

2009 MANUAL TRANSMISSION**T355 - Service Information - Journey****DESCRIPTION****DESCRIPTION**

This five speed is a constant-mesh manual transaxle. All gear ranges, except reverse, are synchronized. The reverse gear utilizes a reverse brake for shifting ease. The reverse idler gear is supported on a sliding spindle idler shaft. The transaxle case is aluminum with a steel end-plate bearing cover. It is housed in a die-cast aluminum case featuring a two-piece, middle split design.

The T355 transaxle internal components can be serviced only by separating the gear case from the bellhousing case.

CAUTION: The transaxle output shaft is serviced as a unit. No disassembly and reassembly is possible. Damage to the transaxle may result.

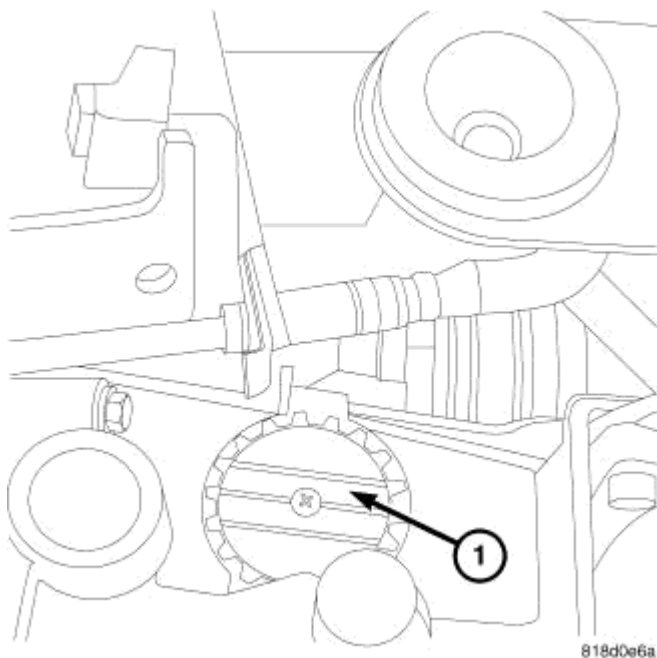
TRANSAXLE IDENTIFICATION

Fig. 1: Locating Transaxle ID Tag
Courtesy of CHRYSLER LLC

The transaxle model, assembly number, and build date are on a metal I.D. tag (1) that is attached to the top of the transaxle.

GEAR RATIOS

2009 Dodge Journey R/T

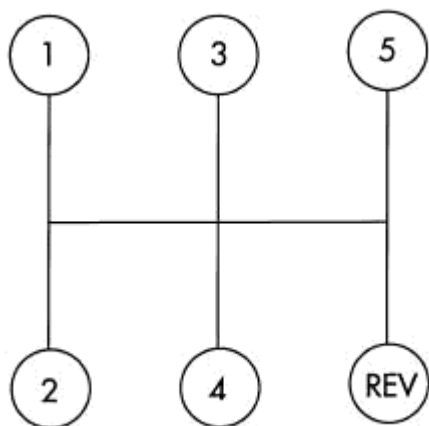
2009 MANUAL TRANSMISSION T355 - Service Information - Journey

GEAR	Ratio
1st	3.77
2nd	2.16
3rd	1.41
4th	1.026
5th	0.81
REVERSE	3.4
FINAL DRIVE RATIO	4.12
REVERSE BRAKE	YES
CLUTCH RELEASE SYSTEM	HYDRAULIC

CAUTION: All gears and shafts must not be interchanged with other transaxles; they will not function correctly.

The differential is a conventional arrangement of gears that is supported by tapered roller bearings. The final output gear turns the ring gear and differential assembly, thereby turning the drive axle shafts.

GEARSHIFT PATTERN



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Fig. 2: T355 Transaxle Shift Pattern
Courtesy of CHRYSLER LLC

The T355 transaxle shift pattern is a modified H-pattern. Overdrive fifth and reverse gears are in-line and outboard of the first through fourth gear positions.

DIAGNOSIS AND TESTING

COMMON PROBLEM CAUSES

The majority of transaxle malfunctions are a result of:

- Insufficient lubrication
- Incorrect lubricant
- Misassembled or damaged internal components
- Improper operation

NOISY OPERATION

Transaxle noise is most often a result of worn or damaged components. Chipped, broken gear or synchronizer teeth, and brindled, spalled bearings all cause noise.

Abnormal wear and damage to the internal components is frequently the end result of insufficient lubricant.

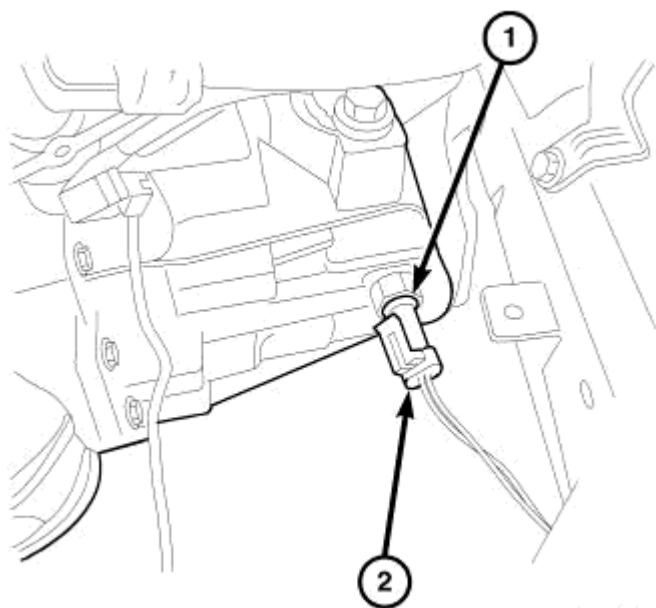
LOW LUBRICANT LEVEL

Insufficient transaxle lubricant is usually the result of leaks, or inaccurate fluid level check or refill method. **Vehicle must be level to accurately check fluid level.** Leakage is evident by the presence of oil around the leak point. If leakage is not evident, the condition is probably the result of an underfill.

If air-powered lubrication equipment is used to add fluid to the MPS6 transaxle, be sure the equipment is properly calibrated. Equipment out of calibration can lead to an under fill condition. Refer to **Standard Procedure** for Draining and Filling in this service information .

REMOVAL

REMOVAL

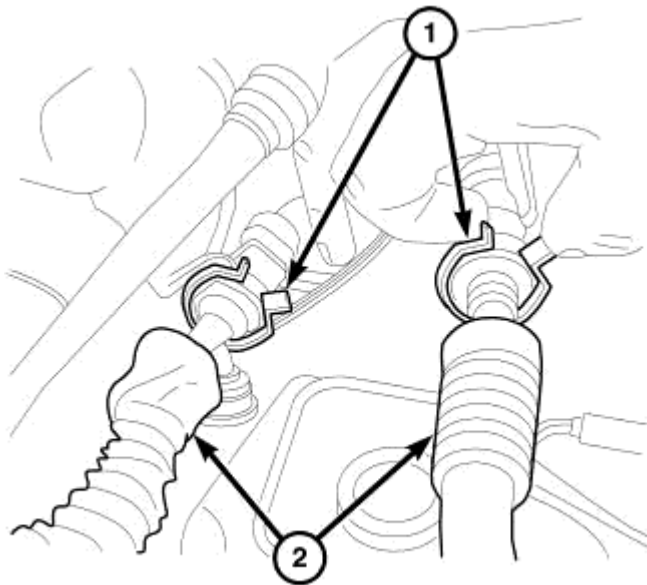


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Fig. 3: Removing/Installing Back-Up Lamp Switch Connector

Courtesy of CHRYSLER LLC

1. Raise hood.
2. Remove engine cover.
3. Remove air cleaner assembly.
4. Disconnect negative battery cable.
5. Unplug the speed sensor connector (if equipped).
6. Disconnect back-up lamp switch connector (2).



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Fig. 4: Removing/Installing Shift Cable-To-Bracket Clips
Courtesy of CHRYSLER LLC

7. Remove shift cable-to-bracket clips (1).

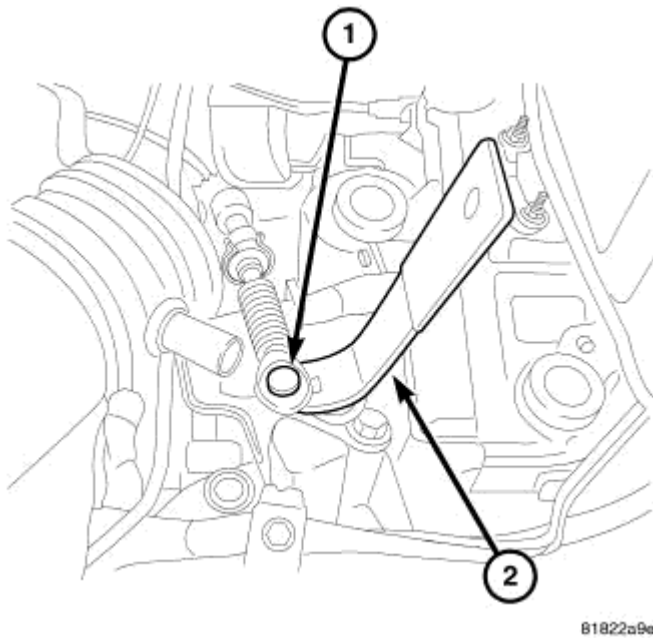


Fig. 5: Shift Selector And Crossover Cable
Courtesy of CHRYSLER LLC

8. Disconnect shift selector and crossover cable (1) from levers. Remove cables and secure out of the way.

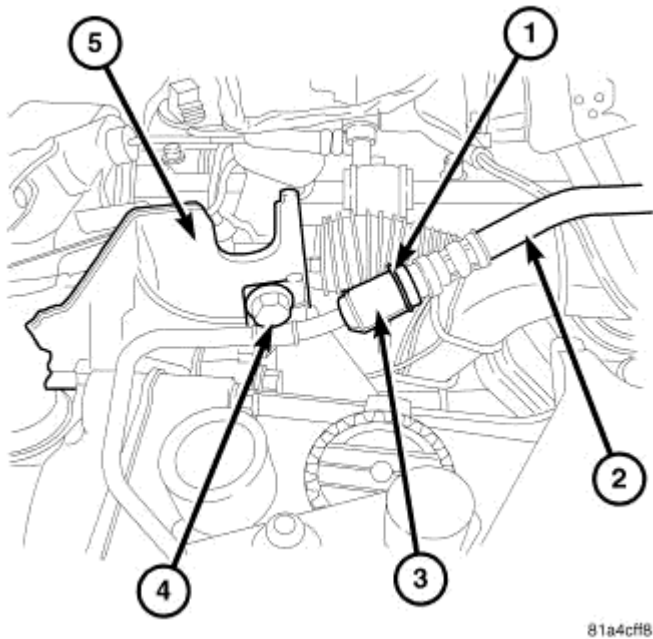


Fig. 6: Removing/Installing Clip At Hydraulic Line
Courtesy of CHRYSLER LLC

9. Remove the slave cylinder hydraulic line bolt (4) at bracket (5).
10. Remove the clip (1) at the hydraulic line and separate (2, 3) the line.

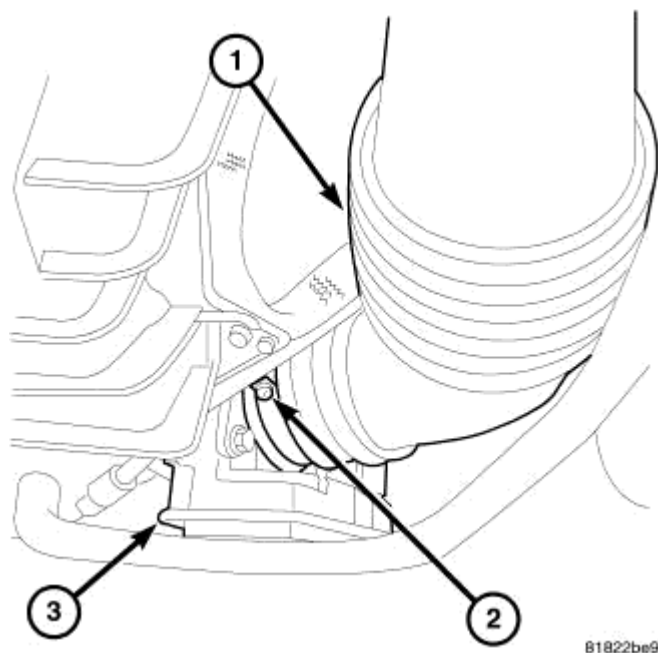


Fig. 7: Removing/Installing Air Inlet Tube At Throttle Body
Courtesy of CHRYSLER LLC

11. Remove the air inlet tube (1) by loosening the screw (2) at the throttle body (3).

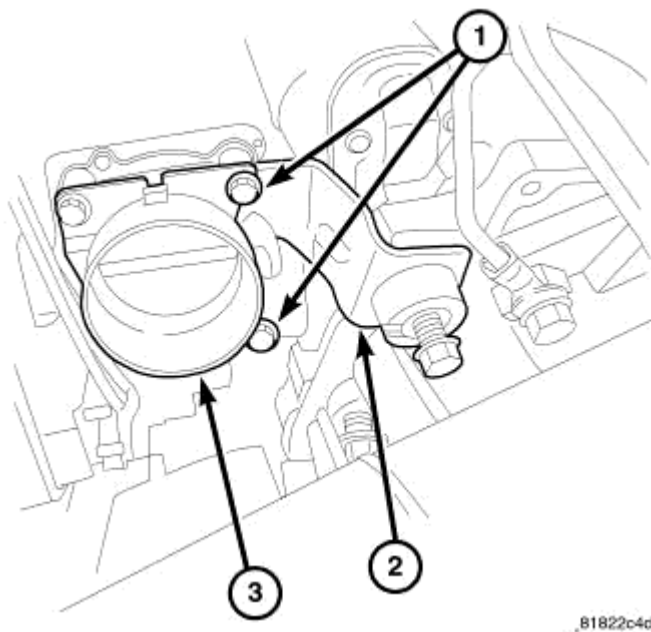


Fig. 8: Removing/Installing Throttle Body Support Bracket
Courtesy of CHRYSLER LLC

12. Remove the throttle body support bracket bolts (1).
13. Remove the throttle body support bracket (2).

14. Remove upper bell housing bolts.
15. Remove the starter bolts and slide the starter back. Refer to **Electrical - Engine Systems/Starting/STARTER - Removal** .

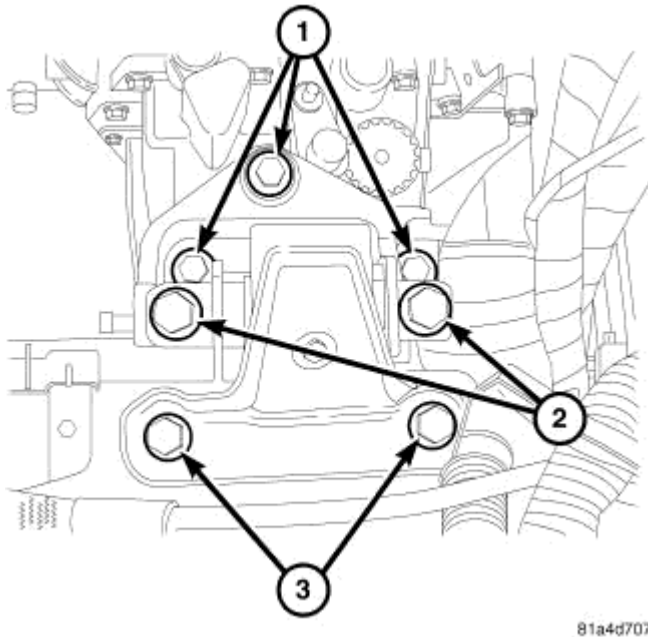


Fig. 9: Left Bracket To Transmission Bolts
Courtesy of CHRYSLER LLC

16. Remove the upper transmission mount-to-bracket bolts (1).
17. Raise vehicle on hoist.
18. Remove the splash shields. Refer to **Body/Exterior/SHIELD, Splash - Removal** .

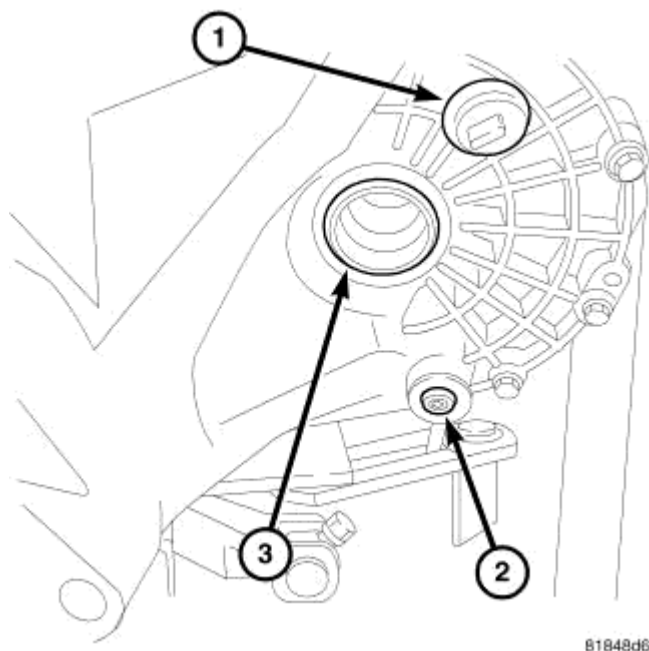


Fig. 10: Removing/Installing Transaxle Oil Drain Plug
Courtesy of CHRYSLER LLC

19. Remove transaxle oil drain plug (2) and drain oil into a suitable container. Reinstall drain plug and tighten to 14 N.m (120 in. lbs.).
20. Remove both halfshafts. Refer to **Differential and Driveline/Half Shaft - Removal**.

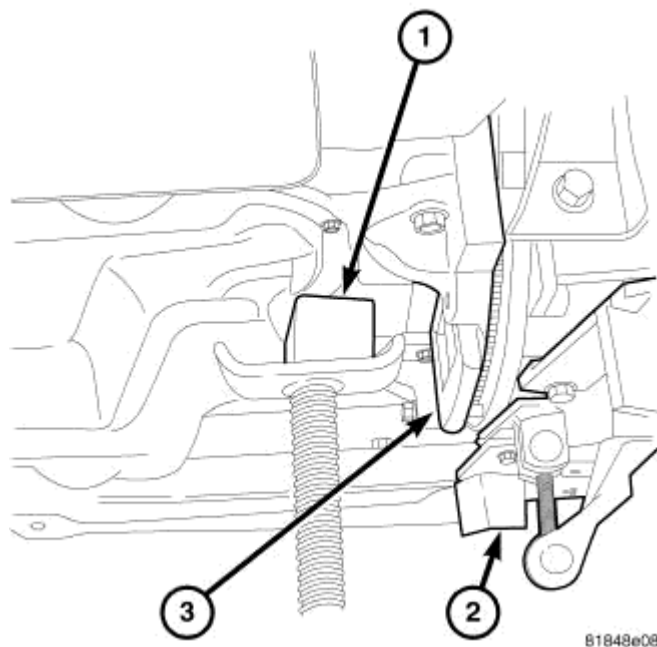


Fig. 11: Removing/Installing Bell Housing Dust Cover
Courtesy of CHRYSLER LLC

21. Support the engine with a screw jack (1).
22. Remove bell housing dust cover (3).

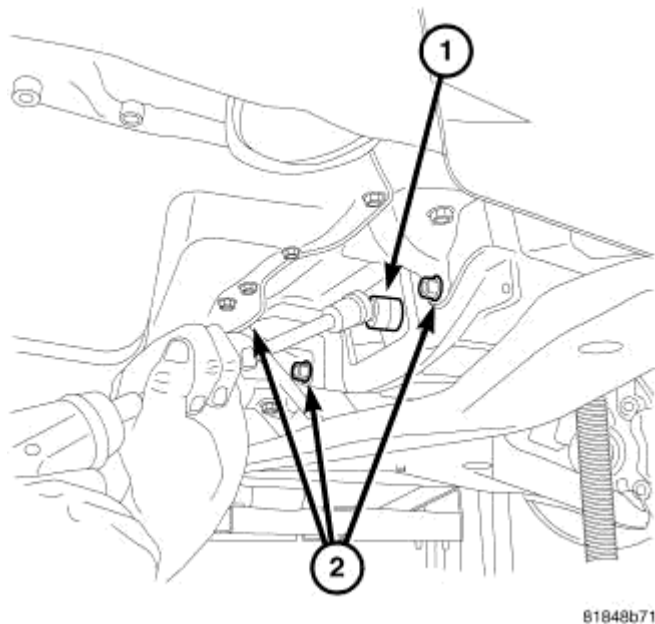


Fig. 12: Removing/Installing Modular Clutch-To-Drive Plate Bolts
Courtesy of CHRYSLER LLC

23. Remove four modular clutch-to-drive plate bolts (1). While removing bolts, one tight-tolerance (slotted) drive plate hole will be encountered. When this bolt is removed, mark drive plate and modular clutch assembly at this location, and be sure to align marks upon reassembly.
24. Remove the transmission crossmember. Refer to **Frame and Bumpers/Frame/CROSSMEMBER - Removal** .

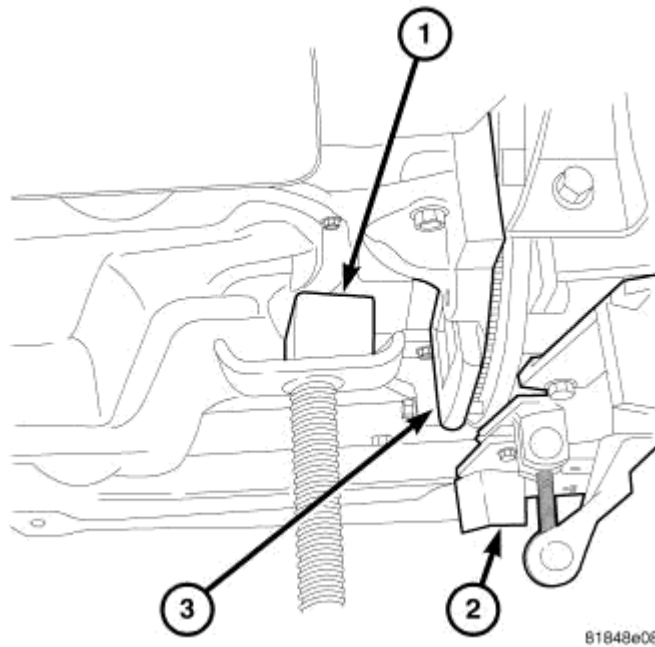


Fig. 13: Removing/Installing Bell Housing Dust Cover
Courtesy of CHRYSLER LLC

25. Install a transmission jack (2).

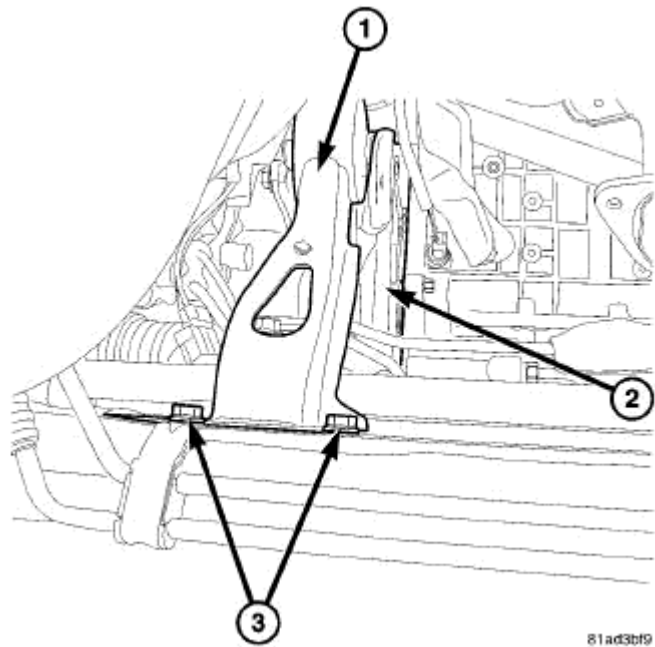
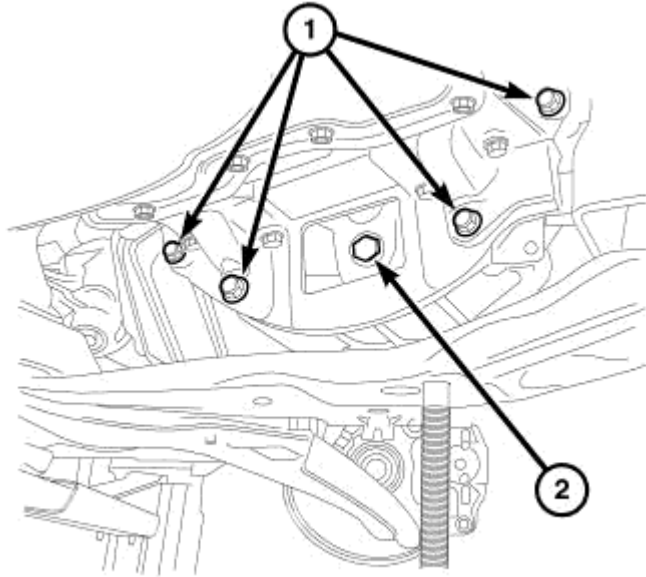


Fig. 14: Removing/Installing Rear Transmission Mount Bracket
Courtesy of CHRYSLER LLC

26. Remove the rear transmission through bolt.

27. Remove the rear transmission mount bolts (3) and mount (1) from the frame.
28. Remove the rear transmission mount bracket bolts and bracket from transmission.



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Fig. 15: Transmission Bell Housing Bolts
Courtesy of CHRYSLER LLC

29. Remove the remaining transmission bell housing bolts (1).
30. Carefully lower engine and transaxle on screw jack and transmission jack until proper removal clearance is obtained.
31. Obtain a helper to assist in holding transaxle while removing transaxle-to-engine mounting bolts.
32. Remove transaxle from vehicle.

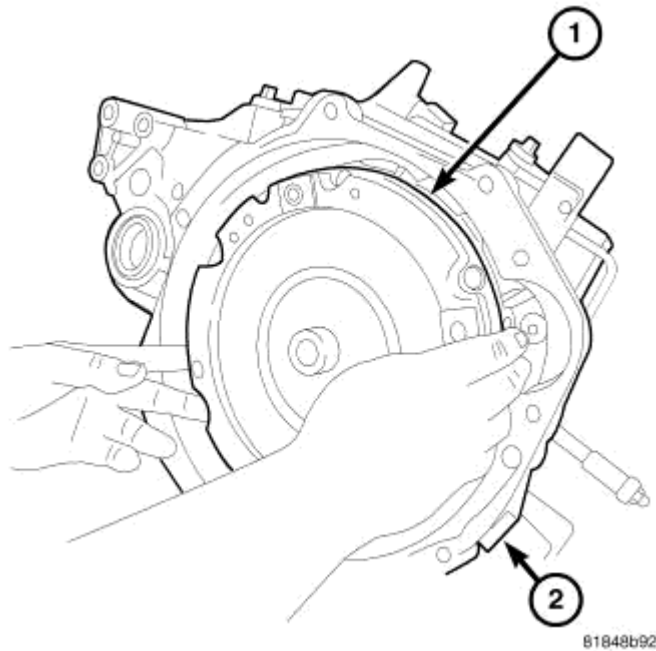


Fig. 16: Modular Clutch Assembly
Courtesy of CHRYSLER LLC

33. Remove clutch module from transaxle input shaft (1).
34. Remove front mount bracket and hydraulics from transaxle.

DISASSEMBLY

DISASSEMBLY

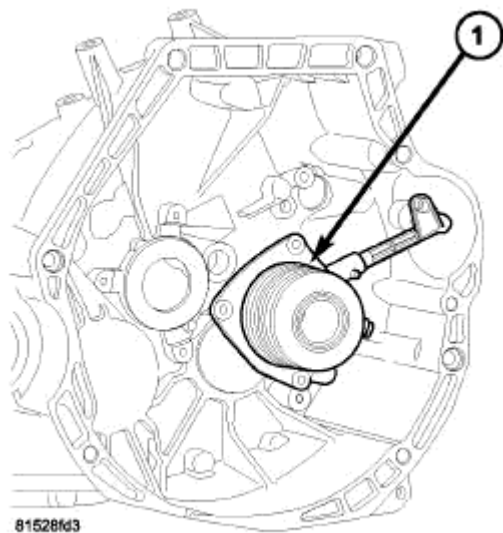


Fig. 17: Removing/Installing Slave Cylinder

Courtesy of CHRYSLER LLC

1. Remove bolts from slave cylinder-to-clutch bellhousing and remove slave cylinder (1) from transaxle.

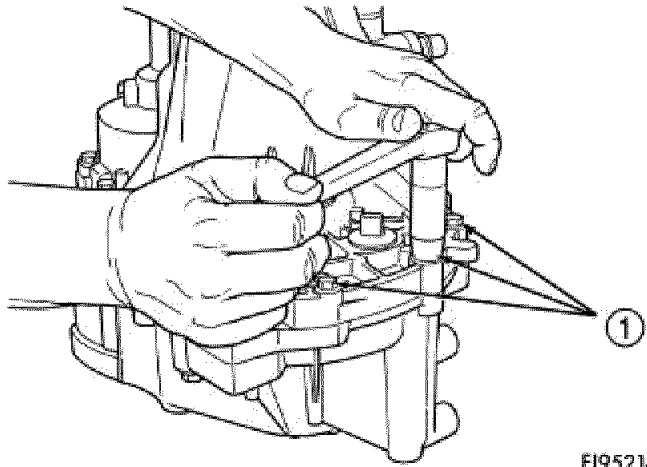


Fig. 18: Removing/Installing Transaxle Case Half Bolts
Courtesy of CHRYSLER LLC

1 - CASE BOLTS

CAUTION: The transaxle output shaft is serviced as a unit. No disassembly and reassembly is possible. Damage to the transaxle may result.

The T355 transaxle internal components can be serviced only by separating the gear case from the bellhousing case.

2. Place transaxle on bench.
3. Remove transaxle case half bolts (1).

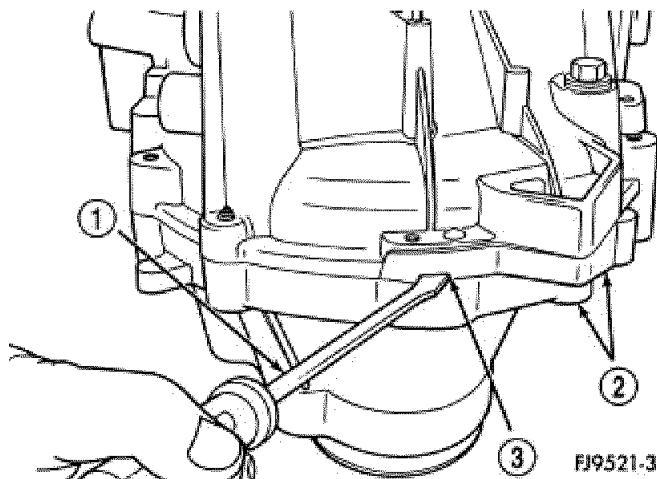
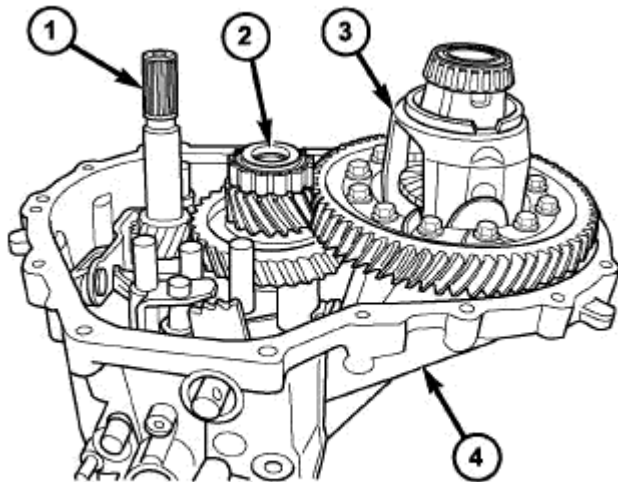


Fig. 19: Separate Case Halves
Courtesy of CHRYSLER LLC

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|-----------------|
| 1 - PRY TOOL |
| 2 - CASE HALVES |
| 3 - PRY SLOT |

4. Place two screwdrivers (1) into the slots (3) provided in the case halves (2) near the dowels. Separate the case halves.



