

COMPONENT DISASSEMBLY & REASSEMBLY

OUTPUT SHAFT

NOTE: Mark all components for reassembly reference during removal from output shaft. During reassembly lubricate all rotating or sliding parts with Mercon ATF.

Disassembly

1. Using a press and split clamp plate, remove tapered roller rear bearing from reverse gear end of shaft. Slide reverse gear, needle bearing and 5th-reverse synchronizer blocker ring from shaft. Remove 5th-reverse synchronizer snap ring. Slide synchronizer assembly, blocker ring, needle bearing and 5th gear from shaft. See **Fig. 6**.
2. Using a press and split clamp plate, remove tapered roller bearing from 1st gear end of shaft. Remove pinion gear snap ring. Place split clamp plate behind 1st gear and press pinion drive gear and 1st gear off shaft together.
3. Remove needle bearing and 1st gear synchronizer blocker ring. See **Fig. 6**. Remove 1st-2nd synchronizer snap ring. Slide 1st-2nd synchronizer assembly, blocker ring needle bearing and 2nd gear from shaft.

Reassembly

1. Slide needle bearing, blocker ring and 2nd gear onto shaft. Slide 1st-2nd synchronizer assembly into place, ensure short collar faces out. See **Fig. 7**. Install NEW synchronizer snap ring. Install 1st gear synchronizer blocker ring, needle bearing and 1st gear.
2. Using appropriate driver, press pinion gear onto output shaft. Pinion gear can only be installed to output shaft splines in one direction. Using appropriate driver, press tapered roller bearing onto 1st gear end of shaft.

NOTE: When assembling synchronizer assembly, align 3 grooves in blocker ring with synchronizer inserts. This allows synchronizer assembly to seat properly in blocker ring.

3. Install needle bearing, 5th-reverse gear blocker ring and 5th gear onto shaft. Install 5th-reverse synchronizer assembly, ensure short collar faces out. Install NEW synchronizer snap ring.
4. Install 5th-reverse gear blocker ring, needle bearing and reverse gear onto shaft. Using appropriate driver, press tapered roller bearing onto 5th gear end of shaft. Ensure bearings are seated against shoulder of output shaft. Ensure synchronizer sleeves are in Neutral position.

