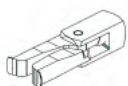
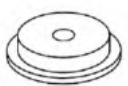


Transfer Case

Special Tool(s) / General Equipment

 E232969	205-1018 Installation Tube
 E133913	205-153 (T80T-4000-W) Handle
 E142012	307-318 Remover, Stator Bearing TKIT-1994-FMH/FLMH TKIT-1994-LMH/MH TKIT-1994-FH
 E270043	307-344 (T95P-7H150-A) Installer, Driven Sprocket Wheel TKIT-1995-F TKIT-1995-FM/FLM TKIT-1995-LMM
 E270043	307-549 Installer, Shift Shaft Fluid Seal TKIT-2005D1-F1
 E216426	307-626 Installer, Differential Seal TKIT-2008ET-FLM TKIT-2008ET-ROW
 E231410	308-047 (T77F-1102-A) Remover, Bearing Cup
 E232991	308-410 Installer, Output Shaft Front Bearing TKIT-1999-F/FLM/LT
 E232991	308-943 Installer, Input Seal
 E232992	308-944 Installer, Front Output Seal
Slide Hammer	
Adjustable Mounting Arm	
Spatula	
Punch	
Copper Hammer	

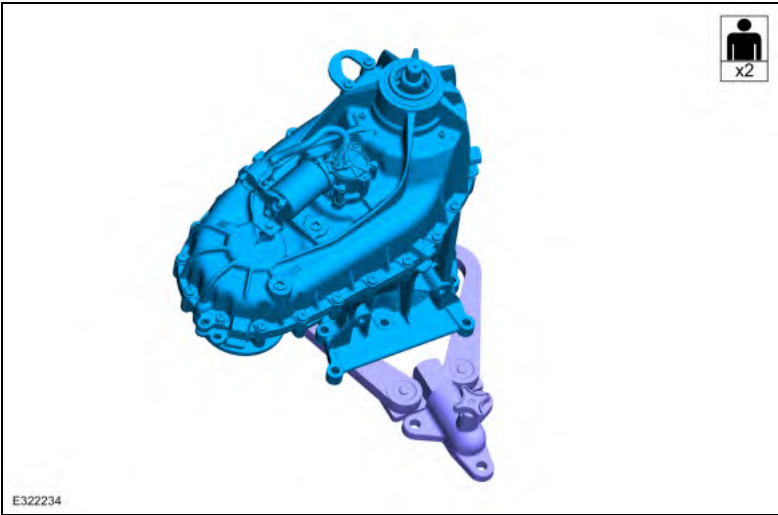
Materials

Name	Specification
Motorcraft® Ultra Silicone Sealant TA-29	-

DISASSEMBLY

All vehicles

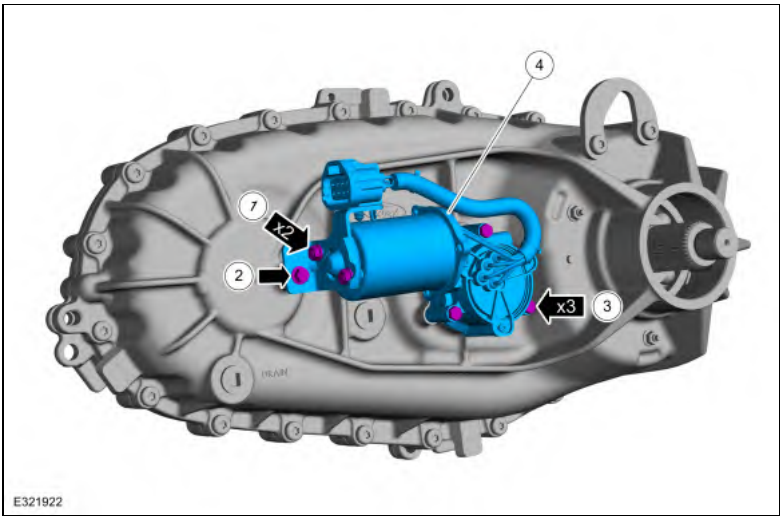
1. Using a transmission adjustable mounting arm, secure the transfer case to the bench.
Use the General Equipment: Adjustable Mounting Arm



2. Remove the transfer case rear seal.
Refer to: Transfer Case Rear Seal - Vehicles With: Flanged Yoke (308-07B Transfer Case, Removal and Installation).
Refer to: Transfer Case Rear Seal - Vehicles With: Slip Yoke (308-07B Transfer Case, Removal and Installation).
3. Remove the coil wire pin from the electrical connector.
1. Remove the inner retainer from the wire connector.
2. Press the release tab and remove the coil wire pin.



4. 1. Loosen the transfer case shift motor bracket nuts.
2. Remove the transfer case shift motor bracket bolt.
3. Remove the transfer case shift motor bolts.
4. Remove the transfer case shift motor.

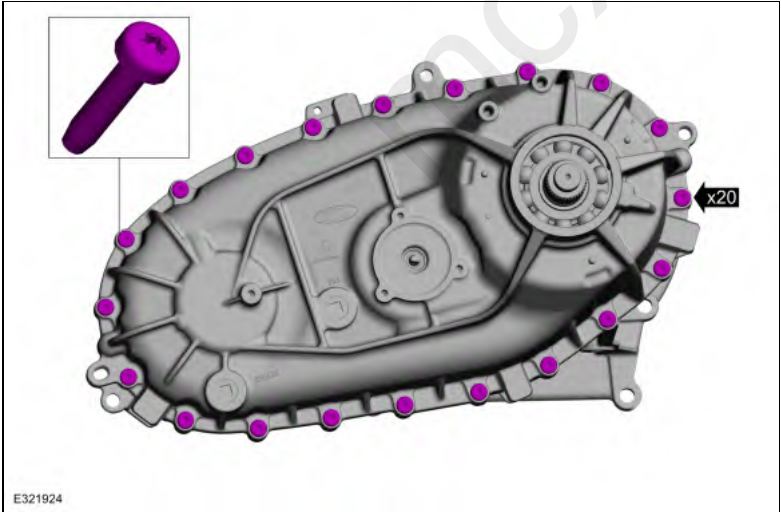


5. Remove the coil nuts.



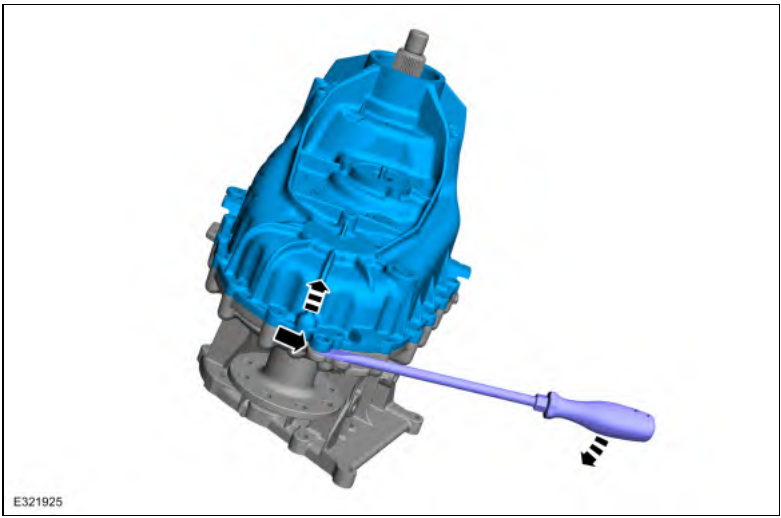
6. **NOTE:** The transfer case bolts are self tapping, and it is normal to find metal shavings while removing the cover.

Remove the transfer case bolts.

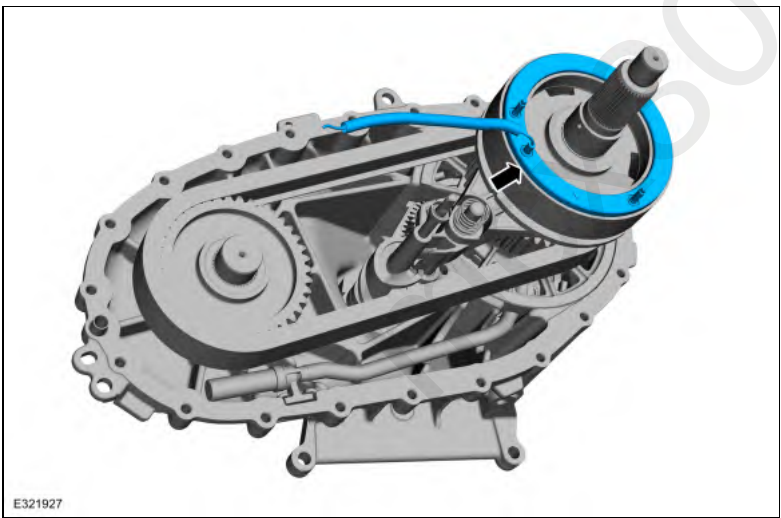


7. **NOTE:** Use care not damage the field coil wire.

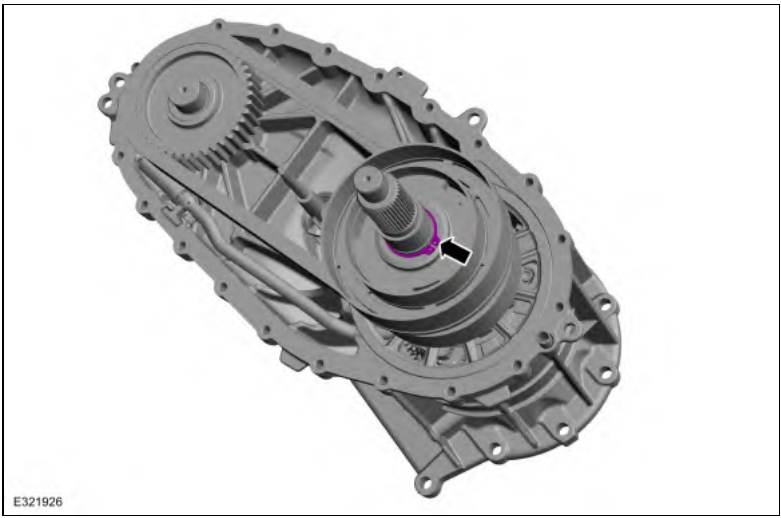
Using the pry bosses, separate the transfer case covers.



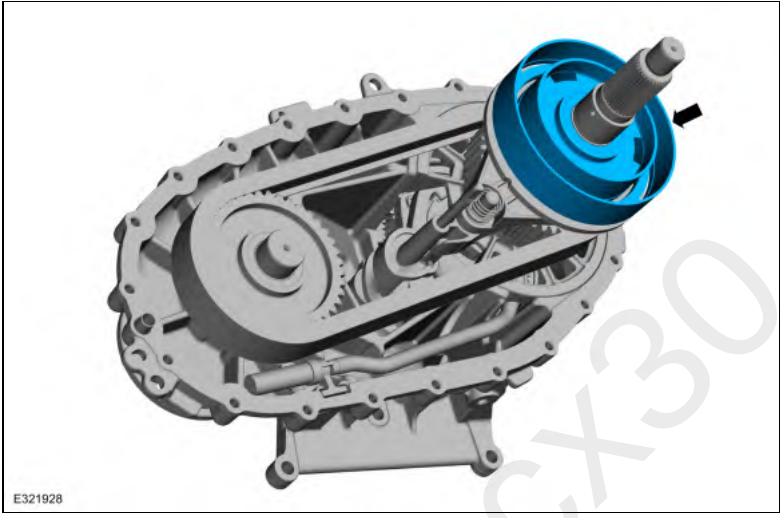
8. Remove the transfer case field coil.



