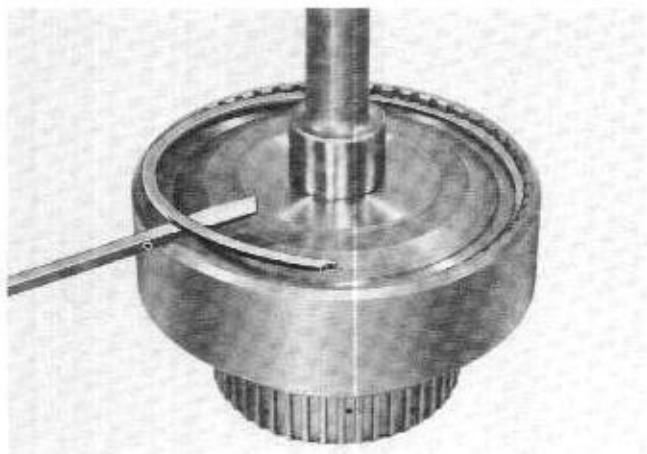


**SECTION SIX—DISASSEMBLY, INSPECTION, ASSEMBLY OF THE FRONT CLUTCH, AND INSTALLATION OF FRONT AND REAR CLUTCHES IN THE TRANSMISSION CASE**

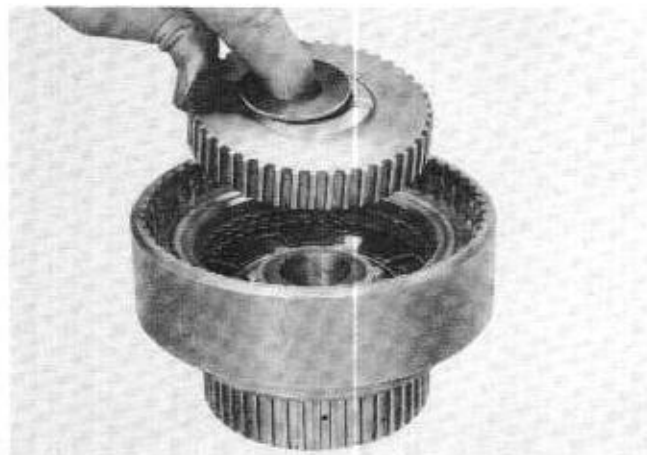
**A. Disassembly of the Front Clutch**



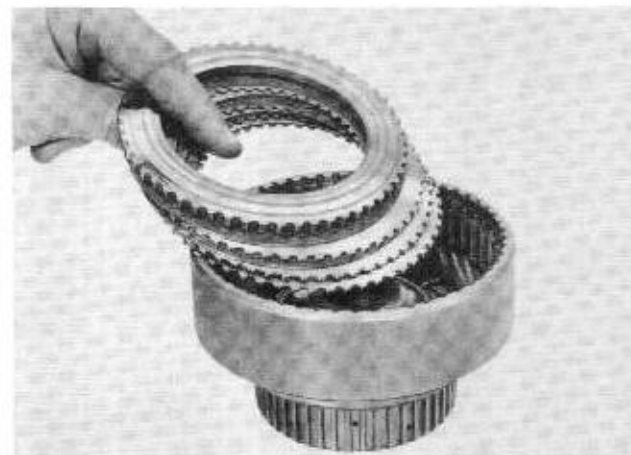
1. Remove the clutch snap ring.



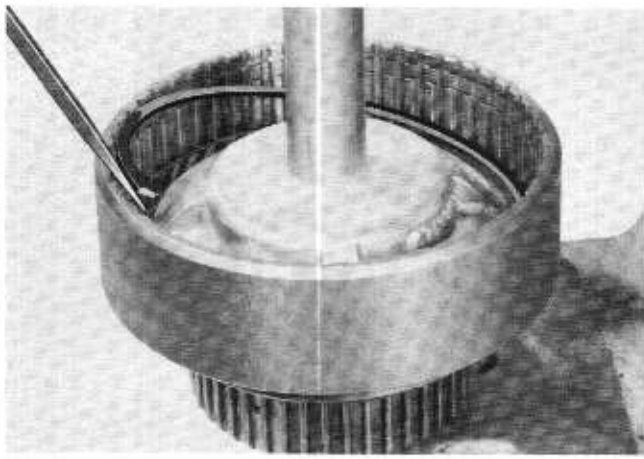
2. Remove the turbine shaft from the clutch drum.