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Fig. 20: Bellhousing Case Half Removed
Courtesy of CHRYSLER LLC

- | |
|---------------------------|
| 1 - INPUT SHAFT |
| 2 - OUTPUT SHAFT |
| 3 - DIFFERENTIAL ASSEMBLY |
| 4 - GEARTRAIN HOUSING |

5. Remove bellhousing half from gear case half (4) .

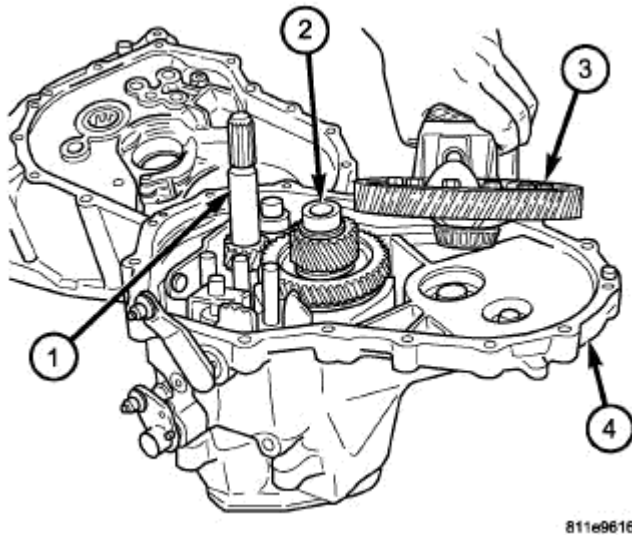


Fig. 21: Removing/Installing Differential Assembly
Courtesy of CHRYSLER LLC

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|---------------------------|
| 1 - INPUT SHAFT |
| 2 - OUTPUT SHAFT |
| 3 - DIFFERENTIAL ASSEMBLY |
| 4 - GEARTRAIN HOUSING |

6. Remove differential assembly (3) from housing (4) .

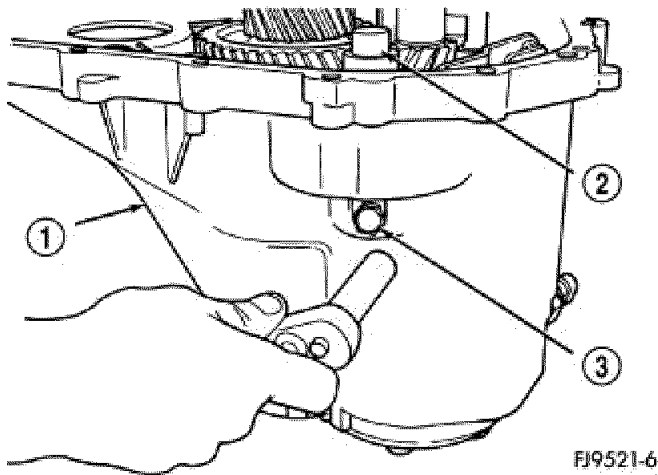


Fig. 22: Reverse Idler Shaft Bolt
Courtesy of CHRYSLER LLC

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|-------------------------|
| 1 - CASE |
| 2 - REVERSE IDLER SHAFT |

3 - REVERSE IDLER SHAFT BOLT

7. Remove reverse idler shaft bolt (3).

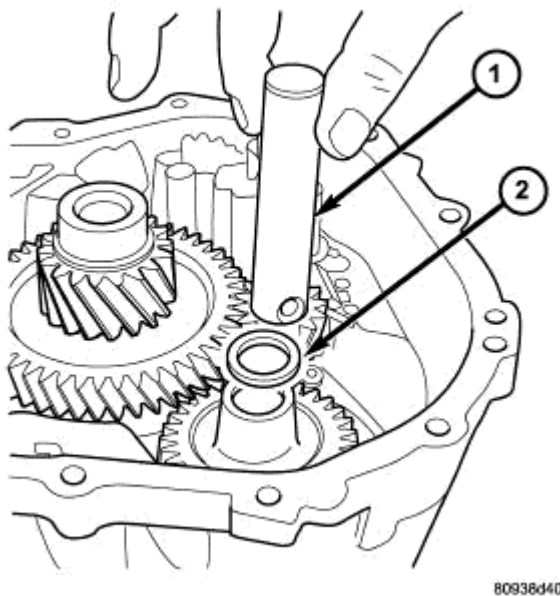


Fig. 23: Reverse Idler Shaft Removal/Installation
Courtesy of CHRYSLER LLC

1 - REVERSE IDLER SHAFT

2 - SPACER

8. Remove reverse idler shaft (1) .

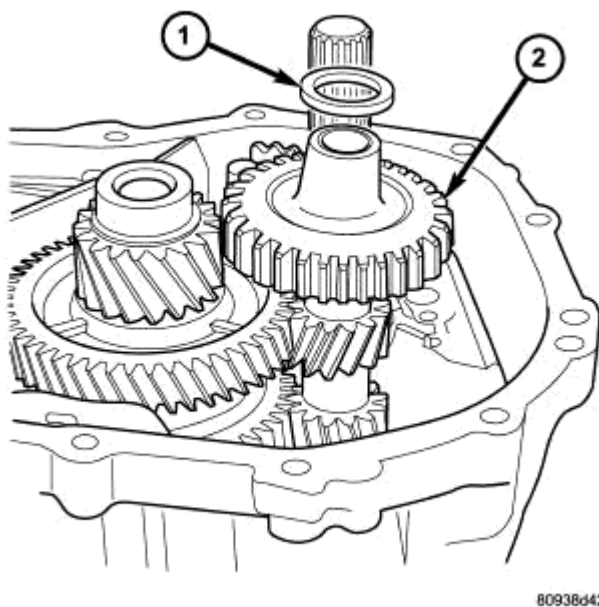


Fig. 24: Reverse Idler Gear and Spacer
Courtesy of CHRYSLER LLC

1 - SPACER

2 - REVERSE IDLER GEAR

9. Remove reverse idler gear (2) and spacer (1).

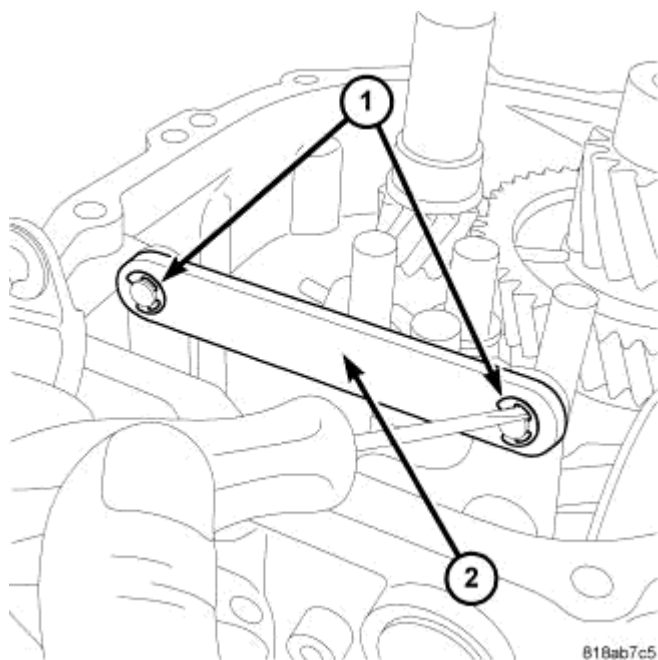


Fig. 25: Clips At Linkage Tie Bar
Courtesy of CHRYSLER LLC

10. Remove the clips (1) at the linkage tie bar (2).

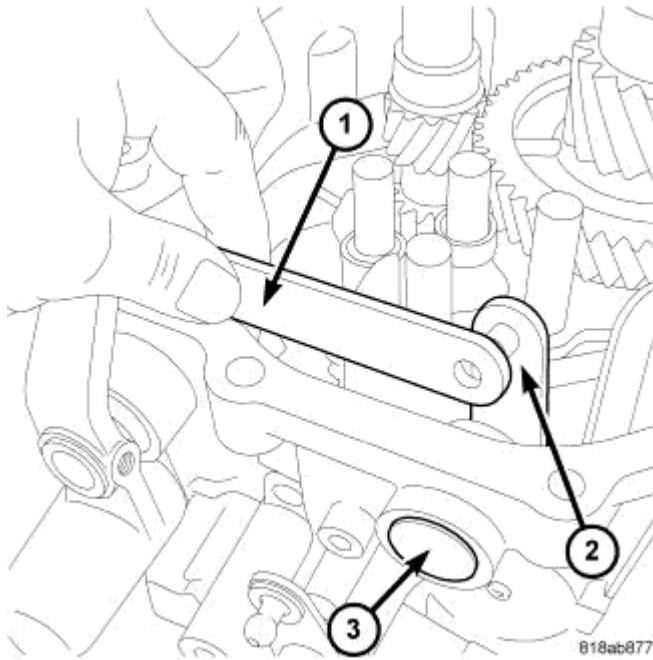


Fig. 26: Removing/Installing Plug & Linkage Tie Bar
Courtesy of CHRYSLER LLC

11. Remove the linkage tie bar (1).
12. Remove the plug (3) at the selector shaft (2).

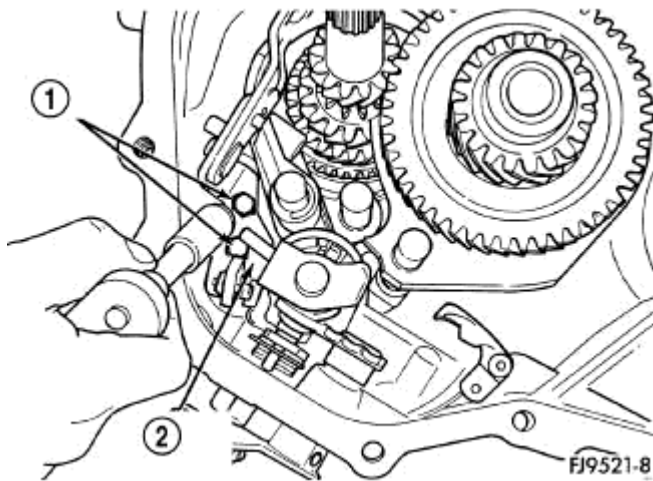


Fig. 27: Screws Retaining Reverse Fork Bracket
Courtesy of CHRYSLER LLC

1 - SCREWS (2)

2 - REVERSE FORK BRACKET

13. Remove two screws (1) retaining reverse fork bracket (2).

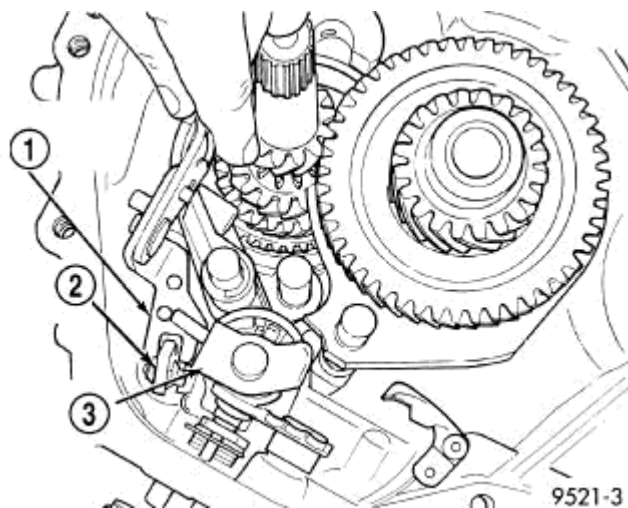


Fig. 28: Removing/Installing Reverse Fork Bracket
Courtesy of CHRYSLER LLC

1 - REVERSE FORK BRACKET

2 - REVERSE CAM BLOCKOUT

3 - SHIFT BLOCKER ASSEMBLY

14. Remove reverse fork bracket (1) and reverse cam block-out assembly (2).

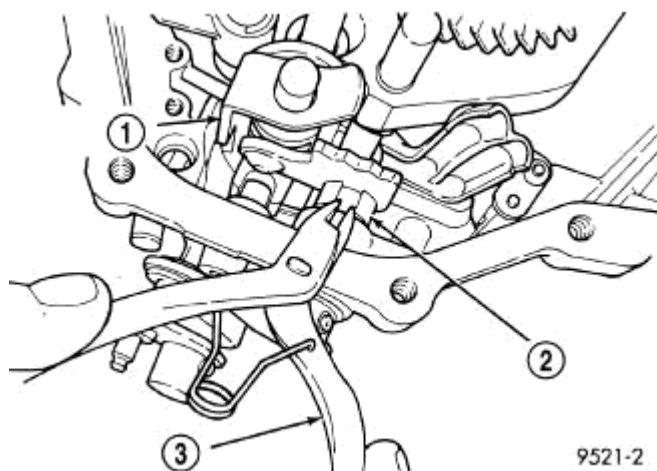


Fig. 29: Remove Selector Shaft Spacer
Courtesy of CHRYSLER LLC

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|-------------------------------------|
| 1 - SHIFT BLOCKER ASSEMBLY |
| 2 - SELECTOR SHAFT SPACER (PLASTIC) |
| 3 - SNAP RING PLIERS |

15. Using snap-ring pliers (3) , remove link shaft spacer (2).

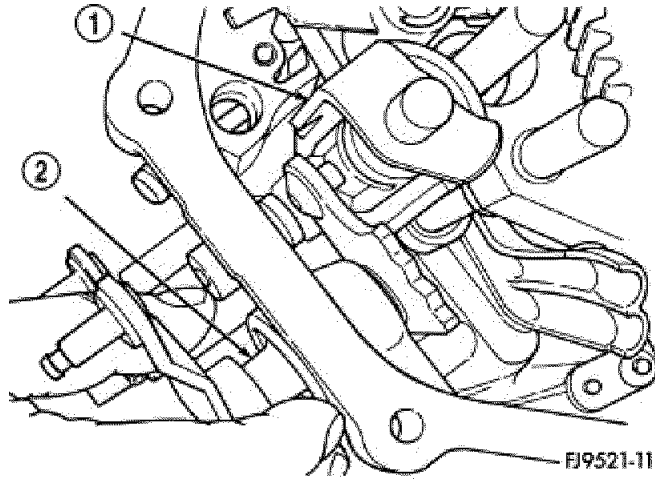
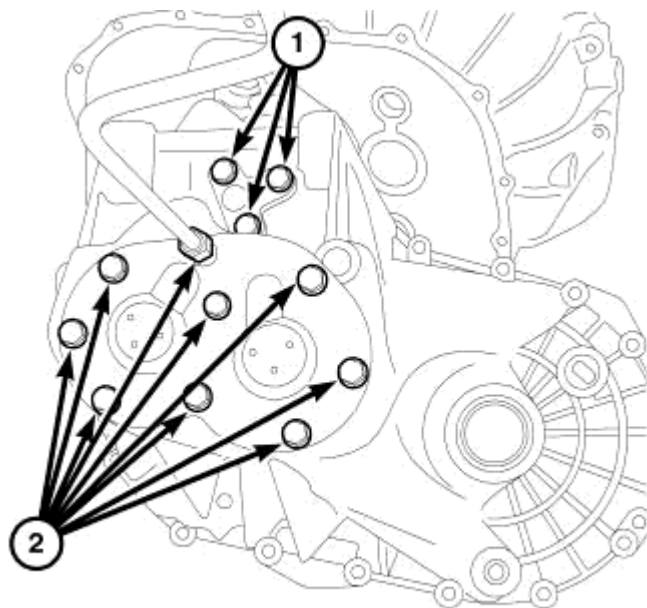


Fig. 30: Selector Shaft
Courtesy of CHRYSLER LLC

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|--------------------|
| 1 - SHIFT ASSEMBLY |
| 2 - SELECTOR SHAFT |

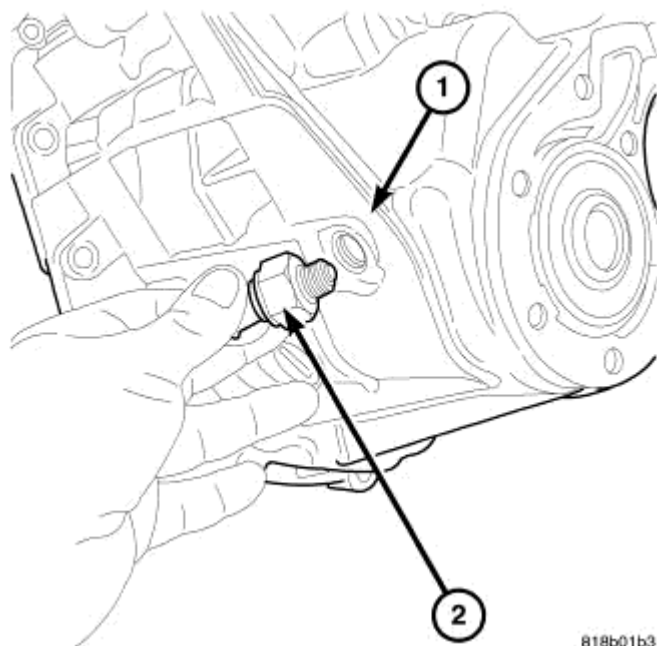
16. Pull the link shaft shift pin out of the slot in the blocker assembly. Turn selector shaft (2) up and out of the way.



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Fig. 31: Removing/Installing Transaxle End Cover Bolts & Rear Detent Assembly Bolts
Courtesy of CHRYSLER LLC

17. Remove transaxle end cover (2) and rear detent assembly bolts (1).



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Fig. 32: Removing/Installing Backup Lamp Switch
Courtesy of CHRYSLER LLC

18. Remove the backup lamp switch (2).

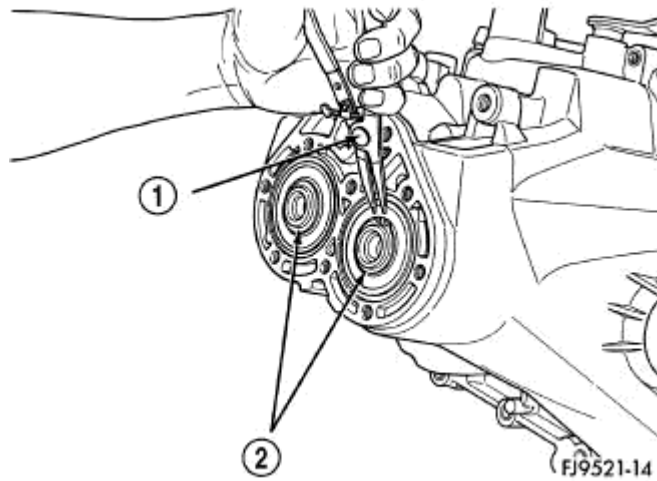


Fig. 33: Snap Rings Retaining Bearings
Courtesy of CHRYSLER LLC

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|----------------------|
| 1 - SNAP RING PLIERS |
| 2 - SNAP RINGS |

19. Remove two snap rings (2) retaining the output shaft and the input shaft to the bearings.

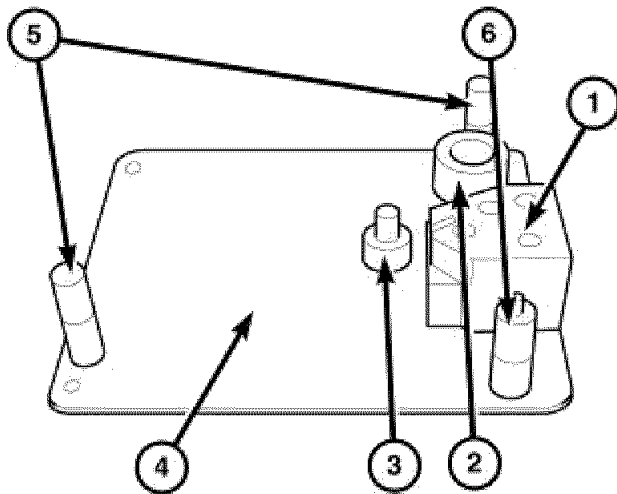
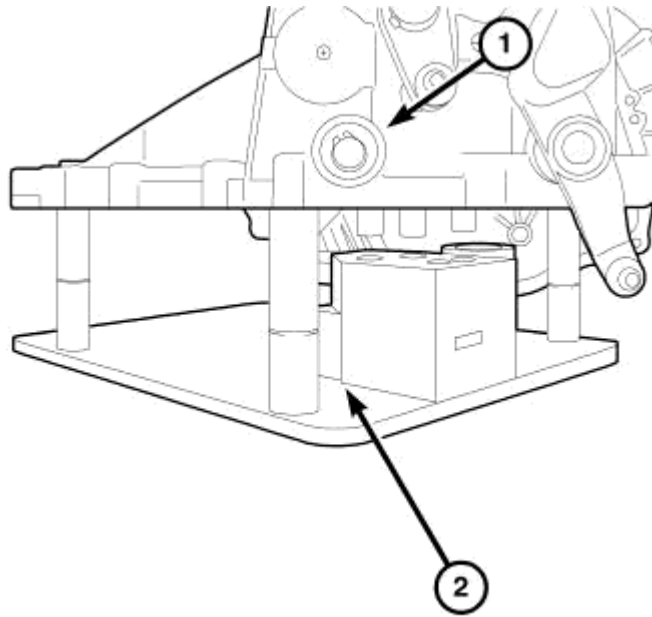


Fig. 34: Bench Fixture 6785 & Adaptors
Courtesy of CHRYSLER LLC

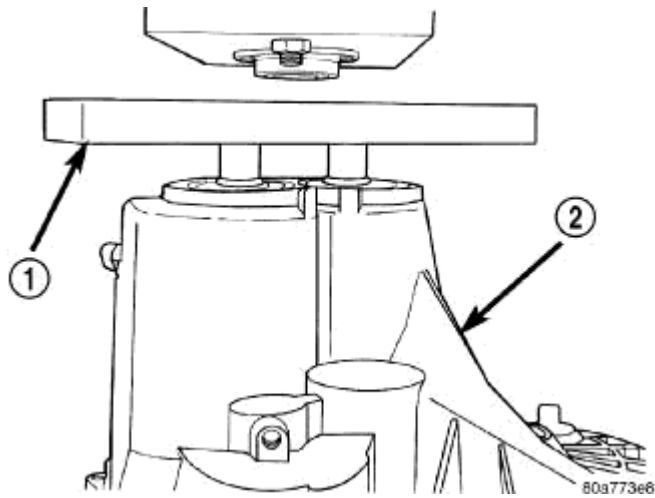
20. The Bench Fixture 6785 (4) and adaptors 9761-1 (1), 9761-2 (3), 9761-3 (2), 9761-6 (5) and 9761-7 (6) will be used to remove input and output shafts from the case.



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Fig. 35: Removing/Installing Transaxle At Bench Fixture 6785
 Courtesy of CHRYSLER LLC

21. Turn transaxle over. Install transaxle (1) onto Bench Fixture 6785 (2). Verify shim spacers and adaptors are in position on Bench Fixture 6785. Install transaxle into shop press.



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Fig. 36: Removing/Installing Bearing Remover 6768 At Transaxle End Bearings
 Courtesy of CHRYSLER LLC

1 - BEARING FIXTURE
2 - TRANSAXLE CASE

22. Install Bearing Remover 6768 (1) onto transaxle end bearings. Verify tool is properly aligned to input and output shafts.

CAUTION: The oil dams in the input and output shafts can be damaged while pressing on the shafts if the bearing fixture is not used properly.

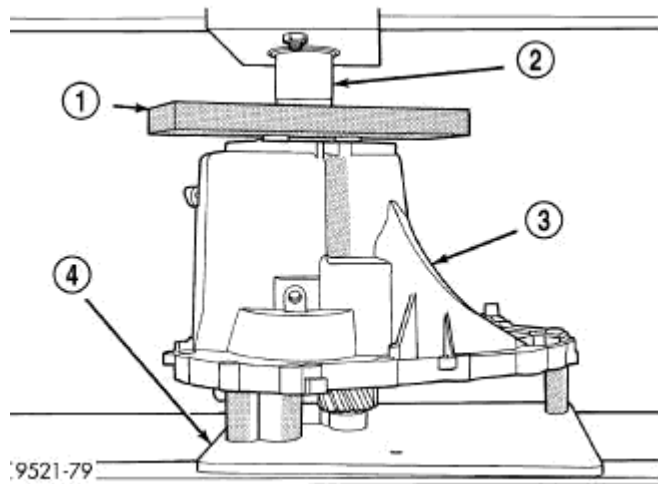
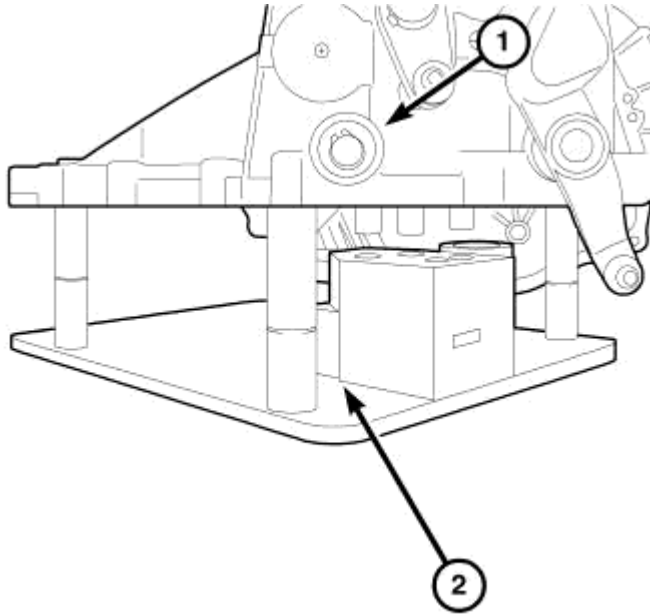


Fig. 37: Pressing Input & Output Shaft Assemblies Out Of Case
Courtesy of CHRYSLER LLC

1 - BEARING FIXTURE
2 - PRESS RAM
3 - TRANSAXLE CASE
4 - BENCH FIXTURE

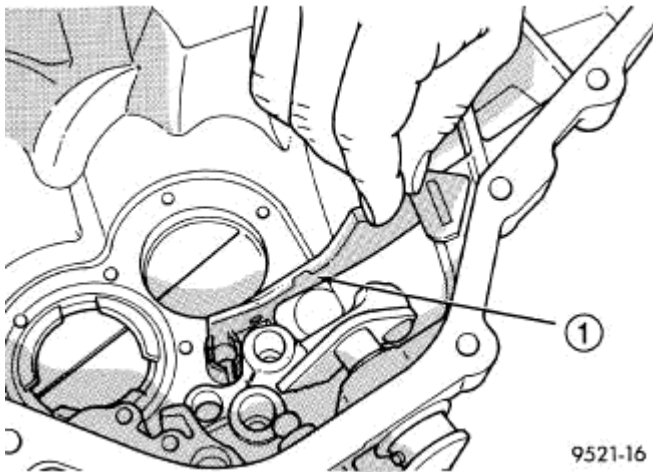
23. Install transaxle gear case (3) into shop press. Press (2) output and input shaft assemblies out of case.
24. Remove transaxle from press.



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Fig. 38: Removing/Installing Transaxle At Bench Fixture 6785
Courtesy of CHRYSLER LLC

25. Carefully remove transaxle case (1) from the shaft assemblies and Bench Fixture 6785 (2).



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Fig. 39: Oil Feed Trough
Courtesy of CHRYSLER LLC

1 - OIL FEED TROUGH

26. Be sure the oil-feed trough (1) to the end bearings is not damaged.

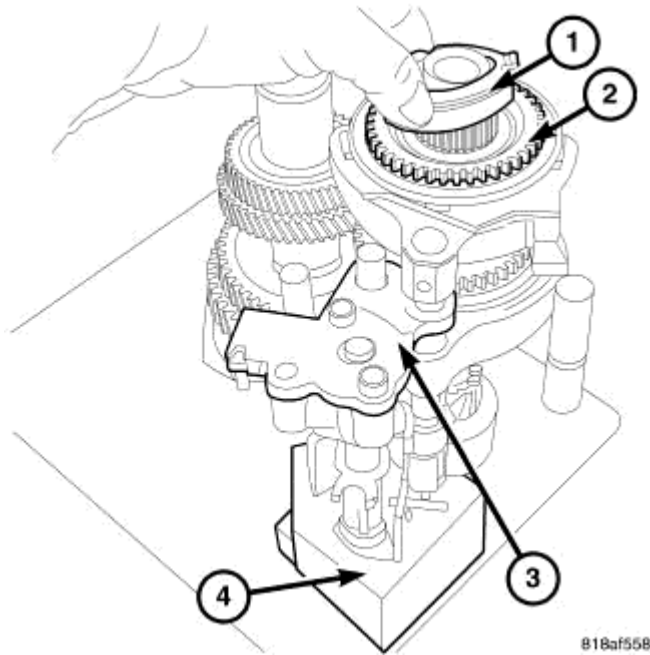


Fig. 40: Removing/Installing Reverse Brake Friction Cone & Blocking Ring At Input Shaft Assembly

Courtesy of CHRYSLER LLC

27. Remove the reverse brake friction cone (1) from the input shaft assembly.
28. Remove the blocking ring (2) from the input shaft assembly.

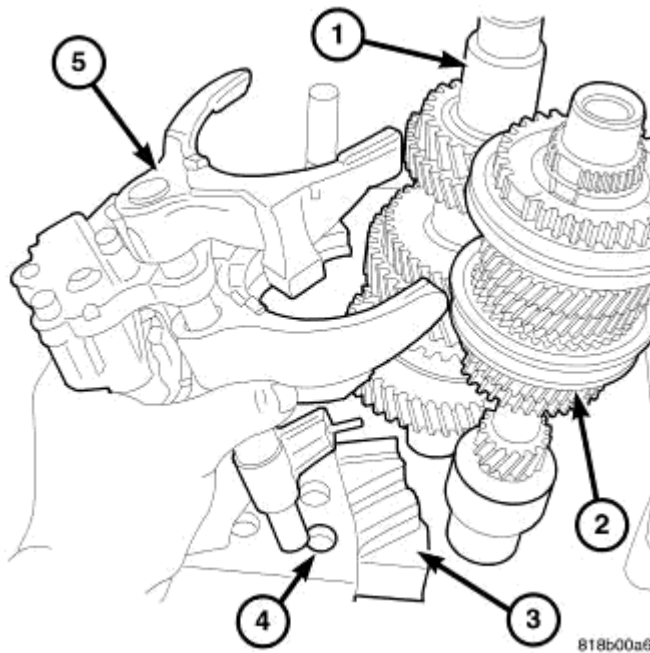


Fig. 41: Shift Blocker Assembly And Reverse Shift Fork

Courtesy of CHRYSLER LLC

29. Remove the shift blocker assembly, the reverse shift fork (5) and the detent assembly from the bench fixture (4).
30. Remove input (2) and output shaft (1) assemblies from Bench Fixture 6785.

