

SECTION 8-C

MAST JACKET ASSEMBLY

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8-18 REMOVAL AND INSTALLATION OF STEERING MAST JACKET ASSEMBLY

a. Removal

1. Remove two nuts holding flexible coupling to steering shaft flange on power steering cars. On manual steering cars, remove bolt and nut that retain clamp to coupling and slide clamp off from couplings.

2. Remove lock key from each shift rod and pull rods out of shift levers.

3. Remove the screws that retain toe pan cover plate to cowl. See Figure 8-80.

4. Remove the nuts that retain mast jacket clamp. See Figure 8-80.

5. Disconnect Wiring Harness Connectors from mast jacket and disconnect horn wire.

6. Align shift lever or levers with hole in cowl and remove jacket assembly.

b. Installation

1. Align shift lever or levers with hole in cowl and slide end of assembly through hole. Loosely attach jacket to instrument panel. Rubber seal goes between clamp and mast jacket.

2. Position mast jacket assembly so that flange on steering shaft is properly positioned on flexible coupling. Make sure coupling rivet heads are positioned in the center of their correct slots in flange. Small rivet goes in small slot and large rivet in large slot. On manual steering cars, opening in coupling must line up with mark on steering gear worm shaft. See Figure 8-15.

3. Position mast jacket so steering shaft is in center of lower end of assembly. See Figure 8-81. Attach toe pan cover to cowl. If toe pan cover plate does not line up with attaching holes in cowl when steering shaft is correctly aligned, it will be necessary to drill new holes in cowl.