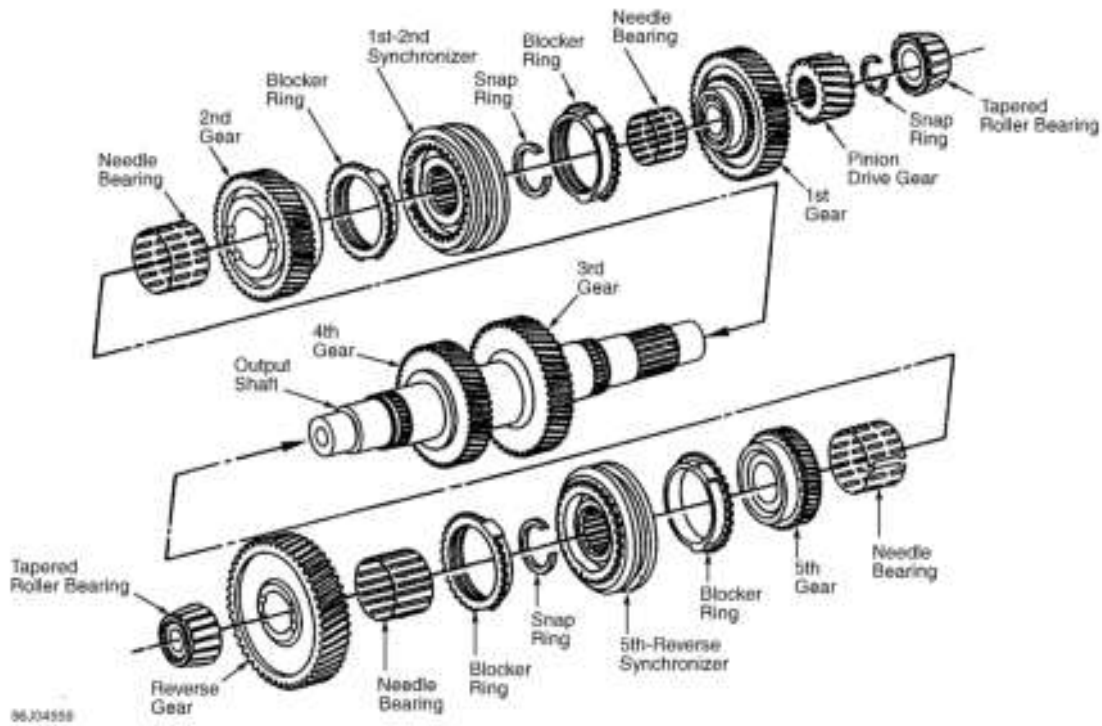


Fig. 6: Exploded View Of Output Shaft Assembly
 Courtesy of FORD MOTOR CO.

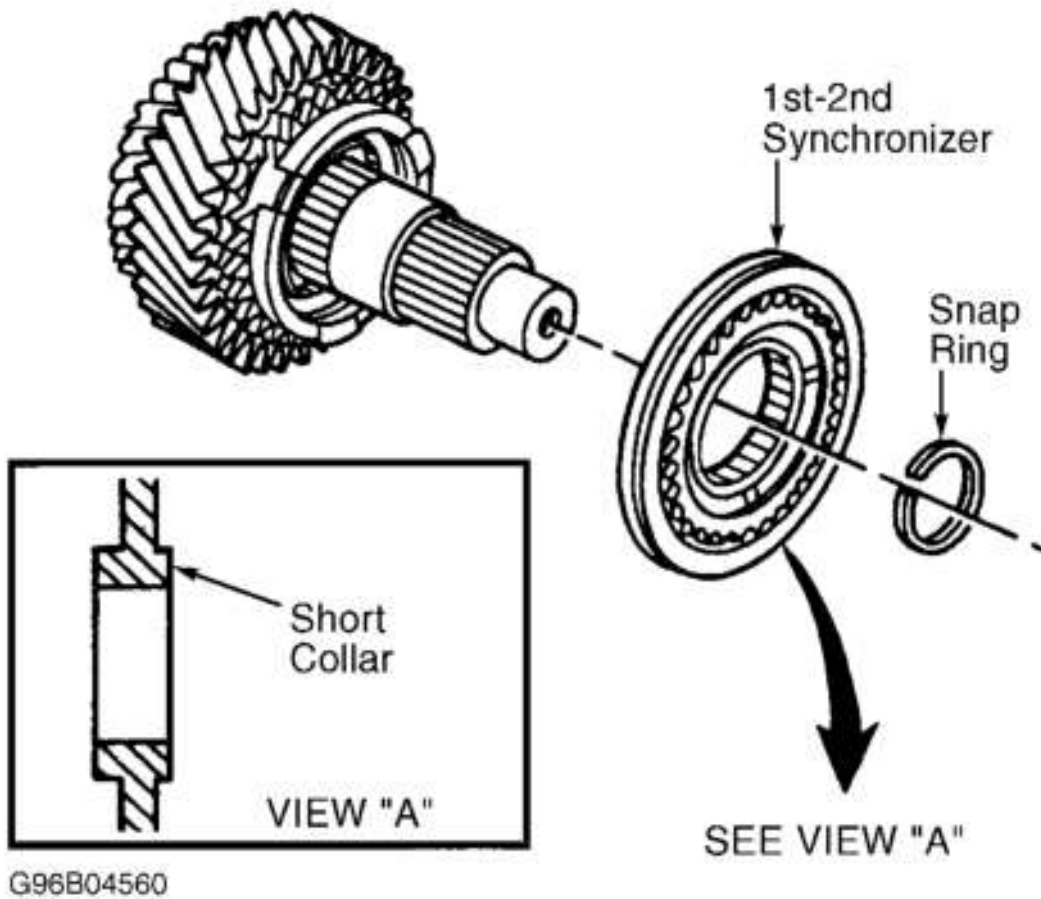


Fig. 7: Installing Synchronizer Assembly
 Courtesy of FORD MOTOR CO.

