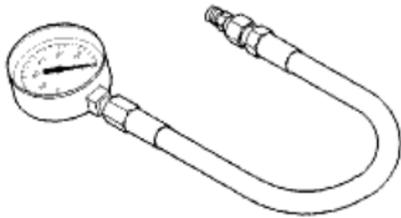
SPECIAL TOOLS

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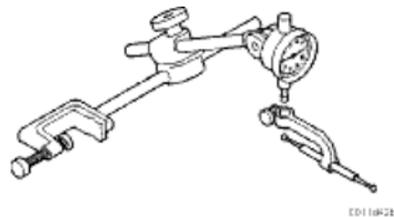
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**Fig. 190: Puller C-637**

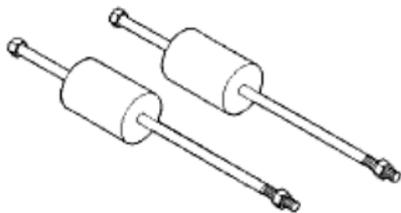
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**Fig. 191: Pressure Gauge (High) C-3293SP**

Courtesy of CHRYSLER LLC

**Fig. 192: Dial Indicator C-3339**

Courtesy of CHRYSLER LLC

**Fig. 193: Oil Pump Puller C-3752**

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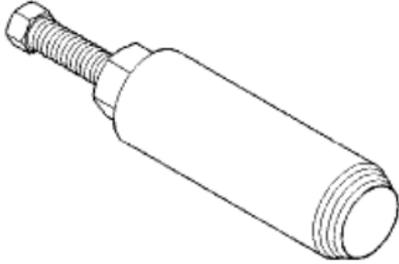


Fig. 194: Seal Puller C-3981B
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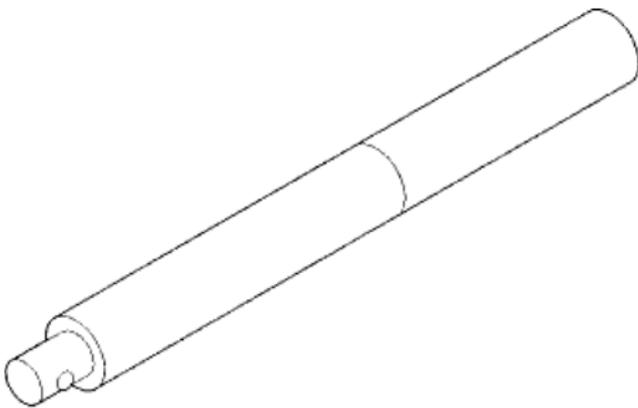


Fig. 195: Universal Handle C-4171
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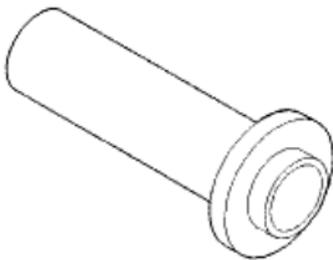
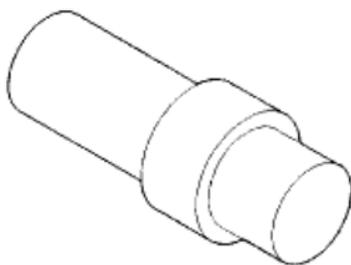


Fig. 196: Seal Installer C-4193A
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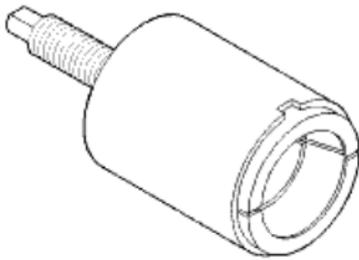


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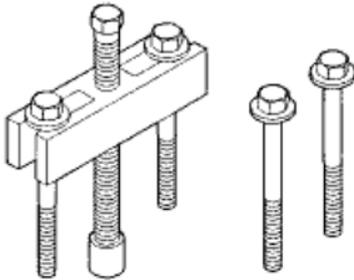
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Fig. 197: Adapter C-4996

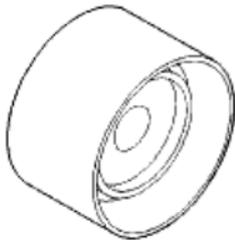
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**Fig. 198: Remover Kit L-4406**

Courtesy of CHRYSLER LLC

**Fig. 199: Gear Puller L-4407A**

Courtesy of CHRYSLER LLC

**Fig. 200: Bearing Installer L-4410**

Courtesy of CHRYSLER LLC

**Fig. 201: Gear Checking Plate I-4432**

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Courtesy of CHRYSLER LLC

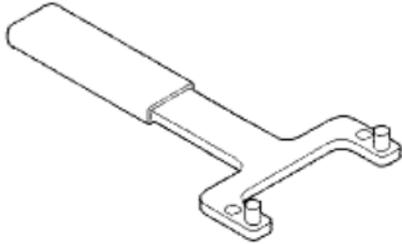


Fig. 202: Bearing Puller L-4435
Courtesy of CHRYSLER LLC

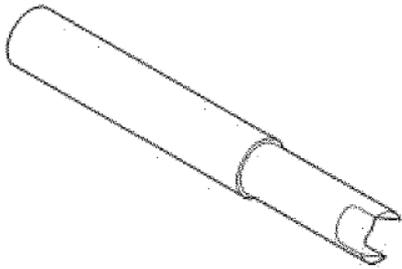


Fig. 203: Differential Tool L-4436A
Courtesy of CHRYSLER LLC

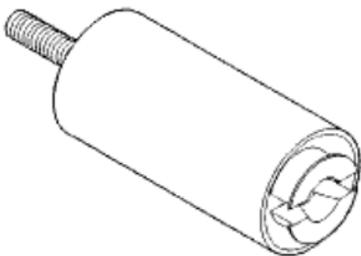


Fig. 204: Special Jaw Set L-4518
Courtesy of CHRYSLER LLC

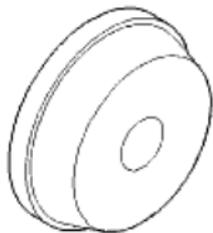


Fig. 205: Installer L-4520
Courtesy of CHRYSLER LLC

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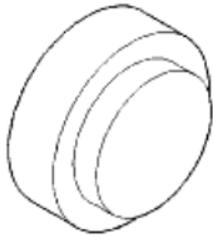


Fig. 206: Thrust Button L-4539-2
Courtesy of CHRYSLER LLC

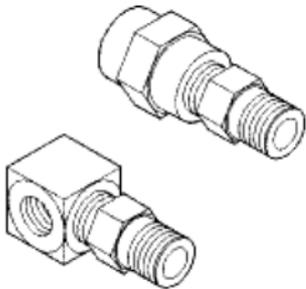


Fig. 207: Adapter L-4559
Courtesy of CHRYSLER LLC

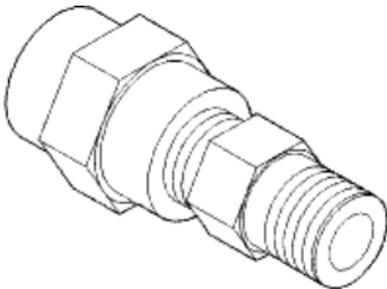


Fig. 208: Adapter L-4559-2
Courtesy of CHRYSLER LLC

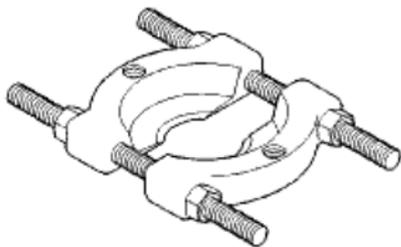


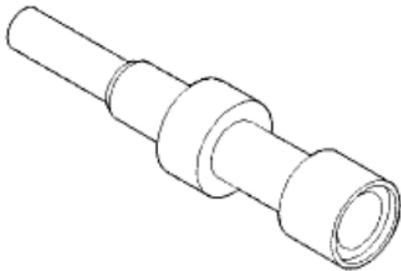
Fig. 209: Bearing Splitter P-334
Courtesy of CHRYSLER LLC

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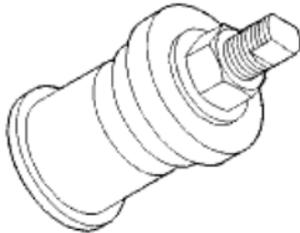
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**Fig. 210: Puller Set 5048**

Courtesy of CHRYSLER LLC

**Fig. 211: Remover/Installer 5049-A**

Courtesy of CHRYSLER LLC

**Fig. 212: Installer 5050A**

Courtesy of CHRYSLER LLC

**Fig. 213: Installer 5052**

Courtesy of CHRYSLER LLC

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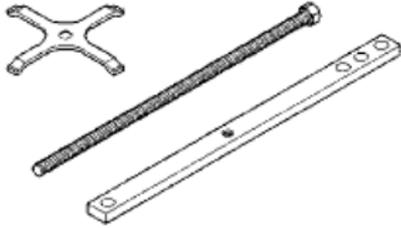


Fig. 214: Compressor 5058A
Courtesy of CHRYSLER LLC

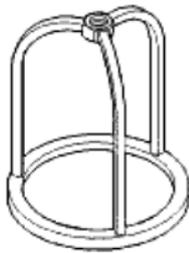


Fig. 215: Compressor 5059-A
Courtesy of CHRYSLER LLC

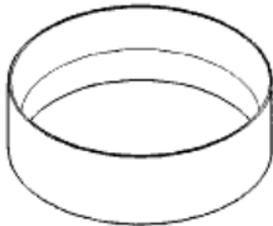


Fig. 216: Installer 5067
Courtesy of CHRYSLER LLC

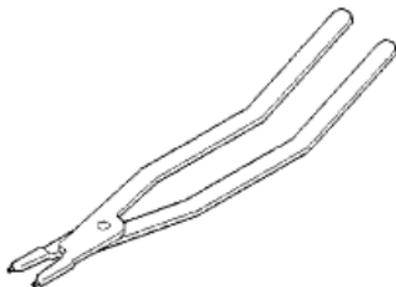


Fig. 217: Pliers 6051
Courtesy of CHRYSLER LLC

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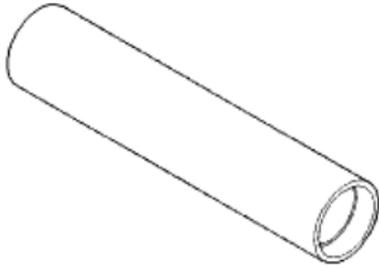


Fig. 218: Installer 6052
Courtesy of CHRYSLER LLC



Fig. 219: Installer 6053
Courtesy of CHRYSLER LLC

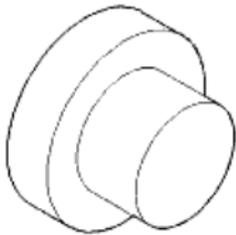


Fig. 220: Button 6055
Courtesy of CHRYSLER LLC

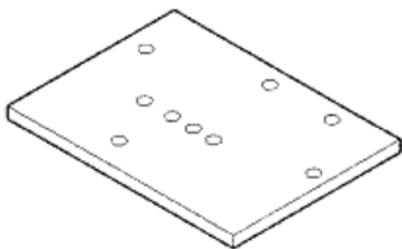
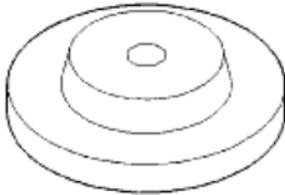


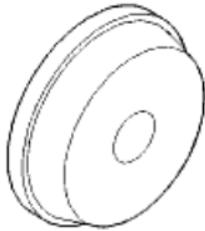
Fig. 221: Plate 6056
Courtesy of CHRYSLER LLC

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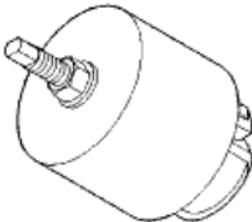
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**Fig. 222: Disk 6057**

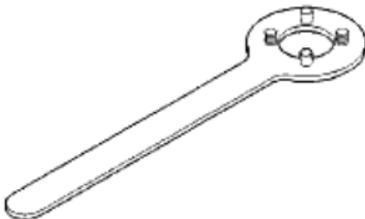
Courtesy of CHRYSLER LLC

**Fig. 223: Installer 6061**

Courtesy of CHRYSLER LLC

**Fig. 224: Remover 6062-A**

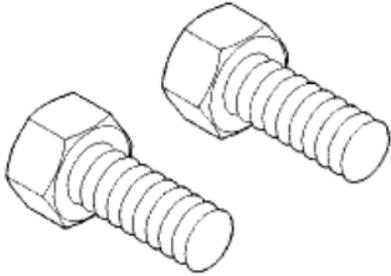
Courtesy of CHRYSLER LLC

**Fig. 225: Holder 6259**

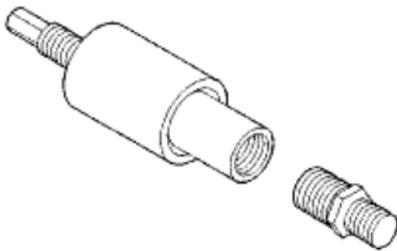
Courtesy of CHRYSLER LLC

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**Fig. 226: Bolt 6260**

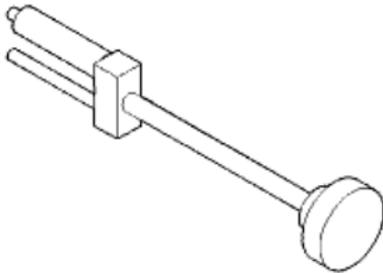
Courtesy of CHRYSLER LLC

**Fig. 227: Installer 6261**

Courtesy of CHRYSLER LLC

**Fig. 228: Tip 6268**

Courtesy of CHRYSLER LLC

**Fig. 229: Remover/Installer 6301**

Courtesy of CHRYSLER LLC

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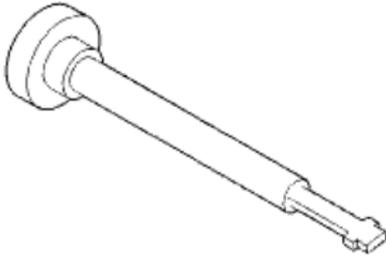


Fig. 230: Remover/Installer 6302
Courtesy of CHRYSLER LLC



Fig. 231: Installer 6536-A
Courtesy of CHRYSLER LLC

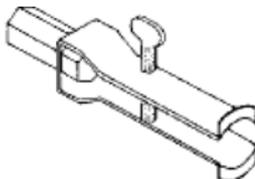


Fig. 232: Puller 7794-A
Courtesy of CHRYSLER LLC

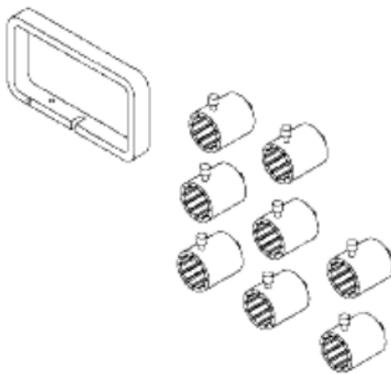


Fig. 233: End Play Socket Set 8266
Courtesy of CHRYSLER LLC

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Fig. 234: Input Clutch Pressure Fixture 8391
Courtesy of CHRYSLER LLC

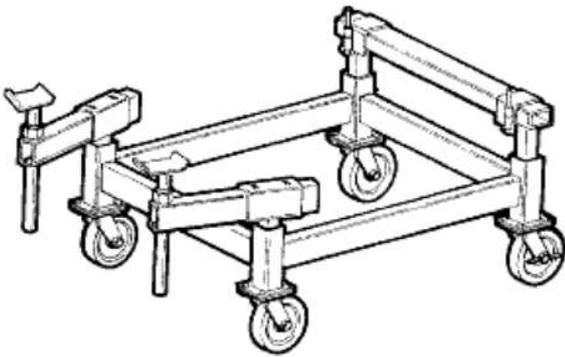


Fig. 235: Driveline Support Table 8874
Courtesy of CHRYSLER LLC

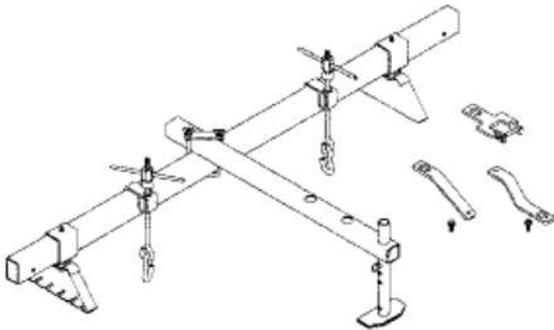


Fig. 236: Driveline Support Fixture 8534B
Courtesy of CHRYSLER LLC

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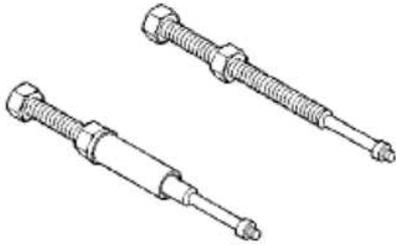


Fig. 237: Steering Shaft Roll Pin Remover/Installer 6831A
Courtesy of CHRYSLER LLC

ACCUMULATOR

DESCRIPTION

DESCRIPTION

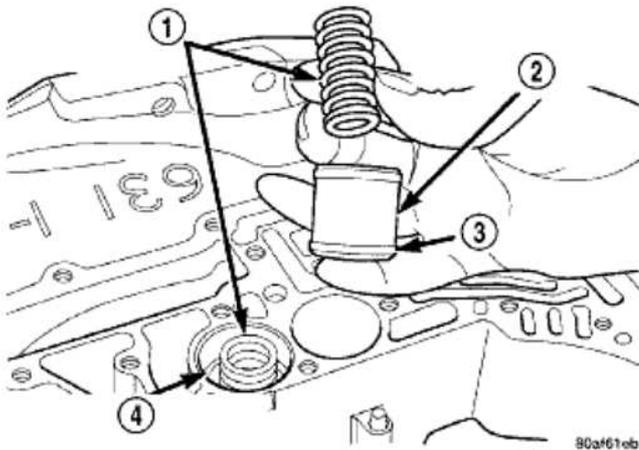


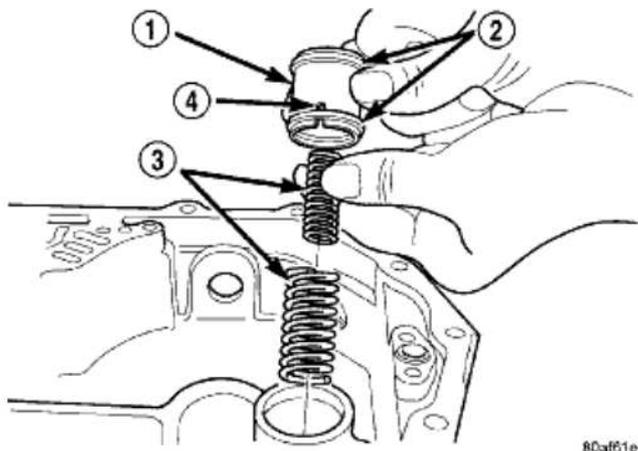
Fig. 238: Identifying Underdrive & Overdrive Accumulators
Courtesy of CHRYSLER LLC

1 - RETURN SPRING
2 - UNDERDRIVE CLUTCH ACCUMULATOR
3 - SEAL RING (2)
4 - OVERDRIVE CLUTCH ACCUMULATOR

The 41TE underdrive, overdrive, low/reverse, and 2/4 clutch hydraulic circuits each contain an accumulator. An accumulator typically consists of a piston (2), seal rings (3) return spring(s) (1) and a cover or plug. The overdrive and underdrive accumulators are located within the transaxle case, and are retained by the valve body.

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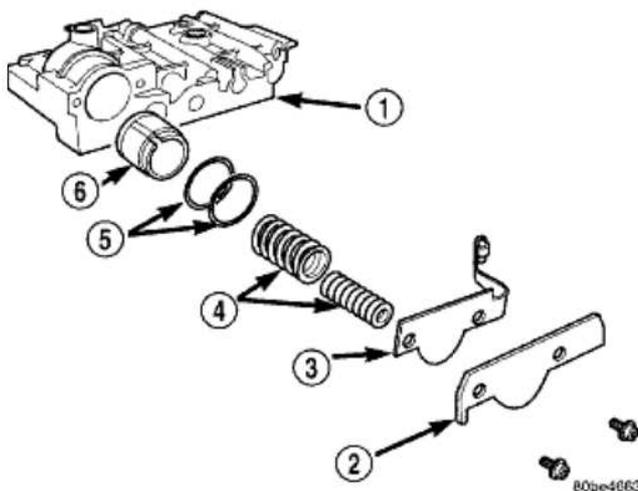


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Fig. 239: Removing/Installing Low/Reverse Accumulator Return Springs
Courtesy of CHRYSLER LLC

- | |
|------------------------|
| 1 - ACCUMULATOR PISTON |
| 2 - SEAL RINGS |
| 3 - RETURN SPRINGS |
| 4 - (NOTE NOTCH) |

The low reverse accumulator (1) is also located within the transaxle case, but the assembly is retained by a cover and a snap-ring.



80be4863

Fig. 240: Identifying 2/4 Accumulator Assembly
Courtesy of CHRYSLER LLC

- | |
|--------------------|
| 1 - VALVE BODY |
| 2 - RETAINER PLATE |
| 3 - DETENT SPRING |

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4 - SPRINGS

5 - SEALS

6 - PISTON

The 2/4 accumulator is located in the valve body (1) . It is retained by a cover and retaining screws.

OPERATION

OPERATION

The function of an accumulator is to cushion the application of a frictional clutch element. When pressurized fluid is applied to a clutch circuit, the application force is dampened by fluid collecting in the respective accumulator chamber against the piston and spring(s). The intended result is a smooth, firm clutch application.

ASSEMBLY, INPUT CLUTCH

DISASSEMBLY

DISASSEMBLY

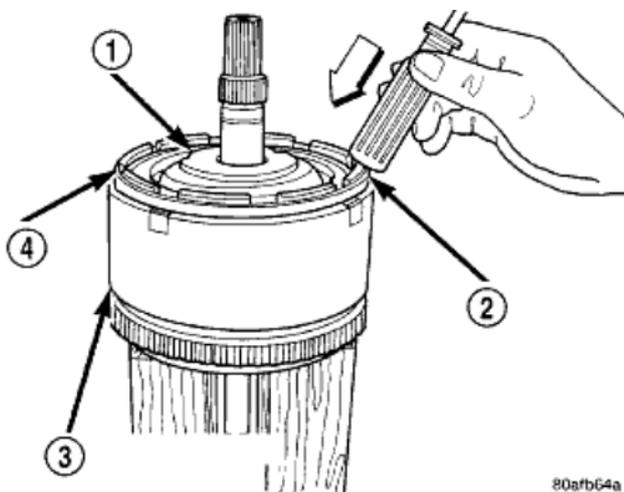


Fig. 241: Tapping Down Reverse Clutch Reaction Plate
Courtesy of CHRYSLER LLC

1 - #4 THRUST PLATE (SELECT)

2 - TAP DOWN REVERSE CLUTCH REACTION PLATE TO REMOVE OR INSTALL SNAP RING

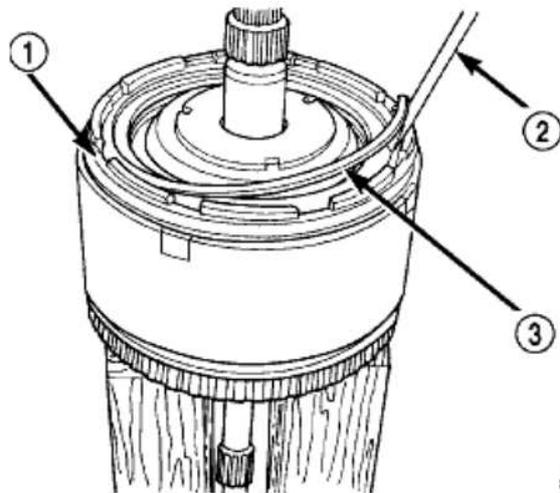
3 - INPUT SHAFT CLUTCHES RETAINER ASSEMBLY

4 - REVERSE CLUTCH REACTION PLATE

1. Mount input clutch assembly (3) to Input Clutch Pressure Fixture Tool 8391.
2. Tap down reverse clutch reaction plate (4) to release pressure from snap ring (2).

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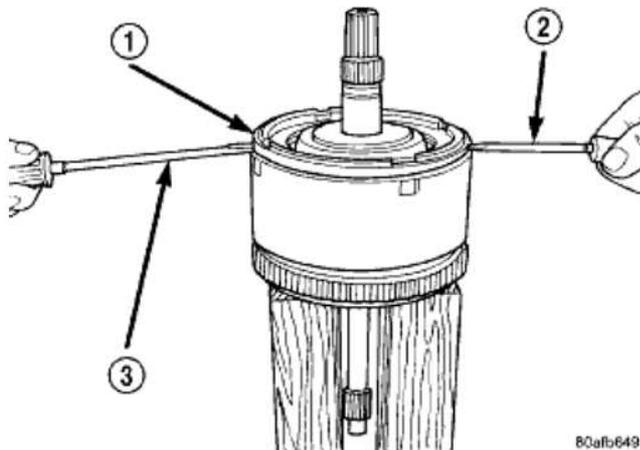


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Fig. 242: Removing Reverse Clutch Snap Ring
Courtesy of CHRYSLER LLC

- | |
|---------------------------------------|
| 1 - REACTION PLATE |
| 2 - SCREWDRIVER |
| 3 - REVERSE CLUTCH SNAP RING (SELECT) |

3. Remove reverse clutch snap ring (3) .



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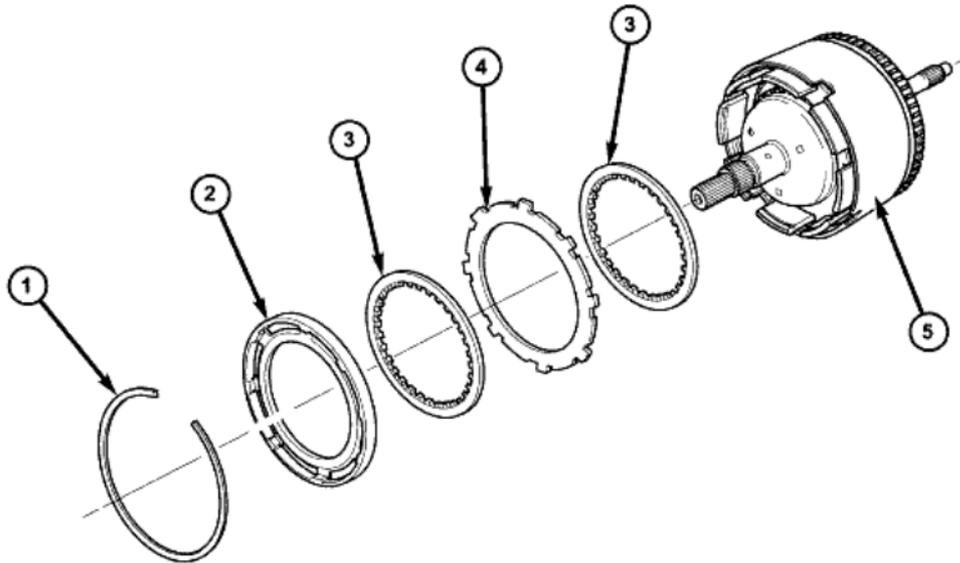
Fig. 243: Removing Reverse Clutch Reaction Plate
Courtesy of CHRYSLER LLC

- | |
|-----------------------------------|
| 1 - REVERSE CLUTCH REACTION PLATE |
| 2 - SCREWDRIVER |
| 3 - SCREWDRIVER |

4. Pry up and remove reverse clutch reaction plate (1) .

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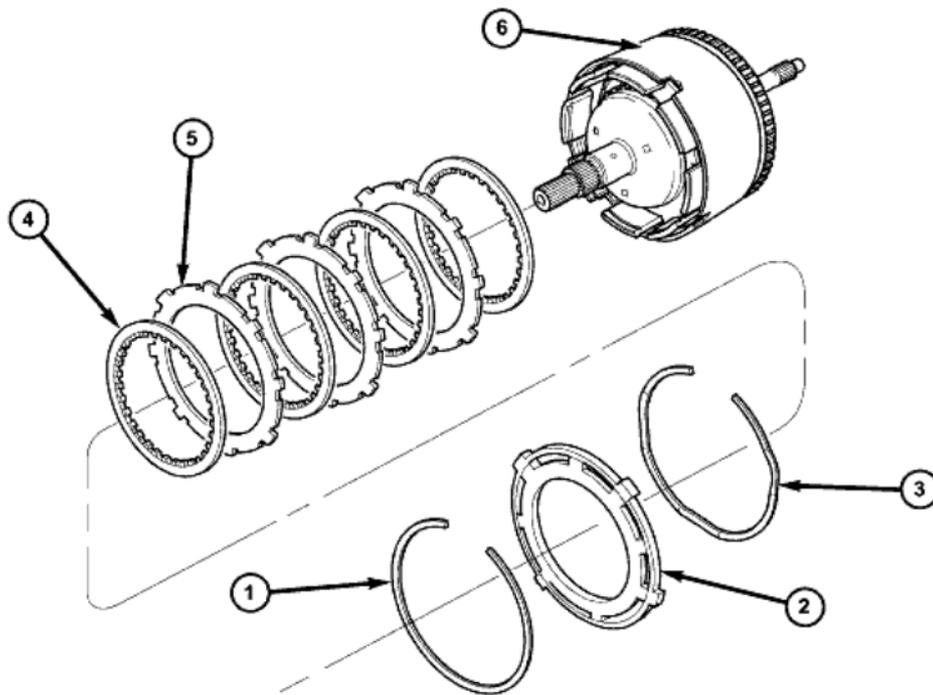
Fig. 244: Removing/Installing Reverse Clutch Pack
Courtesy of CHRYSLER LLC

- 1 - SNAP RING
- 2 - REACTION PLATE
- 3 - CLUTCH DISC (2)
- 4 - CLUTCH PLATE (1)
- 5 - INPUT CLUTCH ASSEMBLY

5. Remove reverse clutch pack (3,4) . **Tag components for assembly identification.**

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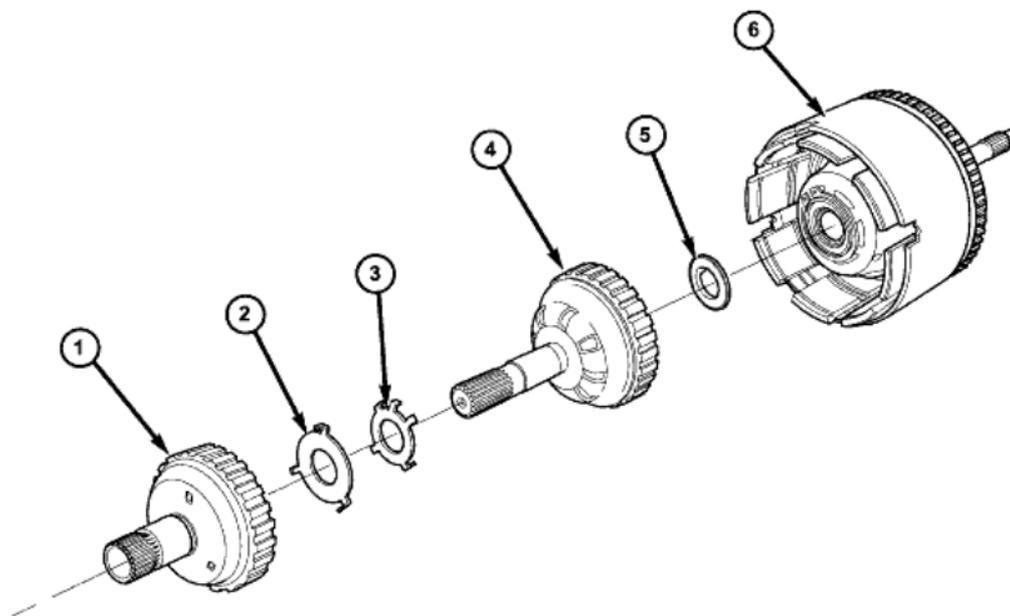
Fig. 245: Removing/Installing OD/Reverse Pressure Plate Snap Ring
 Courtesy of CHRYSLER LLC

- | |
|--|
| <ul style="list-style-type: none"> 1 - SNAP RING 2 - OD/REVERSE PRESSURE PLATE 3 - SNAP RING (WAVE) 4 - CLUTCH DISC (4) 5 - CLUTCH STEEL (3) 6 - INPUT CLUTCH ASSEMBLY |
|--|

6. Remove the OD/Reverse pressure plate snap ring (1) .
7. Remove OD/Reverse pressure plate (2).
8. Remove OD/Reverse pressure plate wave snap ring (3).
9. Remove OD clutch pack (4,5). **Tag components for assembly identification.**

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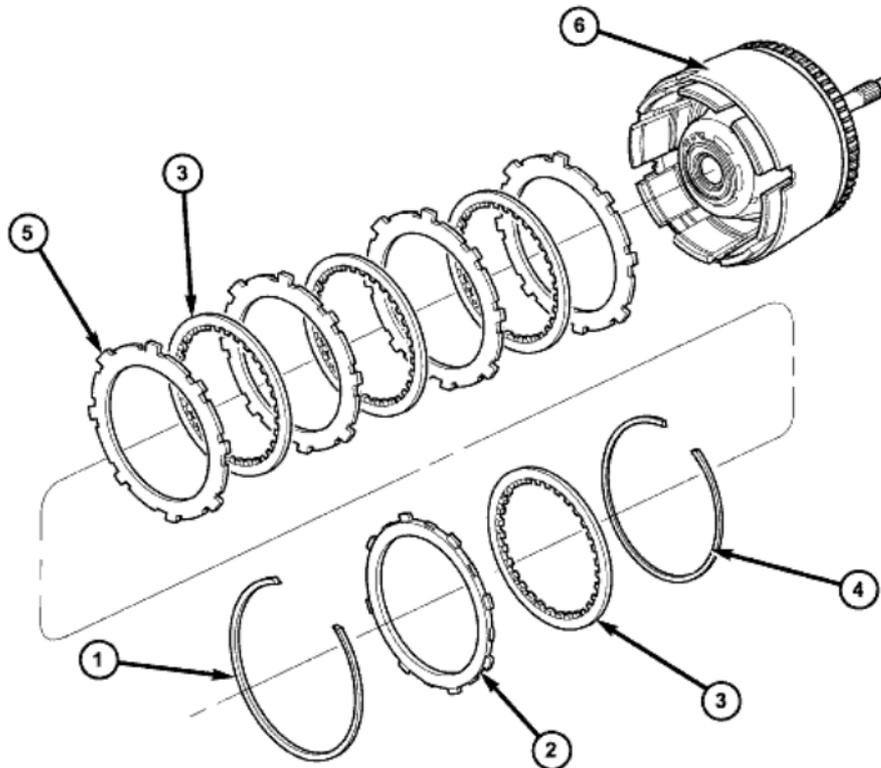
Fig. 246: Removing/Installing OD & UD Shafts, Thrust Washer & Plate, & #2 Needle Bearing
Courtesy of CHRYSLER LLC

- | |
|---|
| <ul style="list-style-type: none"> 1 - OVERDRIVE SHAFT 2 - #3 THRUST PLATE (3 TABS) 3 - #3 THRUST WASHER (5 TABS) 4 - UNDERDRIVE SHAFT 5 - #2 NEEDLE BEARING (3 TABS) 6 - INPUT CLUTCH ASSEMBLY |
|---|

10. Remove and inspect OD (1) and UD Shafts (4), as well as #3 thrust washer and plate (2, 3), and #2 needle bearing (5).

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Fig. 247: Removing/Installing OD/UD Reaction Plate Tapered Snap Ring, Clutch Plate, & First Clutch Disc

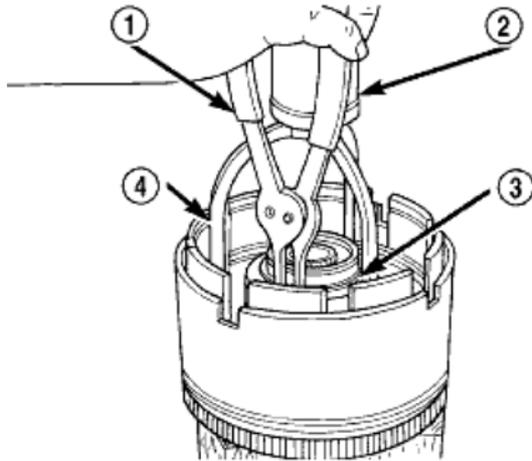
Courtesy of CHRYSLER LLC

- | |
|---------------------------|
| 1 - SNAP RING (TAPERED) |
| 2 - OD/UD REACTION PLATE |
| 3 - CLUTCH DISC |
| 4 - SNAP RING (FLAT) |
| 5 - CLUTCH PLATE |
| 6 - INPUT CLUTCH ASSEMBLY |

11. Remove the OD/UD reaction plate tapered snap ring (1) , clutch plate (5), and first clutch disc (3).
12. Remove the UD clutch flat snap ring (4) and rest of the input clutch assembly (6). **Tag clutch pack for assembly identification.**

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Fig. 248: Compressing UD Clutch Piston/Spring Enough To Remove Snap Ring
 Courtesy of CHRYSLER LLC

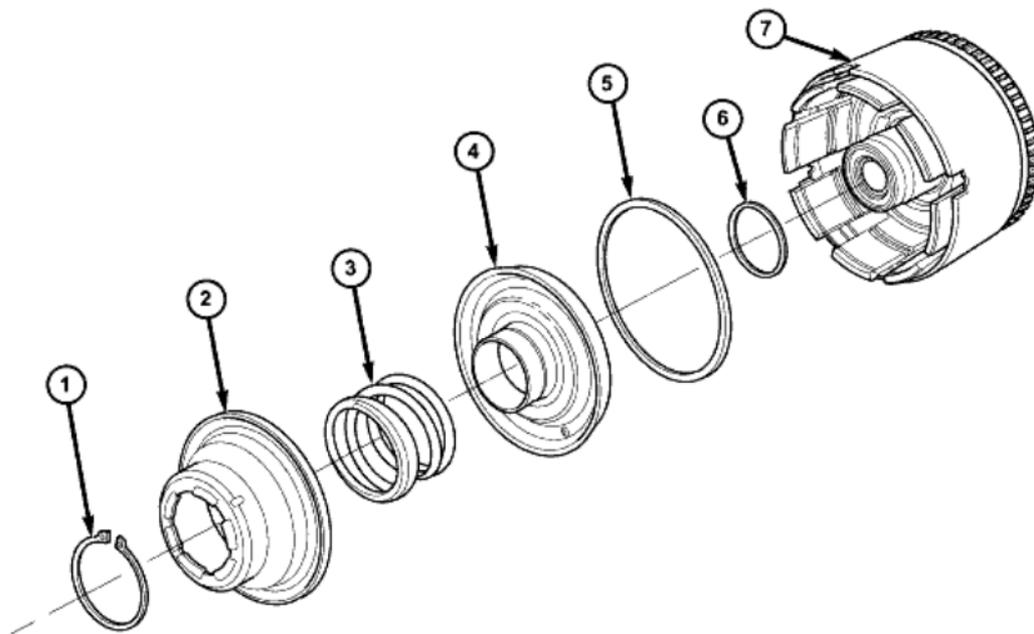
- | |
|-----------------------|
| 1 - SNAP RING PLIERS |
| 2 - ARBOR PRESS RAM |
| 3 - SNAP RING |
| 4 - COMPRESSOR 5059-A |

CAUTION: Compress return spring just enough to remove or install snap ring.

- Using compressor 5059-A (4) and an arbor press (2), compress UD clutch piston/spring enough to remove snap ring (3).

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Fig. 249: Removing/Installing Underdrive Clutch Piston, Spring & Retainer
 Courtesy of CHRYSLER LLC

- 1 - SNAP RING
- 2 - SPRING RETAINER
- 3 - SPRING
- 4 - UD CLUTCH PISTON
- 5 - SEAL, OUTER
- 6 - SEAL, INNER
- 7 - INPUT CLUTCH ASSEMBLY

14. Refer to **Fig. 249** as necessary when performing the following steps
15. Remove spring retainer (2) , spring (3), and UD clutch piston (4).

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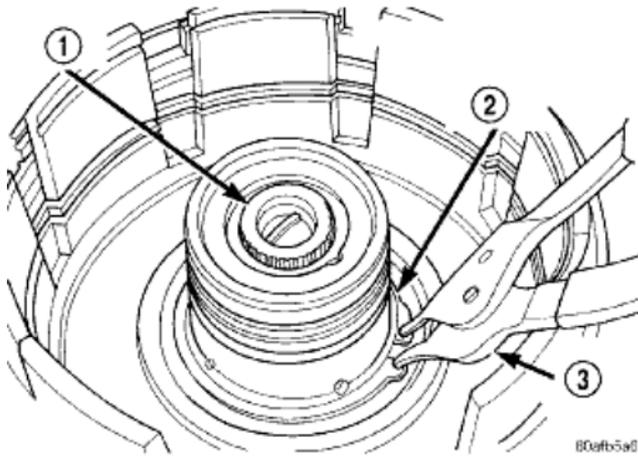


Fig. 250: Removing Input Hub Tapered Snap Ring
Courtesy of CHRYSLER LLC

- | |
|---|
| 1 - INPUT SHAFT |
| 2 - INPUT HUB SNAP RING (TAPERED SIDE UP WITH TABS IN CAVITY) |
| 3 - SNAP RING PLIERS |

16. Remove input hub tapered snap ring (2) .

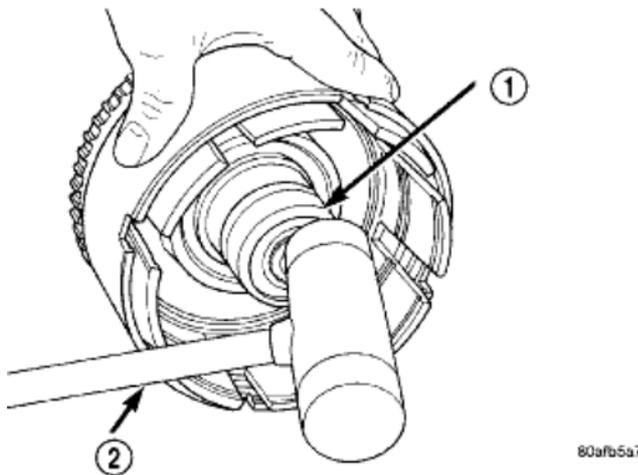


Fig. 251: Tapping On Input Hub With Soft Faced Hammer
Courtesy of CHRYSLER LLC

- | |
|----------------------------------|
| 1 - INPUT SHAFT AND HUB ASSEMBLY |
| 2 - SOFT FACED HAMMER |

17. Tap on input hub with soft faced hammer (2) and separate input hub from OD/Reverse piston and clutch retainer.

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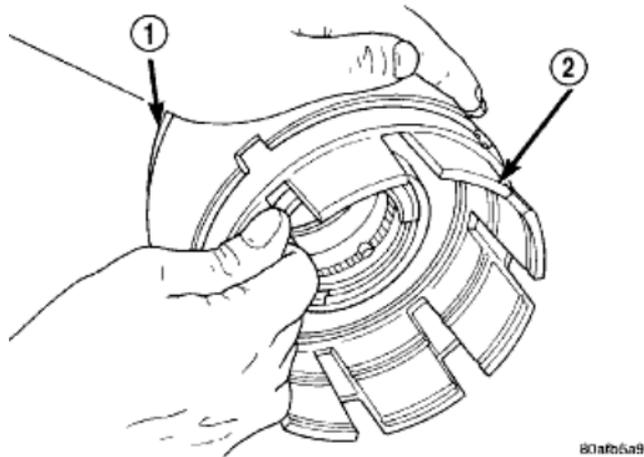


Fig. 252: Identifying Clutch Retainer & OD/Reverse Piston
Courtesy of CHRYSLER LLC

- | |
|------------------------------|
| 1 - OVERDRIVE/REVERSE PISTON |
| 2 - INPUT CLUTCHES RETAINER |

18. Separate clutch retainer (2) from OD/Reverse piston (1).

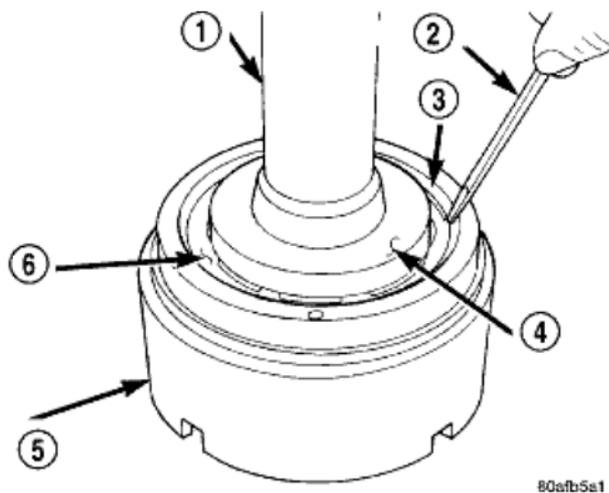


Fig. 253: Compressing Return OD/Reverse Piston Return Spring To Remove Snap Ring
Courtesy of CHRYSLER LLC

- | |
|---|
| 1 - ARBOR PRESS RAM (COMPRESS RETURN SPRING JUST ENOUGH TO REMOVE OR INSTALL SNAP RING) |
| 2 - SCREWDRIVER |
| 3 - SNAP RING |
| 4 - Disk 6057 |
| 5 - OD/REVERSE PISTON |

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6 - RETURN SPRING

19. Using Disk 6057 (4) and an arbor press (1), compress return OD/Reverse piston return spring just enough to remove snap ring (3).

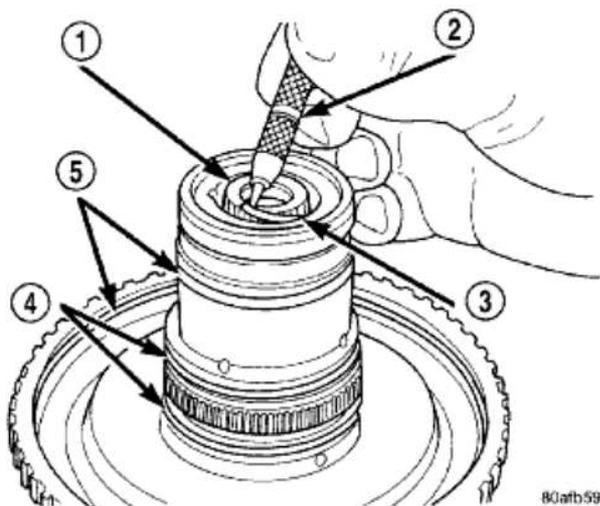


Fig. 254: Removing Input Shaft-To-Input Clutch Hub Snap Ring
Courtesy of CHRYSLER LLC

- | |
|------------------------|
| 1 - INPUT SHAFT |
| 2 - SHARP-POINTED TOOL |
| 3 - SNAP RING |
| 4 - O-RINGS |
| 5 - SEALS |

20. Remove input shaft to input clutch hub snap ring (3) .

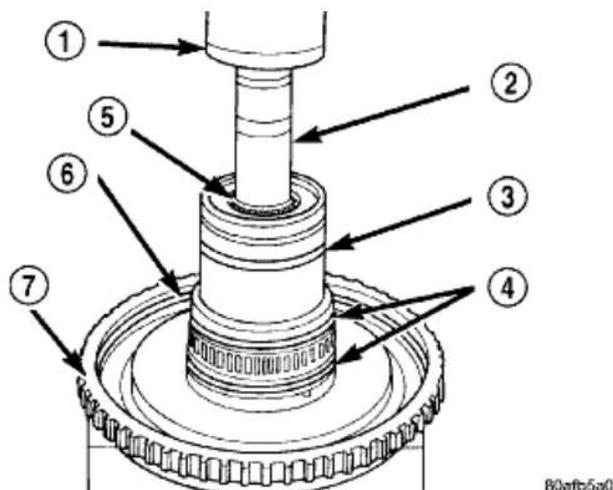


Fig. 255: Removing Input Shaft

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Courtesy of CHRYSLER LLC

1 - ARBOR PRESS RAM
2 - SOCKET
3 - SEAL
4 - O-RINGS
5 - INPUT SHAFT
6 - SEAL
7 - INPUT SHAFT HUB ASSEMBLY

21. Using a suitably sized socket (2) and an arbor press (1), remove input shaft (5) from input shaft hub (7).

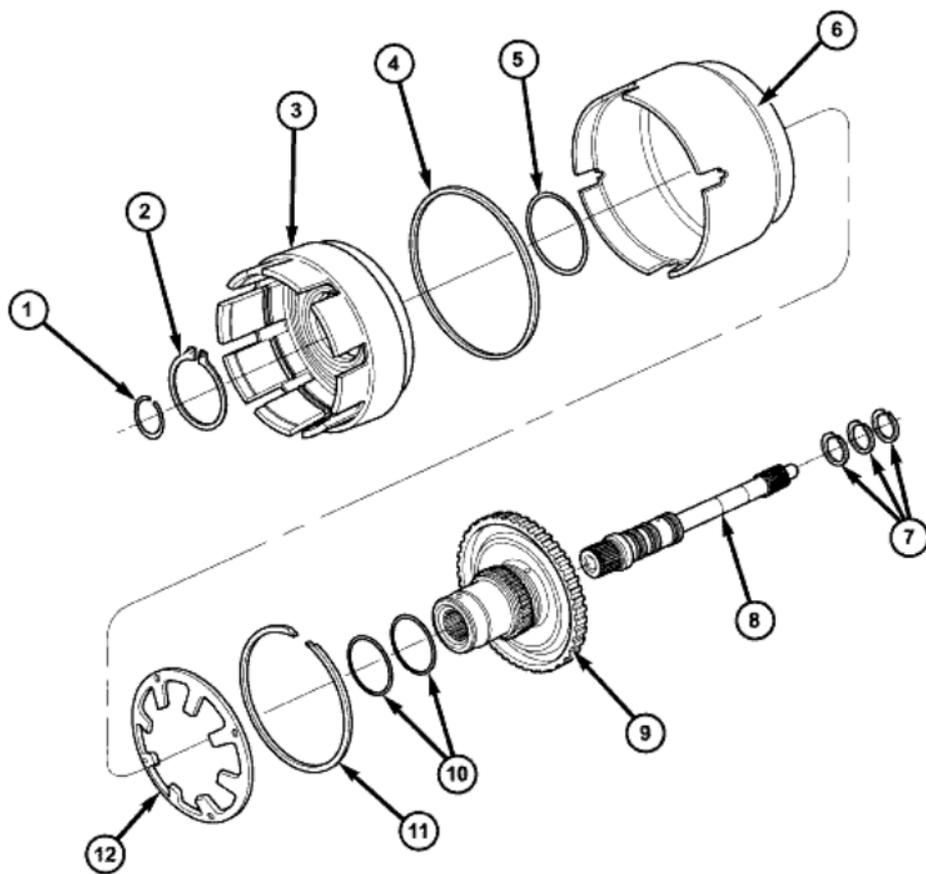


Fig. 256: Identifying Input Clutch Hub, Retainer, & OD/Reverse Piston
Courtesy of CHRYSLER LLC

1 - SNAP RING (INPUT SHAFT)
2 - SNAP RING
3 - CLUTCH RETAINER
4 - SEAL, OUTER

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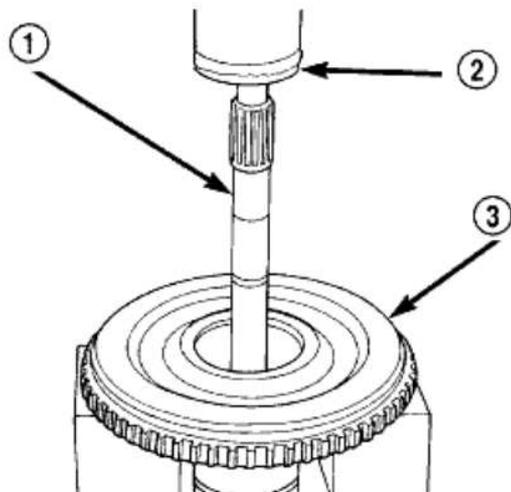
2009 AUTOMATIC TRANSMISSION 41TE - Service Information - Grand Caravan, Town & Country

- 5 - SEAL, INNER
- 6 - OD/REVERSE PISTON
- 7 - SEAL, INPUT SHAFT
- 8 - SHAFT, INPUT
- 9 - HUB
- 10 - SEAL
- 11 - SNAP RING
- 12 - BELLEVILLE SPRING

22. Refer to **Fig. 256** as necessary when performing the above steps

ASSEMBLY

ASSEMBLY



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Fig. 257: Installing Input Shaft
Courtesy of CHRYSLER LLC

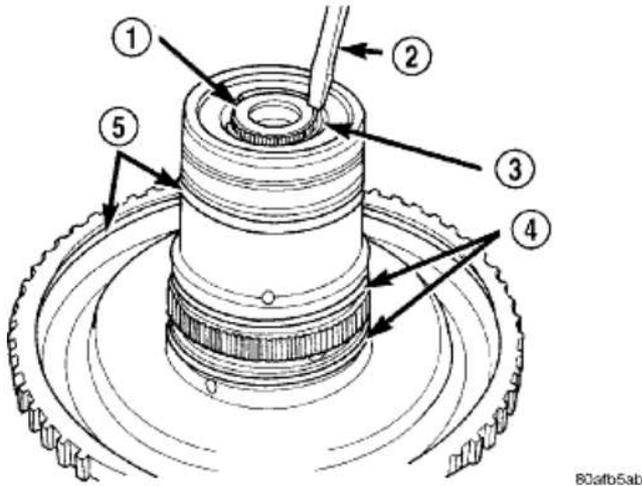
- | |
|------------------------------|
| 1 - INPUT SHAFT |
| 2 - ARBOR PRESS |
| 3 - INPUT SHAFT HUB ASSEMBLY |

Use petrolatum on all seals to ease assembly of components.