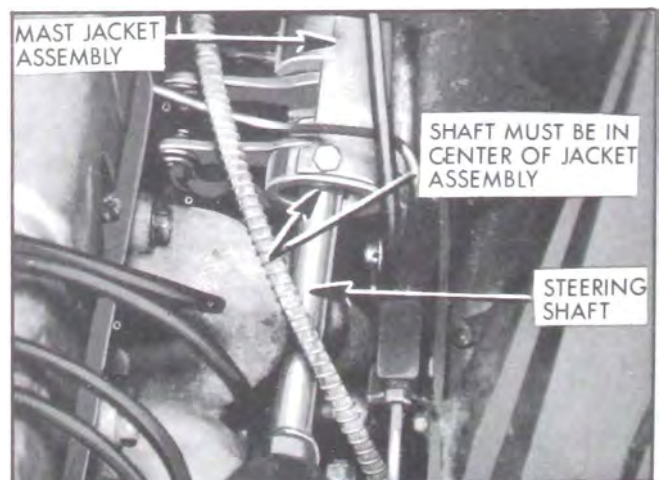


Figure 8-81—Steering Shaft to Mast Jacket Alignment

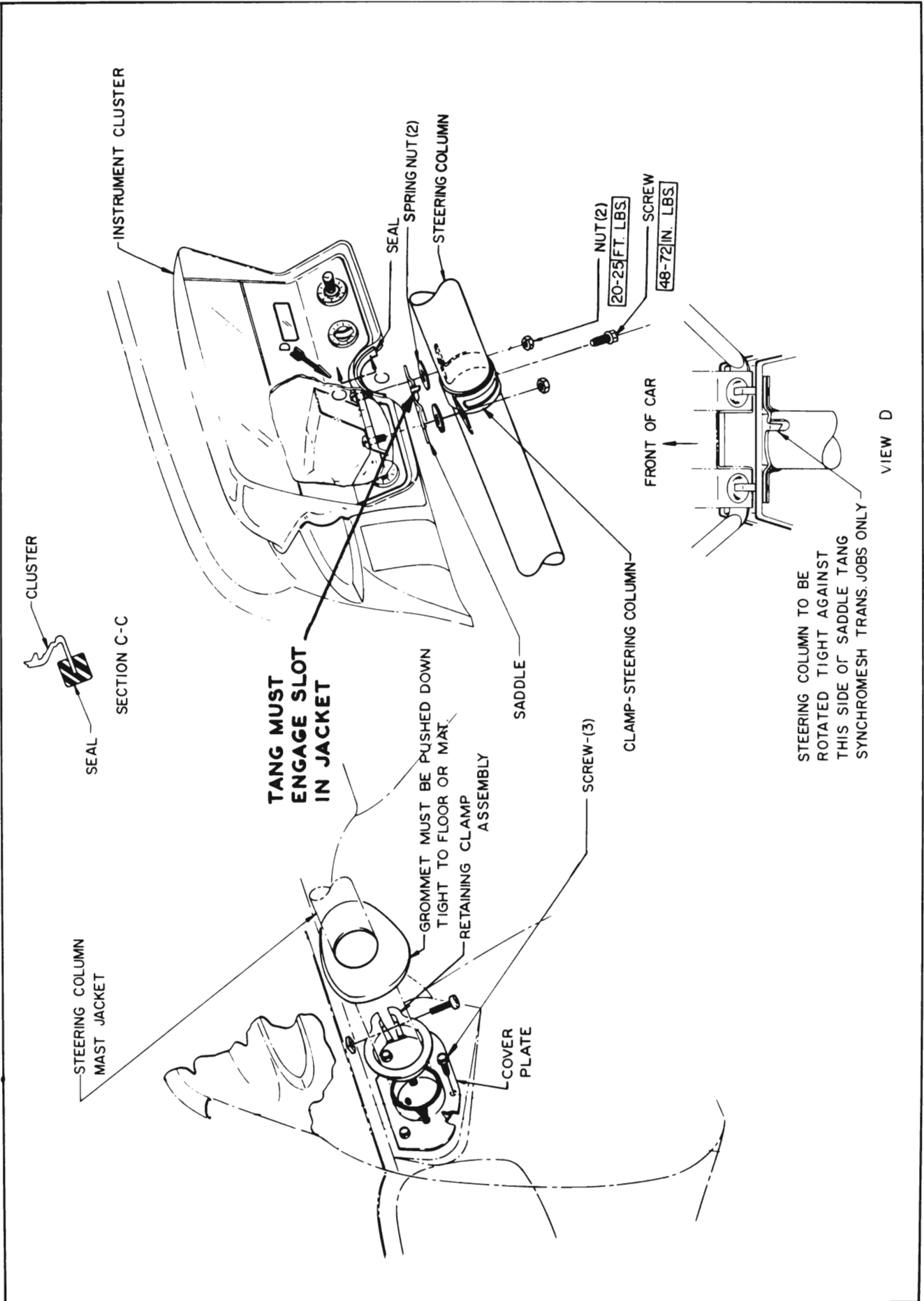


Figure 8-80—Mast Jacket Installation

4. Check distance between edge of coupling and edge of mast jacket. See Figure 8-82. Measurement should be approximately 4-3/4". If necessary, loosen clamp that retains jacket to toe pan and reposition jacket.

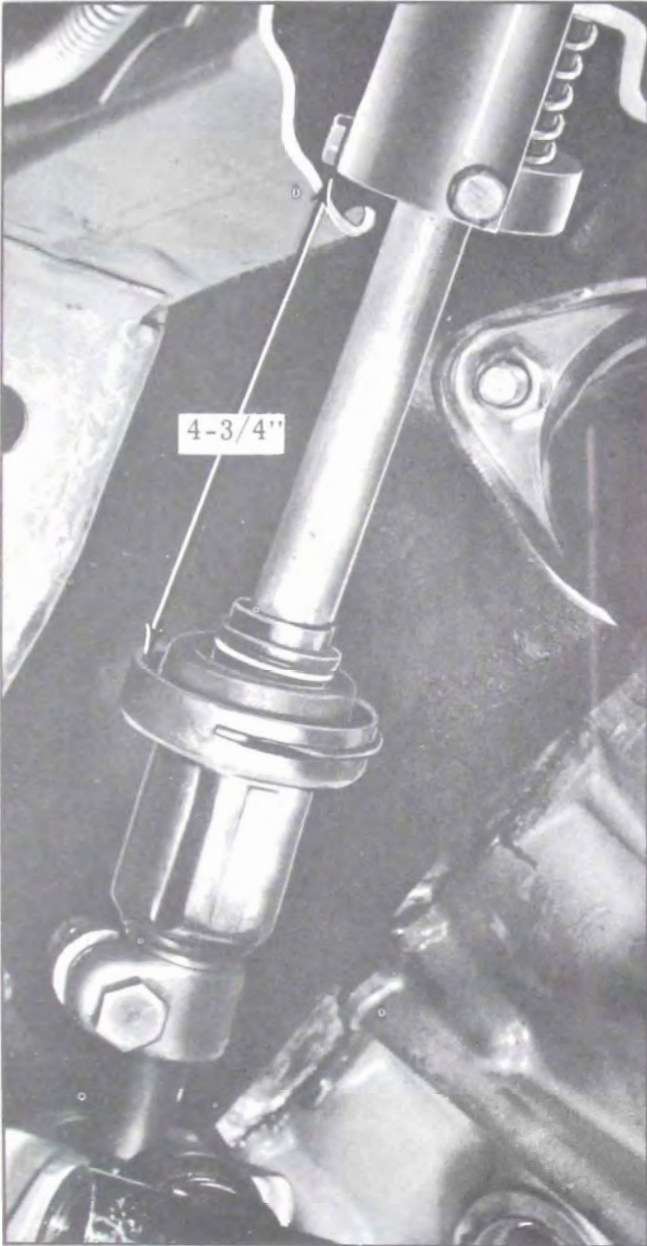


Figure 8-82—Correct Position of Mast Jacket to Lower Coupling

5. Place tang of mast jacket saddle in slot in jacket and tighten clamp nuts. See Figure 8-80.

6. Plug wiring harness connectors on switch-
es on mast jacket and connect horn wire.

7. On power steering cars, install the two nuts and lock washers on the bolts that retain

flexible coupling to steering shaft flange. Flange must not contact rivets, and horn ground wire must be on bolt between flexible coupling and flange. On manual steering cars, position clamp on coupling and install bolt and nut. Tighten to 40 ft. lbs.

8. Attach each shift rod to shift lever with lock key.

8-19 DISASSEMBLY AND ASSEMBLY OF THREE-SPEED SYNCHROMESH TRANSMISSION MAST JACKET AND TRANSMISSION CONTROL SHAFT ASSEMBLY

NOTE: Refer to Figure 8-83 for disassembly and assembly.

a. Disassembly

1. Remove mast jacket assembly from car. Par. 8-18.

2. Remove steering wheel. Par. 8-5.

3. Remove back-up light switch and operating lever from mast jacket.

4. Slide horn wire grommet retainer from mast jacket.

5. Remove horn contact ring and wire assembly.

6. Remove direction signal switch spring pin and spring. Then pull actuator rod out of actuator housing.

7. Remove bearing upper snap ring, washer and spring from steering shaft. Slide steering shaft out of mast jacket assembly.

