
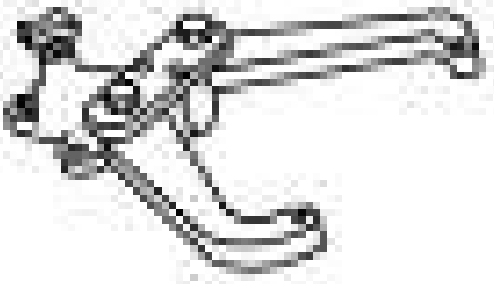


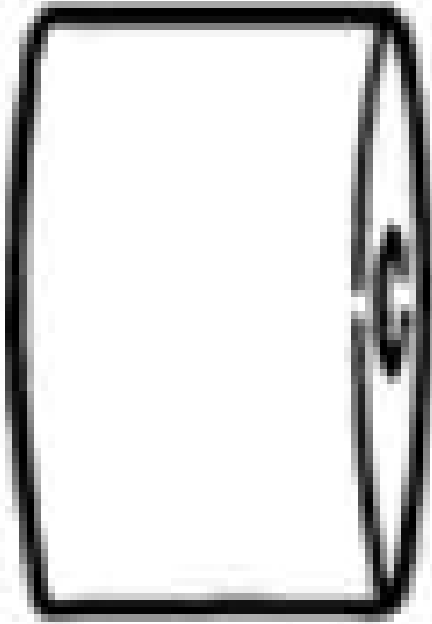
DISASSEMBLY

TRANSMISSION

Special Tool(s)

SPECIAL TOOL SPECIFICATION

 <p>ST1631-A</p>	<p>Handle, Torque Converter 307-091 (T81P-7902-C)</p>
 <p>ST1165-A</p>	<p>Holding Fixture, Transmission 307-003 (T57L-500-B)</p>



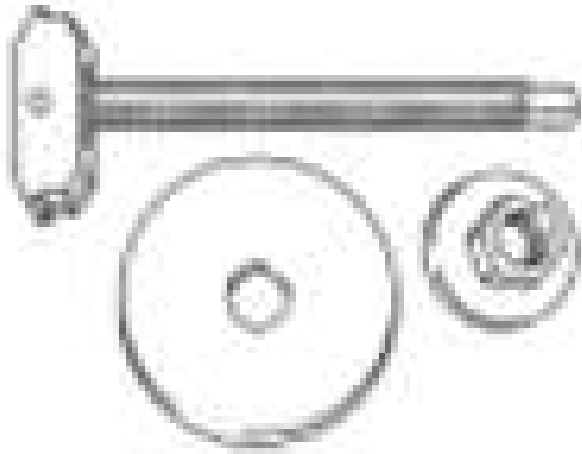
ST1433-B

Installer, Front Wheel Hub Oil Seal
205-256



ST2381-A

Remover, Input Shaft Oil Seal
308-375



ST2932-A

Remover, Needle Bearing
307-562 (includes 307-562/1 and 307-562/2)



ST1282-A

Remover, Pilot Bearing
308-001 (T58L-101-B)

Remover, Transmission Fluid Pump
307-553



ST2891-A



ST1104-B

Retaining Ring Pliers
307-343 (T95P-77001-AHR)

Slide Hammer
100-001 (T50T-100-A)



ST1185-A

All vehicles

1. Install Transmission Holding Fixture 307-003 on the torque converter housing and install the transmission on a bench.

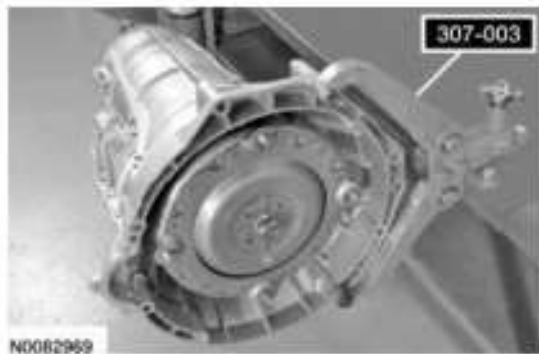


Fig. 300: Identifying Transmission Holding Fixture 307-003 On Torque Converter Housing
Courtesy of FORD MOTOR CO.

