

Warner T-19B and T-19D Four-Speed Transmission

SECTION 16-24

APPLIES TO F-250-F-350 HD (4x2) (4x4) EQUIPPED WITH 6.9L DIESEL ENGINE AND 7.5L GAS ENGINE

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DESCRIPTION

The four-speed fully synchronized T19B and T-19D transmissions are equipped with a center, floor-mounted gear shift lever (Fig. 1).

The reverse gear and the first-, second-, third-, and fourth-speed gears are helical.

The input shaft is supported by a ball bearing.

The front end of the output shaft is supported by a pilot bearing installed in the input shaft. The rear end of the output shaft is supported by a ball bearing. The ball bearing and shaft are retained in the case by a snap ring.

DIAGNOSIS AND TESTING

Refer to Section 16-10, General Manual Transmission Service.

REMOVAL AND INSTALLATION

Transmission

F-250—F-350 (4x2)

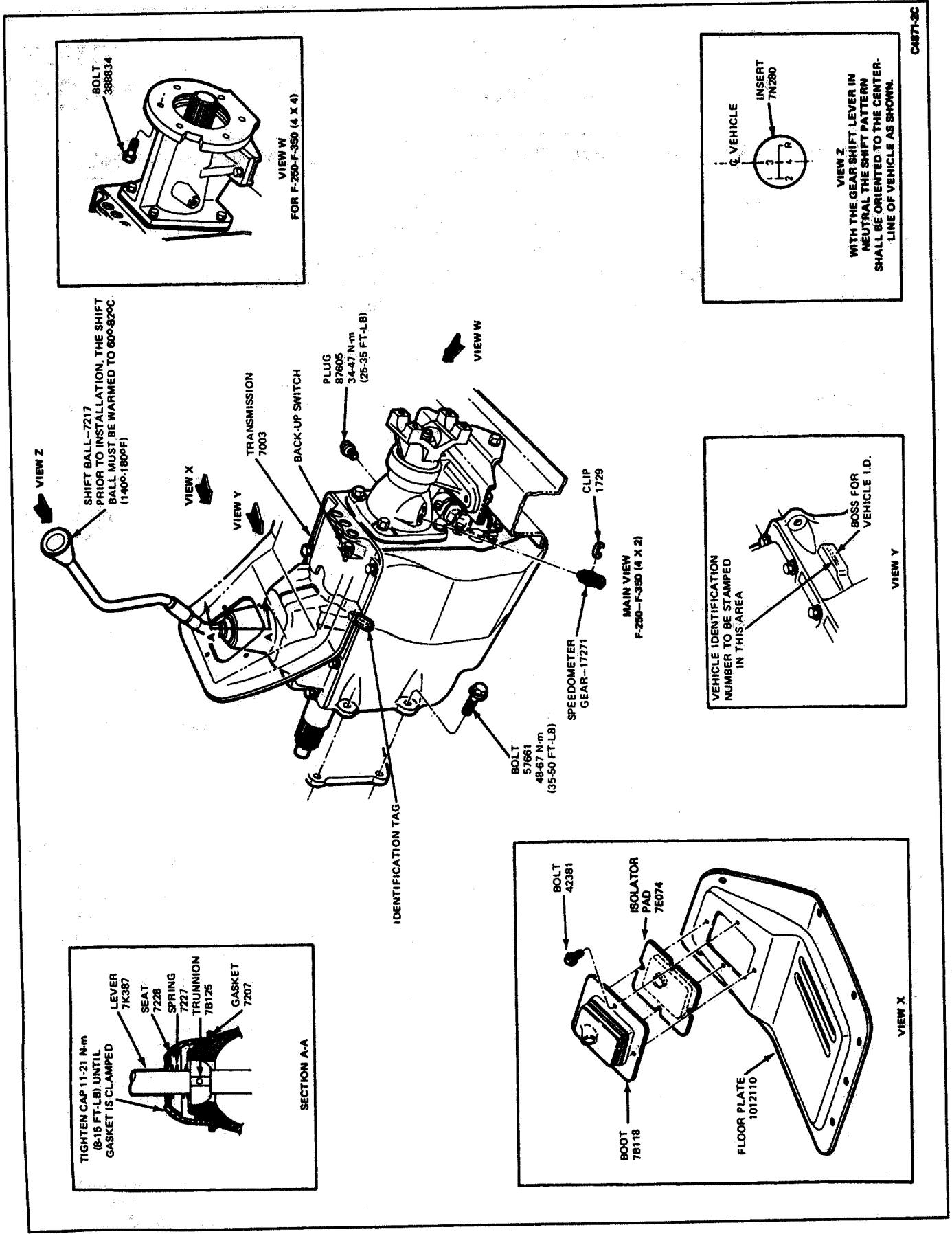
Removal

1. Remove the floor mat, the body floor pan cover, the gearshift lever shift ball and boot as an assembly. Remove the isolator pad assembly.
2. Raise the vehicle and position safety stands. Position a transmission jack under the transmission, and disconnect the speedometer cable.
3. Disconnect the back-up lamp switch located at the rear of the gear shift housing cover (Fig. 1).
4. Disconnect the drive shaft or coupling shaft and clutch linkage from the transmission and wire it to one side.
5. Remove the transmission rear insulator and lower retainer (Fig. 2). Remove the crossmember as described in the Removal and Installation of this Section.
6. Remove the transmission attaching bolts.

7. Move the transmission to the rear until the input shaft clears the clutch housing. Lower the transmission.

Installation

1. Place the transmission on a transmission jack, install guide studs in the clutch housing and raise the transmission until the input shaft splines are aligned with the clutch disc splines. The clutch release bearing and hub must be properly positioned in the release lever fork.
2. Slide the transmission forward on the guide studs until it is in position on the clutch housing. Install the attaching bolts and tighten them to 48-67 N·m (35-50 ft-lb). Remove the guide studs and install the two lower attaching bolts.
3. Install the crossmember as described in the Removal and Installation portion of this Section. Position the insulator and retainer between the transmission and crossmember. Install bolts and tighten to 60-80 N·m (45-60 ft-lbs). Install the nut retaining the insulator and retainer to crossmember. Tighten to 68-94 N·m (50-70 ft-lbs) (Fig. 2). Remove transmission jack.
4. Connect the speedometer cable and driven gear and clutch linkage.
5. Install the bolts attaching the front U-joint of the coupling shaft to the transmission output shaft flange. Tighten the bolts and nuts to specifications as listed in the specifications of Section 15-60, Driveshaft—Single Snap Ring Type U-Joint. Install the transmission rear support and upper and lower absorbers (Fig. 3).
6. Connect the back-up lamp switch.
7. Install the shift lever, boot and shift ball as an assembly and lubricate the spherical ball seat with Multi-Purpose Long-Life Lubricant C1AZ-19590-B (ESA-M1C75-B) or equivalent.
8. Install the isolator pad assembly. Install the floor pan cover, and floor mat.