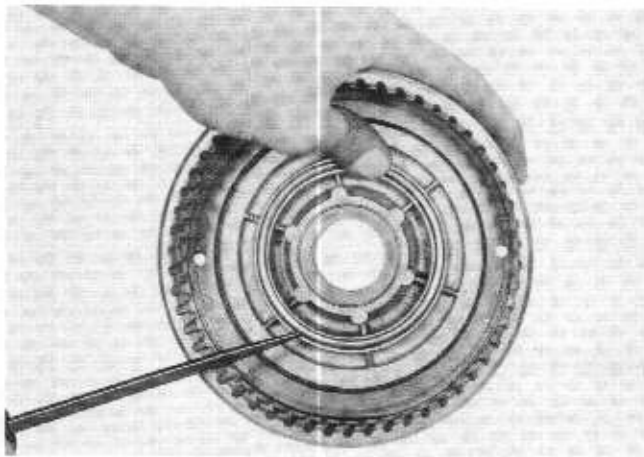
3. Remove the fiber thrust washer and the clutch hub.



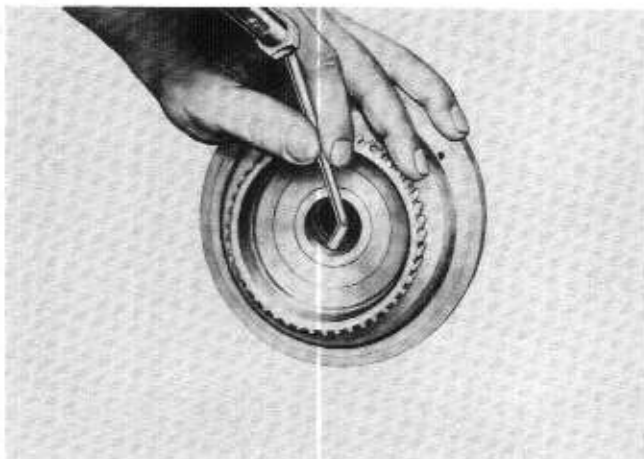
4. Remove the bronze and steel clutch plates and the pressure plate.