2. Using the Torque Converter Handle 307-091, remove the torque converter.

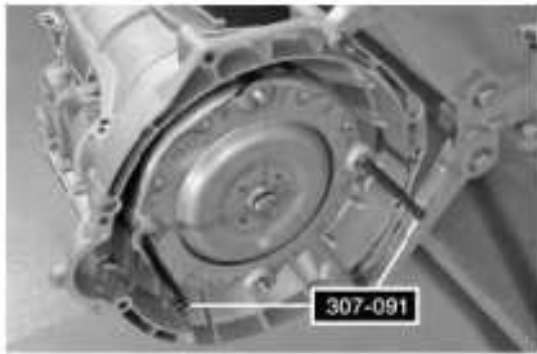


Fig. 301: Removing Torque Converter
Courtesy of FORD MOTOR CO.

3. Remove the transmission fluid pan bolts and the pan.



Fig. 302: Locating Transmission Fluid Pan And Bolts
Courtesy of FORD MOTOR CO.

4. Remove the transmission fluid pan gasket.



Fig. 303: Locating Transmission Fluid Pan Gasket
Courtesy of FORD MOTOR CO.

5. Remove and discard the transmission fluid filter.

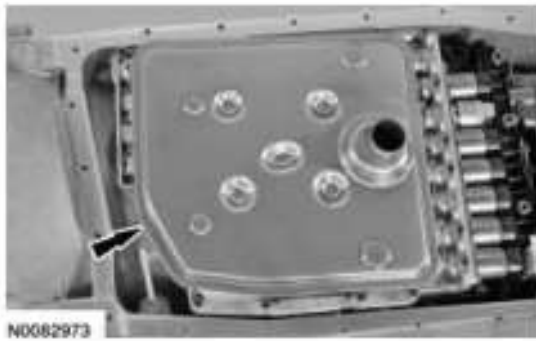


Fig. 304: Identifying Transmission Fluid Filter
Courtesy of FORD MOTOR CO.

6. Press the release tab and lift up on the bulkhead connector retainer to release the bulkhead connector shell.



Fig. 305: Pressing Release Tab And Lift Up On Bulkhead Connector Retainer
Courtesy of FORD MOTOR CO.

NOTE: Do not touch the electrical connector pins or the exposed solenoid tabs on the Transmission Control Module (TCM). Electrostatic discharge may occur and may cause damage to the mechatronic unit.

7. With the transmission bulkhead connector retainer up, pull the outer shell of the bulkhead connector

out of the transmission.



Fig. 306: Locating Transmission Bulkhead Connector Retainer
Courtesy of FORD MOTOR CO.

8. Remove the 11 bolts from the mechatronic assembly.

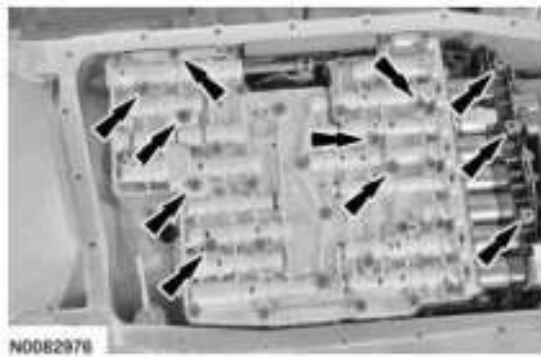


Fig. 307: Locating Mechatronic Assembly Bolts
Courtesy of FORD MOTOR CO.