INPUT SHAFT

Disassembly

1. Using a press and split clamp plate, remove tapered roller rear bearing from 5th gear end of shaft. Remove 5th gear snap ring. Place bearing puller behind 5th gear and press 5th gear from shaft. Remove 4th gear, needle bearing and synchronizer blocker ring from shaft.
2. Remove snap ring and 3rd-4th gear synchronizer assembly. See **Fig. 8**. Remove 3rd gear, needle bearing and synchronizer blocker ring from shaft. Using a press and split clamp plate, remove tapered roller rear bearing from 1st gear end of shaft.

Reassembly

1. Using appropriate driver, press tapered roller rear bearing onto 1st gear end of shaft. Install 3rd gear, needle bearing and synchronizer blocker ring onto shaft. Install 3rd-4th gear synchronizer assembly with short collar facing out. Install NEW synchronizer snap ring. See **Fig. 8**.
2. Install 4th gear, needle bearing and synchronizer blocker ring onto shaft. Using appropriate driver, press 5th gear onto shaft. Install NEW 5th gear snap ring. Using appropriate driver, press tapered

roller bearing onto 5th gear end of shaft.

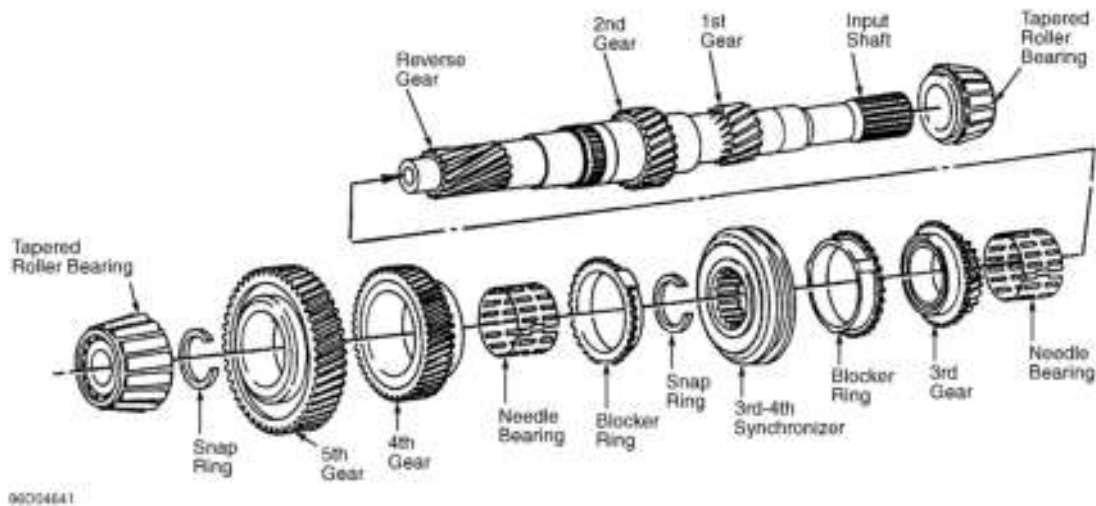


Fig. 8: Exploded View Of Input Shaft Assembly
Courtesy of FORD MOTOR CO.

SYNCHRONIZER ASSEMBLIES

NOTE: Use caution when disassembling synchronizers. Detent balls are spring loaded and may be ejected from assembly.

Disassembly

Wrap synchronizer assembly in a clean shop towel. Slide hub and sleeve apart. Remove detent balls, blocker bars and compression springs from hub. See **Fig. 9**.

Reassembly

Insert compression springs into synchronizer hub pockets, use petroleum jelly to hold in place. Place detent balls into hub inserts and assemble against springs. Use a rubber band to hold in place. Slide sleeve onto hub assembly aligning ball detents with detent balls. As sleeve slides into place retaining detent balls, remove rubber band.

NOTE: When assembling synchronizer, notice that sleeve and hub have an extremely tight fit and must be held square to prevent jamming. Do not force sleeve onto hub.