8. Remove bearing retainer from actuator housing and lift bearing out of housing.

9. Remove the three actuator housing retaining screws and lift actuator from jacket.

10. Remove thrust washer and actuator lock plate.

11. Drive out shift lever pivot pin with a suitable drift. Support shift housing to prevent damage.

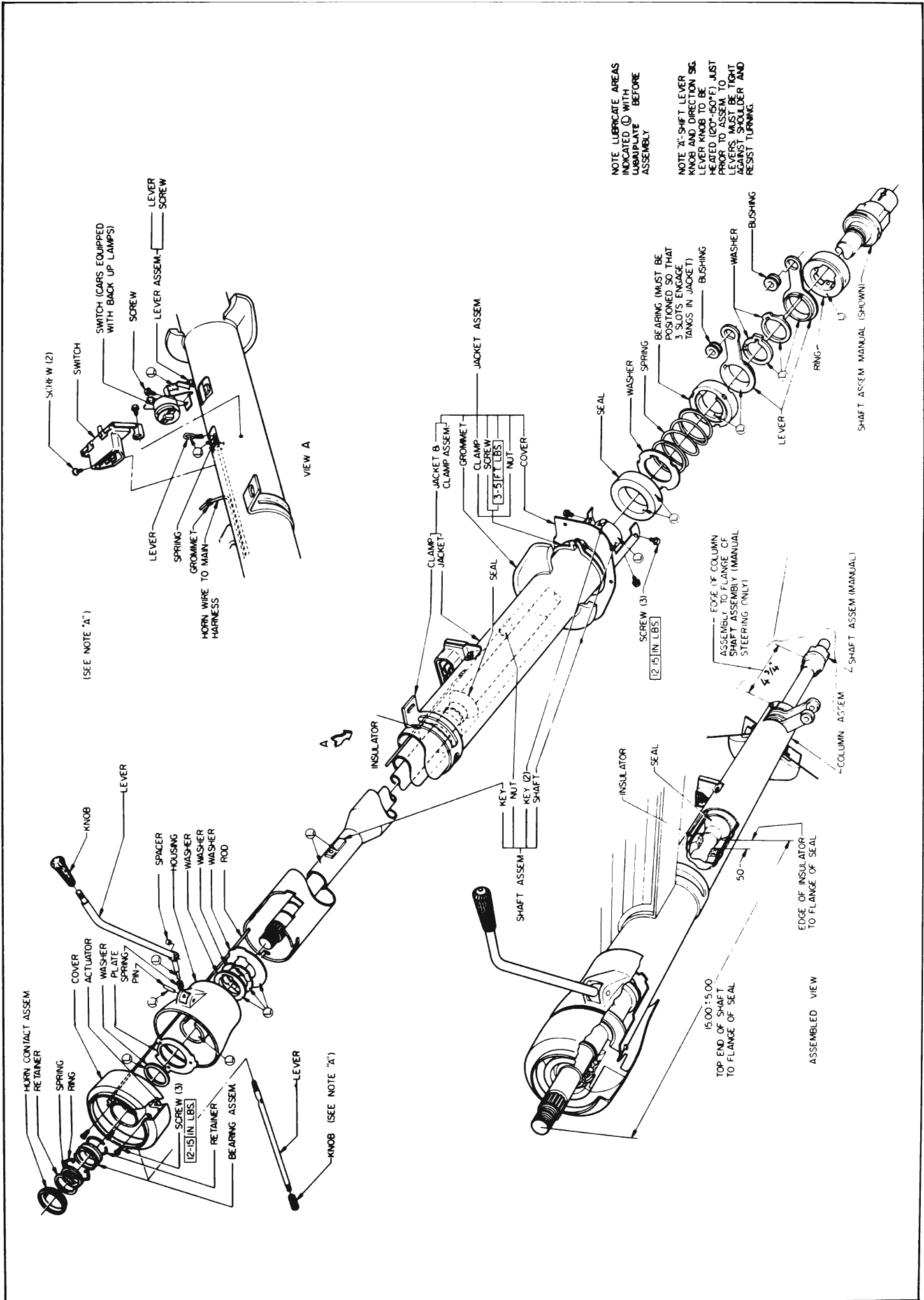


Figure 8-83—Mast Jacket and Transmission Shaft Assembly - Three-Speed Synchromesh Transmission

12. Remove shift lever and anti-rattle spring.
13. Slide shift housing off from mast jacket. It may be necessary to use a wood block and tap it off.
14. Remove nylon washer, wave washer and spacer washer from upper end of the shift control shaft.
15. Remove the three screws that retain the control shaft retainer ring to lower end of mast jacket. See Figure 8-84.

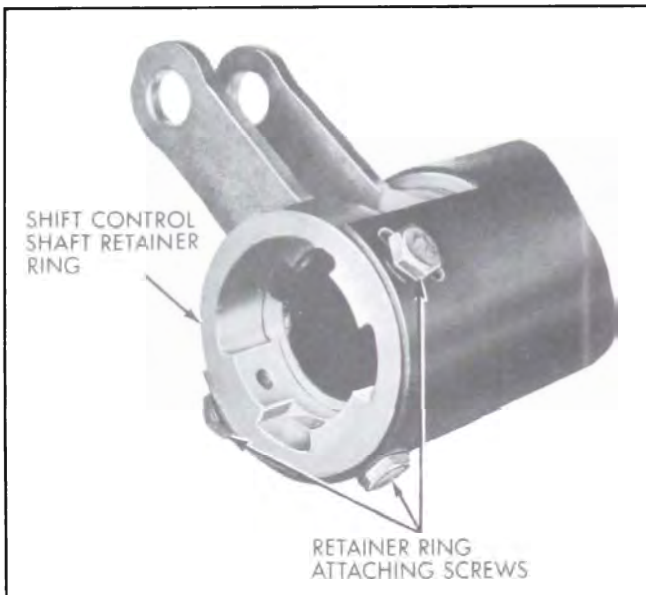


Figure 8-84—Shift Control Shaft Retainer Ring

16. Slide control shaft out of mast jacket.
17. Remove lower shift lever from control shaft.
18. Push the nylon bearing onto the control shaft far enough to clear the second lug and rotate the bearing so that it holds the spring in compression. See Figure 8-85.
19. Remove the two nylon washers and the upper shift lever by guiding them over the locating lugs on control shaft. See Figure 8-85.

