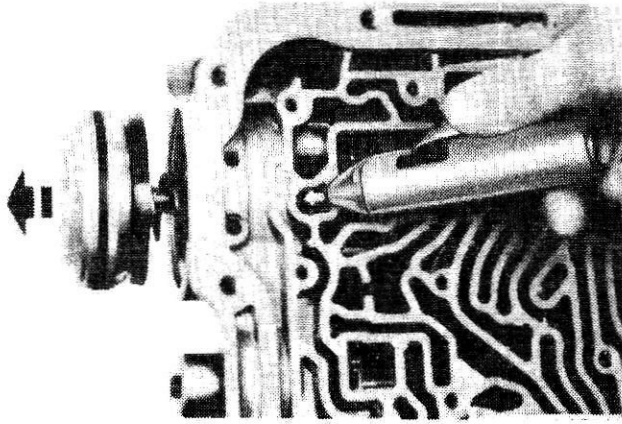
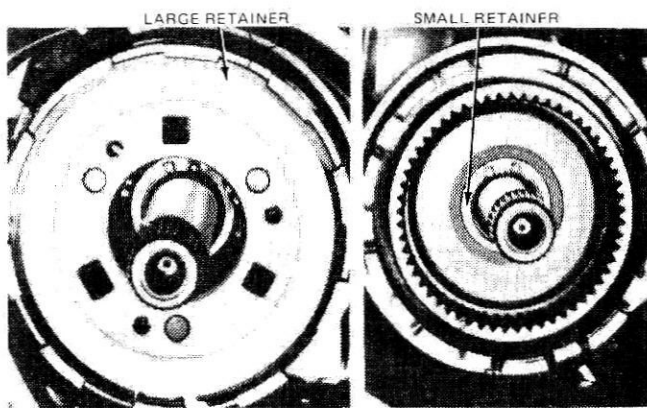




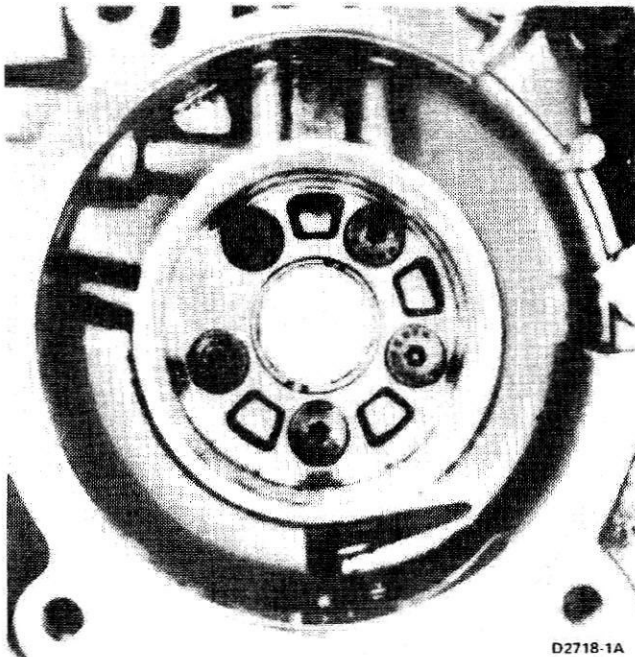
D2710-1A

FIG. 23 Removing Servo Piston



D2716-1A

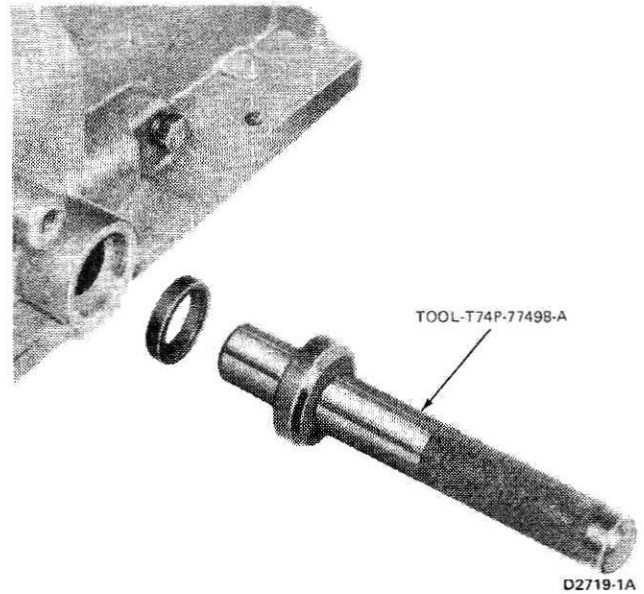
FIG. 24 Removing Planet Gear Carrier



D2718-1A

FIG. 25 One-Way Clutch

overheating. Replace the entire set if necessary. If new plates are used immerse them in transmission fluid for 30 minutes before assembly.



