

## UNIT REPAIR

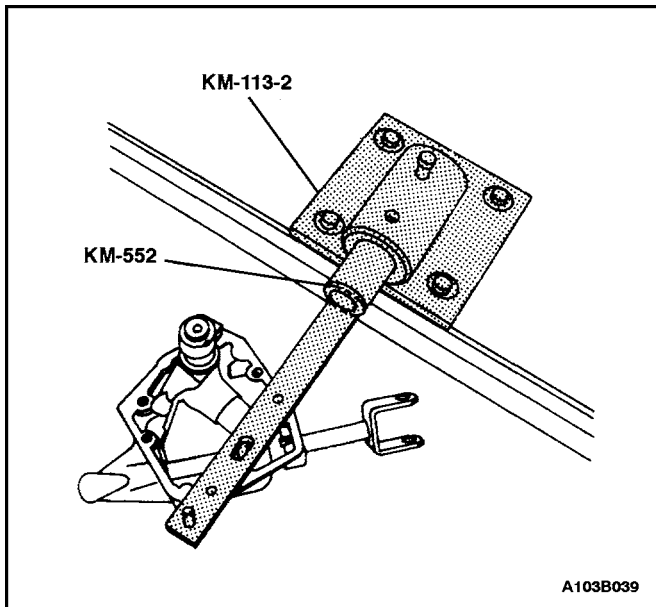
### MAJOR COMPONENT DISASSEMBLY

#### Tools Required

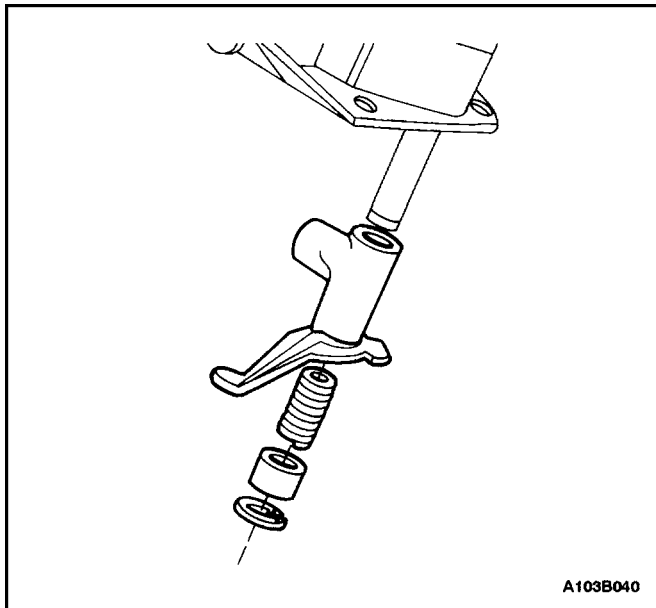
J-6125-B Slide Hammer  
 J-22888-20-A Bearing Puller with J-22888-35 Puller Legs  
 KM-553-A Fifth Gear Puller  
 J-36633 Snap Ring Retainer  
 KM-113-2 Base  
 J-42469 Shift Rod Remover  
 KM-552 Fixture

#### Disassembly Procedure

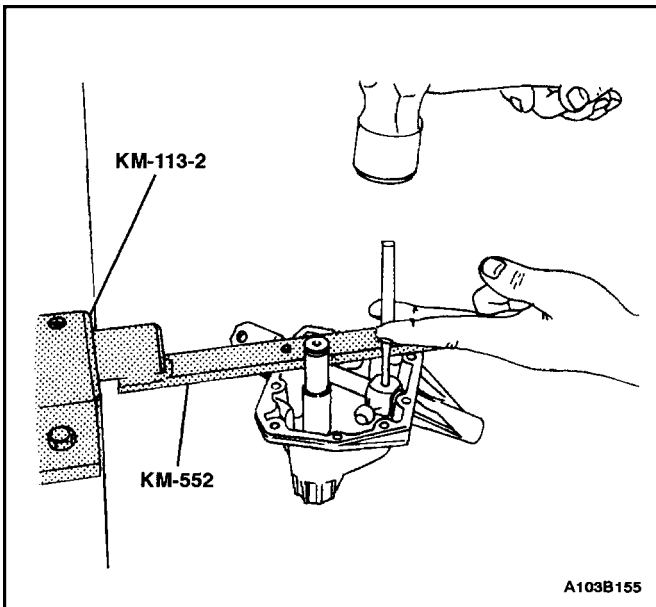
1. Remove the transaxle from the vehicle. Refer to "Transaxle Assembly" in this section.
2. Remove the filler plug at the cover.
3. Remove the bolts from the gearshift lever cover.
4. Remove the gearshift lever cover.



5. Bolt the gearshift lever cover to the fixture KM-552.
6. Position the fixture KM-552 into the base KM-113-2.

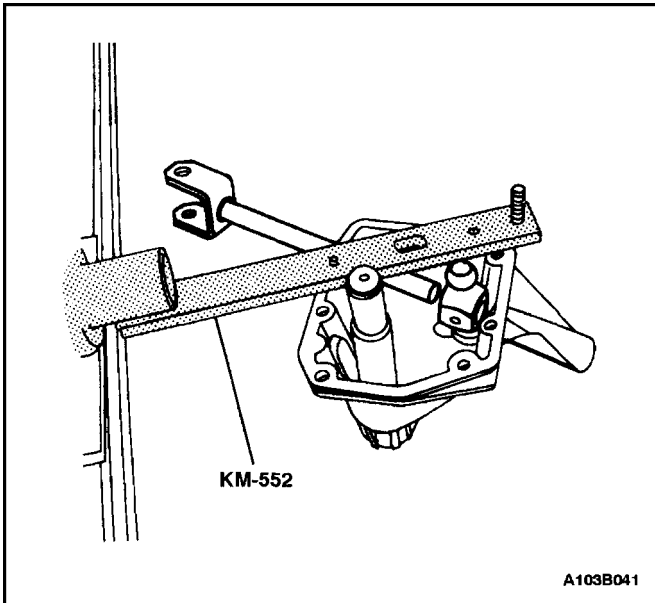


7. Remove the snap ring, the bushing, the spring, and the intermediate lever.

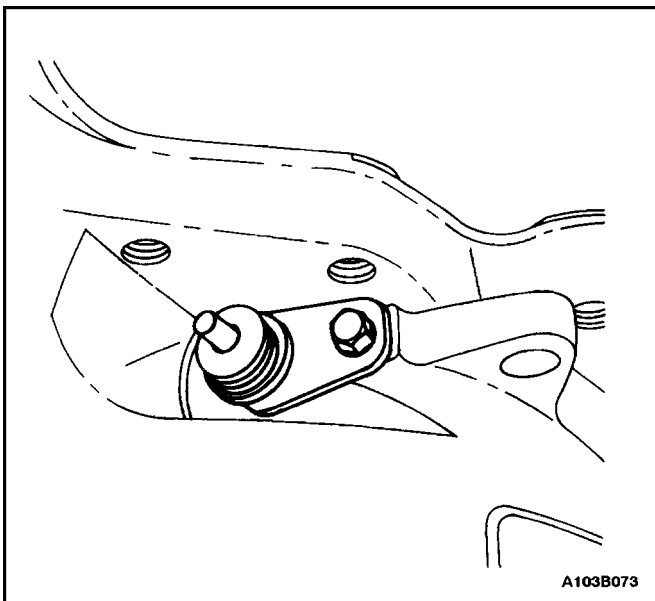


8. Remove the shift finger lever pin.

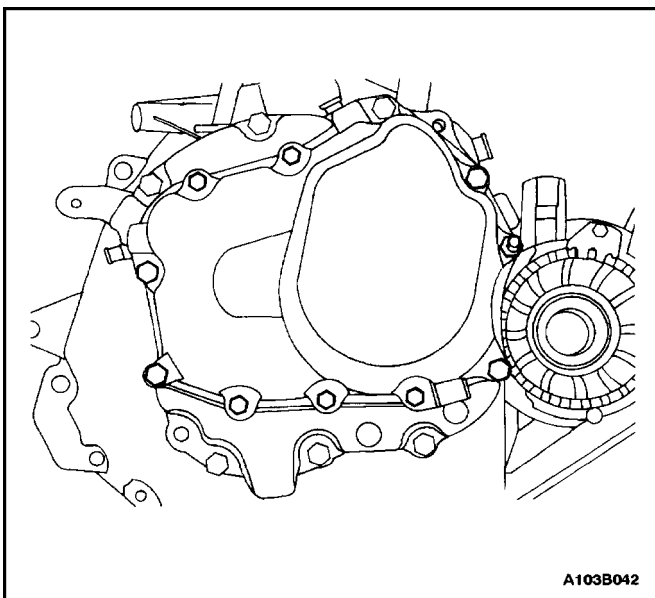
9. Remove the gearshift rod and the shift finger lever.

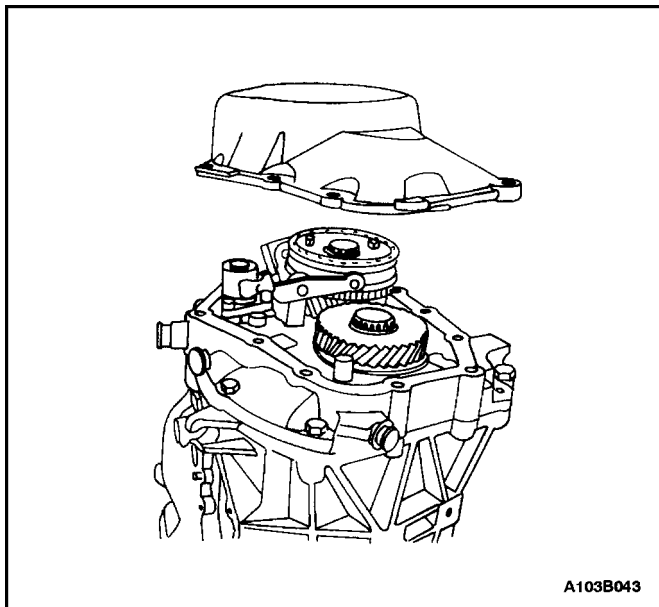


10. Remove the bolt and the speedometer-driven gear from the transaxle housing.

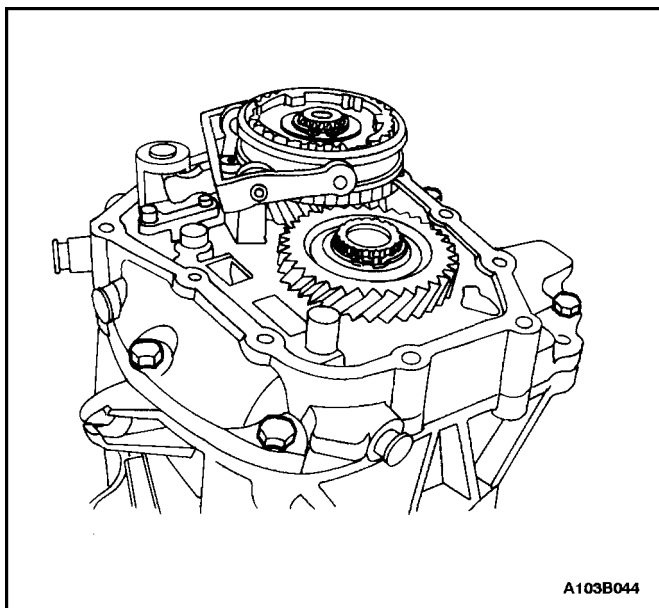


11. Remove the transaxle cover bolts.

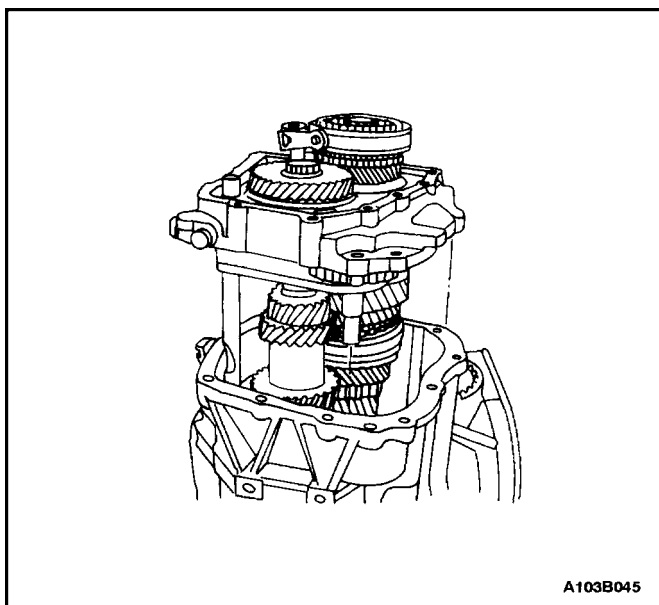




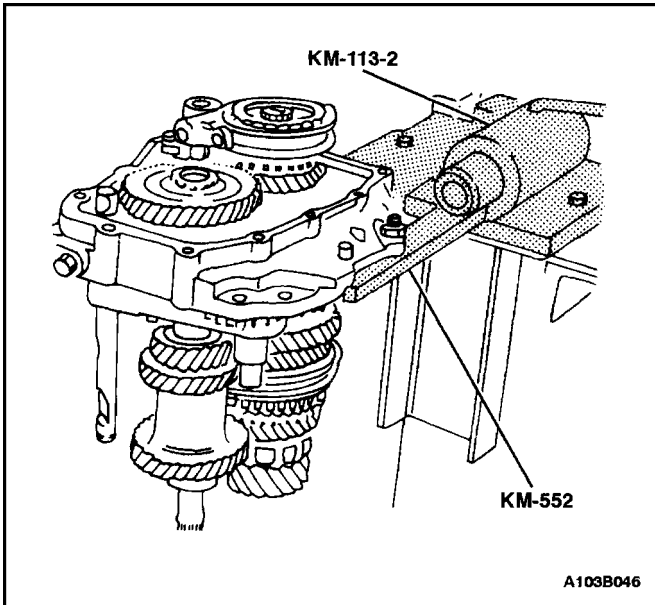
12. Remove the transaxle cover.



