

DESCRIPTION > DESCRIPTION C510 MANUAL

This five speed is a constant-mesh manual transmission. All gear ranges, except reverse, are synchronized. The transmission case is aluminum with a steel end-plate cover. It is housed in a die-cast aluminum case featuring a two-piece, middle split design.

The C510 transmission internal components can be serviced only by separating the gear case from the clutch housing.

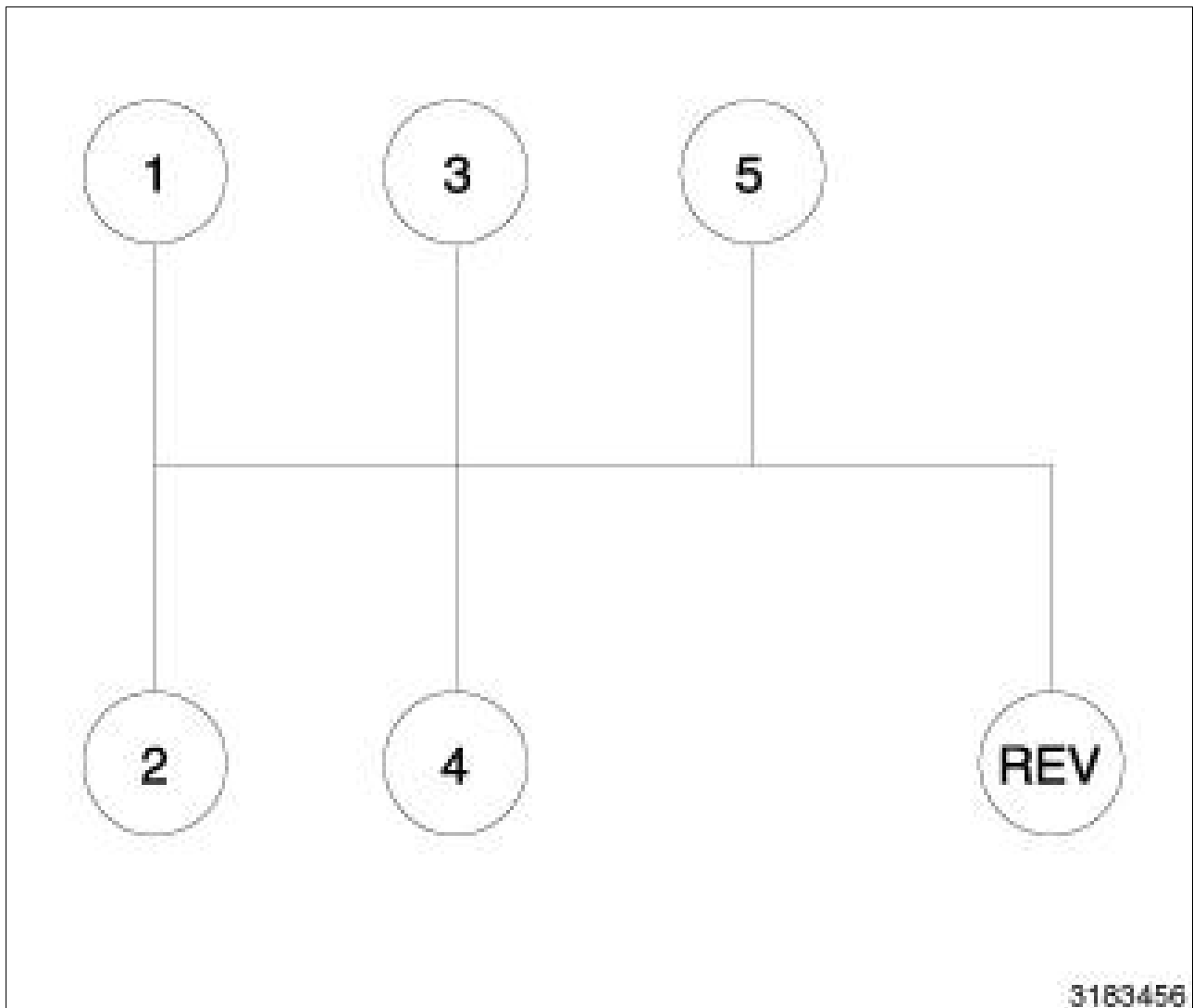
GEAR RATIOS

GEAR	Ratio
1st	3.909
2nd	2.158
3rd	1.345
4th	.974
5th	0.766
REVERSE	3.818
FINAL DRIVE RATIO	3.733
CLUTCH RELEASE SYSTEM	HYDRAULIC

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

DESCRIPTION > DESCRIPTION C510 MANUAL > GEARSHIFT PATTERN

Fig 1: Manual Transmission Shift Pattern



Courtesy of CHRYSLER GROUP, LLC

1. The C514 transaxle shift pattern is a modified H-pattern. Overdrive fifth and reverse gears are outboard of the first through fourth gear positions.

DIAGNOSIS AND TESTING > COMMON PROBLEM CAUSES

The majority of transmission malfunctions are a result of:

- Insufficient lubrication
- Incorrect lubricant
- Mis-assembled or damaged internal components
- Improper operation

DIAGNOSIS AND TESTING > COMMON PROBLEM CAUSES > NOISY OPERATION

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

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

DIAGNOSIS AND TESTING > COMMON PROBLEM CAUSES > LOW LUBRICANT LEVEL

Insufficient transmission 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.

SPECIFICATIONS > TORQUE SPECIFICATIONS

TORQUE SPECIFICATIONS

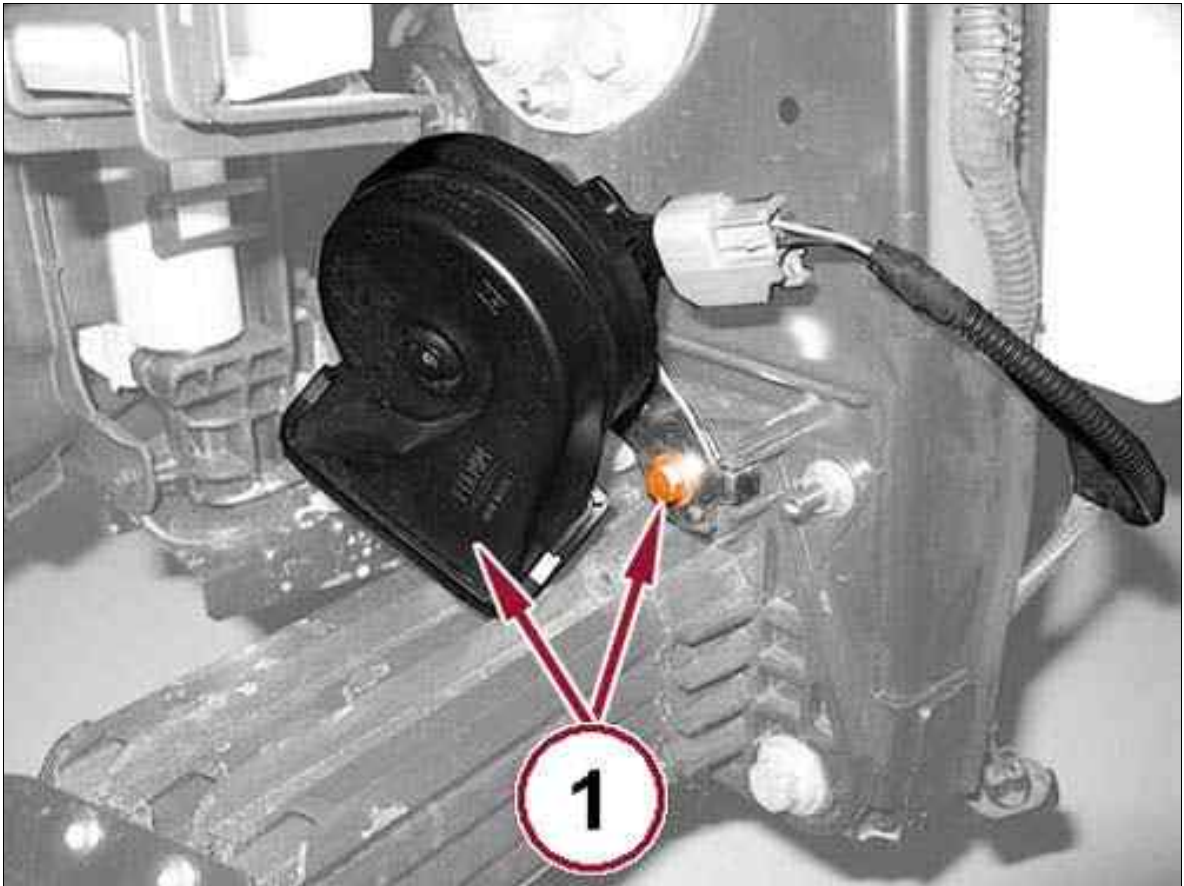
DESCRIPTION	N.m	Ft. Lbs.	In. Lbs.	COMMENT
Drain Plug	46	34	-	
Engine to Transmission Bolt	60	44	-	
Fifth Gear Shift Fork to Rail Bolt	17	13	-	
Fill Plug	25	18	-	
First and Second Gear Shift Fork to Rail Bolt	17	13	-	
Gear Selector/Engagement Lever Bolts	24	18	-	
Input and Output Shaft Nuts	112	83	-	Do not reuse these fasteners. If removed, a NEW fastener must be installed and tightened to specifications.
Input and Output Shaft Rear Bearing Retaining Plate	24	18	-	
Left Axle Seal Flange Bolts	20 + 45°	15 + 45°	-	
Left Engine Mount Bracket to Transmission Bolts	67	49	-	

Left Engine Mount Support Bracket Bolts	35	26	-	
Rear Engine Mount Bracket to Front Suspension Cradle Bolts	90 + 45°	66 + 45°	-	
Rear Engine Mount Bracket to Isolator	90 + 45°	66 + 45°	-	
Rear Engine Mount Isolator to Transmission Bolts	40 + 45°	30 + 45°	-	
rear Transmission Cover Bolts	24	18	-	
Reverse Idler Shaft Bolt	33	24	-	
Reverse Shift Fork Bolts	9.8	-	87	
Ring Gear Bolts	85	63	-	
Third and Fourth Gear Shift Fork to Rail bolt	17	13	-	
Transmission Case Bolts	24	18	-	
Transmission to Engine Bolts	60	44	-	
Upper Dust Cover to Transmission Bolts	60	44	-	

REMOVAL AND INSTALLATION > REMOVAL AND INSTALLATION > REMOVAL

1. Place the car on a lift.
2. Remove the front tire and wheel assemblies. Refer to REMOVAL AND INSTALLATION .
3. Remove the belly pan. Refer to BELLY PAN, REMOVAL AND INSTALLATION .
4. Remove the front inner wheelhouse splash shields. Refer to SHIELD, SPLASH, FRONT WHEELHOUSE, REMOVAL AND INSTALLATION .
5. Remove the front fascia. Refer to FASCIA, FRONT, REMOVAL AND INSTALLATION .
6. Remove the starter motor. Refer to STARTER, REMOVAL AND INSTALLATION .
7. Drain the transmission oil. Refer to STANDARD PROCEDURE .
8. Remove the exhaust manifold. Refer to MANIFOLD, EXHAUST, REMOVAL AND INSTALLATION .
9. Remove the front half shafts. Refer to REMOVAL AND INSTALLATION .
10. Remove the engine cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .
11. Remove the battery tray. Refer to TRAY, BATTERY, REMOVAL AND INSTALLATION .

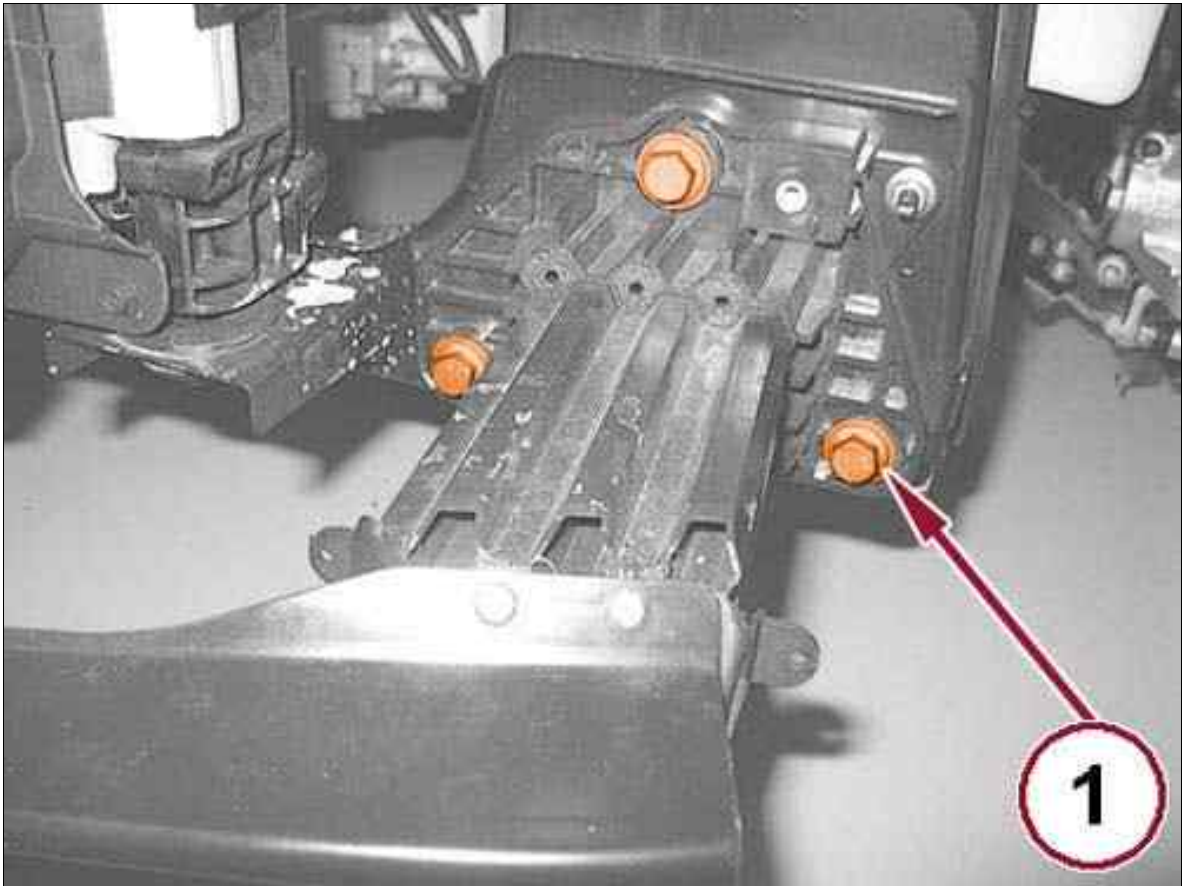
Fig 1: Horn & Bolt



Courtesy of CHRYSLER GROUP, LLC

12. Remove the bolt and position the horn (1) aside.

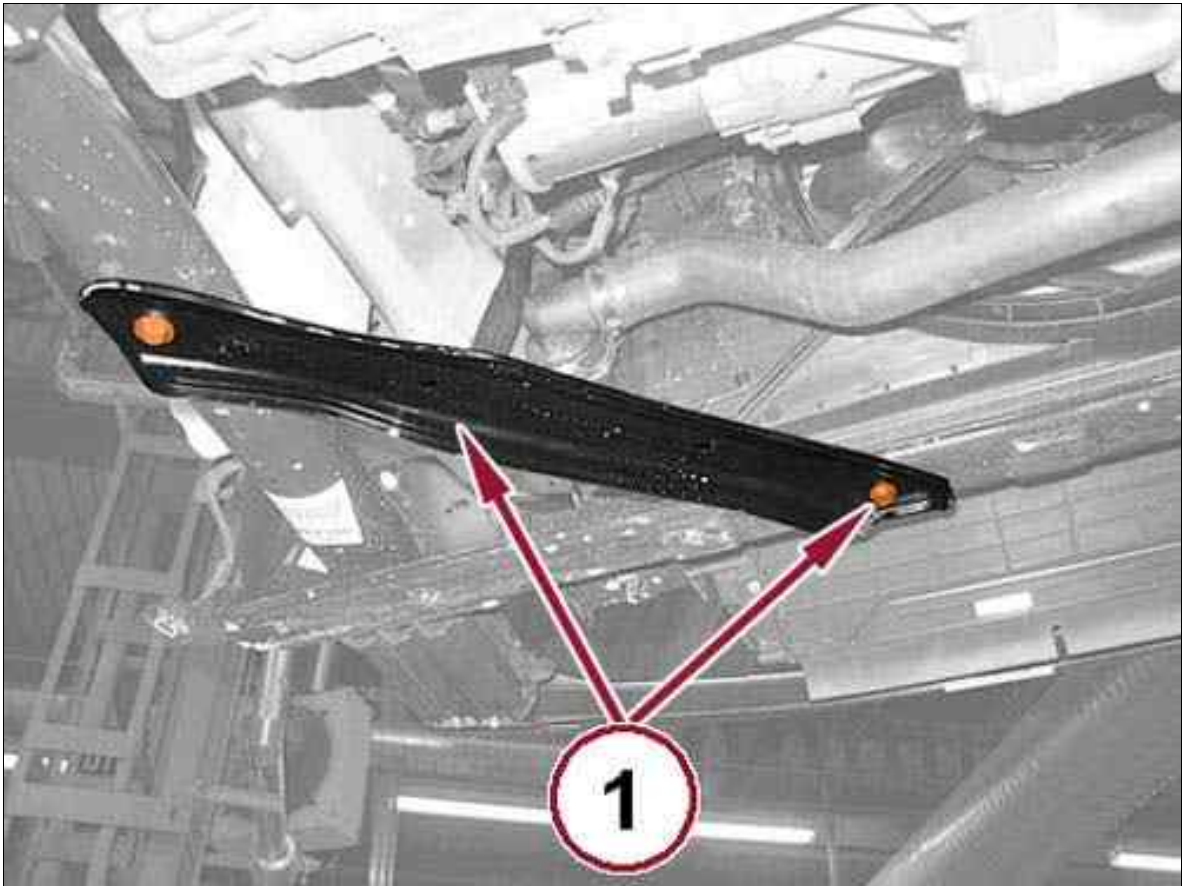
Fig 2: Lower Load Beam Bolts



Courtesy of CHRYSLER GROUP, LLC

13. Remove the bolts (1) for the left lower load beam.

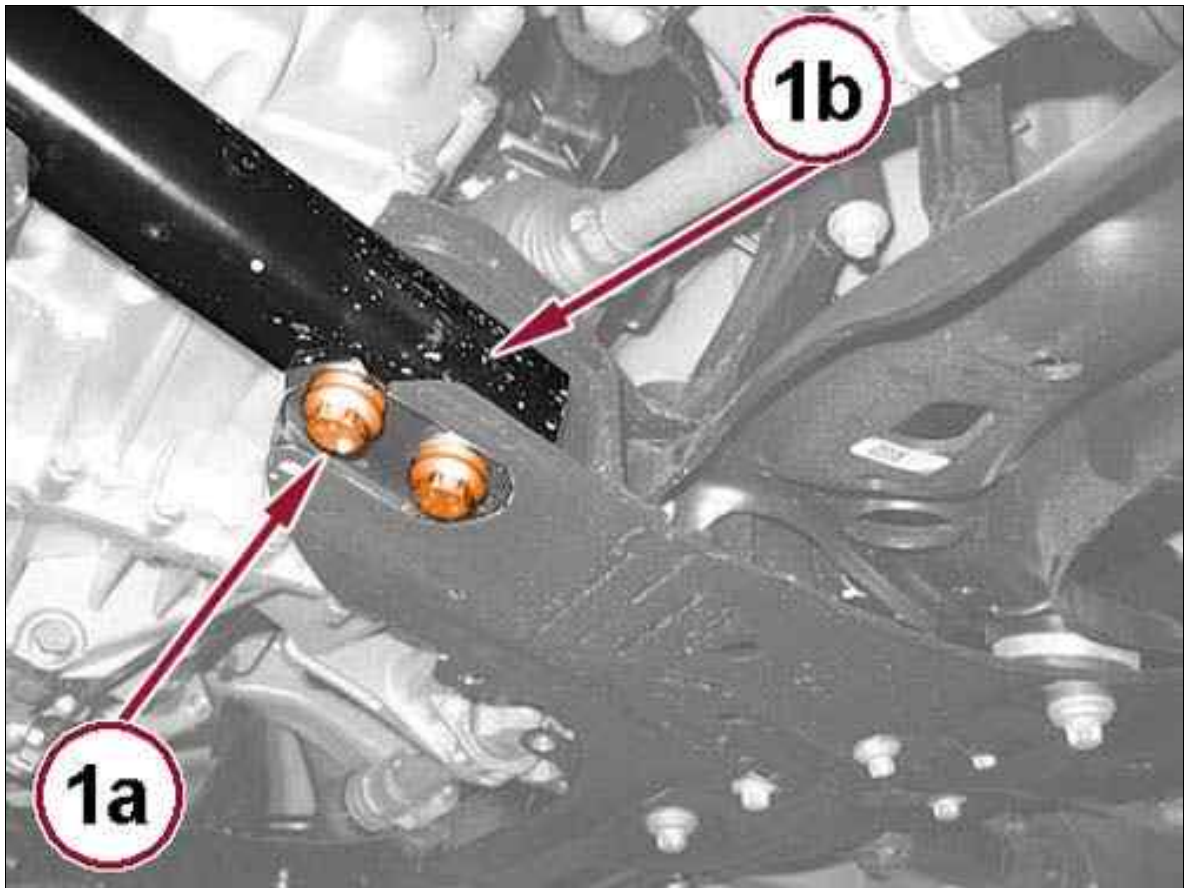
Fig 3: Front End Reinforcement & Bolts



Courtesy of CHRYSLER GROUP, LLC

14. Remove the bolts and remove the front end reinforcement (1).

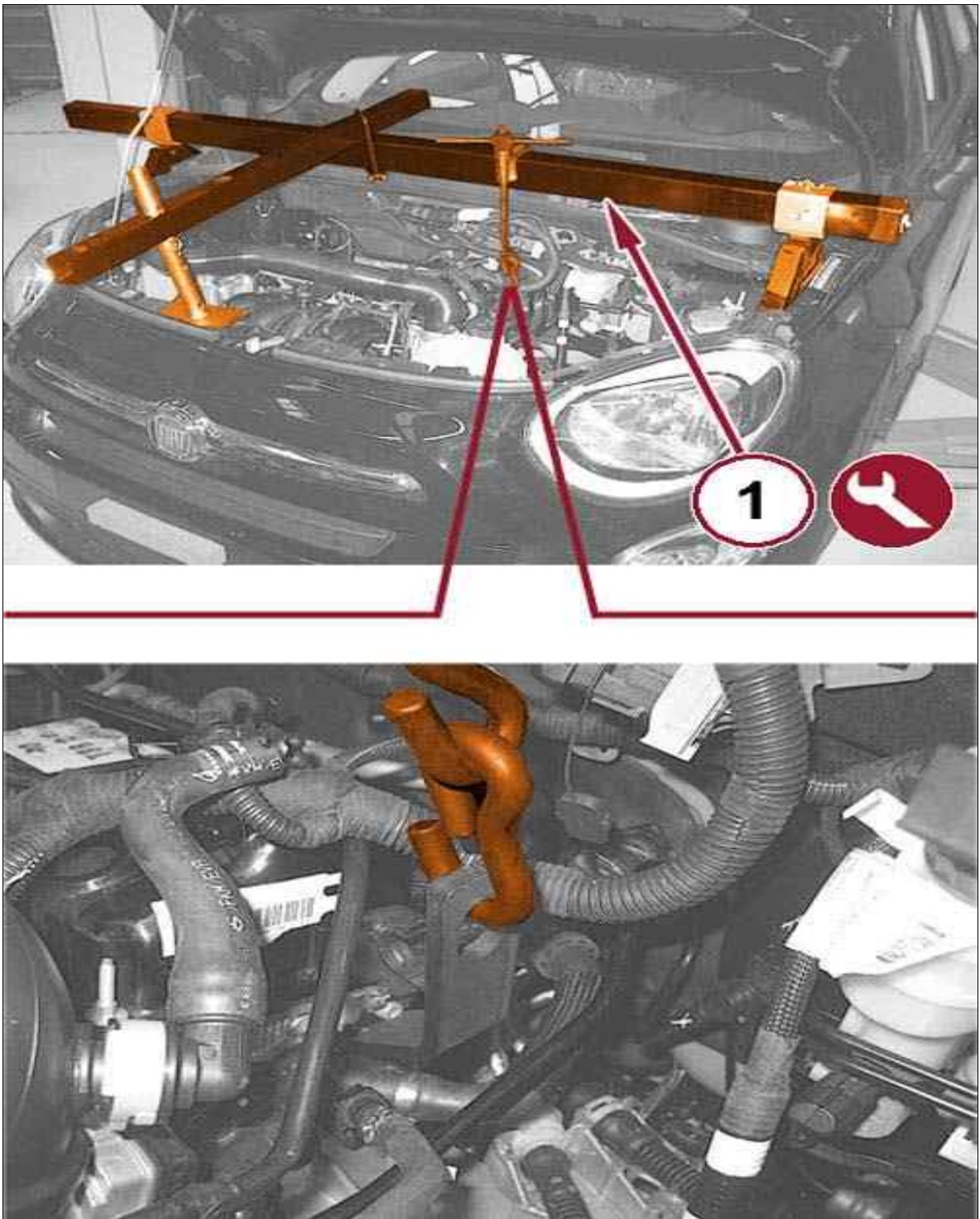
Fig 4: Left Lower Load Beam & Bolts



Courtesy of CHRYSLER GROUP, LLC

15. Remove the bolts (1a) and remove the left lower load beam (1b).

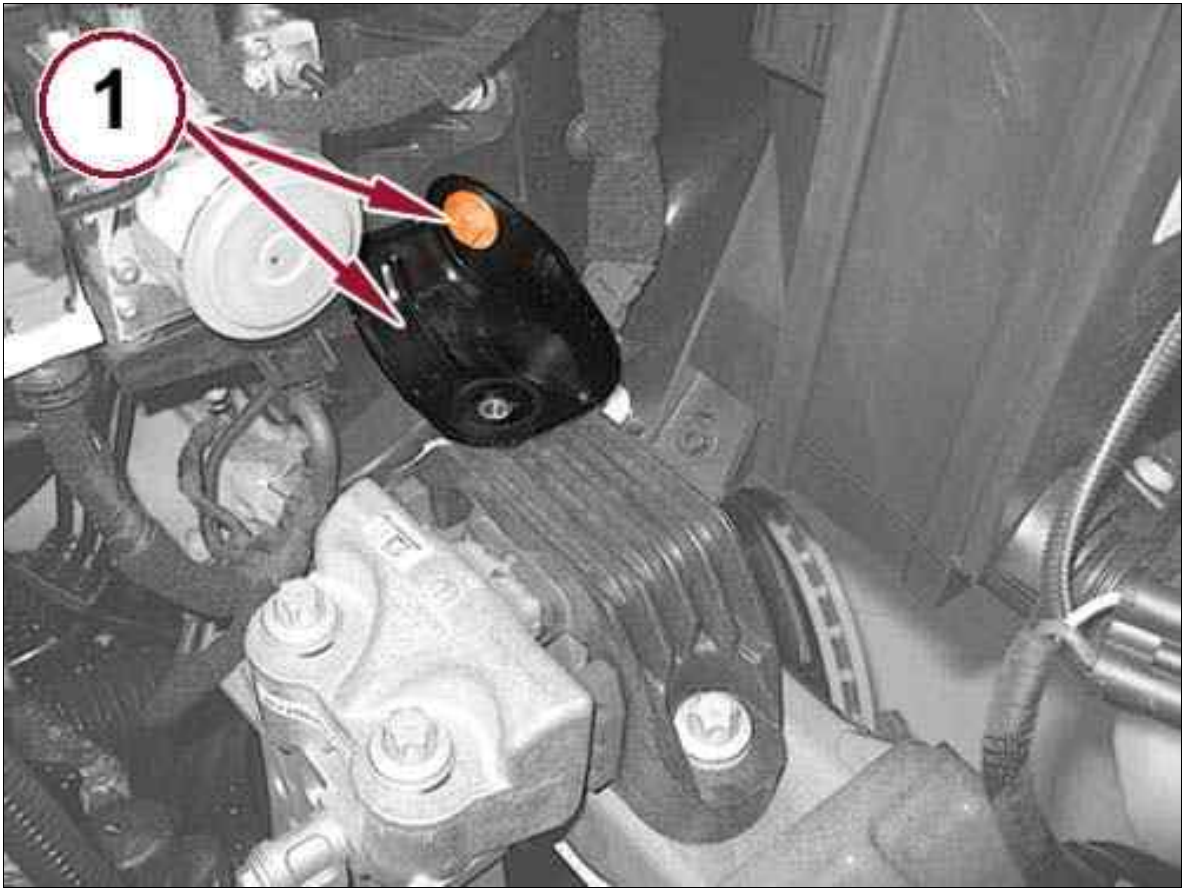
Fig 5: Powertrain Support Tools



Courtesy of CHRYSLER GROUP, LLC

16. Position the powertrain support tools 2000040436 (1).

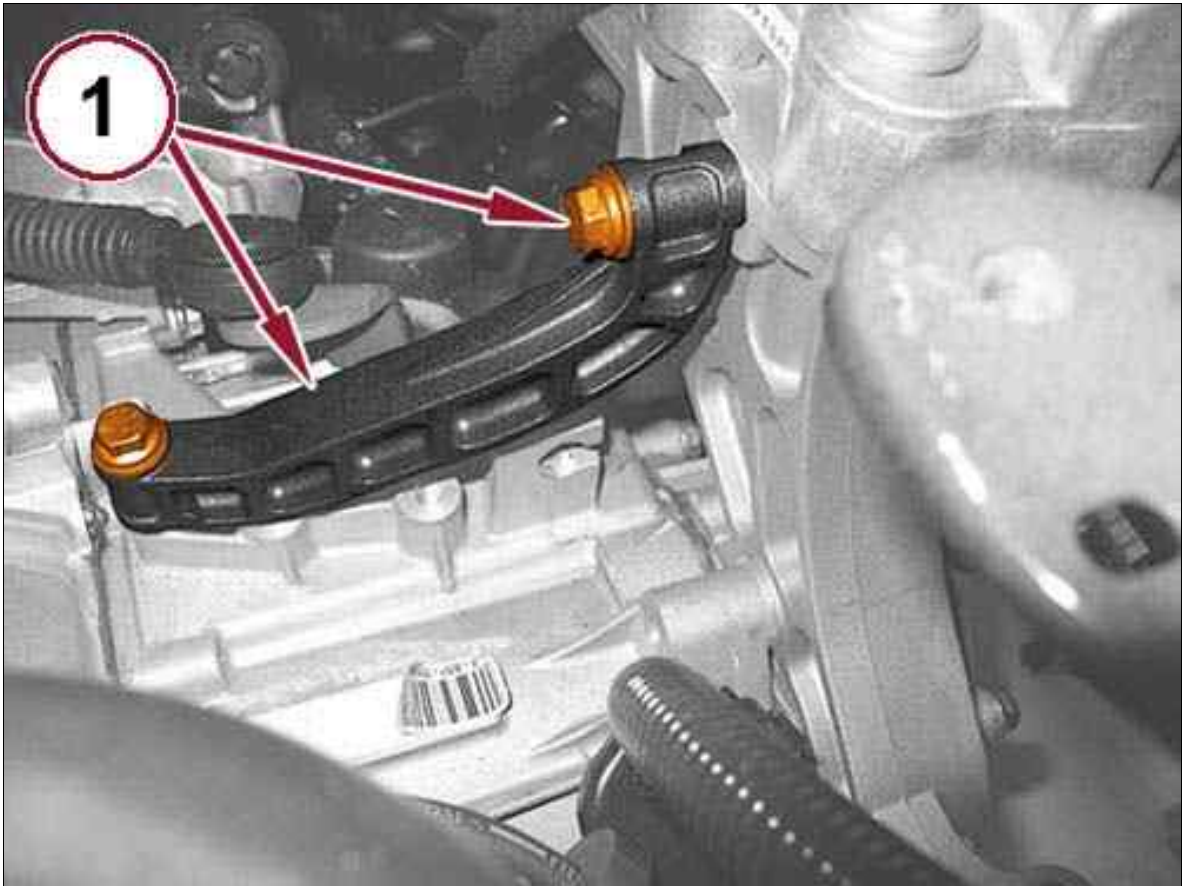
Fig 6: Bolt & Heat Shield



Courtesy of CHRYSLER GROUP, LLC

17. Remove the bolt and remove heat shield (1).

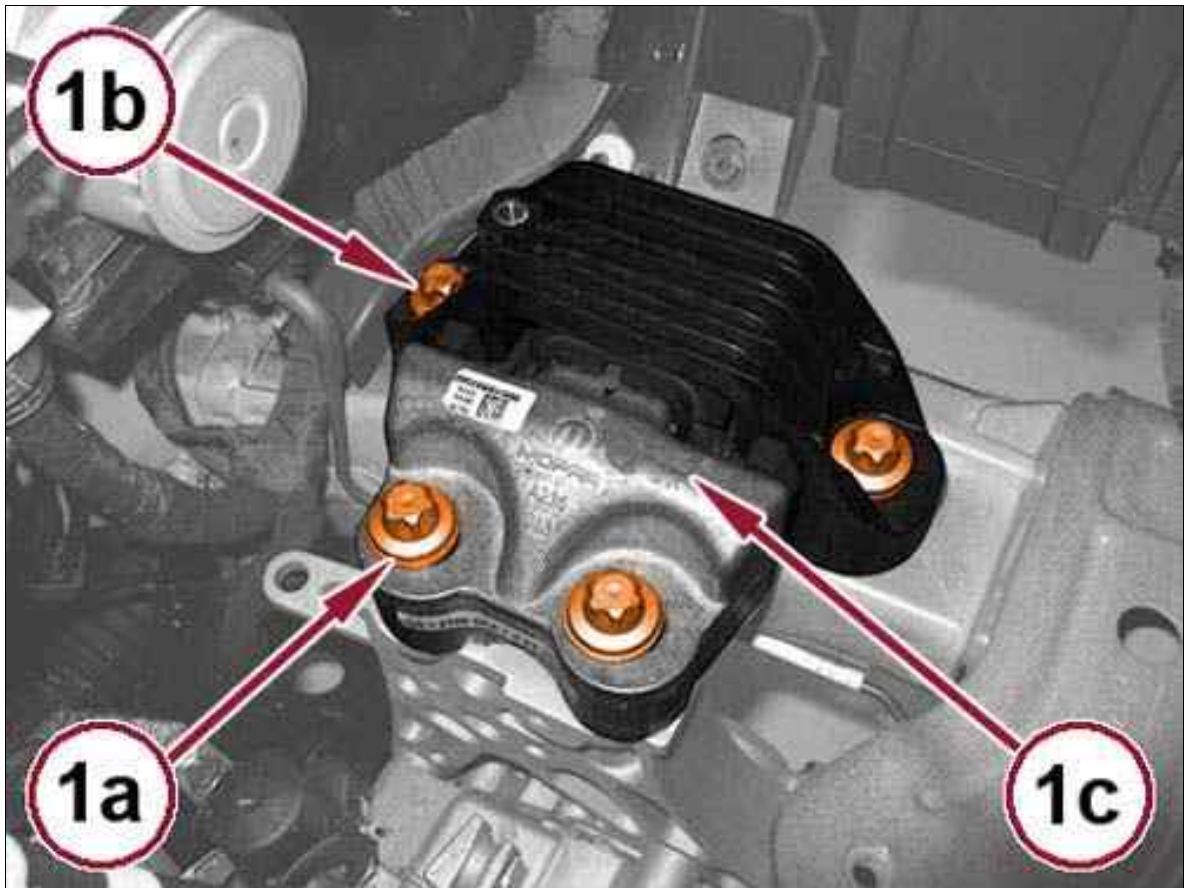
Fig 7: Left Engine Mount Reinforcement Bracket & Bolts



Courtesy of CHRYSLER GROUP, LLC

18. Remove the bolts and remove the left engine mount reinforcement bracket (1).

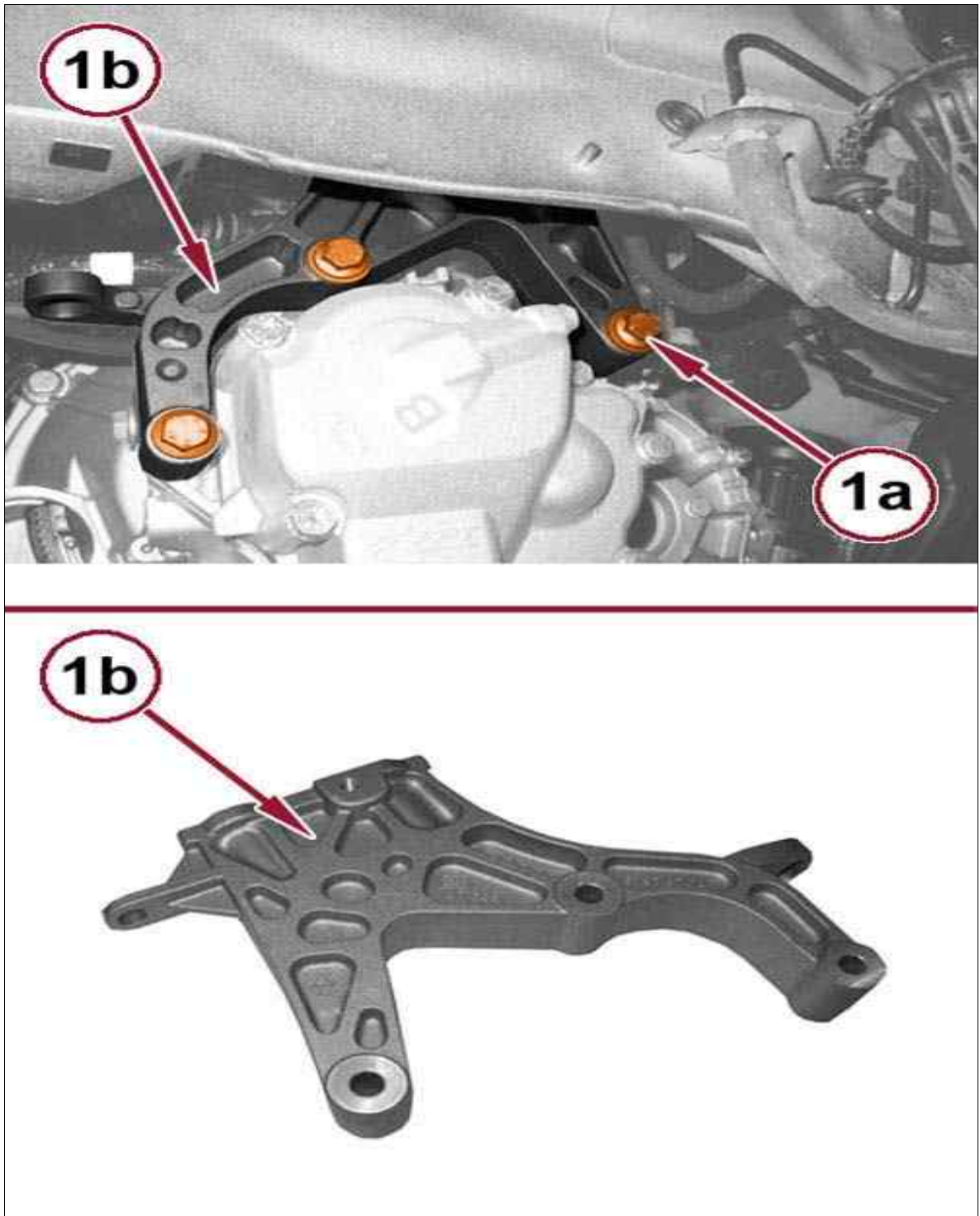
Fig 8: Left Side Engine Mount & Bolts



Courtesy of CHRYSLER GROUP, LLC

19. Remove the bolts (1a and 1b) and remove the left side engine mount (1c).

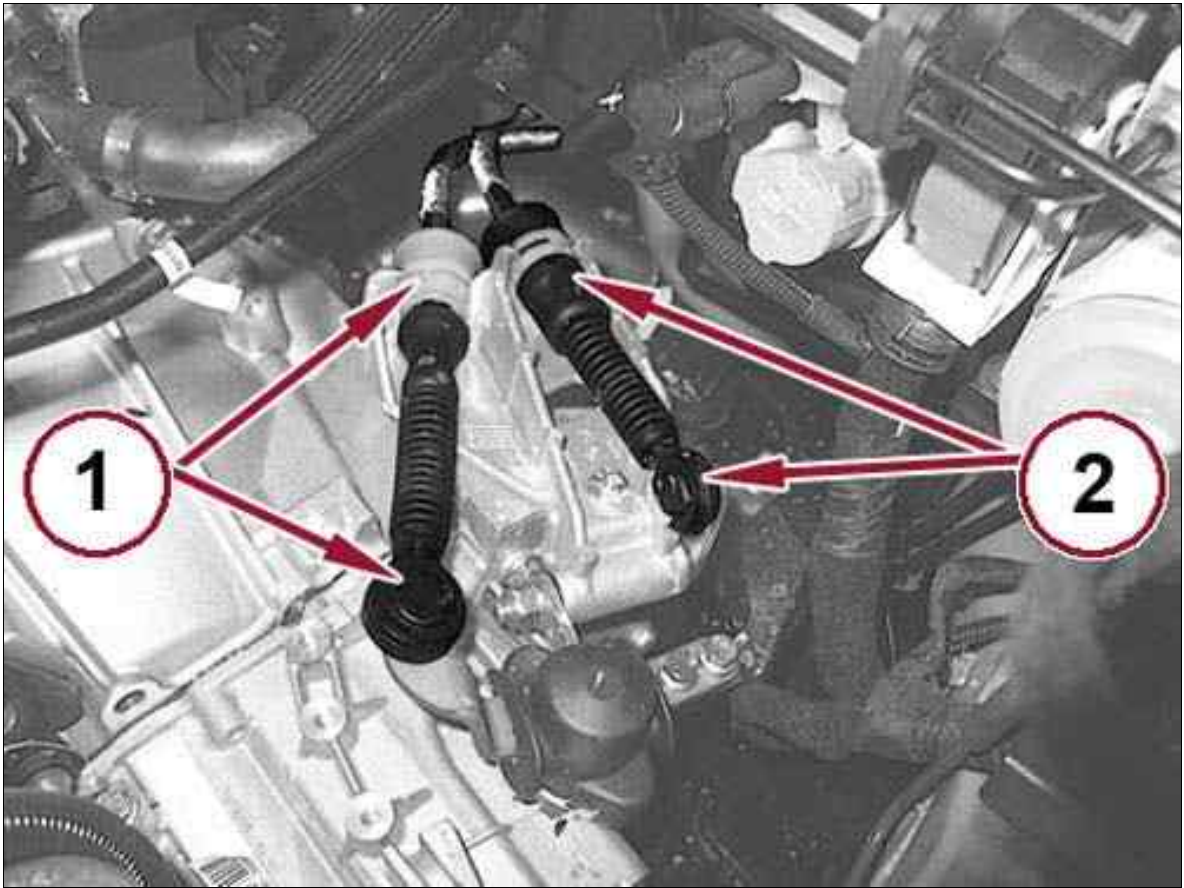
Fig 9: Left Engine Mount Bracket & Bolts



Courtesy of CHRYSLER GROUP, LLC

20. Remove the bolts (1a) and remove the left engine mount bracket (1b).

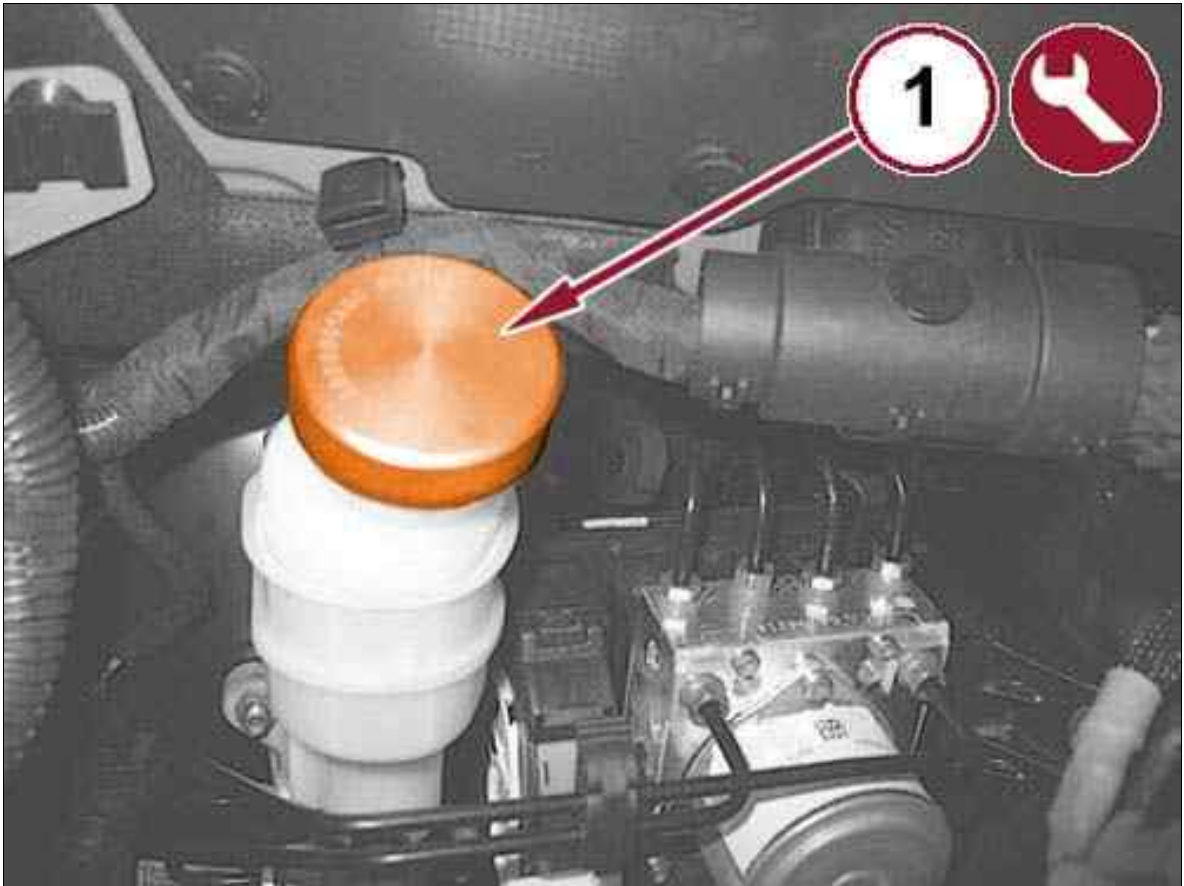
Fig 10: Gear Engagement Cable & Gear Selection Cable



Courtesy of CHRYSLER GROUP, LLC

21. Detach the gear engagement cable (1) from the transmission and position aside.
22. Detach the gear selection cable (2) from the transmission and position aside.

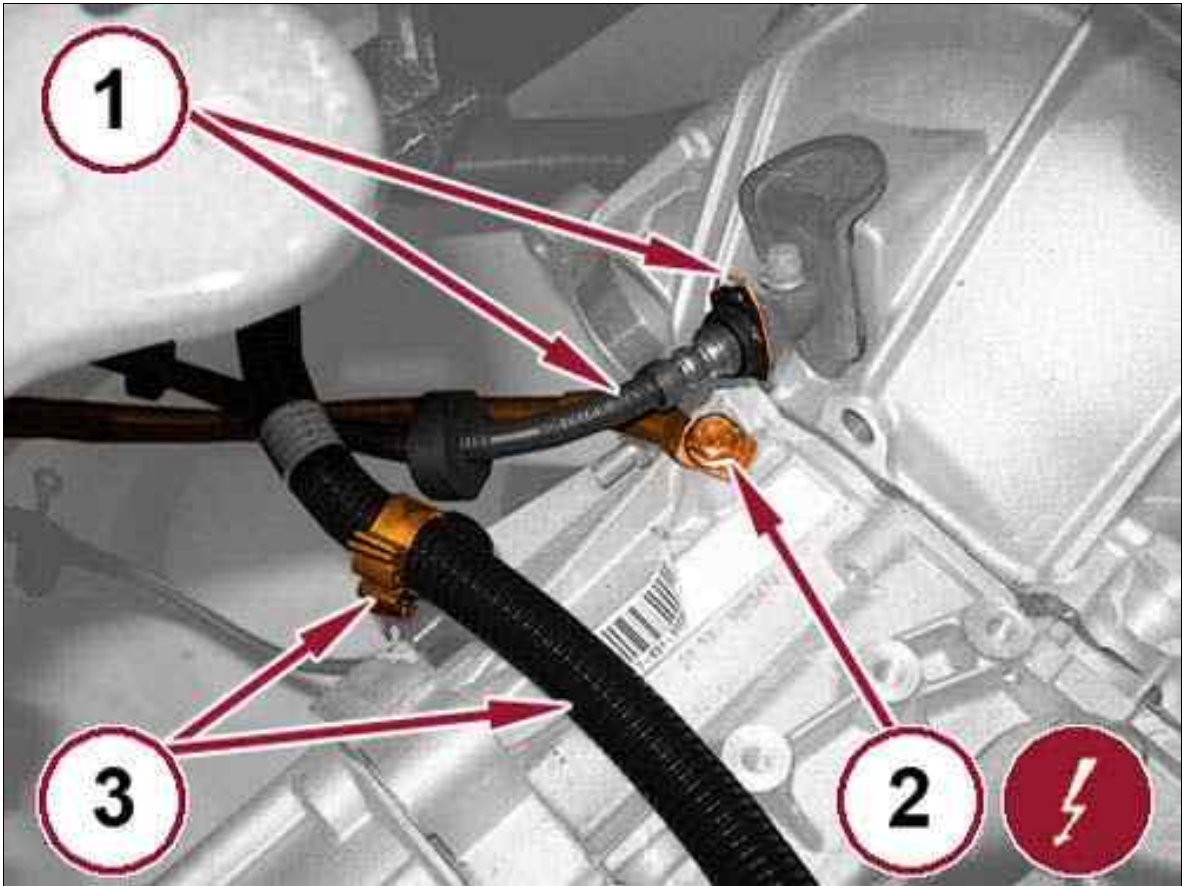
Fig 11: Brake/Clutch Fluid Reservoir Cap



Courtesy of CHRYSLER GROUP, LLC

23. Install the 2000001400 brake/clutch fluid reservoir cap (1).

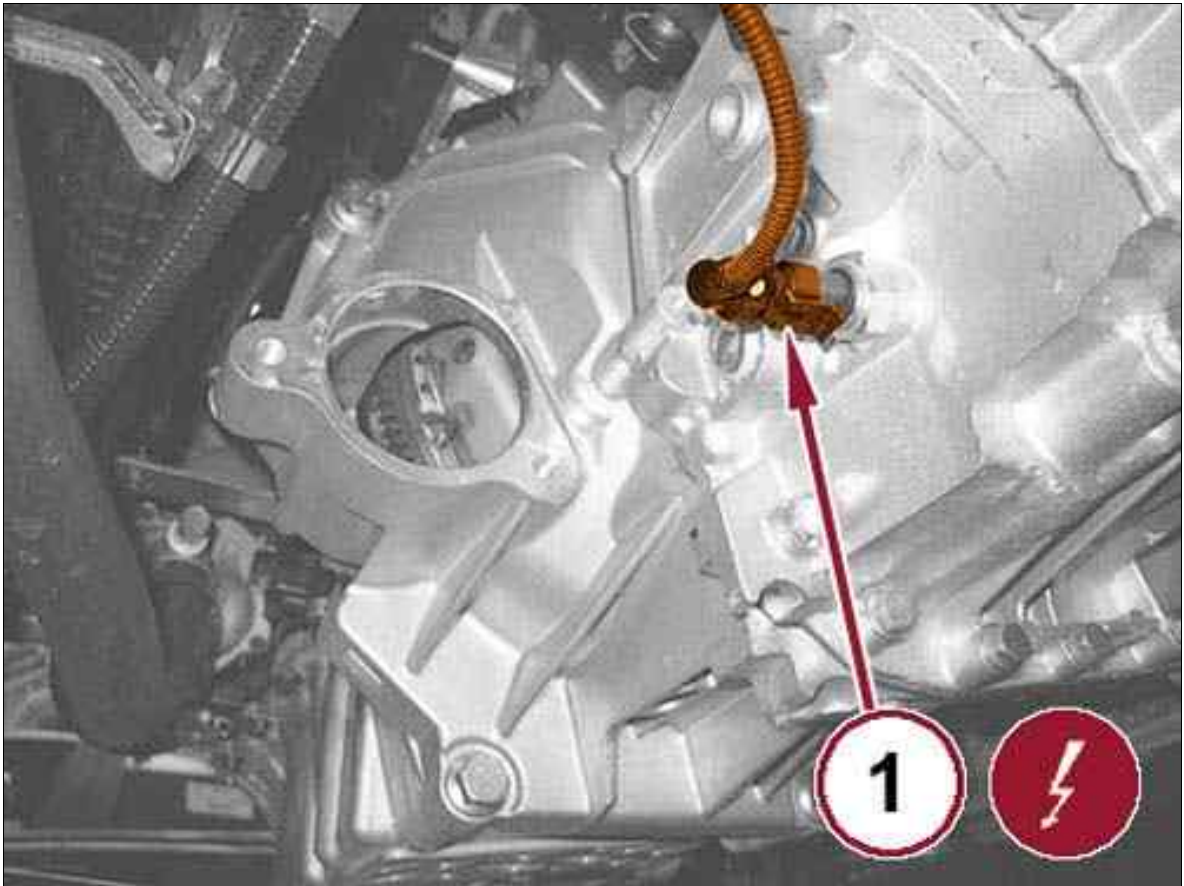
Fig 12: Clutch Slave Cylinder Hose, Battery Earth Lead, Starter Wiring & Clip



Courtesy of CHRYSLER GROUP, LLC

24. Lift the clip and disconnect the hose (1) for the clutch slave cylinder.
25. Remove the bolt and disconnect the battery earth lead (2).
26. Open the clip and release the starter wiring (3).

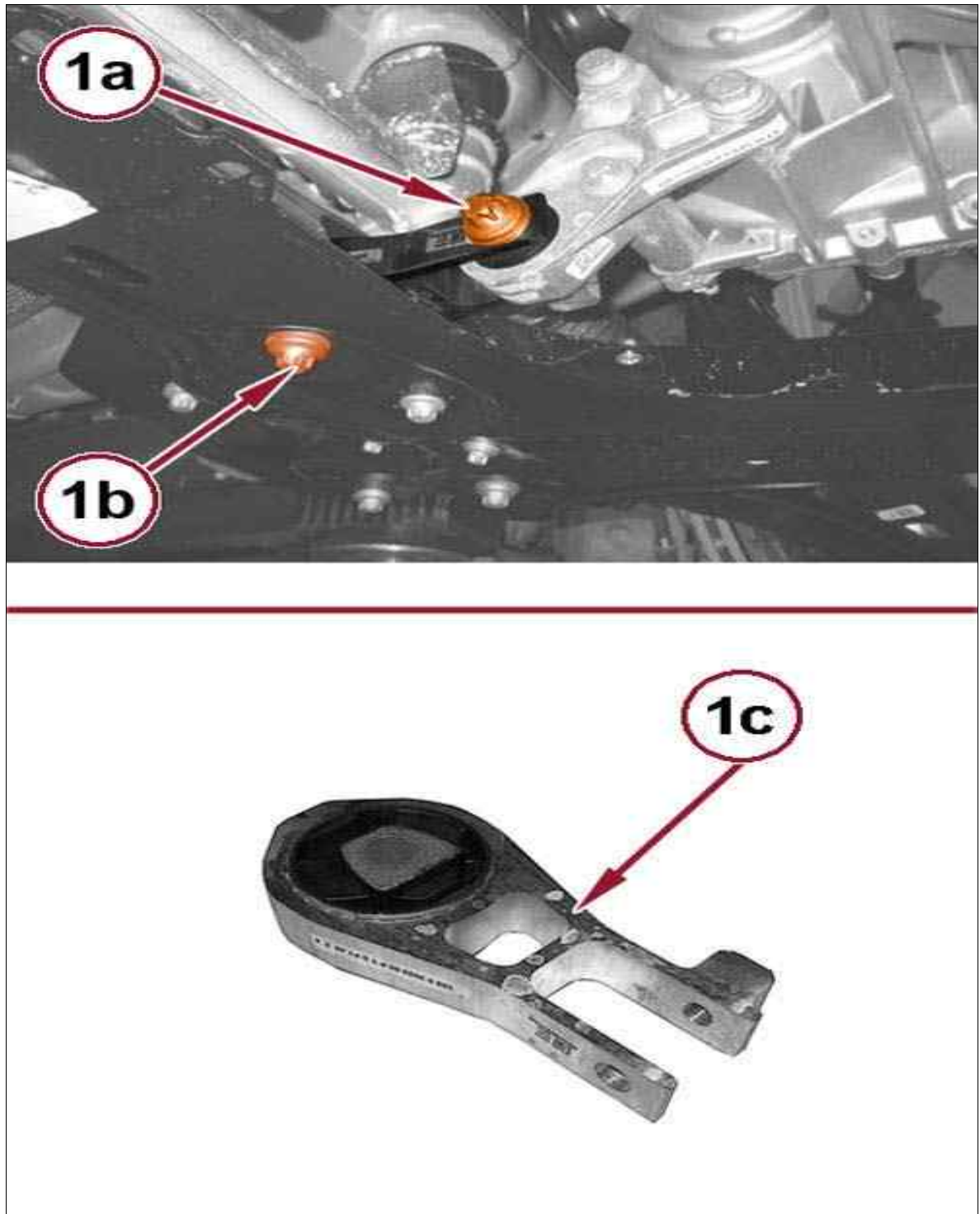
Fig 13: Back Up Lamp Switch Wire Harness Connector



Courtesy of CHRYSLER GROUP, LLC

27. Disconnect the back up lamp switch wire harness connector (1).

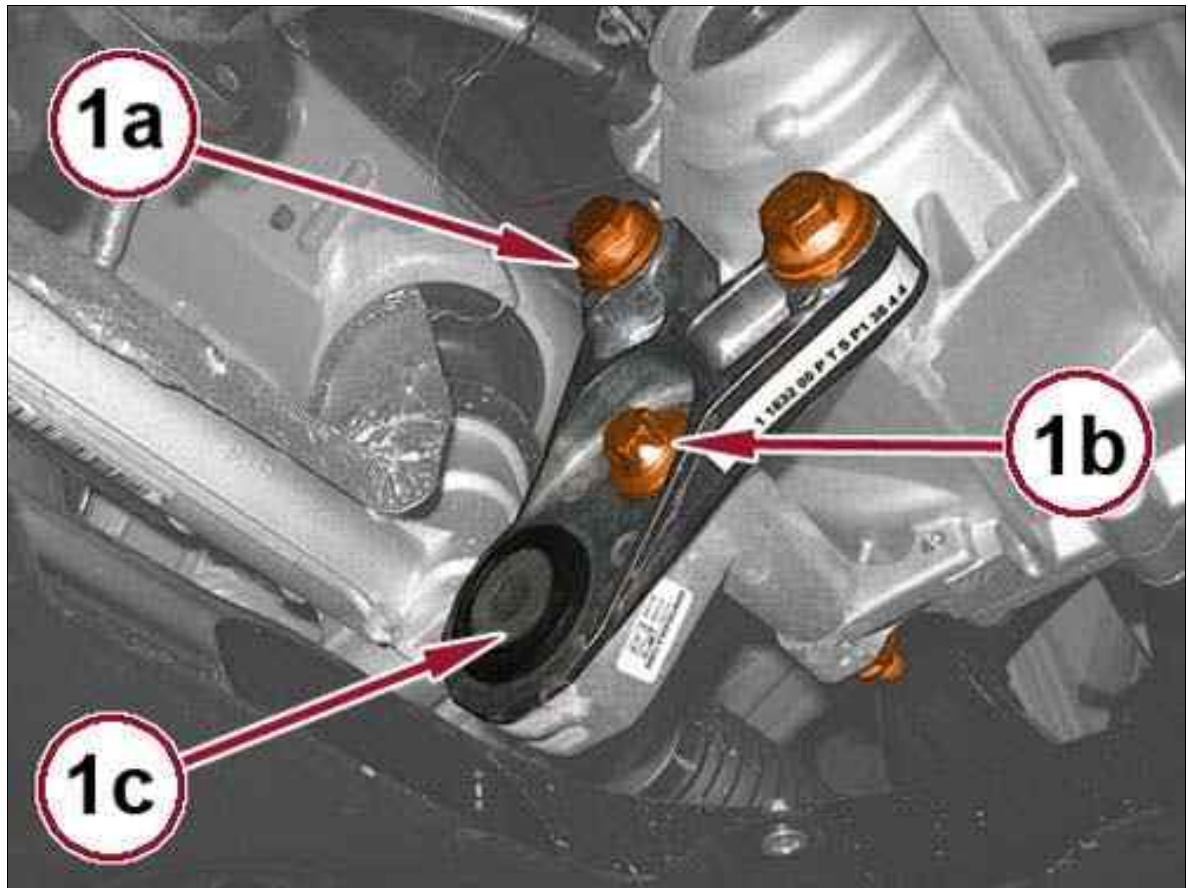
Fig 14: Reaction Rod & Bolts



Courtesy of CHRYSLER GROUP, LLC

28. Remove the bolts (1a) and (1b), then remove the reaction rod (1c).

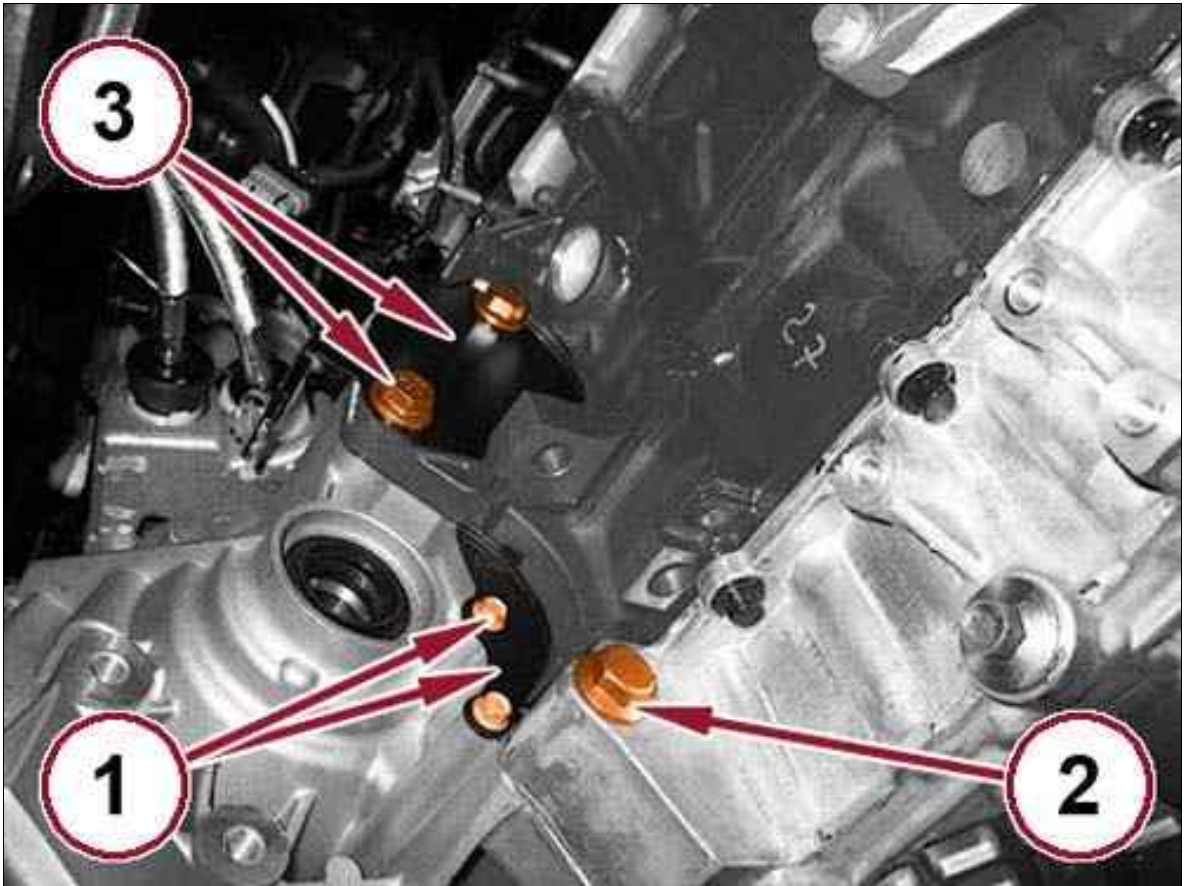
Fig 15: Reaction Rod Bracket & Bolts



Courtesy of CHRYSLER GROUP, LLC

29. Remove the bolts (1a), the bolt (1b) and remove the bracket for the reaction rod (1c).

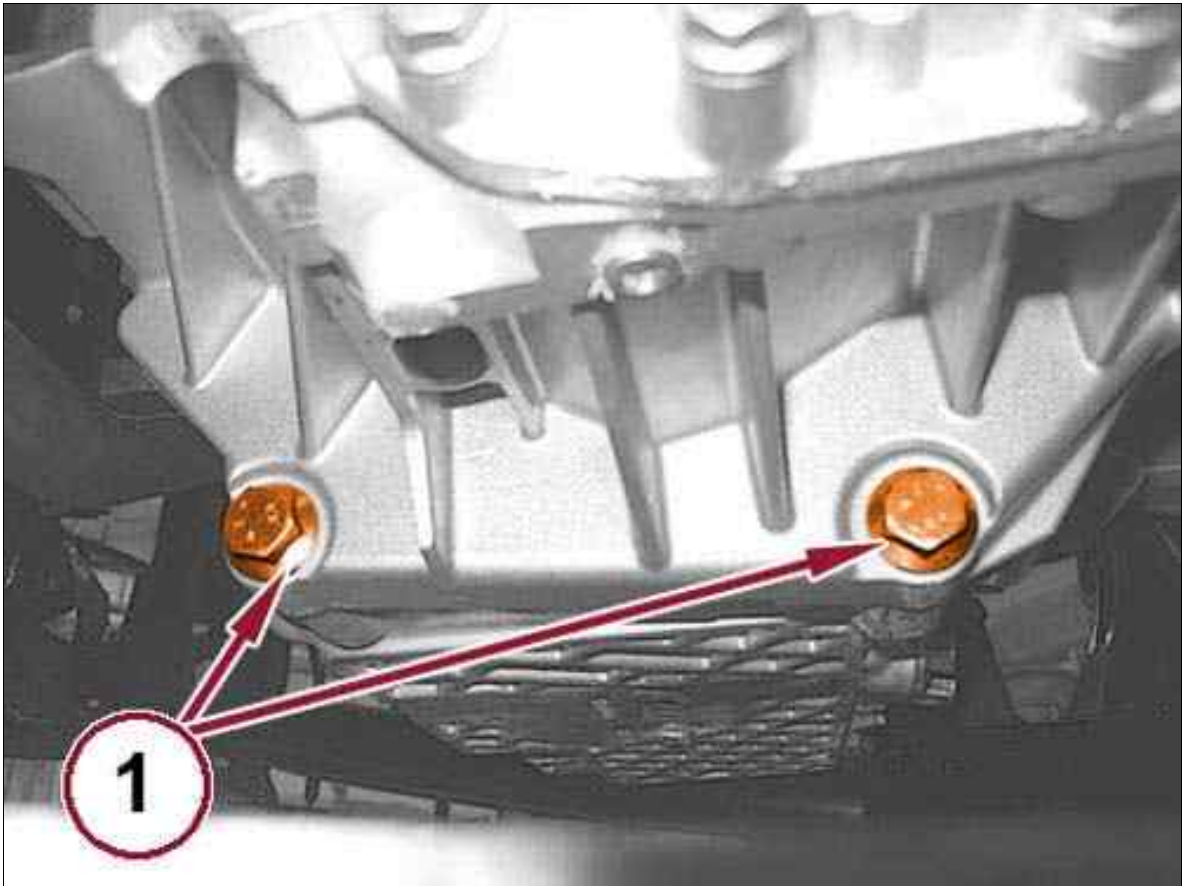
Fig 16: Lower Dust Cover, Upper Dust Cover & Engine To Oil Pan Transmission Bolts



Courtesy of CHRYSLER GROUP, LLC

- 30. Remove the lower dust cover (1).
- 31. Remove the engine oil pan to transmission bolt (2).
- 32. Remove the upper dust cover (3).