9. Remove the mechatronic assembly.

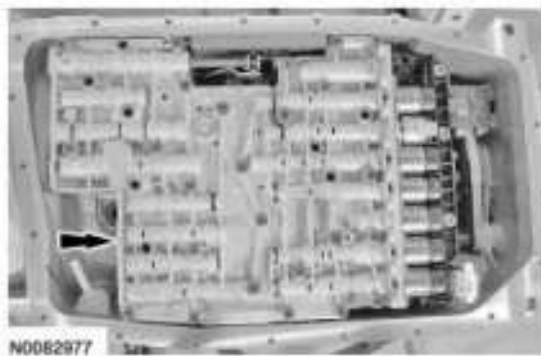


Fig. 308: Locating Mechatronic Assembly
Courtesy of FORD MOTOR CO.

10. Remove the rubber adapter and the fluid filter seal.



Fig. 309: Removing Rubber Adapter And Fluid Filter Seal
Courtesy of FORD MOTOR CO.

11. Remove and discard the 4 rubber feed tubes for the center support. Note the size and location while removing for correct installation.
 1. Black feed tubes
 2. Green feed tube
 3. Blue feed tube

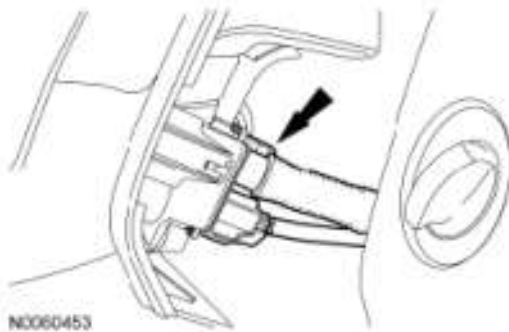


Fig. 310: Locating Rubber Feed Tubes
Courtesy of FORD MOTOR CO.

12. Remove the thermal bypass valve from the case.

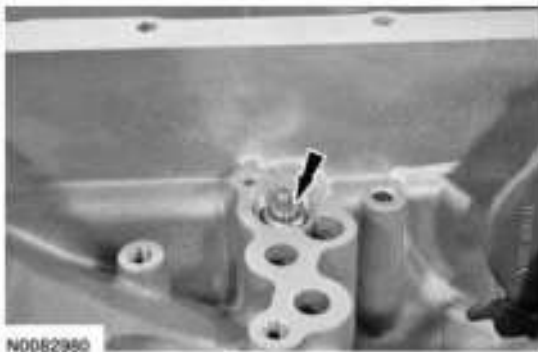


Fig. 311: Locating Thermal Bypass Valve
Courtesy of FORD MOTOR CO.

13. Inspect the thermal bypass valve for damage, install a new valve if damage is indicated.

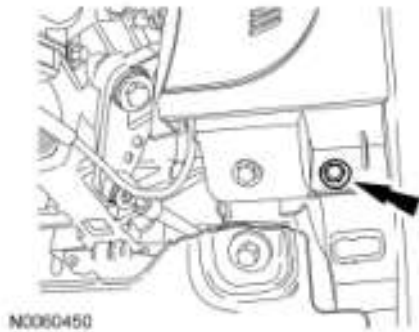


Fig. 312: Inspecting Thermal Bypass Valve For Damage
Courtesy of FORD MOTOR CO.

14. Using the Input Shaft Oil Seal Remover 308-375 and Slide Hammer 100-001, remove and discard the front pump seal.



Fig. 313: Removing Pump Seal
Courtesy of FORD MOTOR CO.

15. Remove and discard the 13 front pump bolts.

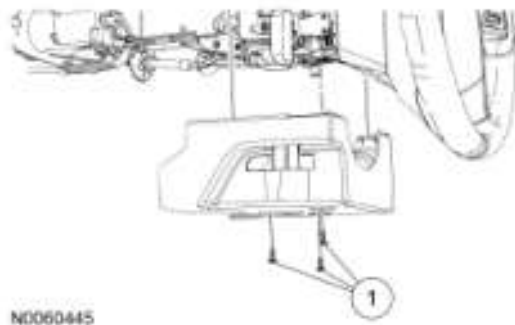


Fig. 314: Locating Front Pump Bolts
Courtesy of FORD MOTOR CO.