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FIG. 1 Warner T-19B and T-19D Transmission

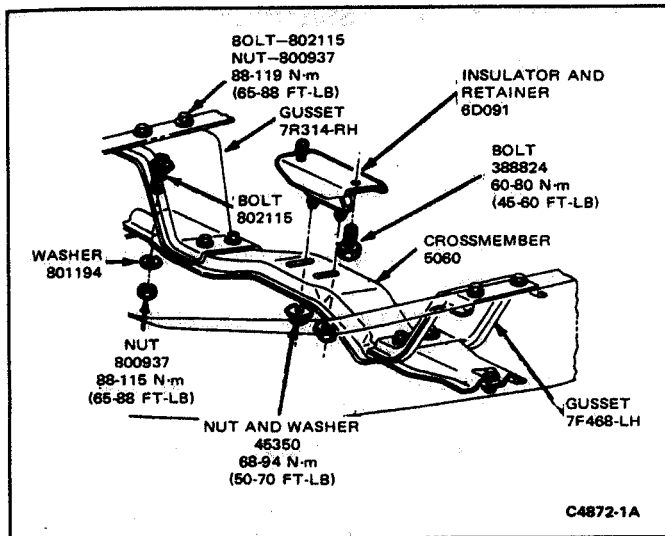


FIG. 2 Crossmember Installation—F-250—F-350 (4x2)

F-250—F-350 (4x4)

Removal

1. Open door and cover seat.
2. Remove the screws holding the floor mat.
3. Remove the screws holding the access cover to the floor pan. Place the shift lever in the reverse position and remove the cover.
4. Remove the insulator and dust cover.
5. Remove the transfer case shift lever, shift ball and boot as an assembly.
6. Remove transmission shift lever, shift ball and boot as an assembly.
7. Raise the vehicle on a hoist.
8. Remove the drain plug and drain the transmission.
9. Disconnect the rear driveshaft from the transfer case and wire it out of the way.
10. Disconnect the front driveshaft from the transfer case and wire it out of the way.
11. Remove the shift link from transfer case.
12. Remove the speedometer cable from the transfer case.
13. Position a transmission jack under the transfer case. Remove the six bolts holding the transfer case to the transmission and lower the transfer case from the vehicle.
14. Remove the ten bolts that hold the rear support bracket to the transmission (Fig. 3).
15. Position a transmission jack under the transmission and remove the rear support bracket and brace.
16. Remove the four bolts that hold the transmission to the bell housing.
17. Remove the transmission from the vehicle.

Installation

1. Place the transmission on a transmission jack and install it in the vehicle installing two guide studs in the bell housing top holes, to guide the transmission into position.
2. Install the two lower bolts. Remove the guide studs and install the upper bolts.

3. Place the rear support bracket in position and install the eight retaining bolts (Fig. 3).
4. Install the two bolts at the rear support insulator bracket (Fig. 3). Remove the transmission jack.
5. Position the transfer case on the transmission jack and install the six retaining bolts and gasket. Position the transfer case on the transmission and tighten the bolts as listed in the appropriate transfer case Section.
6. Install the transfer case shift link and retainer ring.
7. Position and install the speedometer cable.
8. Remove wire and connect front driveshaft.
9. Remove wire and connect rear driveshaft.
10. Fill transfer case with Motorcraft XT-2-QDX, DEXRON® II, automatic transmission fluid or equivalent and fill the manual transmission with Standard Transmission Lubricant (SAE 80W), D8DZ 19C547-A(ESP-M2C83-C) lubricant or equivalent.
11. Lower vehicle.
12. Remove fabricated dirt shield and prepare gasket area.
13. Position gasket and shift cover.
14. Install two pilot bolts, then install remaining shift cover retaining bolts.
15. Install transfer case shift lever, shift ball and boot as an assembly and transmission shift lever, shift ball and boot as an assembly.
16. Install dust cover and insulator.
17. Install access cover to floor pan screws.
18. Install the floor mat screws.
19. Install the boot area screws.

Cross Member

F-250—F-350

Refer to (Figs. 2 and 3).

Removal

1. Raise vehicle on hoist.
2. Remove skid plate, if so equipped. Remove heat shield from catalytic converter.

CAUTION: Use extreme caution when working in the area of the catalytic converter because of the extremely high temperatures generated by the converter.

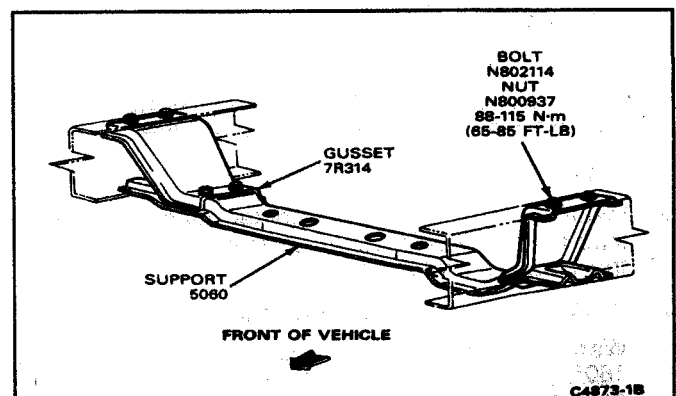


FIG. 3 Crossmember Installation—F-250—F-350 (4x4)

3. Remove two nuts connecting upper gusset to frame on both sides of the frame.
4. Remove nut and bolt assembly connecting gusset to crossmember. Remove gusset on left side.
5. Remove bolts holding transmission to transmission support plate on crossmember.
6. Raise transmission with a transmission jack.
7. Remove the nut and bolt assemblies connecting the support plate to crossmember. Remove support plate. Remove right gusset.
8. Remove nut and bolt assemblies connecting crossmember to frame. Remove crossmember.

Installation

1. Install crossmember and transmission support plate, and position right and left gussets on bolts in frame. Install nuts on upper gusset to frame bolts and tighten to specification.
2. Install crossmember to frame nut and bolt assembly and tighten to specification.
3. Install nut and bolt assembly connecting gusset to crossmember and tighten to specification.
4. Install nut and bolt assemblies connecting transmission support plate to crossmember and tighten to specification.
5. Lower the transmission.
6. Install bolts connecting transmission support plate to transmission and tighten to specification.
7. Install skid plate, if so equipped. Install heat shield over catalytic converter. Tighten all nuts and bolts to specification.
8. Lower vehicle.

Shift Lever

Refer to Fig. 1.

NOTE: Remove the shift ball only if the shift ball, boot or lever is to be replaced. If either the ball, boot or lever is not being replaced, remove the ball, boot and lever as an assembly.