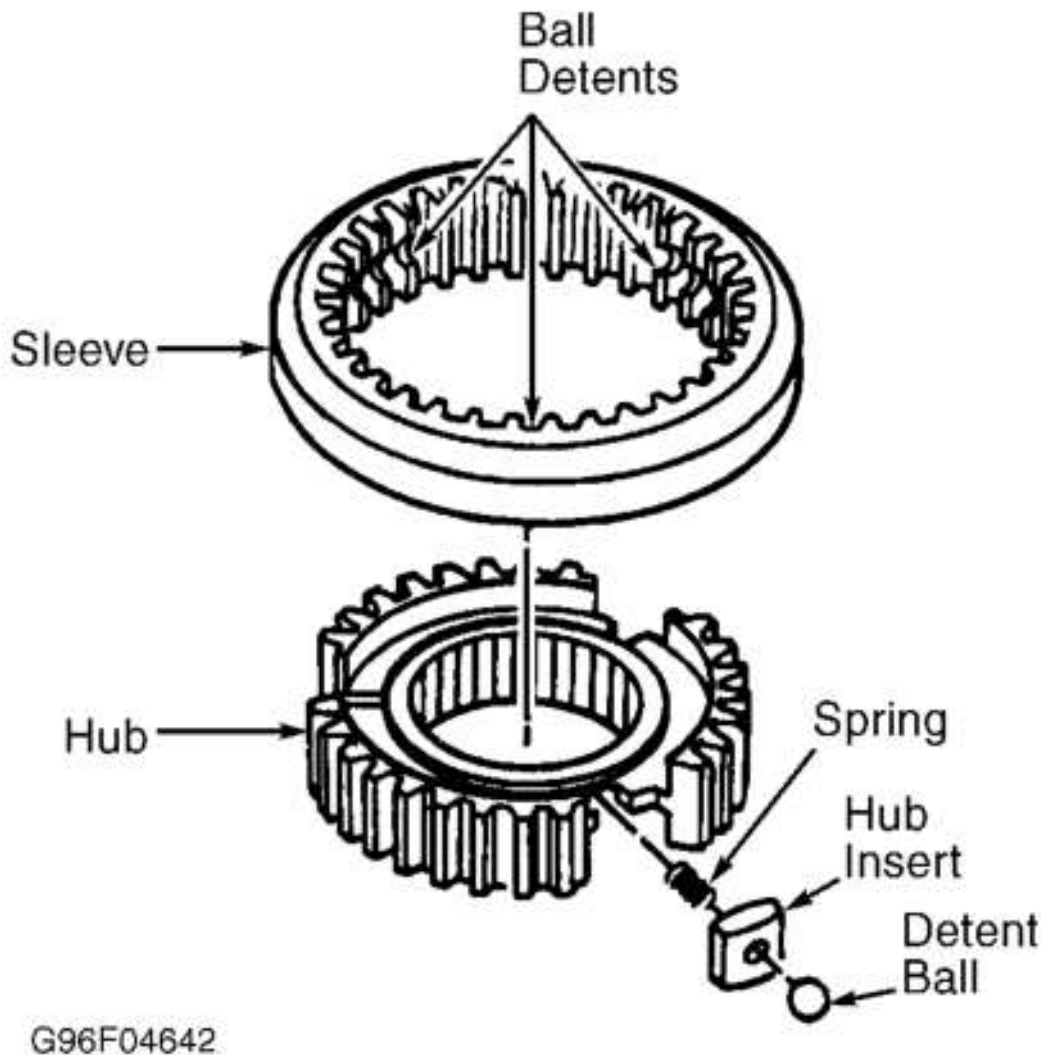
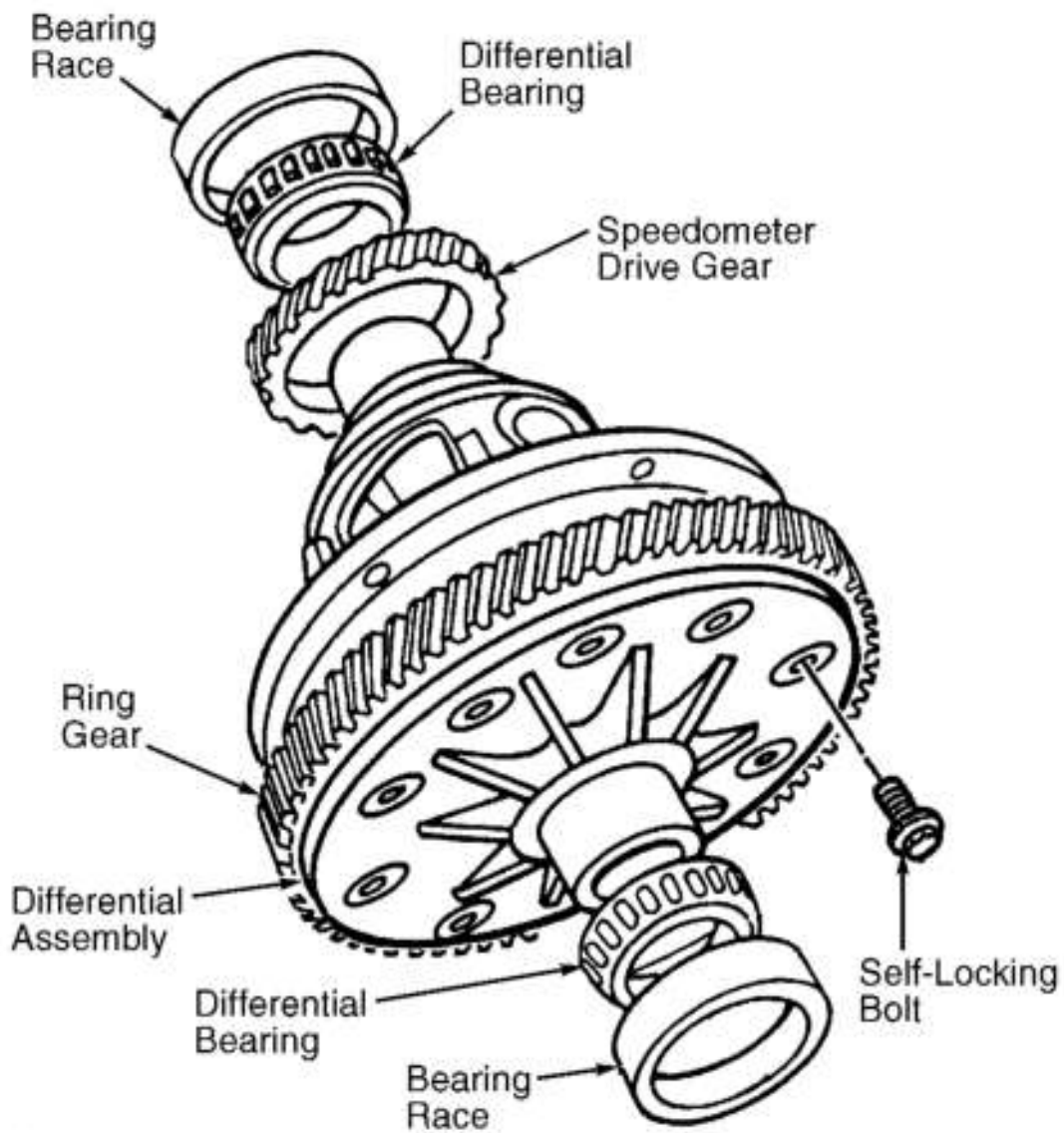


Fig. 9: Exploded View Of Synchronizer Assembly
 Courtesy of FORD MOTOR CO.

DIFFERENTIAL ASSEMBLY

Disassembly & Reassembly

1. Using appropriate puller, remove tapered roller bearings from each end of differential. Remove final drive gear retaining bolts. See **Fig. 10**. Tap final drive gear from differential with a soft mallet to remove. If necessary, remove speedometer drive gear by gently prying with 2 screwdrivers.
2. To reassemble differential, reverse disassembly procedure. Install final drive gear onto differential and secure to case with NEW self-locking ring gear retaining bolts. Using standard circular pattern sequence, tighten bolts to specification. See **TORQUE SPECIFICATIONS**. If removed, install speedometer gear engaging recesses in differential housing.



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Fig. 10: Exploded View Of Differential Assembly
Courtesy of FORD MOTOR CO.