

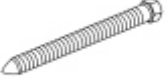







Transmission

Special Tool(s)

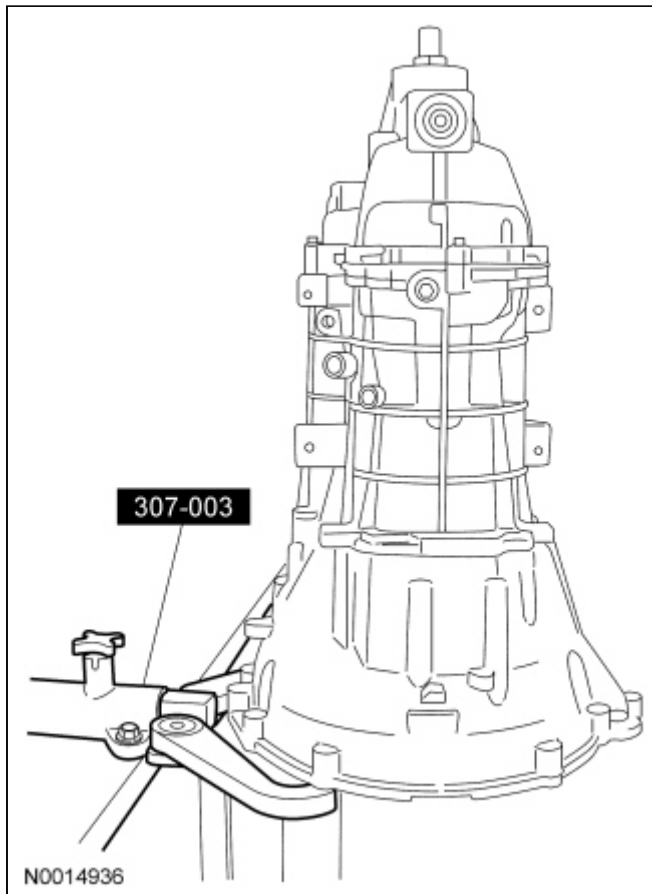
 ST2026-A	2 Jaw Puller 205-D072 (D80L-1002-L) or equivalent
 ST1186-A	Holding Fixture, Transmission 307-003 (T57L-500-B)
 ST1304-A	Removal Screw, Bearing Tube 308-092 (T84T-7025-B)
 ST2200-A	Remover, Bushing 307-001 (TOOL-1175-AC)
 ST2272-A	Remover, Front Wheel Hub 205-D070 (D93P-1175-B) or equivalent
 ST1305-A	Remover, Mainshaft Bearing 308-058 (T77J-7025-H)
 ST1306-A	Remover, Mainshaft Bearing 308-059 (T77J-7025-J)
 ST2163-A	Remover/Installer, Bearing Tube 308-024 (T75L-7025-B)

Disassembly

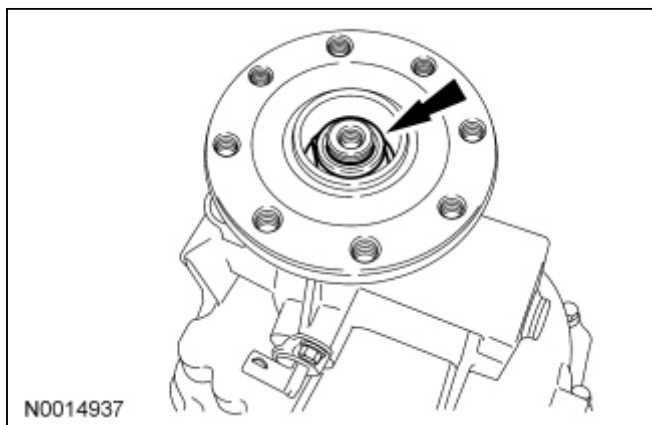
NOTE: If any roll pins, retaining rings or bearings are removed during disassembly, install new components. Install bearings and bearing cups as a set.

NOTE: For additional information, refer to the exploded view under the Assembly procedure in this section.

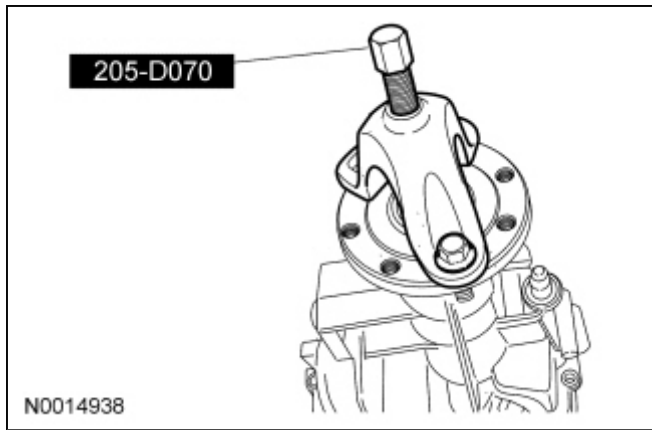
1. Clean the transmission exterior with solvent and dry with compressed air. During disassembly, clean all components with solvent and dry with compressed air.
2. Attach the transmission to the Transmission Holding Fixture.



3. Remove the output flange nut, washer and oil seal.

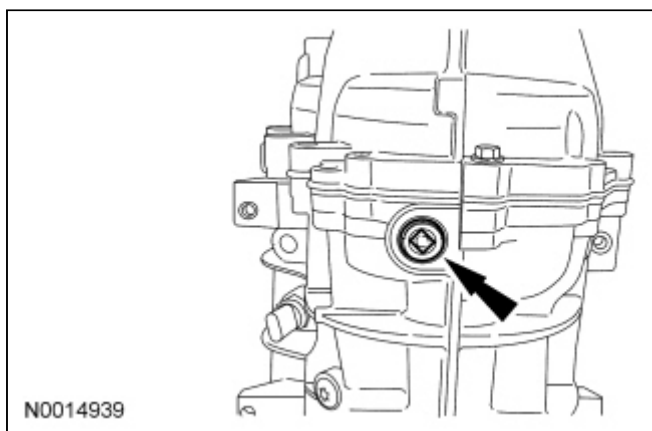


4. Using the Front Wheel Hub Remover, remove the output flange.

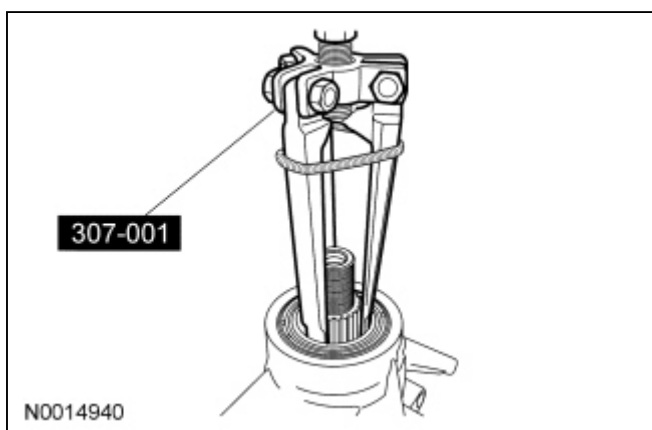


5. **NOTE:** Position a drain pan under the transmission.

