

identification tag and sector shaft cover bolts. Torque the bolts to specification.

16. Using an in-lb torque wrench, adjust the gear input shaft meshload to specification.

STEERING GEAR HOUSING

Disassembly and Assembly

1. Remove the snap ring from the lower end of the housing (Fig. 8).
2. Remove the lower seal from the housing (Fig. 7).

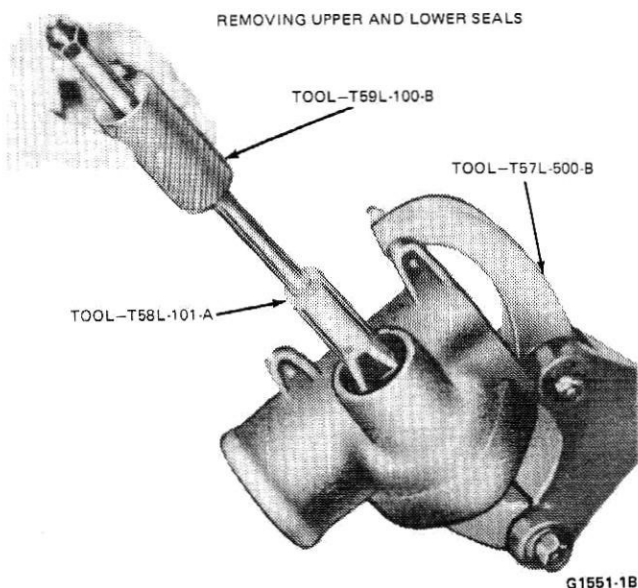


FIG. 7 Removing Upper and Lower Seals

3. Remove the upper seal from the housing.
4. Lubricate both new sector shaft seals with clean lubriplate or equivalent.
5. Apply lubriplate or equivalent to the sector shaft seal bore in the housing.
6. Place the dust seal on tool T77L-3576-A so the raised lip of the seal will fit into the seal driver tool. Then slide the pressure seal onto the tool. The flat back side of the seal should be against the flat side of the dust seal (Fig. 8).
7. Insert the seal driver tool into the sector shaft bore, carefully aligning the seals with the bore. Slowly drive on the tool until the seals are seated in the bore.
8. Install the snap ring in the gear housing, seating the snap ring in its groove.

VALVE HOUSING

Disassembly and Assembly

1. Remove the dust seal (Fig. 9) from the rear of the valve housing, using Tools T59L-100-B and T58L-101-A. Discard the seal.
2. Remove the snap ring from the valve housing.
3. Turn the fixture so the valve housing is upside down.
4. Insert Tool T65P-3524-A2 and A3 in the valve body assembly opposite the seal and gently tap the bearing and seal out of the housing (Fig. 10). Discard the seal. **Do not damage the valve bore in the housing when inserting and removing the tool.**
5. Remove the fluid inlet and outlet tube Seats with Tube Seat Remover T74P-3504-L if they are damaged.