CAUTION: The output shaft assembly is serviced as an assembly. Do not try to repair any component on the output shaft. If the 1-2 synchronizer or gear fails, it is necessary to replace the complete output shaft assembly.

CLEANING

CLEANING

Clean the gears, bearings, shafts, synchronizers, thrust washers, oil feeder, shift mechanism, gear case, and bellhousing. Do not use solvent to clean sealed bearings. Dry all parts except the bearings with compressed air. Allow the bearings to either air dry or wipe them dry with clean shop towels.

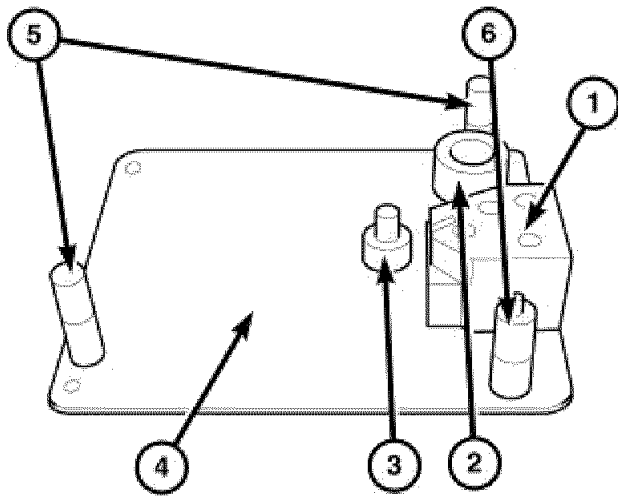
INSPECTION

INSPECTION

Inspect the gears, bearings and shafts. Replace the bearings and cups if the rollers are worn, chipped, cracked, flat spotted, brindled, or if the bearing cage is damaged or distorted. Replace the gears if the teeth are chipped, cracked or worn thin. Inspect the synchronizers. Replace the sleeve if worn or damaged in any way. Replace the stop rings if the friction material is burned, flaking off, or worn. Check the condition of the synchro keys and springs. Replace these parts if worn, cracked, or distorted.

ASSEMBLY

ASSEMBLY



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Fig. 42: Bench Fixture 6785 & Adaptors
Courtesy of CHRYSLER LLC

The T355 transaxle internal components can be serviced only by separating the gear case from the bellhousing case.

CAUTION: The transaxle output shaft is serviced as a unit. No disassembly and reassembly is possible. Damage to the transaxle may result.

The sealant used to seal the transaxle case halves is MOPAR® Gasket Maker, Loctite® 518, or equivalent. The sealant used for the bearing end plate cover is MOPAR® RTV.

NOTE: Some of the assembly adaptors are different part numbers from the disassembly adaptors.

1. Load bench fixture (4) with adaptors 9761-1 (1), 9761-2 (3), 9761-3 (2), 9761-4 (5) and 9761-5 (6).

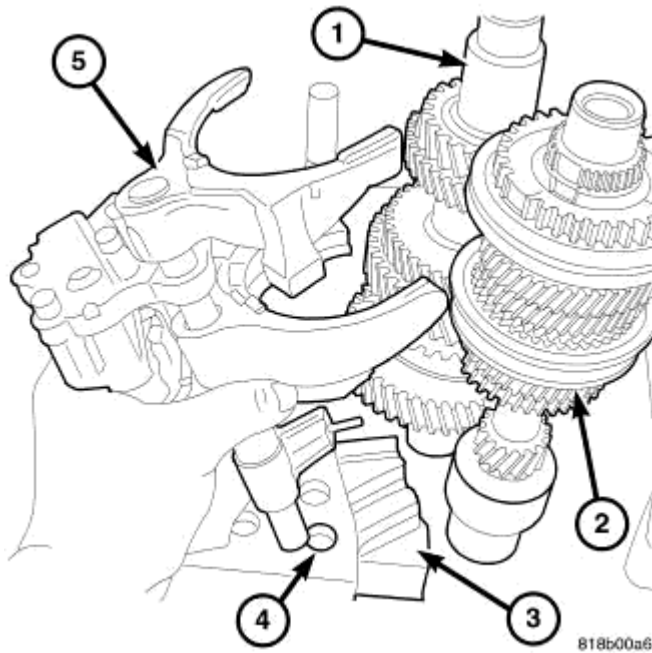


Fig. 43: Shift Blocker Assembly And Reverse Shift Fork
Courtesy of CHRYSLER LLC

2. Install the output (1) and input (2) shafts onto bench fixture 6785.
3. Install shift blocker assemblies, fork assemblies and detent assemblies all as one.

NOTE: **Adaptor 9761-1 will slide shift blocker assembly and all the shift fork into the input and output shafts.**

4. Align all shift forks and slide into place.

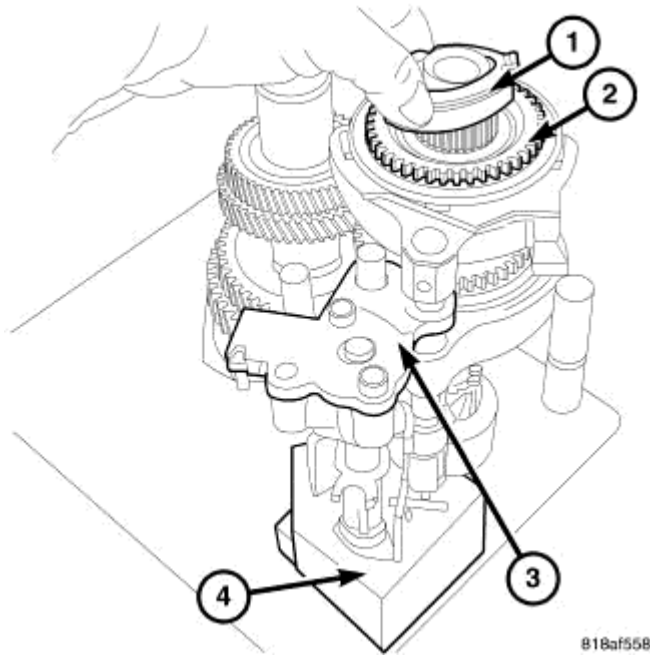


Fig. 44: Removing/Installing Reverse Brake Friction Cone & Blocking Ring At Input Shaft Assembly

Courtesy of CHRYSLER LLC

5. Install reverse brake blocking ring (2).
6. Install reverse brake friction cone (1).

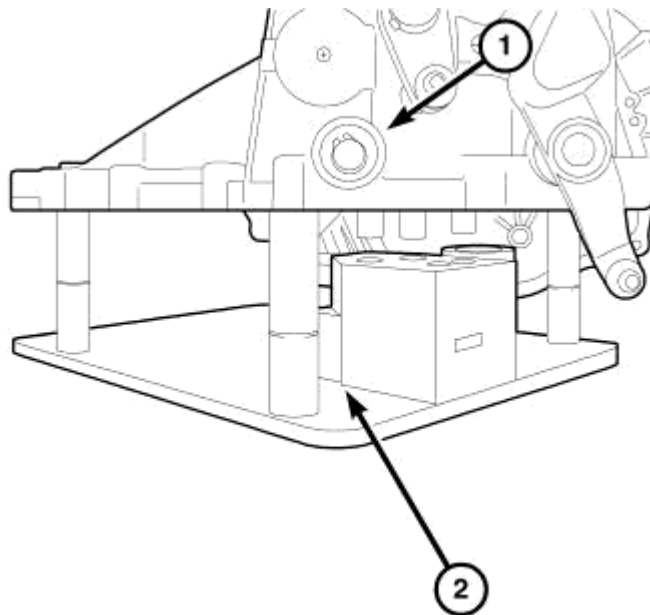


Fig. 45: Removing/Installing Transaxle At Bench Fixture 6785

Courtesy of CHRYSLER LLC

NOTE: One detent assembly bolt may need to be installed to align assembly.

NOTE: Insure that the select link is installed properly also insure that the blocker assembly catches the crossover ball stud (this can be checked by using a mirror).

7. Install gear case half (1) over bench fixture (2). Line up shift finger over 3-4 lug.
8. Line up reverse brake friction cone lugs to the slots in the gear case. Verify reverse brake shim is in position.

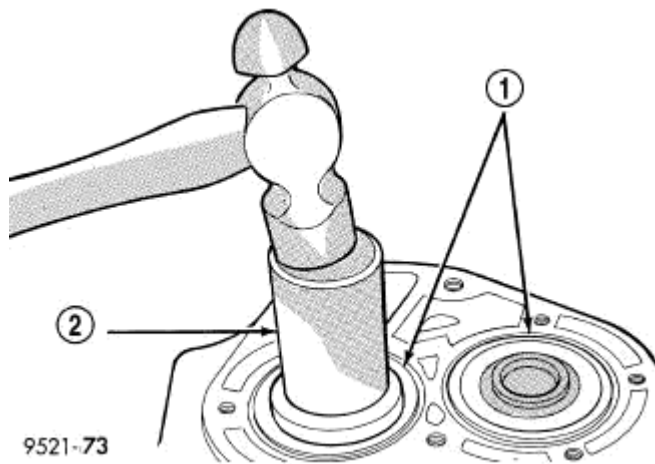


Fig. 46: Installing Input and Output Bearings
Courtesy of CHRYSLER LLC

1 - INPUT AND OUTPUT BEARINGS
2 - SEAL INSTALLER 4992-1

9. Position input and output bearings (1) on the shafts. Using Seal Installer C-4992-1 (2), install input and output shaft bearings (1) until they bottom into the case and against the shafts.

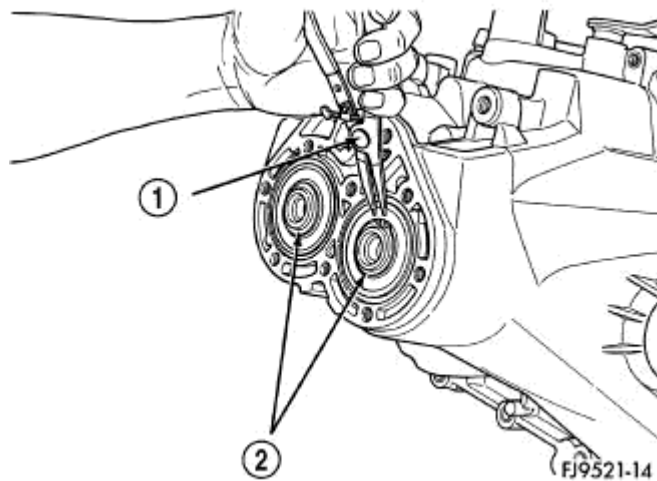


Fig. 47: Snap Rings Retaining Bearings
Courtesy of CHRYSLER LLC

- | |
|----------------------|
| 1 - SNAP RING PLIERS |
| 2 - SNAP RINGS |

10. Install **new** snap rings (2) at input and output bearings.

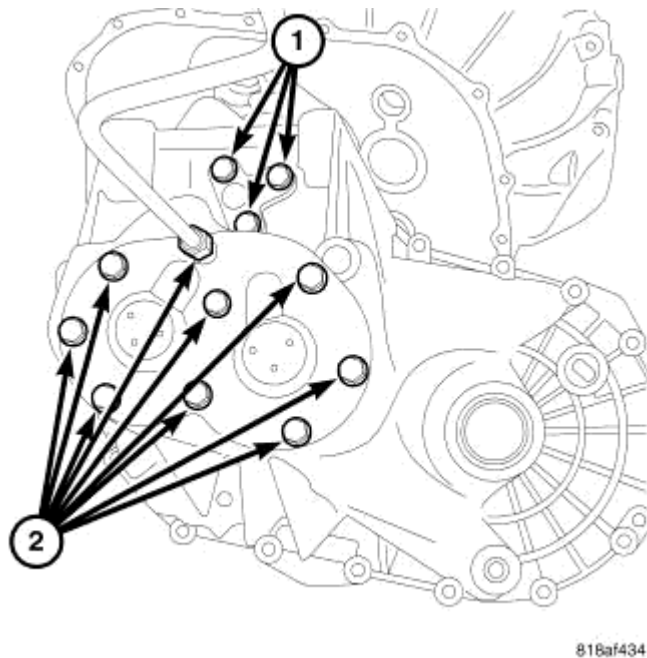


Fig. 48: Removing/Installing Transaxle End Cover Bolts & Rear Detent Assembly Bolts
Courtesy of CHRYSLER LLC

11. Apply MOPAR® RTV sealant to end cover outer edge and around bolt holes. Install end cover onto gear case. Tighten end cover bolts to 25 N.m (225 in. lbs.).

NOTE: Install new O-rings on shift blocker assembly bolts.

12. Install the three detent assembly bolts (1) and tighten to 25 N.m (225 in. lbs.).

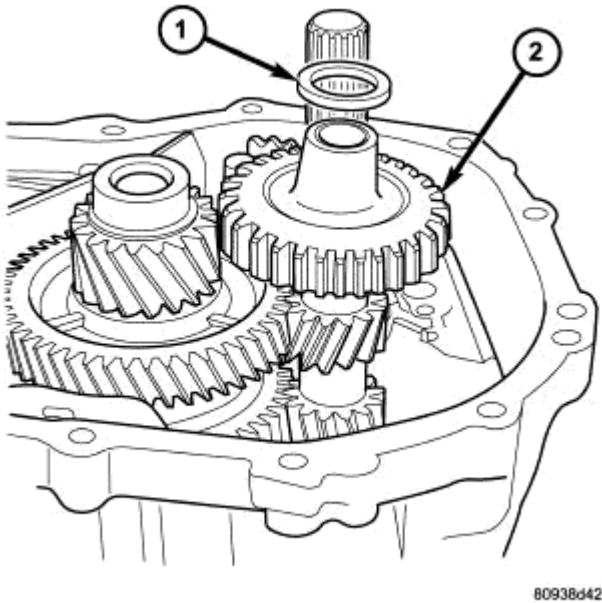


Fig. 49: Reverse Idler Gear and Spacer
Courtesy of CHRYSLER LLC

1 - SPACER
2 - REVERSE IDLER GEAR

13. Remove gear case from bench fixture.
14. Install gear case in a holding fixture with end cover facing down.
15. Turn selector link into slot on blocker assembly.
16. Push selector link spacer clip onto selector shaft.
17. Install reverse idler gear (2) and spacer (1).

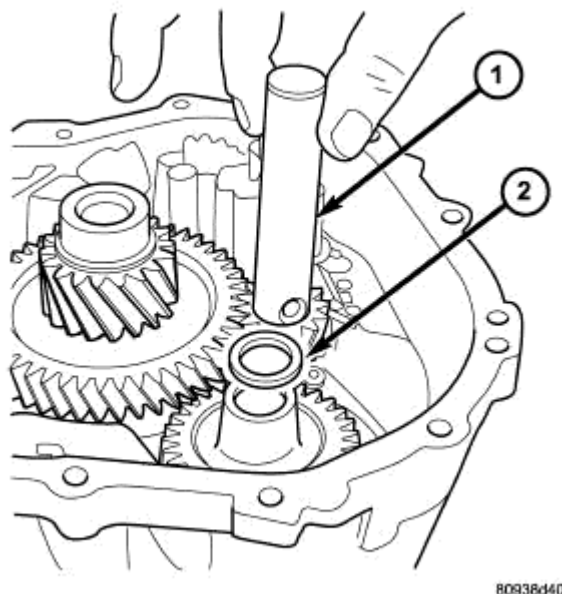


Fig. 50: Reverse Idler Shaft Removal/Installation
Courtesy of CHRYSLER LLC

1 - REVERSE IDLER SHAFT

2 - SPACER

18. Install reverse idler shaft (1) .

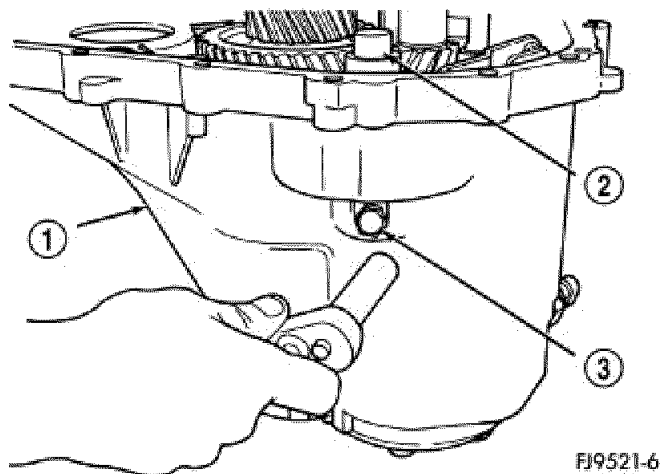


Fig. 51: Reverse Idler Shaft Bolt
Courtesy of CHRYSLER LLC

1 - CASE

2 - REVERSE IDLER SHAFT

3 - REVERSE IDLER SHAFT BOLT

19. Install bolt into reverse idler shaft (2) and tighten to 26 N.m (19 ft. lbs.).

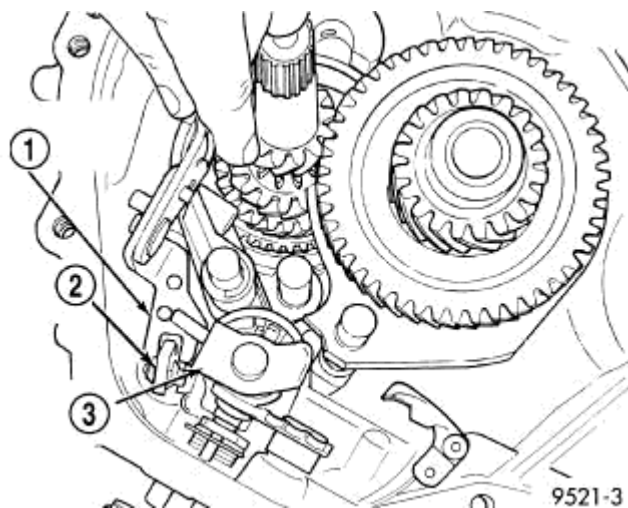


Fig. 52: Removing/Installing Reverse Fork Bracket
Courtesy of CHRYSLER LLC

1 - REVERSE FORK BRACKET

2 - REVERSE CAM BLOCKOUT

3 - SHIFT BLOCKER ASSEMBLY

20. Install fifth and reverse blocker (2).
21. Insure reverse shift linkage is properly aligned in the reverse fork.
22. Install reverse fork bracket (1).

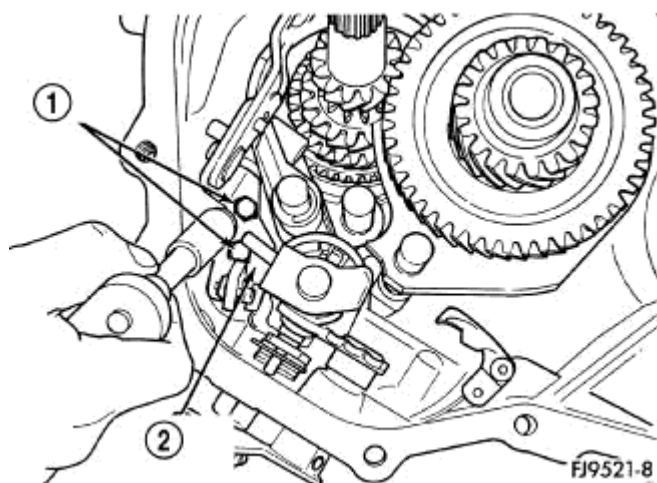


Fig. 53: Reverse Fork Screws

Courtesy of CHRYSLER LLC

1 - SCREWS (2)

2 - REVERSE FORK BRACKET

23. Tighten reverse fork bracket (1) screws to 11 N.m (96 in. lbs.).

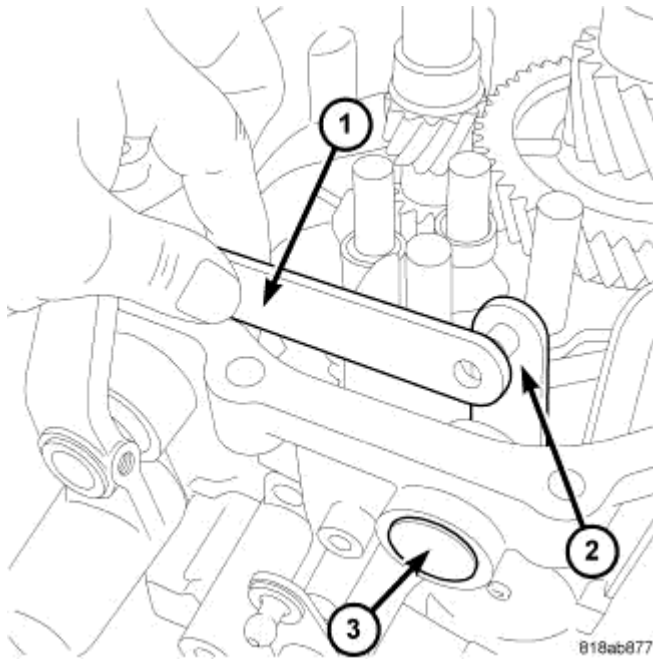


Fig. 54: Removing/Installing Plug & Linkage Tie Bar
Courtesy of CHRYSLER LLC

24. Install the linkage tie bar (1).

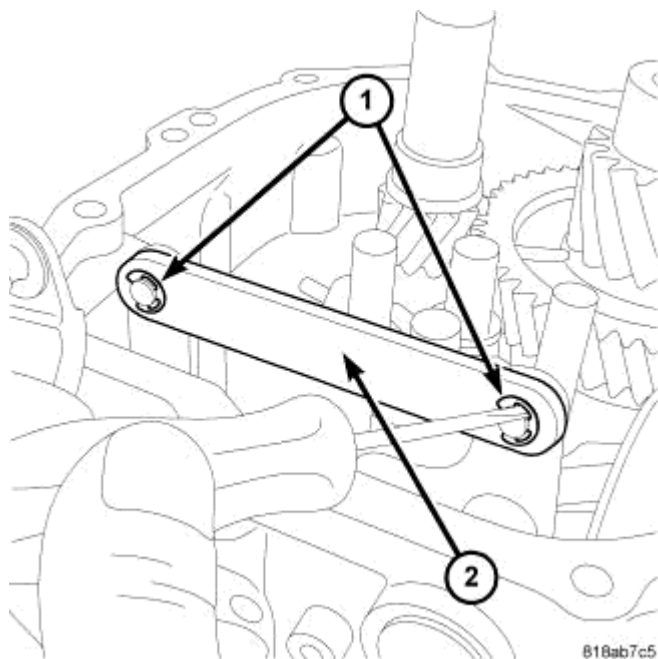


Fig. 55: Clips At Linkage Tie Bar
Courtesy of CHRYSLER LLC

25. Install the linkage tie bar clips (1).

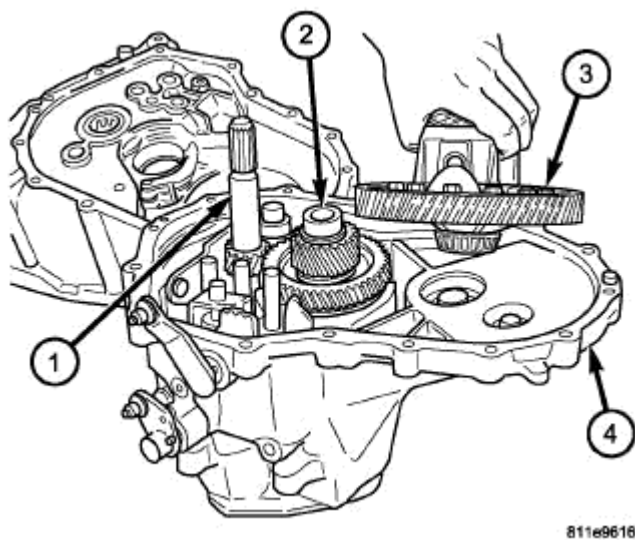


Fig. 56: Removing/Installing Differential Assembly
Courtesy of CHRYSLER LLC

- | |
|---|
| <p>1 - INPUT SHAFT
2 - OUTPUT SHAFT
3 - DIFFERENTIAL ASSEMBLY</p> |
|---|

4 - GEARTRAIN HOUSING

26. Install differential (3) into gear case (4) .

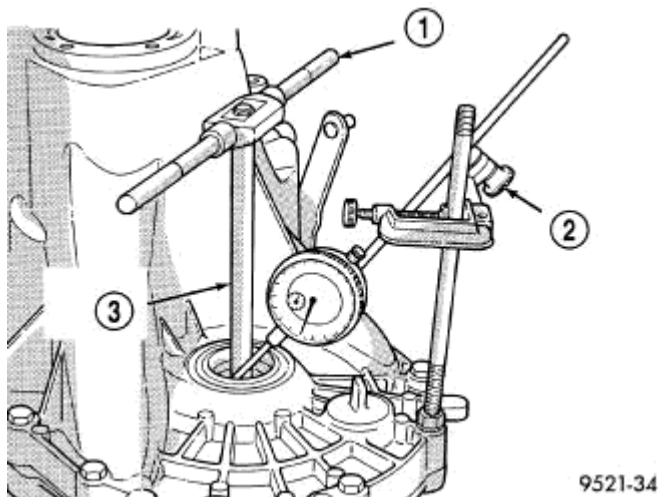
BEARING ADJUSTMENT PROCEDURE

Fig. 57: Checking Differential Bearing End Play To Determine Shim Thickness

Courtesy of CHRYSLER LLC

1 - T-HANDLE

2 - DIAL INDICATOR SET

3 - TORQUE TOOL C-4995A

1. Use extreme care when removing and installing bearing cups and cones. Use only an arbor press for installation, as a hammer may not properly align the bearing cup or cone. Burrs or nicks on the bearing seat gives a false end-play reading while gauging for proper shims. Improperly seated bearing cups and cones are subject to low mileage failures.
2. Bearing cups and cones should be replaced if they show signs of pitting or heat distress. If distress is seen on either the cup or bearing rollers, both cup and cone must be replaced.
3. Bearing preload and drag torque specifications must be maintained to avoid premature bearing failures. Used (original) bearings may lose up to 50% of the original drag torque after break-in. All bearing adjustments must be made with no other component interference or gear intermesh.
4. Replace bearings as a pair: If one differential bearing is defective, replace both differential bearings, if one input shaft bearing is defective, replace both input shaft bearings.
5. Bearing cones must not be reused if removed.
6. Turning torque readings should be obtained while smoothly rotating in either direction.

DIFFERENTIAL BEARING PRELOAD ADJUSTMENT

NOTE: True bearing turning torque readings can be obtained only with the geartrain

removed from the case.

1. Remove bearing cup and existing shim from clutch bellhousing case.
2. Press in new bearing cup into bellhousing case (or use a cup that has been ground down on the outer edge for ease of measurement).
3. Press in new bearing cup into gear case side.
4. Oil differential bearings with transmission fluid. Install differential assembly in transaxle gear case. Install clutch bellhousing over gear case. Install and tighten case bolts to 25 N.m (225 in. lbs.).
5. Position transaxle with bellhousing facing down on workbench with C-clamps. Position dial indicator.

NOTE: Position of dial indicator is for illustrative purposes only. The dial indicator should be parallel to T-Handle to obtain the most accurate reading.

6. Apply a medium load to differential with Torque Tool C-4995A (3) and a T-handle (1), in the downward direction. Roll differential assembly back and forth a number of times. This will settle the bearings. Zero the dial indicator (2). To obtain end play readings, apply a medium load in an upward direction while rolling differential assembly back and forth. Record end play.

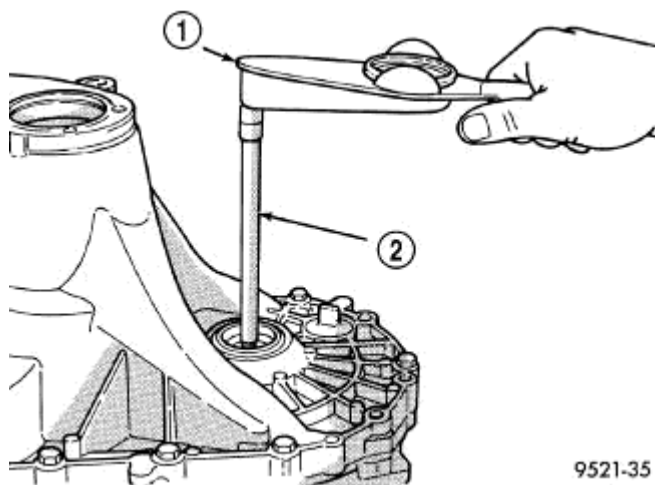


Fig. 58: Checking Differential Bearing Turning Torque
Courtesy of CHRYSLER LLC

1 - INCH-
POUND
TORQUE
WRENCH

2 -
TORQUE
TOOL C-
4995A

7. The shim required for proper bearing preload is the **total of end play, plus (constant) preload of 0.18**

mm (0.007 in.). Never combine shims to obtain the required preload.

8. Remove case bolts. Remove clutch bellhousing differential bearing cup. Install shim(s) selected. Then press the bearing cup into clutch bellhousing.
9. Install clutch bellhousing. Install and tighten case bolts to 25 N.m (225 in. lbs.).

Using Torque Tool C-4995A (2) and an inch-pound torque wrench (1), check turning torque of the differential assembly. **The turning torque should be 6 to 12 in. lbs. If the turning torque is too high, install a 0.05 mm (0.002 inch) thinner shim. If the turning torque is too low, install a 0.05 mm (0.002 inch) thicker shim.**

10. Recheck turning torque (1). Repeat until the proper turning torque is obtained.

Once proper turning torque has been established, place gear case on the end plate. Draw a bead of MOPAR® Gasket Maker, Loctite® 518, or equivalent, on the flat surface of the case mating flange. Install clutch bellhousing onto gear case. Install and tighten case bolts to 25 N.m (225 in. lbs.).