9. Remove the field coil housing snap ring.



10. Remove the field coil housing.

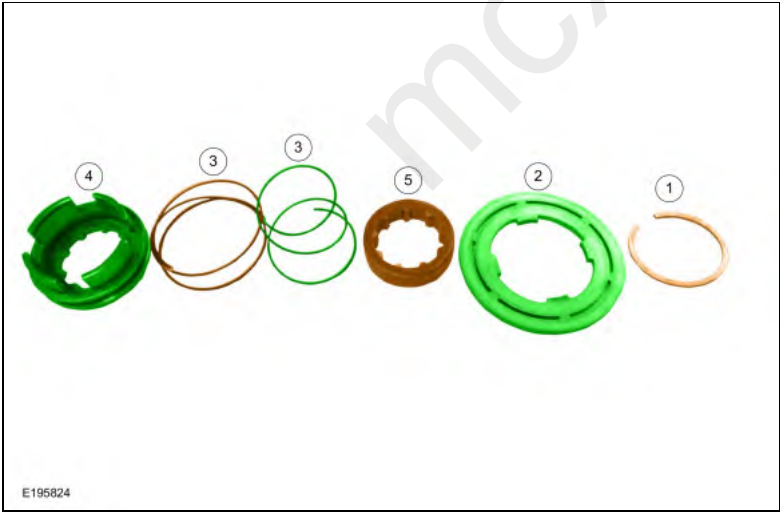


11. Remove the lock up hub, shift fork and shift fork spring.



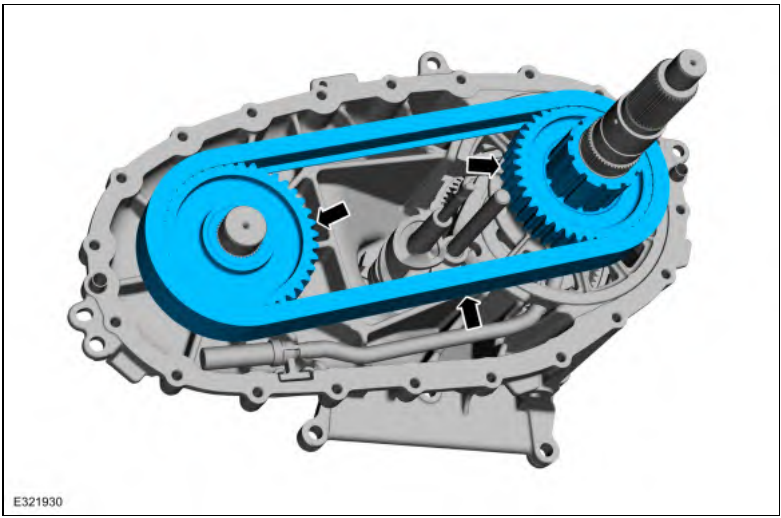
12. **NOTE:** Remove the lockup hub assembly as a single unit. If disassembly is required, proceed with the following.

- Disassemble the lockup hub assembly.
- 1. Remove the lockup hub snap ring.
 - 2. Separate the lockup collar.
 - 3. Separate the 2 lockup springs.
 - 4. Separate the lockup hub.
 - 5. Remove the armature.



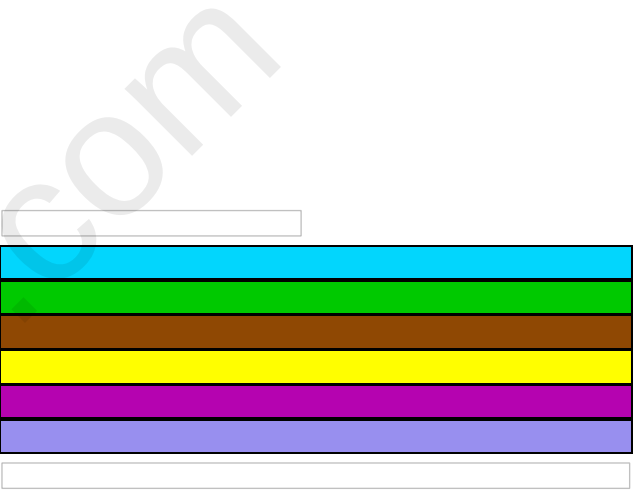
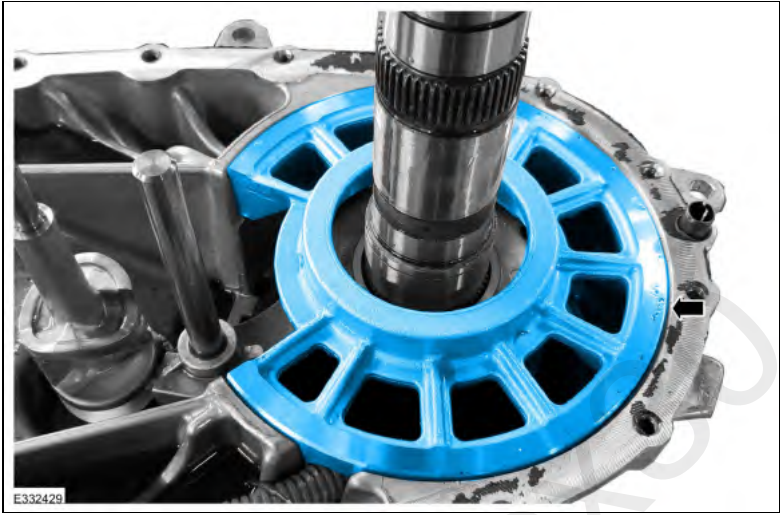
13. **NOTE:** Remove the drive chain and sprockets as an assembly.

Remove the drive chain and sprockets.



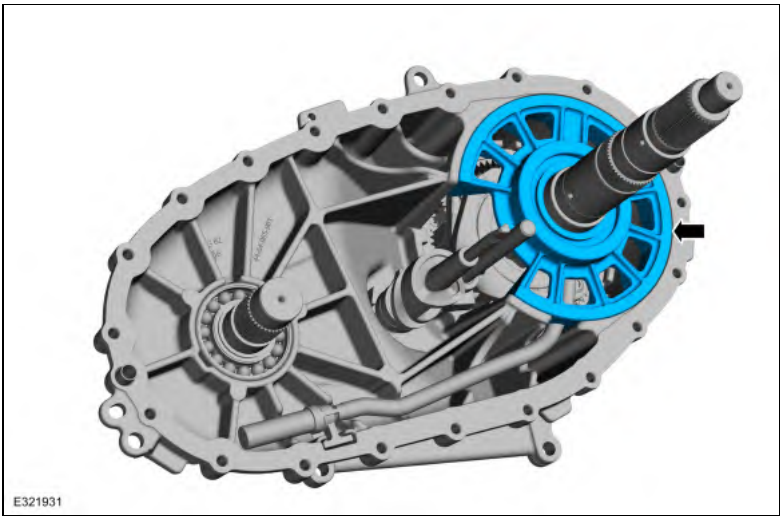
Vehicles equipped with a 6R100 transmission

14. **NOTE:** If disassembling the transfer case to replace the front output shaft seal, skip ahead to step 24: Remove the output shaft circlip and the out put shaft.
- Remove the center support assembly.



Vehicles not equipped with a 6R100 transmission

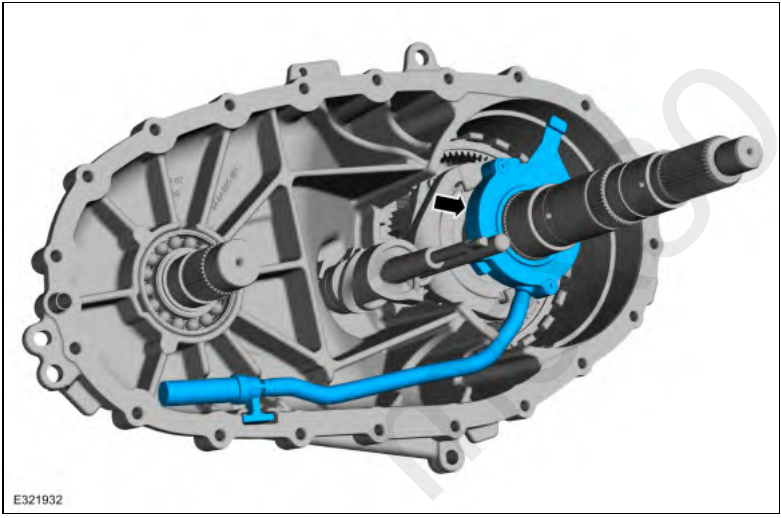
15. **NOTE:** If disassembling the transfer case to replace the front output shaft seal, skip ahead to step 24: Remove the output shaft circlip and the out put shaft.
- Remove the center bearing support assembly.



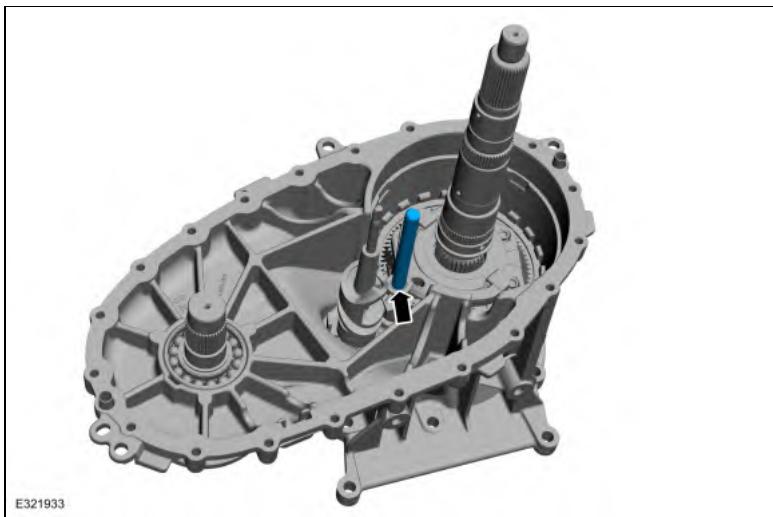
All vehicles

16. **NOTE:** The pump assembly is not repairable.

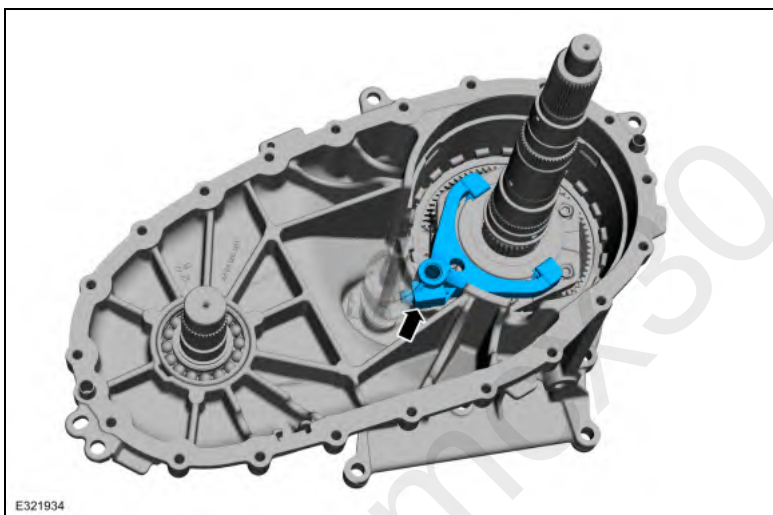
Remove the oil pump assembly and magnet.