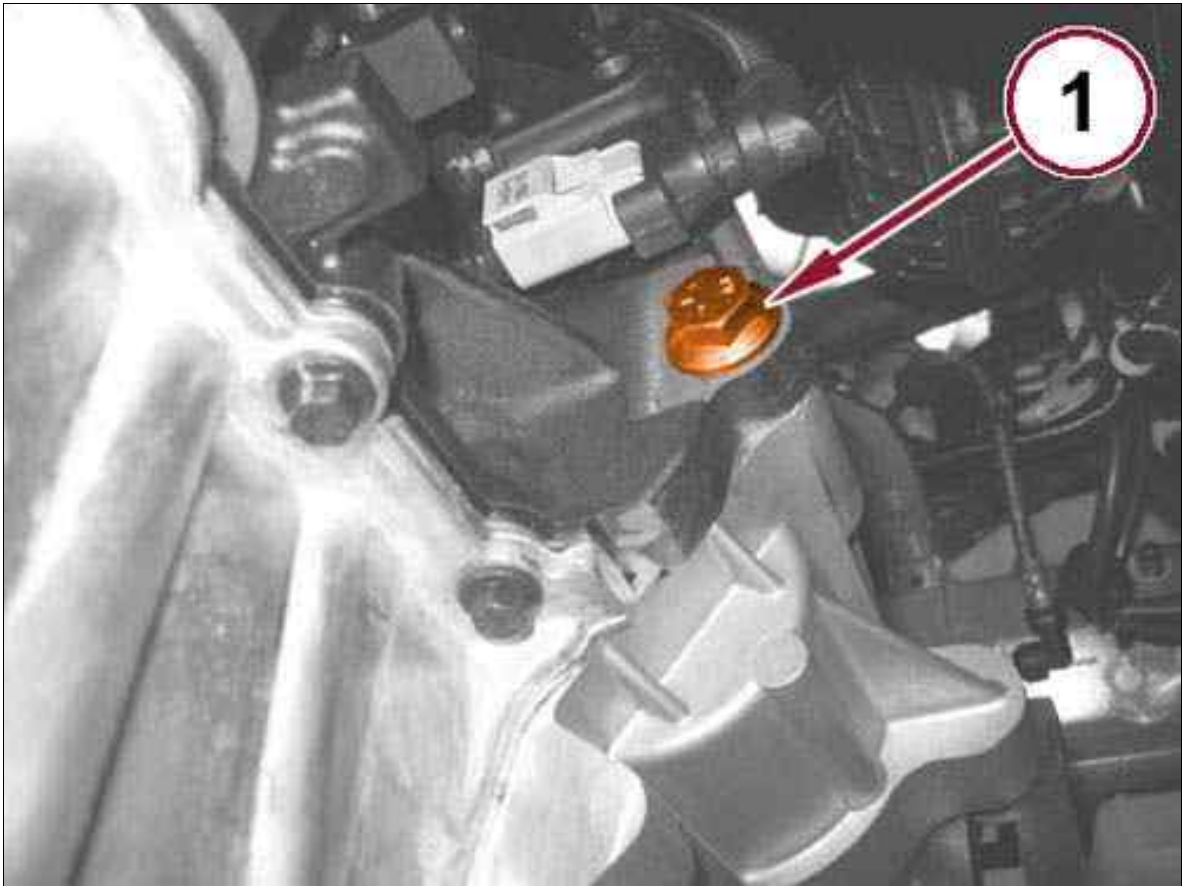
Fig 17: Transmission To Engine Oil Pan Bolts



Courtesy of CHRYSLER GROUP, LLC

33. Remove the transmission to engine oil pan bolts (1).

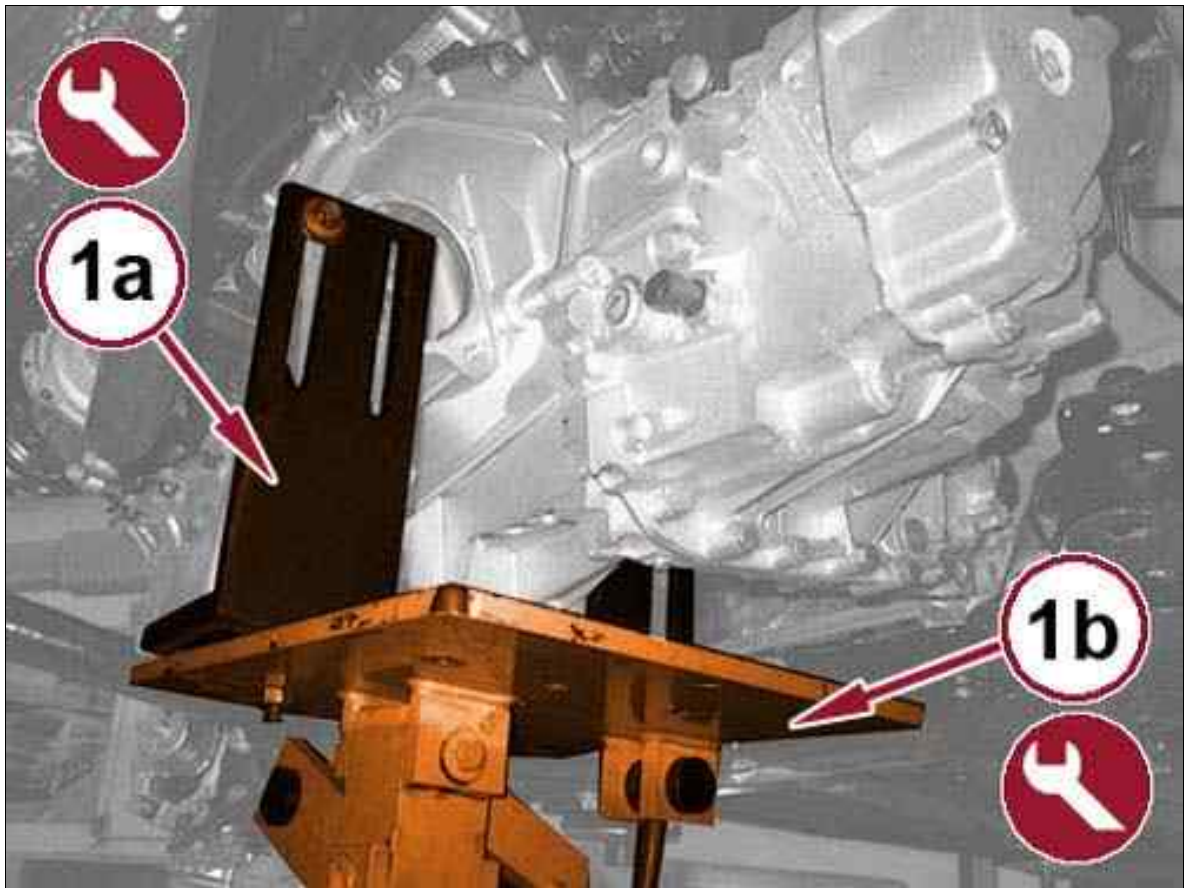
Fig 18: Lower Front Engine To Transmission Bolt



Courtesy of CHRYSLER GROUP, LLC

34. Remove the lower front engine to transmission bolt (1).

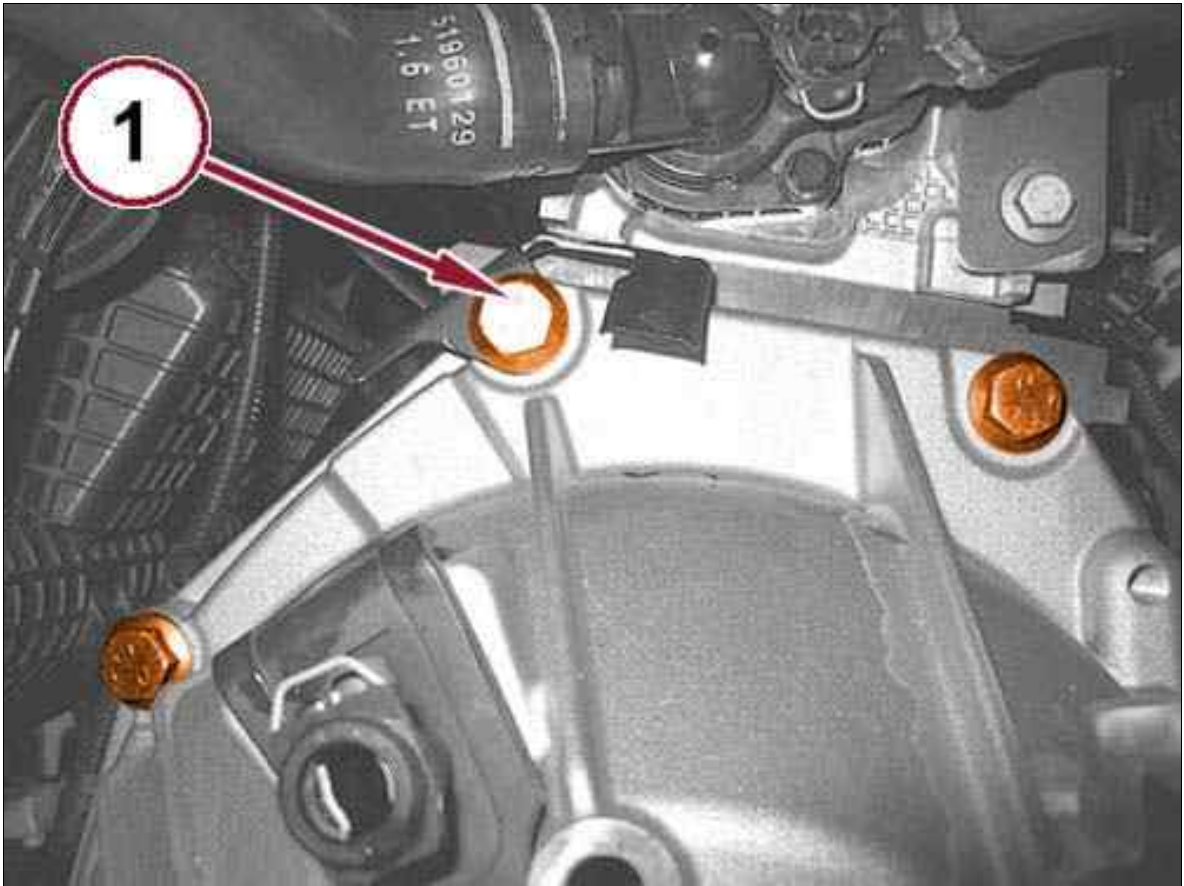
Fig 19: Jack & Brackets



Courtesy of CHRYSLER GROUP, LLC

35. Support the transmission with the brackets 1870847000 (1a) and the jack 1870835001 (1b).

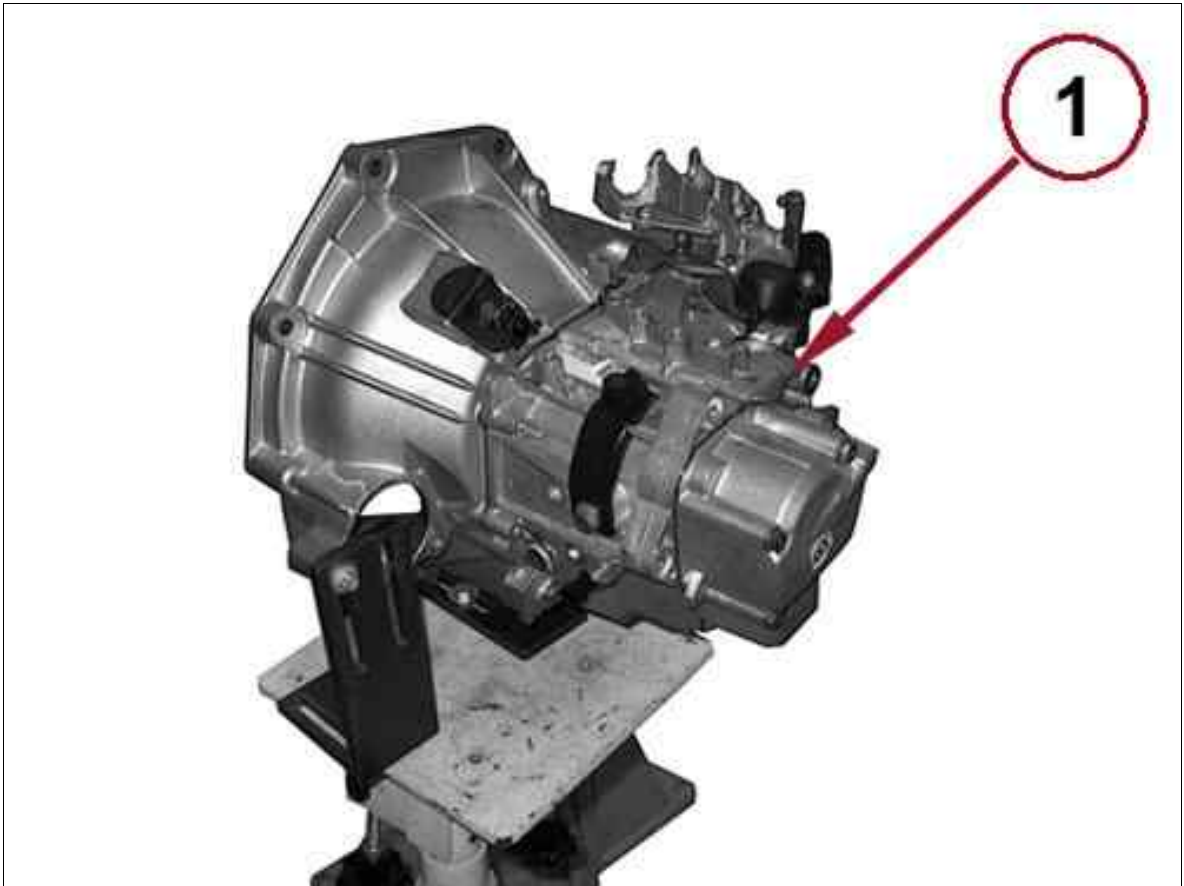
Fig 20: Upper Transmission To Engine Bolts



Courtesy of CHRYSLER GROUP, LLC

36. Remove the upper transmission to engine bolts (1).

Fig 21: Transmission



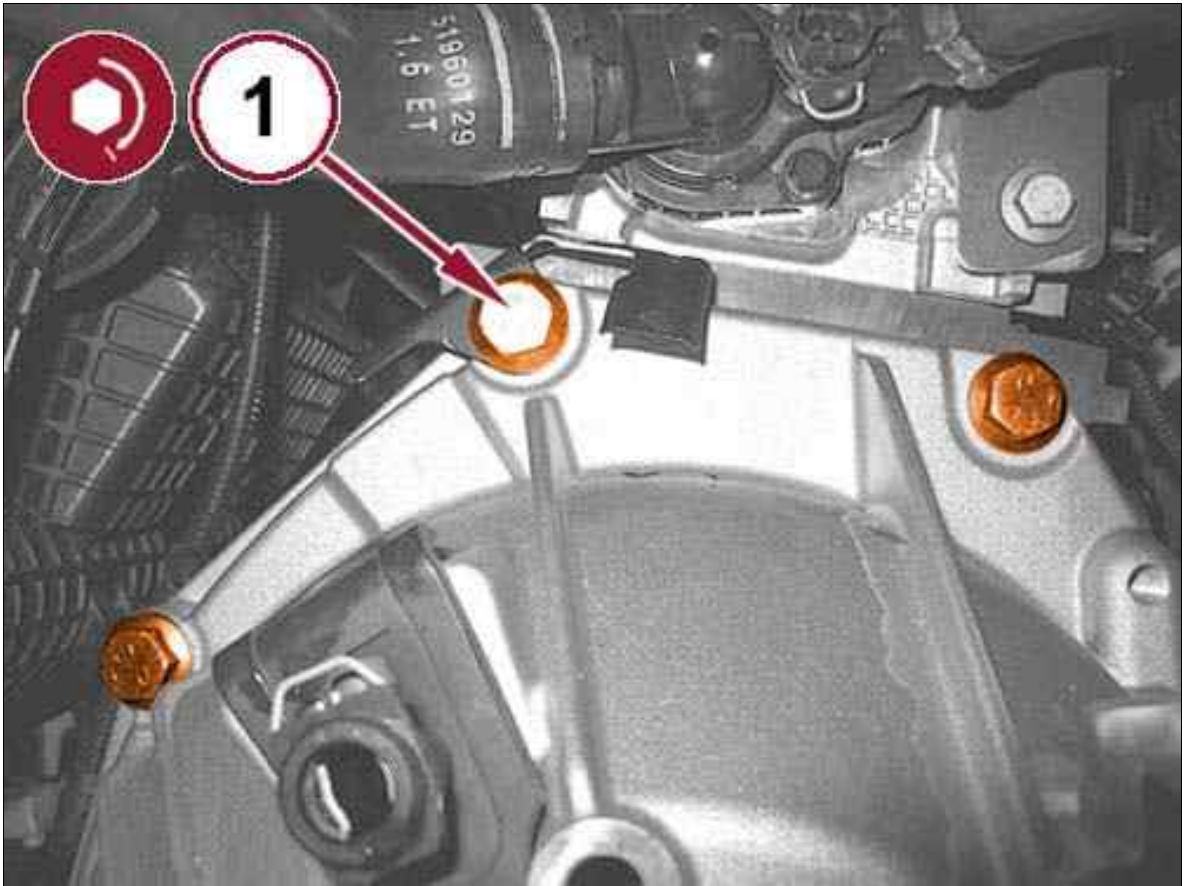
Courtesy of CHRYSLER GROUP, LLC

37. Remove the transmission (1) from the vehicle.

REMOVAL AND INSTALLATION > REMOVAL AND INSTALLATION > INSTALLATION

1. Install the transmission using the 1870835001 jack and the 1870847000 brackets.

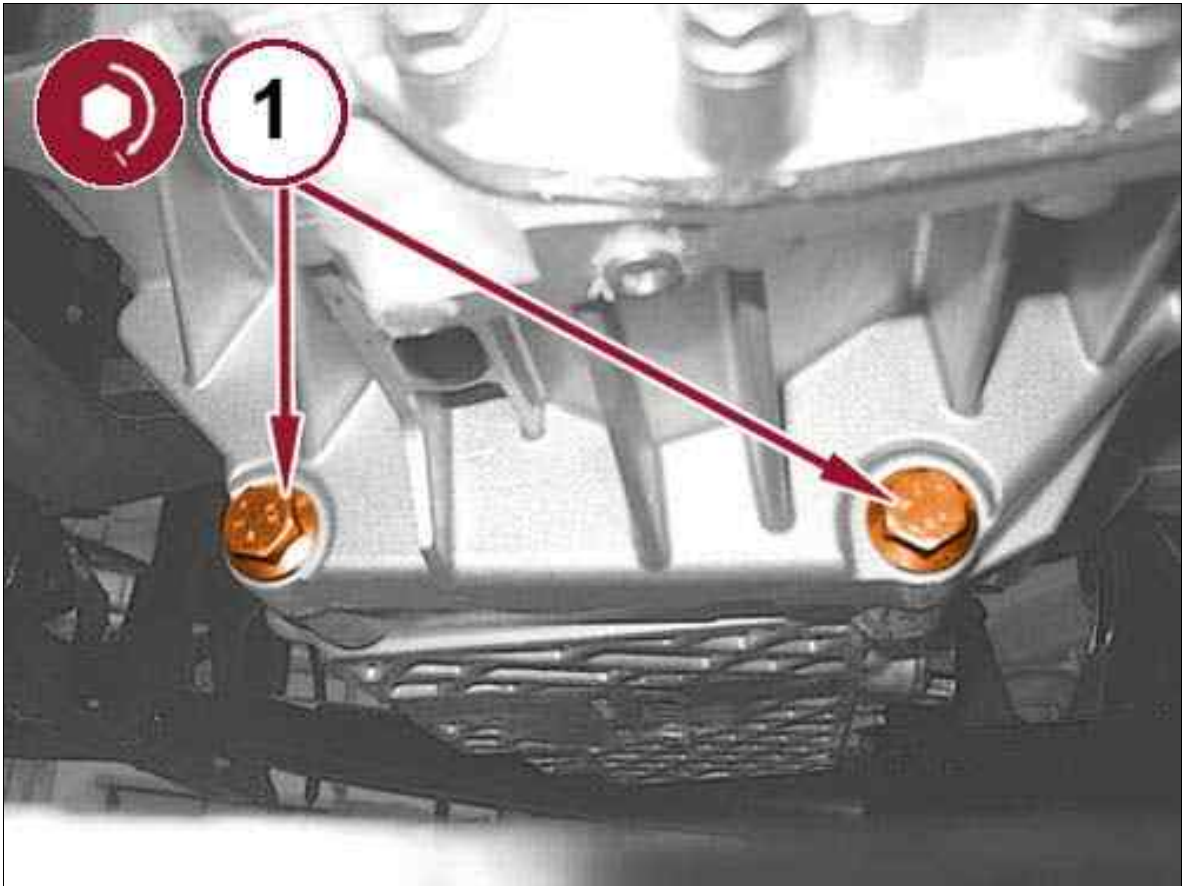
Fig 1: Upper Transmission To Engine Bolts



Courtesy of CHRYSLER GROUP, LLC

2. Tighten the upper transmission to engine bolts to the proper TORQUE SPECIFICATIONS .
3. Remove the transmission jack and adapters.

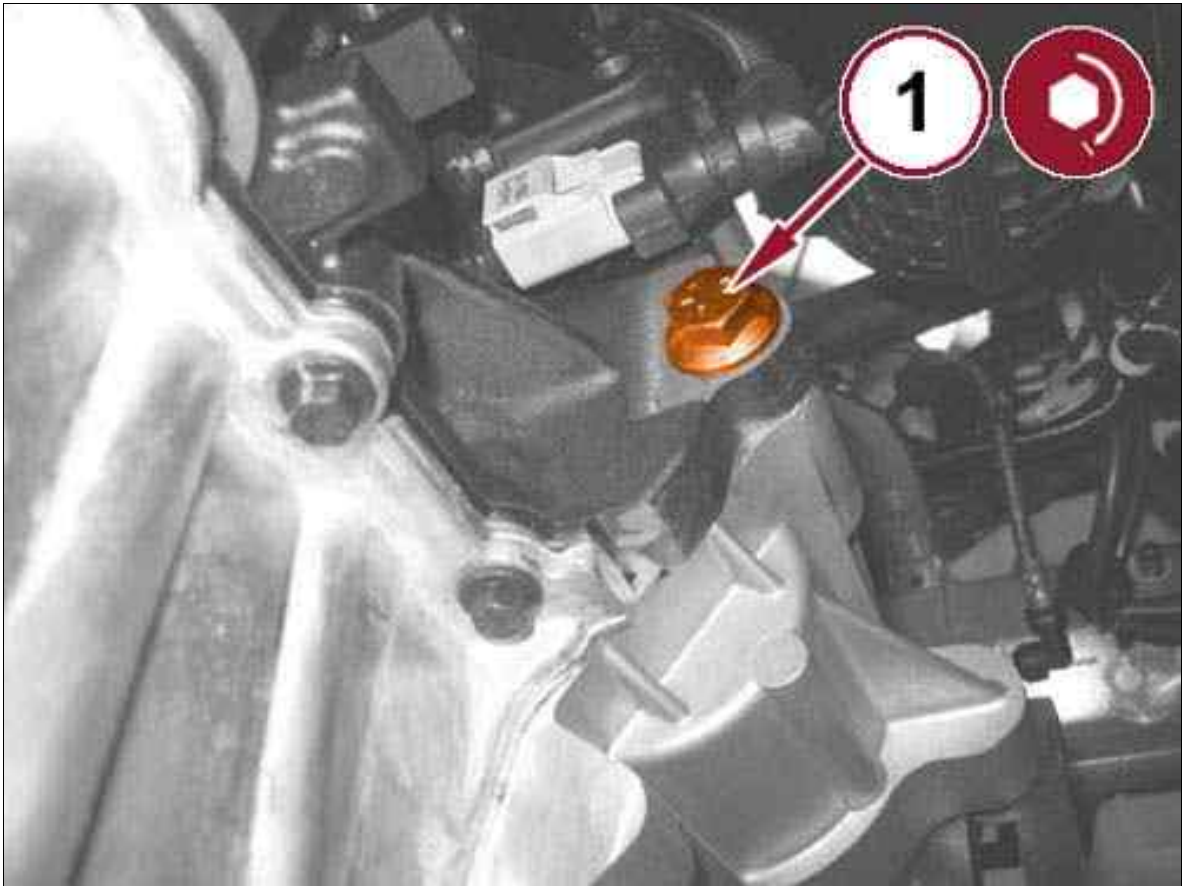
Fig 2: Lower Transmission To Engine Oil Pan Bolts



Courtesy of CHRYSLER GROUP, LLC

4. Install the lower transmission to engine oil pan bolts (1) and tighten to the proper TORQUE SPECIFICATIONS .

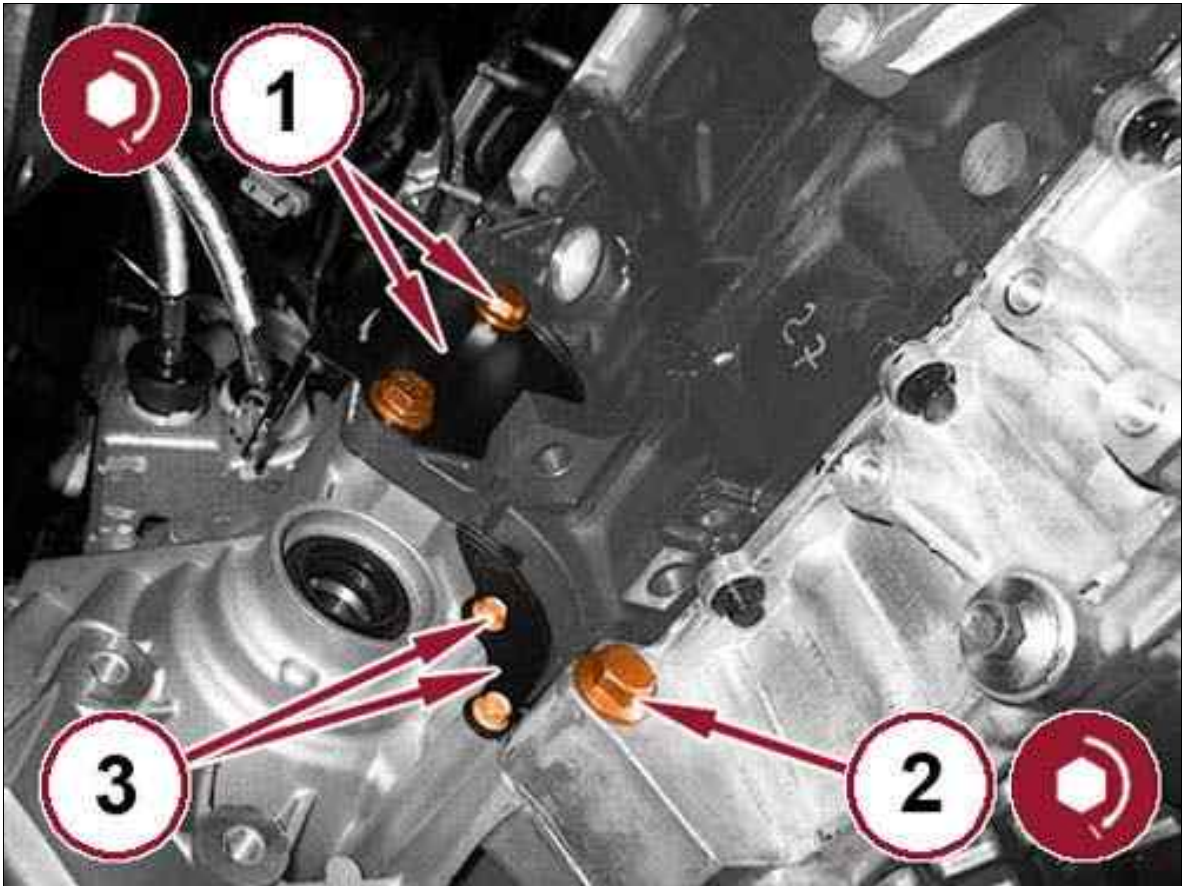
Fig 3: Front Lower Engine To Transmission Bolt



Courtesy of CHRYSLER GROUP, LLC

5. Install the front lower engine to transmission bolt (1) and tighten to the proper TORQUE SPECIFICATIONS .

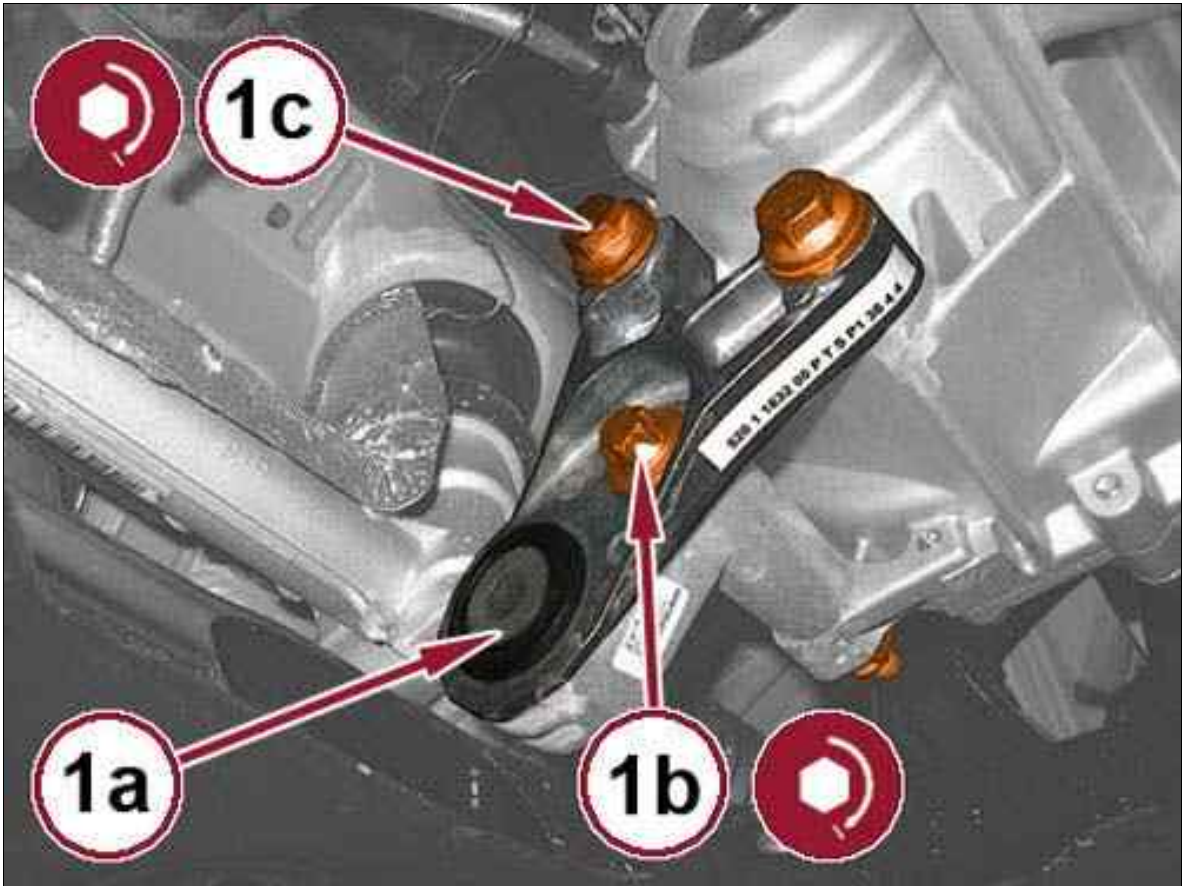
Fig 4: Upper Dust Cover & Bolts



Courtesy of CHRYSLER GROUP, LLC

6. Install the upper dust cover and tighten the bolts (1) to the proper TORQUE SPECIFICATIONS .
7. Install the transmission to oil pan bolt (2) and tighten to the proper TORQUE SPECIFICATIONS .
8. Install the upper dust cover and tighten the bolts (3).

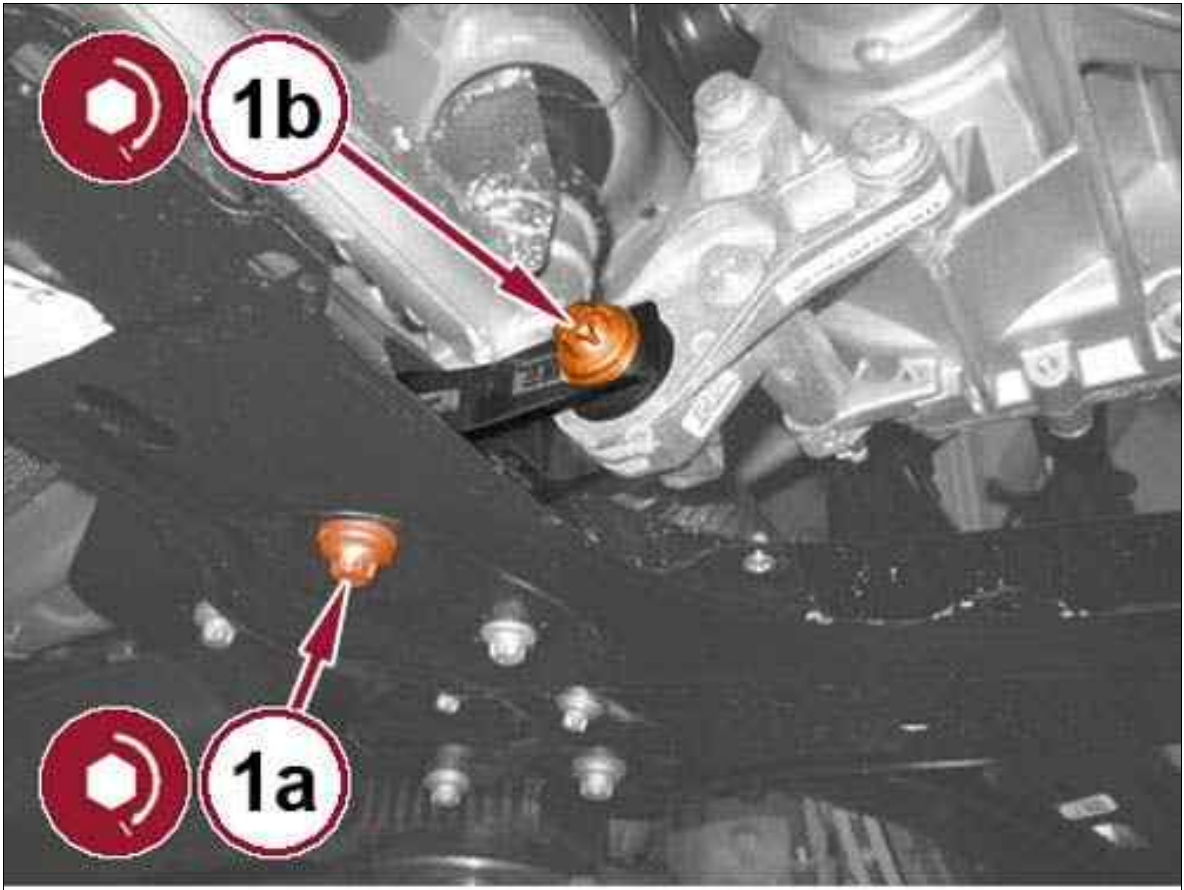
Fig 5: Rear Engine Mount Isolator & Bolts



Courtesy of CHRYSLER GROUP, LLC

9. Install the rear engine mount isolator (1a) and tighten the bolt (1b) and the bolts (1c) to the proper TORQUE SPECIFICATIONS .

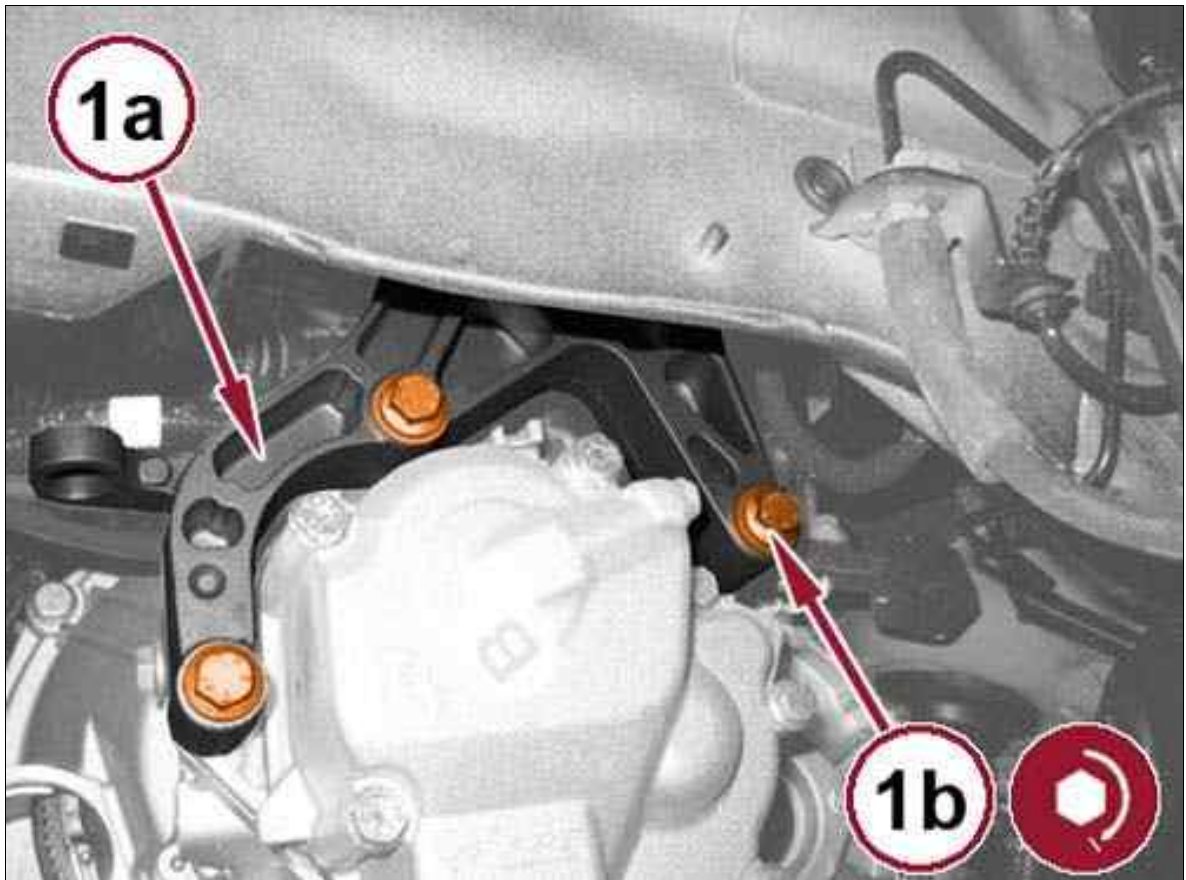
Fig 6: Rear Engine Mount Bracket Bolts



Courtesy of CHRYSLER GROUP, LLC

10. Install the rear engine mount bracket bolts (1a) and (1b) to the proper TORQUE SPECIFICATIONS .
11. Connect back up lamp switch wire harness connector.
12. Engage the starter wiring with the retaining clip.
13. Connect the battery ground wire and tighten the bolt.
14. Connect the slave cylinder hose and engage the retaining clip.
15. Attach the gear selection and engagement cables to the transmission.

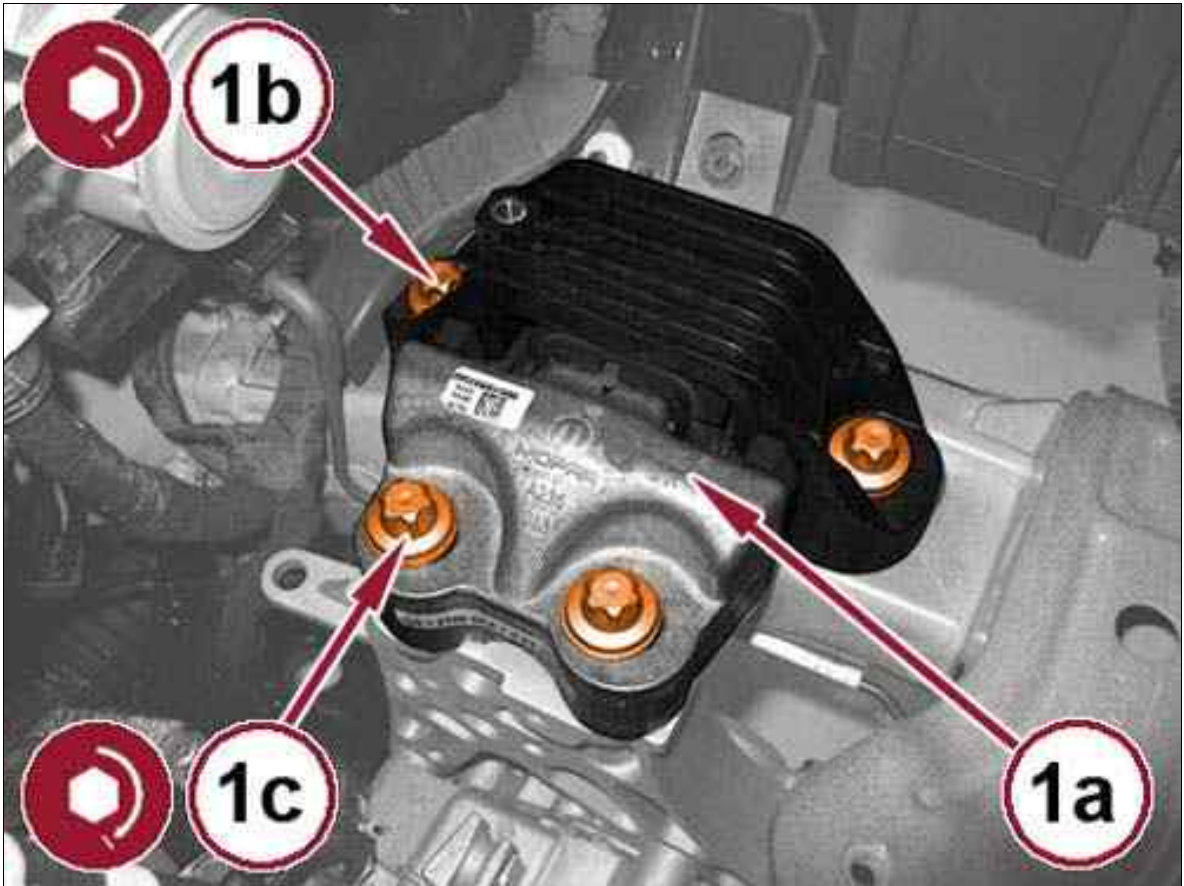
Fig 7: Left Engine Mount Bracket & Bolts



Courtesy of CHRYSLER GROUP, LLC

16. Install the left engine mount bracket (1a) and tighten the bolts (1b) to the proper TORQUE SPECIFICATIONS .

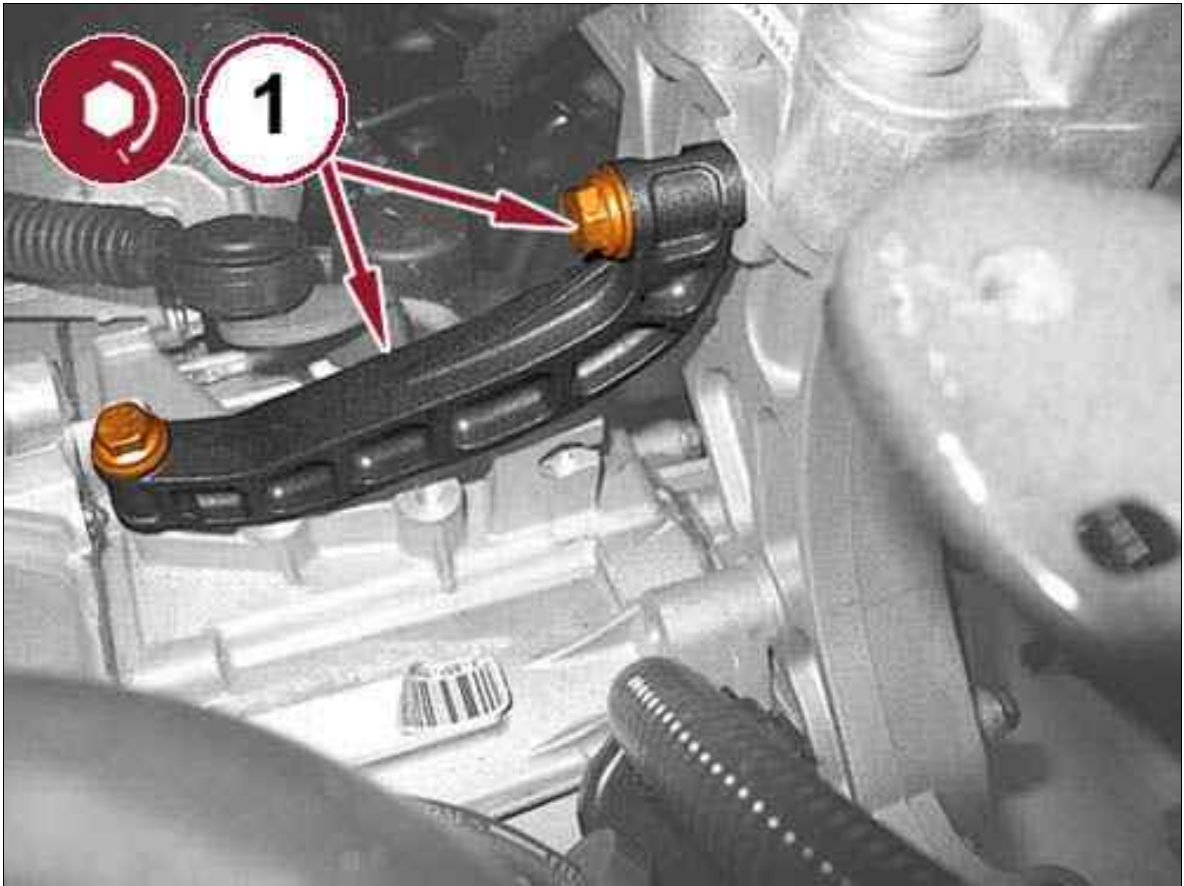
Fig 8: Left Side Engine Mount Isolator & Bolts



Courtesy of CHRYSLER GROUP, LLC

17. Install the left side engine mount isolator (1a) and tighten the bolts (1b) and (1c) to the proper TORQUE SPECIFICATIONS .

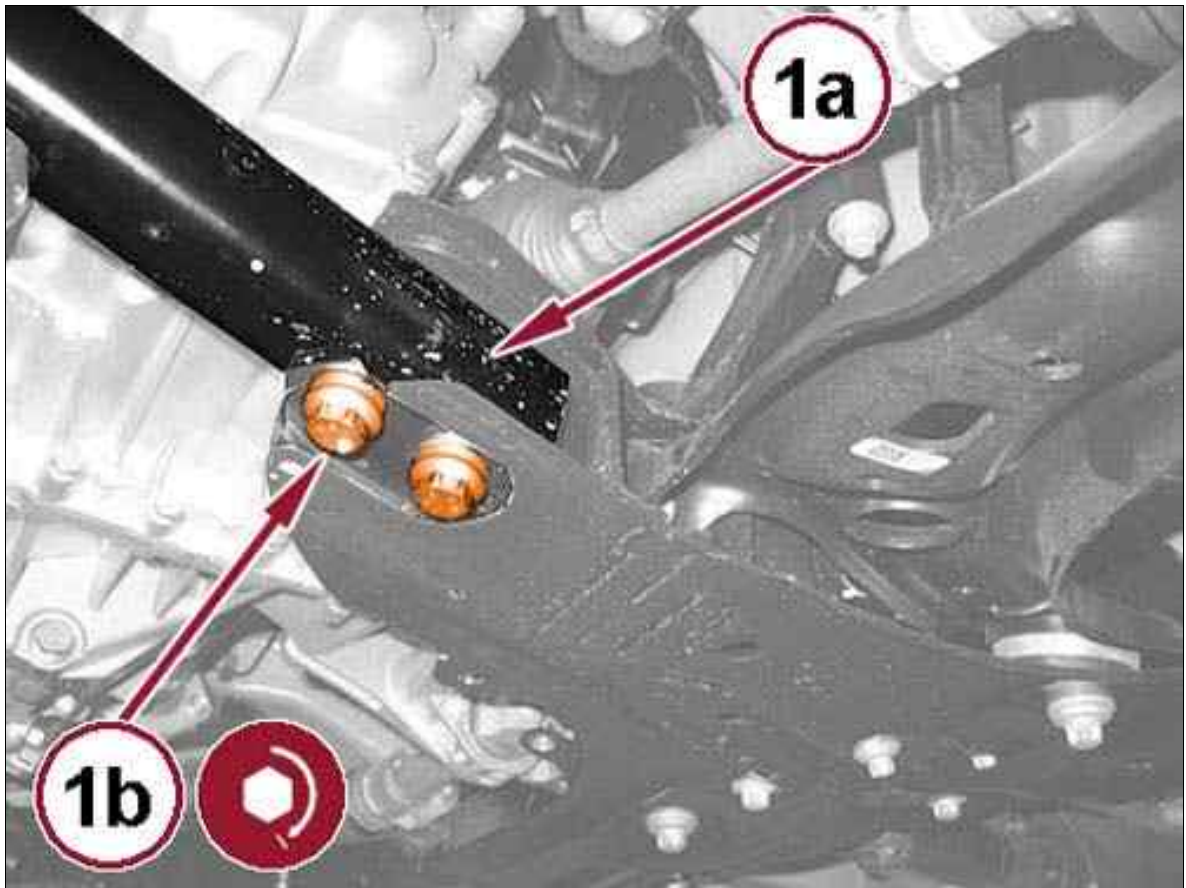
Fig 9: Left Engine Mount Reinforcement Bracket & Bolts



Courtesy of CHRYSLER GROUP, LLC

18. Install the left engine mount reinforcement bracket (1) and tighten the bolts to the proper TORQUE SPECIFICATIONS .
19. Install the heat shield in its housing and tighten the screw.
20. Remove the 2000040436 powertrain support tools.

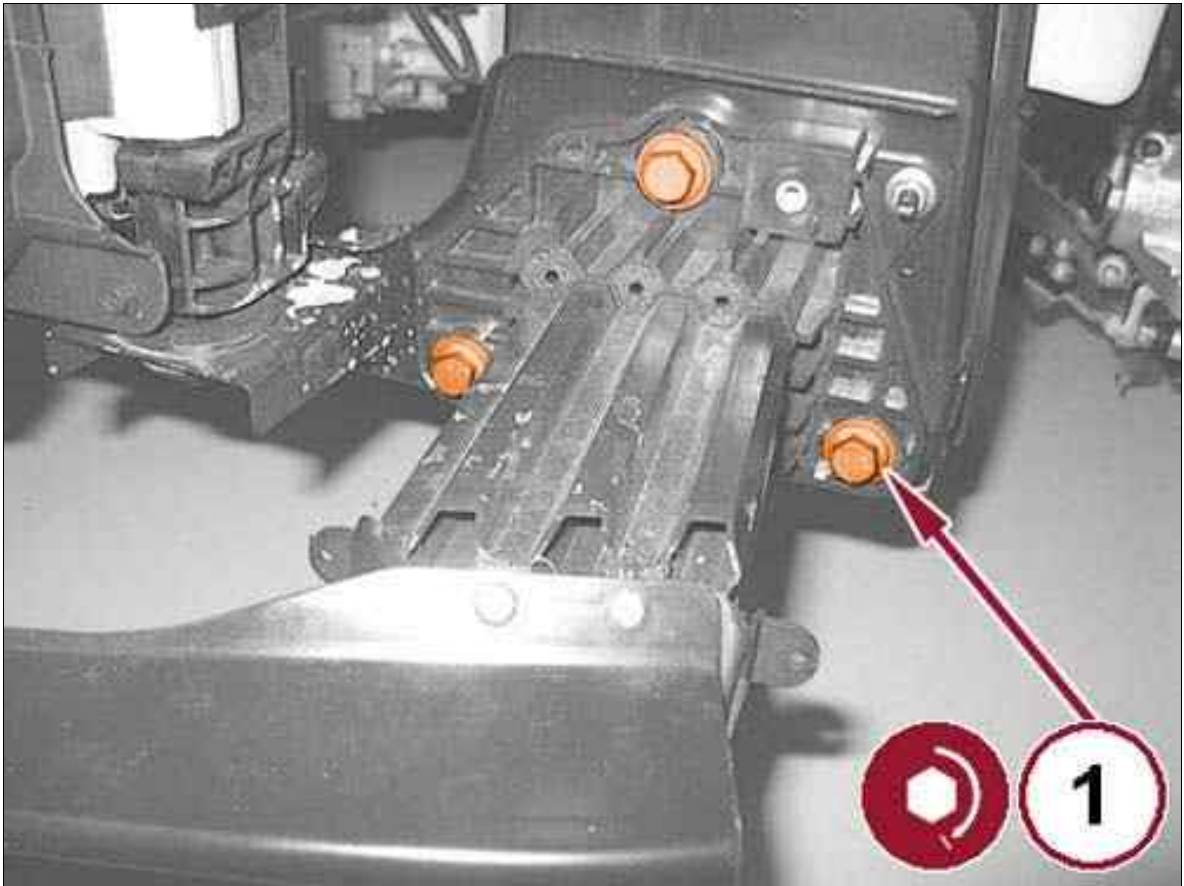
Fig 10: Left Lower Load Beam & Bolts



Courtesy of CHRYSLER GROUP, LLC

21. Position the left lower load beam (1a) in position and tighten the bolts (1b) to the proper SPECIFICATIONS .
22. Install the front end reinforcement and tighten the bolts.

Fig 11: Left Lower Load Beam & Front End Bolts



Courtesy of CHRYSLER GROUP, LLC

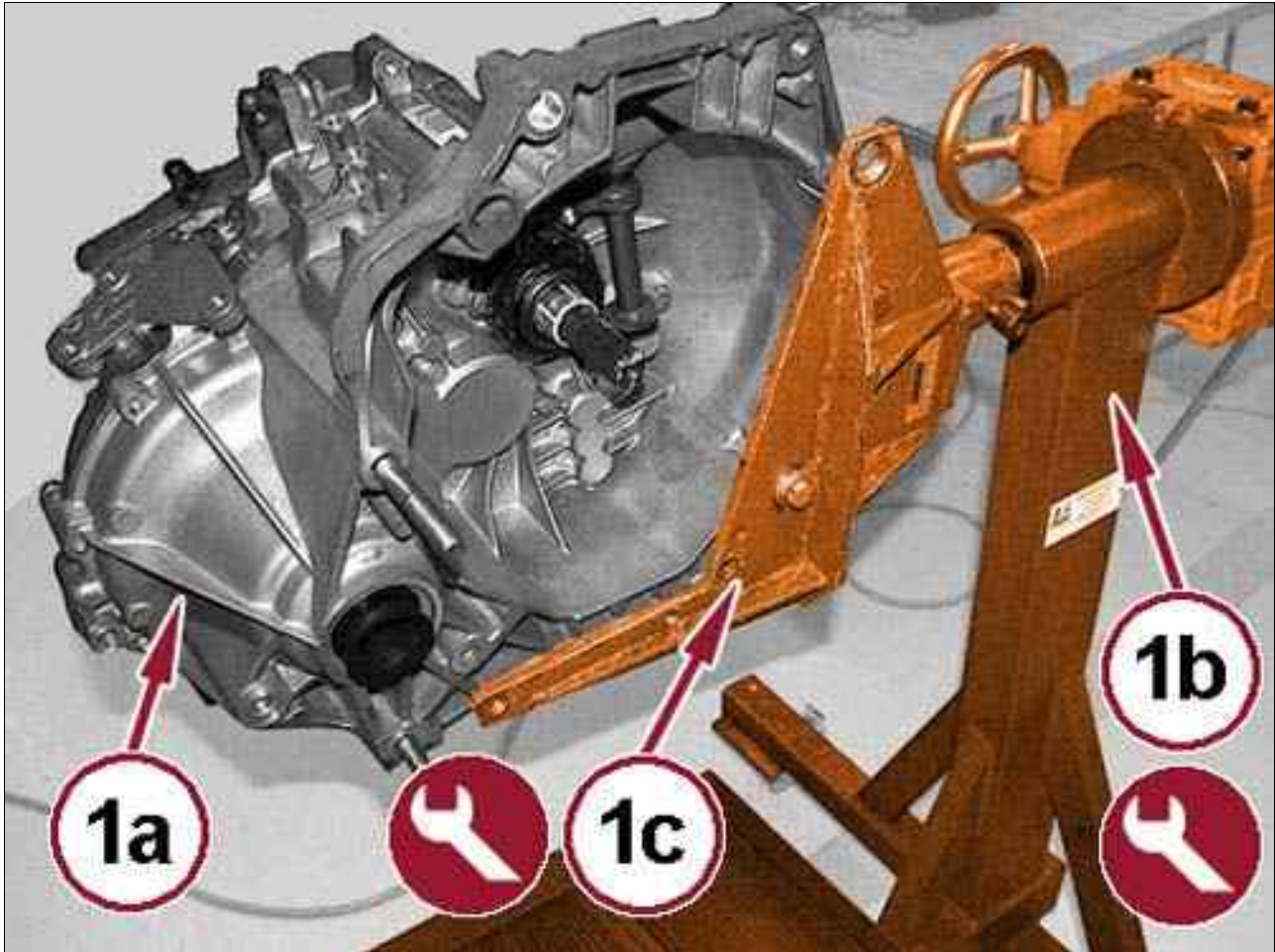
23. Install the left lower load beam to the front end bolts (1) and tighten to the proper SPECIFICATIONS .
24. Install the horn in its housing and tighten the bolt.
25. Install the battery support tray. Refer to TRAY, BATTERY, REMOVAL AND INSTALLATION .
26. Install the engine cover. Refer to COVER, ENGINE, REMOVAL AND INSTALLATION .
27. Install the front half shafts. Refer to REMOVAL AND INSTALLATION .
28. Install the exhaust manifold. Refer to MANIFOLD, EXHAUST, REMOVAL AND INSTALLATION .
29. Fill the transmission with the specified oil. Refer to CAPACITIES AND RECOMMENDED FLUIDS, SPECIFICATIONS .
30. Bleed the hydraulic clutch. Refer to STANDARD PROCEDURE .
31. Install the starter motor. Refer to STARTER, REMOVAL AND INSTALLATION .
32. Install the front fascia. Refer to FASCIA, FRONT, REMOVAL AND INSTALLATION .
33. Install the front wheelhouse inner splash shields. Refer to SHIELD, SPLASH, FRONT WHEELHOUSE, REMOVAL AND INSTALLATION .
34. Install the belly pan. Refer to BELLY PAN, REMOVAL AND INSTALLATION .

35. Install the front tire and wheel assemblies. Refer to REMOVAL AND INSTALLATION .

36. Remove the car from the lift.

DISASSEMBLY AND ASSEMBLY > DISASSEMBLY AND ASSEMBLY > DISASSEMBLY

Fig 1: Transmission, Overhaul Stand & Adapter



Courtesy of CHRYSLER GROUP, LLC



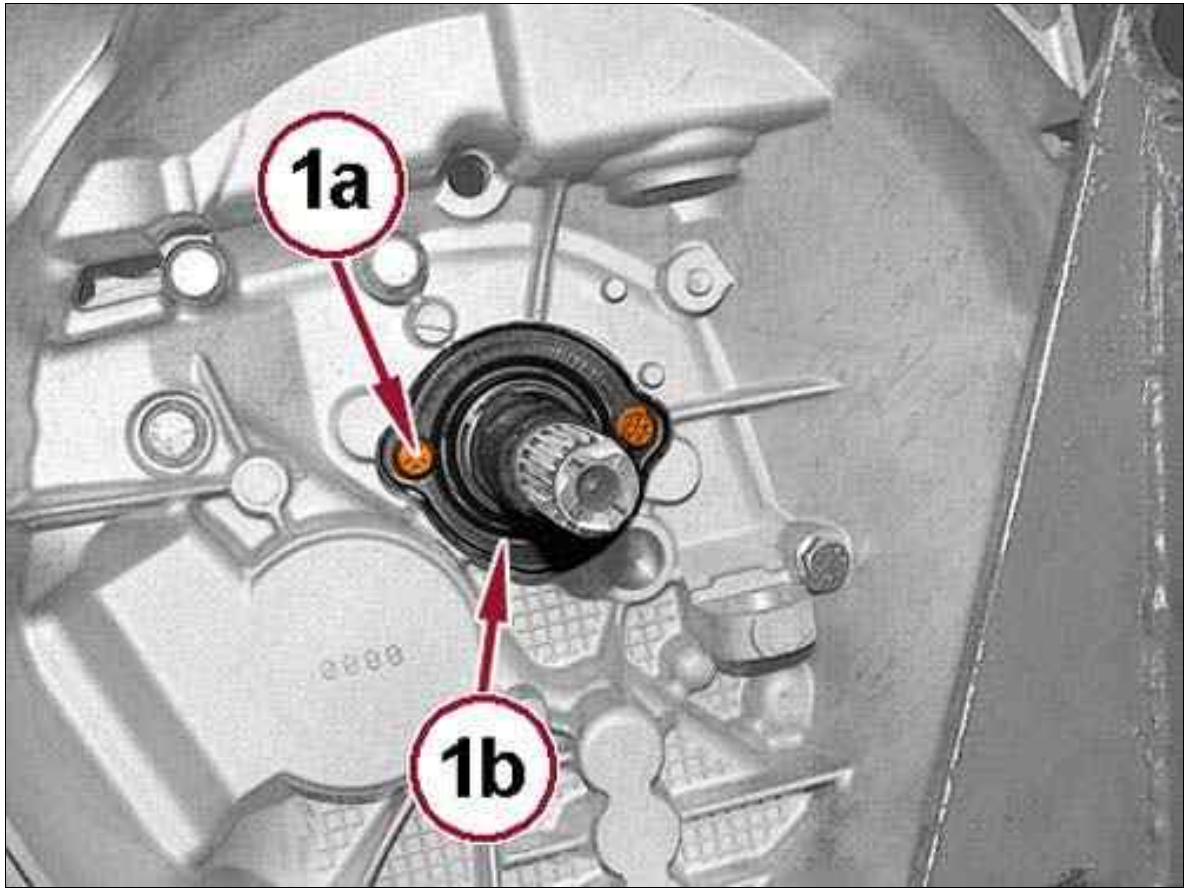
NOTE:

During removal and installation of gears using the press, the gear to plate bearing surface must be as large as possible. Place an aluminium sheet of suitable thickness between the gear and the plate to prevent damage to the gear teeth.

1. Position the transmission (1a) on the overhaul stand 1871000000 (1b) using the adapter 1871001014 (1c).
2. Use tools 1840005001 (1a), 1847017001 (1b) and 1840005303 to remove the left inner tripod housing (1d).

3. Remove the outer clutch thrust control linkage retaining ring.
4. Remove the outer clutch thrust control linkage.

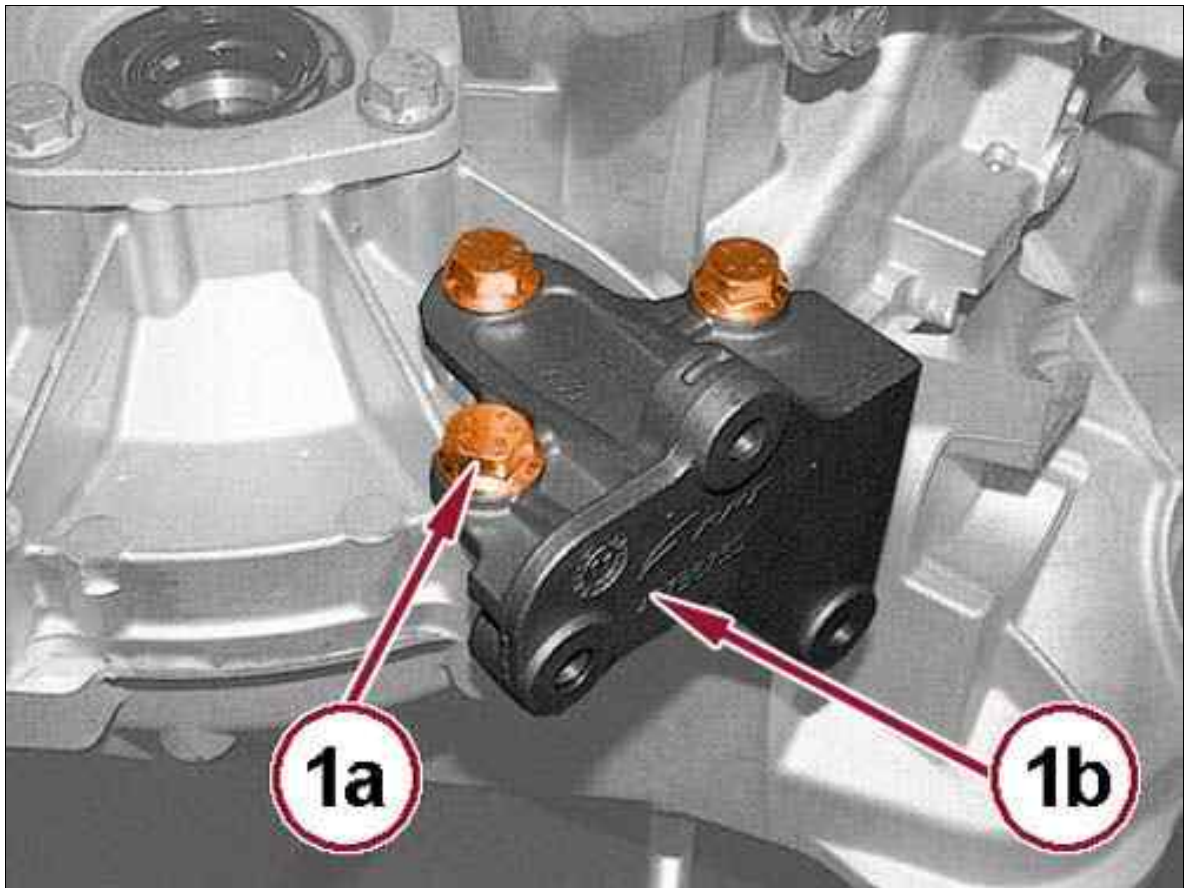
Fig 2: Bolts & Transmission Input Shaft Seal



Courtesy of CHRYSLER GROUP, LLC

5. Remove the bolts (1a) and remove the transmission input shaft seal (1b) from the bellhousing.

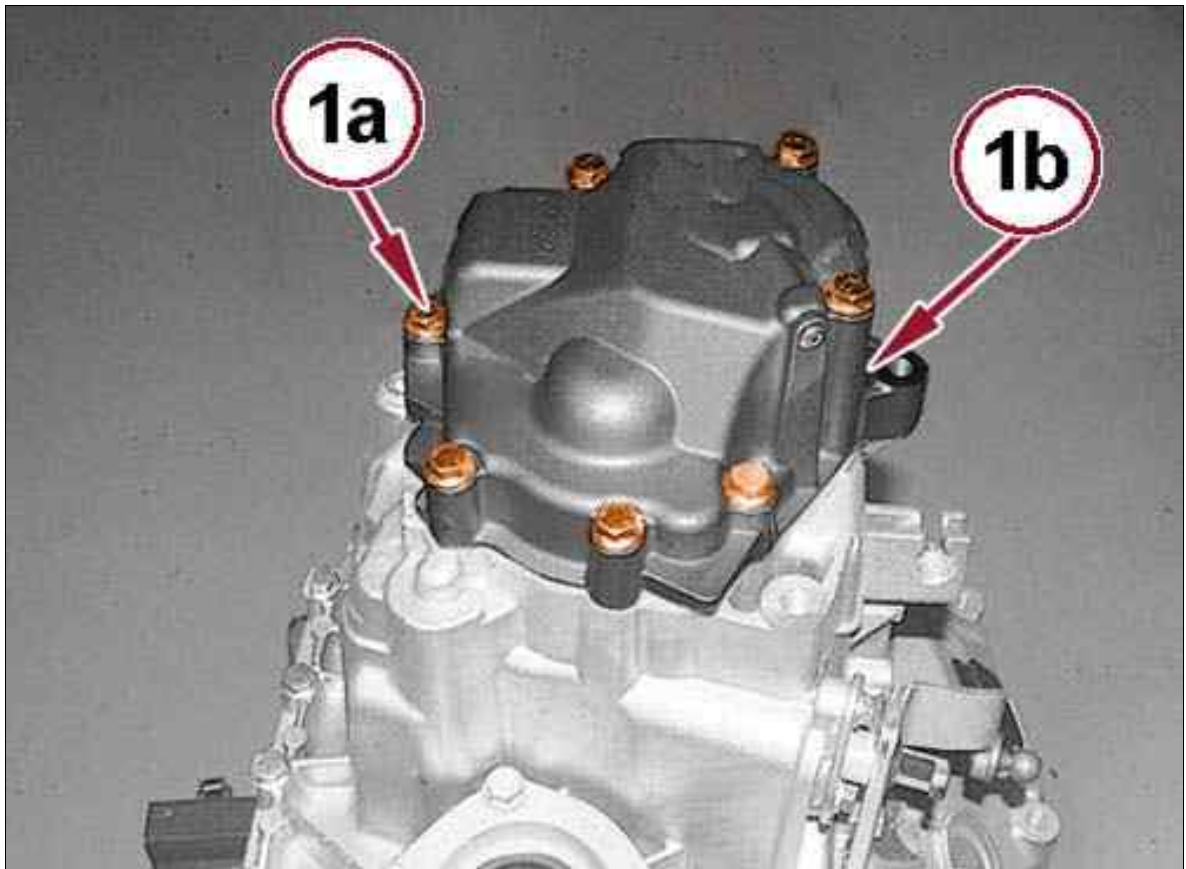
Fig 3: Bolts & Gear Shift Cable Reaction Bracket



Courtesy of CHRYSLER GROUP, LLC

6. Remove the bolts (1a) and remove the gear shift cable reaction bracket (1b).

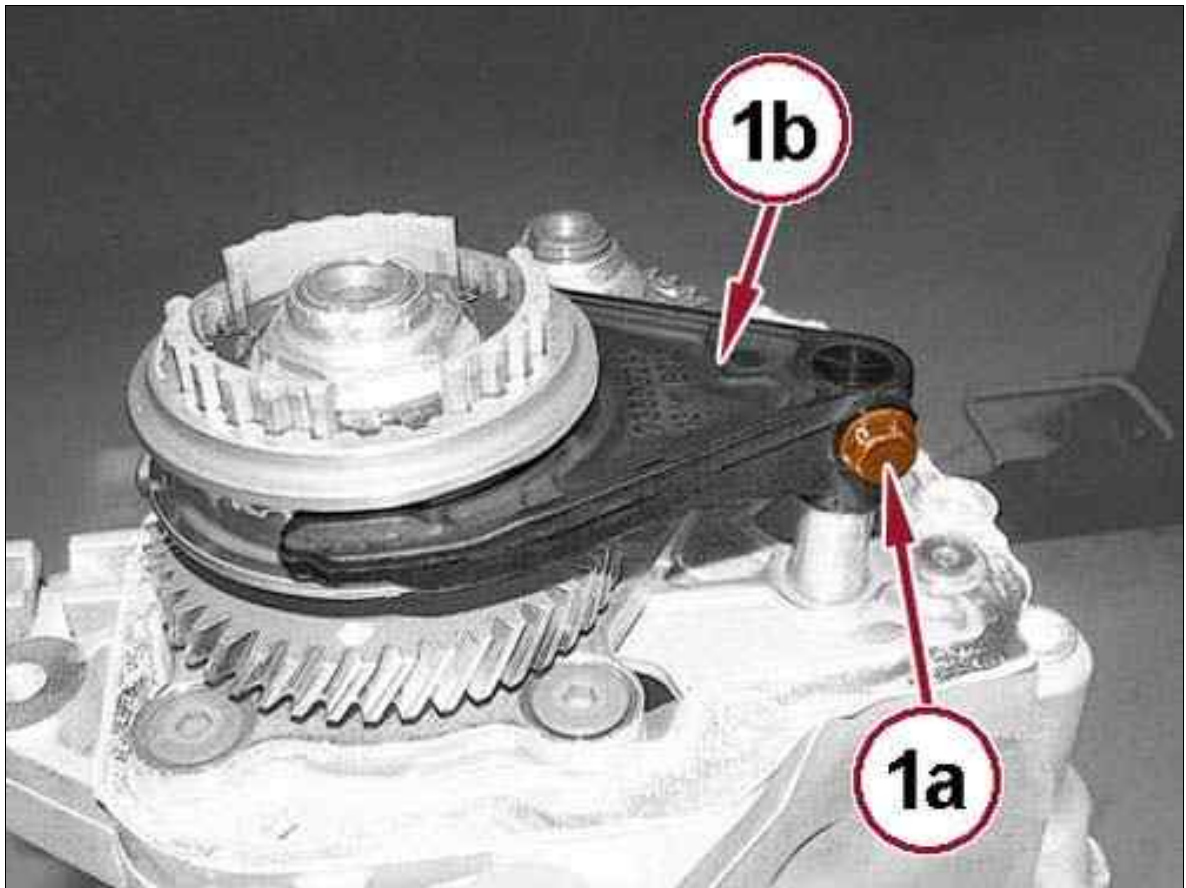
Fig 4: Bolts & Transmission Rear Cover



Courtesy of CHRYSLER GROUP, LLC

7. Remove the bolts (1a) and remove the transmission rear cover (1b).
8. Engage any gear using the gear selection and engagement lever.