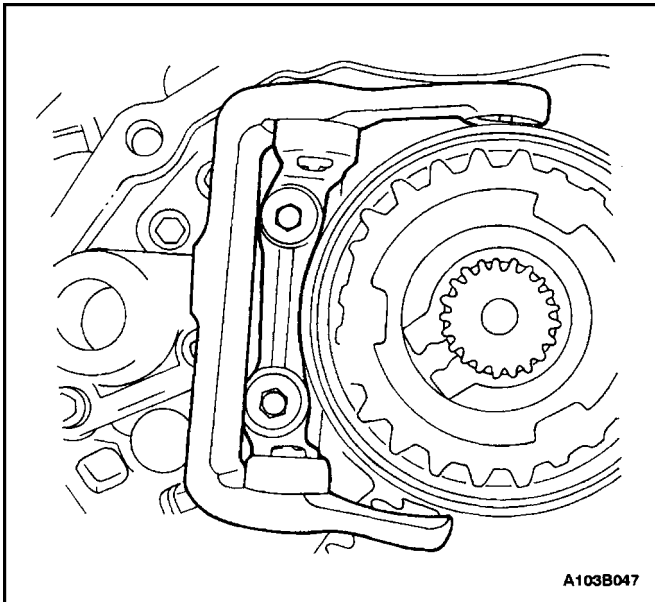
13. Shift the transaxle into second gear.  
14. Remove the bearing plate bolts.



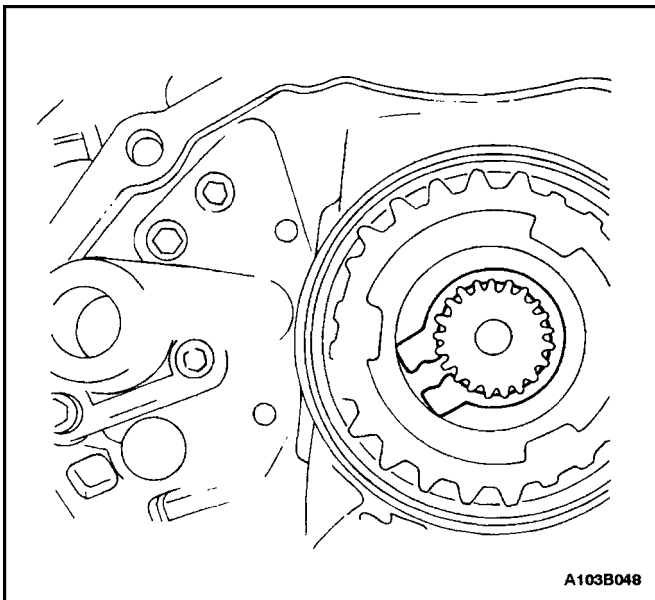
15. Remove the bearing plate from the case with the shafts attached.



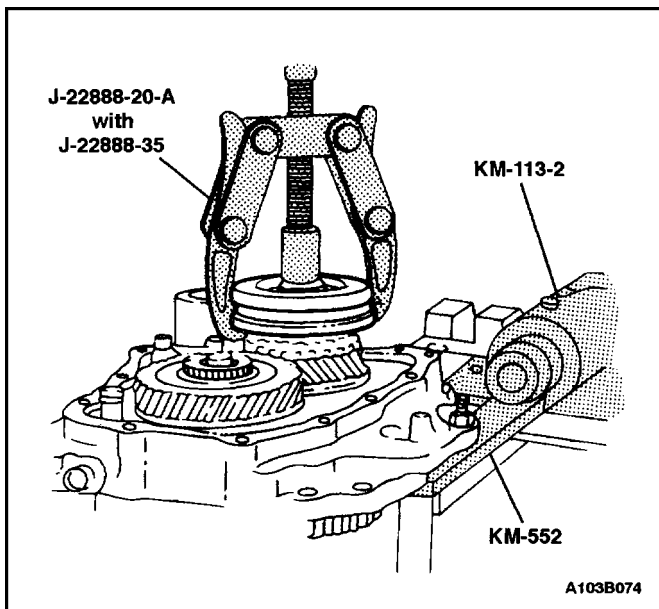
16. Shift the transaxle into reverse (R).
17. Bolt the bearing plate to the fixture KM-552 and install the fixture KM-552 into the base KM-113-2.



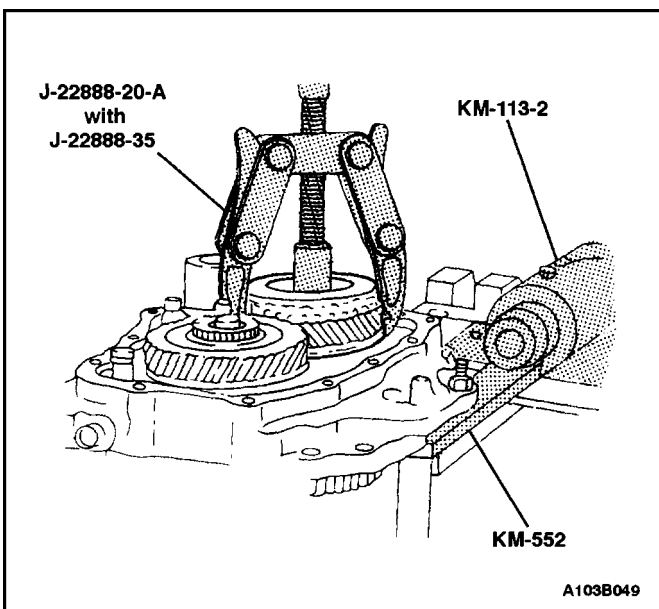
18. Remove the bolts and the fifth-gear fork from the bearing plate.



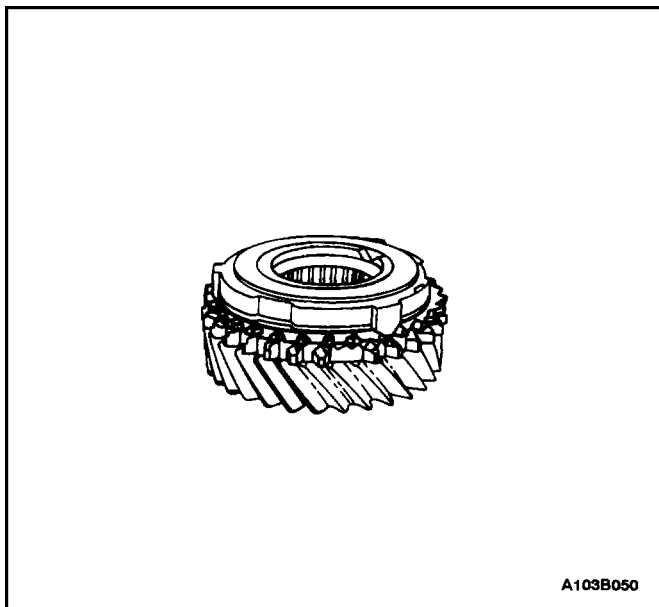
19. Remove the mainshaft-driven fifth-speed assembly snap ring.



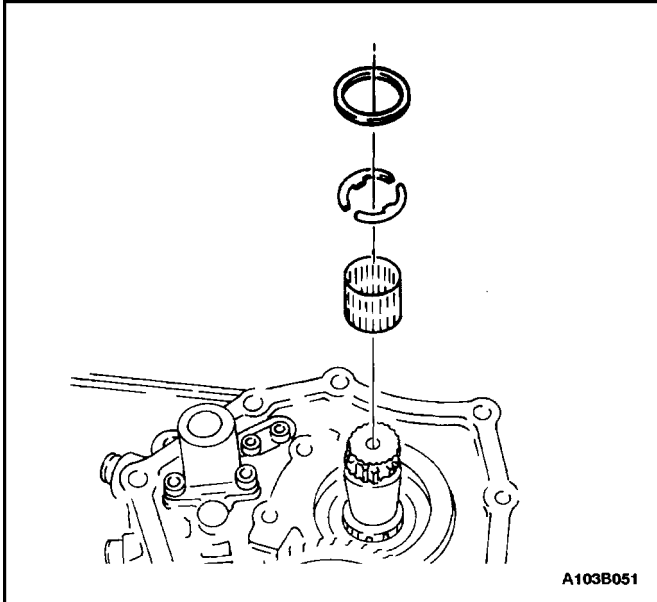
20. Remove the fifth driven gear synchronizer sleeve and the synchronizer gear using the bearing puller J-22888-20-A with the puller legs J-22888-35.



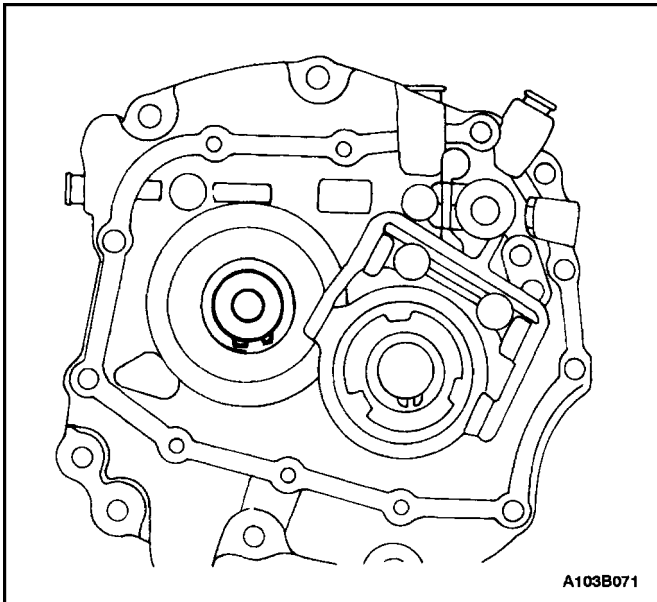
21. Remove the mainshaft-driven fifth-gear assembly.



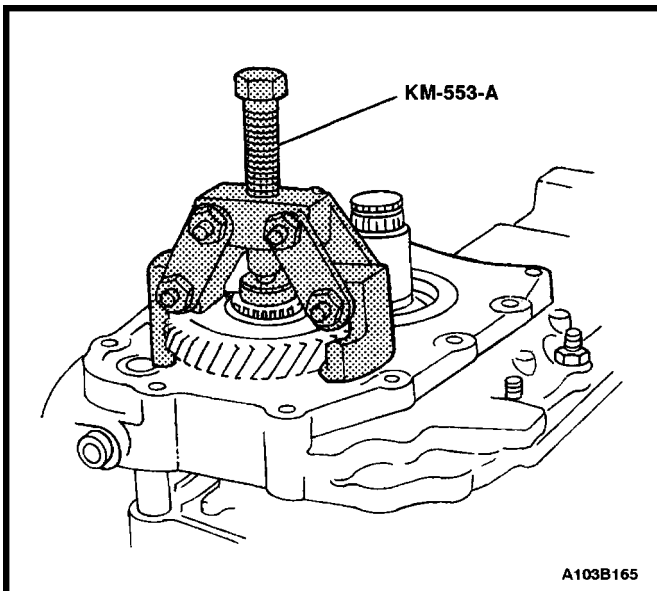
22. Remove the brass synchronizer ring.



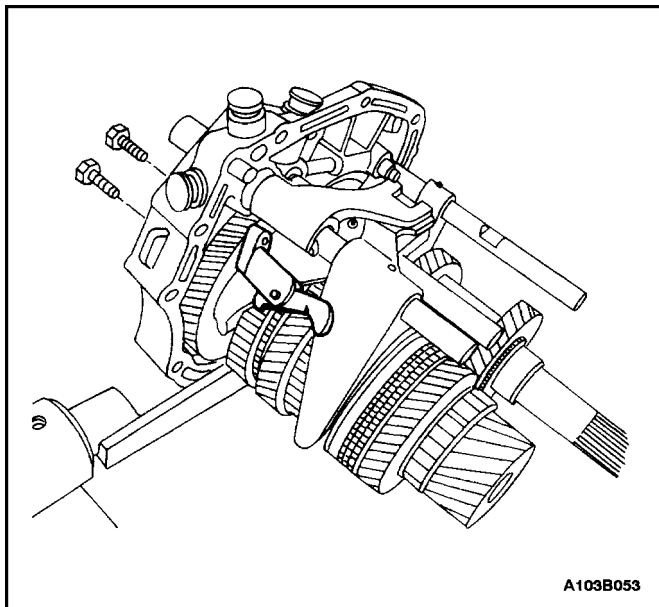
23. Remove the needle bearing, the retaining ring, and the thrust washers.



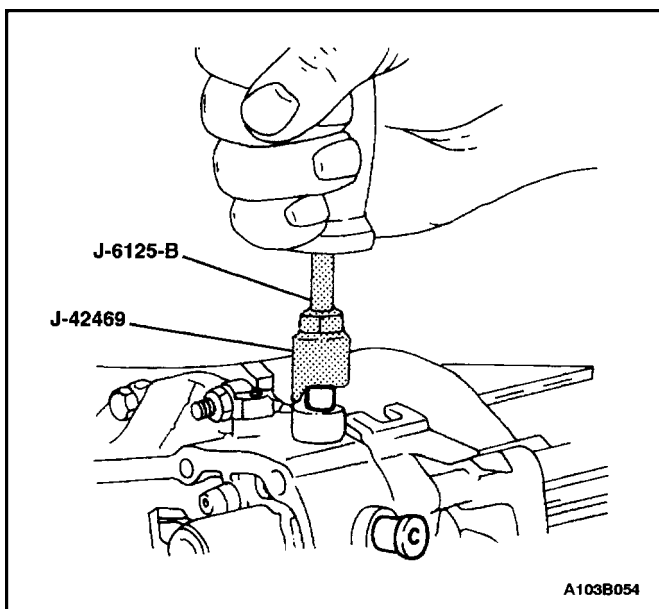
24. Remove the input drive fifth-gear snap ring.



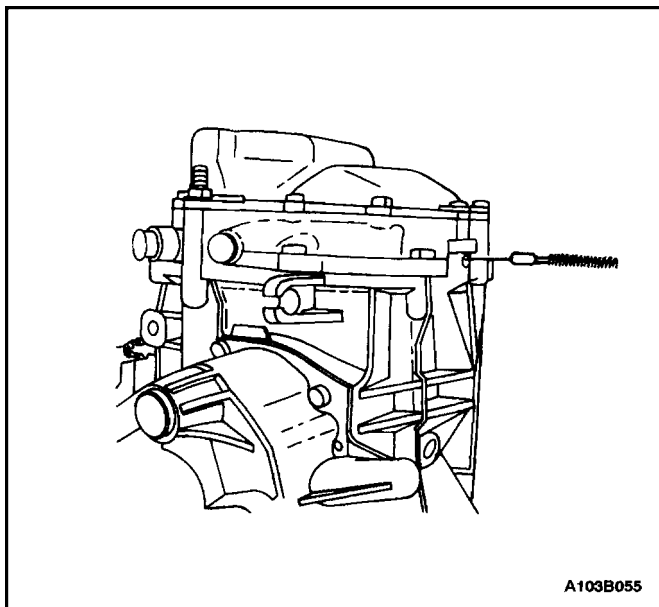
25. Remove the input drive fifth gear using the fifth-gear puller KM-553-A.