5. Remove the clutch release spring snap ring -- using an arbor press and the special tool shown.

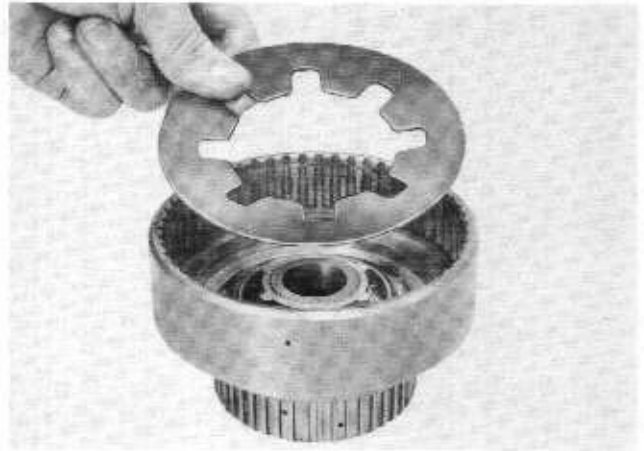


7. Remove the steel bearing ring.

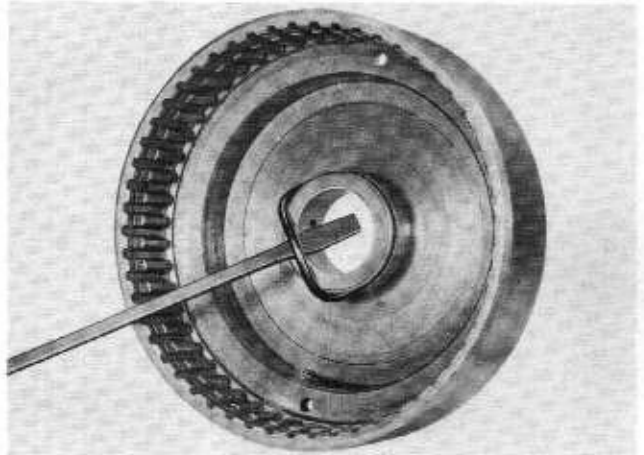


8. Using air pressure and a piece of 3/16 inch tubing, force the clutch piston out of the cylinder.

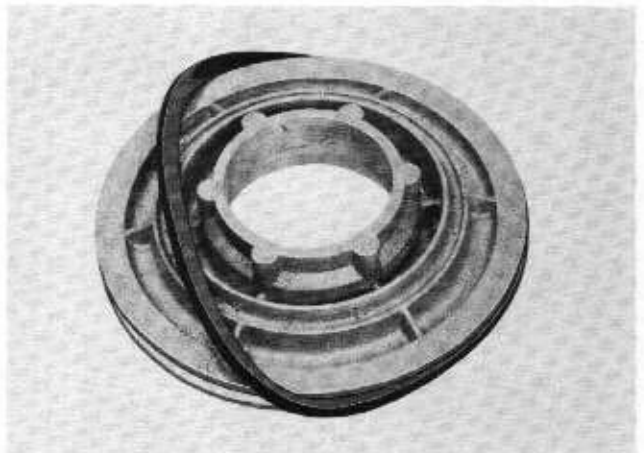
**CAUTION** Hold your hand over piston to keep it from flying out.



6. Remove the clutch release spring from the clutch cylinder.



9. Remove the piston inner seal from the clutch cylinder.

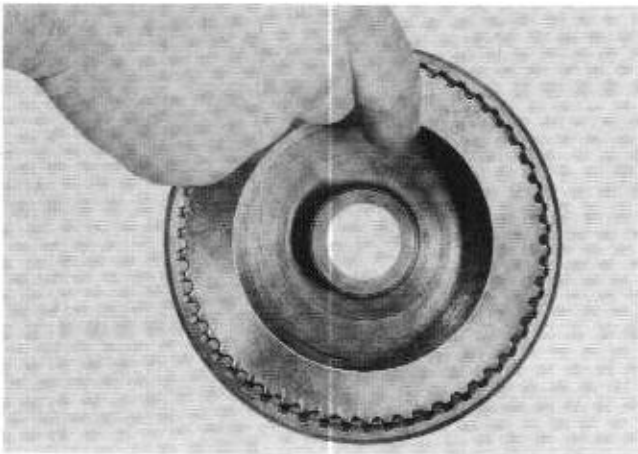


10. Remove the piston outer seal from the groove in the piston.

**B. Inspection of the Front Clutch**

Wash all the parts thoroughly in clean solvent, and blow them dry before inspection.

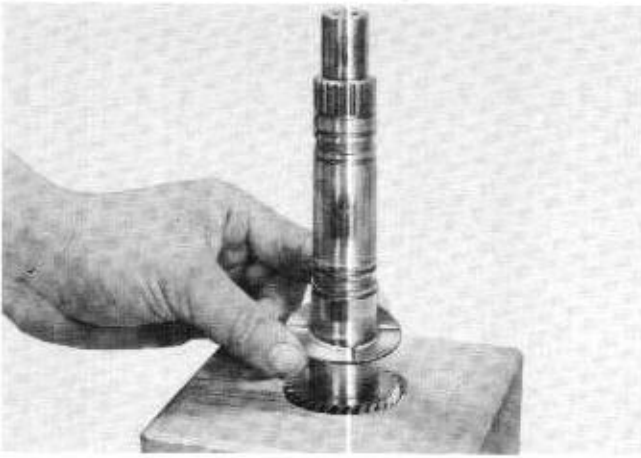
1. Inspect the clutch cylinder, all thrust surfaces, the piston bore, and clutch plate serrations for scores or burrs.
2. Check fluid passages for obstruction.
3. Inspect the clutch piston for scores.
4. Check the clutch release spring for distortion and cracks.