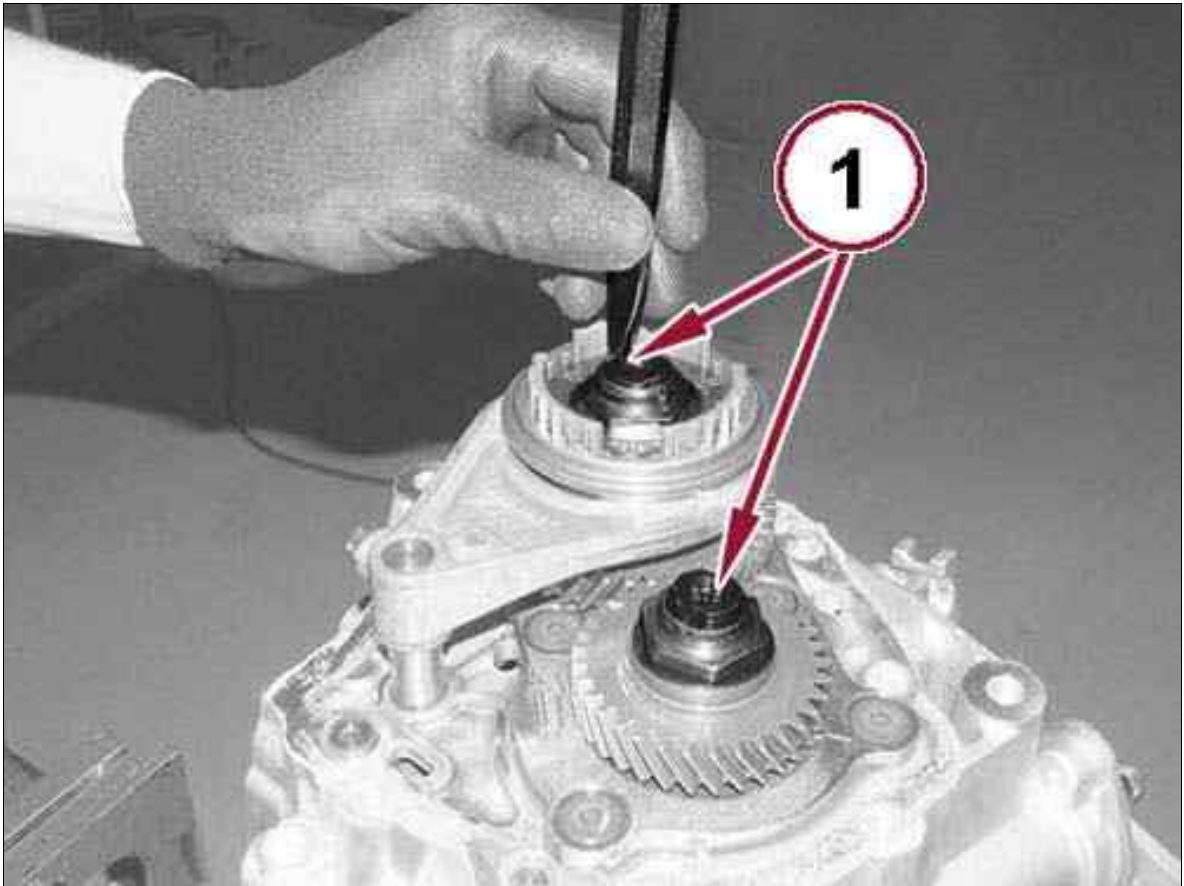
Fig 5: Bolt & 5th Gear Shift Fork



Courtesy of CHRYSLER GROUP, LLC

9. Remove the bolt (1a) from the 5th gear shift fork (1b).
10. Engage the 5th gear by pushing the fork (1b) down.

Fig 6: Fork



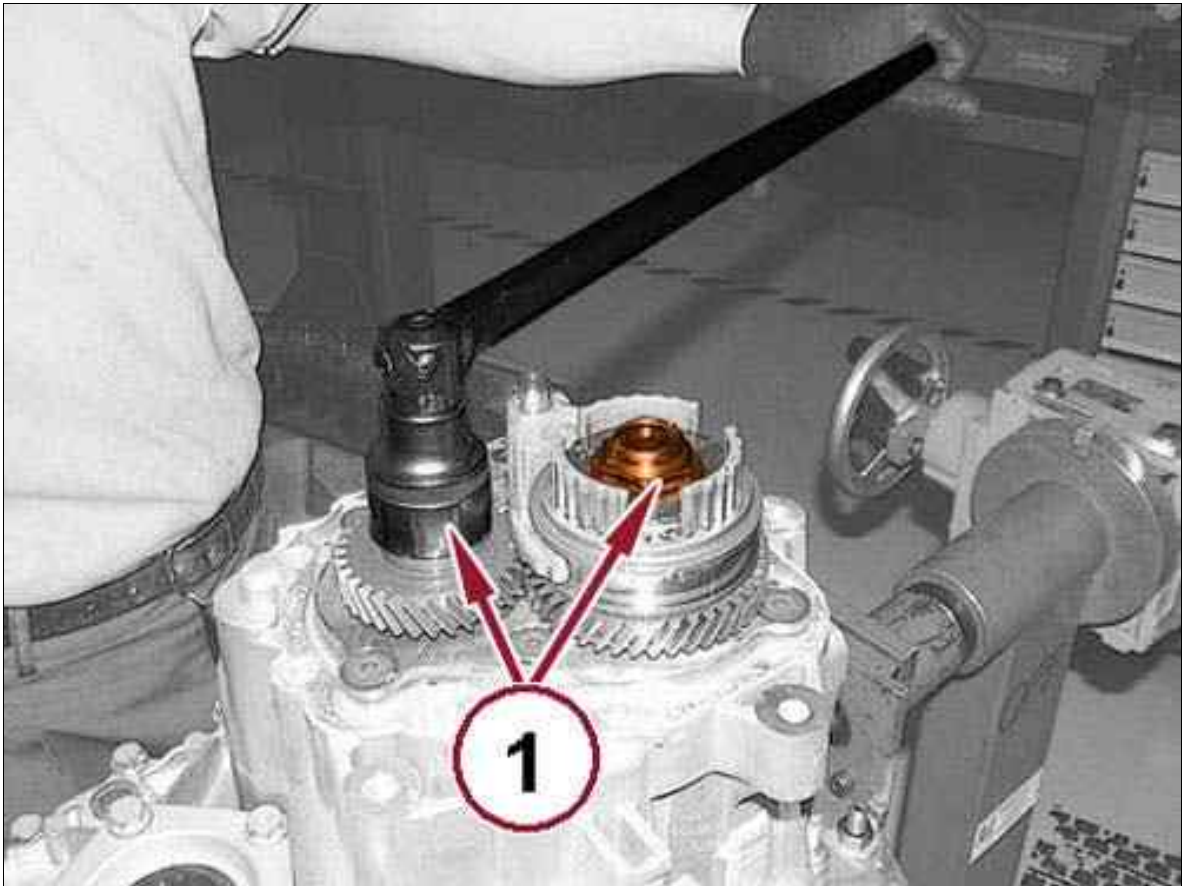
Courtesy of CHRYSLER GROUP, LLC

 NOTE:

If two gears are engaged simultaneously the gear shafts will lock.

11. Use a suitable drift to straighten the staking on the input and output shaft nuts (1).

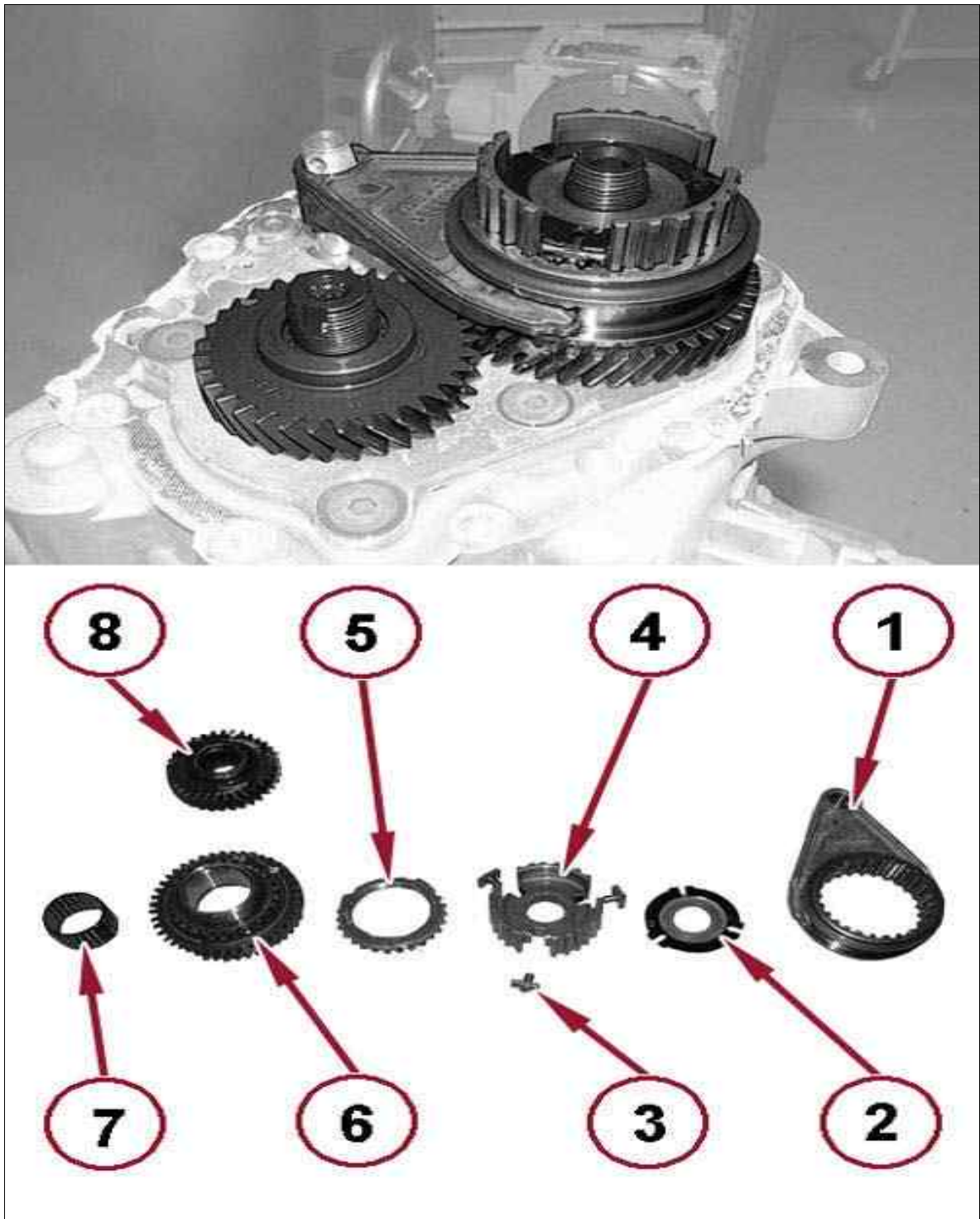
Fig 7: Suitable Drift & Input And Output Shaft Nuts



Courtesy of CHRYSLER GROUP, LLC

12. Remove the input and output shaft nuts (1).

Fig 8: Exploded View Of 5th Gear Components

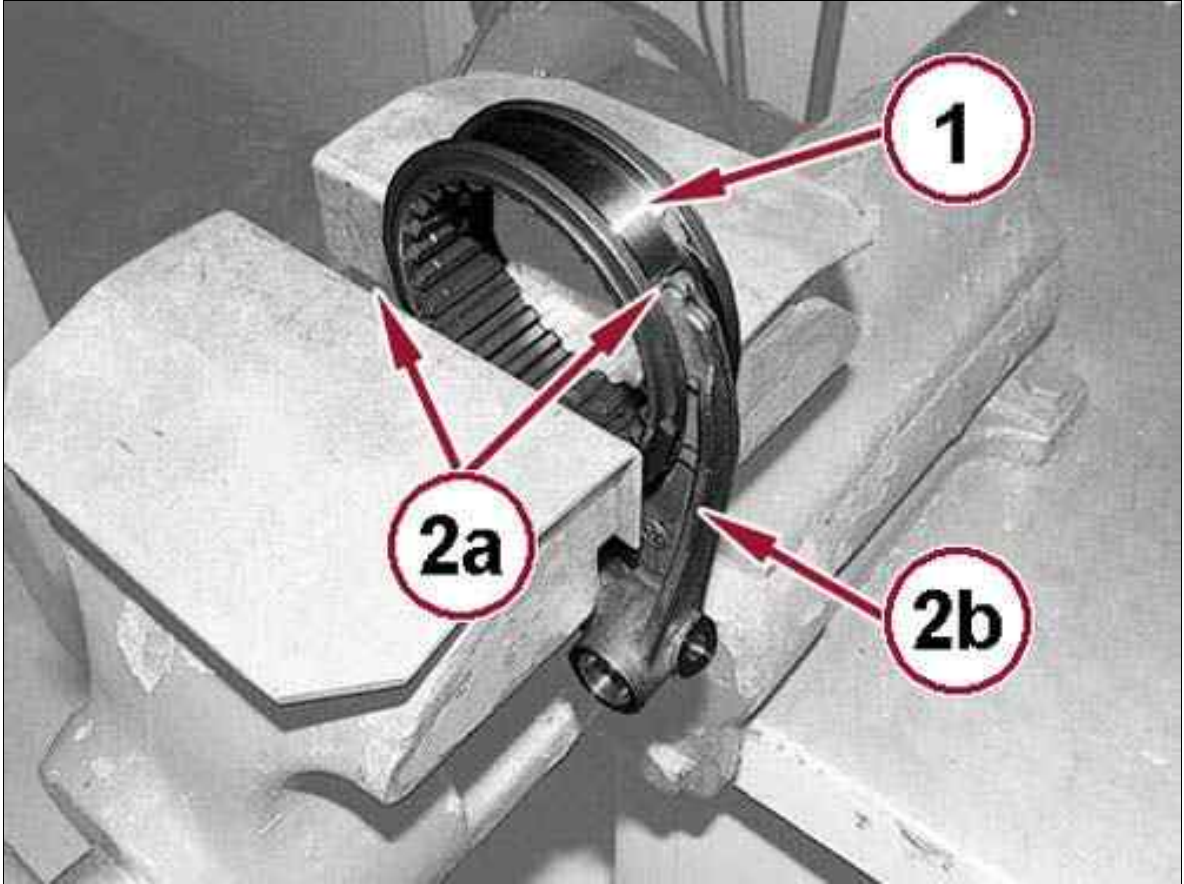


Courtesy of CHRYSLER GROUP, LLC

13. Remove the 5th gear shift fork with the 5th gear synchronizer sleeve (1).
14. Remove the retaining washer (2) for the synchronizer detents.
15. Remove the synchronizer detents (3).
16. Remove the 5th gear synchronizer hub (4).

17. Remove the 5th gear synchronizer ring (5).
18. Remove the 5th gear drive gear (6).
19. Remove the 5th gear drive gear needle bearing (7).
20. Remove the 5th gear driven gear (8).

Fig 9: 5th Gear Synchronizer Sleeve, Two Ends & Fork



Courtesy of CHRYSLER GROUP, LLC

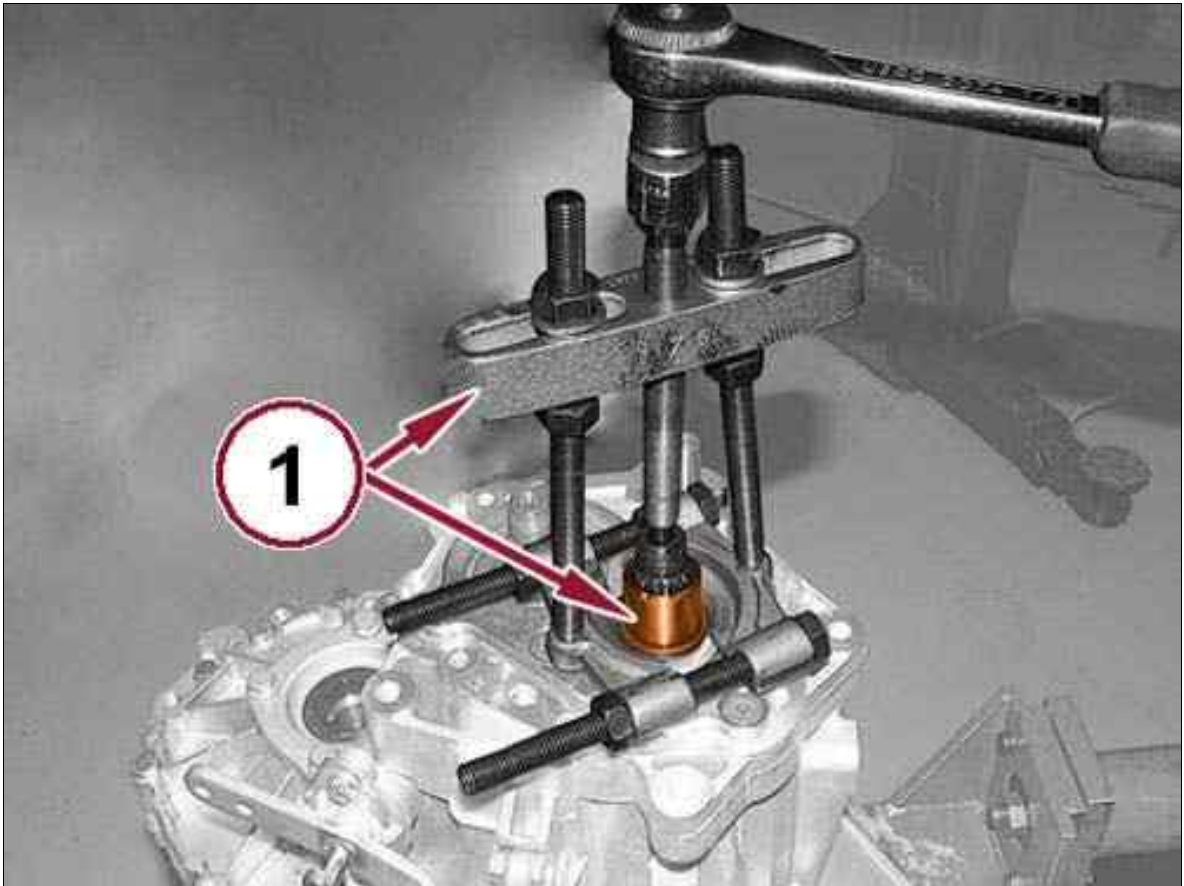


NOTE:

Do not nick the tapered part of the sleeve and the ends of the fork with the drift.

21. Position the 5th gear synchronizer sleeve (1) in a vice with protective, non marring jaw covers.
22. Using a brass punch, alternatively tap on the two ends (2a) of the fork (2b) to separate it from the 5th gear synchronizer sleeve.

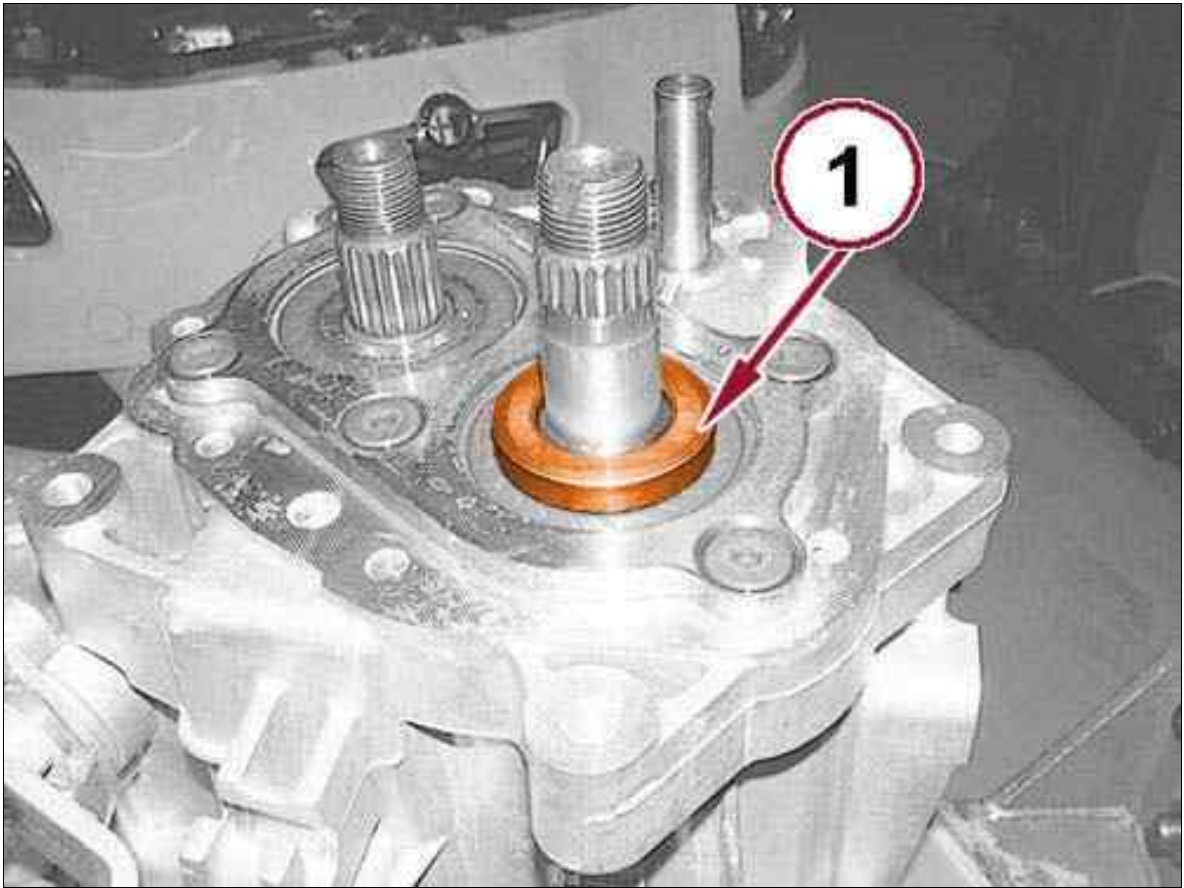
Fig 10: Suitable Puller & 5th Gear Drive Gear Bushing



Courtesy of CHRYSLER GROUP, LLC

23. Using a suitable puller, remove the 5th gear drive gear bushing (1).

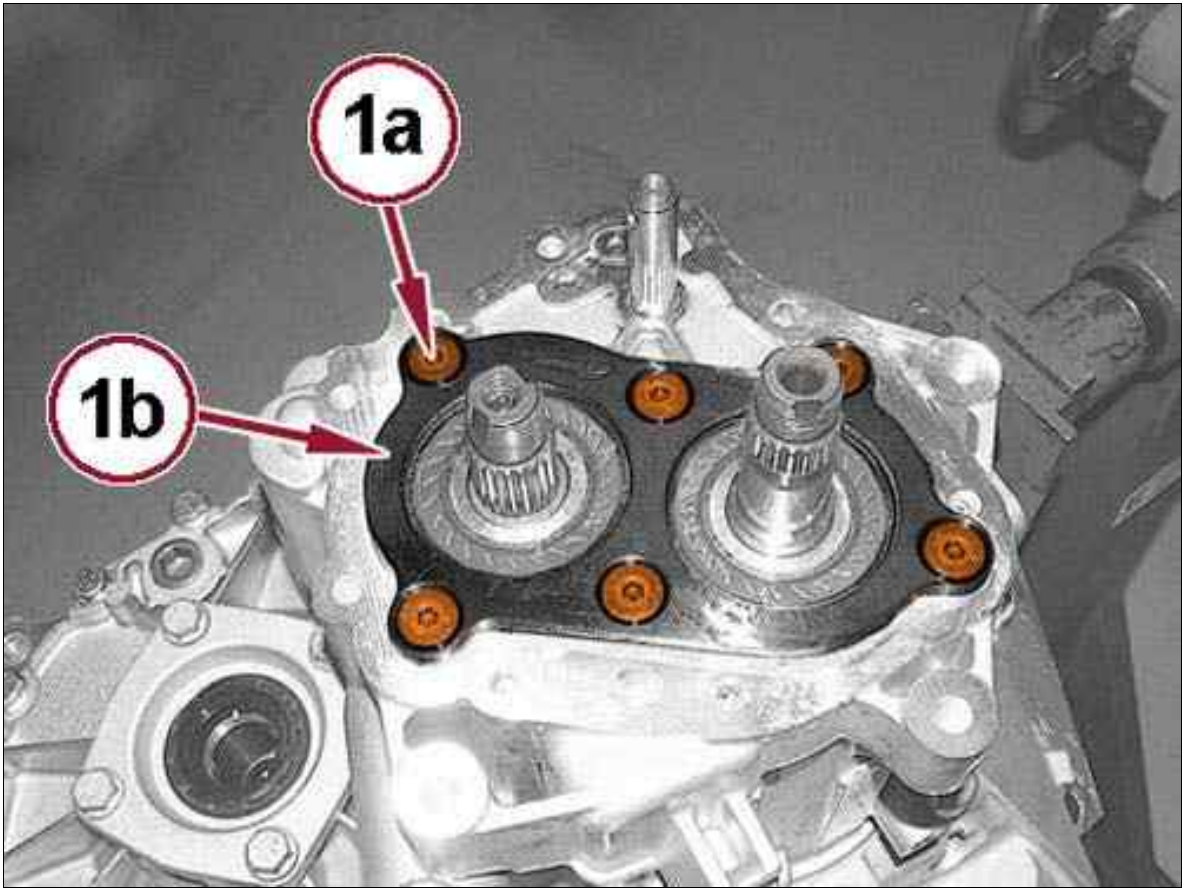
Fig 11: Spacer



Courtesy of CHRYSLER GROUP, LLC

24. Remove the spacer (1).

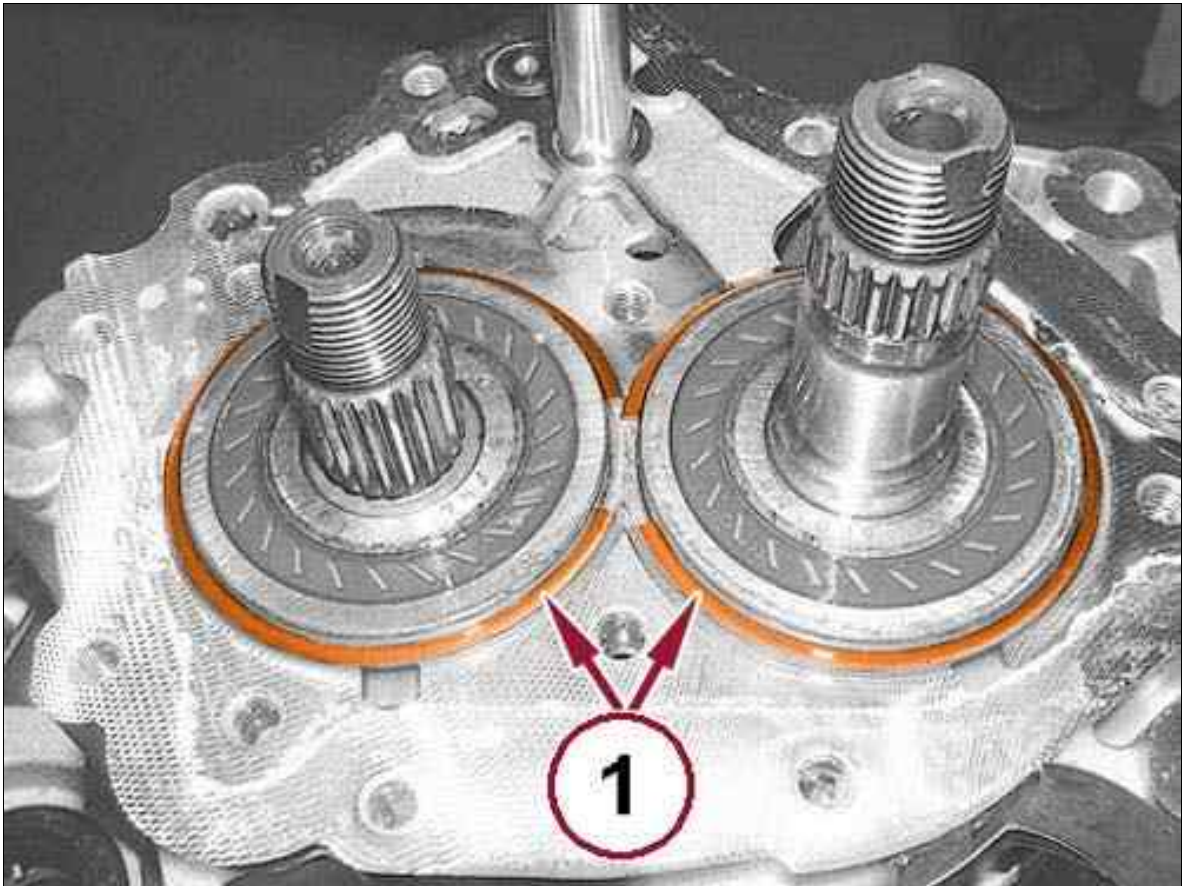
Fig 12: Input And Output Shaft Rear Bearing Retaining Plate & Bolts



Courtesy of CHRYSLER GROUP, LLC

25. Remove the bolts (1a) and remove the input and output shaft rear bearing retaining plate (1b).

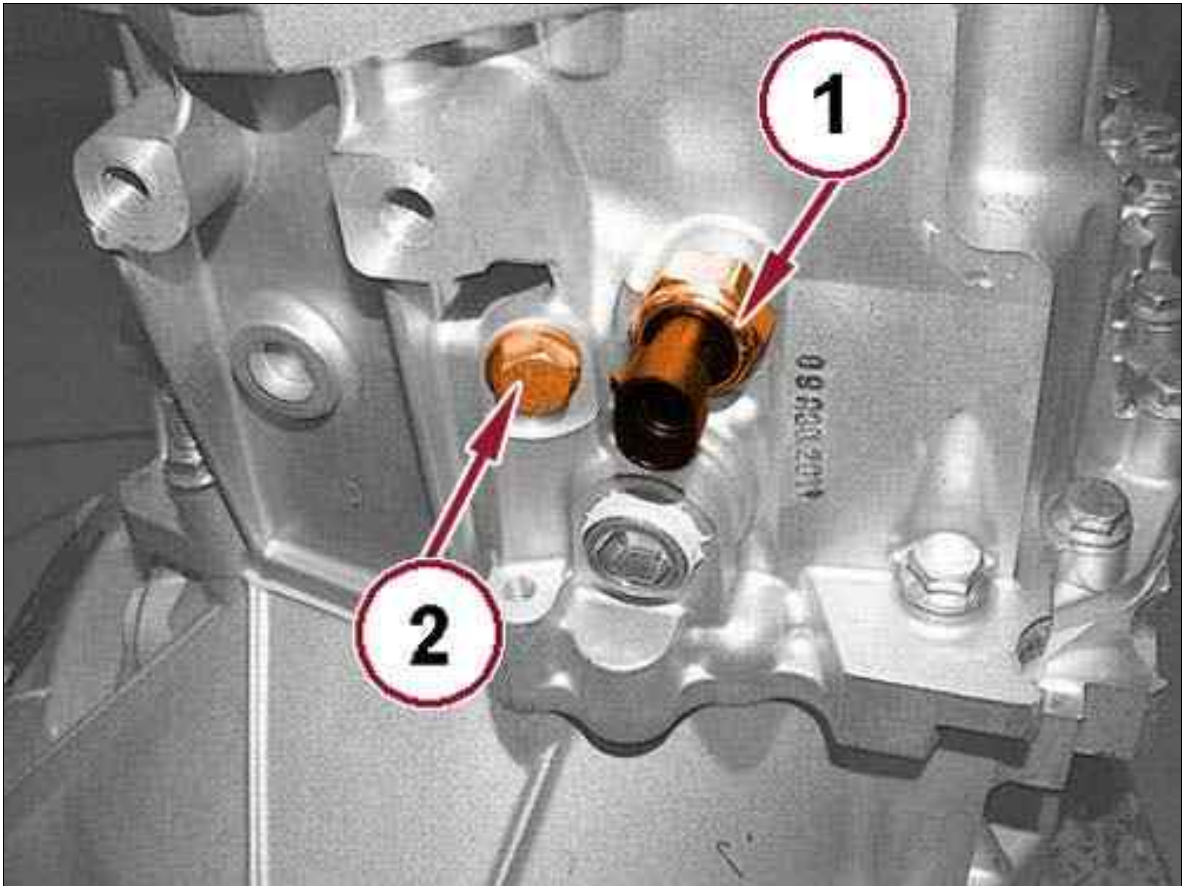
Fig 13: Input And Output Shaft Rear Bearing Snap Rings



Courtesy of CHRYSLER GROUP, LLC

26. Reposition the input and output shaft rear bearing snap rings so their openings are at the front and remove them (1).

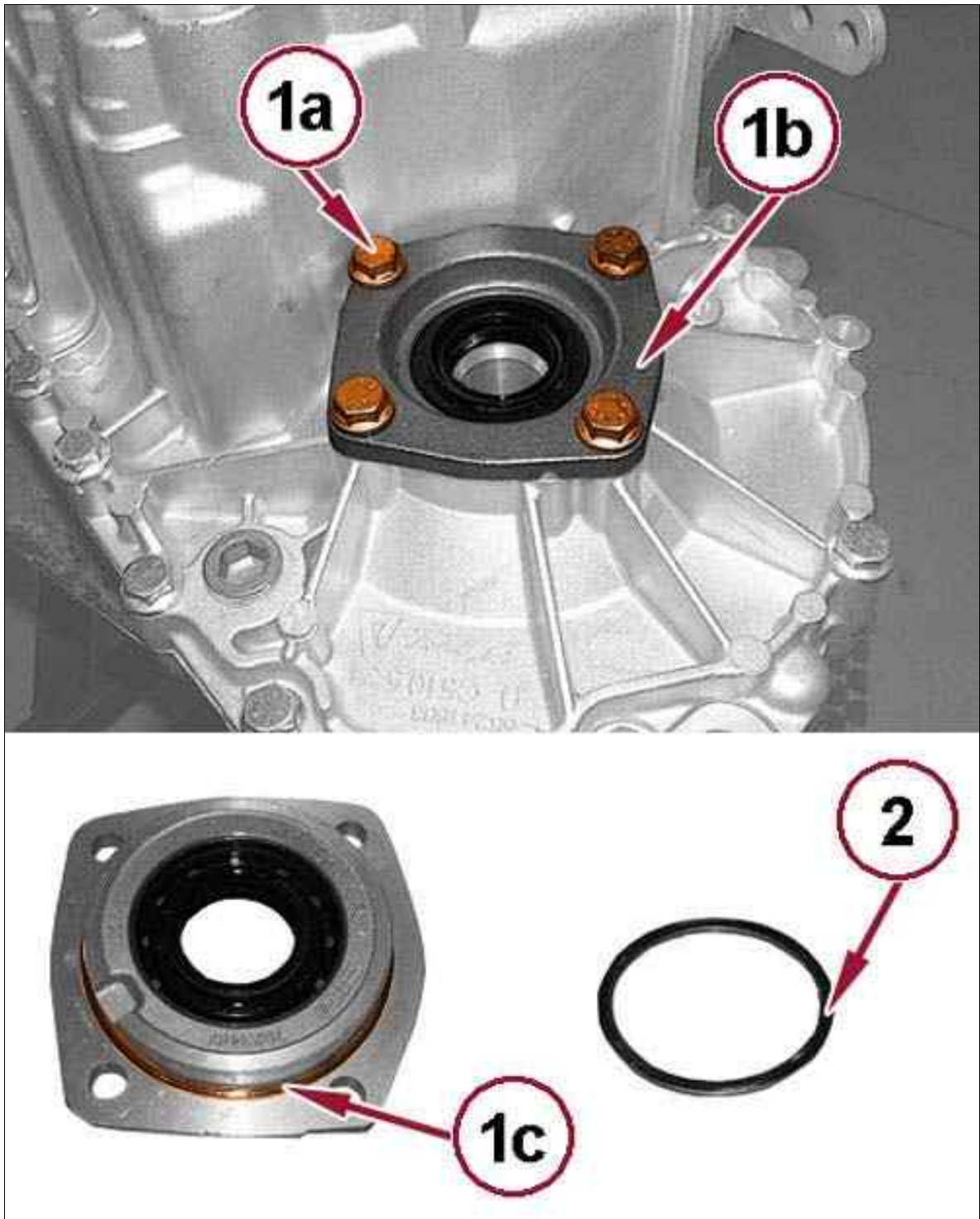
Fig 14: Backup Lamp Switch & Reverse Idler Gear Shaft Bolt



Courtesy of CHRYSLER GROUP, LLC

27. Remove the backup lamp switch (1).
28. Remove the reverse idler gear shaft bolt (2).

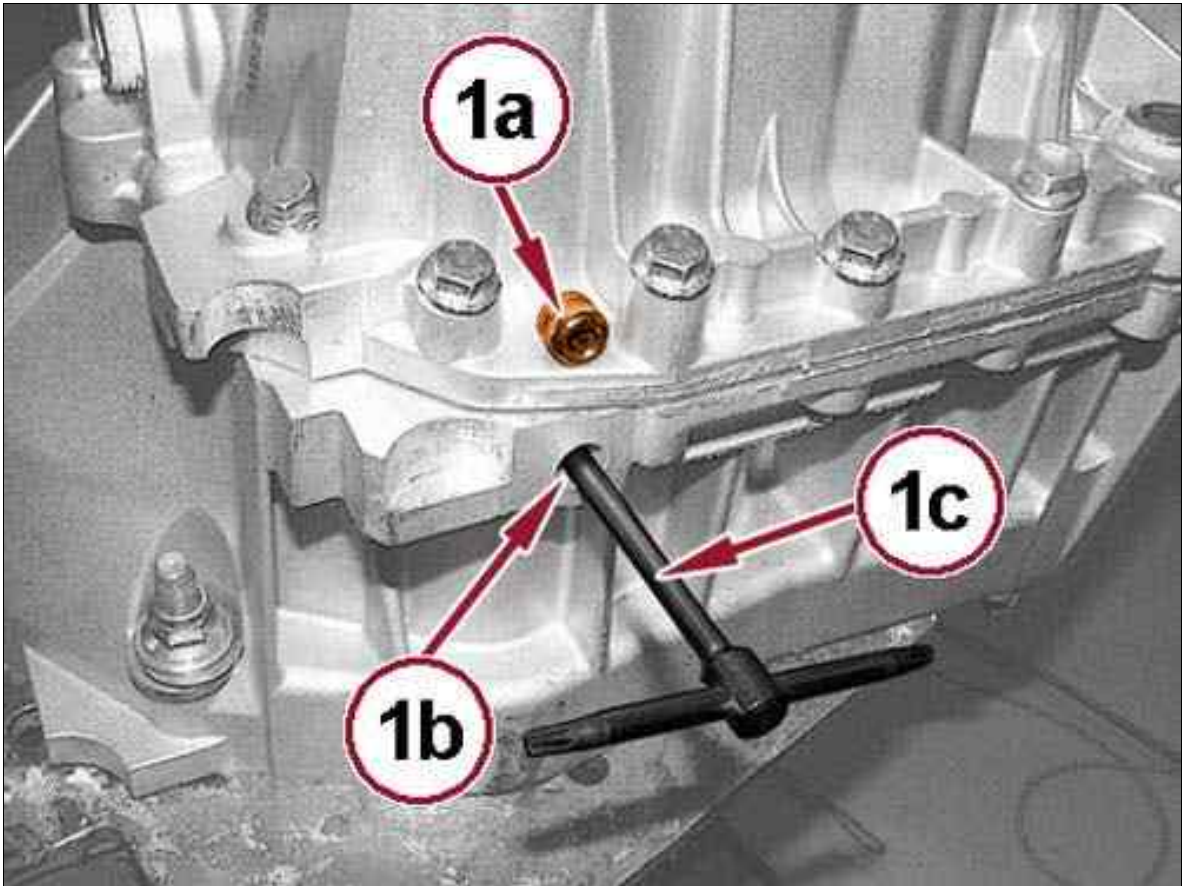
Fig 15: Left Half Shaft Seal, O-Ring, Differential Bearing Preload Thrust Washer & Bolts



Courtesy of CHRYSLER GROUP, LLC

29. Remove the bolts (1a) and remove and **DISCARD** the left half shaft seal (1b) with O-ring (1c).
30. Remove the differential bearing preload thrust washer (2).
31. Operate the gear selector and engagement lever and put the transmission in neutral.

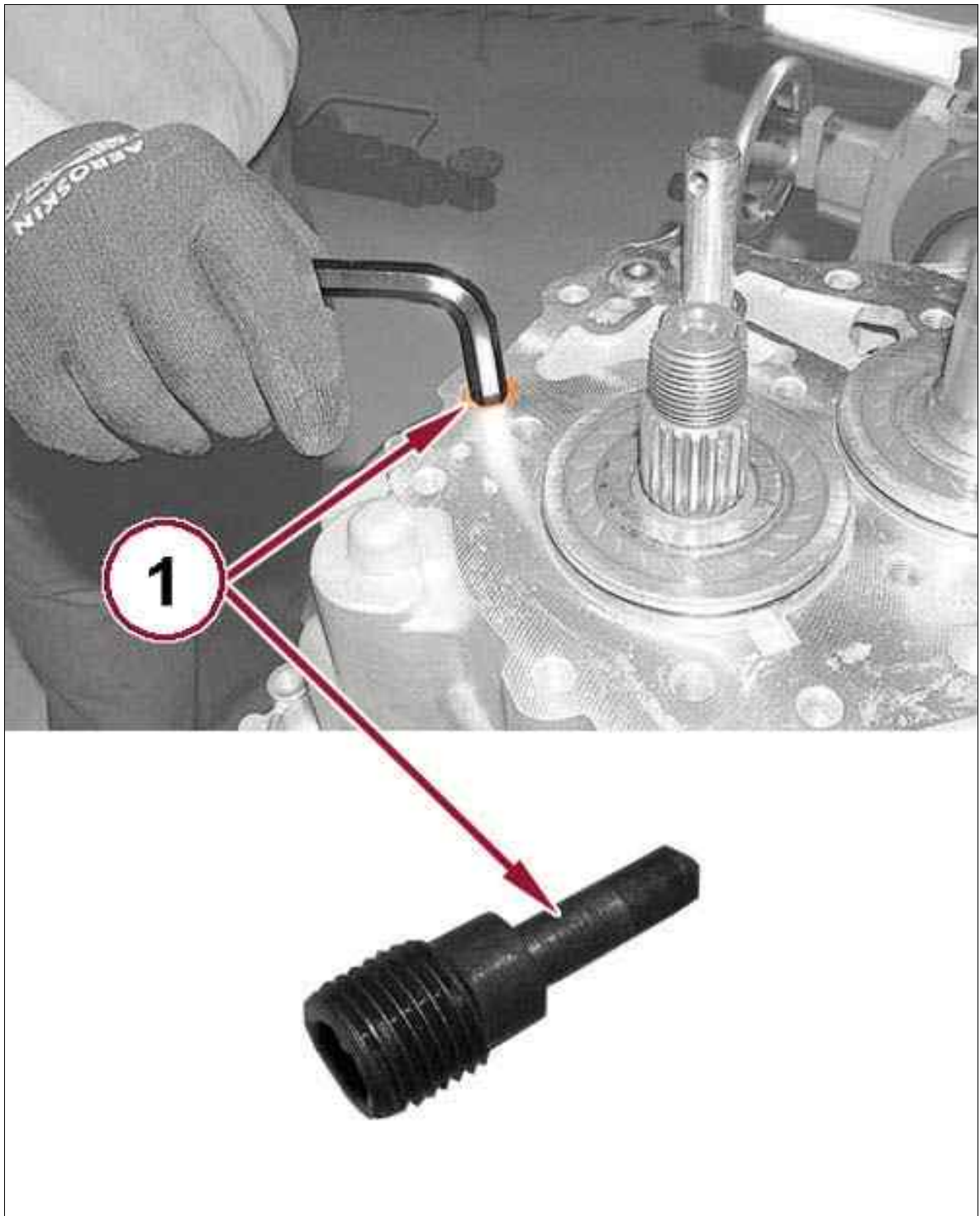
Fig 16: Plug & Suitable Pin



Courtesy of CHRYSLER GROUP, LLC

32. Remove the plug (1a) and insert a suitable pin (1c) in the hole (1b) until the gear shift rails are locked in neutral.

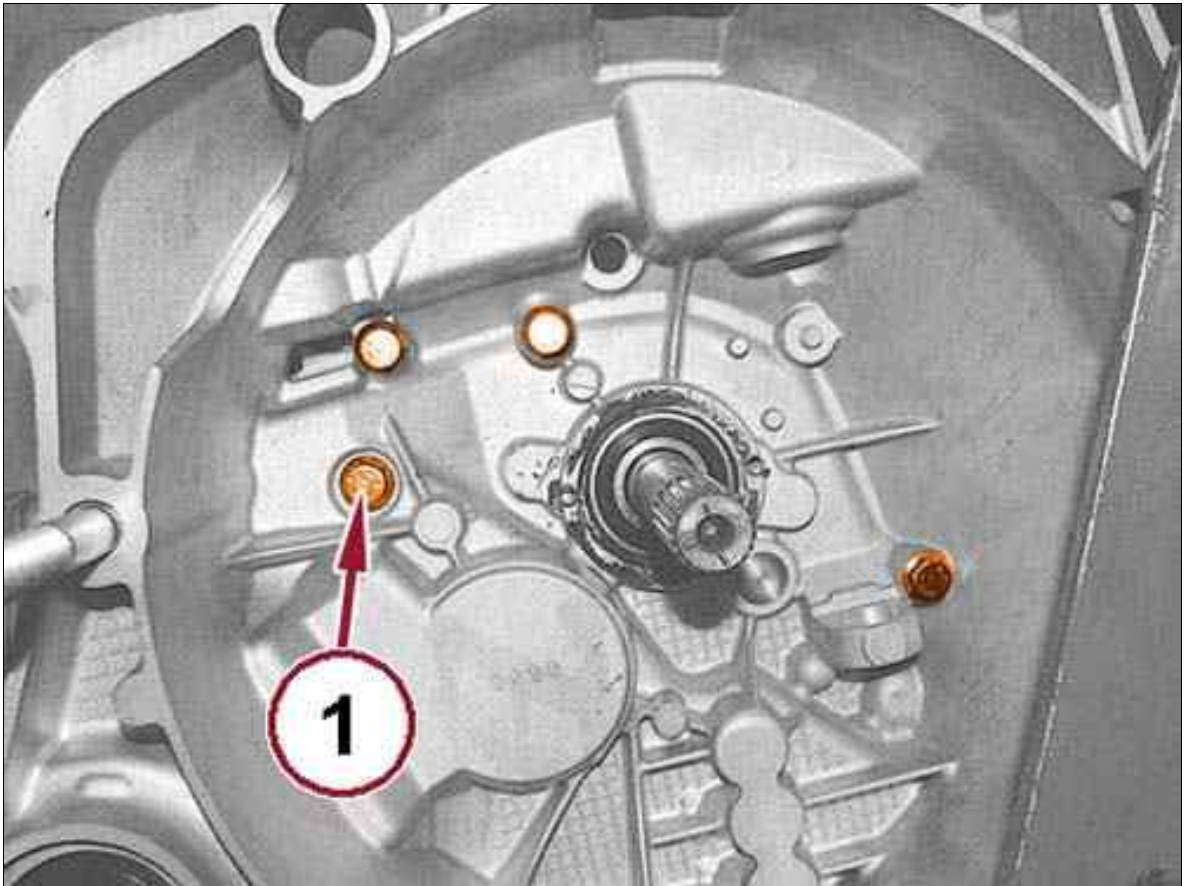
Fig 17: Gear Selector Lever Inner Support Locking Pin



Courtesy of CHRYSLER GROUP, LLC

33. Unscrew the gear selector lever inner support locking pin (1).

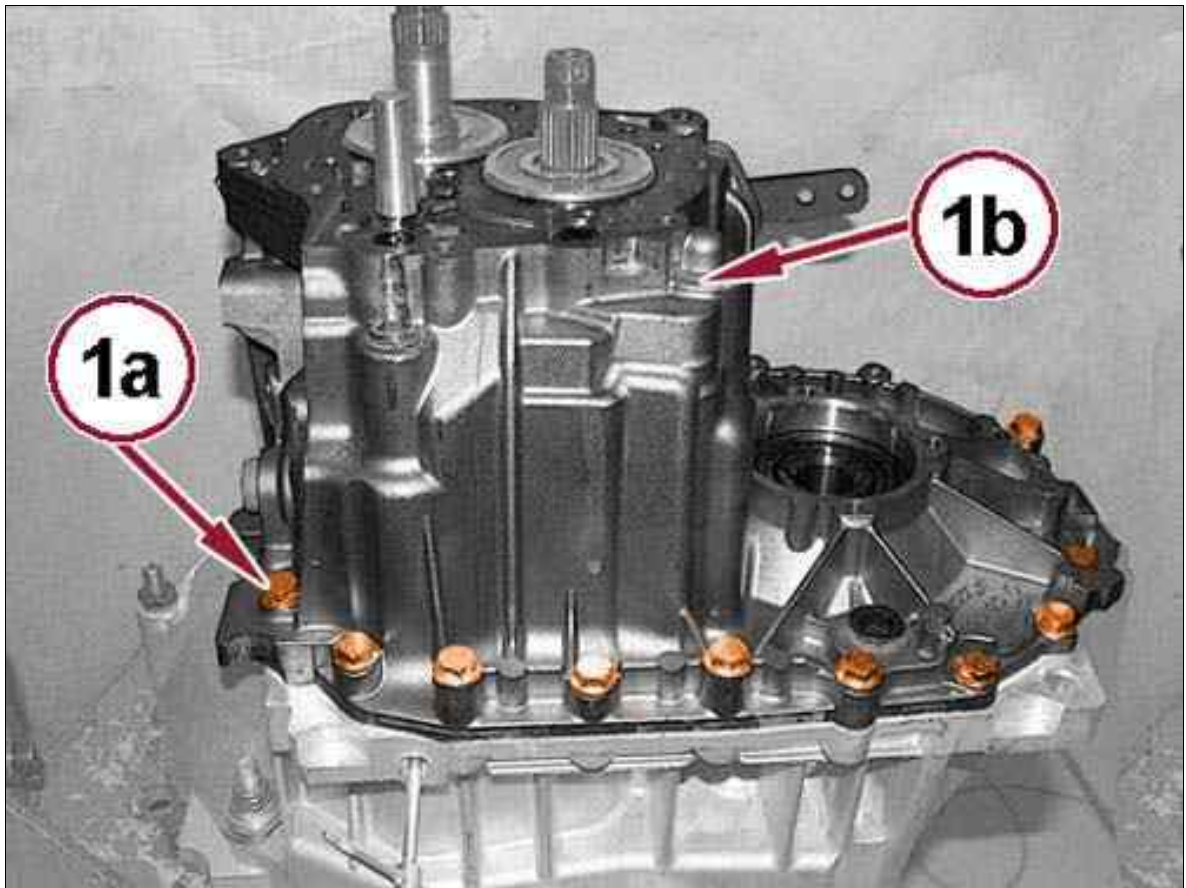
Fig 18: Inner Bellhousing Bolts



Courtesy of CHRYSLER GROUP, LLC

34. Remove the inner bellhousing bolts (1).

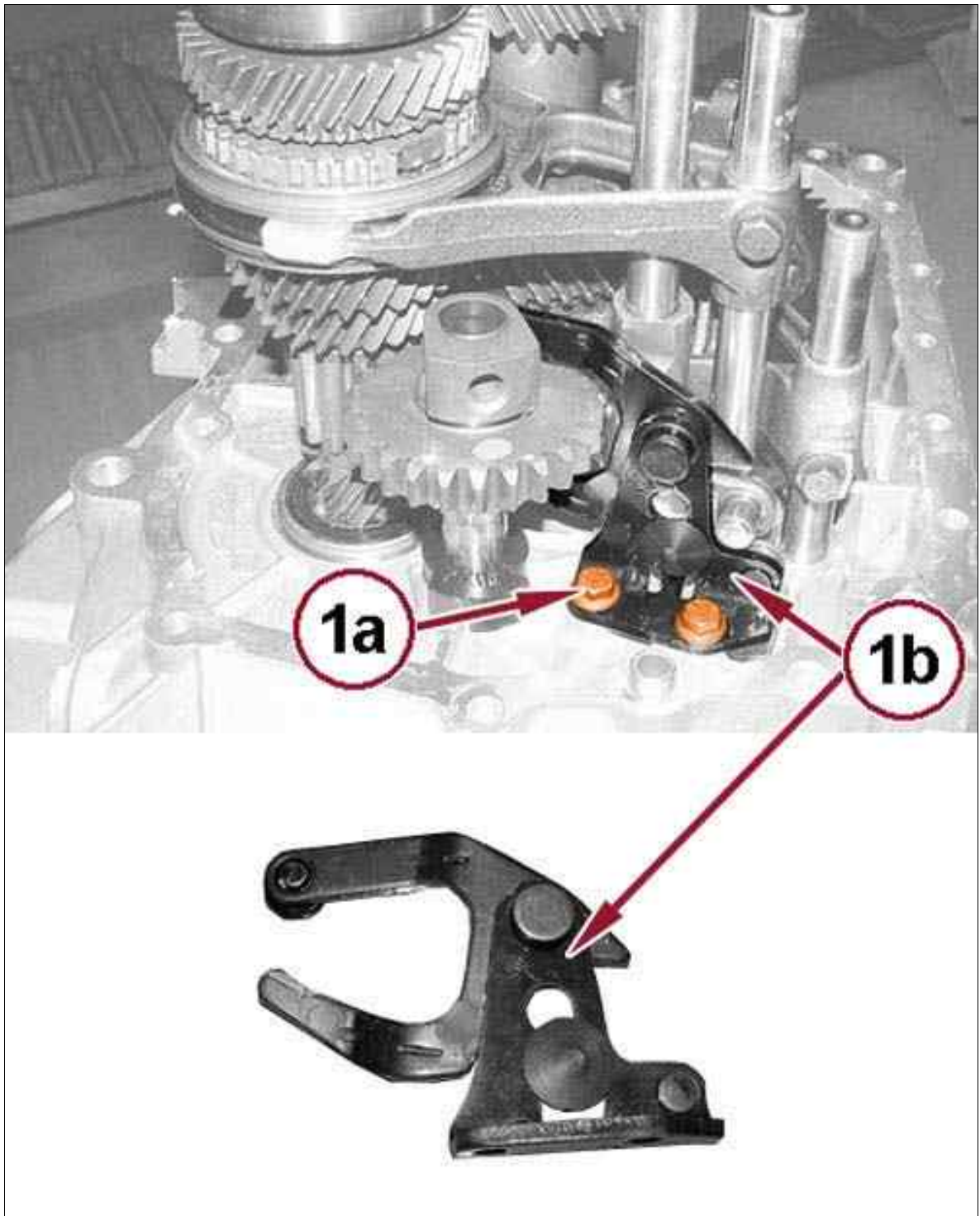
Fig 19: Bolts & Transmission Case



Courtesy of CHRYSLER GROUP, LLC

35. Remove the bolts (1a) and separate the transmission case (1b) from the bellhousing.

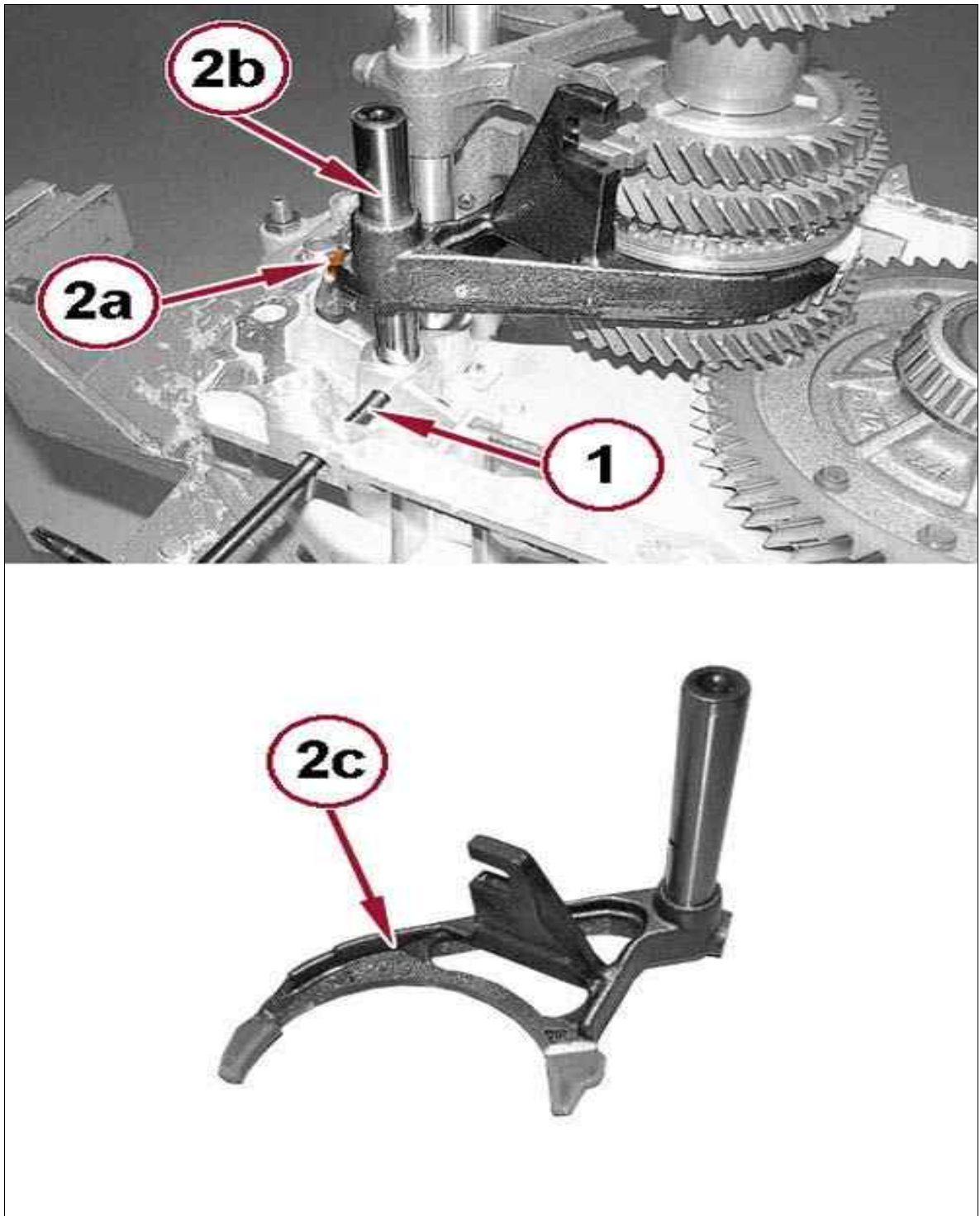
Fig 20: Bolts & Reverse Engagement Lever



Courtesy of CHRYSLER GROUP, LLC

36. Remove the bolts (1a) and remove the reverse engagement lever (1b).

Fig 21: Screw, Rail, 1st And 2nd Gear Shift Fork & Pin

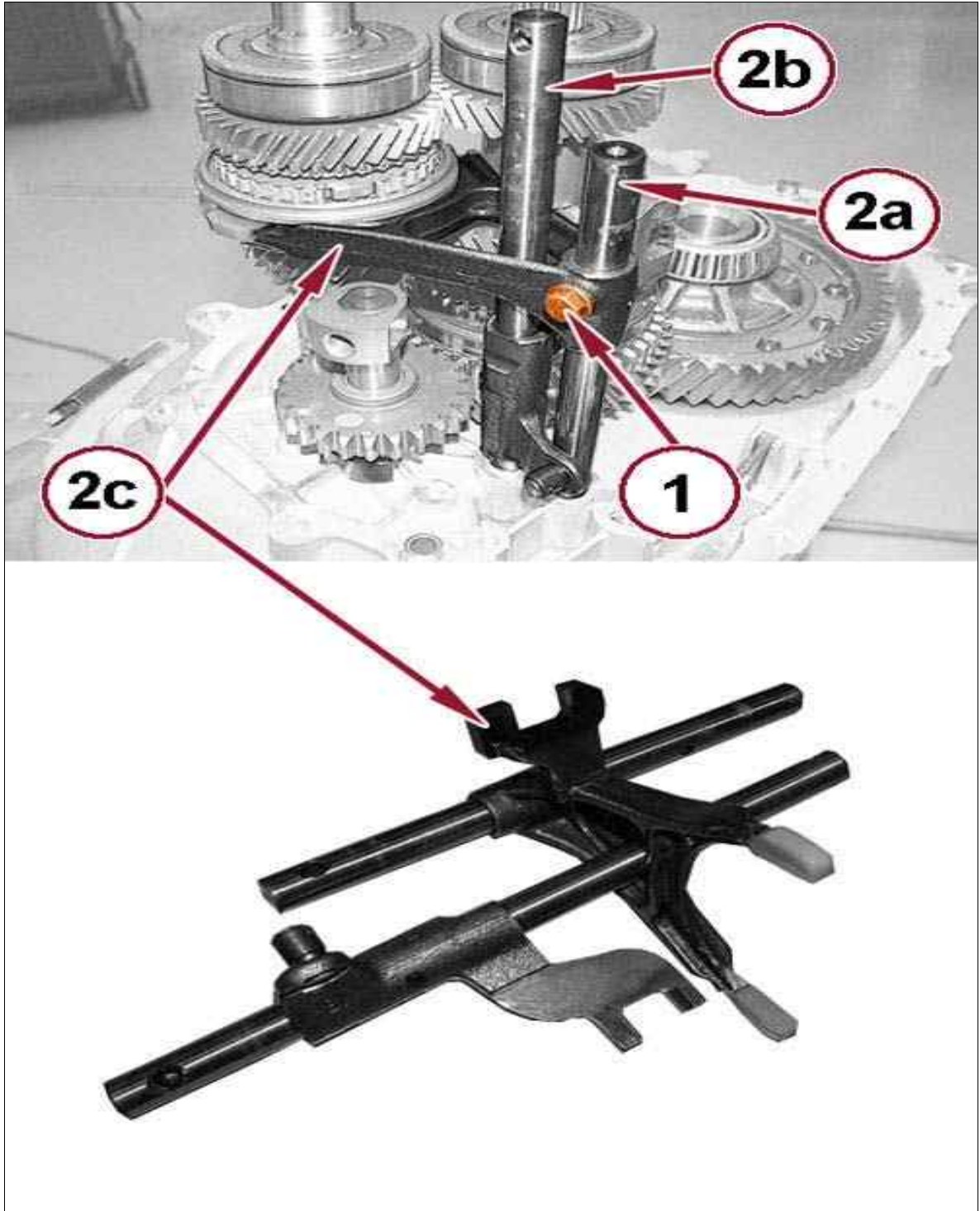


Courtesy of CHRYSLER GROUP, LLC

37. Remove the pin (1) used for locking the gear shift rails.

38. Remove the screw (2a), remove the rail (2b) and 1st and 2nd gear shift fork (2c).

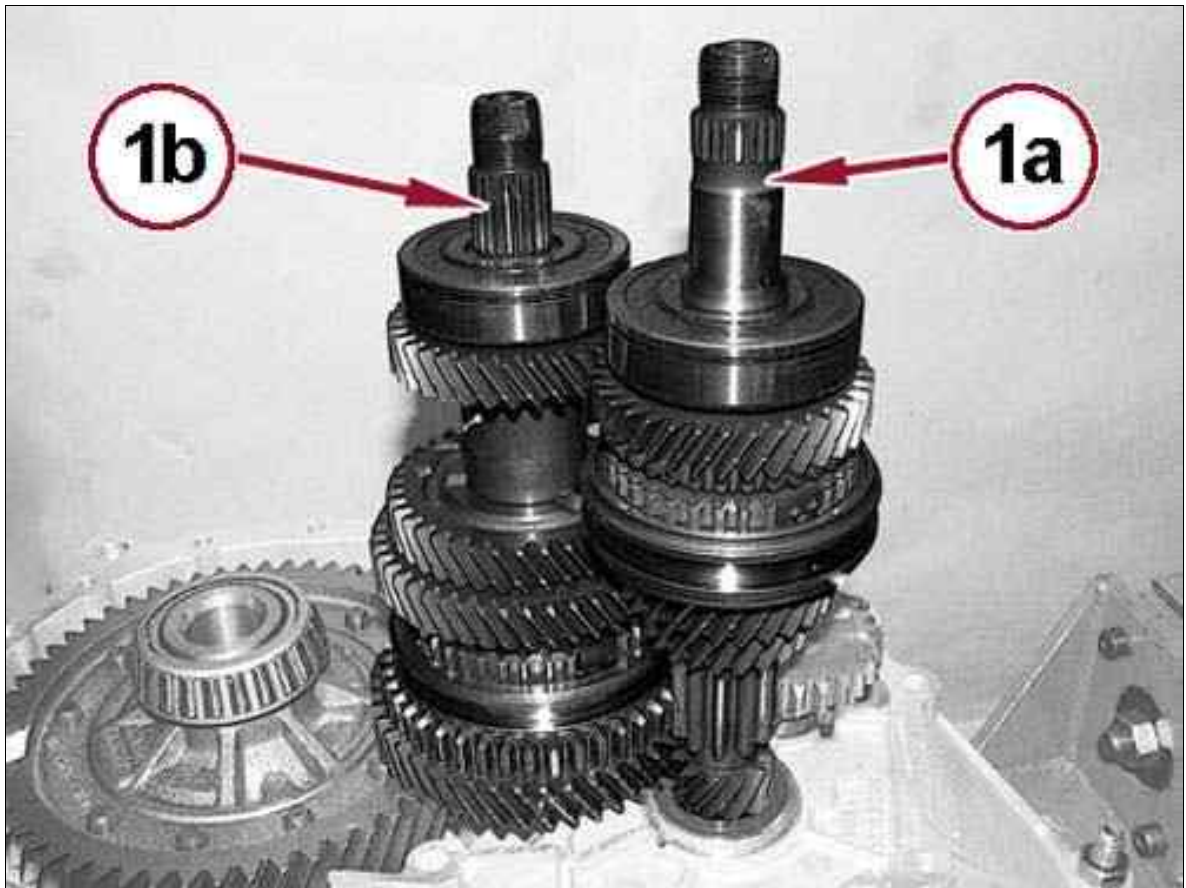
Fig 22: 3rd And 4th Gear Shift Rail, 5th And Reverse Gear Shift Rail, 3rd And 4th Gear Fork & Bolt



Courtesy of CHRYSLER GROUP, LLC

39. Remove the bolt (1) from 3rd and 4th gear shift fork.
40. Remove the 3rd and 4th gear shift rail (2a) and the 5th and reverse gear shift rail (2b) simultaneously with the 3rd and 4th gear fork (2c).

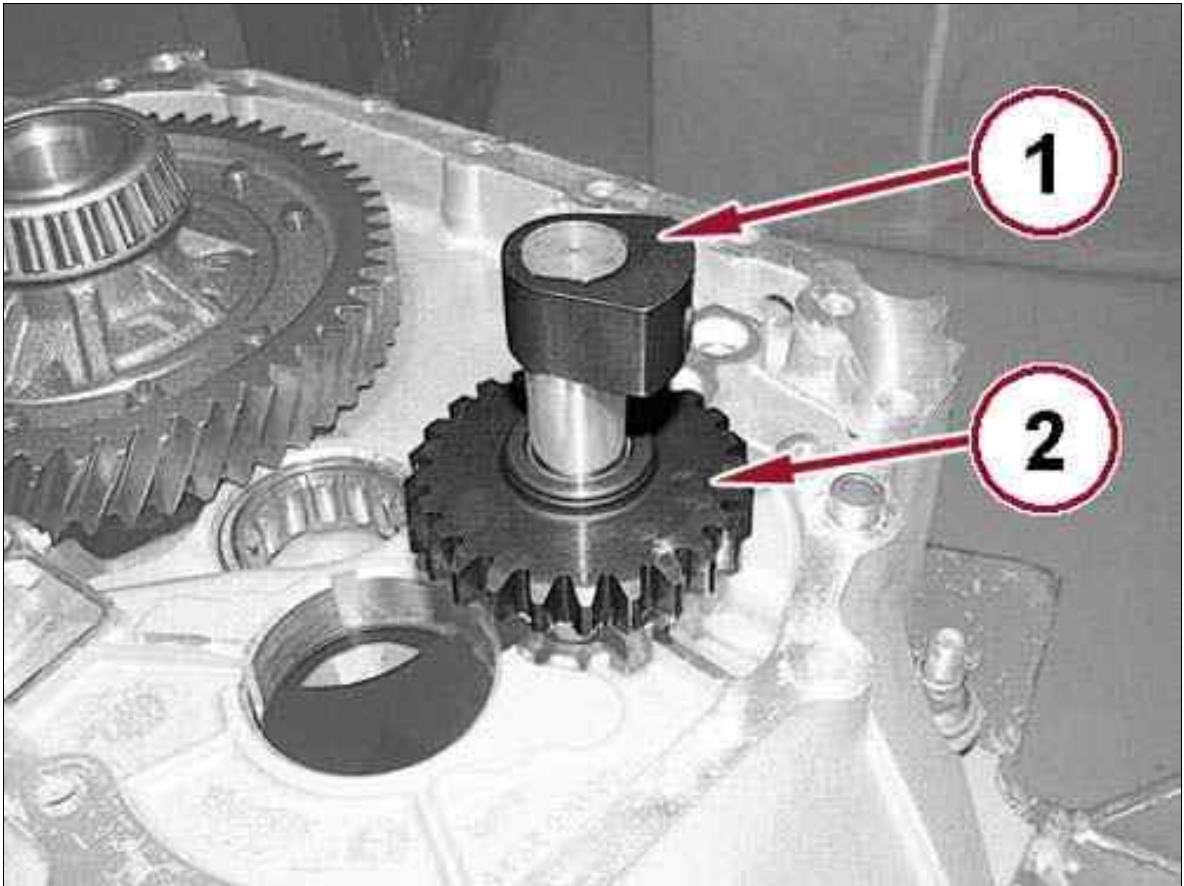
Fig 23: Input Shaft & Output Shaft



Courtesy of CHRYSLER GROUP, LLC

41. Remove the input shaft (1a) and the output shaft (1b) assemblies simultaneously.

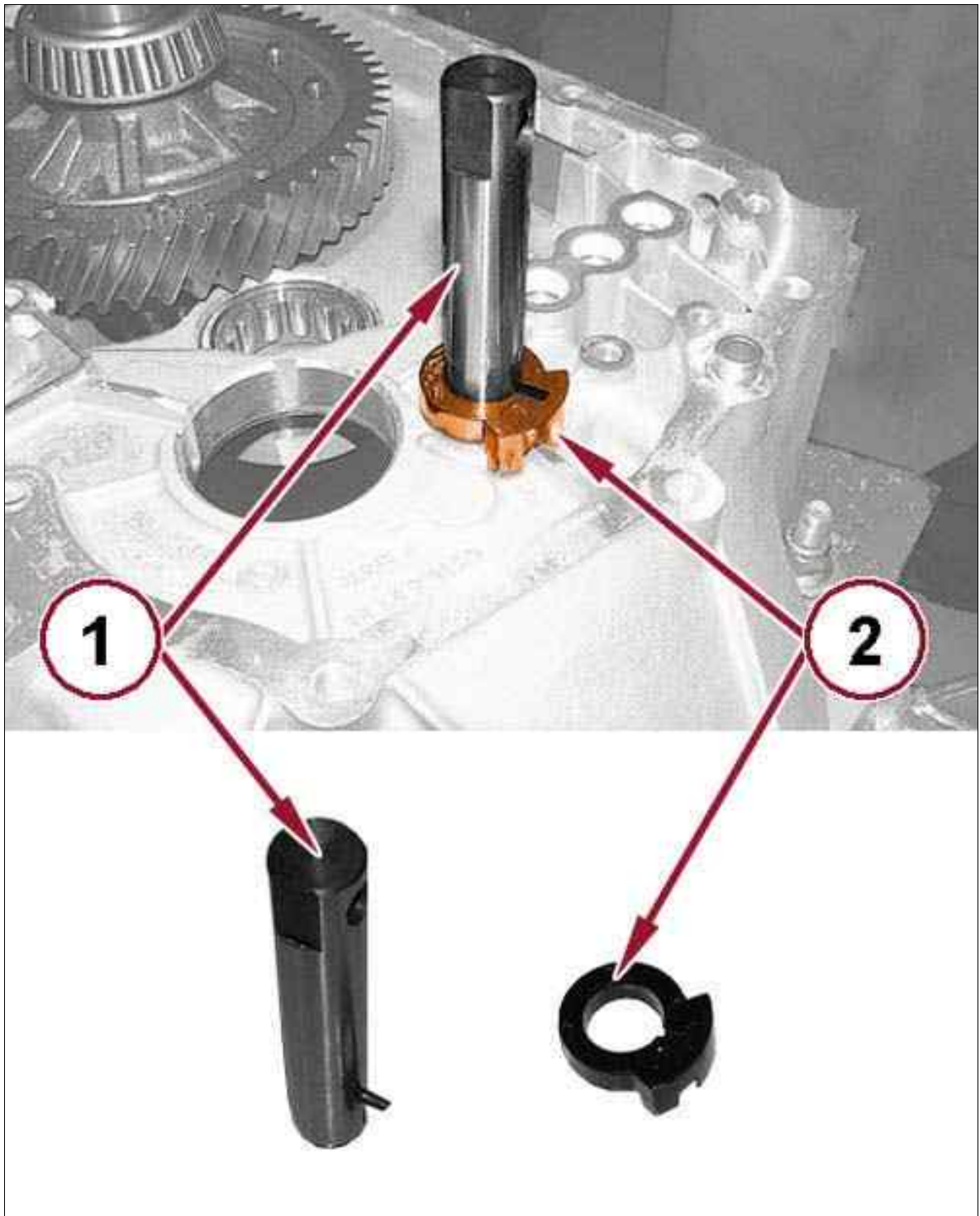
Fig 24: Reverse Idler Gear Shaft Support Screw & Reverse Idler Gear



Courtesy of CHRYSLER GROUP, LLC

42. Remove the reverse idler gear shaft support screw (1).
43. Remove the reverse idler gear (2).

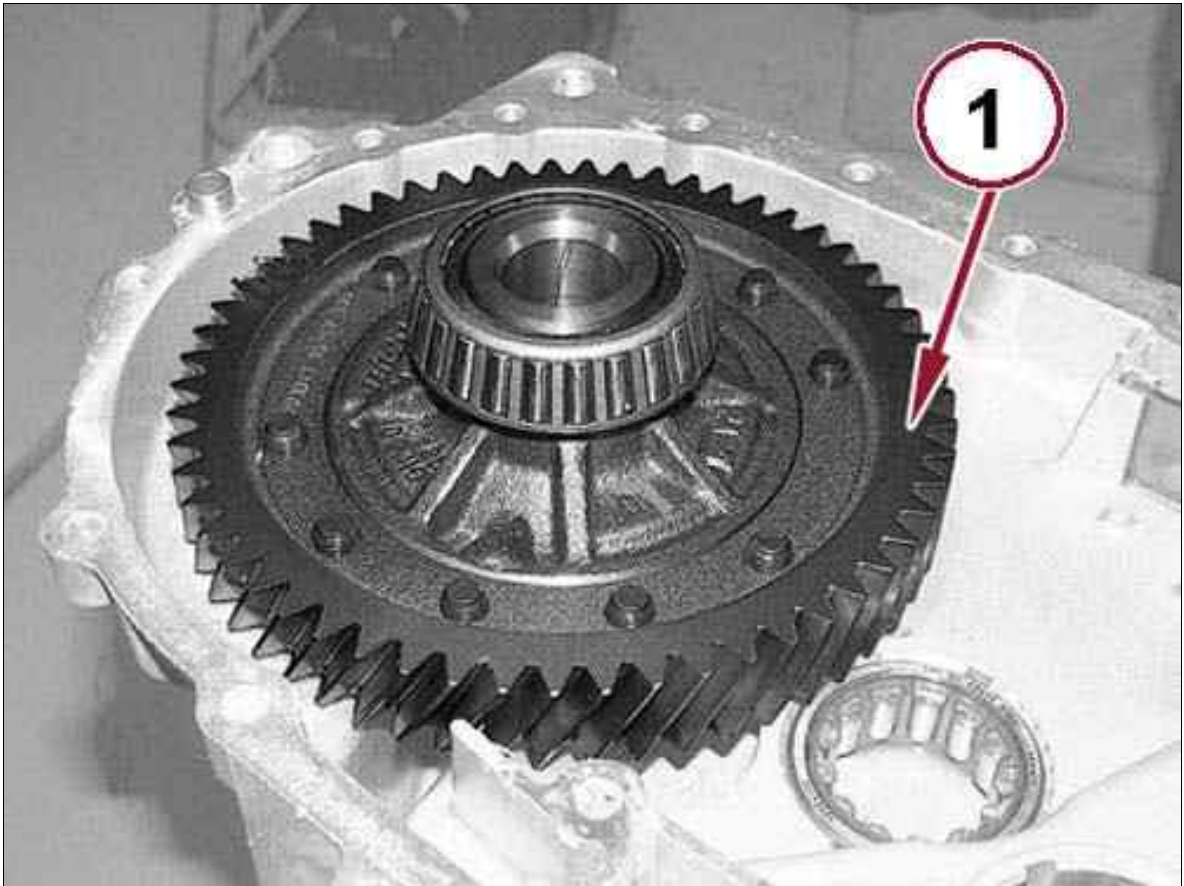
Fig 25: Centering Pin & Bushing



Courtesy of CHRYSLER GROUP, LLC

44. Remove the reverse idler gear shaft complete with centering pin (1).
45. Remove the reverse idler gear shaft locating bushing (2).