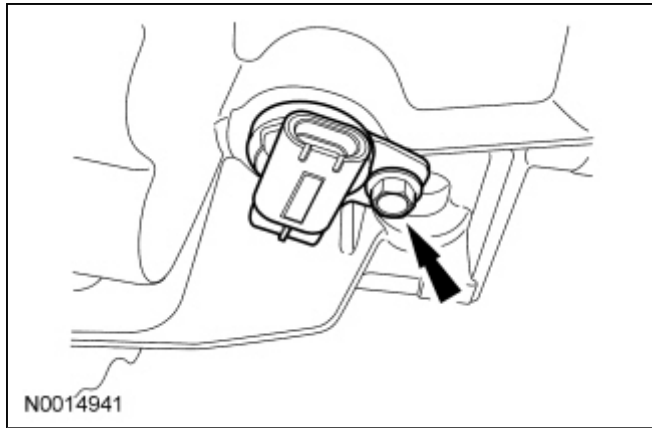
Remove the drain plug, then rotate the transmission to a horizontal position and drain the remaining transmission fluid.



6. Using the Bushing Remover, remove the extension housing fluid seal.



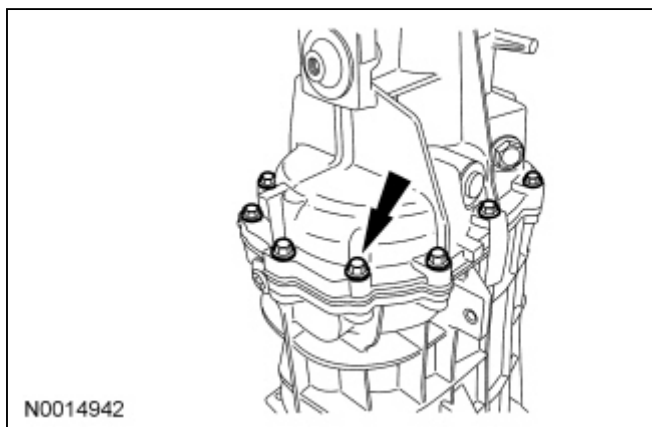
7. Remove the Output Shaft Speed (OSS) sensor bolt and the OSS sensor.



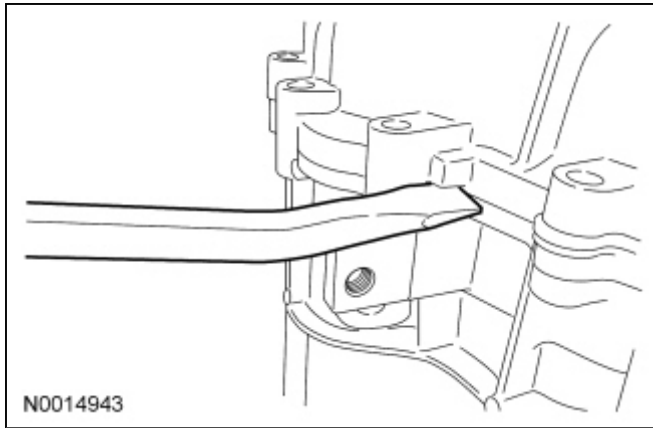
8. Remove the reversing lamp switch.



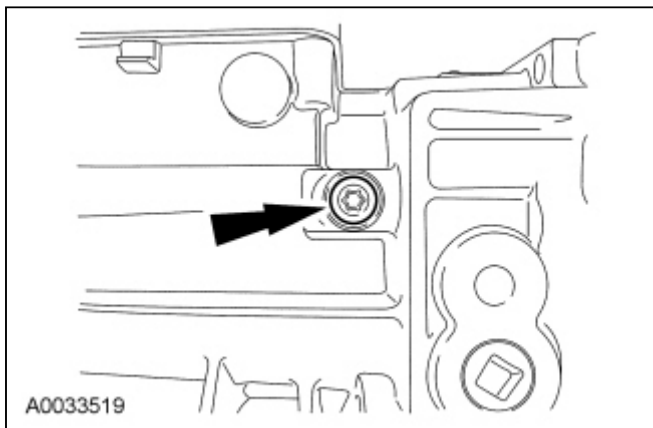
9. Remove the 12 extension housing bolts.



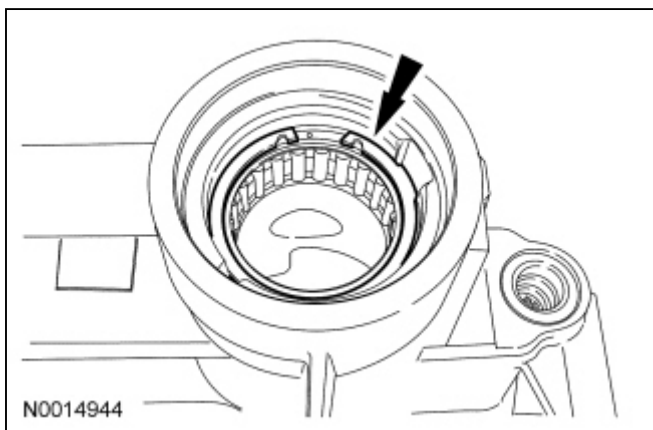
10. Using a flat-blade screwdriver, separate the extension housing, then remove the gearshift offset lever from the transmission case, then remove the extension housing.
 - Remove and discard the split pin from the gearshift offset lever during removal.



11. Remove the 5th/reverse gear lockout bolt.



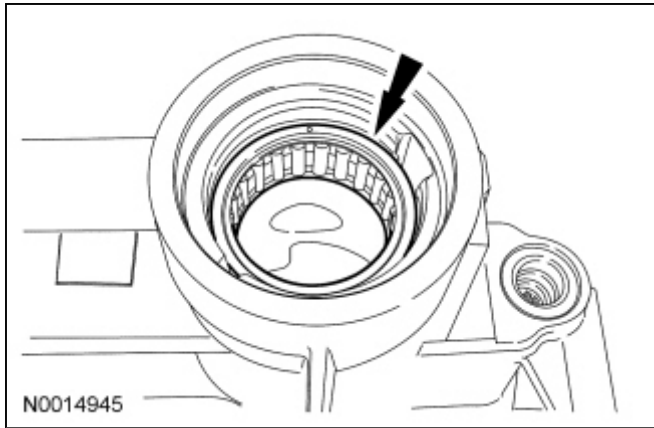
12. Remove and discard the snap ring.



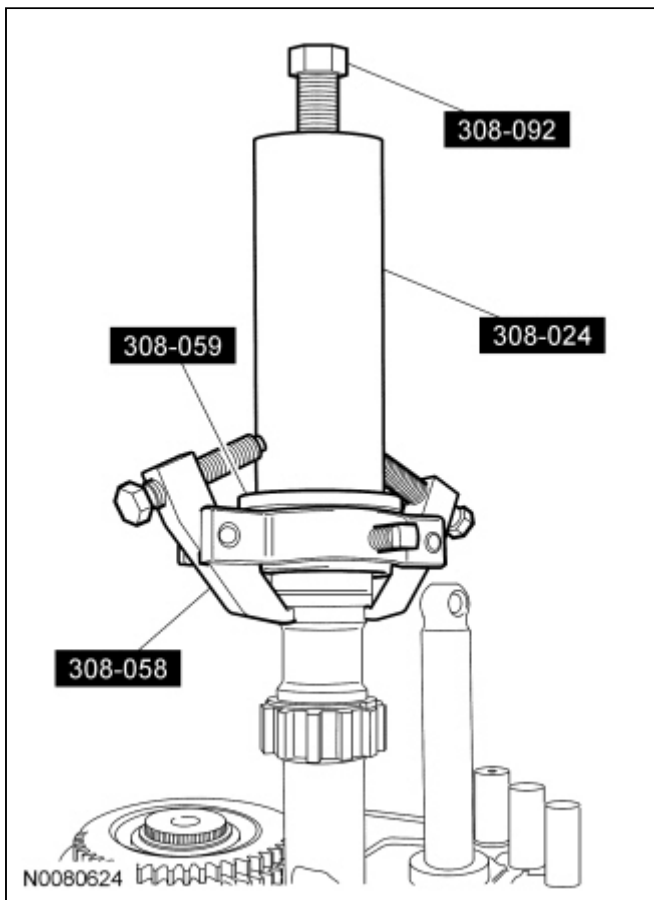
13. **NOTE:** Always install a new bearing race if installing a new bearing.