1. Using an arbor press (2), install input shaft (1) to input shaft hub (3) .

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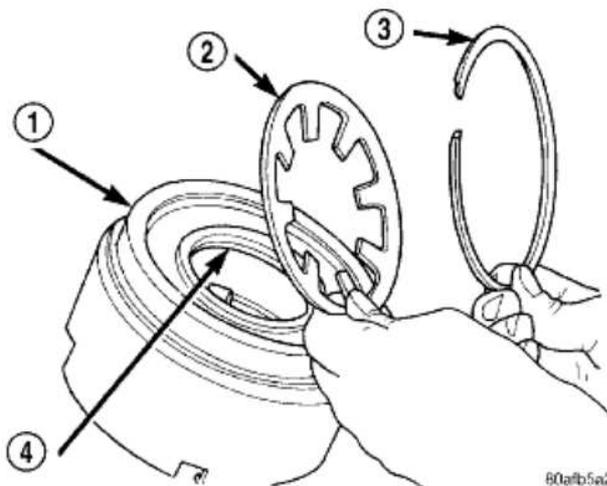


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Fig. 258: Installing Input Shaft Snap Ring
Courtesy of CHRYSLER LLC

1 - INPUT SHAFT
2 - SCREWDRIVER (DO NOT SCRATCH BEARING SURFACE)
3 - SNAP RING
4 - O-RINGS
5 - SEALS

2. Install input shaft snap ring (3) .



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Fig. 259: Identifying OD/Reverse Piston, Return Spring, & Snap Ring
Courtesy of CHRYSLER LLC

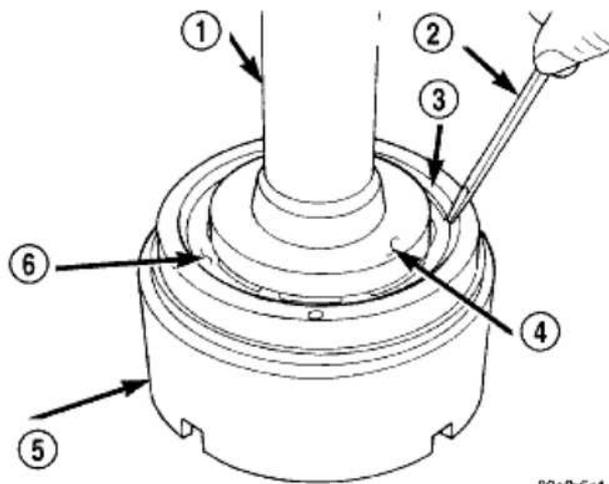
1 - OD/REVERSE PISTON
2 - RETURN SPRING
3 - SNAP RING

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4 - O-RING

- Place OD/Reverse piston (1) return spring (2) and snap ring (3) into position.

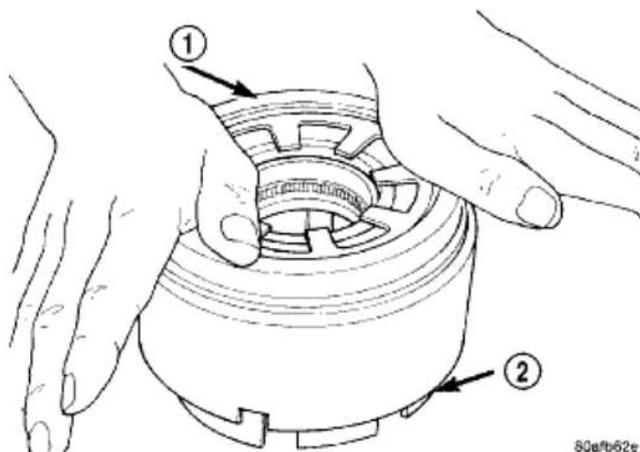


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Fig. 260: Installing OD/Reverse Piston, Return Spring, & Snap Ring
Courtesy of CHRYSLER LLC

1 - ARBOR PRESS RAM (COMPRESS RETURN SPRING JUST ENOUGH TO REMOVE OR INSTALL SNAP RING)
2 - SCREWDRIVER
3 - SNAP RING
4 - Disk 6057
5 - OD/REVERSE PISTON
6 - RETURN SPRING

- Using an arbor press (1) and Disk 6057 (4), install OD/Reverse piston (5) return spring (6) and snap ring (3).



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Fig. 261: Installing OD/Reverse Piston
Courtesy of CHRYSLER LLC

1 - PUSH DOWN TO INSTALL OVERDRIVE/REVERSE PISTON
2 - INPUT CLUTCHES RETAINER

5. Install the OD/Reverse piston assembly (1) to the input clutch retainer (2).

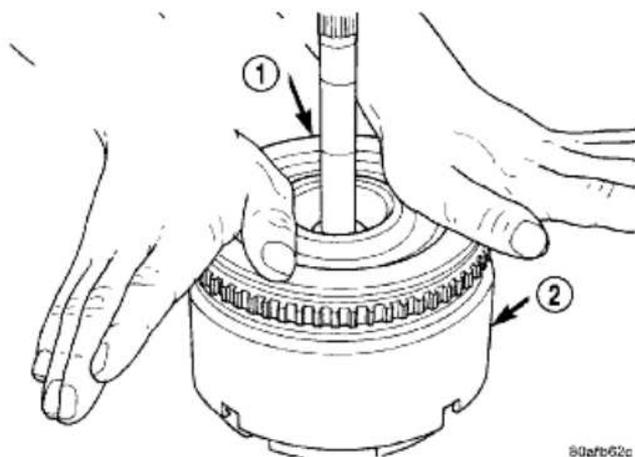


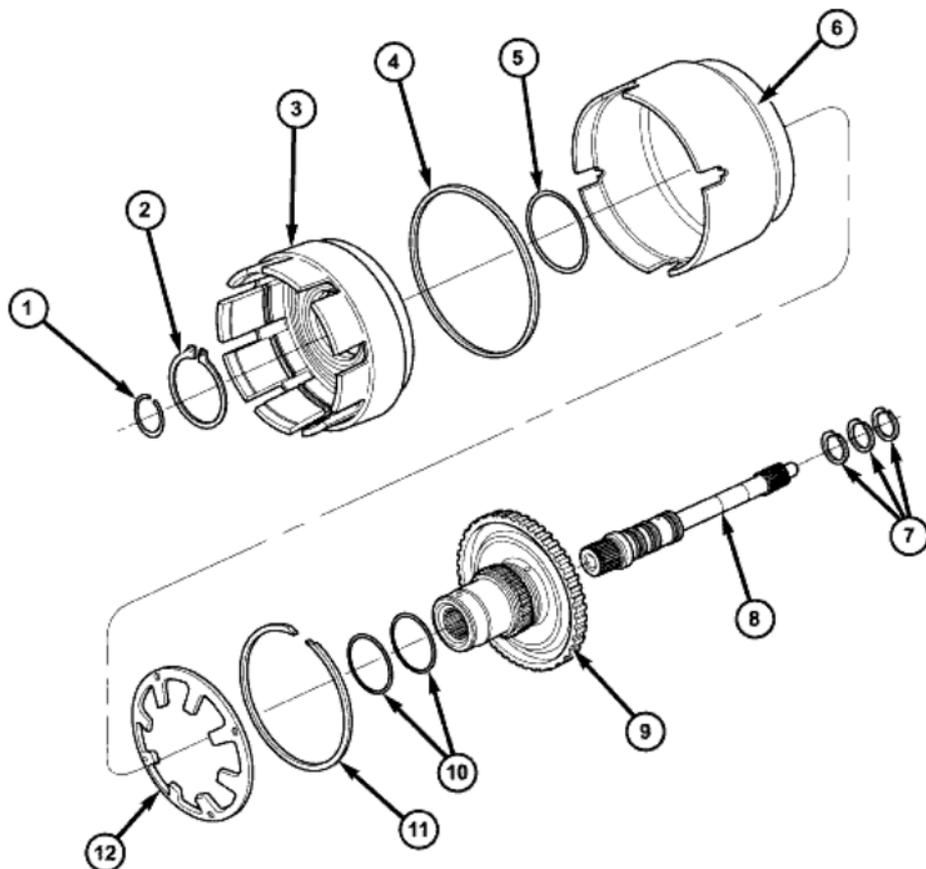
Fig. 262: Installing Input Shaft Hub Assembly
Courtesy of CHRYSLER LLC

1 - PUSH DOWN TO INSTALL INPUT SHAFT HUB ASSEMBLY (ROTATE TO ALIGN SPLINES)
2 - OD/REV. PISTON

6. Install the input hub/shaft assembly (rotate to align splines) (1) to the OD/Reverse piston/clutch retainer assembly (2).

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Fig. 263: Identifying Input Clutch Hub, Retainer, & OD/Reverse Piston
Courtesy of CHRYSLER LLC

- 1 - SNAP RING (INPUT SHAFT)
- 2 - SNAP RING
- 3 - CLUTCH RETAINER
- 4 - SEAL, OUTER
- 5 - SEAL, INNER
- 6 - OD/REVERSE PISTON
- 7 - SEAL, INPUT SHAFT
- 8 - SHAFT, INPUT
- 9 - HUB
- 10 - SEAL
- 11 - SNAP RING
- 12 - BELLEVILLE SPRING

7. Refer to **Fig. 263** as necessary when performing the following steps .

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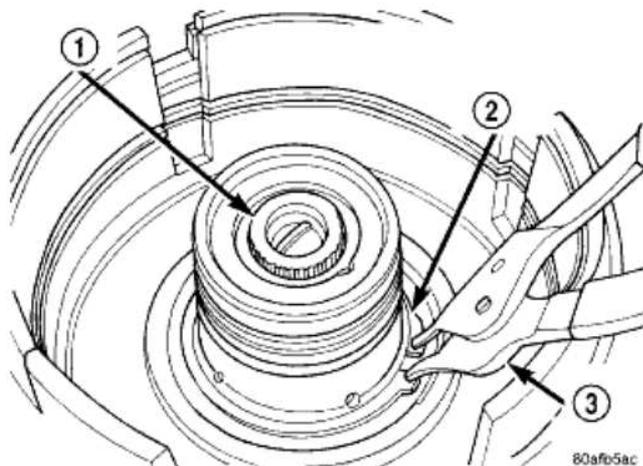


Fig. 264: Installing Input Hub Tapered Snap Ring
Courtesy of CHRYSLER LLC

1 - INPUT SHAFT

2 - INPUT HUB SNAP RING (TAPERED SIDE UP WITH TABS IN CAVITY)

3 - SNAP RING PLIERS

8. Install input hub tapered snap ring (tapered side up with tabs in cavity) (2) .

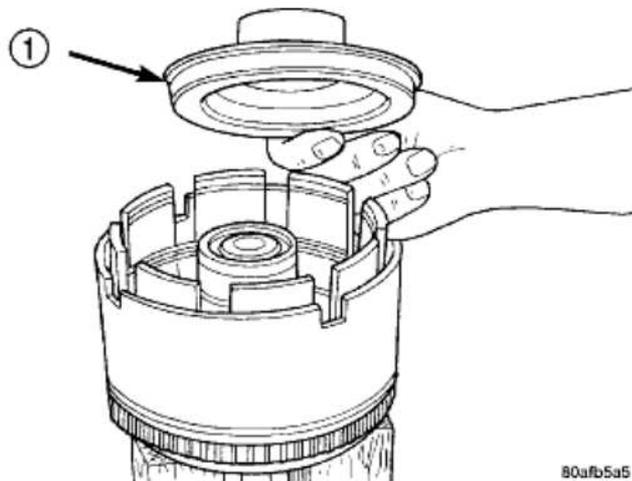


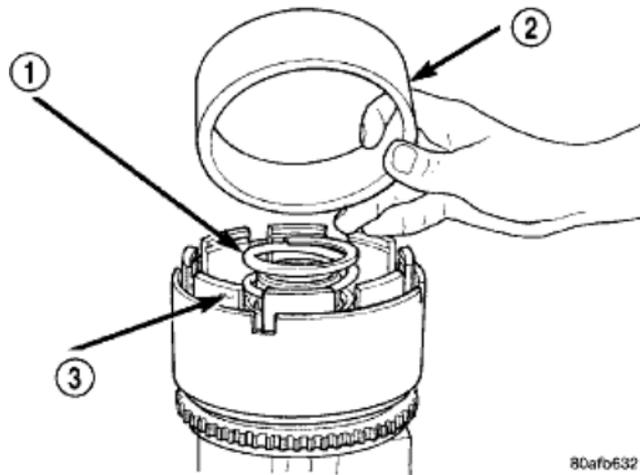
Fig. 265: Installing Underdrive Clutch Piston
Courtesy of CHRYSLER LLC

1 - PISTON

9. Install UD clutch piston (1) .

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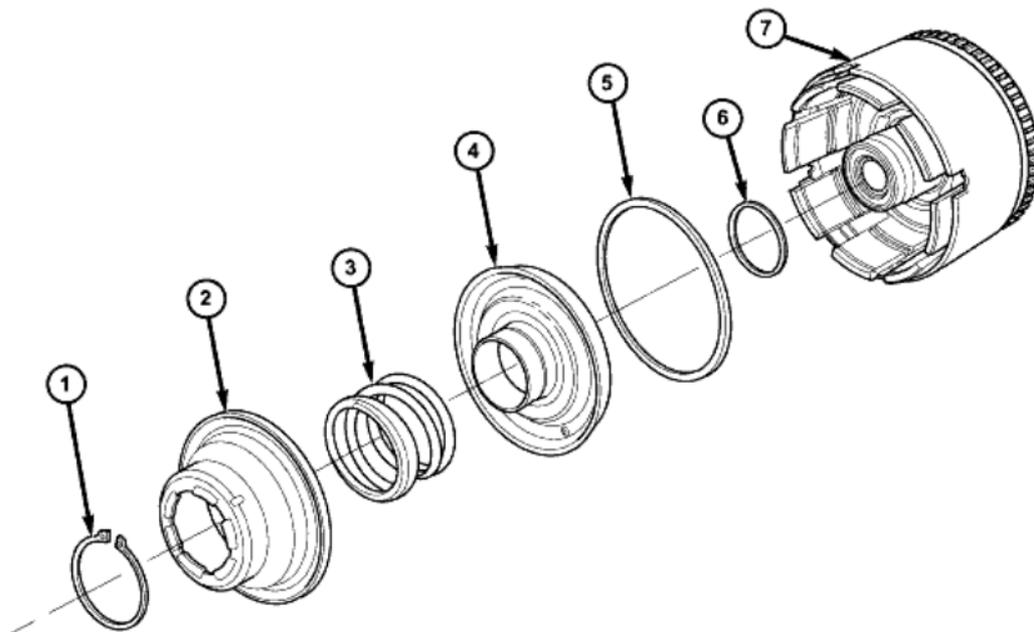
Fig. 266: Installing UD Piston Return Spring & Installer 5067
Courtesy of CHRYSLER LLC

1 - PISTON RETURN SPRING

2 - INSTALLER 5067

3 - INPUT SHAFT CLUTCHES RETAINER ASSEMBLY

10. Install UD piston return spring (1) and Installer 5067 (2).



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Fig. 267: Removing/Installing Underdrive Clutch Piston, Spring & Retainer
Courtesy of CHRYSLER LLC

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- 1 - SNAP RING
- 2 - SPRING RETAINER
- 3 - SPRING
- 4 - UD CLUTCH PISTON
- 5 - SEAL, OUTER
- 6 - SEAL, INNER
- 7 - INPUT CLUTCH ASSEMBLY

11. Refer to **Fig. 267** as necessary when performing the following steps.

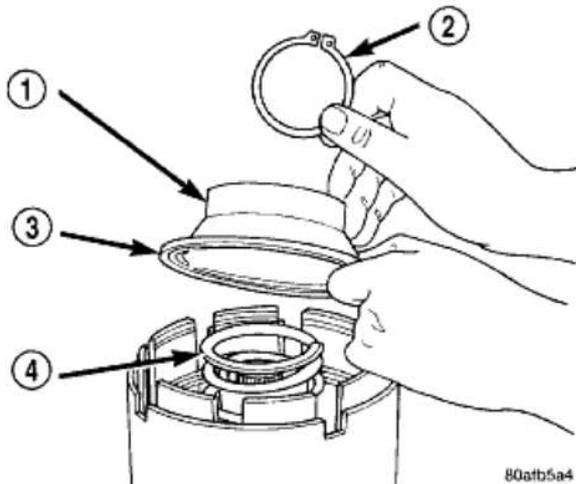


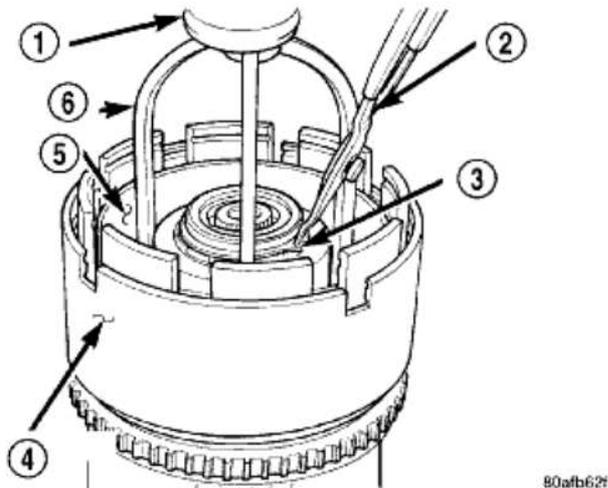
Fig. 268: Identifying UD Spring Retainer & Snap Ring
Courtesy of CHRYSLER LLC

- 1 - UNDERDRIVE SPRING RETAINER
- 2 - SNAP RING
- 3 - SEAL
- 4 - PISTON RETURN SPRING

12. Place the UD spring retainer (1) and snap ring (2) into position.

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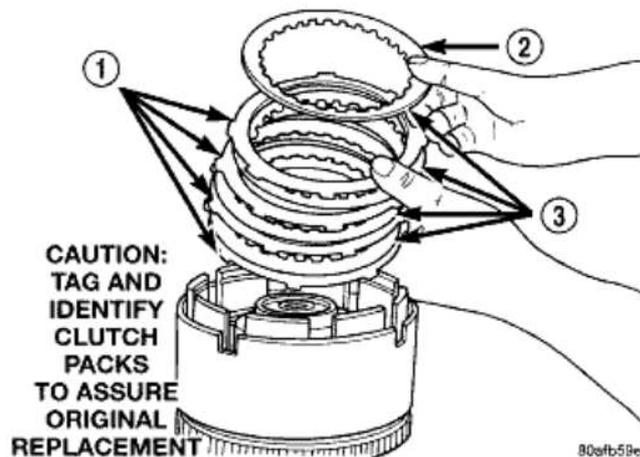
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Fig. 269: Installing UD Spring Retainer and Snap Ring
Courtesy of CHRYSLER LLC

1 - ARBOR PRESS RAM
2 - SNAP RING PLIERS
3 - SNAP RING
4 - OD/REVERSE PISTON
5 - INSTALLER 5067
6 - COMPRESSOR 5059-A

- Using Compressor 5059-A (6) and an arbor press (1), Install the UD spring retainer and snap ring (3). Compress just enough to install snap ring (3).

CAUTION: Compress return spring just enough to install snap ring.



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Fig. 270: Installing Underdrive UD Clutch Pack

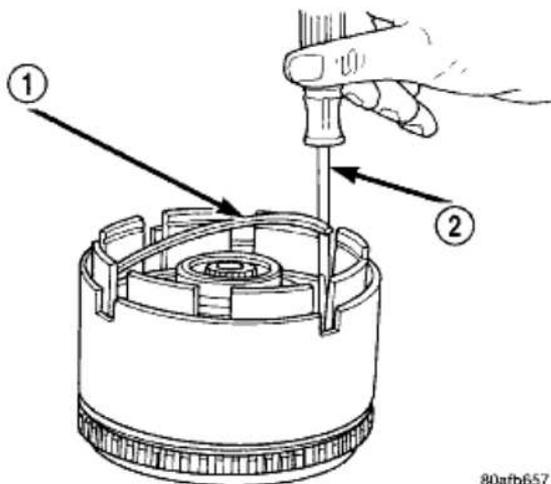
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Courtesy of CHRYSLER LLC

- | |
|------------------------|
| 1 - CLUTCH PLATE |
| 2 - ONE UD CLUTCH DISC |
| 3 - CLUTCH DISC |

14. Install the UD clutch pack (1,3) . Leave out upper disc (2), until snap ring is installed.

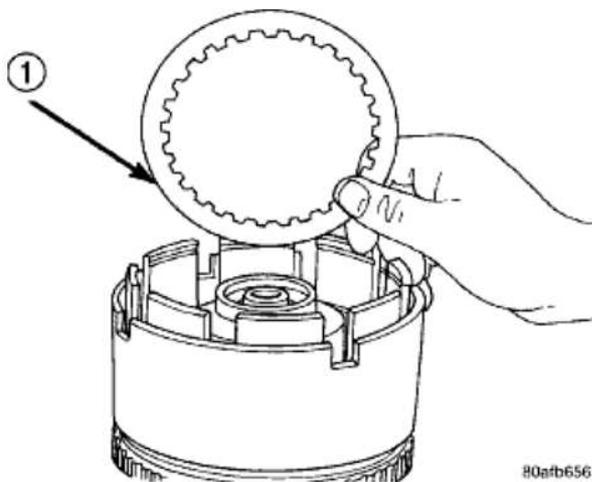


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Fig. 271: Installing UD Clutch Flat Snap Ring
Courtesy of CHRYSLER LLC

- | |
|---|
| 1 - UNDERDRIVE CLUTCH REACTION PLATE FLAT SNAP RING |
| 2 - SCREWDRIVER |

15. Install the UD clutch flat snap ring (1) .



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Fig. 272: Installing Last UD Clutch Disc
Courtesy of CHRYSLER LLC

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1 - ONE UNDERDRIVE CLUTCH DISC

16. Install the last UD clutch disc (1) .

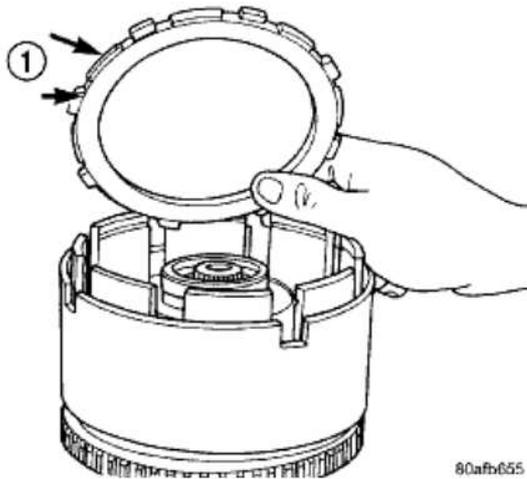
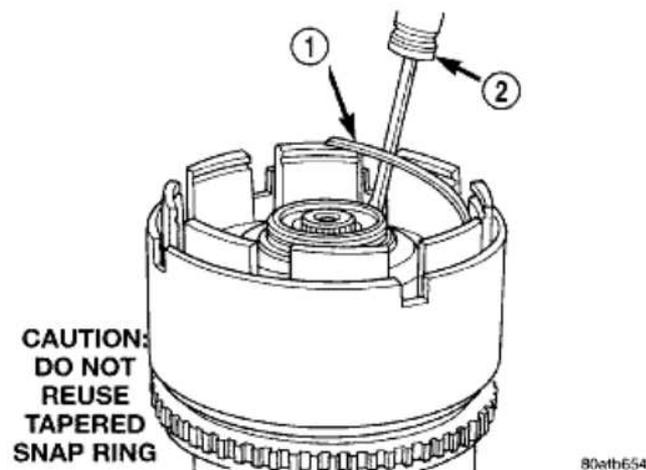


Fig. 273: Installing OD/UD Clutches Reaction Plate

Courtesy of CHRYSLER LLC

1 - OD/UD CLUTCH REACTION PLATE (TAPERED STEP SIDE UP)

17. Place the OD/UD clutch reaction plate (1) and snap ring into position. The OD/UD clutches reaction plate has a step on both sides. Install the OD/UD clutches reaction plate tapered step side up.



CAUTION:
DO NOT
REUSE
TAPERED
SNAP RING

Fig. 274: Installing Snap Ring

Courtesy of CHRYSLER LLC

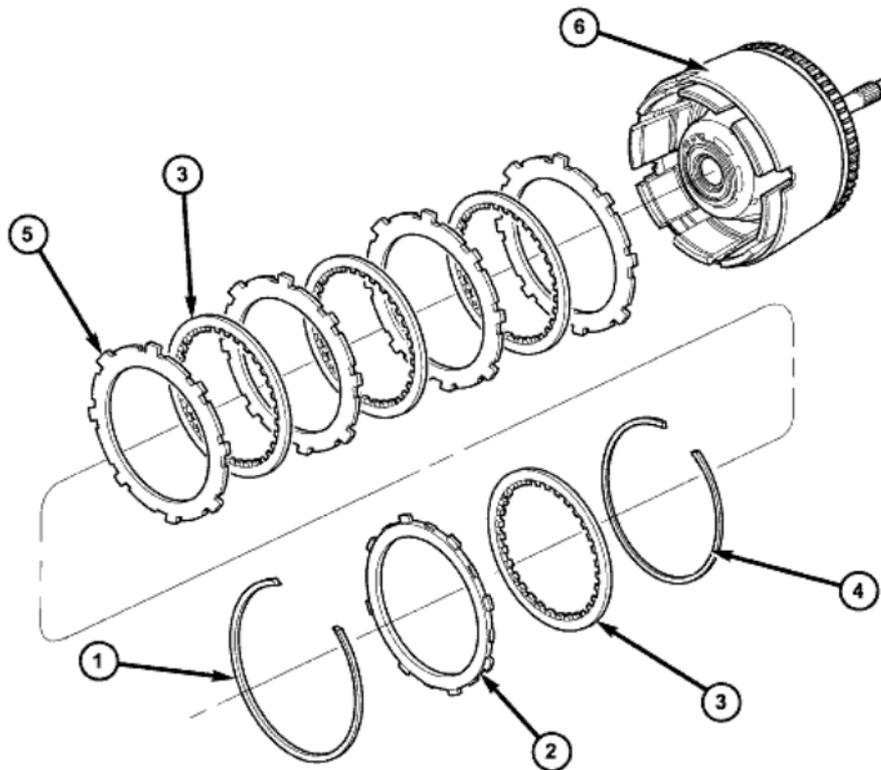
- 1 - OVERDRIVE/UNDERDRIVE CLUTCHES REACTION PLATE TAPERED SNAP RING
2 - SCREWDRIVER (DO NOT SCRATCH REACTION PLATE)

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18. Install the snap ring (1) using a screwdriver (2).

NOTE: Snap ring ends must be located within one finger of the input clutch hub. Be sure that snap ring is fully seated, by pushing with screwdriver, into snap ring groove all the way around.



8014906

Fig. 275: Removing/Installing OD/UD Reaction Plate Tapered Snap Ring, Clutch Plate, & First Clutch Disc

Courtesy of CHRYSLER LLC

- | |
|---------------------------|
| 1 - SNAP RING (TAPERED) |
| 2 - OD/UD REACTION PLATE |
| 3 - CLUTCH DISC |
| 4 - SNAP RING (FLAT) |
| 5 - CLUTCH PLATE |
| 6 - INPUT CLUTCH ASSEMBLY |

19. Refer to **Fig. 275** as necessary when performing the following steps .

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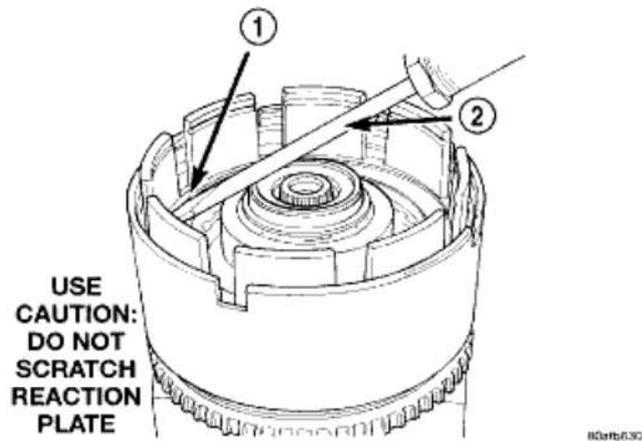


Fig. 276: Seating Tapered Snap Ring
Courtesy of CHRYSLER LLC

- | |
|--|
| 1 - OVERDRIVE/UNDERDRIVE CLUTCHES REACTION PLATE TAPERED SNAP RING |
| 2 - SCREWDRIVER |

20. Seat tapered snap ring (1) to ensure proper installation.

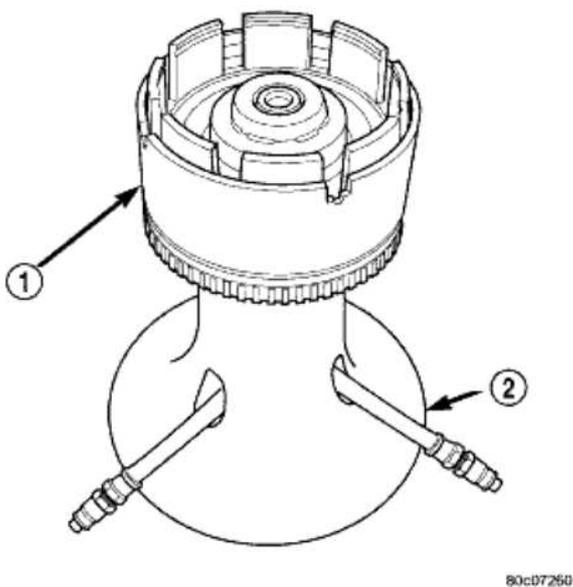


Fig. 277: Installing Input Clutch Assembly
Courtesy of CHRYSLER LLC

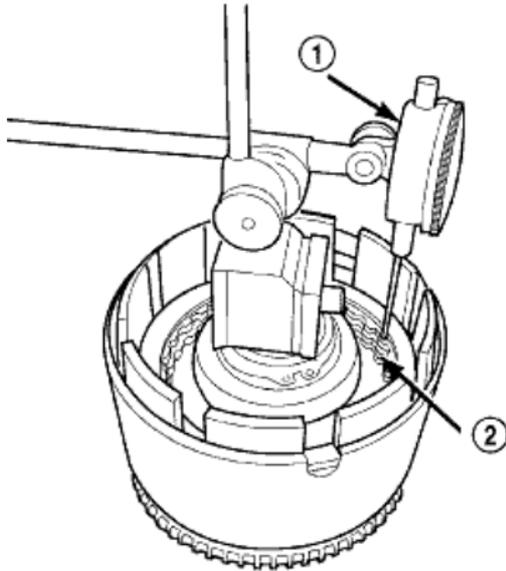
- | |
|---------------------------|
| 1 - INPUT CLUTCH ASSEMBLY |
|---------------------------|

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2 - INPUT CLUTCH PRESSURE FIXTURE 8391

21. Install input clutch assembly (1) to the Input Clutch Pressure Fixture 8391 (2) .



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Fig. 278: Identifying Dial Indicator & UD Clutch Pack
Courtesy of CHRYSLER LLC

- | |
|-----------------------|
| 1 - DIAL INDICATOR |
| 2 - UNDERDRIVE CLUTCH |

22. Set up dial indicator (1) on the UD clutch pack (2) .

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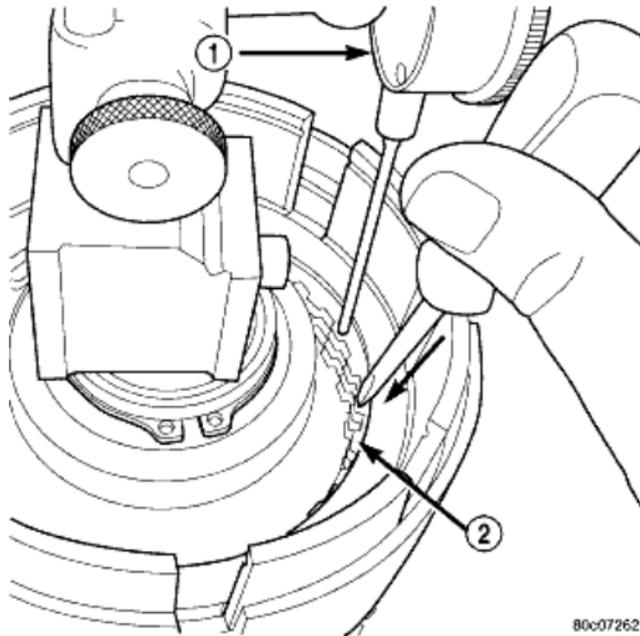


Fig. 279: Measuring UD Clutch Pack Clearance
Courtesy of CHRYSLER LLC

- | |
|-----------------------|
| 1 - DIAL INDICATOR |
| 2 - UNDERDRIVE CLUTCH |

23. Using moderate pressure, press down and hold (near indicator) the UD clutch pack (2) with screwdriver or suitable tool and zero dial indicator. When releasing pressure on clutch pack, indicator reading should advance 0.005-0.010.

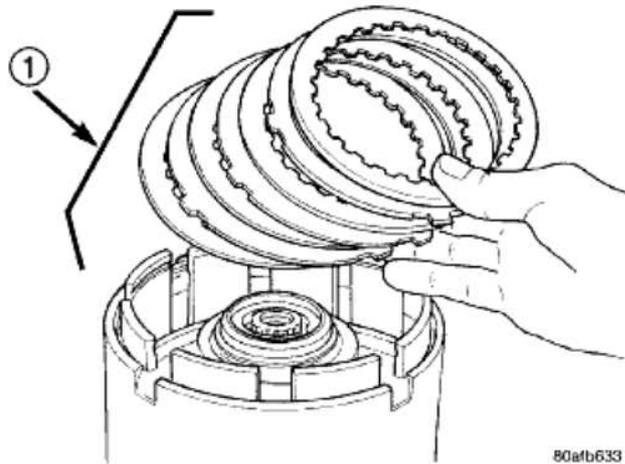
CAUTION: Do not apply more than 30 psi (206 kPa) to the underdrive clutch pack.

24. Apply 30 psi (206 kPa) to the underdrive hose on Input Clutch Pressure Fixture 8391 and measure UD clutch clearance. Measure and record UD clutch pack measurement in four places, 90° apart.
25. Take average of four measurements and compare with UD clutch pack (2) clearance specification.
Underdrive clutch pack clearance must be 0.94-1.50 mm (0.037-0.059 in.).
26. If necessary, select the proper reaction plate to achieve specifications:

UNDERDRIVE REACTION PLATE THICKNESS	
4659939AB	5.837-5.937 mm (0.230-0.234 in.)
4659940AB	6.147-6.248 mm (0.242-0.246 in.)
4659941AB	6.457-6.557 mm (0.254-0.258 in.)

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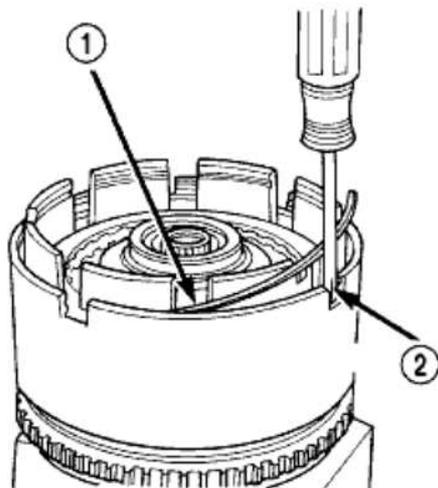


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Fig. 280: Installing OD Clutch Pack
Courtesy of CHRYSLER LLC

1 - OVERDRIVE CLUTCH PACK

27. Install the OD clutch pack (four frictions/three steels) (1) .



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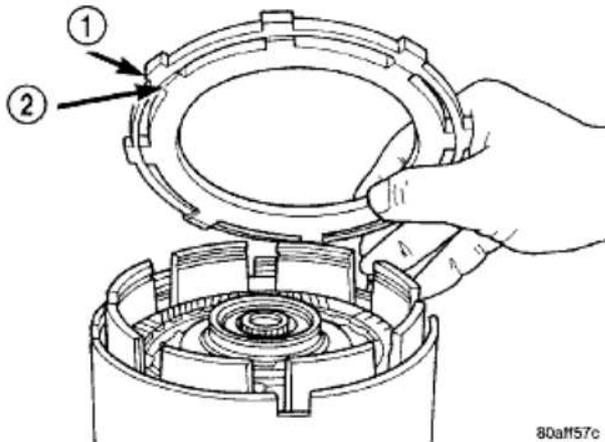
Fig. 281: Installing Waved Snap Ring
Courtesy of CHRYSLER LLC

1 - OVERDRIVE PRESSURE PLATE WAVED SNAP RING
2 - SCREWDRIVER

28. Install OD pressure plate waved snap ring (1) .

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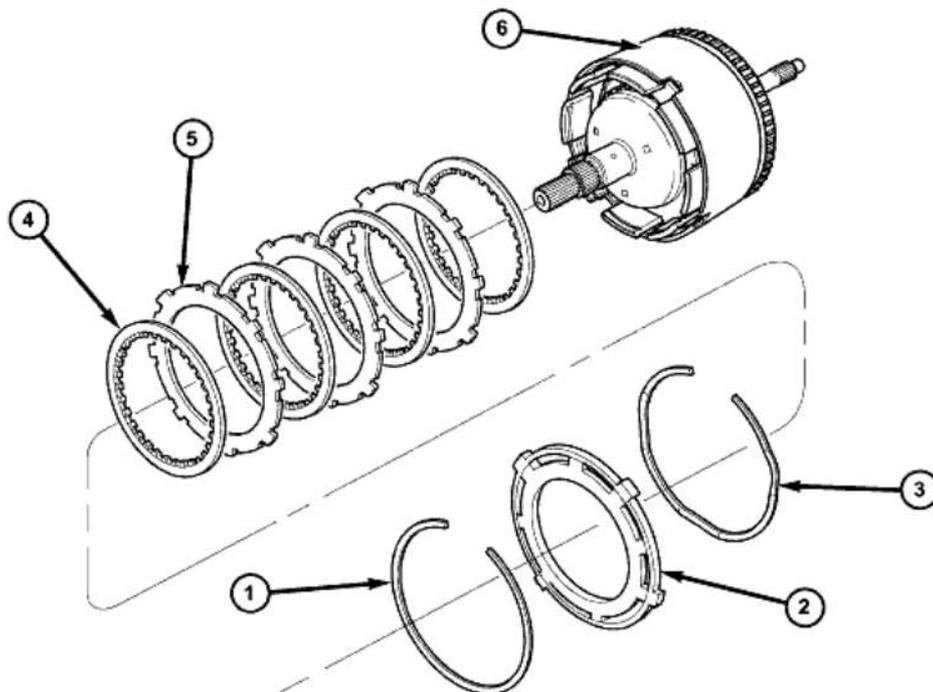


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Fig. 282: Installing OD/Reverse Pressure Plate
Courtesy of CHRYSLER LLC

1 - OVERDRIVE/REVERSE PRESSURE PLATE
2 - (STEP SIDE DOWN)

29. Install the OD/Reverse pressure plate (1) with large step down (towards OD clutch pack) (2) .



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Fig. 283: Removing/Installing OD/Reverse Pressure Plate Snap Ring
Courtesy of CHRYSLER LLC

1 - SNAP RING

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- 2 - OD/REVERSE PRESSURE PLATE
- 3 - SNAP RING (WAVE)
- 4 - CLUTCH DISC (4)
- 5 - CLUTCH STEEL (3)
- 6 - INPUT CLUTCH ASSEMBLY

30. Refer to **Fig. 283** as necessary when performing the following steps .

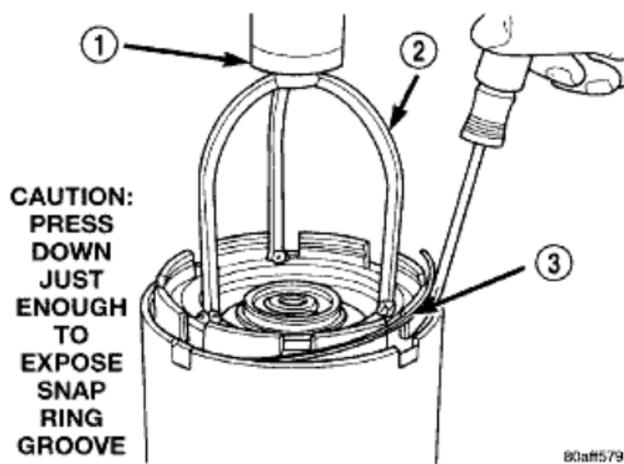


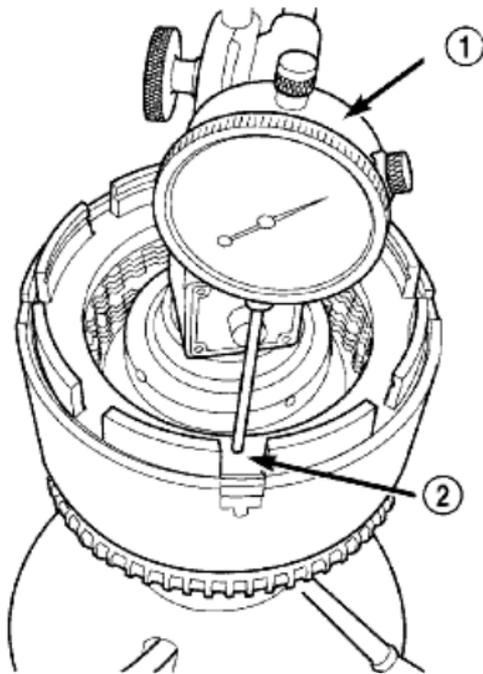
Fig. 284: Installing Flat Snap Ring
Courtesy of CHRYSLER LLC

- 1 - ARBOR PRESS RAM
- 2 - COMPRESSOR 5059-A
- 3 - FLAT SNAP RING

31. Install OD pressure plate flat snap ring (3) .

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Fig. 285: Measuring OD Clutch Pack Clearance
Courtesy of CHRYSLER LLC

- | |
|-------------------------------|
| 1 - DIAL INDICATOR |
| 2 - OD/REVERSE REACTION PLATE |

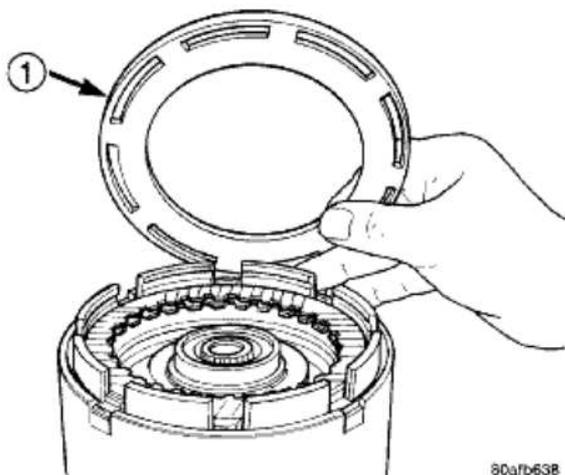
32. Measure OD clutch pack clearance. Set up dial indicator (1) on top of the OD/Reverse pressure plate.
33. Zero dial indicator and apply 30 psi (206 kPa) air pressure to the overdrive clutch hose on Tool 8391. Measure and record OD clutch pack measurement in four places, 90° apart.
34. Take average of four measurements and compare with OD clutch pack clearance specification. **The overdrive (OD) clutch pack clearance is 1.07-3.25 mm (0.042-0.128 in.).**

If not within specifications, the clutch is not assembled properly. There is no adjustment for the OD clutch clearance.

35. Install reverse clutch pack (two frictions/one steel) (1,2) .

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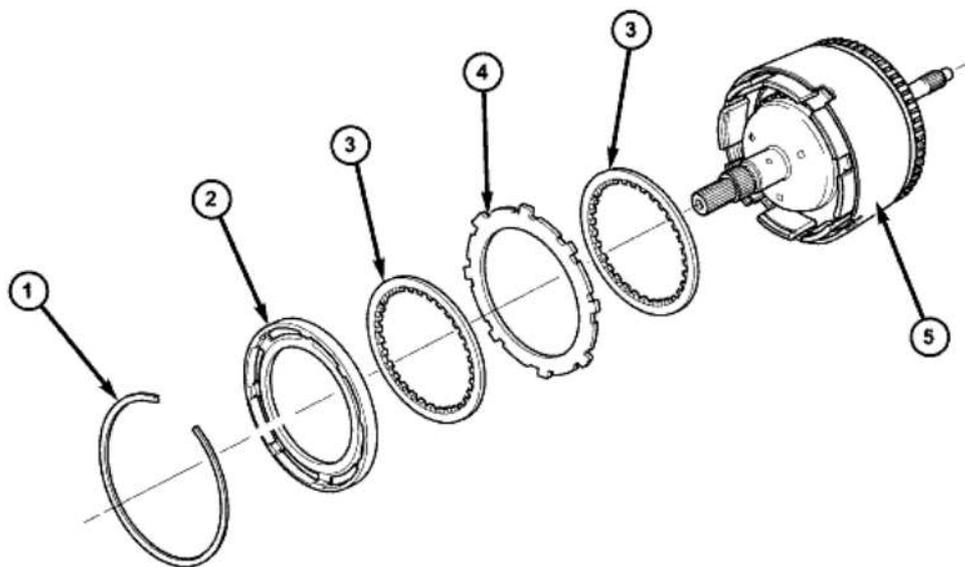


90arb63B

Fig. 286: Installing Reverse Clutch Reaction Plate
Courtesy of CHRYSLER LLC

1 - REVERSE CLUTCH REACTION PLATE (FLAT SIDE DOWN)

36. Install reverse clutch reaction plate with the flat side down towards reverse clutch .



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Fig. 287: Removing/Installing Reverse Clutch Pack
Courtesy of CHRYSLER LLC

1 - SNAP RING
2 - REACTION PLATE
3 - CLUTCH DISC (2)
4 - CLUTCH PLATE (1)
5 - INPUT CLUTCH ASSEMBLY

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37. Refer to **Fig. 287** as necessary when performing the following steps .

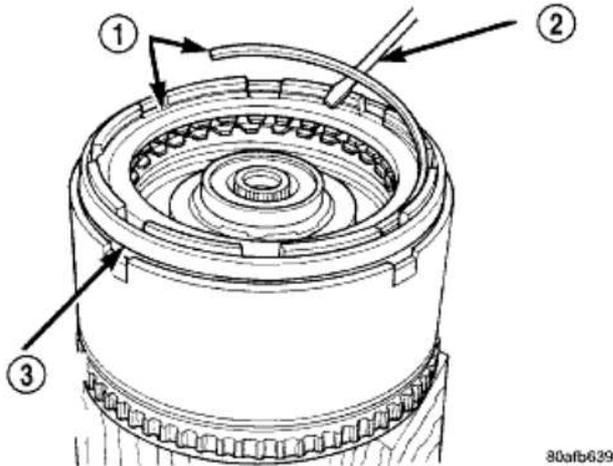


Fig. 288: Installing Reverse Clutch Snap Ring
Courtesy of CHRYSLER LLC

- | |
|---------------------------------------|
| 1 - REVERSE CLUTCH SNAP RING (SELECT) |
| 2 - SCREWDRIVER |
| 3 - REVERSE CLUTCH REACTION PLATE |

38. Tap reaction plate (3) down to allow installation of the reverse clutch snap ring (1) Install reverse clutch snap ring (1).