20. Align the nylon bearing with the lugs on the control shaft and remove the bearing, spring and washer from shaft.

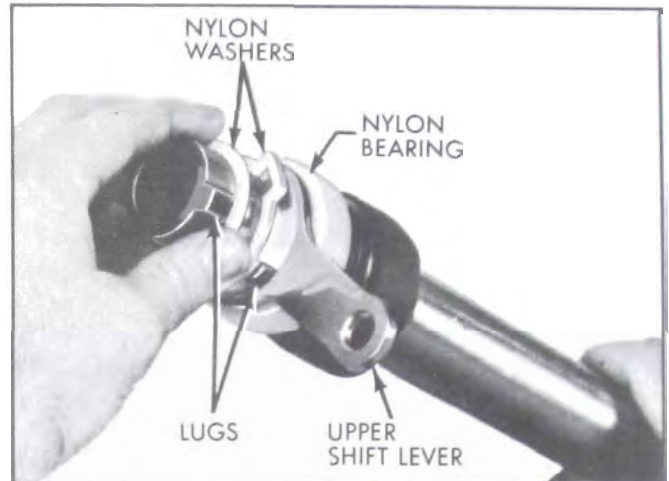


Figure 8-85—Removing Nylon Washers from Shift Control Shaft

b. Assembly

NOTE: Lubricate areas indicated with L on figure 8-83 with lubriplate during assembly of parts.

1. Position spring stop washer on shift control shaft so that it seats against the shoulder on the shaft.

2. Install spring and nylon bearing on control shaft. Position bearing so that the second location lug holds the bearing and spring in place. See Figure 8-86.

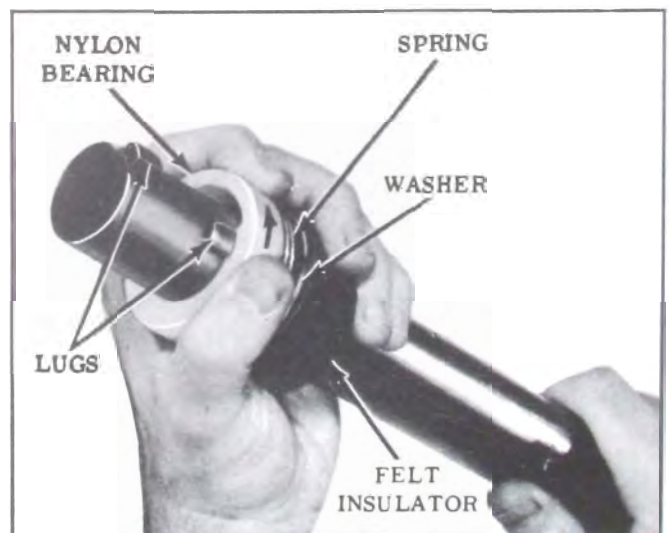


Figure 8-86—Installing Nylon Bearing

3. Install the upper shift lever on the control shaft so that the flange on lever is toward lower end of shaft. See Figure 8-85.

4. Install a nylon washer onto the control shaft so that its locating tab engages the opening in the upper lever flange. See Figure 8-85.

5. Position the second nylon washer on the shaft so that its locating tab is pointing toward lower end of shaft.

6. Install the lower shift lever on control shaft so that the opening in lever engages the lug on the control shaft. Position lower nylon washer so that its tab engages the opening in the lower shift lever. See Figure 8-87.

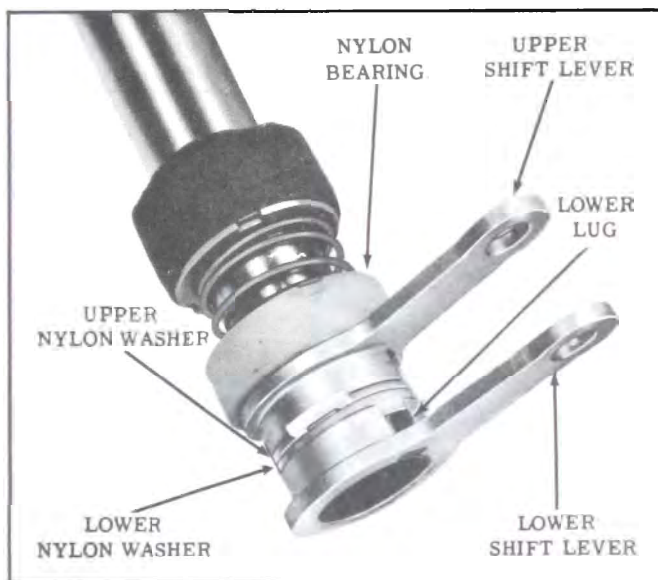


Figure 8-87—Control Shaft Assembly Ready to be Installed in Mast Jacket

7. Rotate nylon bearing until the groove in bearing is over the upper lug on shaft and allow spring to seat bearing against the upper shift lever.

8. Insert control shaft into the bottom end of mast jacket. The three slots in the nylon bearing must align with the tangs in the mast jacket. See Figure 8-83.