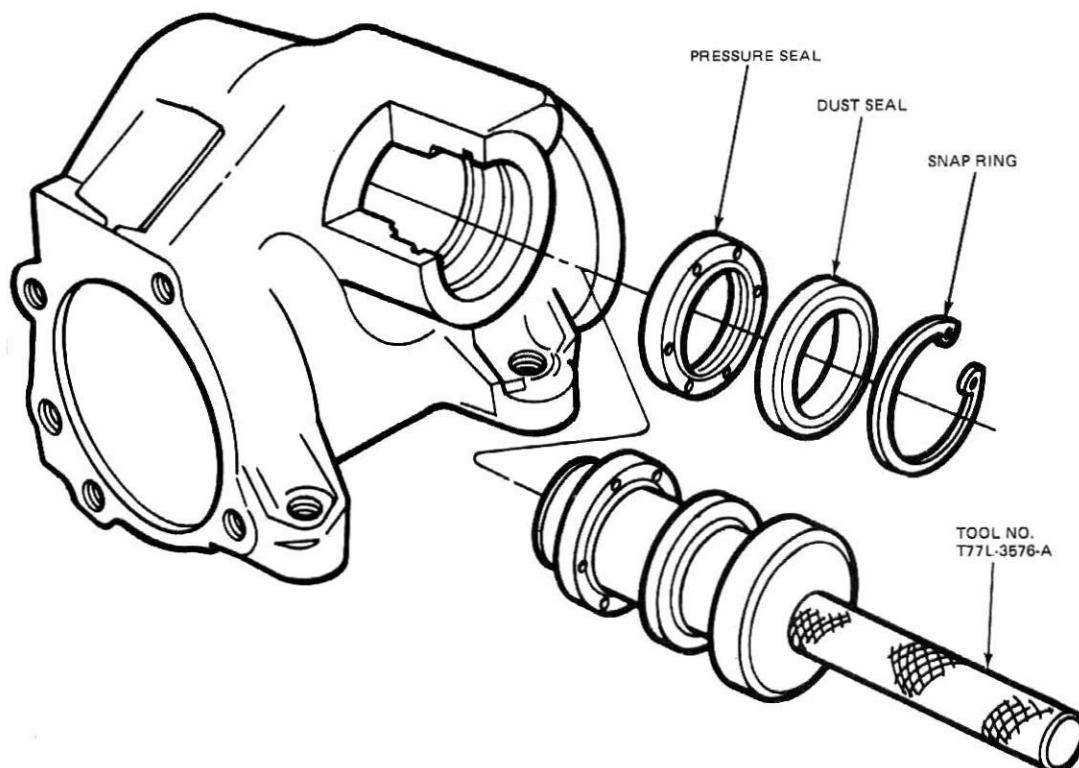


FIG. 8 Installing Sector Shaft Seals

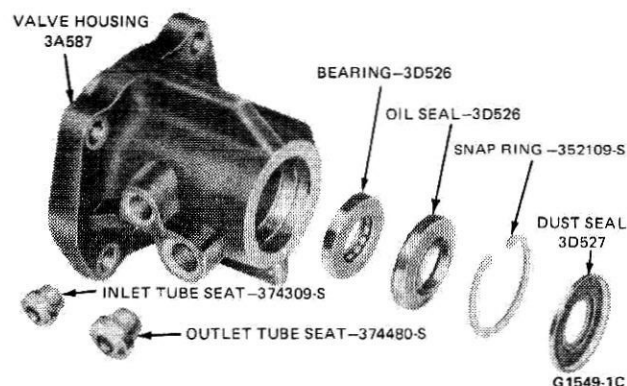


FIG. 9 Valve Housing Disassembled

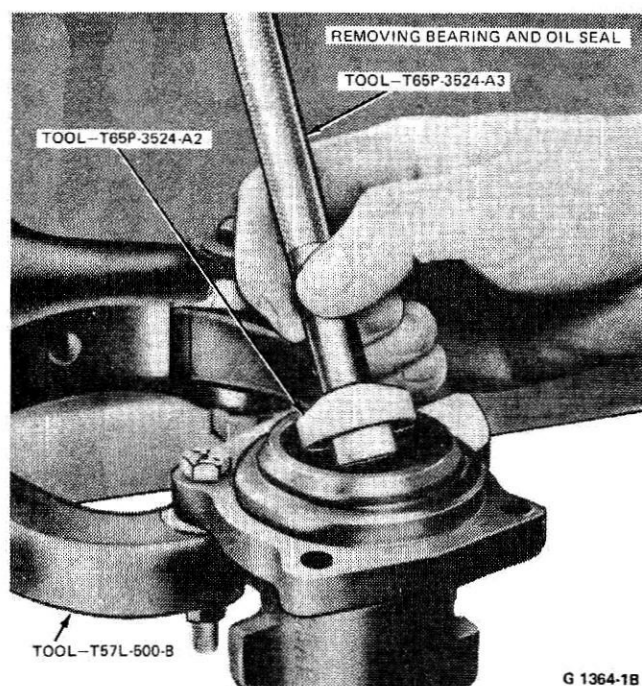


FIG. 10 Removing Bearing and Oil Seal

6. Coat the fluid inlet and outlet tube seats with petroleum jelly and install them in the housing with Tube Seat Replacer T74P-3504-M.
7. Coat the bearing and seal surface of the housing with petroleum jelly.
8. Install the bearing in the valve housing and seat the bearing as shown in Fig. 11. Be sure the bearing rotates freely.
9. Dip a new oil seal in gear lubricant and place it in the housing with the metal side facing outward. Drive the seal into the housing until the outer edge does not quite clear the snap ring groove (Fig. 12).
10. Place the snap ring in the housing and drive the snap ring until ring seats in its groove (Fig. 12).
11. Place the dust seal in the housing **with the rubber side facing out**. Drive the seal until it seats behind the undercut in the input shaft.