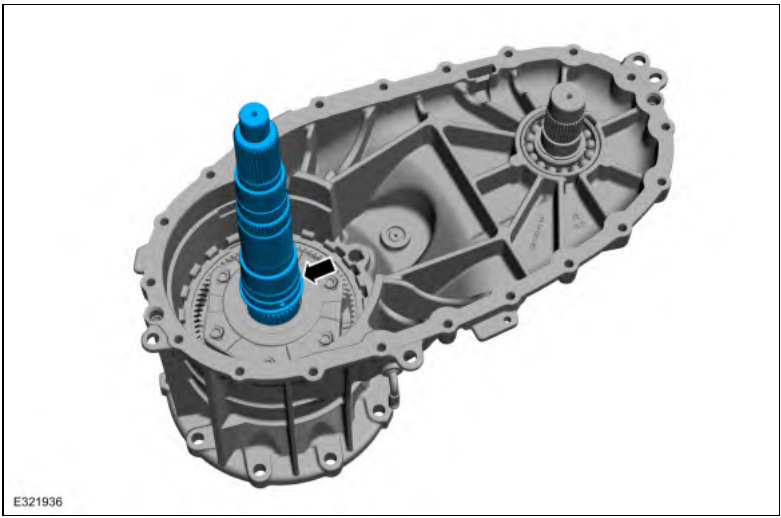
17. Remove the shift rail.

A vertical stack of six colored rectangles. From top to bottom, the colors are cyan, green, brown, yellow, magenta, and light blue. Each rectangle is outlined in black and they are all of equal height and width.

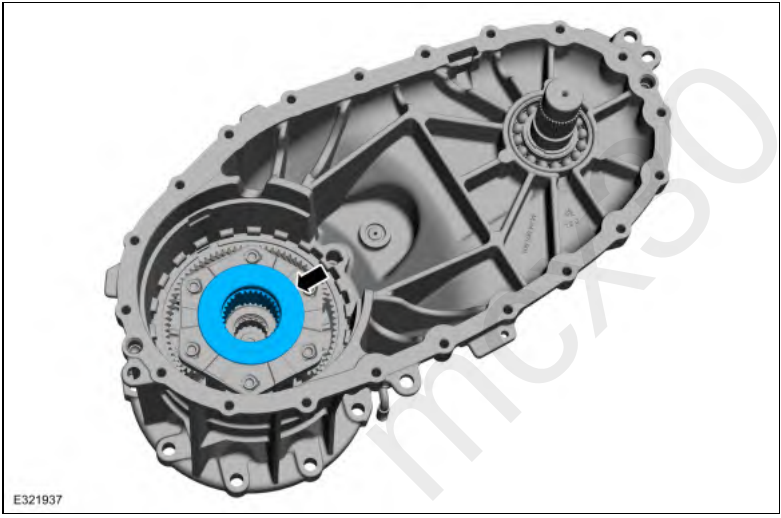
18. Remove the shift fork.



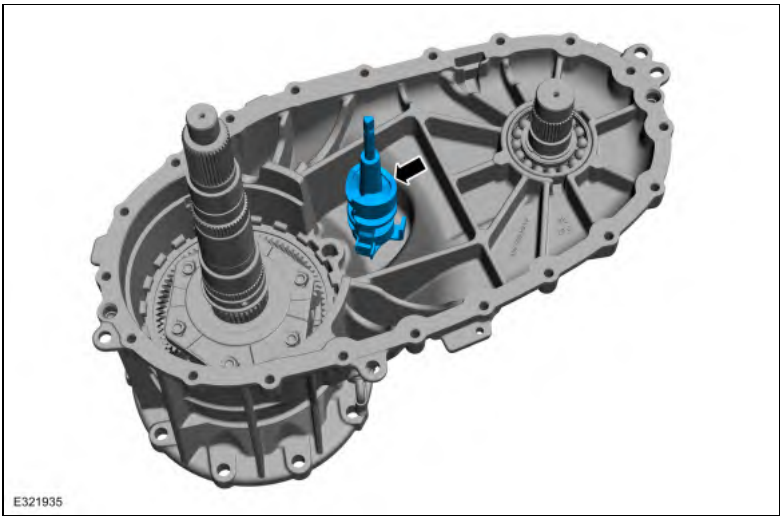
19. Remove the output shaft.



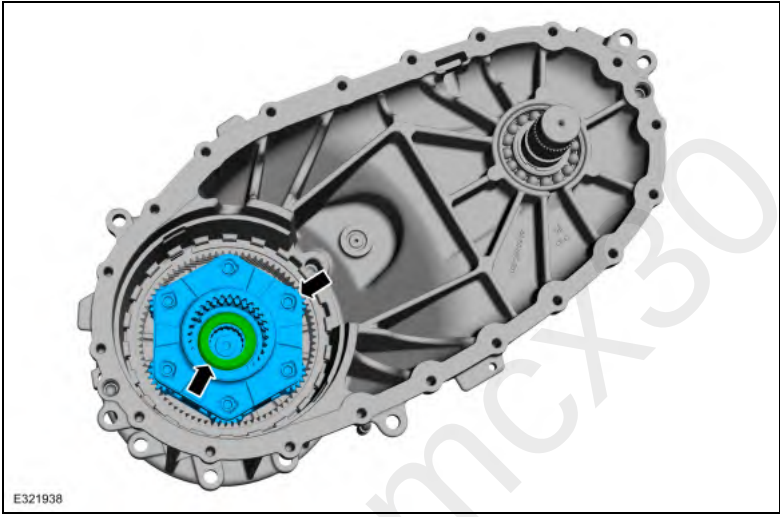
20. Remove the reduction hub.



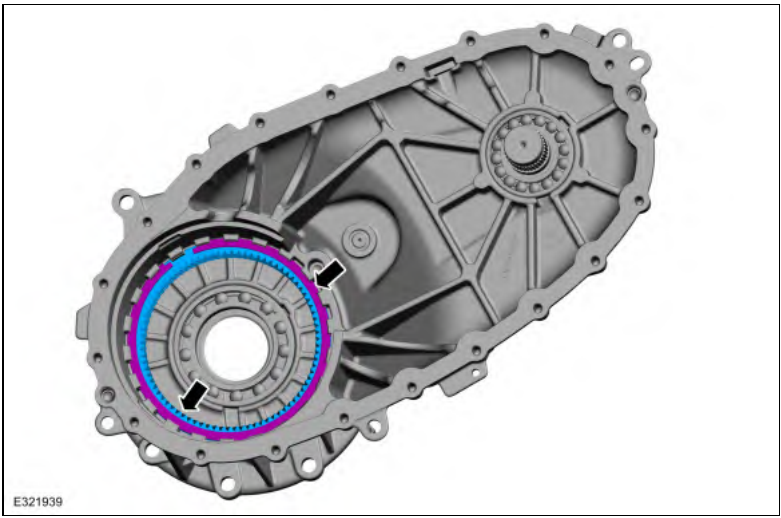
21. **NOTE:** The electric shift cam is serviced as an assembly. Do not disassemble the shift cam assembly.
Remove the electric shift cam assembly.



22. **NOTE:** Replace the inner planet carrier needle bearing if necessary.
Remove the planet carrier thrust bearing and the front planet carrier.

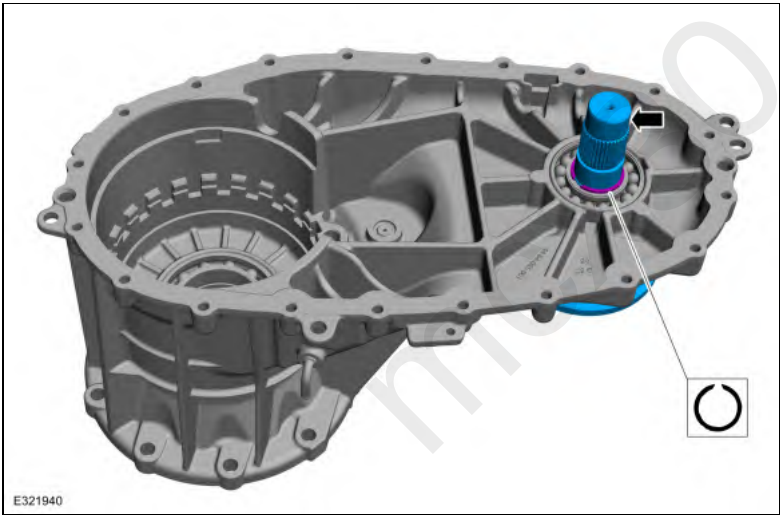


23. Remove the ring gear circlip and the ring gear.

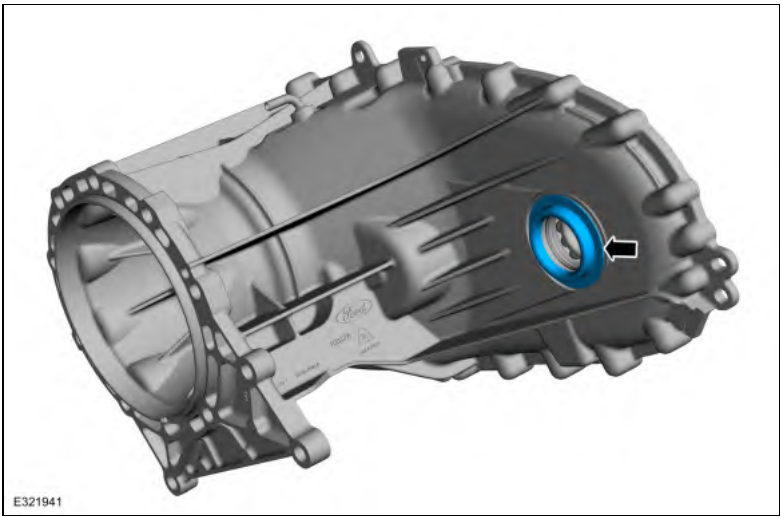


24. **NOTICE:** Do not let the front output shaft fall while removing the snap ring or damage to the component may occur.

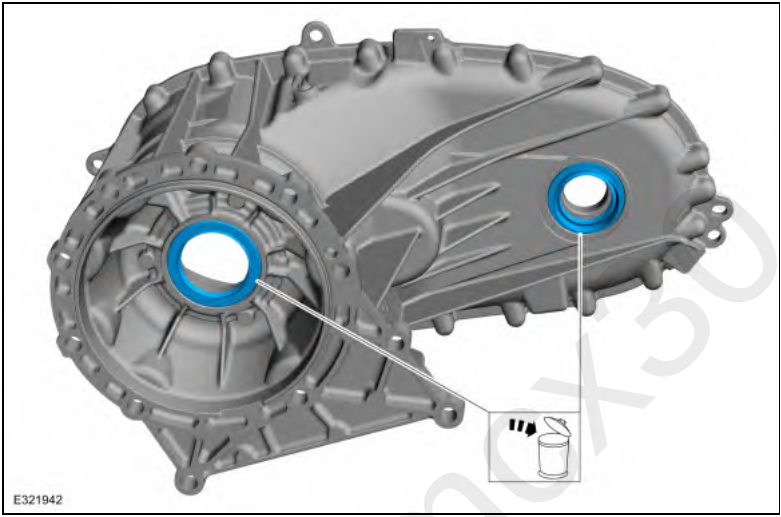
Remove the output shaft circlip and the output shaft.