Remove the output shaft bearing.

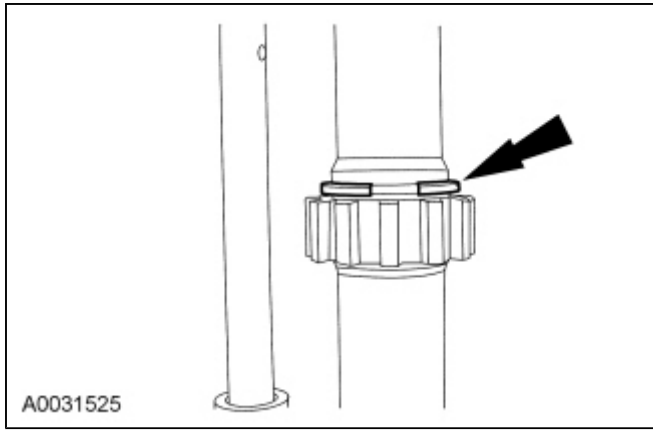
- Inspect the bearing, install a new bearing if necessary.



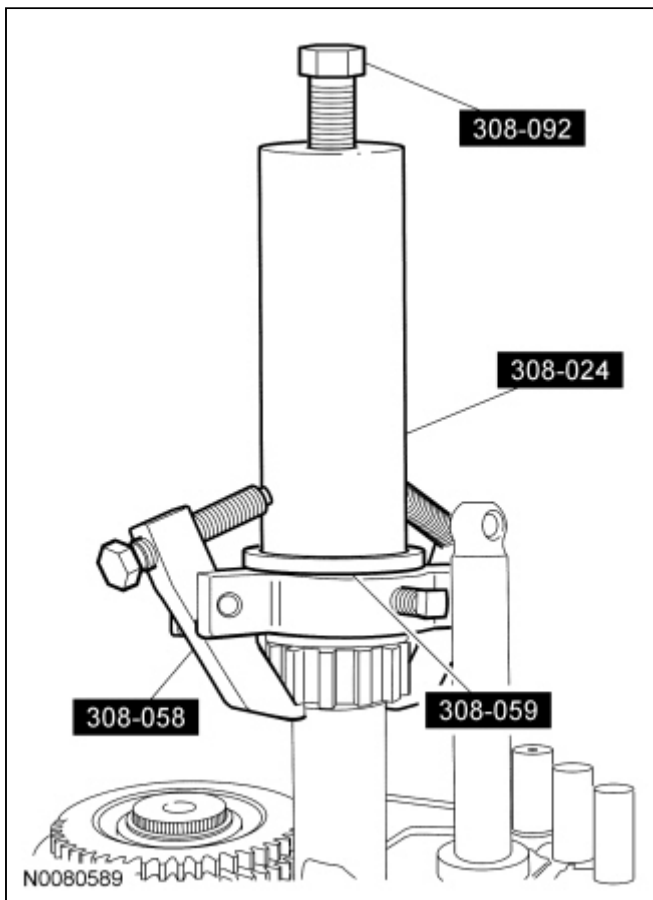
- Using the Bearing Tube Remover/Installer with the Bearing Tube Removal Screw and the Mainshaft Bearing Remover (308-058) with Mainshaft Bearing Remover (308-059), remove the output shaft bearing race.



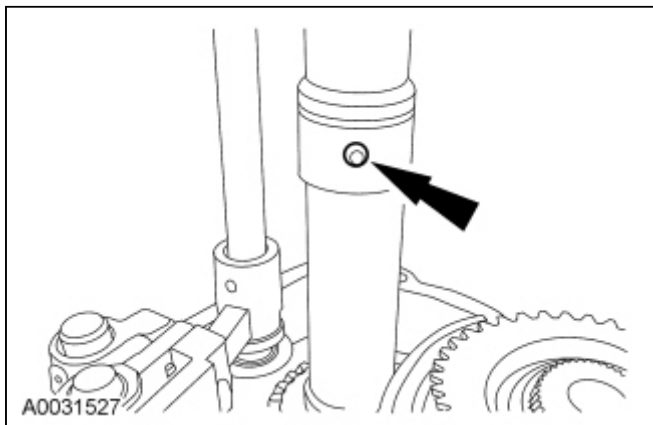
- Remove the bearing race spacer.
- Remove the OSS sensor tone wheel retaining ring.



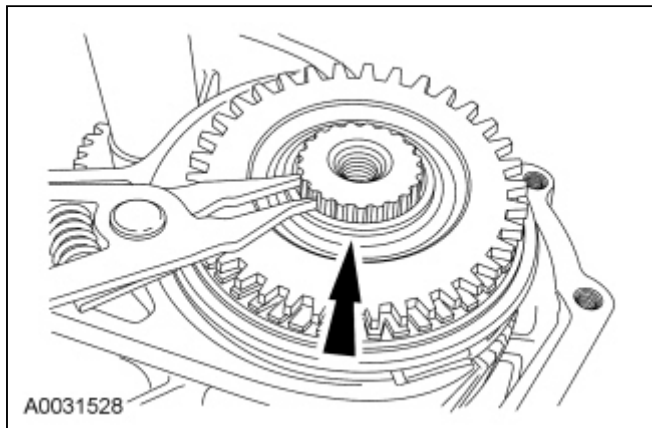
- Using the Bearing Tube Remover/Installer with the Bearing Tube Removal Screw and the Mainshaft Bearing Remover (308-058) with Mainshaft Bearing Remover (308-059), remove the OSS sensor tone wheel.



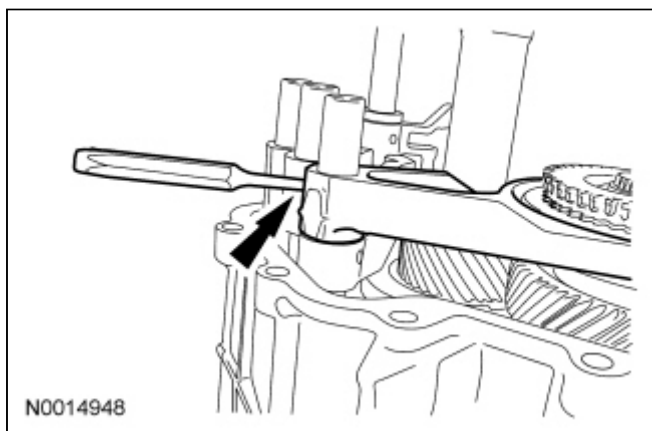
- Remove the OSS sensor tone wheel check ball.