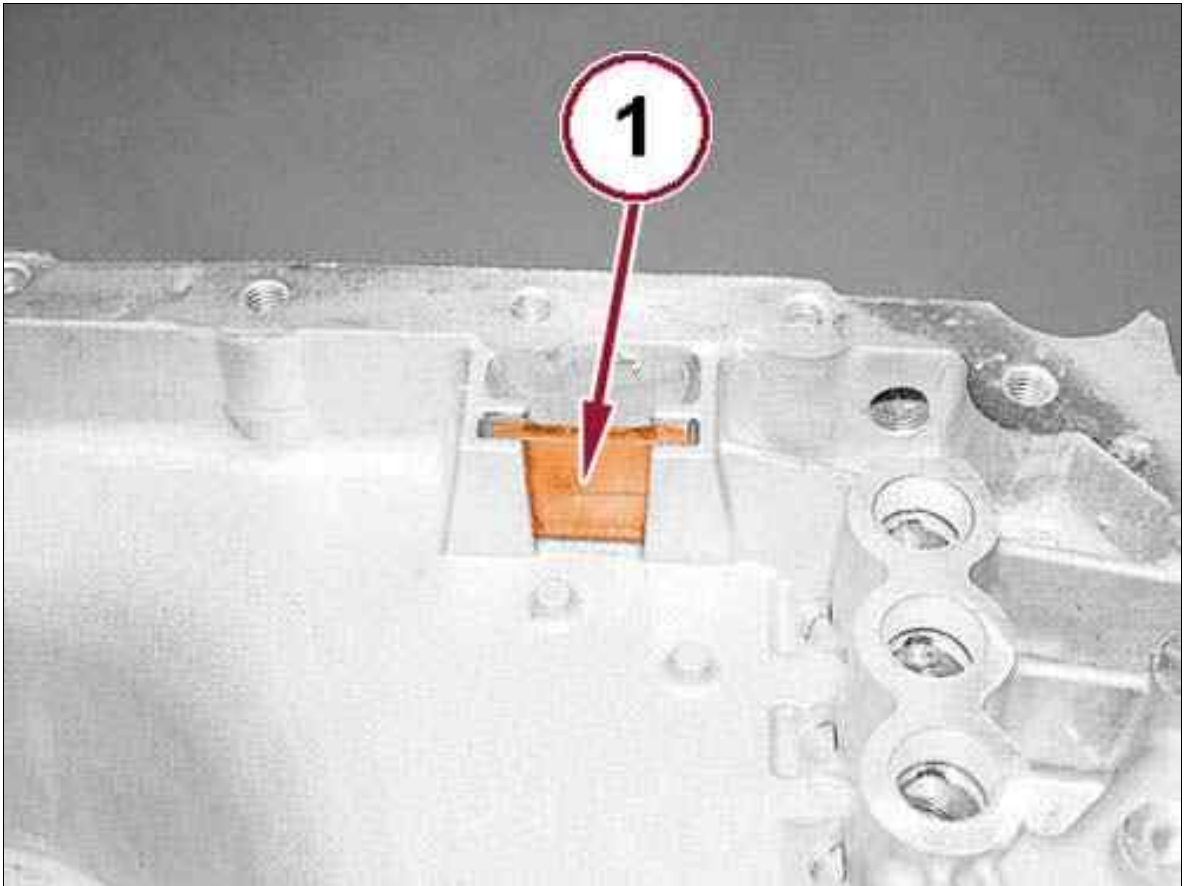
Fig 26: Differential Assembly



Courtesy of CHRYSLER GROUP, LLC

46. Remove the differential assembly (1).

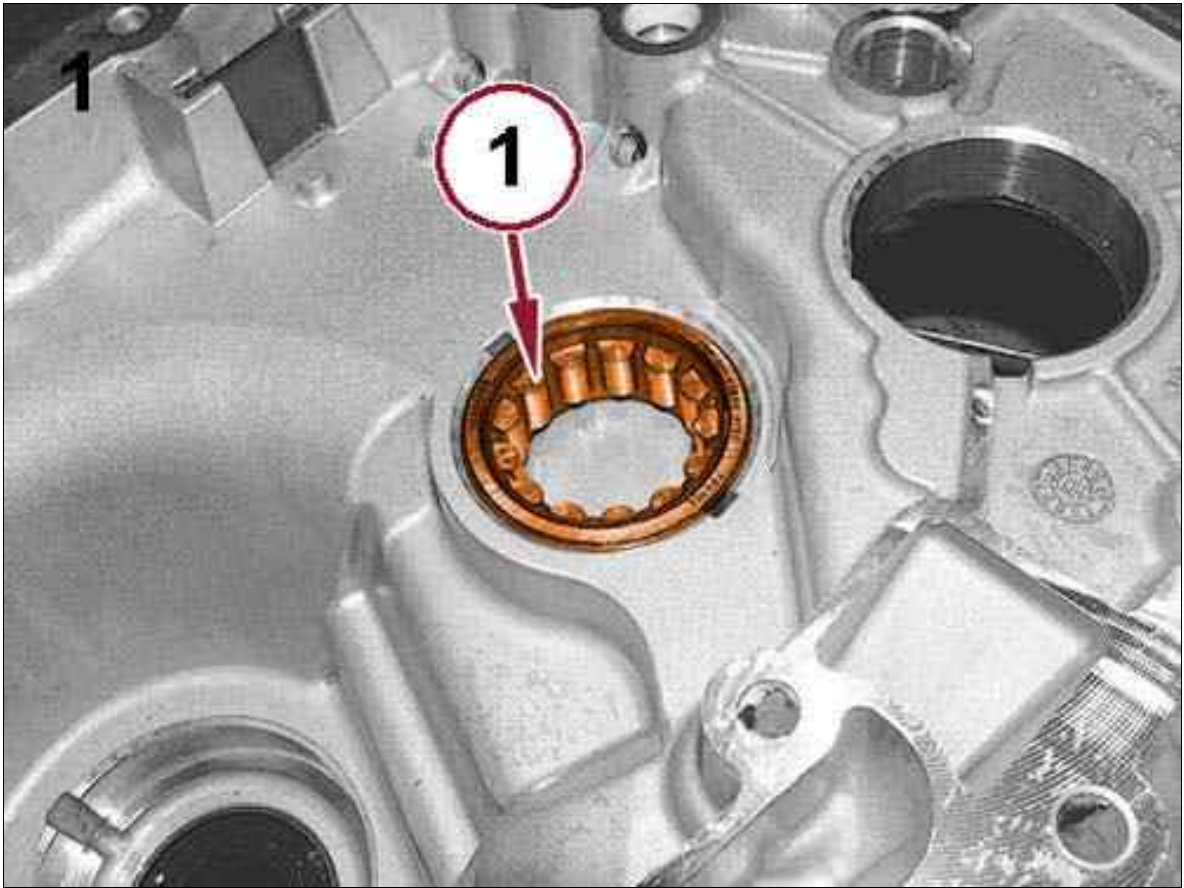
Fig 27: Magnet



Courtesy of CHRYSLER GROUP, LLC

47. Remove the magnet (1).

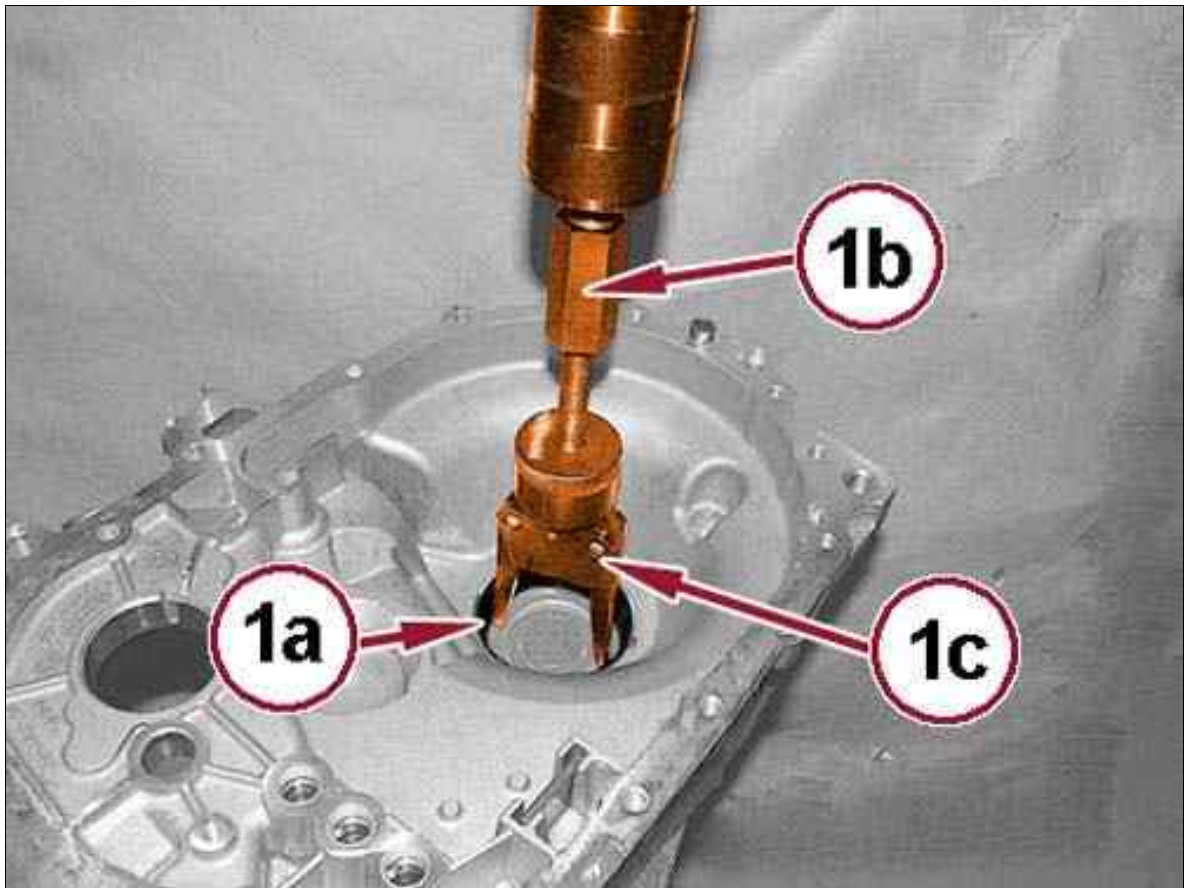
Fig 28: Output Shaft Front Bearing



Courtesy of CHRYSLER GROUP, LLC

48. Remove the output shaft front bearing (1).

Fig 29: Outer Race & Special Tools



Courtesy of CHRYSLER GROUP, LLC

49. Remove the outer race (1a) for the right side differential bearing from the bellhousing, using tools 1847017001 (1b) and 1870655000 (1c).

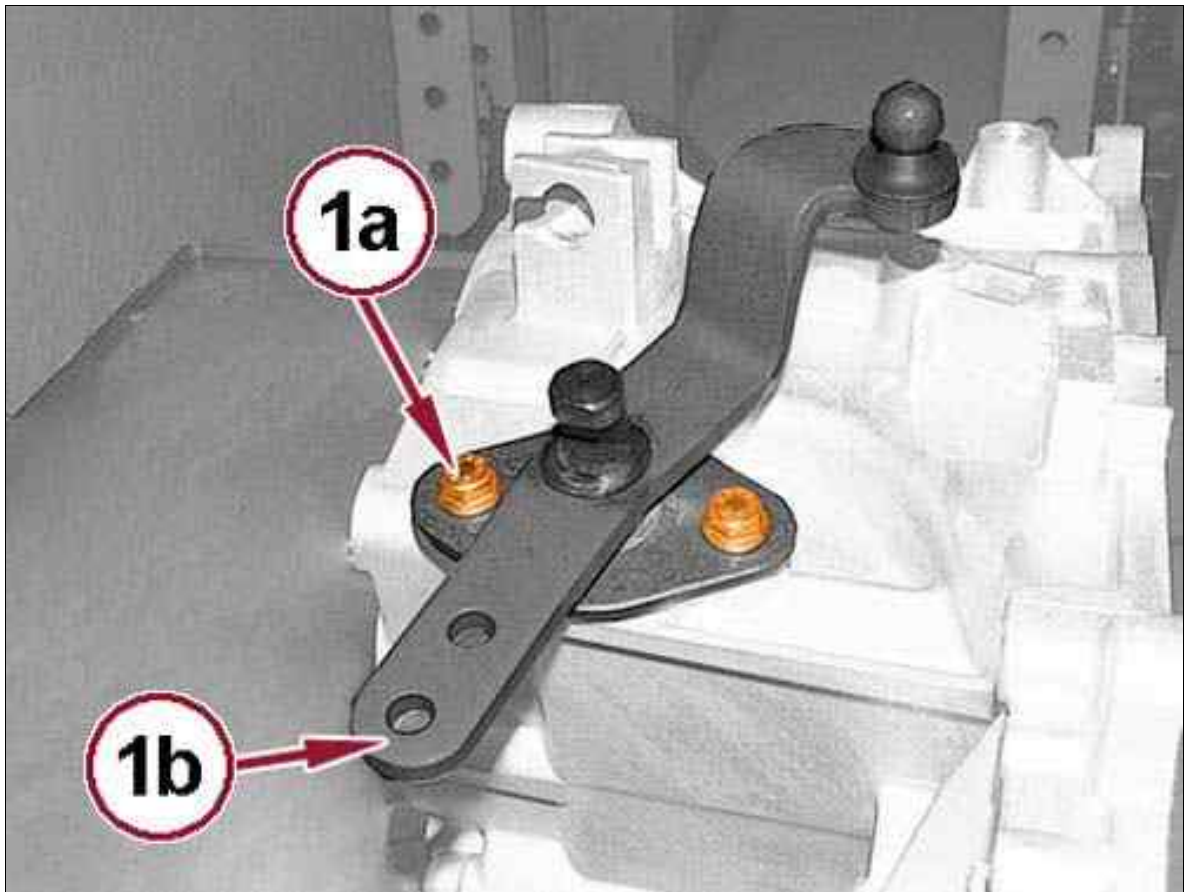
Fig 30: Right Side Half Shaft Seal



Courtesy of CHRYSLER GROUP, LLC

50. Remove the right side half shaft seal (1).
51. Position the transmission case in a vice equipped with protective, non marring jaw covers.

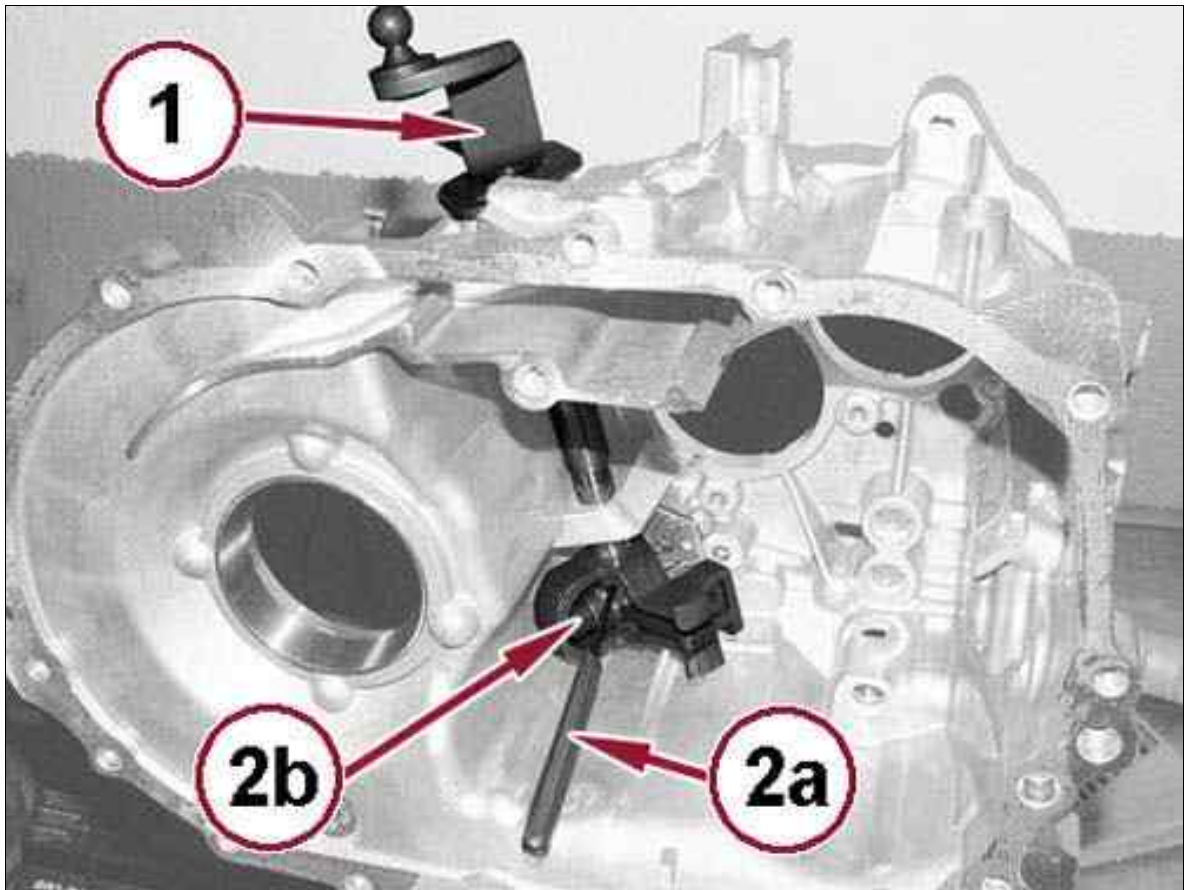
Fig 31: Bolts, Gear Selector & Engagement Lever



Courtesy of CHRYSLER GROUP, LLC

52. Remove the bolts (1a) for the gear selector and engagement lever (1b).

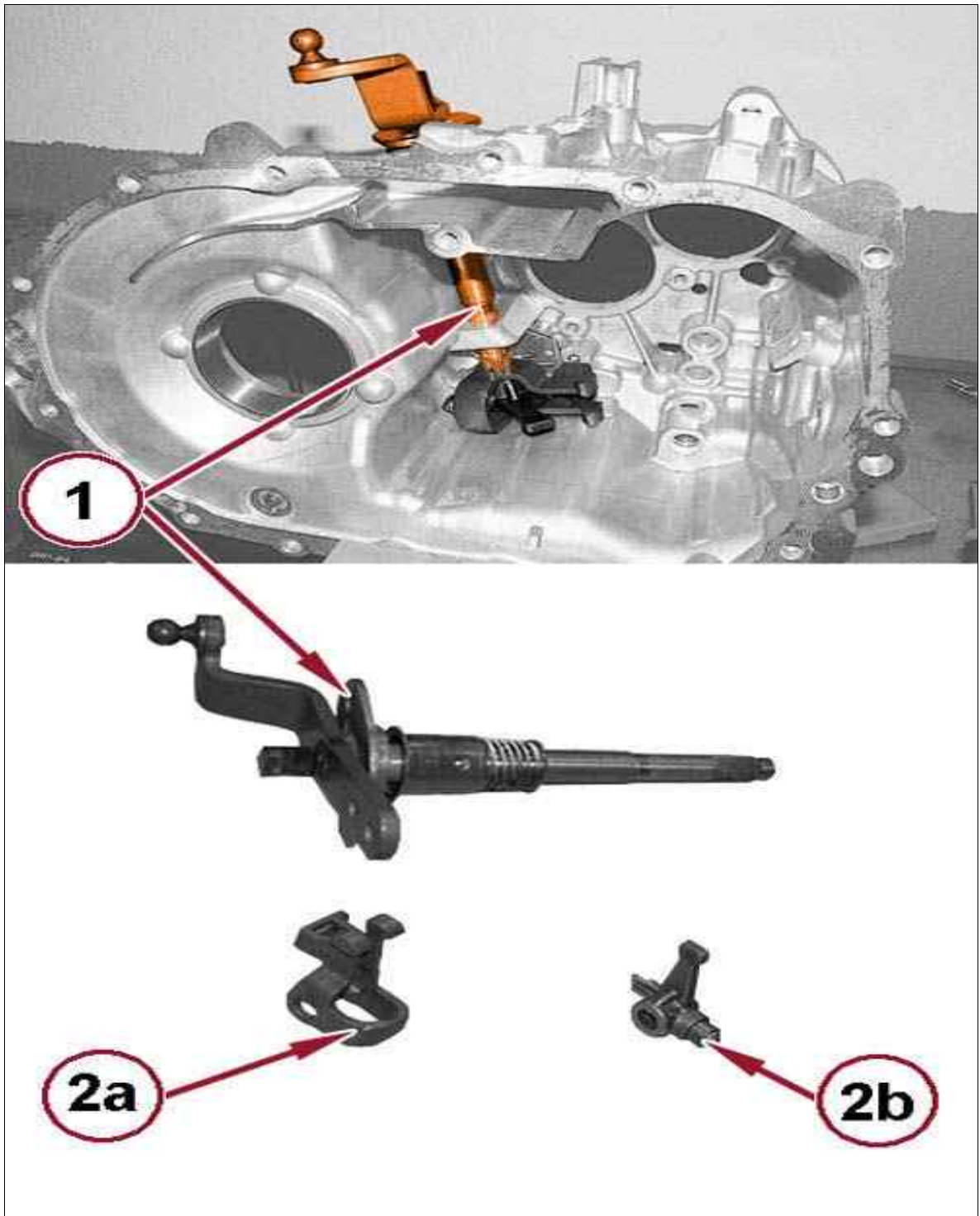
Fig 32: Engagement Lever, Punch & Dog Retaining Pin



Courtesy of CHRYSLER GROUP, LLC

53. Turn the gear selector and engagement lever (1) to access the dog retaining pin.
54. Keep the gear selector and engagement lever pressed while using a suitable punch (2a) to remove the dog retaining pin (2b).

Fig 33: Engagement Lever, Engagement Rod Inner Mounting Bracket & Dog

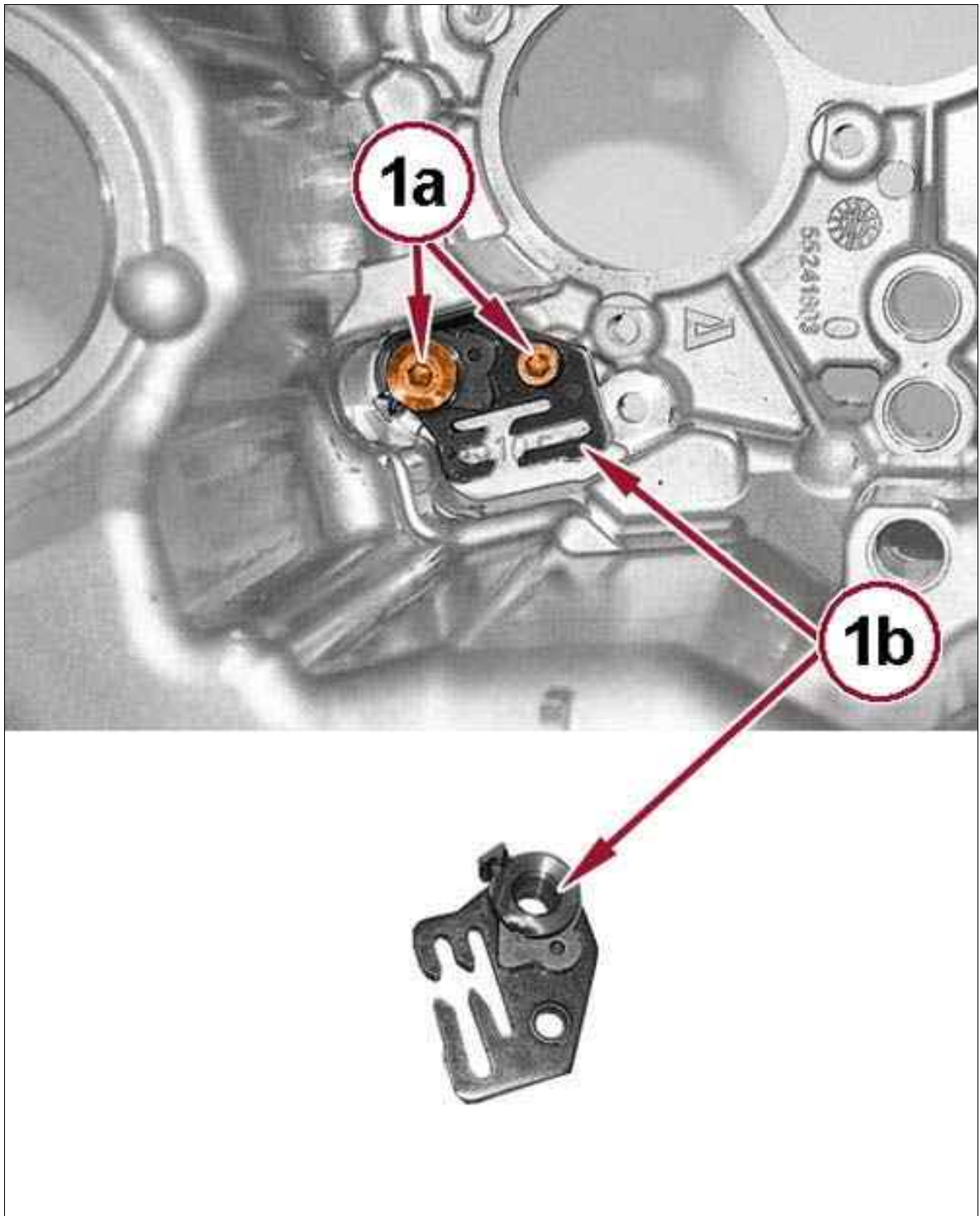


Courtesy of CHRYSLER GROUP, LLC

55. Remove the gear selector and engagement lever (1).

56. Remove the gear selector and engagement rod inner mounting bracket (2a) and the dog (2b).

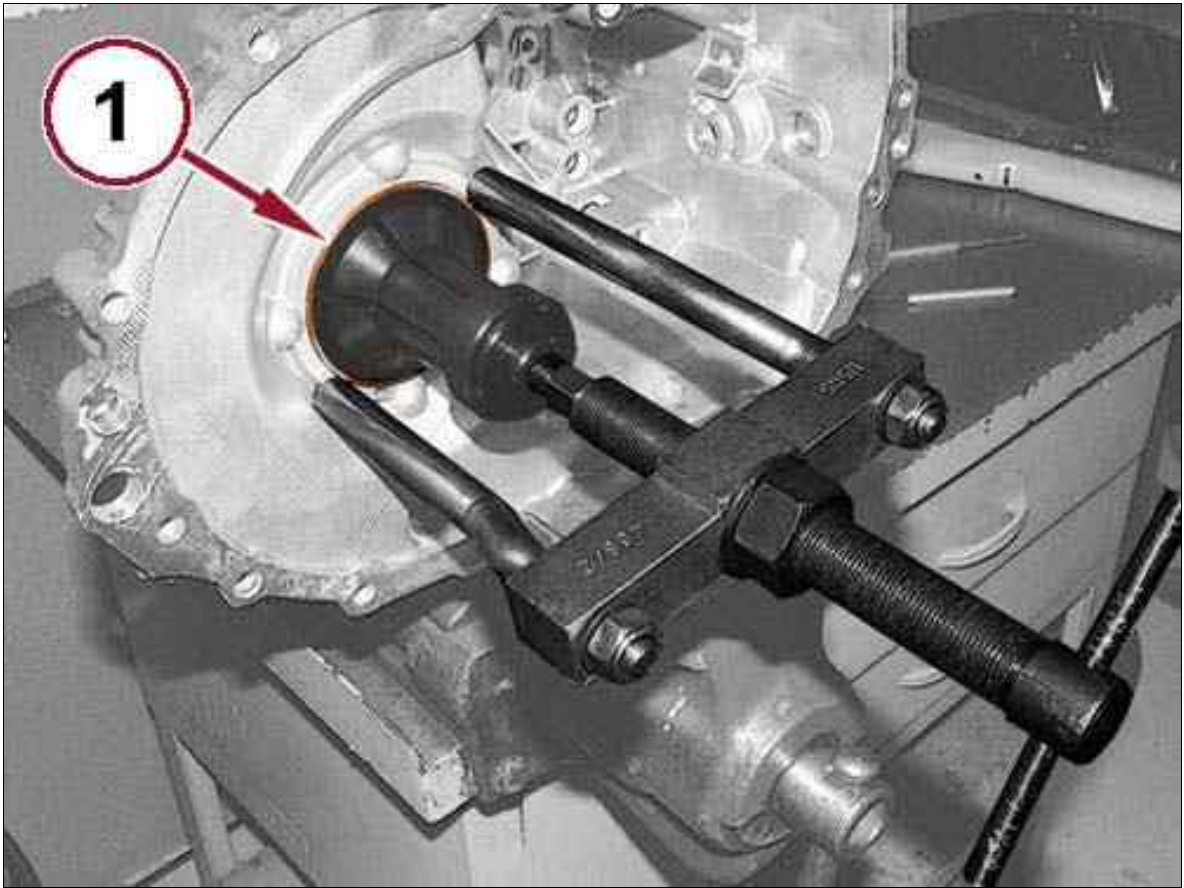
Fig 34: Bolts & Gear Control Drive Plate



Courtesy of CHRYSLER GROUP, LLC

57. Remove the bolts (1a) and remove the gear control drive plate (1b).

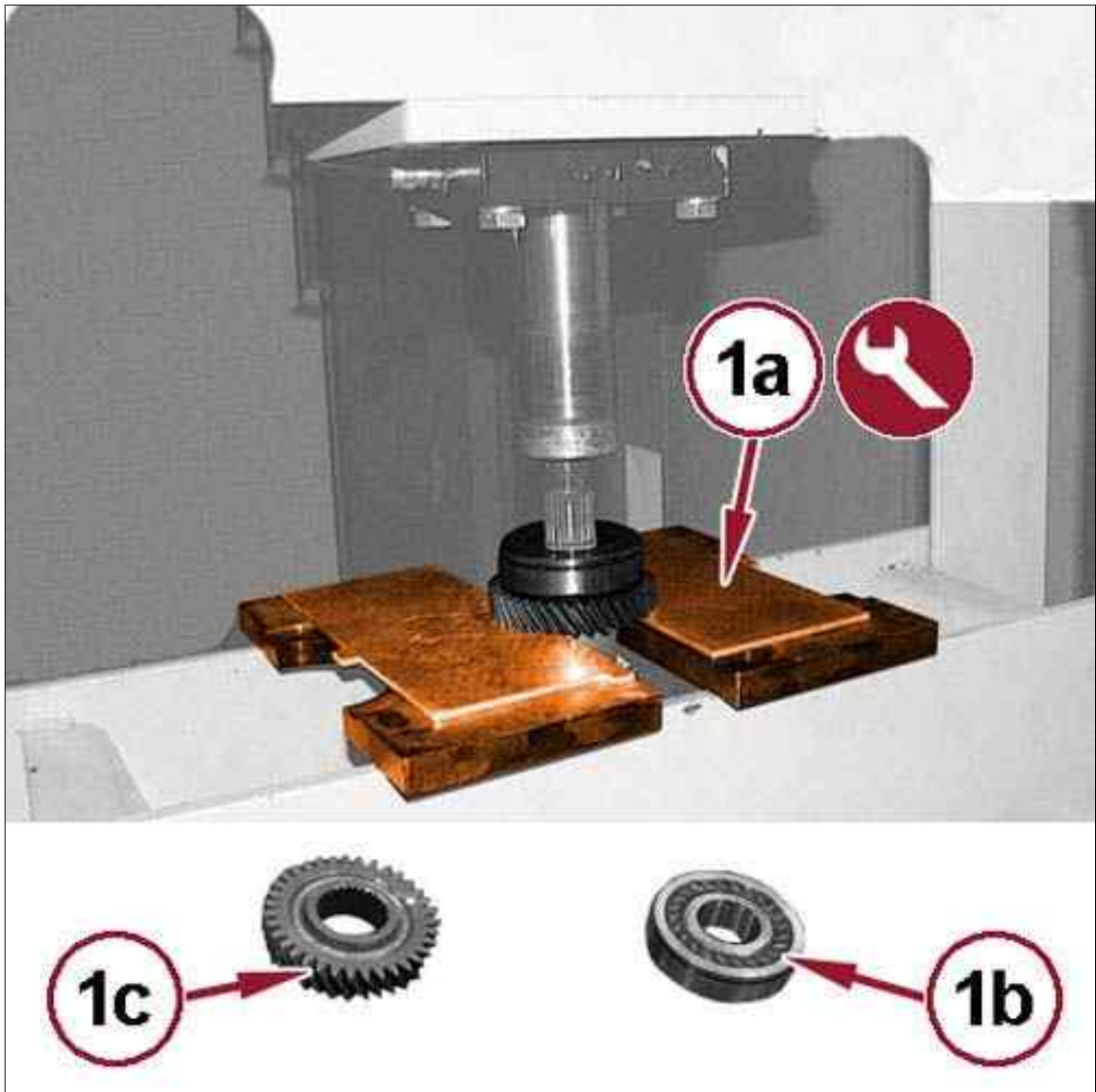
Fig 35: Left Side Differential Bearing Outer Race



Courtesy of CHRYSLER GROUP, LLC

58. Using a suitable tool, remove the left side differential bearing outer race (1) from the transmission case.

Fig 36: Rear Bearing, 4th Gear Driven Gear & Hydraulic Press

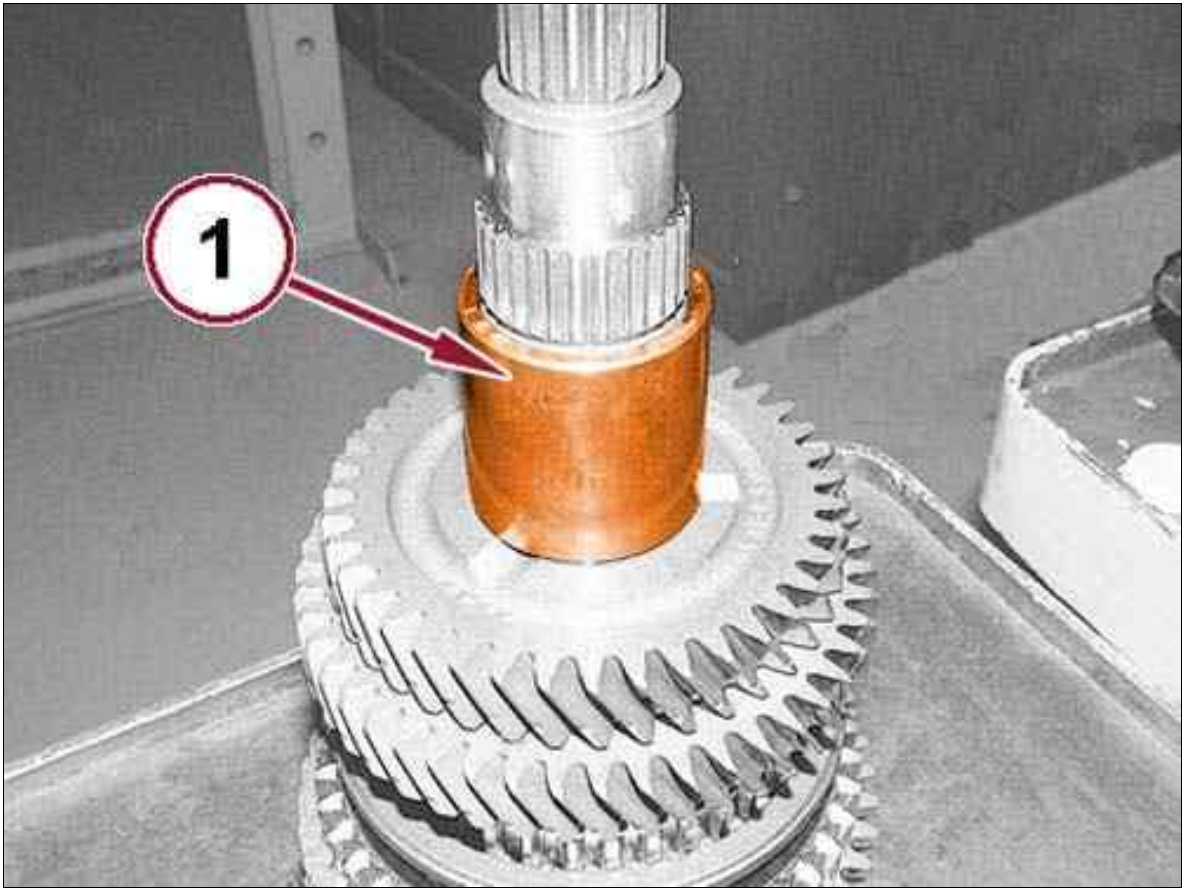


Courtesy of CHRYSLER GROUP, LLC

OUTPUT SHAFT DISASSEMBLY

1. With a hydraulic press using the tool 2000005000 (1a), remove the rear bearing (1b) and the 4th gear driven gear (1c).

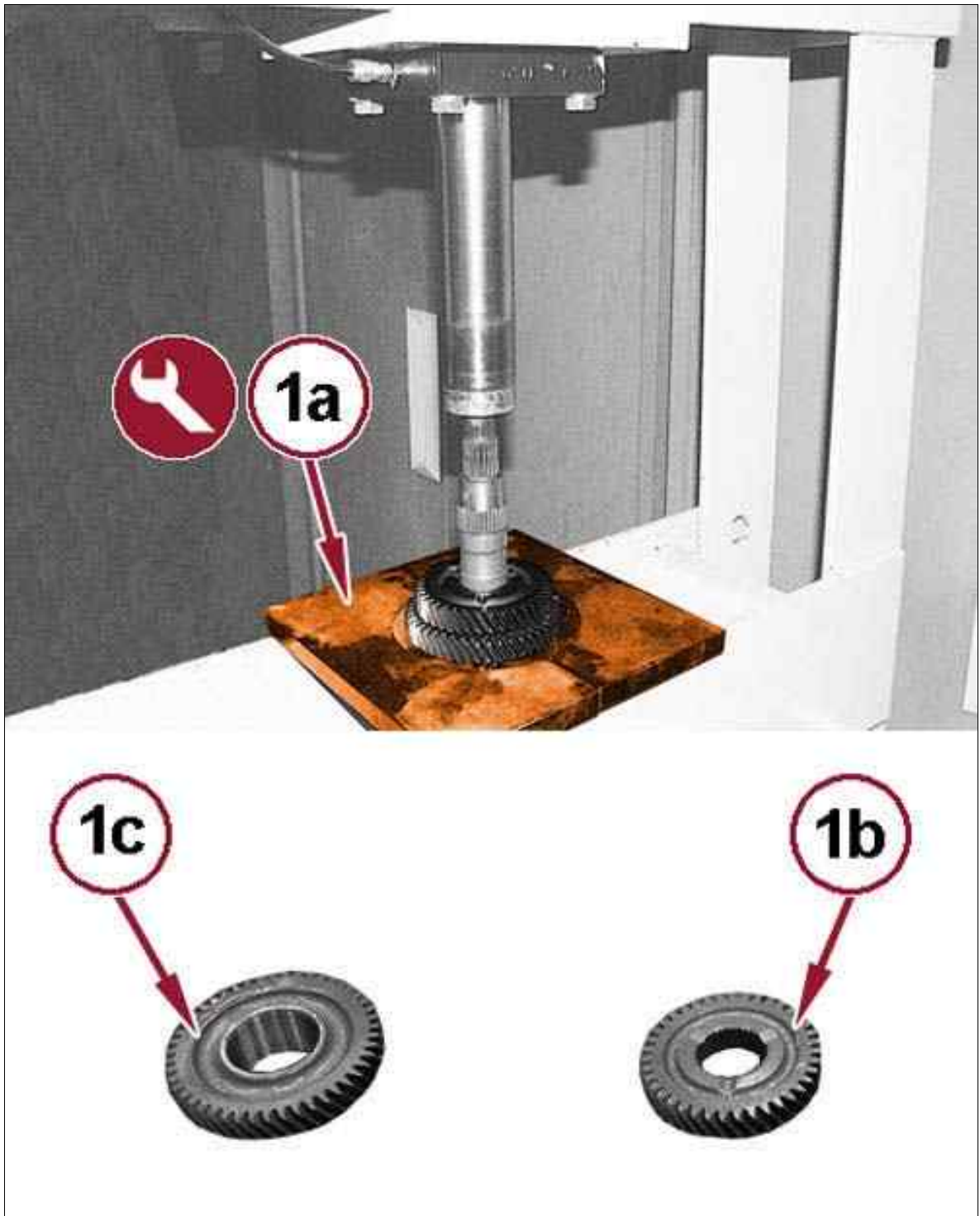
Fig 37: Spacer



Courtesy of CHRYSLER GROUP, LLC

2. Remove the spacer (1) between 3rd and 4th gear.

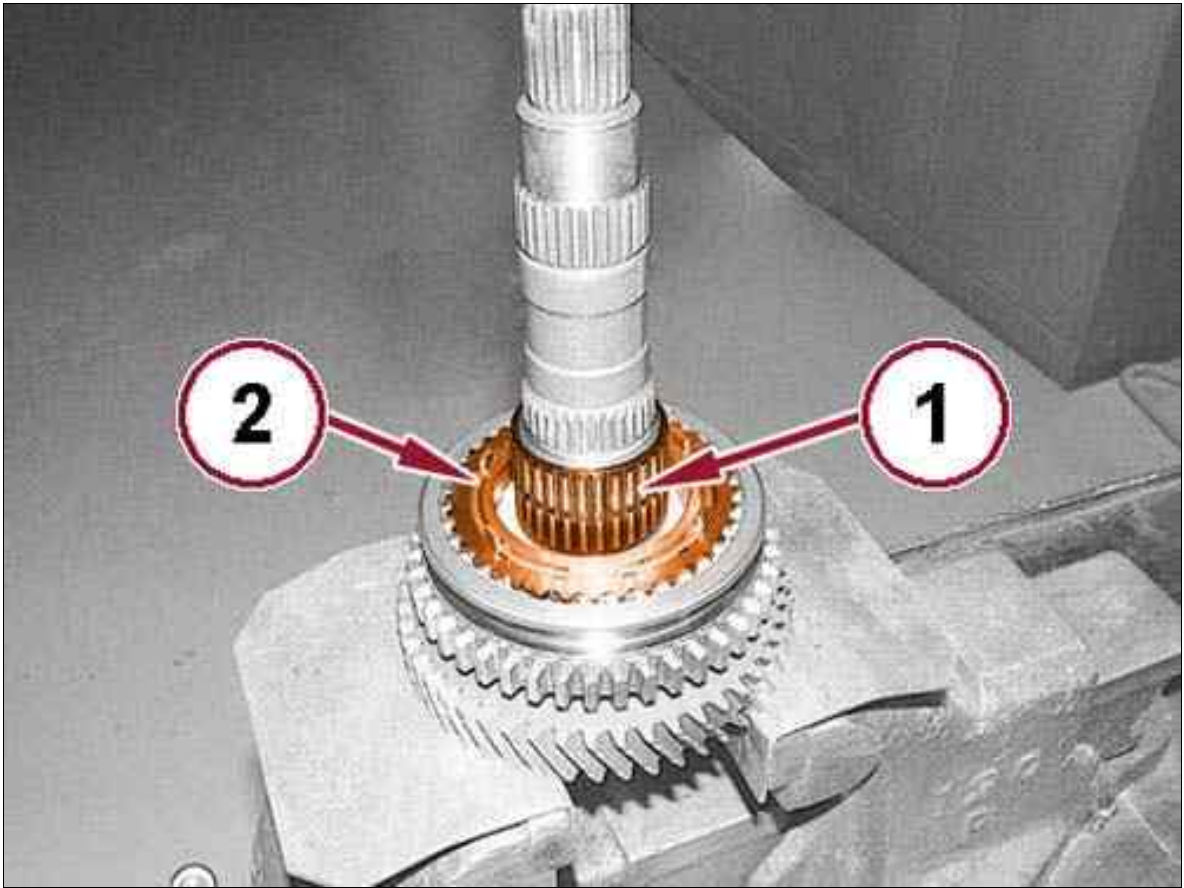
Fig 38: 3rd Gear Driven Gear, 2nd Gear Driven Gear & Special Tool



Courtesy of CHRYSLER GROUP, LLC

3. With a hydraulic press using the tool 2000005000 (1a), remove the 3rd gear driven gear (1b) and the 2nd gear driven gear (1c).

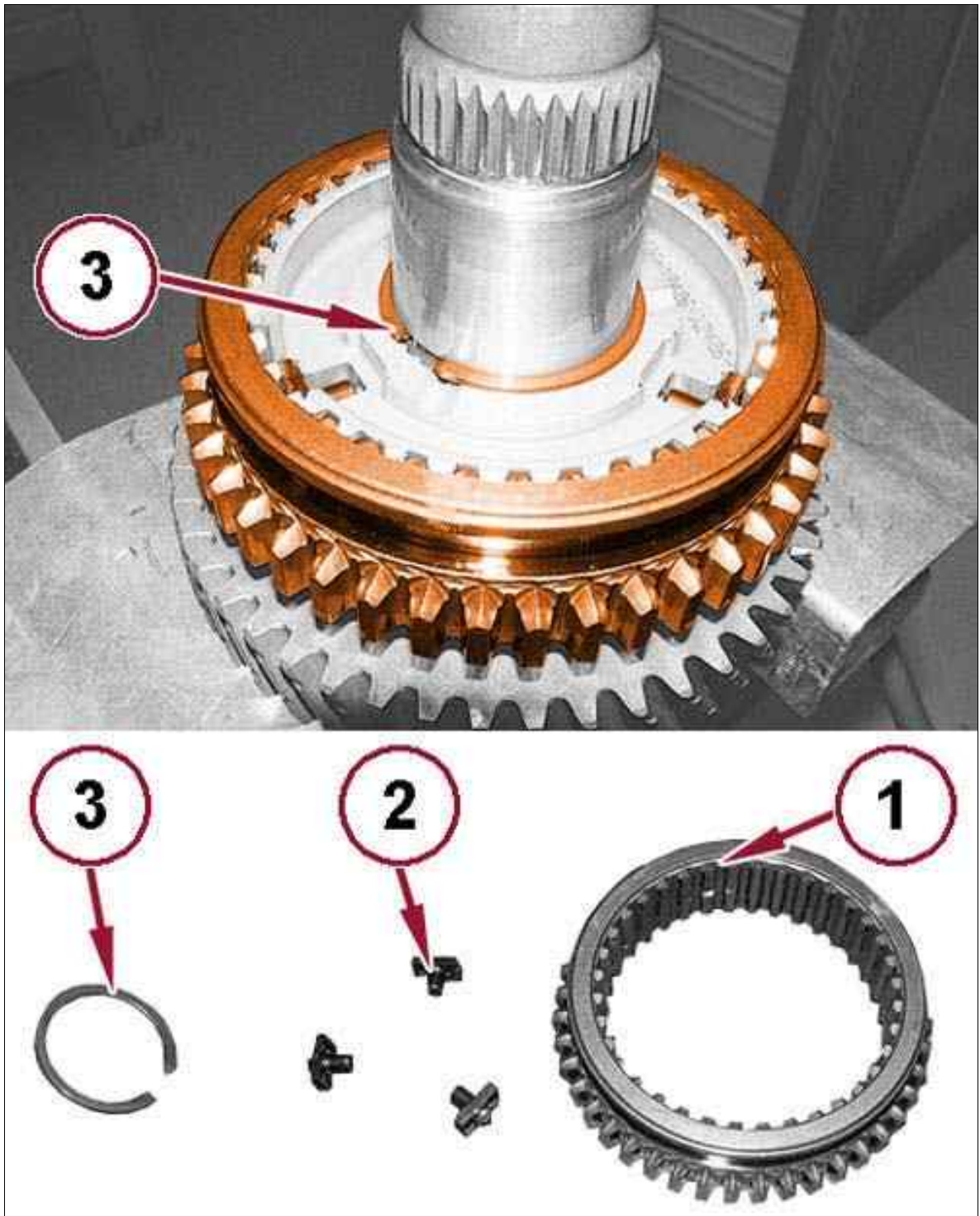
Fig 39: 2nd Gear Driven Gear Needle Bearing & 2nd Gear Synchronizer Ring



Courtesy of CHRYSLER GROUP, LLC

4. Position the output shaft in a vice with protective, non marring jaw covers.
5. Remove the 2nd gear driven gear needle bearing (1).
6. Remove the 2nd gear synchronizer ring (2).

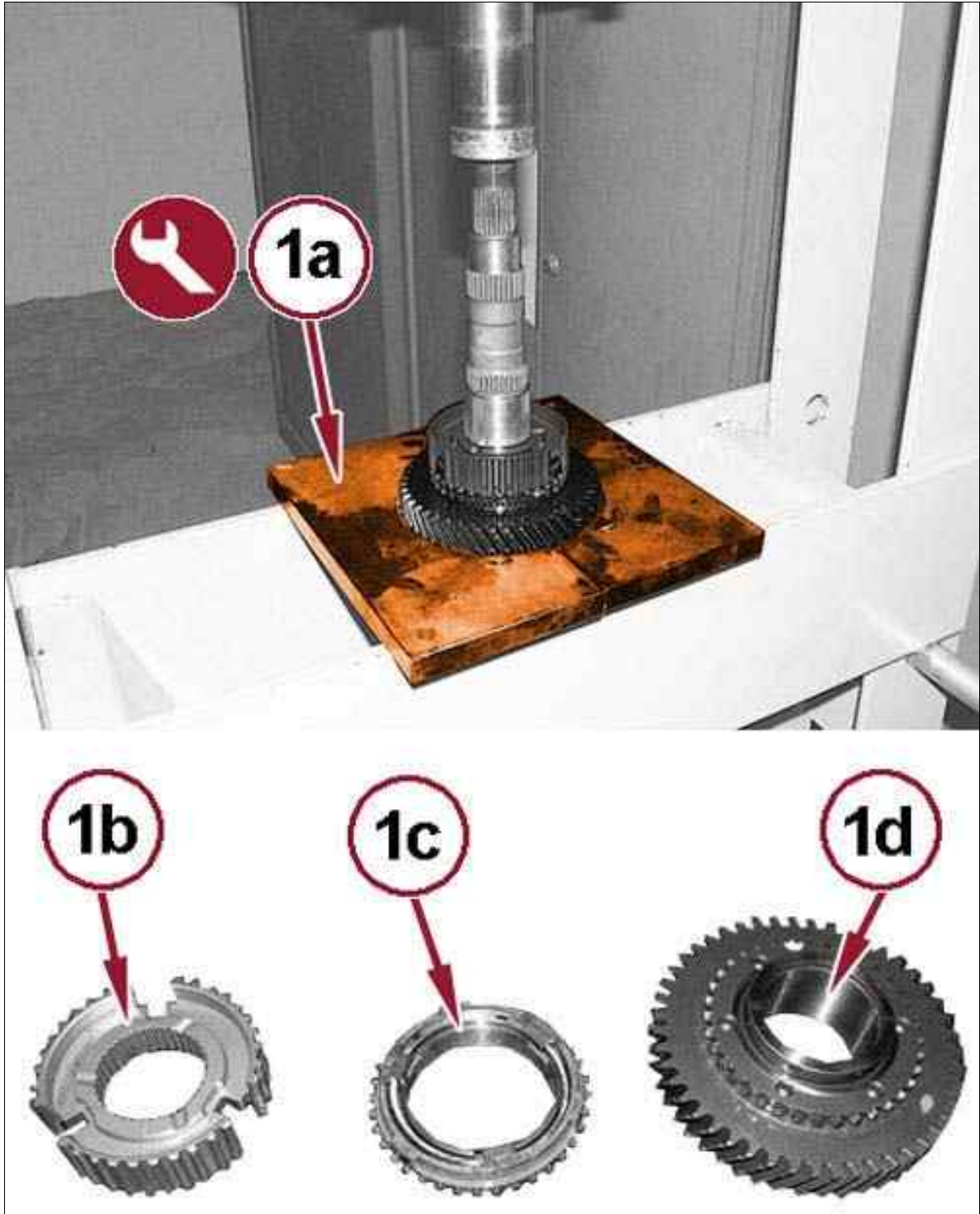
Fig 40: 1st-2nd Reverse Synchronizer Sleeve & Synchronizer Detents



Courtesy of CHRYSLER GROUP, LLC

7. Remove the 1st-2nd and reverse synchronizer sleeve (1).
8. Remove the synchronizer detents (2).
9. Remove and **DISCARD** the 1st-2nd and reverse synchronizer hub snap ring (3).

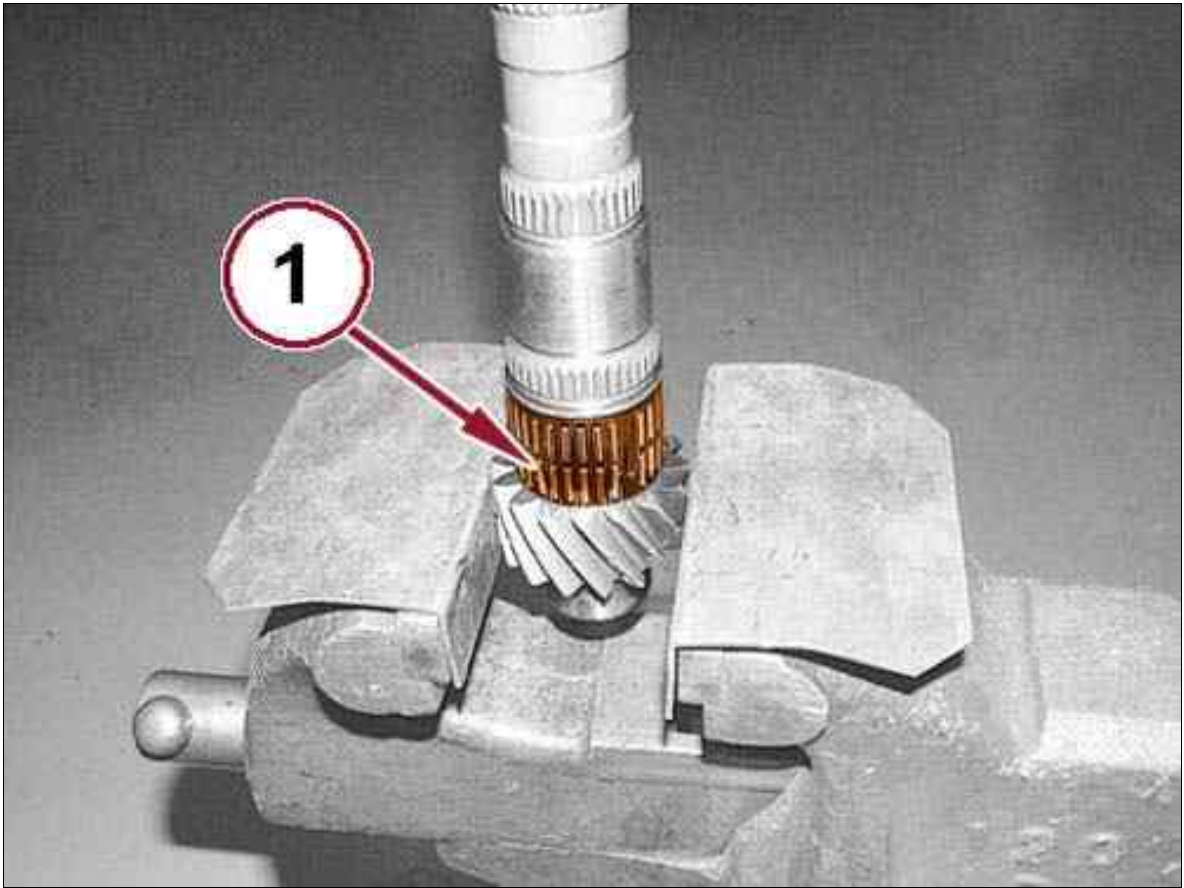
Fig 41: 1st-2nd Reverse Synchronizer Hub, 1st Gear Synchronizer Ring & 1st Gear Driven Gear & Special Tool



Courtesy of CHRYSLER GROUP, LLC

10. With a hydraulic press, use tool 2000005000 (1a) to remove the 1st-2nd and reverse synchronizer hub (1b), the 1st gear synchronizer ring (1c) and the 1st gear driven gear (1d).

Fig 42: Needle Bearing



Courtesy of CHRYSLER GROUP, LLC

11. Remove the needle bearing (1) for the 1st gear driven gear.
12. The output shaft front bearing inner race cannot be serviced; if worn or damaged, replace the output shaft.

Fig 43: Rear Bearing, Spacer, 4th Gear Drive Gear & Special Tool



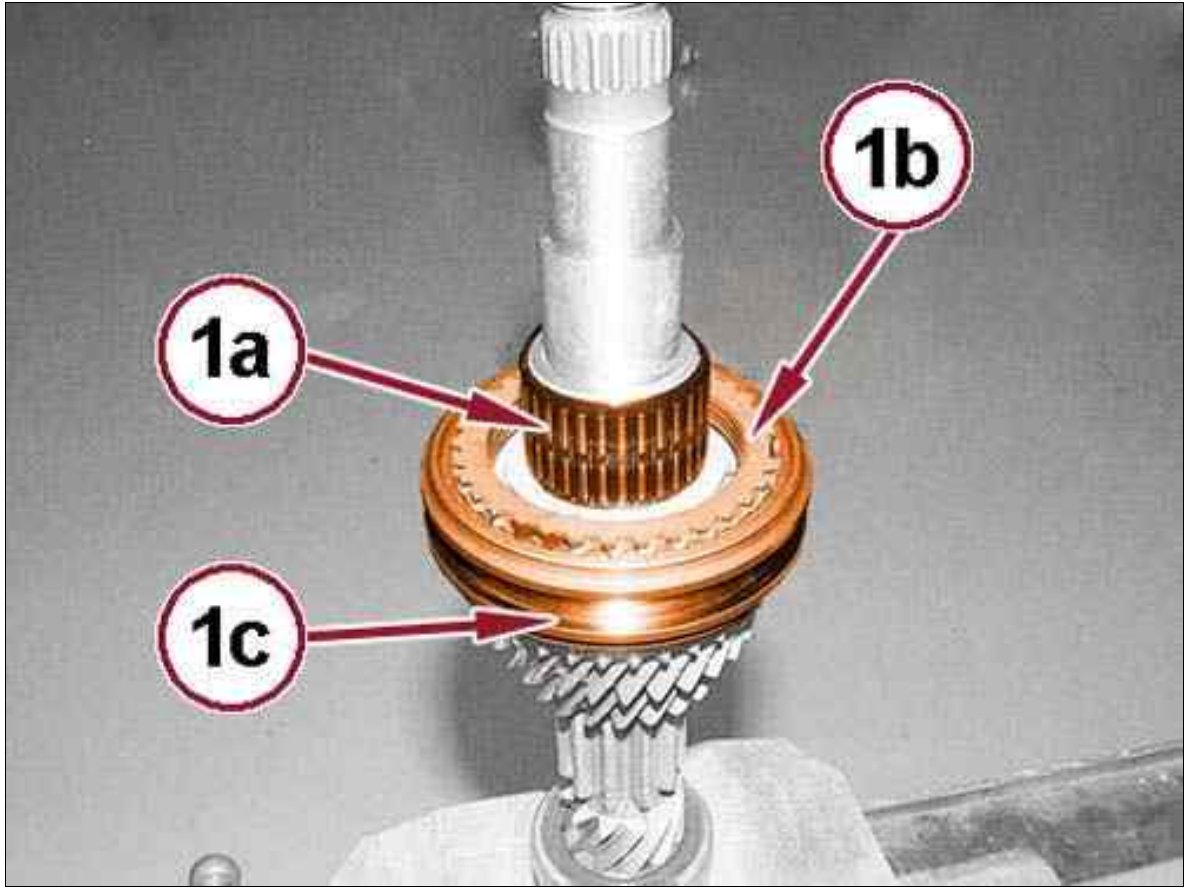
Courtesy of CHRYSLER GROUP, LLC

13. Position the input shaft in a suitable hydraulic press using the tool 1870899400 (1a), remove the rear bearing (1b), the spacer (1c) and the 4th gear drive gear (1d).

INPUT SHAFT DISASSEMBLY

1. Position the input shaft in a vice with protective, non marring jaw covers.

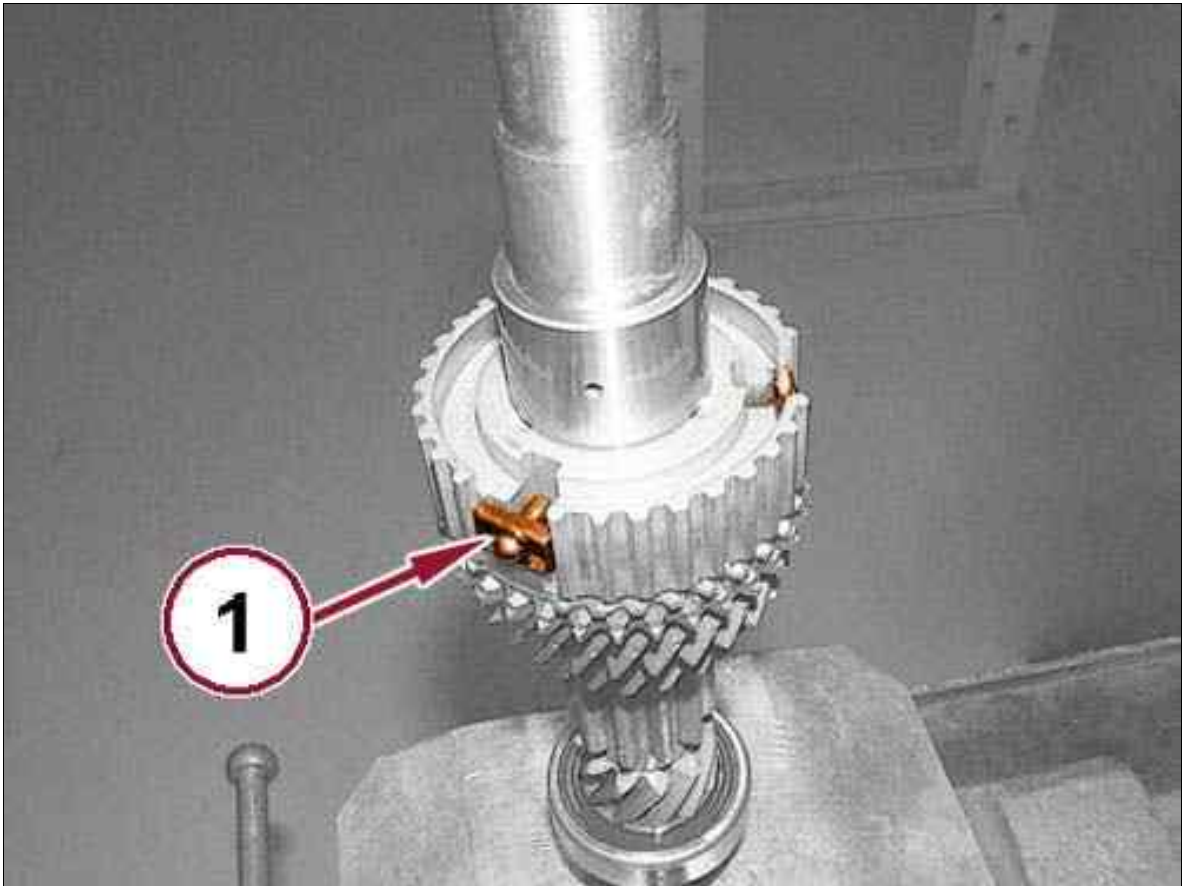
Fig 44: 4th Gear Drive Gear Needle Bearing, 4th Gear Synchronizer Ring & 3rd And 4th Gear Synchronizer Sleeve



Courtesy of CHRYSLER GROUP, LLC

2. Remove the 4th gear drive gear needle bearing (1a), the 4th gear synchronizer ring (1b) and the 3rd and 4th gear synchronizer sleeve (1c).

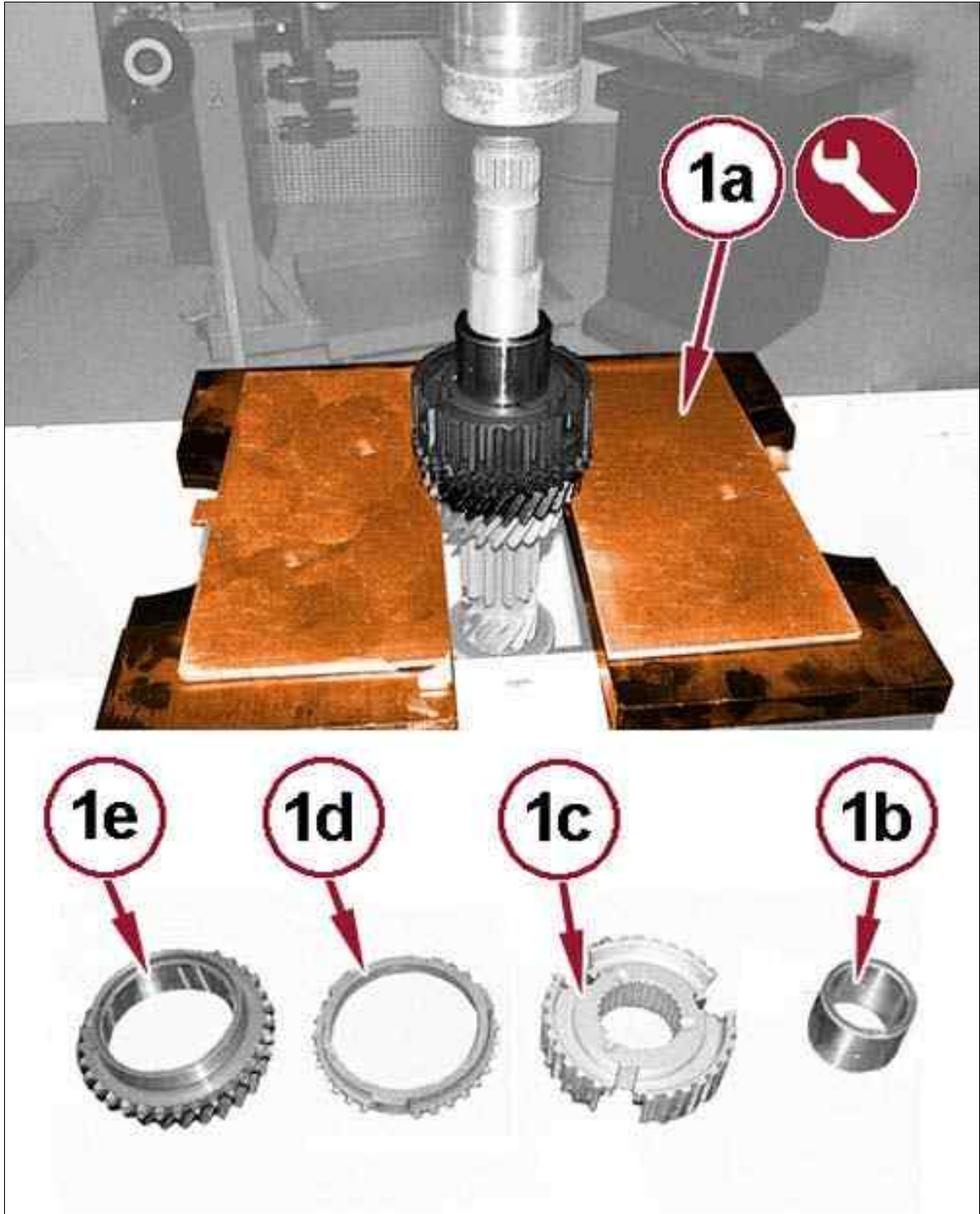
Fig 45: Synchronizer Detents



Courtesy of CHRYSLER GROUP, LLC

3. Remove the synchronizer detents (1).

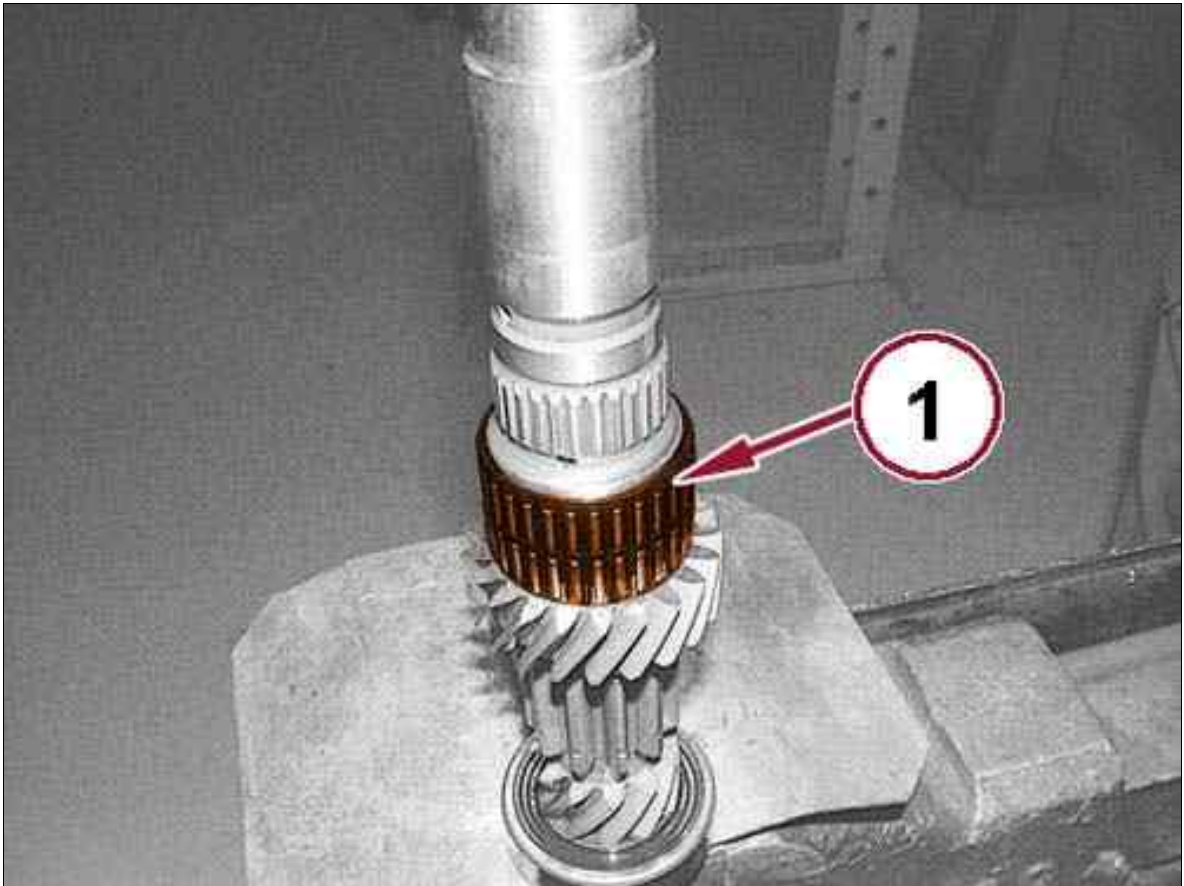
Fig 46: 4th Gear Drive Gear Bushing, 3rd And 4th Gear Synchronizer Hub, 3rd Gear Synchronizer Ring & 3rd Speed Drive Gear



Courtesy of CHRYSLER GROUP, LLC

4. With a hydraulic press, use the tool 2000005000 (1a) to remove the 4th gear drive gear bushing (1b), the 3rd and 4th gear synchronizer hub (1c), the 3rd gear synchronizer ring (1d) and the 3rd speed drive gear (1e).