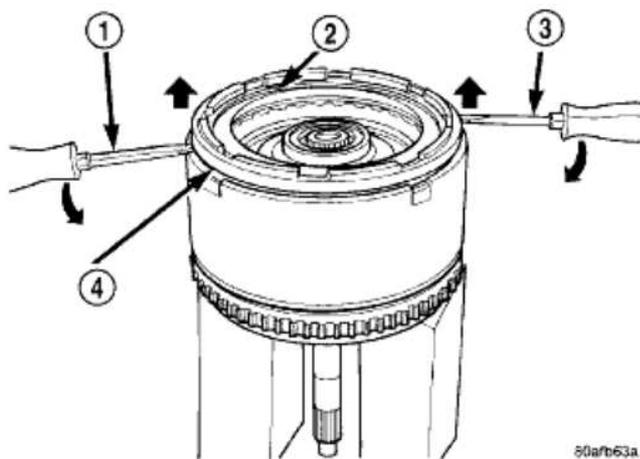


Fig. 289: Prying Up Reaction Plate To Seat Against Snap Ring
Courtesy of CHRYSLER LLC

- | |
|-----------------|
| 1 - SCREWDRIVER |
| 2 - SNAP RING |

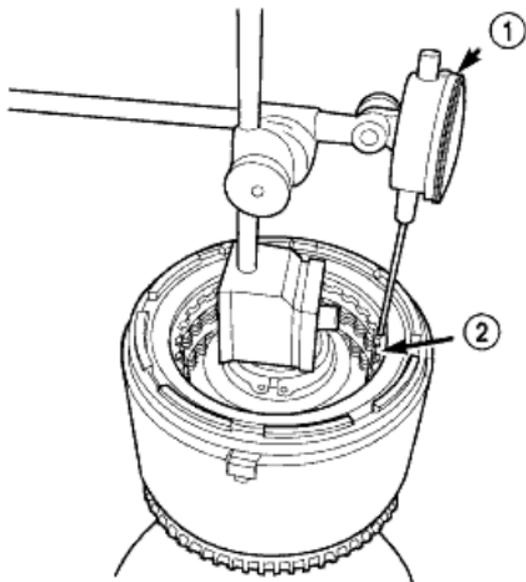
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3 - SCREWDRIVER

4 - MUST RAISE REVERSE REACTION PLATE TO RAISE SNAP RING

39. Pry up reverse reaction plate (4) to seat against snap ring (2).



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Fig. 290: Identifying Dial Indicator & Reverse Clutch Pack
Courtesy of CHRYSLER LLC

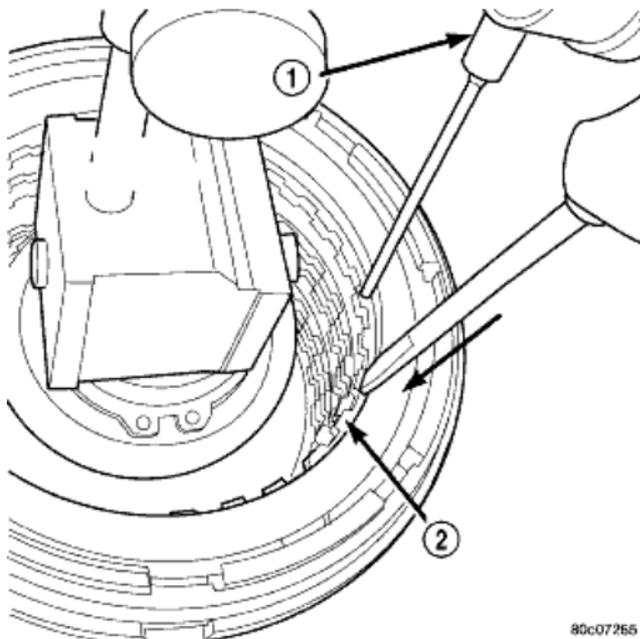
1 - DIAL INDICATOR

2 - REVERSE CLUTCH

40. Set up a dial indicator (1) on the reverse clutch pack (2).

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80c07265

Fig. 291: Measuring Reverse Clutch Pack Clearance
Courtesy of CHRYSLER LLC

- | |
|--------------------|
| 1 - DIAL INDICATOR |
| 2 - REVERSE CLUTCH |

41. Using moderate pressure, press down and hold (near indicator) reverse clutch disc (2) with screwdriver or suitable tool and zero dial indicator (1). When releasing pressure, indicator should advance 0.005-0.010. as clutch pack relaxes.
42. Apply 30 psi (206 kPa) air pressure to the reverse clutch hose on Input Clutch Pressure Fixture 8391. Measure and record reverse clutch pack measurement in four places, 90° apart.
43. Take average of four measurements and compare with reverse clutch pack clearance specification. **The reverse clutch pack clearance is 0.89-1.37 mm (0.035-0.054 in.).** Select the proper reverse clutch snap ring to achieve specifications:

REVERSE CLUTCH SNAP RING THICKNESS	
4377195	1.53-1.58 mm (0.060-0.062 in.)
4412871	1.77-1.83 mm (0.070-0.072 in.)
4412872	2.02-2.07 mm (0.080-0.082 in.)
4412873	2.27-2.32 mm (0.090-0.091 in.)

44. To complete the assembly, reverse clutch and overdrive clutch must be removed.
45. Install the #2 needle bearing (note 3 small tabs up) (1) .

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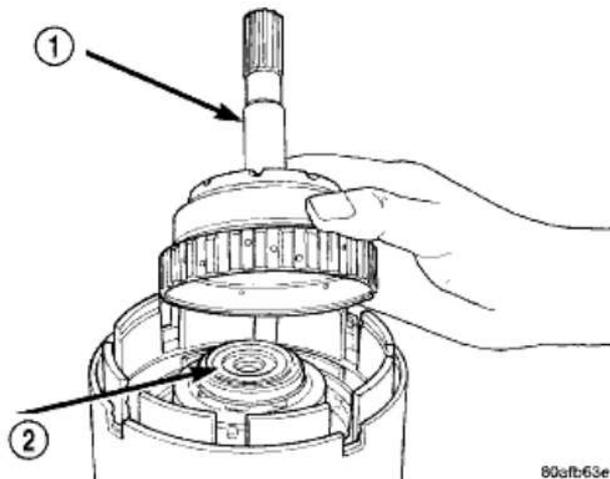


Fig. 292: Installing Underdrive Shaft Assembly
Courtesy of CHRYSLER LLC

- | |
|-------------------------------|
| 1 - UNDERDRIVE SHAFT ASSEMBLY |
| 2 - #2 NEEDLE BEARING |

46. Install the underdrive shaft assembly (1) .

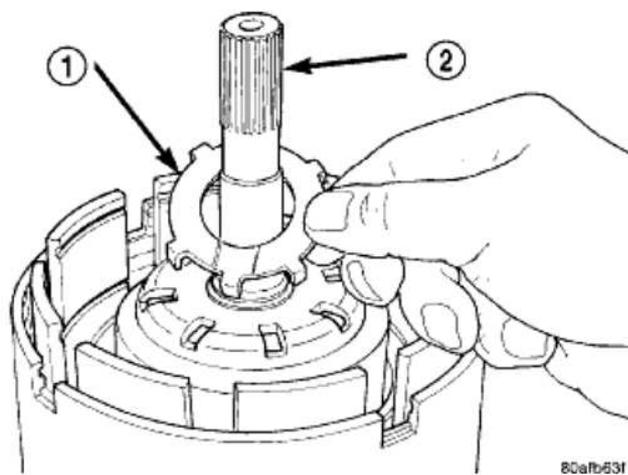


Fig. 293: Installing No. 3 Thrust Washer
Courtesy of CHRYSLER LLC

- | |
|------------------------------------|
| 1 - #3 THRUST WASHER (NOTE 5 TABS) |
| 2 - UNDERDRIVE SHAFT ASSEMBLY |

47. Install the #3 thrust washer (1) to the underdrive shaft assembly (2). Be sure five tabs are seated properly.

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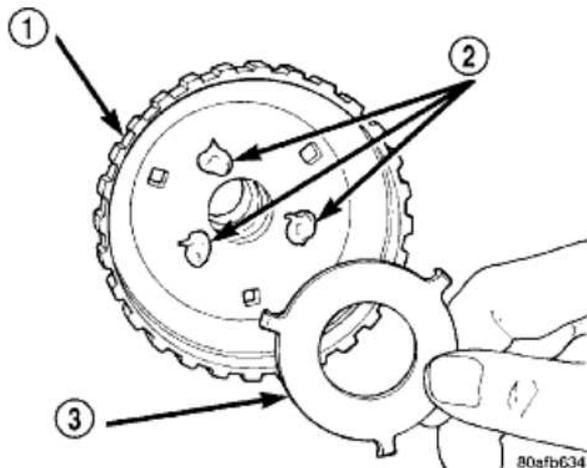


Fig. 294: Installing No. 3 Thrust Plate
Courtesy of CHRYSLER LLC

- | |
|--|
| 1 - OVERDRIVE SHAFT ASSEMBLY |
| 2 - DABS OF PETROLATUM (FOR RETENTION) |
| 3 - #3 THRUST PLATE (NOTE 3 TABS) |

48. Install the #3 thrust plate (3) (note 3 tabs) to the bottom of the overdrive shaft assembly (1). Retain with petrolatum or transmission assembly gel (2).

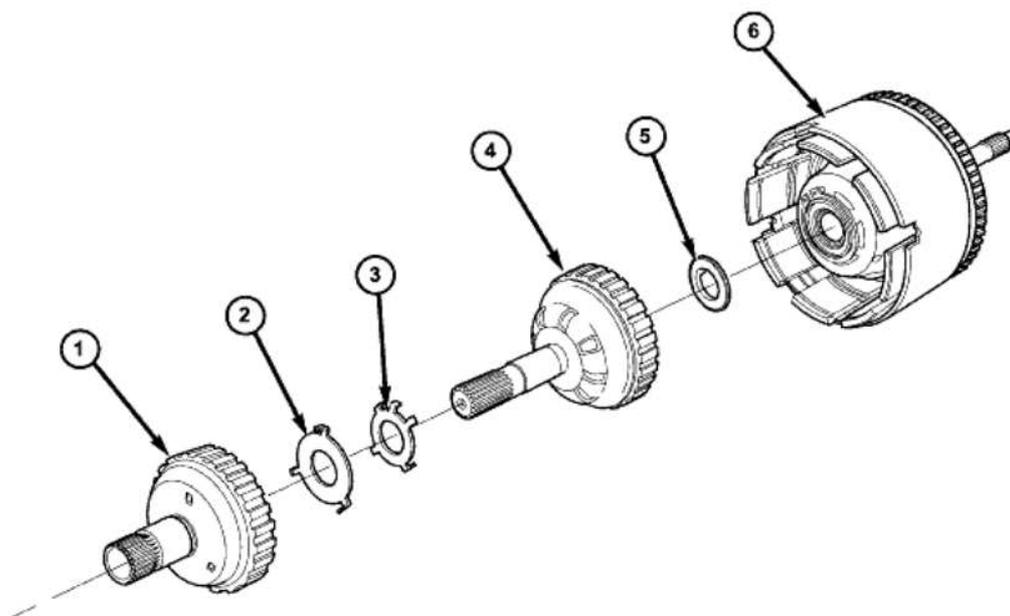


Fig. 295: Removing/Installing OD & UD Shafts, Thrust Washer & Plate, & #2 Needle Bearing

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Courtesy of CHRYSLER LLC

- | |
|--------------------------------|
| 1 - OVERDRIVE SHAFT |
| 2 - #3 THRUST PLATE (3 TABS) |
| 3 - #3 THRUST WASHER (5 TABS) |
| 4 - UNDERDRIVE SHAFT |
| 5 - #2 NEEDLE BEARING (3 TABS) |
| 6 - INPUT CLUTCH ASSEMBLY |

49. Refer to **Fig. 295** as necessary when performing the following steps .

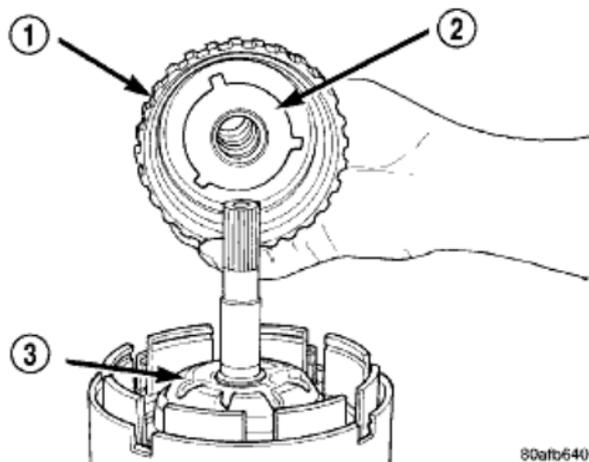


Fig. 296: Installing Overdrive Shaft Assembly
Courtesy of CHRYSLER LLC

- | |
|------------------------------|
| 1 - OVERDRIVE SHAFT ASSEMBLY |
| 2 - #3 THRUST PLATE |
| 3 - #3 THRUST WASHER |

50. Install the overdrive shaft assembly (1) .
51. Reinstall overdrive and reverse clutch as shown in **Fig. 296**. **Rechecking these clutch clearances is not necessary.**

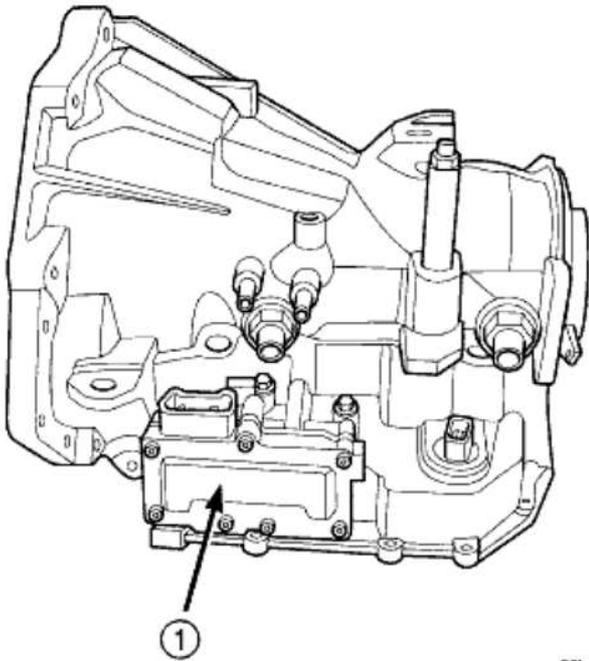
ASSEMBLY, TRANSMISSION SOLENOID AND PRESSURE SWITCH

DESCRIPTION

DESCRIPTION

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Fig. 297: Identifying Solenoid/Pressure Switch Assembly
Courtesy of CHRYSLER LLC

1 - SOLENOID AND PRESSURE SWITCH ASSEMBLY

The Solenoid/Pressure Switch Assembly (1) is external to the transaxle and mounted to the transaxle case. The assembly consists of four solenoids that control hydraulic pressure to the LR/CC, 2/4, OD, and UD friction elements. The reverse clutch is controlled by line pressure from the manual valve in the valve body. The solenoids are contained within the Solenoid/Pressure Switch Assembly, and can only be serviced by replacing the assembly.

The solenoid assembly also contains pressure switches that monitor and send hydraulic circuit information to the PCM/TCM. Likewise, the pressure switches can only be service by replacing the assembly.

OPERATION

OPERATION

SOLENOIDS

The solenoids receive electrical power from the Transmission Control Relay through a single wire. The PCM/TCM energizes or operates the solenoids individually by grounding the return wire of the solenoid needed. When a solenoid is energized, the solenoid valve shifts, and a fluid passage is opened or closed (vented or applied), depending on its default operating state. The result is an apply or release of a frictional element.

The 2/4 and UD solenoids are normally applied, which by design allow fluid to pass through in their relaxed or "off" state. This allows transaxle limp-in (P,R,N,2) in the event of an electrical failure.

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The continuity of the solenoids and circuits are periodically tested. Each solenoid is turned on or off depending on its current state. An inductive spike should be detected by the PCM/TCM during this test. If no spike is detected, the circuit is tested again to verify the failure. In addition to the periodic testing, the solenoid circuits are tested if a speed ratio or pressure switch error occurs.

PRESSURE SWITCHES

The PCM/TCM relies on three pressure switches to monitor fluid pressure in the L/R, 2/4, and OD hydraulic circuits. The primary purpose of these switches is to help the PCM/TCM detect when clutch circuit hydraulic failures occur. The range for the pressure switch closing and opening points is 11-23 psi. Typically the switch opening point will be approximately one psi lower than the closing point. For example, a switch may close at 18 psi and open at 17 psi. The switches are continuously monitored by the PCM/TCM for the correct states (open or closed) in each gear as shown in the following chart:

PRESSURE SWITCH STATES

GEAR	L/R	2/4	OD
R	OP	OP	OP
P/N	CL	OP	OP
1st	CL	OP	OP
2nd	OP	CL	OP
D	OP	OP	CL
OD	OP	CL	CL
OP = OPEN			
CL = CLOSED			

A Diagnostic Trouble Code (DTC) will set if the PCM/TCM senses any switch open or closed at the wrong time in a given gear.

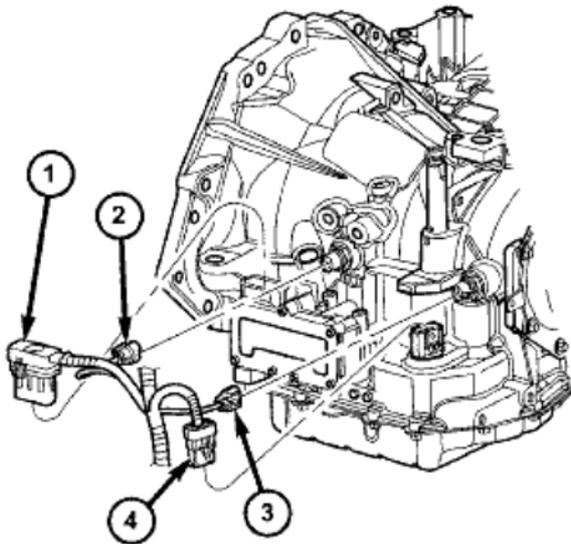
The PCM/TCM also tests the 2/4 and OD pressure switches when they are normally off (OD and 2/4 are tested in 1st gear, OD in 2nd gear, and 2/4 in 3rd gear). The test simply verifies that they are operational, by looking for a closed state when the corresponding element is applied. Immediately after a shift into 1st, 2nd, or 3rd gear with the engine speed above 1000 RPM, the PCM/TCM momentarily turns on element pressure to the 2/4 and/or OD clutch circuits to identify that the appropriate switch has closed. If it doesn't close, it is tested again. If the switch fails to close the second time, the appropriate Diagnostic Trouble Code (DTC) will set.

REMOVAL

REMOVAL

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Fig. 298: Identifying Transmission Connectors
Courtesy of CHRYSLER LLC

- | |
|--|
| <p>1 - SOLENOID PACK CONNECTOR
 2 - INPUT SPEED SENSOR CONNECTOR
 3 - OUTPUT SPEED SENSOR CONNECTOR
 4 - TRANSMISSION RANGE SENSOR CONNECTOR</p> |
|--|

NOTE: If solenoid/pressure switch assembly is being replaced, the "Quick-Learn" procedure must be performed. Refer to Electrical - Electronic Control Modules/Electronic Control Modules/MODULE, Powertrain Control - Standard Procedure .

1. Disconnect battery negative cable.
2. Remove air cleaner assembly.
3. Disconnect solenoid/pressure switch assembly connector (1) .
4. Disconnect input speed sensor connector (2).

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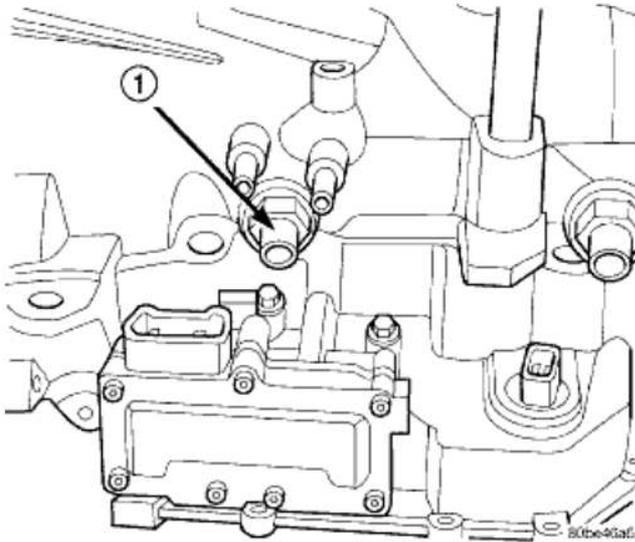


Fig. 299: Removing/Installing Input Speed Sensor
Courtesy of CHRYSLER LLC

1 - INPUT SPEED SENSOR

5. Remove input speed sensor (1) .

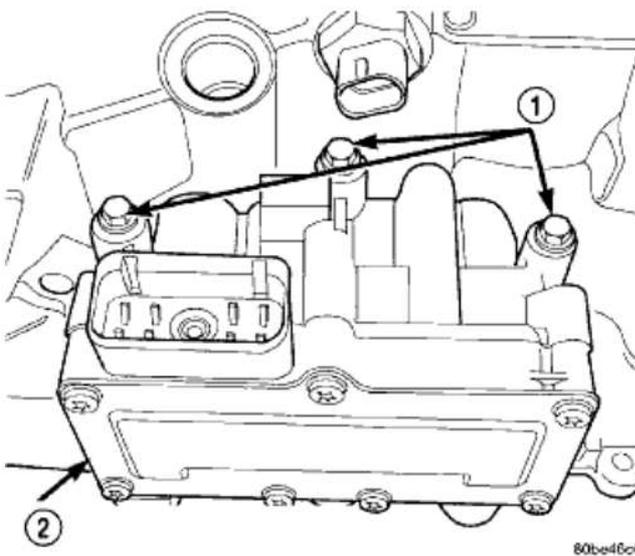


Fig. 300: Removing/Installing Solenoid/Pressure Switch Assembly-To-Transaxle Case Bolts
Courtesy of CHRYSLER LLC

1 - BOLTS

2 - SOLENOID AND PRESSURE SWITCH ASSEMBLY

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6. Remove three solenoid/pressure switch assembly-to-transaxle case bolts (1) .

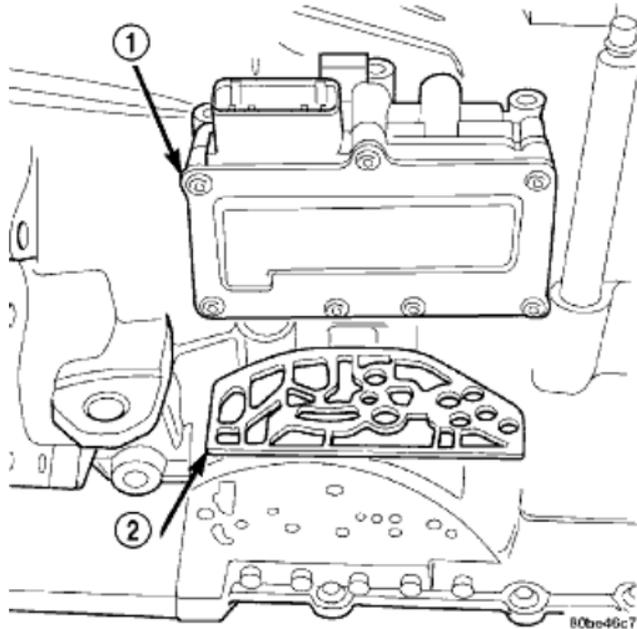


Fig. 301: Removing/Installing Solenoid/Pressure Switch Assembly & Gasket
Courtesy of CHRYSLER LLC

- | |
|---------------------------------------|
| 1 - SOLENOID/PRESSURE SWITCH ASSEMBLY |
| 2 - GASKET |

7. Remove solenoid/pressure switch assembly (1) and gasket (2). Use care to prevent gasket material and foreign objects from become lodged in the transaxle case ports.

INSTALLATION

INSTALLATION

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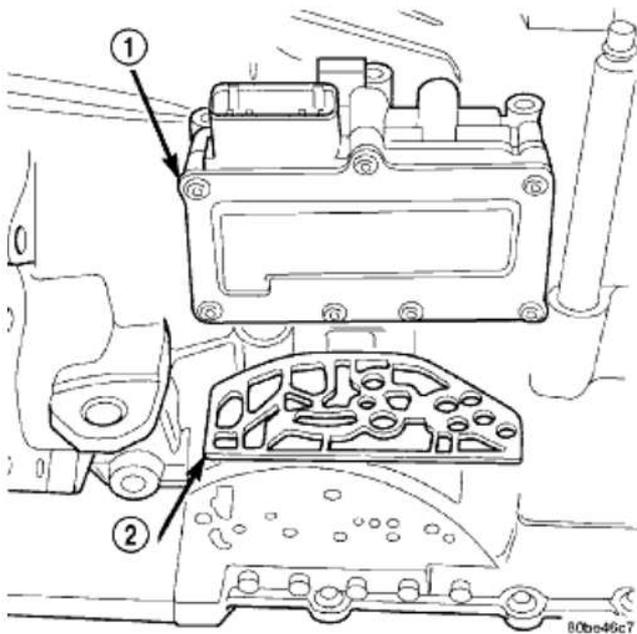


Fig. 302: Removing/Installing Solenoid/Pressure Switch Assembly & Gasket
Courtesy of CHRYSLER LLC

- | |
|---------------------------------------|
| 1 - SOLENOID/PRESSURE SWITCH ASSEMBLY |
| 2 - GASKET |

NOTE: If solenoid/pressure switch assembly is being replaced, it is necessary to perform the "Quick-Learn" procedure. Refer to Electrical - Electronic Control Modules/Electronic Control Modules/MODULE, Powertrain Control - Standard Procedure .

1. Install solenoid/pressure switch assembly and new gasket to transaxle .

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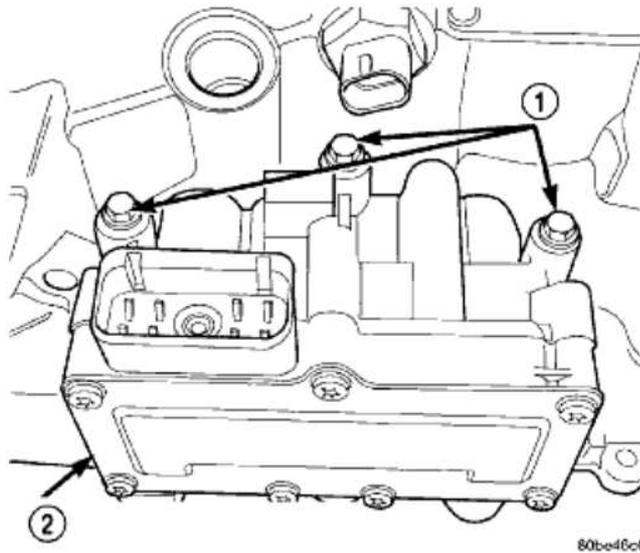


Fig. 303: Removing/Installing Solenoid/Pressure Switch Assembly-To-Transaxle Case Bolts
Courtesy of CHRYSLER LLC

- | |
|---|
| 1 - BOLTS |
| 2 - SOLENOID AND PRESSURE SWITCH ASSEMBLY |

2. Install and torque three bolts (1) to 12 N.m (105 in. lbs.).

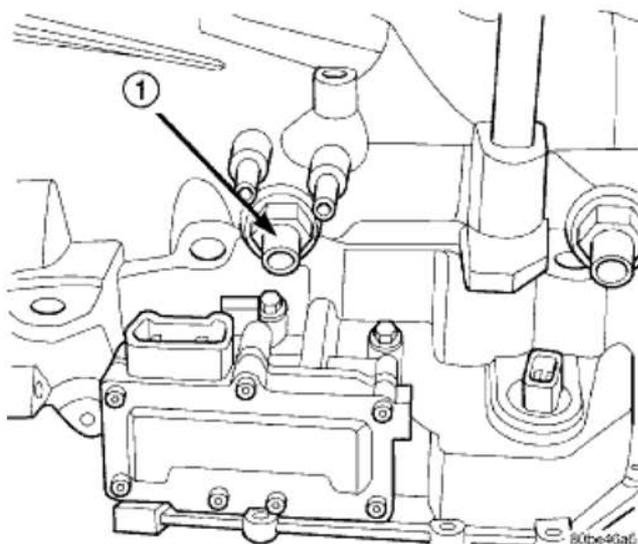


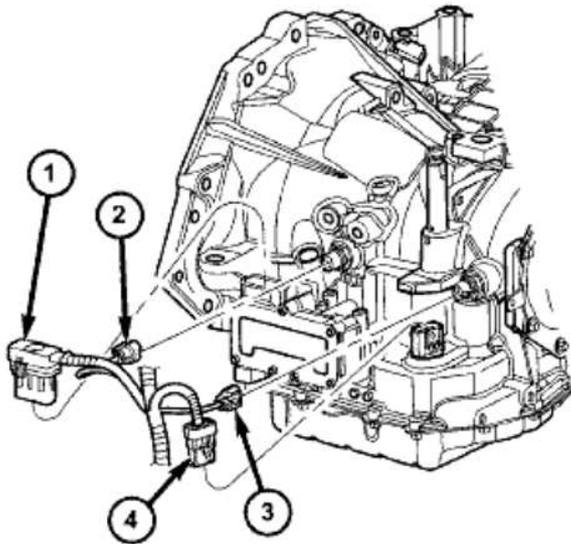
Fig. 304: Removing/Installing Input Speed Sensor
Courtesy of CHRYSLER LLC

- | |
|------------------------|
| 1 - INPUT SPEED SENSOR |
|------------------------|

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3. Install input speed sensor (1) and torque to 27 N.m (20 ft. lbs.).



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Fig. 305: Identifying Transmission Connectors

Courtesy of CHRYSLER LLC

- | |
|--|
| <p>1 - SOLENOID PACK CONNECTOR
 2 - INPUT SPEED SENSOR CONNECTOR
 3 - OUTPUT SPEED SENSOR CONNECTOR
 4 - TRANSMISSION RANGE SENSOR CONNECTOR</p> |
|--|

4. Connect input speed sensor connector (2) .
5. Install solenoid/pressure switch 8-way connector and torque to 4 N.m (35 in. lbs.).
6. Install air cleaner assembly.
7. Connect battery negative cable.
8. If solenoid/pressure switch assembly was replaced, perform the "Quick-Learn" procedure. Refer to **Electrical - Electronic Control Modules/Electronic Control Modules/MODULE, Powertrain Control - Standard Procedure** .

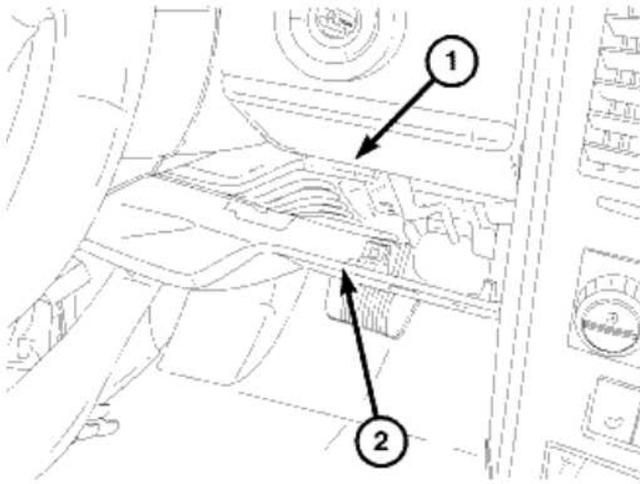
CABLE, SHIFT

REMOVAL

REMOVAL

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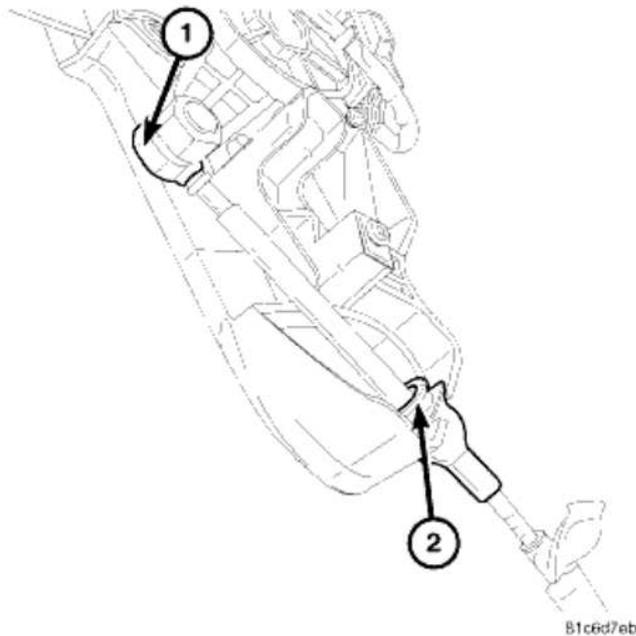


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Fig. 306: Identifying Knee Blocker

Courtesy of CHRYSLER LLC

1. Remove the knee blocker (2). Refer to **Body/Instrument Panel/KNEEBLOCKER - Removal**.



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Fig. 307: Identifying Shift Cable At Shifter

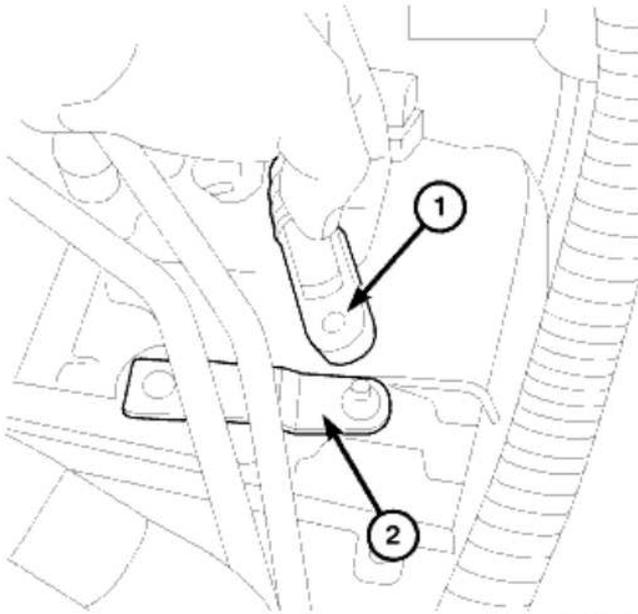
Courtesy of CHRYSLER LLC

NOTE: Ensure the lock tab on the shift cable (2) is depressed before pulling the cable from the shifter housing.

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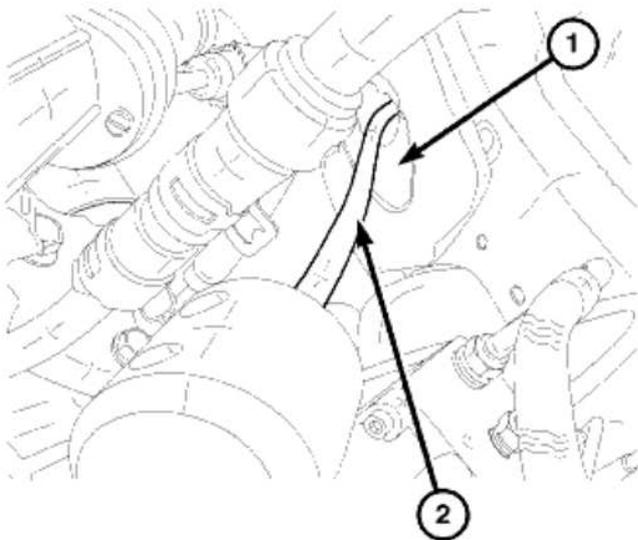
- Remove the cable from the shifter (1, 2).



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Fig. 308: Identifying Gearshift Cable & Transaxle Manual Valve Lever
Courtesy of CHRYSLER LLC

- Disconnect gearshift cable (1) from transaxle manual valve lever (2).
- Disconnect gearshift cable from the bracket.



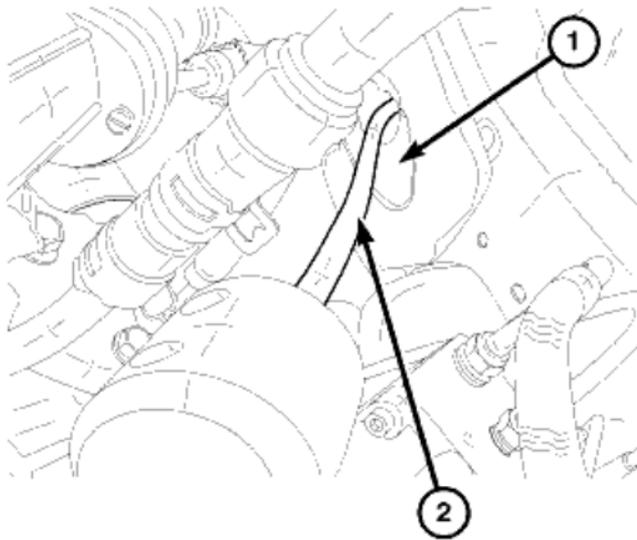
81c6d913

Fig. 309: Identifying Shift Cable At Bulkhead
Courtesy of CHRYSLER LLC

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5. Remove the grommet from the bulkhead
6. Pull the cable (2) through the bulkhead (1) into the passenger compartment.

INSTALLATION**INSTALLATION**

81c6d813

Fig. 310: Identifying Shift Cable At Bulkhead
Courtesy of CHRYSLER LLC

NOTE: Ensure rubber grommet in the bulkhead is fully seated to prevent water leaking into the passenger compartment.

1. Install the shift cable (2) through the bulkhead (1) from the passenger compartment.
2. Seat rubber grommet in the bulkhead.

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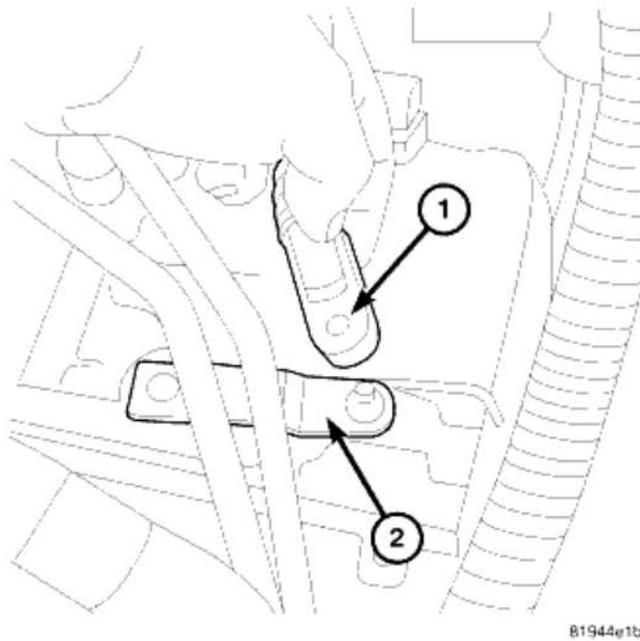


Fig. 311: Identifying Gearshift Cable & Transaxle Manual Valve Lever
Courtesy of CHRYSLER LLC

3. Connect gearshift cable to the bracket.
4. Connect gearshift cable (1) to transaxle manual valve lever (2).

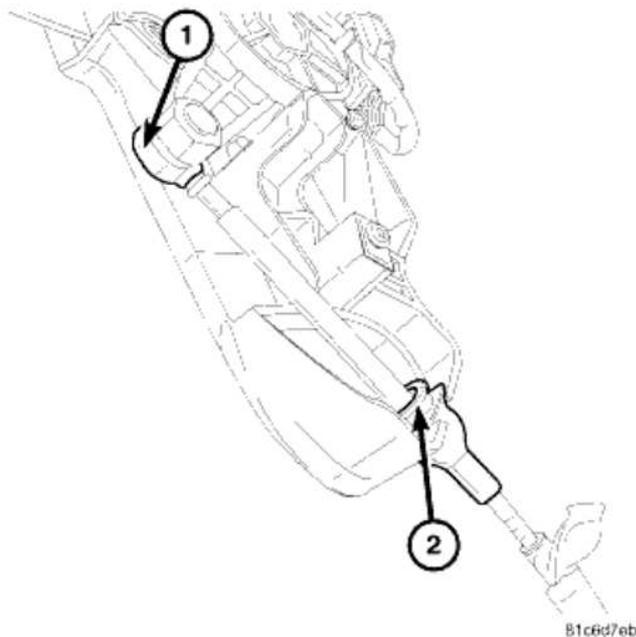


Fig. 312: Identifying Shift Cable At Shifter
Courtesy of CHRYSLER LLC

NOTE: Ensure the lock tab on the shift cable (2) is seated after the cable in

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installed to the shifter housing.

5. Install the cable to the shifter (1, 2).
6. Install the knee blocker (2). Refer to **INSTALLATION**.

ADJUSTMENTS

ADJUSTMENTS

ADJUSTMENT

1. Park the vehicle on level ground and set the parking brake.
2. Place the gearshift lever in gated park (P) and remove ignition key.
3. Loosen the cable adjustment screw at the transaxle manual valve lever.
4. Pull the gearshift lever fully forward to the park detent position.
5. Release the park brake, then rock the vehicle to assure it is in park. Reset the park brake.
6. Tighten the cable adjustment screw to 8 N.m (70 in. lbs.). Gearshift cable should now be properly adjusted.
7. Verify adjustment by using the verification procedure.

VERIFICATION

1. Place gearshift lever in gated park (P).
2. Attempt to move vehicle by rocking back and forth on level ground. If vehicle does not move, attempt to start engine. If engine starts, the park position is correct.
3. Set parking brake.
4. Turn key to on/run and depress brake pedal. Place gearshift lever in neutral (N).
5. Attempt to start engine. If engine starts in both neutral (N) or park (P), gearshift cable is adjusted properly. No adjustment is required.
6. If engine does not start in either park (P) or neutral (N), perform adjustment procedure.

DRIVE, FINAL

DESCRIPTION

DESCRIPTION

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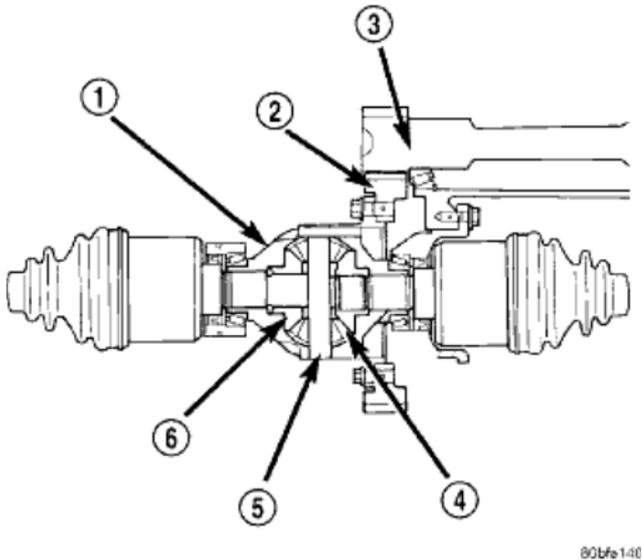


Fig. 313: Identifying Differential Assembly
Courtesy of CHRYSLER LLC

1 - DIFFERENTIAL CASE
2 - RING GEAR
3 - TRANSFER SHAFT
4 - PINION GEAR
5 - PINION SHAFT
6 - SIDE GEAR

The 41TE differential is a conventional open design. It consists of a ring gear and a differential case. The differential case consists of pinion and side gears, and a pinion shaft. The differential case is supported in the transaxle by tapered roller bearings .

OPERATION

OPERATION

The differential assembly is driven by the transfer shaft by way of the differential ring gear. The ring gear drives the differential case, and the case drives the driveshafts through the differential gears. The differential pinion and side gears are supported in the case by thrust washers and a pinion shaft. Differential pinion and side gears make it possible for front tires to rotate at different speeds while cornering.

DISASSEMBLY

DISASSEMBLY

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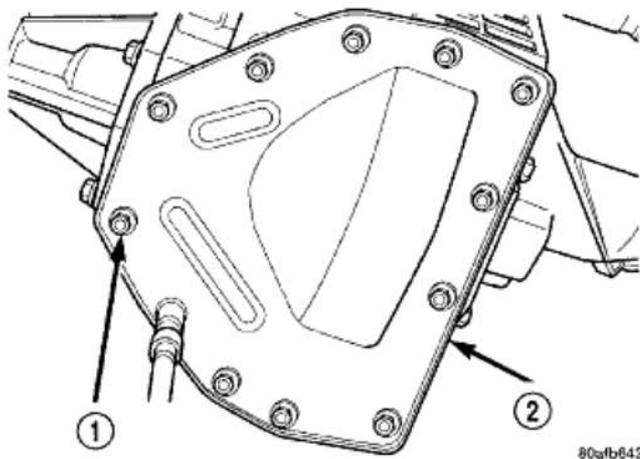


Fig. 314: Removing/Installing Differential Cover Bolts
Courtesy of CHRYSLER LLC

- | |
|------------------------------|
| 1 - DIFFERENTIAL COVER BOLTS |
| 2 - DIFFERENTIAL COVER |

NOTE: The transfer shaft should be removed for differential repair and bearing turning torque checking

1. Remove the differential cover bolts (1).

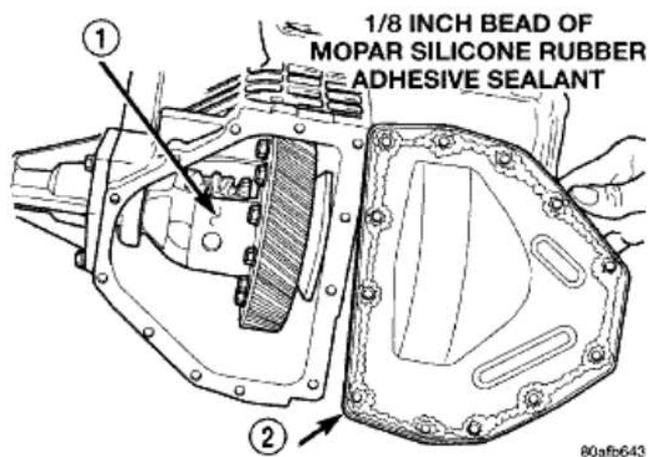


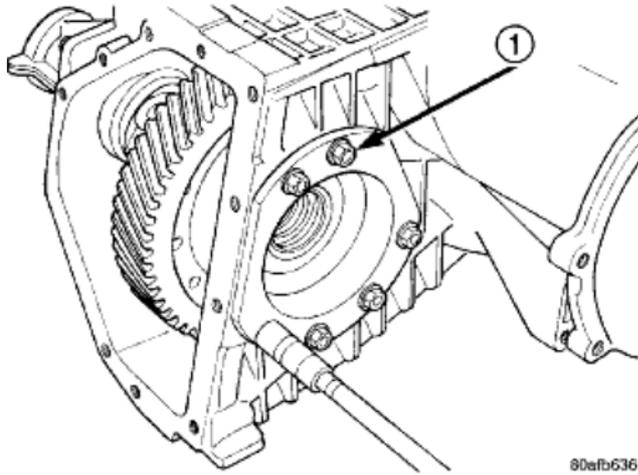
Fig. 315: Identifying Differential Cover
Courtesy of CHRYSLER LLC

- | |
|---------------------------|
| 1 - DIFFERENTIAL ASSEMBLY |
| 2 - DIFFERENTIAL COVER |

2. Remove the differential cover (2).

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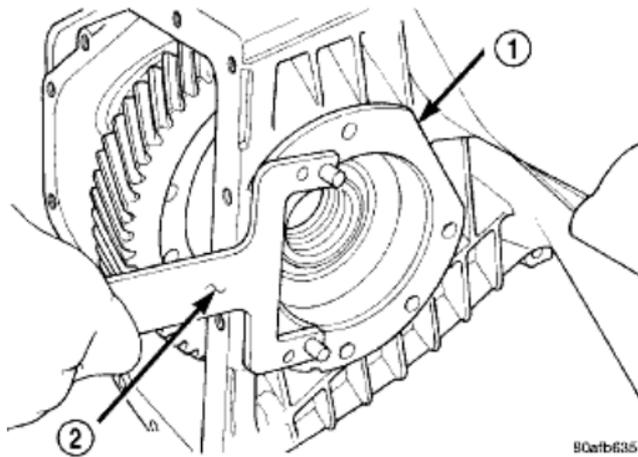


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Fig. 316: Removing/Installing Differential Bearing Retainer Bolts
Courtesy of CHRYSLER LLC

1 - DIFFERENTIAL RETAINER BOLTS

3. Remove the differential bearing retainer bolts (1).



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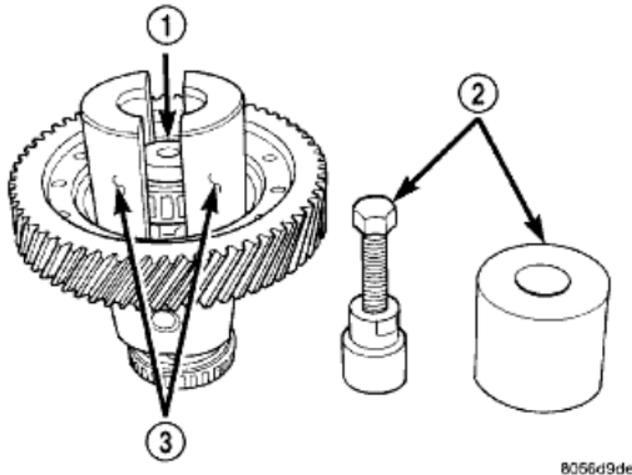
Fig. 317: Removing Differential Bearing Retainer
Courtesy of CHRYSLER LLC

1 - DIFFERENTIAL BEARING RETAINER
2 - BEARING PULLER L-4435

4. Remove the differential bearing retainer (1).

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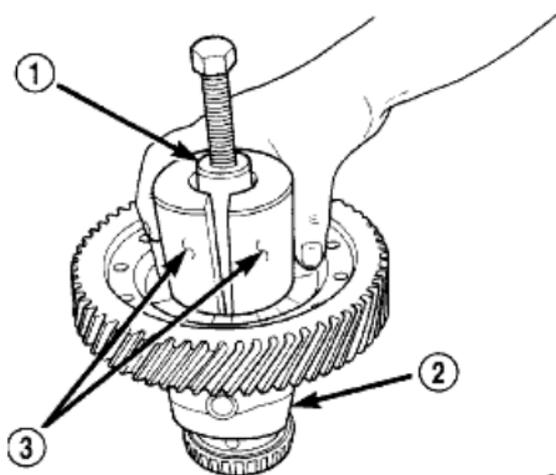
Fig. 318: Removing Differential Bearing Cone On Extension Housing Side
Courtesy of CHRYSLER LLC

1 - THRUST BUTTON L-4539-2
2 - PULLER SET 5048
3 - COLLETS 5048-4

- Using a plastic hammer, remove extension housing/adaptor plate on the right side of the transaxle.

WARNING: Hold onto differential assembly to prevent it from rolling out of housing.

- Use Puller Set 5048 (2), 5048-3 Collets (3), and L-4539-2 Button (1) to remove the differential bearing cone on the extension housing side.