19. Remove and discard the 5th gear synchronizer retaining ring.

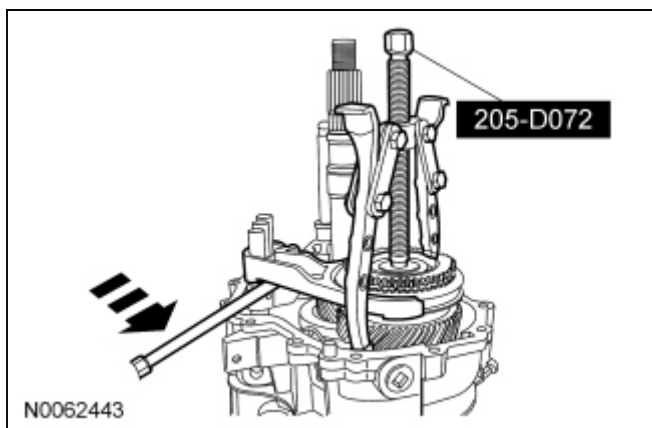


20. Using a 5/32-inch drift and a hammer, remove and discard the pin from the 5th gear shift fork.

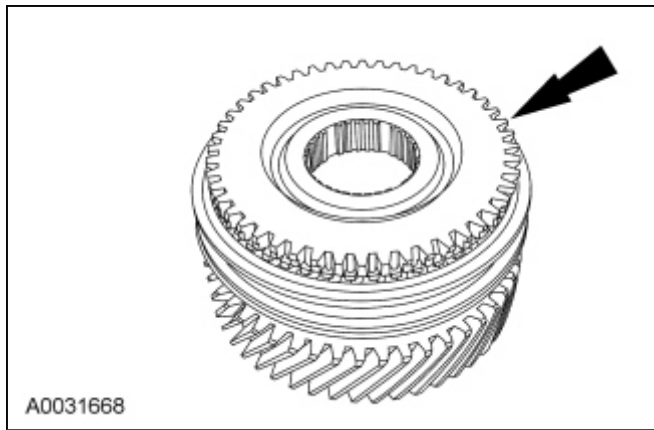


21. **NOTE:** A flat-blade screwdriver may aid in removal.

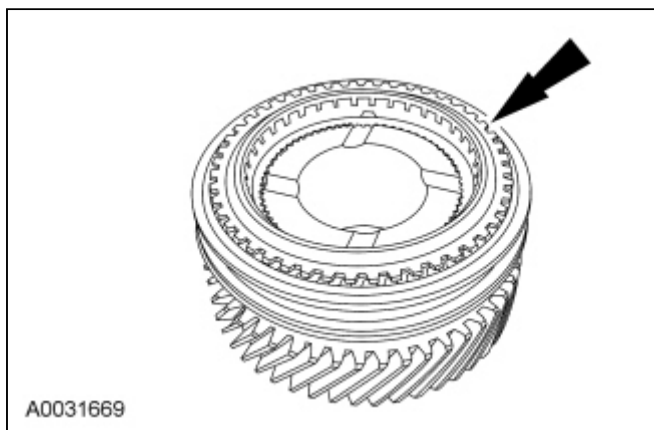
Using the 2 Jaw Puller, remove the 5th gear shift fork, synchronizer assembly, synchronizer cone and the 5th gear as an assembly.



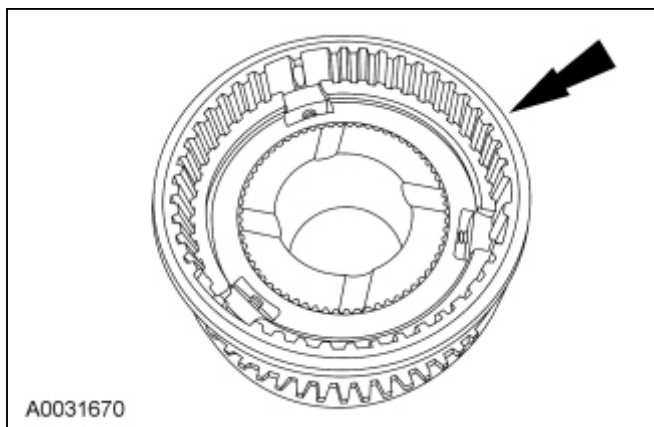
22. Remove the 5th gear clutch cone.



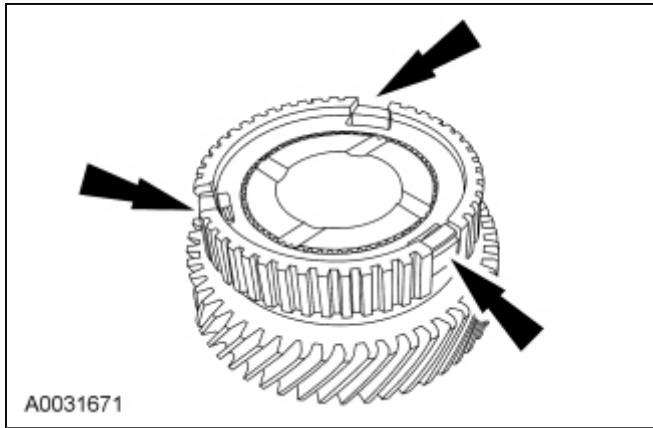
23. Remove the 5th gear synchronizer blocking ring.
- Inspect the blocking ring for wear or damage. Install new blocking rings as necessary.



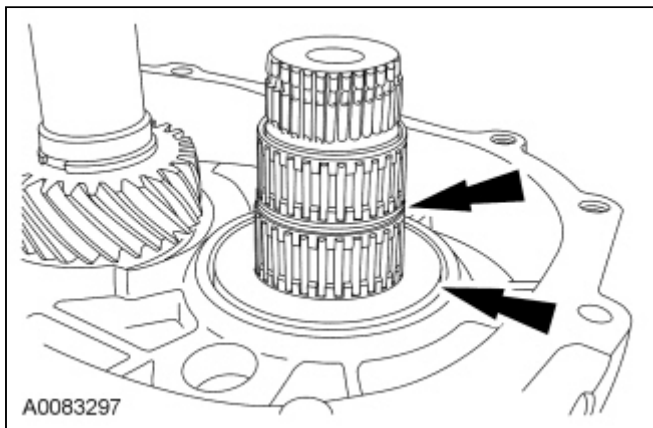
24. Remove the 5th gear synchronizer sleeve from the synchronizer hub.



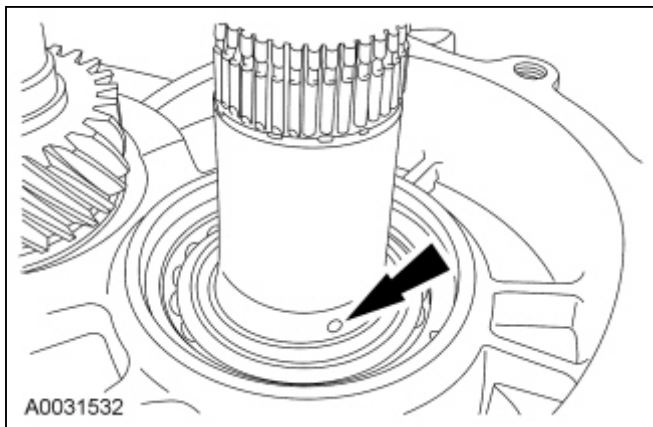
25. Remove the synchronizer inserts and the springs.



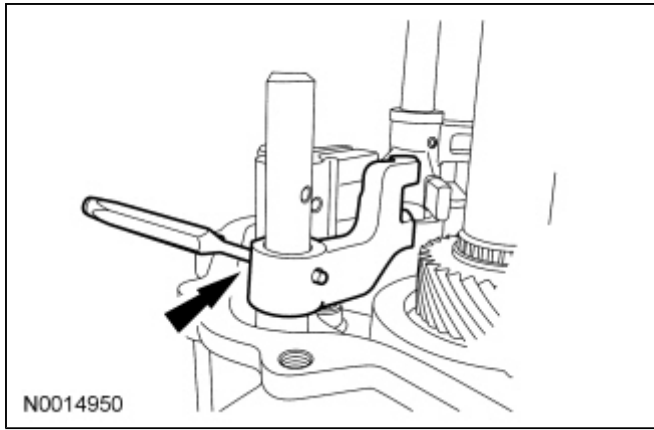
26. Remove the 5th gear needle bearings and the thrust washer.
- Inspect the needle bearings for wear or damage. Install new bearings as necessary.