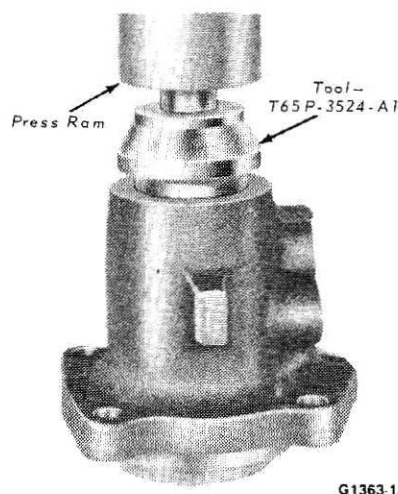


FIG. 11 Installing Valve Housing Bearing

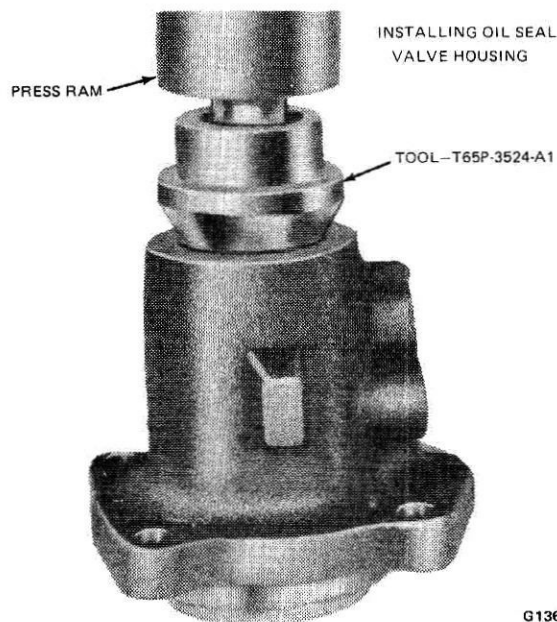


FIG. 12 Installing Oil Seal in Valve Housing

WORM AND VALVE SLEEVE

Disassembly and Assembly

1. Remove valve sleeve rings from sleeve by inserting the blade of a small pocket knife under them and cutting them off (Fig. 13).
2. Mount the worm end of the worm and valve sleeve assembly into a soft jawed vise (Fig. 14).
3. Install mandrel Tool T75L-3517-A1 over the sleeve; slide one valve sleeve ring over the tool (Fig. 15).
4. Slide the pusher Tool T75L-3517-A2 over the mandrel; rapidly push down on the pusher tool, forcing the ring down the ramp and into the fourth

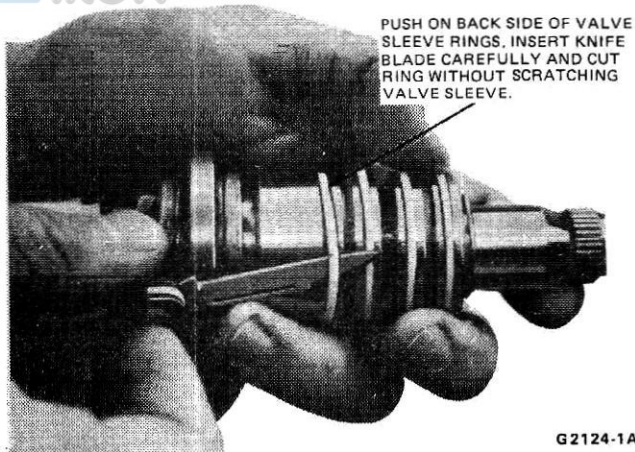


FIG. 13 Removing Valve Sleeve Rings

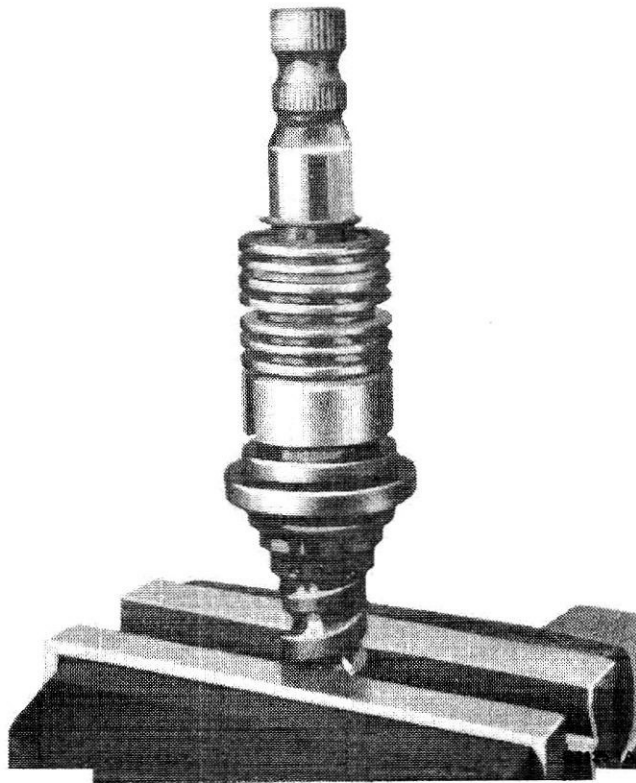


FIG. 14 Worm and Sleeve With Ring Removed

groove of the valve sleeve. Repeat this step three more times, and each time add one of the spacers, Tool T75L-3517-A3, under the mandrel tool. By adding the spacer each time, the mandrel tool will line up with the next groove of the valve sleeve (Figs. 16 and 17).