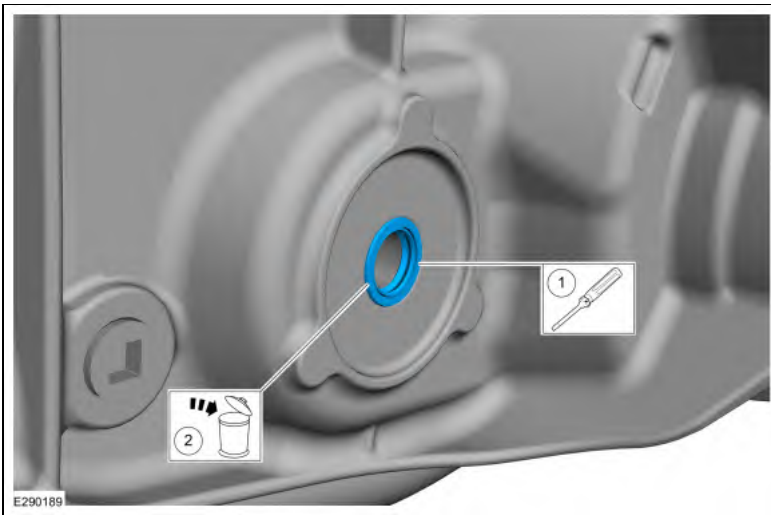
25. Remove the front output shaft seal protector.



26. Remove and discard the front input shaft seal and the front output shaft seal.



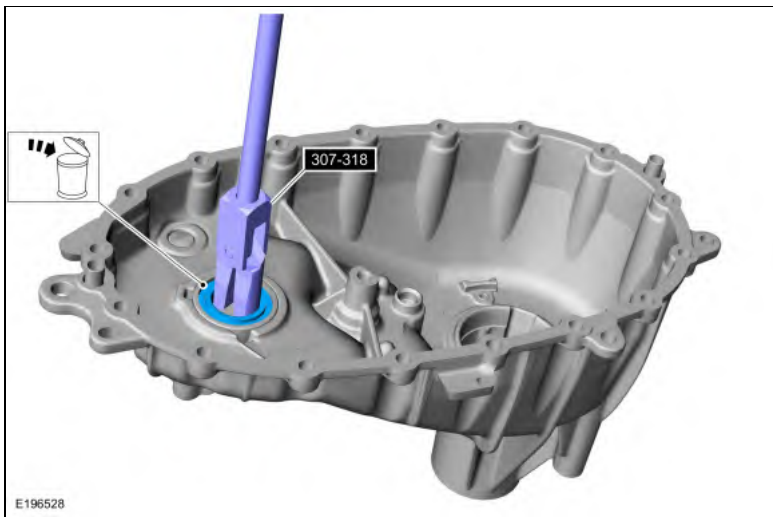
27. Remove and discard the shift shaft seal.



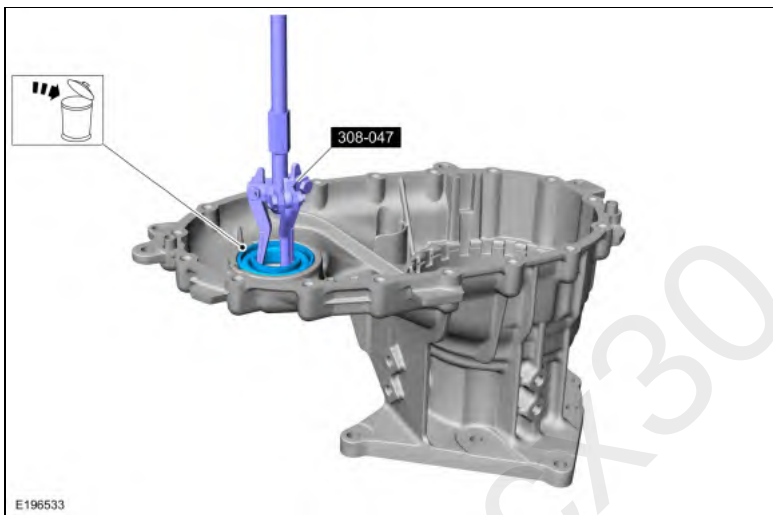
28. Using the special tool with the Slide Hammer, remove the rear output shaft bearing.
Use Special Service Tool: 308-047 (T77F-1102-A) Remover, Bearing Cup.
Use the General Equipment: Slide Hammer



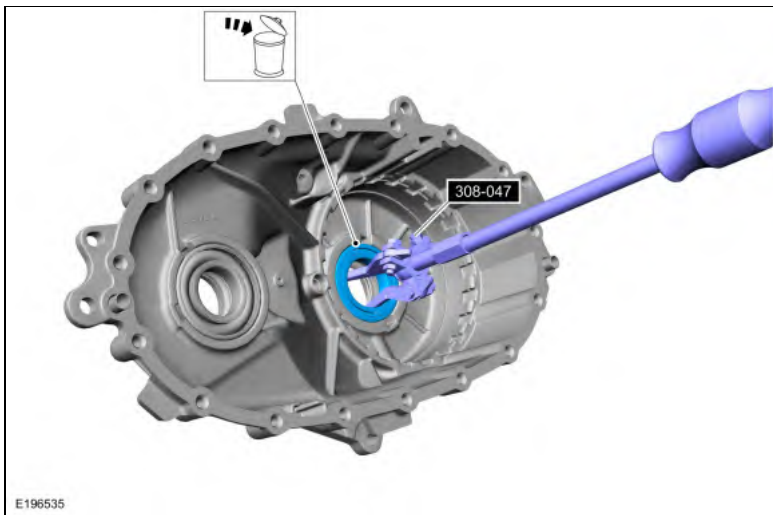
29. Using the special tool and a Slide Hammer, remove the front output shaft support bearing.
Use Special Service Tool: 307-318 Remover, Stator Bearing.
Use the General Equipment: Slide Hammer



30. Using the special tool with the Slide Hammer, remove the front output shaft bearing.
 Use Special Service Tool: 308-047 (T77F-1102-A) Remover, Bearing Cup.
 Use the General Equipment: Slide Hammer

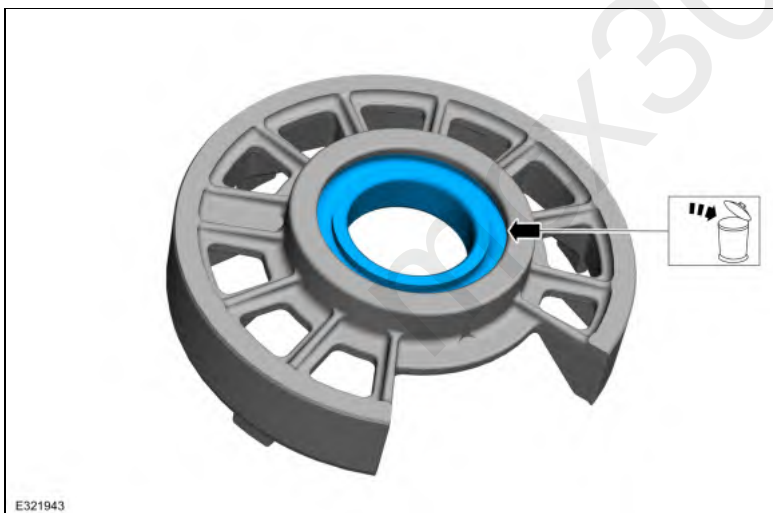


31. Using the special tool and a Slide Hammer, remove the front planet carrier bearing.
 Use Special Service Tool: 308-047 (T77F-1102-A) Remover, Bearing Cup.
 Use the General Equipment: Slide Hammer



Vehicles not equipped with a 6R100 transmission

32. Remove the center support bearing.
Use the General Equipment: Copper Hammer
Use the General Equipment: Punch



All vehicles

33. **NOTE:** Clean and inspect the components of the transfer case for damage and install new components as necessary.

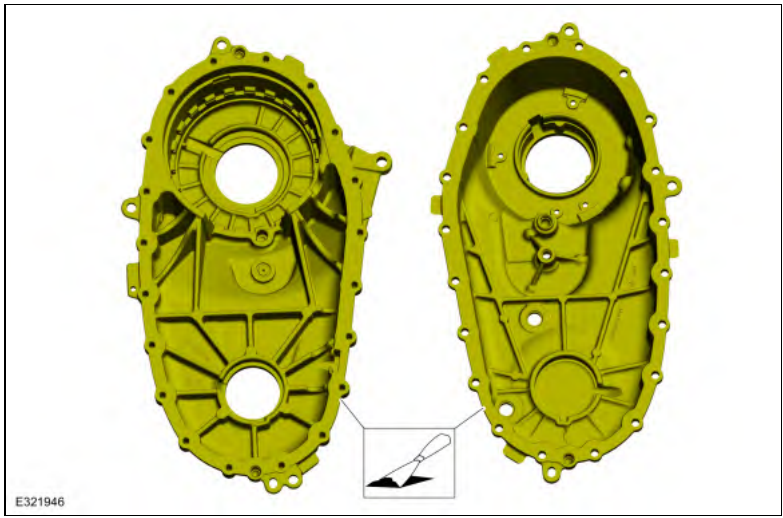
Clean the transfer case with solvent and dry with compressed air.

ASSEMBLY

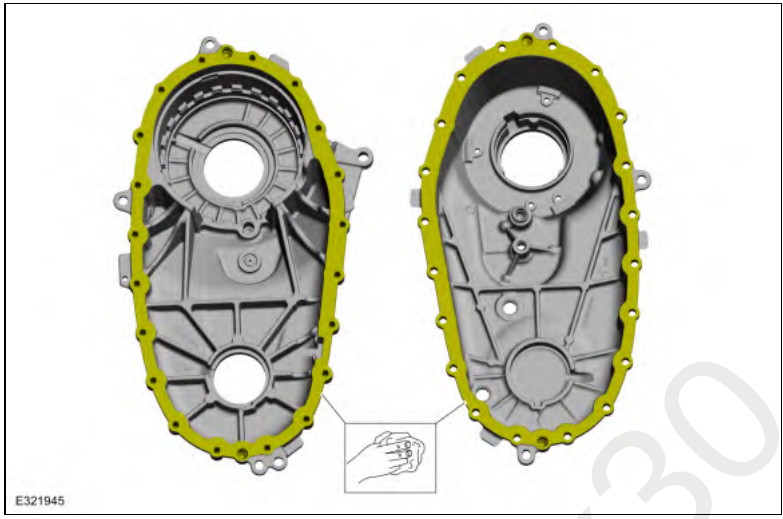
All vehicles

NOTE: Lubricate all internal components with the recommended transfer case lubricant during reassembly.