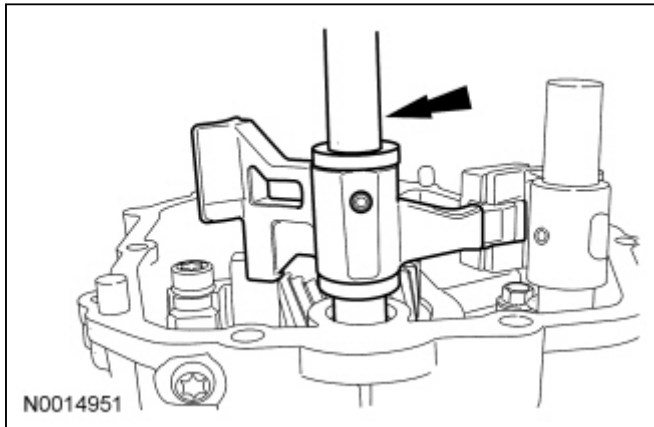
27. Remove the check ball.



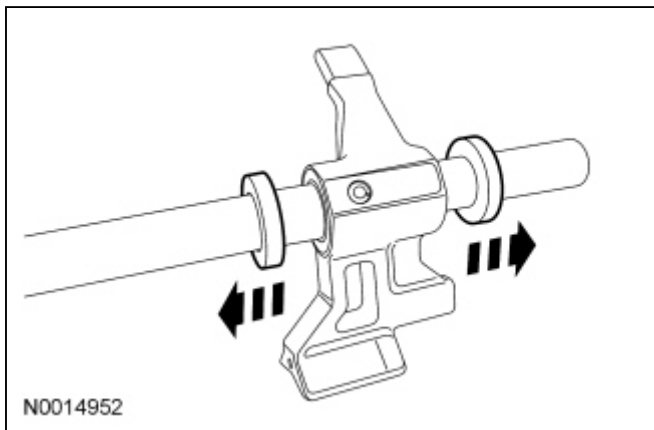
28. Using a 5/32-inch drift and a hammer, drive out the split pin, then remove the 5th/reverse lever fork. Discard the split pin.



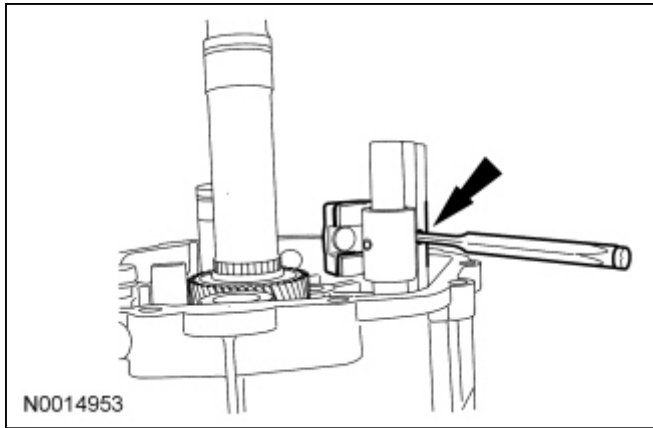
29. Remove the main shift rail.



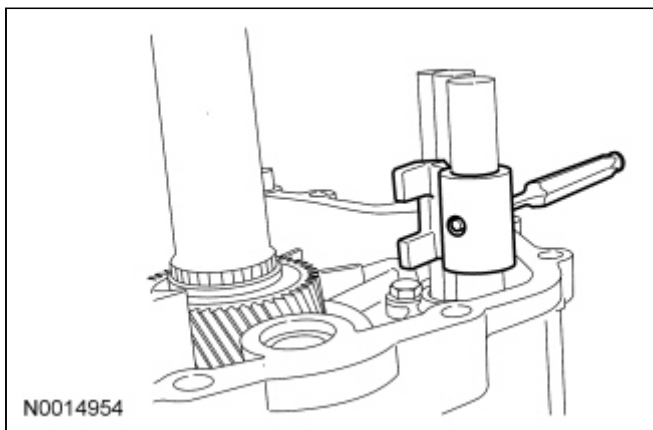
30. Remove and discard the 2 plastic spacers from the mainshaft rail.



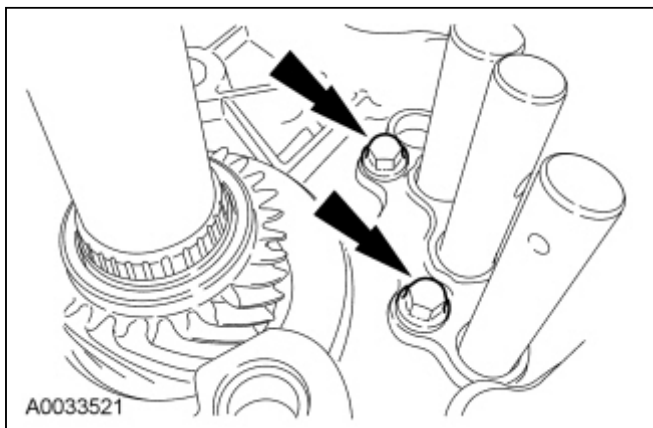
31. Using a 5/32-inch drift and a hammer, drive out the split pin, then remove the 3rd/4th shift finger. Discard the split pin.



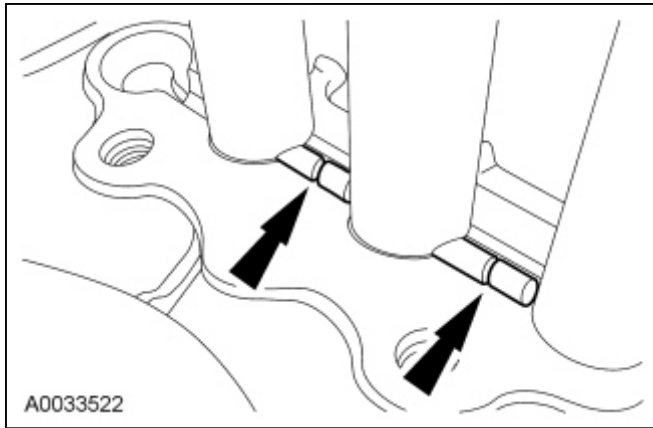
32. Using a 5/32-inch drift and a hammer, drive out the split pin, then remove the 1st/2nd shift finger. Discard the split pin.



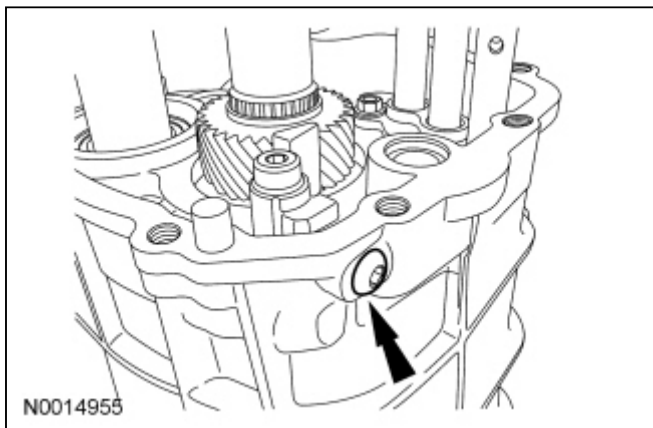
33. Remove the shift interlock plate bolts and the shift interlock plate.