11. Install the backup lamp switch (2), tighten switch to 23 N.m (17 ft. lbs.).

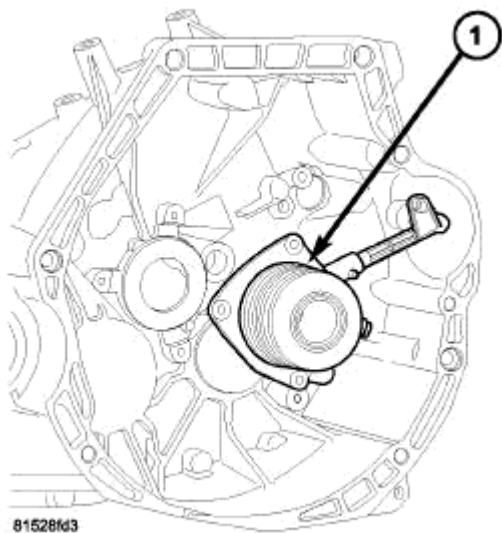


Fig. 59: Removing/Installing Slave Cylinder
Courtesy of CHRYSLER LLC

12. Install slave cylinder (1) to transaxle using new bolts. Refer to **Clutch/CYLINDER, Clutch Slave - Installation** .

INSTALLATION

INSTALLATION

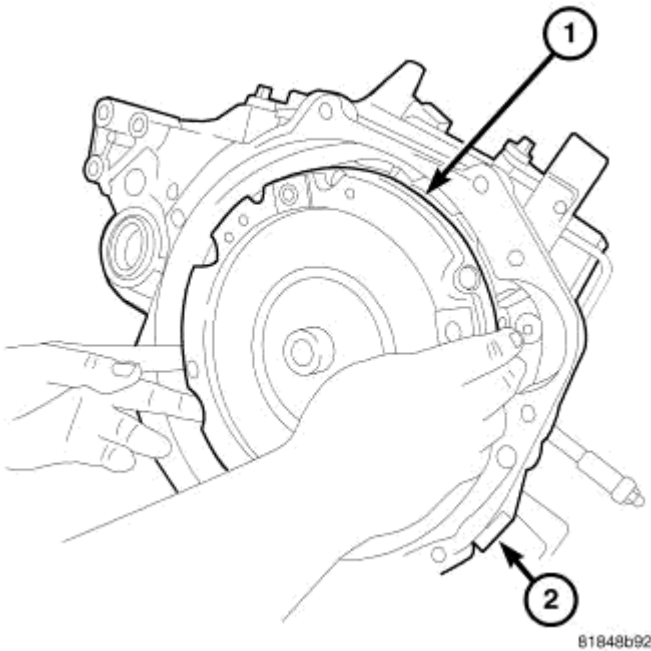


Fig. 60: Modular Clutch Assembly
Courtesy of CHRYSLER LLC

1. Install clutch module (1) (if equipped) onto input shaft.

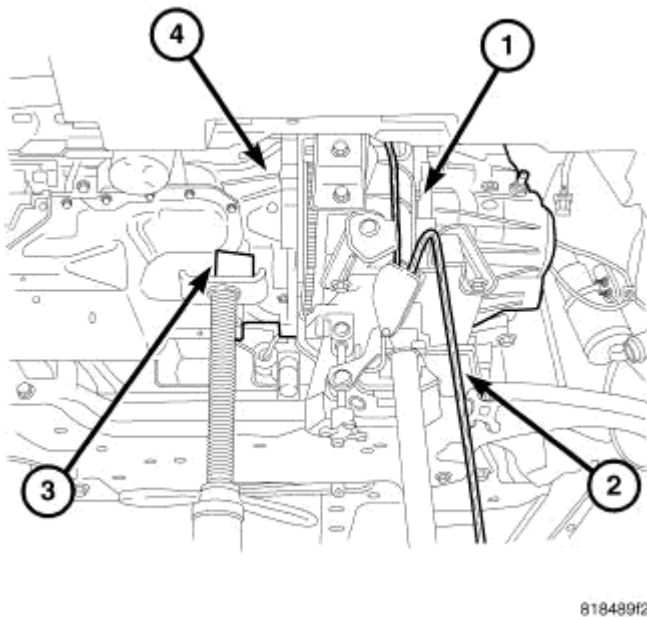


Fig. 61: Installing Transaxle Into Position
Courtesy of CHRYSLER LLC

2. Install transaxle (1) into position.
3. Install the transmission crossmember. Refer to **Frame and Bumpers/Frame/CROSSMEMBER** -

Removal .

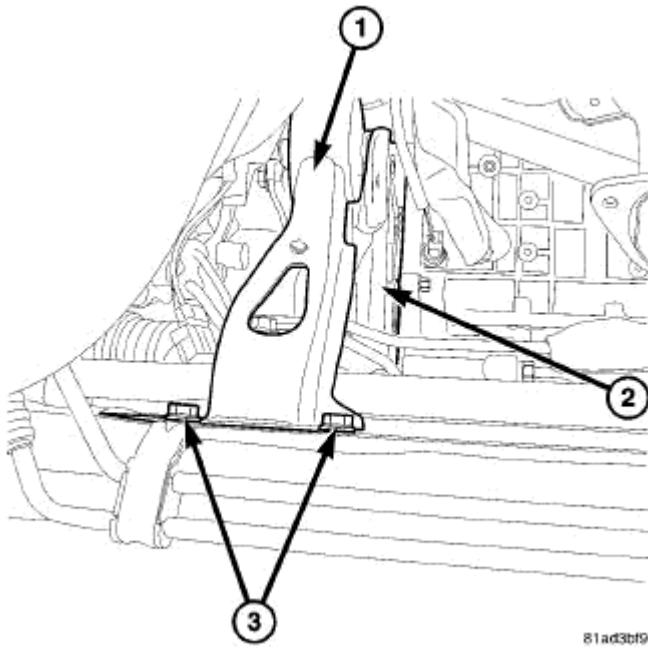


Fig. 62: Removing/Installing Rear Transmission Mount Bracket
 Courtesy of CHRYSLER LLC

4. Install the rear transmission mount bracket (2) and bolts, tighten to 68 N.m (50 ft. lbs.).
5. Install the rear transmission mount (1) and bolts, tighten to 68 N.m (50 ft. lbs.).
6. Install the rear transmission mount through bolt (4) at this time and tighten to 68 N.m (50 ft. lbs.).

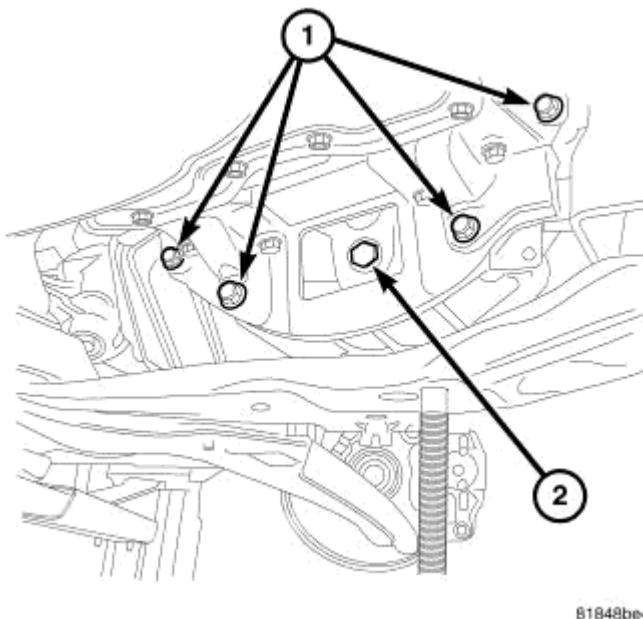
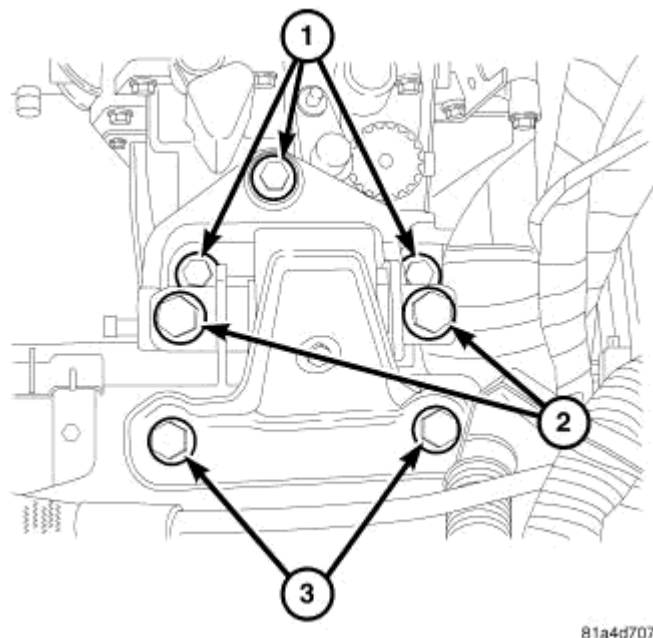


Fig. 63: Transmission Bell Housing Bolts

Courtesy of CHRYSLER LLC

7. Install transaxle-to-engine mounting bolts and tighten to 48 N.m (35 ft. lbs.).

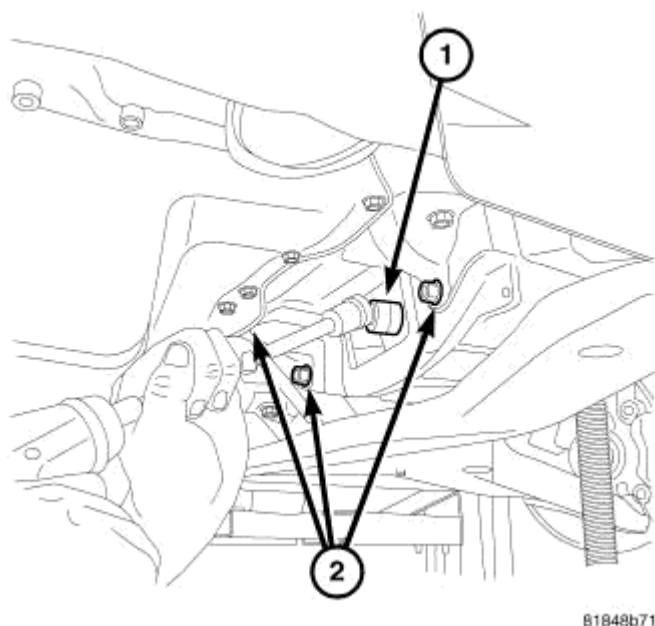


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Fig. 64: Left Bracket To Transmission Bolts

Courtesy of CHRYSLER LLC

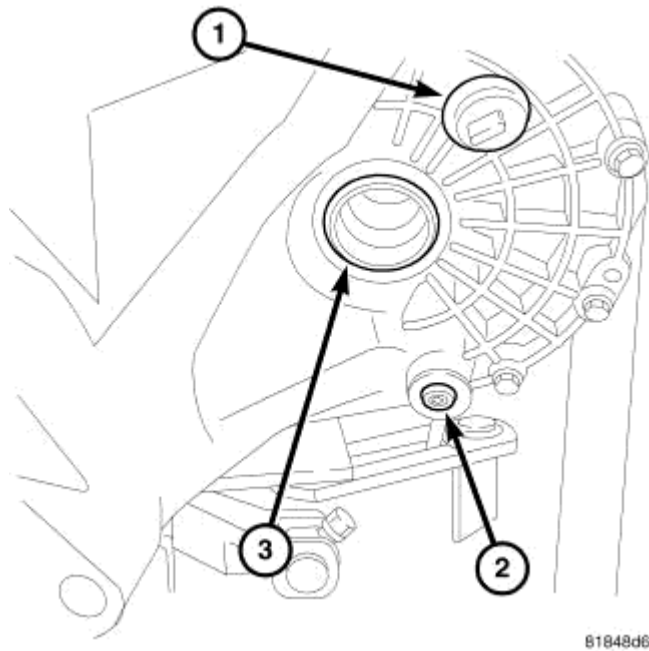
8. Raise engine and transaxle with screw jack and transmission jack until upper mount bracket aligns with upper mount. Install mount bolts (1) and tighten to 68 N.m (50 ft. lbs.).
9. Remove screw jack.



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Fig. 65: Removing/Installing Modular Clutch-To-Drive Plate Bolts
Courtesy of CHRYSLER LLC

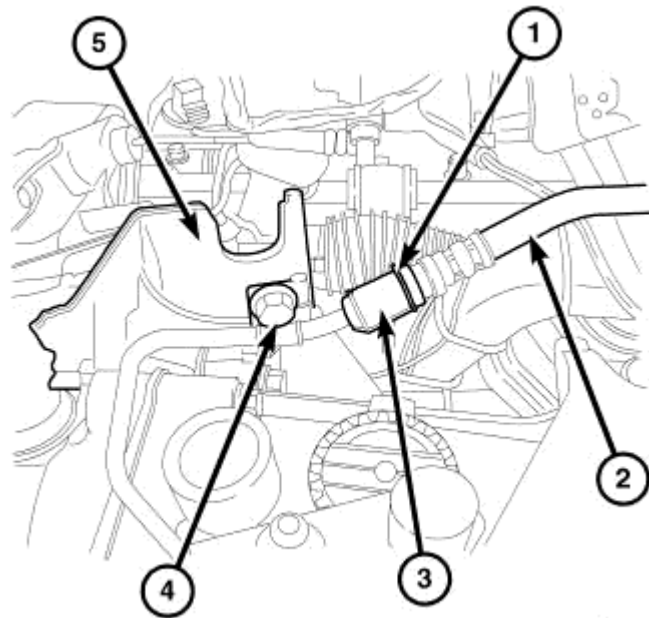
10. Install four (4) modular clutch-to-driveplate bolts (4). Align drive plate and modular clutch alignment marks placed upon disassembly. Start with tight-tolerance (slotted) hole, install and torque bolts to 88 N.m (65 ft. lbs.).
11. Install starter motor and tighten bolts to 54 N.m (40 ft. lbs.). Make sure to fasten ground cable to upper starter bolt. Refer to **Electrical - Engine Systems/Starting/STARTER - Installation** .
12. Install bell housing dust cover.
13. Install both front axle driveshafts. Refer to **Differential and Driveline/Half Shaft - Installation** .



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Fig. 66: Removing/Installing Transaxle Oil Drain Plug
Courtesy of CHRYSLER LLC

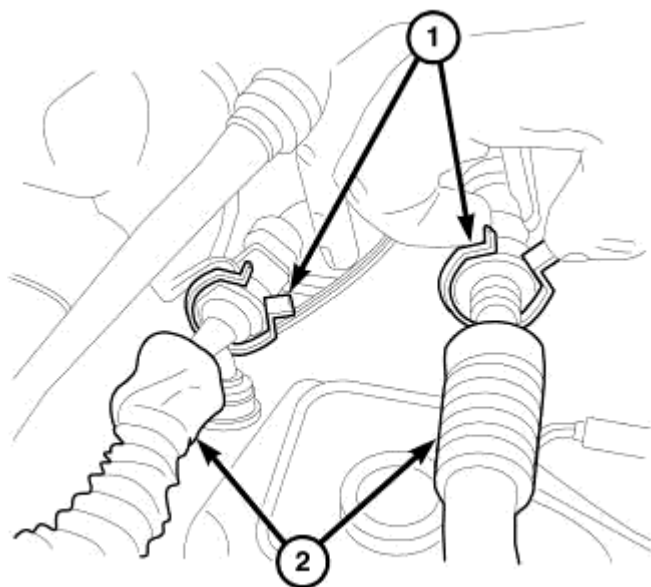
14. Fill transaxle with suitable amount of fluid (2.7 liters). See **Standard Procedure**.
15. Lower the vehicle.
16. Install the remaining bell housing bolts and tighten to 48 N.m (35 ft. lbs.).



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Fig. 67: Removing/Installing Clip At Hydraulic Line
Courtesy of CHRYSLER LLC

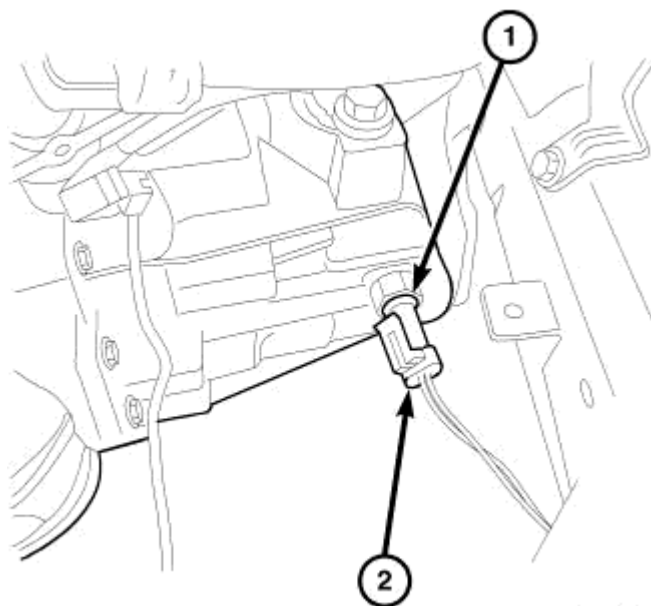
17. Connect the hydraulic clutch slave cylinder lines (2, 3) and clip (1), verify connection by pushing and pulling connection.
18. Bleed slave cylinder.



81822a5b

Fig. 68: Removing/Installing Shift Cable-To-Bracket Clips
Courtesy of CHRYSLER LLC

19. Connect shift and selector cables (2) to shift lever. Install cables to bracket (1).



818228bb

Fig. 69: Removing/Installing Back-Up Lamp Switch Connector

Courtesy of CHRYSLER LLC

20. Connect back-up lamp switch connector (1).
21. Connect the vehicle speed sensor connector if equipped.
22. Install the air cleaner assembly.
23. Connect the negative battery cable.
24. Road test vehicle and inspect for leaks.

SPECIFICATIONS**SPECIFICATIONS****SPECIFICATIONS**

DESCRIPTION	N.m	Ft. Lbs.	In. Lbs.
Back-up Lamp Switch	23	17	-
Crossover Cable Adjustment Screw	8	-	70
Drain Plug	14	-	120
Bolts, Differential Ring Gear	95	70	-
Bolts, End Plate Cover	25	-	225
Bolts, Output Bearing Race Retaining Strap	12	-	105
Bolts, Reverse Fork Bracket	11	-	96
Bolt, Reverse Idler Shaft	26	19	-
Bolts, Shift Cable Bracket to Transaxle	21	-	185
Transaxle Case Bolts	25	-	225
Bolt, Transaxle to Engine	48	35	-
Bolt, Vehicle Speed Sensor	7	-	60
Bolts, Modular Clutch-to- Driveplate	88	65	-
Bolt, Reverse Idler Shaft	29	21	-
Bolts, Shift Blocker Assembly	25	-	225
Bolts, Upper Mount - to Transaxle	68	50	-
Bolts, Shifter Assembly	7	-	61
Bolts, Crossmember - to - Frame	68	50	-
Through Bolt, Rear			

transmission mount	68	50	-
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Bolts that have thread sealer or torque lock patches should not be reused. Always install new bolts in these applications.

SPECIAL TOOLS

SPECIAL TOOLS

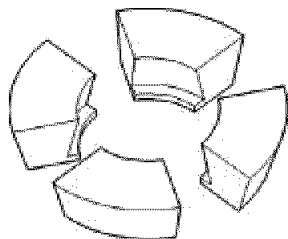


Fig. 70: Adaptor Blocks C-293-45
Courtesy of CHRYSLER LLC

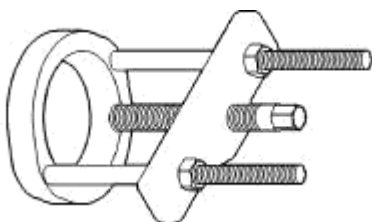


Fig. 71: Puller C-293-PA
Courtesy of CHRYSLER LLC

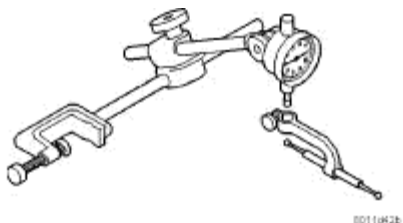


Fig. 72: Dial Indicator C-3339A
Courtesy of CHRYSLER LLC

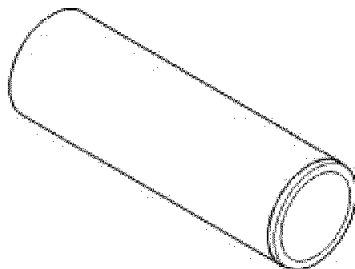


Fig. 73: Installer 6448A

Courtesy of CHRYSLER LLC

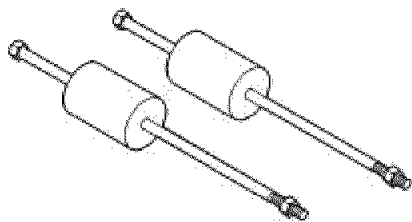


Fig. 74: Slide Hammer C-3752
Courtesy of CHRYSLER LLC

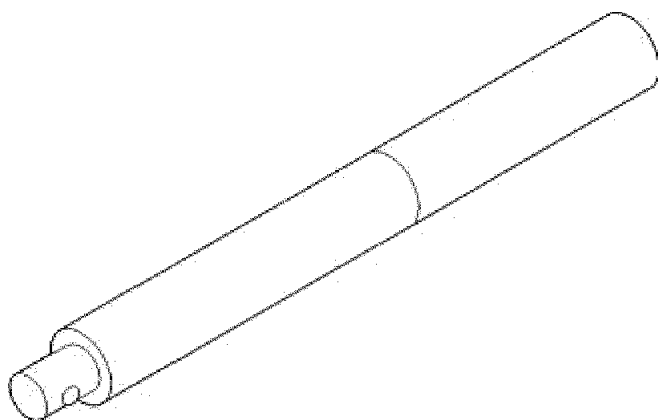


Fig. 75: Handle C-4171
Courtesy of CHRYSLER LLC

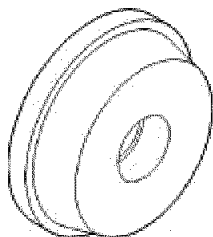


Fig. 76: Bearing Installer C-4628
Courtesy of CHRYSLER LLC

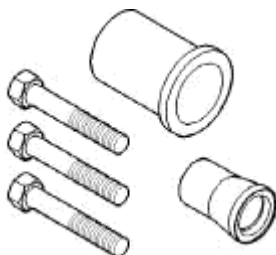


Fig. 77: Seal Remover C-4680
Courtesy of CHRYSLER LLC

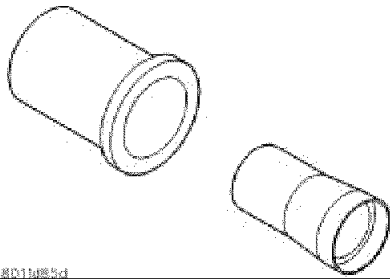


Fig. 78: Seal Installer C-4992
Courtesy of CHRYSLER LLC

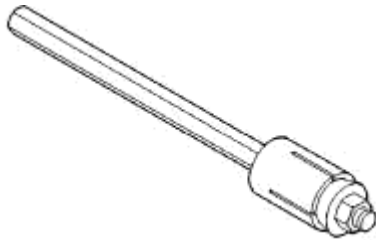


Fig. 79: Torque Tool C-4995
Courtesy of CHRYSLER LLC

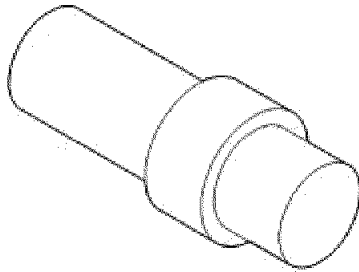


Fig. 80: Adapter C-4996
Courtesy of CHRYSLER LLC

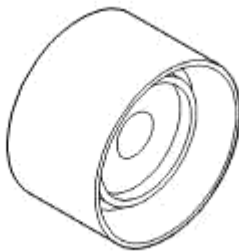


Fig. 81: Installer L-4410
Courtesy of CHRYSLER LLC

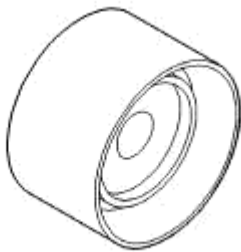


Fig. 82: Installer L-4440
Courtesy of CHRYSLER LLC

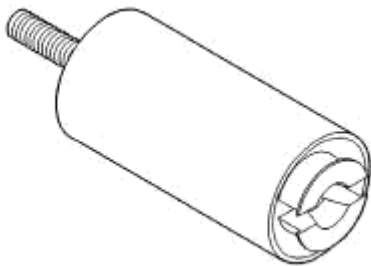


Fig. 83: Puller L-4518
Courtesy of CHRYSLER LLC

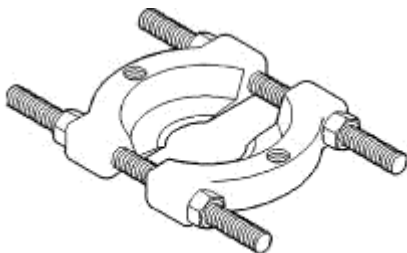


Fig. 84: Bearing Splitter 1130
Courtesy of CHRYSLER LLC

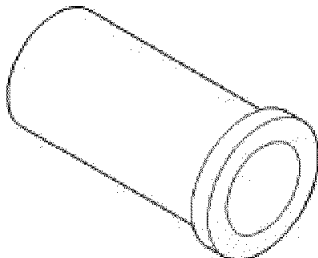


Fig. 85: Driver 6342
Courtesy of CHRYSLER LLC

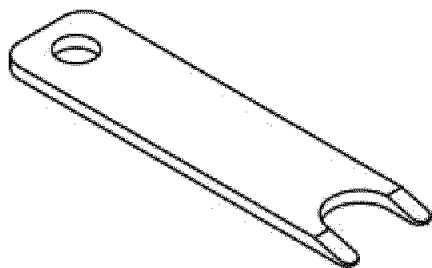


Fig. 86: Disconnect Tool 6638A
Courtesy of CHRYSLER LLC

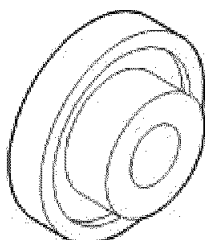


Fig. 87: Seal Installer 9928
Courtesy of CHRYSLER LLC

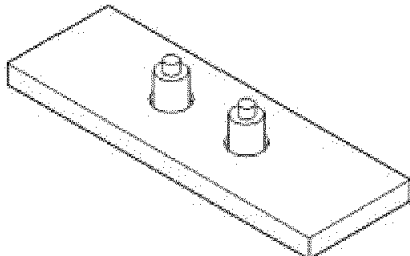


Fig. 88: Bearing Remover 6768
Courtesy of CHRYSLER LLC

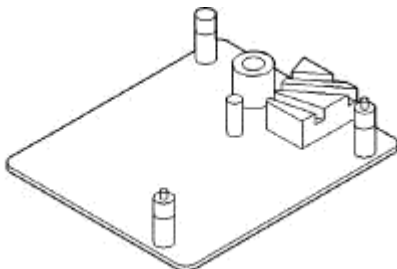


Fig. 89: Bench Fixture 6785
Courtesy of CHRYSLER LLC

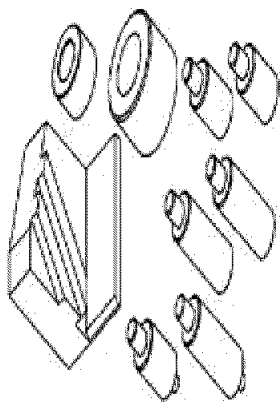


Fig. 90: Adaptors 9761

Courtesy of CHRYSLER LLC

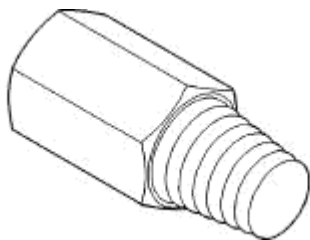


Fig. 91: Remover 6786

Courtesy of CHRYSLER LLC

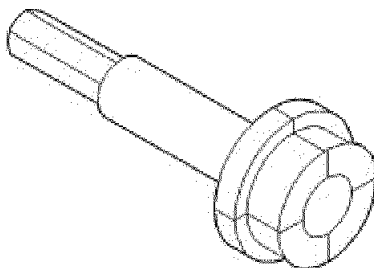


Fig. 92: Remover 6787

Courtesy of CHRYSLER LLC

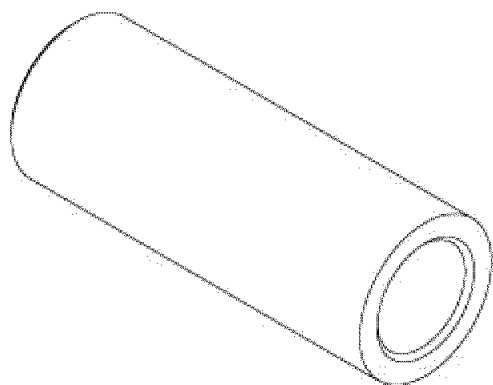


Fig. 93: Installer 8864

Courtesy of CHRYSLER LLC

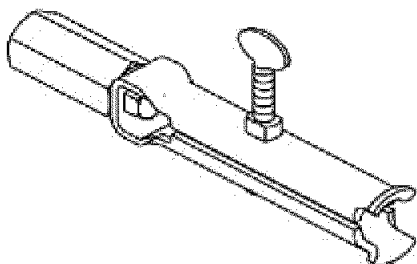


Fig. 94: Puller 9585

Courtesy of CHRYSLER LLC

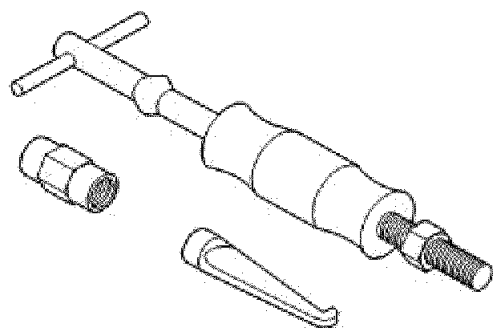


Fig. 95: Slide Hammer C-637

Courtesy of CHRYSLER LLC

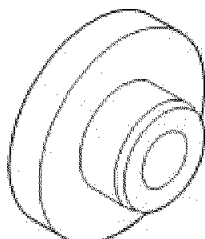


Fig. 96: Installer Bearing - 5064

Courtesy of CHRYSLER LLC

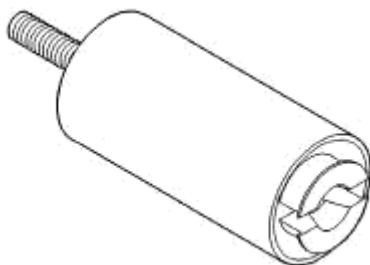


Fig. 97: Puller- L-4518

Courtesy of CHRYSLER LLC

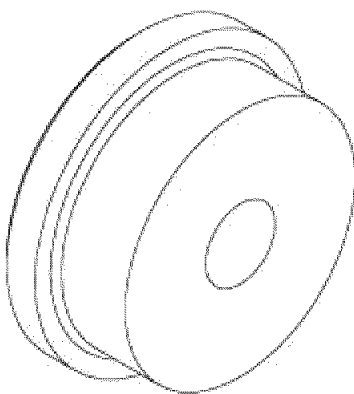


Fig. 98: Installer 8692

Courtesy of CHRYSLER LLC



Fig. 99: Adapters C-293-37

Courtesy of CHRYSLER LLC

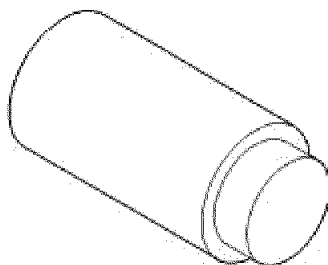


Fig. 100: Plug Or Insert 9678

Courtesy of CHRYSLER LLC

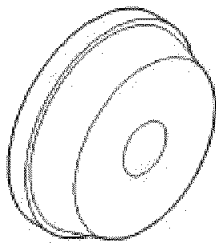


Fig. 101: Installer L-4520

Courtesy of CHRYSLER LLC

BEARING AND RACE, INPUT

REMOVAL

REMOVAL

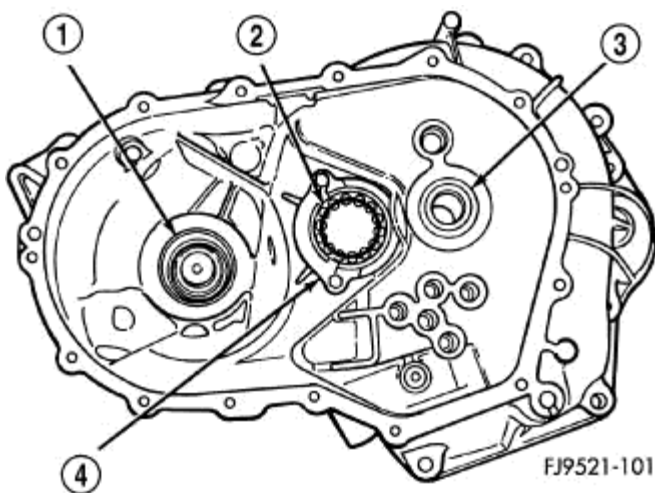


Fig. 102: Identifying Input Bearing, Differential Bearing, Output Bearing, & Bearing Retainer

Courtesy of CHRYSLER LLC

- | |
|---|
| 1 - DIFFERENTIAL BEARING
2 - OUTPUT BEARING
3 - INPUT BEARING
4 - BEARING RETAINER |
|---|

The input bearing (3) is a one-piece bearing and sleeve unit. The sleeve is the slide point for the clutch-release bearing and lever.