26. Remove the bolts and the fifth-gearshift connector from the bearing plate using the pawl.

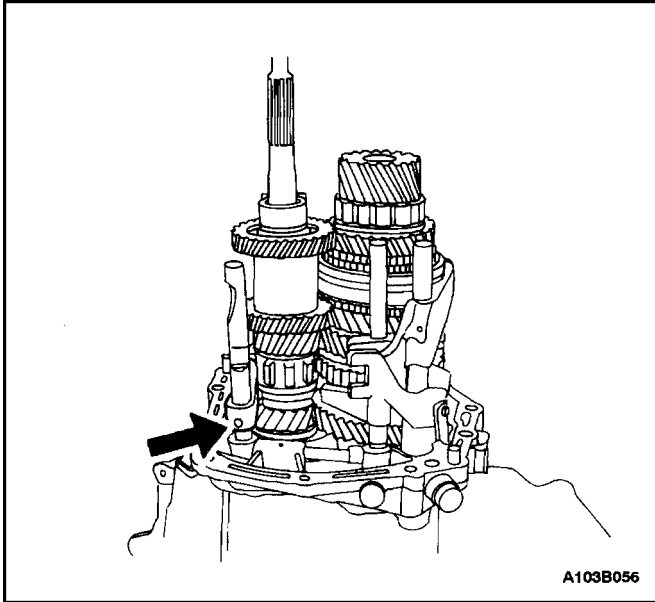


27. Remove the four shift-rod plugs using the shift rod remover J-42469 and the slide hammer J-6125-B.

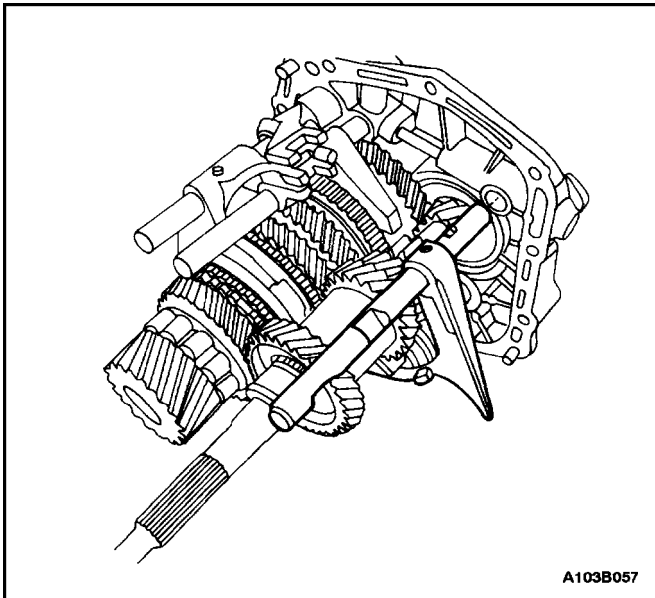


28. Remove the spring and the rod lock pin from the small plug hole.

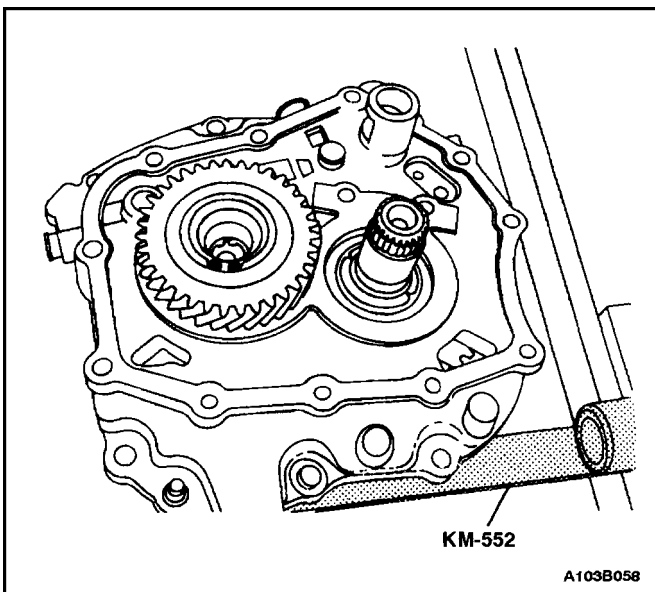




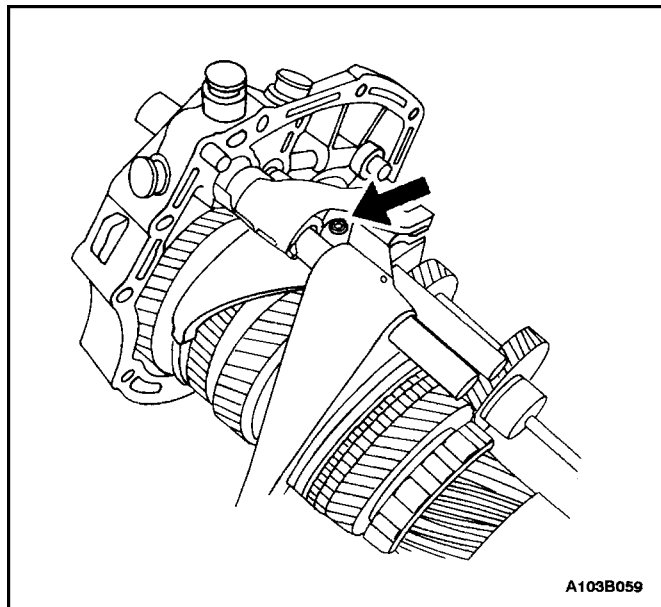
29. Remove the pin from the reverse gearshift rod/fork assembly.



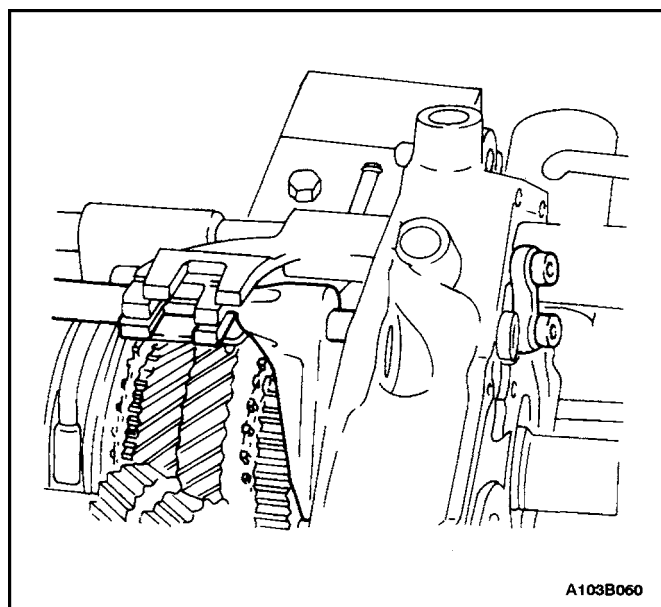
30. Remove the reverse gearshift rod/fork assembly from the bearing plate.



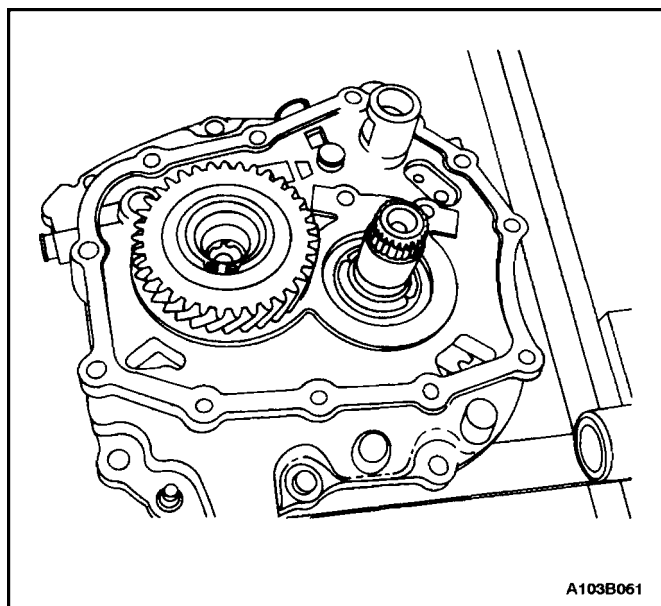
31. Remove the bolts from the support bracket.



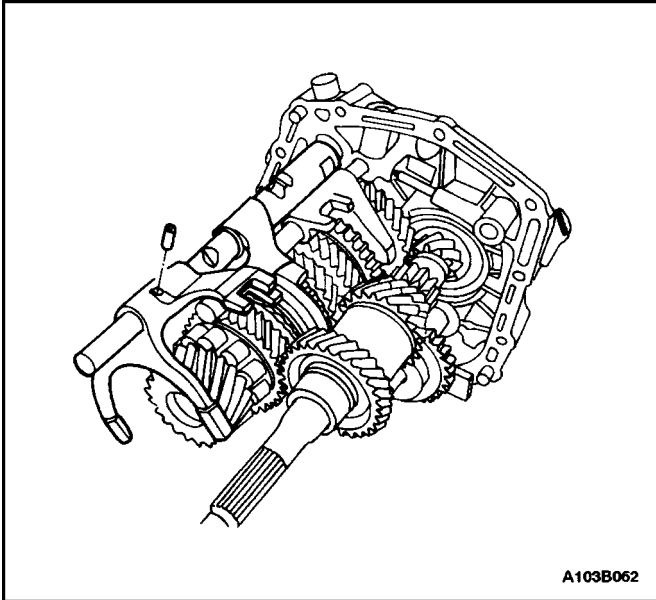
32. Remove the first-second gearshift fork holding pin.



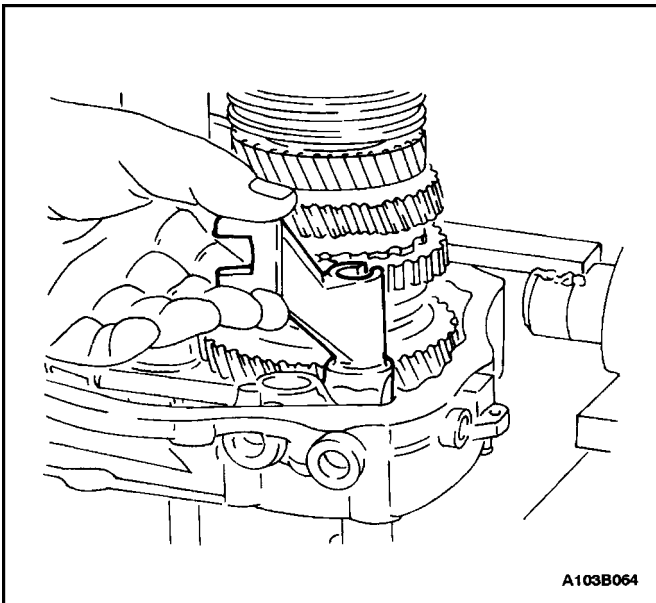
33. Drive the first-second gearshift rod out until it is just free of the bearing plate.



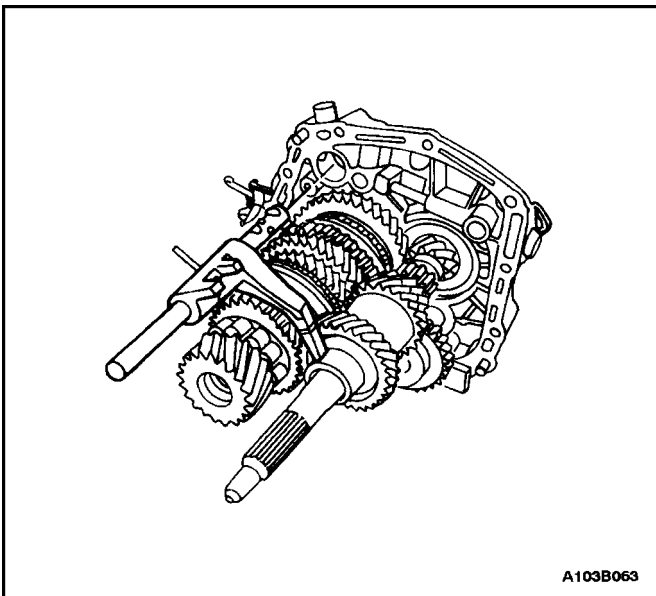
34. Remove the support bracket from the bearing plate.



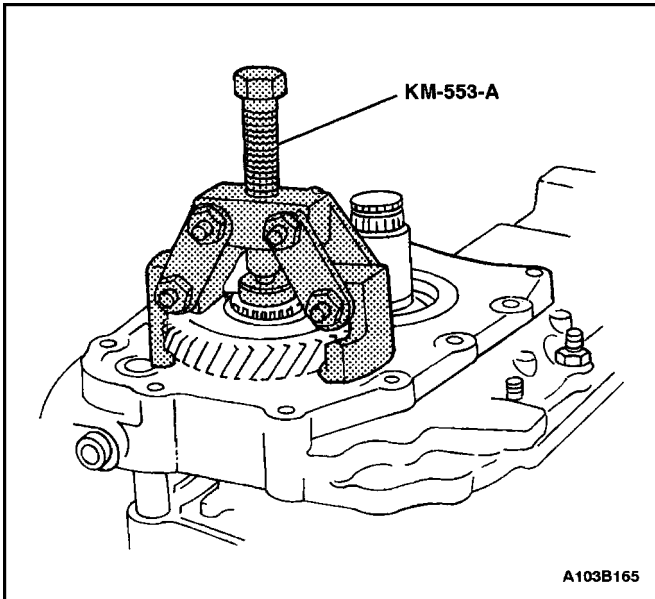
35. Remove the third–fourth gearshift fork holding pin and the third–fourth gearshift rod.