Removal

1. Remove the plastic insert from the shift ball. Warm the ball with a heat gun to 60°-82°C (140°-180°F) knock the ball off the lever with a block of wood and a hammer, taking care not to damage the finish on the shift lever.
2. Remove the rubber boot and floor pan cover.
3. Shift the unit into second gear, remove the lock pin and remove the shift lever from the shifter housing.

Installation

1. Install the shift lever in the shifter housing, making sure that the slot in the lever aligns with the tab in the housing. Install the lock pin.
2. Install the rubber boot and floor pan cover.
3. Warm the ball with a heat gun to 60°-82°C (140°-180°F) and tap the ball on the lever with a 7/16 inch socket and mallet. Install the plastic shift pattern insert.

DISASSEMBLY AND ASSEMBLY

Transmission

Refer to Fig. 4.

Disassembly

1. Place the transmission in a suitable holding fixture (Fig. 5).
2. Remove the drain plug and drain the lubricant from the transmission.
3. Remove the bolts attaching the gearshift housing to the case and remove the housing.
4. Lock the transmission in two gears and remove the U-joint flange and output oil seal.
5. Remove the speedometer driven-gear and bearing assembly.
6. Remove the output shaft rear bearing retainer or extension housing and gasket.
7. Remove the speedometer drive gear snap ring retainer. Slide the speedometer drive gear off the output shaft. Remove the speedometer gear drive ball.
8. Remove the output shaft bearing snap ring from the output shaft and the snap ring from the bearing, (Fig. 6). Remove bearing spacer washer.
9. Install Tools T75L-7025-B, F, H, and T84T-7025-B on the output shaft and over the output shaft bearing (Fig. 7). Remove the output shaft bearing.
10. Remove the input shaft bearing retainer and gasket. Remove the input shaft bearing snap ring from the input shaft and the snap ring from the bearing, (Fig. 8).
11. Install tool on the input shaft and over the input shaft bearing. Remove the input shaft bearing.
12. Remove the input shaft oil baffle (Fig. 9).
NOTE: The baffle is installed in an offset position away from the bearing.
13. Remove the spring clip from the reverse shifter arm pivot screw and remove the pivot screw from the shifter arm, and case. Lift the shifter arm and shoe assembly out of the case by prying with a screwdriver.
14. Remove the input shaft (with the flat facing upward) assembly from the case. Do not lose the 22 pilot bearing rollers from the inner end of the shaft. Remove the thrust spacer.
15. Remove the output shaft and gear assemblies from the case.
16. Use the Dummy Countershaft T83T-7111-B shown in Fig. 10 to drive out the countershaft (from the front). **Keep the dummy shaft in contact with the countershaft to avoid dropping the rollers. The dummy shaft should be 23.82-23.83 cm (9.379-9.380 inches) long and 2.878-2.882 cm (1.133-1.135 inches) in diameter.** Remove the countershaft cluster gear. Make sure the front and rear thrust washers are removed from the case. Be careful not to lose any rollers.
17. Remove the idler shaft (from the front of the transmission) using the tools T50T-100-A and T50T-7140-C as shown in Fig. 11. Exercise caution so as not to damage the transmission case while using the tool to remove the idler shaft.