16. Using the Transmission Fluid Pump Remover 307-553 and Slide Hammer 100-001, remove the front pump support.



Fig. 315: Removing Front Pump Support
Courtesy of FORD MOTOR CO.

17. Inspect the back of the front pump to check if the selective shim is on the pump. If the selective shim is on the pump, remove it from the pump.

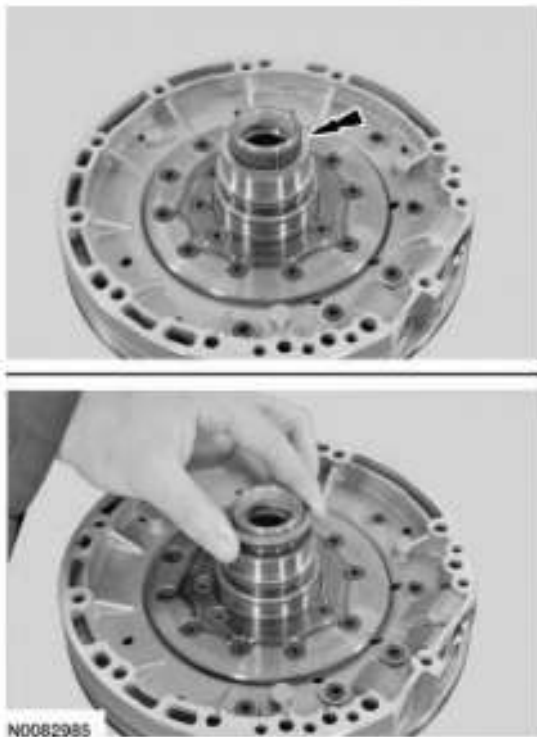


Fig. 316: Locating Selective Shim On Pump
Courtesy of FORD MOTOR CO.

18. Remove and discard the front pump O-ring seal from the pump assembly.



Fig. 317: Locating Pump Assembly O-Ring Seal
Courtesy of FORD MOTOR CO.

19. If the selective shim is not on the pump, using a magnet, remove it from the forward/overdrive clutch assembly.

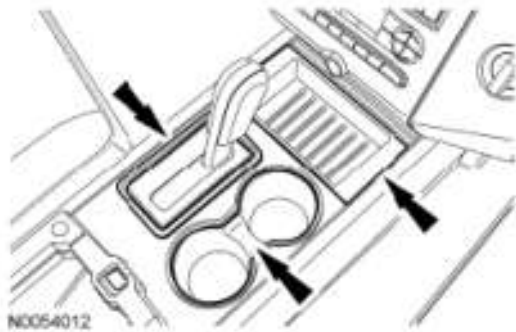


Fig. 318: Locating Forward/Overdrive Clutch Assembly
Courtesy of FORD MOTOR CO.

20. Remove the forward (clutch A)/overdrive (clutch E) clutch assembly.



Fig. 319: Removing Forward (Clutch A)/Overdrive (Clutch E) Clutch Assembly
Courtesy of FORD MOTOR CO.

21. Remove the caged T5 roller bearing.



Fig. 320: Locating Caged Roller Bearing
Courtesy of FORD MOTOR CO.

22. Remove the direct clutch assembly.



Fig. 321: Locating Direct Clutch Assembly
Courtesy of FORD MOTOR CO.

23. Using the Retaining Ring Pliers 307-343, remove the center support snap ring.



Fig. 322: Removing Center Support Snap Ring
Courtesy of FORD MOTOR CO.

24. Remove the center support and T6 bearing.



Fig. 323: Removing Center Support And T6 Bearing
Courtesy of FORD MOTOR CO.