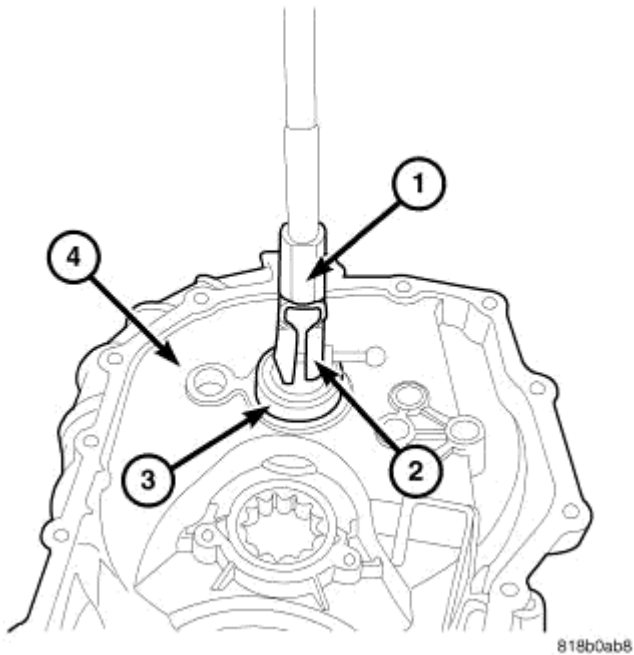


Fig. 103: Identifying Puller 9585, Slide Hammer C-637, & Input Bearing
Courtesy of CHRYSLER LLC

1. Install Puller 9585 (2) and Slide Hammer C-637 (1) over into bearing on the gear case side of the transaxle clutch housing (4).
2. Pull the input bearing (3) out of the housing.

INSTALLATION

INSTALLATION

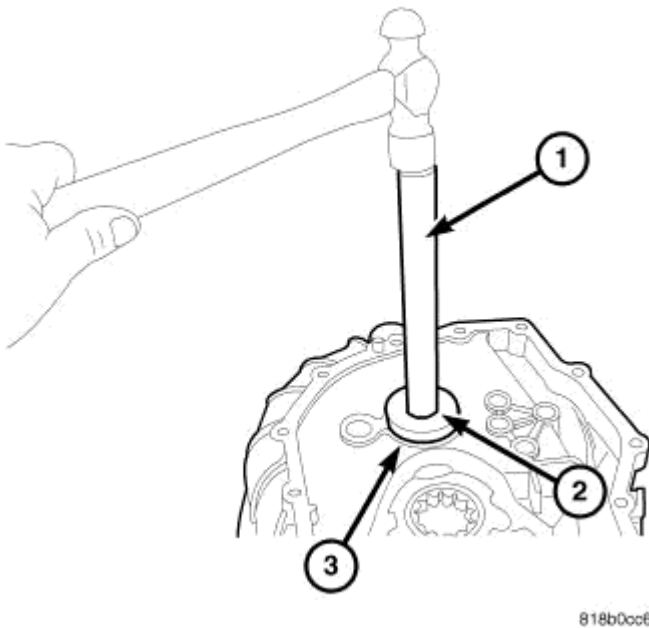


Fig. 104: Installing Input Bearing Into Bore Using Installer 5064 & Handle C-4171
Courtesy of CHRYSLER LLC

1. Apply coating of Loctite® sealant on bearing outer diameter. Position sleeve and bearing assembly at input bearing bore.
2. Using Installer 5064 (2) and Handle C-4171 (1) install input bearing (3) into bore until it is fully seated.

BEARING AND RACE, OUTPUT

REMOVAL

REMOVAL

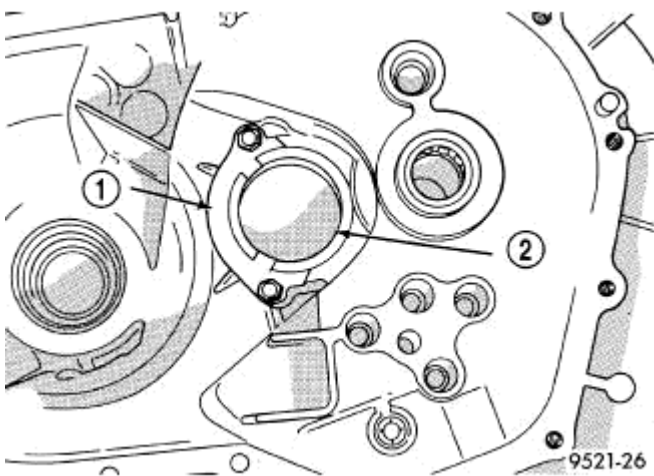
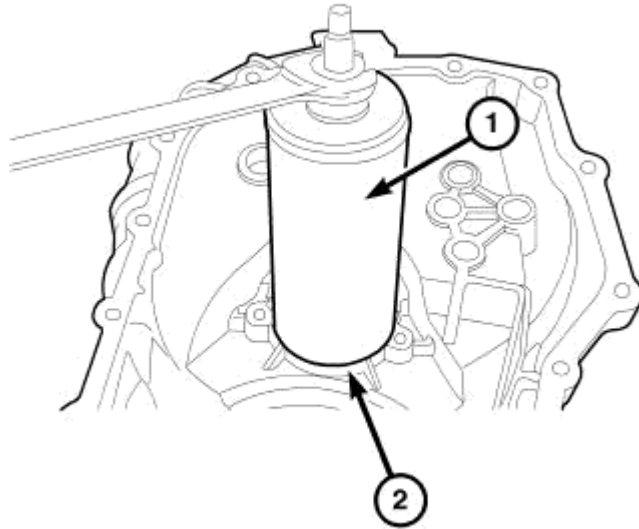


Fig. 105: Removing/Installing Output Bearing Strap

Courtesy of CHRYSLER LLC

- 1 - BEARING RETAINER
- 2 - OUTPUT BEARING RACE

1. Remove screws at output bearing retainer strap (1) .



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Fig. 106: Identifying Puller L-4518 & Output Bearing
Courtesy of CHRYSLER LLC

2. Install Puller L-4518 (1) and remove output bearing (2).

INSTALLATION

INSTALLATION

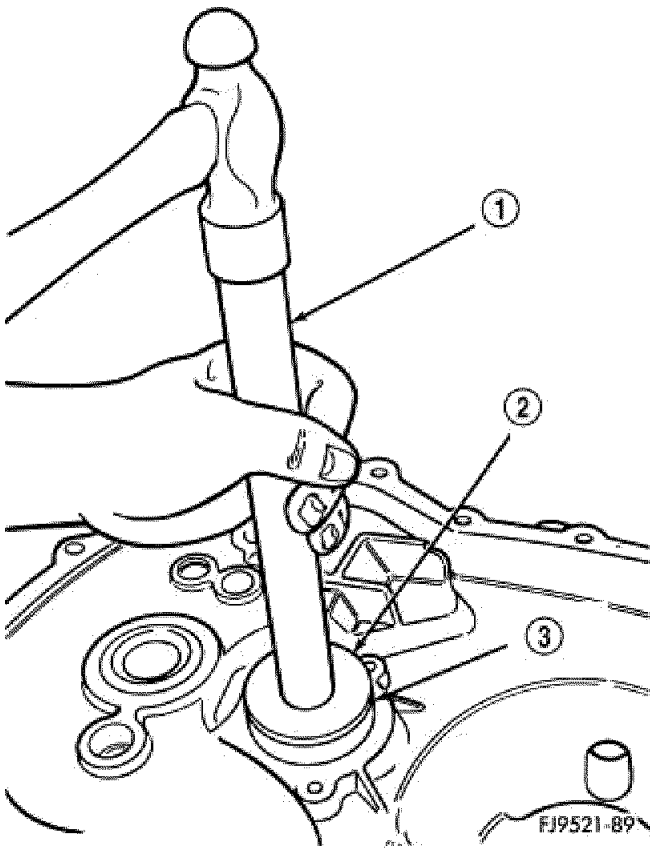


Fig. 107: Output Bearing Race Installation

Courtesy of CHRYSLER LLC

- | |
|--|
| 1 - HANDLE C-4171
2 - INSTALLER C-4628
3 - OUTPUT BEARING RACE |
|--|

NOTE: Properly install race with tabs on lock feature.

1. Line up output bearing (3) to bore.
2. Insert tool Installer 8692 (2) with Handle C-4171 (1) onto output bearing. Tap bearing into bore. Verify that the larger diameter of the cage is facing outward. Position bearing retaining strap. Tighten bolts to 12 N.m (105 in. lbs.).

BUSHING(S), SHIFT RAIL

REMOVAL

REMOVAL

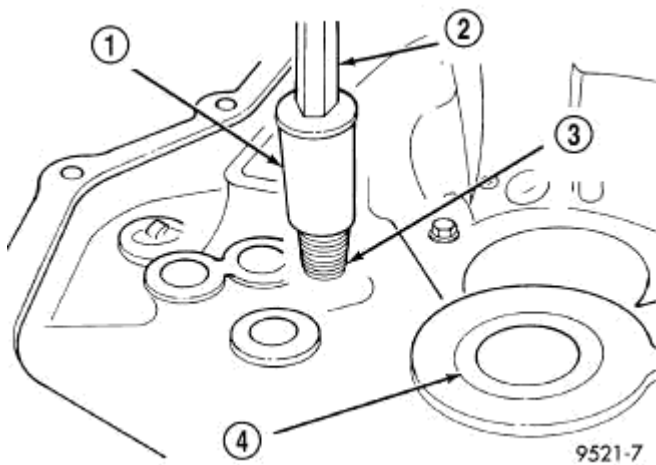


Fig. 108: Shift Rail Bushing Removal
Courtesy of CHRYSLER LLC

1 - REMOVER 6786
2 - SLIDE HAMMER C-3752
3 - SHIFTER RAIL BUSHING
4 - INPUT BEARING

1. Thread Remover 6786 (1) into shift rail bushing.
2. Install slide hammer C-3752 (2) onto tool.
3. Remove bushing (3) using slide hammer and tool assembly.

INSTALLATION

INSTALLATION

1. Line up replacement bushing in bore.
2. Using Installer MD998343, tap bushing into bore until flush with the chamfer in the case.

BUSHING(S), SHIFT SELECT SHAFT

REMOVAL

REMOVAL

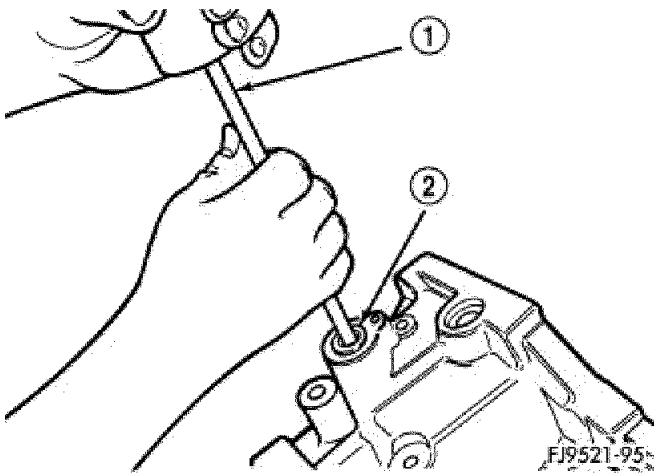


Fig. 109: Removing/Installing Shifter Shaft Bushing
Courtesy of CHRYSLER LLC

- | |
|---|
| <p>1 - SLIDE HAMMER C-3752</p> <p>2 - SHIFTER SHAFT BUSHING</p> |
|---|

1. Install Slide Hammer C-3752 (1) through the select bushing.
2. Thread nut and washer onto slide hammer.
3. Using the slide hammer, remove the select shaft bushing (2).

INSTALLATION

INSTALLATION

1. Position the replacement select shaft bushing over the crossover shaft bushing bore.
2. Using an appropriate size deep-well socket, install the select shaft bushing into the bushing bore.

BUSHING(S), SHIFT SHAFT

REMOVAL

REMOVAL

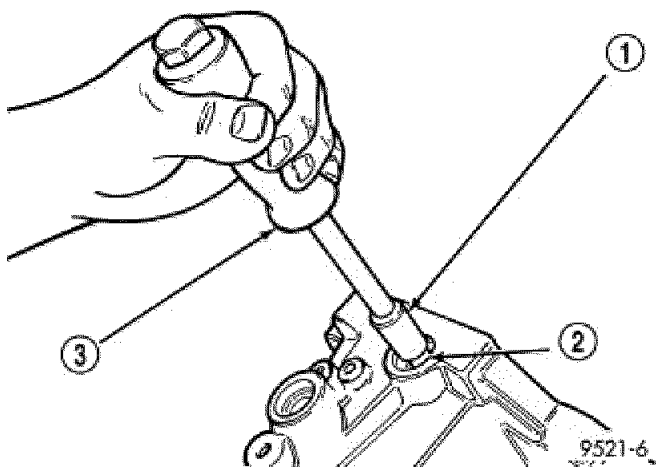


Fig. 110: Removing/Installing Shift Shaft Bushing
Courtesy of CHRYSLER LLC

- 1 - REMOVER 6786
- 2 - SHIFT SHAFT BUSHING
- 3 - SLIDE HAMMER C-3752

1. Remove shift shaft. Refer to **SHAFT, Shift**.
2. Thread Remover 6786 (1) into bushing.
3. Install slide hammer C-3752 (3) onto tool and remove bushing (2) using slide hammer.

INSTALLATION

INSTALLATION

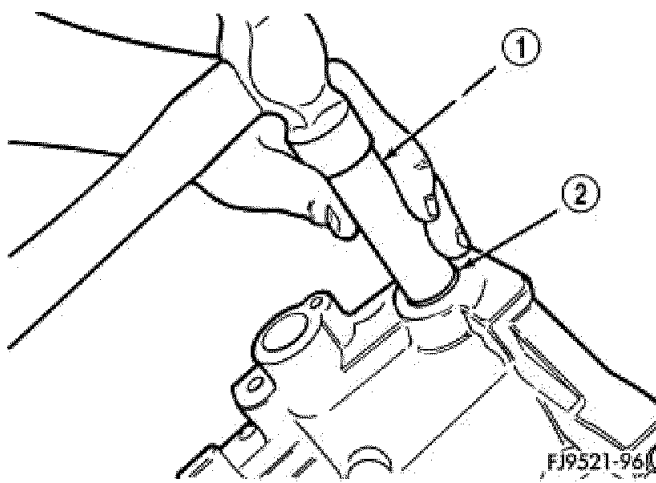


Fig. 111: Selector Shaft Bushing Installation
Courtesy of CHRYSLER LLC

- 1 - DEEP WELL SOCKET
- 2 - SHIFTER SHAFT BUSHING

1. Position replacement bushing over shift shaft bore.
2. Using an appropriate size deep-well socket (1), install bushing (2) in selector shaft bore.

CABLE, GEARSHIFT CONTROL

REMOVAL

REMOVAL

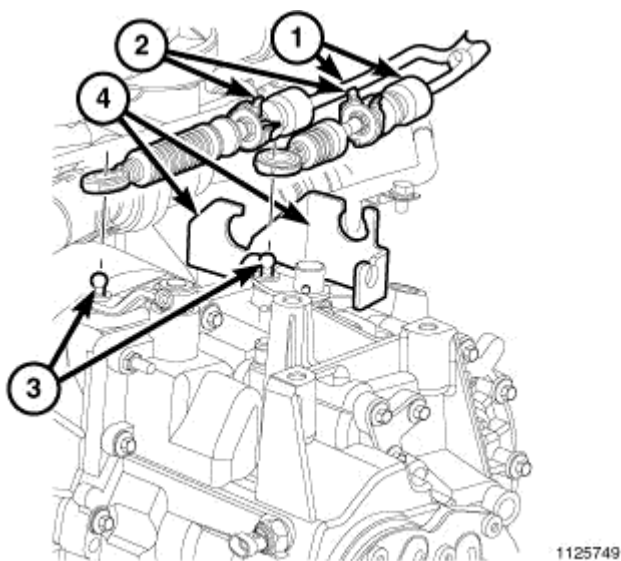


Fig. 112: Removing/Installing Cables At Shift Lever
Courtesy of CHRYSLER LLC

1. Remove the shifter. See **Removal**.
2. Raise hood.
3. Remove the resonator.
4. Remove engine cover.
5. Remove air cleaner assembly.
6. Disconnect negative battery cable.
7. Squeeze cable retaining clips (2) and remove cables from bracket (4).
8. Disconnect cables (1) from the shift levers (3) at the transaxle.

CAUTION: Pry up with equal force on both sides of shifter cable isolator bushings to avoid damaging cable isolator bushings.

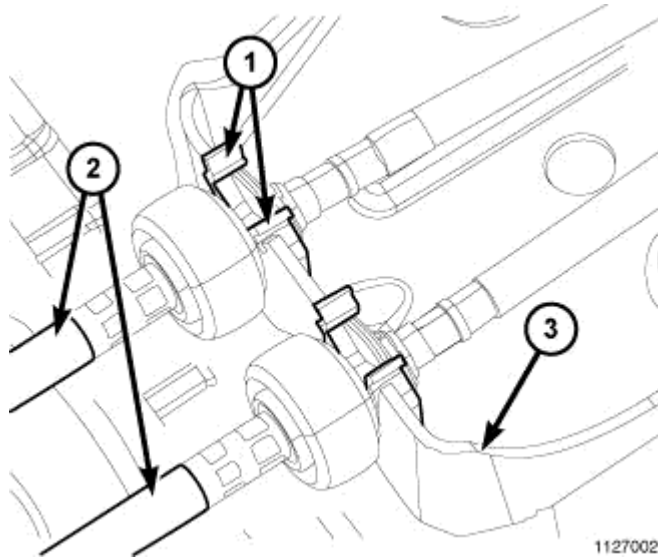


Fig. 113: Cable Retaining Clips And Cables
Courtesy of CHRYSLER LLC

9. Remove the Electronic Stability Control (ESC) Dynamics Sensor. Refer to **Brakes/Electrical/SENSOR, Dynamics - Removal**.
10. Remove the Occupant Restraint Controller (ORC). See **Removal**.

NOTE: Squeeze one side tab, roll fitting upward, then squeeze other side tab and lift cable clear of shifter.

11. Squeeze the Cable Retaining Clips (1) and remove the Cables (2) from the base of the Shifter (3).

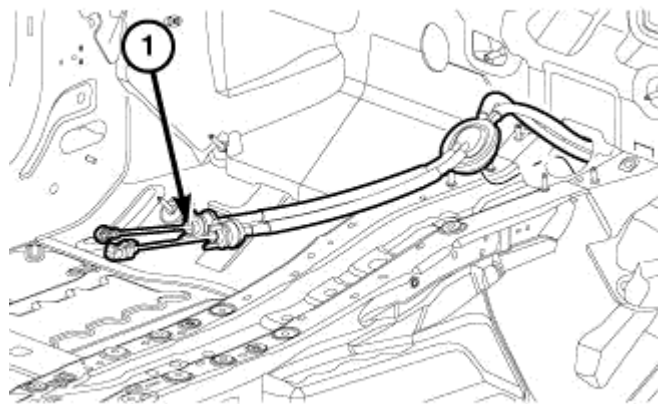


Fig. 114: Removing/Installing Cable Assembly From Vehicle
Courtesy of CHRYSLER LLC

12. Remove the Cable Assembly (1) from vehicle.

INSTALLATION

INSTALLATION

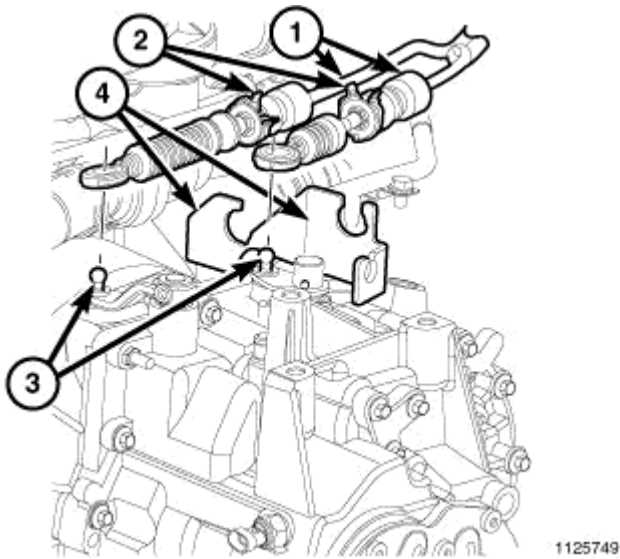


Fig. 115: Removing/Installing Cables At Shift Lever
 Courtesy of CHRYSLER LLC

1. Install cable assembly through floor pan opening.
2. Route transaxle end of cable assembly into engine compartment and over transaxle assembly.

NOTE: The Cable with the white colored clip installs to the inboard side of the bracket

3. Install the Cables (2) to the Transaxle Bracket (4).
4. Connect the Cable Ends (1) to the Shift Levers (3) on the Transaxle.

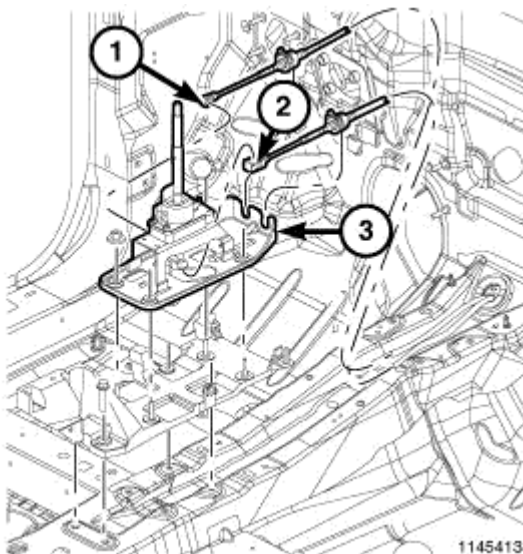


Fig. 116: Remove/Install Shifter Cables Into Shifter Base
Courtesy of CHRYSLER LLC

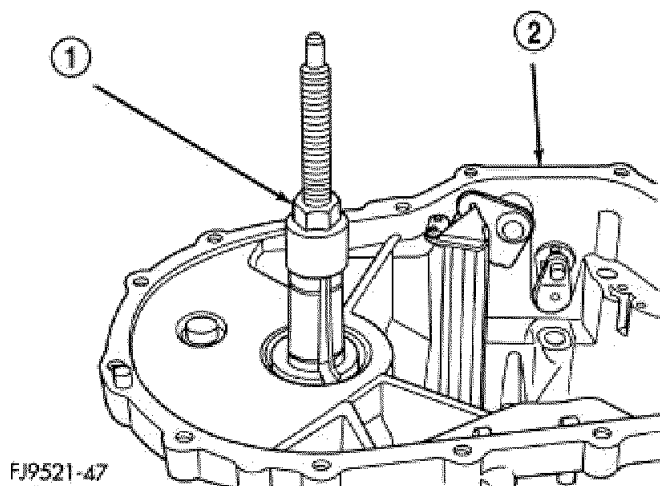
NOTE: Cable (1) installs with the barbed side facing up on the left side of the shifter

5. Install the Shifter Cables (1) and (2) into the Shifter Base (3).
6. Install ORC. Refer to **Restraints/MODULE, Occupant Restraint Controller - Installation** .
7. Install the Electronic Stability Control (ESC) Dynamics Sensor. Refer to **Brakes/Electrical/SENSOR, Dynamics - Installation** .
8. Install shifter. See **Installation** .
9. Install the air cleaner assembly.
10. Connect battery cable.

CUPS, DIFFERENTIAL BEARING

REMOVAL

REMOVAL

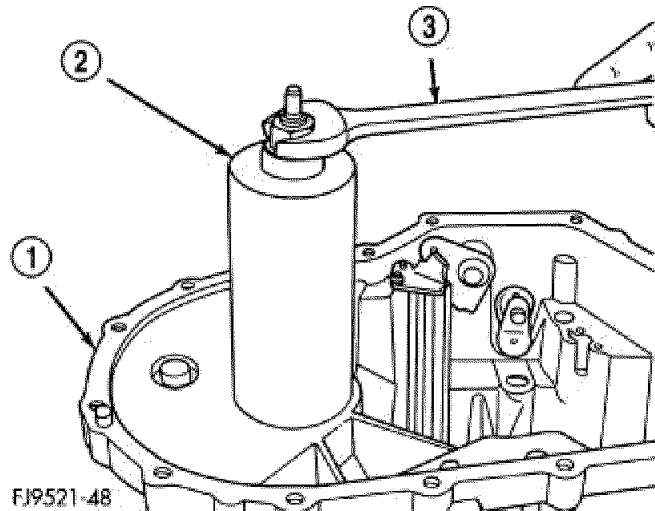


FJ9521-47

Fig. 117: Identifying Remover L-4518 & Gear Case
Courtesy of CHRYSLER LLC

- | |
|--|
| <p>1 - SPECIAL TOOL L-4518
2 - GEAR CASE</p> |
|--|

1. Remove differential assembly from gear case (2). Refer to **DIFFERENTIAL, Transaxle** p.
2. Install Remover L-4518 (1) into the differential bearing cup.



FJ9521-48

Fig. 118: Removing Differential Bearing Race
Courtesy of CHRYSLER LLC

- | |
|---|
| <p>1 - GEAR CASE
2 - SPECIAL TOOL L-4518
3 - WRENCH</p> |
|---|

3. Install the tool cup (2) over the tool.

4. Tighten the tool until the race is removed from the case.

INSTALLATION

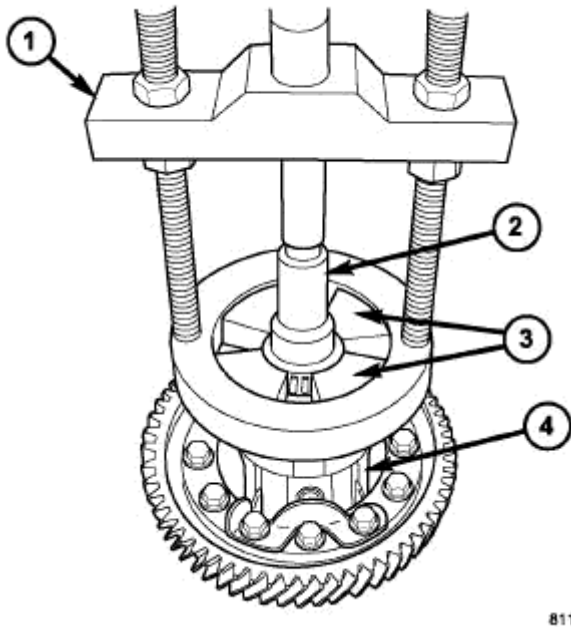
INSTALLATION

1. Position the bearing cup into the case.
2. Install the bearing cup onto Installer L-4520.
3. Using Installer L-4520 and Universal Handle C-4171, install differential bearing cup into the transaxle case.

DIFFERENTIAL, TRANSAXLE

DISASSEMBLY

DISASSEMBLY



811ea92a

Fig. 119: Removing Differential Bearing Cones Using Puller C-293-PA & Adaptors
Courtesy of CHRYSLER LLC

- | |
|-----------------------------|
| 1 - PULLER PRESS C-293 |
| 2 - ADAPTOR C-4996 |
| 3 - ADAPTOR BLOCKS C-293-45 |
| 4 - DIFFERENTIAL CASE |

1. Remove differential bearing cones (ring gear and differential case side) using Puller C-293 - PA (1) ,

Adapter Blocks C-293-45 (3), and Adaptor C-4996 (2). If all wheel drive use Puller C-293 PA, four C-293-37 Inserts and Press Insert 9678 to remove the large carrier bearing.