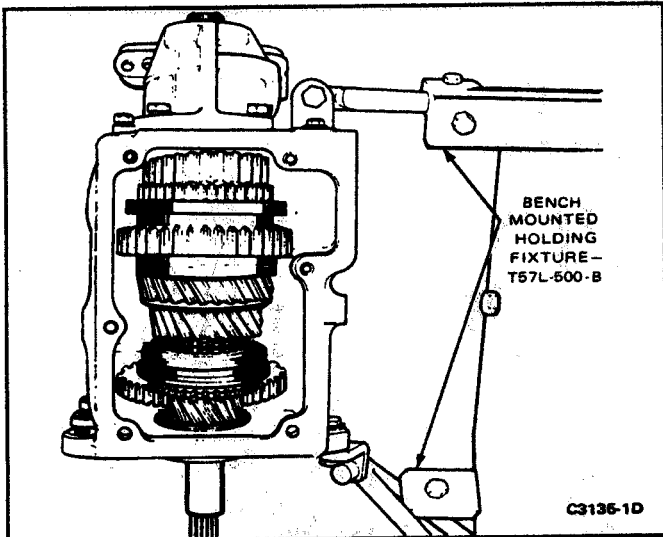


FIG. 5 Transmission in Holding Fixture

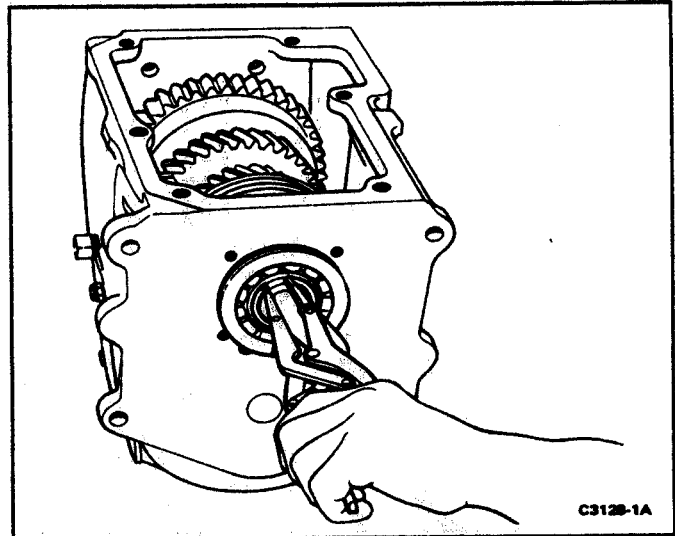


FIG. 8 Removing Input Shaft Bearing Snap Ring

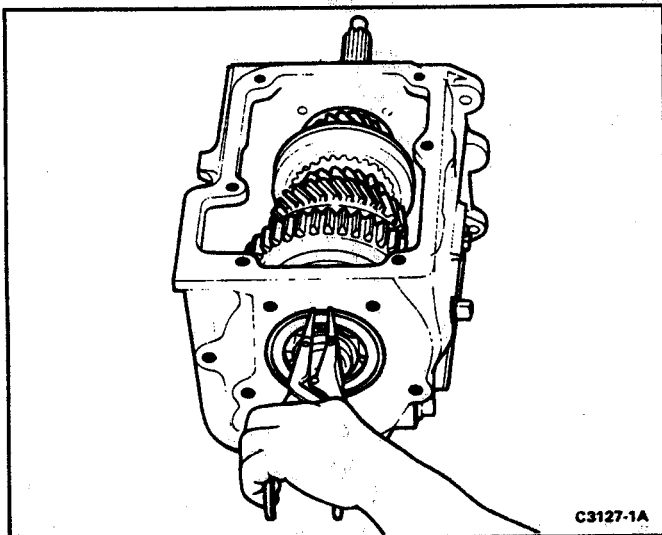


FIG. 6 Removing Output Shaft Bearing Snap Ring

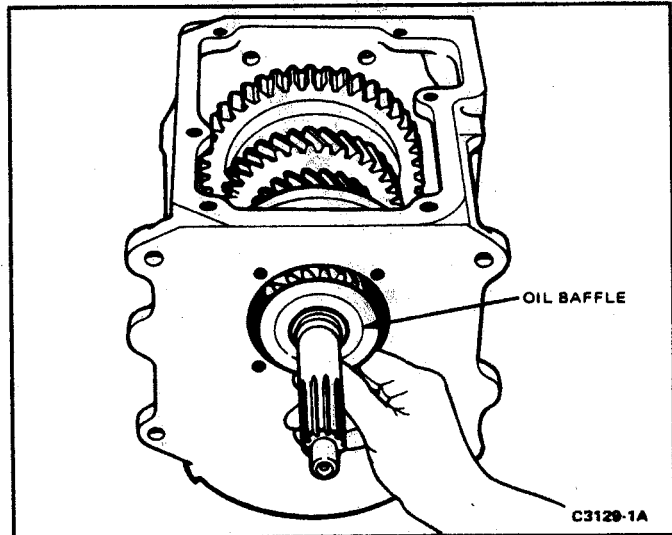


FIG. 9 Removing Input Shaft Oil Baffle

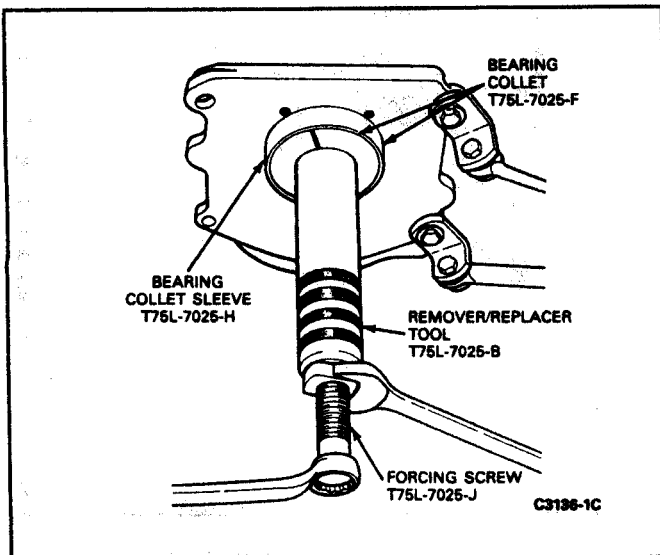


FIG. 7 Removing Output Shaft Bearing

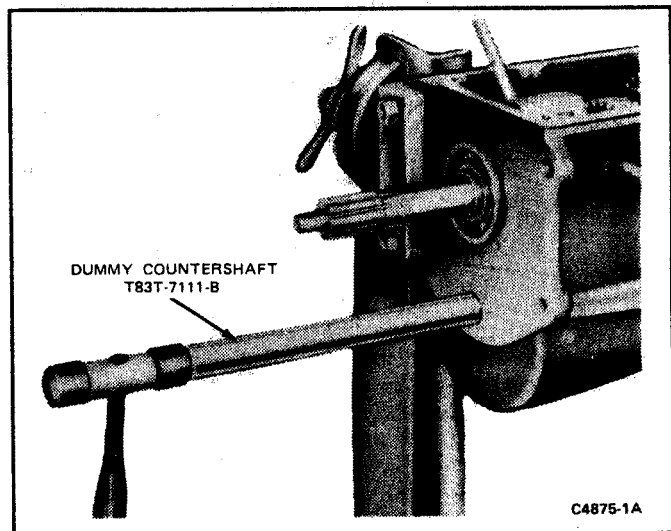


FIG. 10 Removing Countershaft

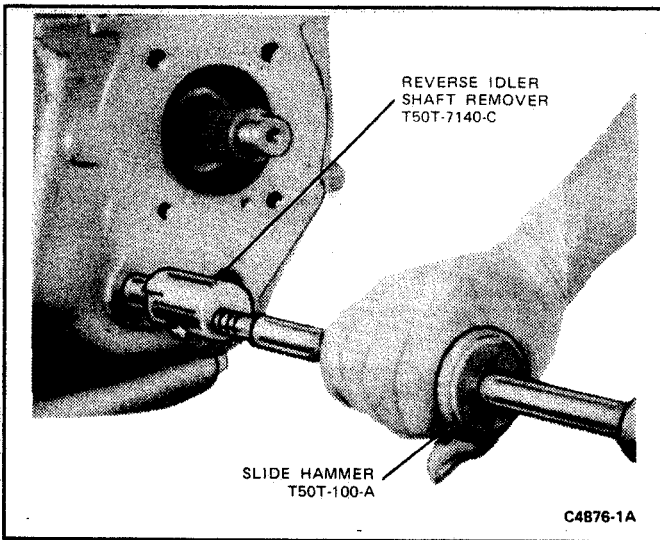


FIG. 11 Removing Reverse Idler Shaft

18. Remove the reverse idler gear, and thrust washers, being careful not to lose any of the rollers.

Assembly

Refer to Fig. 4

1. Coat all parts, especially the bearings, with the specified transmission lubricant to prevent scoring when the transmission is first operated.
2. Start the countershaft (small end first) into its bore at the rear of the case. Insert the shaft just enough to position the rear countershaft steel thrust washer on the shaft and against the case. Apply grease to the washer to hold it in position. Using the reverse idler shaft as a temporary holding tool, insert the small end of the shaft into the front countershaft bore just enough to hold the front countershaft steel thrust washer in position (Fig. 12). Install the thrust washer.

NOTE: Make sure that the notch in the thrust washers are aligned with the boss at each end of the case.