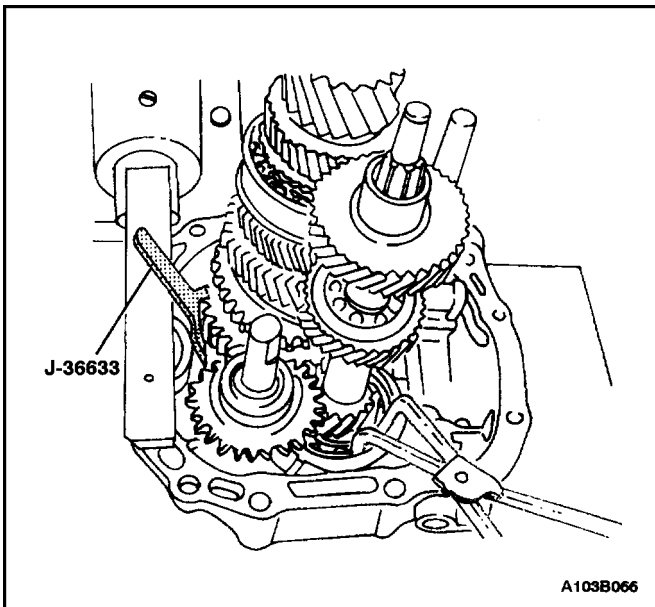
36. Remove the fifth gearshift lever from the bearing plate.



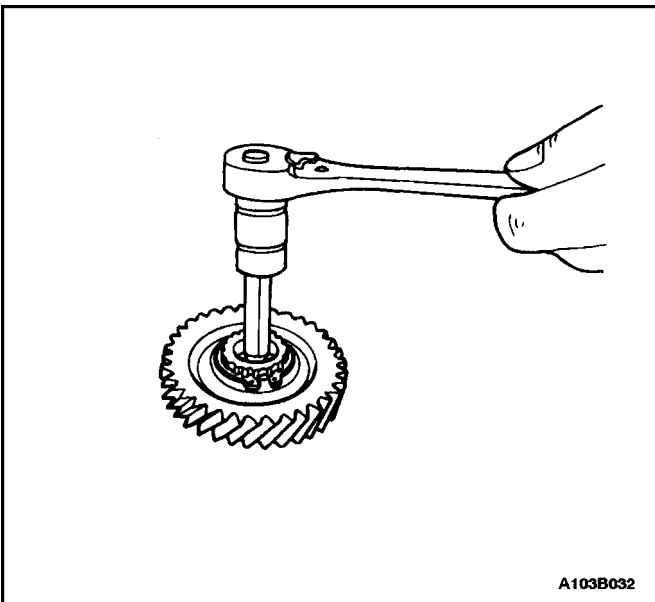
37. Remove the first–second gearshift rod.



38. Compress the snap ring holding the mainshaft and secure it with the snap ring retainer J-36633.



39. Hold the snap ring open at the base of the input shaft using the snap ring pliers.
40. Remove the mainshaft assembly and the input shaft assembly from the bearing plate.



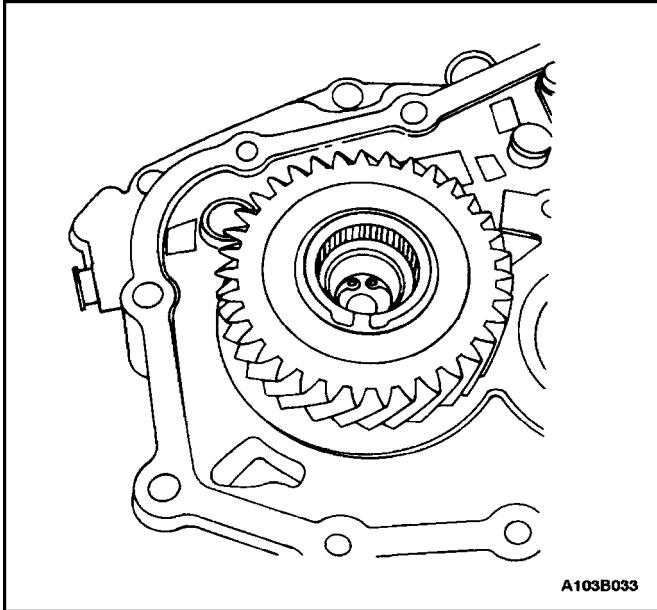
## INPUT SHAFT AND CLUSTER GEAR

### Tools Required

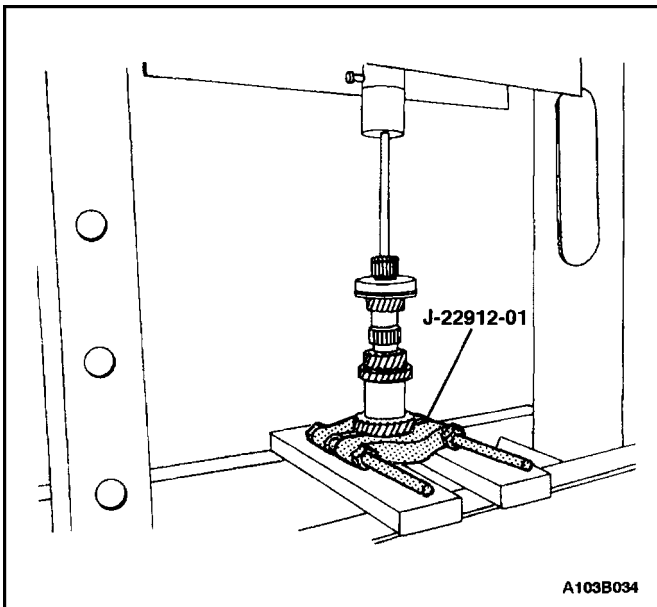
J-22912-01 Universal Bearing Puller

### Disassembly Procedure

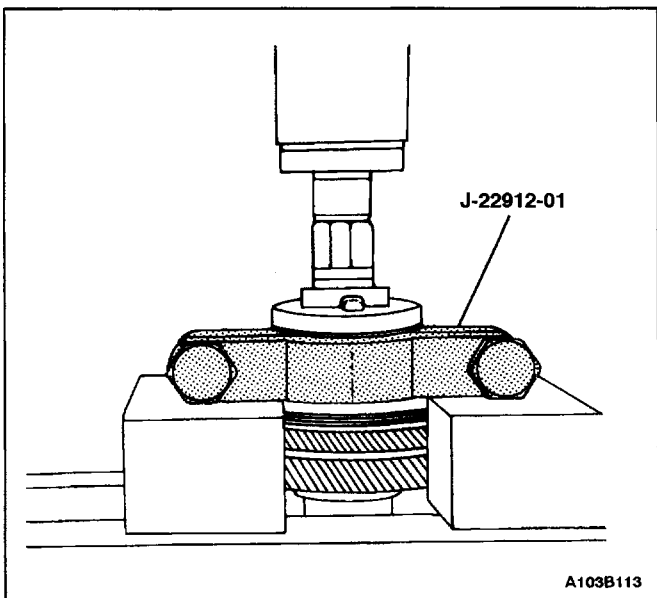
1. Remove the detent screw at the end of the input driveshaft.



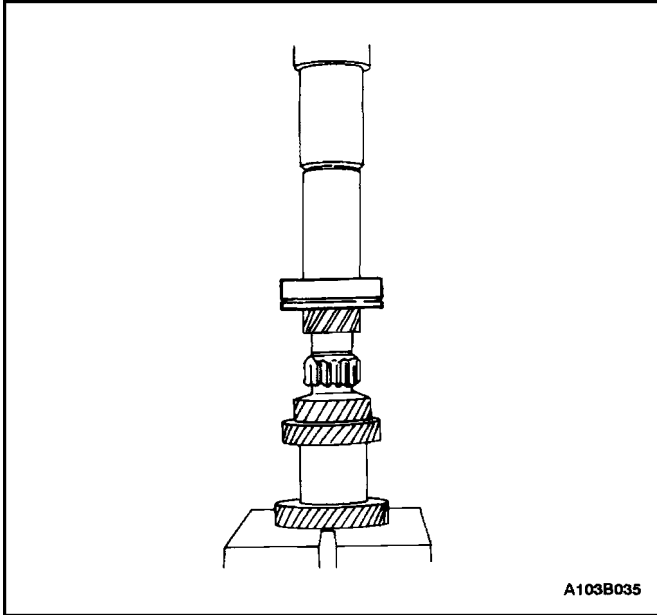
2. Remove the snap ring at the base of the gear cluster.



3. Press the input driveshaft from the input shaft cluster gear using the universal bearing puller J-22912-01.

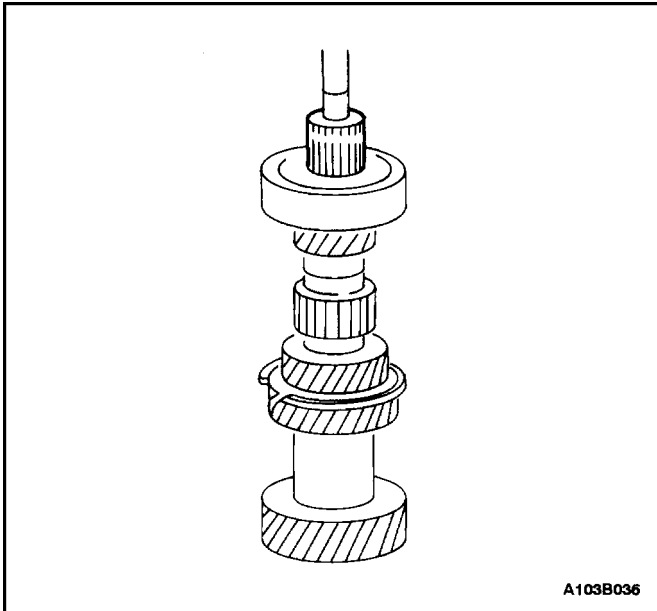


4. Remove the cluster shaft bearing from the input shaft gear cluster using universal bearing puller J-22912-01.

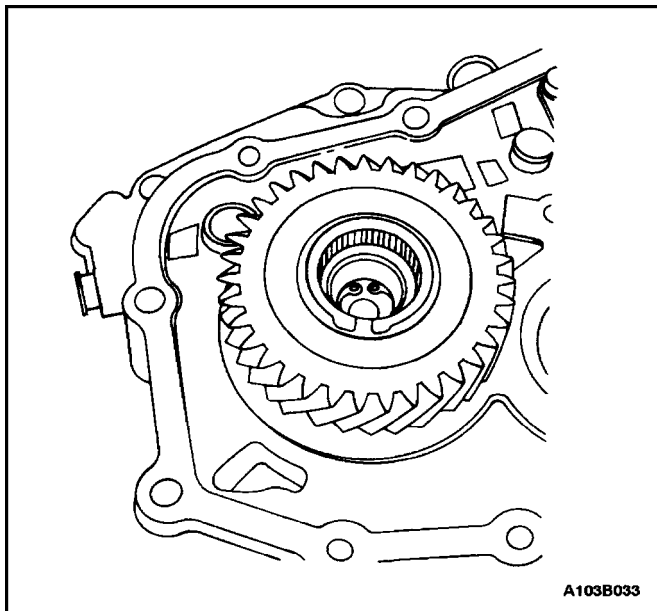


### Assembly Procedure

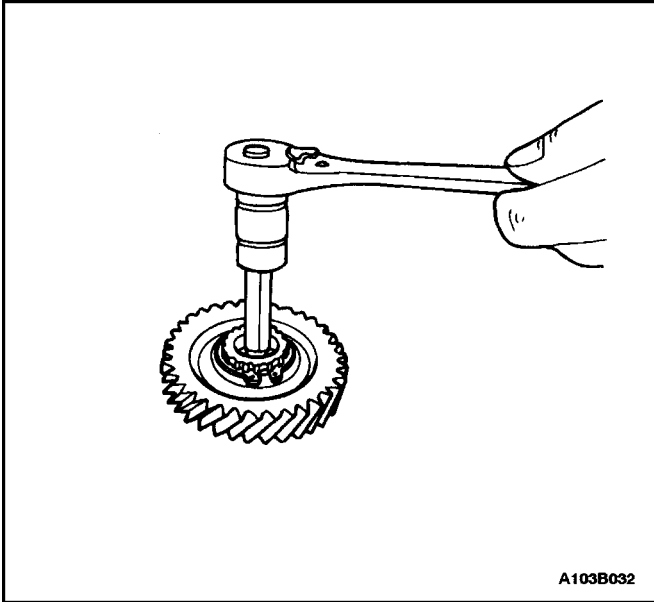
1. Press the cluster shaft bearing onto the input shaft gear cluster.



2. Press the input driveshaft into the input shaft gear cluster assembly.



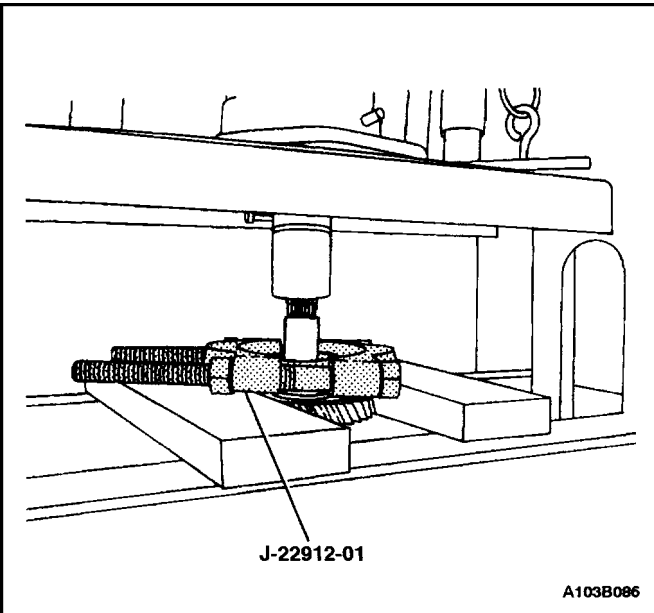
3. Install the snap ring at the base of the gear cluster.



4. Install the detent screw at the end of the input driveshaft.

**Tighten**

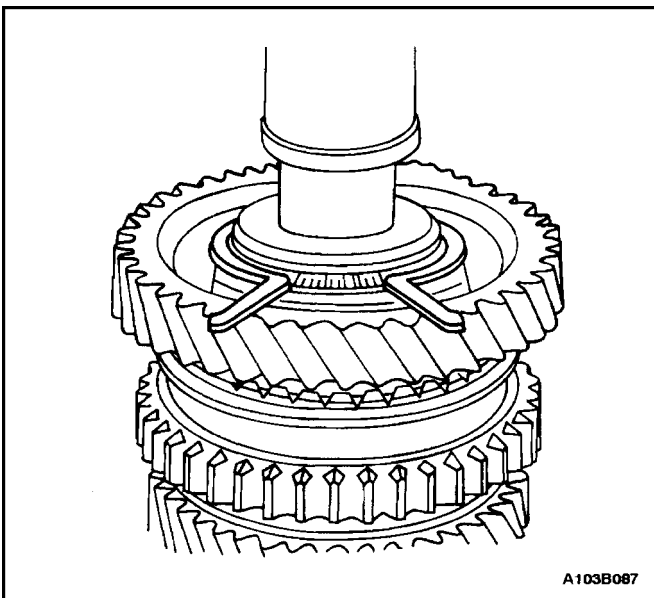
Tighten the input driveshaft detent screw to 15 N•m (11 lb–ft).