25. **NOTE:** If the thrust bearing stuck to the back of the center support during removal, remove the thrust bearing from the center support.

Remove the selective shim from the center support.



Fig. 324: Removing Selective Shim From Center Support
Courtesy of FORD MOTOR CO.

26. **NOTE:** If the selective shim stuck to the T7 thrust bearing during removal of the center support, remove the shim from the thrust bearing.

If the selective shim is stuck to the T7 thrust bearing, remove the shim and remove the thrust bearing.

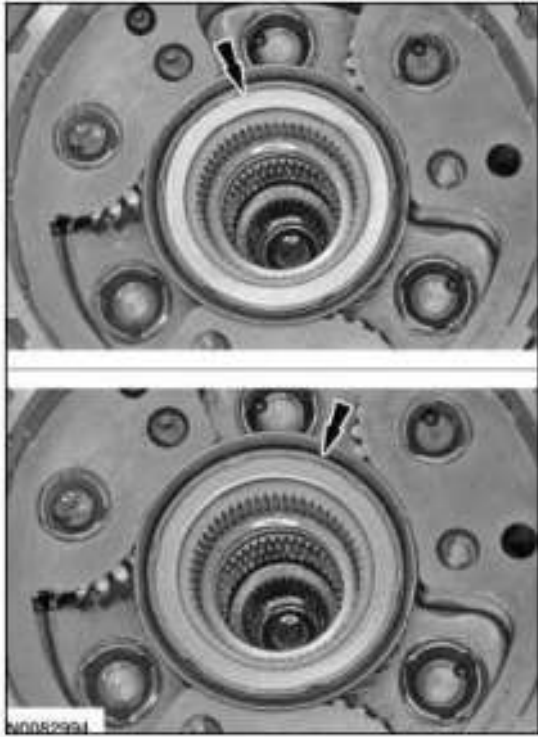


Fig. 325: Locating Thrust Bearing Shim
Courtesy of FORD MOTOR CO.

NOTE: When removing the planet carrier and the low/reverse clutch pack, some of the clutch plates may stay in the case. Remove any clutch plates from the transmission that were not removed with the carrier and keep the clutch plates together.

27.

Remove the planet carrier and the low/reverse clutch pack as an assembly.



Fig. 326: Locating Planet Carrier And Low/Reverse Clutch Pack
Courtesy of FORD MOTOR CO.

28. Remove the low/reverse sun gear.



Fig. 327: Removing Low/Reverse Sun Gear
Courtesy of FORD MOTOR CO.

29. **NOTE:** When removing the sun gear, take note that the taper edge is facing up toward the torque converter housing.

Remove the sun gear from the planet assembly.



Fig. 328: Removing Sun Gear Into Planet Assembly
Courtesy of FORD MOTOR CO.

30. **NOTE:** Remove the bearings with the sun gear.

Remove the top T8 and the bottom T9 roller bearings from the sun gear.



Fig. 329: Locating Top And Bottom Roller Bearings

Courtesy of FORD MOTOR CO.

31. Remove the T9 roller bearing race in the bottom of the carrier.



Fig. 330: Locating Roller Bearing Race In Bottom Of Carrier
Courtesy of FORD MOTOR CO.

32. If the T10 thrust bearing is attached to the rear planetary carrier, remove it from the carrier. If it stayed in the transmission case when the rear planetary carrier was removed, remove it from the transmission case.

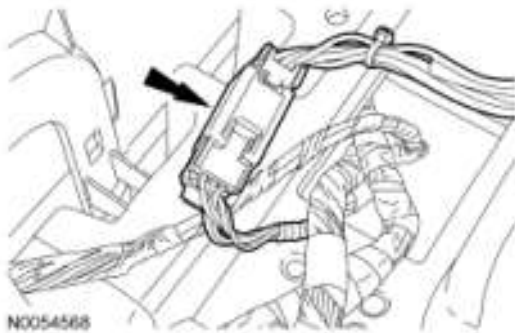


Fig. 331: Locating T10 Thrust Bearing
Courtesy of FORD MOTOR CO.