3. Position the countershaft cluster gear assembly in the case. Do not lose any rollers.

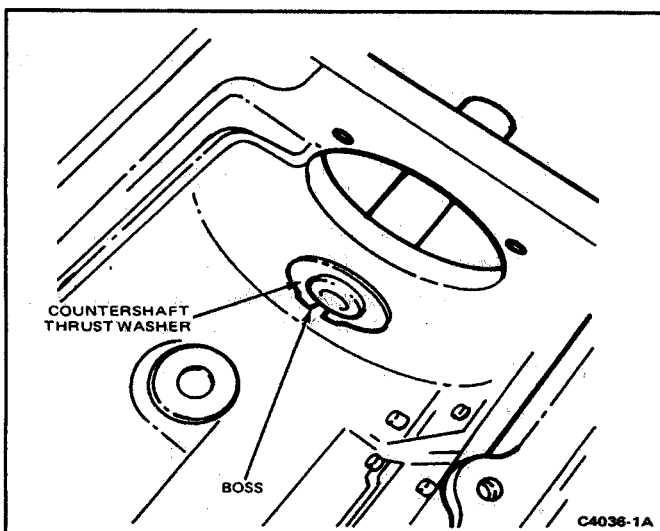


FIG. 12 Installing Countershaft Thrust Washer

4. Slide out the reverse idler shaft and countershaft gear dummy shaft by installing the countershaft from the rear. Keep shaft ends in contact so that rollers cannot drop out of position. Do not drive the countershaft completely into the press fit at the rear of the case at this time.
5. Position the reverse idler gear assembly in the case and install the idler (small end of the shaft toward the front). Shift fork groove of the gear should be toward the front of the case (Fig. 13). Do not drive the shaft completely into position.
6. Make sure that the countershaft and reverse idler gear shaft are properly aligned so that the retainer can be positioned in the shaft slots. Drive the shafts into position in the case. Install the retainer and bolt.
7. Install the output shaft assembly in the case.
8. With the output shaft shifted slightly to the right, position the reverse shifter arm and shoe assembly on the reverse idler gear. Install the pivot screw through the hole in the left side of the case and into the shifter arm hole (Fig. 14). Install the spring clip to retain the shifter arm to the pivot screw. Center the output shaft to the case bore.

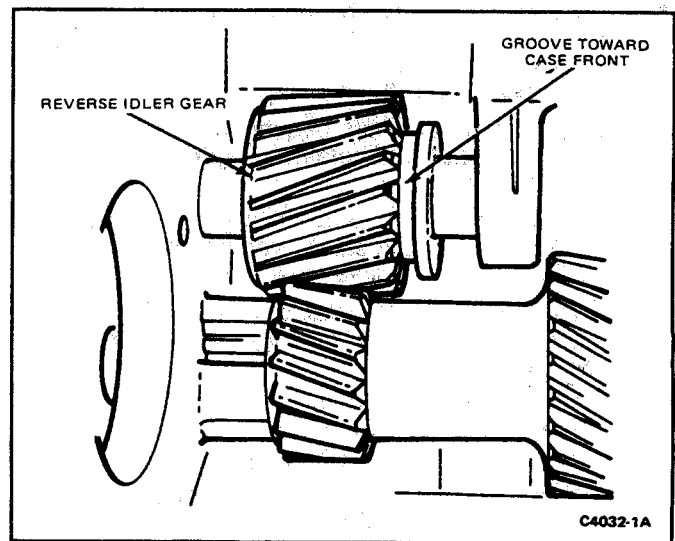


FIG. 13 Reverse Idler Gear Installation

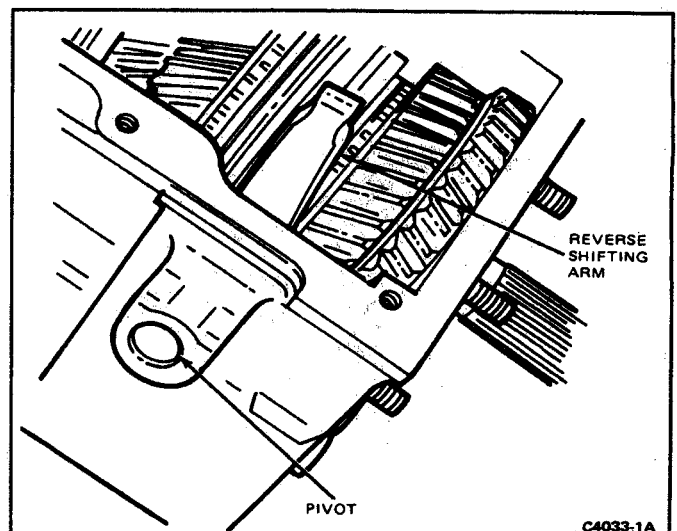


FIG. 14 Reverse Shifter Arm Installation

9. Install the input shaft through the front bore with the flats on the shaft facing upward. When past the countershaft, turn the input shaft so the flats are facing downward. Guide the input shaft onto the output shaft.
10. Install the input shaft oil baffle.
11. Install a dummy bearing (Tool T75L-7025-Q) on the transmission input shaft as shown in Fig. 15. This tool is necessary to keep the input and output shafts in alignment when installing the output shaft bearing.
12. Assemble the locating snap ring to the outer race of the output shaft bearing in the groove provided.
13. Install the output shaft bearing using the tools T75L-7025-B, L, as shown in Fig. 16.
14. Install the spacer washer against the rearward face of the output shaft bearing. (The properly installed washer will be external to the main body of the transmission.)
15. Install a snap ring at the rearward surface of the washer in the output shaft groove provided.
16. Remove the dummy bearing from the input shaft.
17. Install the input shaft bearing using the tools T75L-7025-B, K, Q, R, S as shown in Fig. 17 and install the snap ring. Use the thickest select fit snap rings which will fit on the bearing.
18. Install the input shaft bearing thrust spacer and retainer gasket and retainer. Tighten the bolts to specification.
19. Position the speedometer drive gear (and spacer, if used) on the output shaft over lock ball and install the speedometer drive gear retaining snap ring.
20. Using a new gasket install the output shaft bearing retainer (or extension housing). Tighten the bolts to specification.
21. Lubricate the retainer, bushing and seal and the U-joint flange with Multi-Purpose Long-Life Lubricant, C1AZ-19590-B (ESA-M1C75-B) or equivalent.
22. Install the U-joint flange. Lock the transmission in two gears and tighten the retaining nut to specifications.