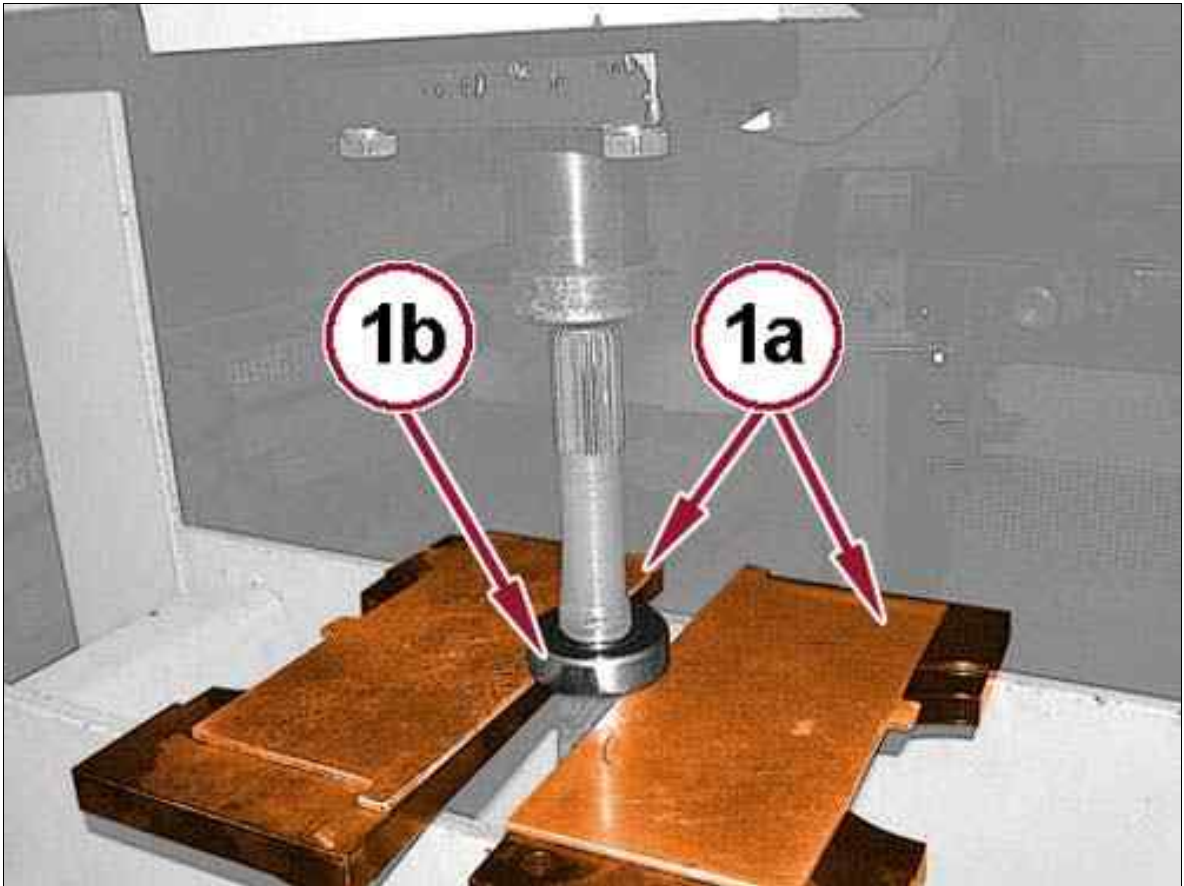
Fig 47: 3rd Speed Drive Gear Needle Bearing



Courtesy of CHRYSLER GROUP, LLC

5. Remove the 3rd speed drive gear needle bearing (1).

Fig 48: Input Shaft Front Bearing & Special Tool



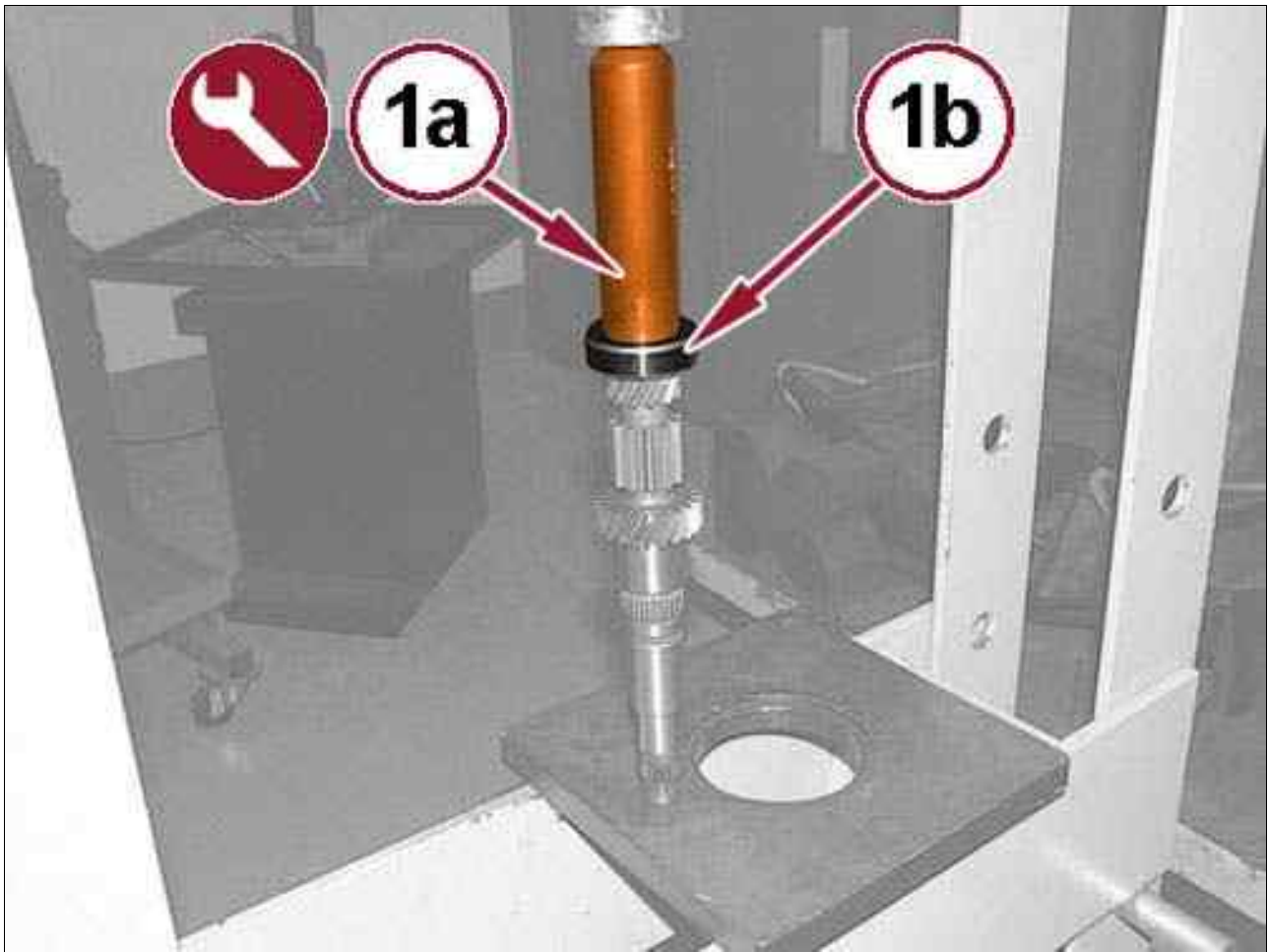
Courtesy of CHRYSLER GROUP, LLC

6. With a hydraulic press using the tool 2000005000 (1a), remove the input shaft front bearing (1b).

DISASSEMBLY AND ASSEMBLY > DISASSEMBLY AND ASSEMBLY > ASSEMBLY

Thoroughly clean and inspect all parts. Replace any component that has excess wear or is damaged as necessary.

Fig 1: Input Shaft Front Bearing & Special Tool

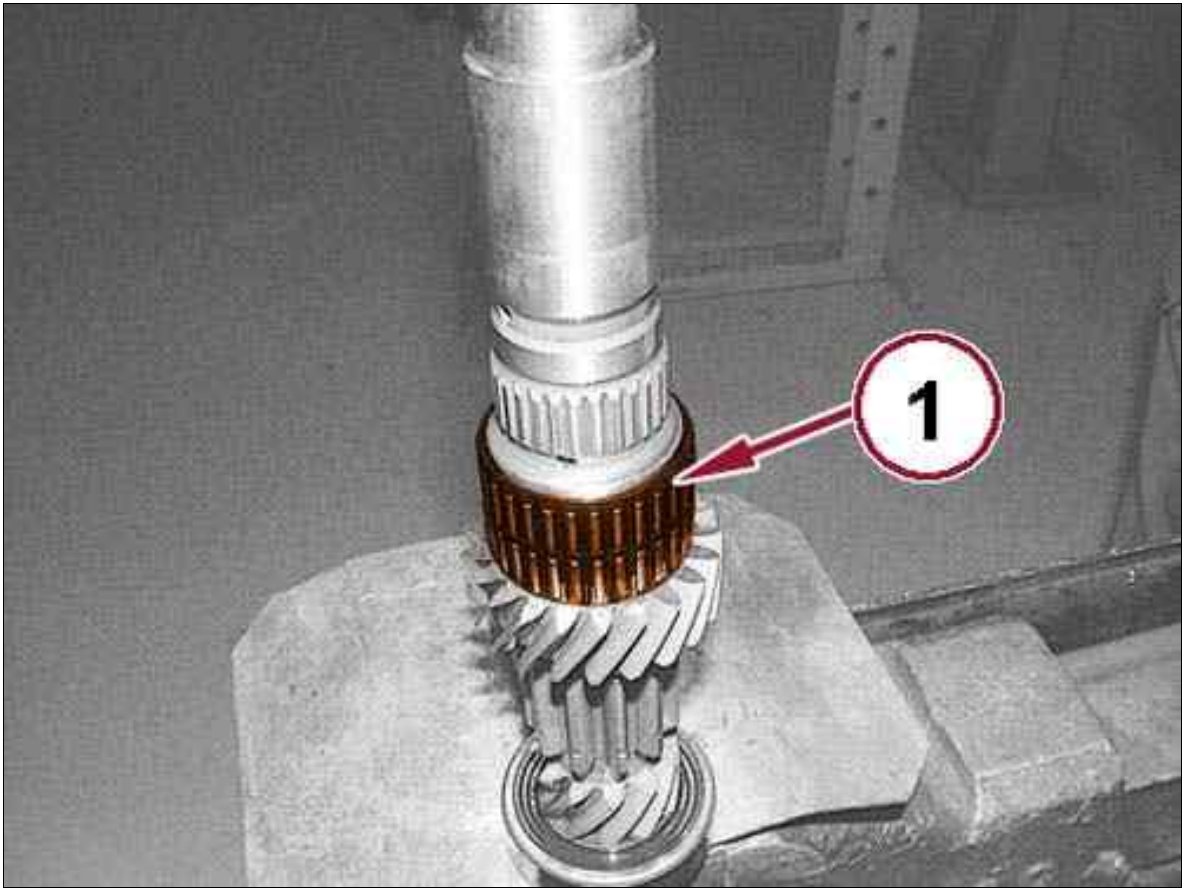


Courtesy of CHRYSLER GROUP, LLC

INPUT SHAFT ASSEMBLY

1. Using a hydraulic press and the tool 1870659000 (1a), install the input shaft front bearing (1b).

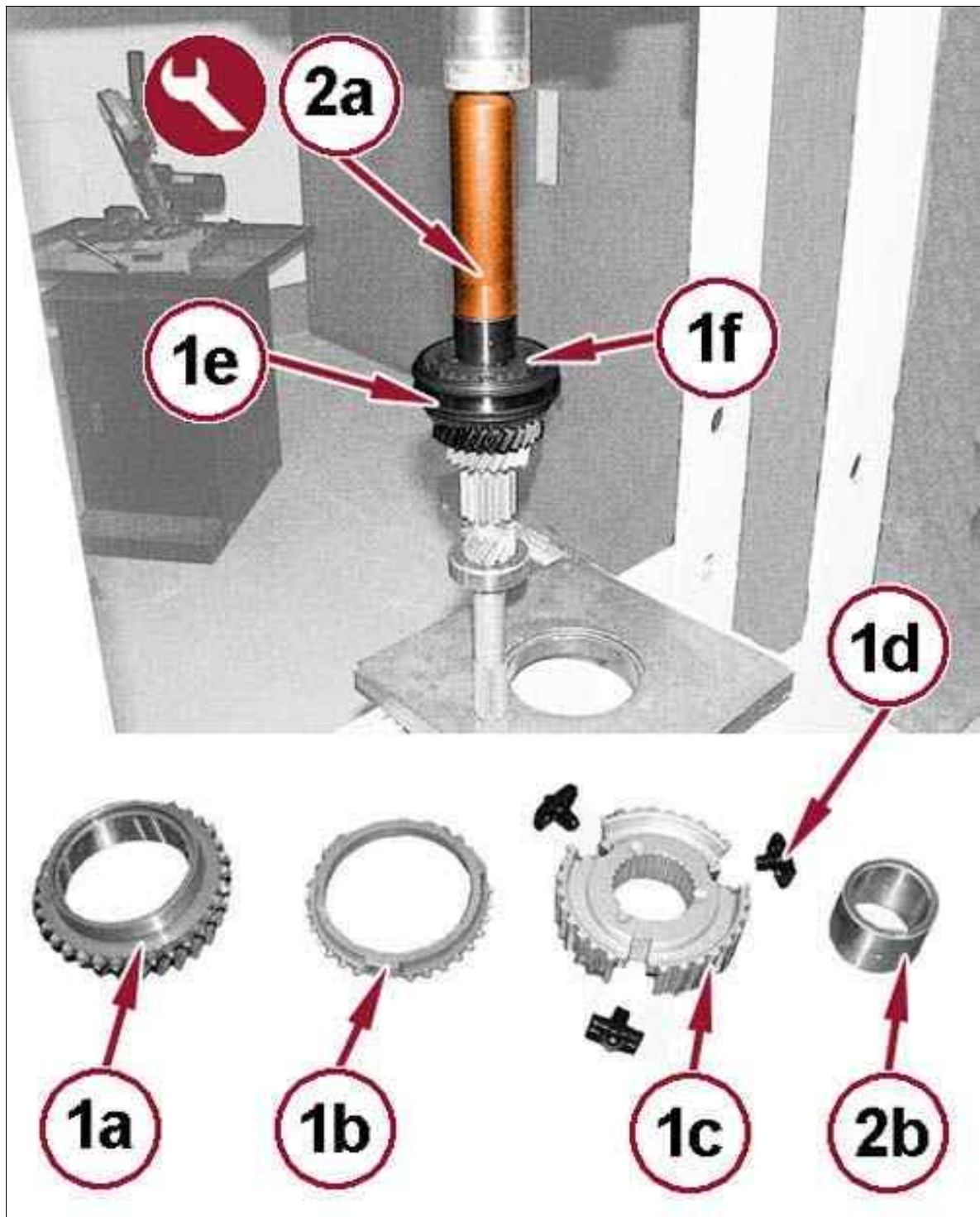
Fig 2: 3rd Speed Drive Gear Needle Bearing



Courtesy of CHRYSLER GROUP, LLC

2. Install the 3rd speed drive gear needle bearing (1).

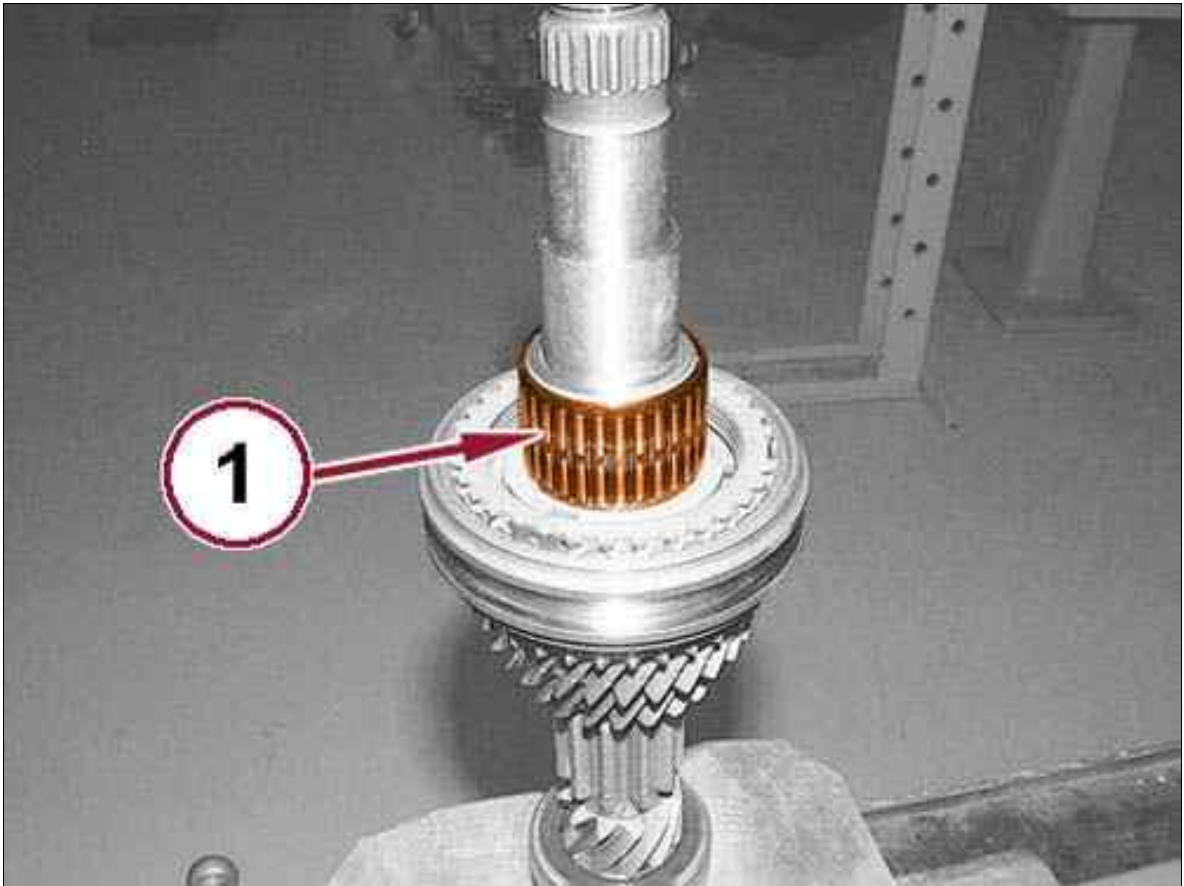
Fig 3: Exploded View Of 3rd Speed Drive Gear Components



Courtesy of CHRYSLER GROUP, LLC

3. Install the 3rd speed drive gear (1a), the 3rd gear synchronizer ring (1b), the 3rd and 4th gear synchronizer hub (1c), the synchronizer detents (1d), the 3rd and 4th synchronizer sleeve (1e) and the 4th speed synchronizer ring (1f).
4. Using a hydraulic press and the tool 1870659000 (2a), install the bushing for the 4th speed drive gear (2b).

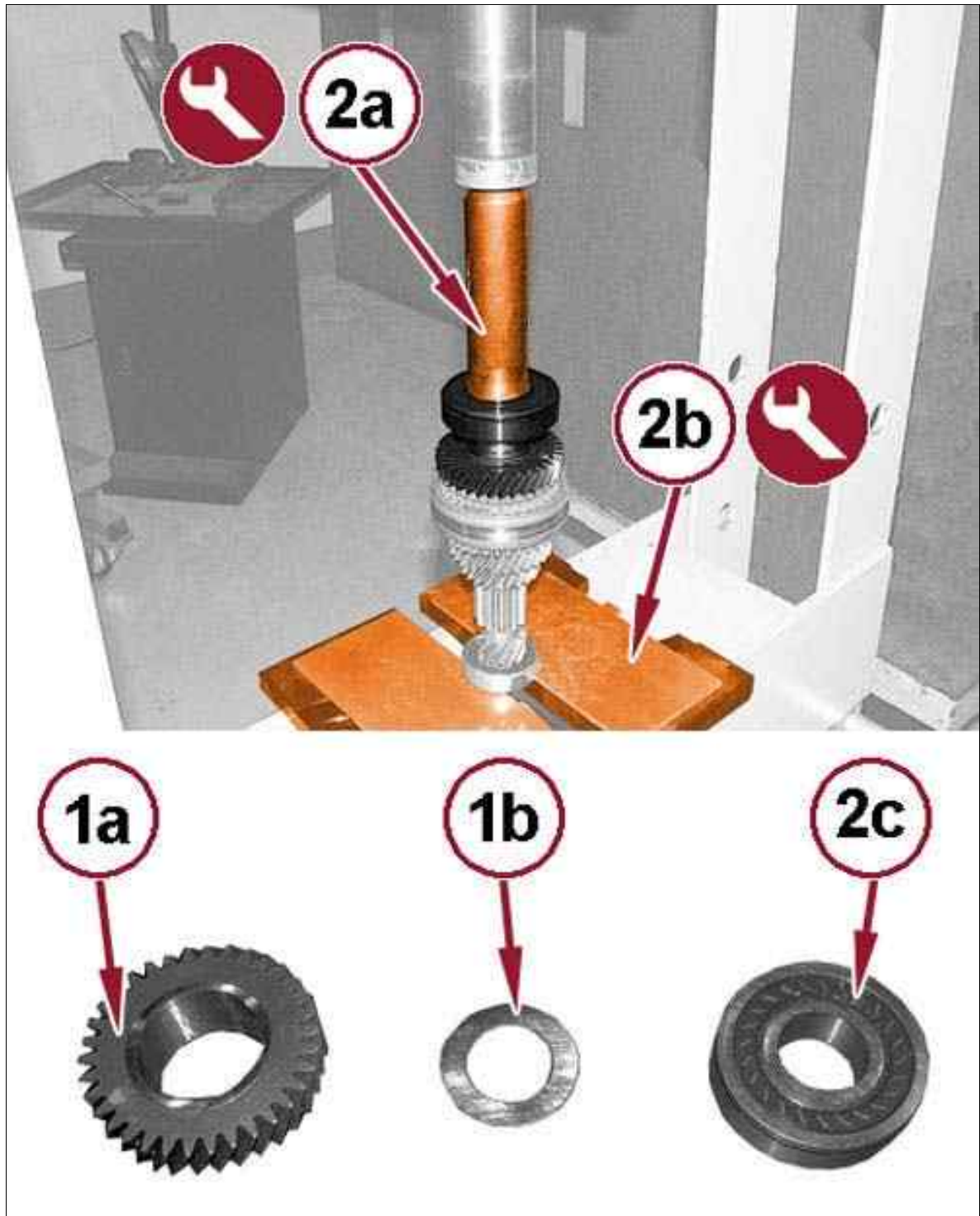
Fig 4: 4th Speed Drive Gear Needle Bearing



Courtesy of CHRYSLER GROUP, LLC

5. Install the 4th speed drive gear needle bearing (1).

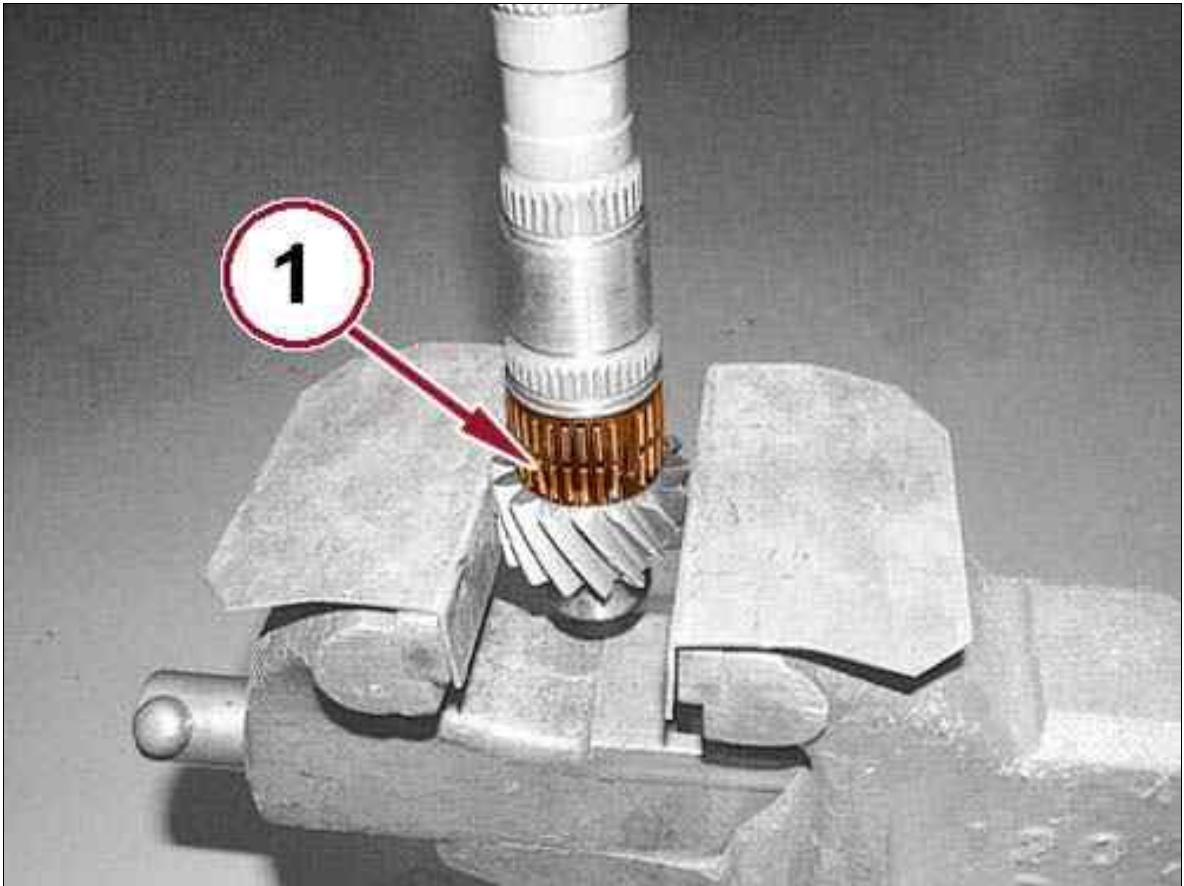
Fig 5: 4th Speed Drive Gear, Shim, Rear Bearing & Special Tools



Courtesy of CHRYSLER GROUP, LLC

6. Install the 4th speed drive gear (1a) and the shim (1b).
7. Using a hydraulic press and the tools 1870659000 (2a) and 2000005000 (2b) install the rear bearing (2c).

Fig 6: 1st Speed Driven Gear Needle Bearing

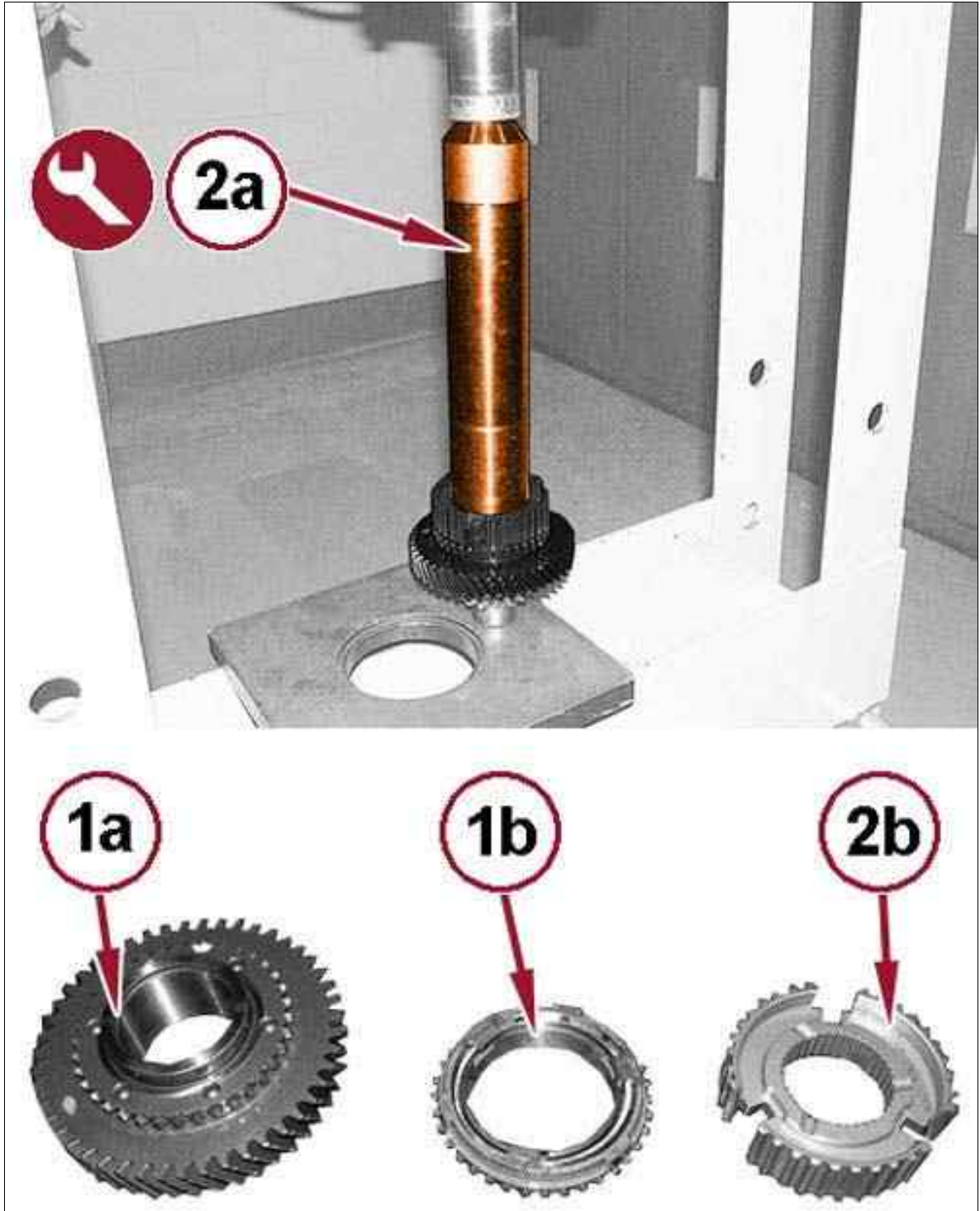


Courtesy of CHRYSLER GROUP, LLC

OUTPUT SHAFT ASSEMBLY

1. Install the 1st speed driven gear needle bearing (1).

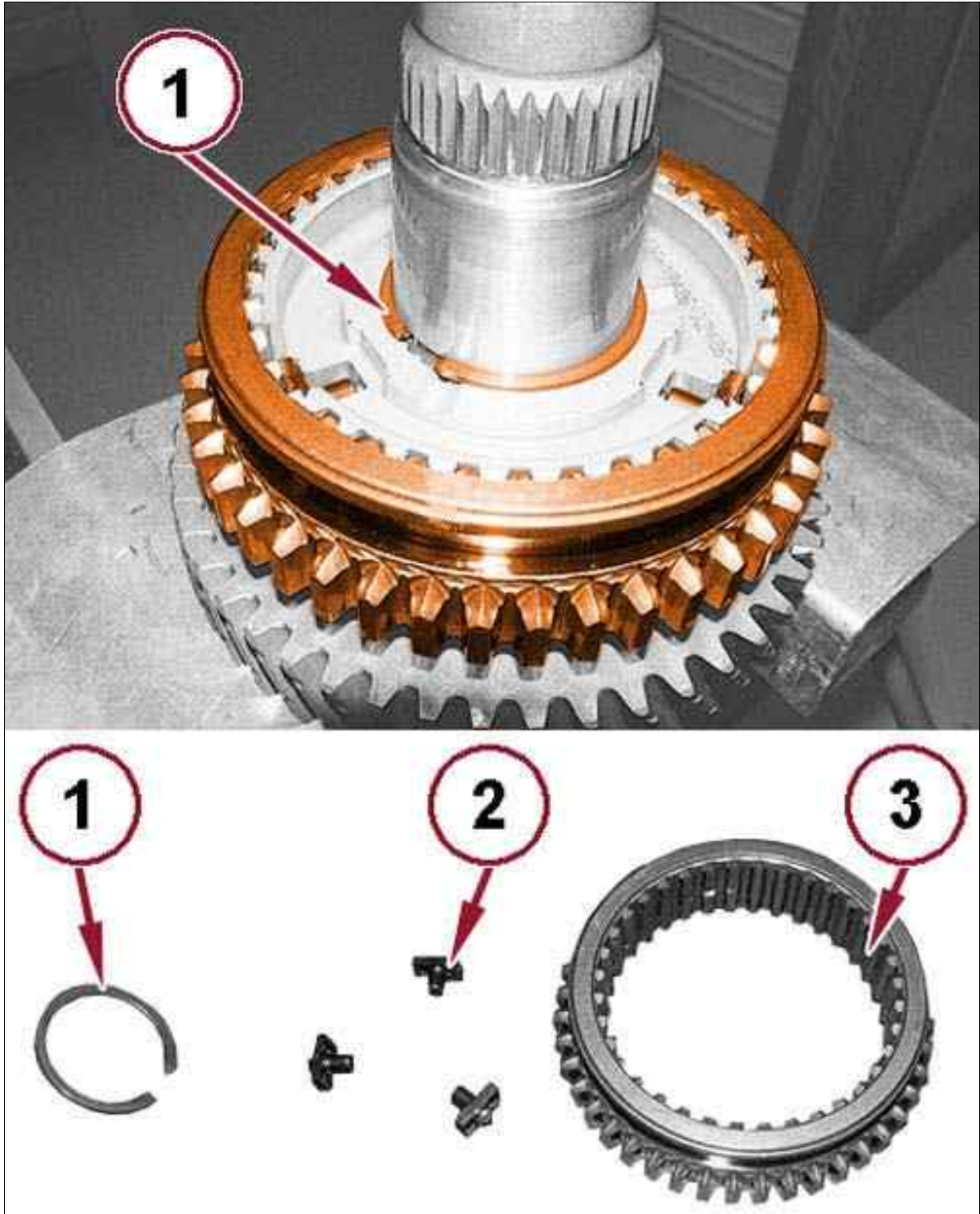
Fig 7: 1st Speed Driven Gear, Synchronizer Ring, 1st-2nd And Reverse Synchronizer Hub & Special Tool



Courtesy of CHRYSLER GROUP, LLC

2. Install the 1st speed driven gear (1a) and 1st gear synchronizer ring (1b).
3. Using a hydraulic press and the tool 1870658000 (2a), install the 1st-2nd and reverse synchronizer hub (2b).

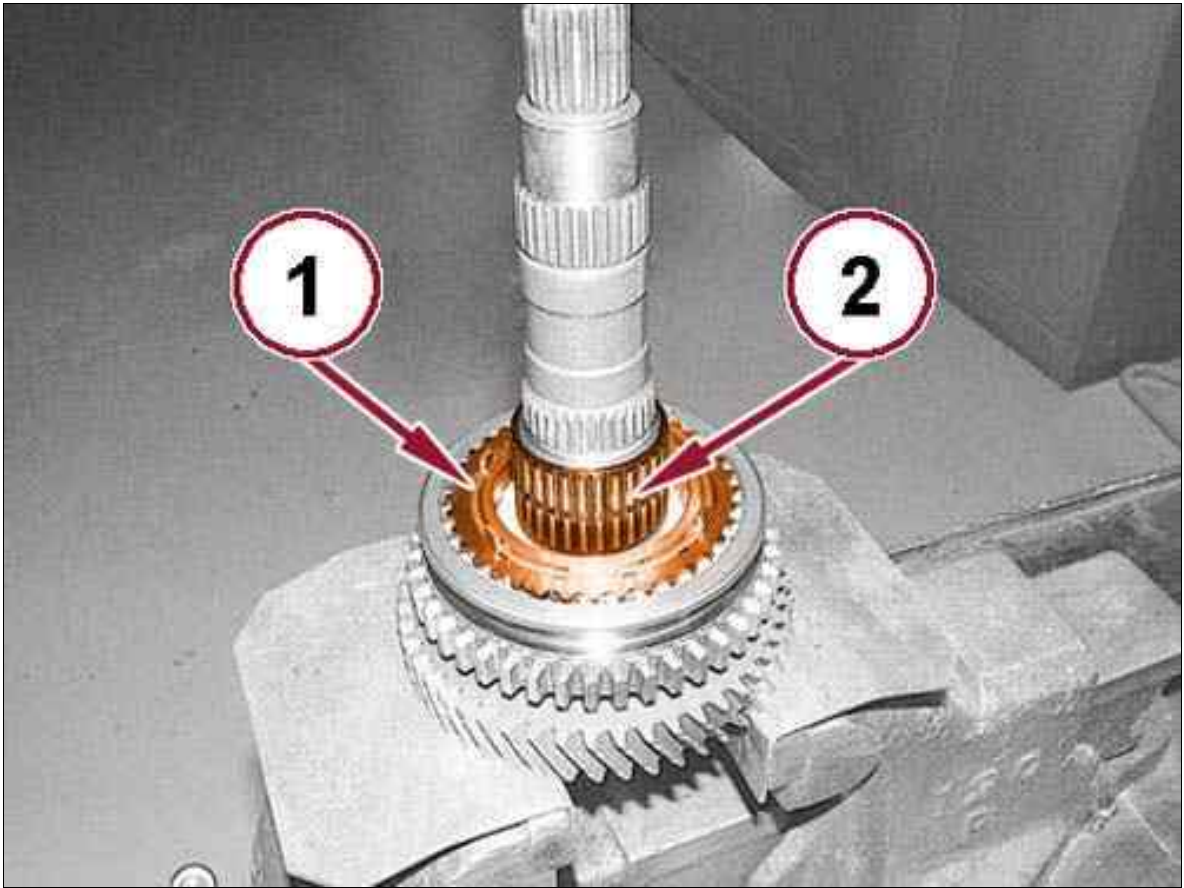
Fig 8: 1st-2nd Reverse Synchronizer Hub Snap Ring, Synchronizer Detents & Reverse Synchronizer Sleeve



Courtesy of CHRYSLER GROUP, LLC

4. Position the output shaft in a vice with protective, non marring jaw covers.
5. Install a **NEW** 1st-2nd and reverse synchronizer hub snap ring (1).
6. Install the synchronizer detents (2) in the 1st-2nd and reverse synchronizer hub.
7. Install the 1st-2nd and reverse synchronizer sleeve (3).

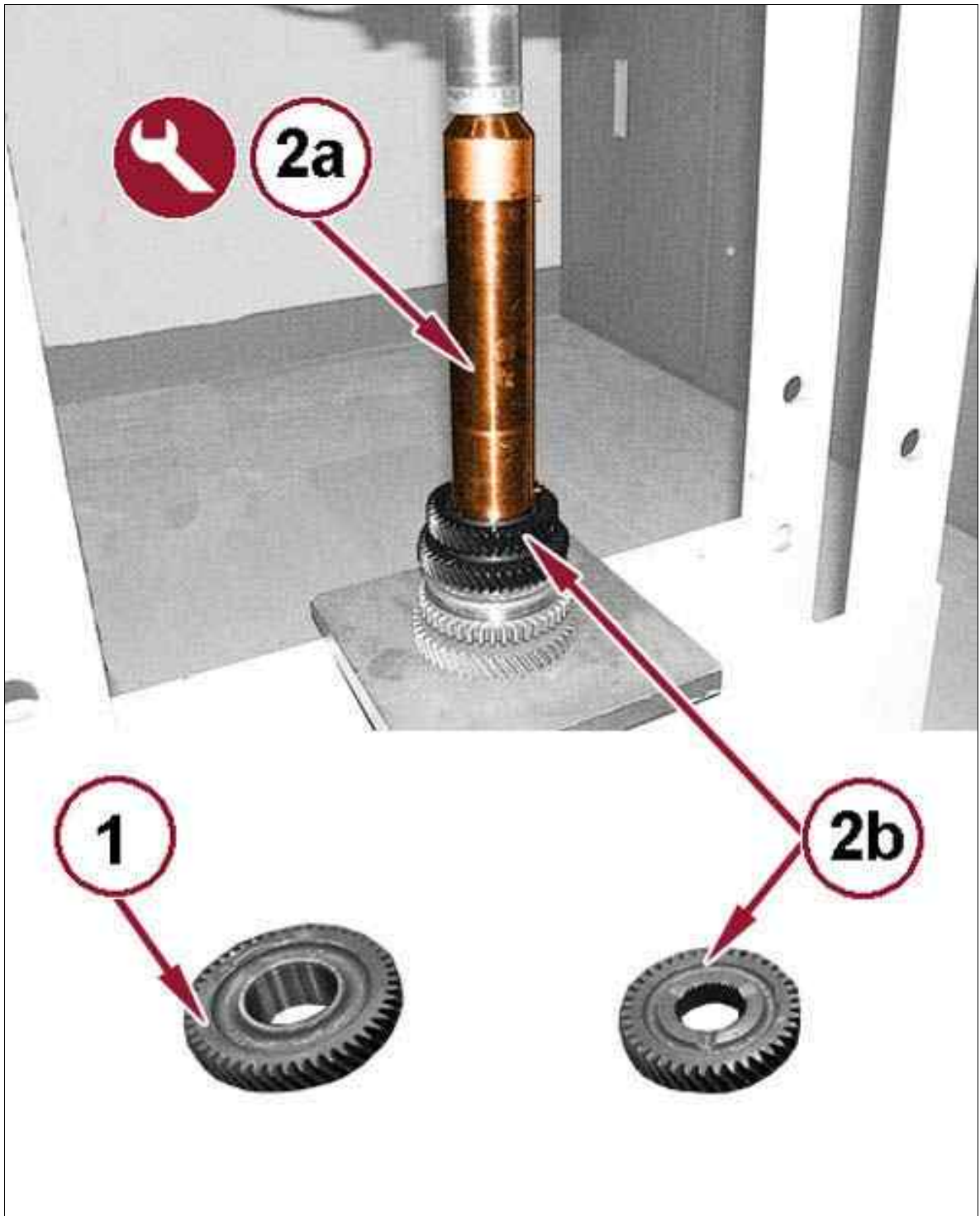
Fig 9: 2nd Gear Synchronizer Rings & 2nd Speed Driven Gear Needle Bearing



Courtesy of CHRYSLER GROUP, LLC

8. Install the 2nd gear synchronizer rings (1).
9. Install the 2nd speed driven gear needle bearing (2).

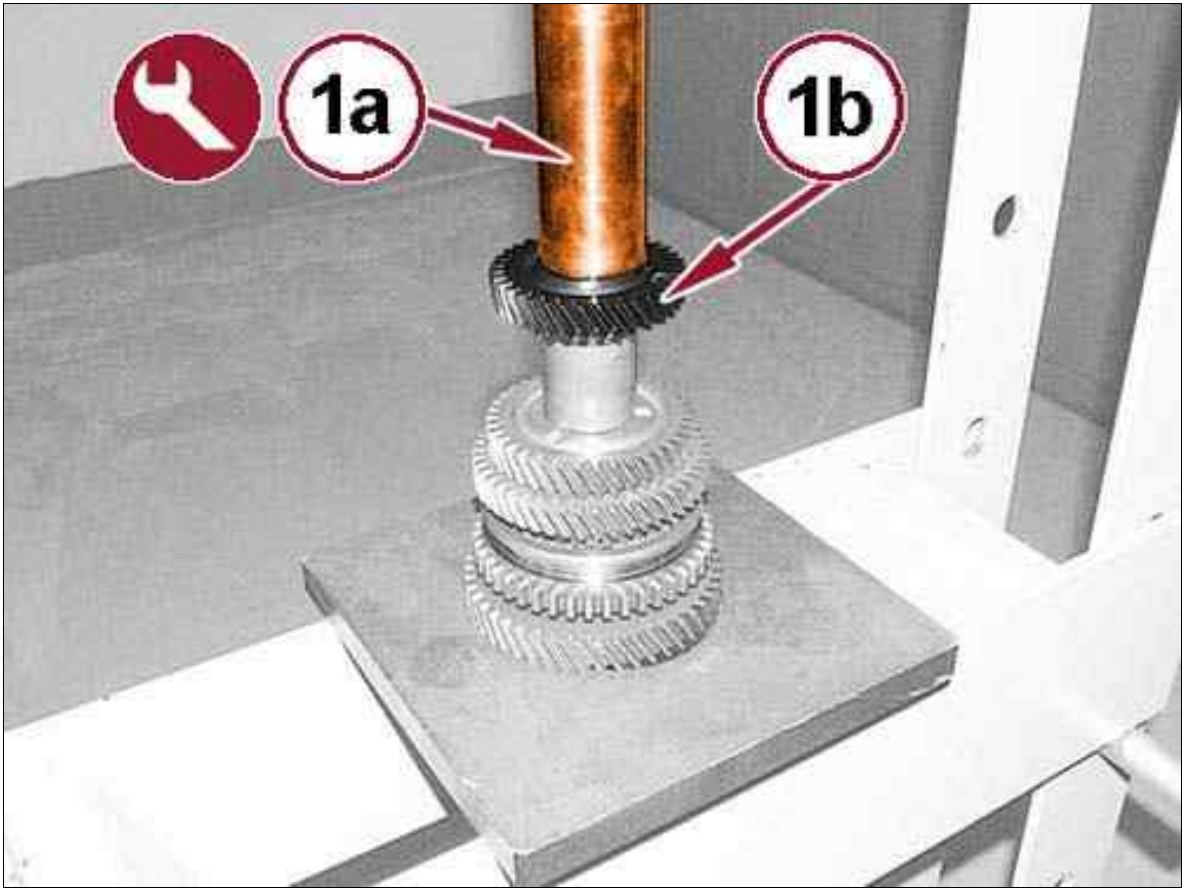
Fig 10: 2nd Speed Driven Gear



Courtesy of CHRYSLER GROUP, LLC

10. Install the 2nd speed driven gear (1).
11. Using a hydraulic press and the tool 1870658000 (2a), install the 3rd speed driven gear (2b).
12. Install the spacer between the 3rd and 4th gear.

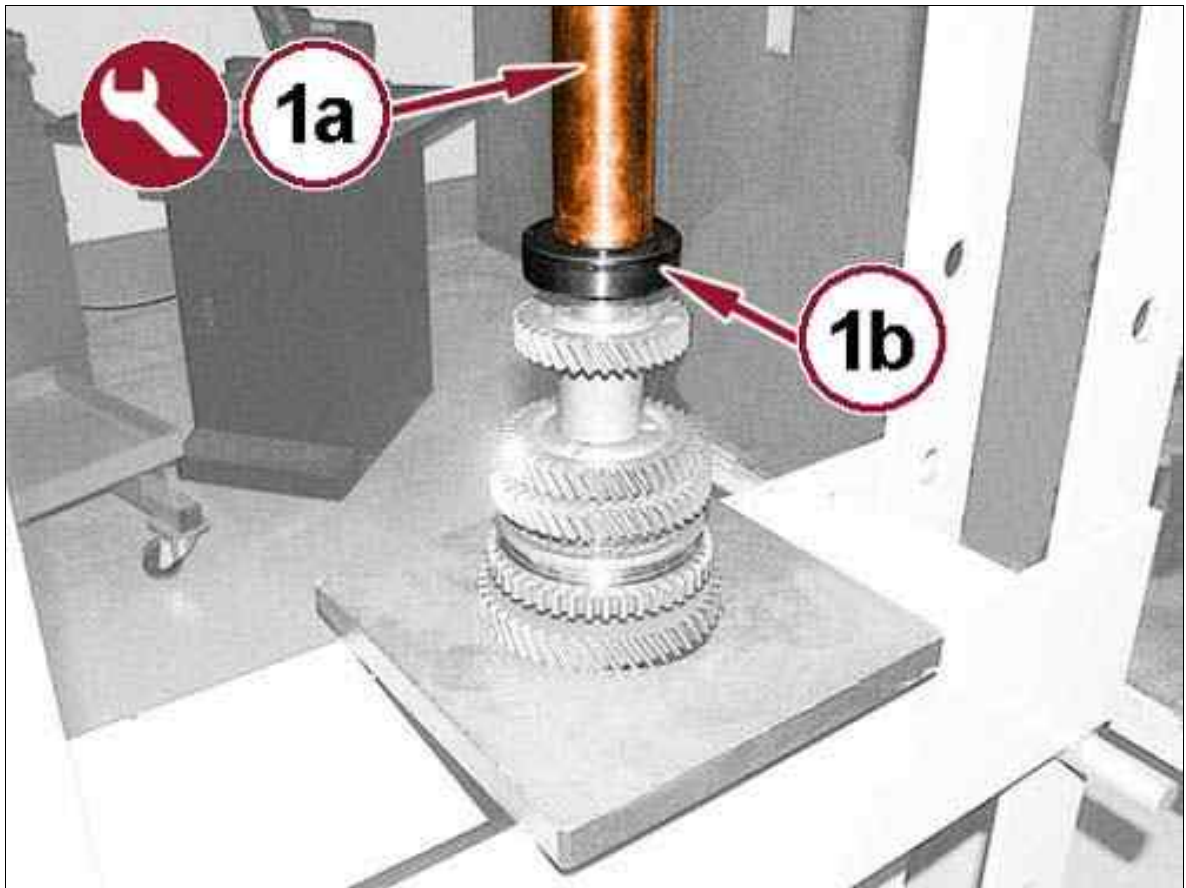
Fig 11: 4th Speed Driven Gear & Special Tool



Courtesy of CHRYSLER GROUP, LLC

13. Using a hydraulic press and the tool 1870465000 (1a), install the 4th speed driven gear (1b).

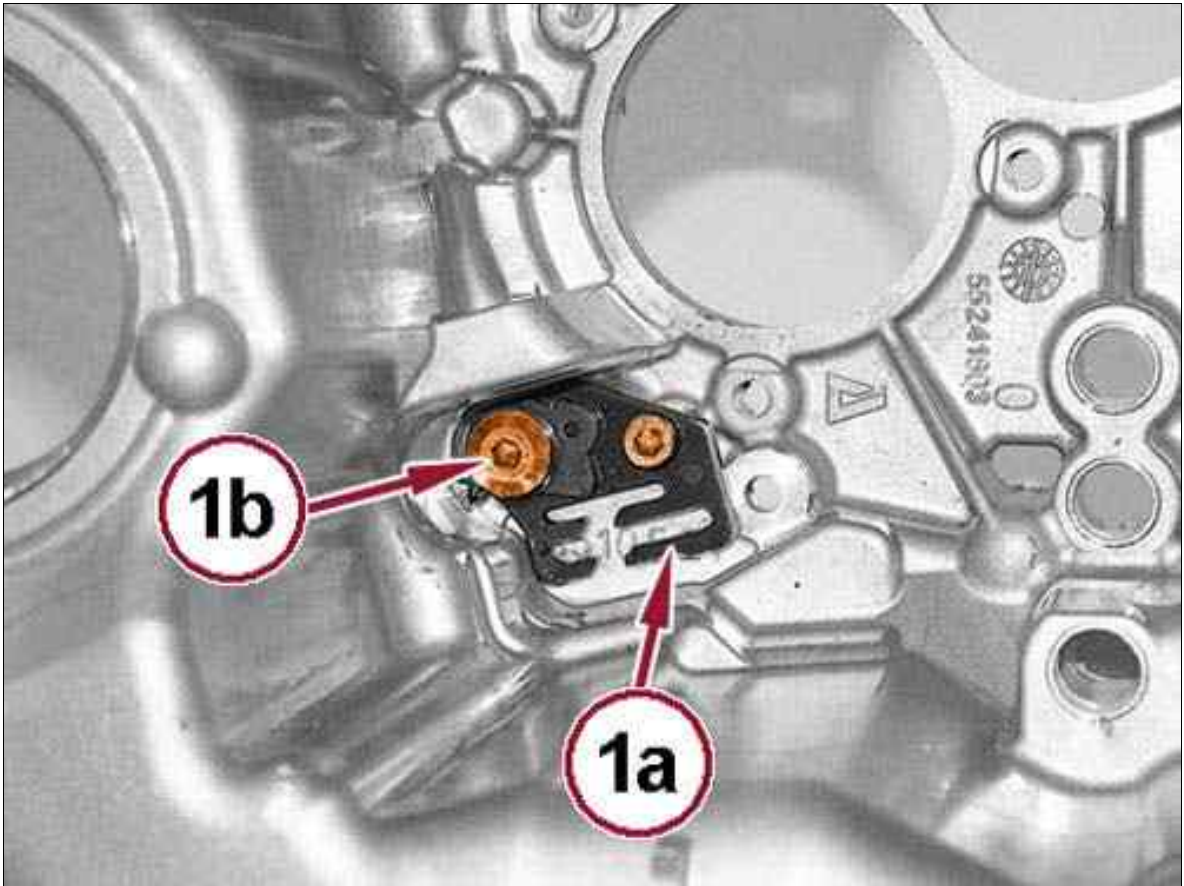
Fig 12: Rear Bearing & Special Tool



Courtesy of CHRYSLER GROUP, LLC

14. Using a hydraulic press and the tool 1870465000 (1a), install the rear bearing (1b).

Fig 13: Gear Control Drive Plate & Bolts

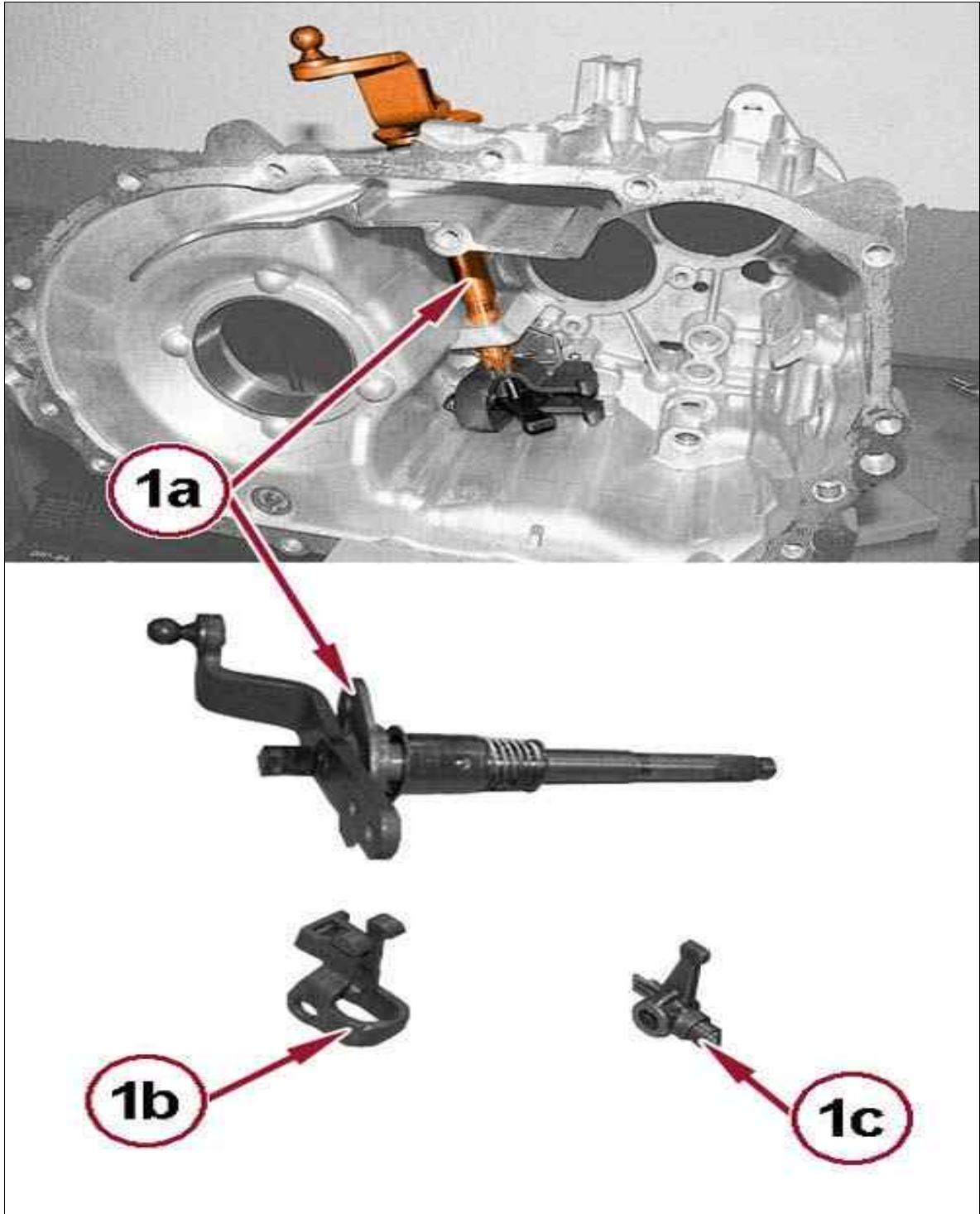


Courtesy of CHRYSLER GROUP, LLC

TRANSMISSION ASSEMBLY

1. Position the transmission case in a vice with protective, non marring jaw covers.
2. Place the gear control drive plate (1a) and tighten the bolts (1b).

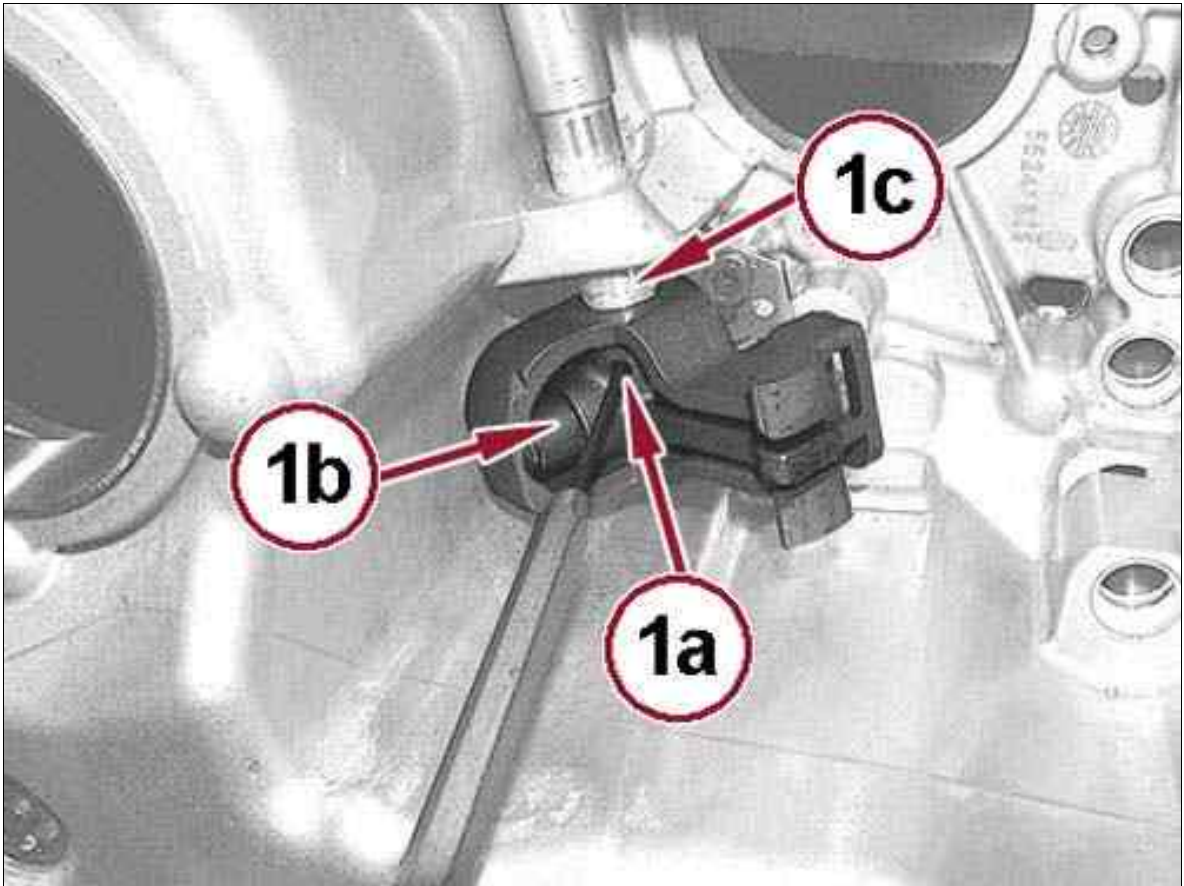
Fig 14: Gear Selector And Engagement Lever, Gear Selector, Engagement Rod Inner Mounting Bracket & Dog



Courtesy of CHRYSLER GROUP, LLC

3. Place the gear selector and engagement lever (1a) in its housing along with the gear selector and engagement rod inner mounting bracket (1b) and the dog (1c).

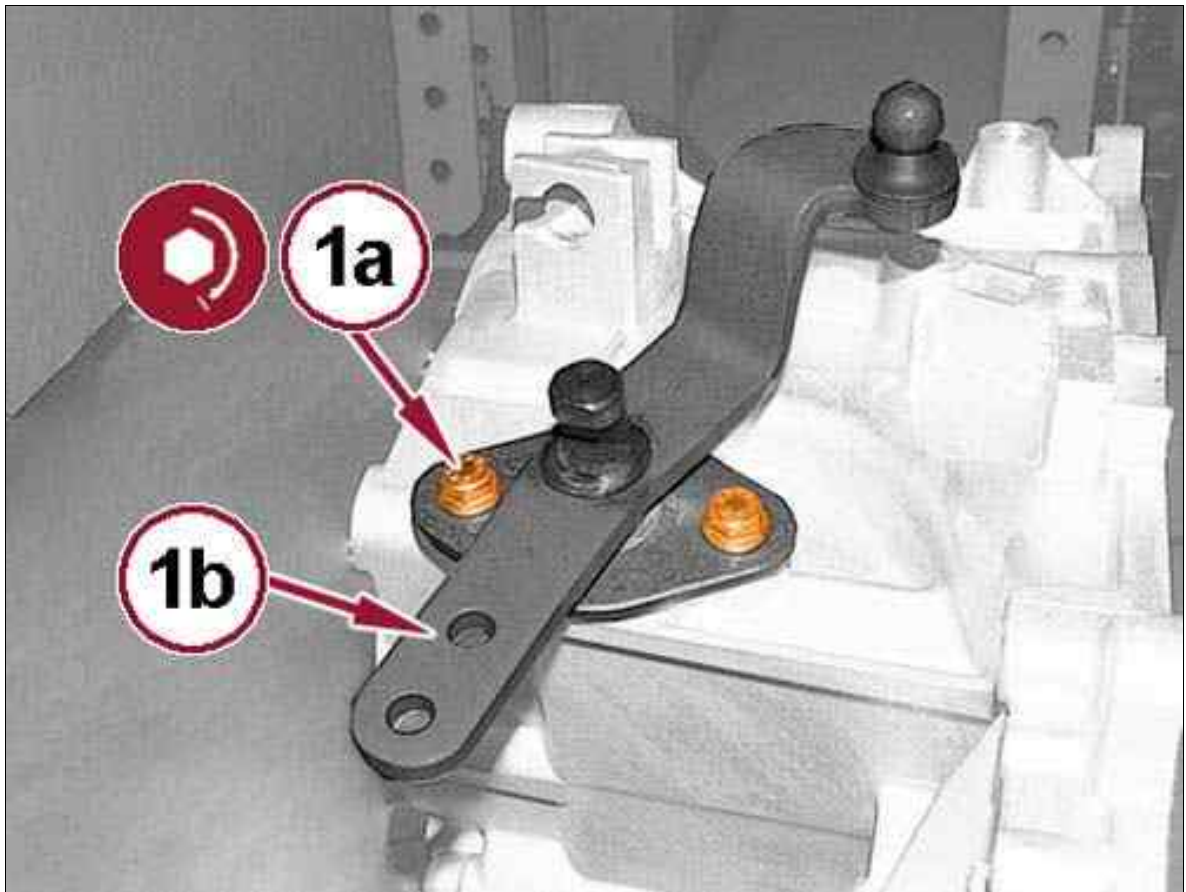
Fig 15: Pin, Gear Selector & Engagement Lever



Courtesy of CHRYSLER GROUP, LLC

4. Using a suitable punch, install the **NEW** pin (1a) securing the dog (1b) to the gear selector and engagement lever (1c).