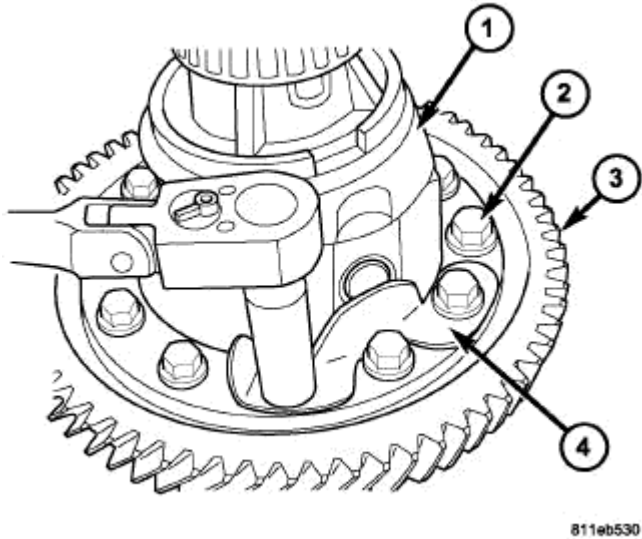
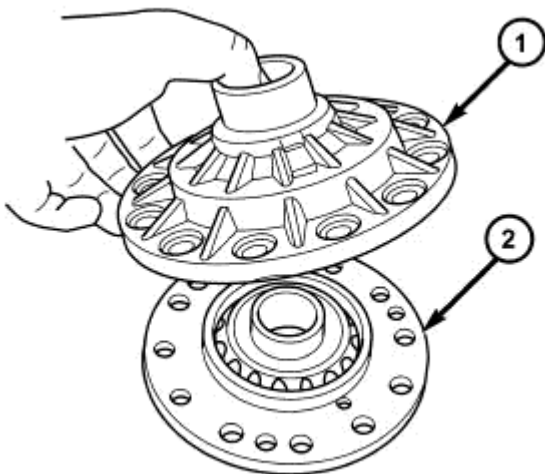


Fig. 120: Differential Ring Gear-to-Case Bolts
Courtesy of CHRYSLER LLC

- | |
|---|
| <p>1 - DIFFERENTIAL CASE
 2 - BOLT (12)
 3 - RING GEAR
 4 - PINION SHAFT RETAINER (2)</p> |
|---|

2. Remove the bolts holding the pinion shaft retainer (4) and the ring gear (3) to the differential case (1).



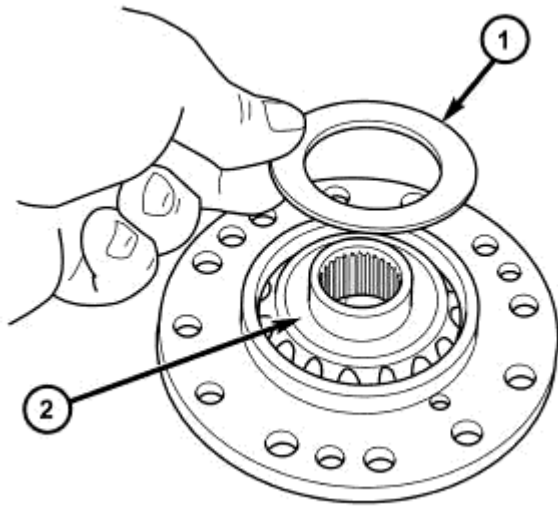
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Fig. 121: Differential Support Plate

Courtesy of CHRYSLER LLC

- | |
|---|
| 1 - DIFFERENTIAL SUPPORT PLATE
2 - DIFFERENTIAL CASE |
|---|

3. Separate differential support (1) from case (2).



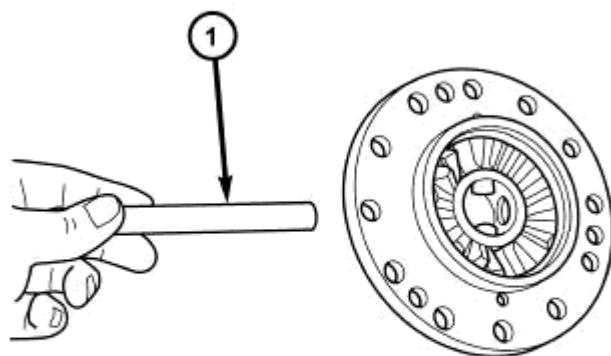
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Fig. 122: Removing/Installing Side Gear Thrust Washer & Side Gear

Courtesy of CHRYSLER LLC

- | |
|---|
| 1 - SIDE GEAR THRUST WASHER
2 - DIFFERENTIAL SIDE GEAR |
|---|

4. Remove the side gear thrust washer (1).
5. Remove side gear (2).

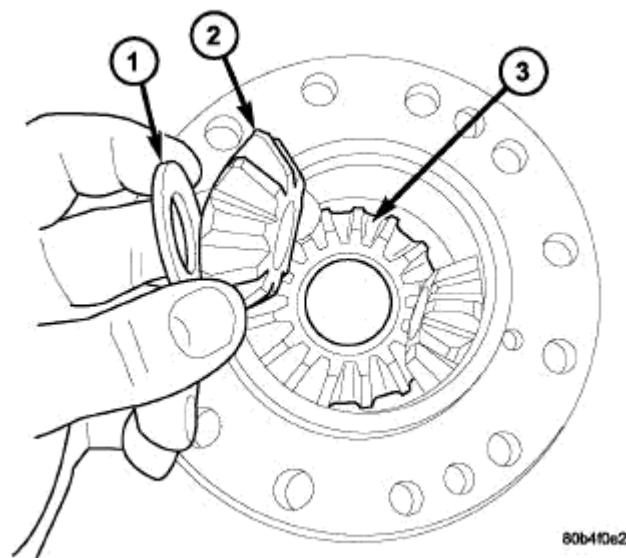


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Fig. 123: Long Pinion Shaft
Courtesy of CHRYSLER LLC

1 - PINION SHAFT (LONG)

6. Remove pinion shaft (1).

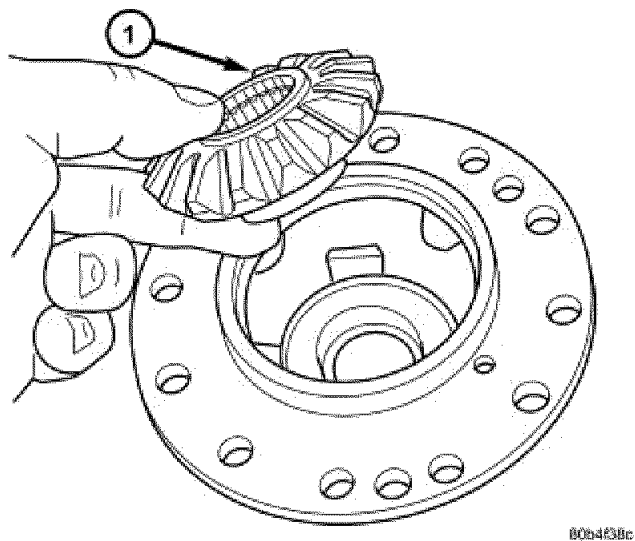


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Fig. 124: Pinion Gear and Thrust Washer
Courtesy of CHRYSLER LLC

- 1 - THRUST WASHER (4)
- 2 - PINION GEAR (4)

7. Remove pinion gear (2) and thrust washers (1).

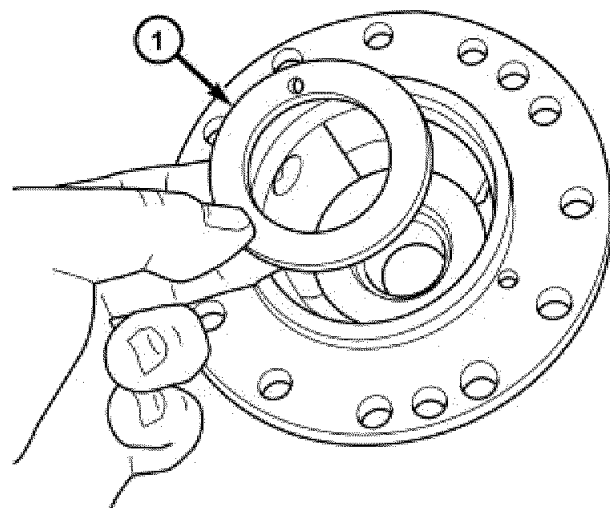


80b438c

Fig. 125: Differential Side Gear
Courtesy of CHRYSLER LLC

- 1 - DIFFERENTIAL SIDE GEAR

8. Remove side gear (1).



80b52605

Fig. 126: Side Gear Thrust Washer
Courtesy of CHRYSLER LLC

1 - SIDE GEAR THRUST WASHER

9. Remove the side gears thrust washer (1).

ASSEMBLY

ASSEMBLY

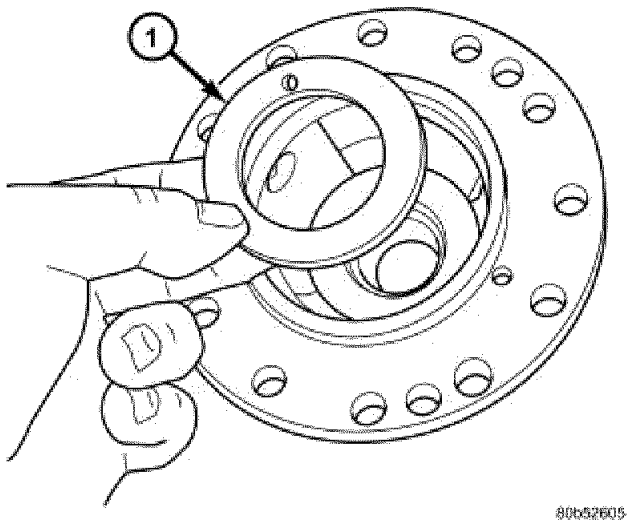


Fig. 127: Side Gear Thrust Washer
Courtesy of CHRYSLER LLC

1 - SIDE GEAR THRUST WASHER

1. Install side gear thrust washer (1) into case.

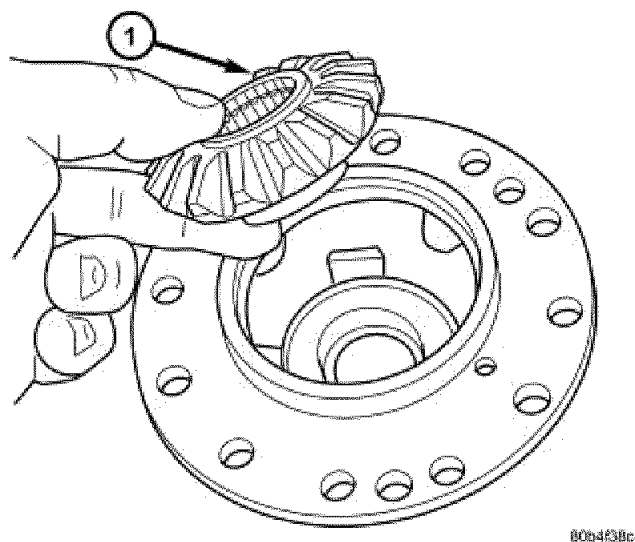


Fig. 128: Differential Side Gear
Courtesy of CHRYSLER LLC

1 - DIFFERENTIAL SIDE GEAR

2. Install side gear (1).

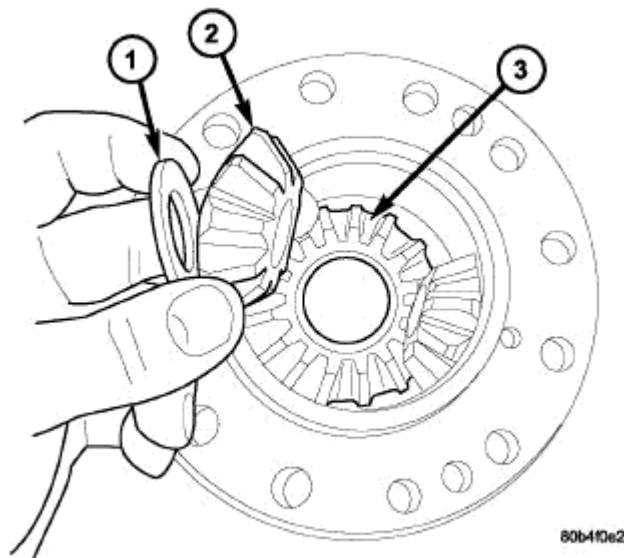
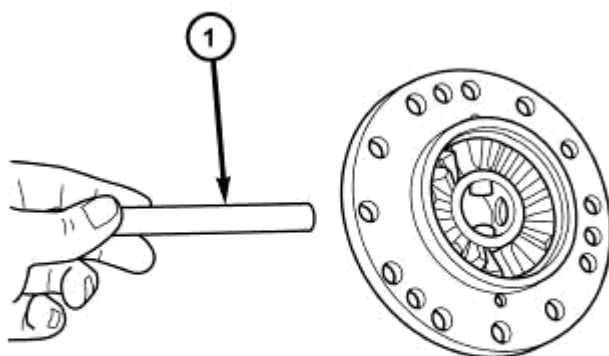


Fig. 129: Pinion Gear and Thrust Washer
Courtesy of CHRYSLER LLC

- 1 - THRUST WASHER (4)
- 2 - PINION GEAR (4)

3. Install pinion gear (2) and thrust washer (1) into case.

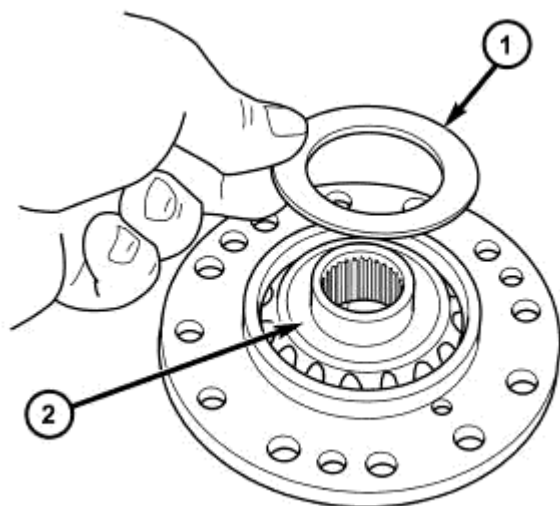


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Fig. 130: Long Pinion Shaft
Courtesy of CHRYSLER LLC

- 1 - PINION SHAFT (LONG)

4. Install pinion shaft (1) .

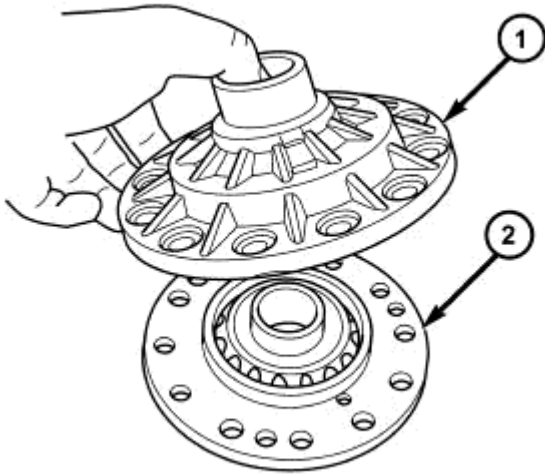


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Fig. 131: Removing/Installing Side Gear Thrust Washer & Side Gear
Courtesy of CHRYSLER LLC

- | |
|---|
| 1 - SIDE GEAR THRUST WASHER
2 - DIFFERENTIAL SIDE GEAR |
|---|

5. Install the side gear (2) and the thrust washer (1).



80b4f036

Fig. 132: Differential Support Plate
Courtesy of CHRYSLER LLC

- | |
|---|
| 1 - DIFFERENTIAL SUPPORT PLATE
2 - DIFFERENTIAL CASE |
|---|

6. Install differential support (1) onto case (2).

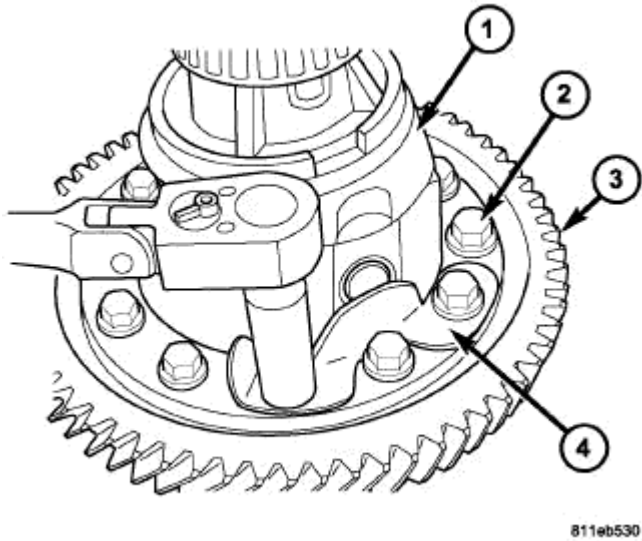


Fig. 133: Differential Ring Gear-to-Case Bolts
Courtesy of CHRYSLER LLC

- | |
|---|
| <p>1 - DIFFERENTIAL CASE
 2 - BOLT (12)
 3 - RING GEAR
 4 - PINION SHAFT RETAINER (2)</p> |
|---|

7. Install pinion shaft retainer along with **NEW** ring gear-to-case bolts (2) tighten bolts to 95 N.m (70 ft. lbs.).

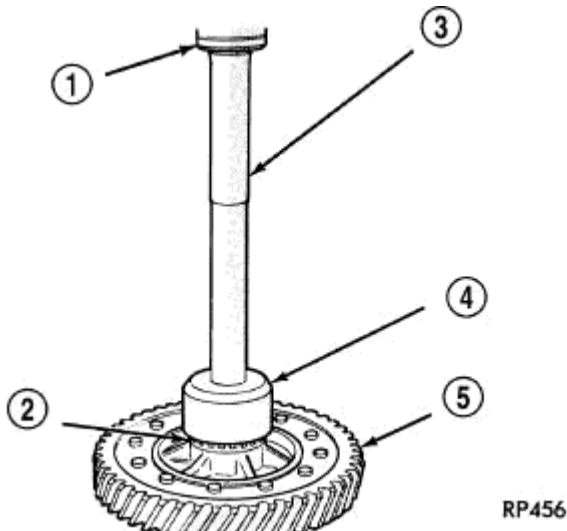
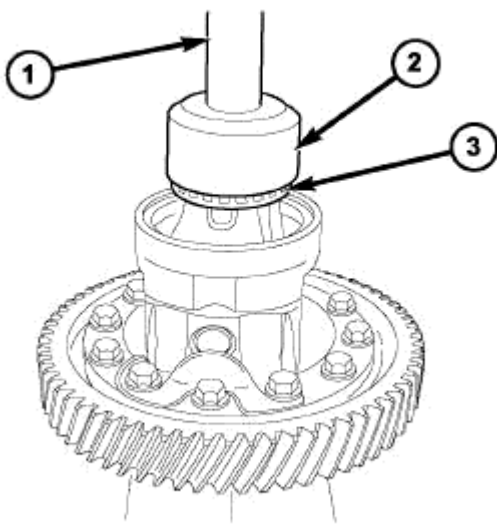


Fig. 134: Installing Differential Bearing Cone to Ring Gear Side
Courtesy of CHRYSLER LLC

- 1 - ARBOR PRESS RAM
- 2 - BEARING CONE
- 3 - HANDLE C-4171
- 4 - INSTALLER L-4410
- 5 - DIFFERENTIAL ASSEMBLY

8. Using an arbor press (1) , Handle C-4171 (3), and Installer L-4410 (4), install differential side bearing to ring gear side.



811ebcf2

Fig. 135: Install Bearing Cone to Differential Case Side
Courtesy of CHRYSLER LLC

- 1 - HANDLE C-4171
- 2 - INSTALLER L-4410
- 3 - BEARING CONE

9. Using an arbor press, Handle C-4171 (1) , and Installer L-4410 (2), install differential side bearings (3) to case side. If all wheel drive use Bearing Installer 6053 to install the large bearing.

Measure and Adjust Side Gear End-Play

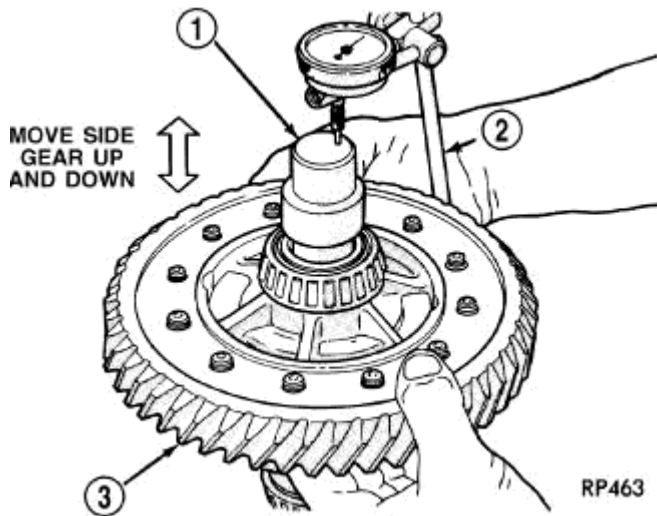


Fig. 136: Checking Side Gear End Play - Typical
 Courtesy of CHRYSLER LLC

1. Rotate the assembly two full revolutions both clockwise and counterclockwise. Set up dial indicator and record end play.
2. Rotate side gear 90 degrees and take another measurement (2) . Again, rotate side gear 90 degrees and record a final measurement.
3. Using the smallest end play recorded, shim that side gear to within 0.001 to 0.013 inch. The other side gear should be checked using the same procedure.

CAUTION: Side gear end play must be within 0.001 to 0.013 inch.

ADJUSTMENTS

DIFFERENTIAL BEARING PRELOAD ADJUSTMENT/SHIM SELECTION

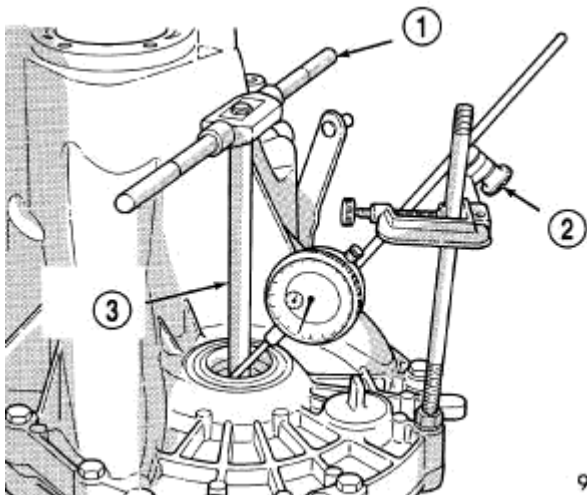


Fig. 137: Checking Differential Bearing End Play to Determine Shim Thickness
Courtesy of CHRYSLER LLC

- | |
|-------------------------|
| 1 - T-HANDLE |
| 2 - DIAL INDICATOR SET |
| 3 - TORQUE TOOL C-4995A |

Measure and adjust differential side bearing preload during any transaxle service, especially when the following components are replaced:

- Transaxle gear case
- Clutch bellhousing case
- Differential case
- Differential bearings

NOTE: True bearing turning torque readings can be obtained only with the geartrain removed from the case.

1. Remove bearing cup and existing shim from clutch bellhousing case.
2. Press in new bearing cup into bellhousing case (or use a cup that has been ground down on the outer edge for ease of measurement).
3. Press in new bearing cup into gear case side.
4. Oil differential bearings with transmission fluid. Install differential assembly in transaxle gear case. Install clutch bellhousing over gear case. Install and torque case bolts to 25 N.m (225 in. lbs.).
5. Position transaxle with bellhousing facing down on workbench with C-clamps. Position dial indicator (2) .

NOTE: Indicator is set up as shown for illustrative purposes only. Indicator must be parallel to T-Handle to obtain the most accurate reading.

6. Apply a medium load to differential with Torque Tool C-4995A (3) and a T-handle (1), in the downward direction. Roll differential assembly back and forth a number of times. This will settle the bearings. Zero the dial indicator (2). To obtain end play readings, apply a medium load in an upward direction while rolling differential assembly back and forth. Record end play.

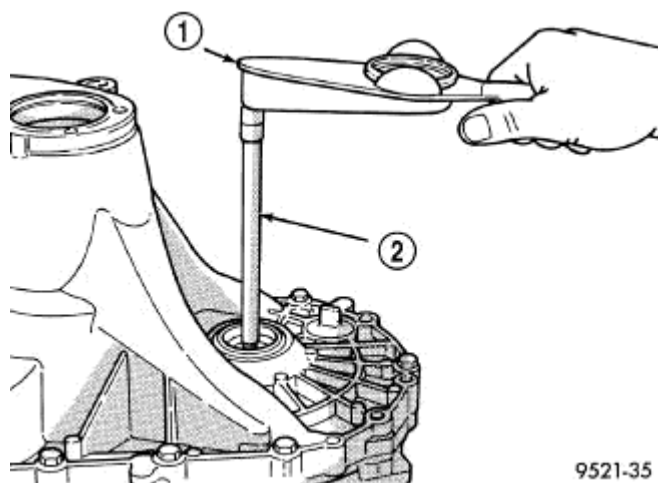


Fig. 138: Checking Differential Bearing Turning Torque
 Courtesy of CHRYSLER LLC

1 - INCH-
 POUND
 TORQUE
 WRENCH

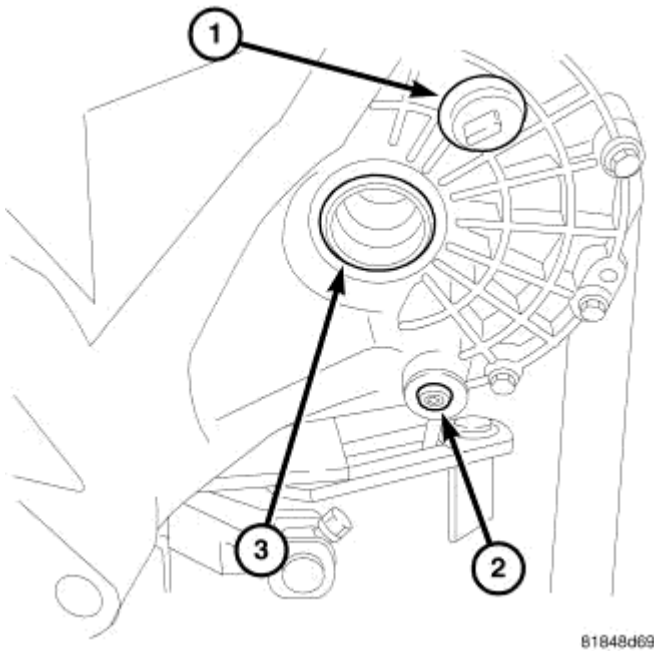
2 -
 TORQUE
 TOOL C-
 4995A

7. The shim required for proper bearing preload is the **total of end play, plus (constant) preload of 0.18 mm (0.007 in.)**. Never combine shims to obtain the required preload.
8. Remove case bolts. Remove clutch bellhousing differential bearing cup. Install shim(s) selected in 7. Then press the bearing cup into clutch bellhousing.
9. Install clutch bellhousing. Install and tighten case bolts to 25 N.m (225 in. lbs.).
10. Using Torque Tool C-4995A (2) and an inch-pound torque wrench (1) check turning torque of the differential assembly. **The turning torque should be 6 to 12 in. lbs. If the turning torque is too high, install a 0.05 mm (0.002 inch) thinner shim. If the turning torque is too low, install a 0.05 mm (0.002 inch) thicker shim.**
11. Recheck turning torque. Repeat 10 until the proper turning torque is obtained.

FLUID

STANDARD PROCEDURE

FLUID DRAIN AND FILL



61848d69

Fig. 139: Removing/Installing Transaxle Oil Drain Plug
Courtesy of CHRYSLER LLC

NOTE: All T355 Manual Transaxles require the use of ATF+4 (Automatic Transmission Fluid).

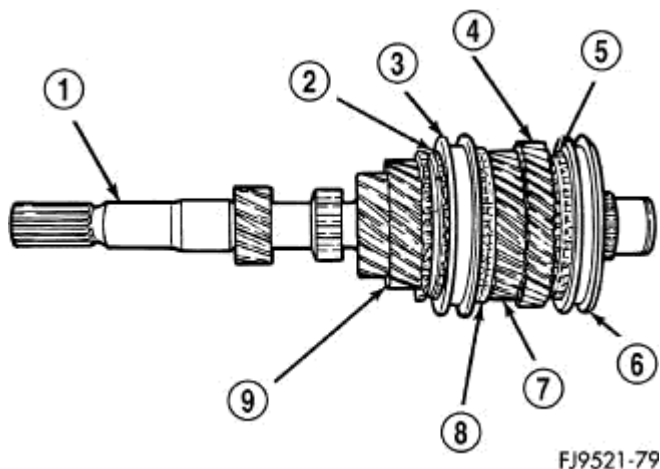
The transaxle fill plug (1) is located on the left side of the transaxle differential area. The fluid level should be within 3/16 inch from the bottom of the transaxle fill hole (vehicle must be level when checking).

The transaxle drain plug (2) is located on the lower right side of the transaxle differential housing. Tighten drain plug to 14 N.m (120 in. lbs.).

INPUT SHAFT, TRANSMISSION

DISASSEMBLY

DISASSEMBLY

**Fig. 140: Input Shaft**

Courtesy of CHRYSLER LLC

- 1 - INPUT SHAFT
- 2 - STOP RING
- 3 - SLEEVE
- 4 - 5TH SPEED GEAR
- 5 - STOP RING
- 6 - SLEEVE
- 7 - 4TH SPEED GEAR
- 8 - STOP RING
- 9 - 3RD SPEED GEAR

NOTE: Ring gaps must be measured with synchronizer ring biased towards gear clutching teeth on gear cone as much as possible while measuring gaps.

Before disassembly of the input shaft (1), it is necessary to check the synchronizer stop ring gap. Use a feeler gauge to measure the gaps between the stop rings (2, 5, and 8) and the speed gears. The correct gaps are listed below:

- 3rd - 0.73-1.53 mm (0.029-0.060 in)
- 4th - 0.77-1.57 mm (0.030-0.062 in).
- 5th - 0.73-1.53 mm (0.029-0.060 in)
- Reverse Brake - 0.505-1.74 mm (0.020-0.068 in.)

The reverse brake measurement is taken between the stop ring and case.

If a stop ring gap does not fall within the specifications, it must be inspected for wear and replaced. If the 1st or 2nd synchronizer stop ring is worn beyond specifications, the complete output shaft assembly must be replaced.

The input shaft incorporates the 3rd, 4th, and 5th speed gears and synchronizers on the assembly.

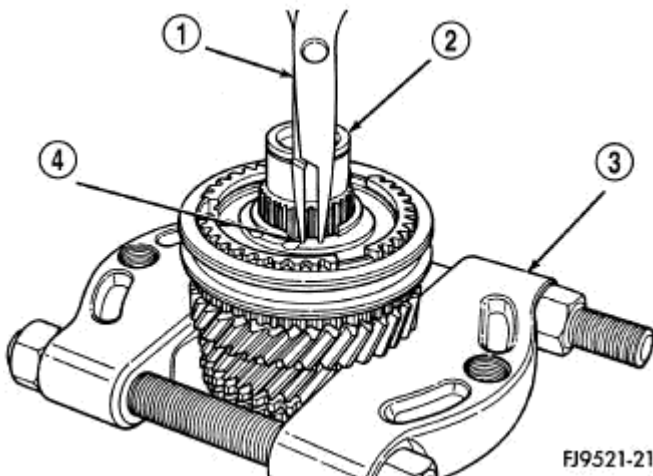


Fig. 141: Removing/Installing Snap Ring At 5th Synchronizer Hub On Input Shaft
Courtesy of CHRYSLER LLC

- 1 - SNAP RING PLIERS
- 2 - INPUT SHAFT
- 3 - BEARING SPLITTER
- 4 - SNAP RING

1. Install Bearing Splitter 1130 (3) behind 5th speed gear. Remove snap ring (4) at 5th synchronizer hub on input shaft (2).