5. After installing the four valve sleeve rings, apply a light coat of gear lubricant to the sleeve and rings.
6. Install one spacer over the input shaft as a pilot for installing the sizing tube. Slowly install the sizing tube, Tool T75L-3517-A4, over the sleeve valve end of the worm shaft onto the valve sleeve rings. Make sure that the rings are not being bent over as the tube is slid over them (Figs. 18 and 19).

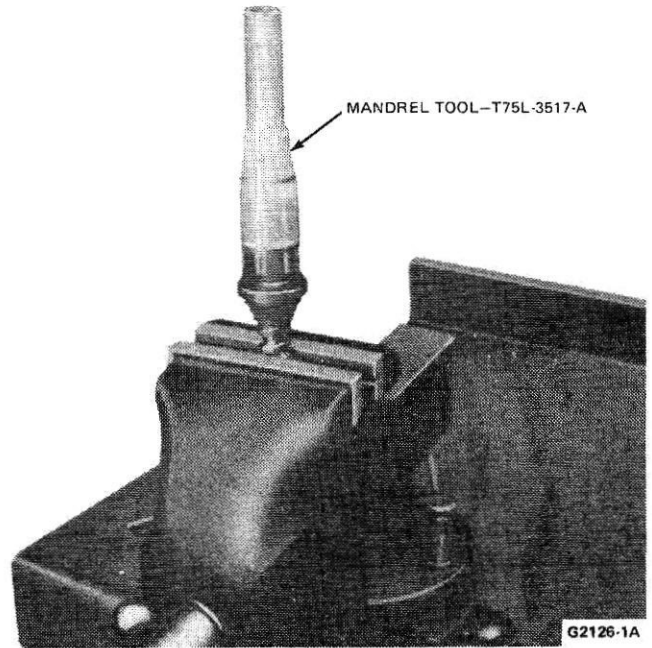


FIG. 15 Mandrel Installed on Sleeve

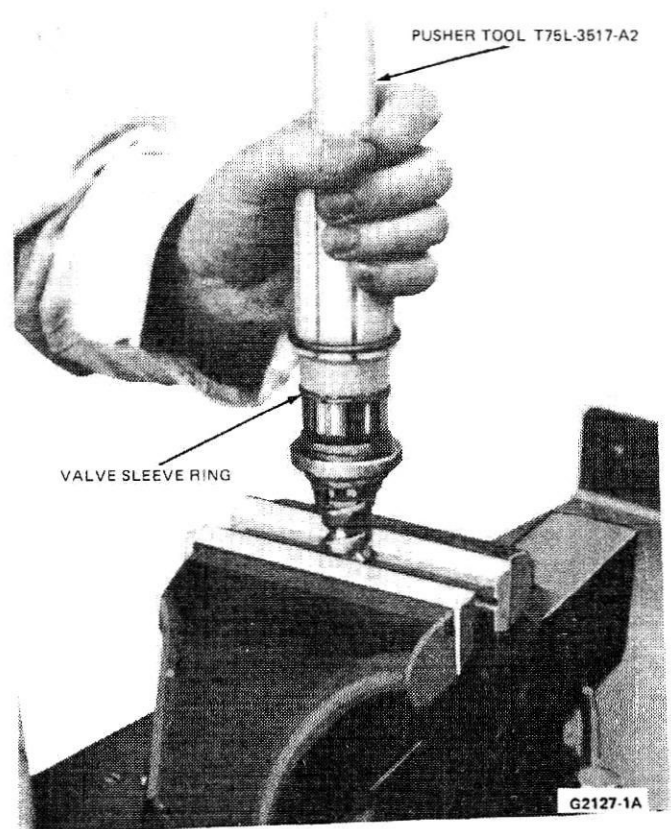


FIG. 16 Installing Ring on Valve Sleeve

7. Remove the sizing tube and check the condition of the rings. Make sure that the rings turn freely in the grooves.
8. Fig. 20 shows the complete set of tools needed to perform the above operations. The tool Kit Number for the complete set is T75L-3517-A.