**MAINSHAFT****Tools Required**

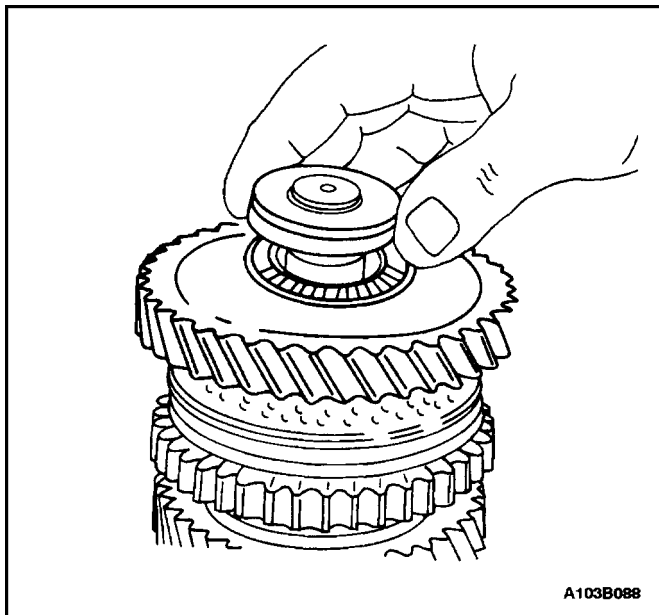
J-22912-01 Universal Bearing Puller

**Disassembly Procedure**

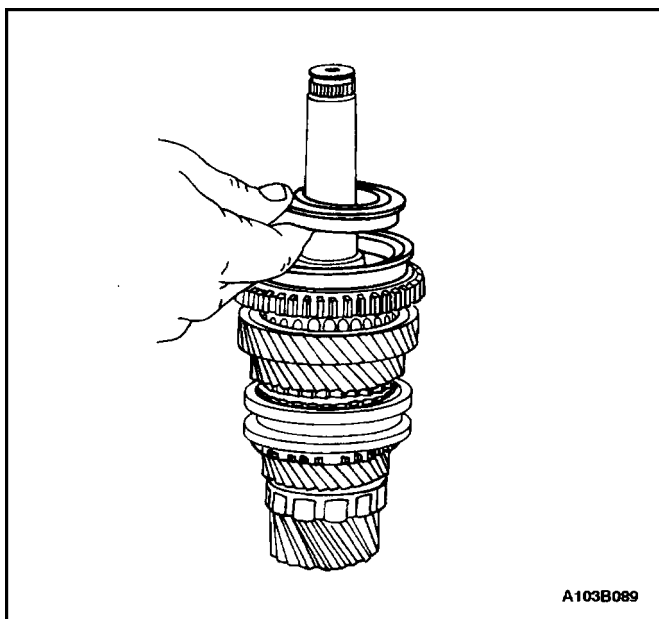
1. Remove the mainshaft bearing using the universal bearing puller J-22912-01.



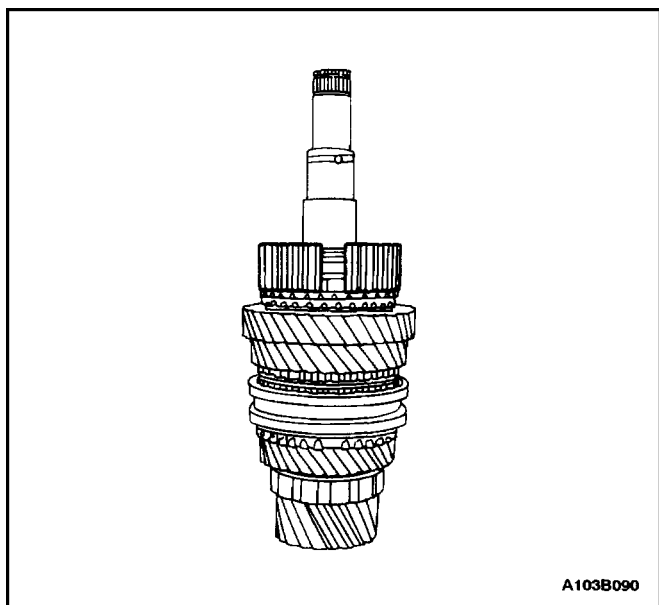
2. Remove the snap ring.



3. Remove the first gear, the flat-type first-gear needle bearing, and the mainshaft wear plate.

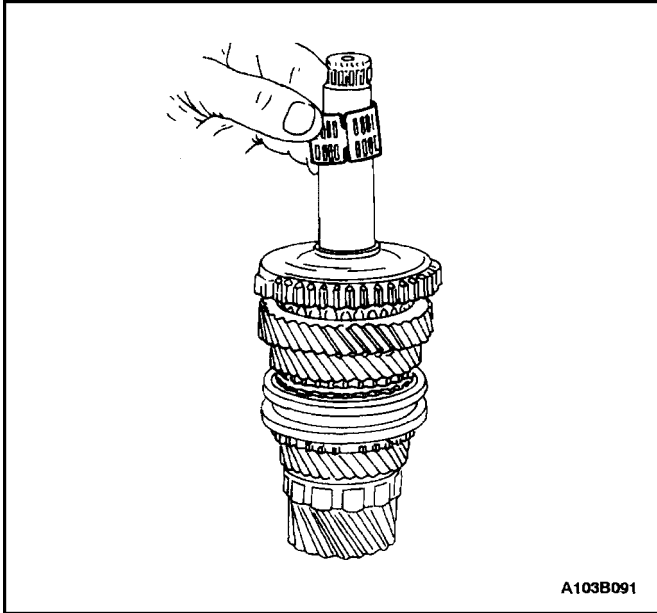


4. Remove the synchronizer hub sleeve that contains the synchronizer spring.
5. Remove the outer blocking ring.

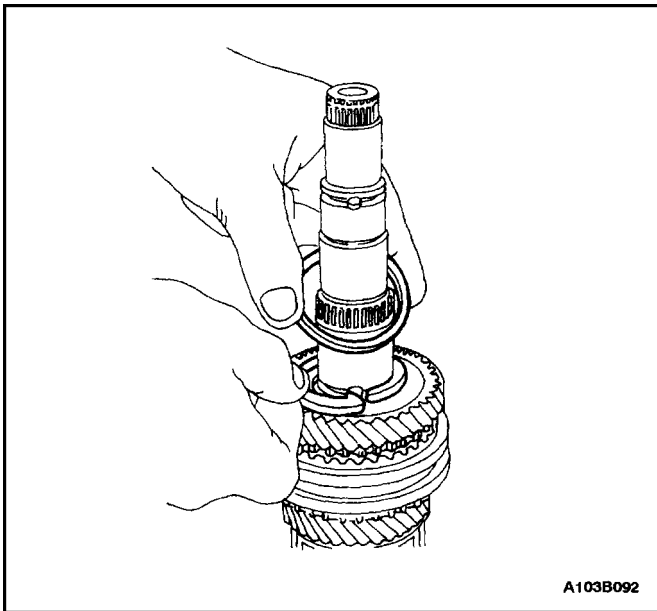


6. Remove the keys from the first-second synchronizer gear.

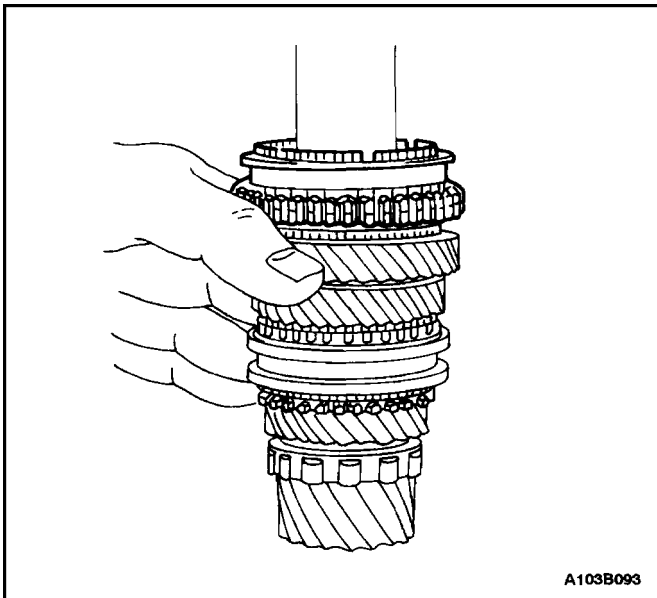




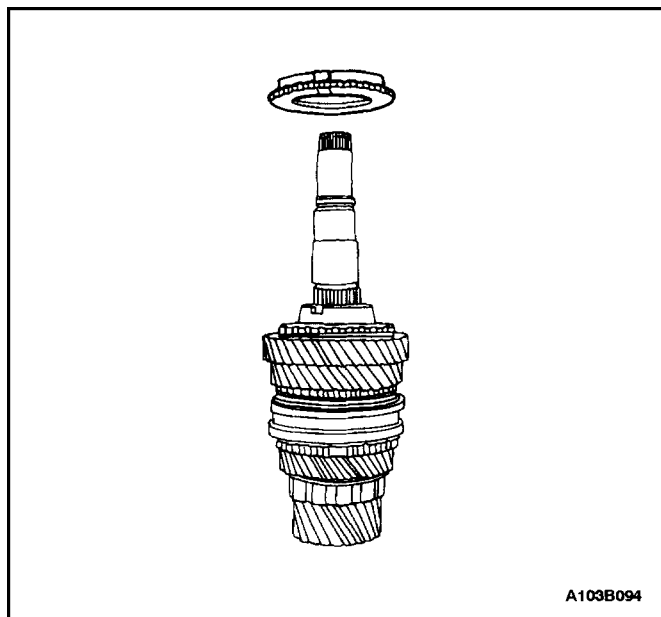
7. Remove the barrel-type first-gear needle bearing.



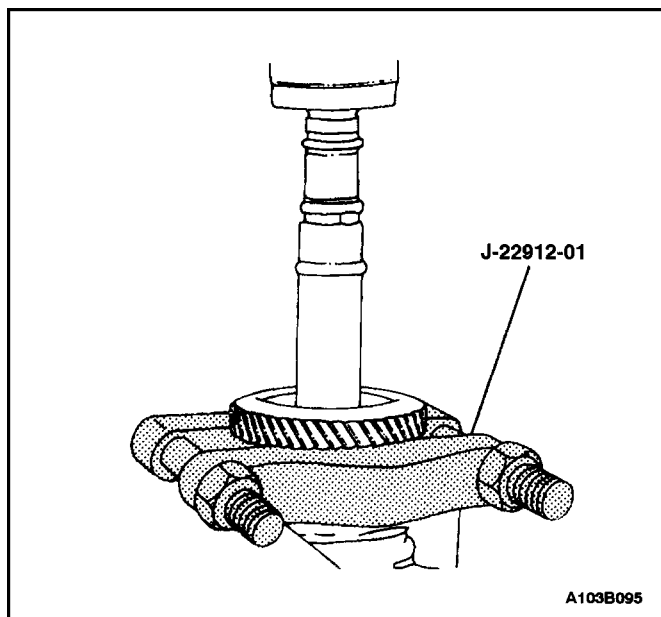
8. Remove the snap ring and the washer.



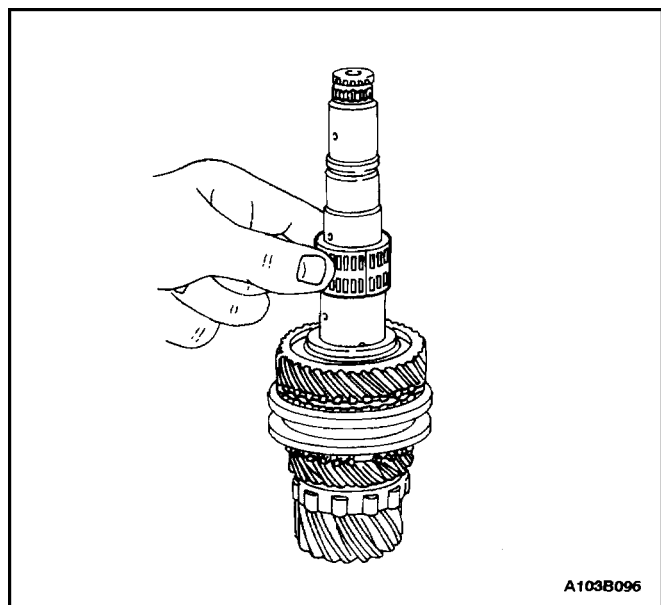
9. Remove the first-second synchronizer gear from the mainshaft.