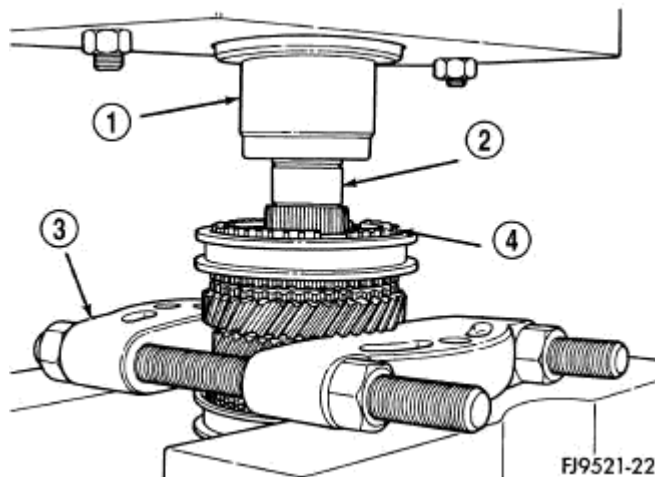
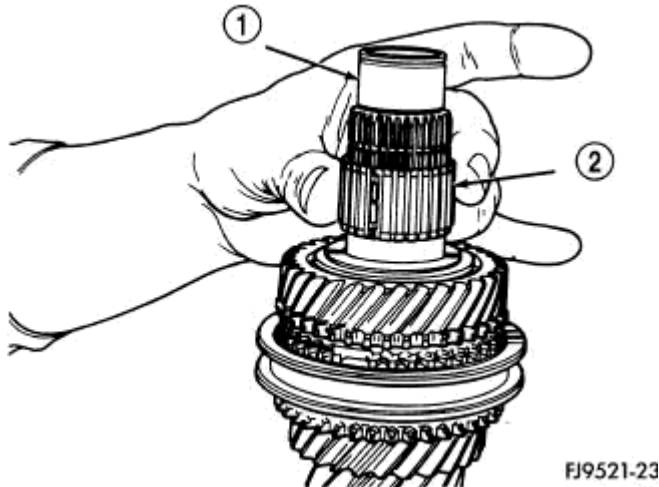


Fig. 142: Remove Synchronizer Using Shop Press
Courtesy of CHRYSLER LLC

- 1 - PRESS RAM
- 2 - INPUT SHAFT
- 3 - BEARING SPLITTER

4 -
SYNCHRONIZER
ASSEMBLY

2. Remove synchronizer (4) and gear using shop press (1).

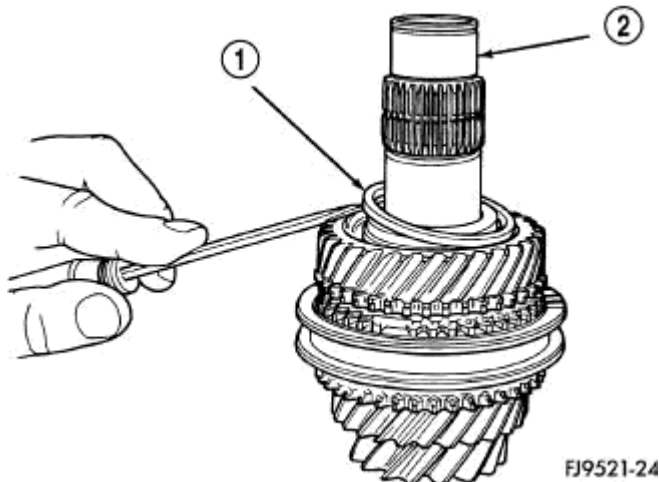


FJ9521-23

Fig. 143: Caged Needle Bearing Removal/Installation
Courtesy of CHRYSLER LLC

1 - INPUT
SHAFT
2 -
CAGED
NEEDLE
BEARING

3. Remove caged needle bearing (2) .



FJ9521-24

Fig. 144: Split Thrust Washer Ring
Courtesy of CHRYSLER LLC

1 - SPLIT
THRUST
WASHER
RING
2 -
INPUT
SHAFT

4. Remove 4-5 gears split thrust washer ring (1) .

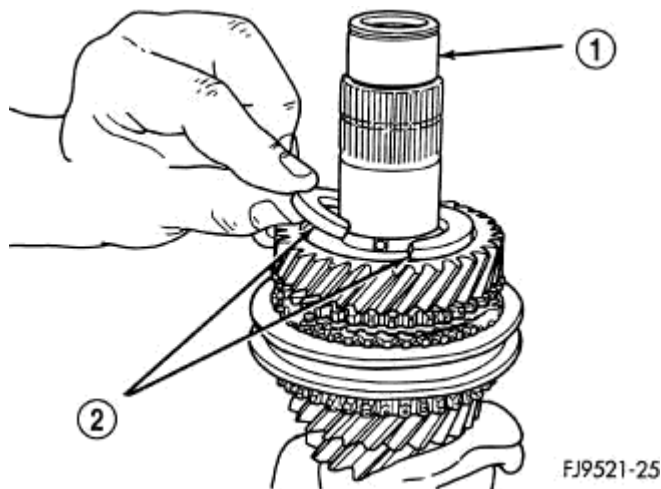


Fig. 145: Split Thrust Washer Removal/Installation
Courtesy of CHRYSLER LLC

1 -
INPUT
SHAFT
2 - SPLIT
THRUST
WASHER

5. Remove split thrust washer (2) .

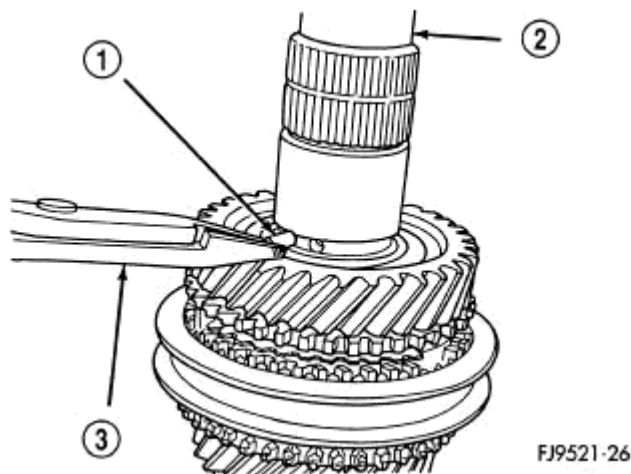


Fig. 146: Split Thrust Washer Separation Pin
Courtesy of CHRYSLER LLC

- 1 - SEPARATION PIN
- 2 - INPUT SHAFT
- 3 - PLIERS

6. Remove split thrust washer separation pin (1) .

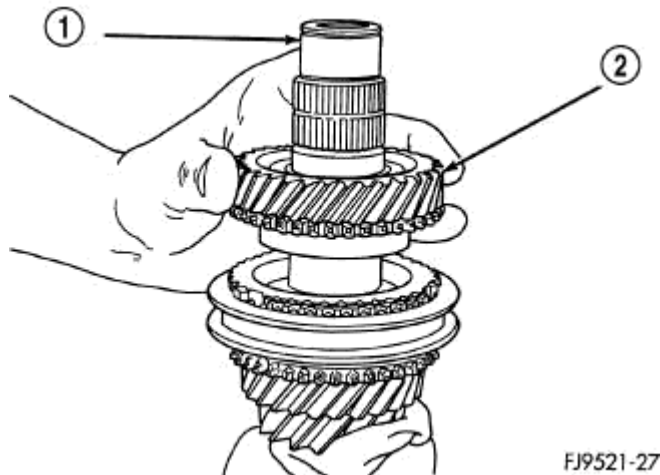


Fig. 147: 4th Gear Removal
Courtesy of CHRYSLER LLC

- 1 - INPUT SHAFT

2 - 4TH
GEAR

7. Remove 4th gear (2) .

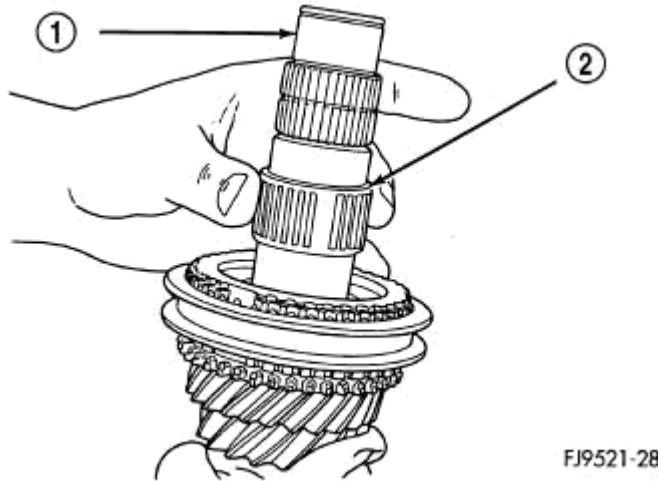


Fig. 148: Caged Needle Bearing Removal
Courtesy of CHRYSLER LLC

1 - INPUT
SHAFT
2 -
CAGED
NEEDLE
BEARING

8. Remove 4th gear caged needle bearing (2) . Check the caged needle bearing (2) for a broken retention spring.

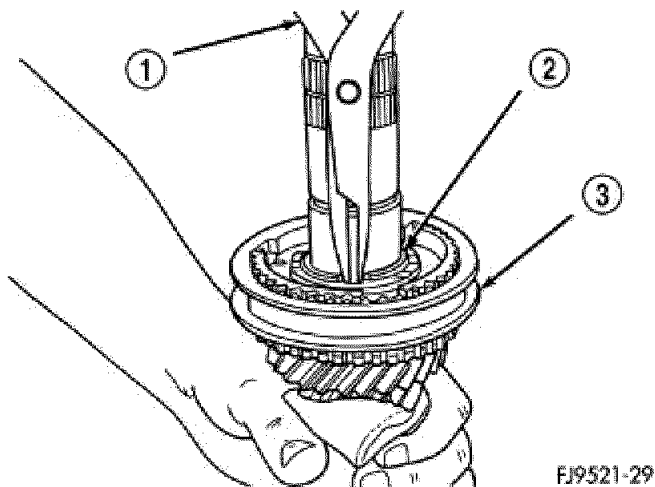


Fig. 149: 3-4 Synchronizer Hub Snap Ring

Courtesy of CHRYSLER LLC

1 - SNAP RING
PLIERS
2 - SYNCHRO
SNAP RING
3 -
SYNCHRONIZER
ASSEMBLY

9. Remove blocking ring. Remove 3-4 synchronizer hub retaining snap ring (3) .

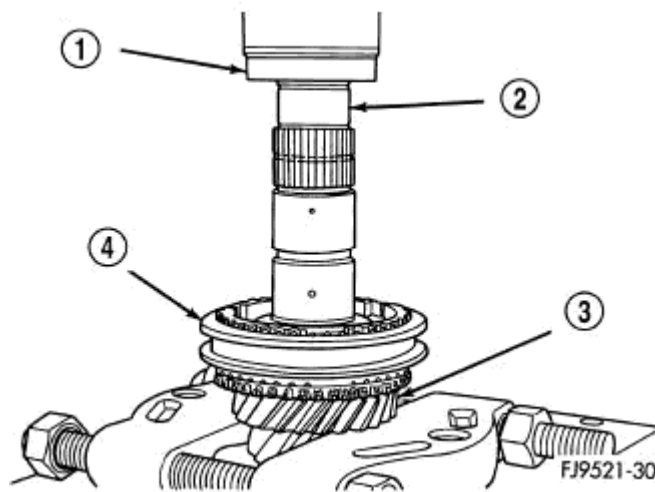
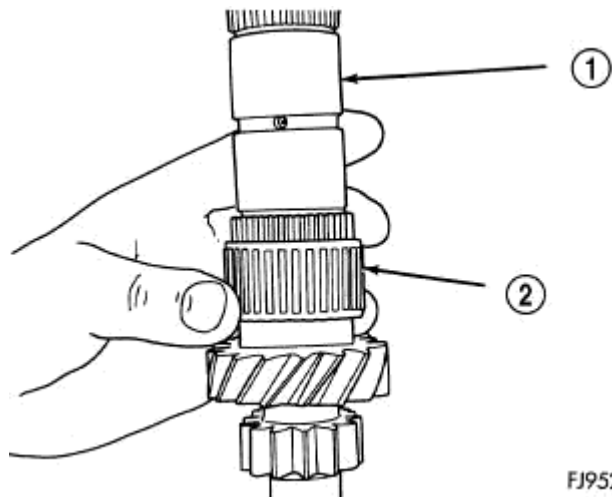


Fig. 150: 3rd Gear Removal
Courtesy of CHRYSLER LLC

1 - PRESS RAM
2 - INPUT SHAFT
3 - 3RD GEAR
4 -
SYNCHRONIZER
ASSEMBLY

10. Install input shaft in shop press (1) . Using Bearing Splitter 1130, remove 3-4 synchronizer and 3rd gear (3).



FJ9521-31

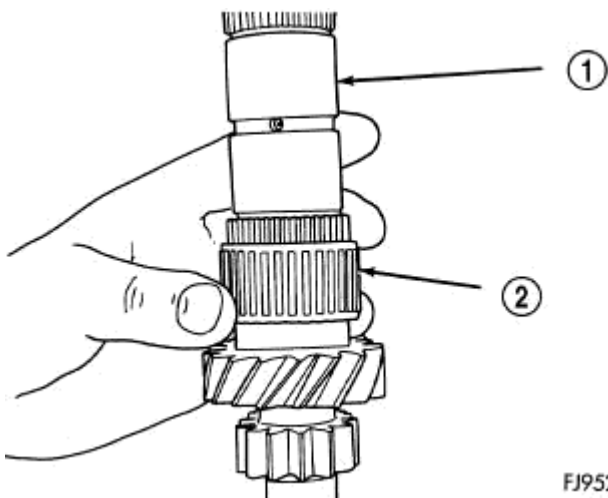
Fig. 151: Removing/Installing 3rd Gear Caged Needle Bearing
Courtesy of CHRYSLER LLC

1 - INPUT
SHAFT
2 - 3RD
GEAR
CAGED
NEEDLE
BEARING

11. Remove 3rd gear caged needle bearing (2) . Inspect needle bearing for a broken retention spring.
12. Inspect the input shaft for worn or damaged bearing races or chipped gear teeth. Replace as necessary.

ASSEMBLY

ASSEMBLY



FJ9521-31

Fig. 152: Removing/Installing 3rd Gear Caged Needle Bearing
Courtesy of CHRYSLER LLC

- 1 - INPUT SHAFT
2 - 3RD GEAR CAGED NEEDLE BEARING

1. Place input shaft into shop press.
2. Install 3rd gear caged needle bearing (2) .

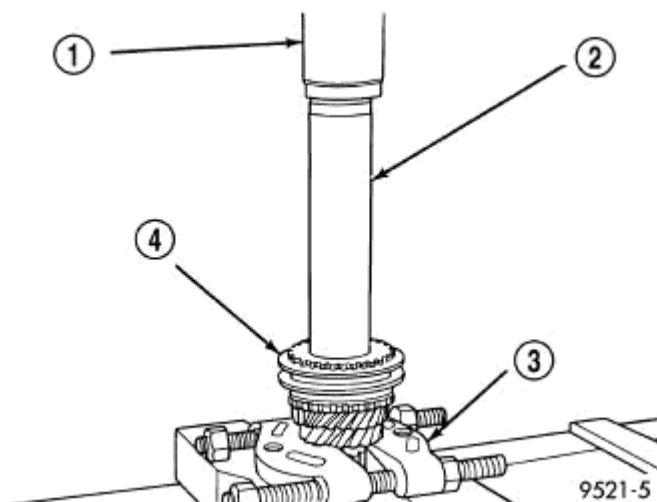


Fig. 153: 3rd Gear Synchronizer Assembly
Courtesy of CHRYSLER LLC

- 1 - PRESS RAM
2 - SLEEVE C-3717
3 - BEARING SPLITTER
4 - 3RD GEAR SYNCHRONIZER ASSEMBLY

3. Install 3rd gear and 3-4 synchronizer (4) onto input shaft. Position Installer 6448A (2) over input shaft and press on synchronizer hub and 3rd gear. The synchronizer hub has the letter **U** stamped on the top face of the hub. This designates that the hub must be installed with the **U** facing upward.

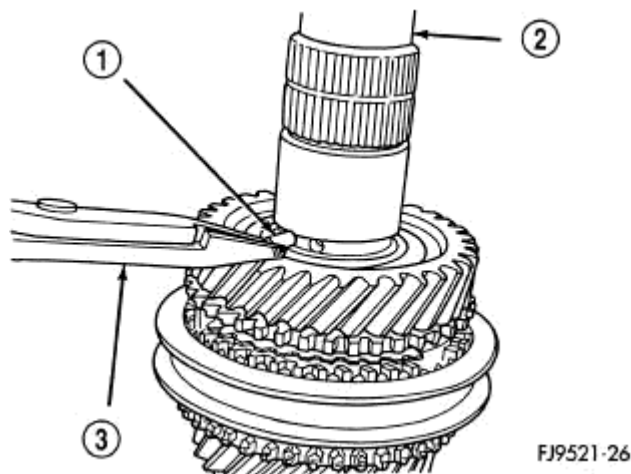


Fig. 154: Split Thrust Washer Separation Pin
Courtesy of CHRYSLER LLC

- | |
|--|
| <p>1 -
SEPARATION
PIN
2 - INPUT
SHAFT
3 - PLIERS</p> |
|--|

4. Install a **new** 3-4 synchronizer snap ring into slot on input shaft.
5. Install blocking ring into 3-4 synchronizer. Install 4th gear caged needle bearing.
6. Install 4th gear onto input shaft.
7. Install 4-5 split thrust washer separation pin (1) .

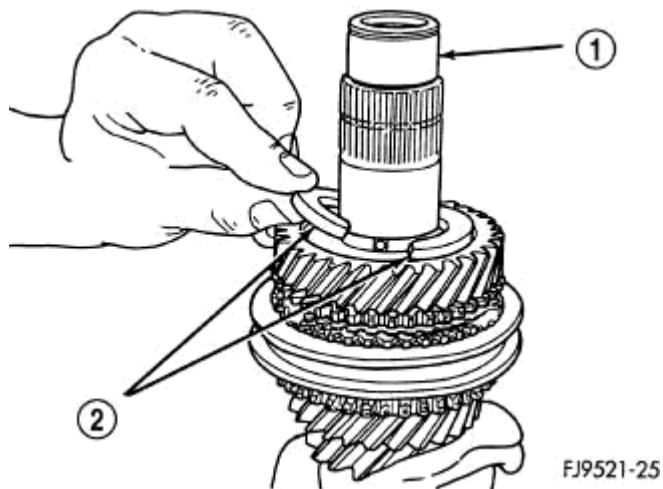
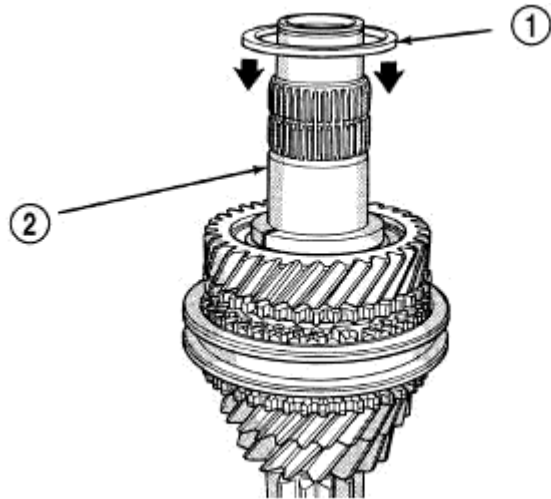


Fig. 155: Split Thrust Washer Removal/Installation
Courtesy of CHRYSLER LLC

1 -
INPUT
SHAFT
2 - SPLIT
THRUST
WASHER

8. Install split thrust washer (2) onto input shaft (1).



9521-31

Fig. 156: Retaining Ring Installation
Courtesy of CHRYSLER LLC

1 - SPLIT
THRUST
WASHER
RING
2 -
INPUT
SHAFT

9. Install split thrust washer retaining ring (1) .

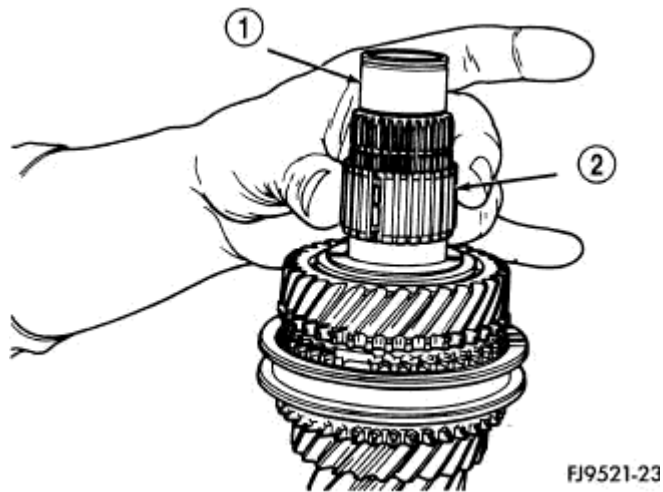


Fig. 157: Caged Needle Bearing Removal/Installation
Courtesy of CHRYSLER LLC

1 - INPUT
SHAFT
2 -
CAGED
NEEDLE
BEARING

10. Install 5th gear caged needle bearing (2) .

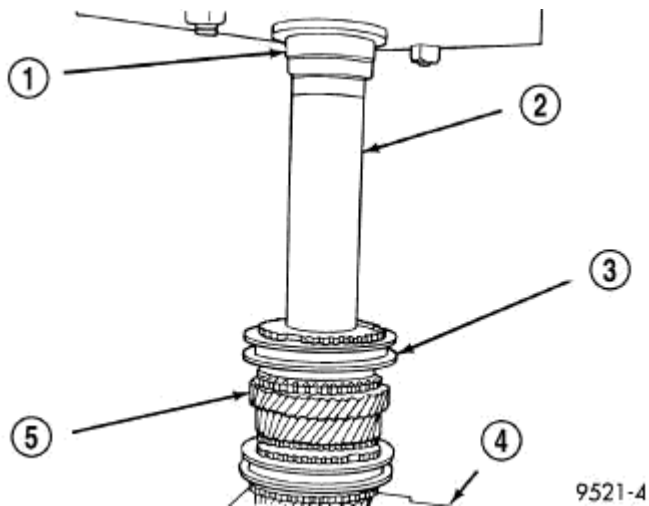


Fig. 158: 5th Speed Gear Installation
Courtesy of CHRYSLER LLC

1 - PRESS RAM
2 - SLEEVE C-
3717

3 -
SYNCHRONIZER
ASSEMBLY
4 - BEARING
SPLITTER
5 - 5TH SPEED
GEAR

11. Using Installer 6448A (2) , install 5th speed gear (5) and synchronizer (3). The 5th gear synchronizer hub has the letter **S** stamped on the top face of the hub. This designates that the hub must be installed with the **S** facing upward.

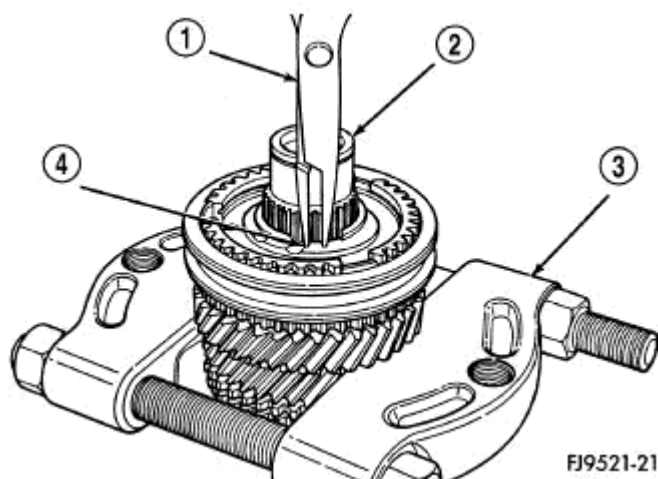


Fig. 159: Removing/Installing Snap Ring At 5th Synchronizer Hub On Input Shaft
Courtesy of CHRYSLER LLC

1 - SNAP
RING
PLIERS
2 - INPUT
SHAFT
3 -
BEARING
SPLITTER
4 - SNAP
RING

12. Install a **new** 5th gear synchronizer snap ring (4) .

LEVER, SHIFT

REMOVAL

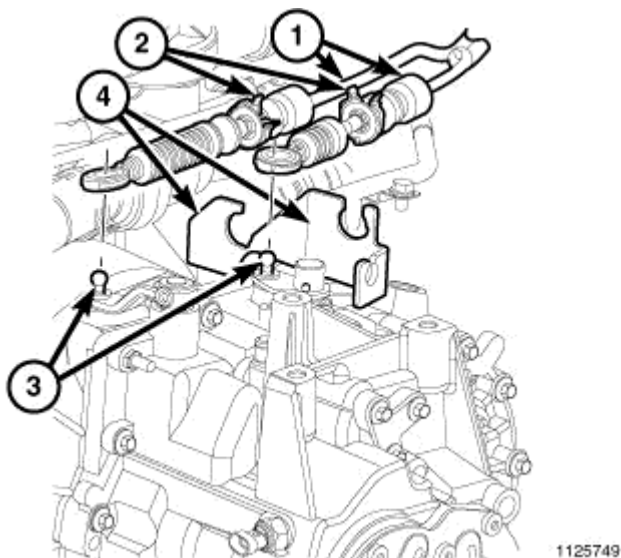
REMOVAL

Fig. 160: Removing/Installing Cables At Shift Lever
Courtesy of CHRYSLER LLC

1. Disconnect select cable (2) from select lever (3) and cable bracket.
2. Using a pin punch, remove the select roll pin from lever.
3. Pull up and remove the select lever from the transaxle select shaft.

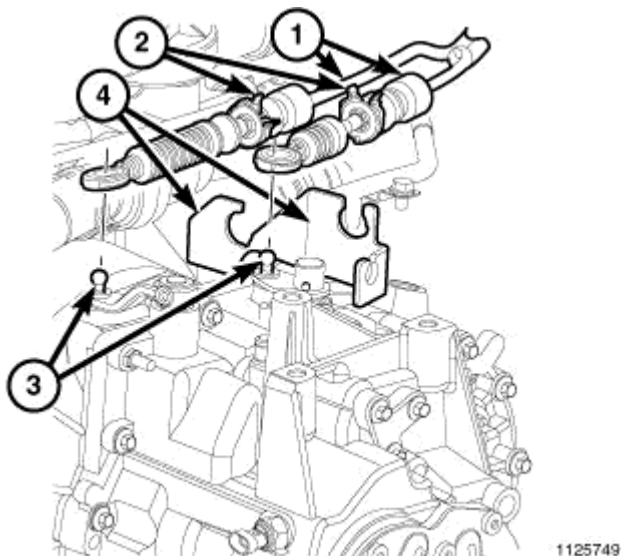
INSTALLATION**INSTALLATION**

Fig. 161: Removing/Installing Cables At Shift Lever
Courtesy of CHRYSLER LLC

1. Install select lever to shaft and fasten with NEW roll pin.
2. Install select cable to bracket. Fasten with clip.
3. Install select cables (2) to select lever (3).

MECHANISM, GEARSHIFT

REMOVAL

REMOVAL

1. Detach gear shift boot from console.
2. Remove rear power window switch (if equipped) and disconnect harness from console.
3. Remove the center console assembly. Refer to **Body/Interior/CONSOLE, Center - Removal** .

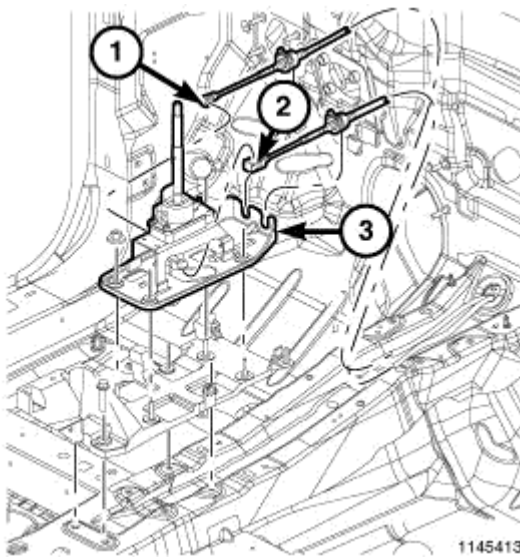


Fig. 162: Remove/Install Shifter Cables Into Shifter Base
Courtesy of CHRYSLER LLC

4. Remove the Shifter Cables (1) and (2) from the Shift Levers.

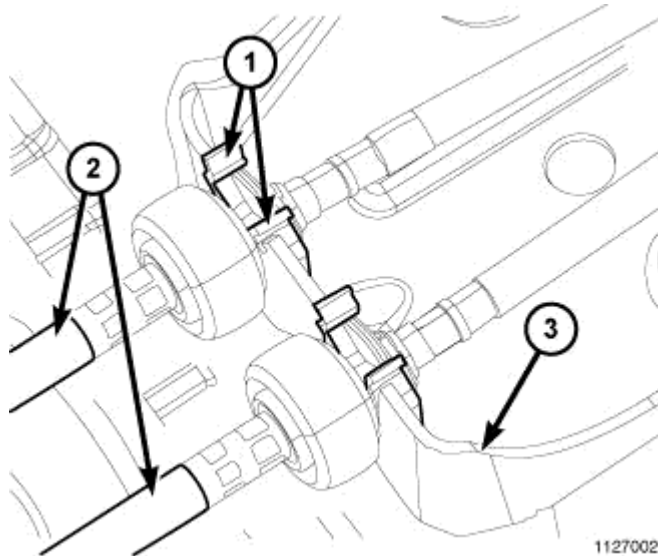


Fig. 163: Cable Retaining Clips And Cables
Courtesy of CHRYSLER LLC

NOTE: Squeeze one side tab, roll fitting upward, then squeeze other side tab, then remove cable from the Shifter Base

5. Remove the Cables (2) from the Shifter Base (3).

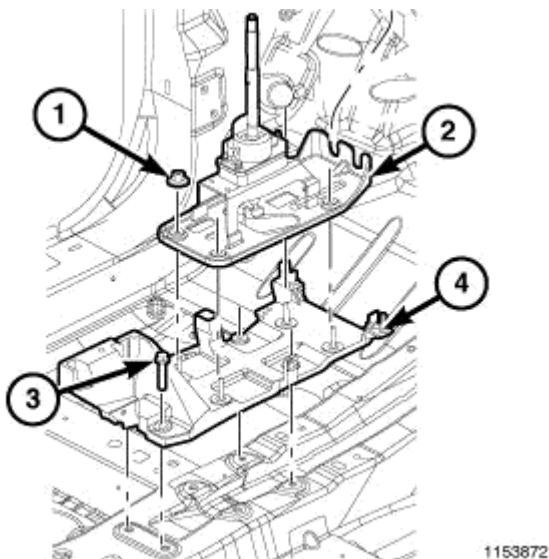


Fig. 164: Removing/Installing Shifter Assembly
Courtesy of CHRYSLER LLC

6. Remove the Shifter Assembly Nuts (1) and remove the Shifter Assembly (2).

INSTALLATION

INSTALLATION

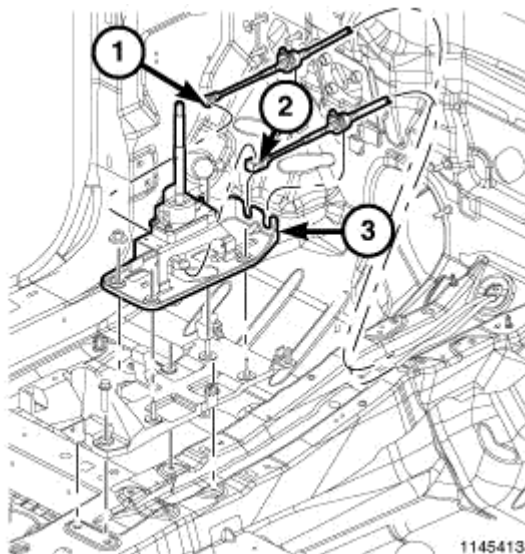


Fig. 165: Remove/Install Shifter Cables Into Shifter Base
Courtesy of CHRYSLER LLC

NOTE: The cable with the black end fitting (1) installs with the barbed side up on the left side of the shifter

1. Install the Shifter Cables (1) and (2) to the Shift Levers.

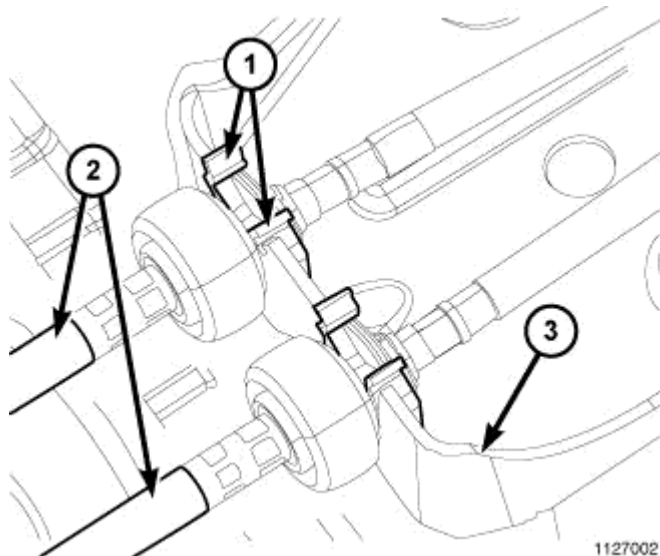


Fig. 166: Cable Retaining Clips And Cables
Courtesy of CHRYSLER LLC

2. Install the Cables (2) to the Shifter Bracket (5).

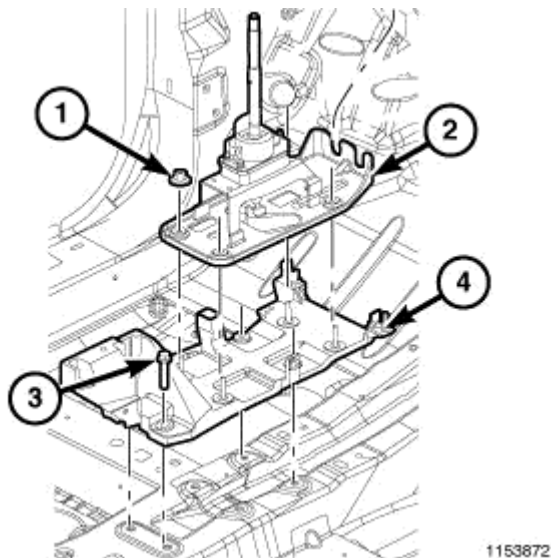


Fig. 167: Removing/Installing Shifter Assembly
Courtesy of CHRYSLER LLC

3. Install the Shifter Assembly (2) and the Shifter Assembly Nuts (1). Tighten nuts (2) to 7 N.m (61 in. lbs.).
4. Install center console assembly. Refer to **Body/Interior/CONSOLE, Center - Installation** .
5. Install rear power window switch (if equipped) and fasten harness to console
6. Attach gearshift boot to center console assembly.
7. Verify that shift pattern is aligned properly.