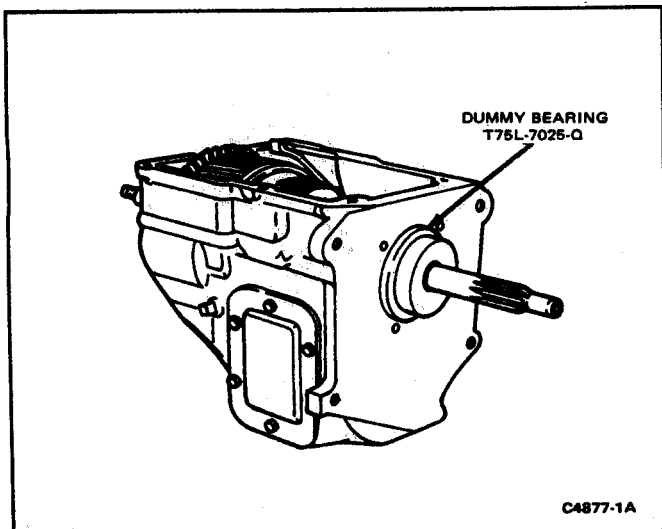


FIG. 15 Installing Dummy Bearing

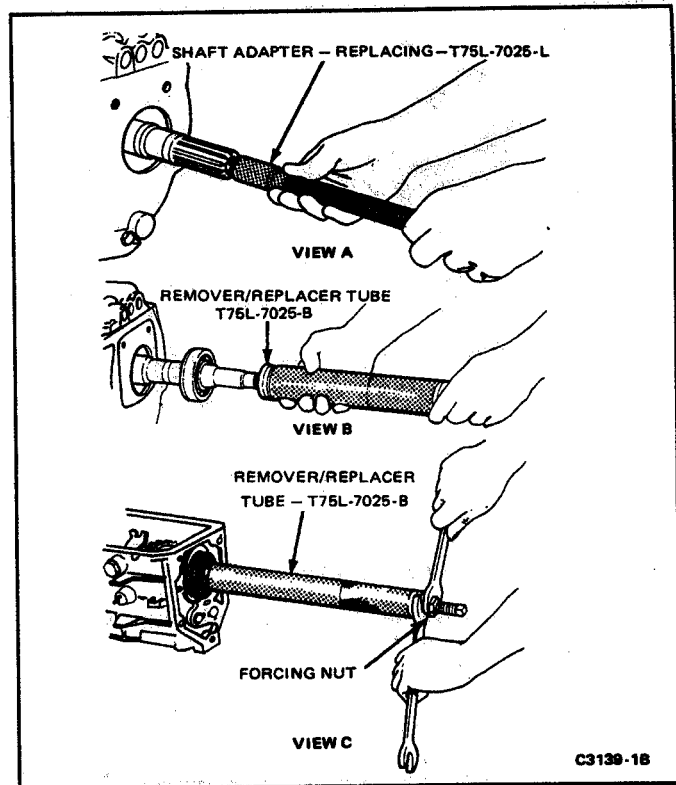


FIG. 16 Installing Output Shaft Bearing

23. Install the gear shift housing assembly (with housing assembly and unit shifted into second gear) on the transmission and tighten the cover bolts to specification.
24. Fill the transmission to the proper level with recommended lubricant Standard Transmission Lubricant D8DZ-19C547-A (ESP-MC83C) or equivalent. Add 1/4 liter (1/2 pint) of lubricant through the speedometer cable hole in the rear transmission extension housing.

Sub-Assemblies

Input Shaft

Disassembly

1. Remove the thrust spacer and pilot bearing rollers from the gear bore.
2. Using a suitable puller, remove the input shaft ball bearing. Remove the oil baffle.

Assembly

1. Press the ball bearing and oil baffle onto the input shaft and against the gear.
2. Coat the bore of the gear with grease, and place the 22 pilot bearing rollers in the bore.
3. Install the thrust spacer in the bore against the rollers. Use grease to hold it in position.

Output Shaft

Disassembly

1. Remove the snap ring. Slide the third- and high-speed synchronizer assembly, blocking ring and the third-speed gear off the shaft.
2. Place the output shaft in an arbor press and press the reverse gear off the shaft or pull the reverse

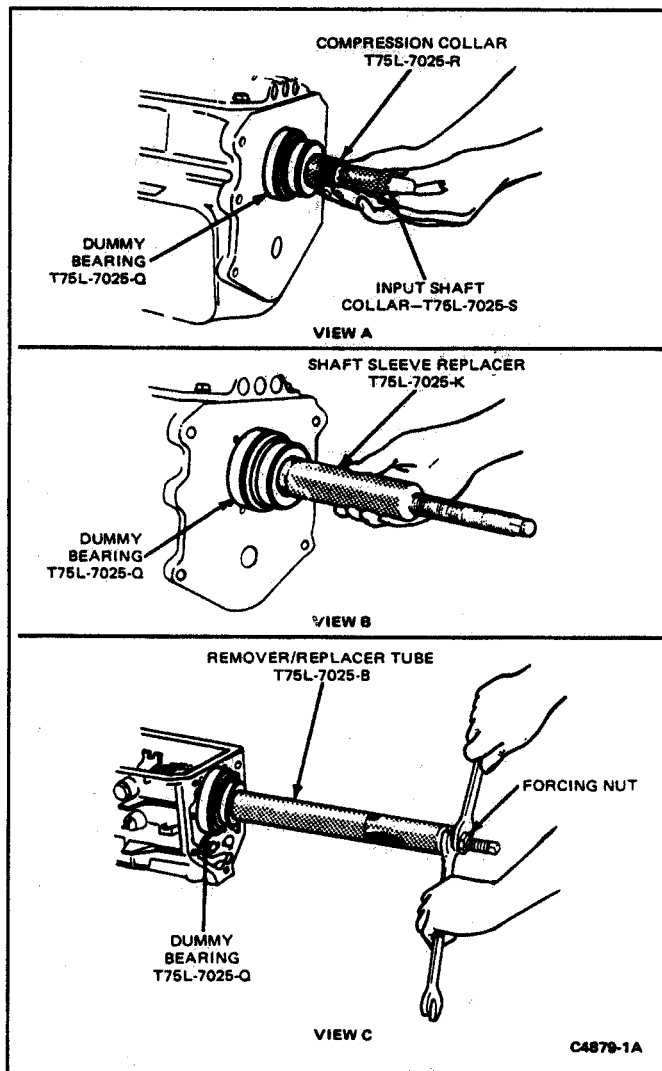


FIG. 17 Installing Input Shaft Bearing

gear off the shaft with Two-Jaw Puller D80L-1002-L or Two-Three Jaw Puller, D80L-1013-A.

3. Remove the first-speed selective snap ring and slide the first-speed gear and blocker ring off the output shaft.
4. Remove the first- and second-speed synchronizer snap ring. Slide the synchronizer off the shaft.
5. Remove the snap ring from the rear of the second-speed gear. Remove the blocking ring and synchronizer gear from the output shaft.

Assembly

1. Hold the output shaft in a vertical position with the front of the shaft down, and slide the second-speed gear onto the shaft (gear cone toward rear).
2. Install the snap ring (2.34-2.39mm (.092-.094 inch) thick) on the output shaft at the rear of the second-speed gear.
3. Place a blocking ring in the first and second speed synchronizer assembly next to the side of the hub with the counterbore. Make sure that the ring slots are aligned with the insert.
4. Hold the blocking ring in the first and second-speed synchronizer assembly (with ring slots aligned with inserts) on the side with the hub counterbore and

install the assembly on the output shaft. The hub counterbore must be toward the second speed gear. Install the snap ring. (Use thickest selective snap ring that can be fit into the groove.)

5. Install the second blocking ring in the synchronizer assembly, making sure that the ring slots are aligned with the inserts.
6. Install the first-speed gear (coned portion toward the first and second-speed synchronizer assembly) and 2.57-2.61mm (.101-.103 inch) thick snap ring on the shaft.
7. Mount the output shaft in a press and press the reverse gear (longer hub toward first-speed gear) on the shaft. Press the rear bearing cone on the output shaft. If the output shaft bearing is to be replaced, be sure it is a maximum load-rated bearing.
8. Remove the output shaft from the press. Install the third-speed gear (cone toward front).
9. Place a blocking ring in the third- and high-speed synchronizer assembly on the side with the larger hub diameter. Make sure that the slots are aligned with the inserts.
10. Hold the blocking ring in position, and slide the synchronizer assembly onto the output shaft. Blocking ring and large hub diameter must be toward third-speed gear.
11. Install the thrust race on the shaft against the synchronizer hub. The flange must be toward the front. Install the thrust bearing against the race.
12. Apply grease to the face of the blocking ring and install it on the shaft and in the third and high-speed synchronizer assembly.