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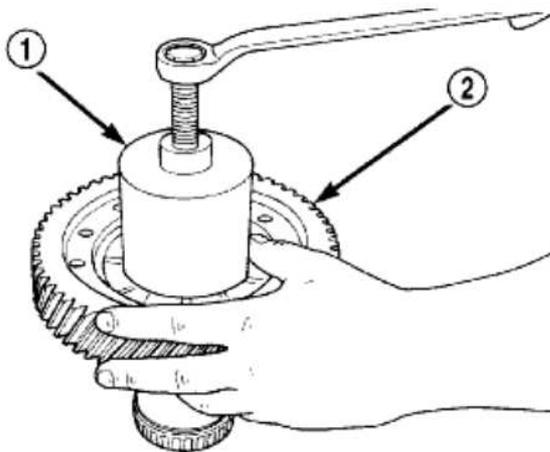
Fig. 319: Installing Puller Set 5048, 5048-4 Collets, & L-4539-2 Button To Differential Bearing Cone On Bearing Retainer Side
Courtesy of CHRYSLER LLC

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- | |
|---------------------|
| 1 - PULLER SET 5048 |
| 2 - DIFFERENTIAL |
| 3 - COLLETS 5048-4 |

7. Install Puller Set 5048 (1), 5048-4 Collets (3), and L-4539-2 Button to the differential bearing cone on the bearing retainer side.

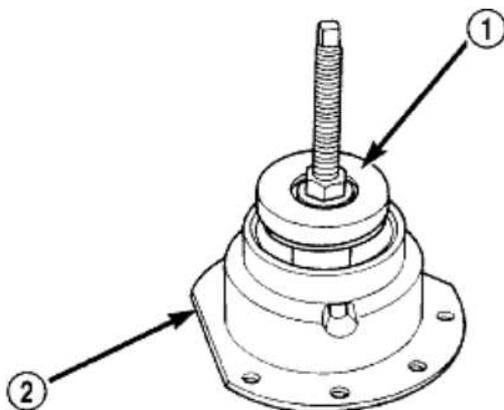


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Fig. 320: Removing Differential Bearing Cone On Bearing Retainer Side
Courtesy of CHRYSLER LLC

- | |
|---------------------|
| 1 - PULLER SET 5048 |
| 2 - RING GEAR |

8. Remove the differential bearing cone on the bearing retainer side.



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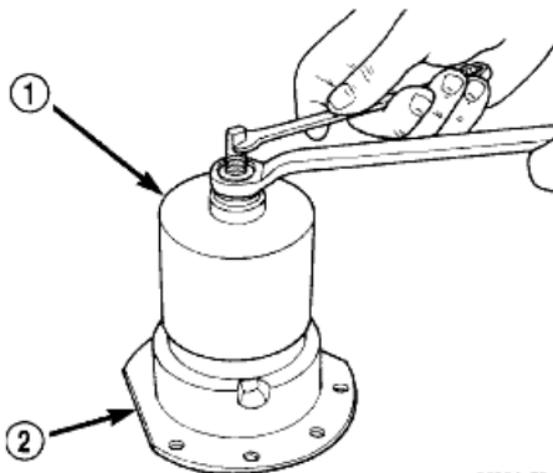
Fig. 321: Installing Special Jaw Set L-4518 & Remover 6062A Onto Differential Bearing Race
Courtesy of CHRYSLER LLC

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- | |
|-----------------------------------|
| 1 - REMOVER 6062A |
| 2 - DIFFERENTIAL BEARING RETAINER |

9. Install Special Jaw Set L-4518 and Remover 6062A (1), onto the differential bearing race from the extension housing.

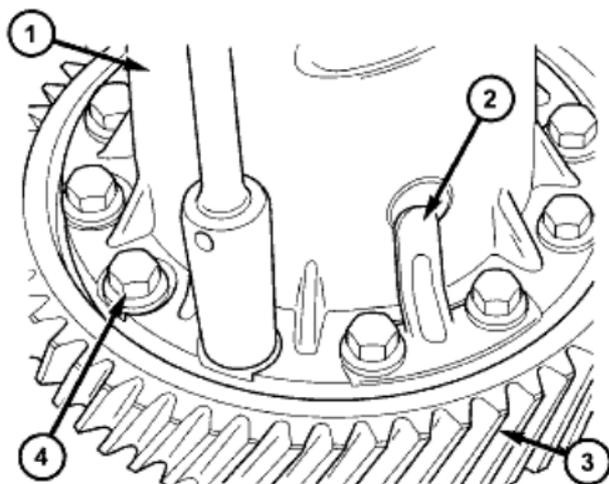


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Fig. 322: Removing Differential Bearing Race From Bearing Retainer
Courtesy of CHRYSLER LLC

- | |
|-----------------------------------|
| 1 - REMOVER 6062A |
| 2 - DIFFERENTIAL BEARING RETAINER |

10. Remove the differential bearing race from the bearing retainer (2).



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Fig. 323: Identifying Ring Gear-To-Differential Case Bolts & Floating Pinion Shaft Retainers

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Courtesy of CHRYSLER LLC

1 - DIFFERENTIAL CASE
2 - PINION SHAFT RETAINER
3 - RING GEAR
4 - RING GEAR-TO-CASE BOLT

11. Remove ring gear-to-differential case bolts (4) and floating pinion shaft retainers (2).

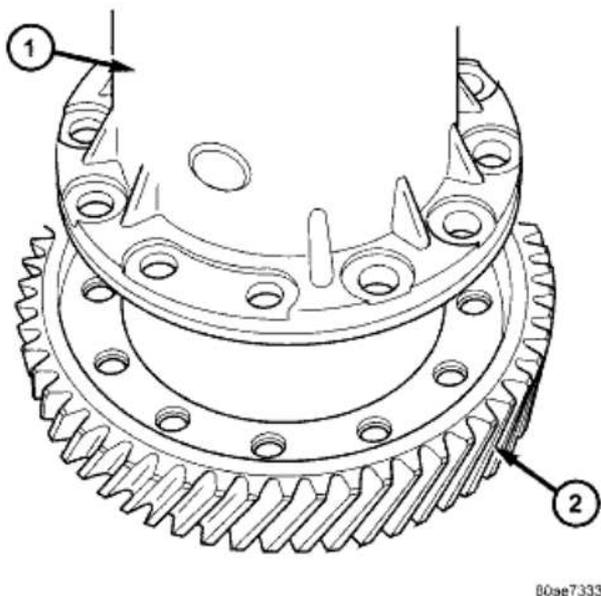


Fig. 324: Identifying Ring Gear & Differential Case
Courtesy of CHRYSLER LLC

1 - DIFFERENTIAL CASE
2 - RING GEAR

12. Separate ring gear (2) from differential case (1).

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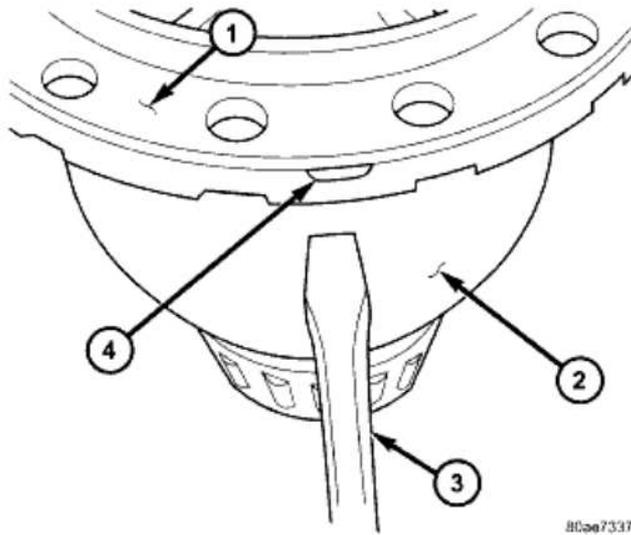


Fig. 325: Identifying Differential Cover At Case
Courtesy of CHRYSLER LLC

- 1 - DIFFERENTIAL SUPPORT
- 2 - DIFFERENTIAL CASE
- 3 - SCREWDRIVER
- 4 - RELIEF (2 @ 180° APART)

13. Separate differential cover (1) from case (2) using suitable screwdrivers at position.

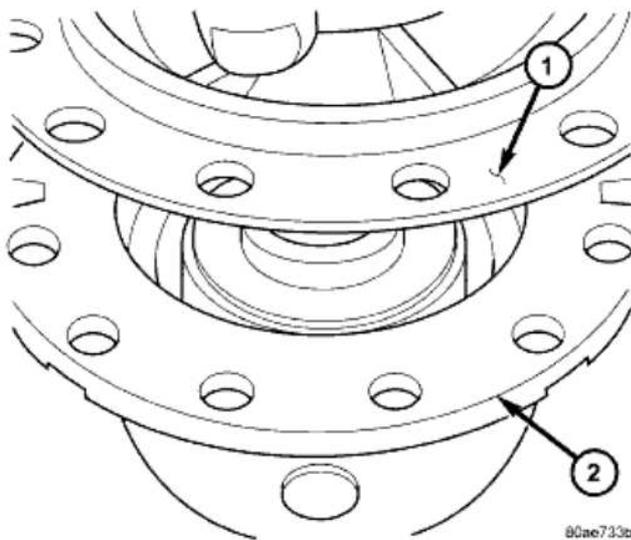


Fig. 326: Identifying Differential Support
Courtesy of CHRYSLER LLC

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- 1 - DIFFERENTIAL SUPPORT
- 2 - DIFFERENTIAL CASE

14. Lift support (1) from case (2) .

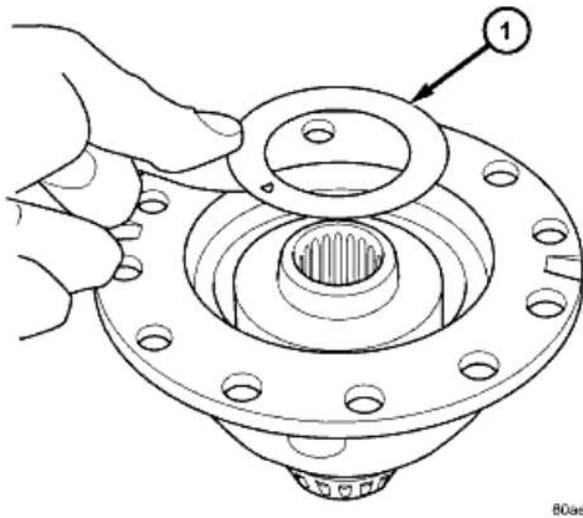
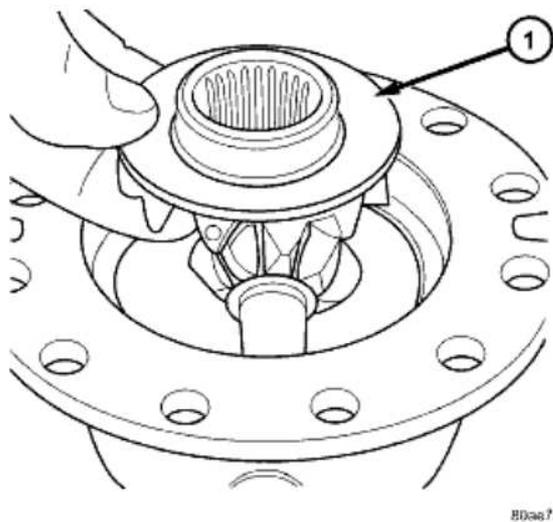


Fig. 327: Removing/Installing Side Gear Thrust Washer
Courtesy of CHRYSLER LLC

- 1 - SIDE GEAR THRUST WASHER

15. Remove side gear thrust washer (1) .



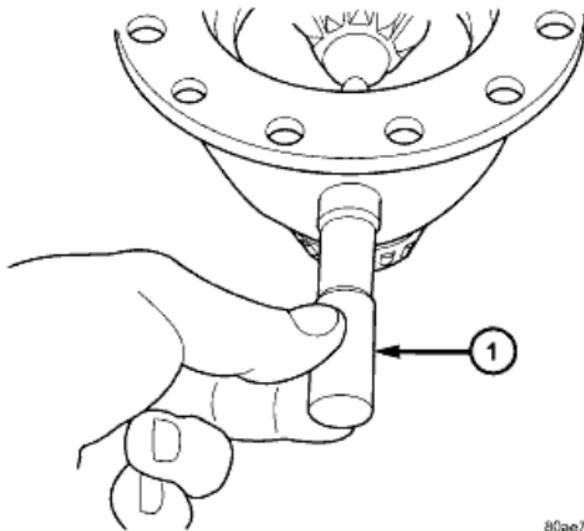
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Fig. 328: Removing/Installing Side Gear
Courtesy of CHRYSLER LLC

1 - DIFFERENTIAL SIDE GEAR

16. Remove side gear (1) .



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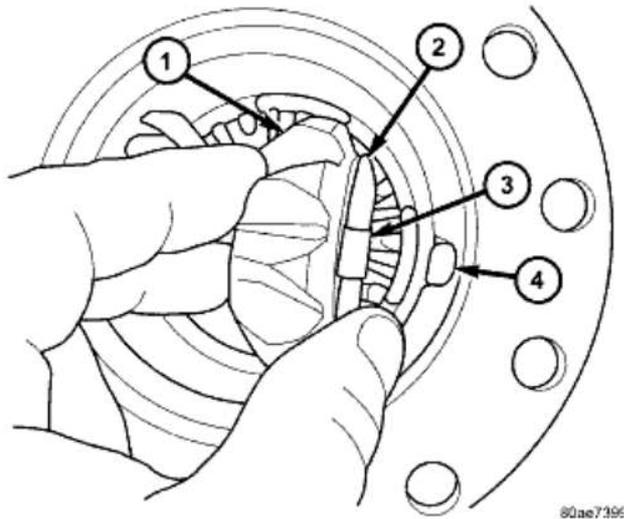
Fig. 329: Removing/Installing Pinion Shaft
Courtesy of CHRYSLER LLC

1 - PINION SHAFT

17. Remove pinion shaft (1) .

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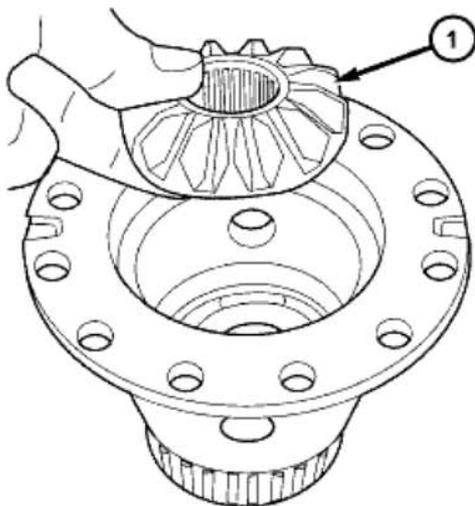


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Fig. 330: Removing/Installing Pinion Gears & Tabbed Washers
Courtesy of CHRYSLER LLC

- 1 - PINION GEAR
- 2 - TABBED WASHER
- 3 - LOCATING TAB
- 4 - NOTCH

18. Remove pinion gears (1) and tabbed washers (2) .



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Fig. 331: Removing/Installing Differential Side Gear
Courtesy of CHRYSLER LLC

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1 - DIFFERENTIAL SIDE GEAR

19. Remove differential side gear (1) .

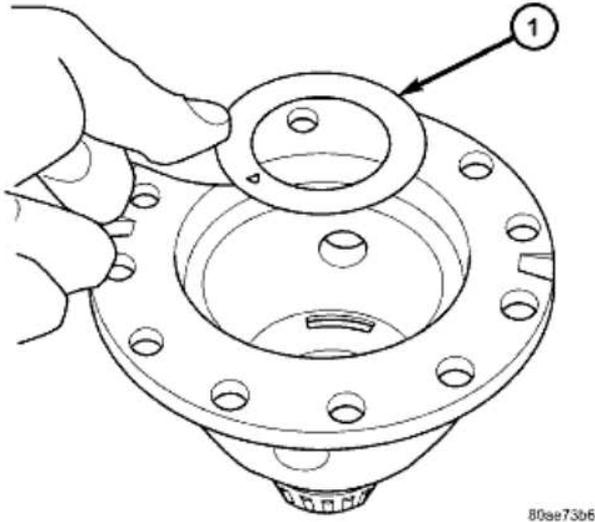


Fig. 332: Removing/Installing Side Gear Thrust Washer
Courtesy of CHRYSLER LLC

1 - THRUST WASHER

20. Remove side gear thrust washer (1) .
21. Inspect all components for excessive wear.

ASSEMBLY**ASSEMBLY**

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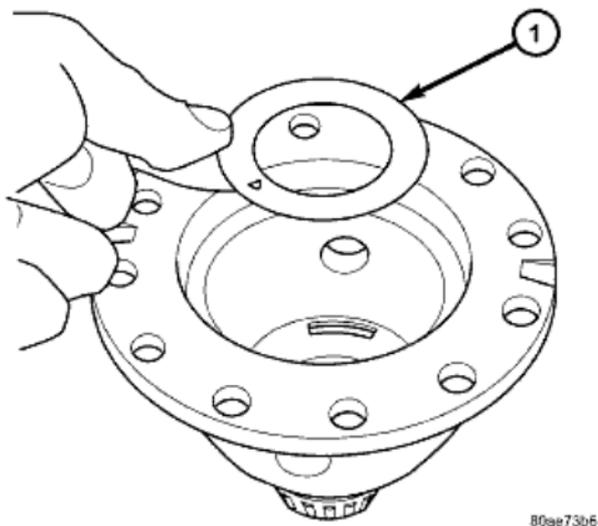


Fig. 333: Identifying Thrust Washer
Courtesy of CHRYSLER LLC

1 - THRUST WASHER

NOTE: The differential is serviced as an assembly. Differential service is limited to bearing cups and cones. Any other differential component failure must be remedied by differential assembly and transfer shaft replacement.

1. Install side gear thrust washer to differential case.

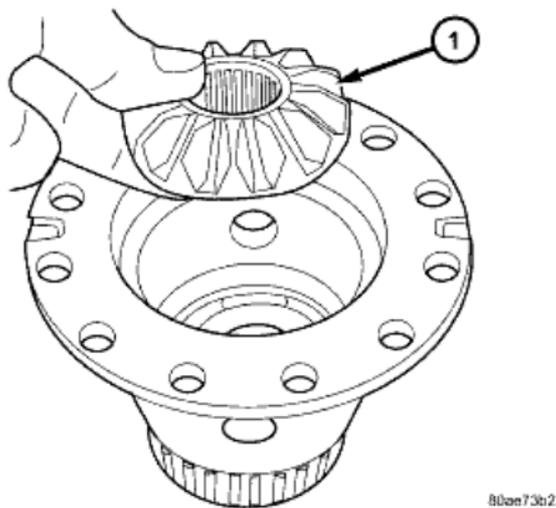


Fig. 334: Identifying Side Gear

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Courtesy of CHRYSLER LLC

1 - DIFFERENTIAL SIDE GEAR

2. Install side gear to differential case.

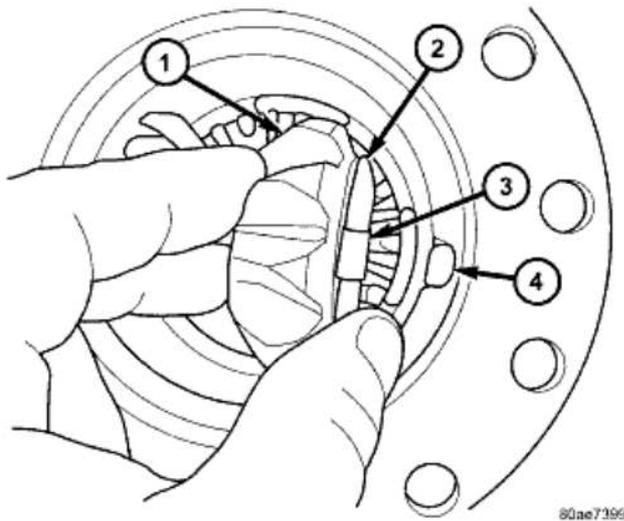


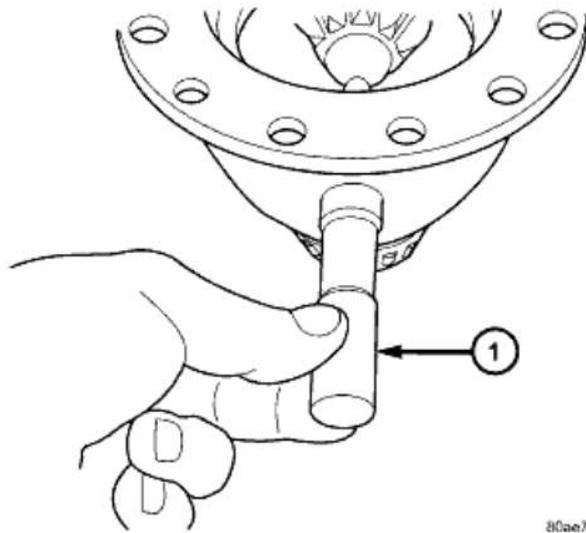
Fig. 335: Identifying Pinion Gear & Washer
Courtesy of CHRYSLER LLC

1 - PINION GEAR
2 - TABBED WASHER
3 - LOCATING TAB
4 - NOTCH

3. Install both pinion gears and washers to case, while orientating washer tabs to notch in case.

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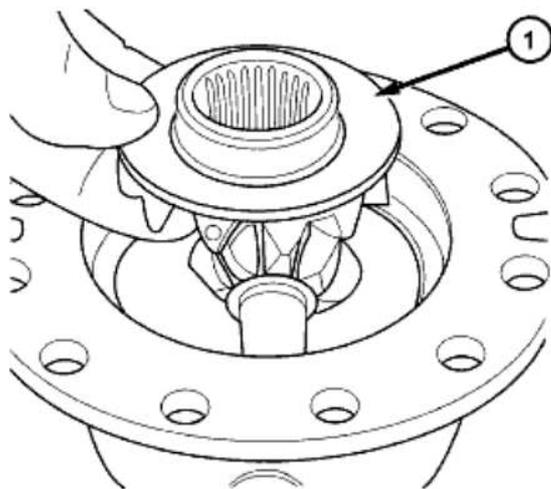


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Fig. 336: Identifying Pinion Shaft
Courtesy of CHRYSLER LLC

1 - PINION SHAFT

4. Install pinion shaft.



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Fig. 337: Identifying Side Gear
Courtesy of CHRYSLER LLC

1 - DIFFERENTIAL SIDE GEAR

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5. Install side gear to case.

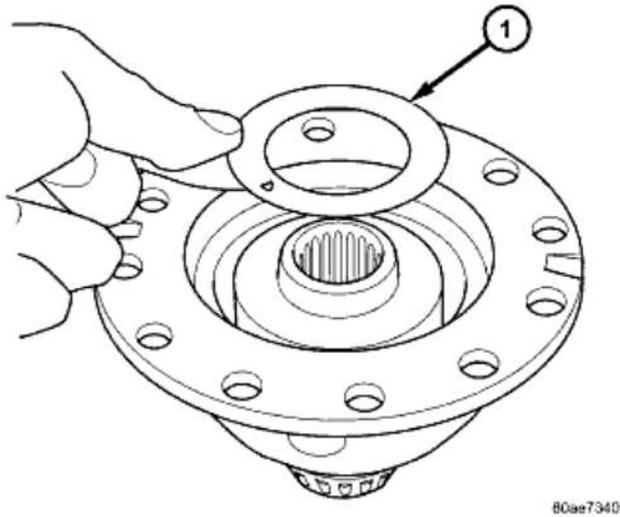


Fig. 338: Identifying Side Gear Thrust Washer
Courtesy of CHRYSLER LLC

1 - SIDE GEAR THRUST WASHER

6. Install side gear thrust washer to case.

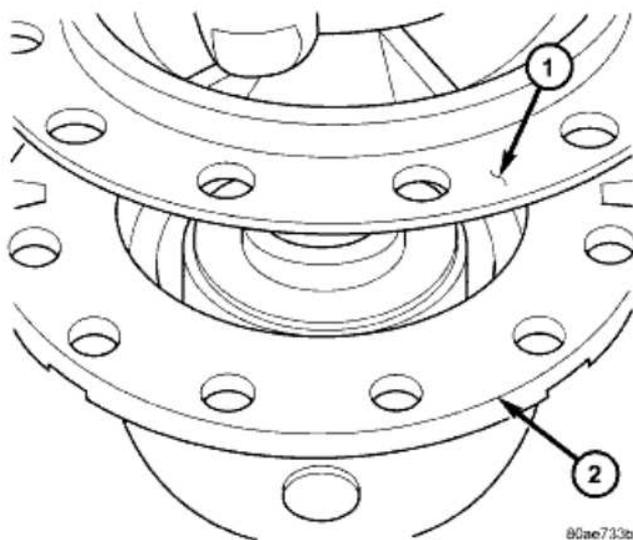


Fig. 339: Identifying Differential Support
Courtesy of CHRYSLER LLC

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- 1 - DIFFERENTIAL SUPPORT
- 2 - DIFFERENTIAL CASE

7. Install differential support into position, while aligning through-holes.

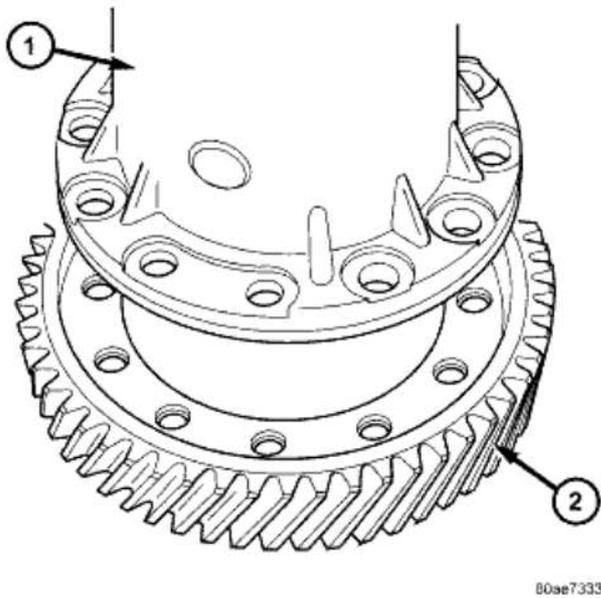


Fig. 340: Identifying Differential Ring Gear
Courtesy of CHRYSLER LLC

- 1 - DIFFERENTIAL CASE
- 2 - RING GEAR

8. Install differential ring gear to case.

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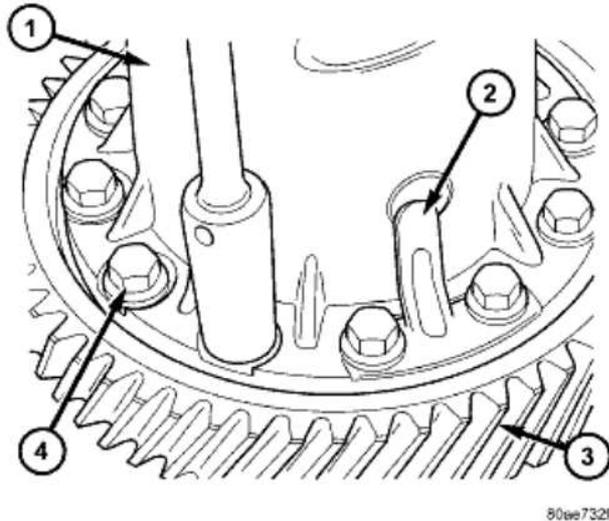


Fig. 341: Identifying Ring Gear-To-Case Bolts & Pinion Shaft Retainers
Courtesy of CHRYSLER LLC

- | |
|----------------------------|
| 1 - DIFFERENTIAL CASE |
| 2 - PINION SHAFT RETAINER |
| 3 - RING GEAR |
| 4 - RING GEAR-TO-CASE BOLT |

9. Install ring gear-to-case bolts, with pinion shaft retainers, and torque bolts to 95 N.m (70 ft. lbs.).

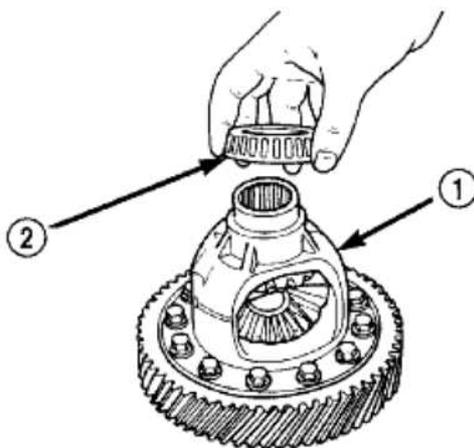


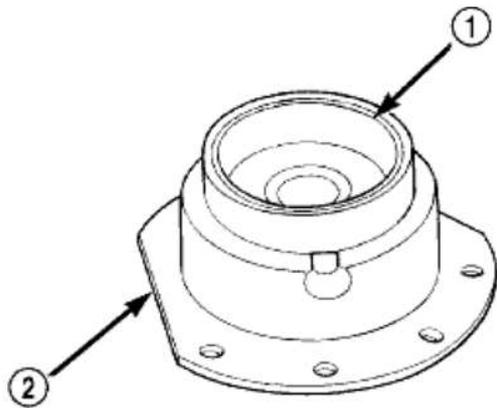
Fig. 342: Installing Differential Bearing To Differential (Extension Housing Side)
Courtesy of CHRYSLER LLC

- | |
|---------------------------|
| 1 - DIFFERENTIAL ASSEMBLY |
| 2 - DIFFERENTIAL BEARING |

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10. Using Miller Special Tool L-4410, and C-4171, install differential bearing to differential (extension housing side).

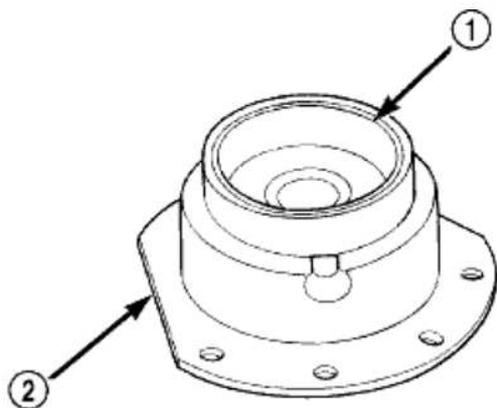


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Fig. 343: Removing/Installing Differential Bearing & Bearing Race
Courtesy of CHRYSLER LLC

- | |
|-----------------------------------|
| 1 - DIFFERENTIAL BEARING CUP |
| 2 - DIFFERENTIAL BEARING RETAINER |

11. Using Miller Special Tool 5052 and C-4171, install differential bearing to differential (bearing retainer side).
12. Using Miller Special Tool 6061 and C-4171, install differential bearing race to bearing retainer.



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Fig. 344: Removing/Installing Differential Bearing & Bearing Race
Courtesy of CHRYSLER LLC

- | |
|-----------------------------------|
| 1 - DIFFERENTIAL BEARING CUP |
| 2 - DIFFERENTIAL BEARING RETAINER |

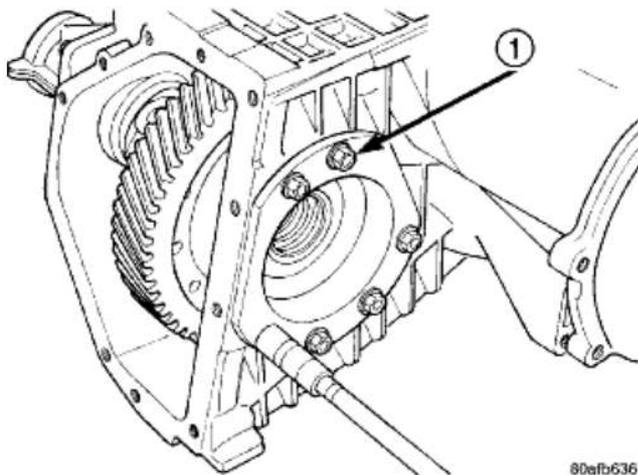
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13. Using Miller Special Tool L-4520 and C-4171, install differential bearing to extension housing.

NOTE: Use Mopar® Silicone Rubber Adhesive Sealant, or equivalent, on retainer and extension housing/adapter plate to seal to case.

14. Install differential assembly into transaxle case. Install differential bearing retainer.

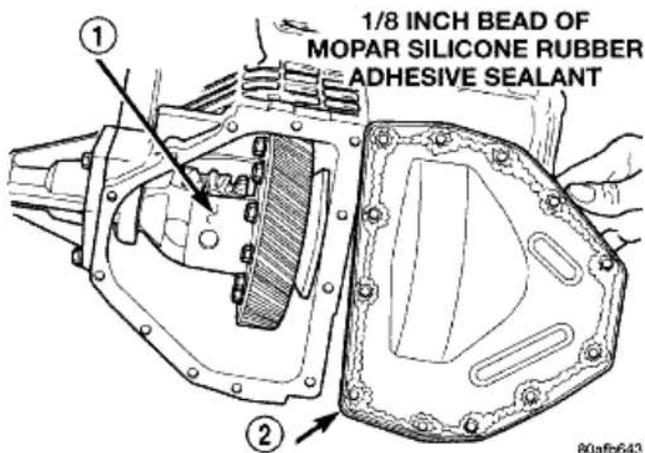


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Fig. 345: Removing/Installing Differential Bearing Retainer Bolts
Courtesy of CHRYSLER LLC

1 - DIFFERENTIAL RETAINER BOLTS

15. Torque retainer-to-case bolts to 28 N.m (21 ft. lbs.).



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Fig. 346: Identifying Differential Cover
Courtesy of CHRYSLER LLC

1 - DIFFERENTIAL ASSEMBLY

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2 - DIFFERENTIAL COVER

16. Apply a bead of Mopar® Silicone Rubber Adhesive Sealant to extension housing/adaptor plate and install into position. Install and torque bolts to 28 N.m (21 ft. lbs.).
17. Measure and adjust differential bearing preload. See **Transmission and Transfer Case/Automatic - 41TE/DRIVE, Final - Adjustments.**
18. Apply a bead of Mopar® Silicone Rubber Adhesive Sealant to differential cover and install to case.

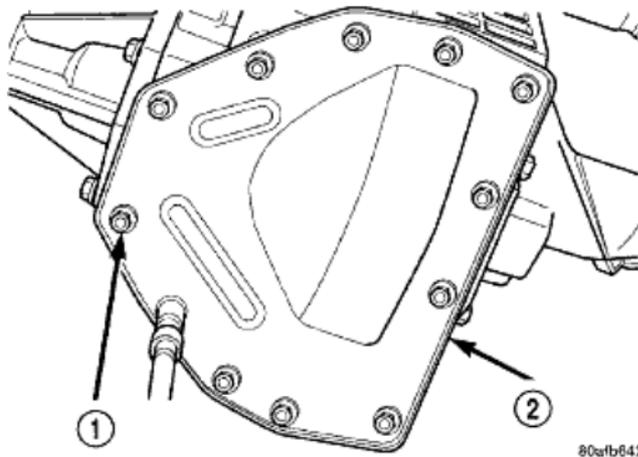


Fig. 347: Removing/Installing Differential Cover Bolts
Courtesy of CHRYSLER LLC

1 - DIFFERENTIAL COVER BOLTS
2 - DIFFERENTIAL COVER

19. Install and torque cover-to-case bolts to 19 N.m (165 in. lbs.).

ADJUSTMENTS

ADJUSTMENTS

NOTE: Perform all differential bearing preload measurements with the transfer shaft and gear removed.

DIFFERENTIAL BEARING PRELOAD ADJUSTMENT USING EXISTING SHIM

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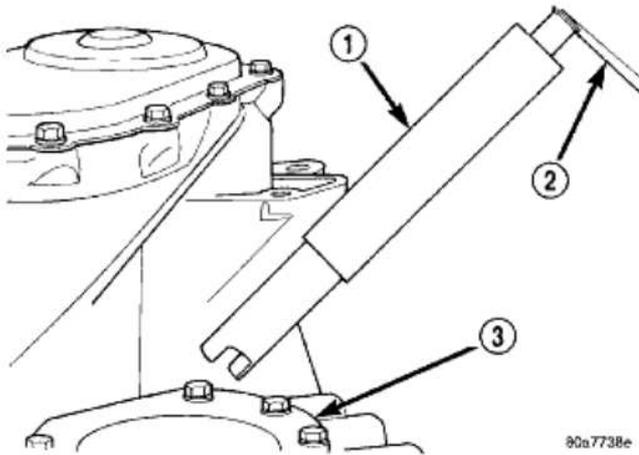


Fig. 348: Installing Tool L-4436-A Into Differential & Onto Pinion Mate Shaft
Courtesy of CHRYSLER LLC

- | |
|-----------------------------------|
| 1 - DIFFERENTIAL TOOL L-4436-A |
| 2 - TORQUE WRENCH |
| 3 - DIFFERENTIAL BEARING RETAINER |

1. Position the transaxle assembly vertically on the support stand, differential bearing retainer side up.
2. Install Tool L-4436-A into the differential and onto the pinion mate shaft .

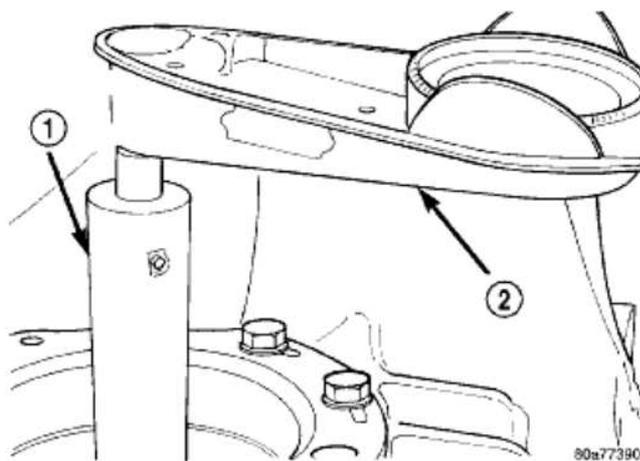


Fig. 349: Measuring Turning Torque Of Differential
Courtesy of CHRYSLER LLC

- | |
|--------------------------------|
| 1 - DIFFERENTIAL TOOL L-4436-A |
| 2 - TORQUE WRENCH |

3. Rotate the differential at least one full revolution to ensure the tapered roller bearings are fully seated.

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4. Using Tool L-4436-A and an inch-pound torque wrench, check the turning torque of the differential . **The turning torque should be between 5 and 18 inch-pounds.**
5. If the turning torque is within specifications, remove tools. Setup is complete.
6. If turning torque is not within specifications, proceed with the following steps:
 - a. Remove differential bearing retainer from the transaxle case.
 - b. Remove the bearing cup from the differential bearing retainer using Tool 6062A.
 - c. Remove the existing shim from under the cup.
 - d. Measure the existing shim.
 - e. If the turning torque was too high when measured, install a 0.05 mm (0.002 inch) thinner shim. If the turning torque is was too low, install a 0.05 mm (0.002 inch) thicker shim. Repeat until 5-18 inch-pounds turning torque is obtained.

Oil Baffle is not required to be installed when making shim selection.

 - f. Install the proper shim under the bearing cup. Make sure the oil baffle is installed properly in the bearing retainer, below the bearing shim and cup.
 - g. Install the differential bearing retainer using Tool 5052 and C-4171. Seal the retainer to the housing with MOPAR® Silicone Rubber Adhesive Sealant and torque bolts to 28 N.m (250 in. lbs.).
7. Using Tool L-4436-A and an inch-pound torque wrench, recheck the turning torque of the differential. **The turning torque should be within 5-18 inch-pounds.**

Shim thickness need be determined only if any of the following parts are replaced:

- Transaxle case
- Differential carrier
- Differential bearing retainer
- Extension housing
- Differential bearing cups and cones

DIFFERENTIAL BEARING SHIM CHART

PART NUMBER	SHIM THICKNESS	
	MM	INCH
4659257	0.980	0.0386
4659258	1.02	0.0402
4659259	1.06	0.0418
4659260	1.10	0.0434
4659261	1.14	0.0449
4659262	1.18	0.0465
4659263	1.22	0.0481
4659264	1.26	0.0497
4659265	1.30	0.0512

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4659266	1.34	0.0528
4659267	1.38	0.0544
4659268	1.42	0.0560
4659269	1.46	0.0575
4659270	1.50	0.0591
4659271	1.54	0.0607
4659272	1.58	0.0623
4659273	1.62	0.0638
4659274	1.66	0.0654
4659275	1.70	0.0670
4659283	2.02	0.0796
4659284	2.06	0.0812

PRELOAD ADJUSTMENT W/O SHIM

1. Remove the bearing cup from the differential bearing retainer using Miller special Tool 6062A.
2. Remove existing shim from under bearing cup.
3. Reinstall the bearing cup into the retainer using Miller Special Tool 6061, and C-4171.

NOTE: Oil baffle is not required when making the shim calculation.

4. Install the bearing retainer into the case. Torque bolts to 28 N.m (250 in. lbs.).
5. Position the transaxle assembly vertically on the support stand and install Miller Special Tool L-4436-A into the bearing retainer.
6. Rotate the differential at least one full revolution to ensure the tapered roller bearings are fully seated.
7. Attach a dial indicator to the case and zero the dial. Place the tip on the end of Special Tool L-4436-A.
8. Place a large screwdriver to each side of the ring gear and lift. Check the dial indicator for the amount of end play.

CAUTION: Do not damage the transaxle case and/or differential retainer sealing surface.

9. Using the end play measurement that was determined, add 0.18mm (0.007 inch). This should give you between 5-18 inch pounds of bearing preload. Refer to **DIFFERENTIAL BEARING SHIM CHART** to determine which shim to use.
10. Remove the differential bearing retainer. Remove the bearing cup.
11. Install the oil baffle. Install the proper shim combination under the bearing cup.
12. Install the differential bearing retainer. Seal the retainer to the housing with Mopar® Silicone Rubber Adhesive Sealant. Torque bolts to 28 N.m (250 in. lbs.).
13. Using Miller Special Tool L-4436-A and an inch-pound torque wrench, check the turning torque of the differential. The turning torque should be between 5-18 inch-pounds.

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NOTE: If turning torque is too high install a 0.05mm (0.002 inch) thicker shim. If the turning torque is too low, install a 0.05mm (0.002 inch) thinner shim. Repeat until 5-18 inch-pounds of turning torque is obtained.

DRIVING CLUTCHES

DESCRIPTION

DESCRIPTION

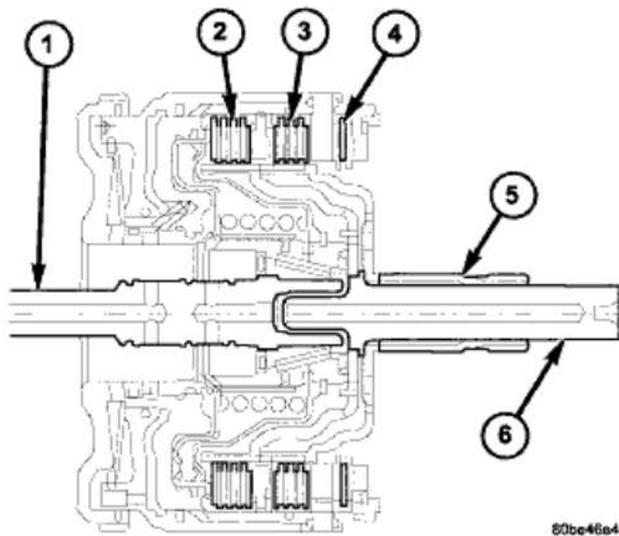


Fig. 350: Identifying Input Clutch Assembly

Courtesy of CHRYSLER LLC

1 - INPUT SHAFT
2 - UNDERDRIVE CLUTCH
3 - OVERDRIVE CLUTCH
4 - REVERSE CLUTCH
5 - OVERDRIVE SHAFT
6 - UNDERDRIVE SHAFT

Three hydraulically applied input clutches are used to drive planetary components. The underdrive, overdrive, and reverse clutches are considered input clutches and are contained within the input clutch assembly. The input clutch assembly also contains:

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- Input shaft
- Input hub
- Clutch retainer
- Underdrive piston
- Overdrive/reverse piston
- Overdrive hub
- Underdrive hub

OPERATION**OPERATION**

The three input clutches are responsible for driving different components of the planetary geartrain.

NOTE: Refer to **ELEMENTS IN USE AT EACH POSITION OF SELECTOR LEVER** for a collective view of which clutch elements are applied at each position of the selector lever.

UNDERDRIVE CLUTCH

The underdrive clutch is hydraulically applied in first, second, and third (direct) gears by pressurized fluid against the underdrive piston. When the underdrive clutch is applied, the underdrive hub drives the rear sun gear.

OVERDRIVE CLUTCH

The overdrive clutch is hydraulically applied in third (direct) and overdrive gears by pressurized fluid against the overdrive/reverse piston. When the overdrive clutch is applied, the overdrive hub drives the front planet carrier.

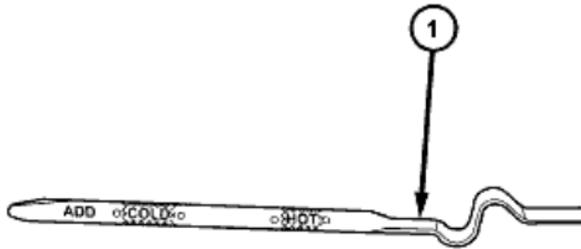
REVERSE CLUTCH

The reverse clutch is hydraulically applied in reverse gear only by pressurized fluid against the overdrive/reverse piston. When the reverse clutch is applied, the front sun gear assembly is driven.

FLUID**STANDARD PROCEDURE****FLUID LEVEL AND CONDITION CHECK****FLUID LEVEL CHECK**

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Fig. 351: Identifying Fluid Level Indicator
Courtesy of CHRYSLER LLC

1 - FLUID LEVEL INDICATOR

NOTE: Only transmission fluid of the type labeled Mopar ATF+4 (Automatic Transmission Fluid) should be used in this transaxle.

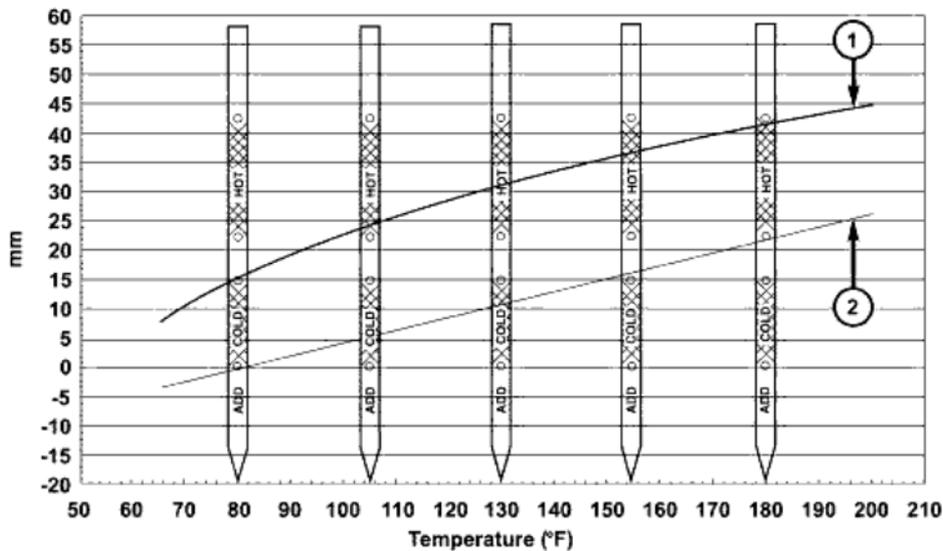
The transmission sump has a fluid level indicator (dipstick) to check oil similar to most automatic transmissions. It is located on the left side of the engine. Be sure to wipe all dirt from dipstick handle before removing.

The torque converter fills in both the P Park and N Neutral positions. Place the selector lever in P Park to be sure that the fluid level check is accurate. **The engine should be running at idle speed for at least one minute, with the vehicle on level ground.** At normal operating temperature 82° C (180° F), the fluid level is correct if it is in the HOT region on the oil level indicator (1). The fluid level should be within the COLD region of the dipstick at 27° C (80° F) fluid temperature.

FLUID LEVEL CHECK USING DRB

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Fig. 352: Transmission Fluid Temperature Chart
Courtesy of CHRYSLER LLC

- 1 - MAX. LEVEL
- 2 - MIN. LEVEL

NOTE: Engine and Transaxle should be at normal operating temperature before performing this procedure.

1. Start engine and apply parking brake.
2. Hook up DRB scan tool and select transmission.
3. Select sensors.
4. Read the transmission temperature value.
5. Compare the fluid temperature value with the fluid temperature chart (1,2) .
6. Adjust transmission fluid level shown on the indicator according to **Fig. 352**.
7. Check transmission for leaks.

Low fluid level can cause a variety of conditions because it allows the pump to take in air along with the fluid. As in any hydraulic system, air bubbles make the fluid spongy, therefore, pressures will be low and build up slowly.

Improper filling can also raise the fluid level too high. When the transaxle has too much fluid, the gears churn up foam and cause the same conditions which occur with a low fluid level.

In either case, air bubbles can cause overheating and/or fluid oxidation, and varnishing. This can interfere with

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normal valve, clutch, and accumulator operation. Foaming can also result in fluid escaping from the transaxle vent where it may be mistaken for a leak.

FLUID CONDITION

Along with fluid level, it is important to check the condition of the fluid. When the fluid smells burned, and is contaminated with metal or friction material particles, a complete transaxle recondition is probably required. Be sure to examine the fluid on the dipstick closely. If there is any doubt about its condition, drain out a sample for a double check.

Mopar® ATF+4 (Automatic Transmission Fluid), when new, is red in color. The ATF is dyed red so it can be identified from other fluids used in the vehicle such as engine oil or antifreeze. The red color is not permanent and is not an indicator of fluid condition. As the vehicle is driven, the ATF will begin to look darker in color and may eventually become brown. **This is normal.** ATF+4 also has a unique odor that may change with age. Consequently, **odor and color cannot be used to indicate the fluid condition or the need for a fluid change.**

After the fluid has been checked, seat the dipstick fully to seal out water and dirt.

FLUID AND FILTER SERVICE

FLUID/FILTER SERVICE (RECOMMENDED)

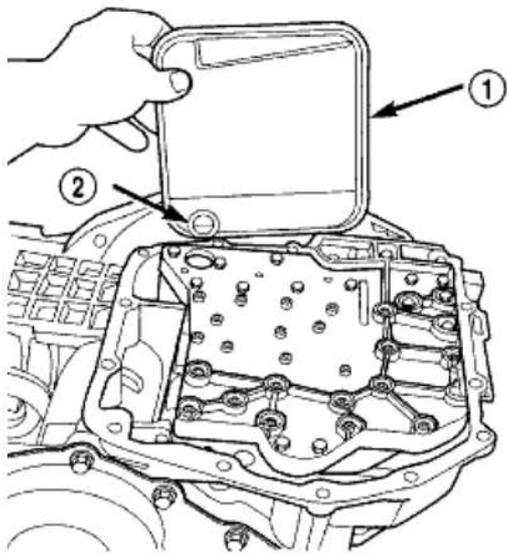


Fig. 353: Identifying Filter & O-Ring
Courtesy of CHRYSLER LLC

- | |
|----------------|
| 1 - OIL FILTER |
| 2 - O-RING |

NOTE: Refer to MAINTENANCE SCHEDULES for the recommended maintenance (fluid/filter change) intervals for this transaxle.

