













Section 308-07C: Transfer Case — All-Wheel Drive
DISASSEMBLY AND ASSEMBLY

1997 Explorer/Mountaineer Workshop Manual


Transfer Case

Special Service Tool(s)

 ST1309-A	Bearing Cone Replacer T88T-7025-B
 ST1254-A	Bearing Plate T75L-1165-B
 ST1368-A	Bearing Pulling Attachment D84L-1123-A
 ST1362-A	Bearing Remover T94P-77001-KH
 ST1186-A	Bench Mounted Holding Fixture T57L-500-B
 ST2079-A	Companion Flange Holding Tool 307372
 ST1370-A	Differential Seal Replacer T83T-3254-B
 ST1255-A	Driver Handle T80T-4000-W
 ST1364-A	Front Pump Seal Replacer T87L-77248-AH
 ST1351-A	Impact Slide Hammer T50T-100-A
 ST1367-A	Pinion Bearing Cone Replacer T53T-4621-C
 ST1143-A	Seal Protector T96T-7127-C
	Seal Replacer Input Shaft T96T-7127-A

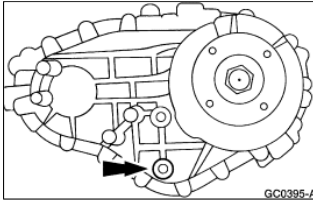


Disassembly

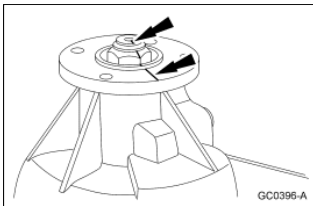
1.  **CAUTION: Seals are damaged upon removal. New seals are required after removal.**

Remove the transfer case and place on a workbench; refer to the procedure in this section.

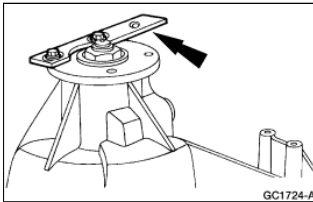
2. Remove the drain plug and drain the fluid.



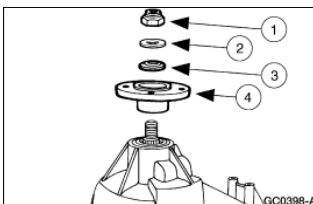
3. Mark the rear transfer case flange and the rear output shaft for correct reassembly.



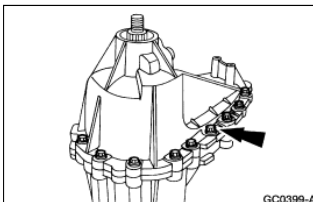
4. Install Companion Flange Holding Tool to the rear output flange.



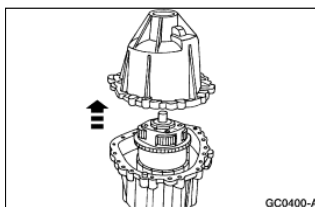
5. Remove the rear output flange.
 1. Remove the rear output flange nut.
 2. Remove the rear output flange washer.
 3. Remove the rear output flange seal.
 4. Remove the rear output flange.




6. Place the transfer case in Bench Mounted Holding Fixture and remove 17 bolts from the front case half and the rear case half.



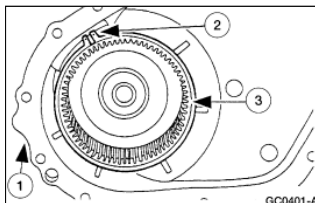
7. Insert a pry bar and separate the front and rear case halves.



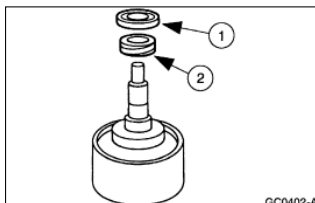
8.  **CAUTION:** Do not remove the bearing from the rear output shaft.

Remove the rear output shaft and ring gear from the rear case half.

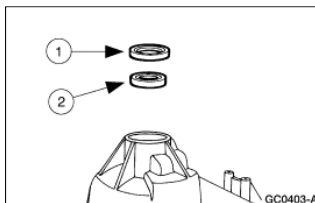
1. Place the rear half of the case in Bench Mounted Holding Fixture.
2. Open the retaining ring.
3. Remove the rear output shaft and rear gear.