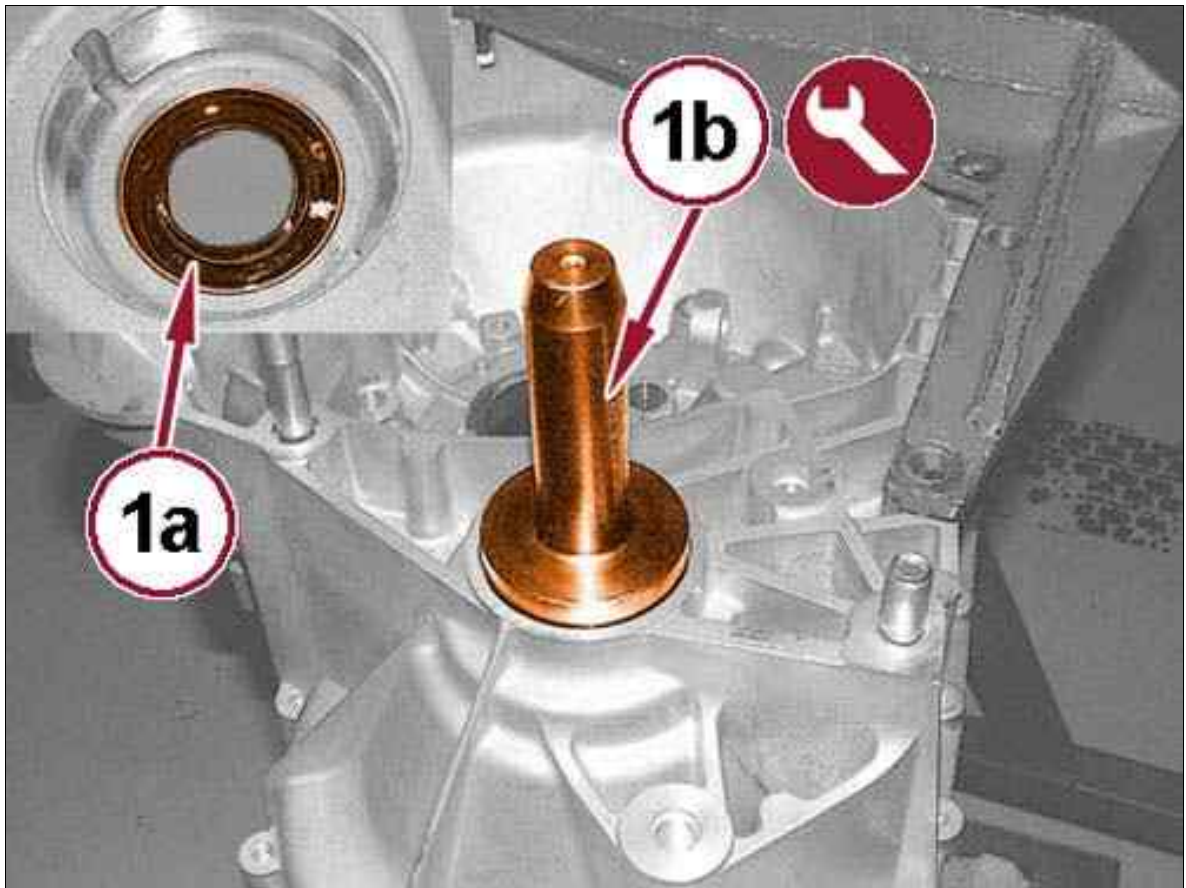
Fig 16: Gear Selector, Engagement Lever & Screws



Courtesy of CHRYSLER GROUP, LLC

5. Tighten the gear selector and engagement lever (1b) fixing screws (1a) to the proper TORQUE SPECIFICATIONS .

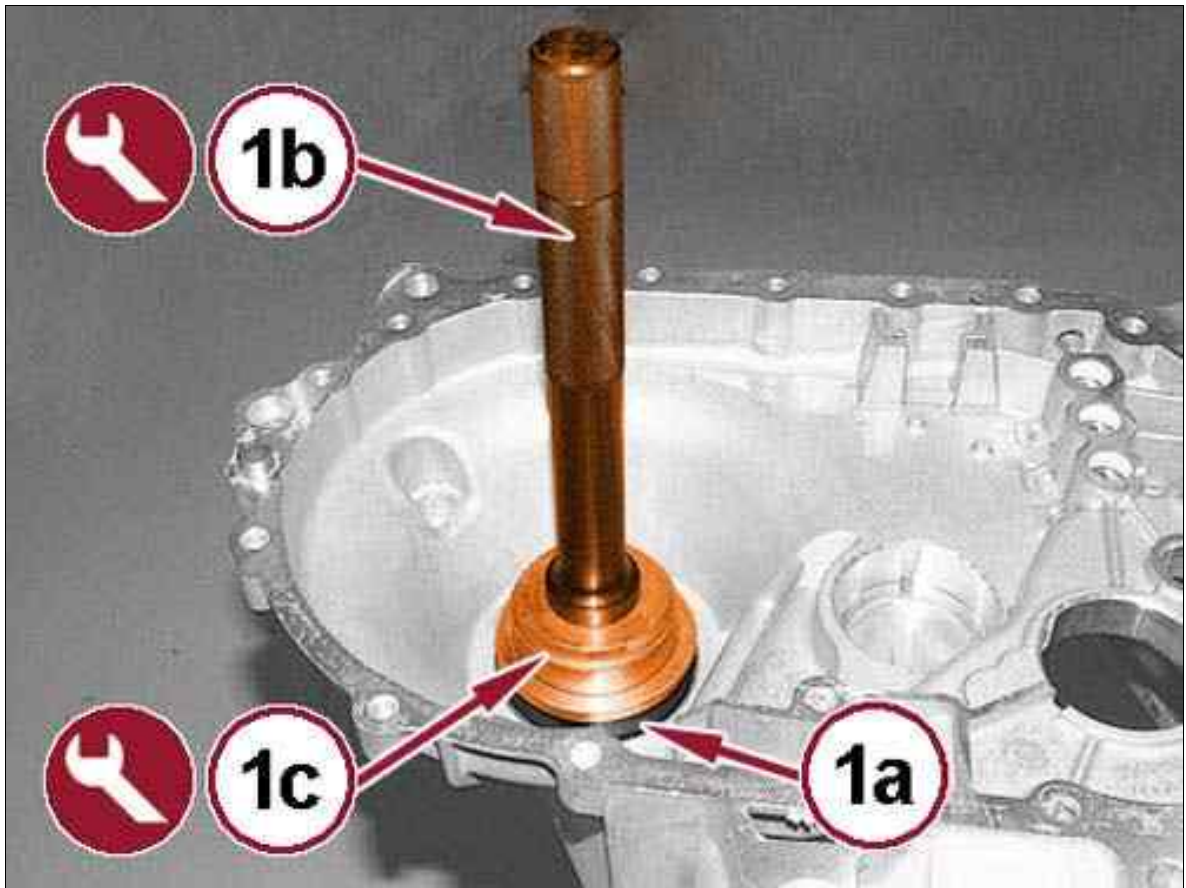
Fig 17: Right Side Half Shaft Seal & Special Tool



Courtesy of CHRYSLER GROUP, LLC

6. Install a **NEW** right side half shaft seal (1a) using the tool 1875016000 (1b).

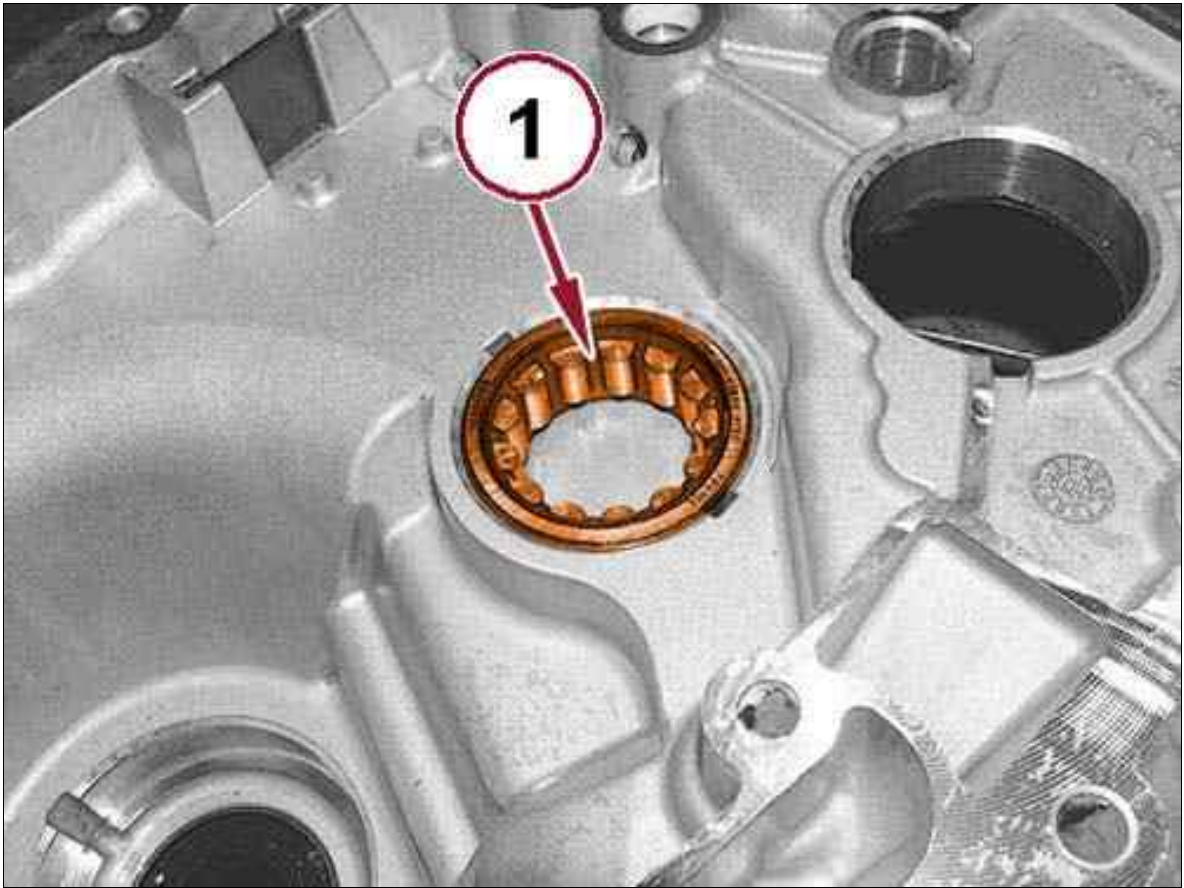
Fig 18: Outer Race & Special Tools



Courtesy of CHRYSLER GROUP, LLC

7. Install the outer race (1a) for the right side differential bearing using tools 1870898400 (1b) and 1874541000 (1c).

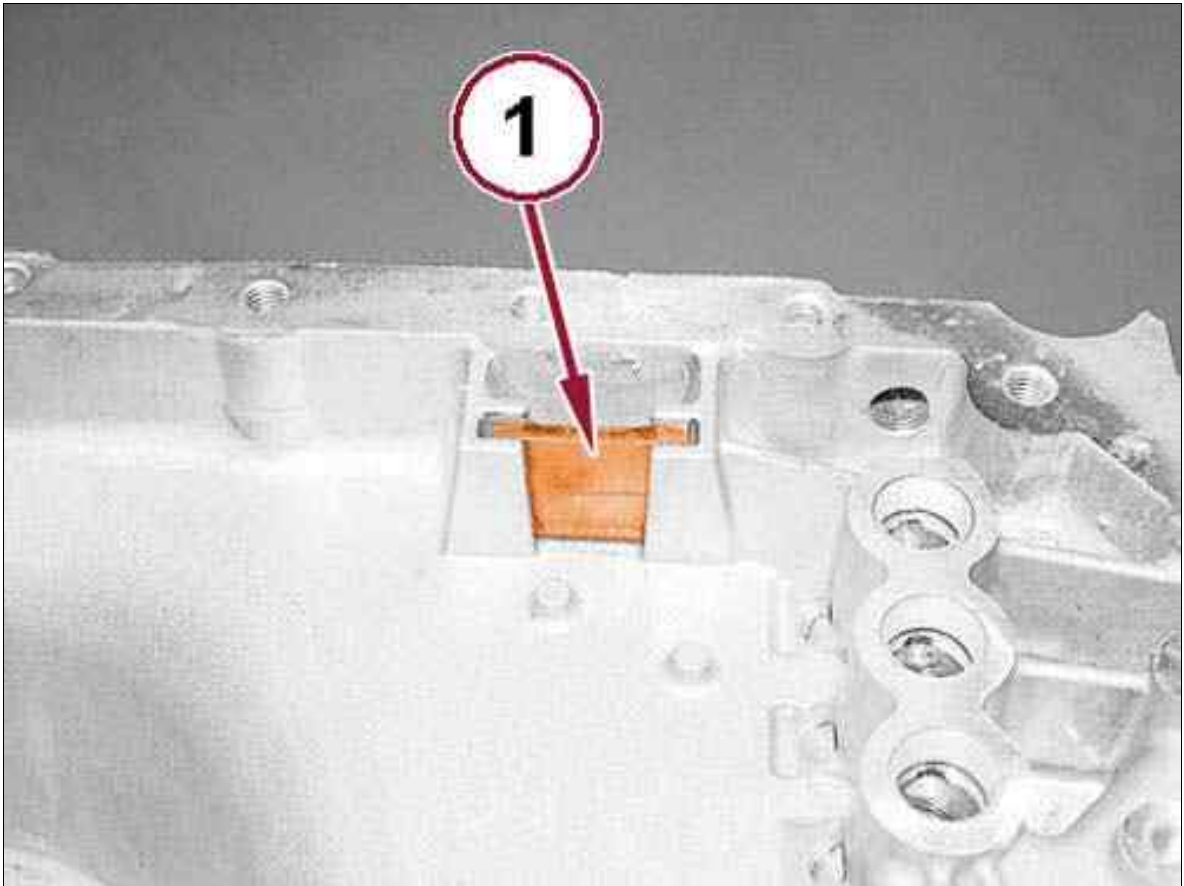
Fig 19: Output Shaft Front Bearing



Courtesy of CHRYSLER GROUP, LLC

8. Install the output shaft front bearing (1).

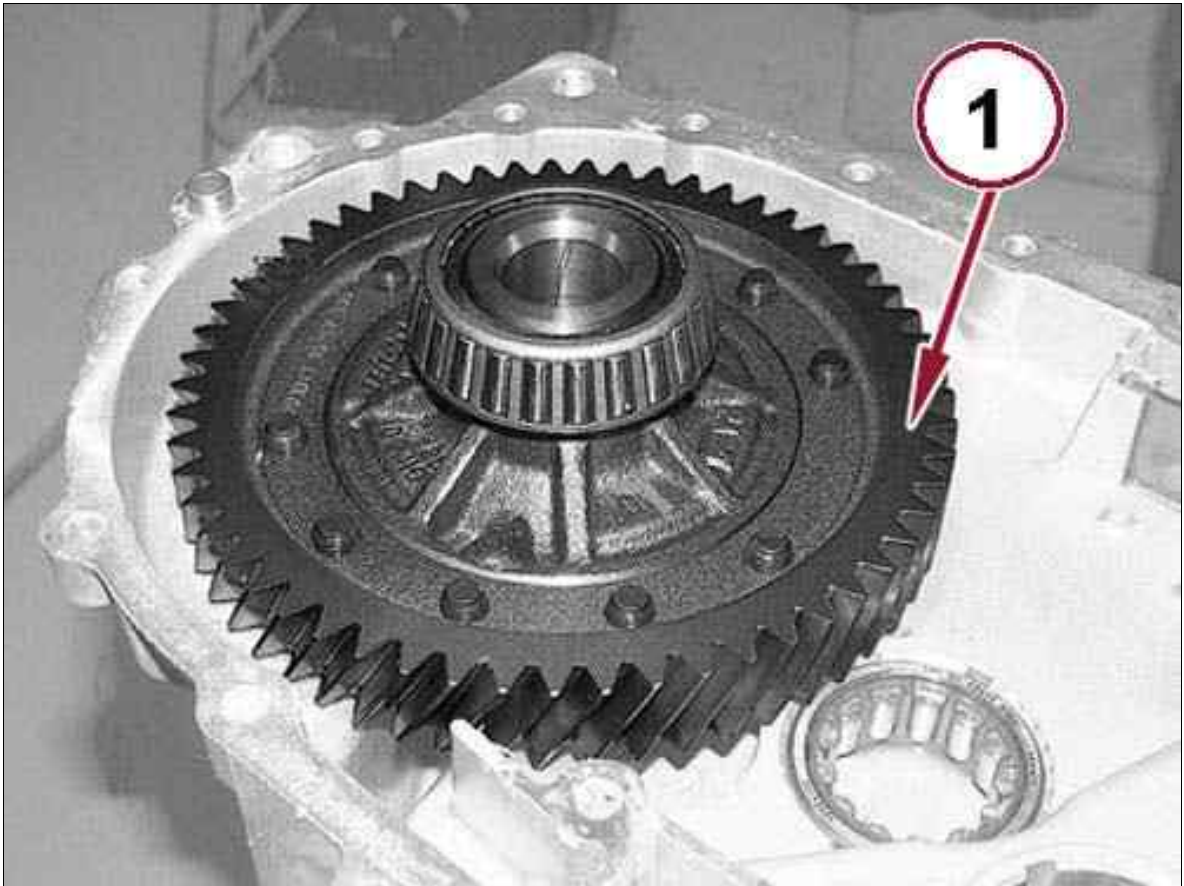
Fig 20: Magnet



Courtesy of CHRYSLER GROUP, LLC

9. Install the magnet (1) in the case.

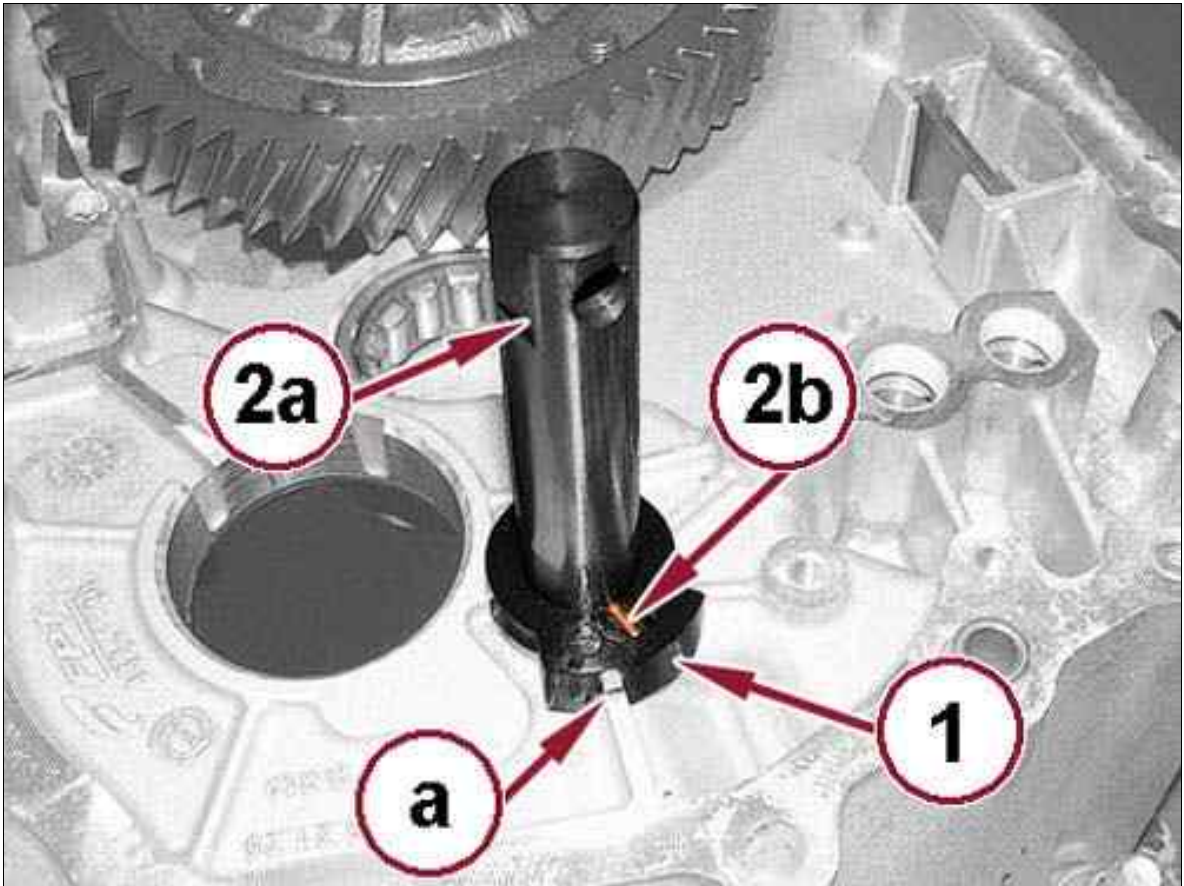
Fig 21: Differential Assembly



Courtesy of CHRYSLER GROUP, LLC

10. Install the differential assembly (1) in the bellhousing.

Fig 22: Reverse Idler Gear Bushing, Indexing Notch, Reverse Idler Gear Shaft, Pin & Bushing

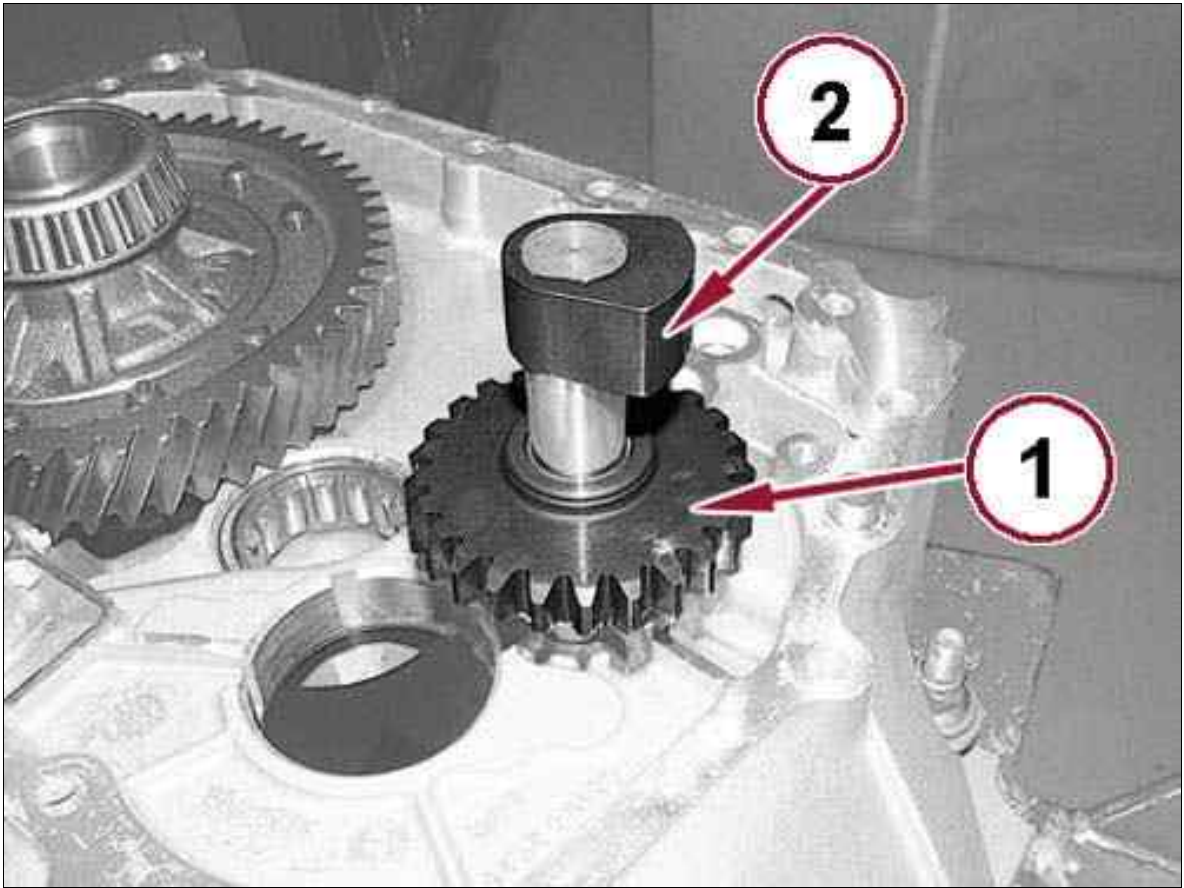


Courtesy of CHRYSLER GROUP, LLC

Install the bushing for the reverse idler gear shaft.

11. Install the reverse idler gear bushing (1) with indexing notch (a) over the rib in the bellhousing as shown.
12. Install the reverse idler gear shaft (2a), placing the pin (2b) in the groove in the bushing (1).

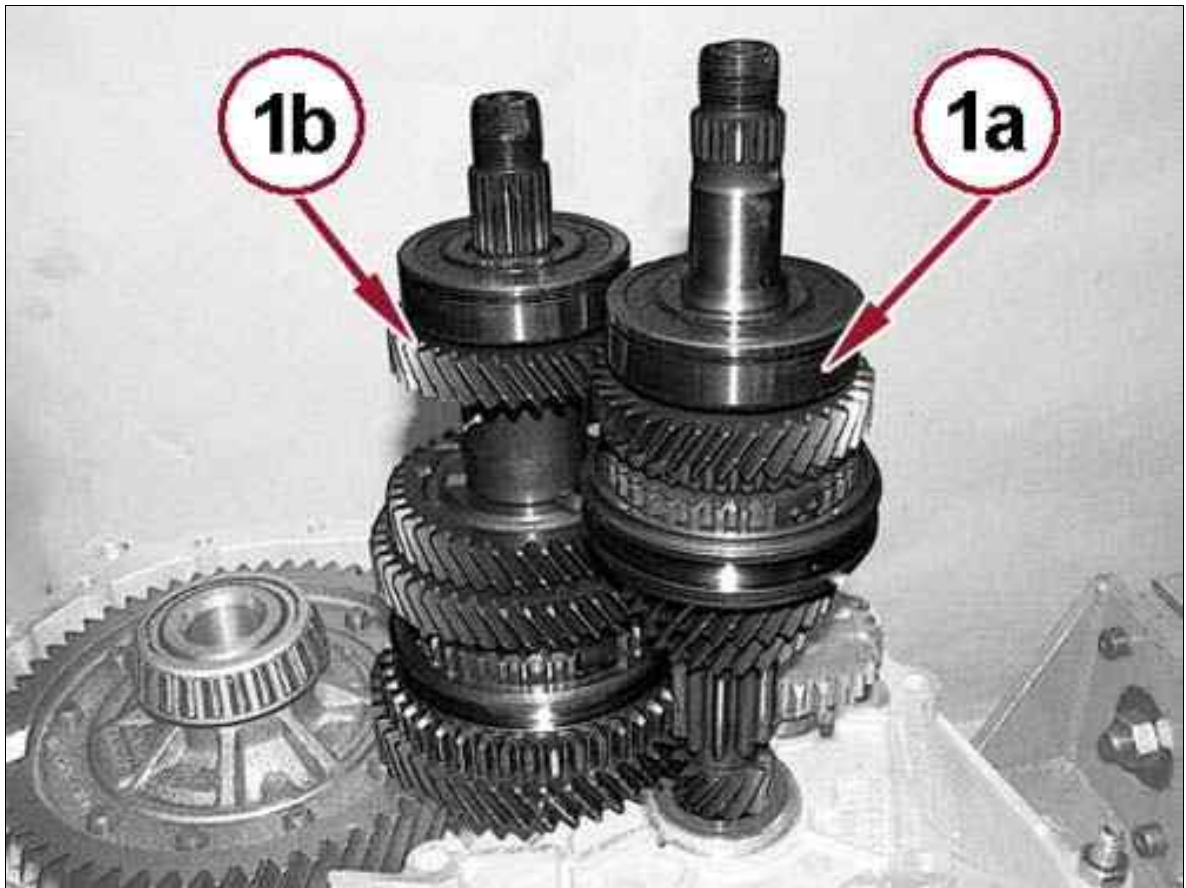
Fig 23: Reverse Idler Gear & Shaft Support



Courtesy of CHRYSLER GROUP, LLC

13. Install the reverse idler gear (1) with the gear engagement teeth facing downward.
14. Install the reverse idler gear shaft support (2).

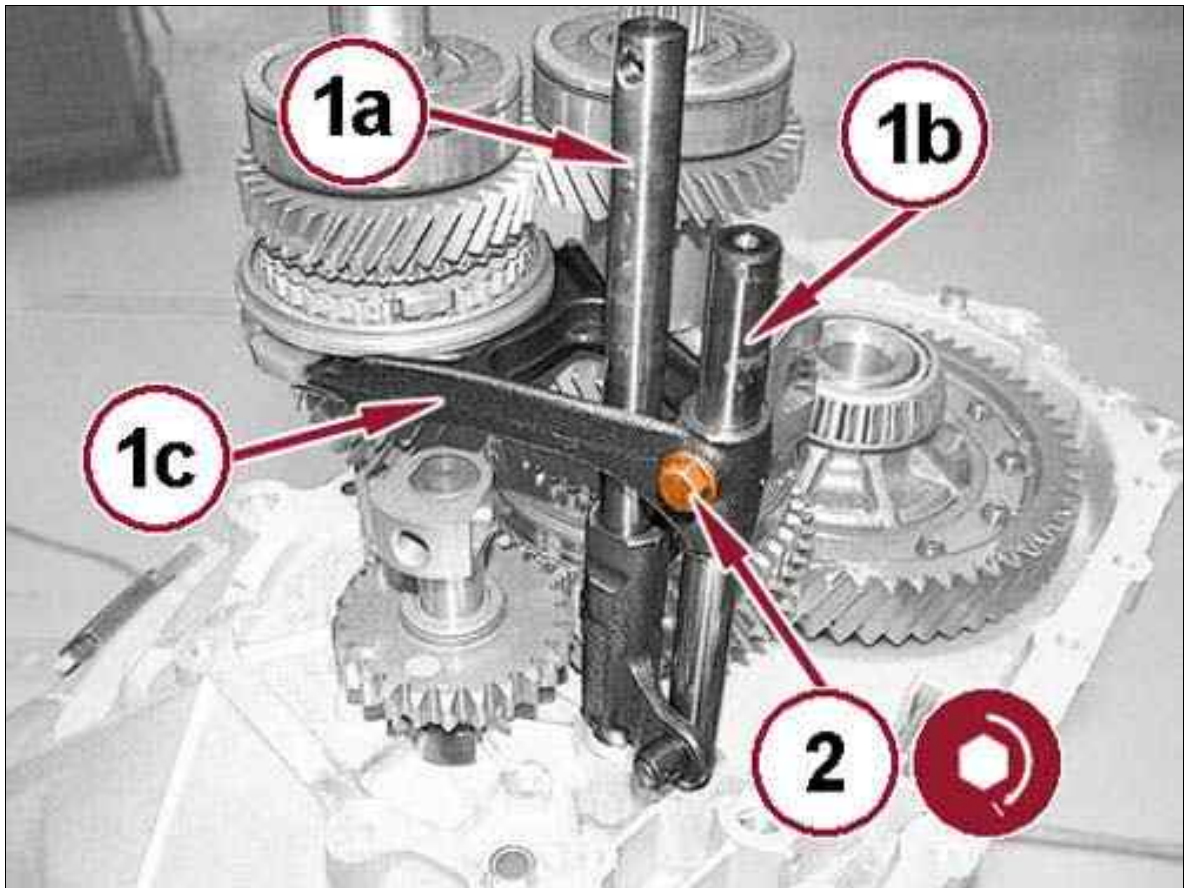
Fig 24: Input Shaft & Output Shaft



Courtesy of CHRYSLER GROUP, LLC

15. Install the input shaft (1a) and the output shaft (1b) assemblies simultaneously.

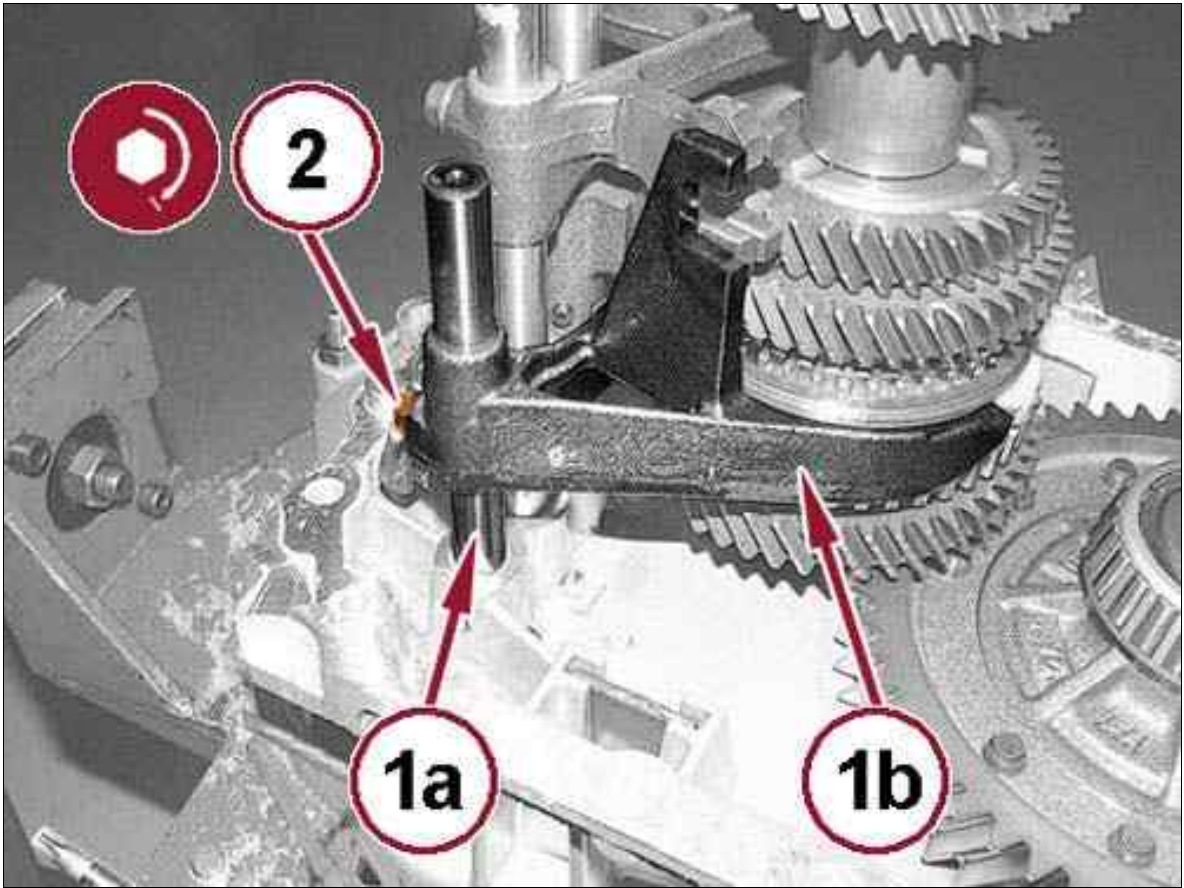
Fig 25: 5th And Reverse Gear Shift Rail, 3rd And 4th Gear Shift Rail & Shift Fork



Courtesy of CHRYSLER GROUP, LLC

16. Install the 5th and reverse gear shift rail (1a) and the 3rd and 4th gear shift rail (1b) with shift fork (1c) simultaneously.
17. Tighten the 3rd and 4th gear shift fork bolt (2) to the proper TORQUE SPECIFICATIONS .

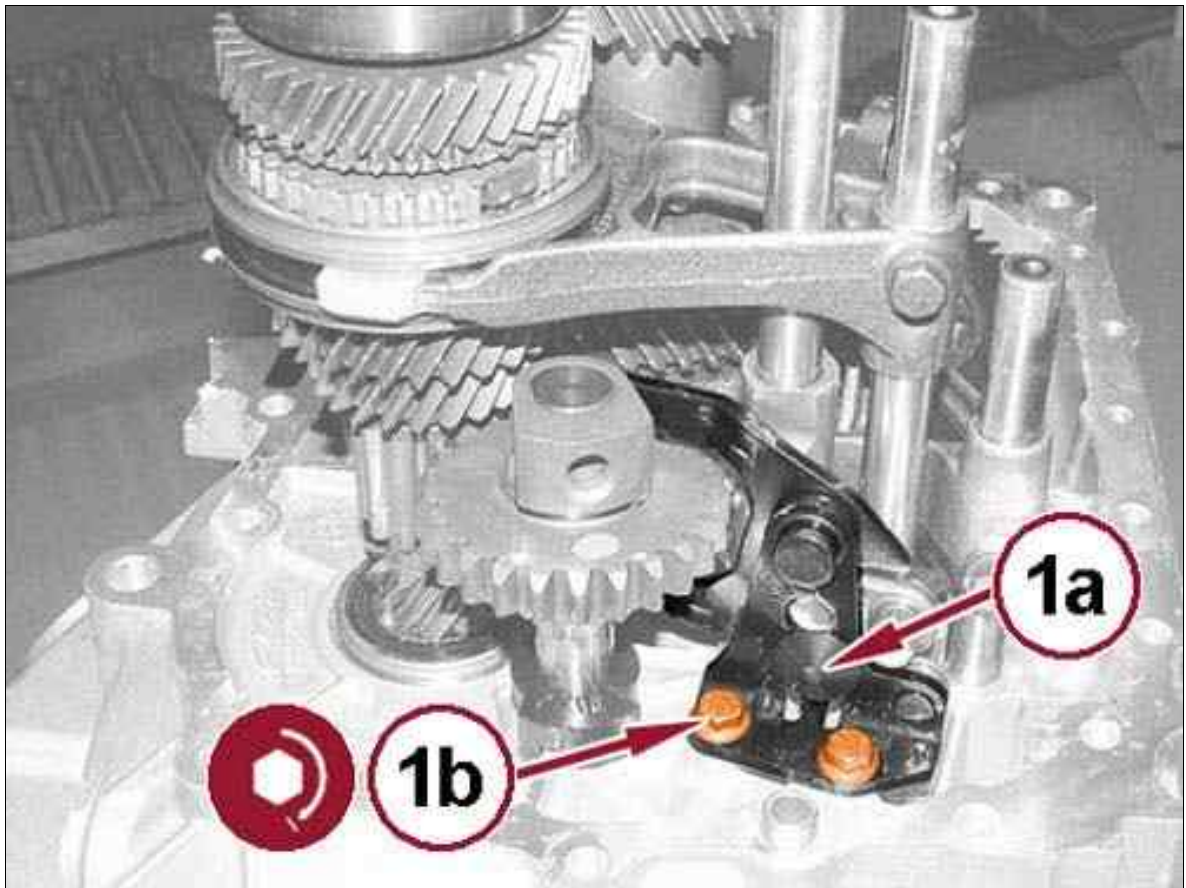
Fig 26: 1st And 2nd Gear Shift Rail With Shift Fork



Courtesy of CHRYSLER GROUP, LLC

18. Install the 1st and 2nd gear shift rail (1a) with shift fork (1b).
19. Tighten the 1st and 2nd gear fork bolt to the proper TORQUE SPECIFICATIONS .

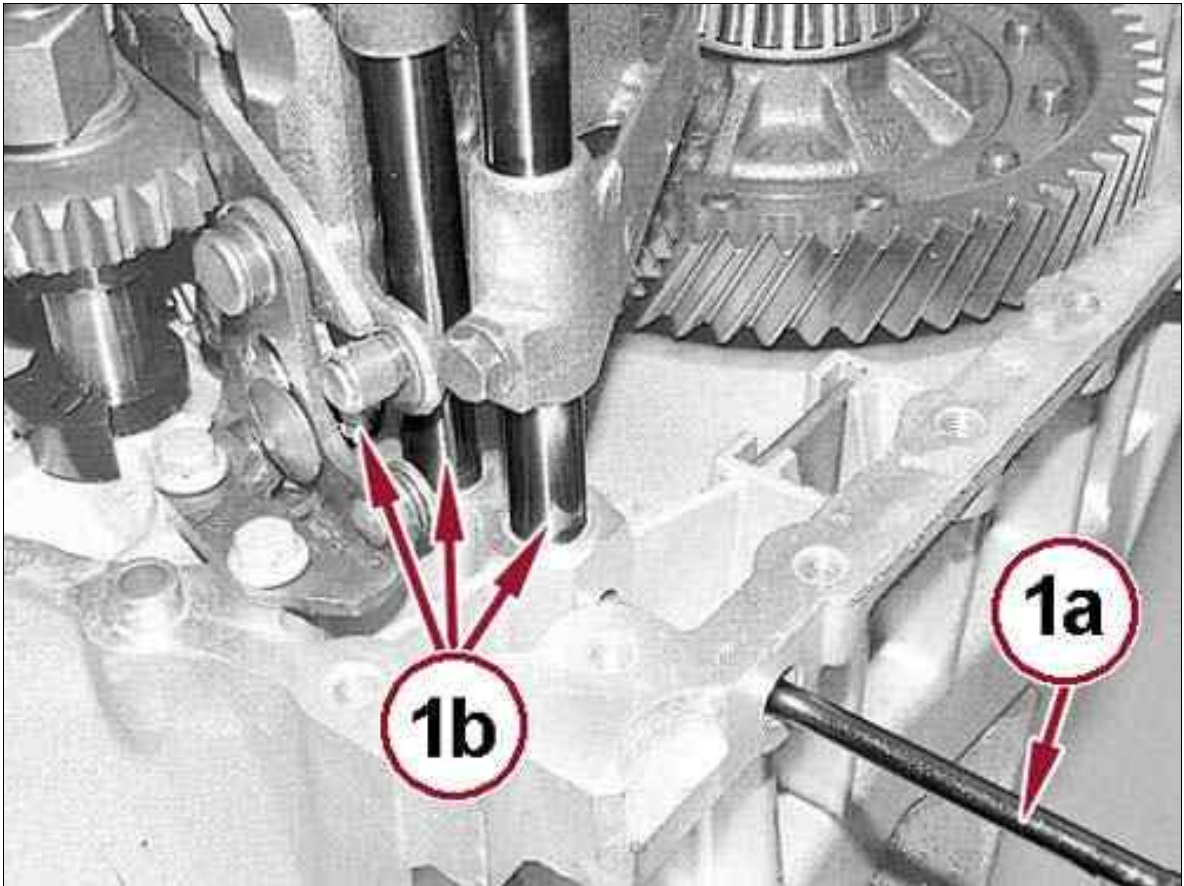
Fig 27: Reverse Shift Fork & Bolts



Courtesy of CHRYSLER GROUP, LLC

20. Install the reverse shift fork (1a) and tighten the bolts (1b) to the proper TORQUE SPECIFICATIONS .

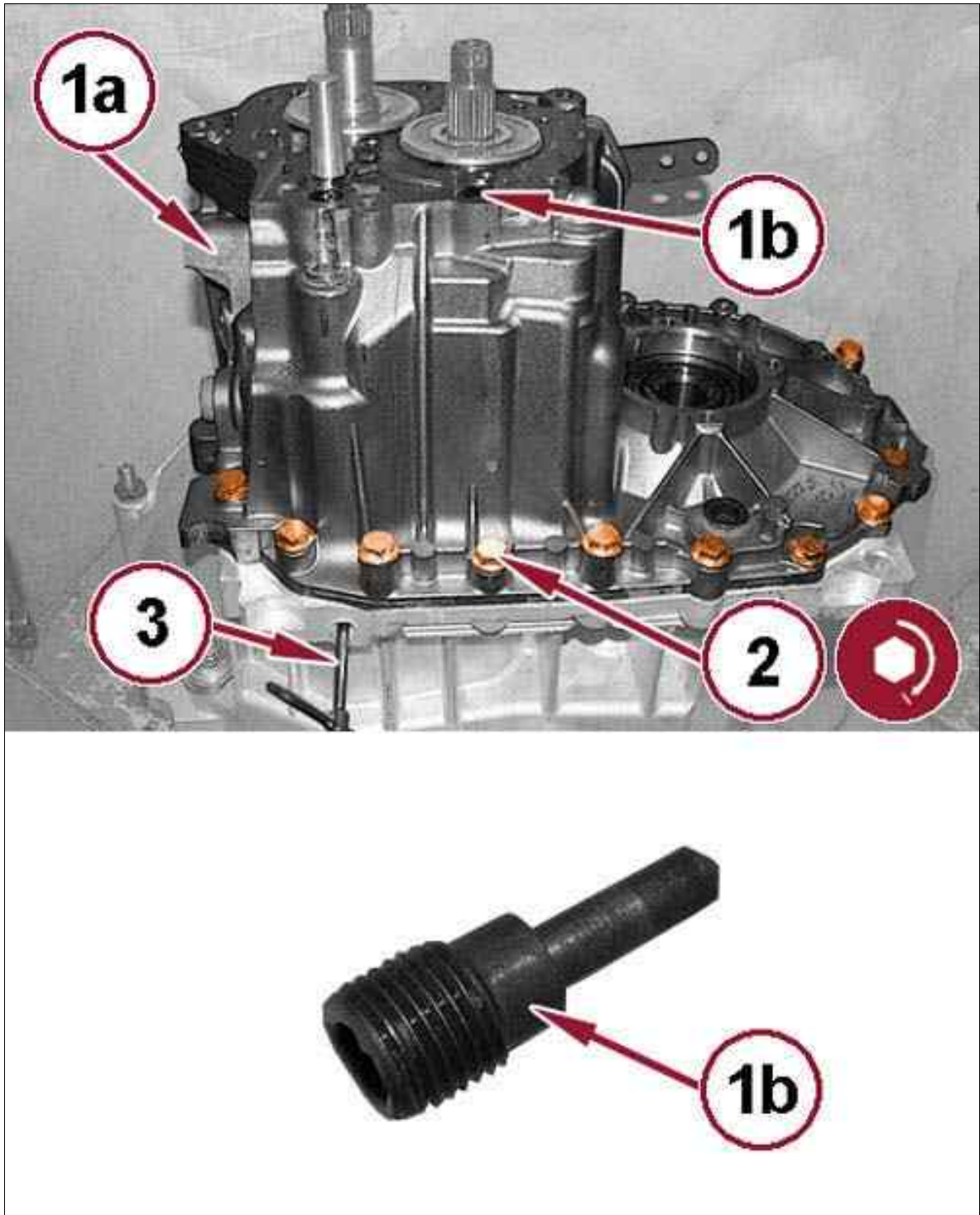
Fig 28: Locking Pin, Bellhousing & Shift Rails



Courtesy of CHRYSLER GROUP, LLC

21. Position all the gear shift forks in neutral and install a suitable locking pin (1a) through the bellhousing and shift rails (1b).
22. Apply sealant to the mating surface of the bellhousing and the transmission case.

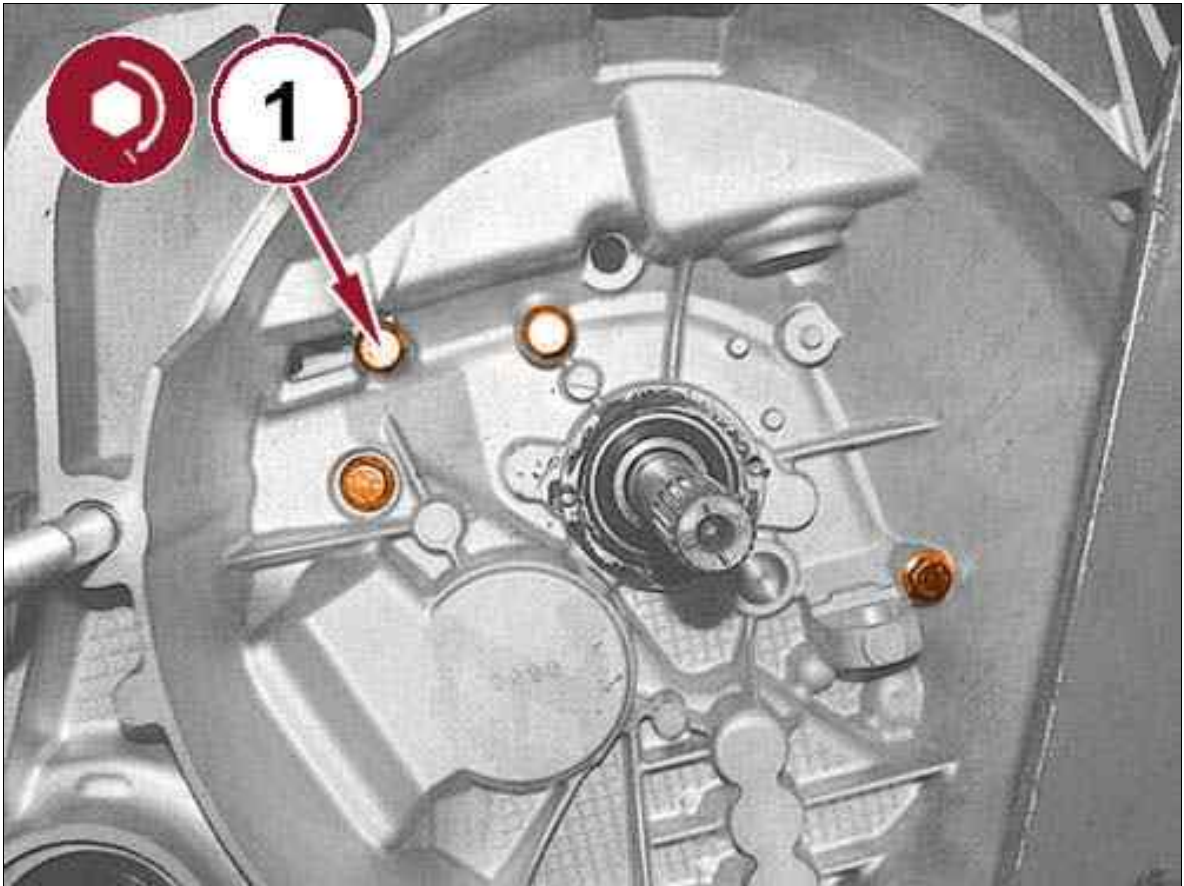
Fig 29: Transmission Case, Locking Pin, Outer Transmission Case Bolts & Shift Rail Locking Pin



Courtesy of CHRYSLER GROUP, LLC

23. Install the transmission case (1a) to the bellhousing and tighten the gear selector and engagement lever inner support locking pin (1b).
24. Tighten the outer transmission case bolts (2) to the proper TORQUE SPECIFICATIONS .
25. Remove the shift rail locking pin (3) and install and tighten the plug.

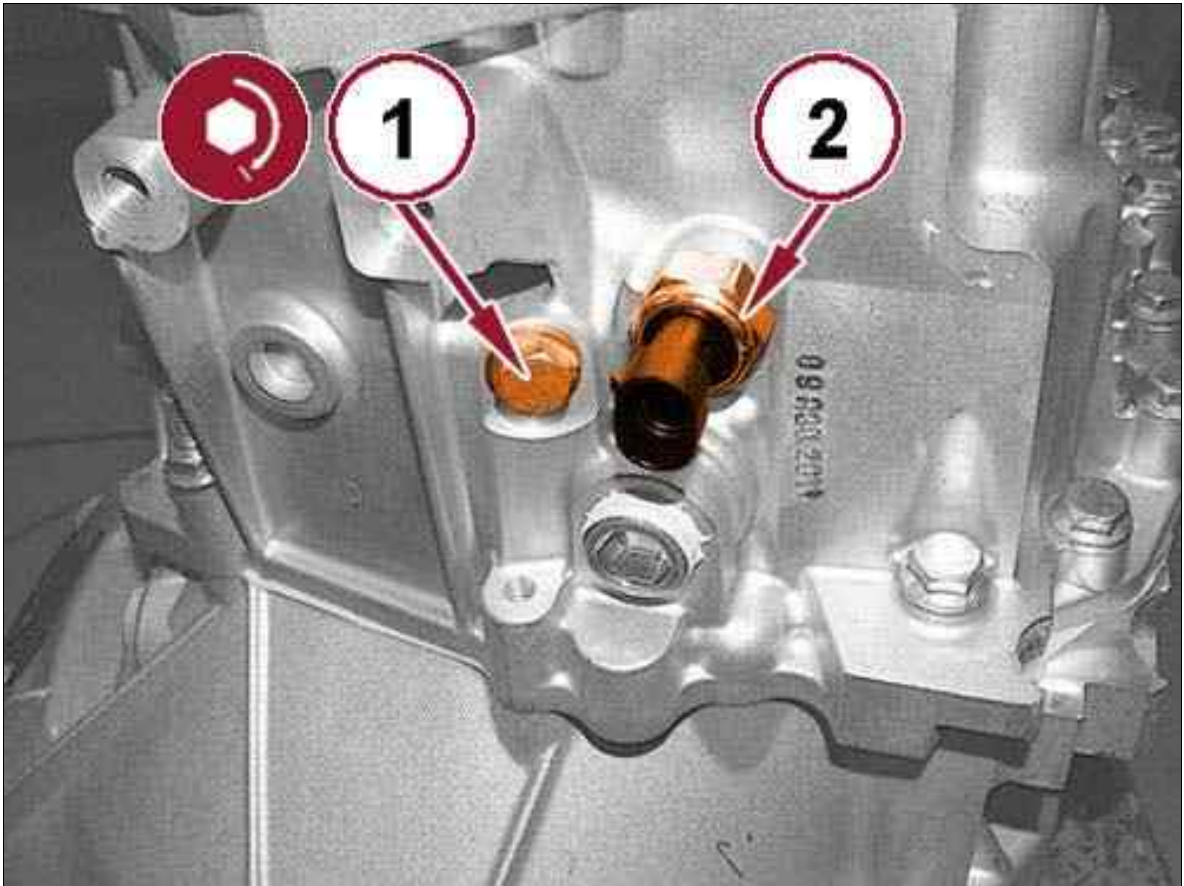
Fig 30: Inner Transmission Case Bolts



Courtesy of CHRYSLER GROUP, LLC

26. Tighten the inner transmission case bolts (2) to the proper TORQUE SPECIFICATIONS .

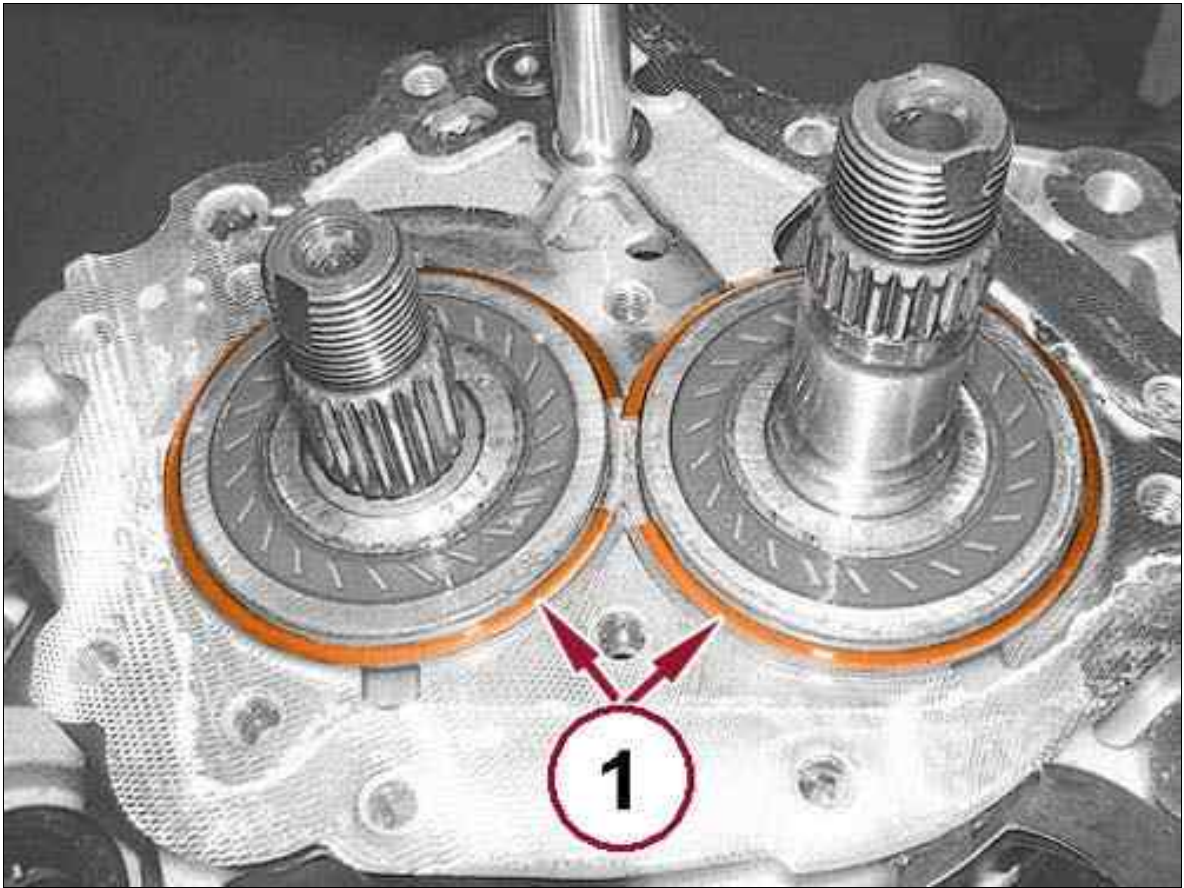
Fig 31: Reverse Idler Shaft Bolt & Backup Lamp Switch



Courtesy of CHRYSLER GROUP, LLC

27. Tighten the reverse idler shaft bolt (1) to the proper TORQUE SPECIFICATIONS .
28. Install the backup lamp switch (2).

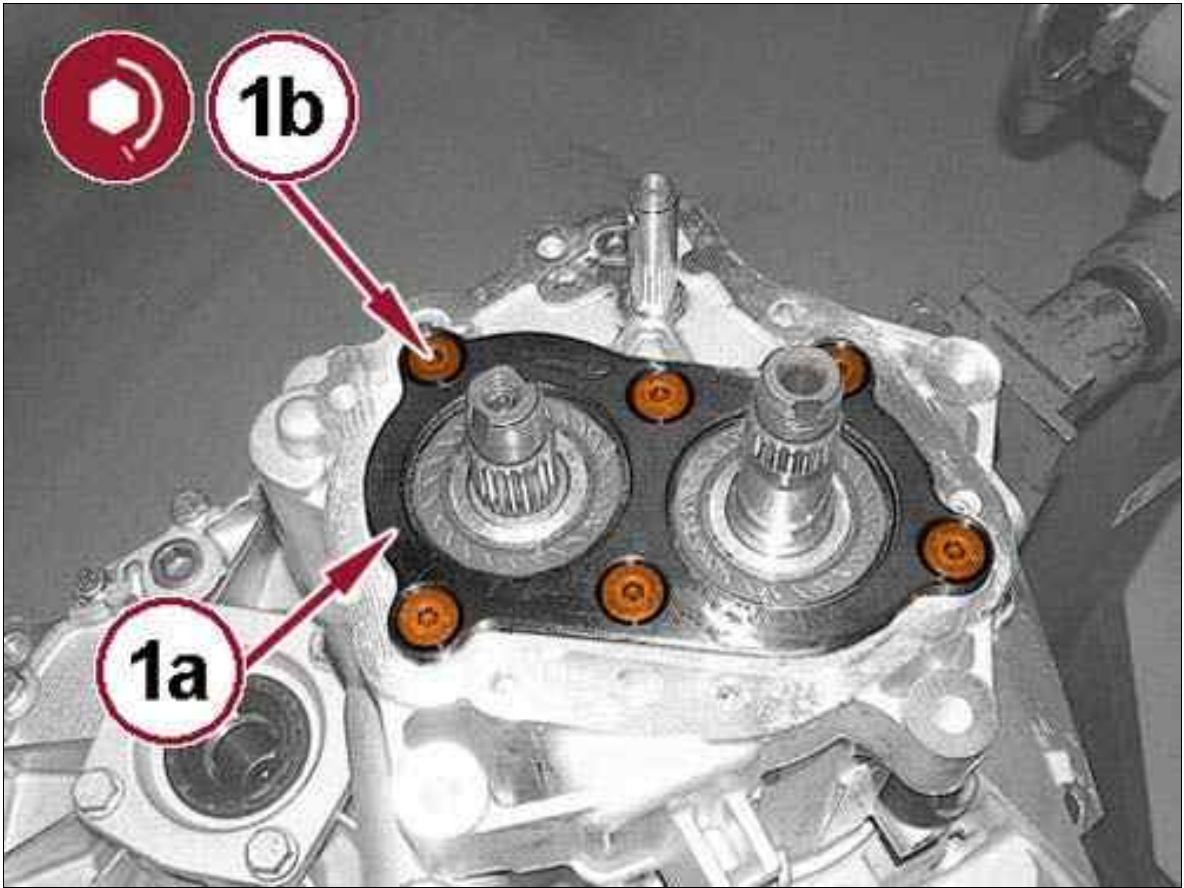
Fig 32: Input And Output Shaft Rear Bearing Snap Rings



Courtesy of CHRYSLER GROUP, LLC

29. Install the input and output shaft rear bearing snap rings (1). After installation, orient the gaps as shown.

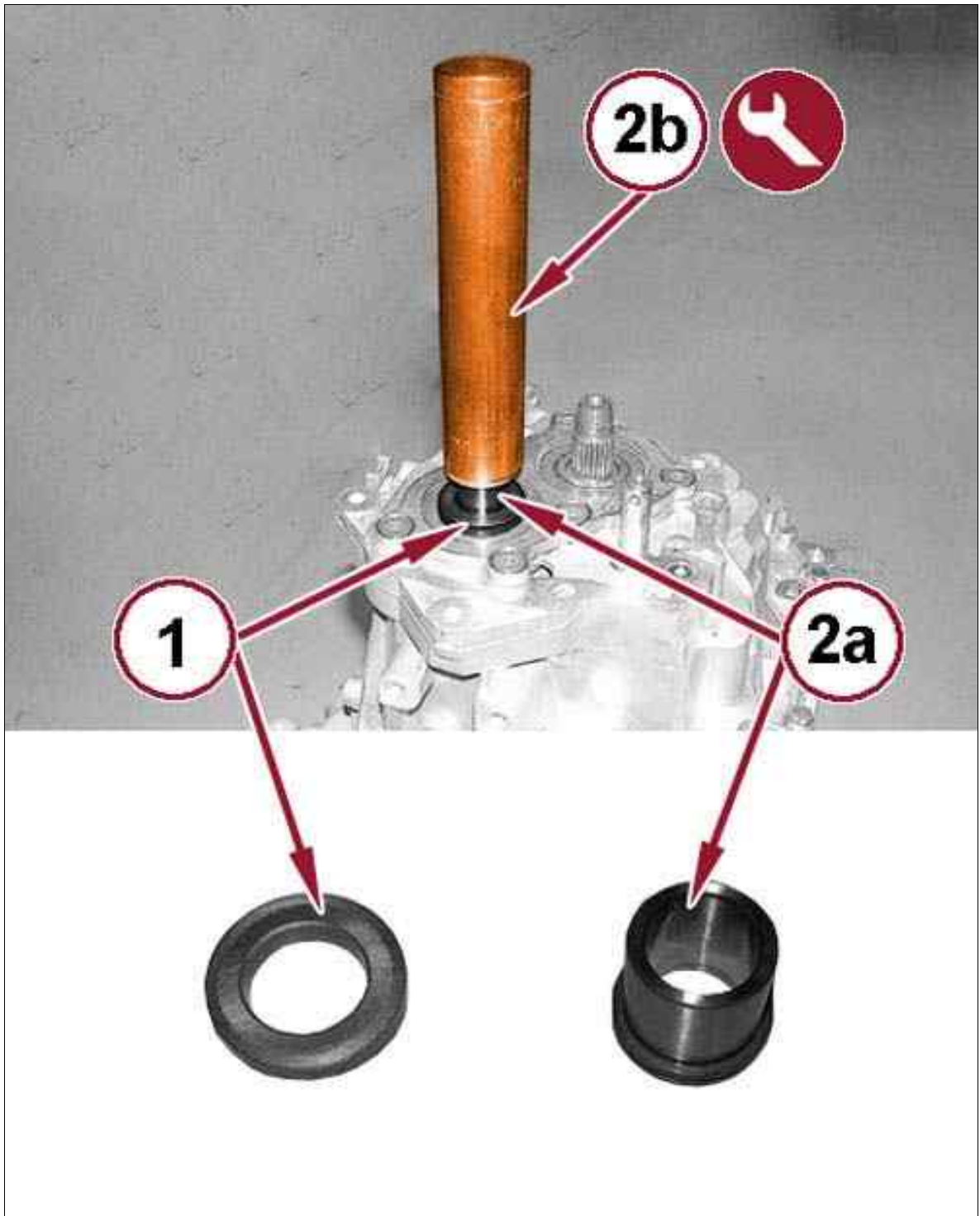
Fig 33: Input And Output Shaft Rear Bearing Retaining Plate & Bolts



Courtesy of CHRYSLER GROUP, LLC

30. Install input and output shaft rear bearing retaining plate (1a) and tighten the bolts (1b) to the proper TORQUE SPECIFICATIONS .

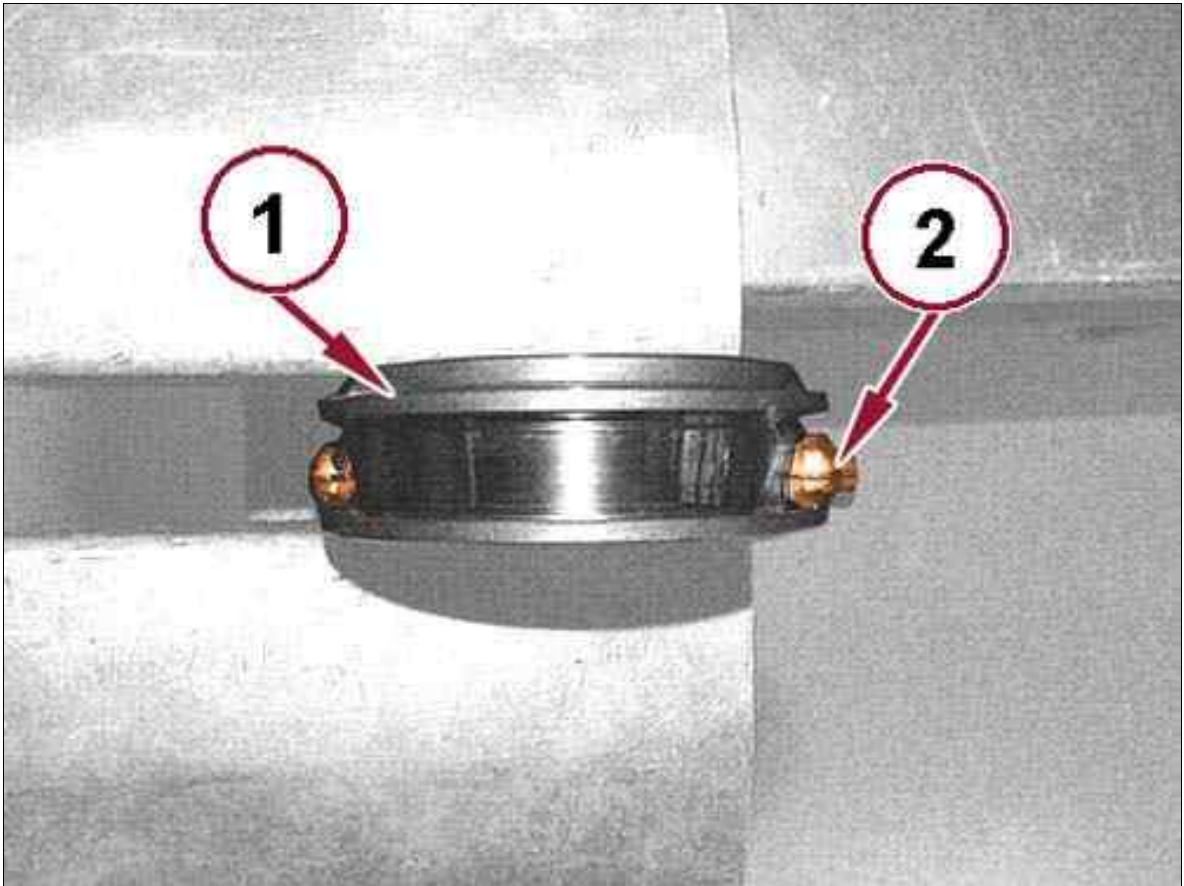
Fig 34: 5th Speed Drive Gear Bushing, Spacer & Special Tool



Courtesy of CHRYSLER GROUP, LLC

31. Install the spacer (1).
32. Install the 5th speed drive gear bushing (2a) using the tool 1871004500 (2b).

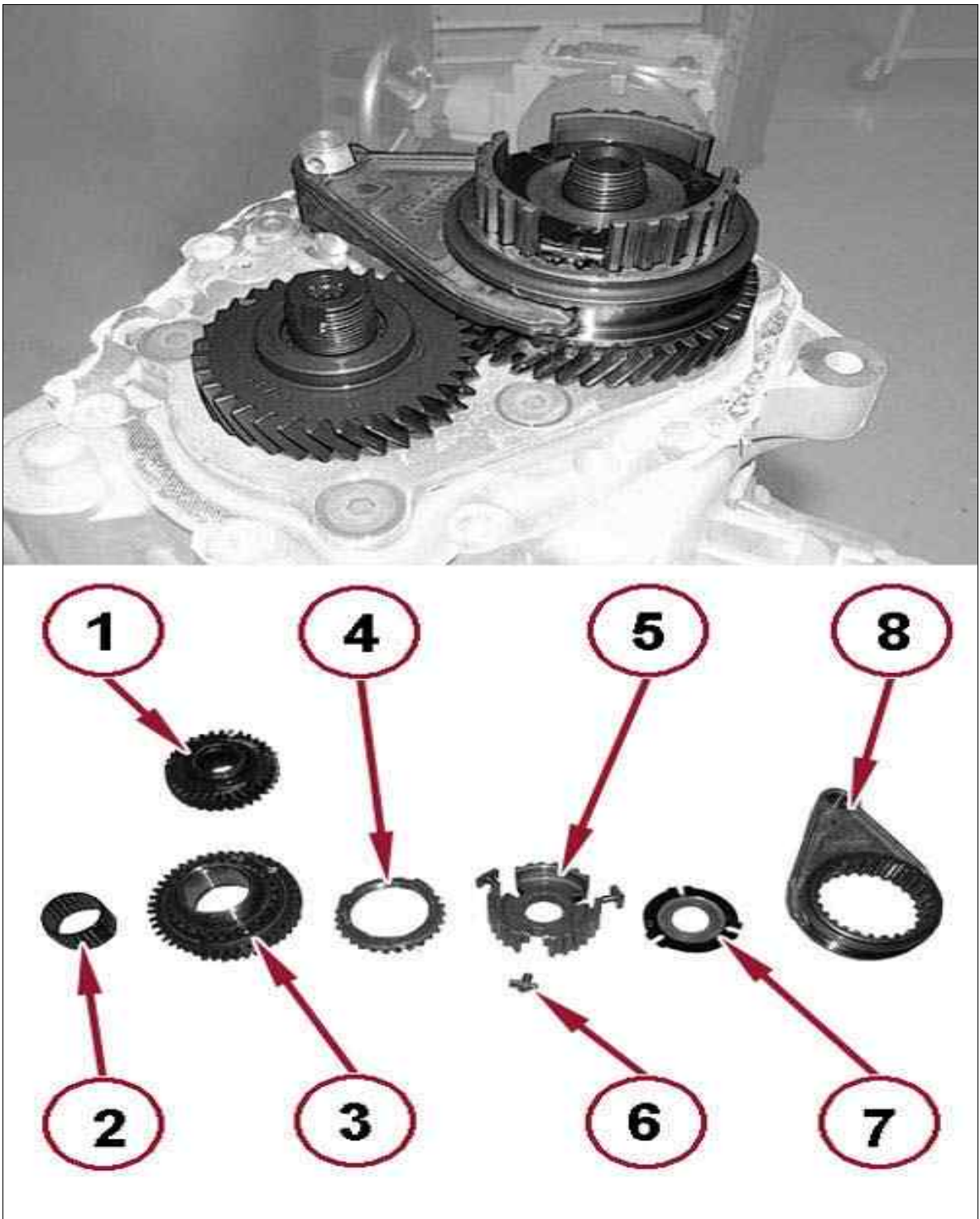
Fig 35: 5th Gear Synchronizer Sleeve & 5th Gear Shift Fork



Courtesy of CHRYSLER GROUP, LLC

33. Position the 5th gear synchronizer sleeve (1) in a vice with protective, non marring jaws.
34. Position the 5th gear shift fork (2) so that the tapered part is facing the same direction as the taper of the sleeve (1). Press the fork onto the sleeve by hand.
35. Check that the sleeve (1) can rotate freely inside of the fork (2).

Fig 36: Exploded View Of 5th Gear Components

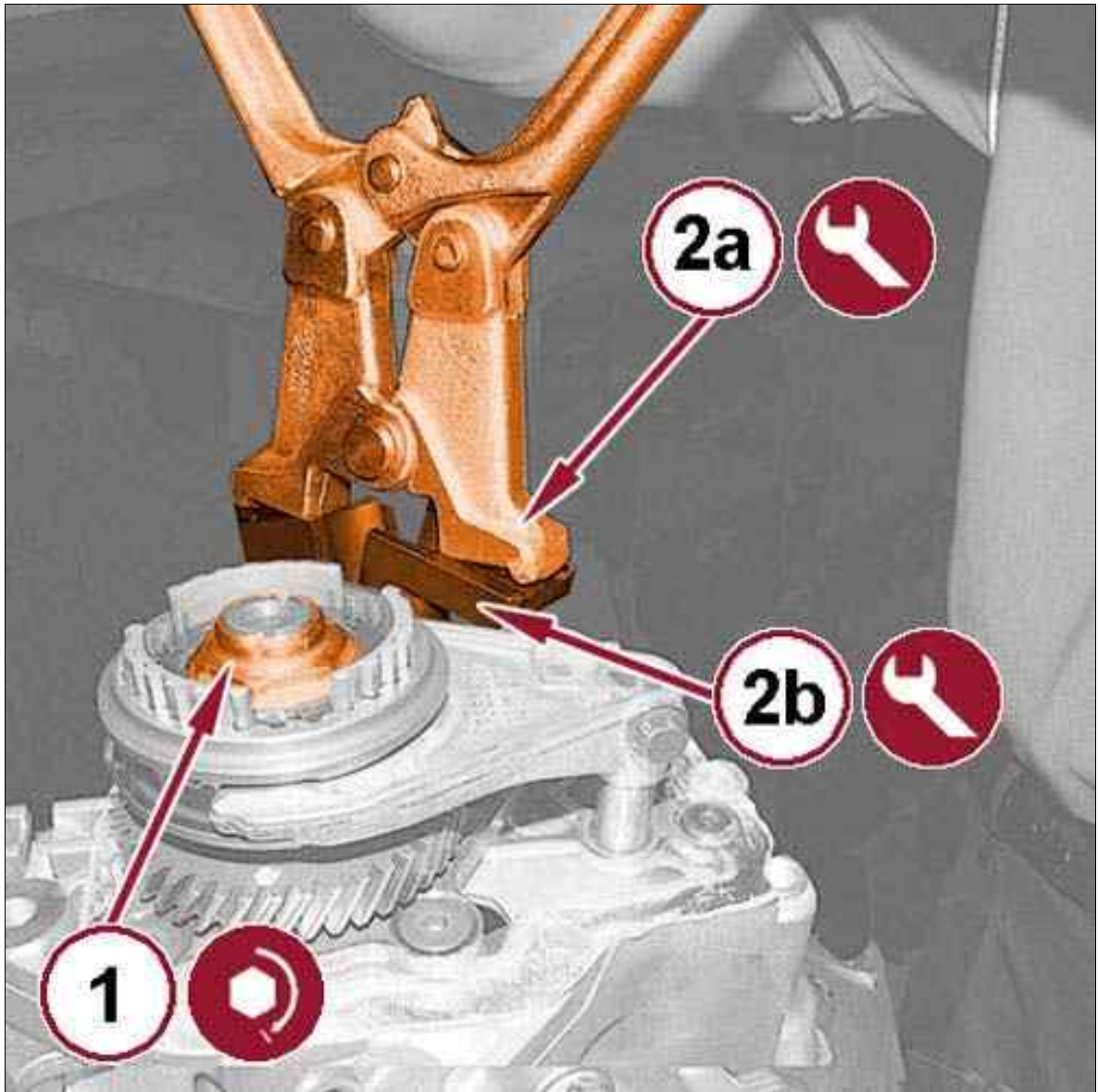


Courtesy of CHRYSLER GROUP, LLC

36. Install the 5th speed driven gear (1).
37. Install the 5th speed drive gear needle bearing (2).
38. Install the 5th speed drive gear (3).
39. Install the 5th gear synchronizer ring (4).

40. Install the 5th gear synchronizer hub (5).
41. Install the detents (6).
42. Install the detent retainer (7).
43. Install the 5th speed synchronizer sleeve complete with shift fork (8).
44. Engage any gear using the gear selection and engagement lever.
45. Engage 5th gear by pressing the shift fork down.

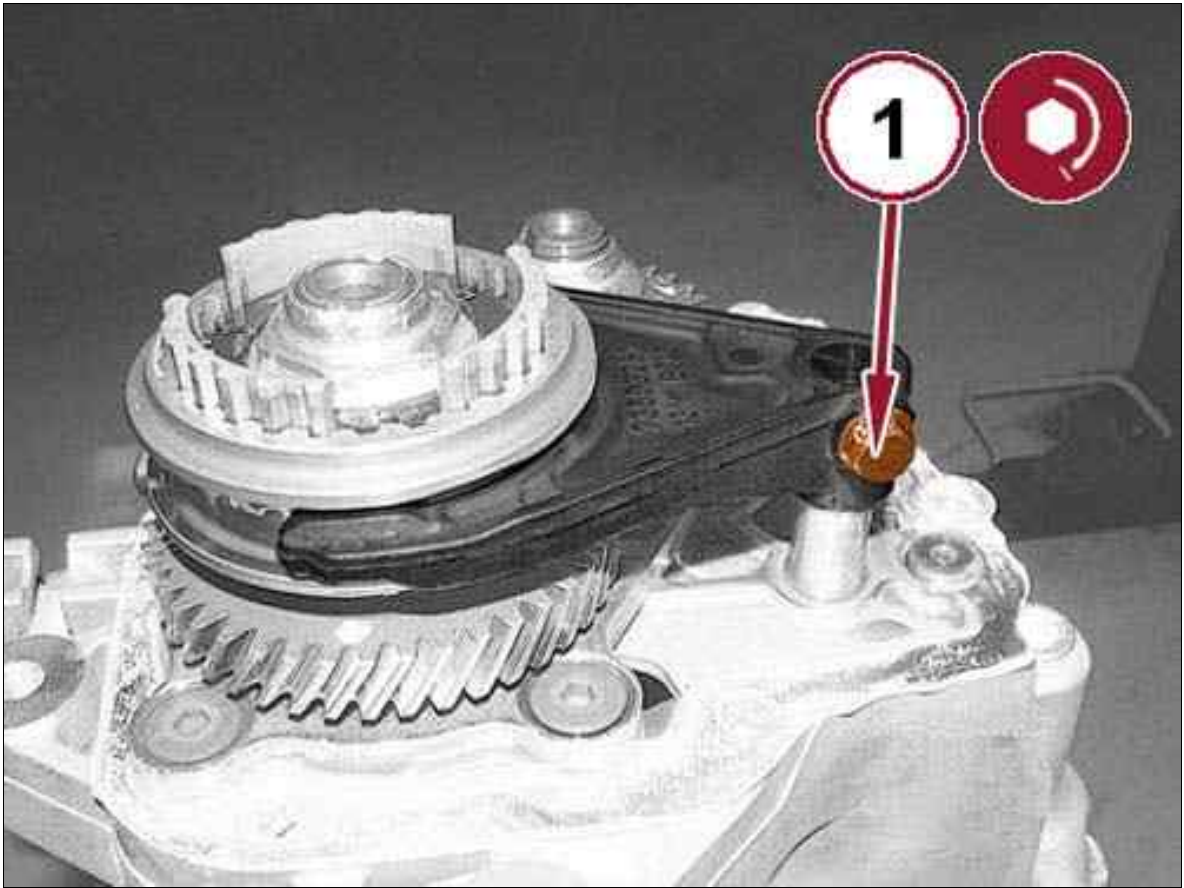
Fig 37: Input And Output Shaft Nuts & Special Tools



Courtesy of CHRYSLER GROUP, LLC

46. Install **NEW** nuts (1) on the input and output shafts and tighten the to the proper TORQUE SPECIFICATIONS .
47. Stake the input and output shaft nuts using the tools 1874140001 (2a) and 1874140005 (2b).