9. Insert control shaft retainer ring in mast jacket and install the three retaining screws. See Figure 8-84.

10. Slide the spacer washer over upper end of control shaft and insert it in mast jacket as shown. See Figure 8-88.

11. Install wave washer and nylon washer on control shaft. See Figure 8-83.

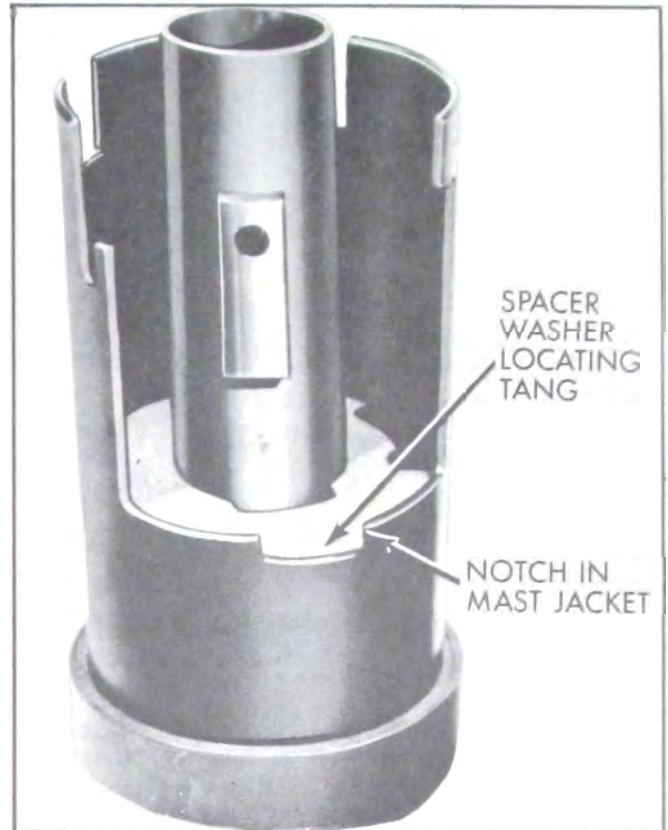


Figure 8-88—Shift Control Shaft Spacer Washer Installation

12. Slide shift housing on control shaft, aligning slot in housing with raised lug on shaft.

13. Position anti-rattle spring on end of shift lever and insert lever into shift control shaft. Support shift housing and install shift lever pivot pin.

14. Install turn signal actuator lockplate over control shaft and inside mast jacket as shown. See Figure 8-89.

15. Position thrust washer around control shaft and on shift housing.

16. Install actuator housing, using the three screws to retain it to lock plate.

17. Install a new bearing lower snap ring on steering shaft, being sure it is properly seated in groove on shaft. See Figure 8-90.

18. Insert steering shaft in shift control shaft. Dust seal must be on shaft so that it will be located as shown in Figure 8-83 when shaft is installed.

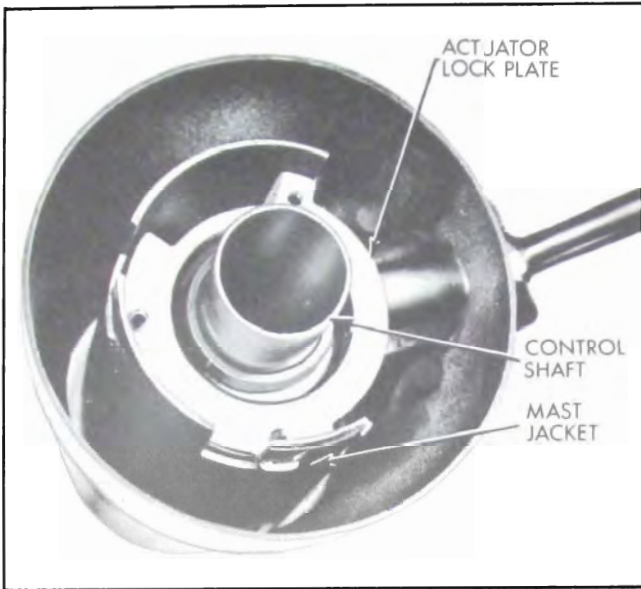


Figure 8-89—Installation of Actuator Lock Plate

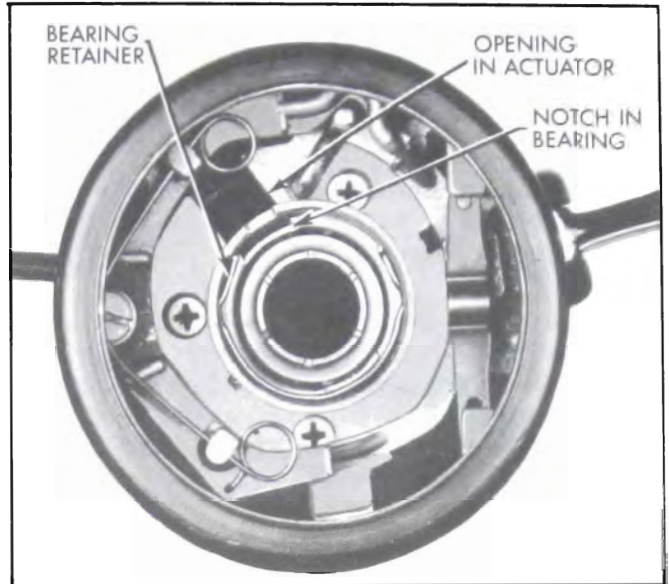


Figure 8-91—Bearing and Retainer Installation

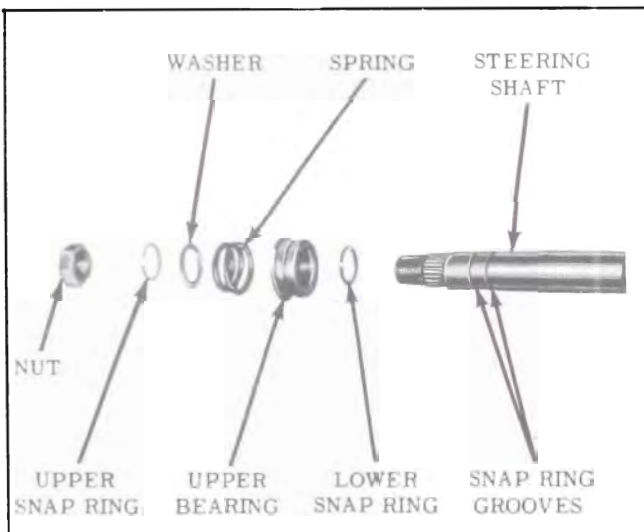


Figure 8-90—Steering Shaft Upper and Lower Snap Rings

19. Place bearing in actuator housing so that it is located as shown in Figure 8-91. Install bearing retainer so that it engages slots in actuator. See Figure 8-91.