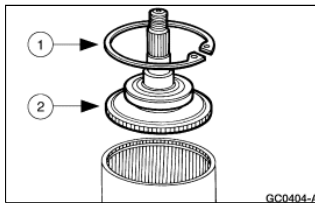
9. Remove the output shaft bearing and the speedometer tone wheel.
1. Remove the output shaft bearing.
 2. Remove the speedometer tone wheel.



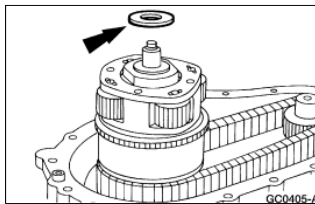
10. Remove the rear output shaft seal and the bearing.
1. Pry out the rear output shaft seal.
 2. Pull out the rear output shaft bearing.



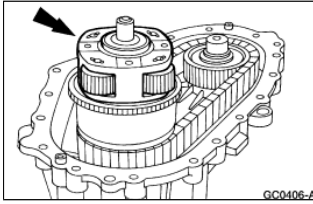
11. Remove the ring gear from the rear output shaft.
1. Remove the retaining ring.
 2. Remove the ring gear from the rear output shaft.



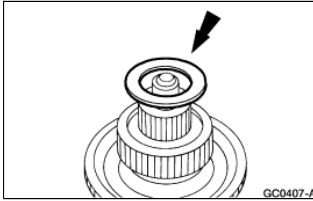
12. Place the front case half in Bench Mounted Holding Fixture and remove the planetary gear thrust washer.



13. Remove the planetary assembly.

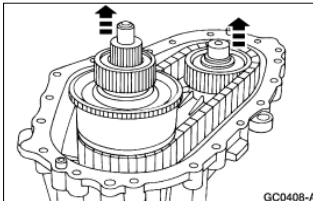


14. Remove the sun gear thrust washer.

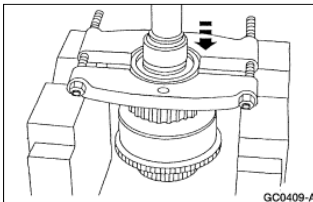


15. **NOTE:** Do not remove the viscous clutch bushing or pinion bearing. Replace as part of the viscous clutch assembly.

Remove the viscous clutch with the driven sprocket and the drive chain.

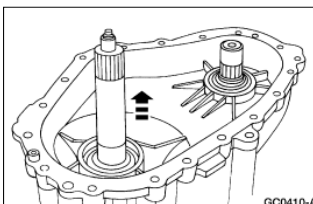


16. Press the sun gear shaft bearing off the sun gear shaft with Bearing Pulling Attachment.

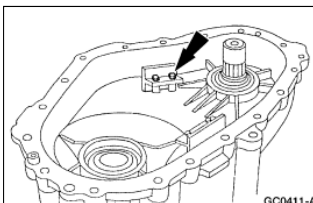


17. **NOTE:** Do not remove the front case half input shaft bushing. Replace as part of the front case half.

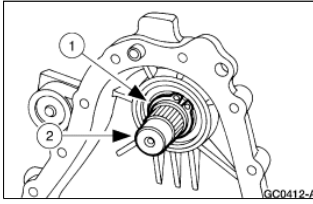
Remove the input shaft.



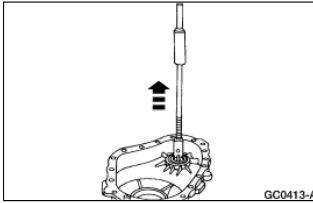
18. Remove the four bolts and the two chain snubbers.



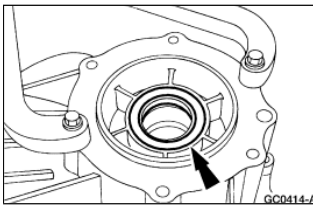
19. Remove the front output shaft.
1. Remove the front output shaft retaining ring.
 2. Remove the front output shaft with a soft face hammer.



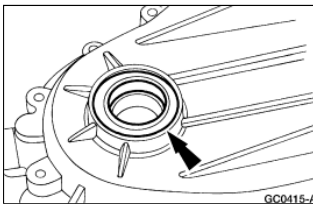
20. Remove the front output shaft bearing with Bearing Remover and Impact Slide Hammer.