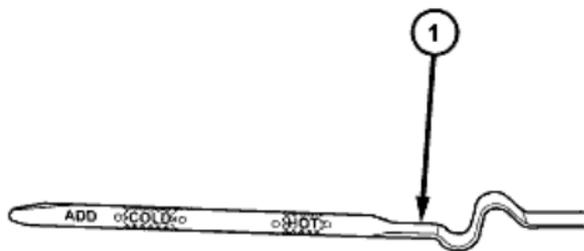
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NOTE: Only fluids of the type labeled Mopar® ATF+4 should be used. A filter change should be made at the time of the transmission oil change. The magnet (on the inside of the oil pan) should also be cleaned with a clean, dry cloth.

NOTE: If the transaxle is disassembled for any reason, the fluid and filter should be changed.

1. Raise vehicle on a hoist. Refer to **HOISTING** for proper procedures. Place a drain container with a large opening, under transaxle oil pan.
2. Remove both engine mount-to-engine crossmember cradle nuts. Using suitable screw jack and wood block, raise engine and transmission slightly to facilitate transaxle oil pan removal and installation.
3. Loosen pan bolts and tap the pan at one corner to break it loose allowing fluid to drain, then remove the oil pan.
4. Install a new filter and o-ring on bottom of the valve body .



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Fig. 354: Identifying Fluid Level Indicator
Courtesy of CHRYSLER LLC

1 - FLUID LEVEL INDICATOR

5. Clean the oil pan and magnet. Reinstall pan using new Mopar Silicone Adhesive sealant. Tighten oil pan bolts to 19 N.m (165 in. lbs.).
6. Pour four Quarts of Mopar® ATF+4 through the dipstick opening.
7. Start engine and allow to idle for at least one minute. Then, with parking and service brakes applied, move selector lever momentarily to each position, ending in the park or neutral position.
8. Check the transaxle fluid level and add an appropriate amount to bring the transaxle fluid level to 3mm (1/8 in.) below the lowest mark on the dipstick .
9. Recheck the fluid level after the transaxle has reached normal operating temperature (180°F.[82°C]). Refer to **FLUID LEVEL AND CONDITION CHECK** for the proper fluid fill procedure.
10. To prevent dirt from entering transaxle, make certain that dipstick is fully seated into the dipstick

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opening.

DIPSTICK TUBE FLUID SUCTION METHOD (ALTERNATIVE)

1. When performing the fluid suction method, make sure the transaxle is at full operating temperature.
2. To perform the dipstick tube fluid suction method, use a suitable fluid suction device (Vacula™ or equivalent).
3. Insert the fluid suction line into the dipstick tube.

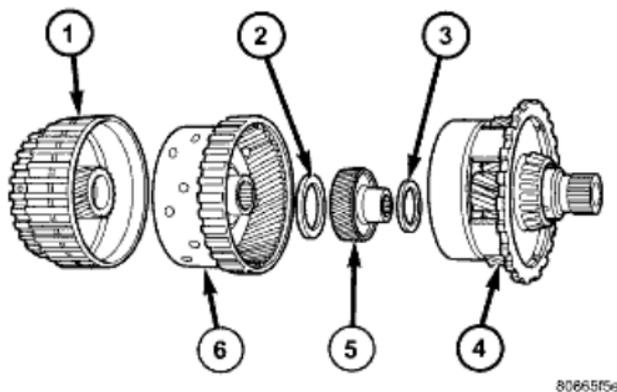
NOTE: Verify that the suction line is inserted to the lowest point of the transaxle oil pan. This will ensure complete evacuation of the fluid in the pan.

4. Follow the manufacturers recommended procedure and evacuate the fluid from the transaxle.
5. Remove the suction line from the dipstick tube.
6. Pour four Quarts of Mopar® ATF+4 through the dipstick opening.
7. Start engine and allow to idle for at least one minute. Then, with parking and service brakes applied, move selector lever momentarily to each position, ending in the park or neutral position.
8. Check the transaxle fluid level and add an appropriate amount to bring the transaxle fluid level to 3mm (1/8 in.) below the lowest mark on the dipstick .
9. Recheck the fluid level after the transaxle has reached normal operating temperature (180°F.[82°C]). See **FLUID LEVEL CHECK**.
10. To prevent dirt from entering transaxle, make certain that dipstick is fully seated into the dipstick opening.

GEARTRAIN, PLANETARY

DESCRIPTION

DESCRIPTION



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Fig. 355: Identifying Planetary Geartrain Components
Courtesy of CHRYSLER LLC

1 - FRONT SUN GEAR ASSEMBLY
2 - #6 THRUST BEARING
3 - #7 THRUST BEARING
4 - REAR CARRIER/FRONT ANNULUS ASSEMBLY
5 - REAR SUN GEAR
6 - FRONT CARRIER/REAR ANNULUS ASSEMBLY

The planetary geartrain is located between the input clutch assembly and the rear of the transaxle case. The planetary geartrain consists of two sun gears (1,5), two planetary carriers, two annulus (ring) gears (4,6), and one output shaft.

OPERATION

OPERATION

The planetary geartrain utilizes two planetary gear sets that connect the transmission input shaft to the output shaft. Input and holding clutches drive or lock different planetary members to change output ratio or direction.

HOLDING CLUTCHES

DESCRIPTION

DESCRIPTION

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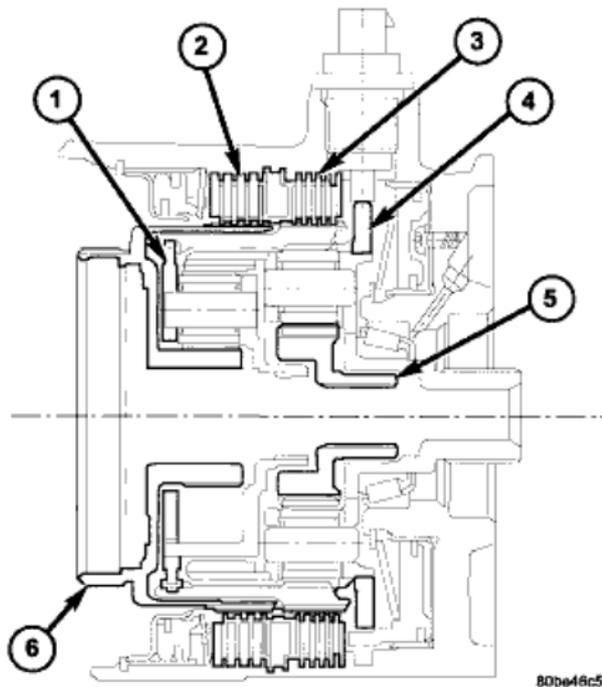


Fig. 356: Identifying 2/4 & Low/Reverse Clutches & Planetary Geartrain Components

Courtesy of CHRYSLER LLC

1 - FRONT PLANET CARRIER/REAR ANNULUS
2 - 2/4 CLUTCH
3 - L/R CLUTCH
4 - REAR PLANET CARRIER/FRONT ANNULUS
5 - REAR SUN GEAR
6 - FRONT SUN GEAR ASSEMBLY

Two hydraulically applied multi-disc clutches are used to hold planetary geartrain components (1,4) stationary while the input clutches drive others. The 2/4 (2) and Low/Reverse (3) clutches are considered holding clutches and are contained at the rear of the transaxle case.

OPERATION

OPERATION

NOTE: Refer to **ELEMENTS IN USE AT EACH POSITION OF SELECTOR LEVER** for a collective view of which clutch elements are applied at each position of the selector lever.

2/4 CLUTCH

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The 2/4 clutch is hydraulically applied in Second and Fourth gears by pressurized fluid against the 2/4 clutch piston. When the 2/4 clutch is applied, the front sun gear assembly is held or grounded to the transaxle case.

LOW/REVERSE CLUTCH

The Low/Reverse clutch is hydraulically applied in Park, Reverse, Neutral, and First gears by pressurized fluid against the Low/Reverse clutch piston. When the Low/Reverse clutch is applied, the front planet carrier/rear annulus assembly is held or grounded to the transaxle case.

KNOB, GEARSHIFT

REMOVAL

REMOVAL

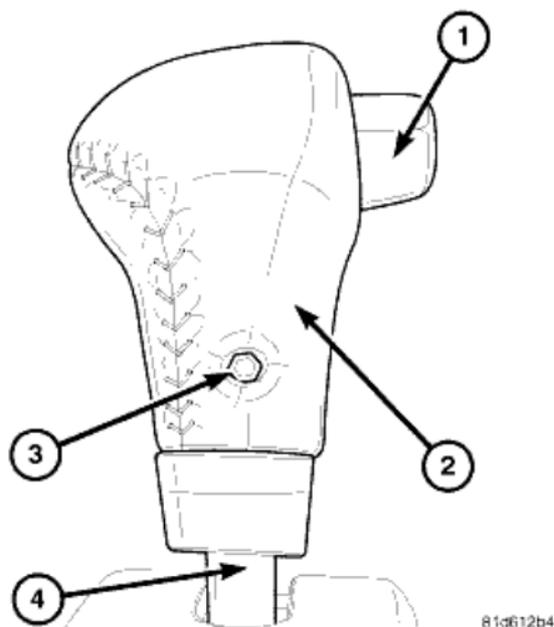


Fig. 357: Removing/Installing Gearshift Knob

Courtesy of CHRYSLER LLC

1. Loosen the set screw (3) on the shift knob (2).
2. Hold in the shift knob button (1).
3. Pull up on the shift knob (2) while holding the shift knob button (1) in.

INSTALLATION

INSTALLATION

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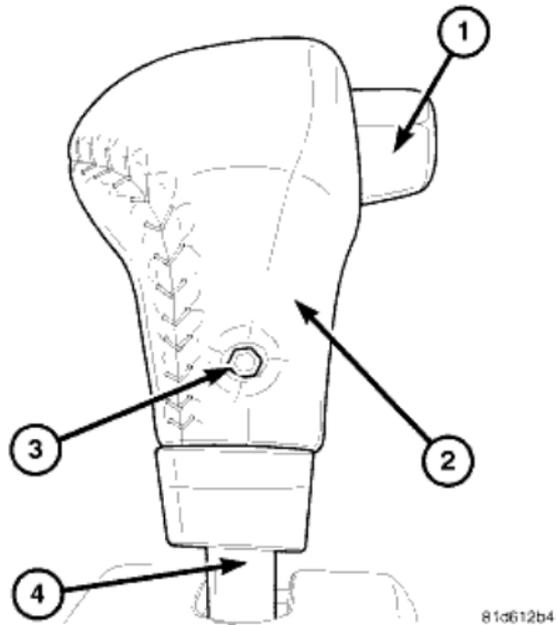


Fig. 358: Removing/Installing Gearshift Knob

Courtesy of CHRYSLER LLC

1. While holding the shift knob button (1) in install the shift knob (1) onto the shift mechanism shaft (4).
2. Tighten the set screw (3).

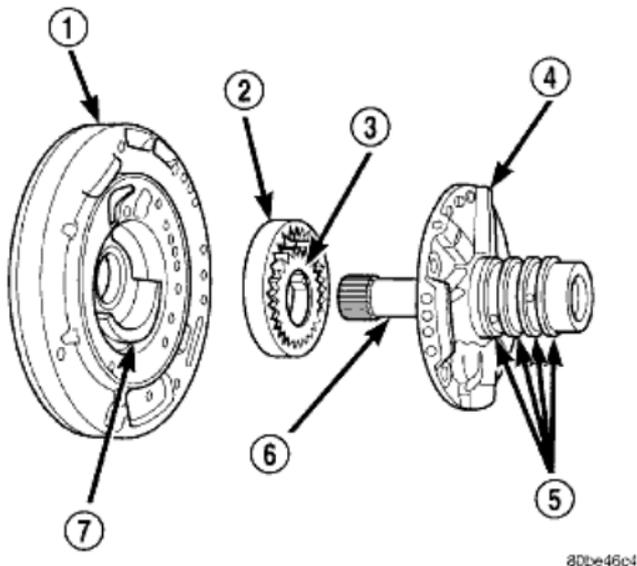
PUMP, TRANSMISSION OIL

DESCRIPTION

DESCRIPTION

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Fig. 359: Identifying Transmission Oil Pump Assembly
Courtesy of CHRYSLER LLC

- 1 - PUMP HOUSING
- 2 - OUTER PUMP GEAR
- 3 - INNER PUMP GEAR
- 4 - REACTION SHAFT SUPPORT
- 5 - SEAL RINGS (4)
- 6 - REACTION SHAFT
- 7 - CRESCENT

The oil pump is located in the pump housing inside the bell housing of the transmission case. The oil pump assembly consists of an inner (3) and outer (2) gear, a housing (1), and a cover that also serves as the reaction shaft support (6).

OPERATION

OPERATION

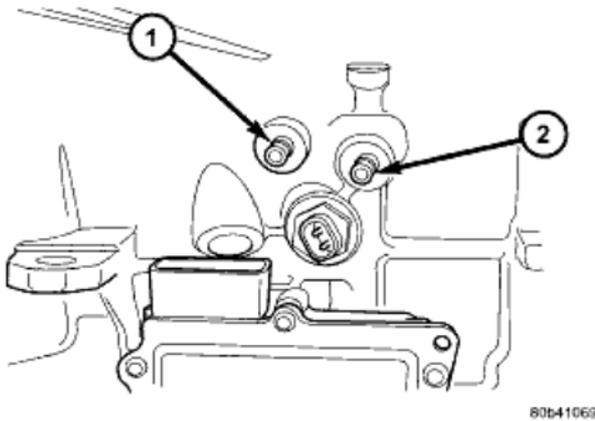
As the torque converter rotates, the converter hub rotates the inner and outer gears. As the gears rotate, the clearance between the gear teeth increases in the crescent area, and creates a suction at the inlet side of the pump. This suction draws fluid through the pump inlet from the oil pan. As the clearance between the gear teeth in the crescent area decreases, it forces pressurized fluid into the pump outlet and to the valve body.

STANDARD PROCEDURE

OIL PUMP VOLUME CHECK

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Fig. 360: Identifying Transmission Oil Cooler Ports
Courtesy of CHRYSLER LLC

- | |
|--|
| <p>1 - FROM COOLER
2 - TO COOLER</p> |
|--|

Measuring oil pump output volume will determine if sufficient flow to the transmission oil cooler exists, and whether or not an internal transmission failure is present.

Verify that transmission fluid is at the proper level. If adding fluid is necessary, fill to the proper level with Mopar® ATF+4 (Automatic Transmission Fluid-Type 9602). The following procedure is to check oil pump output volume:

1. Using hose cutters or a suitable blade, cut the "to cooler" line off flush with the cooler inlet fitting and place a collection container under the open line.

CAUTION: With the fluid set at the proper level, fluid collection should not exceed (1) quart or internal damage to the transmission may occur.

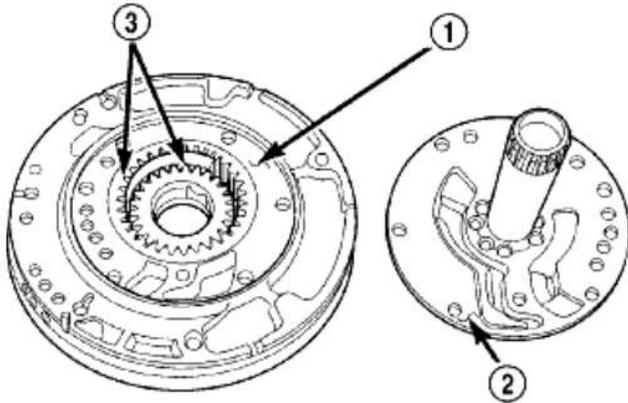
2. Start engine and run **at curb idle speed**, with the shift selector in neutral.
3. If one quart of ATF is collected in 20 seconds or less, flow is within acceptable limits. If fluid flow is intermittent or it takes more than 20 seconds to collect one quart of ATF, see **Transmission and Transfer Case/Automatic - 41TE - Diagnosis and Testing**.
4. Inspect the cooler hose for damage. Replace if necessary.
5. Re-connect the to cooler line to the transmission using a service splice kit. Refer to instructions included with the kit.
6. Refill the transaxle to proper level with Mopar® ATF+4 (Automatic Transmission Fluid-Type 9602).

DISASSEMBLY

DISASSEMBLY

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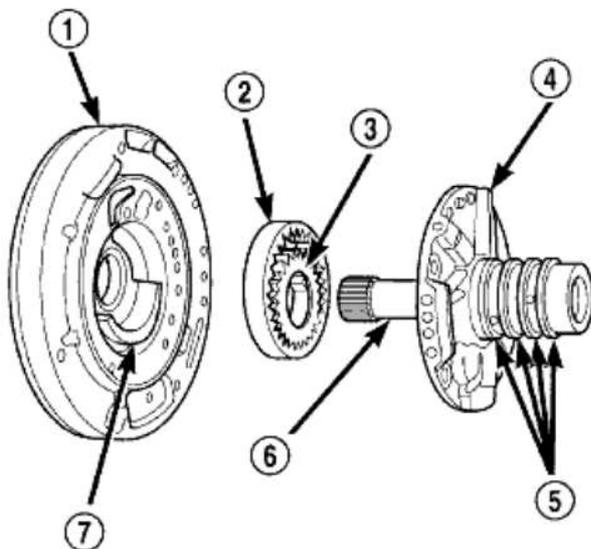


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Fig. 361: Removing/Installing Reaction Shaft Support
Courtesy of CHRYSLER LLC

- 1 - PUMP HOUSING
- 2 - REACTION SHAFT SUPPORT
- 3 - PUMP GEARS

1. Remove the reaction shaft support bolts.
2. Remove the reaction shaft support (2) from the pump housing (1).



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Fig. 362: Identifying Oil Pump Gears & Housing
Courtesy of CHRYSLER LLC

- 1 - PUMP HOUSING

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- 2 - OUTER PUMP GEAR
- 3 - INNER PUMP GEAR
- 4 - REACTION SHAFT SUPPORT
- 5 - SEAL RINGS (4)
- 6 - REACTION SHAFT
- 7 - CRESCENT

3. Remove the pump gears (2, 3) and check for wear and damage on pump housing (1) and gears (2, 3).

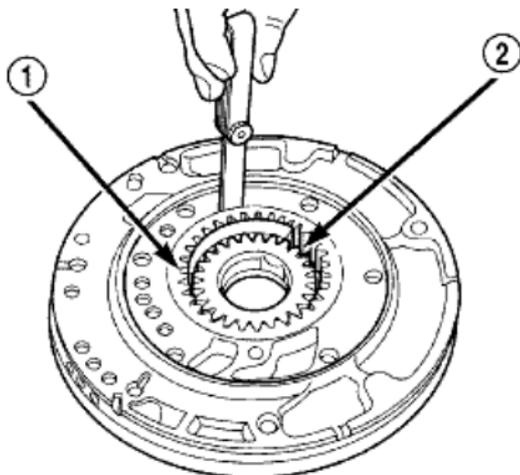
CLEANING

CLEANING

Clean pump and support components with solvent and dry them with compressed air.

INSPECTION

INSPECTION



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Fig. 363: Measuring Gear Clearances Between Pump Socket & Crescent
Courtesy of CHRYSLER LLC

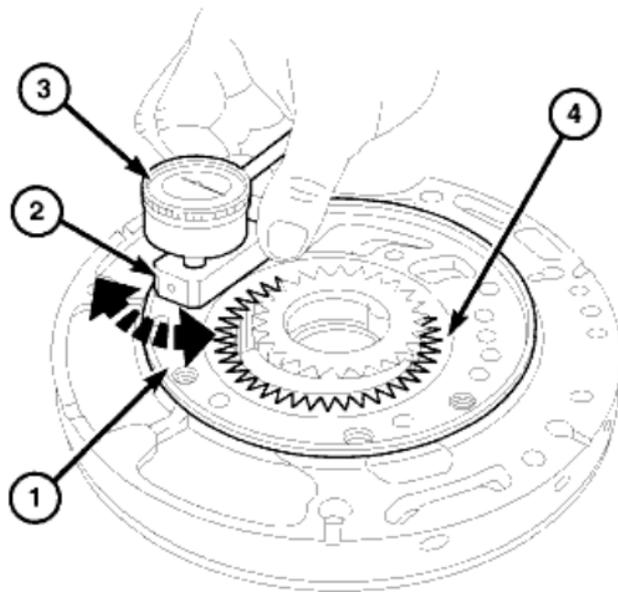
- 1 - OUTER GEAR
- 2 - POCKET

1. Re-install the gears and check clearances.
2. Measure the clearance between the outer gear (1) and the pump pocket (2). Clearance should be 0.089-0.202 mm (0.0035-0.0079 in.).
3. Measure clearance between outer gear and crescent. Clearance should be 0.060-0.298 mm (0.0023-0.0117 in.).
4. Measure clearance between inner gear and crescent. Clearance should be 0.093-0.385 mm (0.0036-0.0151 in.).

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in.).



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Fig. 364: Measuring Gear Height To Pump Housing Case Clearance
Courtesy of CHRYSLER LLC

- | |
|--|
| <p>1 - OIL PUMP HOUSING FLAT SURFACE
 2 - SCOOTER BLOCK D-115-2A
 3 - 9524 90° DIAL INDICATOR or C-3339A DIAL INDICATOR
 4 - PUMP GEAR</p> |
|--|

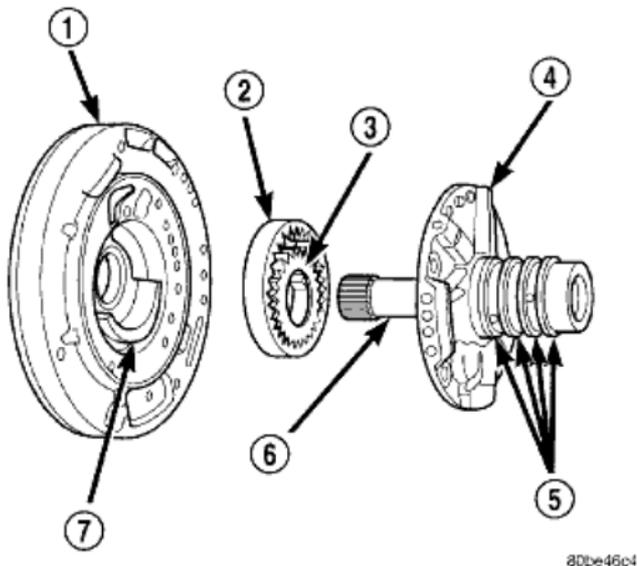
5. Install the 9524 90° or the C-3339A Dial indicator (3) into the Scooter Block D-115-2A (2).
6. Zero the Dial Indicator (3) in the scooter block assembly on a flat surface (1) of the pump housing.
7. While applying slight downward pressure rotate the front of the scooter block side ways onto the outer gear (4).
8. Measure and record the gear height to the pump housing case clearance.
9. The clearance should be 0.020-0.046 mm (0.0008-0.0018 in.). If not replace the oil pump assembly.

ASSEMBLY

ASSEMBLY

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Fig. 365: Identifying Transmission Oil Pump Components
Courtesy of CHRYSLER LLC

- 1 - PUMP HOUSING
- 2 - OUTER PUMP GEAR
- 3 - INNER PUMP GEAR
- 4 - REACTION SHAFT SUPPORT
- 5 - SEAL RINGS (4)
- 6 - REACTION SHAFT
- 7 - CRESCENT

1. Assemble oil pump as shown in **Fig. 365** .
2. Install and torque reaction shaft support-to-oil pump housing bolts to 28 N.m (250 in. lbs.) torque.

RELAY, TRANSMISSION CONTROL

DESCRIPTION

DESCRIPTION

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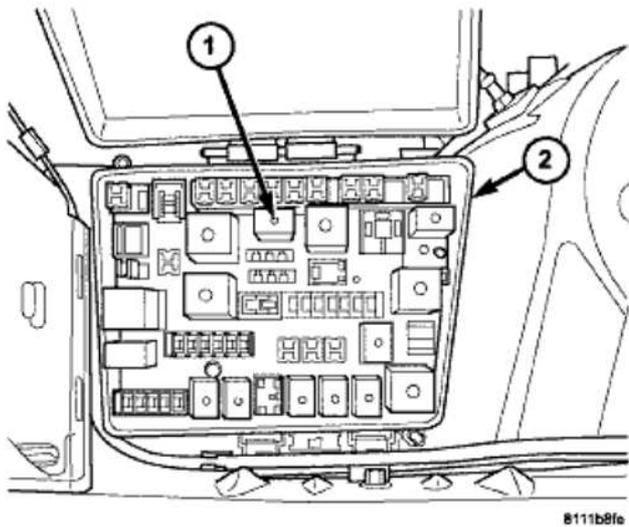


Fig. 366: Locating Transmission Control Relay
Courtesy of CHRYSLER LLC

- | |
|---|
| <p>1 - TRANSMISSION CONTROL RELAY
2 - POWER DISTRIBUTION CENTER</p> |
|---|

The transmission control relay (1) is located in the Power Distribution Center (PDC) (2), which is located on the left side of the engine compartment between the battery and radiator upper support.

OPERATION

OPERATION

The Transmission Control Relay is supplied fused B+ voltage, energized by the PCM, and is used to supply power to the solenoid pack when the transmission is in normal operating mode. When the relay is "off", no power is supplied to the solenoid pack and the transmission is in "limp-in" mode. After a controller reset (ignition key turned to the "run" position or after cranking engine), the PCM energizes the relay. Prior to this, the PCM verifies that the contacts are open by checking for no voltage at the switched battery terminals. After this is verified, the voltage at the solenoid pack pressure switches is checked. After the relay is energized, the PCM monitors the terminals to verify that the voltage is greater than 3 volts.

SEAL, OIL PUMP

REMOVAL

REMOVAL

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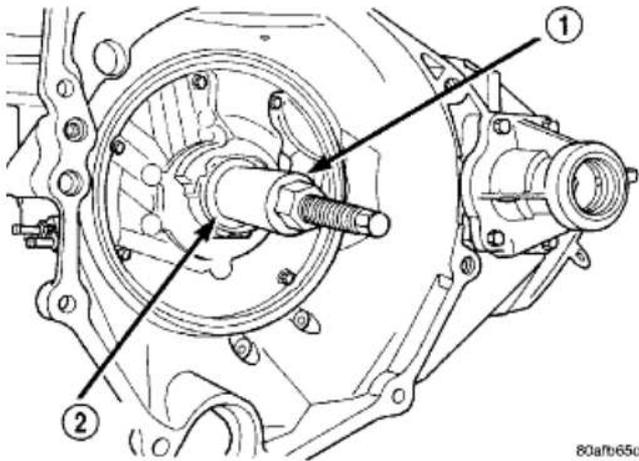


Fig. 367: Removing Oil Pump Seal
Courtesy of CHRYSLER LLC

- | |
|--------------------------|
| 1 - SEAL PULLER C-3981-B |
| 2 - OIL PUMP SEAL |

1. Remove transaxle from vehicle. See **Transmission and Transfer Case/Automatic - 41TE - Removal**.
2. Using Seal Puller C-3981B (1), remove oil pump seal (2).

INSTALLATION

INSTALLATION

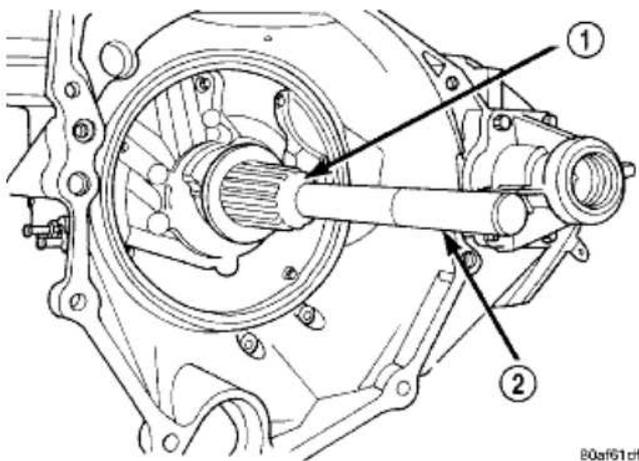


Fig. 368: Installing Oil Pump Seal
Courtesy of CHRYSLER LLC

- | |
|---------------------------|
| 1 - SEAL INSTALLER C-4193 |
|---------------------------|

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2 - HANDLE C-4171

1. Using Seal Installer C-4193A (1) , install oil pump seal.
2. Install transaxle to vehicle. See Transmission and Transfer Case/Automatic - 41TE - Installation.

SENSOR, SPEED, INPUT

DESCRIPTION

DESCRIPTION

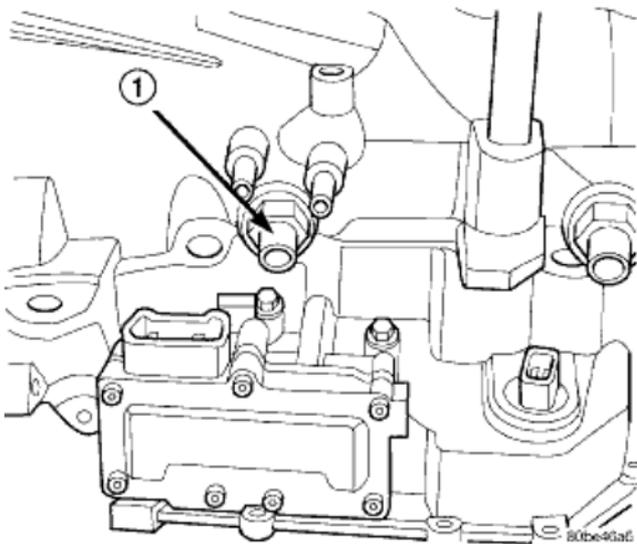


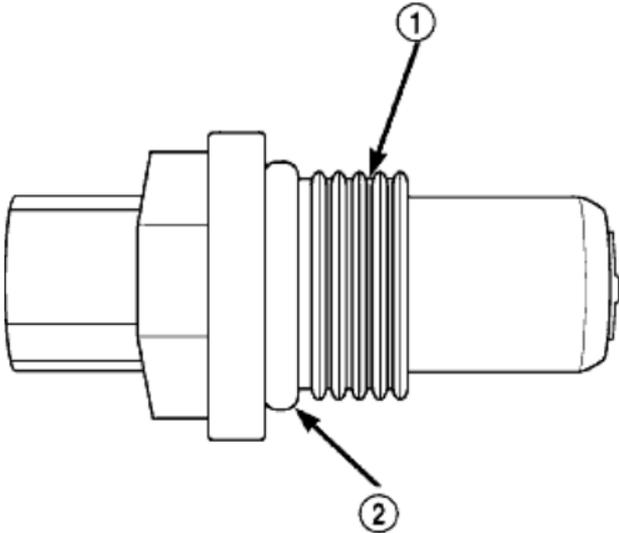
Fig. 369: Removing/Installing Input Speed Sensor
Courtesy of CHRYSLER LLC

1 - INPUT SPEED SENSOR

The Input Speed Sensor (1) , is a two-wire magnetic pickup device that generates AC signals as rotation occurs. It is threaded into the transaxle case.

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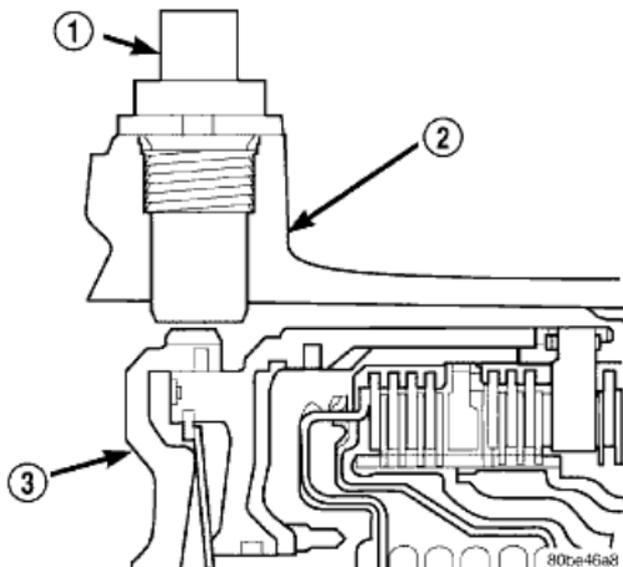
Fig. 370: Identifying Input Speed Sensor & O-Ring
 Courtesy of CHRYSLER LLC

1 - INPUT SPEED SENSOR
2 - O-RING

The Input Speed Sensor (1) is sealed with an O-ring (2) , and is considered a primary input to the Powertrain/Transmission Control Module.

OPERATION

OPERATION



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Fig. 371: Identifying Input Speed Sensor & Input Clutch Hub

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Courtesy of CHRYSLER LLC

- | |
|------------------------|
| 1 - INPUT SPEED SENSOR |
| 2 - TRANSAXLE CASE |
| 3 - INPUT CLUTCH HUB |

The Input Speed Sensor (1) provides information on how fast the input shaft is rotating. As the teeth of the input clutch hub (3) pass by the sensor coil, an AC voltage is generated and sent to the PCM/TCM. The PCM/TCM interprets this information as input shaft RPM.

The PCM/TCM compares the input speed signal with output speed signal to determine the following:

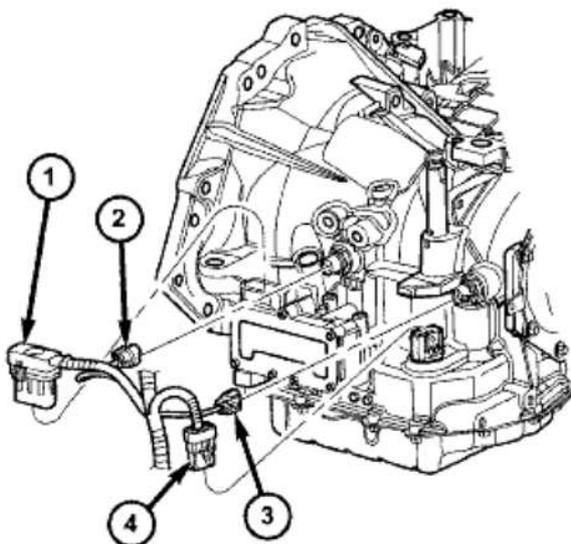
- Transmission gear ratio
- Speed ratio error detection
- CVI calculation

The PCM/TCM also compares the input speed signal and the engine speed signal to determine the following:

- Torque converter clutch slippage
- Torque converter element speed ratio

REMOVAL

REMOVAL



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Fig. 372: Identifying Transmission Connectors

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Courtesy of CHRYSLER LLC

- 1 - SOLENOID PACK CONNECTOR
- 2 - INPUT SPEED SENSOR CONNECTOR
- 3 - OUTPUT SPEED SENSOR CONNECTOR
- 4 - TRANSMISSION RANGE SENSOR CONNECTOR

1. Disconnect battery negative cable.
2. Disconnect input speed sensor connector (2) .

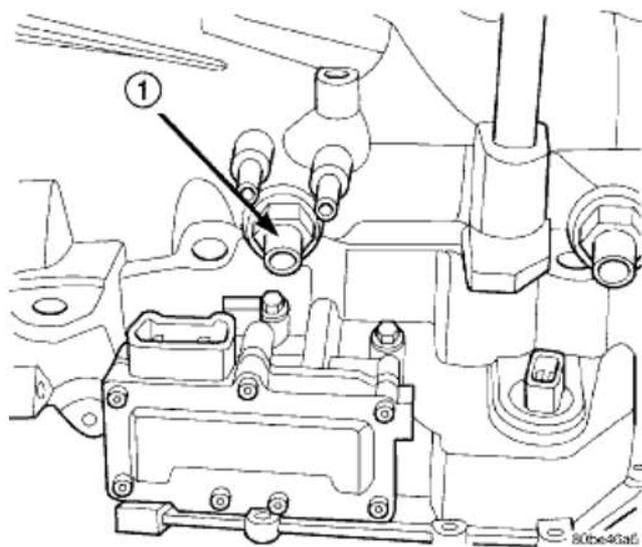


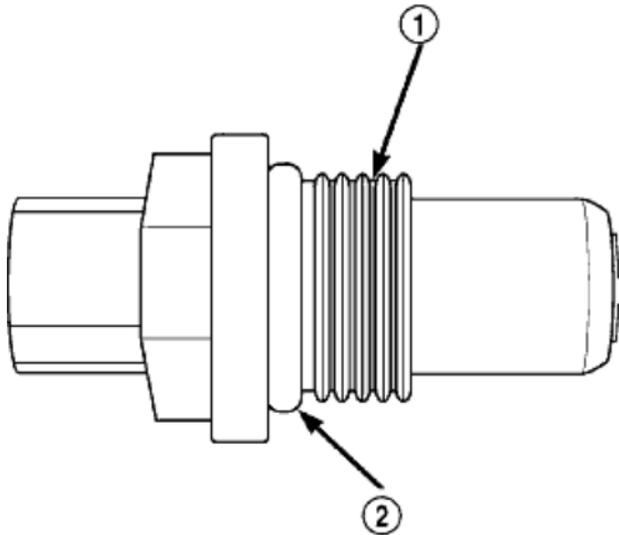
Fig. 373: Removing/Installing Input Speed Sensor
Courtesy of CHRYSLER LLC

- 1 - INPUT SPEED SENSOR

3. Unscrew and remove input speed sensor (1) .

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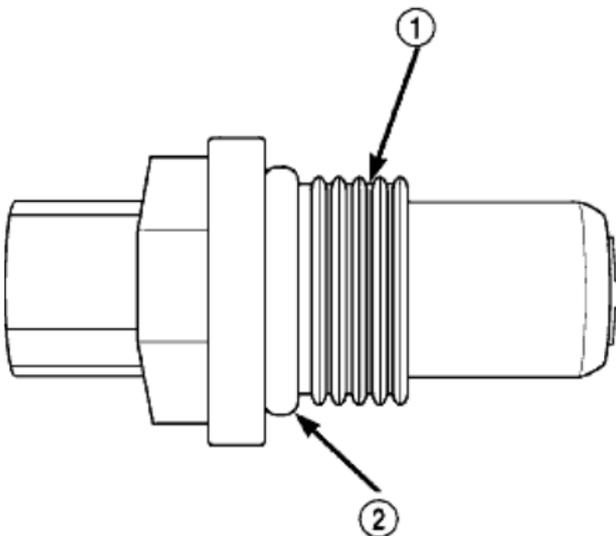
Fig. 374: Identifying Input Speed Sensor & O-Ring
Courtesy of CHRYSLER LLC

1 - INPUT SPEED SENSOR
2 - O-RING

- Inspect speed sensor O-ring (2) and replace if necessary.

INSTALLATION

INSTALLATION



80be48b8

Fig. 375: Identifying Input Speed Sensor & O-Ring

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2009 AUTOMATIC TRANSMISSION 41TE - Service Information - Grand Caravan, Town & Country

Courtesy of CHRYSLER LLC

1 - INPUT SPEED SENSOR

2 - O-RING

1. Verify O-ring (2) is installed into position.

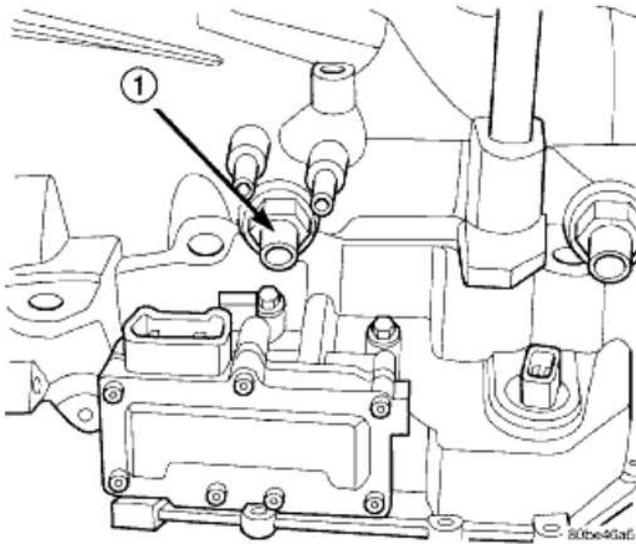


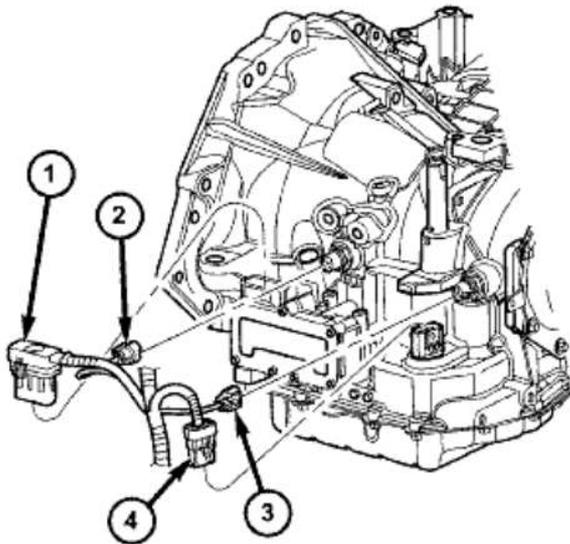
Fig. 376: Removing/Installing Input Speed Sensor
Courtesy of CHRYSLER LLC

1 - INPUT SPEED SENSOR

2. Install and tighten input speed sensor (1) to 27 N.m (20 ft. lbs.).

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81114e67

Fig. 377: Identifying Transmission Connectors
Courtesy of CHRYSLER LLC

- | |
|--|
| <p>1 - SOLENOID PACK CONNECTOR
 2 - INPUT SPEED SENSOR CONNECTOR
 3 - OUTPUT SPEED SENSOR CONNECTOR
 4 - TRANSMISSION RANGE SENSOR CONNECTOR</p> |
|--|

3. Connect speed sensor connector (4) .
4. Connect battery negative cable.

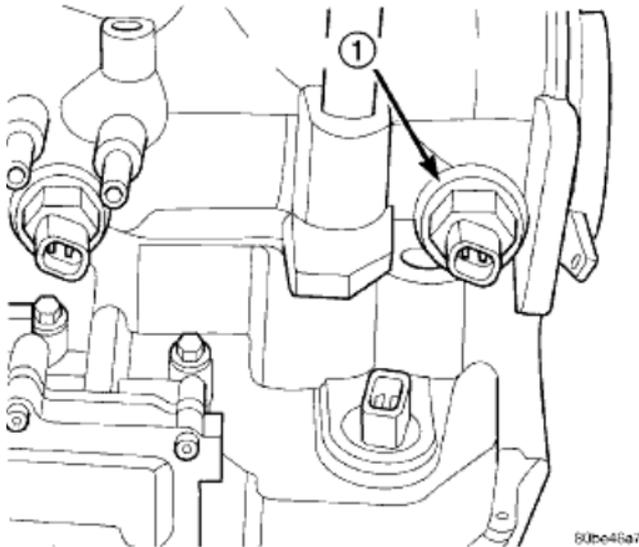
SENSOR, SPEED, OUTPUT

DESCRIPTION

DESCRIPTION

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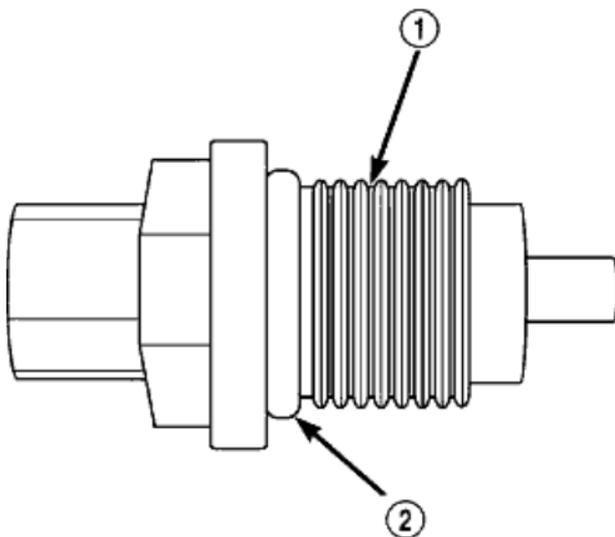


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Fig. 378: Identifying Output Speed Sensor
Courtesy of CHRYSLER LLC

1 - OUTPUT SPEED SENSOR

The Output Speed Sensor (1) is a two-wire magnetic pickup device that generates an AC signal as rotation occurs. It is threaded into the transaxle case.



80be46b9

Fig. 379: Identifying Output Speed Sensor & O-Ring
Courtesy of CHRYSLER LLC

1 - OUTPUT SPEED SENSOR
2 - O-RING

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The Output Speed Sensor (1) is sealed with an O-ring (2), and is considered a primary input to the Powertrain/Transmission Control.

OPERATION

OPERATION

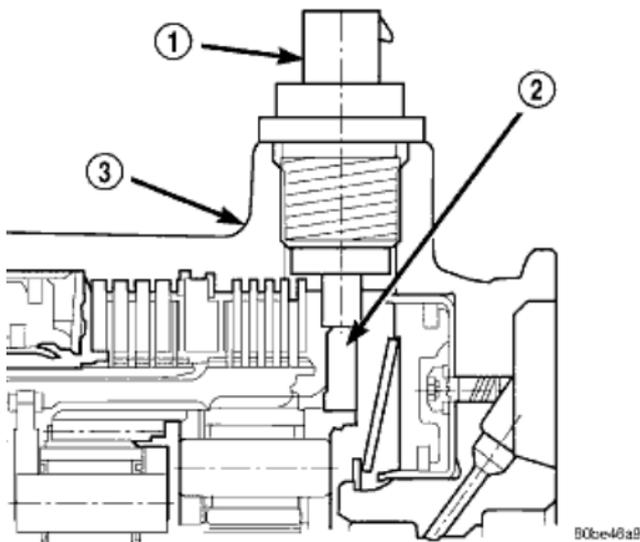


Fig. 380: Identifying Output Speed Sensor & Rear Planet Carrier/Output Shaft Assembly
Courtesy of CHRYSLER LLC

1 - OUTPUT SPEED SENSOR
2 - REAR PLANET CARRIER/OUTPUT SHAFT ASSEMBLY
3 - TRANSAXLE CASE

The Output Speed Sensor (1) provides information on how fast the output shaft is rotating. As the rear planetary carrier park pawl lugs pass by the sensor coil, an AC voltage is generated and sent to the PCM/TCM. The PCM/TCM interprets this information as output shaft RPM.

The PCM/TCM compares the input and output speed signals to determine the following:

- Transmission gear ratio
- Speed ratio error detection
- CVI calculation

VEHICLE SPEED SIGNAL

The vehicle speed signal is taken from the Output Speed Sensor. The PCM converts this signal into a pulse per mile signal and sends the vehicle speed message across the communication bus to the BCM. The BCM sends this signal to the Instrument Cluster to display vehicle speed to the driver. The vehicle speed signal pulse is

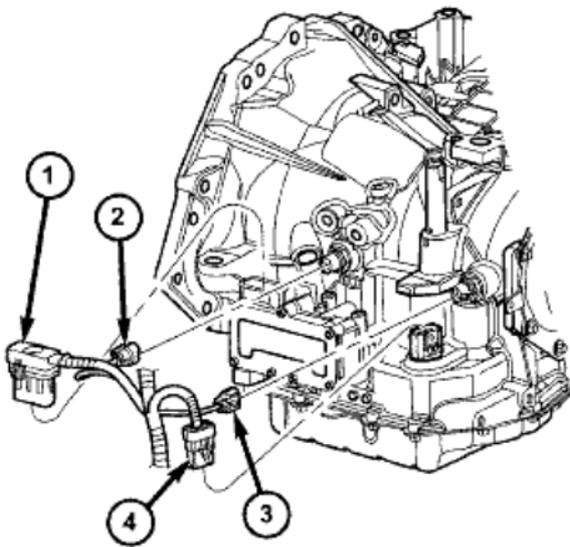
2009 Chrysler Town & Country LX

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roughly 8000 pulses per mile.

REMOVAL

REMOVAL



81114e67

Fig. 381: Identifying Transmission Connectors
Courtesy of CHRYSLER LLC

- | |
|--|
| <p>1 - SOLENOID PACK CONNECTOR
 2 - INPUT SPEED SENSOR CONNECTOR
 3 - OUTPUT SPEED SENSOR CONNECTOR
 4 - TRANSMISSION RANGE SENSOR CONNECTOR</p> |
|--|

1. Disconnect battery negative cable.
2. Raise vehicle on hoist.
3. Disconnect output speed sensor connector (3) .

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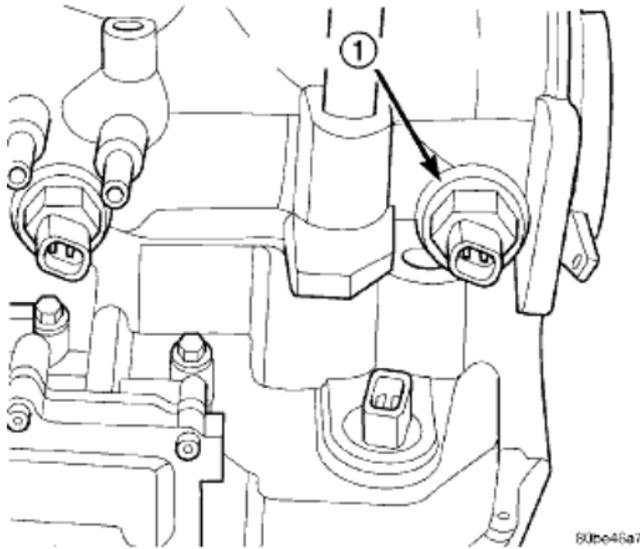


Fig. 382: Identifying Output Speed Sensor
Courtesy of CHRYSLER LLC

1 - OUTPUT SPEED SENSOR

4. Unscrew and remove output speed sensor (1) .

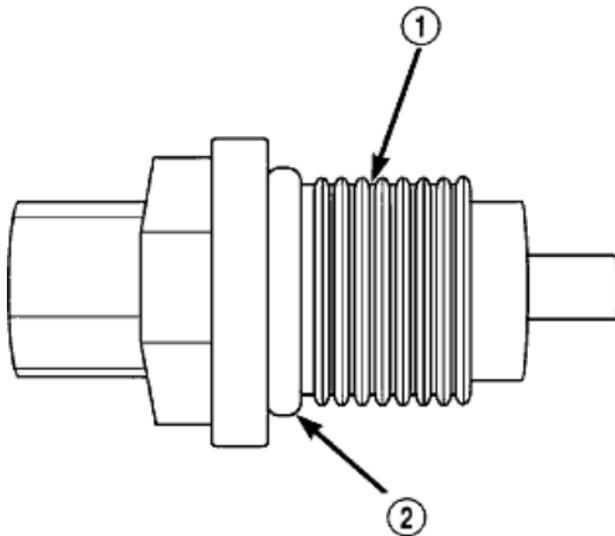


Fig. 383: Identifying Output Speed Sensor & O-Ring
Courtesy of CHRYSLER LLC

1 - OUTPUT SPEED SENSOR

2 - O-RING

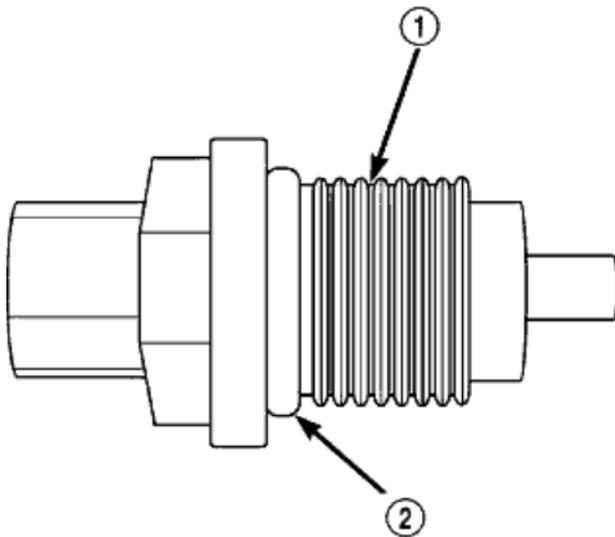
2009 Chrysler Town & Country LX

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- Inspect speed sensor O-ring (2) and replace if necessary.