D2719-1A

FIG. 26 Shift Lever Oil Seal Installation

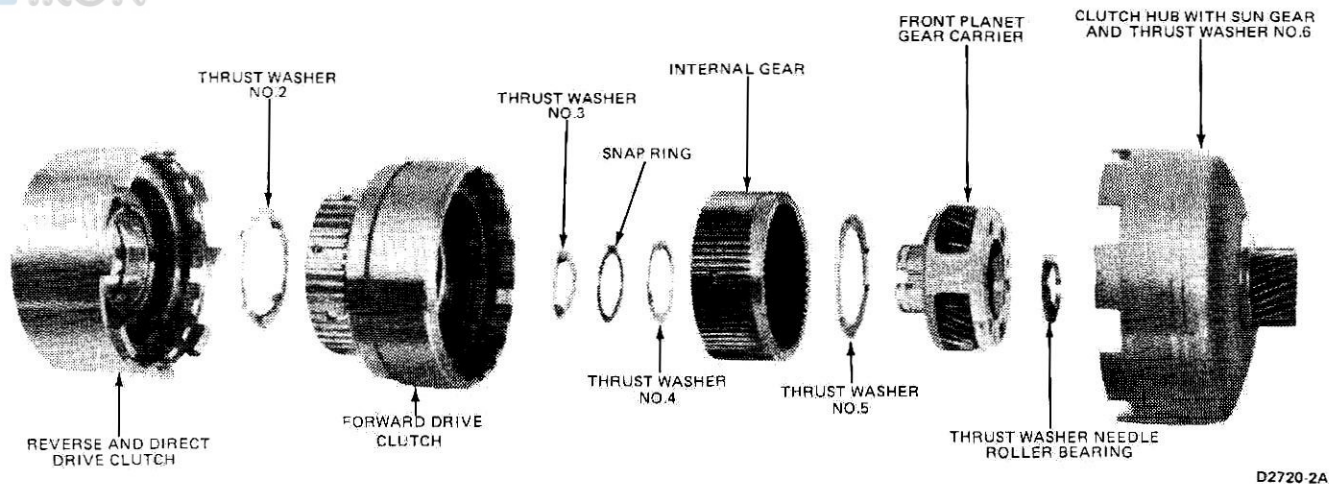
2. Install new O-rings on the piston and clutch body.
3. Carefully install the clutch piston. Use Tool T74P-77404-A to protect the inner seal (Fig. 31).
4. Install the compression springs (20 required) and the spring retainer.
5. Compress the springs using Tool T65L-77515-A and install the retaining ring. Release the load on the springs and remove the tool.
6. Install the clutch plates in the correct order (Fig. 30) and secure with the retaining ring.
7. Use a feeler gage to check the clearance between the retaining ring and the pressure plate (Fig. 32). **Push downward** on the plates while making this check. The clearance should be to specifications. If the clearance is not within specification, install a different, suitable retaining ring. Refer to the specifications at the end of this Part for the clearance specification and the available retaining ring sizes.

FORWARD CLUTCH

Disassembly

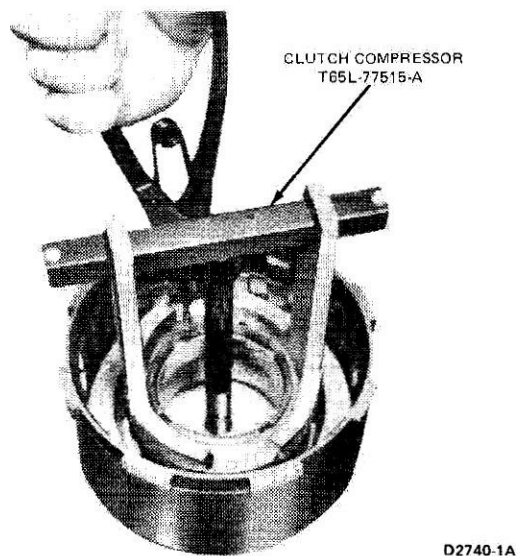
Plate and piston removal procedures for the forward speed clutch assembly are similar to those for the reverse and direct drive clutch (Figs. 28 and 29).