Fig 38: 5th Gear Shift Fork Bolt

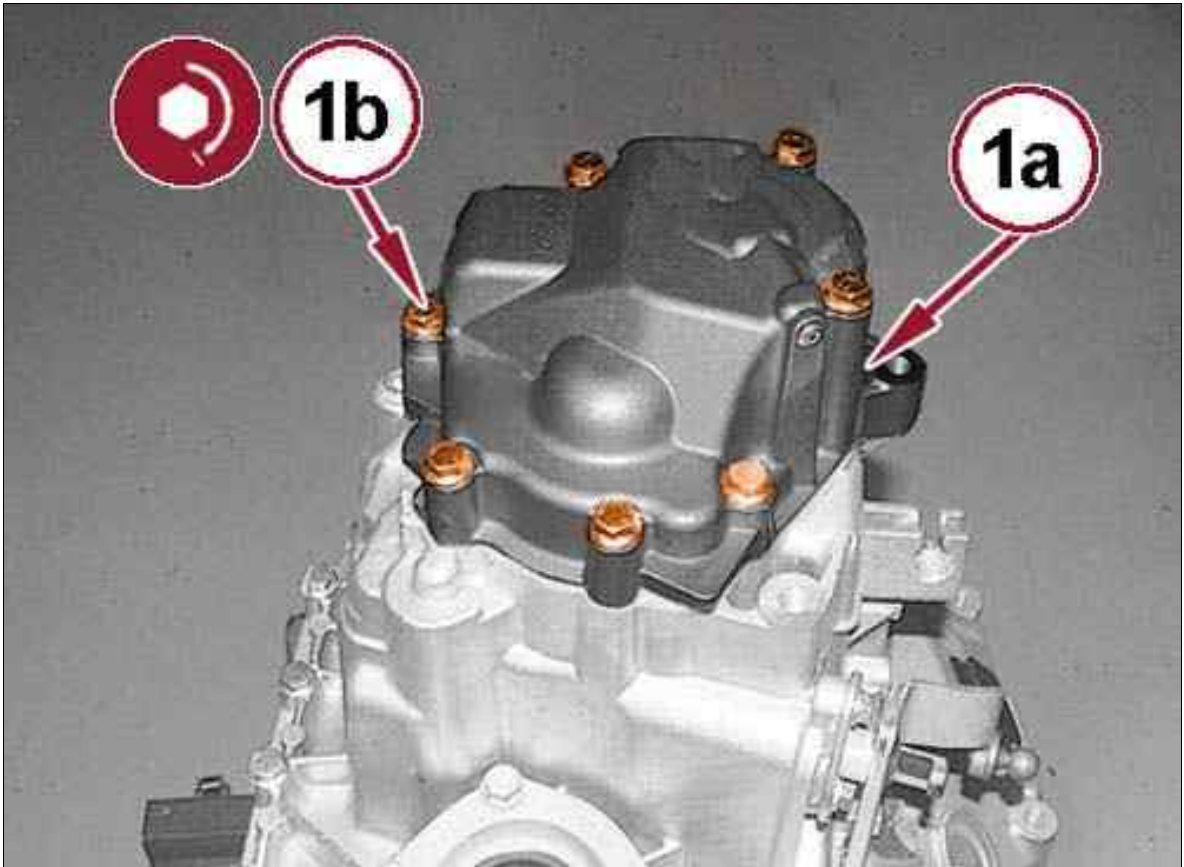


Courtesy of CHRYSLER GROUP, LLC

48. Place the 5th gear shift fork in neutral.

49. Install the 5th gear shift fork bolt (1) to the proper TORQUE SPECIFICATIONS .

Fig 39: Rear Cover & Bolts

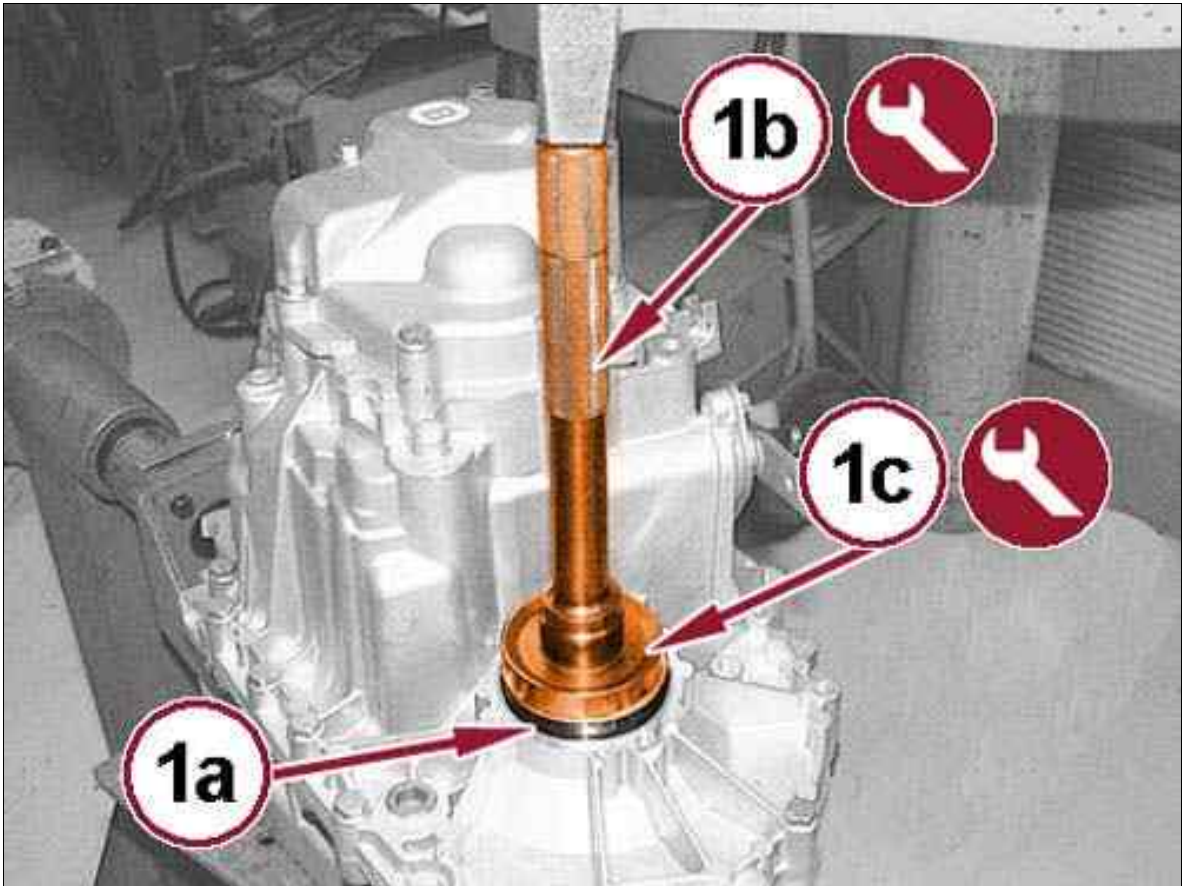


Courtesy of CHRYSLER GROUP, LLC

50. Apply sealant to the rear cover mating surface.

51. Install the rear cover (1a) and tighten the bolts (1b) to the proper TORQUE SPECIFICATIONS

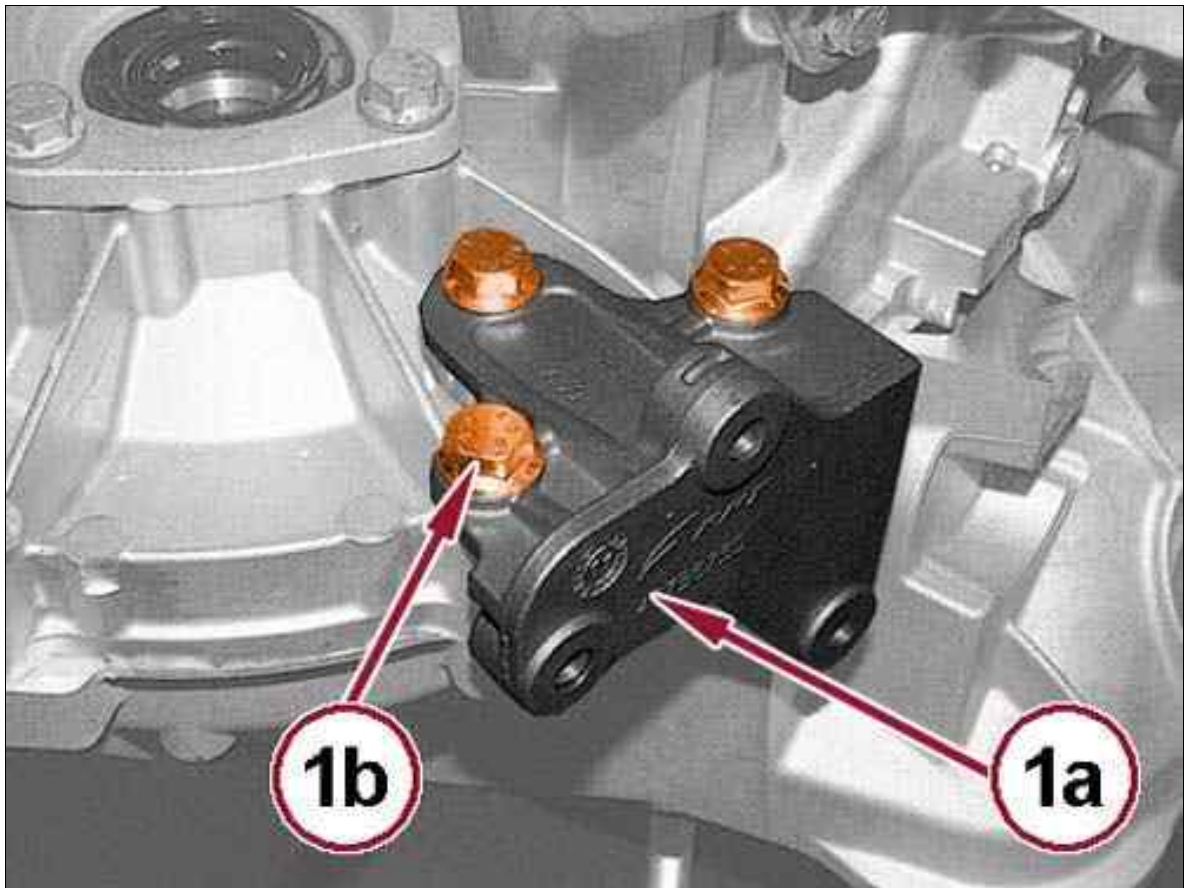
Fig 40: Left Differential Bearing Outer Race & Special Tool



Courtesy of CHRYSLER GROUP, LLC

52. Install the left differential bearing outer race (1a) using tools 1870898400 (1b) and 1875055000 (1c).

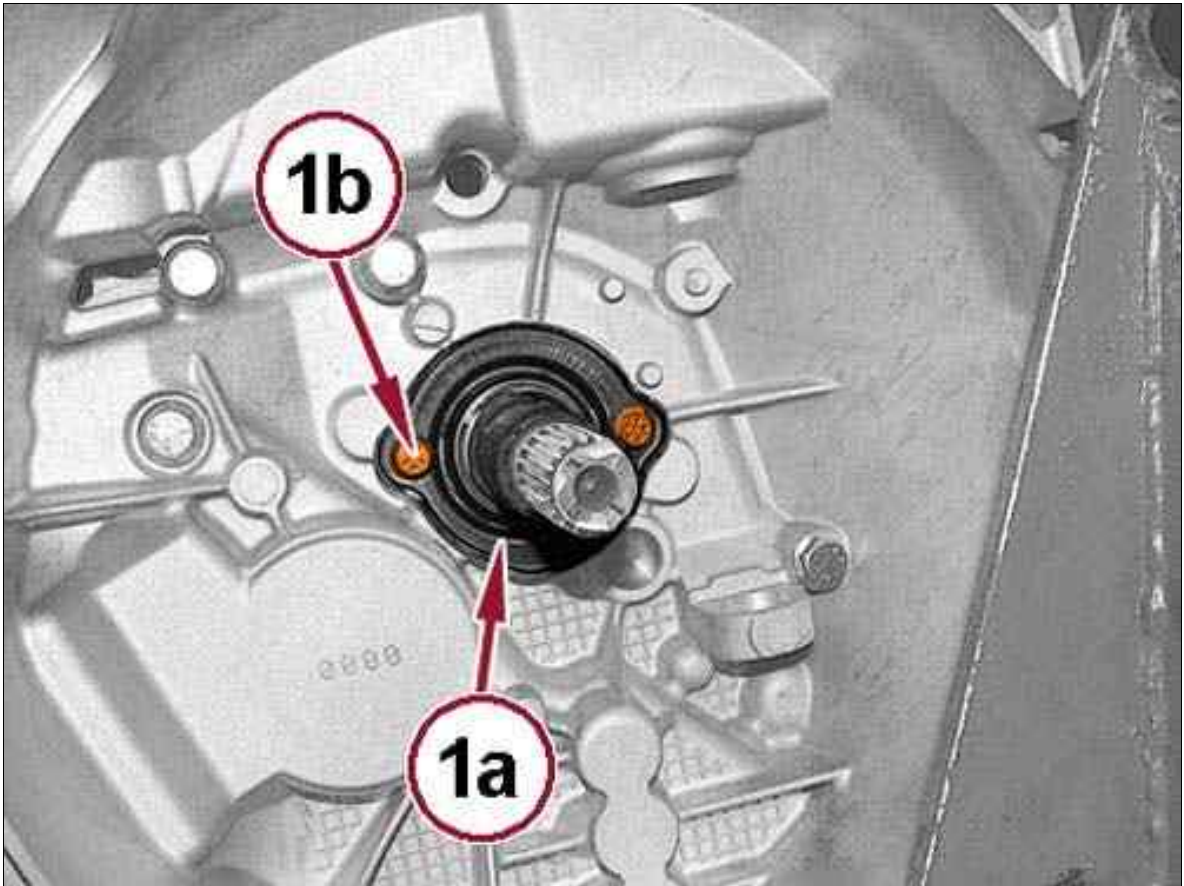
Fig 41: Gear Engagement And Selection Cable Reaction Bracket & Bolts



Courtesy of CHRYSLER GROUP, LLC

53. Install the gear engagement and selection cable reaction bracket (1a) and tighten the bolts (1b).

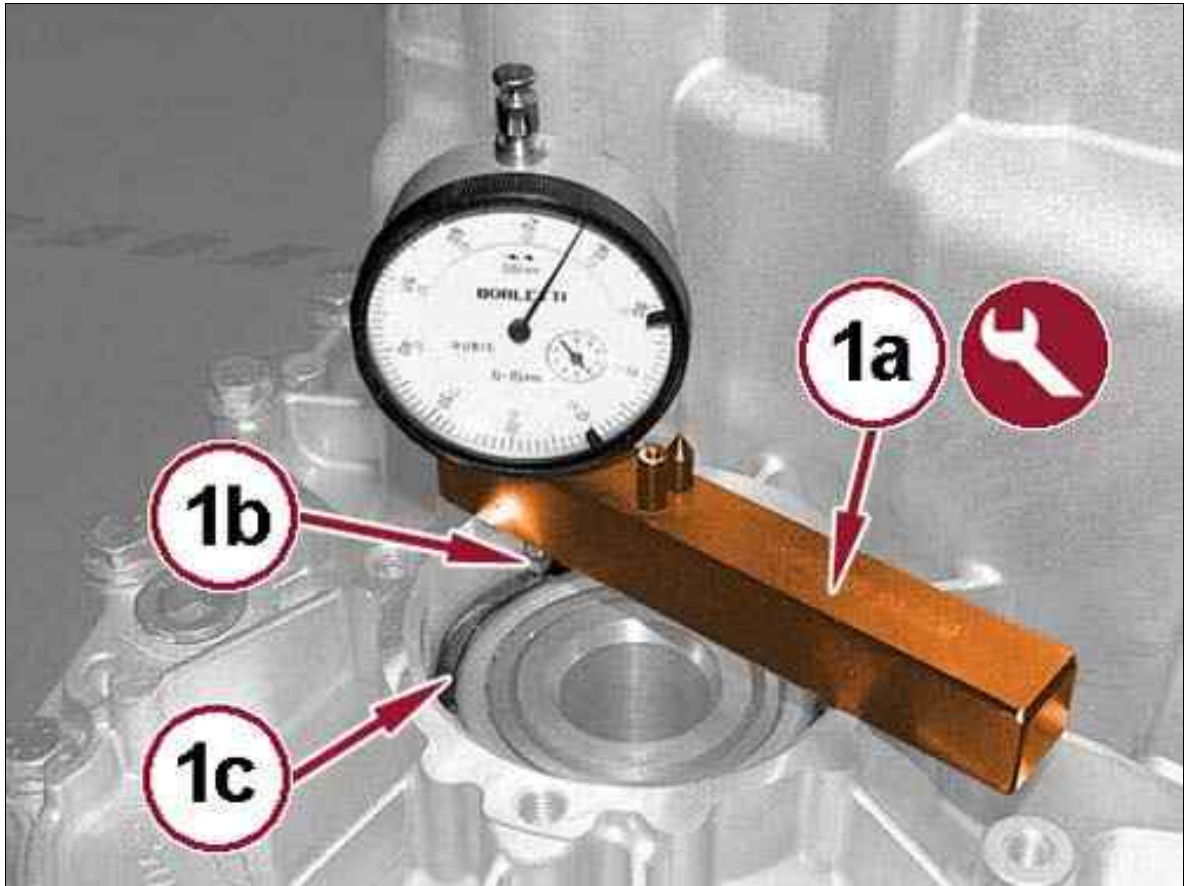
Fig 42: Transmission Input Shaft Gasket & Bolts



Courtesy of CHRYSLER GROUP, LLC

54. Apply sealant to the mating surface of the transmission input shaft gasket flange.
55. Install the transmission input shaft gasket (1a) and tighten the bolts (1b).
56. Install the outer lever of the clutch thrust bearing control and the snap ring.

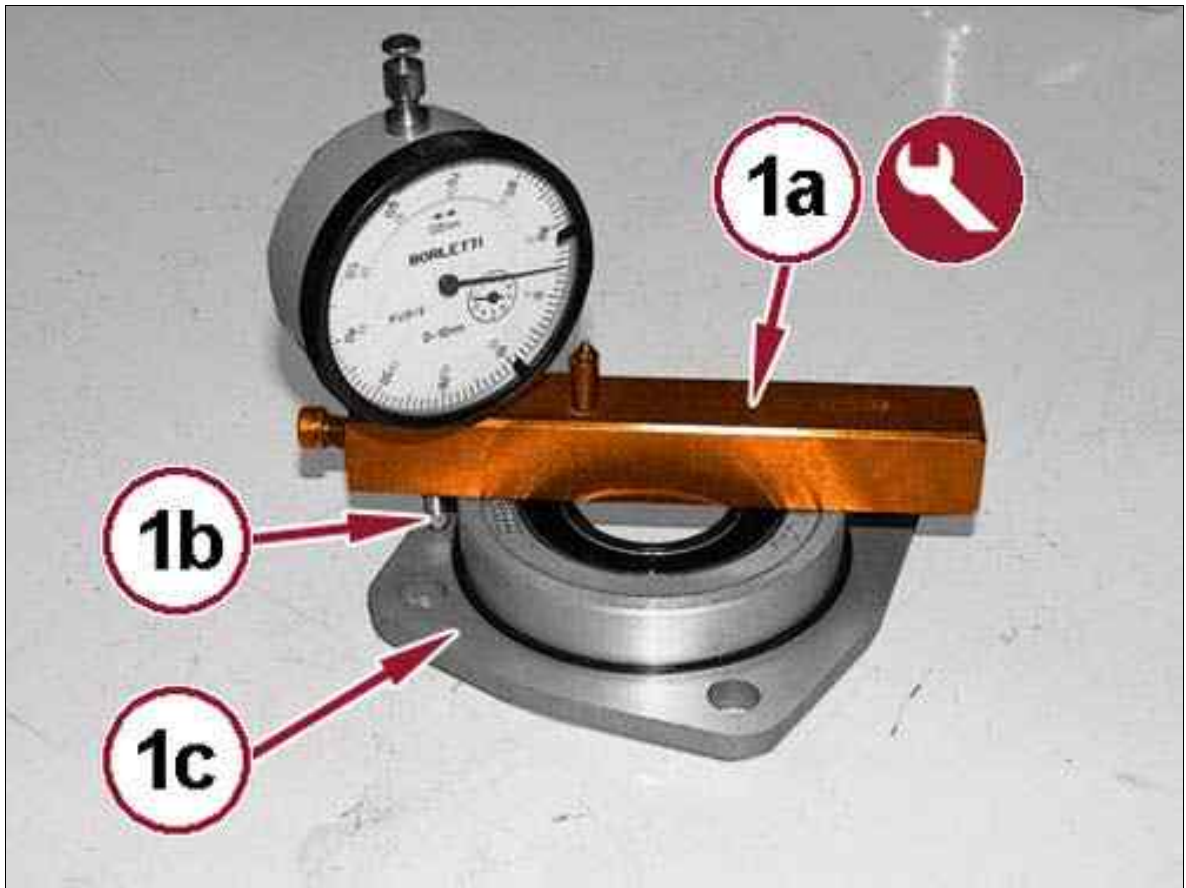
Fig 43: Plunger, Taper Roller Bearing Outer Race & Special Tools



Courtesy of CHRYSLER GROUP, LLC

57. Position the tool 1895655000 (1a) complete with dial indicator across the differential seal cover support surface, then bring the plunger (1b) into contact with the taper roller bearing outer race (1c). Zero the dial indicator with a preload of 1 mm (.0394 in.).

Fig 44: Plunger, Surface & Special Tool



Courtesy of CHRYSLER GROUP, LLC

58. Position the tool 1895655000 (1a) complete with dial indicator across the left axle seal, bringing the plunger (1b) in contact with the surface (1c) and measure the difference.

 **NOTE:**

08 mm (.003 in.) corresponds to the desired preload of the differential bearings.

59. Calculate the size of the differential bearing preload select thrust washer by adding 0.08 mm (.003 in.) to the difference measured.

Fig 45: Thrust Washer, Left Axle Seal, Gasket & Bolts



Courtesy of CHRYSLER GROUP, LLC

60. Install a select thrust washer (1) having the same size or the next largest size to the one calculated for the differential bearing preload in the housing.

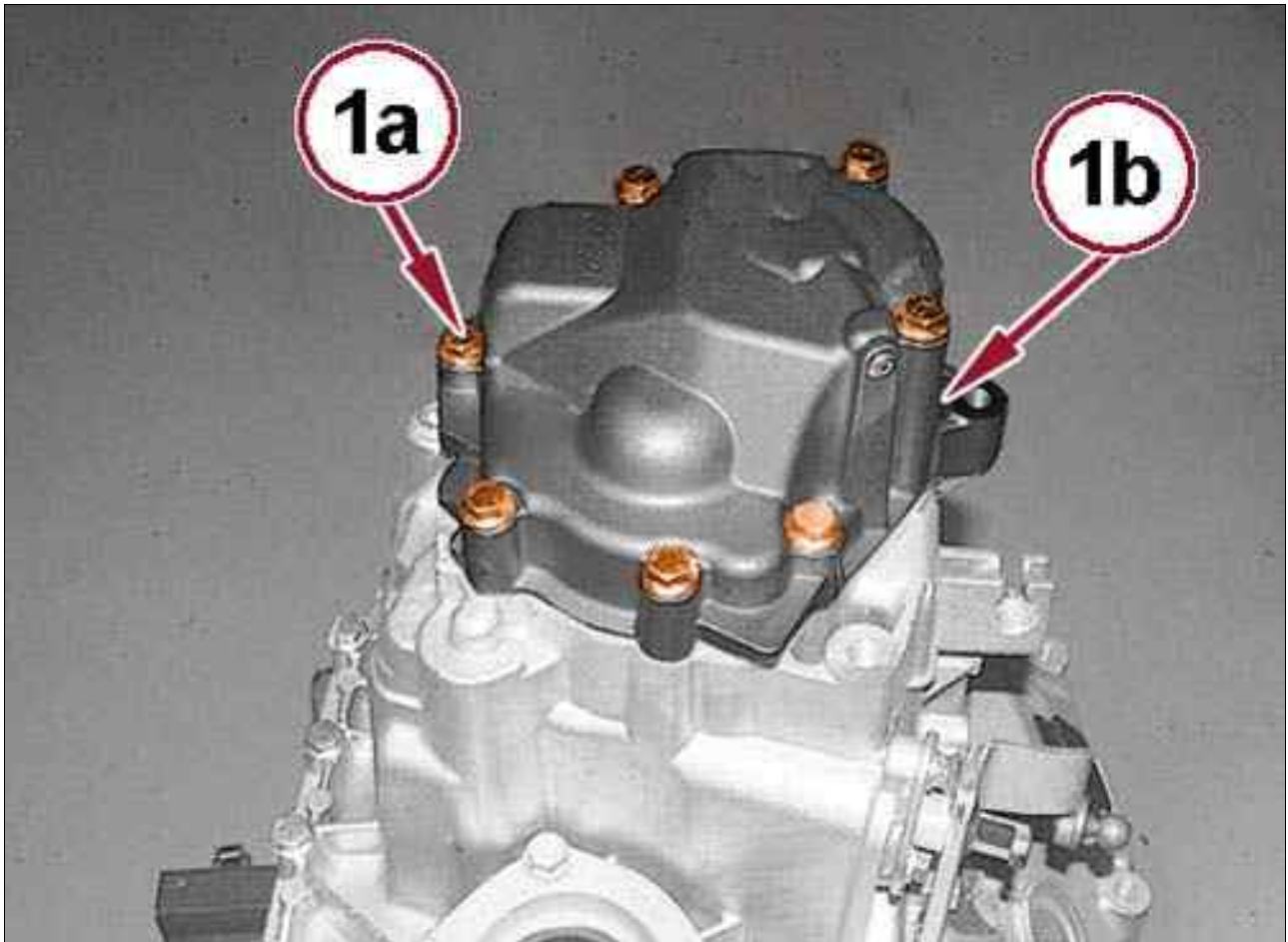
 **NOTE:**

The left axle seal must always be replaced if removed.

61. Install a **NEW** left axle seal (2a) and the gasket (2b), then tighten the bolts (2c) to the proper TORQUE SPECIFICATIONS .
62. Install the differential inner tripod housing.
63. Remove the transmission from the support stand.

DISASSEMBLY AND ASSEMBLY > FIFTH GEAR DISASSEMBLY AND ASSEMBLY > DISASSEMBLY

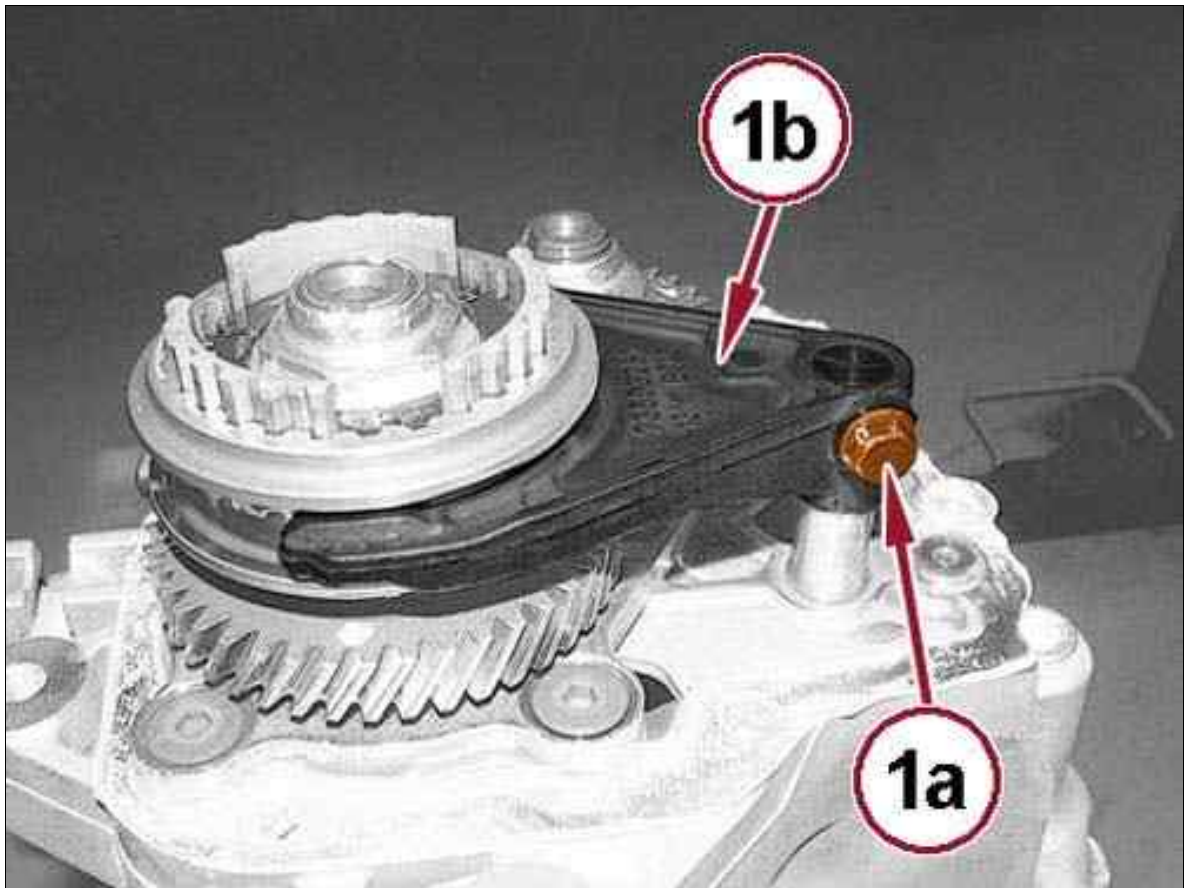
Fig 1: Bolts & Transmission Rear Cover



Courtesy of CHRYSLER GROUP, LLC

1. Remove the bolts (1a) and remove the transmission rear cover (1b).
2. Engage any gear using the gear selection and engagement lever.

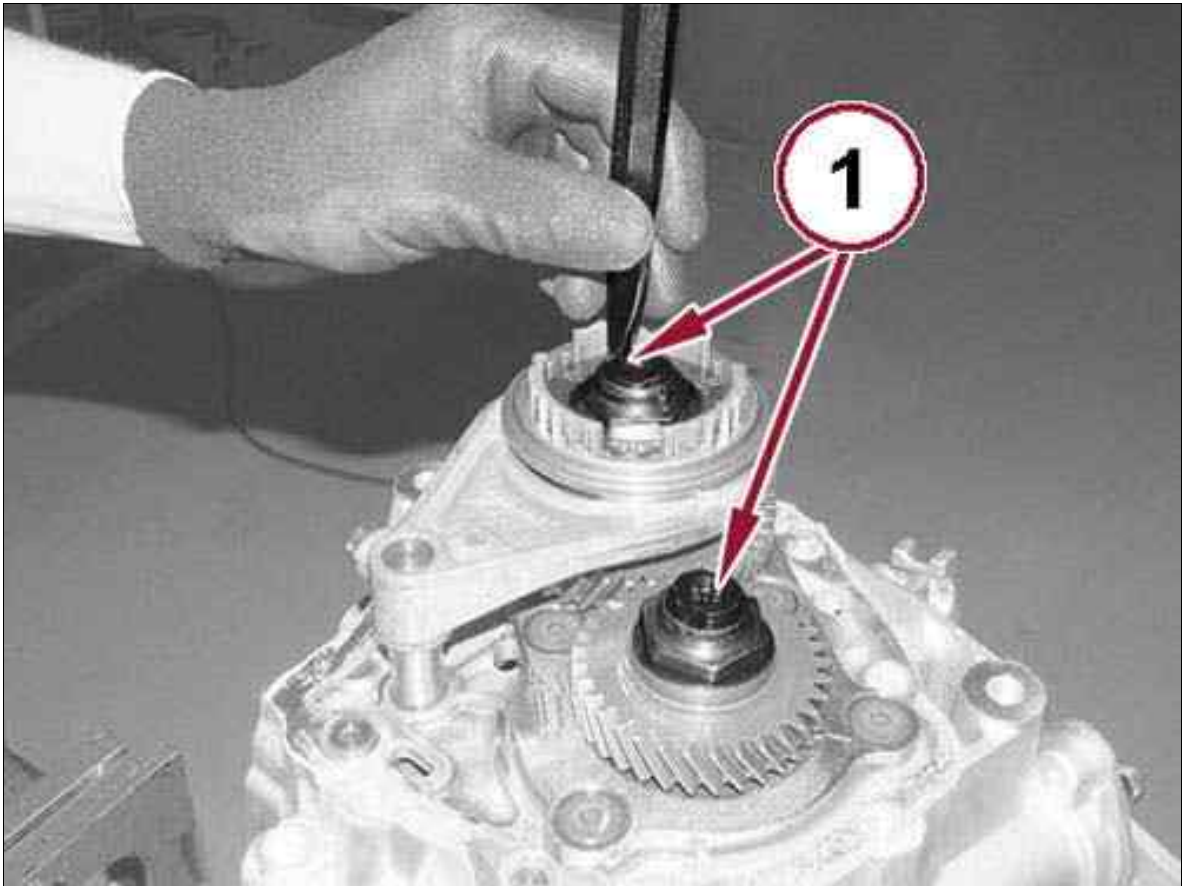
Fig 2: Bolt & 5th Gear Shift Fork



Courtesy of CHRYSLER GROUP, LLC

3. Remove the bolt (1a) from the 5th gear shift fork (1b).
4. Engage the 5th gear by pushing the fork (1b) down.

Fig 3: Fork



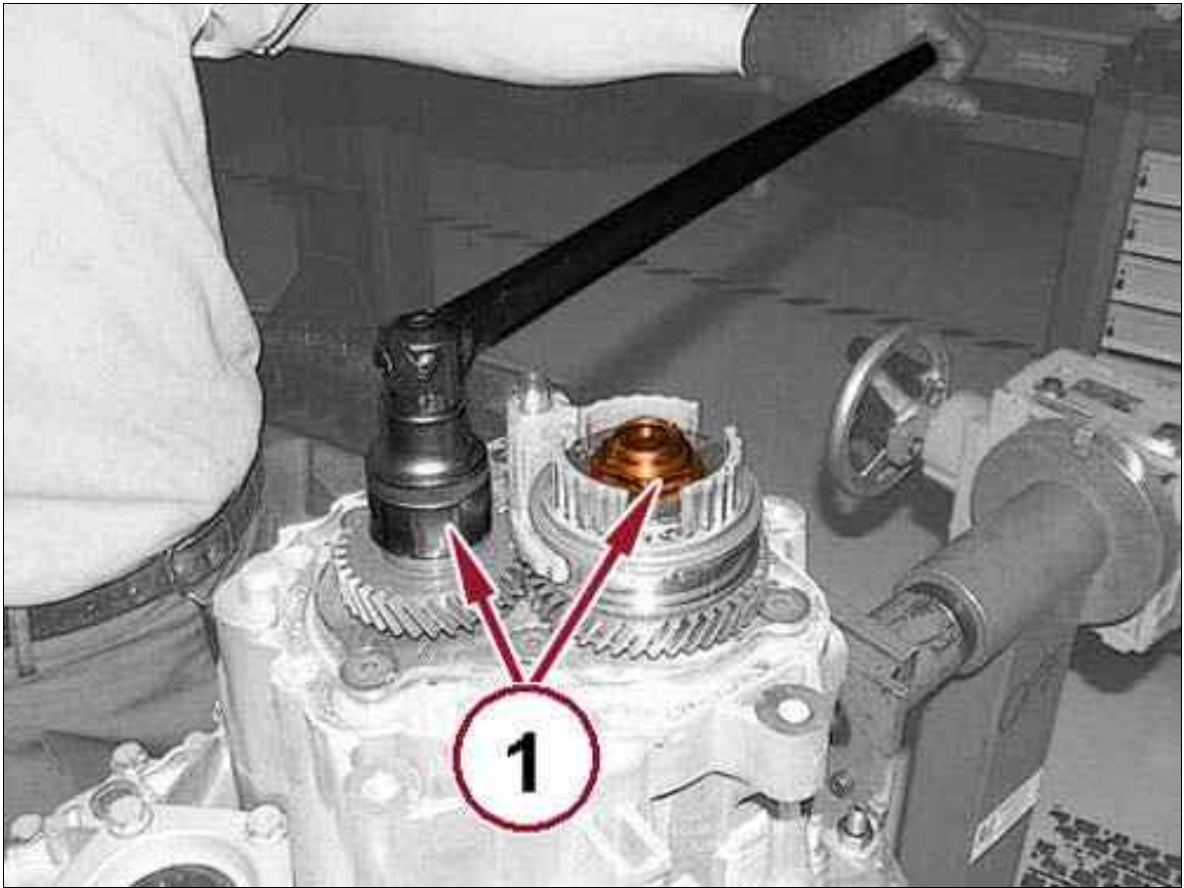
Courtesy of CHRYSLER GROUP, LLC

 NOTE:

If two gears are engaged simultaneously the gear shafts will lock.

5. Use a suitable drift to straighten the staking on the input and output shaft nuts, then loosen the nuts (1).
6. Place 5th gear in the neutral position by lifting up on the shift fork. This will prevent the detents from falling free.

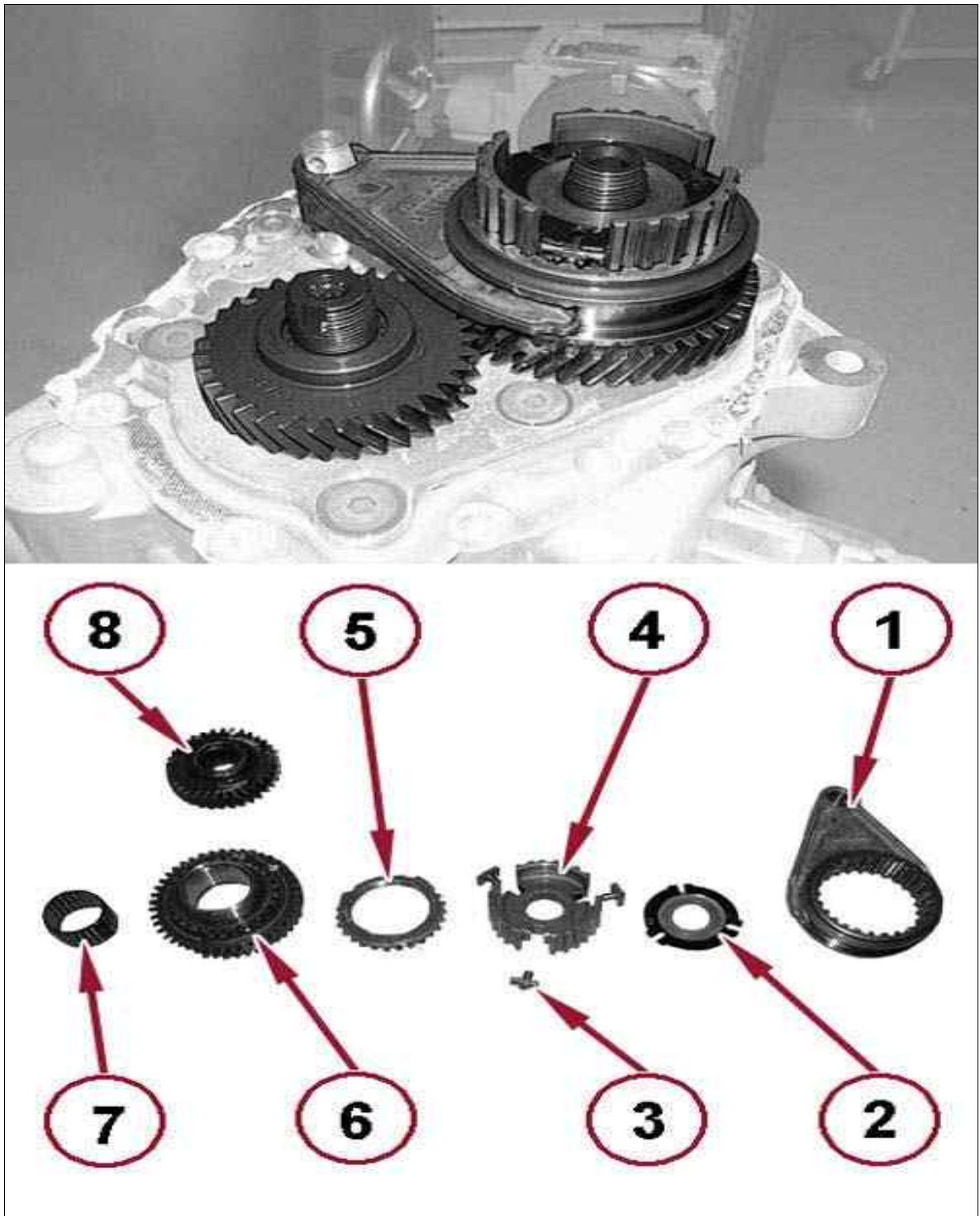
Fig 4: Suitable Drift & Input And Output Shaft Nuts



Courtesy of CHRYSLER GROUP, LLC

7. Remove the input and output shaft nuts (1).

Fig 5: Exploded View Of 5th Gear Components

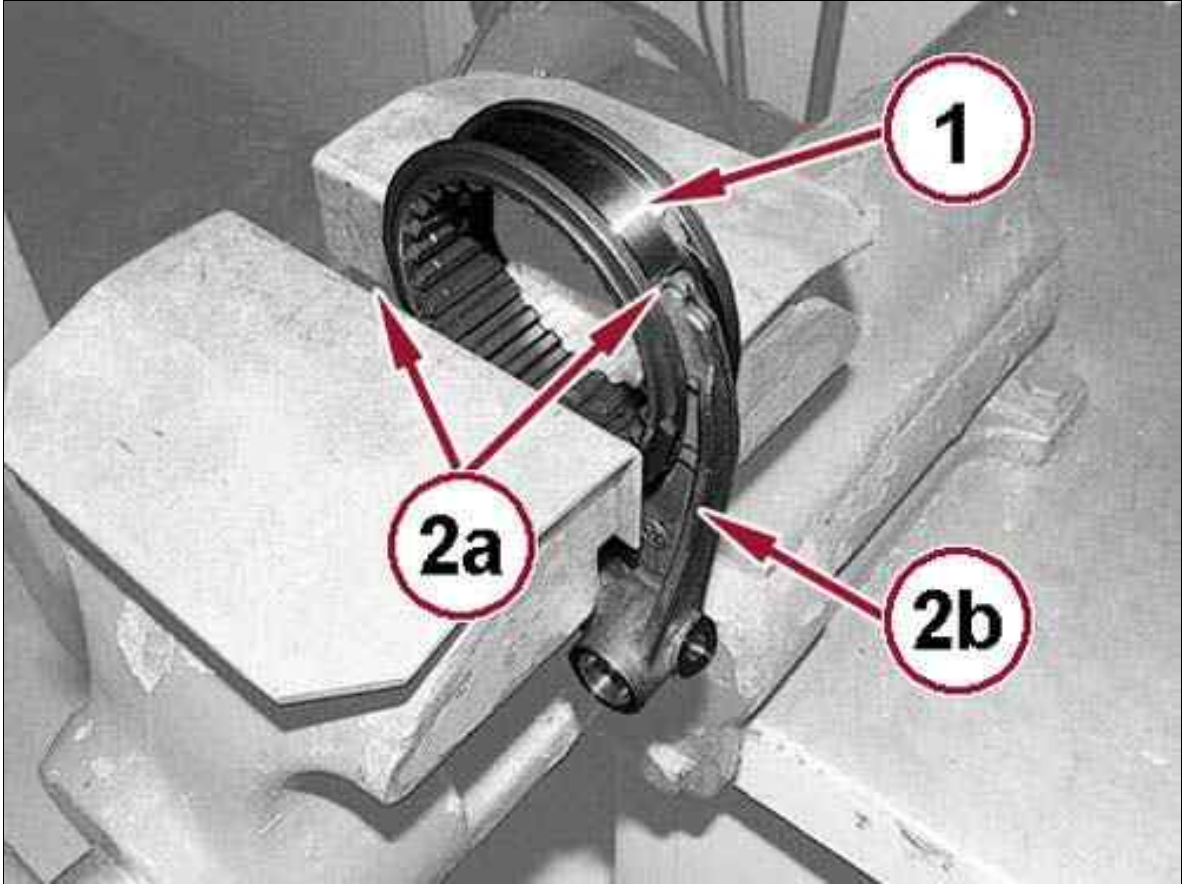


Courtesy of CHRYSLER GROUP, LLC

8. Remove the 5th gear shift fork with the 5th gear synchronizer sleeve (1).
9. Remove the retaining washer (2) for the synchronizer detents.
10. Remove the synchronizer detents (3).
11. Remove the 5th gear synchronizer hub (4).

12. Remove the 5th gear synchronizer ring (5).
13. Remove the 5th gear drive gear (6).
14. Remove the 5th gear drive gear needle bearing (7).
15. Remove the 5th gear driven gear (8).

Fig 6: 5th Gear Synchronizer Sleeve, Two Ends & Fork



Courtesy of CHRYSLER GROUP, LLC



NOTE:

Do not nick the tapered part of the sleeve and the ends of the fork with the drift.

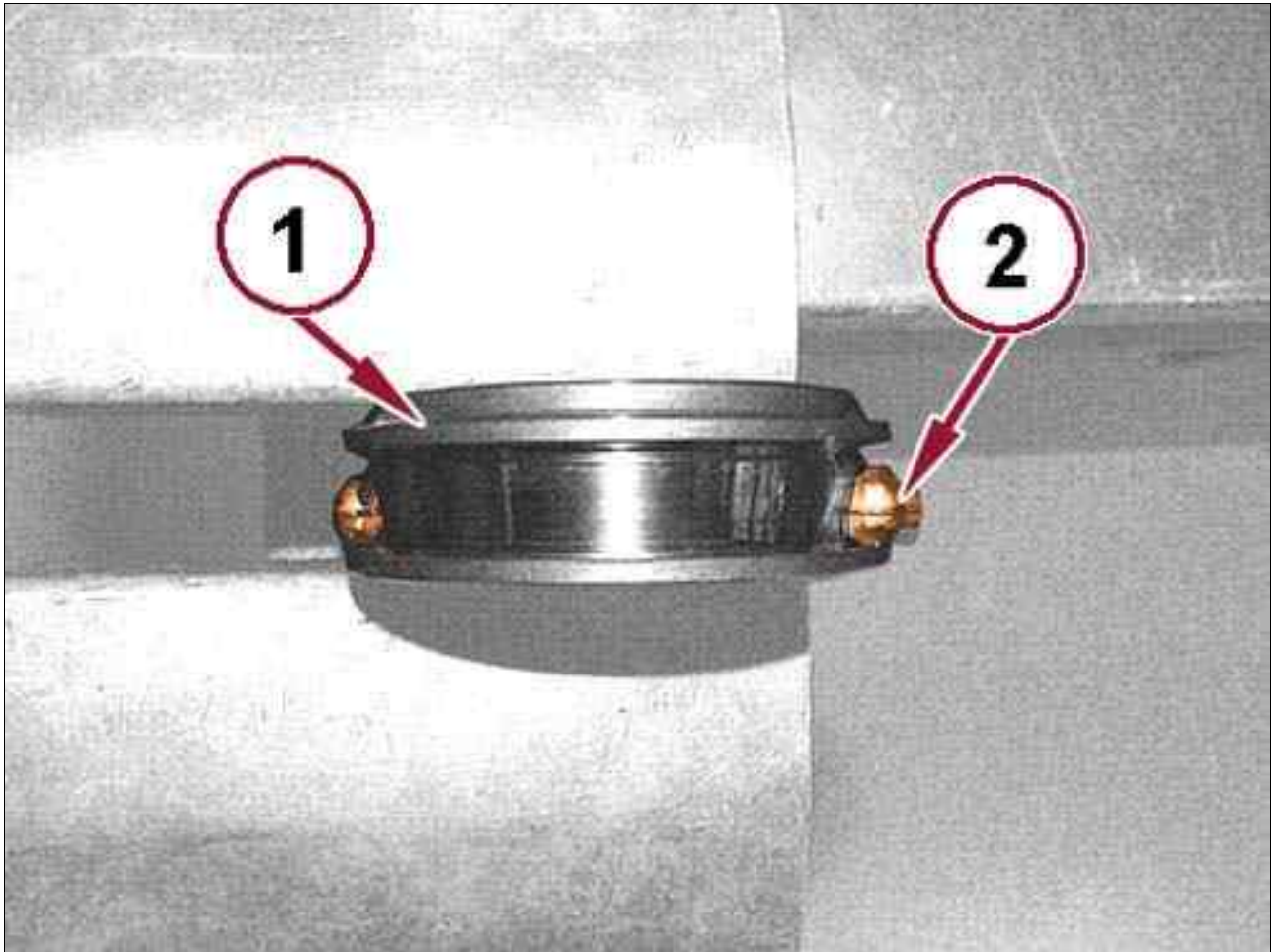
16. Position the 5th gear synchronizer sleeve (1) in a vise with protective, non marring jaw covers.
17. Using a brass punch, alternatively tap on the two ends (2a) of the fork (2b) to separate it from the 5th gear synchronizer sleeve.

DISASSEMBLY AND ASSEMBLY > FIFTH GEAR DISASSEMBLY AND ASSEMBLY > ASSEMBLY

Thoroughly clean and inspect all parts. Replace any component that has excess wear or is damaged as

necessary.

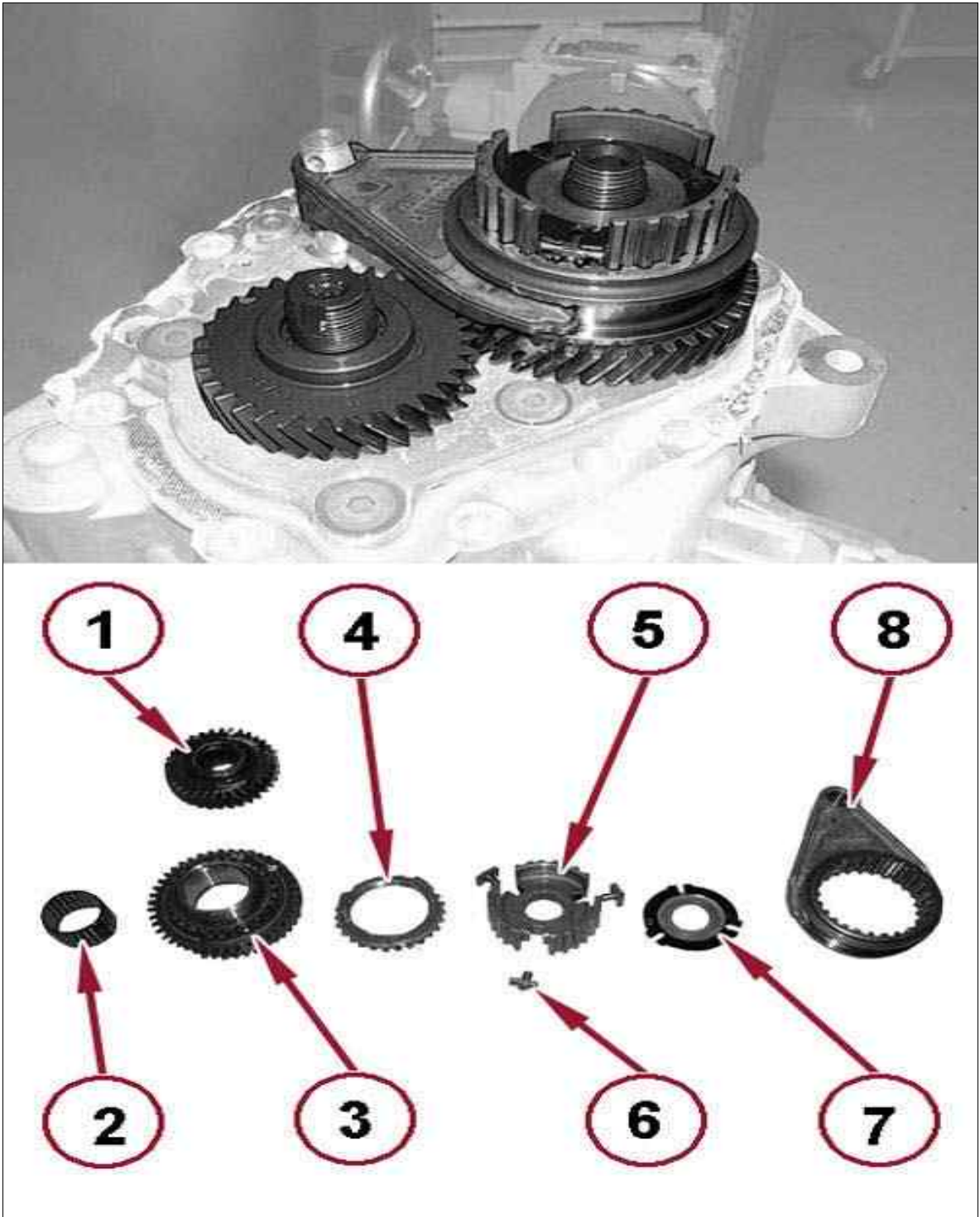
Fig 1: 5th Gear Synchronizer Sleeve & 5th Gear Shift Fork



Courtesy of CHRYSLER GROUP, LLC

1. Position the 5th gear synchronizer sleeve (1) in a vice with protective, non marring jaws.
2. Position the 5th gear shift fork (2) so that the tapered part is facing the same direction as the taper of the sleeve (1). Press the fork onto the sleeve by hand.
3. Check that the sleeve (1) can rotate freely inside of the fork (2).

Fig 2: Exploded View Of 5th Gear Components

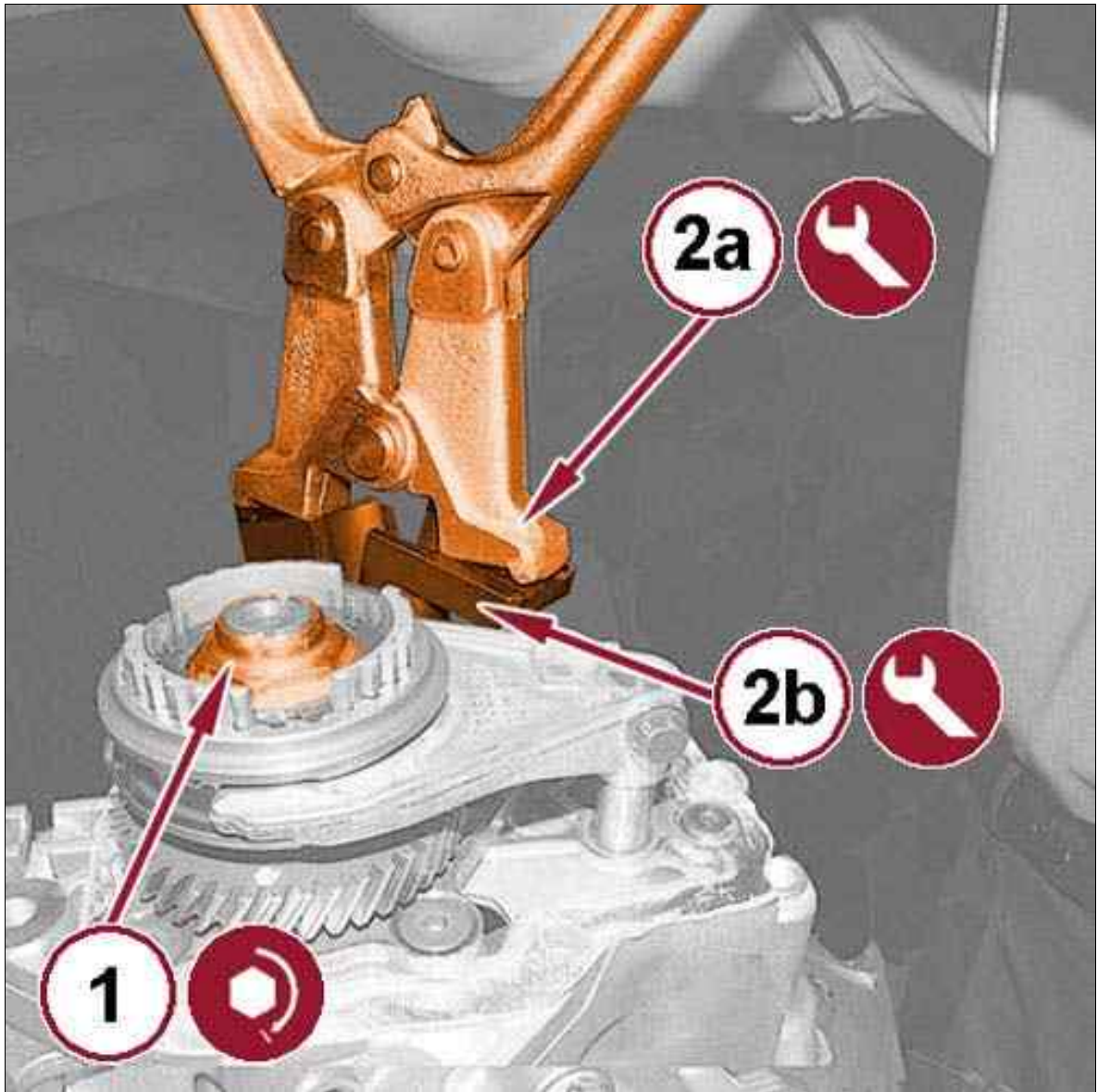


Courtesy of CHRYSLER GROUP, LLC

4. Install the 5th speed driven gear (1).
5. Install the 5th speed drive gear needle bearing (2).
6. Install the 5th speed drive gear (3).
7. Install the 5th gear synchronizer ring (4).

8. Install the 5th gear synchronizer hub (5).
9. Install the detents (6).
10. Install the detent retainer (7).
11. Install the 5th speed synchronizer sleeve complete with shift fork (8).
12. Engage any gear using the gear selection and engagement lever.
13. Engage 5th gear by pressing the shift fork down.

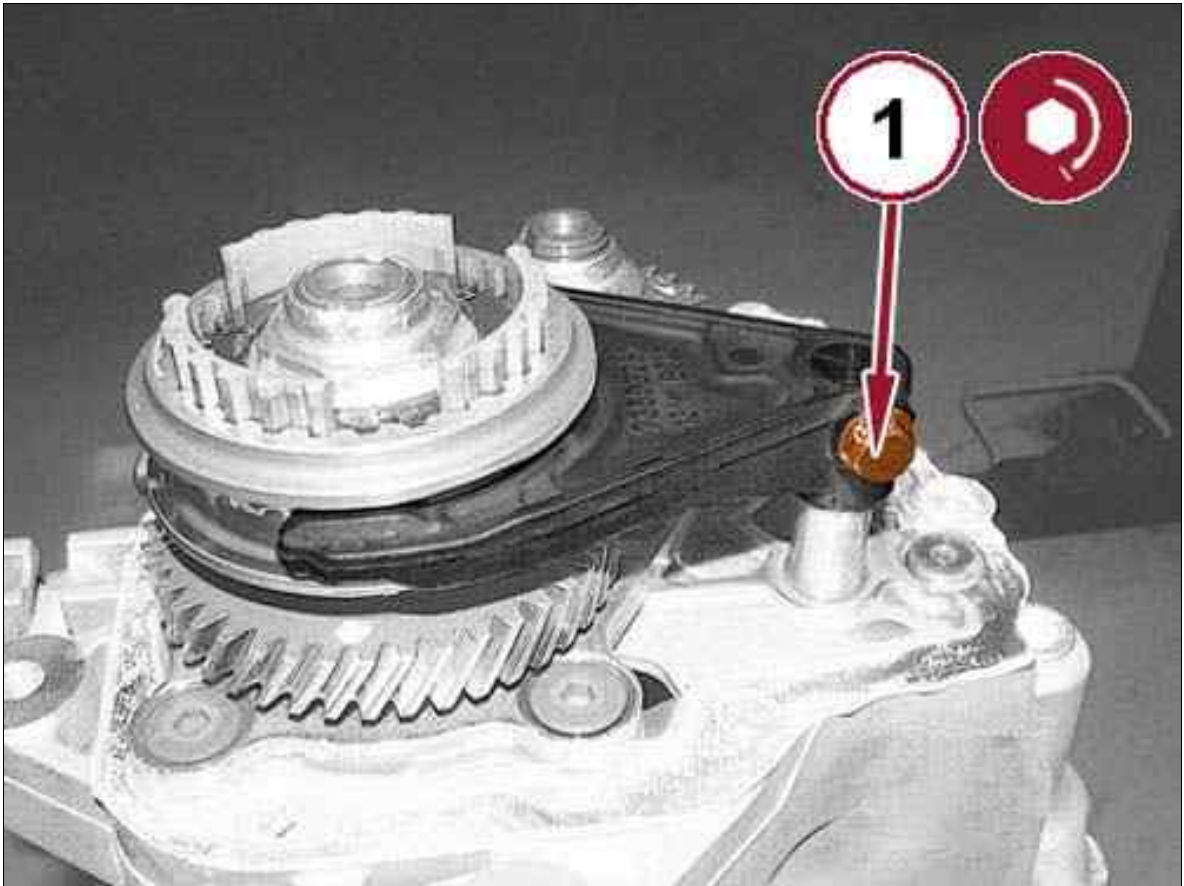
Fig 3: Input And Output Shaft Nuts & Special Tools



Courtesy of CHRYSLER GROUP, LLC

14. Install **NEW** nuts (1) on the input and output shafts and tighten them to the proper TORQUE SPECIFICATIONS .
15. Stake the input and output shaft nuts using the tools 1874140001 (2a) and 1874140005 (2b).

Fig 4: 5th Gear Shift Fork Bolt

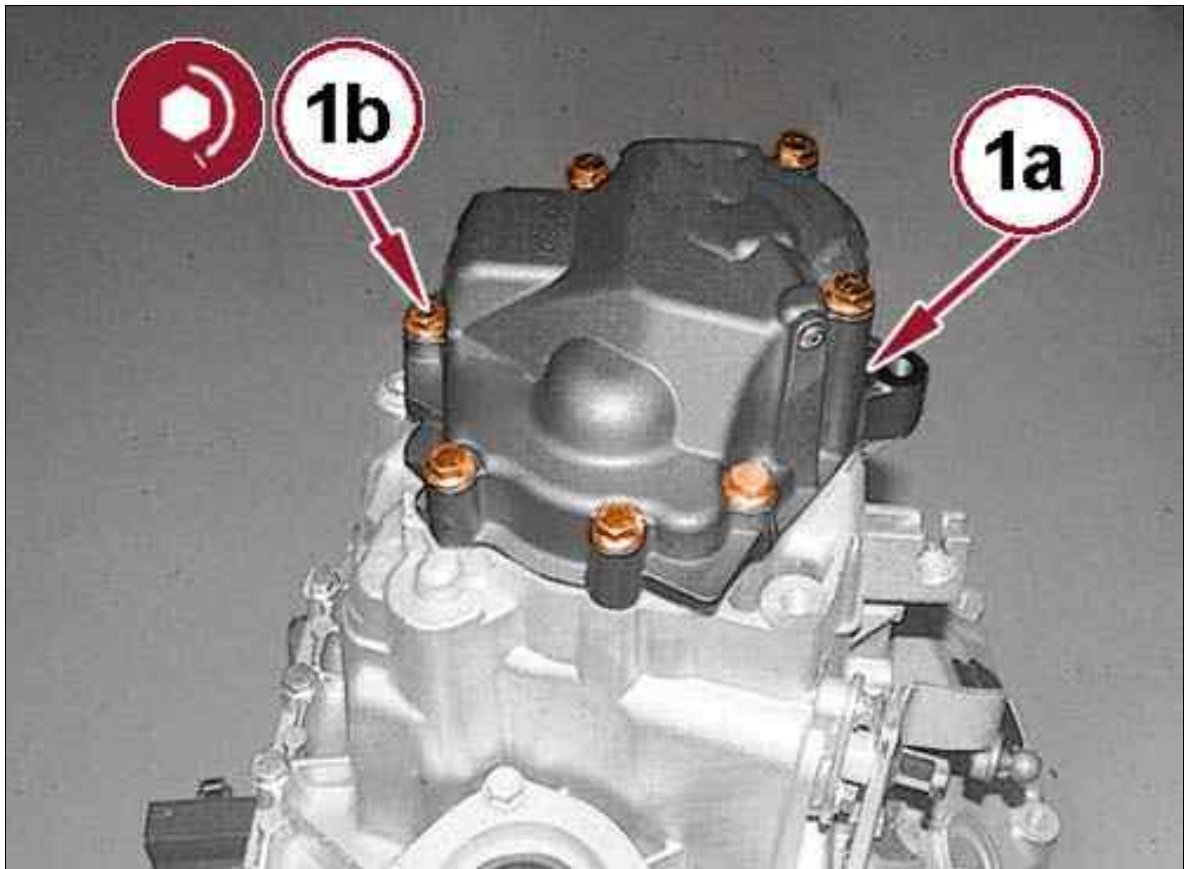


Courtesy of CHRYSLER GROUP, LLC

16. Place the 5th gear shift fork in neutral.

17. Install the 5th gear shift fork bolt (1) to the proper TORQUE SPECIFICATIONS .

Fig 5: Rear Cover & Bolts



Courtesy of CHRYSLER GROUP, LLC

18. Apply sealant to the rear cover mating surface.

19. Install the rear cover (1a) and tighten the bolts (1b) to the proper TORQUE SPECIFICATIONS

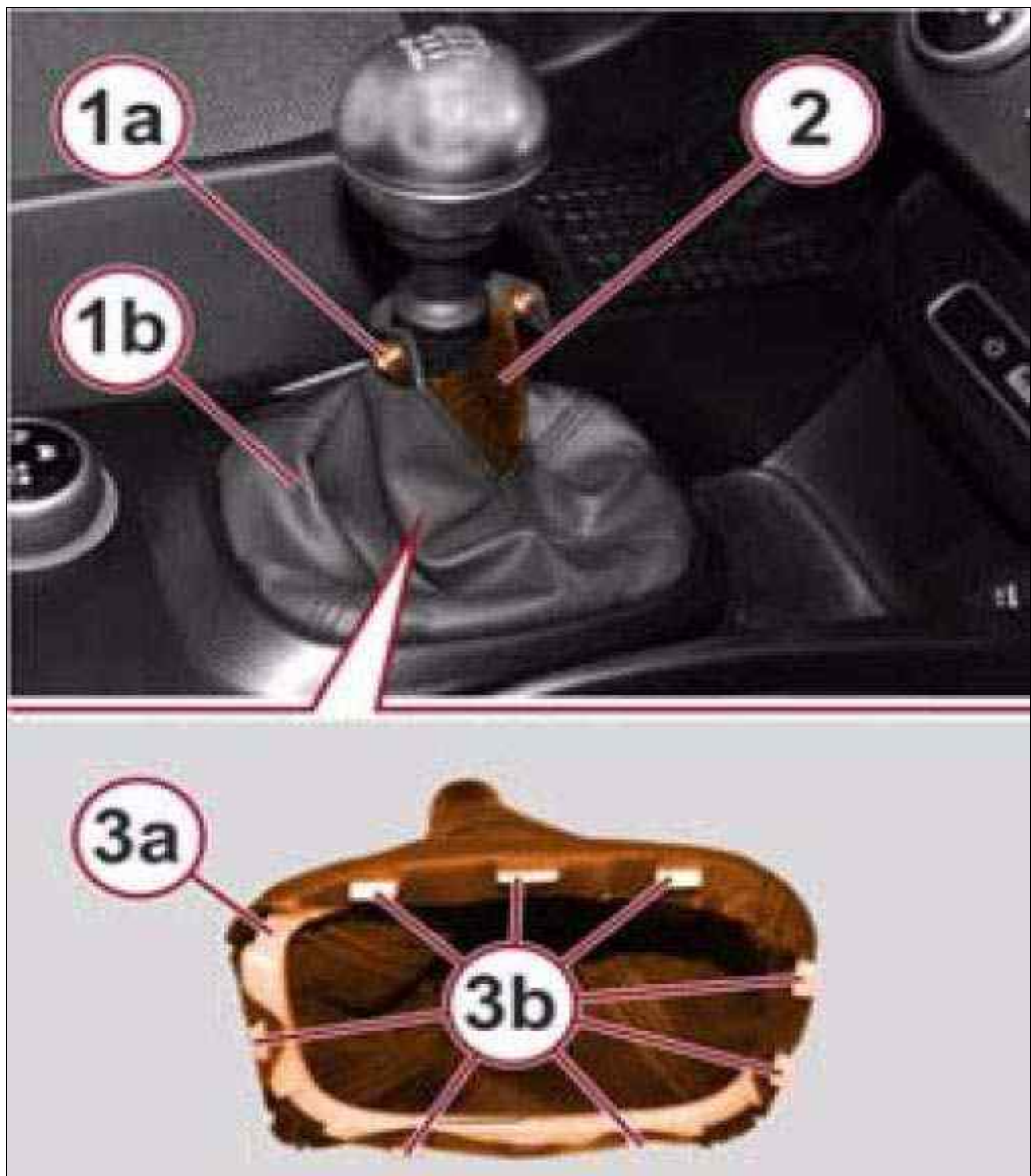
SPECIAL TOOLS > SPECIAL TOOLS

Tool (EMEA)	Tool (NAFTA)	Name	Function
1840005001	*	Puller Bridge	Transmission Diassembly
1840005303	*	Puller Jaws	Transmission Diassembly
1845028000	*	Thrust Button	Differential Bearing Removal
1847017001	*	Slide Hammer	Transmission Disassembly
1870465000	*	Installer	Transmission Assembly
1870655000	*	Puller	Transmission Disassembly
1870658000	*	Installer	Differential Bearing Installation

1870659000	*	Installer	Transmission Assembly
1870835001	*	Hydraulic Jack	Transmission Removal and Installation
1870847000	*	Brackets	Transmission Removal and Installation
1870898400	*	Handle	Transmission Disassembly and Assembly
1870899400	*	Support Plates	Transmission Disassembly and Assembly
1871000000	*	Stand	Transmission Disassembly and Assembly
1871004500	*	Installer	Fifth Gear Bushing Installation
1871001014	*	Adapter	Transmission Disassembly and Assembly
1874140001	*	Handle	Staking the Input and Output Shaft Nuts
1874140005	*	Adapter, Staking	Staking the Input and Output Shaft Nuts
1874541000	*	Installer	Right Differential Bearing Race Installation
1875016000	*	Installer	Right Axle Seal Installation
1875055000	*	Installer	Left Differential Bearing Race Installation
1895655000	*	Support	Differential Bearing Preload Shim Selection
2000001400	*	Cap	Fluid Reservoir
2000040436	8534B	Support Kit	Power Train Support
2000005000	*	Support Plates	Transmission Disassembly and Assembly
*Tool not available for NAFTA. Use a commercially available tool or contact Mopar Essential Tools to order the custom EMEA tool.			

BOOT, GEARSHIFT > REMOVAL AND INSTALLATION > REMOVAL AND INSTALLATION > REMOVAL

Fig 1: Button, Gearshift Boot, Seam, Lower Retainers & Special Tool



Courtesy of CHRYSLER GROUP, LLC

1. Open the button (1a) for the gearshift boot (1b).
2. Separate the Velcro fabric at the seam (2).
3. Using tool 1878077000, pry up the base of the boot (3a), releasing the lower retainers (3b).
4. Remove the gearshift boot.