Rear Wheel Drive (RWD) vehicles

NOTE: The output shaft flange nut has been staked to prevent it from coming loose. Prior to removing the nut, remove the stake to prevent damage to the output shaft.

- 33.

Remove and discard the output shaft flange nut.



Fig. 332: Locating Output Shaft Flange Nut
Courtesy of FORD MOTOR CO.

34. Remove the extension housing flange seal and the output shaft flange.



Fig. 333: Locating Extension Housing Flange Seal And Output Shaft Flange
Courtesy of FORD MOTOR CO.

35. Remove the planet carrier hub, output shaft assembly and T11 bearing.

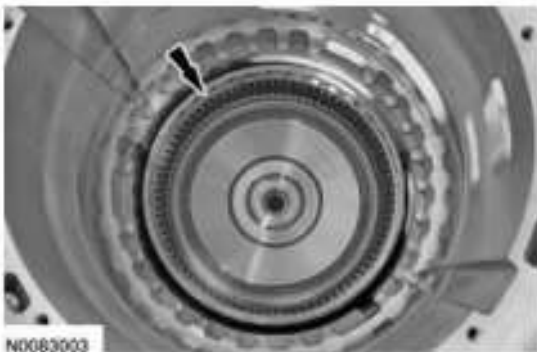


Fig. 334: Locating Planet Carrier Hub And Output Shaft Assembly
Courtesy of FORD MOTOR CO.

36. Using a suitable tool, remove the output shaft seal.

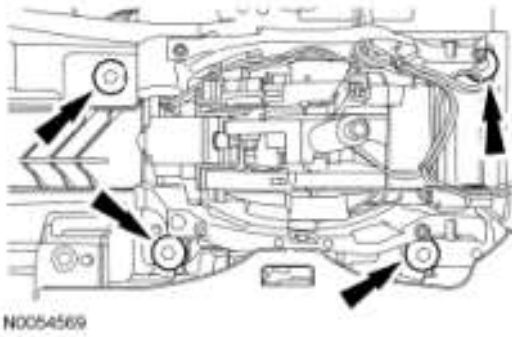


Fig. 335: Removing Output Shaft Seal
Courtesy of FORD MOTOR CO.

37. Remove the slip plane washer.



Fig. 336: Locating Slip Plane Washer
Courtesy of FORD MOTOR CO.

38. Remove the thrust bearing.



Fig. 337: Locating Thrust Bearing
Courtesy of FORD MOTOR CO.

39. Using the Pilot Bearing Remover 308-001, remove the thrust bearing spacer.



Fig. 338: Removing Thrust Bearing Spacer
 Courtesy of FORD MOTOR CO.

40. Install the Needle Bearing Remover 307-562/1 on the bearing.

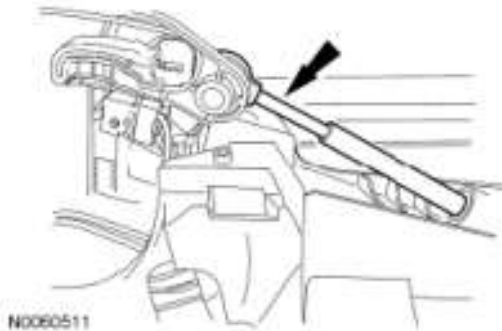


Fig. 339: Installing Needle Bearing Remover 307-562/1 On Bearing
 Courtesy of FORD MOTOR CO.

41. Install the Front Wheel Hub Oil Seal Installer 205-256 on the Needle Bearing Remover 307-562/1 and remove the bearing.