10. Remove the first-second gear blocking ring.

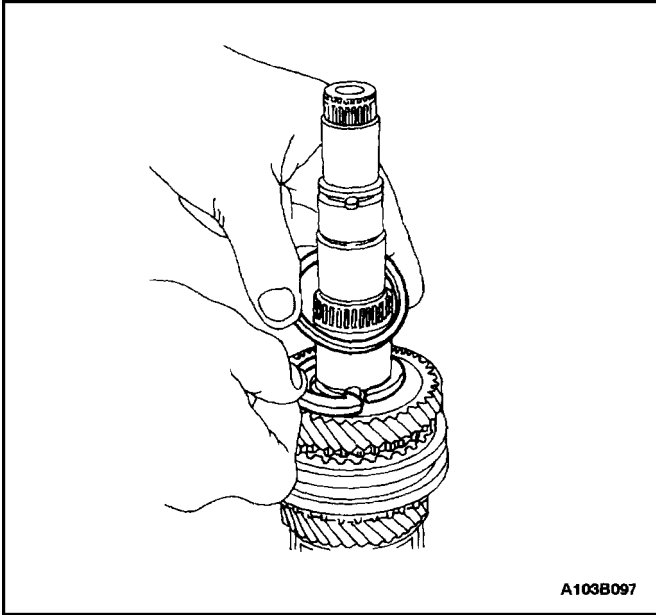


11. Remove the second gear using the universal bearing puller J-22912-01.

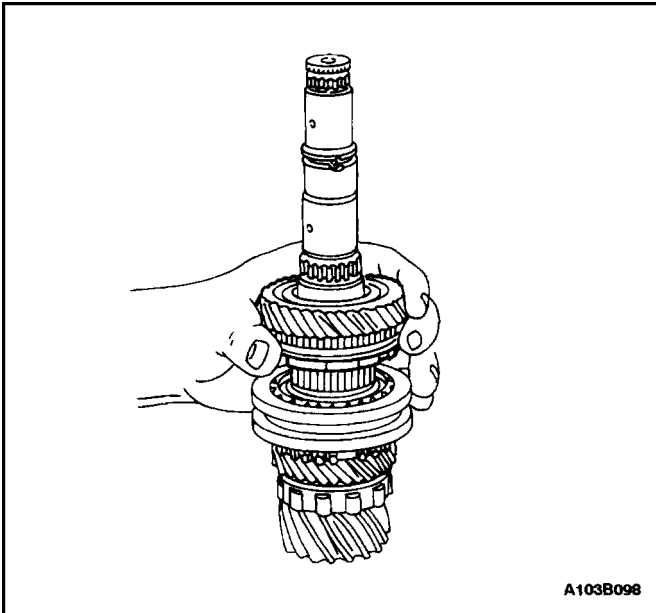


12. Remove the second-gear needle bearing.

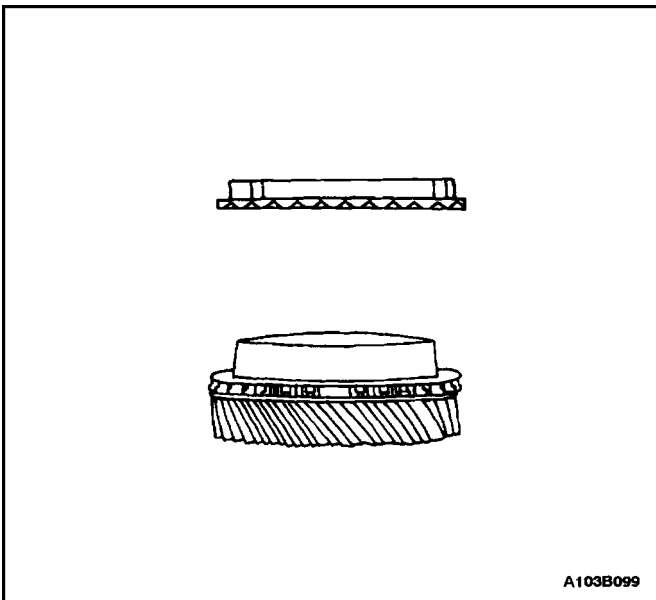
13. Remove the ring and the thrust washer.

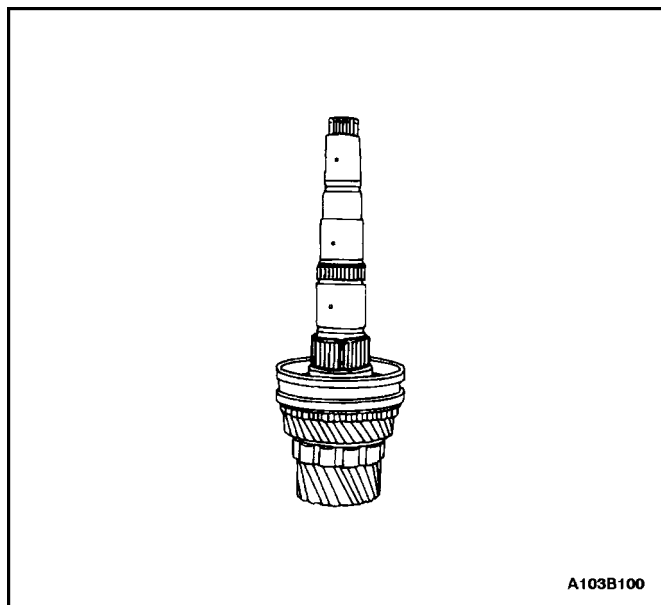


14. Remove the third gear and the synchronizer blocking ring.

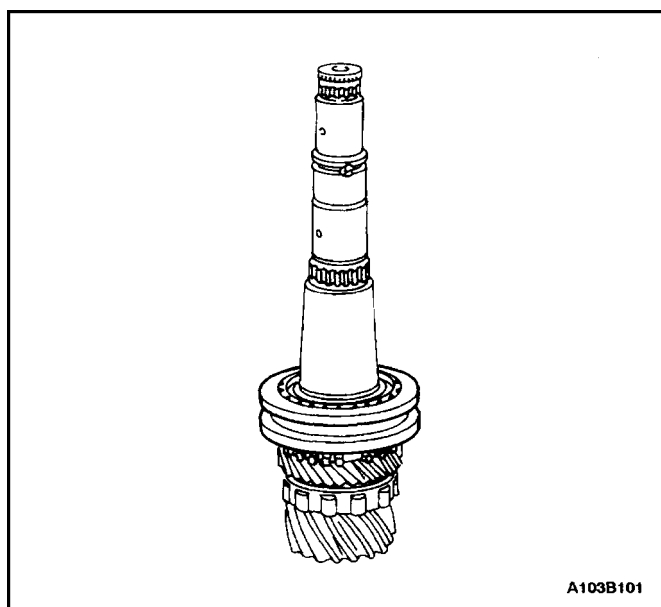


15. Separate the synchronizer blocking ring from the third gear.

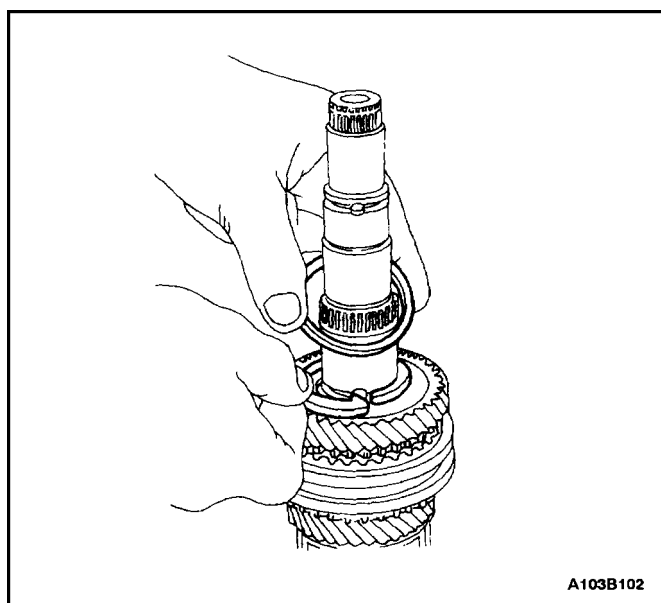




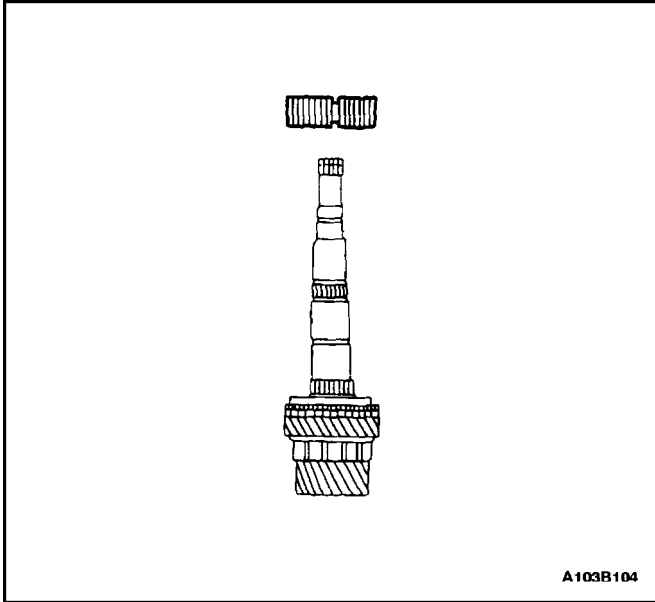
16. Remove the third-gear needle bearing from the mainshaft.



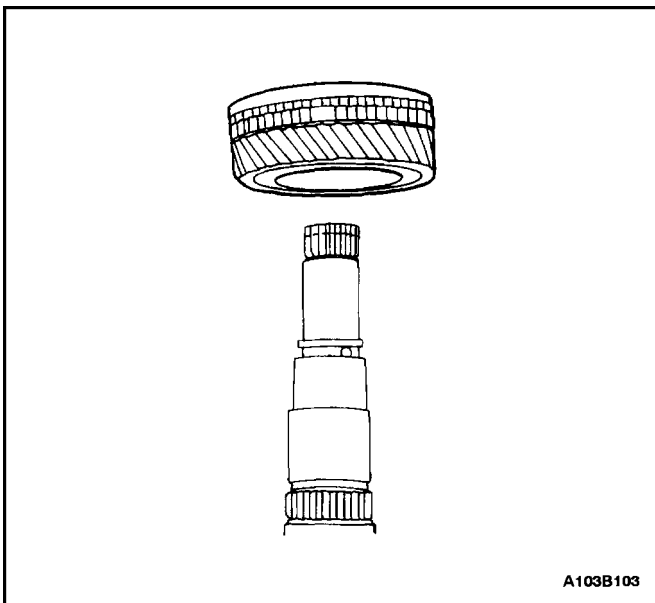
17. Remove the synchronizer sleeve containing the keys and the spring.



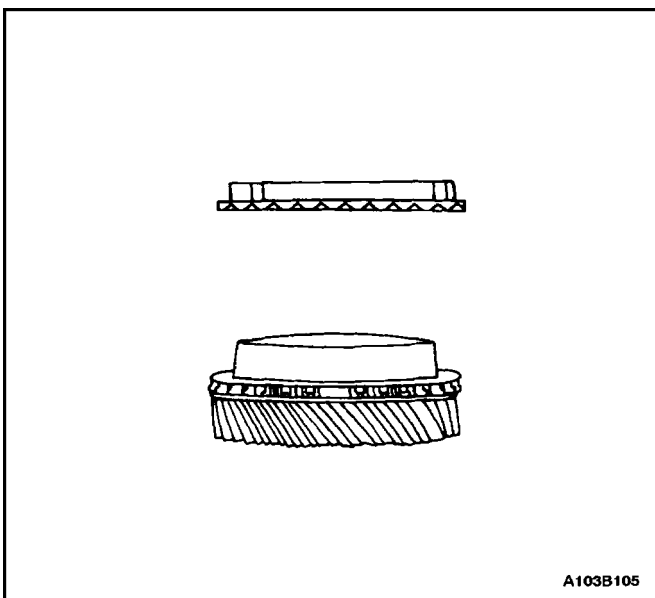
18. Remove the snap ring and the washer from the mainshaft.



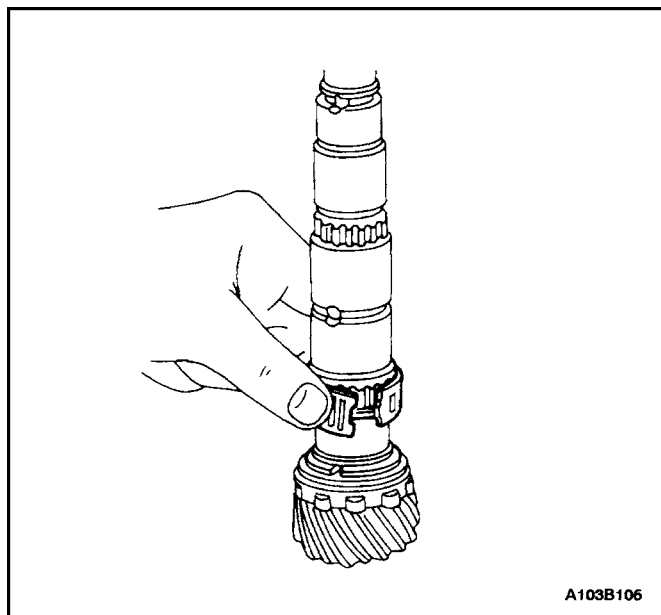
19. Remove the third-fourth synchronizer gear containing the synchronizer spring.



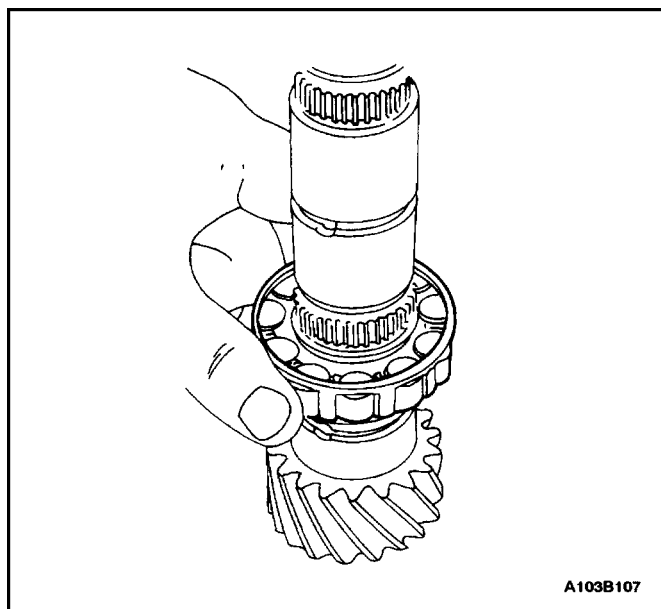
20. Remove the fourth-gear assembly.



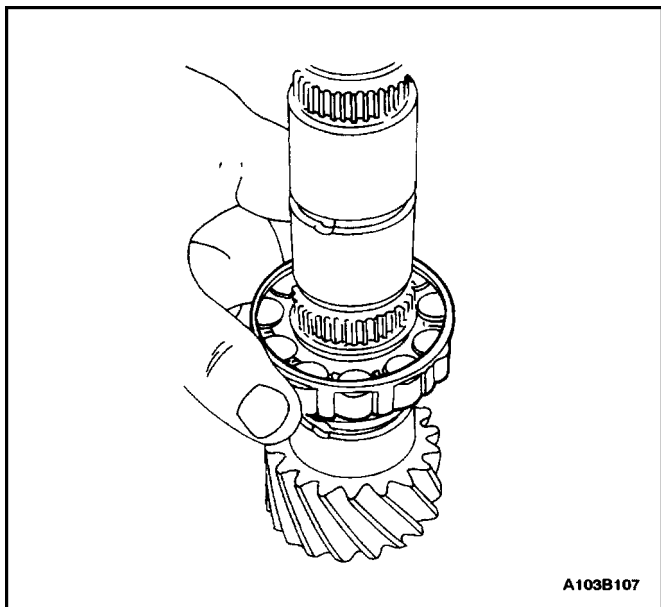
21. Separate the synchronizer blocking ring from the fourth gear.