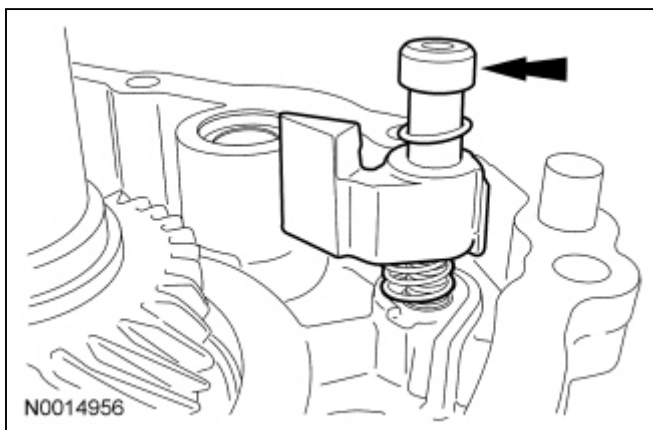
34. Using a magnet, remove the interlock pins.
- One lock pin in the center rail, 2 between the rails.



35. Remove the 5th/reverse gear lockout side bolt.



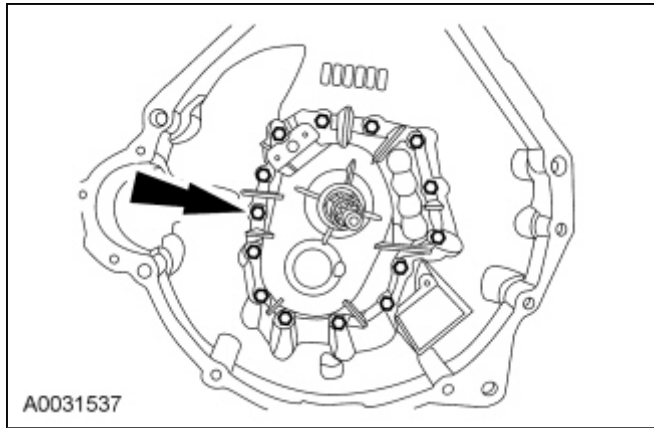
36. Remove the 5th/reverse gear lockout top bolt, then remove the seal, arm and spring.



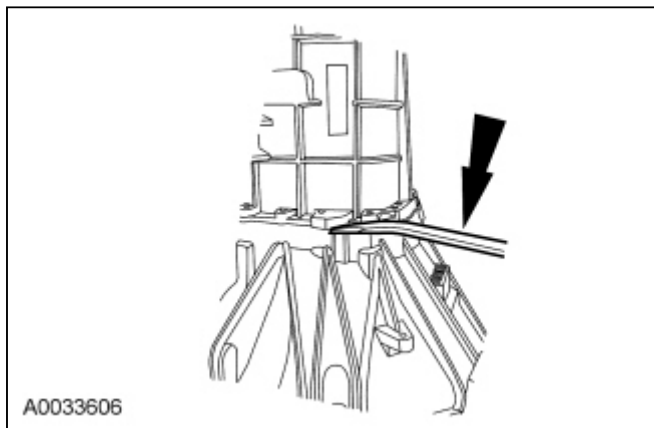
37. **NOTE:** Do not remove all the bolts while in the horizontal position.

Remove the clutch housing-to-transmission main case bolts.

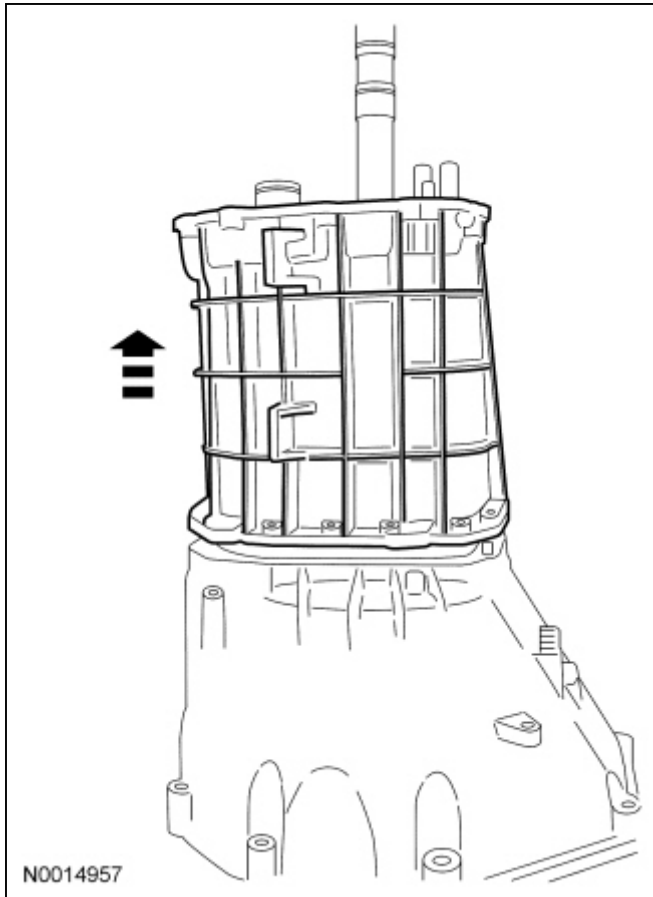
- Rotate the transmission to a horizontal position. Remove 12 bolts, leaving 2 opposing bolts in. Rotate the transmission to a vertical position, then remove the remaining 2 bolts.



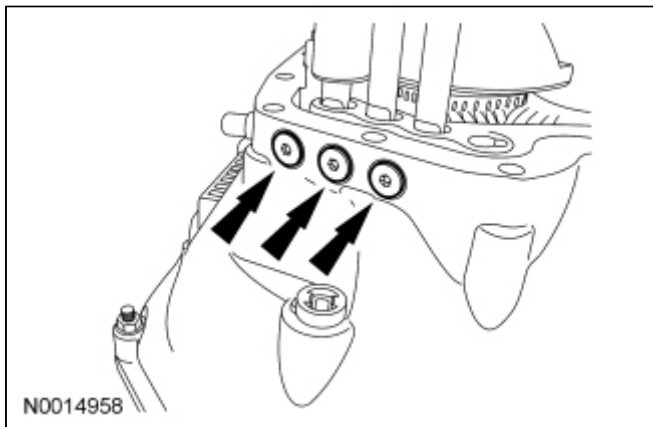
38. Carefully pry the clutch housing from the transmission main case.



39. Remove the transmission main case from the clutch housing.
- The countershaft bearing will remain in the housing. Lightly tap the bearing to remove.
 - Inspect the bearing and install a new one if necessary.