1. Remove the retaining ring and remove the clutch plates and corrugated washer (Fig. 33).
2. Compress the springs with Tool T65L-77515-A being careful not to damage the piston.
3. Remove the retainer and carefully release the load on the springs.
4. Remove the springs and spring retainer.
5. Carefully remove the piston using air pressure.
6. Remove the hydraulic pump.
7. Remove the O-rings from the piston and clutch body.



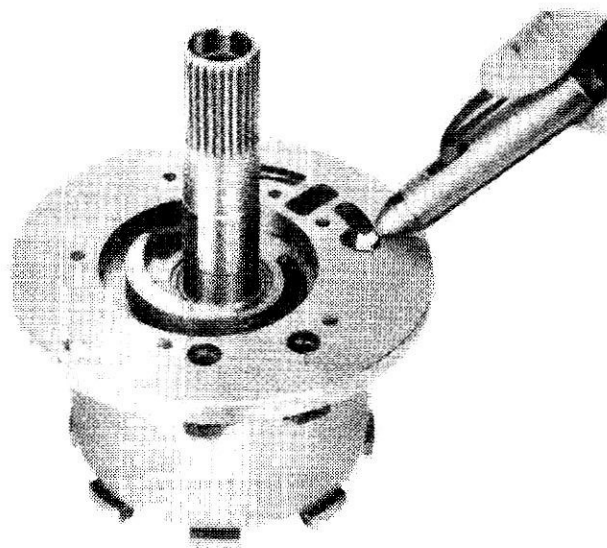
D2720-2A

FIG. 27 Forward Part of Gear Train Disassembled



D2740-1A

FIG. 28 Plate Pack and Spring Removal



D2721-1A

FIG. 29 Removal of Hydraulic Piston

Assembly

1. Inspect the steel clutch plates and the clutch lining plates for wear, damage or effects of overheating. If it is necessary to replace the entire set, immerse the new set of clutch plates in oil for 30 minutes before assembly.
2. Use protective tooling to prevent damage to inner and outer seals (Fig. 34). Install new O-rings on the piston, apply petroleum jelly to the rings and to the shoulder at the clutch stub, and install the piston carefully.
3. Install the compression springs and the spring retainer.
4. Use Tool T65L-77515-A to compress the springs, and install the retaining ring.
5. Install the disc spring washer and the clutch plates in the correct order (Fig. 33) and position the retaining snap ring.
6. Check the clearance between the retaining ring and the support plate following the procedure described for the Reverse and Direct Drive Clutch.
7. Install new steel seals on the clutch stub.

INTERNAL GEAR AND PLANET GEAR ASSEMBLY

Disassembly

1. Remove the snap ring, the planet gear carrier internal gear and thrust washer No. 4 (Fig. 35).
2. Separate the planet gear carrier from the internal gear and remove thrust washer No. 5.

Assembly

1. Insert the planet gear carrier with thrust washer No. 5 in the internal gear. Position thrust washer No. 5 again, and secure with a new snap ring (the internal gear must be free of the planet gear carrier).
2. **The needle roller bearing (No. 6 Washer) can only be replaced complete, with the planet gear carrier. If the thrust washer needle roller bearing is removed, the washer must be positioned with the collar pointing toward the rear (Fig. 35).**