22. Remove the fourth-gear needle bearing, the ring, and the thrust washer.

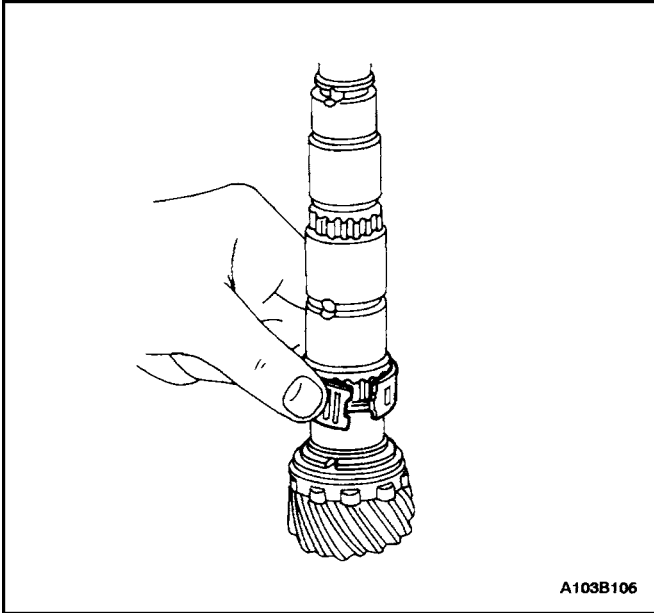


23. Remove the mainshaft bearing.

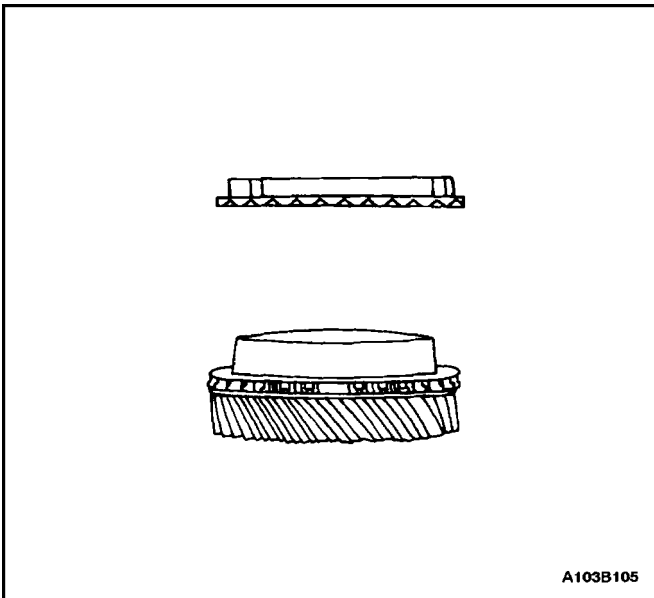


### Assembly Procedure

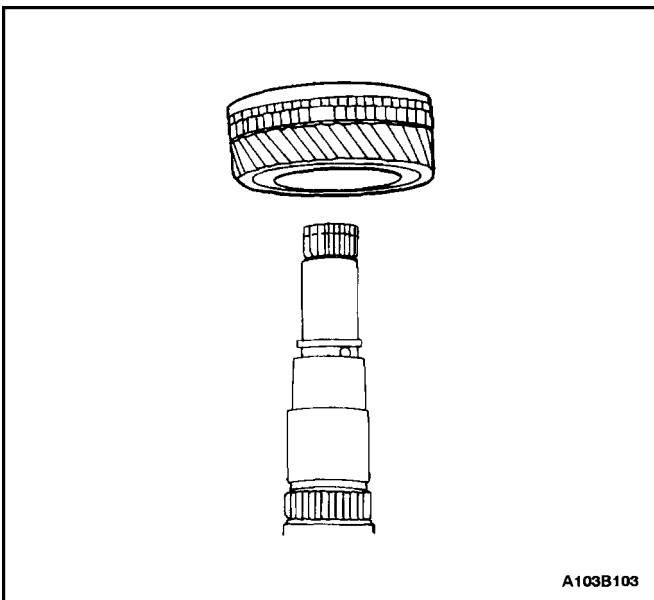
1. Install the mainshaft bearing.



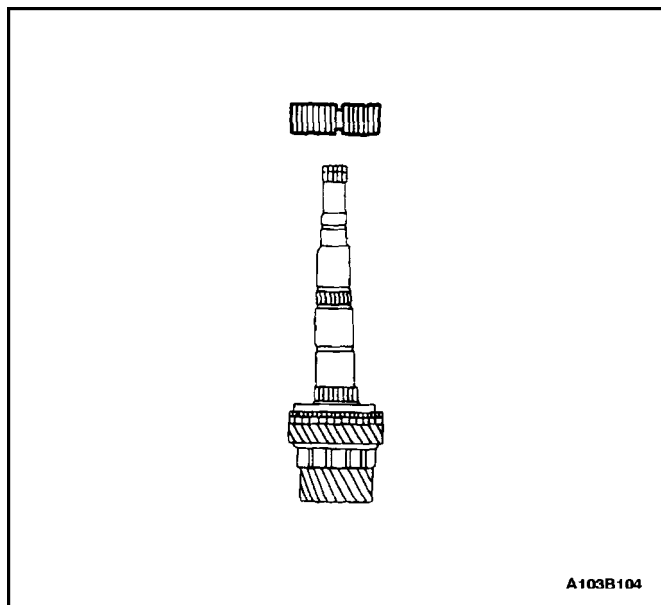
2. Install the ring, the thrust washer, and the fourth-gear needle bearing.



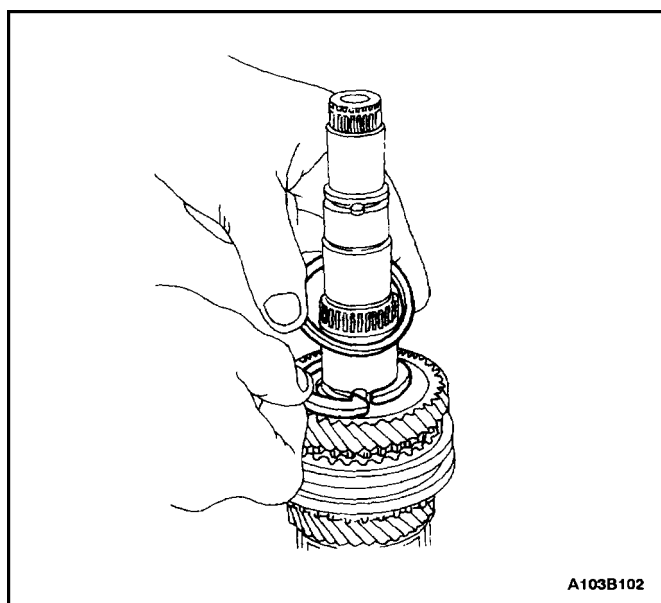
3. Attach the synchronizer blocking ring to the fourth gear.



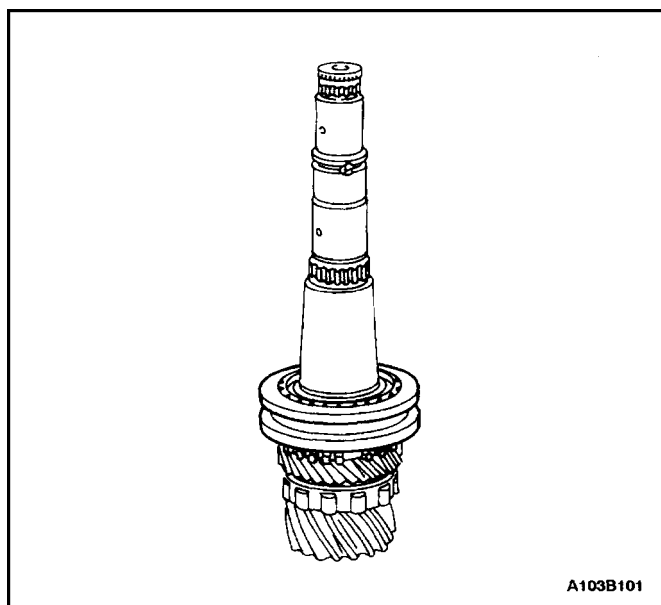
4. Install the fourth-gear assembly.



5. Install the third-fourth gear synchronizer containing the synchronizer spring.



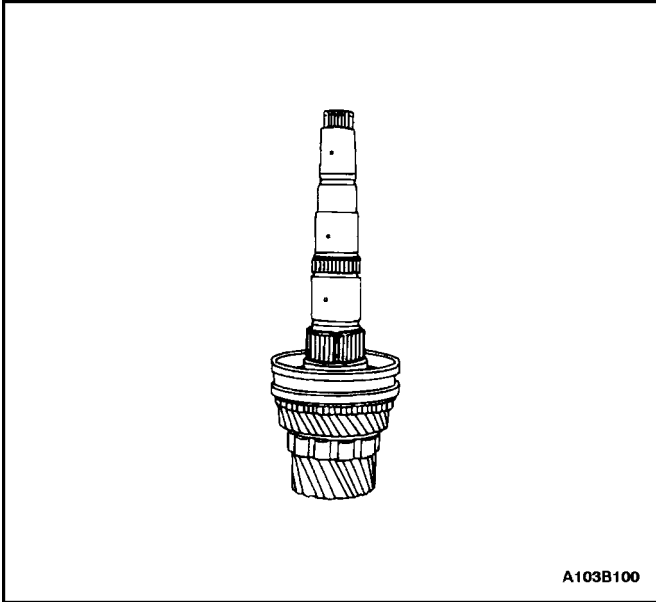
6. Install the snap ring and the washer around the mainshaft.



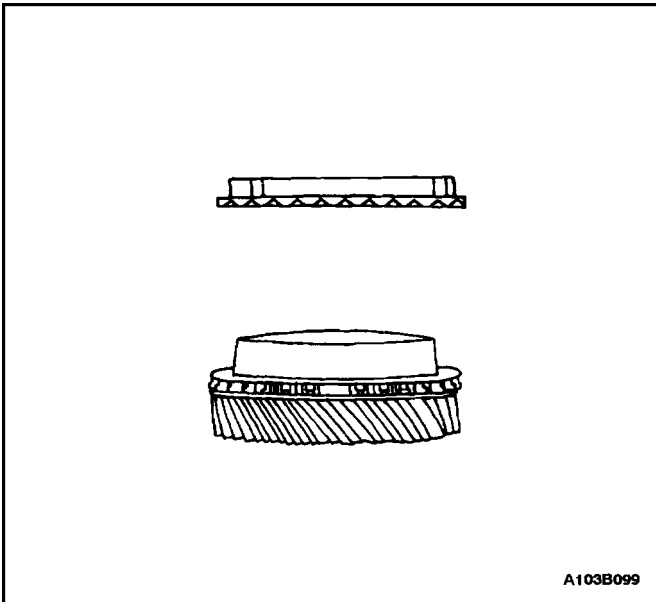
7. Install the synchronizer sleeve containing the keys and the spring.



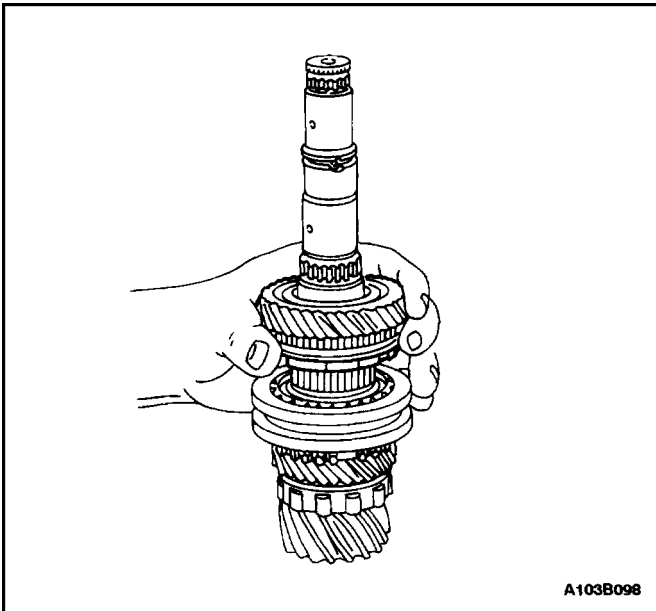
8. Install the third-gear needle bearing.