1. Remove the contamination and deposits from the transfer case housing and cover using a plastic scraper. Clean the transfer case housing and cover using a soft bristle brush to remove the contamination. Clean any remaining lip seal coating that may still be present on the housing or cover bores with a wire brush. Make sure the vent fitting and housing pockets are clean and clear.
Remove the General Equipment: Spatula

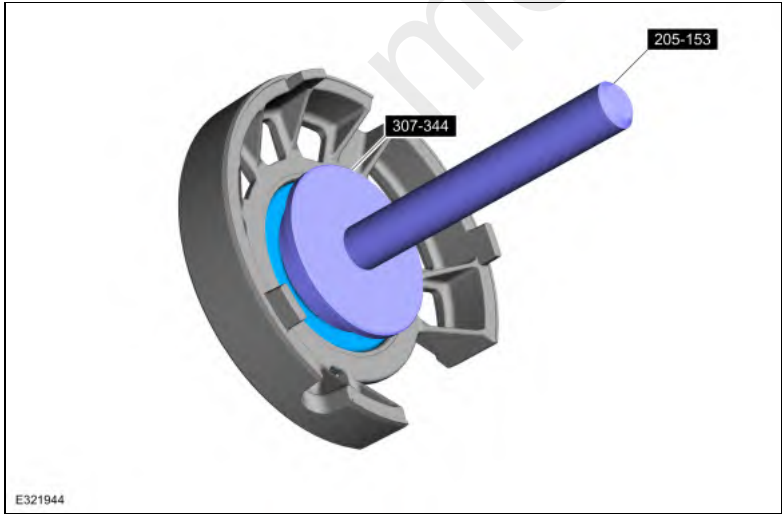


2. Clean the transfer case housing and cover flange sealing surfaces.
Refer to: RTV Sealing Surface Cleaning and Preparation (303-00 Engine System - General Information, General Procedures).



Vehicles not equipped with a 6R100 transmission

3. Using the special tools, install the center support bearing.
Use Special Service Tool: 205-153 (T80T-4000-W) Handle, 307-344 (T95P-7H150-A) Installer, Driven Sprocket Wheel.



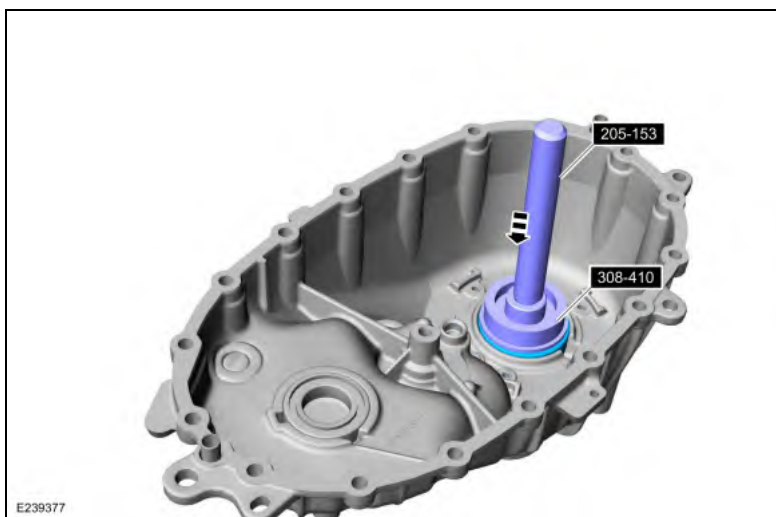
All vehicles

4. Using the special tools, install the front planet carrier bearing.

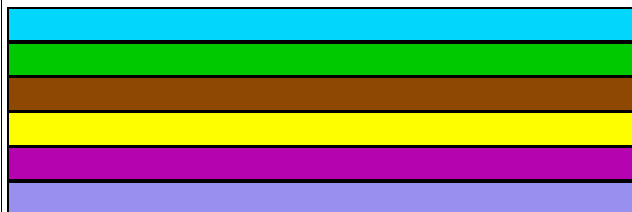
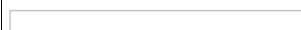
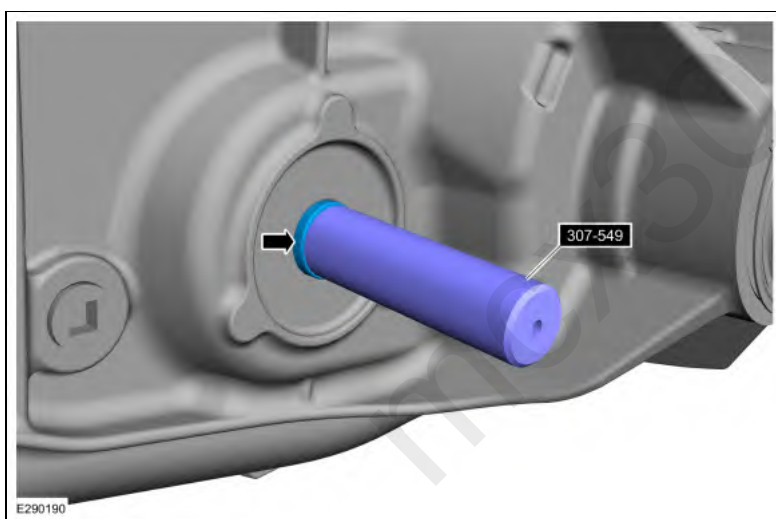
-
- Diagram showing the installation of the oil pump drive shaft (205-153) into the oil pump housing (307-626).

-

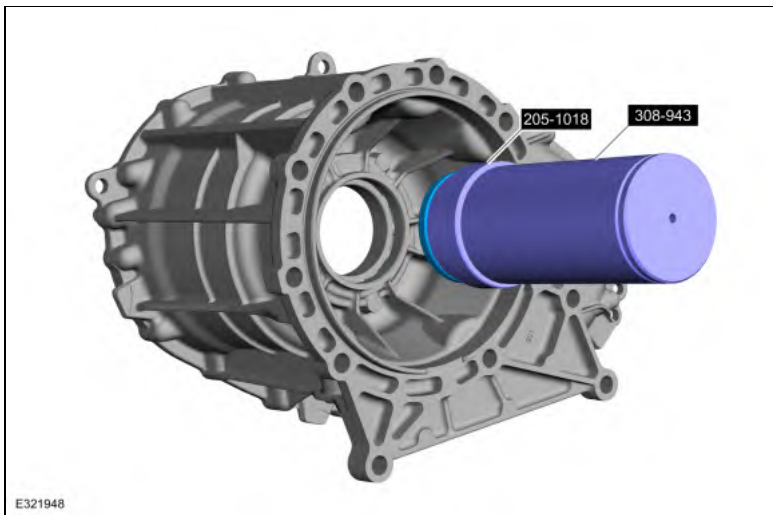
7. Using the special tools, install the rear output shaft bearing.
Use Special Service Tool: 205-153 (T80T-4000-W) Handle. , 308-410 Installer, Output Shaft Front Bearing.



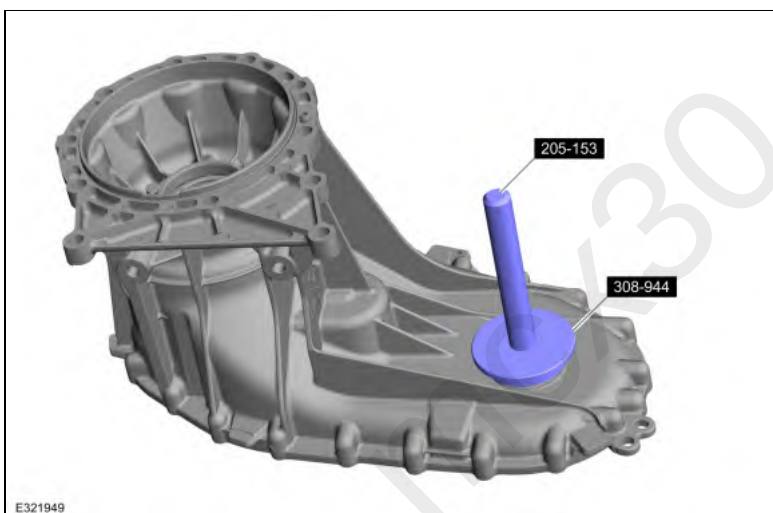
8. Using the special tools, install the shift shaft seal.
Install Special Service Tool: 307-549 Installer, Shift Shaft Fluid Seal.



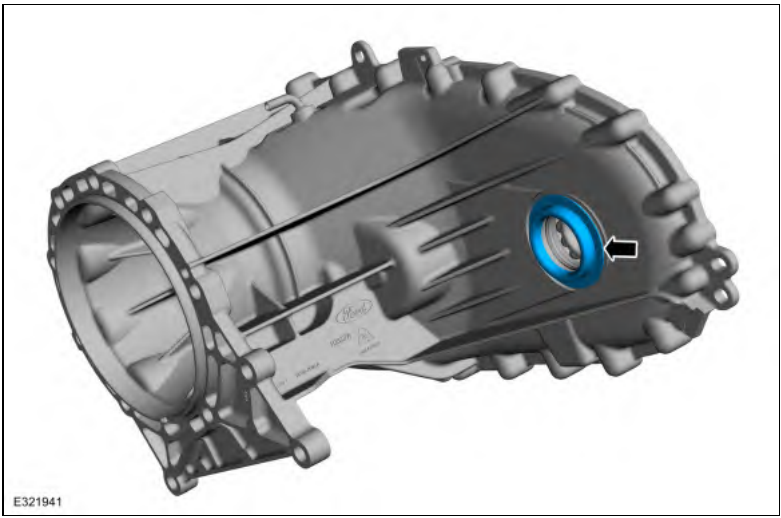
9. Using the special tools, install the input shaft seal.
Use Special Service Tool: 205-1018 Installation Tube. , 308-943 Installer, Input Seal.



10. Using the special tools, install the front output shaft seal.
 Use Special Service Tool: 205-153 (T80T-4000-W) Handle. , 308-944 Installer, Front Output Seal.

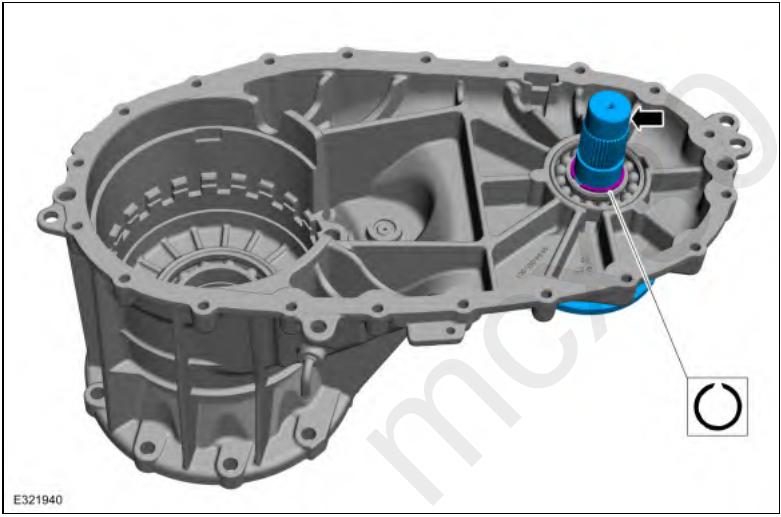


11. Install the output shaft seal protector.

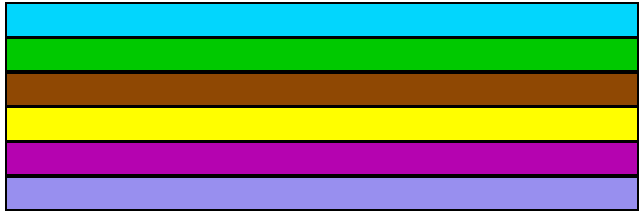
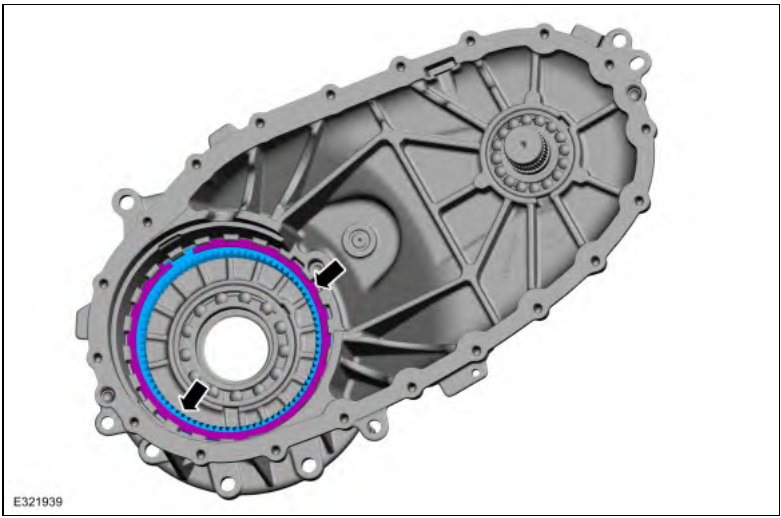


12. **NOTICE:** Do not let the front output shaft fall while removing the snap ring or damage to the component may occur.