Countershaft Gear

Disassembly

Remove the dummy shaft, bearing rollers, bearing spacers and center spacer (sleeve) from the countershaft gear.

Assembly

1. Slide the long bearing spacer (sleeve) (Fig. 4) into the countershaft gear bore and insert the dummy shaft in the spacer.
NOTE: The dummy shaft should be coated liberally with grease.
2. Hold the gear in a vertical position and install one of the bearing spacers. Position the 22 pilot bearing rollers in the gear bore. Refer to Fig. 18.
3. Place a spacer on top of the rollers and install 22 more rollers and another spacer.
4. Coat the face of the large thrust washer with grease, and hold a large thrust washer against the end of the countershaft gear to prevent the rollers from dropping out and turn the assembly over. Install the rollers, spacers and thrust washer in the other end of the gear.

Reverse Idler Gear

Disassembly

Check the idler gear roller bearings for roughness by holding the bushing to prevent its turning while rotating the gear. The gear should then be installed on the shaft to check for roughness between the shaft and bushing. If

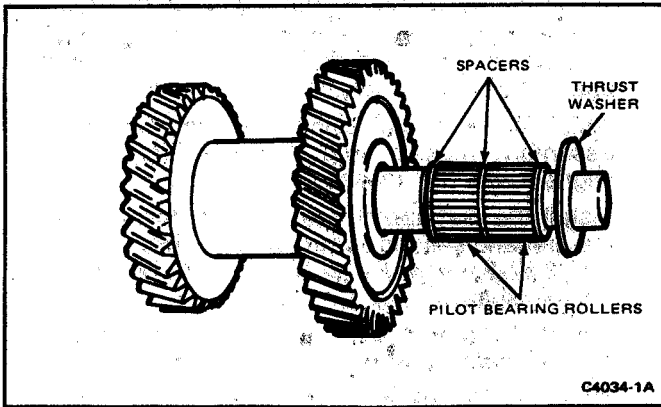


FIG. 18 Countershaft Gear Bearing Rollers Installation

the gear turns freely and smoothly, disassembly of the unit is not necessary. If any roughness is noticed, disassemble the unit as follows:

Remove the snap ring from one end of the gear. Remove the idler gear bearing rollers, thrust washers, bearing spacer, bushing (idler sleeve) and remaining snap ring from the gear.

Assembly

1. Install a snap ring (Fig. 4) in one end of the idler gear and set the gear on end, with the snap ring at the bottom.
2. Position a thrust washer in the gear on top of the snap ring. Coat the outside of the bushing (idler sleeve) with grease and install the bushing on top of the washer. Insert 37 bearing rollers between the bushing and the gear bore.
3. Install a spacer on top of the rollers and install 37 more rollers.
4. Place the remaining thrust washer on the rollers and install the other snap ring.

Synchronizer Hub and Sleeve

Disassembly

1. Remove the spring from each side of the assembly, and remove the three inserts.
2. Slide the hub out of the sleeve.

Assembly

First and Second Speed Synchronizer

1. Install the first and second speed clutch hub in the sleeve. The hub counterbore should be on the same side as the sleeve chamfer.
2. Place the three inserts in the hub slots (Fig. 19).
3. Hook the end of a spring under an insert and position the spring around the hub and under each of the inserts.
4. Turn over the assembly and hook the end of the second spring over the other end of the insert used for hooking the first spring. Position the spring around the hub and under each insert, but in the opposite direction of the first spring.

Third and High Speed Synchronizer

Assembly is the same as that for the first and second-speed synchronizer with the following note: The two grooves on the chamfered portion of the clutch sleeve can be assembled in either direction on the hub.