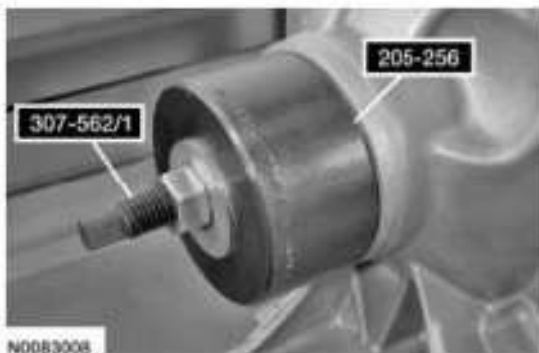


Fig. 340: Installing Front Wheel Hub Oil Seal Installer 205-256 On Needle Bearing Remover 307-562/1
 Courtesy of FORD MOTOR CO.

Four-Wheel Drive (4WD) vehicles

42. Remove the planet carrier hub, output shaft assembly and T11 bearing.

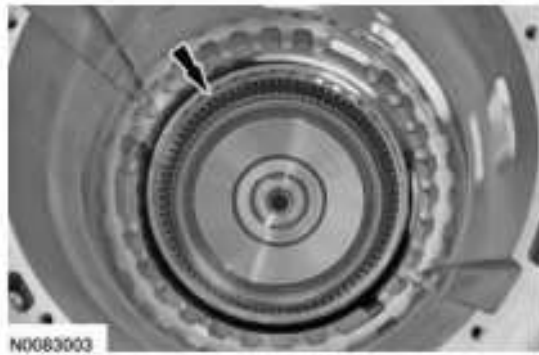


Fig. 341: Locating Planet Carrier Hub And Output Shaft Assembly
Courtesy of FORD MOTOR CO.

43. Remove and discard the output shaft seal.



Fig. 342: Removing Output Shaft Seal
Courtesy of FORD MOTOR CO.

44. Remove the snap ring from the case.

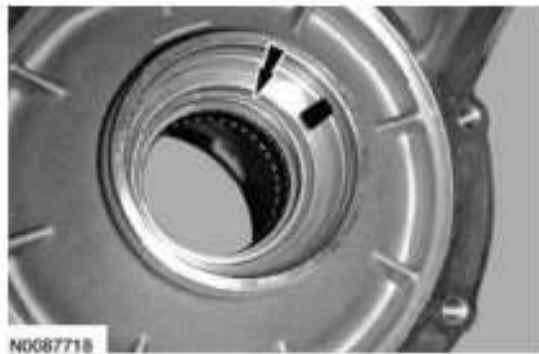


Fig. 343: Locating Snap Ring
Courtesy of FORD MOTOR CO.

- NOTE:** Use care when installing the Needle Bearing Remover 307-562. Look inside the transmission case to make sure that the Needle Bearing Remover 307-562 contacts the bearing only and not the lip of the case, or damage to the case will occur.
- 45.

Using the Needle Bearing Remover 307-562 and the Front Wheel Hub Oil Seal Installer 205-256, remove the bearing assembly.

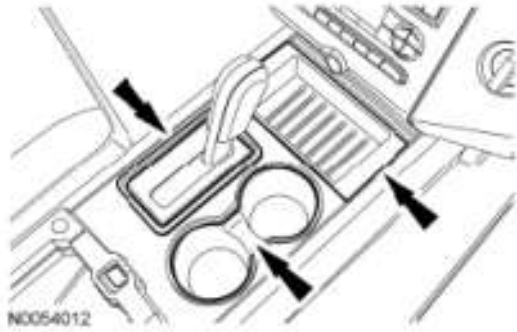


Fig. 344: Removing Bearing Assembly
Courtesy of FORD MOTOR CO.

All vehicles

46. Remove the park rod actuating plate.



Fig. 345: Locating Park Rod Actuating Plate
Courtesy of FORD MOTOR CO.