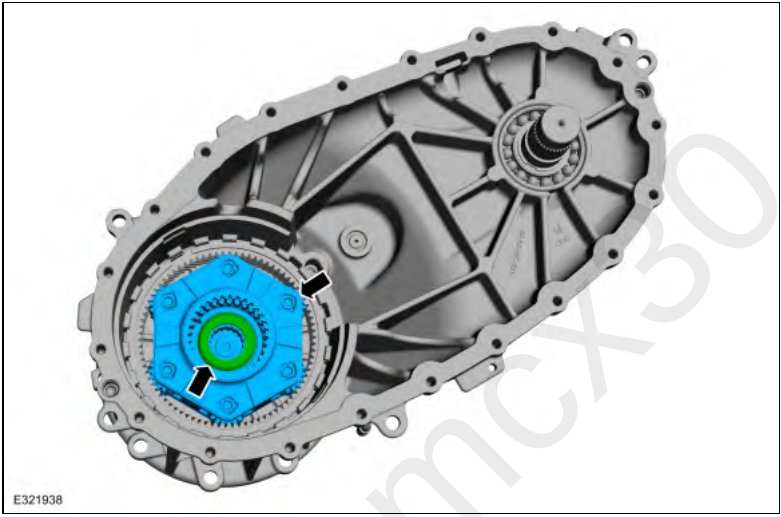
Install the output shaft and the out put shaft circlip.



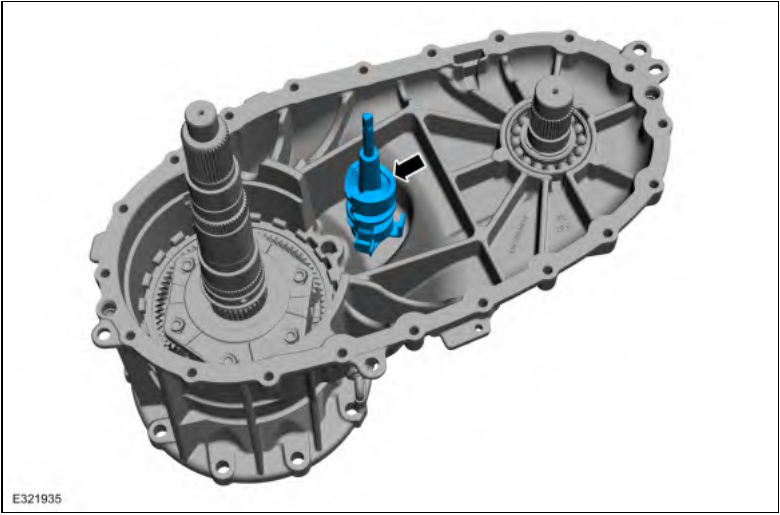
13. Install the ring gear and the ring gear circlip.



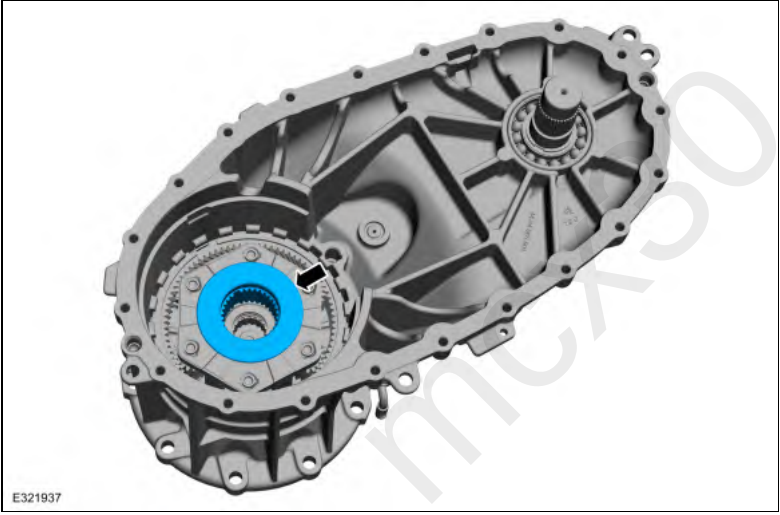
14. Install the planet carrier and the front planet carrier thrust bearing.



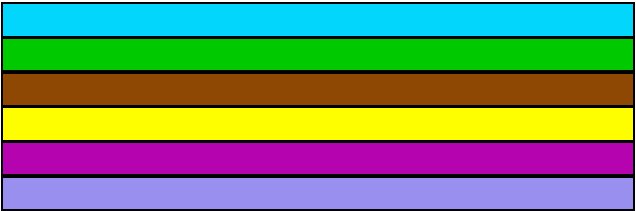
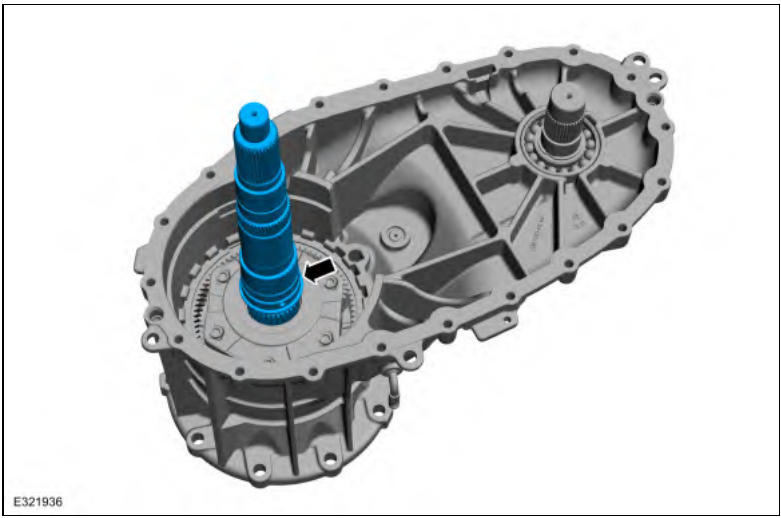
15. Install the electric shift cam assembly.



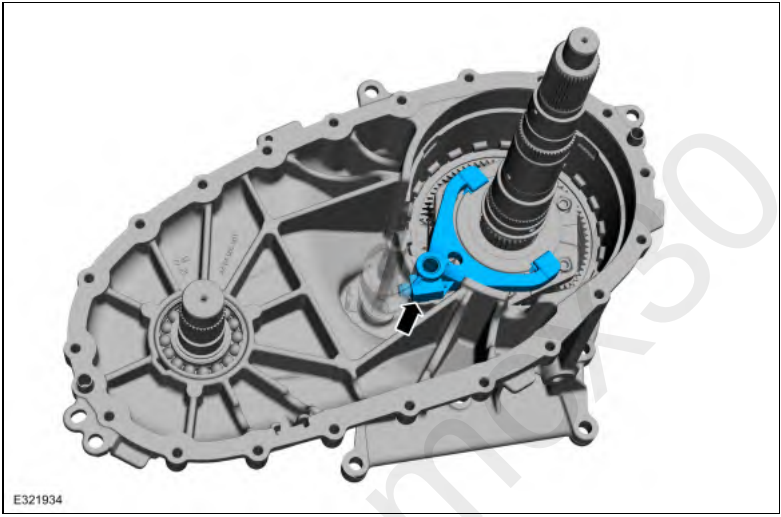
16. Install the reduction hub.



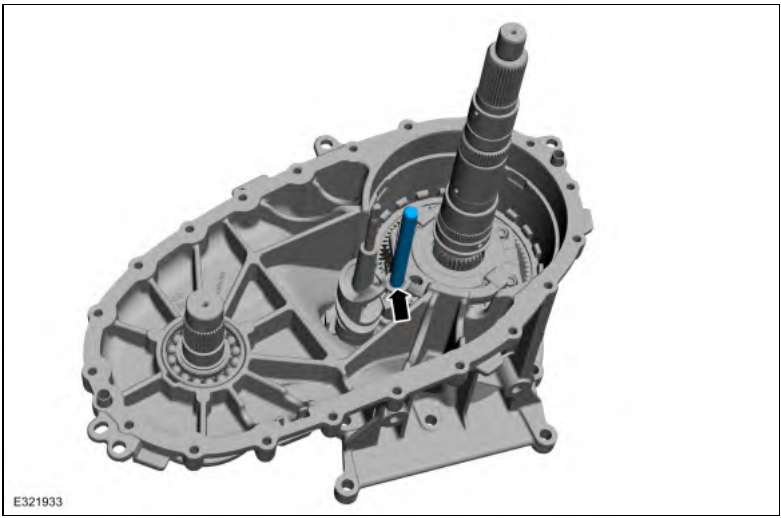
17. Install the output shaft.



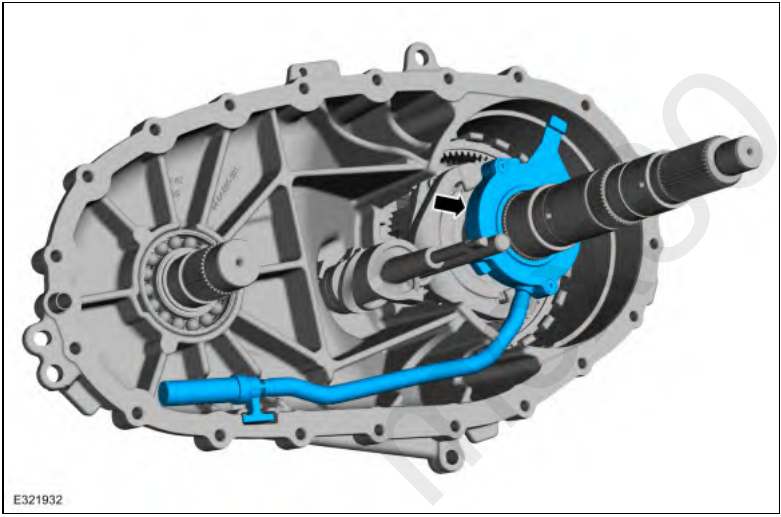
18. Install the shift fork.