INSTALLATION

INSTALLATION



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Fig. 384: Identifying Output Speed Sensor & O-Ring
Courtesy of CHRYSLER LLC

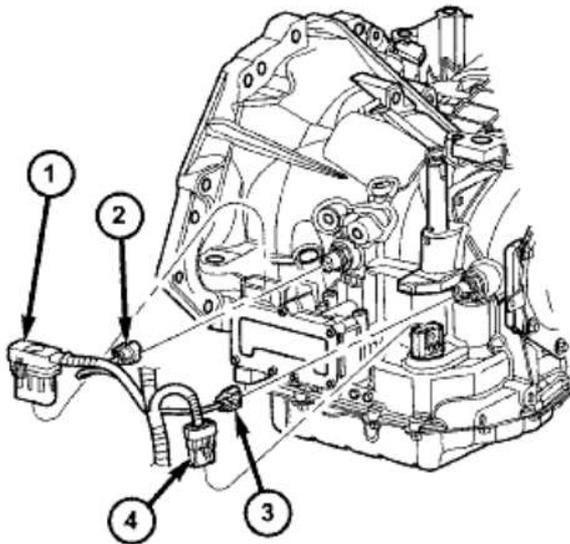
1 - OUTPUT SPEED SENSOR

2 - O-RING

- Verify o-ring (2) is installed into position.
- Install and tighten output speed sensor (1) to 27 N.m (20 ft. lbs.).

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81114e67

Fig. 385: Identifying Transmission Connectors
Courtesy of CHRYSLER LLC

- | |
|--|
| <p>1 - SOLENOID PACK CONNECTOR
 2 - INPUT SPEED SENSOR CONNECTOR
 3 - OUTPUT SPEED SENSOR CONNECTOR
 4 - TRANSMISSION RANGE SENSOR CONNECTOR</p> |
|--|

3. Connect speed sensor connector.
4. Connect battery negative cable.

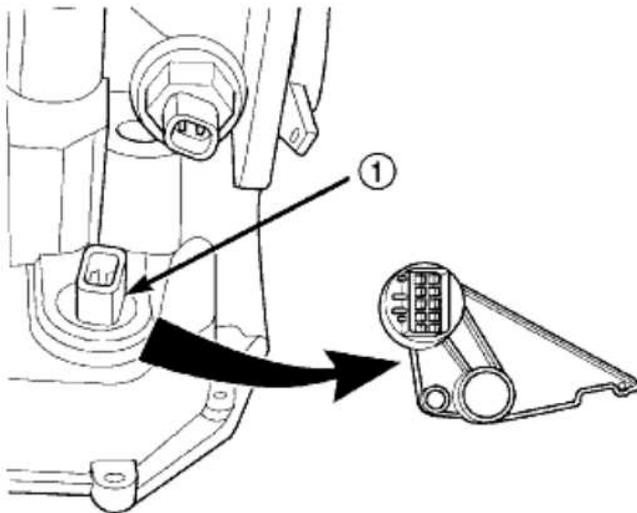
SENSOR, TRANSMISSION RANGE

DESCRIPTION

DESCRIPTION

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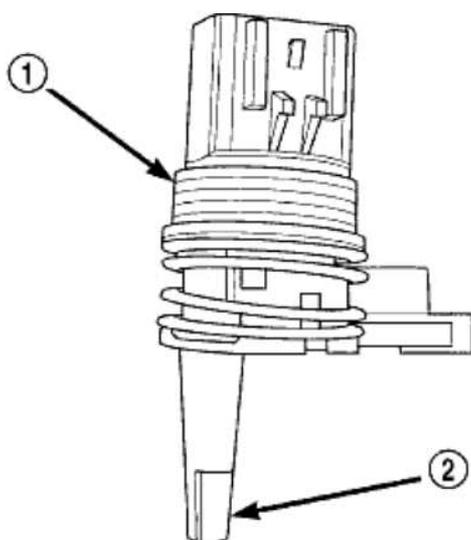
Fig. 386: Locating Transmission Range Sensor (TRS)

Courtesy of CHRYSLER LLC

1 - TRANSMISSION RANGE SENSOR

The Transmission Range Sensor (TRS) (1) is mounted to the top of the valve body inside the transaxle and can only be serviced by removing the valve body. The electrical connector extends through the transaxle case.

The Transmission Range Sensor (TRS) has four switch contacts that monitor shift lever position and send the information to the PCM/TCM.



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Fig. 387: Identifying Transmission Range Sensor With Integrated Temperature Sensor

Courtesy of CHRYSLER LLC

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1 - TRANSMISSION RANGE SENSOR

2 - TEMPERATURE SENSOR

The TRS (1) also has an integrated temperature sensor (thermistor) (2) that communicates transaxle temperature to the TCM and PCM .

OPERATION

OPERATION

The Transmission Range Sensor (TRS) communicates Shift Lever Position (SLP) to the PCM/TCM as a combination of open and closed switches. Each shift lever position has an assigned combination of switch states (open/closed) that the PCM/TCM receives from four sense circuits. The PCM/TCM interprets this information and determines the appropriate transaxle gear position and shift schedule.

Since there are four switches, there are 16 possible combinations of open and closed switches (codes). Seven of these codes are related to gear position and three are recognized as "between gear" codes. This results in six codes which should never occur. These are called "invalid" codes. An invalid code will result in a DTC, and the PCM/TCM will then determine the shift lever position based on pressure switch data. This allows reasonably normal transmission operation with a TRS failure.

TRS SWITCH STATES

SHIFT LEVER POSITION	T42	T41	T3	T1
P	CL	CL	CL	OP
R	CL	OP	OP	OP
N	CL	CL	OP	CL
OD	OP	OP	OP	CL
3	OP	OP	CL	OP
L	CL	OP	CL	CL

TRANSMISSION TEMPERATURE SENSOR

The TTS has an integrated thermistor that the PCM/TCM uses to monitor the transmission's sump temperature. Since fluid temperature can affect transmission shift quality and convertor lock up, the PCM/TCM requires this information to determine which shift schedule to operate in. The PCM also monitors this temperature data so it can energize the vehicle cooling fan(s) when a transmission "overheat" condition exists. If the thermistor circuit fails, the PCM/TCM will revert to calculated oil temperature usage.

CALCULATED TEMPERATURE

A failure in the temperature sensor or circuit will result in calculated temperature being substituted for actual temperature. Calculated temperature is a predicted fluid temperature which is calculated from a combination of inputs:

- Battery (ambient) temperature

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- Engine coolant temperature
- In-gear run time since start-up

REMOVAL

REMOVAL

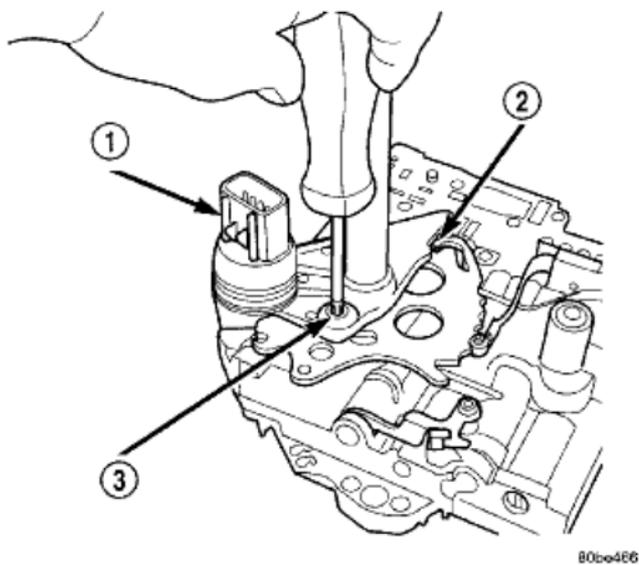


Fig. 388: Removing/Installing Transmission Range Sensor
Courtesy of CHRYSLER LLC

1 - TRANSMISSION RANGE SENSOR
2 - MANUAL VALVE CONTROL PIN
3 - RETAINING SCREW

1. Remove valve body assembly from transaxle. See **Transmission and Transfer Case/Automatic - 41TE/VALVE BODY - Removal**.
2. Remove Transmission Range Sensor retaining screw (3) and remove sensor (1) from valve body.
3. Remove TRS (1) from manual shaft.

INSTALLATION

INSTALLATION

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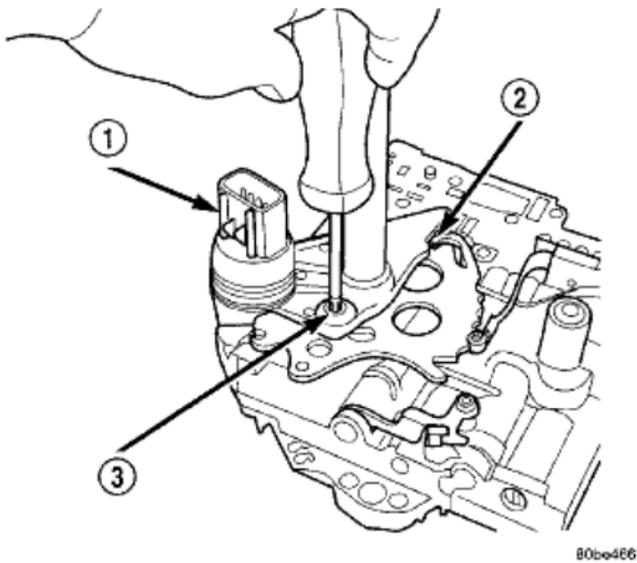


Fig. 389: Removing/Installing Transmission Range Sensor
Courtesy of CHRYSLER LLC

1 - TRANSMISSION RANGE SENSOR
2 - MANUAL VALVE CONTROL PIN
3 - RETAINING SCREW

1. Install Transmission Range Sensor (TRS) (1) to the valve body and torque retaining screw (3) to 5 N.m (45 in. lbs.).
2. Install valve body to transaxle. See **Transmission and Transfer Case/Automatic - 41TE/VALVE BODY - Installation**.

SENSOR, VARIABLE LINE PRESSURE

DESCRIPTION

DESCRIPTION

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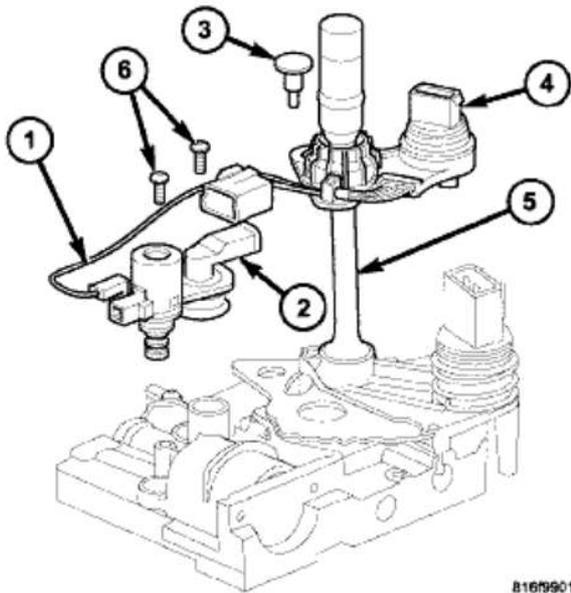


Fig. 390: Identifying Variable Line Pressure Sensor
Courtesy of CHRYSLER LLC

- 1 - PRESSURE CONTROL SOLENOID
- 2 - LINE PRESSURE SENSOR
- 3 - SHOULDER SCREW
- 4 - VARIABLE LINE PRESSURE HEADER
- 5 - MANUAL SHAFT
- 6 - SCREWS

The line pressure sensor (2) is mounted on the top of the valve body, next to the pressure control solenoid (1).

The TCM utilizes a closed-loop system to control transmission line pressure. The system contains a variable force style solenoid, the Pressure Control Solenoid. The solenoid is duty cycle controlled by the TCM to vent the unnecessary line pressure supplied by the oil pump back to the sump. The system also contains a variable pressure style sensor, the Line Pressure Sensor, which is a direct input to the TCM. The line pressure solenoid monitors the transmission line pressure and completes the feedback loop to the TCM. The TCM uses this information to adjust its control of the pressure control solenoid to achieve the desired line pressure.

OPERATION

OPERATION

The TCM calculates the desired line pressure based upon inputs from the transmission and engine. The TCM calculates the torque input to the transmission and uses that information as the primary input to the calculation. The line pressure is set to a predetermined value during shifts and when the transmission is in the PARK and NEUTRAL positions. This is done to ensure consistent shift quality. During all other operation, the actual line

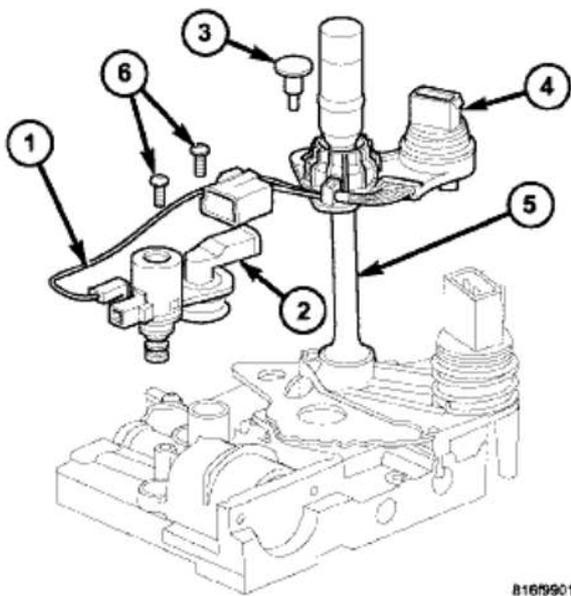
2009 Chrysler Town & Country LX

2009 AUTOMATIC TRANSMISSION 41TE - Service Information - Grand Caravan, Town & Country

pressure is compared to the desired line pressure and adjustments are made to the pressure control solenoid duty cycle.

REMOVAL

REMOVAL



81679901

Fig. 391: Removing/Installing Variable Line Pressure Sensor
Courtesy of CHRYSLER LLC

- | |
|---|
| <p>1 - PRESSURE CONTROL SOLENOID
 2 - LINE PRESSURE SENSOR
 3 - SHOULDER SCREW
 4 - VARIABLE LINE PRESSURE HEADER
 5 - MANUAL SHAFT
 6 - SCREWS</p> |
|---|

1. Remove the valve body from the transmission. See [Transmission and Transfer Case/Automatic - 41TE/VALVE BODY - Removal](#).
2. Remove the electrical connectors from the pressure control solenoid (1) and the line pressure sensor (2).
3. Remove the screws (6) holding the pressure control solenoid (1) and line pressure sensor (2) to the valve body.
4. Remove the pressure control solenoid and line pressure sensor from the valve body.

INSTALLATION

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INSTALLATION

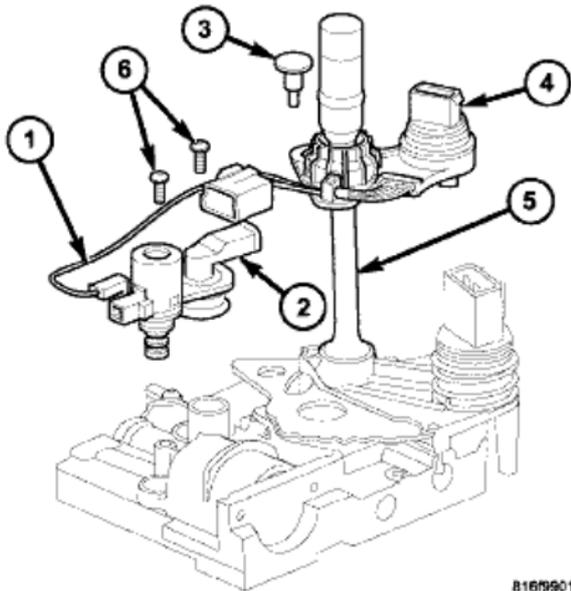


Fig. 392: Removing/Installing Variable Line Pressure Sensor
Courtesy of CHRYSLER LLC

- | |
|-----------------------------------|
| 1 - PRESSURE CONTROL SOLENOID |
| 2 - LINE PRESSURE SENSOR |
| 3 - SHOULDER SCREW |
| 4 - VARIABLE LINE PRESSURE HEADER |
| 5 - MANUAL SHAFT |
| 6 - SCREWS |

1. Install the pressure control solenoid (1) and line pressure sensor (2) into the valve body.
2. Install the screws (6) to hold the pressure control solenoid (1) and line pressure sensor (2) to the valve body.
3. Install the electrical connectors to the pressure control solenoid (1) and the line pressure sensor (2).
4. Install the valve body into the transmission. See **Transmission and Transfer Case/Automatic - 41TE/VALVE BODY - Installation.**

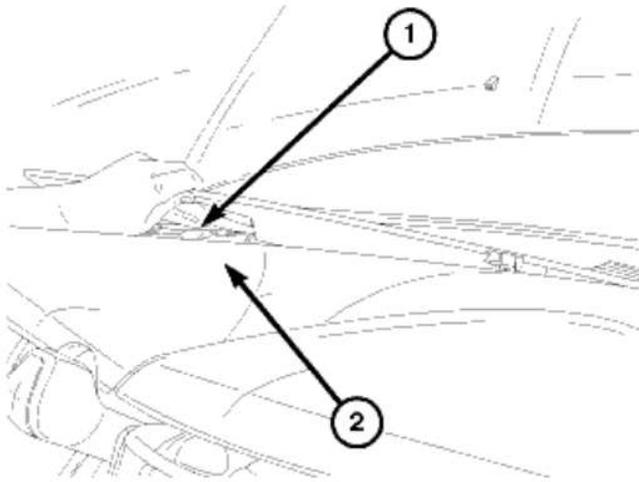
SHIFTER, TRANSMISSION

REMOVAL

REMOVAL

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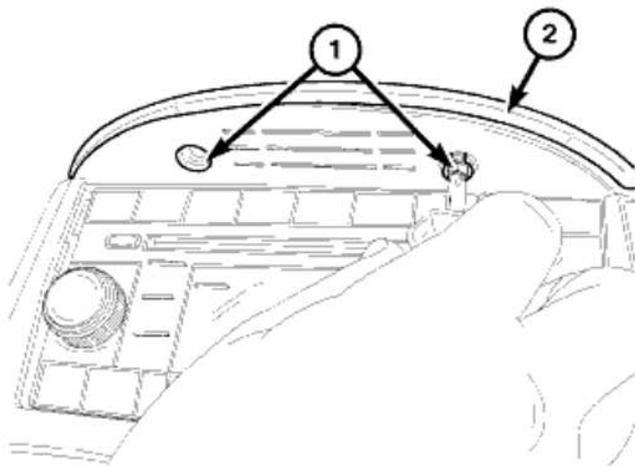


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Fig. 393: Removing/Installing Defroster Cover

Courtesy of CHRYSLER LLC

1. Disconnect the negative battery cable.
2. Using a trim stick remove the defroster cover (1).



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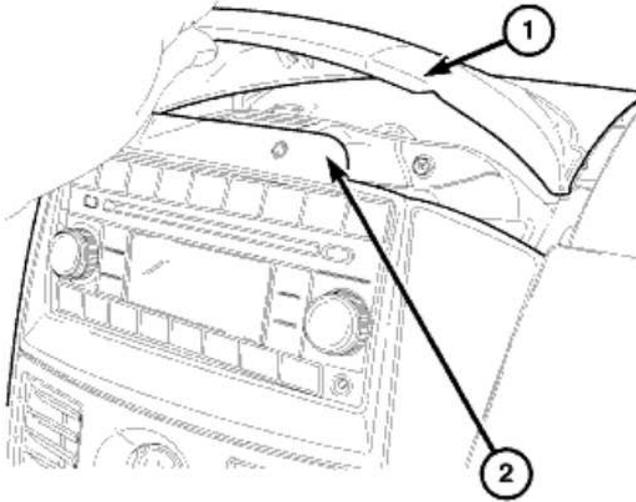
Fig. 394: Removing/Installing Screws At Center Stack Cover

Courtesy of CHRYSLER LLC

3. Remove the screws (1) at the center stack cover (2).

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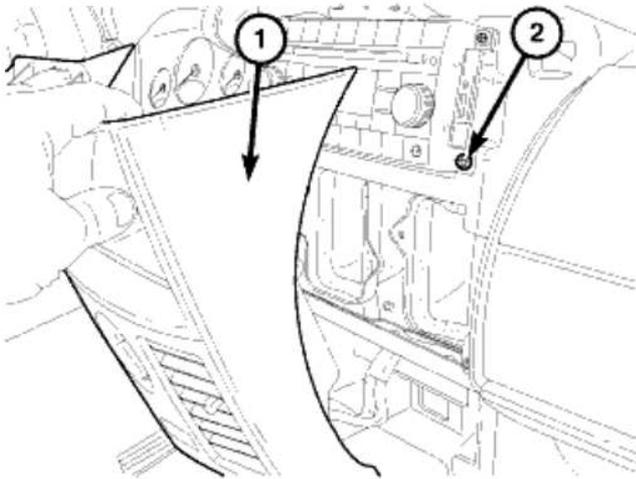
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81c9fad4

Fig. 395: Removing/Installing Center Stack Cover
Courtesy of CHRYSLER LLC

4. Remove the center stack cover (1).



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Fig. 396: Pulling Center Stack Back
Courtesy of CHRYSLER LLC

5. Pull center stack (1) back.

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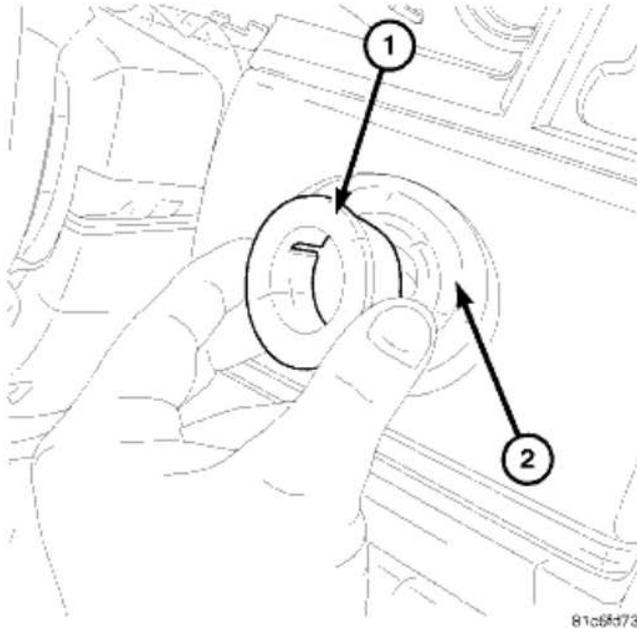


Fig. 397: Removing/Installing Ignition Switch Bezel
Courtesy of CHRYSLER LLC

- Remove the ignition switch bezel (1) from I/P cover (2).

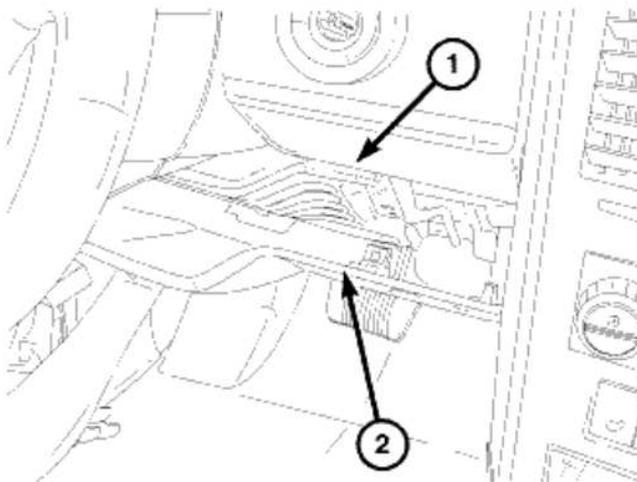


Fig. 398: Identifying Knee Blocker
Courtesy of CHRYSLER LLC

- Remove the knee blocker (2).

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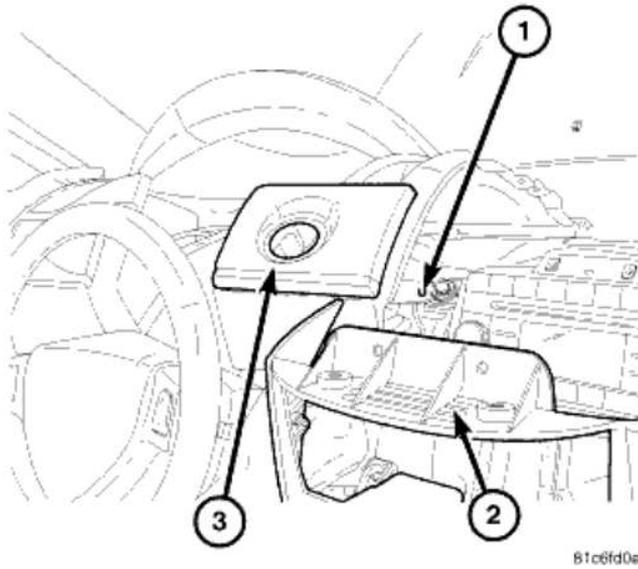


Fig. 399: Removing/Installing I/P Cover
Courtesy of CHRYSLER LLC

8. Remove the I/P cover (3) (if equipped).

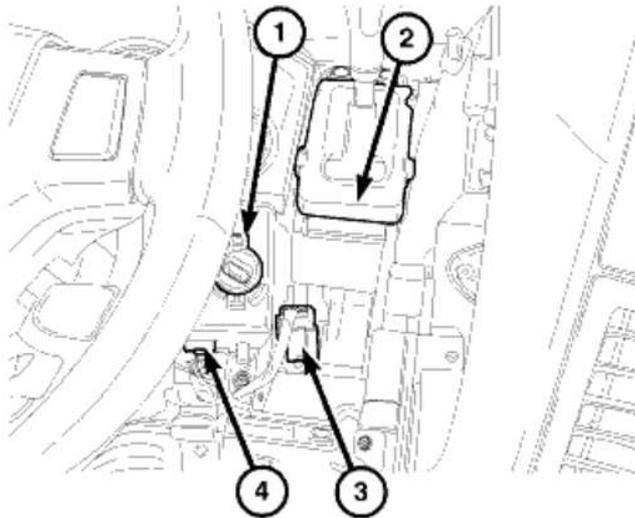


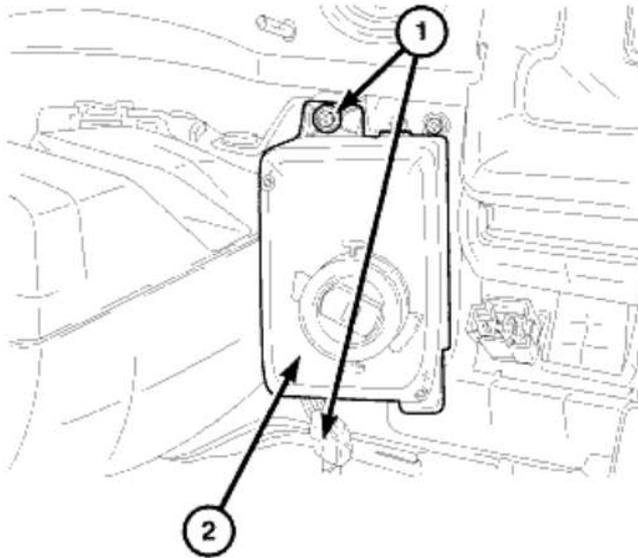
Fig. 400: Identifying Electrical Connectors At WIN & Shifter
Courtesy of CHRYSLER LLC

9. Remove the cluster bezel.
10. Remove the shift knob.

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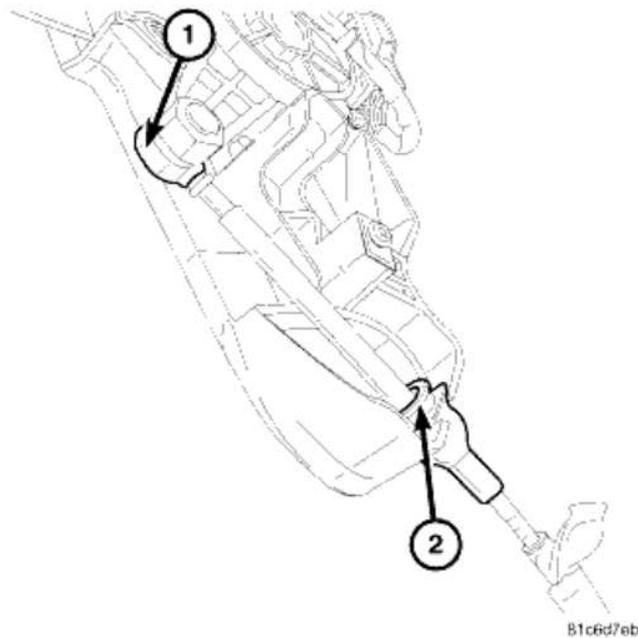
11. Unplug the electrical connectors (3, 4) at the WIN (1) and the shifter (2).



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Fig. 401: Removing/Installing Screws At Win
Courtesy of CHRYSLER LLC

12. Remove the screws (1) at the WIN (2).
13. Remove the WIN to gain access to the lower shifter bolts.



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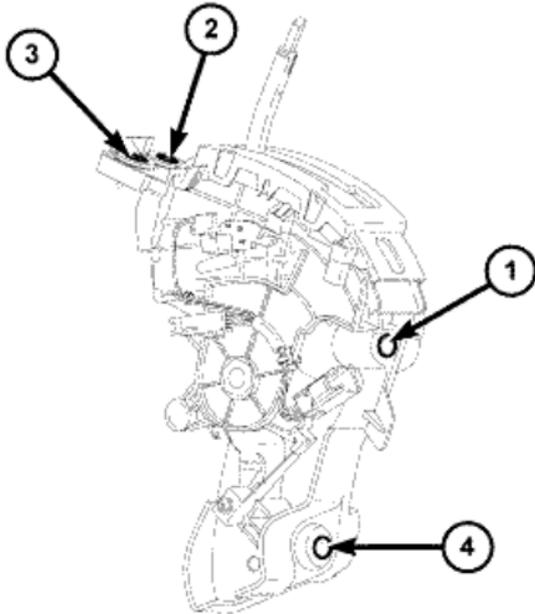
Fig. 402: Identifying Shift Cable At Shifter
Courtesy of CHRYSLER LLC

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NOTE: Ensure the lock tab at the shifter housing (2) is depressed before pulling the cable from the shifter housing.

14. Remove the shift cable (1, 2) at the shifter.



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Fig. 403: Identifying Shifter Mounting Bolts
Courtesy of CHRYSLER LLC

15. Remove the shifter mounting bolts 1 thru 4.

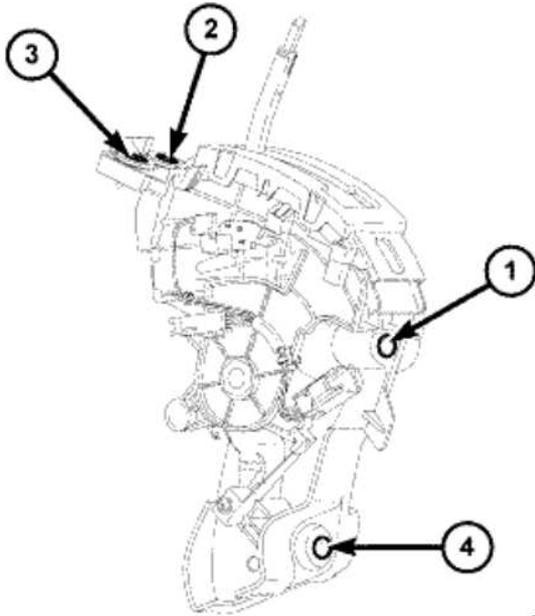
16. Remove the shifter.

INSTALLATION

INSTALLATION

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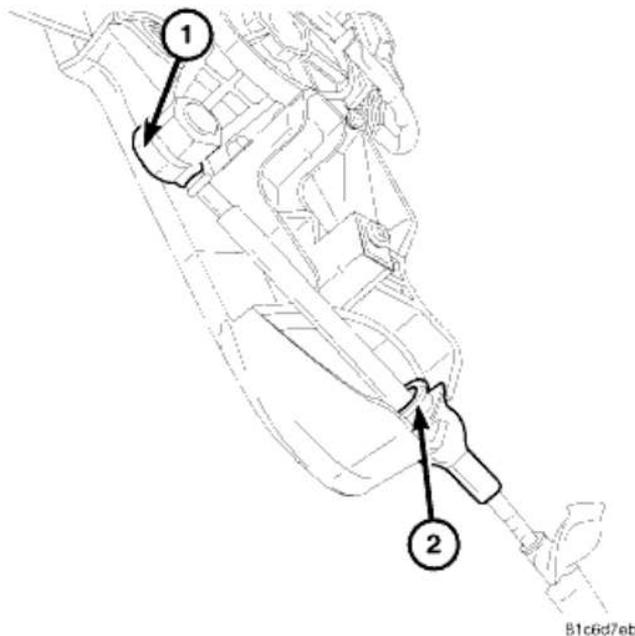


2200187

Fig. 404: Identifying Shifter Mounting Bolts

Courtesy of CHRYSLER LLC

1. Install the shifter mounting bolts and tighten to 20 N.m (15 ft. lbs.) in the proper sequence as indicated on drawing.



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Fig. 405: Identifying Shift Cable At Shifter

Courtesy of CHRYSLER LLC

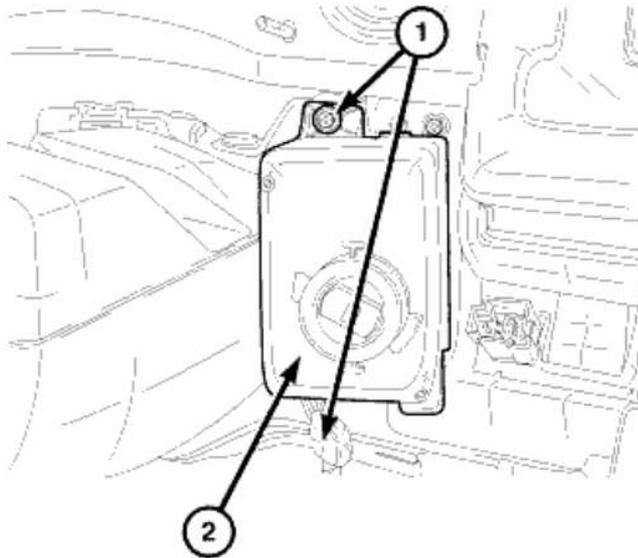
NOTE: Ensure the lock tab is in the lock position after the cable is installed onto

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the shifter housing (2).

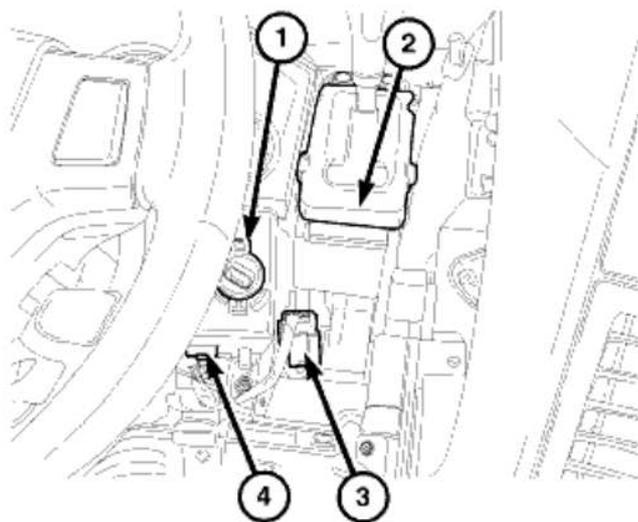
2. Install the shift cable (1, 2) at the shifter.



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Fig. 406: Removing/Installing Screws At Win
Courtesy of CHRYSLER LLC

3. Install the WIN (2) and install the mounting screws (1).



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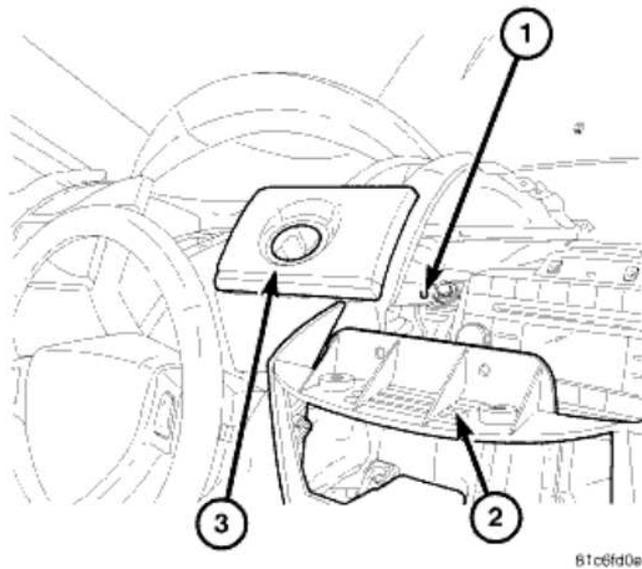
Fig. 407: Identifying Electrical Connectors At WIN & Shifter

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Courtesy of CHRYSLER LLC

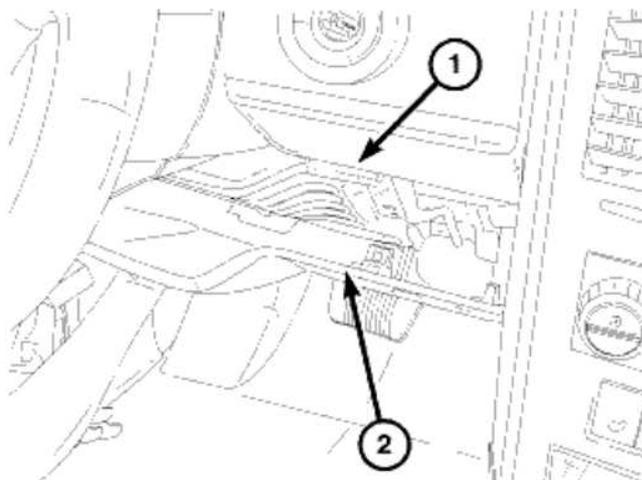
4. Connect the electrical connectors (3, 4) at the WIN (1) and the shifter (2).



81c6fd0e

Fig. 408: Removing/Installing I/P Cover
Courtesy of CHRYSLER LLC

5. Install the I/P cover (3).



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Fig. 409: Identifying Knee Blocker

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Courtesy of CHRYSLER LLC

6. Install the knee blocker (2).

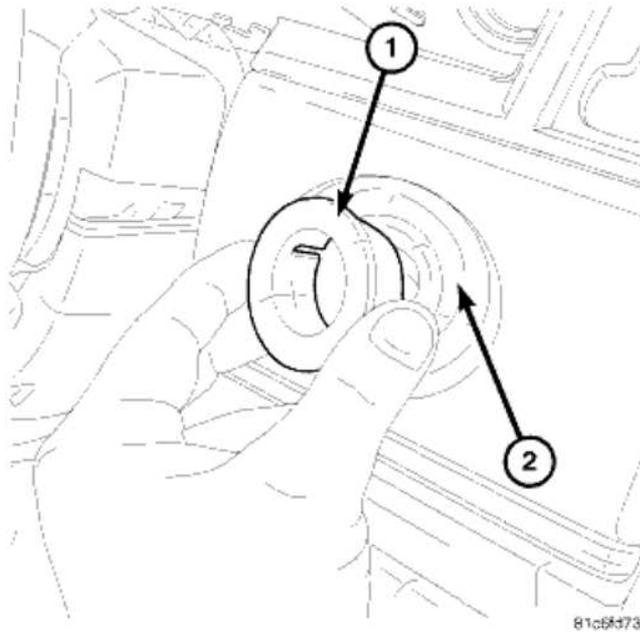
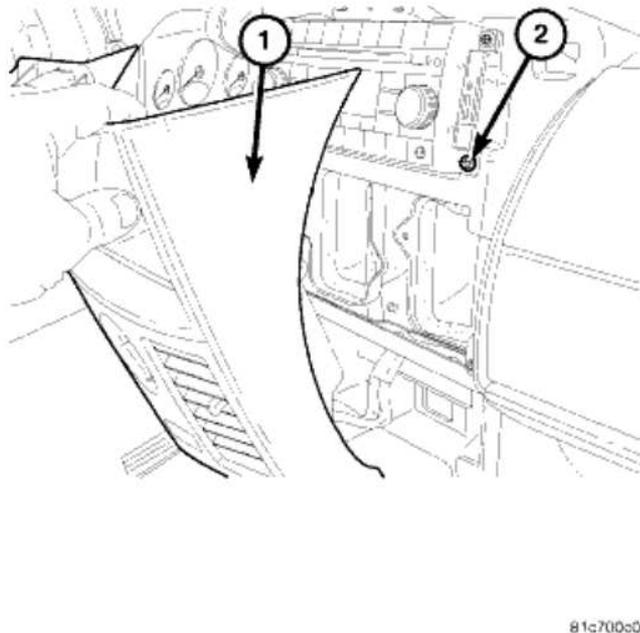


Fig. 410: Removing/Installing Ignition Switch Bezel
Courtesy of CHRYSLER LLC

7. Install the shift knob.
8. Install the ignition switch bezel (1) to I/P cover (2).

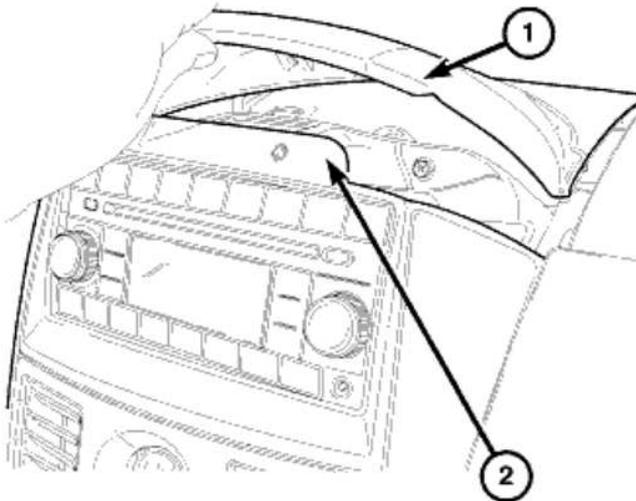


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Fig. 411: Pulling Center Stack Back
Courtesy of CHRYSLER LLC

9. Install center stack cover (1) back into position.



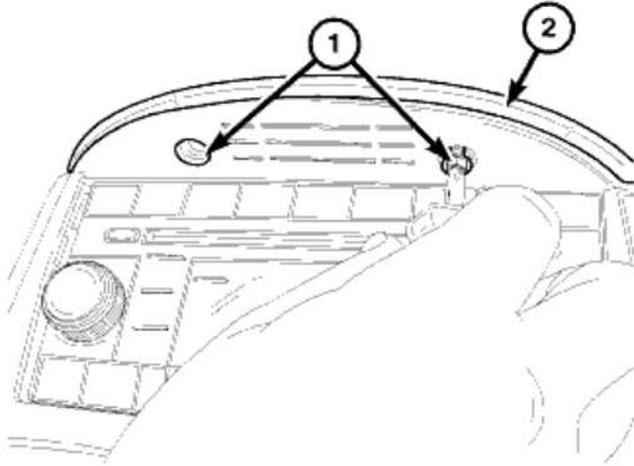
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Fig. 412: Removing/Installing Center Stack Cover
Courtesy of CHRYSLER LLC

10. Install the center stack top cover (1) back.
11. Install the cluster bezel.

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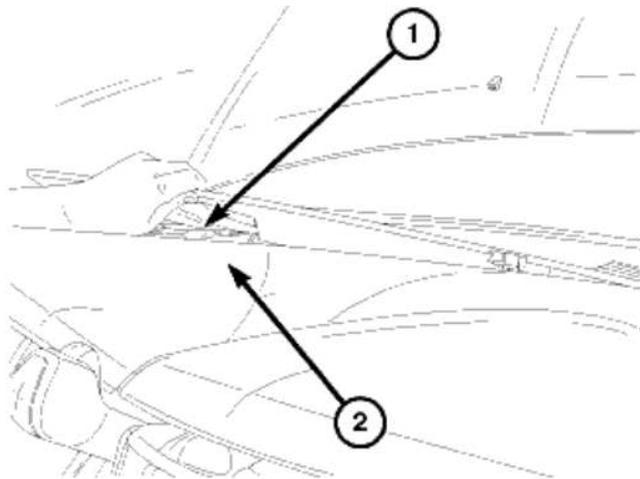
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Fig. 413: Removing/Installing Screws At Center Stack Cover
Courtesy of CHRYSLER LLC

12. Install the screws (1) at the center stack cover (2).



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Fig. 414: Removing/Installing Defroster Cover
Courtesy of CHRYSLER LLC

13. Install the defroster cover (1).
14. Connect the battery cable.

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SOLENOID, PRESSURE CONTROL

DESCRIPTION

DESCRIPTION

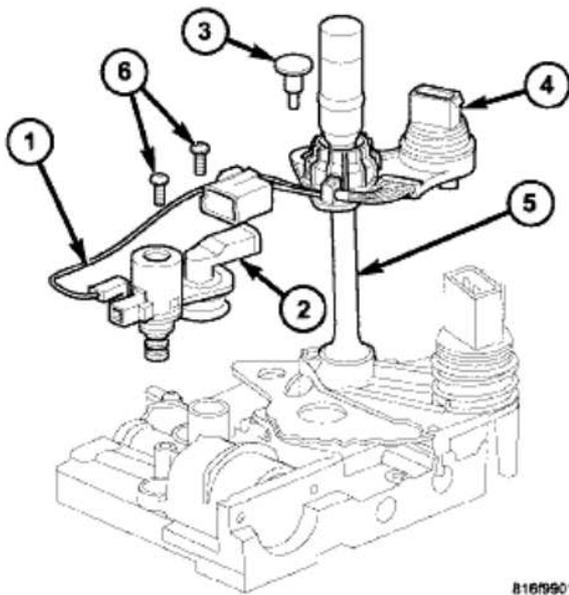


Fig. 415: Identifying Variable Line Pressure Components
Courtesy of CHRYSLER LLC

- 1 - PRESSURE CONTROL SOLENOID
- 2 - LINE PRESSURE SENSOR
- 3 - SHOULDER SCREW
- 4 - VARIABLE LINE PRESSURE HEADER
- 5 - MANUAL SHAFT
- 6 - SCREWS

The pressure control solenoid (1) is mounted on the top of the valve body, next to the line pressure sensor (2).

The TCM utilizes a closed-loop system to control transmission line pressure. The system contains a variable force style solenoid, the Pressure Control Solenoid. The solenoid is duty cycle controlled by the TCM to vent the unnecessary line pressure supplied by the oil pump back to the sump. The system also contains a variable pressure style sensor, the Line Pressure Sensor, which is a direct input to the TCM. The line pressure solenoid monitors the transmission line pressure and completes the feedback loop to the TCM. The TCM uses this information to adjust its control of the pressure control solenoid to achieve the desired line pressure.

OPERATION

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OPERATION

The pressure control solenoid (PCS) is a variable force (VFS) style solenoid. A VFS solenoid is an electro-hydraulic actuator, combining a solenoid and a regulating valve.

The transmission control module varies the current for the PCS, which varies the pressure in the line pressure hydraulic circuit. When the current (duty cycle) of the PCS is low, the pressure in the circuit is higher. At 0 current (0% duty cycle), the pressure is at the maximum value. Conversely, when the current is maximized (100% duty cycle), the pressure in the circuit is at the lowest possible value.

REMOVAL

REMOVAL

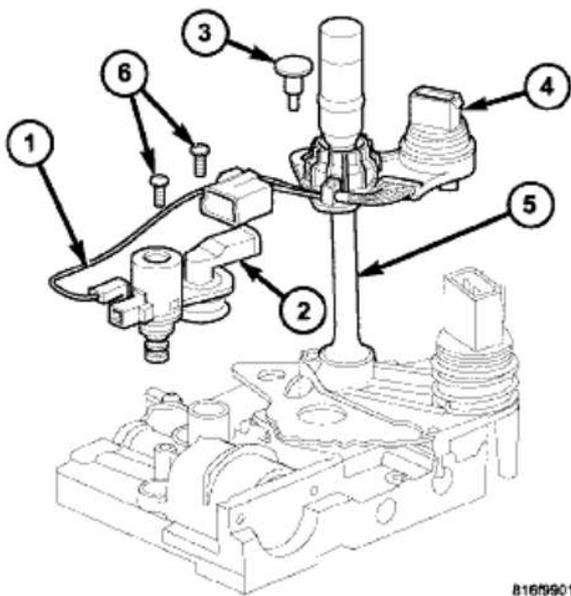


Fig. 416: Removing/Installing Pressure Control Solenoid & Line Pressure Sensor
Courtesy of CHRYSLER LLC

- | |
|---|
| <p>1 - PRESSURE CONTROL SOLENOID
 2 - LINE PRESSURE SENSOR
 3 - SHOULDER SCREW
 4 - VARIABLE LINE PRESSURE HEADER
 5 - MANUAL SHAFT
 6 - SCREWS</p> |
|---|

1. Remove the valve body from the transmission. See [Transmission and Transfer Case/Automatic - 41TE/VALVE BODY - Removal](#).

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2. Remove the electrical connectors from the pressure control solenoid (1) and the line pressure sensor (2).
3. Remove the screws (6) holding the pressure control solenoid (1) and line pressure sensor (2) to the valve body.
4. Remove the pressure control solenoid and line pressure sensor from the valve body.