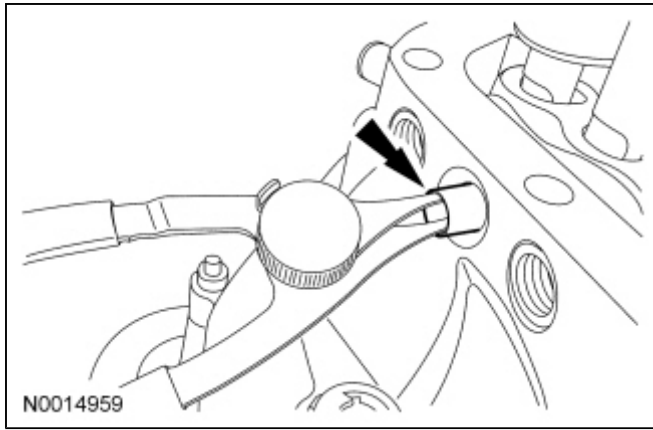


40. Remove the 3 detent plugs.

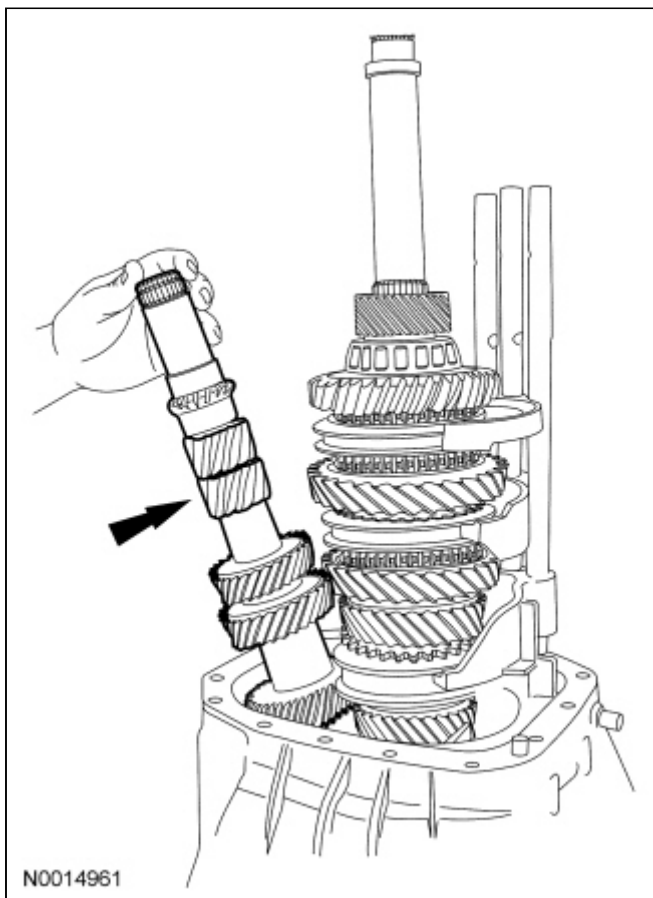


41. Remove the 3 detent springs.

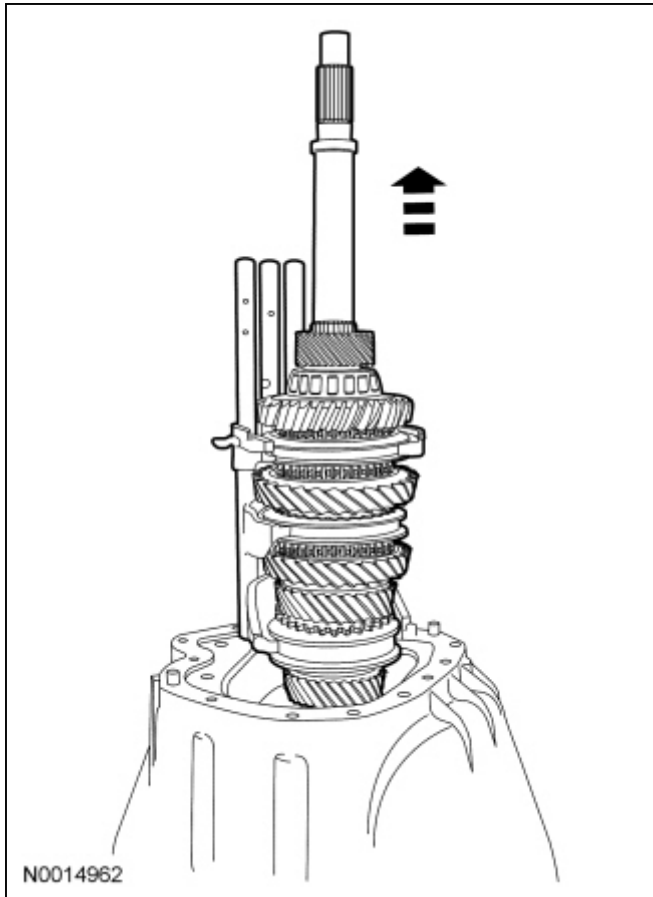
42. Remove the 3 detents.



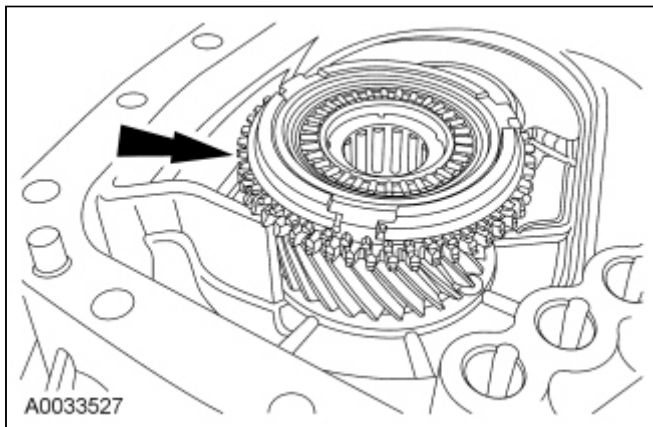
43. Using a jack and a block of wood, lift the mainshaft 13 mm (0.50 in) upward, then tilt the countershaft outward and remove the countershaft.



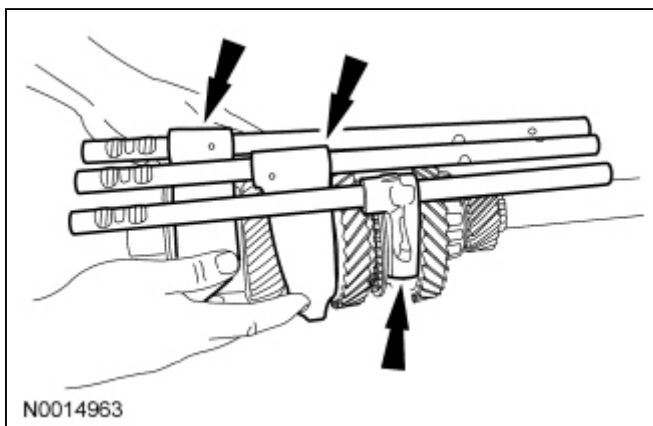
44. While holding the mainshaft, release the jack and remove the mainshaft and shift assembly.



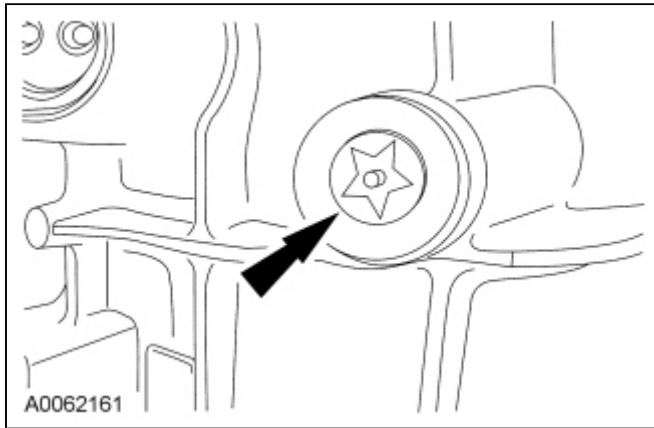
45. Remove the input shaft. For input shaft disassembly, refer to [Input Shaft and Bearing](#) in this section.



46. Carefully remove the shift rails and shift forks from the main shaft. For gearshift rail and fork disassembly, refer to [Gearshift Rail and Fork](#) in this section.