SEAL, AXLE DRIVE SHAFT

REMOVAL

REMOVAL

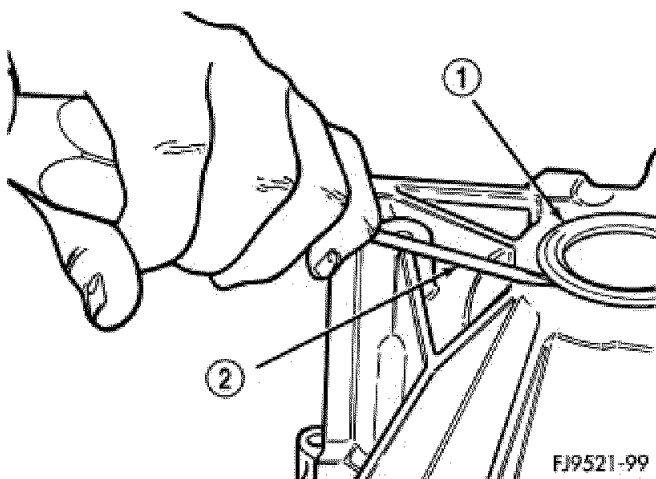


Fig. 168: Axle Shaft Seal Removal

Courtesy of CHRYSLER LLC

1. Remove axle shaft. Refer to **Differential and Driveline/Half Shaft - Removal** .
2. Insert a flat-blade pry tool (2) at outer edge of axle shaft seal (1).
3. Tap on the pry tool (2) with a small hammer and remove axle shaft seal (1).

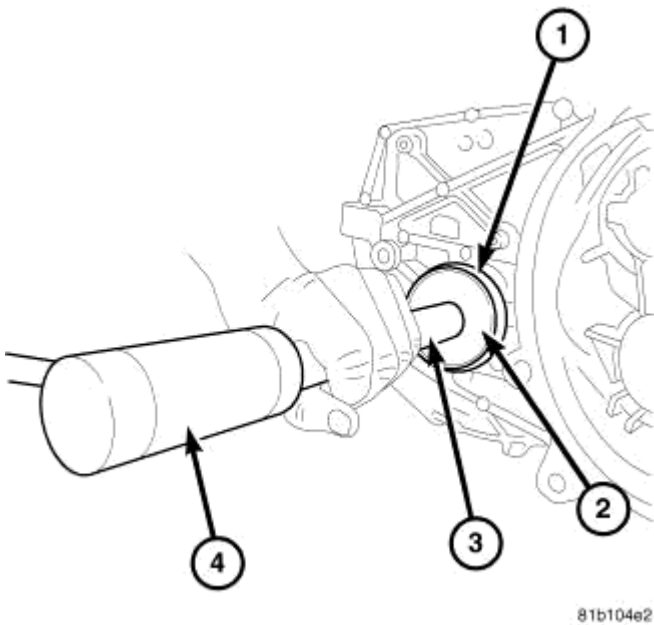
INSTALLATION**INSTALLATION**

Fig. 169: Aligning Axle Shaft Seal With Axle Shaft Seal Bore
Courtesy of CHRYSLER LLC

1. Clean axle shaft seal bore of any excess sealant.
2. Align (bellhousing side) axle shaft seal with axle shaft seal bore.
3. Install axle seal on Seal Installer 9928 and Handle C-4171 and insert into axle shaft seal bore.
4. Tap seal into position until seated against transaxle case.

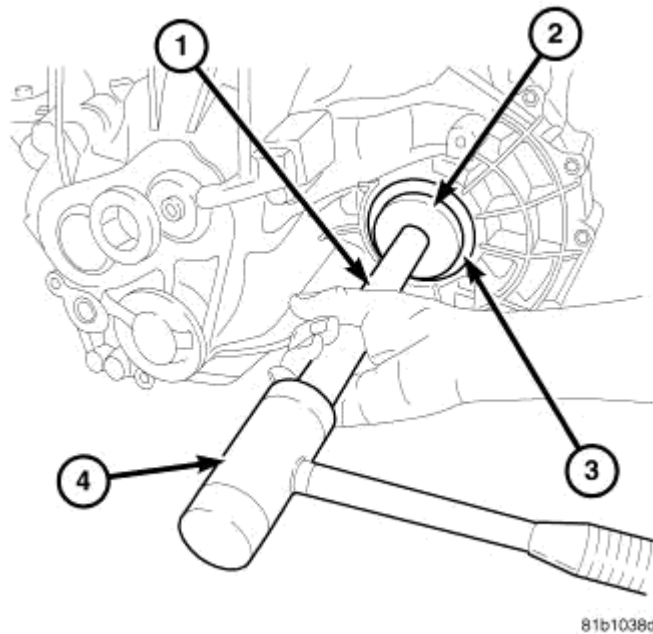


Fig. 170: Installing (Case Side) Axle Seal On Seal Installer 9934 & Handle C-4171, & Inserting Into Axle Shaft Seal Bore

Courtesy of CHRYSLER LLC

5. Align axle shaft seal with axle shaft seal bore.
6. Install (case side) axle seal on Seal Installer 9934 and Handle C-4171 and insert into axle shaft seal bore.
7. Tap seal into position until seated against transaxle case.
8. Install axle shaft. Refer to **Differential and Driveline/Half Shaft - Installation** .
9. Check transaxle fluid level and adjust as necessary.

SEAL, INPUT SHAFT

REMOVAL

REMOVAL

1. Remove the transaxle. See **Removal** .
2. Remove seal.

INSTALLATION

INSTALLATION

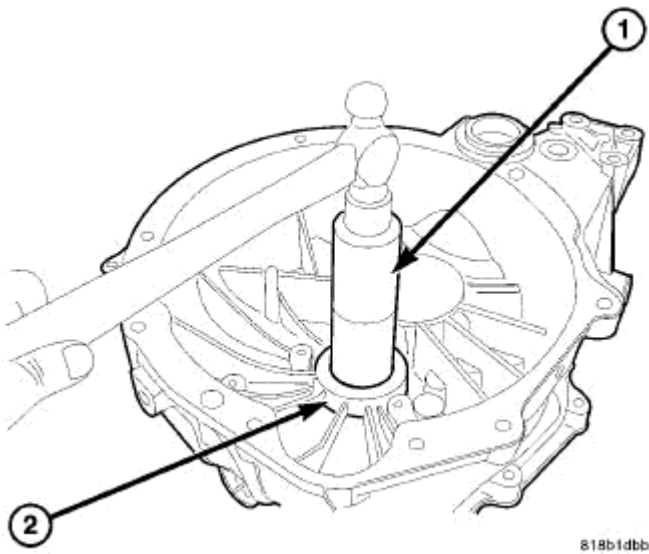


Fig. 171: Installing Input Shaft Seal Using Installer 8864
Courtesy of CHRYSLER LLC

1. Install input shaft seal (2) using installer 8864 (1).
2. Install the transaxle. See **Installation** .

SEALS, SHIFT SHAFT

REMOVAL

REMOVAL

It is not necessary to remove the shift shafts from the transaxle to service the shift shaft seals.

1. Using a pick tool, pry up on the shift shaft seal, and remove seal from bore.

INSTALLATION

INSTALLATION

1. Position new shift shaft seal into bore.
2. Install shift shaft seal into bore using an appropriate size deep-well socket.

SENSOR, VEHICLE SPEED

DESCRIPTION

DESCRIPTION

The Vehicle Speed Sensor (VSS) is a hall effect sensor mounted above the transaxle differential. The sensor is triggered by the ring gear teeth passing below it. The VSS pulse signal to the speedometer/odometer is monitored by the PCM speed control circuitry to determine vehicle speed and to maintain speed control set speed.

REMOVAL

REMOVAL

1. Open hood.
2. Remove the air cleaner housing. Refer to **Engine/Air Intake System/BODY, Air Cleaner - Removal** .
3. Disconnect the speed sensor connector.

CAUTION: Clean area around speed sensor before removing to prevent dirt from entering the transaxle during speed sensor removal.

4. Remove speed sensor retaining bolt.
5. Remove speed sensor from transaxle.

INSTALLATION

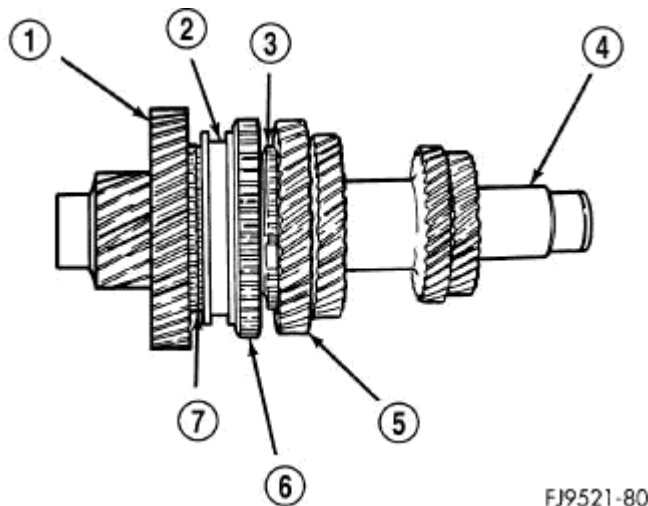
INSTALLATION

1. Using a NEW O-ring, install the speed sensor to the transaxle.
2. Install the bolt and tighten to 7 N.m (60 in. lbs.).
3. Connect speed sensor connector.
4. Install the air cleaner housing. Refer to **Engine/Air Intake System/BODY, Air Cleaner - Installation** .

SHAFT, OUTPUT

DISASSEMBLY

DISASSEMBLY



FJ9521-80

Fig. 172: Output Shaft

Courtesy of CHRYSLER LLC

- 1 - 1ST GEAR
- 2 - SLEEVE
- 3 - STOP RING
- 4 - OUTPUT SHAFT
- 5 - 2ND SPEED GEAR
- 6 - REVERSE GEAR
- 7 - STOP RING

CAUTION: The output shaft is serviced as an assembly. Do not try to repair any component on the output shaft. If the 1-2 synchronizer or gear fails, it is necessary to replace the output shaft assembly.

NOTE: Ring gaps must be measured with synchronizer ring biased towards gear clutching teeth on gear cone as much as possible while measuring gaps.

It is necessary to check the synchronizer stop ring gap. Use a feeler gauge to measure the gaps between the stop rings and the speed gears. The correct gaps are listed below:

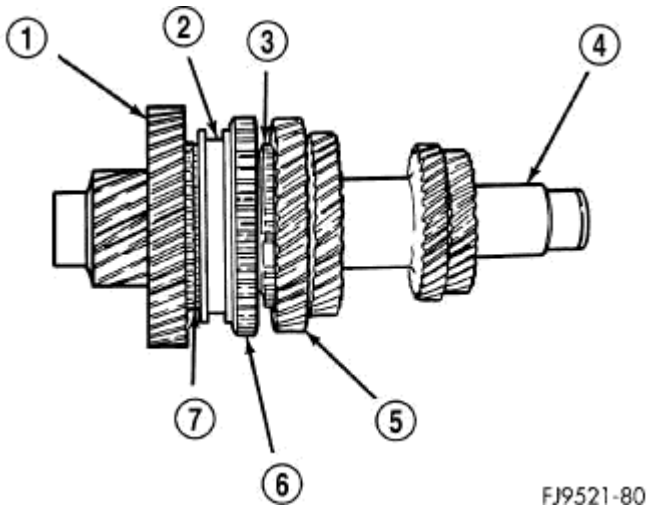
- 1st - 0.522-2.208 mm (0.021-0.087 in)
- 2nd - 0.522-2.208 mm (0.021-0.087 in)

If a stop ring gap does not fall within the specifications it must be inspected for wear and replaced. If the 1st or 2nd synchronizer stop ring is worn beyond specifications, the complete output shaft assembly must be replaced.

The output shaft incorporates the 1st and 2nd gears and synchronizers on the assembly.

INSPECTION

INSPECTION



FJ9521-80

Fig. 173: Output Shaft

Courtesy of CHRYSLER LLC

- 1 - 1ST GEAR
- 2 - SLEEVE
- 3 - STOP RING
- 4 - OUTPUT SHAFT
- 5 - 2ND SPEED GEAR
- 6 - REVERSE GEAR
- 7 - STOP RING

CAUTION: The output shaft is serviced as an assembly. Do not try to repair any component on the output shaft. If the 1-2 synchronizer or gear fails, it is necessary to replace the output shaft assembly.

It is necessary to check the synchronizer stop ring gap. Use a feeler gauge to measure the gaps between the stop rings and the speed gears (3, 7) . The correct gaps are listed below:

- 1st - 0.522-2.208 mm (0.021-0.087 in)
- 2nd - 0.522-2.208 mm (0.021-0.087 in)

If a stop ring gap does not fall within the specifications it must be inspected for wear and replaced. If the 1st or 2nd synchronizer stop ring is worn beyond specifications, the complete output shaft assembly must be replaced.

The output shaft incorporates the 1st and 2nd gears and synchronizers on the assembly.

SHAFT, SELECT**REMOVAL**

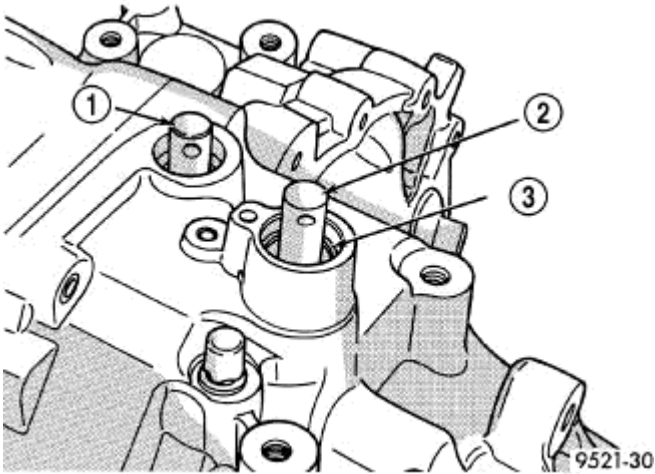
REMOVAL

Fig. 174: Crossover Shaft Snap Ring
Courtesy of CHRYSLER LLC

- | |
|--|
| 1 - SELECTOR SHAFT
2 - CROSSOVER SHAFT
3 - SNAP RING |
|--|

1. Disassemble transaxle.
2. With the transaxle disassembled, remove the select shaft seal.
3. Using snap-ring pliers, remove the snap ring (3) at the select shaft bore.
4. Push the select shaft (2) in the case and remove the select assembly.

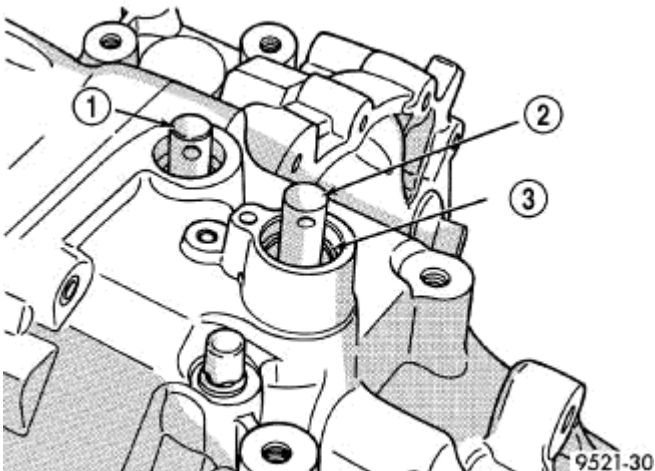
INSTALLATION**INSTALLATION**

Fig. 175: Crossover Shaft Snap Ring

Courtesy of CHRYSLER LLC

- | |
|--|
| 1 - SELECTOR SHAFT
2 - CROSSOVER SHAFT
3 - SNAP RING |
|--|

1. Install select shaft to case and install snap ring (3) .
2. Install the select shaft seal.
3. Assemble transaxle.

SHAFT, SHIFT**REMOVAL****REMOVAL**

1. Disassemble transaxle.
2. With the transaxle disassembled, remove the shift shaft by pushing on the shaft from the outside. Pull shaft out from the inside.

INSTALLATION**INSTALLATION**

1. Pull shift shaft into position from the outside.
2. Assemble transaxle.

SWITCH, BACKUP LAMP**REMOVAL****REMOVAL**

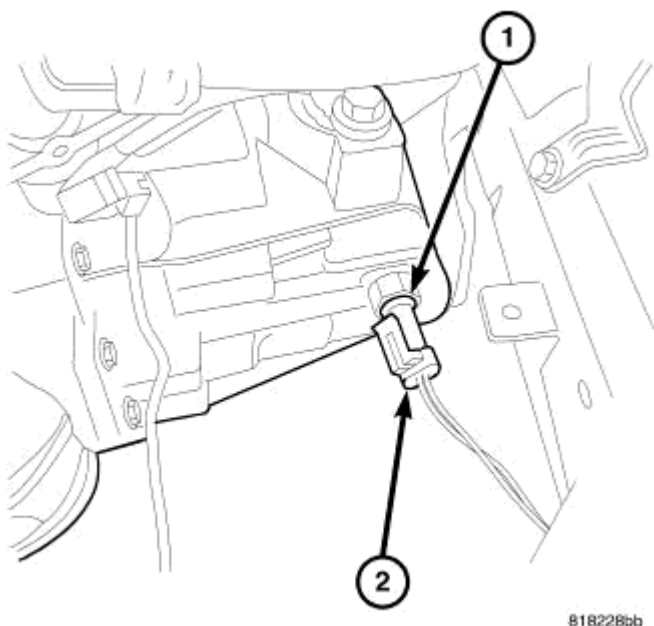


Fig. 176: Removing/Installing Back-Up Lamp Switch Connector
Courtesy of CHRYSLER LLC

1. Lift vehicle on hoist.
2. From bottom side of vehicle, disconnect back-up lamp switch connector (2).

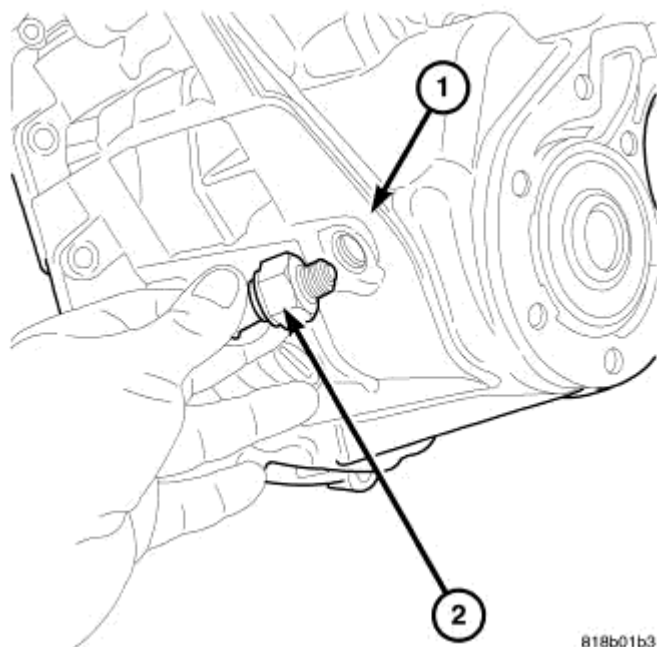


Fig. 177: Removing/Installing Backup Lamp Switch
Courtesy of CHRYSLER LLC

3. Unscrew switch (2) from transaxle.

INSTALLATION

INSTALLATION

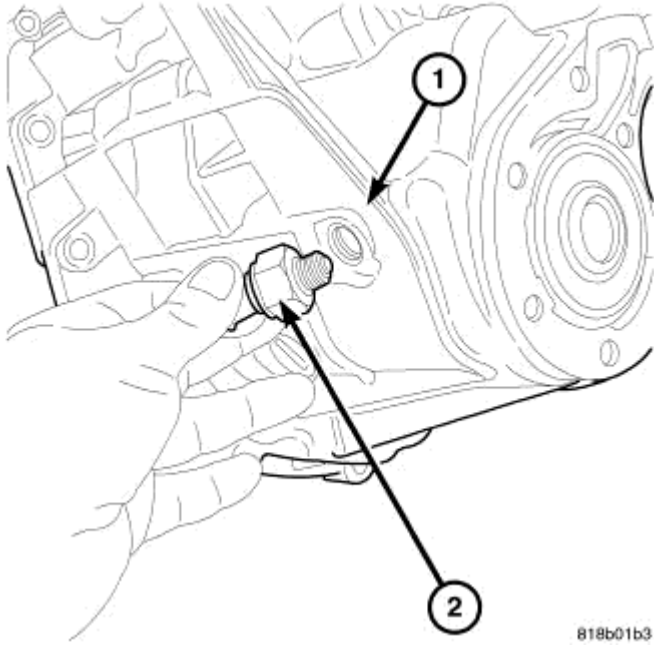


Fig. 178: Removing/Installing Backup Lamp Switch
Courtesy of CHRYSLER LLC

1. Install back-up lamp switch (2). Teflon tape or equivalent must be used on switch threads. Tighten switch to 24 N.m (18 ft. lbs.).

CAUTION: Do not overtighten switch.

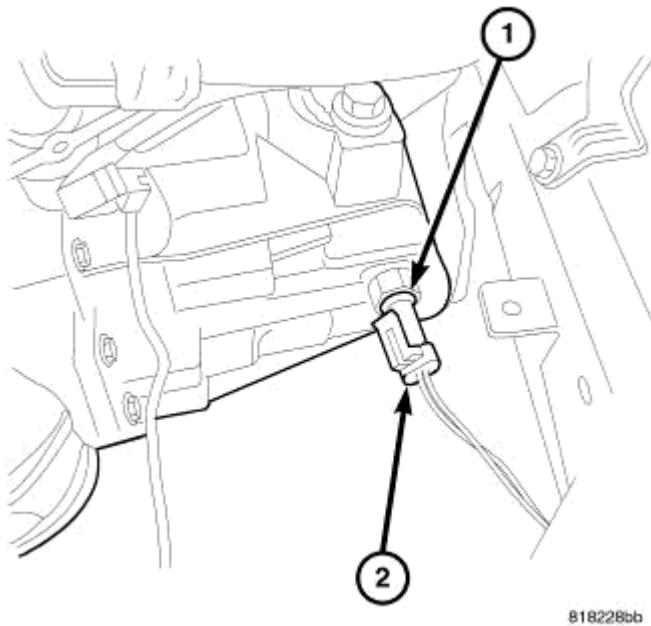


Fig. 179: Removing/Installing Back-Up Lamp Switch Connector
Courtesy of CHRYSLER LLC

2. Connect back-up lamp switch connector (2).
3. Lower vehicle.
4. Verify back-up lamp operation.

SYNCHRONIZER

DISASSEMBLY

DISASSEMBLY

Place synchronizer in a clean shop towel and wrap. Press on inner hub. Carefully open up shop towel and remove springs, balls, keys, hub, and sleeve.

CLEANING

CLEAN

Do not attempt to clean the blocking rings in solvent. The friction material will become contaminated. Place synchronizer components in a suitable holder and clean and air dry.

INSPECTION

INSPECT

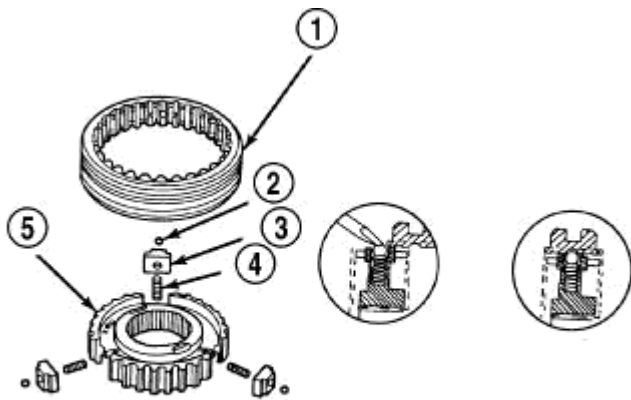
Proper inspection of components involve:

- Teeth, for wear, scuffed, nicked, burred, or broken teeth
- Keys, for wear or distortion
- Balls and springs, for distortion, cracks, or wear

If any of these conditions exist in these components, replace as necessary.

ASSEMBLY

ASSEMBLY



9521-69

Fig. 180: Synchronizer Assembly
Courtesy of CHRYSLER LLC

1 - SLEEVE
2 - BALL
3 - KEY
4 - SPRING
5 - HUB

1. Position synchronizer hub (5) onto a suitable holding fixture (input shaft). The synchronizer hubs (5) are directional. The hubs must be installed with the **U** facing upward.
2. Install springs (4) into hub slot.

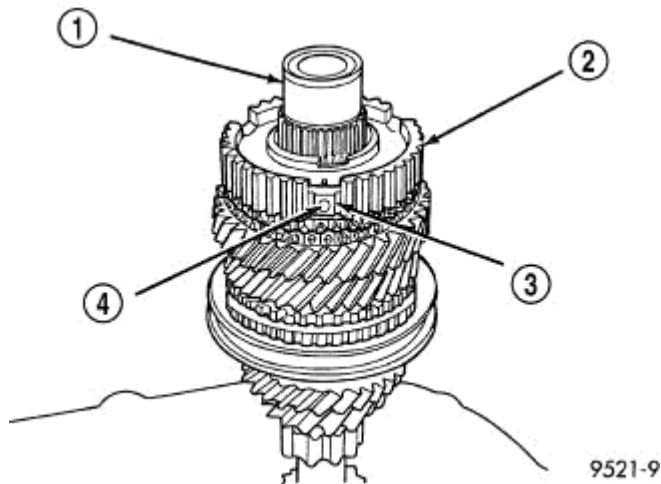


Fig. 181: Inserting Synchronizer Balls Into Keys
Courtesy of CHRYSLER LLC

1 -
INPUT
SHAFT
2 -
HUB
3 -
KEY
4 -
BALL

3. Insert key (3) into hub (2) and spring.
4. Apply petroleum jelly to the hole in the key. Insert balls (4) into each key.

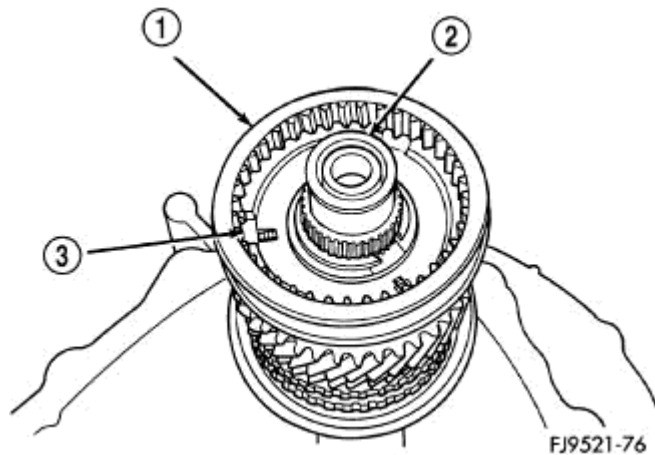


Fig. 182: Identifying Synchronizer Sleeve, Input Shaft, & Key
Courtesy of CHRYSLER LLC

1 -
SLEEVE
2 -
INPUT
SHAFT
3 - KEY

5. Slide sleeve (1) over the hub and depress balls as you carefully slip the sleeve into position .

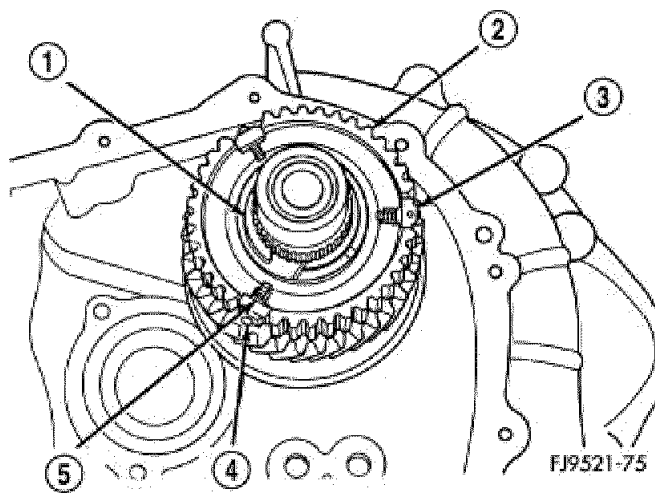


Fig. 183: Centering Synchronizer Keys & Balls By Pushing On Both Stop Rings
Courtesy of CHRYSLER LLC

1 - SNAP
RING
2 -
CLUTCH
3 - KEY
4 - BALL
5 -
SPRING

6. Line up stop ring tang over the keys in the hub, install stop rings, center the keys (3) and balls (4) by pushing on both stop rings.

TROUGH, BEARING OIL FEED, REAR

REMOVAL

REMOVAL

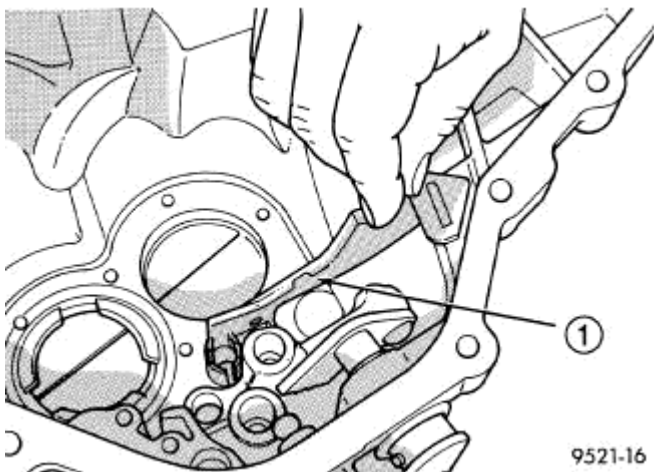


Fig. 184: Oil Feed Trough
Courtesy of CHRYSLER LLC

1 - OIL FEED TROUGH

The bearing oil feed trough (1) is retained in the case by a pin that is molded into the case and clips that are part of the trough.

1. Using light plier pressure, squeeze the clips together at the rear of the trough.
2. Slide the trough over the retaining pin that locates the trough in the case.

INSTALLATION

INSTALLATION

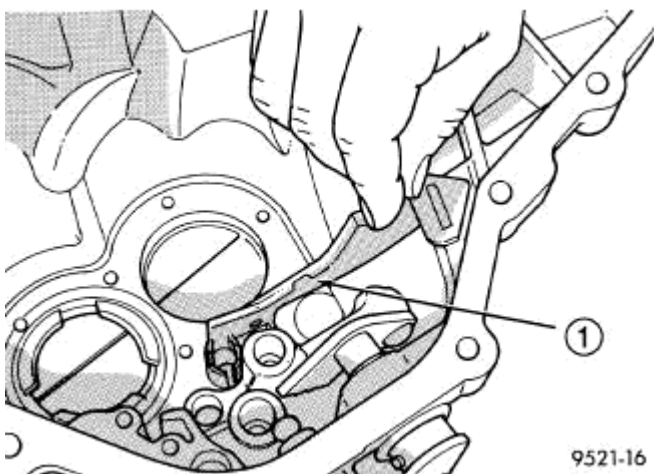


Fig. 185: Oil Feed Trough
Courtesy of CHRYSLER LLC

2009 Dodge Journey R/T

2009 MANUAL TRANSMISSION T355 - Service Information - Journey

1 - OIL FEED TROUGH

1. Slide the trough (1) over the retaining pin that locates the trough in the case.