20. Install spring, washer and a new bearing upper snap ring on steering shaft. Be sure snap ring is seated in groove on shaft.

21. Install horn contact and wire assembly as shown, feeding wire inside mast jacket and out through opening provided for wire in jacket. See Figure 8-83 and 8-92.

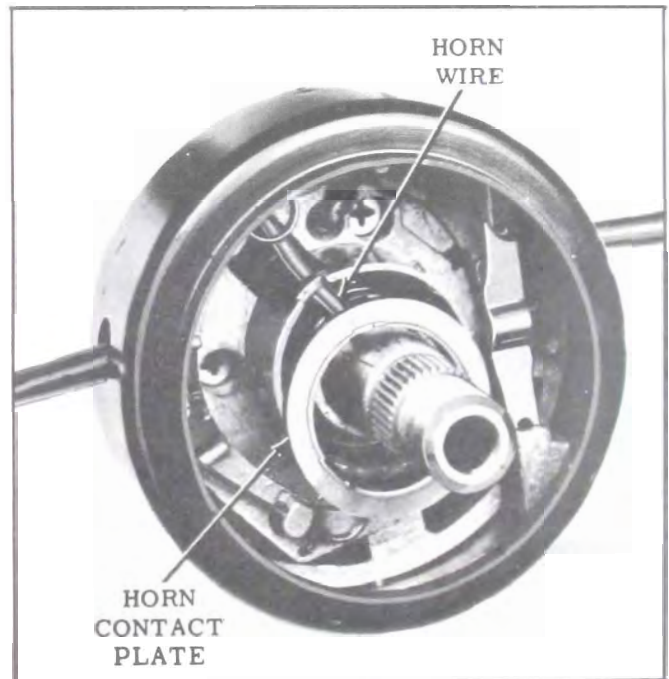


Figure 8-92—Horn Contact and Wire Installation

22. Install direction signal actuator rod in actuator housing. Install spring and spring pin on lower end of rod.

23. Install direction signal switch.

24. Install back-up light switch and operating lever.

25. Install steering wheel.

8-20 DISASSEMBLY AND ASSEMBLY OF AUTOMATIC TRANSMISSION MAST JACKET ASSEMBLY

NOTE: Refer to Figure 8-93 for disassembly and assembly.

a. Disassembly

1. The disassembly of the automatic transmission mast jacket is the same as steps 1 through 16 of the three-speed transmission mast jacket disassembly, par. 8-19, sub-par a. except for the following.

(a) It is necessary to remove neutral safety and operating lever.

(b) There is a shift lever return spring located under the end of the shift lever. This spring may pop out when lever is removed.

(c) The shift control shaft, nylon bearing and shaft lever are serviced as an assembly and

are not to be disassembled.

b. Assembly

1. Slide shift control shaft assembly into mast jacket so that the slots in nylon bearing engage tangs in jacket.

2. Install control shaft spring and retainer ring in mast jacket.

3. To complete assembly, use steps 10 through 25 of Par. 8-19, sub-par. b, as the assembly procedure is the same except for the following:

(a) Shift lever return spring must be assembled under end of shift lever.

(b) When installing actuator housing, dial light wire must be fed down through mast jacket and out through hole provided for it in jacket. See Figure 8-93.

(c) Neutral safety switch must be adjusted after it has been installed.