21. Turn the transfer case front half over in Bench Mounted Holding Fixture and pry out the input shaft seal.

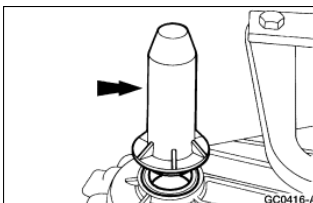


22. Pry out the front output shaft seal.

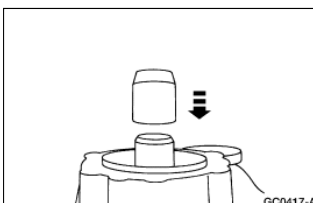


Assembly

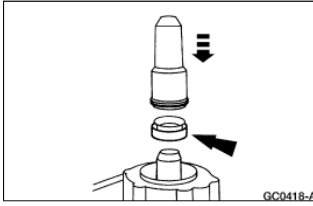
1. Place the transfer case front half in Bench Mounted Holding Fixture and install the front output shaft seal with Front Pump Seal Replacer.



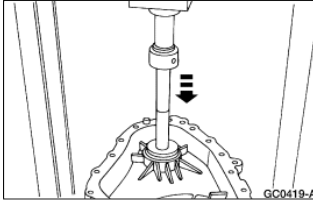
2. Position Seal Protector.



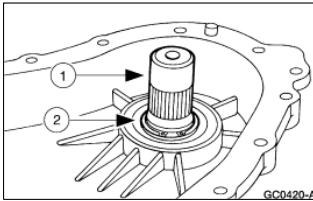
3. Install the input shaft seal with Seal Replacer Input Shaft.



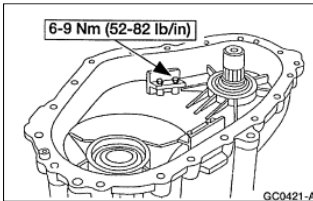
4. Press the front output shaft bearing with Bearing Cone Replacer, Differential Seal Replacer, and Driver Handle.



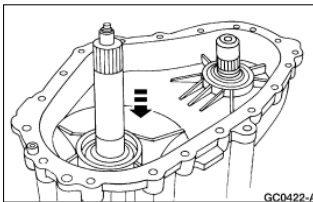
5. Install the front output shaft.
 1. Install the front output shaft using a soft face hammer.
 2. Install the retaining ring.



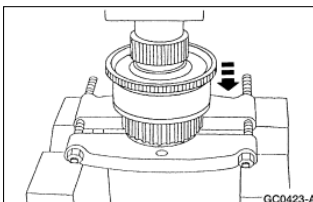
6. Install the two chain snubbers with four bolts.



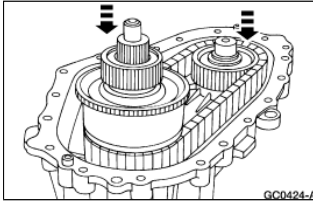
7. Install the input shaft.



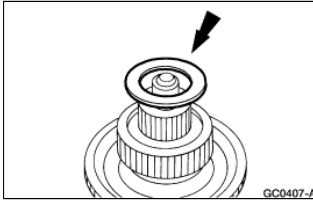
8. Press the sun gear shaft bearing with Pinion Bearing Cone Replacer, Bearing Plate, and Bearing Pulling Attachment.



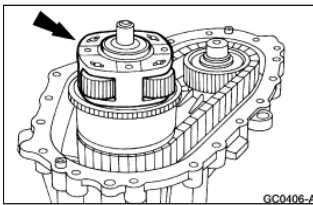
9. Place the viscous clutch with the driven sprocket and the drive chain in the transfer case.



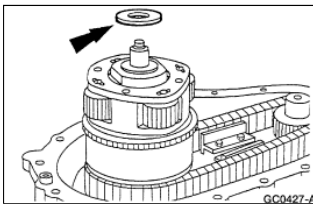
10. Install the sun gear thrust washer.



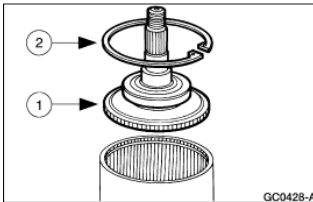
11. Install the planetary assembly.