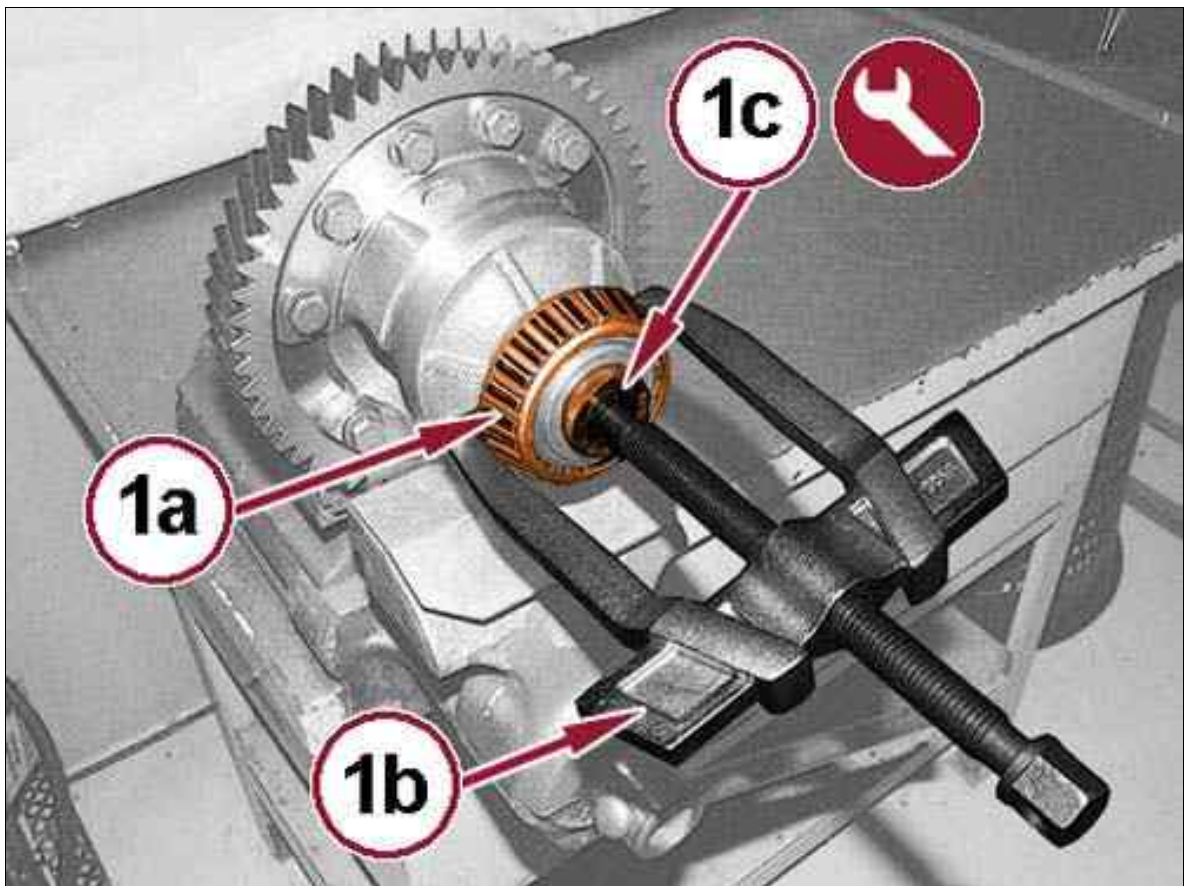
BOOT, GEARSHIFT > REMOVAL AND INSTALLATION > REMOVAL AND INSTALLATION > INSTALLATION

1. Check that the gearshift boot is not damaged.
2. Position the boot over the gearshift lever and engage the lower retainers to the console.
3. Close the gearshift boot seam using the Velcro fabric.
4. Close the button.

DIFFERENTIAL, TRANSAXLE > DISASSEMBLY AND ASSEMBLY > DISASSEMBLY AND ASSEMBLY > DISASSEMBLY

1. Place the complete differential in a vice equipped with protective, non-marring jaw covers.

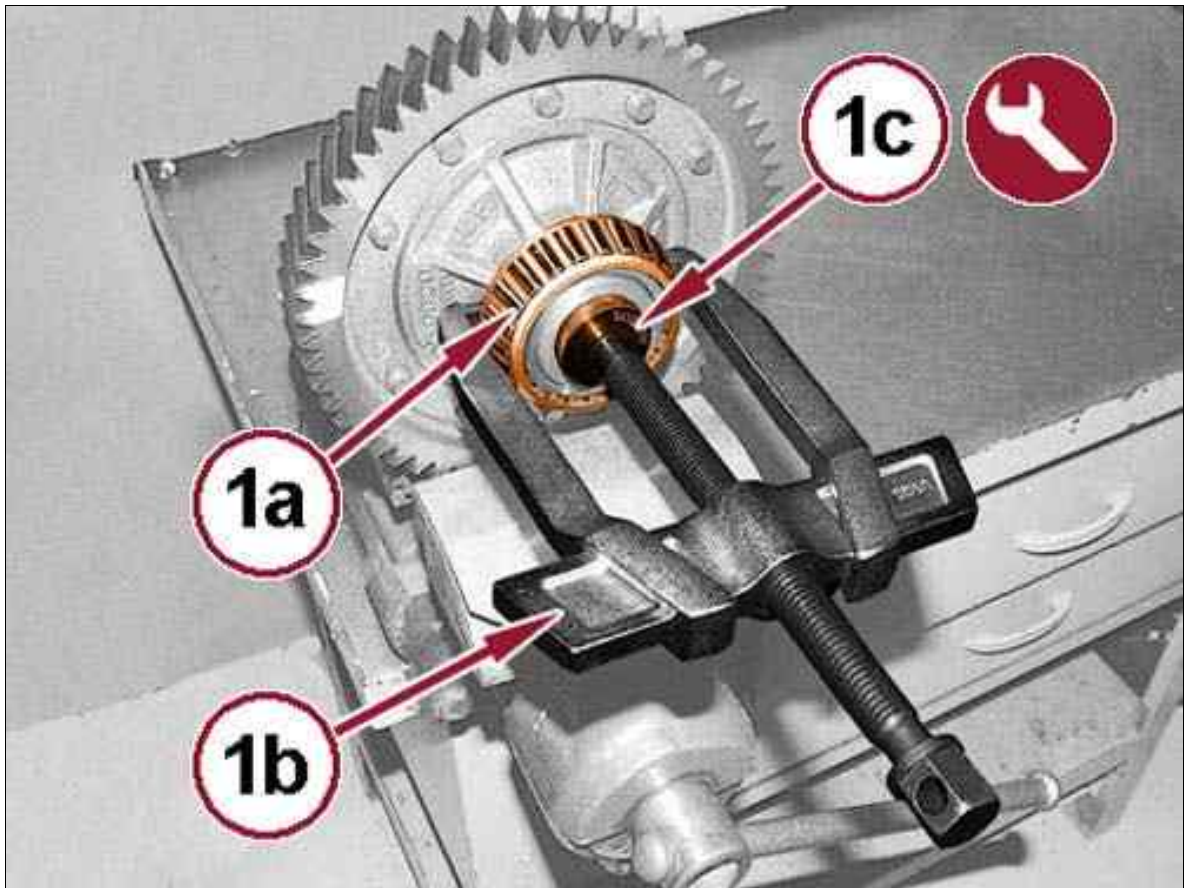
Fig 1: Bearing, Puller & Special Tool



Courtesy of CHRYSLER GROUP, LLC

2. Remove the bearing (1a) from the differential case using a suitable puller (1b) and the tool 1845028000 (1c).

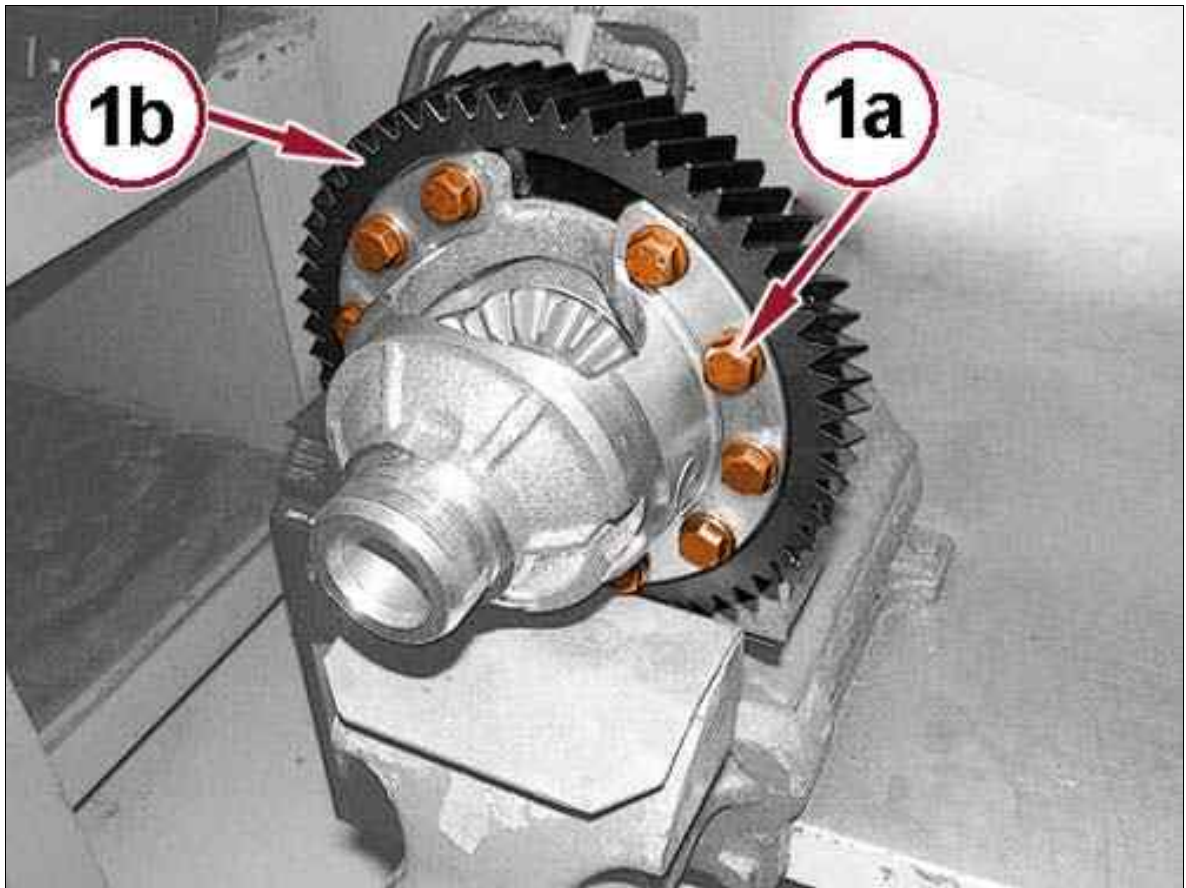
Fig 2: Bearing, Puller & Special Tool



Courtesy of CHRYSLER GROUP, LLC

3. Remove the bearing (1a) from the differential case using a suitable puller (1b) and the tool 1845028000 (1c).
4. Mark the position of the ring gear in relation to the differential casing.

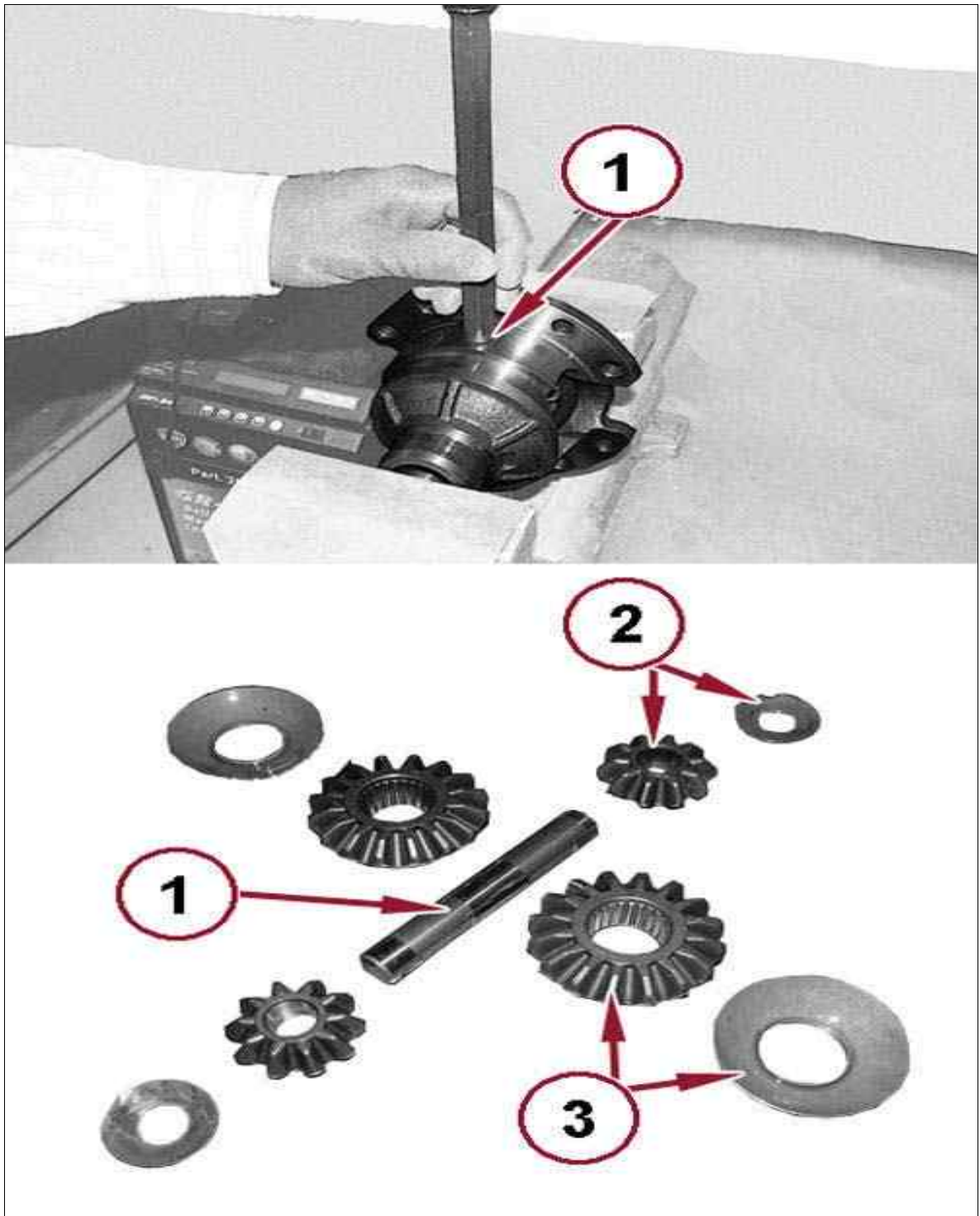
Fig 3: Bolts & Ring Gear



Courtesy of CHRYSLER GROUP, LLC

5. Remove the bolts (1a) and remove the ring gear (1b).

Fig 4: Suitable Drift, Satellite Gears, Planet Gears & Shims



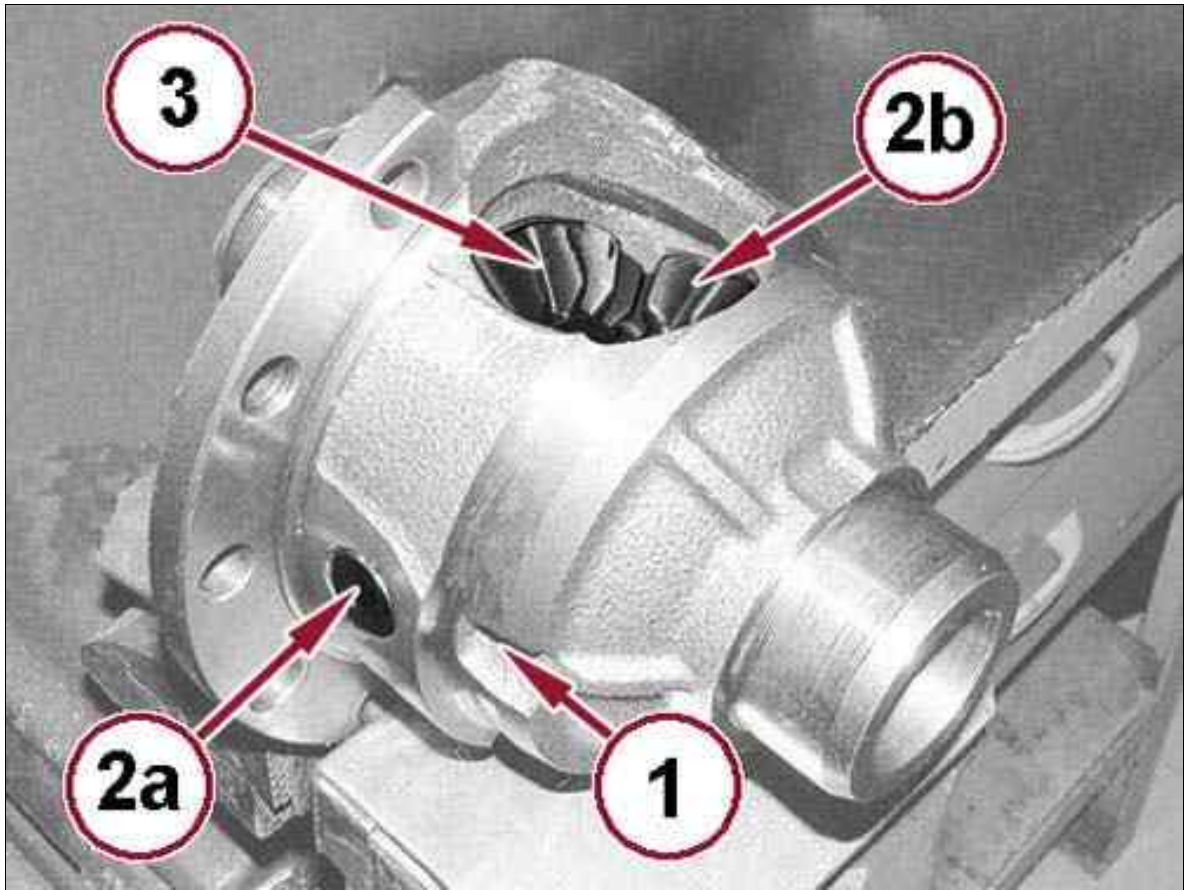
Courtesy of CHRYSLER GROUP, LLC

6. Remove the satellite carrier pin using a suitable drift (1). The roll pin will be sheared during this operation.
7. Remove the satellite gears and shims (2).
8. Remove the planet gears and shims (3).

DIFFERENTIAL, TRANSAXLE > DISASSEMBLY AND ASSEMBLY > DISASSEMBLY AND ASSEMBLY > ASSEMBLY

1. Clean and inspect the satellite and planet gears are intact and show no signs of seizing.

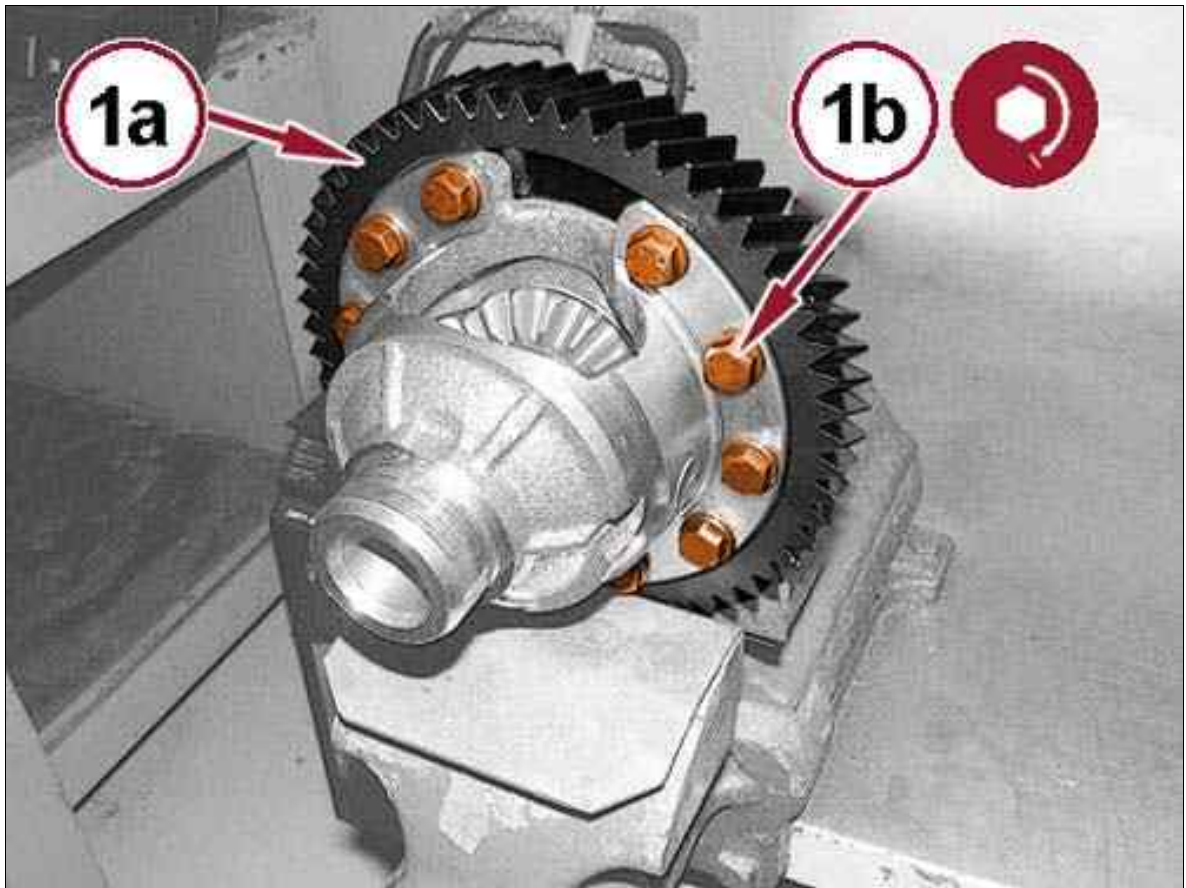
Fig 1: Break Through Wall Point, Satellite Carrier Pins, Planet Gears & Shims



Courtesy of CHRYSLER GROUP, LLC

2. Use a suitable punch to break through the wall of the differential casing at the point shown (1) in the figure.
3. Remove the pieces of the old roll pin from the satellite carrier pin (2) and from the differential casing.
4. Fit the planet gears (3) and shims.
5. Install the satellite carrier pin (2a) in the differential casing with the satellite gears (2b) and shims.
6. Install a **NEW** satellite carrier shaft roll pin using a suitable drift.
7. After installing the roll pin, stake the differential case to prevent it from coming out.
8. Check that the planet and satellite gears rotate without backlash and with slight resistance.

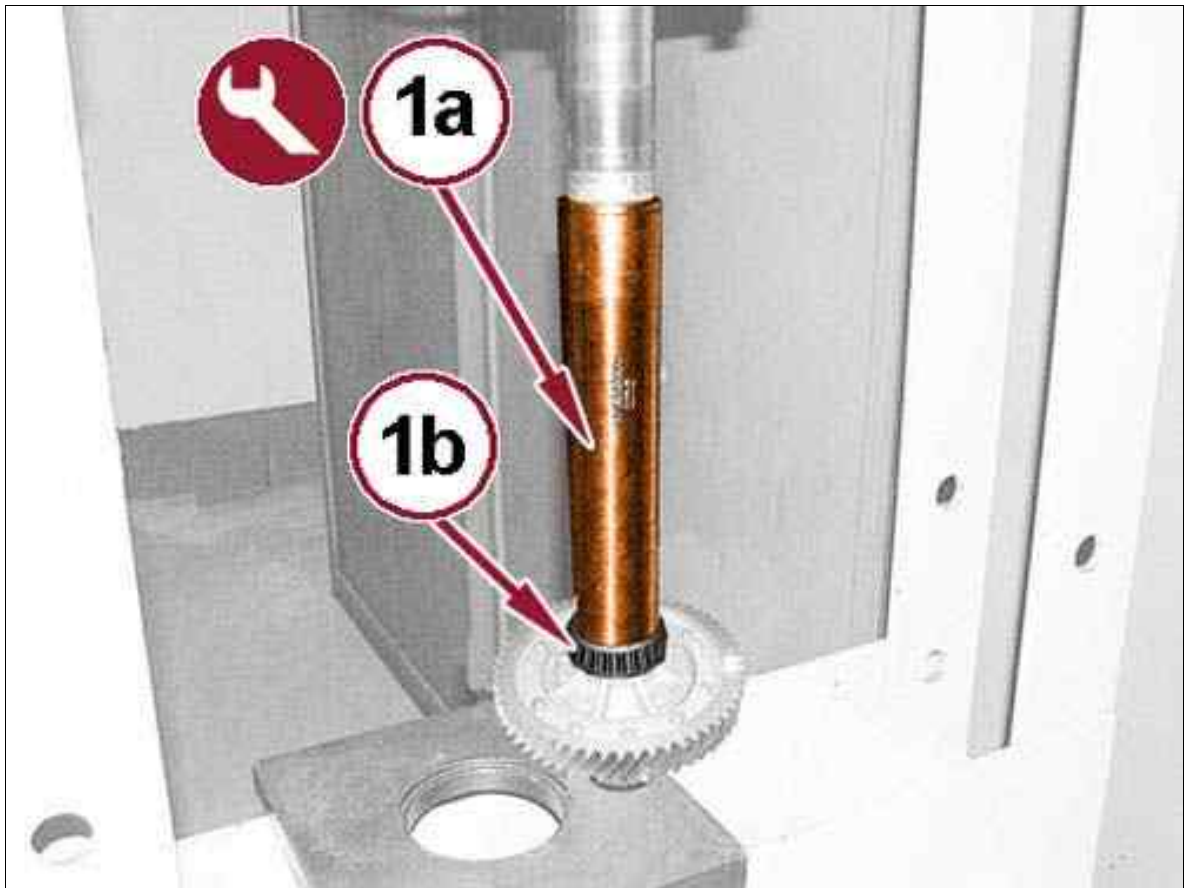
Fig 2: Ring Gear & Bolts



Courtesy of CHRYSLER GROUP, LLC

9. Install the ring gear (1a) aligning the marks made during disassembly, tighten the bolts (1b) to the proper TORQUE SPECIFICATIONS .

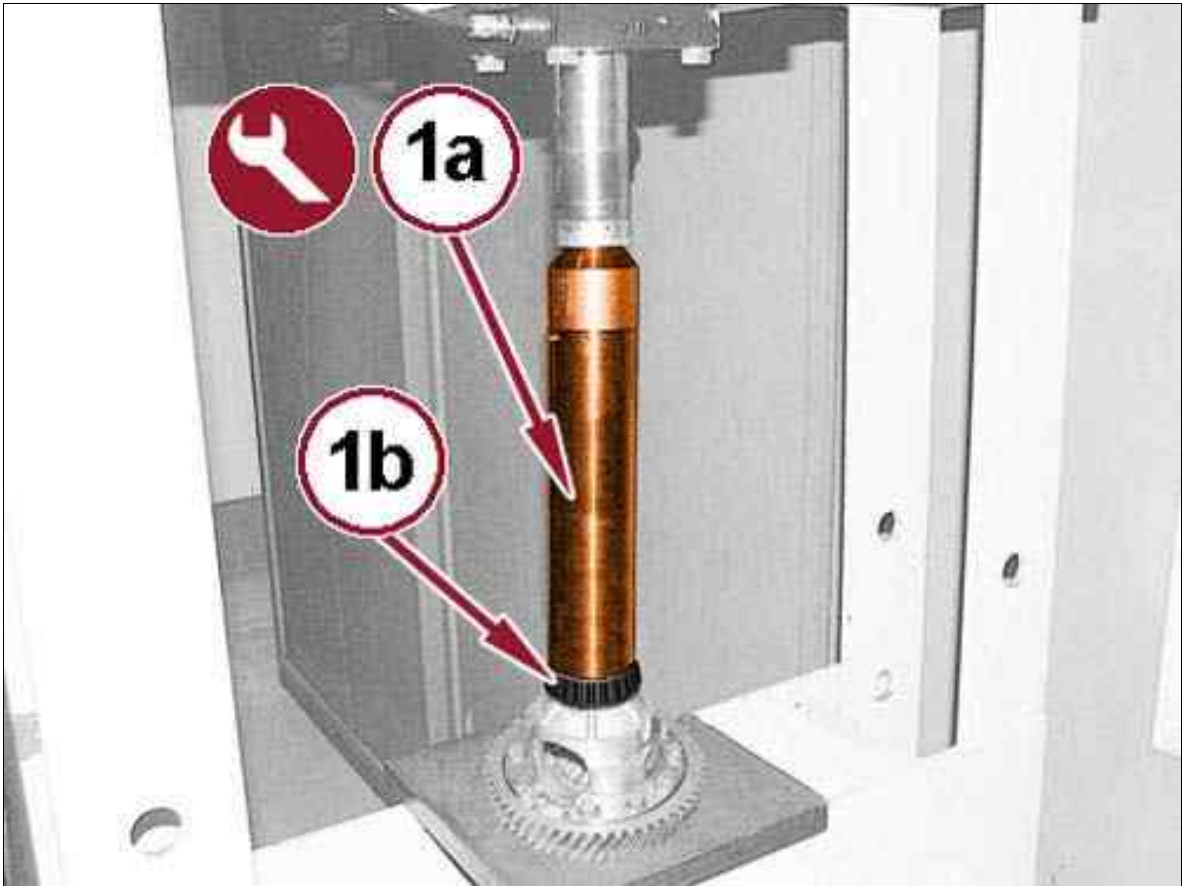
Fig 3: Bearing & Special Tool



Courtesy of CHRYSLER GROUP, LLC

10. Using a suitable hydraulic press and the tool 1870658000 (1a), install the bearing (1b) on the differential case.

Fig 4: Bearing & Special Tool



Courtesy of CHRYSLER GROUP, LLC

11. Using a suitable hydraulic press and the tool 1870658000 (1a), install the bearing (1b) on the differential case.

FLUID > STANDARD PROCEDURE > FLUID DRAIN AND FILL



NOTE:

Changing the manual transmission oil is not a scheduled maintenance operation and is only carried out during overhaul operations involving the replacement of internal components. Therefore, in all other procedures, the manual transmission oil must be reused.



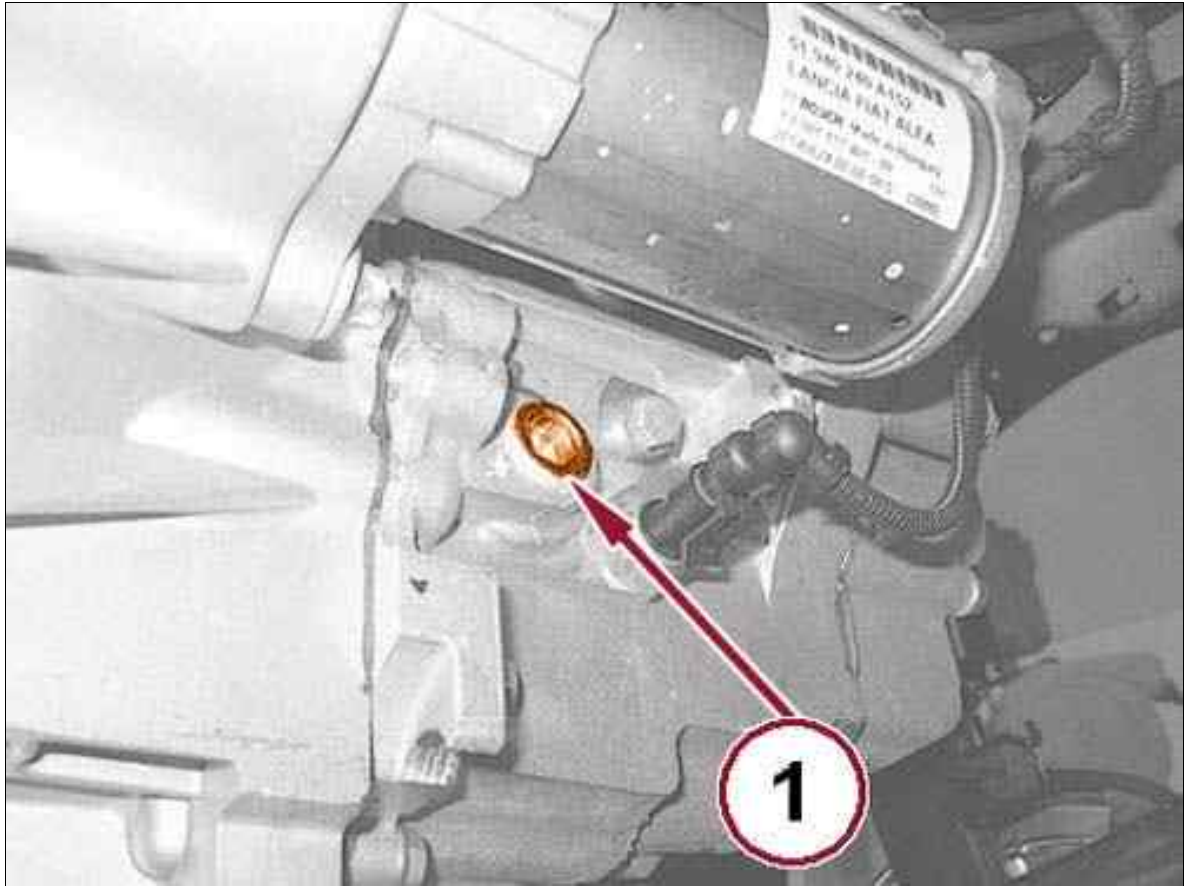
CAUTION:

Possible foreign bodies in the container or in the storage area can compromise the re-utilization of the manual gearbox oil.

1. Place the vehicle on a lift.

2. Remove the belly pan. Refer to BELLY PAN, REMOVAL AND INSTALLATION .

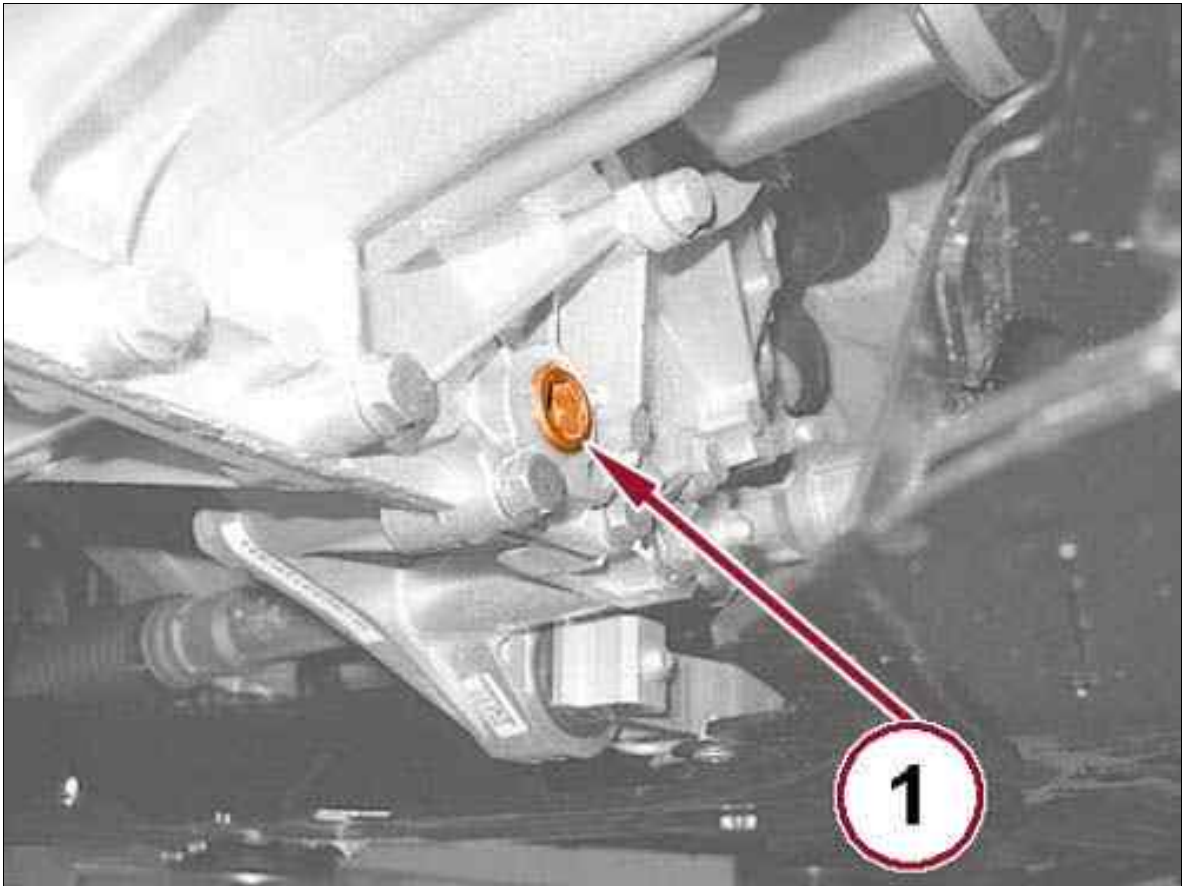
Fig 1: Transmission Filler Plug



Courtesy of CHRYSLER GROUP, LLC

3. Remove the transmission filler plug (1).

Fig 2: Drain Plug



Courtesy of CHRYSLER GROUP, LLC

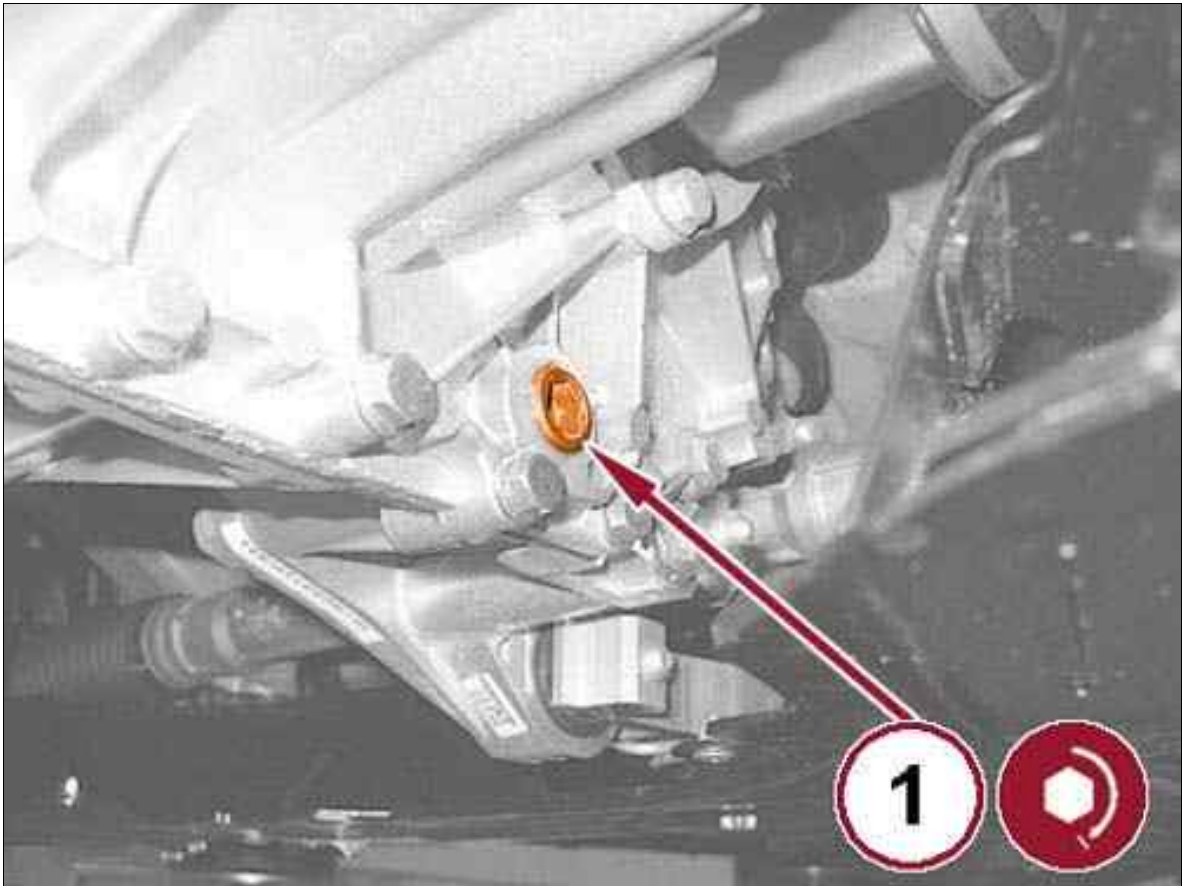


NOTE:

Dispose of the fluid in an approved manner.

4. Remove the drain plug (1) from the transmission and drain the fluid into a suitable container.

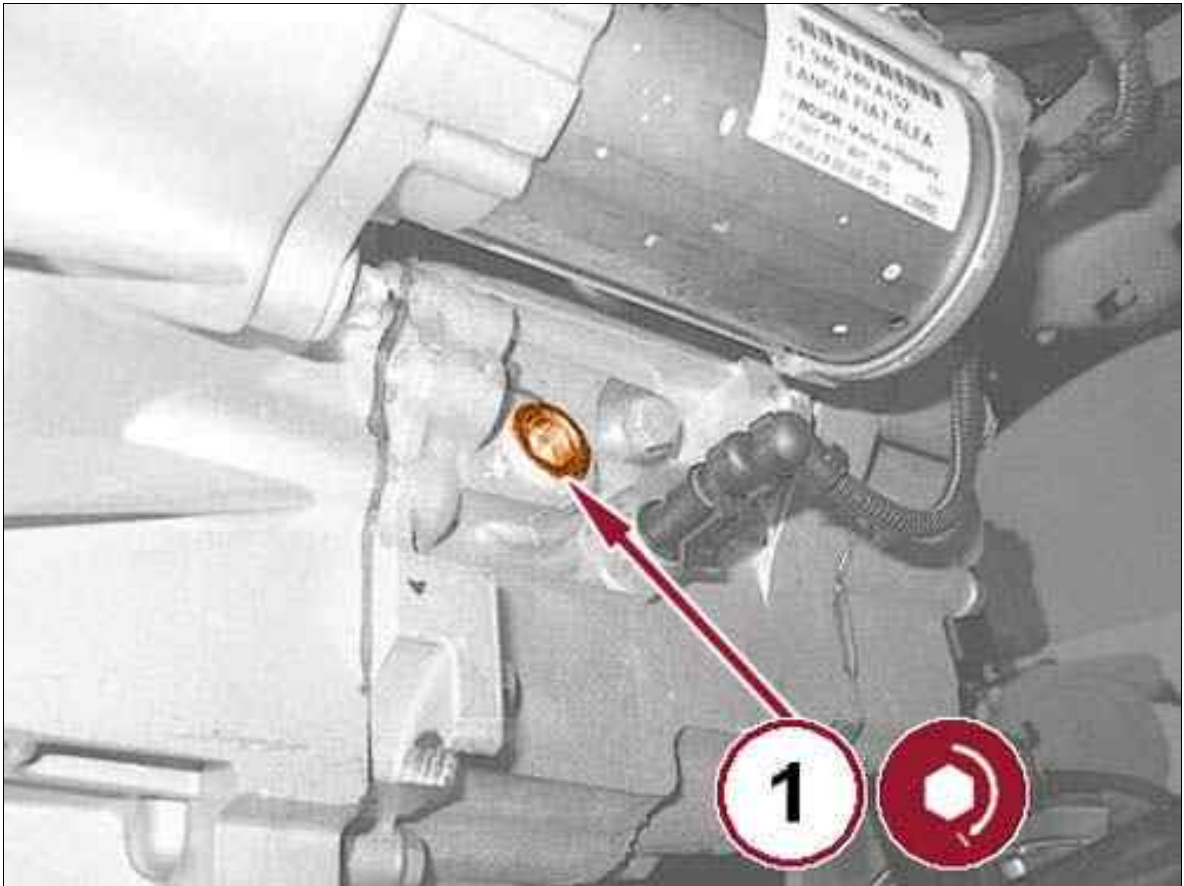
Fig 3: Drain Plug



Courtesy of CHRYSLER GROUP, LLC

5. Clean the drain plug (1) and tighten it to the proper TORQUE SPECIFICATIONS .
6. Refill the transmission with the specified fluid. Refer to CAPACITIES AND RECOMMENDED FLUIDS, SPECIFICATIONS .

Fig 4: Drain Plug

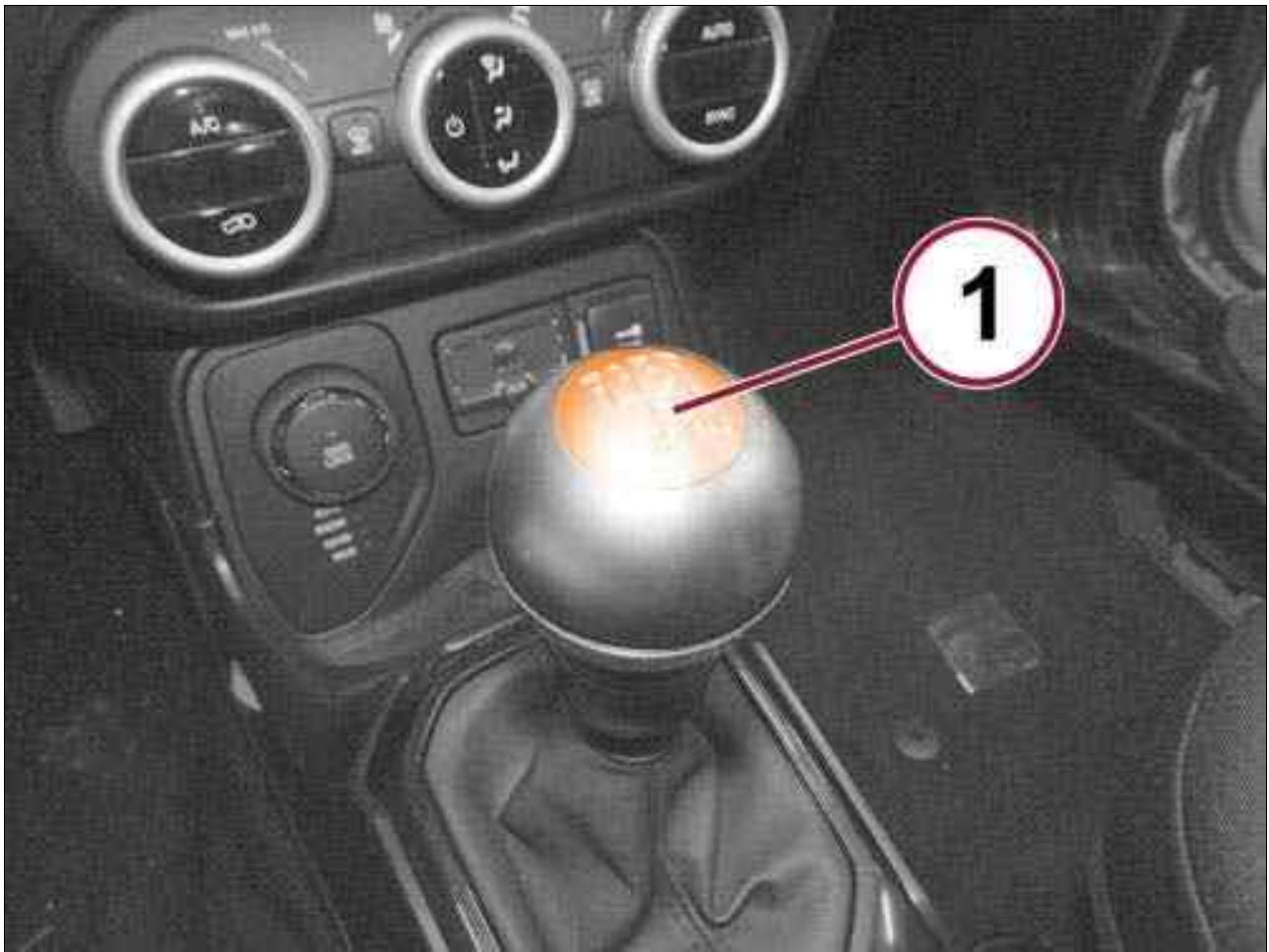


Courtesy of CHRYSLER GROUP, LLC

7. Check that the oil level just touches the lower edge of the filler opening.
8. Clean the drain plug, refit and tighten it to the proper TORQUE SPECIFICATIONS .
9. Install the belly pan. Refer to BELLY PAN, REMOVAL AND INSTALLATION .
10. Remove the vehicle from the lift.

**KNOB, GEARSHIFT > REMOVAL AND INSTALLATION > REMOVAL AND
INSTALLATION > REMOVAL**

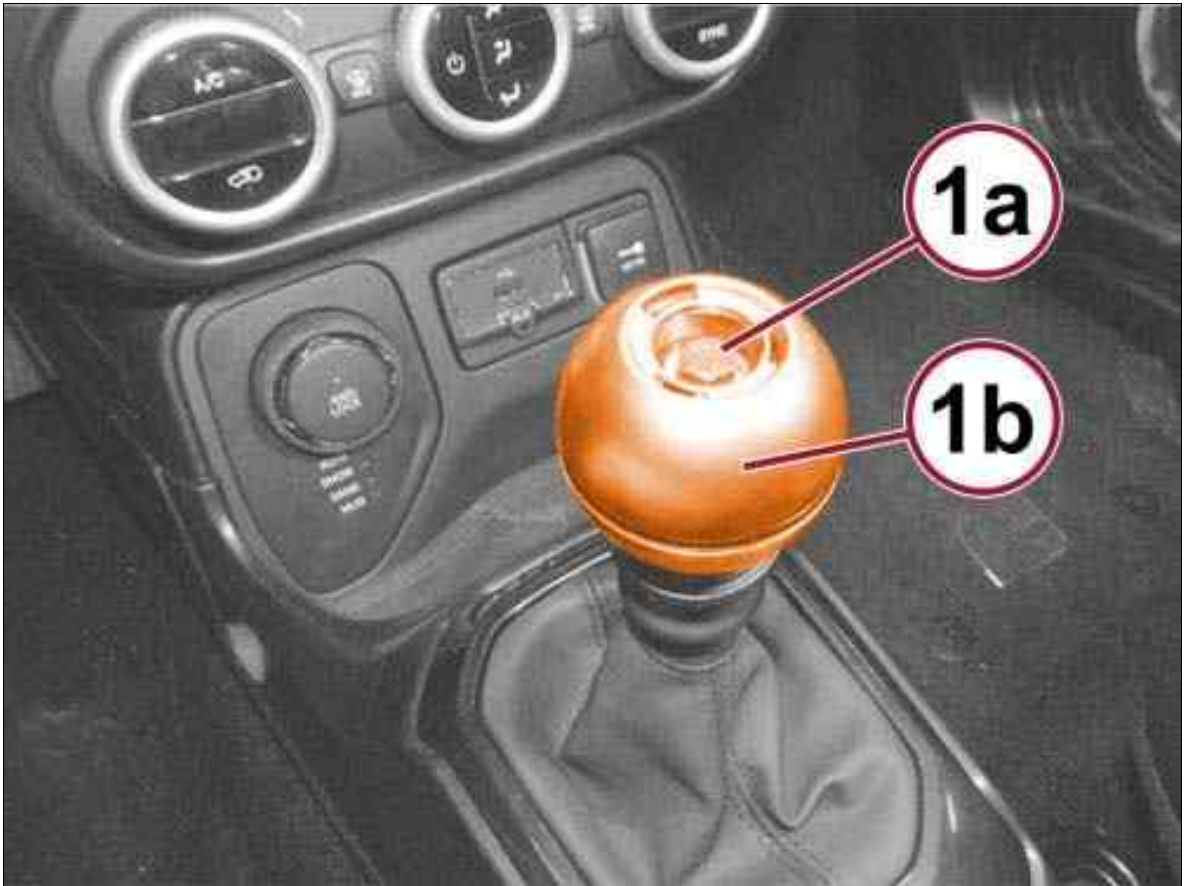
Fig 1: Flange



Courtesy of CHRYSLER GROUP, LLC

1. Pry off the flange (1) at the top of the shifter knob.

Fig 2: Shifter Knob & Bolt



Courtesy of CHRYSLER GROUP, LLC

2. Remove the bolt (1a) and remove the shifter knob (1b).

KNOB, GEARSHIFT > REMOVAL AND INSTALLATION > REMOVAL AND INSTALLATION > INSTALLATION

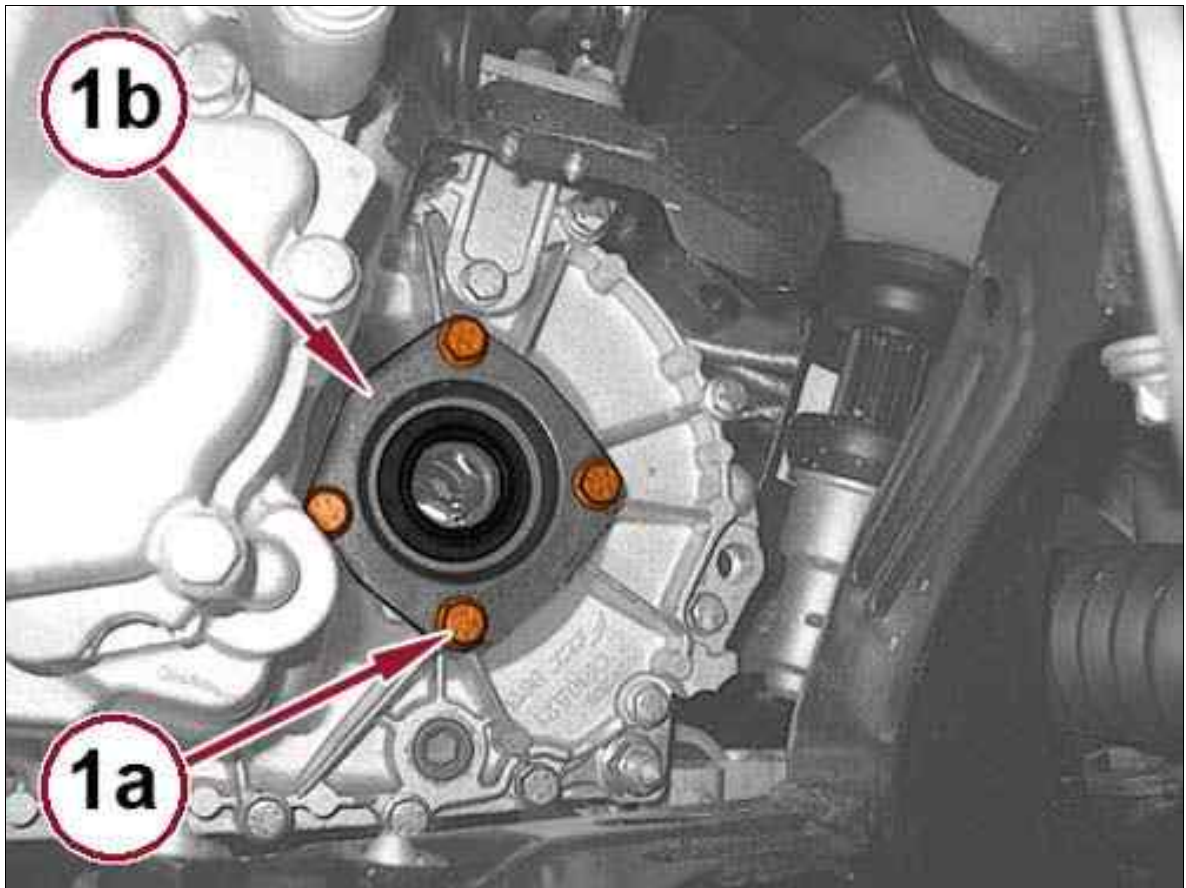
1. Place the shifter knob on the shifter lever tighten the screw.
2. Insert the flange in the top of the shifter knob.

SEAL, AXLE DRIVE SHAFT > REMOVAL AND INSTALLATION > REMOVAL AND INSTALLATION > REMOVAL

LEFT SIDE

1. Remove the left half shaft. Refer to REMOVAL AND INSTALLATION .

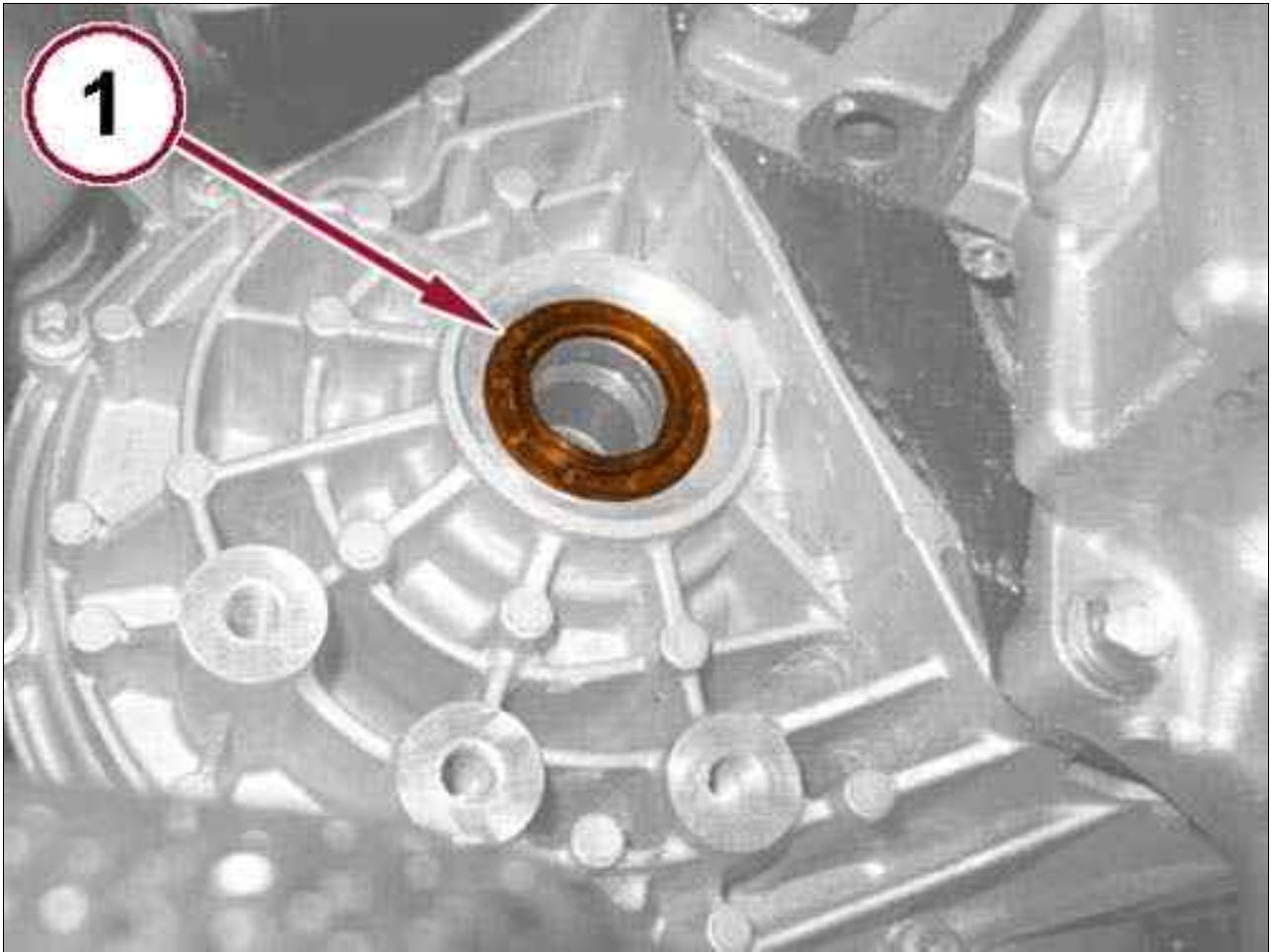
Fig 1: Left Seal Flange & Bolts



Courtesy of CHRYSLER GROUP, LLC

2. Remove the bolts (1a) and remove the left seal flange (1b).

Fig 2: Right Side Axle Drive Shaft Seal



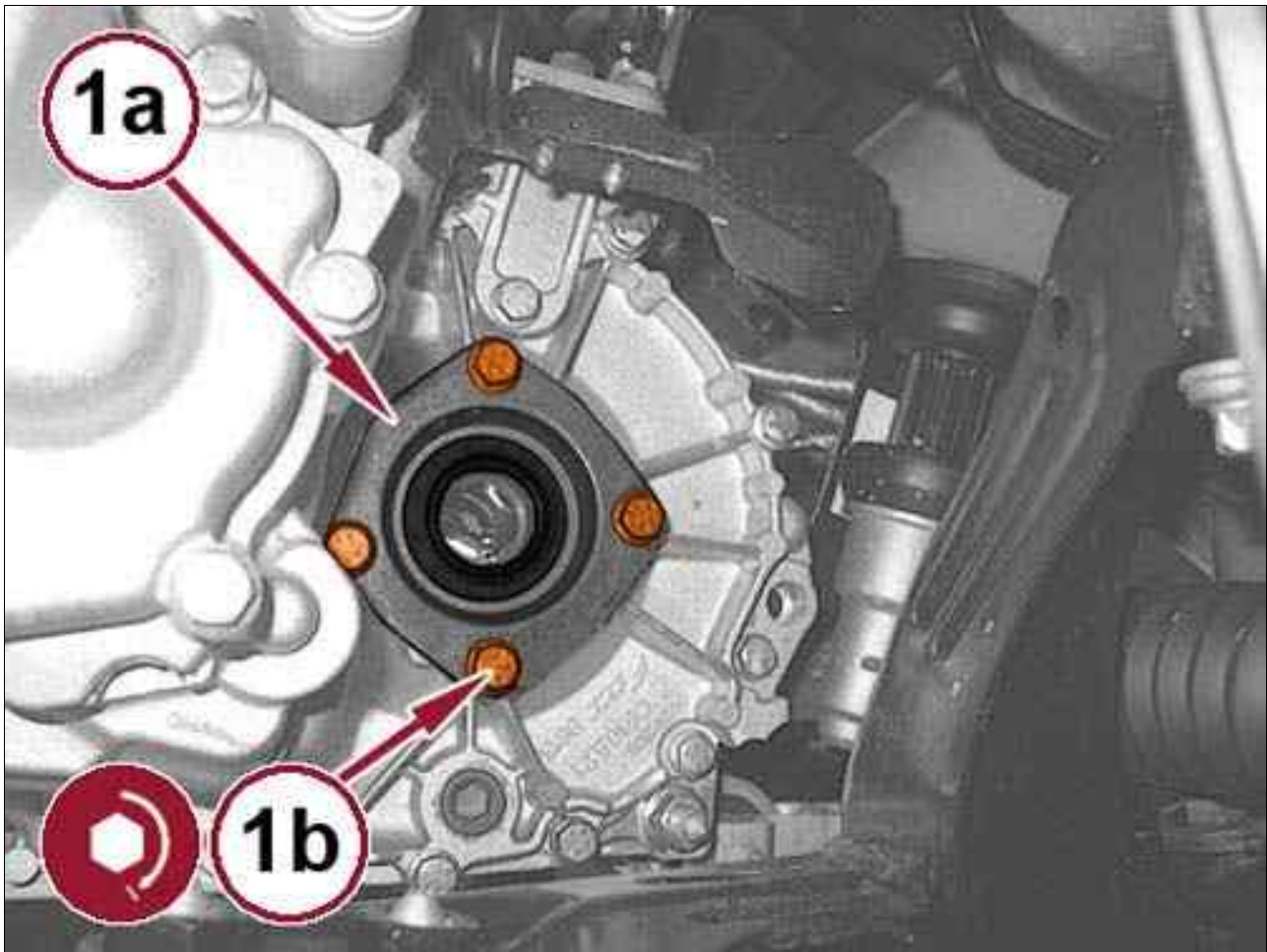
Courtesy of CHRYSLER GROUP, LLC

RIGHT SIDE

1. Remove the right half shaft. Refer to REMOVAL AND INSTALLATION .
2. Carefully pry out the seal (1) using a suitable tool without damaging the seal bore.

**SEAL, AXLE DRIVE SHAFT > REMOVAL AND INSTALLATION > REMOVAL AND
INSTALLATION > INSTALLATION**

Fig 1: Left Flange & Bolts



Courtesy of CHRYSLER GROUP, LLC

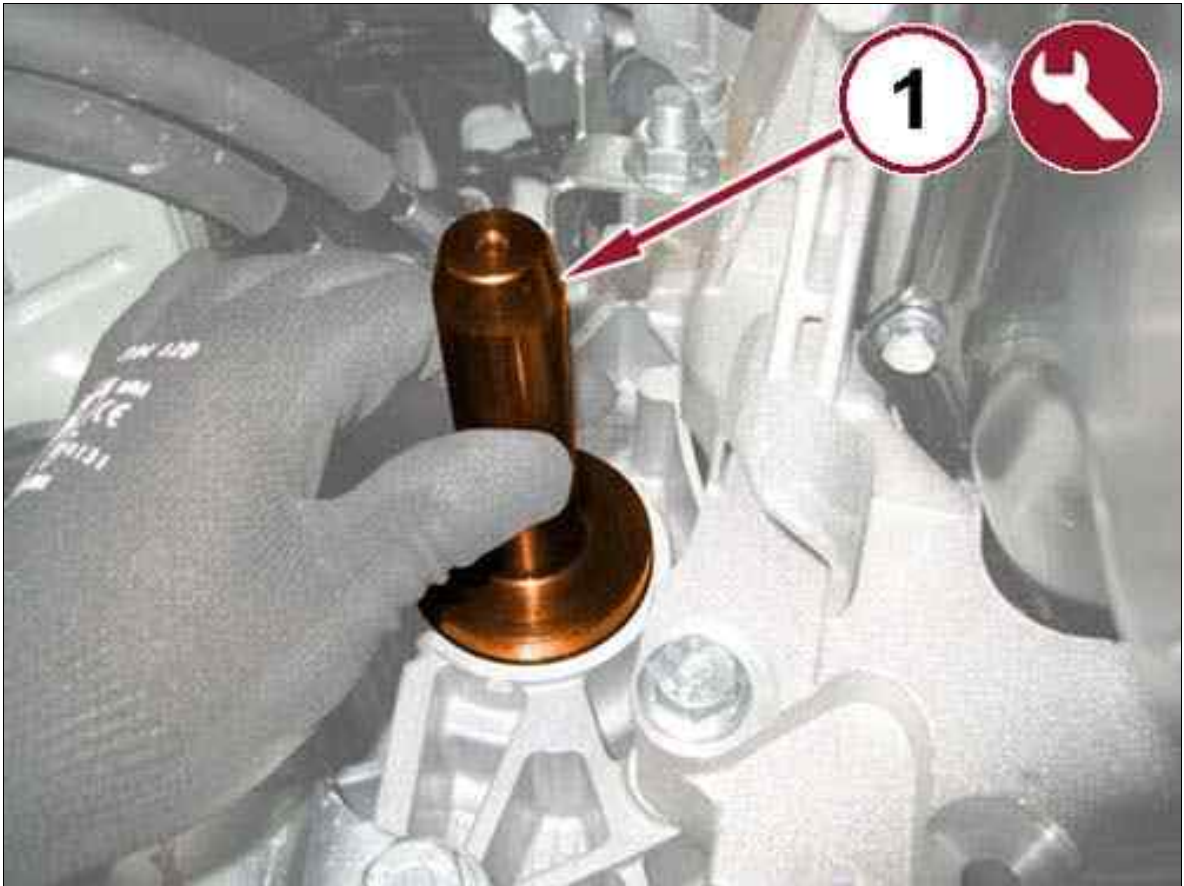
LEFT SIDE

1. Install the left flange (1a) and tighten the bolts (1b) to the proper SPECIFICATIONS .
2. Install the left half shaft. Refer to REMOVAL AND INSTALLATION .

RIGHT SIDE

1. Lubricate the **NEW** axle shaft oil seal with transmission fluid.

Fig 2: Special Tool Installer



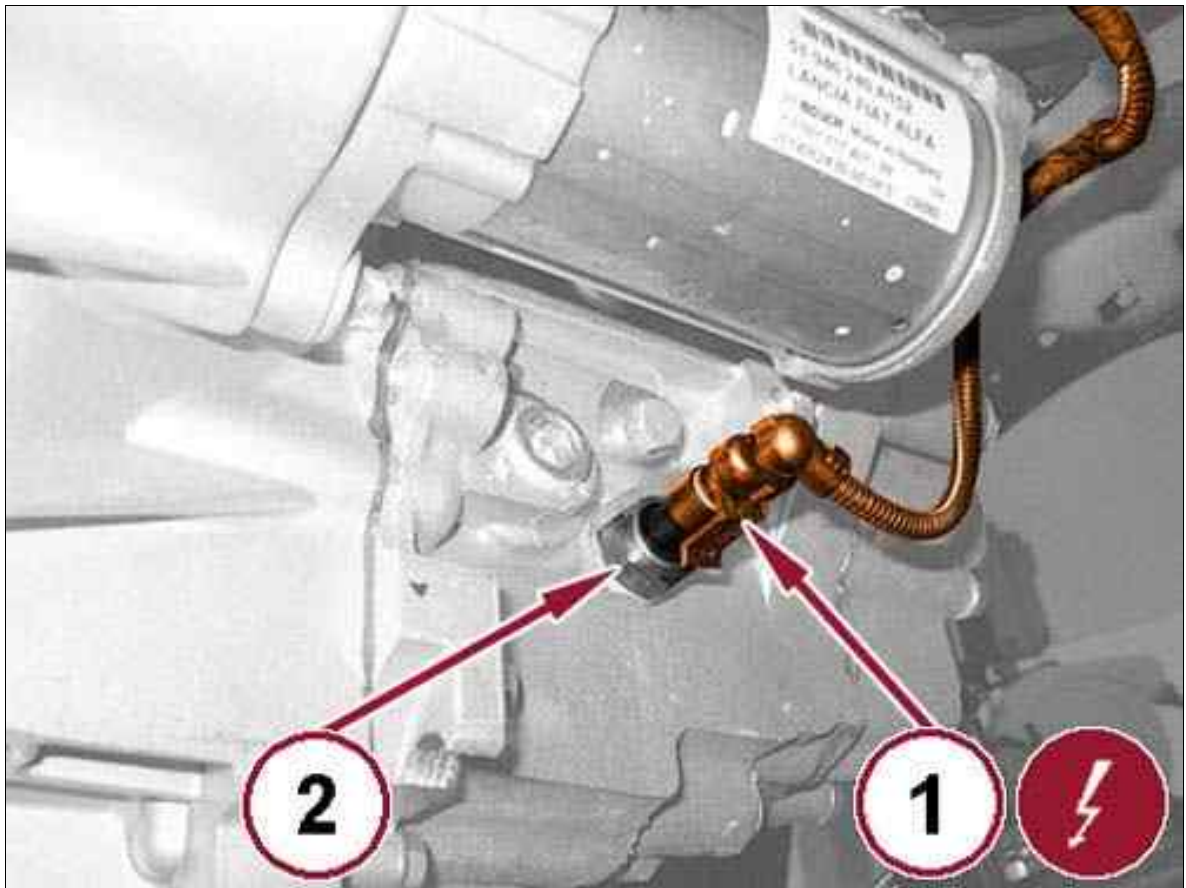
Courtesy of CHRYSLER GROUP, LLC

2. Using the installer 1875016000 (1) install the seal into the differential housing.
3. Install the right half shaft. Refer to REMOVAL AND INSTALLATION .

SWITCH, BACKUP LAMP > REMOVAL AND INSTALLATION > REMOVAL AND INSTALLATION > REMOVAL

1. Place the car on a lift.
2. Remove the belly pan. Refer to BELLY PAN, REMOVAL AND INSTALLATION .

Fig 1: Backup Lamp Switch & Wire Harness Connector



Courtesy of CHRYSLER GROUP, LLC

3. Disconnect the backup lamp switch wire harness connector (1).
4. Remove the backup lamp switch (2).

SWITCH, BACKUP LAMP > REMOVAL AND INSTALLATION > REMOVAL AND INSTALLATION > INSTALLATION

1. Install the backup lamp switch and tighten securely.
2. Connect the backup lamp switch wire harness connector.
3. Install the belly pan. Refer to BELLY PAN, REMOVAL AND INSTALLATION .
4. Remove the car from the lift.