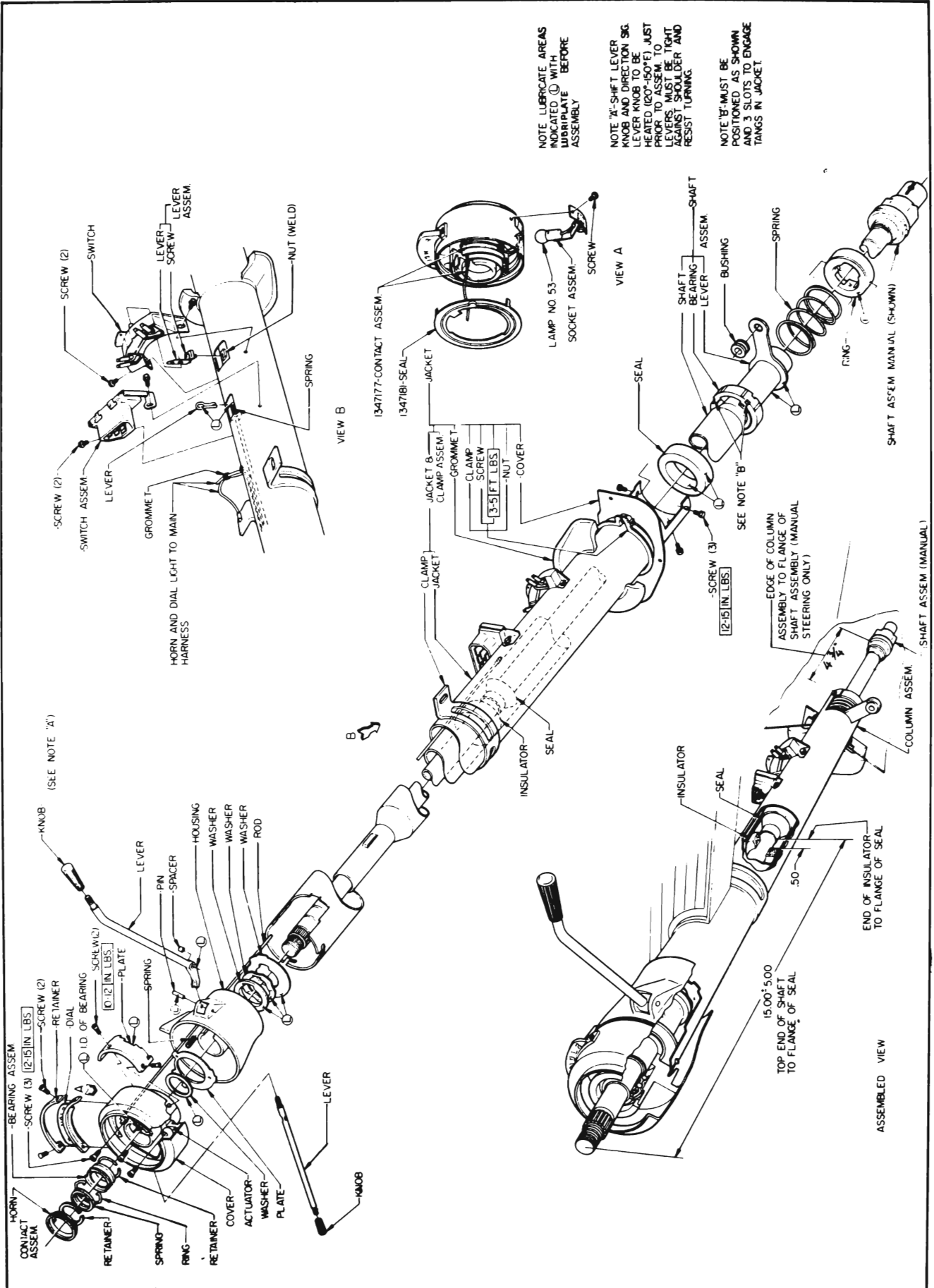


Figure 8-93—Mast Jacket and Transmission Shaft Assembly - Automatic Transmission

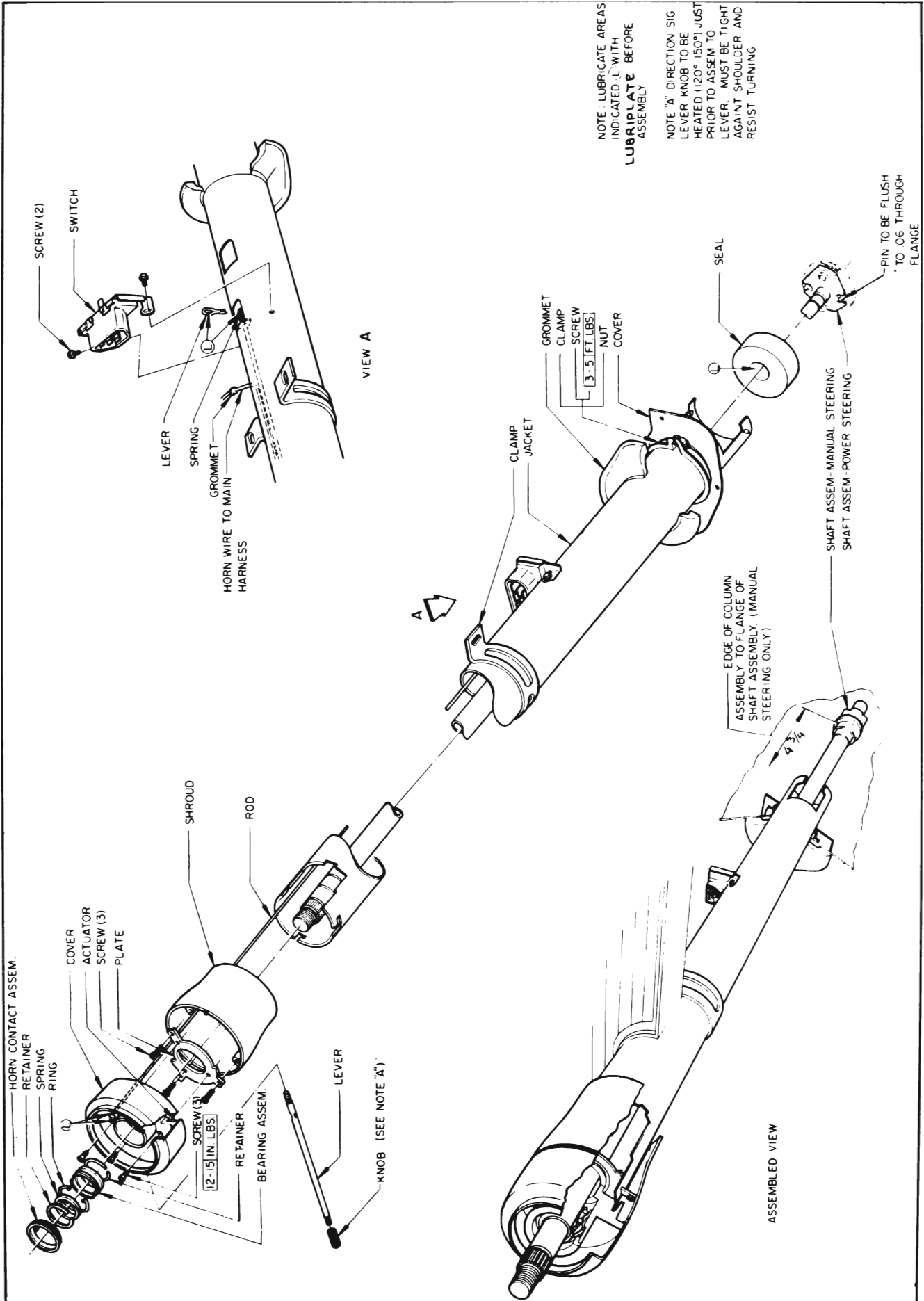
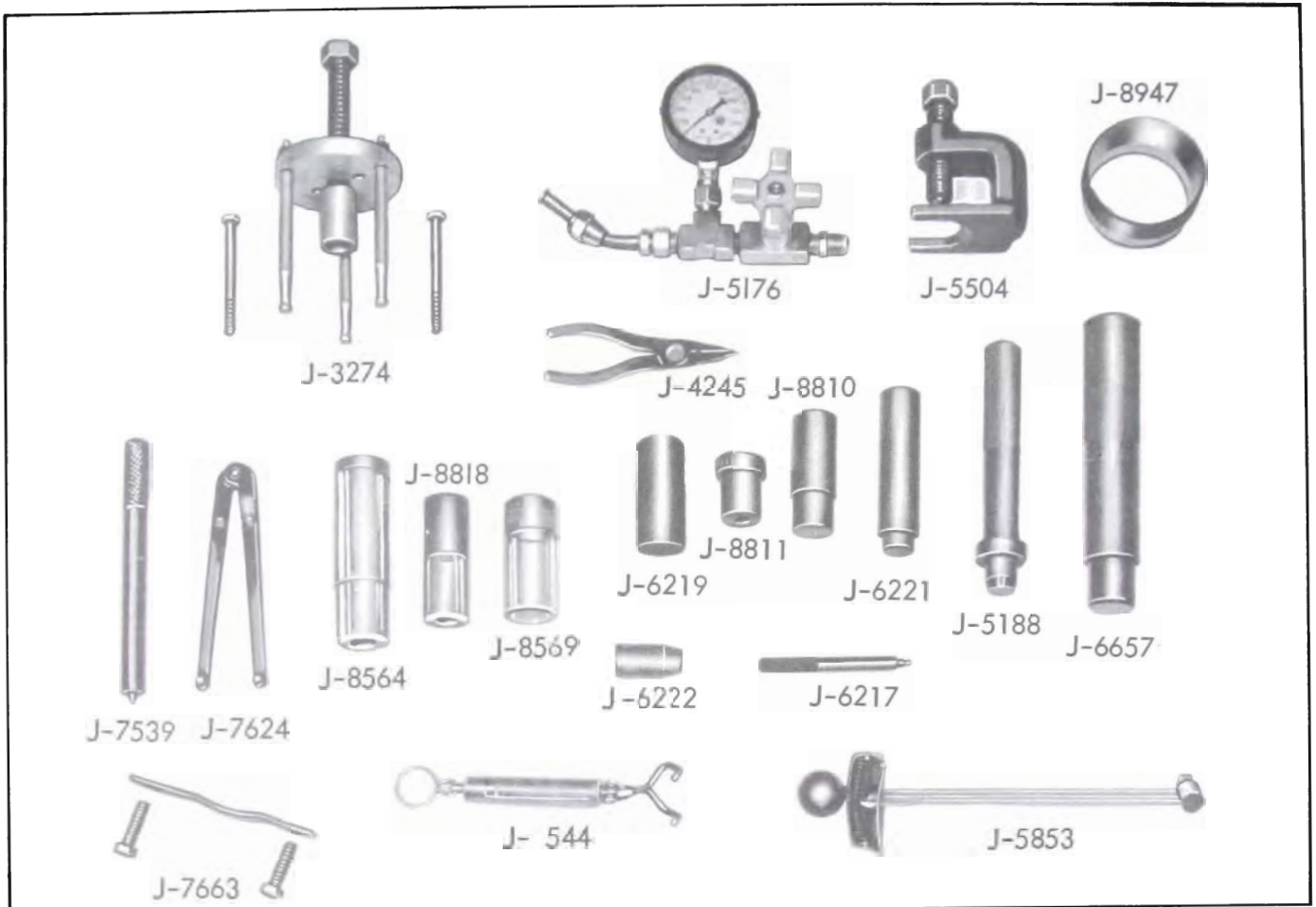


Figure 8-94—Mast Jacket Assembly - 4 Speed Transmission



STEERING TOOLS

- J- 544 Steering Gear Tension Scale 0-4 lbs.
- J-3274 Steering Wheel Puller
- J-4245 True Pliers
- J-5176 Testing Gauge
- J-5188 Valve Cover Seal Installer
- J-5504 Pitman Arm Puller
- J-5854 0-100 in. lb. Torque Wrench
- J-6217 Valve Connector Seal Installer
- J-6219 Steering Gear Pitman Shaft Oil Seal Installer
- J-6221 End Cover Bearing Remover and Installer (Adjuster Plug Needle Bearing)
- J-6222 End Cover Seal Protector (Stub Shaft Protector)
- J 6657 Pitman Shaft Needle Bearing Remover and Installer
- J-7539 Power Steering Gear Ball Retaining Tool
- J-7624 Power Steering Gear Adjustable Spanner Wrench
- J-7663 Power Steering Pump End Plate Installer
- J-8564 Worm Shaft Oil Seal Installer
- J-8569 Pitman Shaft Oil Seal Installer
- J-8810 Pitman Shaft Bushing Remover and Replacer
- J-8811 Pitman Shaft Seal and Upper Bearing Cup Installer
- J-8818 Power Steering Pump Seal Installer
- J-8947 Teflon Ring Compressor

Figure 8-95—Manual and Power Steering Special Tools