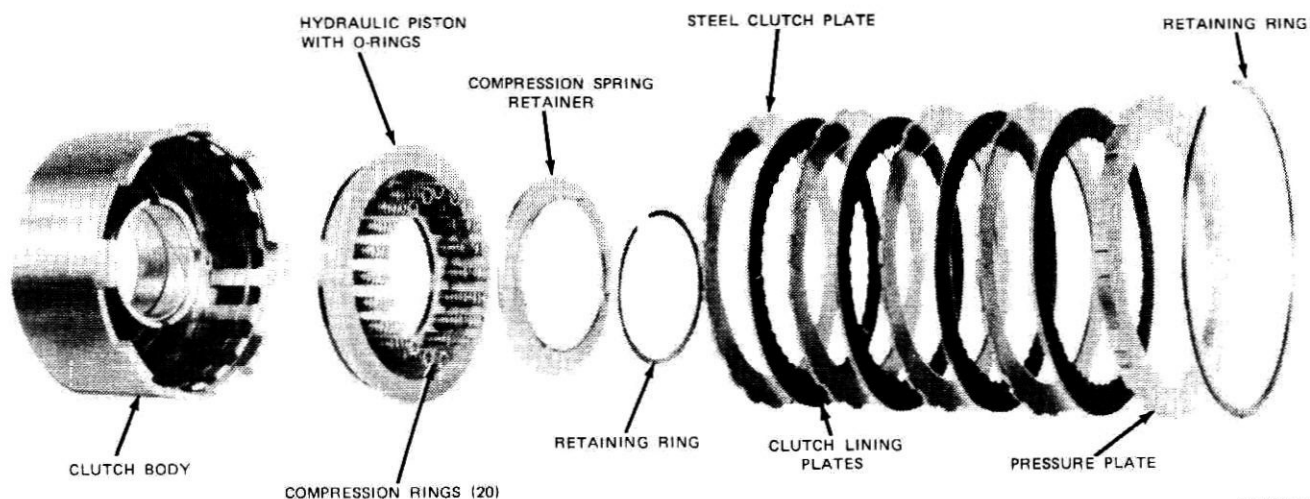


FIG. 30 Reverse and Direct Clutch Disassembled

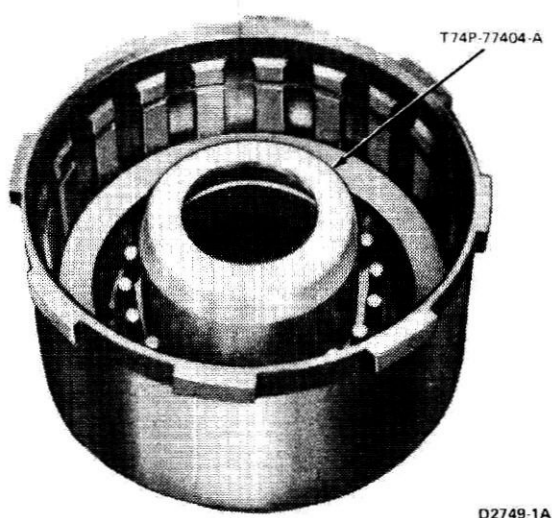


FIG. 31 Inner Seal Protector—High Clutch

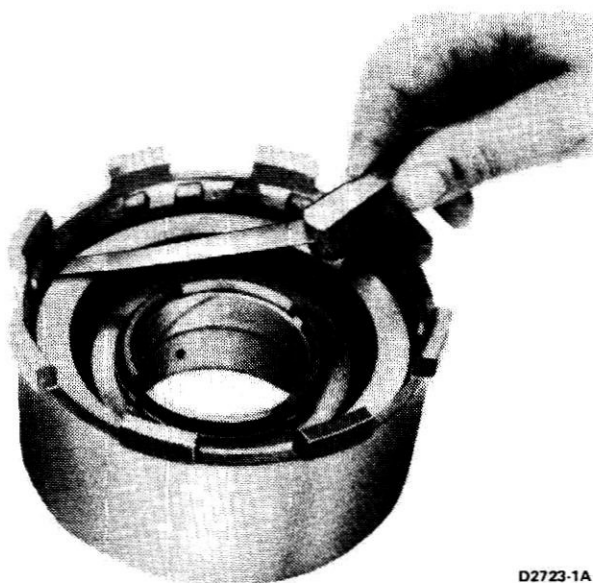


FIG. 32 Checking Clearance Between Pressure Plate and Retaining Ring

FRONT ASSEMBLY

Assembly

Refer to Fig. 27.

1. Place the reverse and direct drive clutch assembly vertically on a bench.
2. Position thrust washer No. 2 and the forward gear clutch assembly.
3. Secure thrust washer No. 3 with petroleum jelly or oil on the planet gear carrier.
4. Install the internal gears and planet gear assembly.
5. Assemble the input shell with the sun gear to the planet gear carrier, then to the body of the reverse and direct drive clutch.

ONE-WAY CLUTCH

Disassembly and Assembly

1. Remove the snap ring (Fig. 36).
2. Lift out the cage with the springs and bearing rollers as a unit.
3. Install the cage with springs.
4. Insert the bearing rollers one by one, using a suitable screwdriver and install the snap ring (Fig. 37).

GOVERNOR

Refer to Figs. 38 and 39.

1. Remove governor body to oil collector body attaching bolts (Fig. 38). **NOTE: When the governor body attaching bolts are removed, the governor components are no longer retained in position to the governor body. Care must be taken not to drop the governor body and components when the attaching bolts are removed.**
2. Remove the governor components from the governor body.
3. Remove the counterweight.
4. Clean all parts and replace any that are worn or damaged. If necessary, remove the three steel seals and carefully install new ones.