19. Install the shift rail.

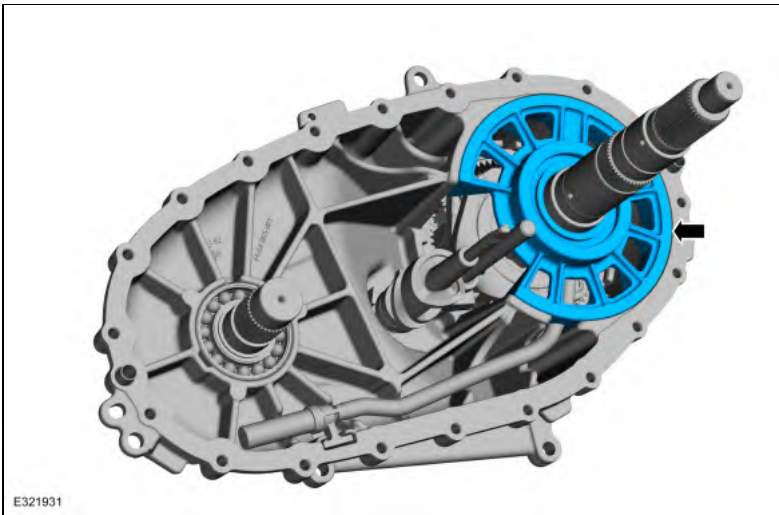


20. Install the magnet and oil pump assembly.



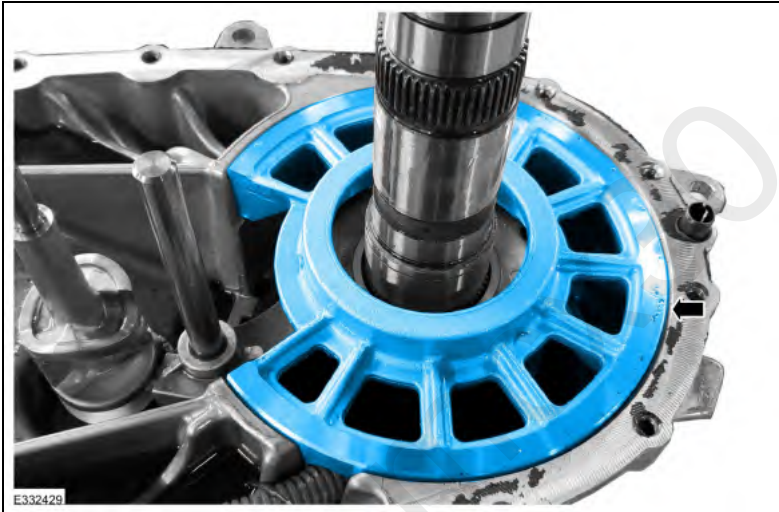
Vehicles not equipped with a 6R100 transmission

21. Install the center bearing support assembly.



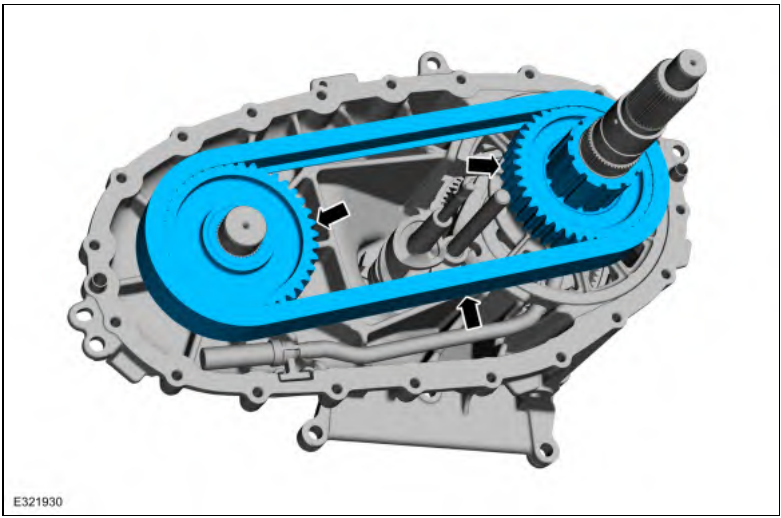
Vehicles equipped with a 6R100 transmission

22. Vehicles equipped with a 6R100 transmission
Install the center support assembly.

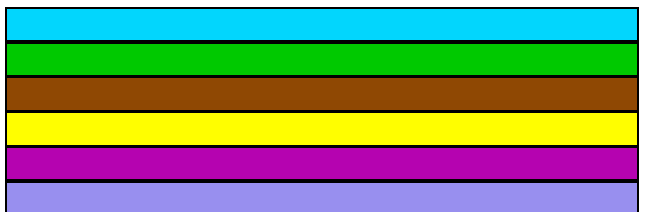
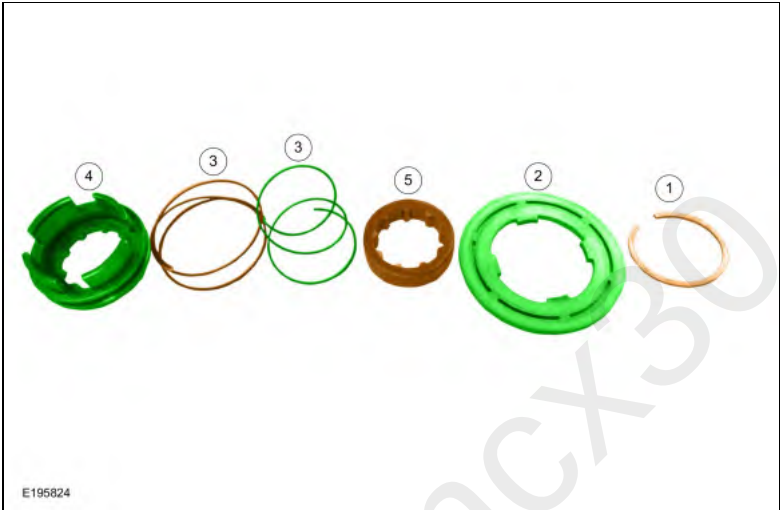


All vehicles

23. **NOTE:** *Install the drive chain and sprockets as an assembly.*
Install the drive chain and sprockets.



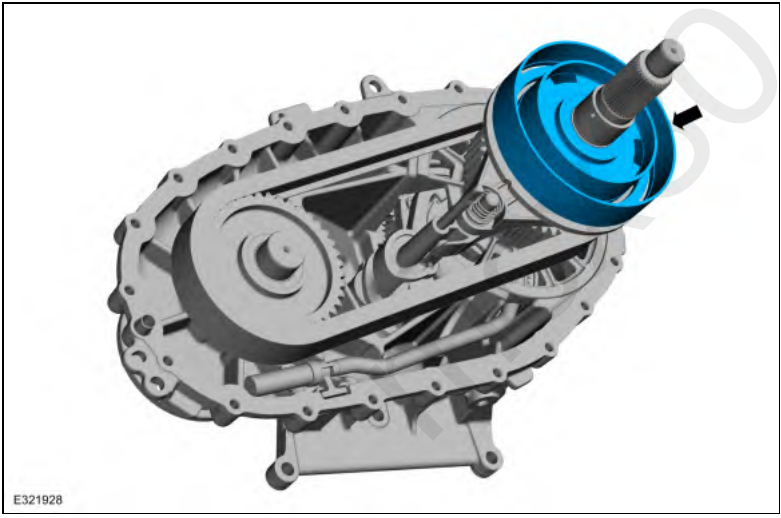
24. Assemble the lockup hub assembly.



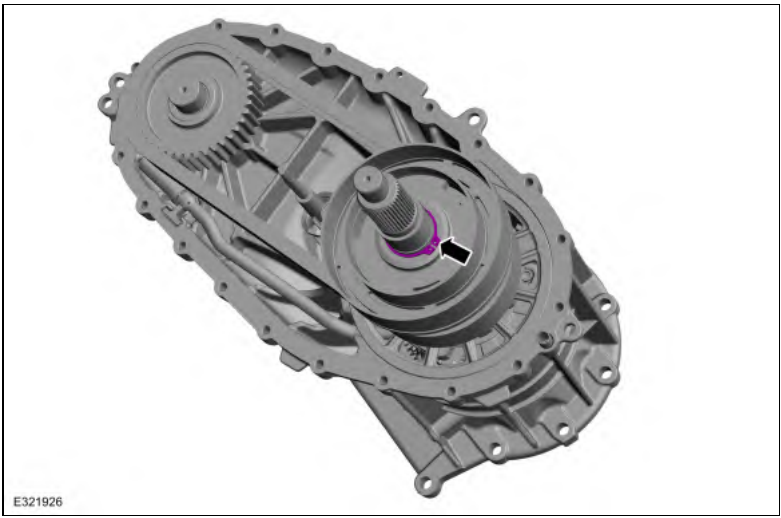
25. Install the lock up hub assembly, shift fork and shift fork spring.



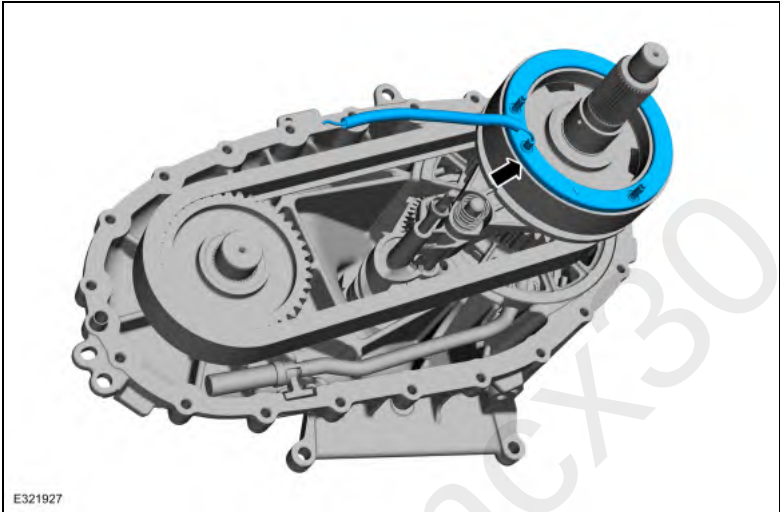
26. Install the field coil housing.