INSTALLATION

INSTALLATION

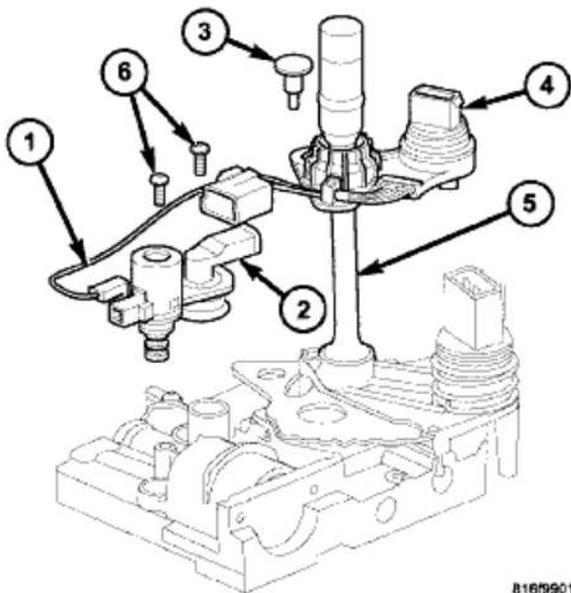


Fig. 417: Removing/Installing Pressure Control Solenoid & Line Pressure Sensor
Courtesy of CHRYSLER LLC

- | |
|-----------------------------------|
| 1 - PRESSURE CONTROL SOLENOID |
| 2 - LINE PRESSURE SENSOR |
| 3 - SHOULDER SCREW |
| 4 - VARIABLE LINE PRESSURE HEADER |
| 5 - MANUAL SHAFT |
| 6 - SCREWS |

1. Install the pressure control solenoid (1) and line pressure sensor (2) into the valve body.
2. Install the screws (6) to hold the pressure control solenoid (1) and line pressure sensor (2) to the valve body.
3. Install the electrical connectors to the pressure control solenoid (1) and the line pressure sensor (2).
4. Install the valve body into the transmission. See **Transmission and Transfer Case/Automatic - 41TE/VALVE BODY - Installation.**

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SWITCH, AUTOSTICK

DESCRIPTION

DESCRIPTION

Autostick is a driver-interactive transmission feature that offers manual gear shifting capability to provide you with more control. Autostick allows you to maximize engine braking, eliminate undesirable upshifts and downshifts, and improve overall vehicle performance. This system can also provide you with more control during passing, city driving, cold slippery conditions, mountain driving, trailer towing, and many other situations.

OPERATION

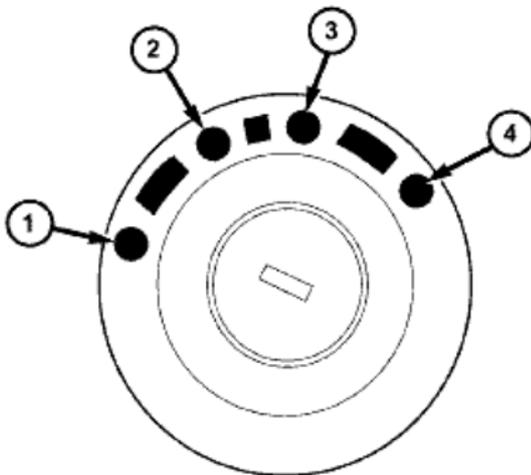
OPERATION

Autostick is a driver interactive transaxle feature that offers manual gear shifting capability. When the shifter is moved into the Autostick position, the transaxle remains in whatever gear it was using before Autostick was activated. Moving the shifter to the left (towards the driver) causes a downshift and moving to the right (towards the passenger) causes an upshift. The instrument cluster will illuminate the selected gear. The vehicle can be launched in 1st, 2nd, or 3rd gear while in the Autostick mode. The speed control is operable in 3rd and 4th gear Autostick mode. Speed control will be deactivated if the transaxle is shifted to 2nd gear. Shifting into OD position cancels the Autostick mode, and the transaxle resumes the OD shift schedule.

SYSTEM, SHIFT INTERLOCK

DESCRIPTION

DESCRIPTION



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Fig. 418: Identifying Ignition Key/Switch Positions

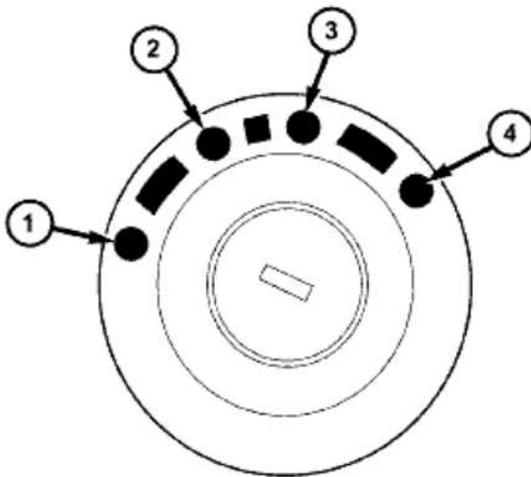
Courtesy of CHRYSLER LLC

- 1 - LOCK
- 2 - ACC
- 3 - ON
- 4 - START

The Brake Transmission Shifter/Ignition Interlock (BTSI) is a solenoid operated system that prevents the transmission gear shifter from being moved out of PARK without a driver in place.

OPERATION

OPERATION



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Fig. 419: Identifying Ignition Key/Switch Positions

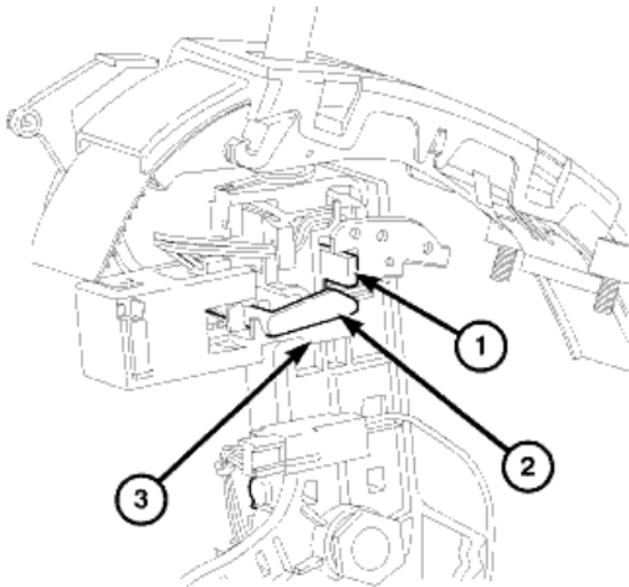
Courtesy of CHRYSLER LLC

- 1 - LOCK
- 2 - ACC
- 3 - ON
- 4 - START

The Brake Transmission Shifter/Ignition Interlock (BTSI) is engaged whenever the ignition switch is in the LOCK or ACC position. An additional electrically activated feature will prevent shifting out of the PARK position unless the brake pedal is depressed at least one-half inch. When the key is in the ON position and the brake pedal is depressed, the shifter is unlocked and will move into any position.

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Fig. 420: Identifying Rotating Arm, Blocking Arm, & Shifter Gate Pin

Courtesy of CHRYSLER LLC

When service brake pedal is not depressed the solenoid rotating arm (2) is free to rotate. The shifter gate pin (1) hits the blocking arm (3) and is prevented from moving from park.

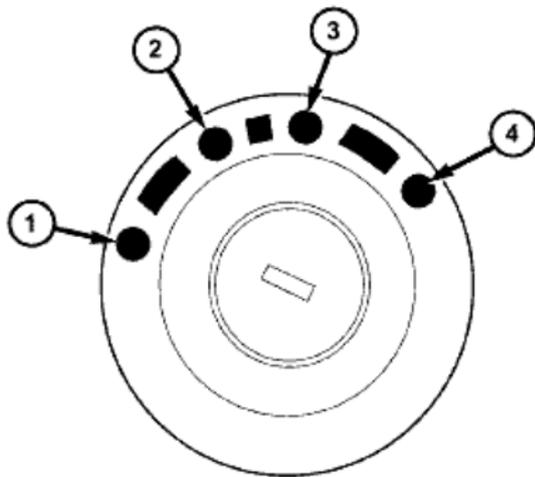
When service brake is applied the rotating arm (2) is prevented from rotating by magnetic force within the solenoid. The shifter gate pin (1) pushes the rotating arm (2) and blocker arm (3) allowing the shifter to move out of park.

DIAGNOSIS AND TESTING

SHIFT INTERLOCK SYSTEM

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Fig. 421: Identifying Ignition Key/Switch Positions

Courtesy of CHRYSLER LLC

- | |
|-----------|
| 1 - LOCK |
| 2 - ACC |
| 3 - ON |
| 4 - START |

The Shifter Response Table describes the normal operation of the Brake Transmission Shift Interlock (BTSI) system. If the "expected response" differs from the vehicle's response, then system repair is necessary.

Refer to **SHIFTER RESPONSE** for expected shifter response, depending on ignition key/switch and brake pedal positions.

If the shifter cannot be moved out of the PARK position, refer to **SHIFTER LOCKED IN PLACE**. If the shift lever can be shifted out of PARK without the brake pedal depressed, the BTSI solenoid is faulty and the shifter must be replaced. If the shift lever still does not move from the park position, the problem is in the shift lever assembly. .

SHIFTER LOCKED IN PLACE

1. Gain access to the brake transmission shift interlock (BTSI) solenoid. The solenoid is part of the shifter assembly.
2. Disconnect the wire connector from the rear of the BTSI solenoid.
3. Insert the ignition key and turn it to the ON position.
4. With the brakes applied, try moving the shifter out of the PARK position.

If the above test passes and the shifter can still be moved freely in and out of PARK without the brake pedal depressed, replace shifter assembly.

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SHIFTER RESPONSE

ACTION	EXPECTED RESPONSE
1. Turn key to the "ACC" position and depress brake pedal.	1. Shifter CAN be shifted out of park.
2. Turn key to the "ON" position, with foot off of brake pedal.	2. Shifter CANNOT be shifted out of park.
3. Turn key to the "ON" position and depress the brake pedal.	3. Shifter CAN be shifted out of park.
4. Leave shifter in any gear and try to return key to the "LOCK" position.	4. Key cannot be returned to the "LOCK" position.
5. Return shifter to "PARK" and try to remove the key.	5. Key can be removed (after returning to "LOCK" position).
6. With the key removed, try to shift out of "PARK".	6. Shifter cannot be shifted out of "PARK".
Insert the key into the ignition cylinder and leave it at "LOCK." Try to move the transmission out of "Park".	Shifter cannot be shifted out of "PARK".
NOTE: Any failure to meet these expected responses requires system repair.	

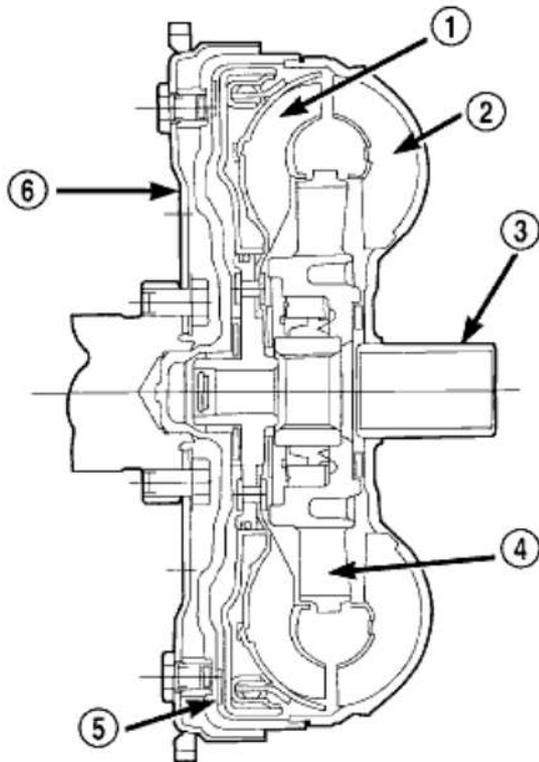
TORQUE CONVERTER

DESCRIPTION

DESCRIPTION

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80be46a3

Fig. 422: Identifying Torque Converter Components
Courtesy of CHRYSLER LLC

- 1 - TURBINE
- 2 - IMPELLER
- 3 - HUB
- 4 - STATOR
- 5 - CONVERTER CLUTCH DISC
- 6 - DRIVE PLATE

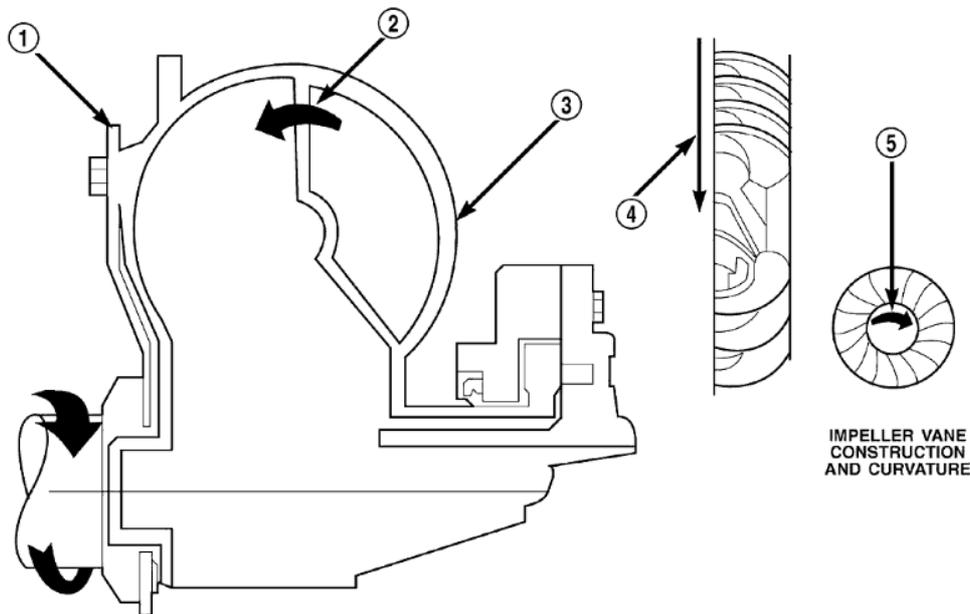
The torque converter is a hydraulic device that couples the engine crankshaft to the transmission. The torque converter consists of an outer shell with an internal turbine (1), a stator (4), an over-running clutch, an impeller (2) and an electronically applied converter clutch (5). The converter clutch provides reduced engine speed and greater fuel economy when engaged. Clutch engagement also provides reduced transmission fluid temperatures. The converter clutch engages in third gear. The torque converter hub (3) drives the transmission oil (fluid) pump.

The torque converter is a sealed, welded unit that is not repairable and is serviced as an assembly.

IMPELLER

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Fig. 423: Identifying Impeller Operation

Courtesy of CHRYSLER LLC

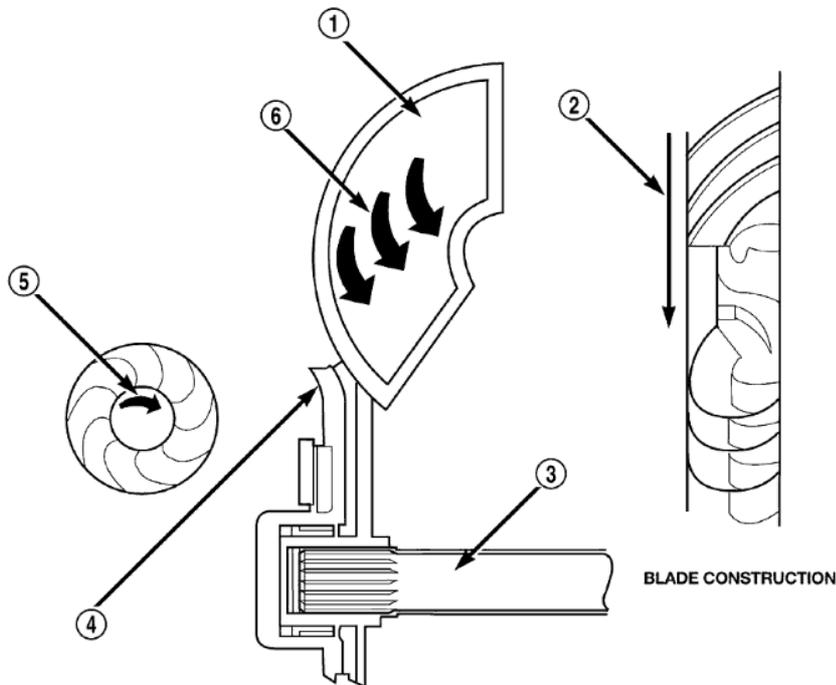
1 - ENGINE FLEXPLATE	4 - ENGINE ROTATION
2 - OIL FLOW FROM IMPELLER SECTION INTO TURBINE SECTION	5 - ENGINE ROTATION
3 - IMPELLER VANES AND COVER ARE INTEGRAL	

The impeller (3) is an integral part of the converter housing. The impeller consists of curved blades placed radially along the inside of the housing on the transmission side of the converter. As the converter housing is rotated by the engine (4,5), so is the impeller, because they are one and the same and are the driving member of the system.

TURBINE

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Fig. 424: Identifying Turbine Operation
Courtesy of CHRYSLER LLC

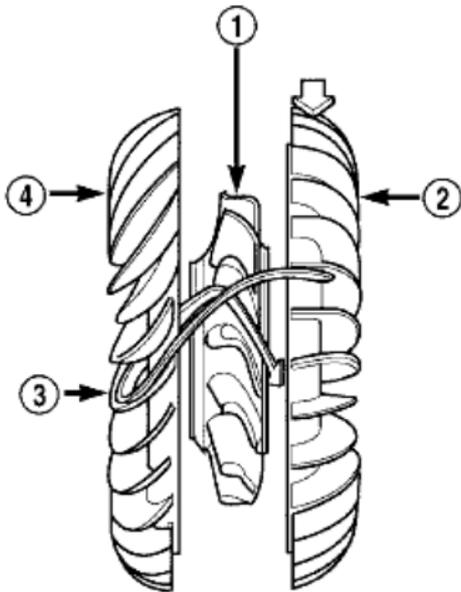
- 1 - TURBINE VANE
- 2 - ENGINE ROTATION
- 3 - INPUT SHAFT
- 4 - PORTION OF TORQUE CONVERTER COVER
- 5 - ENGINE ROTATION
- 6 - OIL FLOW WITHIN TURBINE SECTION

The turbine (1) is the output, or driven, member of the converter. The turbine is mounted within the housing opposite the impeller, but is not attached to the housing. The input shaft (3) is inserted through the center of the impeller and splined into the turbine. The design of the turbine is similar to the impeller, except the blades of the turbine are curved in the opposite direction.

STATOR

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Fig. 425: Locating Stator Assembly
Courtesy of CHRYSLER LLC

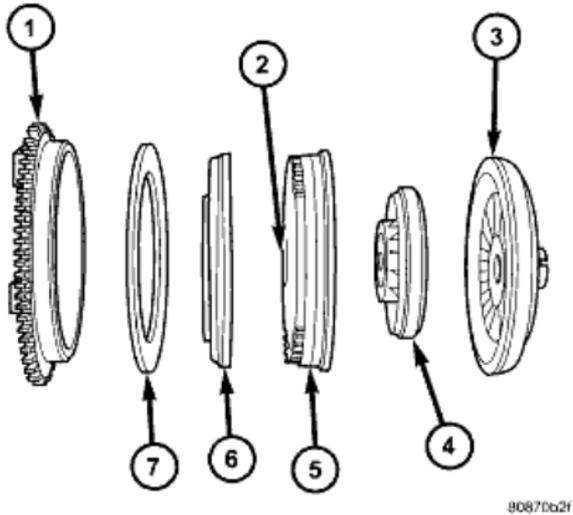
- 1 - STATOR
- 2 - IMPELLER
- 3 - FLUID FLOW
- 4 - TURBINE

The stator assembly (1) is mounted on a stationary shaft which is an integral part of the oil pump. The stator is located between the impeller (2) and turbine (4) within the torque converter case. The stator contains an over-running clutch, which allows the stator to rotate only in a clockwise direction. When the stator is locked against the over-running clutch, the torque multiplication feature of the torque converter is operational.

TORQUE CONVERTER CLUTCH (TCC)

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Fig. 426: Identifying Torque Converter Clutch (TCC) Components
Courtesy of CHRYSLER LLC

- 1 - IMPELLER FRONT COVER
- 2 - THRUST WASHER ASSEMBLY
- 3 - IMPELLER
- 4 - STATOR
- 5 - TURBINE
- 6 - PISTON
- 7 - FRICTION DISC

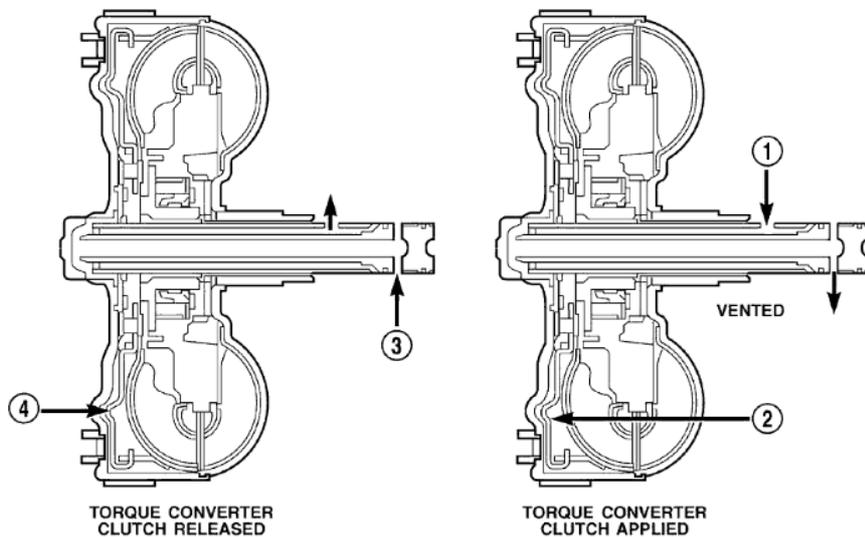
The TCC was installed to improve the efficiency of the torque converter that is lost to the slippage of the fluid coupling. Although the fluid coupling provides smooth, shock-free power transfer, it is natural for all fluid couplings to slip. If the impeller (3) and turbine (5) were mechanically locked together, a zero slippage condition could be obtained. A hydraulic piston (6) was added to the turbine (5), and a friction material (7) was added to the inside of the front cover (1) to provide this mechanical lock-up.

OPERATION

OPERATION

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Fig. 427: Identifying Torque Converter Fluid Pressure Operation

Courtesy of CHRYSLER LLC

1 - APPLY PRESSURE	3 - RELEASE PRESSURE
2 - THE PISTON MOVES SLIGHTLY FORWARD	4 - THE PISTON MOVES SLIGHTLY REARWARD

The converter impeller (driving member), which is integral to the converter housing and bolted to the engine drive plate, rotates at engine speed. The converter turbine (driven member), which reacts from fluid pressure generated by the impeller, rotates and turns the transmission input shaft .

TURBINE

As the fluid that was put into motion by the impeller blades strikes the blades of the turbine, some of the energy and rotational force is transferred into the turbine and the input shaft. This causes both of them (turbine and input shaft) to rotate in a clockwise direction following the impeller. As the fluid is leaving the trailing edges of the turbine's blades, it continues in a "hindering" direction back toward the impeller. If the fluid is not redirected before it strikes the impeller, it will strike the impeller in such a direction that it would tend to slow it down.

STATOR

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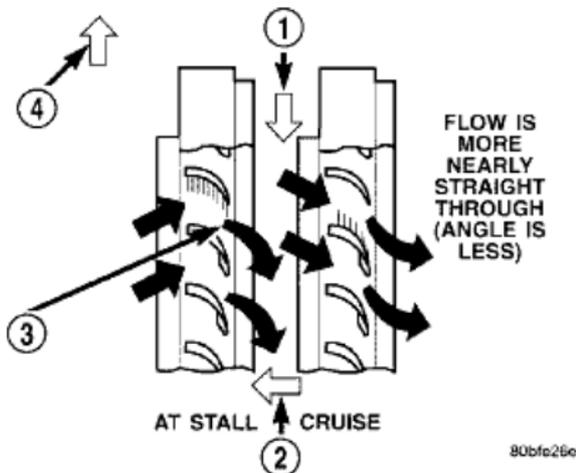


Fig. 428: Identifying Stator Operation
Courtesy of CHRYSLER LLC

- 1 - DIRECTION STATOR WILL FREE WHEEL DUE TO OIL PUSHING ON BACKSIDE OF VANES
- 2 - FRONT OF ENGINE
- 3 - INCREASED ANGLE AS OIL STRIKES VANES
- 4 - DIRECTION STATOR IS LOCKED UP DUE TO OIL PUSHING AGAINST STATOR VANES

Torque multiplication is achieved by locking the stator's over-running clutch to its shaft. Under stall conditions (the turbine is stationary), the oil leaving the turbine blades strikes the face of the stator blades and tries to rotate them in a counterclockwise direction. When this happens the over-running clutch of the stator locks and holds the stator from rotating. With the stator locked, the oil strikes the stator blades and is redirected into a "helping" direction before it enters the impeller. This circulation of oil from impeller to turbine, turbine to stator, and stator to impeller, can produce a maximum torque multiplication of about 2.4:1. As the turbine begins to match the speed of the impeller, the fluid that was hitting the stator in such a way as to cause it to lock-up is no longer doing so. In this condition of operation, the stator begins to free wheel and the converter acts as a fluid coupling .

TORQUE CONVERTER CLUTCH (TCC)

In a standard torque converter, the impeller and turbine are rotating at about the same speed and the stator is freewheeling, providing no torque multiplication. By applying the turbine's piston to the front cover's friction material, a total converter engagement can be obtained. The result of this engagement is a direct 1:1 mechanical link between the engine and the transmission.

The engagement and disengagement of the TCC are automatic and controlled by the Powertrain Control Module (PCM). The engagement cannot be activated in the lower gears because it eliminates the torque multiplication effect of the torque converter necessary for acceleration. Inputs that determine clutch engagement are: coolant temperature, vehicle speed and throttle position. The torque converter clutch is engaged by the clutch solenoid on the valve body. The clutch will engage at approximately 56 km/h (35 mph) with light throttle, after the shift to third gear.

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REMOVAL

REMOVAL

1. Remove transmission and torque converter from vehicle. See [Transmission and Transfer Case/Automatic - 41TE - Removal](#).
2. Place a suitable drain pan under the converter housing end of the transmission.

CAUTION: Verify that transmission is secure on the lifting device or work surface, the center of gravity of the transmission will shift when the torque converter is removed creating an unstable condition.

The torque converter is a heavy unit. Use caution when separating the torque converter from the transmission.

3. Pull the torque converter forward until the center hub clears the oil pump seal.
4. Separate the torque converter from the transmission.

INSTALLATION

INSTALLATION

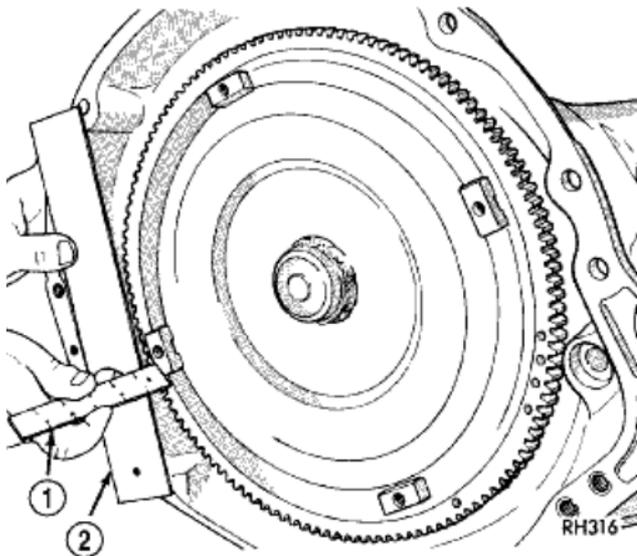


Fig. 429: Checking Torque Converter Seating
Courtesy of CHRYSLER LLC

- | |
|------------------|
| 1 - SCALE |
| 2 - STRAIGHTEDGE |

Check converter hub and drive notches for sharp edges, burrs, scratches, or nicks. Polish the hub and notches

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with 320/400 grit paper or crocus cloth if necessary. The hub must be smooth to avoid damaging the pump seal at installation.

1. Lubricate converter hub and oil pump seal lip with transmission fluid.
2. Place torque converter in position on transmission.

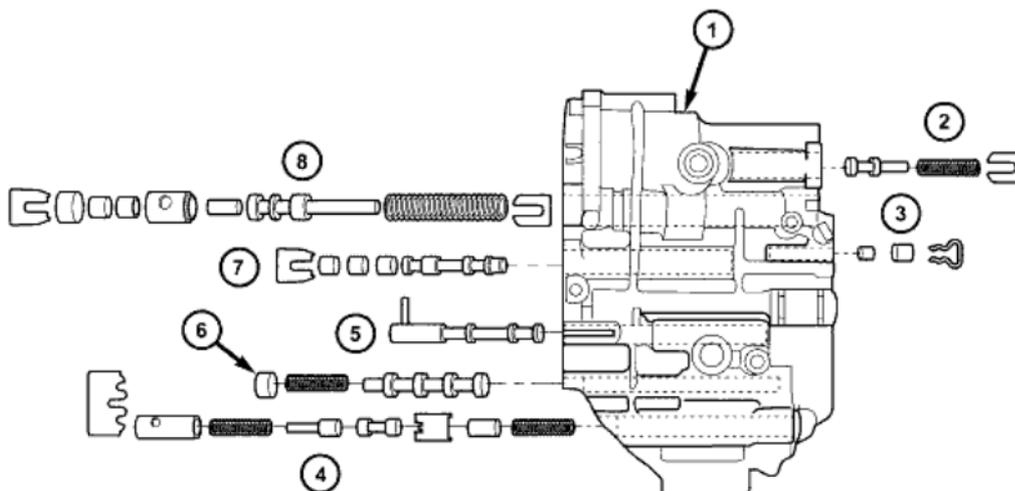
CAUTION: Do not damage oil pump seal or bushing while inserting torque converter into the front of the transmission.

3. Align torque converter to oil pump seal opening.
4. Insert torque converter hub into oil pump.
5. While pushing torque converter inward, rotate converter until converter is fully seated in the oil pump gears.
6. Check converter seating with a scale (1) and straightedge (2). Surface of converter lugs should be 1/2 in. to rear of straightedge when converter is fully seated.
7. If necessary, temporarily secure converter with C-clamp attached to the converter housing.
8. Install the transmission in the vehicle. See Transmission and Transfer Case/Automatic - 41TE - Installation.
9. Fill the transmission with the recommended fluid. See FLUID AND FILTER SERVICE.

VALVE BODY

DESCRIPTION

DESCRIPTION



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Fig. 430: Identifying Valve Body Assembly

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Courtesy of CHRYSLER LLC

1 - VALVE BODY	5 - MANUAL VALVE
2 - T/C REGULATOR VALVE	6 - CONVERTER CLUTCH SWITCH VALVE
3 - L/R SWITCH VALVE	7 - SOLENOID SWITCH VALVE
4 - CONVERTER CLUTCH CONTROL VALVE	8 - REGULATOR VALVE

The valve body assembly consists of a cast aluminum valve body, a separator plate, and transfer plate. The valve body contains valves and check balls that control fluid delivery to the torque converter clutch, solenoid/pressure switch assembly, and frictional clutches. The valve body contains the following components :

- Regulator valve (8)
- Solenoid switch valve (7)
- Manual valve (5)
- Converter clutch switch valve (6)
- Converter clutch control valve (4)
- Torque converter regulator valve (2)
- Low/Reverse switch valve (3)

In addition, the valve body also contains the thermal valve, #2, #3 and #4 check balls, the #5 (overdrive) check valve and the 2/4 accumulator assembly. See **Transmission and Transfer Case/Automatic - 41TE/VALVE BODY - Disassembly**.

OPERATION

OPERATION

NOTE: Refer to **Schematics and Diagrams** for a visual aid in determining valve location, operation and design.

REGULATOR VALVE

The regulator valve controls hydraulic pressure in the transaxle. It receives unregulated pressure from the pump, which works against spring tension to maintain oil at specific pressures. A system of sleeves and ports allows the regulator valve to work at one of three predetermined pressure levels. Regulated oil pressure is also referred to as "line pressure."

SOLENOID SWITCH VALVE

The solenoid switch valve controls line pressure from the LR/CC solenoid. In one position, it allows the low/reverse clutch to be pressurized. In the other, it directs line pressure to the converter control and converter clutch valves.

MANUAL VALVE

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The manual valve is operated by the mechanical shift linkage. Its primary responsibility is to send line pressure to the appropriate hydraulic circuits and solenoids. The valve has three operating ranges or positions.

CONVERTER CLUTCH SWITCH VALVE

The main responsibility of the converter clutch switch valve is to control hydraulic pressure applied to the front (off) side of the converter clutch piston. Line pressure from the regulator valve is fed to the torque converter regulator valve, where it passes through the valve, and is slightly regulated. The pressure is then directed to the converter clutch switch valve and to the front side of the converter clutch piston. This pressure pushes the piston back and disengages the converter clutch.

CONVERTER CLUTCH CONTROL VALVE

The converter clutch control valve controls the back (on) side of the torque converter clutch. When the PCM/TCM energizes or modulates the LR/CC solenoid to apply the converter clutch piston, both the converter clutch control valve and the converter control valve move, allowing pressure to be applied to the back side of the clutch.

T/C REGULATOR VALVE

The torque converter regulator valve slightly regulates the flow of fluid to the torque converter.

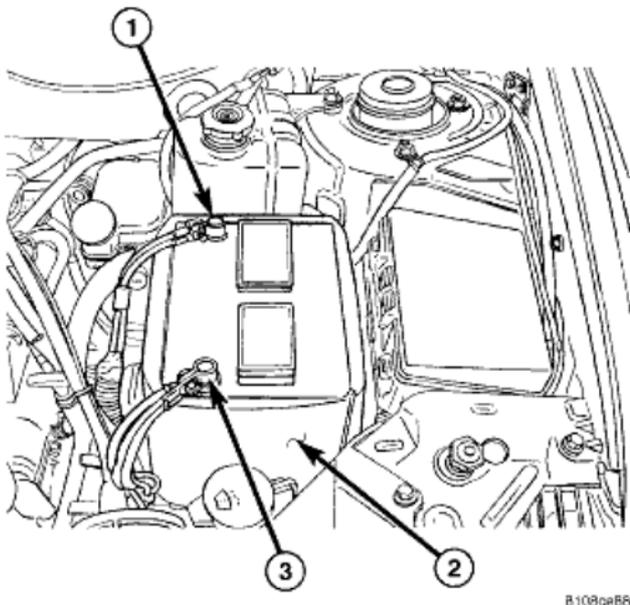
LOW/REVERSE SWITCH VALVE

The low/reverse clutch is applied from different sources, depending on whether low (1st) gear or reverse is selected. The low/reverse switch valve alternates positions depending on from which direction fluid pressure is applied. By design, when the valve is shifted by fluid pressure from one channel, the opposing channel is blocked. The switch valve alienates the possibility of a sticking ball check, thus providing consistent application of the low/reverse clutch under all operating conditions.

REMOVAL**REMOVAL**

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Fig. 431: Identifying Battery Cables
Courtesy of CHRYSLER LLC

- 1 - BATTERY POSITIVE CABLE
- 2 - THERMO-WRAP
- 3 - BATTERY NEGATIVE CABLE

NOTE: If valve body is replaced or reconditioned, the PCM Quick Learn Procedure must be performed. Refer to Electrical - Electronic Control Modules/Electronic Control Modules/MODULE, Powertrain Control - Standard Procedure .

NOTE: The Engine Cradle Crossmember assembly must be partially lowered to gain access to and remove the Valve Body assembly.

1. Disconnect battery negative cable.

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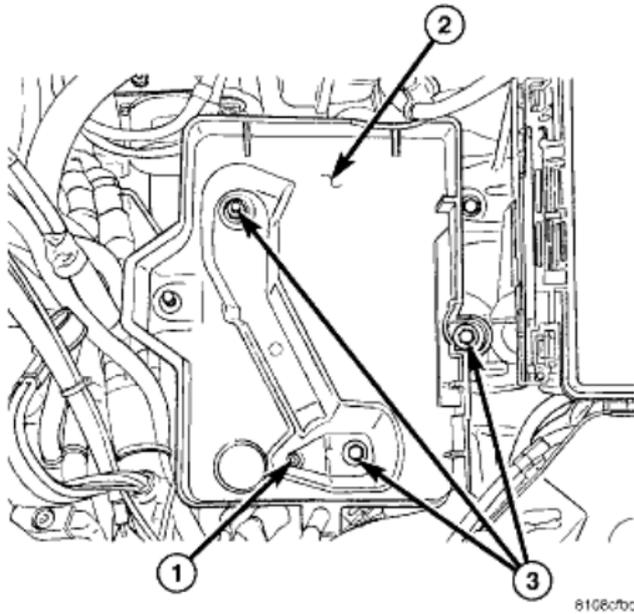


Fig. 432: Removing/Installing Battery & Tray
Courtesy of CHRYSLER LLC

- 1 - DRAIN HOLE/HOSE ATTACHMENT
- 2 - BATTERY TRAY
- 3 - BOLTS

2. Remove battery and tray.

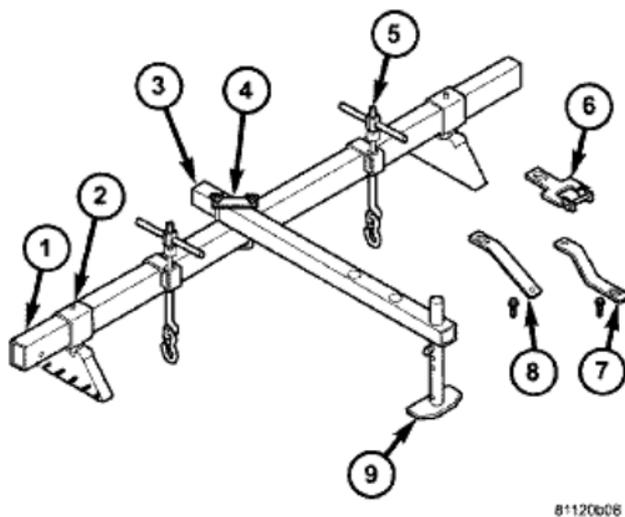


Fig. 433: Installing Overhead Powertrain Support Fixture

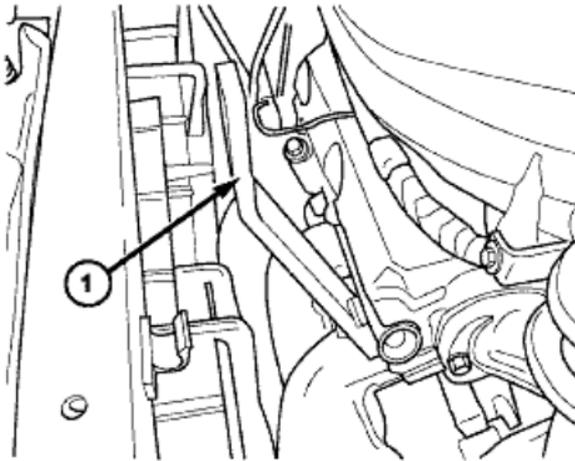
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Courtesy of CHRYSLER LLC

- 1 - SUPPORT TUBE 8534-1
- 2 - BRACKET/SLEEVE 8534-2
- 3 - CROSS-BAR 8534-3
- 4 - CLAMP 8534-5
- 5 - LIFT HOOK ASSEMBLY
- 6 - LIFT BRACKET/BOLT 8534-15
- 7 - LIFT BRACKET/BOLT 8534-7
- 8 - LIFT BRACKET/BOLT 8534-8
- 9 - SUPPORT LEG 8534-4

3. Install overhead powertrain support fixture (Tool 8534B and adapter kit 8534-12)



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Fig. 434: Installing Lift/Support Bracket 8534-8

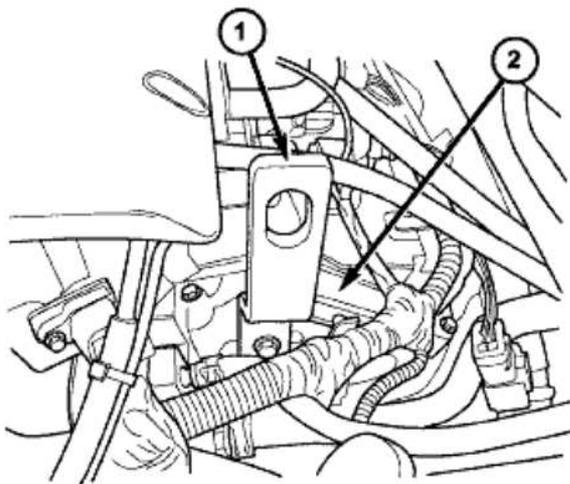
Courtesy of CHRYSLER LLC

- 1 - BRACKET 8534-8

4. Remove engine oil dipstick tube-to-cylinder head fastener. Install lift/support bracket 8534-8 and secure with dipstick tube bolt.

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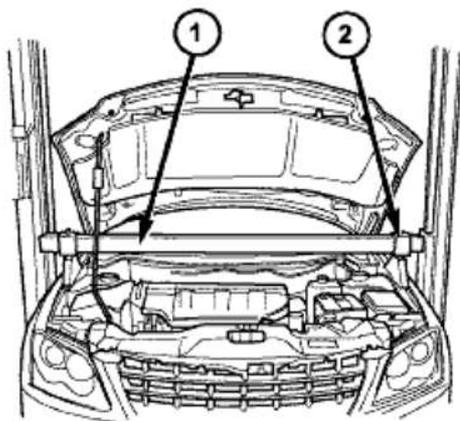


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Fig. 435: Installing Lift/Support Bracket 8534-7 & Bolt
Courtesy of CHRYSLER LLC

- 1 - BRACKET 8534-7
- 2 - REAR CYLINDER HEAD

5. Disconnect coolant temperature sensor (at thermostat housing). Remove engine harness-to-cylinder head bolt. Position harness out of the way. Install and secure lift/support bracket and bolt 8534-7



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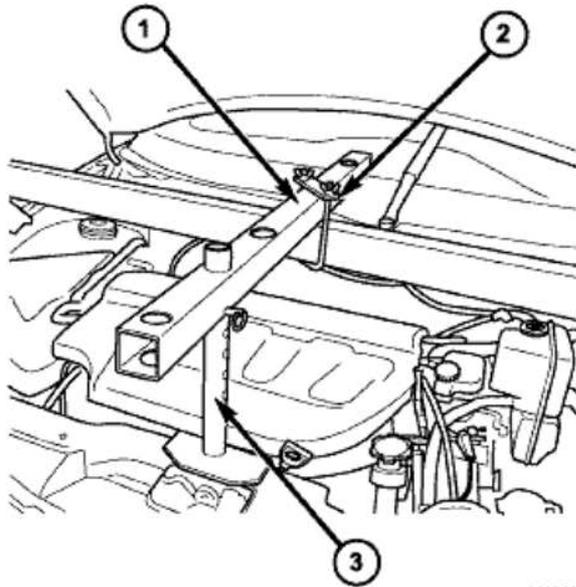
Fig. 436: Identifying Support Tube & Sleeve/Bracket
Courtesy of CHRYSLER LLC

- 1 - SUPPORT TUBE 8534-1
- 2 - BRACKET/SLEEVE 8534-2

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6. Assemble cross-bar 8534-3, clamp 8534-5 and support leg 8534-4 to support tube, allowing support leg to rest on radiator upper support.



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Fig. 437: Identifying Crossbar, Support Leg, & Clamp
Courtesy of CHRYSLER LLC

- | |
|--|
| 1 - CROSS-BAR 8534-3
2 - CLAMP 8534-5
3 - SUPPORT LEG 8534-4 |
|--|

7. Tighten cross-bar-to-support tube clamp 8534-5 , as well as mounting bracket/sleeve 8534-2 thumb screw and hex nut to secure fixture.

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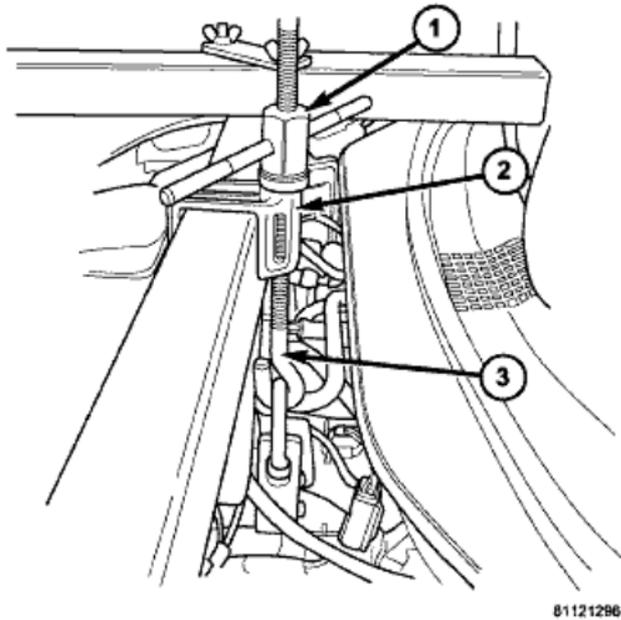


Fig. 438: Installing Bracket/Hook Assemblies
Courtesy of CHRYSLER LLC

- 1 - T-HANDLE 8534-14
- 2 - LIFTING BRACKET 8534-13
- 3 - HOOK ASSEMBLY 8534-11

8. Install lift bracket/hook assemblies.

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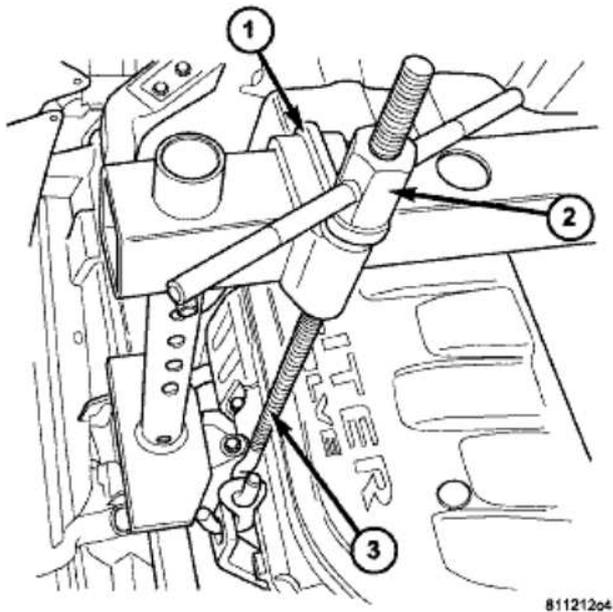


Fig. 439: Identifying T-Handle, Lifting Bracket, & Hook Assembly
Courtesy of CHRYSLER LLC

- | |
|---|
| <p>1 - LIFTING BRACKET 8534-13
2 - T-HANDLE 8534-14
3 - HOOK ASSEMBLY 8534-11</p> |
|---|

9. Tighten t-handles just enough to build tension between the fixture and drivetrain.
10. Disconnect gearshift cable from manual valve lever.
11. Remove manual valve lever from manual shaft.
12. Raise vehicle on hoist.
13. Remove engine mount (front and rear) to engine cradle crossmember nuts.
14. Place scribe marks at engine cradle crossmember and body for alignment upon reassembly.
15. Support cradle at rear with screw jack or equivalent. Partially remove engine cradle crossmember-to-body bolts, lowering cradle at rear enough to facilitate cradle pivoting.
16. Support cradle at front with screw jack or equivalent. Remove engine cradle crossmember-to-body bolts. Lower cradle at front approximately 10 inches to facilitate valve body removal.

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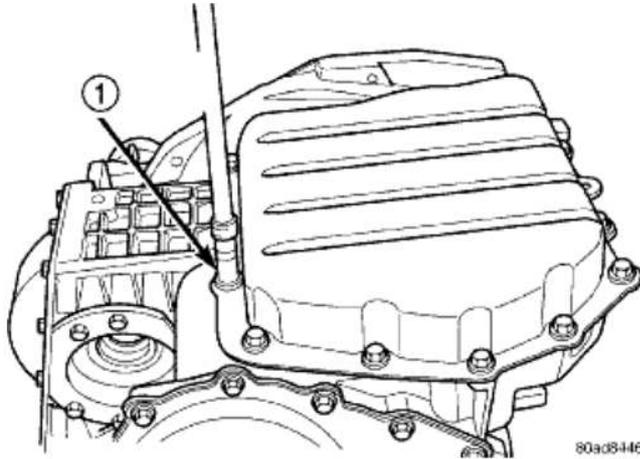


Fig. 440: Identifying Oil Pan Bolts
Courtesy of CHRYSLER LLC

1 - OIL PAN BOLTS (USE RTV UNDER BOLT HEADS)

17. Remove oil pan bolts.

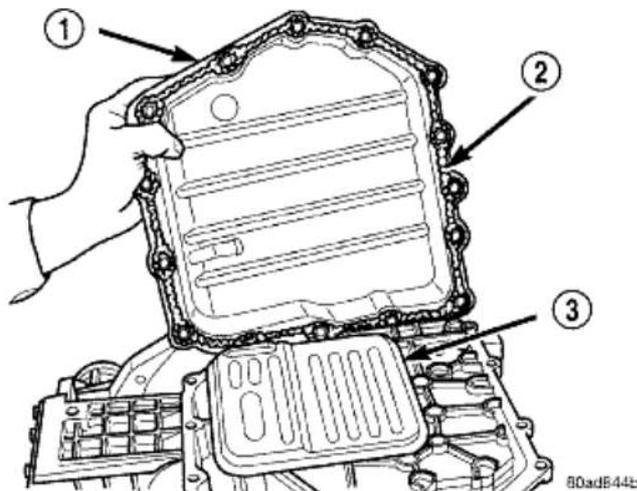


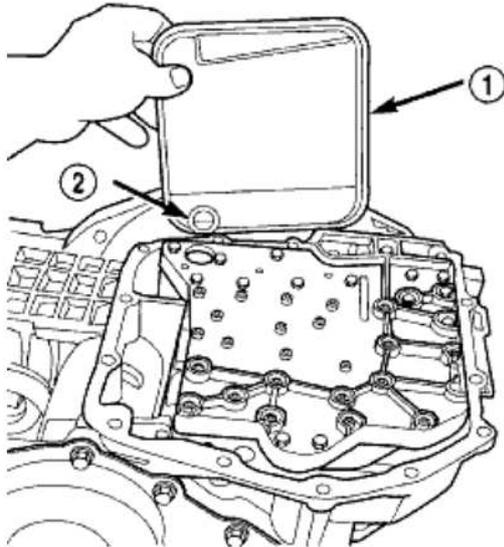
Fig. 441: Removing/Installing Oil Pan
Courtesy of CHRYSLER LLC

1 - OIL PAN
2 - 1/8 INCH BEAD OF RTV SEALANT
3 - OIL FILTER

18. Remove oil pan.

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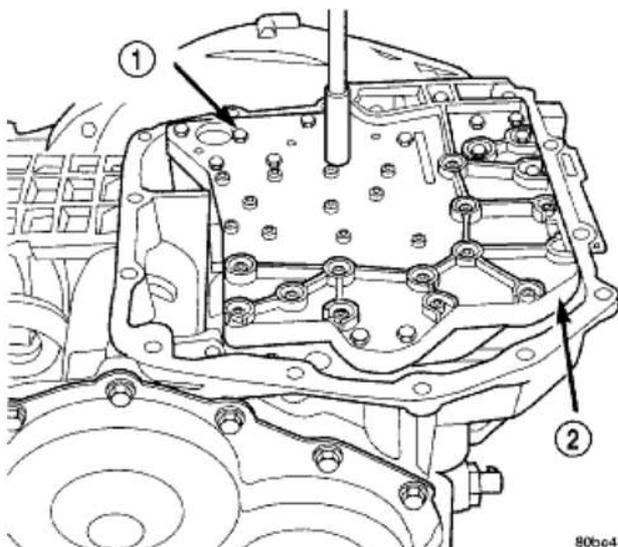


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Fig. 442: Identifying Filter & O-Ring
Courtesy of CHRYSLER LLC

- | |
|----------------|
| 1 - OIL FILTER |
| 2 - O-RING |

19. Remove oil filter.



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Fig. 443: Identifying Valve Body-To-Transaxle Case Bolts
Courtesy of CHRYSLER LLC

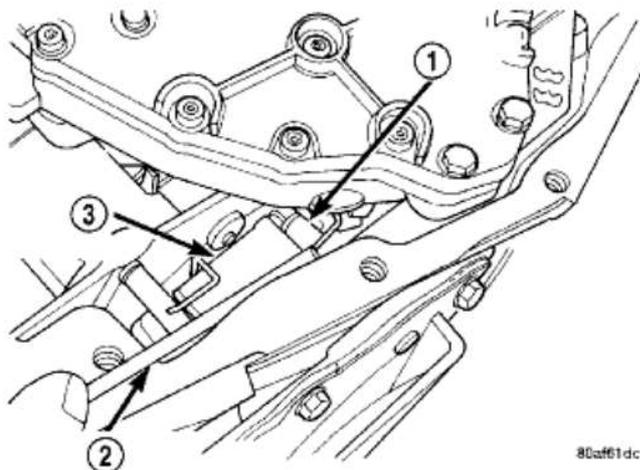
- | |
|-------------------------------------|
| 1 - VALVE BODY ATTACHING BOLTS (18) |
|-------------------------------------|

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2 - VALVE BODY

20. Remove the valve body-to-transaxle case bolts.



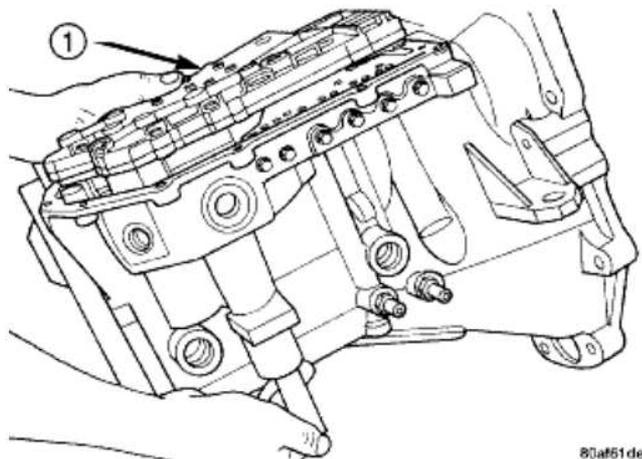
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Fig. 444: Removing/Installing Park Rod Rollers
Courtesy of CHRYSLER LLC

- | |
|------------------------------|
| 1 - PARK SPRAG ROLLERS |
| 2 - SCREWDRIVER |
| 3 - PARK SPRAG GUIDE BRACKET |

NOTE: To ease removal of the valve body, turn the manual valve lever fully clockwise to low or first gear.