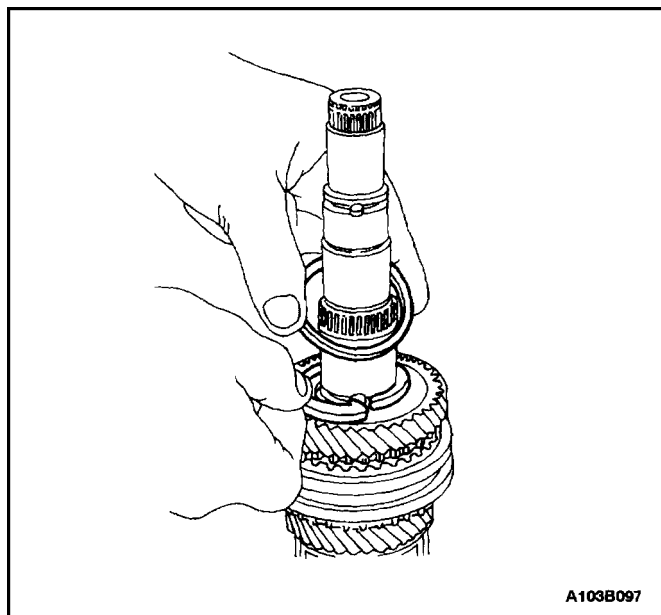


9. Attach the synchronizer blocking ring to the third gear.

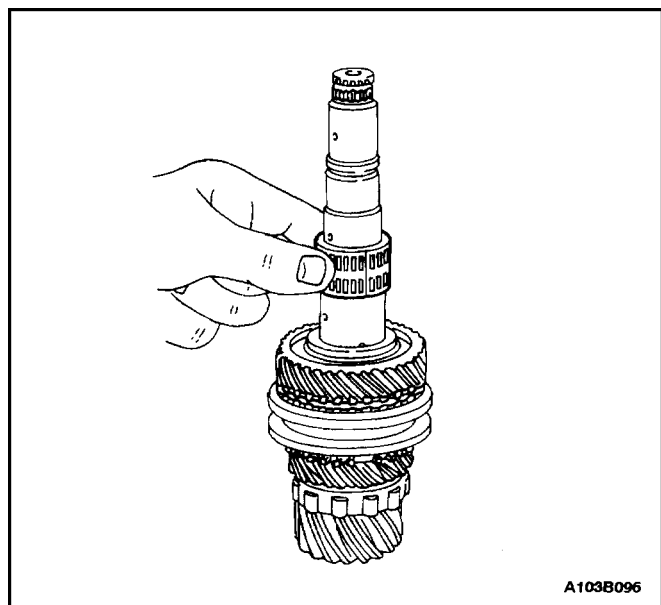


10. Install the third-gear assembly.

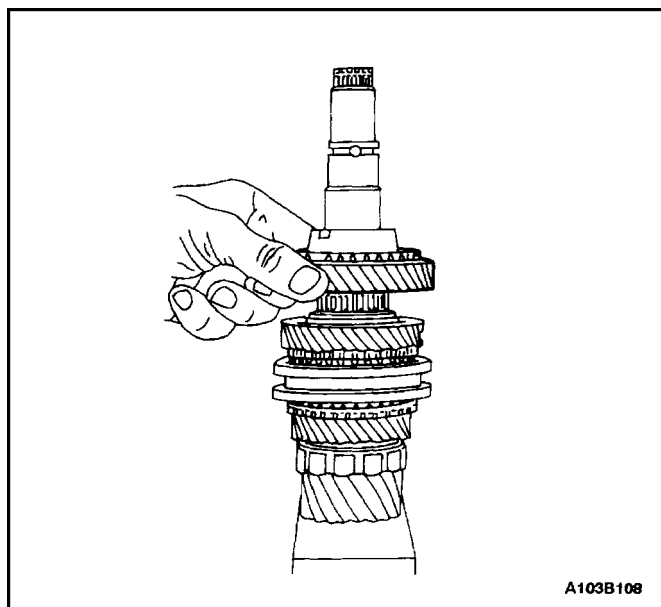




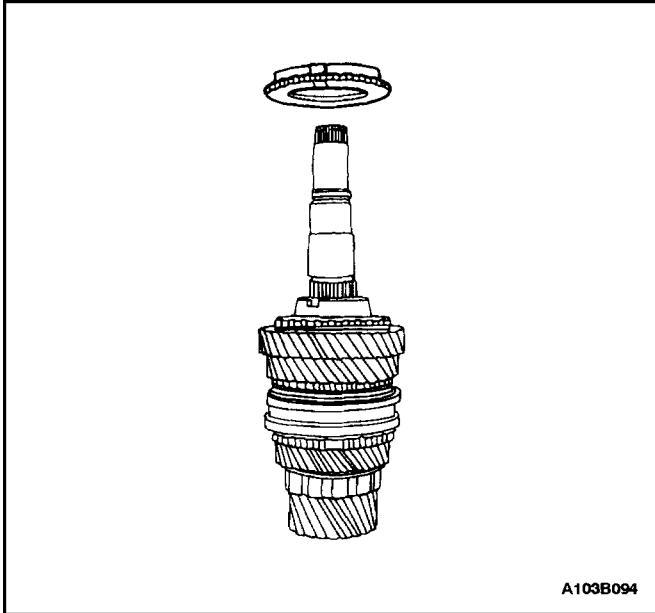
11. Install the thrust washer and the ring.



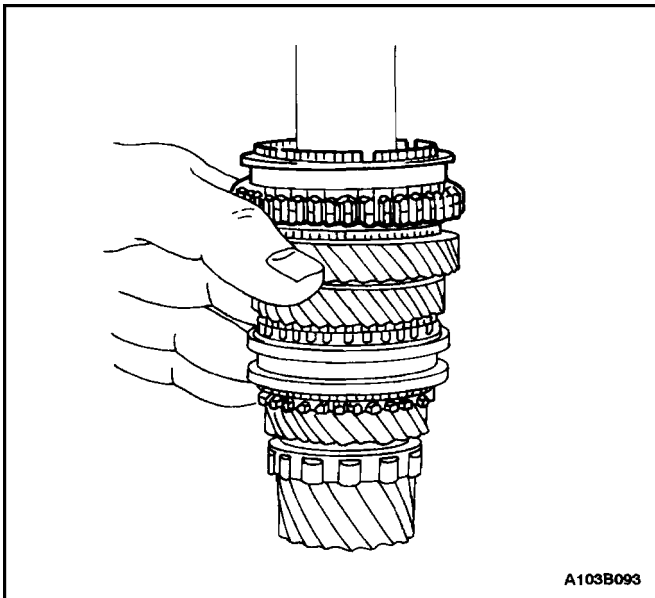
12. Install the second-gear needle bearing.



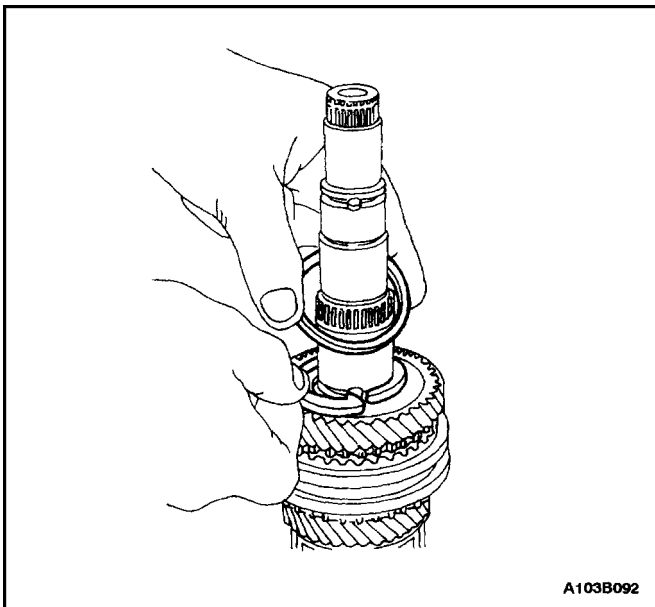
13. Install the second gear.



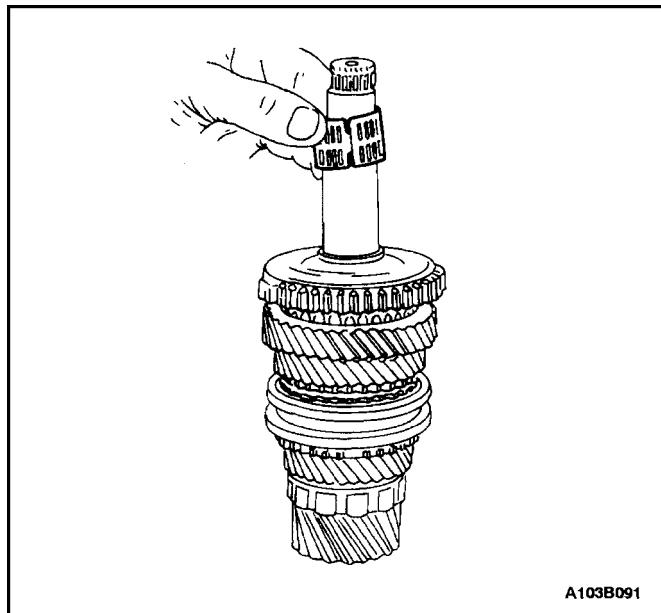
14. Install the first-second gear blocking ring.



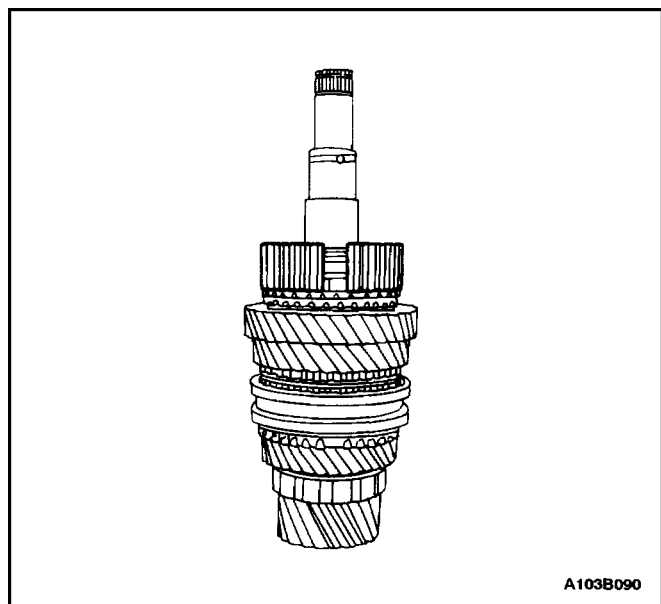
15. Install the first-second synchronizer gear.



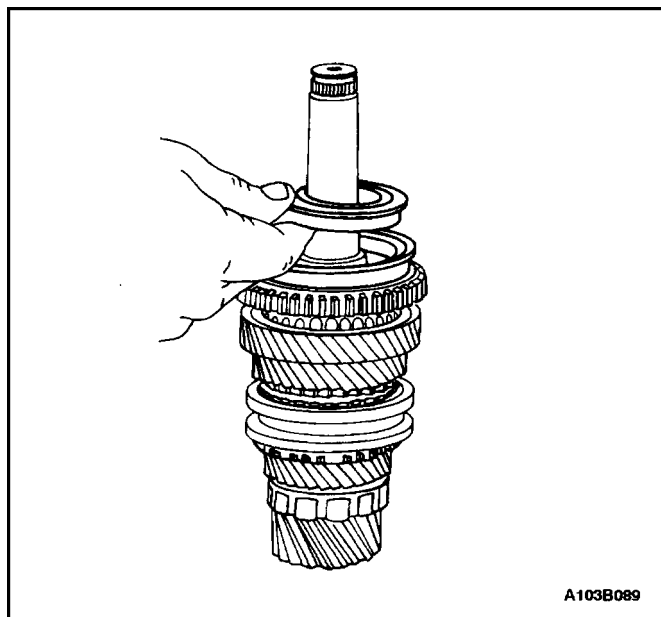
16. Install the washer and the snap ring.



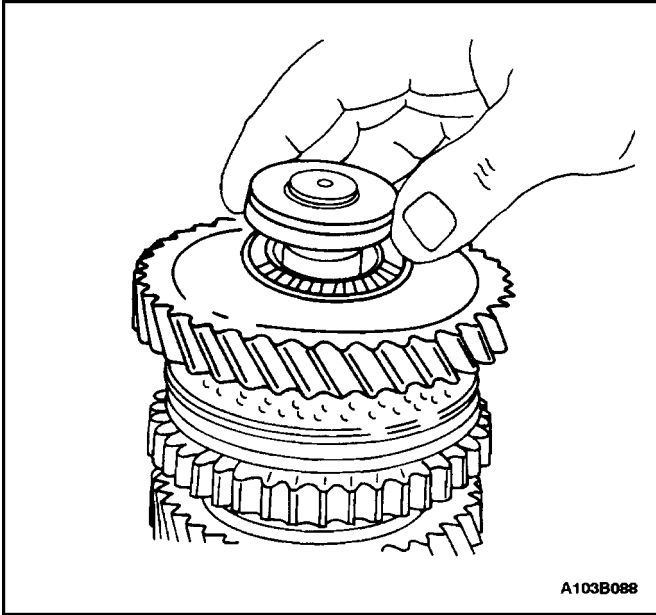
17. Install the first-gear needle bearing.



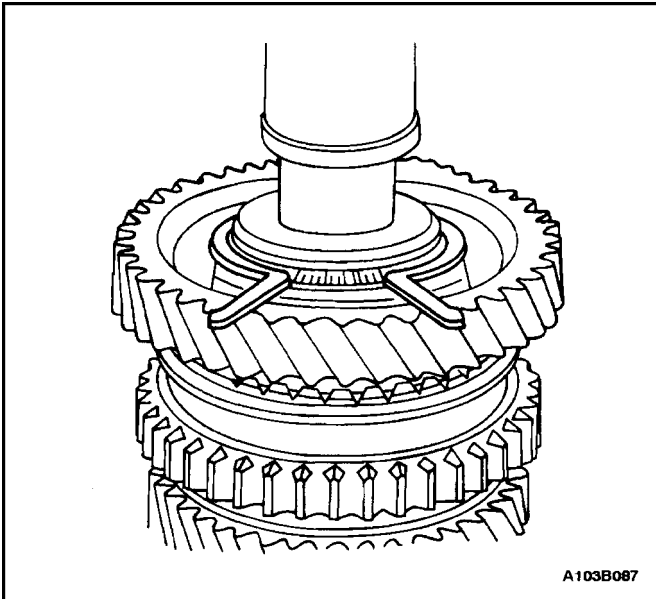
18. Install the keys onto the first-second synchronizer gear.



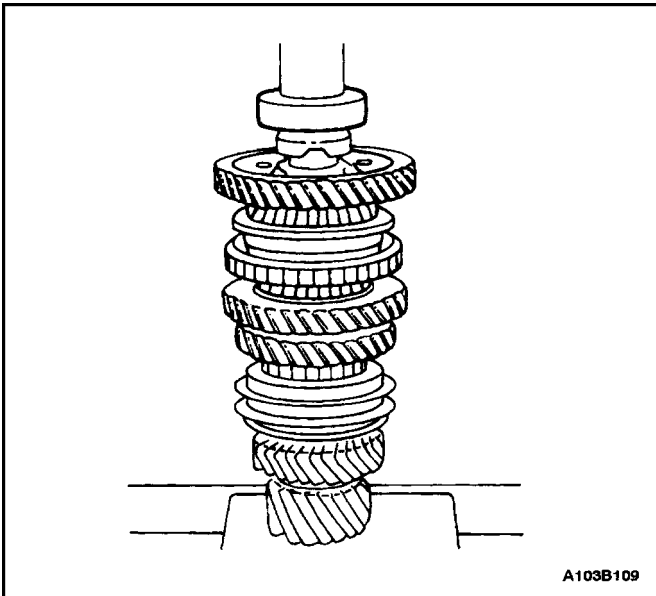
19. Install the synchronizer hub sleeve containing the synchronizer spring.



20. Install the outer blocking ring.
21. Install the mainshaft wear plate, the flat-type first-gear needle bearing, and the first gear.



22. Install the snap ring.



23. Press on the mainshaft bearing.