27. Install the field coil housing snap ring.

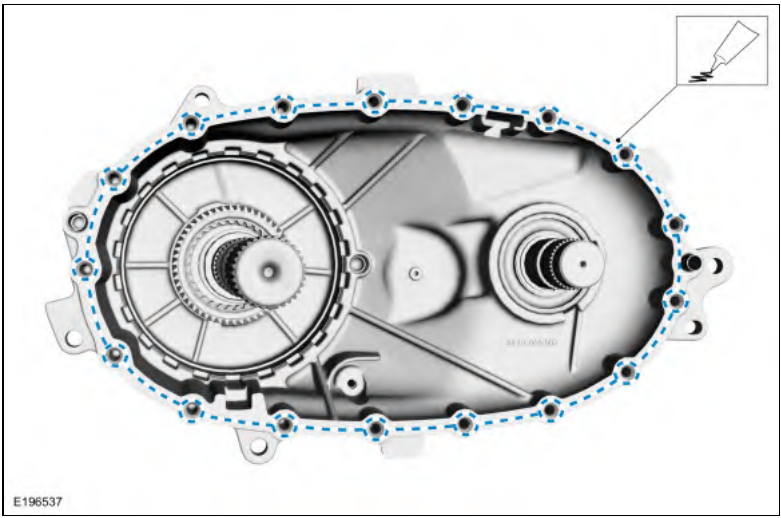


28. Install the transfer case field coil.

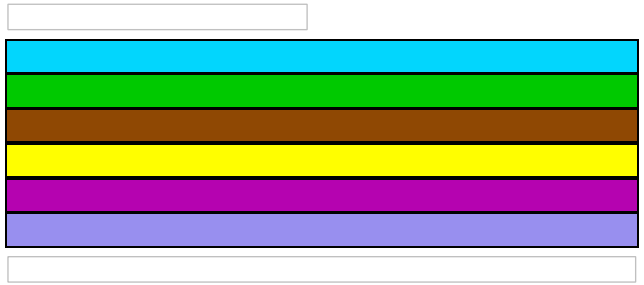
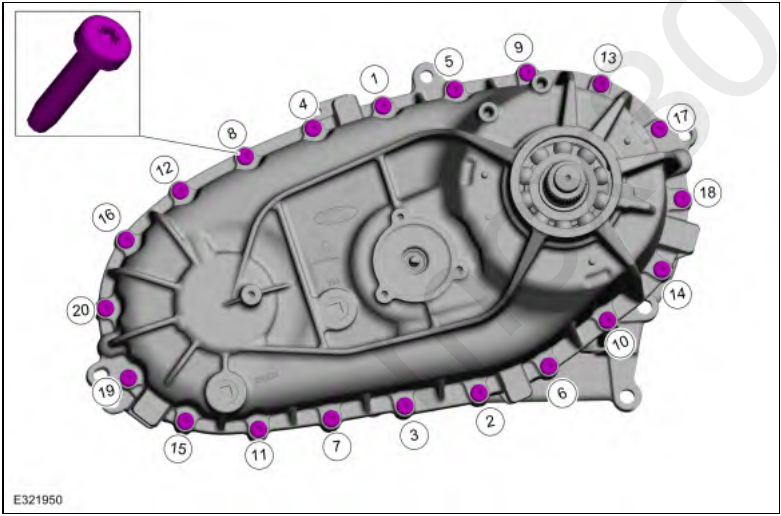


29. **NOTE:** Only apply enough silicone sealant to seal the transfer case halves together and does not squeeze into the transfer case.

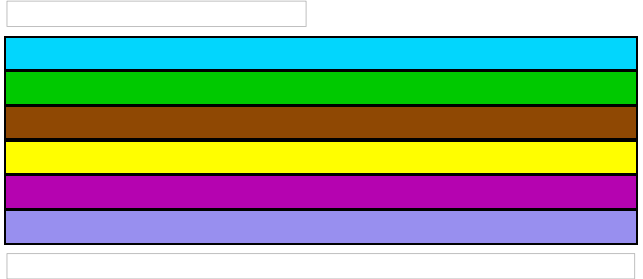
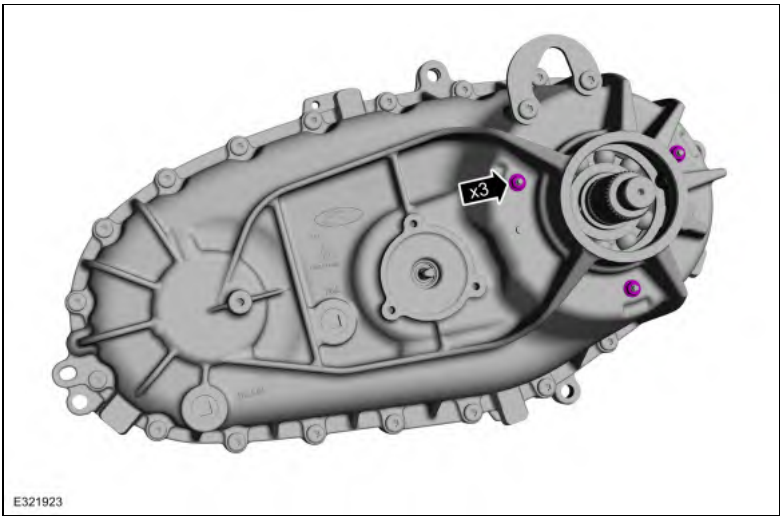
Apply a small bead of silicone sealant to the mating surface of the case half.
Material: Motorcraft® Ultra Silicone Sealant / TA-29



30. **NOTE:** Position the field coil bolts to align with the field coil bolt holes in the rear case. Position field coil wire through the field coil wire through hole in the case.
- Position the transfer case halves and tighten the bolts in the sequence shown.
Torque: 23 lb.ft (31 Nm)

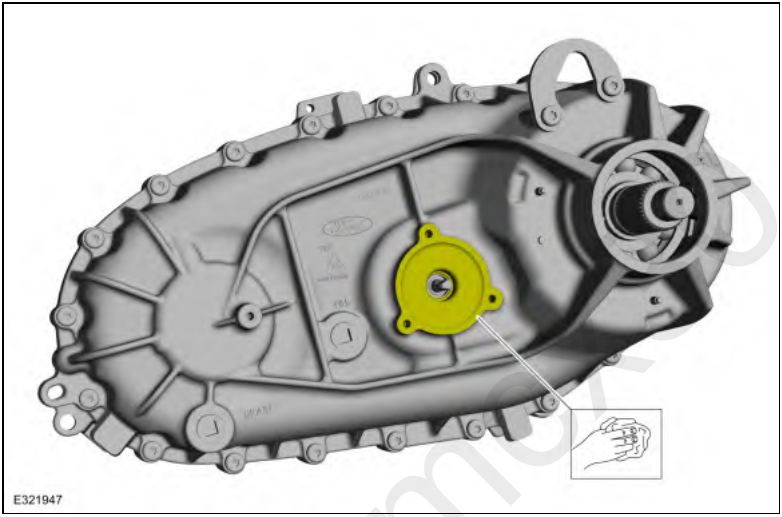


31. Install the transfer case field coil nuts.
Torque: 89 lb.in (10 Nm)

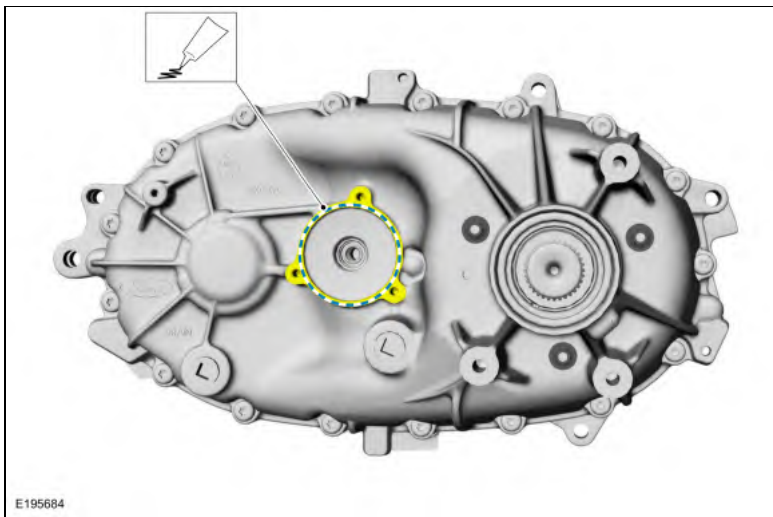


32. Install the transfer case rear seal.
Refer to: Transfer Case Rear Seal - Vehicles With: Flanged Yoke (308-07B Transfer Case, Removal and Installation).
Refer to: Transfer Case Rear Seal - Vehicles With: Slip Yoke (308-07B Transfer Case, Removal and Installation).

33. Clean the transfer case shift motor mating surface.

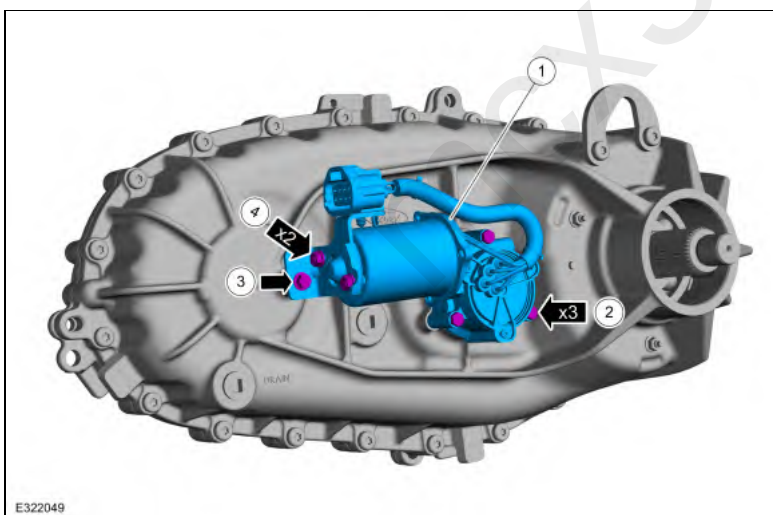


34. Apply a small bead of silicone sealant to the transfer case shift motor mating surface.
Material: Motorcraft® Ultra Silicone Sealant / TA-29



35. **NOTICE:** When installing the shift motor, tighten the bracket nuts last. Failure to follow the steps in the correct order may result in damage to the component.

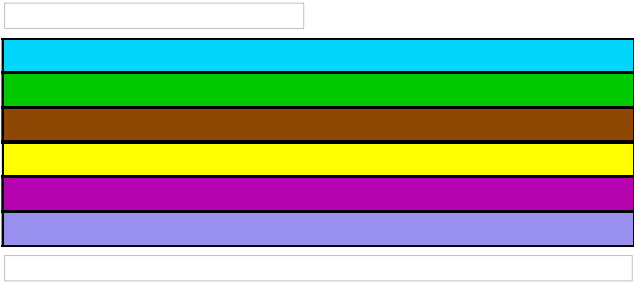
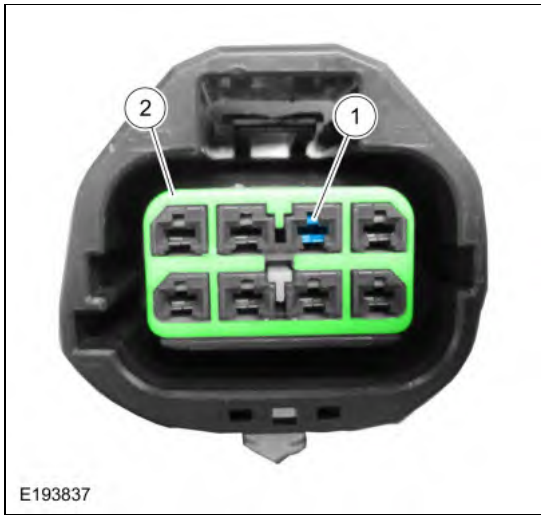
1. Install the transfer case shift motor.
2. Install the transfer case shift motor bolts.
Torque: 89 lb.in (10 Nm)
3. Install the transfer case shift motor bracket bolt.
Torque: 89 lb.in (10 Nm)
4. Tighten the transfer case shift motor bracket nuts.
Torque: 27 lb.in (3 Nm)



36. **NOTE:** After the coil wire is inserted into the connector, gently pull the wire back to verify the pin is locked inside the connector.

Install the coil wire pin in the electrical connector.

1. Insert the coil wire pin in the electrical connector.
2. Install the inner connector retainer.



37. Remove the transfer case from the transmission adjustable mounting arms.
Use the General Equipment: Adjustable Mounting Arm