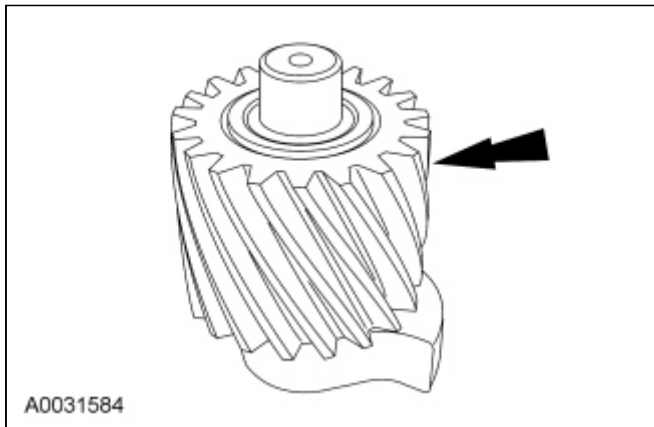
47. Remove the reverse idler shaft bolt. Remove and discard the seal.



48. Remove the reverse idler gear assembly.

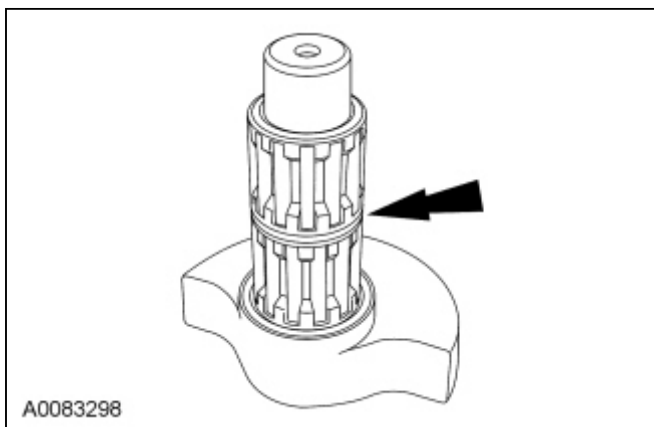
49. Remove the reverse idler gear from the shaft.

- Inspect the gear for wear or damage. Install a new gear as necessary.



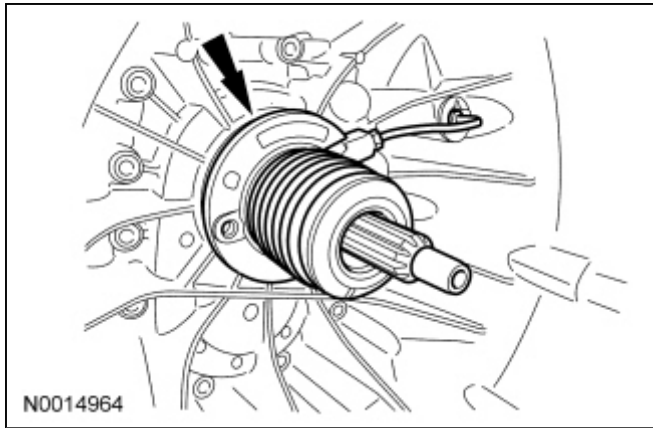
50. Remove the reverse idler gear bearing.

- Inspect the bearing for wear or damage. Install new bearings as necessary.

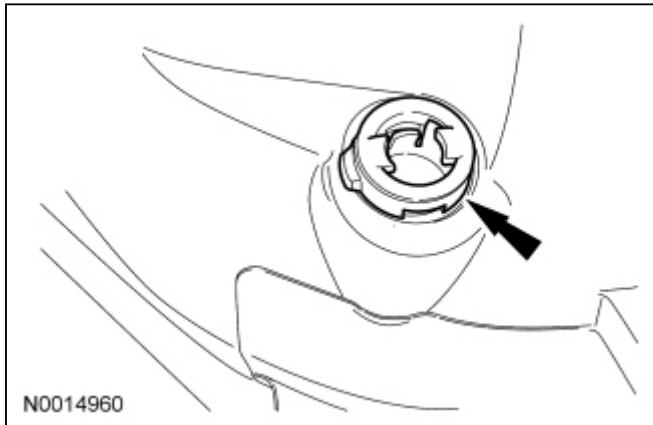


51. Release the clip and remove the clutch slave cylinder connector.

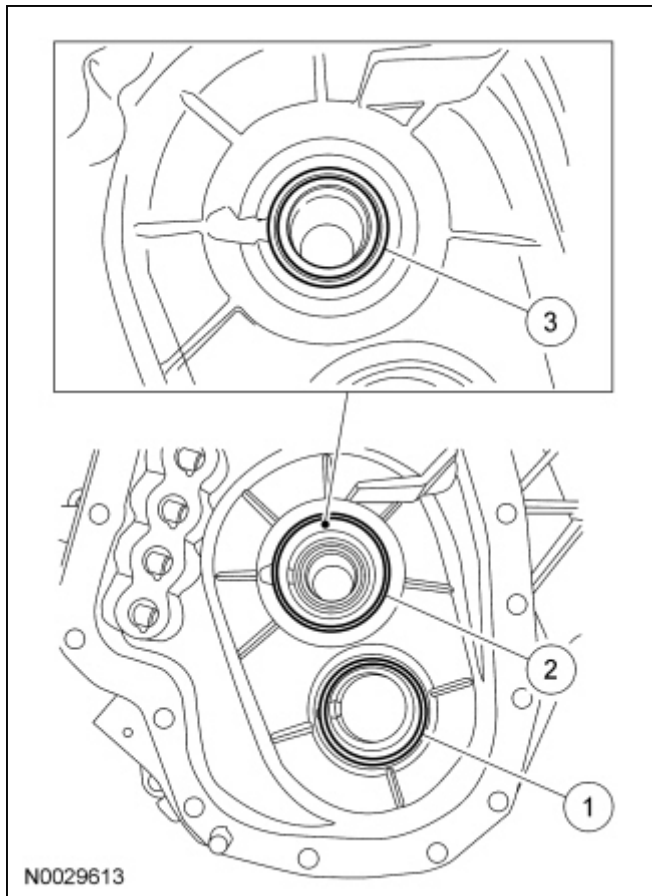
52. Remove the clutch slave cylinder. For additional information, refer to [Section 308-02](#).



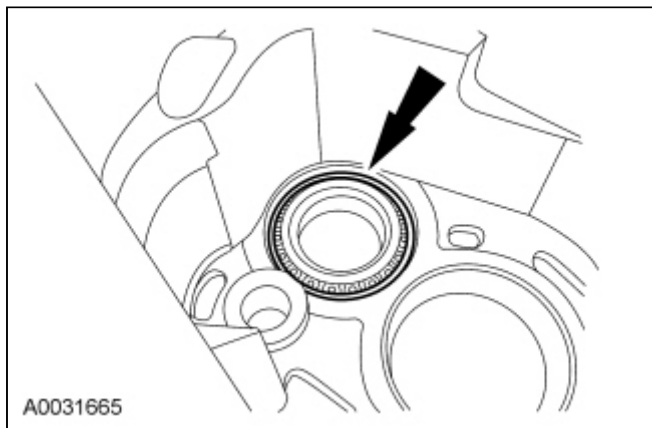
53. Remove and discard the plastic retainer.



54. Disassemble the clutch housing.
1. Remove the countershaft bearing cup and shim.
 2. Remove the input shaft bearing cup and shim.
 3. Remove the input shaft seal.
 - Carefully pry out from the inside of the case.



55. Remove the rear countershaft bearing.
- Inspect the bearing for wear or damage. Install new bearings as necessary.



56. Remove the rear countershaft bearing cup and the rear output shaft bearing cup.
- Inspect the bearing and bearing cup for wear or damage. Install new components as necessary.