21. Remove park rod rollers from guide bracket.



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Fig. 445: Removing/Installing Valve Body

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Courtesy of CHRYSLER LLC

1 - VALVE BODY

22. Remove valve body from transaxle. **Note position of accumulator and springs upon removal for assembly reference.**

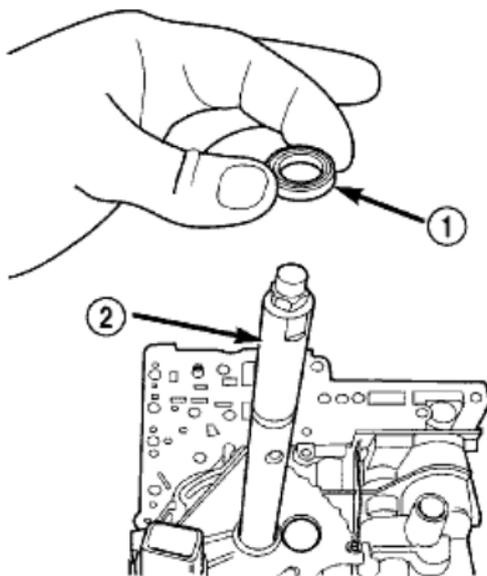
CAUTION: The valve body manual shaft pilot may distort and bind the manual valve if the valve body is mishandled or dropped.

DISASSEMBLY

DISASSEMBLY

NOTE: Cleanliness through entire disassembly and assembly of the valve body cannot be overemphasized. When disassembling, each part should be washed in a suitable solvent, then dried by compressed air. Do not wipe parts with shop towels. All mating surfaces in the valve body are accurately machined; therefore, careful handling of all parts must be exercised to avoid nicks or burrs.

NOTE: If valve body assembly is being reconditioned, the PCM/TCM Quick Learn Procedure must be performed. Refer to Electrical/Electronic Control Modules/MODULE, Powertrain Control - Standard Procedure .



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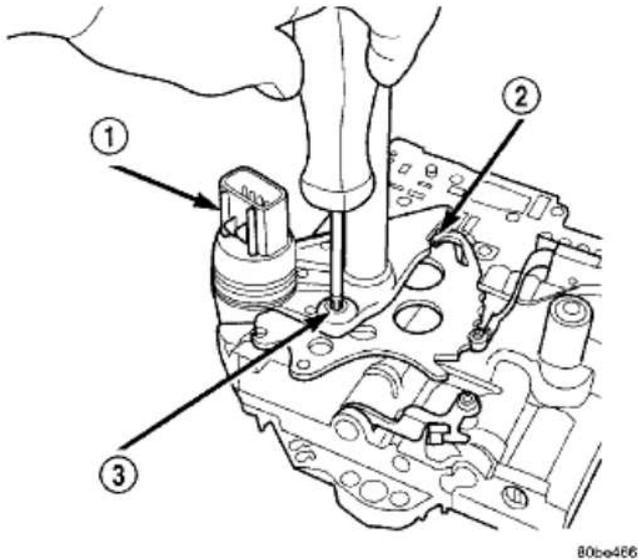
Fig. 446: Removing/Installing Manual Shaft Seal
Courtesy of CHRYSLER LLC

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- 1 - SEAL
- 2 - MANUAL SHAFT

1. Remove manual shaft seal (1).



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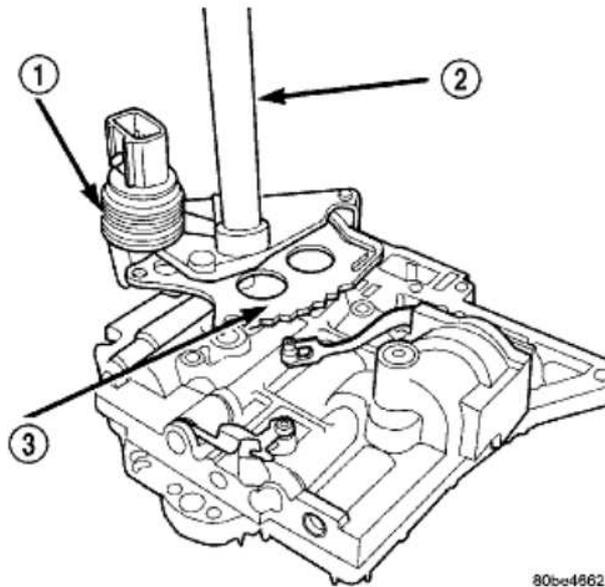
Fig. 447: Removing/Installing Transmission Range Sensor
Courtesy of CHRYSLER LLC

- 1 - TRANSMISSION RANGE SENSOR
- 2 - MANUAL VALVE CONTROL PIN
- 3 - RETAINING SCREW

2. Remove Transmission Range Sensor retaining screw (3).

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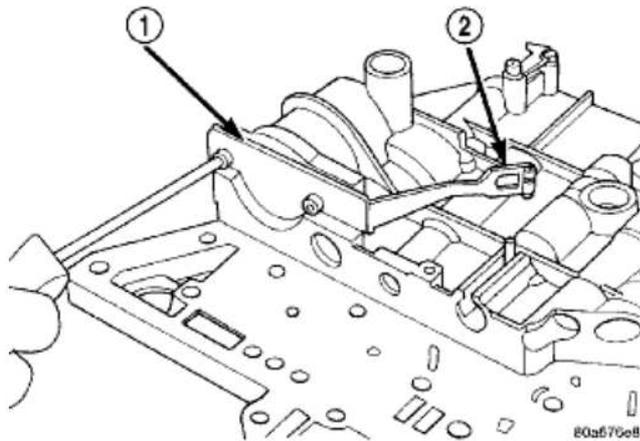


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Fig. 448: Removing/Installing Manual Shaft/Rooster Comb & Transmission Range Sensor
Courtesy of CHRYSLER LLC

- 1 - TRANSMISSION RANGE SENSOR
- 2 - MANUAL SHAFT / ROOSTER COMB
- 3 - ROOSTER COMB

3. Remove Manual Shaft/Rooster Comb (3) and Transmission Range Sensor (1).



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Fig. 449: Removing/Installing 2/4 Accumulator Retaining Plate
Courtesy of CHRYSLER LLC

- 1 - 2-4 ACCUMULATOR RETAINING PLATE
- 2 - DETENT SPRING

4. Remove 2/4 Accumulator Retaining Plate (1).

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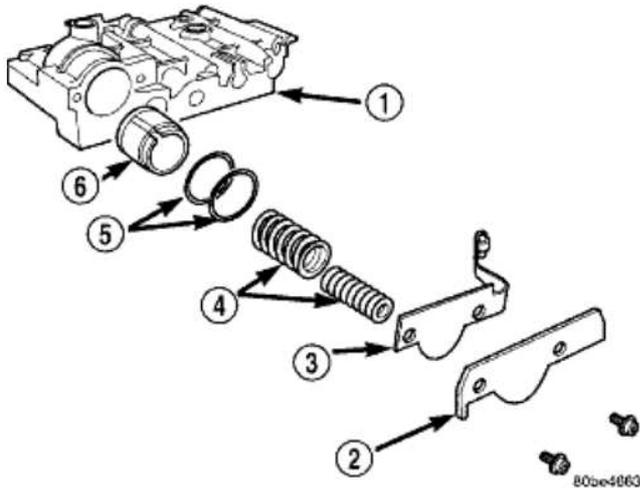


Fig. 450: Identifying 2/4 Accumulator Assembly
Courtesy of CHRYSLER LLC

- 1 - VALVE BODY
- 2 - RETAINER PLATE
- 3 - DETENT SPRING
- 4 - SPRINGS
- 5 - SEALS
- 6 - PISTON

5. Remove 2/4 Accumulator components (2,3,4,5 and 6).

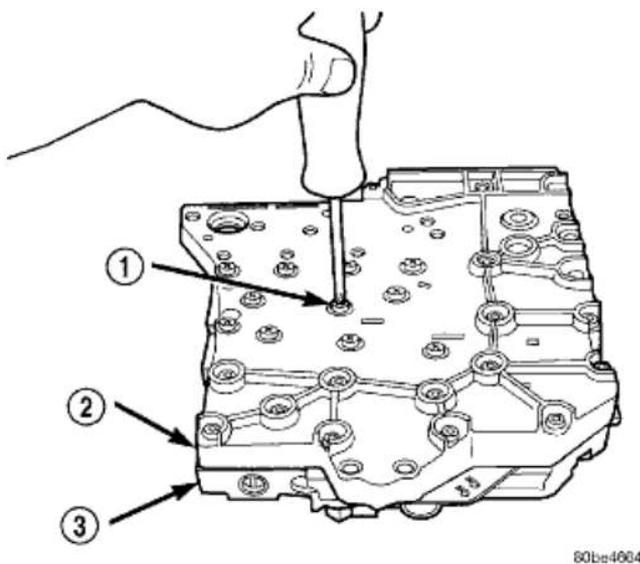


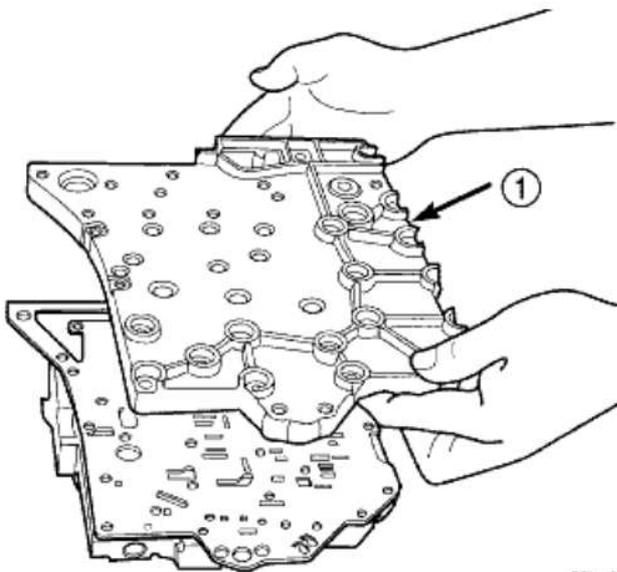
Fig. 451: Identifying Valve Body-To-Transfer Plate Screws
Courtesy of CHRYSLER LLC

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- 1 - SCREW (24)
- 2 - TRANSFER PLATE
- 3 - VALVE BODY

6. Remove Valve Body (3) to Transfer Plate (2) screws (1).

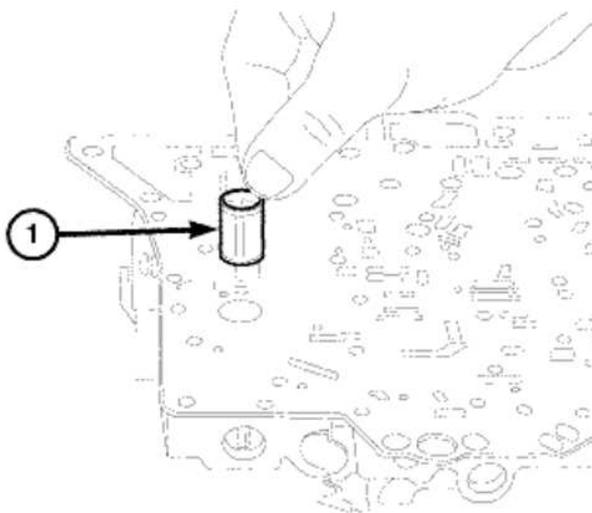


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Fig. 452: Removing/Installing Transfer Plate
Courtesy of CHRYSLER LLC

- 1 - TRANSFER PLATE

7. Invert assembly and remove Transfer Plate (1). Beware of loose check balls.



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Fig. 453: Identifying Oil Screen

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Courtesy of CHRYSLER LLC

8. Remove oil screen (1).

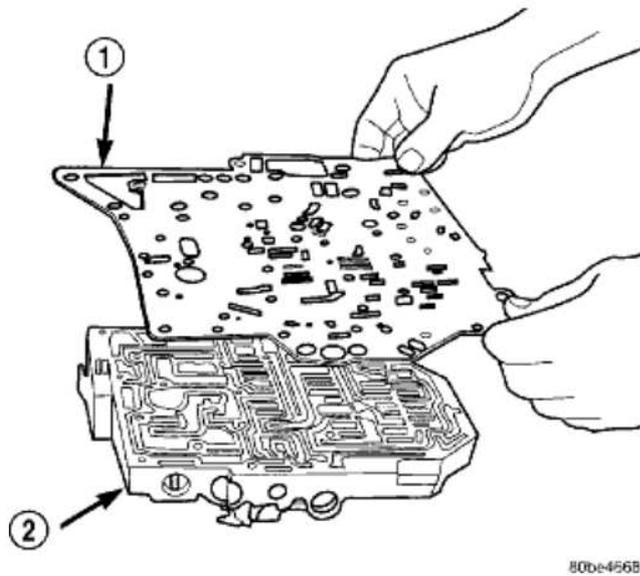


Fig. 454: Removing/Installing Separator Plate
Courtesy of CHRYSLER LLC

- | |
|---------------------|
| 1 - SEPARATOR PLATE |
| 2 - VALVE BODY |

9. Remove separator plate (1).

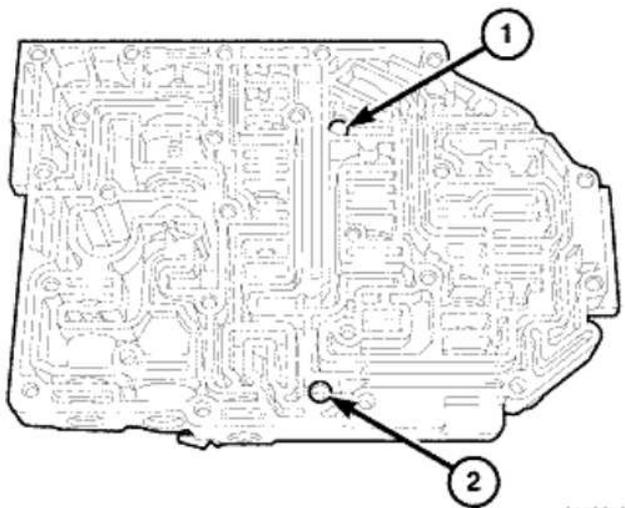


Fig. 455: Identifying Valve Body Check Balls
Courtesy of CHRYSLER LLC

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- 1 - (#4) REVERSE CHECK BALL
- 2 - (#3) L/R CHECK BALL

10. Remove valve body check balls (1 and 2). Note their location for assembly ease.

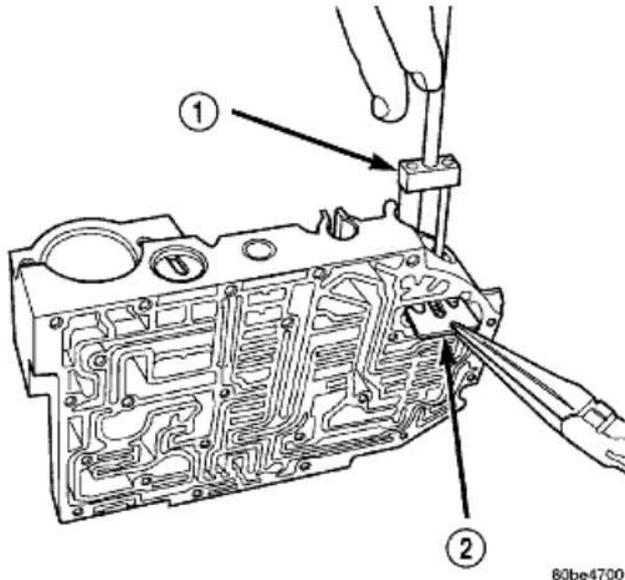


Fig. 456: Removing/Installing Dual Retainer Plate
Courtesy of CHRYSLER LLC

- 1 - REMOVER/INSTALLER 6301
- 2 - RETAINER

NOTE: Tag all valve/spring assemblies for reassembly identification.

11. Remove dual retainer plate (2) using Remover/Installer 6301(1).

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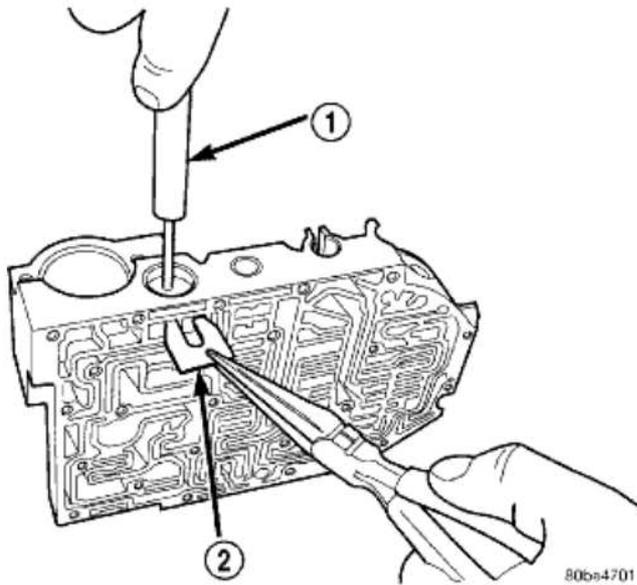


Fig. 457: Removing/Installing Regulator Valve Spring Retainer
Courtesy of CHRYSLER LLC

1 - REMOVER/INSTALLER 6302
2 - RETAINER

12. Remove regulator valve spring retainer (2) using Remover/Installer 6302 (1).

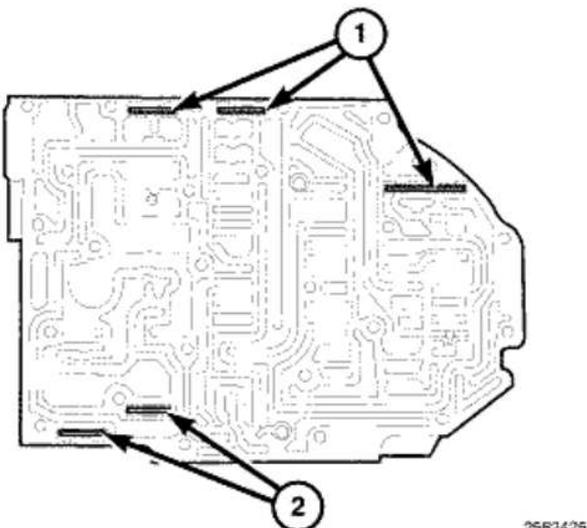


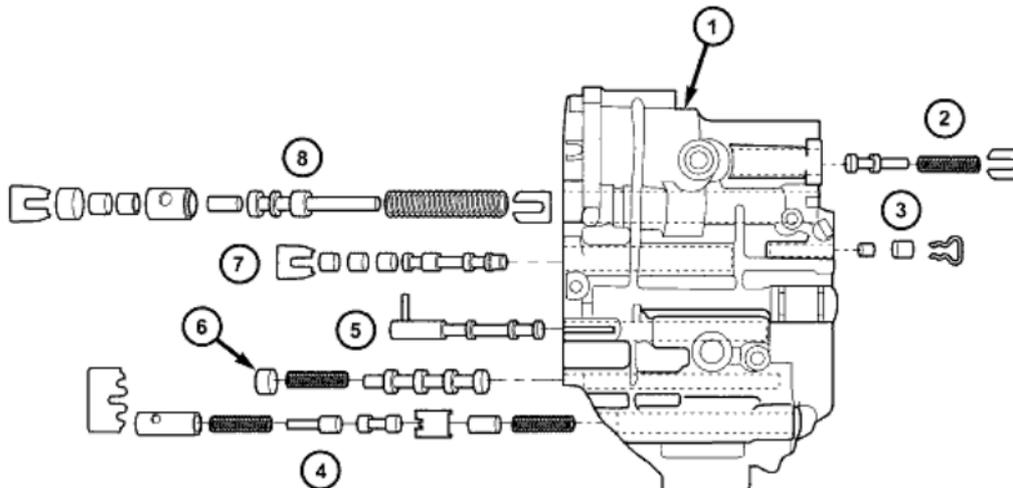
Fig. 458: Removing/Installing Valve Retainers
Courtesy of CHRYSLER LLC

1 - RETAINER
2 - RETAINER

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13. Remove retainers (1 and 2).



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Fig. 459: Identifying Valve Body Assembly
Courtesy of CHRYSLER LLC

1 - VALVE BODY	5 - MANUAL VALVE
2 - T/C REGULATOR VALVE	6 - CONVERTER CLUTCH SWITCH VALVE
3 - L/R SWITCH VALVE	7 - SOLENOID SWITCH VALVE
4 - CONVERTER CLUTCH CONTROL VALVE	8 - REGULATOR VALVE

14. Remove valves and springs.

ASSEMBLY

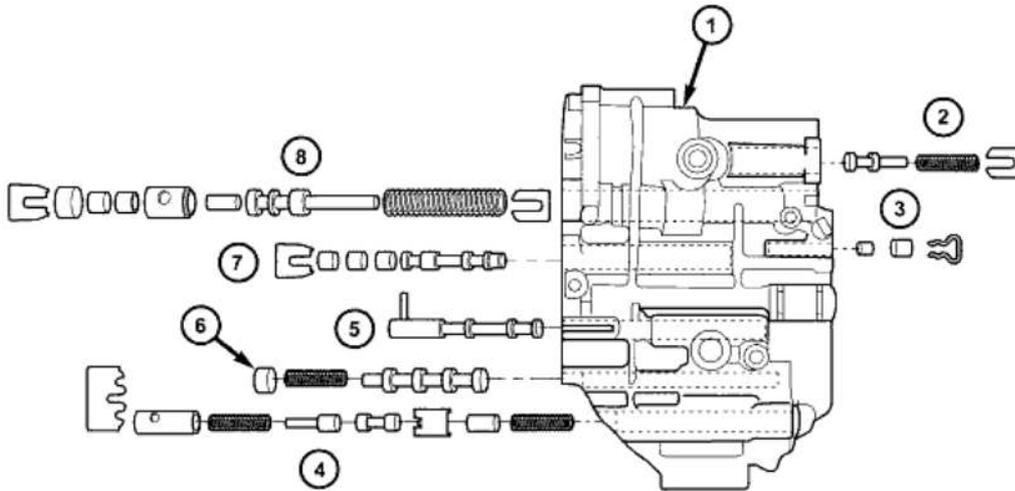
ASSEMBLY

NOTE: Cleanliness through entire disassembly and assembly of the valve body cannot be overemphasized. When disassembling, each part should be washed in a suitable solvent, then dried by compressed air. Do not wipe parts with shop towels. All mating surfaces in the valve body are accurately machined; therefore, careful handling of all parts must be exercised to avoid nicks or burrs.

NOTE: If valve body assembly is reconditioned, the PCM/TCM Quick Learn Procedure must be performed. Refer to Electrical/Electronic Control Modules/MODULE, Powertrain Control - Standard Procedure .

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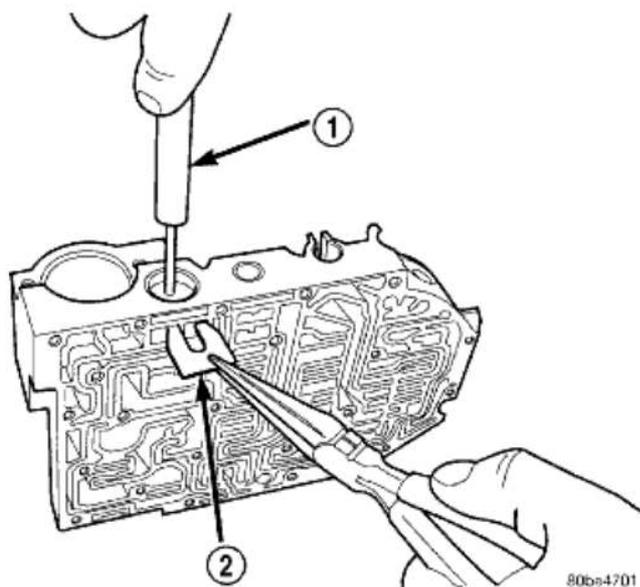


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Fig. 460: Identifying Valve Body Assembly
 Courtesy of CHRYSLER LLC

1 - VALVE BODY	5 - MANUAL VALVE
2 - T/C REGULATOR VALVE	6 - CONVERTER CLUTCH SWITCH VALVE
3 - L/R SWITCH VALVE	7 - SOLENOID SWITCH VALVE
4 - CONVERTER CLUTCH CONTROL VALVE	8 - REGULATOR VALVE

1. Install valves and springs.



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Fig. 461: Removing/Installing Regulator Valve Spring Retainer
 Courtesy of CHRYSLER LLC

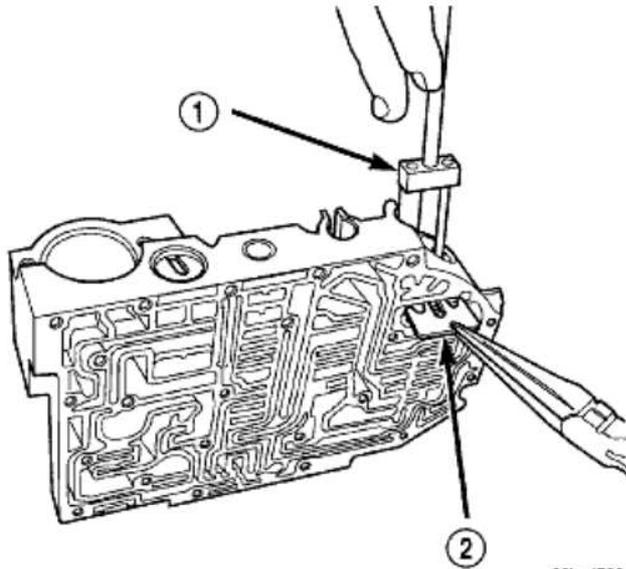
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- 1 - REMOVER/INSTALLER 6302
2 - RETAINER

2. Install regulator valve spring retainer (2) using remover/installer 6302 (1).

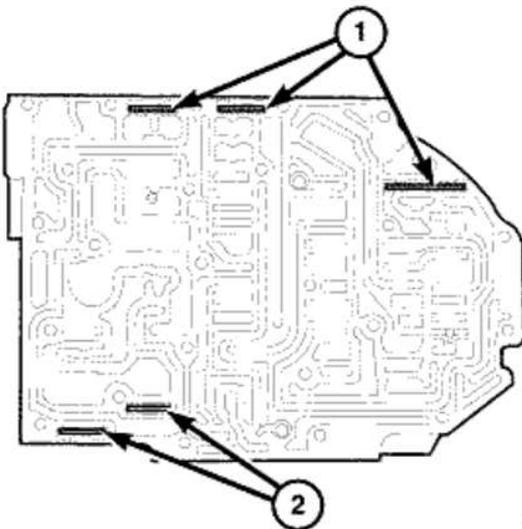


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Fig. 462: Removing/Installing Dual Retainer Plate
Courtesy of CHRYSLER LLC

- 1 - REMOVER/INSTALLER 6301
2 - RETAINER

3. Install dual retainer plate (2) using remover/installer 6301 (1).



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Fig. 463: Removing/Installing Valve Retainers

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Courtesy of CHRYSLER LLC

1 - RETAINER
2 - RETAINER

- Verify that all retainers are installed (1,2). Retainers should be flush or below valve body surface.

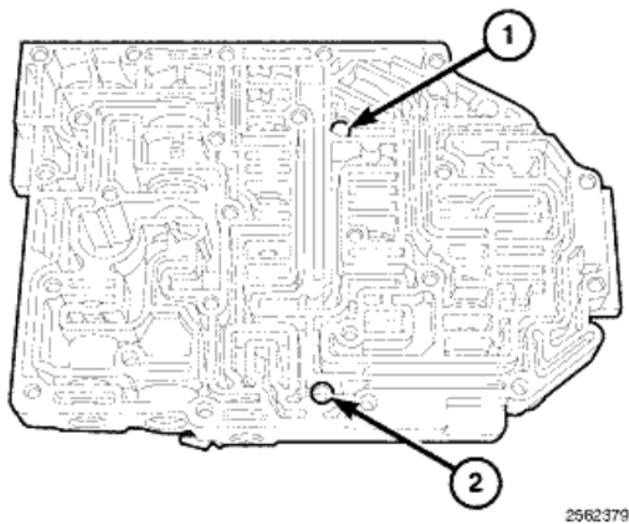


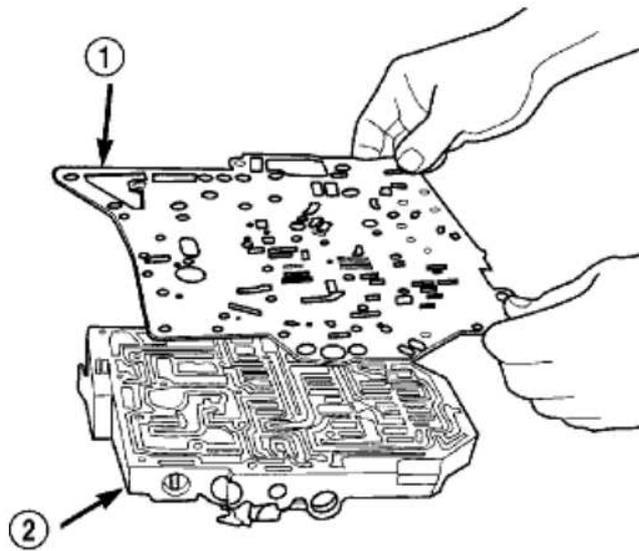
Fig. 464: Identifying Valve Body Check Balls
Courtesy of CHRYSLER LLC

1 - (#4) REVERSE CHECK BALL
2 - (#5) (#3) L/R CHECK BALL

- Install check balls (1 and 2) into position as shown in **Fig. 464**. If necessary, secure them with petrolatum or transmission assembly gel for assembly ease.

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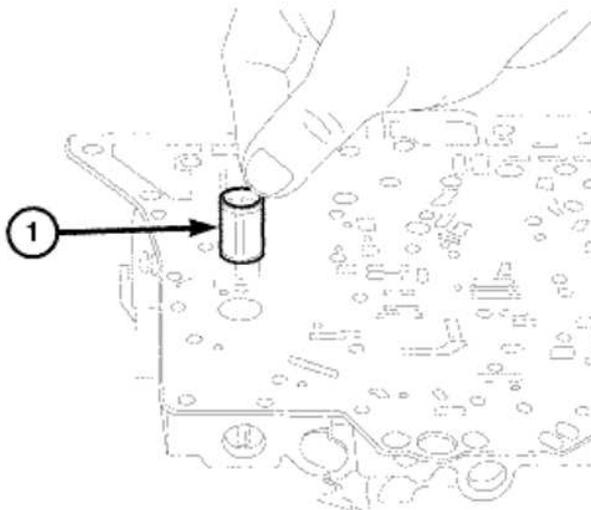


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Fig. 465: Removing/Installing Separator Plate
Courtesy of CHRYSLER LLC

1 - SEPARATOR PLATE
2 - VALVE BODY

6. Install separator plate (1) to valve body (2).



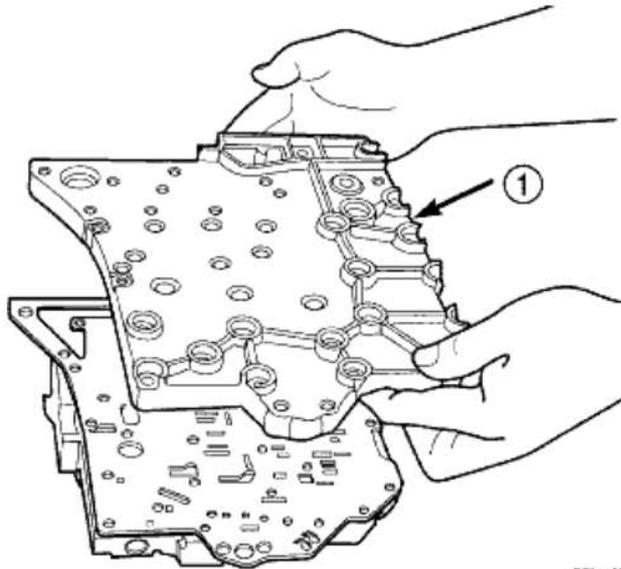
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Fig. 466: Identifying Oil Screen
Courtesy of CHRYSLER LLC

7. Install oil screen (1) to separator plate.

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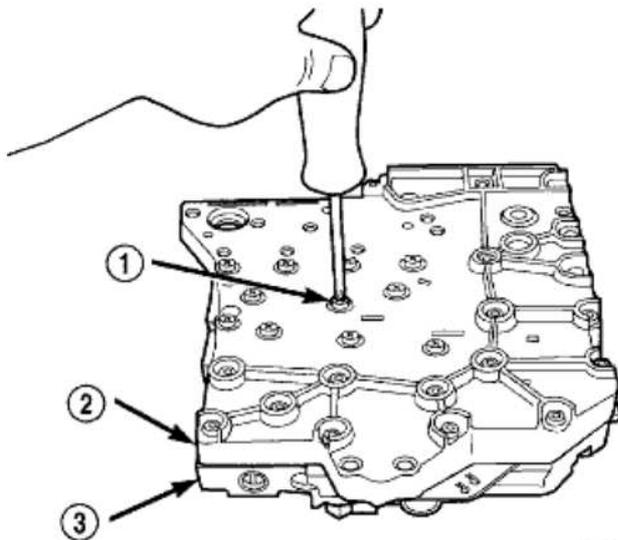


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Fig. 467: Removing/Installing Transfer Plate
Courtesy of CHRYSLER LLC

1 - TRANSFER PLATE

8. Install transfer plate (1) to valve body and separator plate.



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Fig. 468: Identifying Valve Body-To-Transfer Plate Screws
Courtesy of CHRYSLER LLC

1 - SCREW (24)
2 - TRANSFER PLATE
3 - VALVE BODY

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9. Install twenty-four transfer plate to valve body screws (1) and torque to 5 N.m (45 in. lbs.).

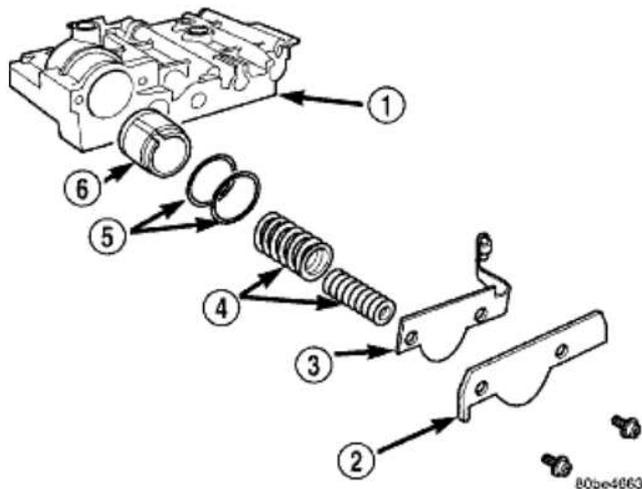


Fig. 469: Identifying 2/4 Accumulator Assembly
Courtesy of CHRYSLER LLC

- 1 - VALVE BODY
- 2 - RETAINER PLATE
- 3 - DETENT SPRING
- 4 - SPRINGS
- 5 - SEALS
- 6 - PISTON

10. Install 2/4 Accumulator components (2,3,4,5 and 6).

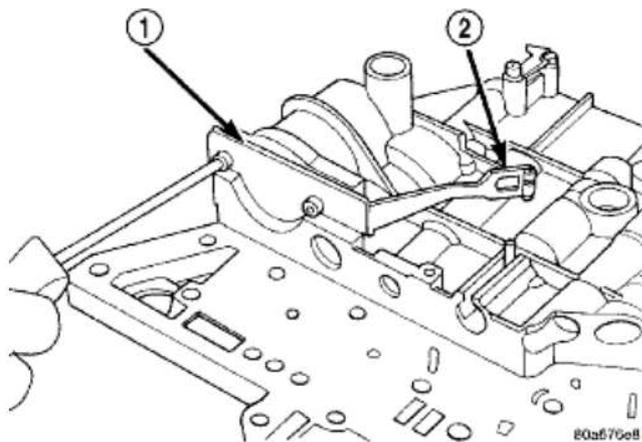


Fig. 470: Removing/Installing 2/4 Accumulator Retaining Plate
Courtesy of CHRYSLER LLC

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- 1 - 2-4 ACCUMULATOR RETAINING PLATE
- 2 - DETENT SPRING

11. Torque 2/4 Accumulator retainer (1) to 5 N.m (45 in. lbs.).

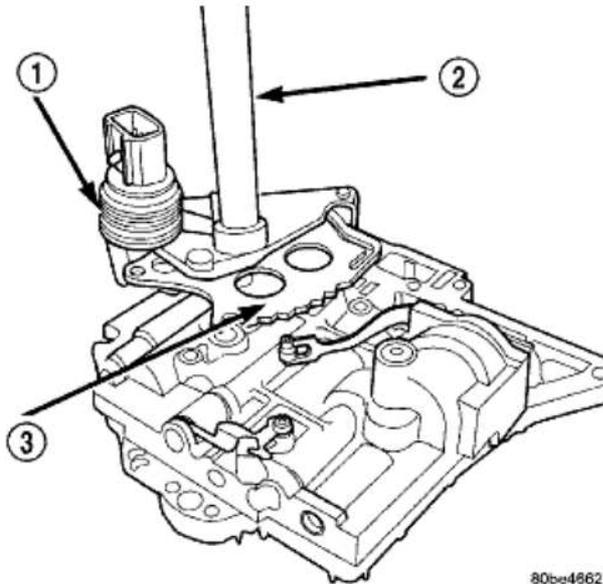


Fig. 471: Removing/Installing Manual Shaft/Rooster Comb & Transmission Range Sensor
Courtesy of CHRYSLER LLC

- 1 - TRANSMISSION RANGE SENSOR
- 2 - MANUAL SHAFT / ROOSTER COMB
- 3 - ROOSTER COMB

12. Install Manual Shaft/Rooster Comb (3) and Transmission Range Sensor (1).

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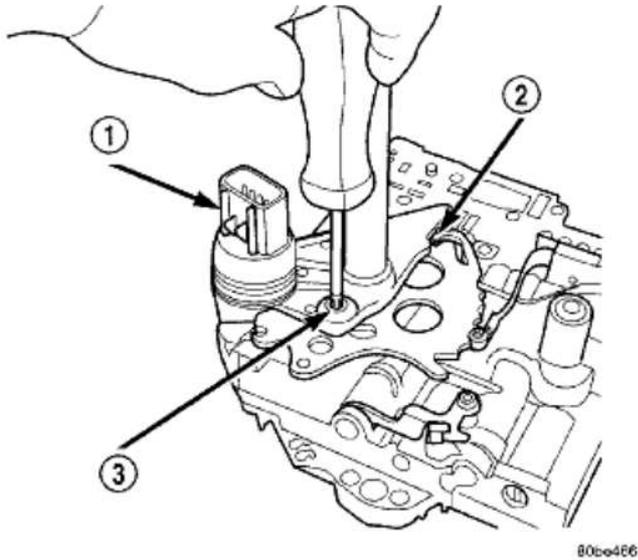


Fig. 472: Removing/Installing Transmission Range Sensor
Courtesy of CHRYSLER LLC

- 1 - TRANSMISSION RANGE SENSOR
- 2 - MANUAL VALVE CONTROL PIN
- 3 - RETAINING SCREW

13. Make sure Manual Valve control pin (2) is contained within the rooster comb slot. Install Transmission Range Sensor retaining screw (3) and torque to 5 N.m (45 in. lbs.).

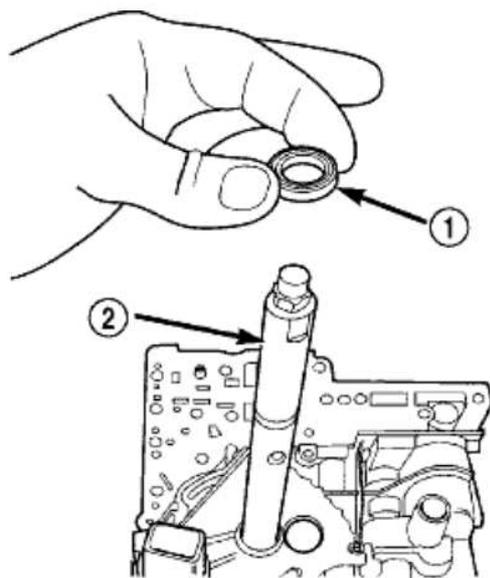


Fig. 473: Removing/Installing Manual Shaft Seal
Courtesy of CHRYSLER LLC

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- 1 - SEAL
- 2 - MANUAL SHAFT

14. Install manual shaft seal (1).

INSTALLATION

INSTALLATION

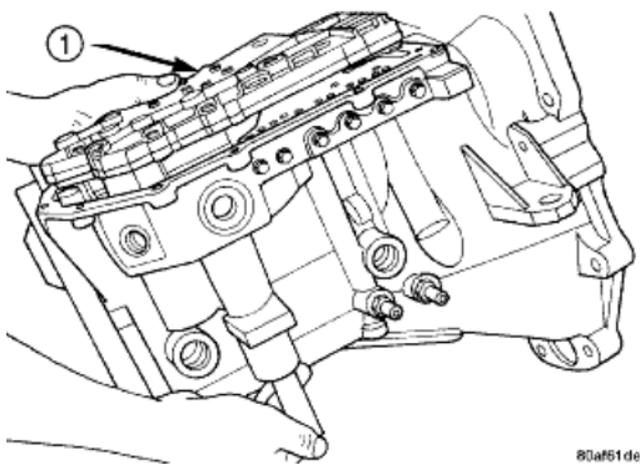


Fig. 474: Removing/Installing Valve Body
Courtesy of CHRYSLER LLC

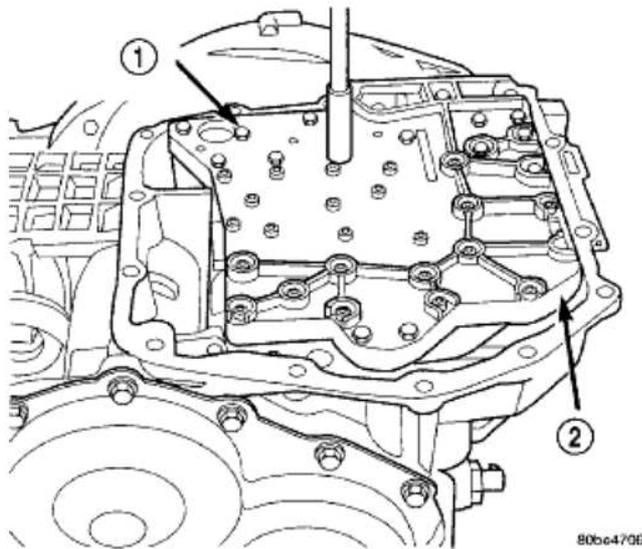
- 1 - VALVE BODY

NOTE: If valve body assembly is being replaced or reconditioned, it is necessary to perform the PCM Quick Learn Procedure. Refer to Electrical - Electronic Control Modules/Electronic Control Modules/MODULE, Powertrain Control - Standard Procedure .

1. Install accumulators and springs as previously removed. Install valve body assembly to transaxle.

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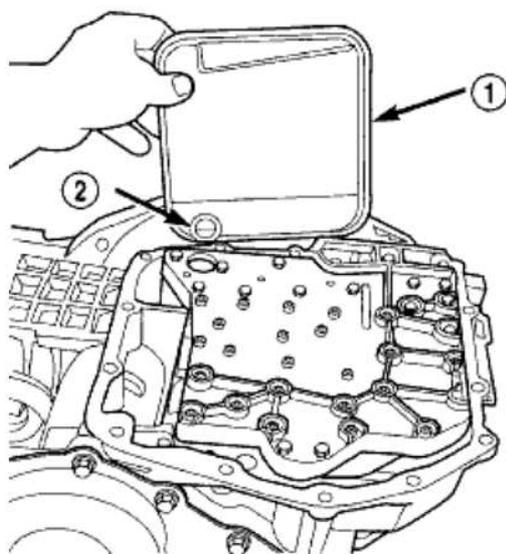


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Fig. 475: Identifying Valve Body-To-Transaxle Case Bolts
Courtesy of CHRYSLER LLC

- | |
|-------------------------------------|
| 1 - VALVE BODY ATTACHING BOLTS (18) |
| 2 - VALVE BODY |

2. Install and torque valve body-to-transaxle case bolts to 12 N.m (105 in. lbs.).



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Fig. 476: Identifying Filter & O-Ring
Courtesy of CHRYSLER LLC

- | |
|----------------|
| 1 - OIL FILTER |
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2 - O-RING

3. Install transaxle oil filter. Inspect the o-ring and replace if necessary.

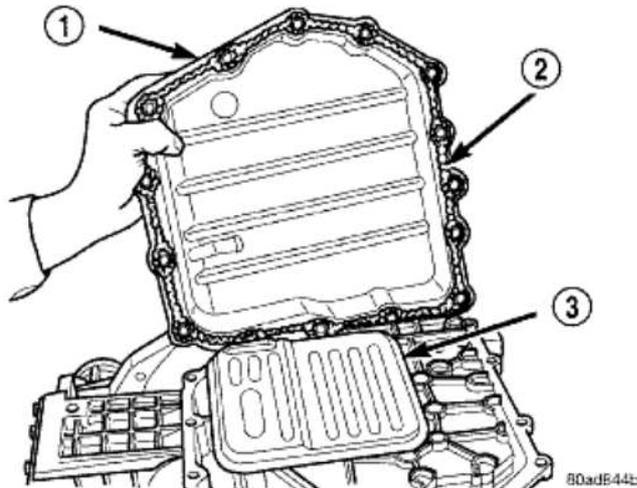


Fig. 477: Removing/Installing Oil Pan

Courtesy of CHRYSLER LLC

1 - OIL PAN

2 - 1/8 INCH BEAD OF RTV SEALANT

3 - OIL FILTER

4. Ensure the transaxle oil pan and transaxle case sealing surfaces are clean and dry. Install an 1/8" bead of MOPAR® Silicone Rubber Adhesive Sealant to the oil pan and install.

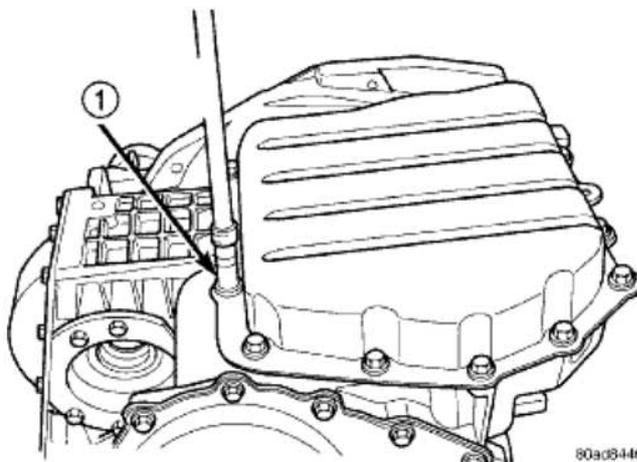


Fig. 478: Identifying Oil Pan Bolts

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1 - OIL PAN BOLTS (USE RTV UNDER BOLT HEADS)

5. Torque oil pan-to-transaxle case bolts to 19 N.m (165 in. lbs.).
6. Raise engine cradle crossmember into position.
7. Aligning index/scribe mark placed upon disassembly, Install four cradle-to-body bolts and torque to 162 N.m (120 ft. lbs.).
8. Lower vehicle.
9. Remove engine support fixture 8534B.
10. Raise vehicle.
11. Install and torque engine front and rear mount-to-cradle nuts to 54 N.m (40 ft. lbs.).
12. Lower vehicle.
13. Connect transmission range sensor connector.
14. Install manual valve lever to manual shaft.
15. Install gearshift cable to manual valve lever.
16. Install battery and tray.
17. Connect battery negative cable.
18. Fill transaxle with Mopar® ATF +4 Transmission fluid. See **FLUID AND FILTER SERVICE**