47. Remove the manual control lever detent plate and park pawl actuator rod.
 1. Remove the roll pin.
 2. Slide the manual control lever shaft out of the case.
 3. Hold the manual control lever spacer to keep it from falling into the case.
 4. Remove the manual control lever detent plate and park pawl actuator rod as an assembly.

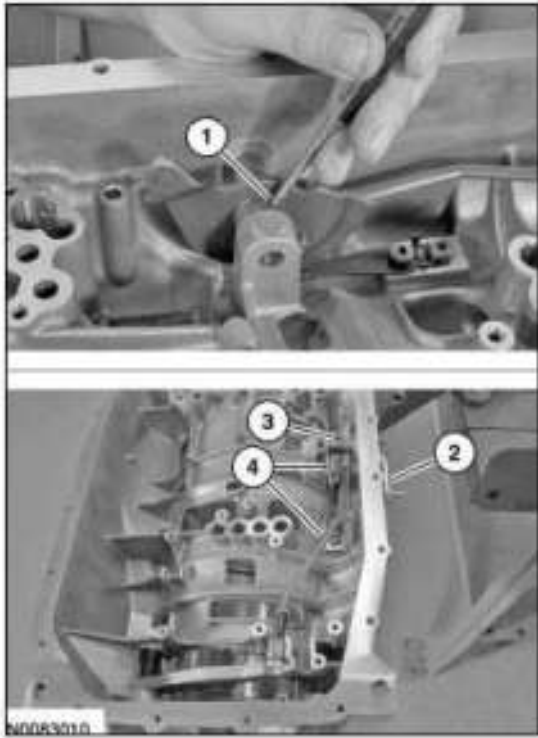


Fig. 346: Removing Manual Control Lever Detent Plate And Park Pawl Actuator Rod
Courtesy of FORD MOTOR CO.

48. Using a suitable tool, remove and discard the manual control lever seal.



Fig. 347: Removing Manual Control Lever Seal
Courtesy of FORD MOTOR CO.

49. Remove the bolt from the back of the case to gain access to the park pawl pin.



Fig. 348: Locating Park Pawl Pin Bolt
Courtesy of FORD MOTOR CO.

50. From the inside of the case, push the park pawl pin out toward the back side of the case while holding the spring and the park pawl. Remove the park pawl pin then remove the park pawl and spring.
1. Park pawl pin
 2. Park pawl spring
 3. Park pawl

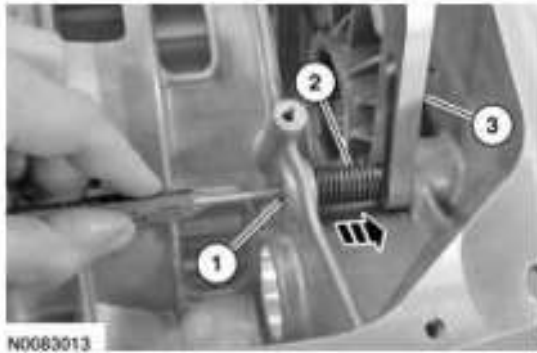


Fig. 349: Removing Park Pawl, Pin And Spring
Courtesy of FORD MOTOR CO.

51. Remove the 2 bolts and the park detent spring.

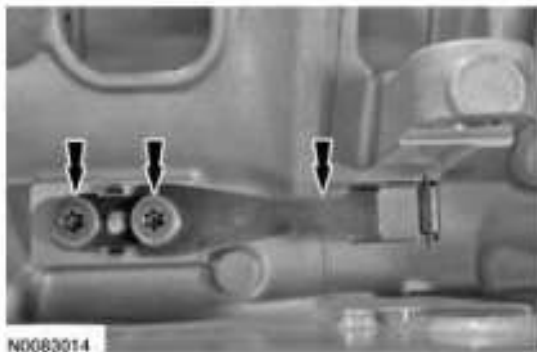


Fig. 350: Locating Park Detent Spring Bolts
Courtesy of FORD MOTOR CO.