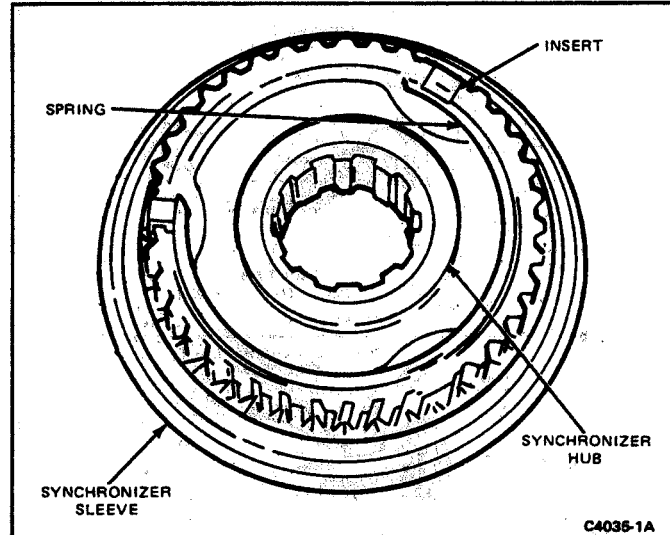


FIG. 19 Synchronizer Hub and Sleeve Assembly

Gear Shift Housing

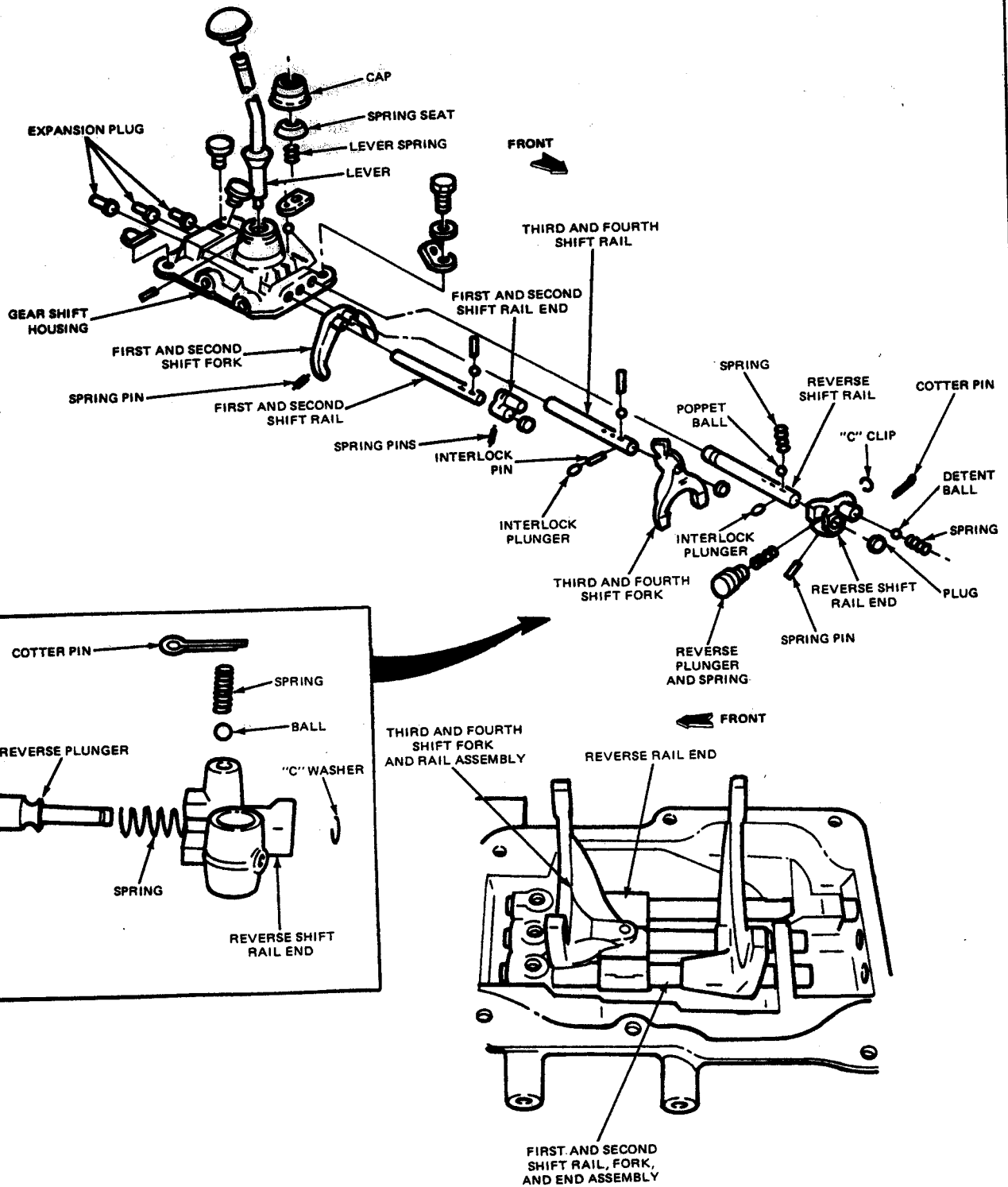
Disassembly

1. Remove the gear shift lever housing cap and lift the lever out of the housing (Fig. 20). Be sure all shafts are in neutral before disassembly.
2. Remove the spring pins from the shift forks and shift rail ends. Remove the expansion plugs from the ends of the housing.
3. Tap the shift rails out of the housing while holding one hand over the holes in the housing to prevent loss of the poppet springs and balls. Remove the shift rail ends and forks. Lift the two shaft interlock plungers and the pin out of the housing.
4. To disassemble the reverse shift rail end, remove the "C" washer to release the plunger and spring. Remove the cotter pin, spring and ball.

Assembly

1. Position the notched end of the first and second shift rail through the rear bore of the housing. Slide the first and second shift fork (use outer hole) onto the shift rail. Do not slide the shaft into its bore at the front end at this time. The three poppet notches should face the top of the housing.
2. Slide the first and second shift rail end into the rail.
3. Place the poppet spring and ball in the hole at the front end of the cover.
4. Use a suitable tool to depress the ball and spring and slide the rail into its bore over the ball.
5. Drive a spring pin through the hole in the first and second shift rail end and into the hole in the rail. Secure the shift fork to the rail with a spring pin. Slide the shift rail to its neutral position (center poppet).
6. Install the interlock plunger in the housing making sure that the end of the plunger is in the side notch of the first and second shift rail.
7. Install the third and fourth shift rail (notched end toward front) in the center bore of the housing, and assemble the shift fork, interlock pin, and poppet spring and ball. Note that the third and fourth shift rail passes through a second hole in the first and second-shift fork and that the poppet notches are

- toward housing top. Secure the third and fourth shift fork to the rail with a spring pin. Slide the rail to neutral position (center poppet).
8. Install the interlock plunger and make sure it is positioned in the notch in the third and fourth shift rail.
 9. Assemble the reverse plunger and spring in the reverse shift rail end. Retain with a "C" shaped washer inserted in the plunger groove. Assemble the ball, spring and cotter pin in the shift rail end.
 10. Install the reverse shift rail (notched end toward front), reverse shift rail end, and poppet spring and ball in the housing. Note that the two poppet notches are toward the housing top. Secure the shift rail end to the rail with a spring pin. Slide the rail to neutral position.
 11. Install expansion plugs into the three shift rail openings at each end of the housing.
 12. Install the gear shift lever, spring and spring seat and lever housing cap.



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FIG. 20 Gear Shift Housing

SPECIFICATIONS

APPROXIMATE LUBRICANT REFILL CAPACITY — WARNER T19B TRANSMISSION

Transmission	Filler Location	Drain Location	Approximate Capacity		
			U.S. Pints	Imp. Pints	Liters
Warner T-19-B (Engine Oil SAE-50 above 0°F/-18°C, SAE-30 below 0°F/-18°C)	Right Side	Right Side	7.0	5.8	3.3

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TORQUE SPECIFICATIONS — WARNER T19B TRANSMISSION

Transmission	N-m	(ft-lbs)
Transmission to Flywheel Housing	51-56	37-42
Gear Shift Housing to Case	34-47	25-35
Speedometer Cable Retainer to Output Shaft Bearing Retainer	4.5-6	3-4.5
Output Shaft Bearing Retainer to Case	48-61	34-45
Flywheel Housing to Engine	55-67	40-50
Filler Plug	34-54	25-40
Drain Plug	34-54	25-40
Output Shaft Flange Nut	102-149	75-115
Countershaft and Reverse Idler Shaft Retainer Bolt	34-47	25-35
Power Take Off Cover	34-47	25-35
Input Shaft Bearing Retainer	21-33	15-25

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SPECIAL SERVICE TOOLS

Number	Description
T50T-100-A	Impact Slide Hammer
T57L-500-B	Bench Mounted Holding Fixture
D80L-1002-A	Two-Jaw Puller
D80L-1013-A	Two-Three Jaw Puller
T75L-7025-B	Remover/Replacer Tube
T75L-7025-F	Bearing Collet
T75L-7025-H	Bearing Collet Sleeve
T84T-7025-B	Forcing Screw
T75L-7025-K	Shaft Sleeve Replacer
T75L-7025-L	Threaded Shaft Adapter Replacer
T75L-7025-Q	Dummy Bearing
T75L-7025-R	Compression Collar
T75L-7025-S	Input Shaft Collar
T83T-7111-B	Dummy Countershaft
T83T-7137-A	Clutch Aligner
T50T-7140-C	Reverse Idler Shaft Remover

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