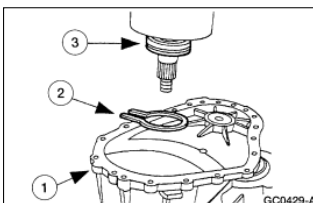
12. Install the planetary thrust washer.



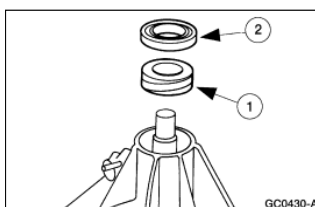
13. Attach the ring gear to the rear output shaft.
1. Position the ring gear on the rear output shaft.
 2. Attach the retaining ring.



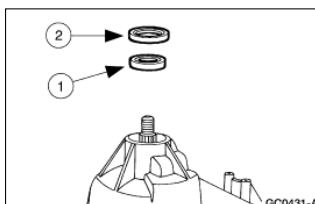
14. Install the rear output shaft and ring gear in the rear case half.
1. Place the rear half of the case in Bench Mounted Holding Fixture.
 2. Install the retaining ring.
 3. Install the rear output shaft and ring gear in retaining ring.



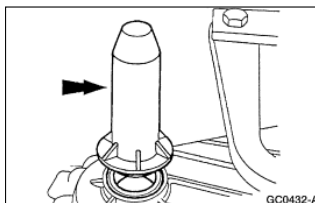
15. Install the speedometer tone wheel and the output shaft bearing.
1. Install the speedometer gear.
 2. Install the output shaft bearing.



16. Position the rear output shaft bearing and seal.
1. Put the rear output shaft bearing over the rear output shaft.
 2. Position the rear output shaft seal on the rear output shaft bearing.

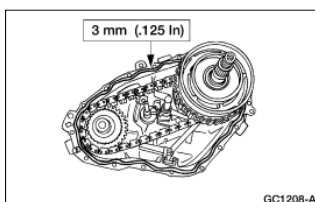


17. Install the rear output shaft seal with Front Pump Seal Replacer.

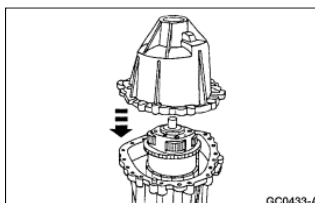


18. **CAUTION:** Do not apply excess silicone rubber. Loosened silicone rubber may damage internal components.

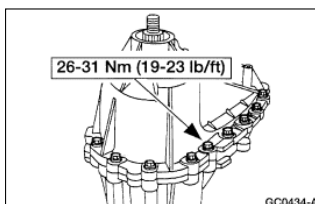
Install a bead of Black Acid Cure Silicone Rubber F4AZ-19562-B or equivalent meeting Ford specification WSE-M4G323-A1 on the surface of the front case.



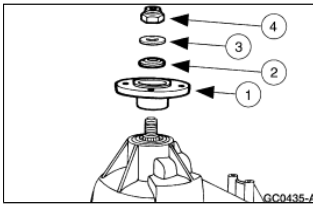
19. Assemble the front and rear case halves.



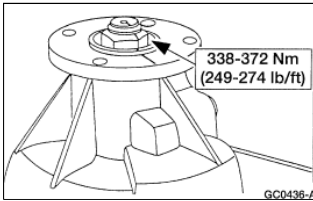
20. Install the 17 bolts from the front and rear case halves.



21. Install the rear output flange.
1. Position the rear output flange.
 2. Position the rear output flange seal.
 3. Position the rear output flange washer.
 4. Position the rear output flange nut.

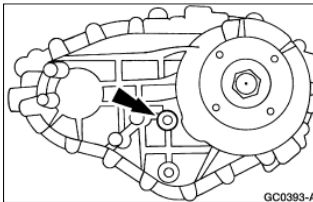


22. Tighten the rear output flange nut.



23. Remove the fill plug.

- Fill the transfer case with Motorcraft MERCON® Multi-Purpose Automatic Transmission Fluid XT-2-QDX, XT-2-DDX or equivalent Mercon approved fluid to the bottom of the fill hole.



24. Install the fill plug.