5. Check the bronze and the steel plates for scored surfaces, and check them for free movement on serrations in the clutch drum. Also check the plates for flatness. If the plates are not flat, replace them.

6. Check the pressure plate for scored surfaces.
7. Check the clutch hub thrust surfaces and splines for wear and scores.
8. Check the bronze thrust washer for scored surfaces.
9. Check the clutch cover bearing surfaces for scores.
10. Check the splines on the turbine shaft for wear and burrs.
11. Check the bushing for scores.
12. Inspect the front band for wear, cracks or distortion.

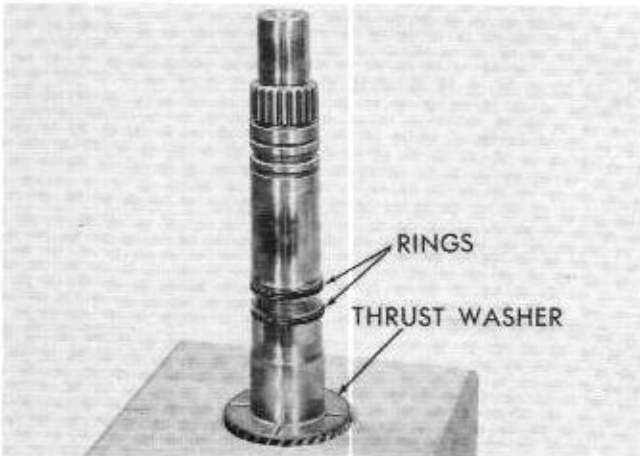
**NOTE** If any of the front clutch parts are damaged, replace them.



### C. Installation of Rear Clutch on Primary Sun Gear Shaft and Assembly of Front Clutch

1. Place the primary sun gear shaft in the bench fixture, and install the bronze thrust washer against the thrust face of the primary sun gear.

**NOTE** Install the washer with its flat side down.

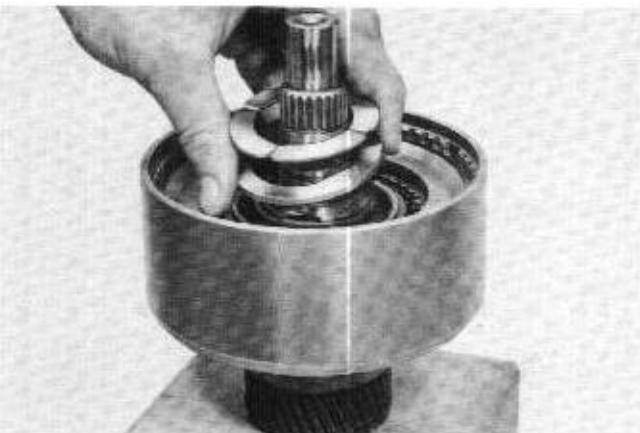


2. Install two seal rings in the lower grooves of the primary sun gear shaft. Check to make sure they move freely in the grooves.

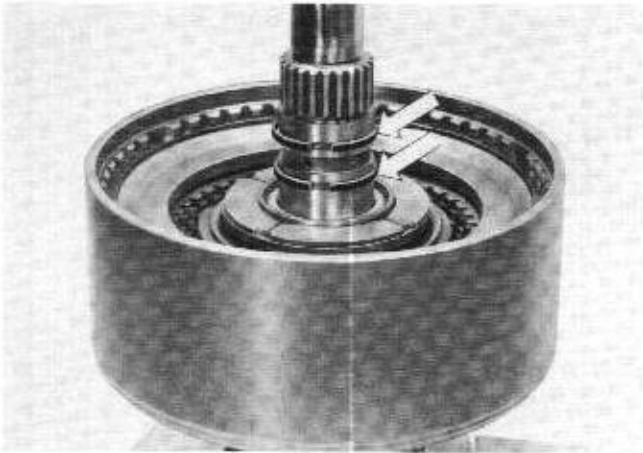


3. Install the rear clutch on the primary sun gear shaft.

**NOTE** Lubricate the parts to make installation easier, and center the two seal rings on the shaft to prevent breakage.

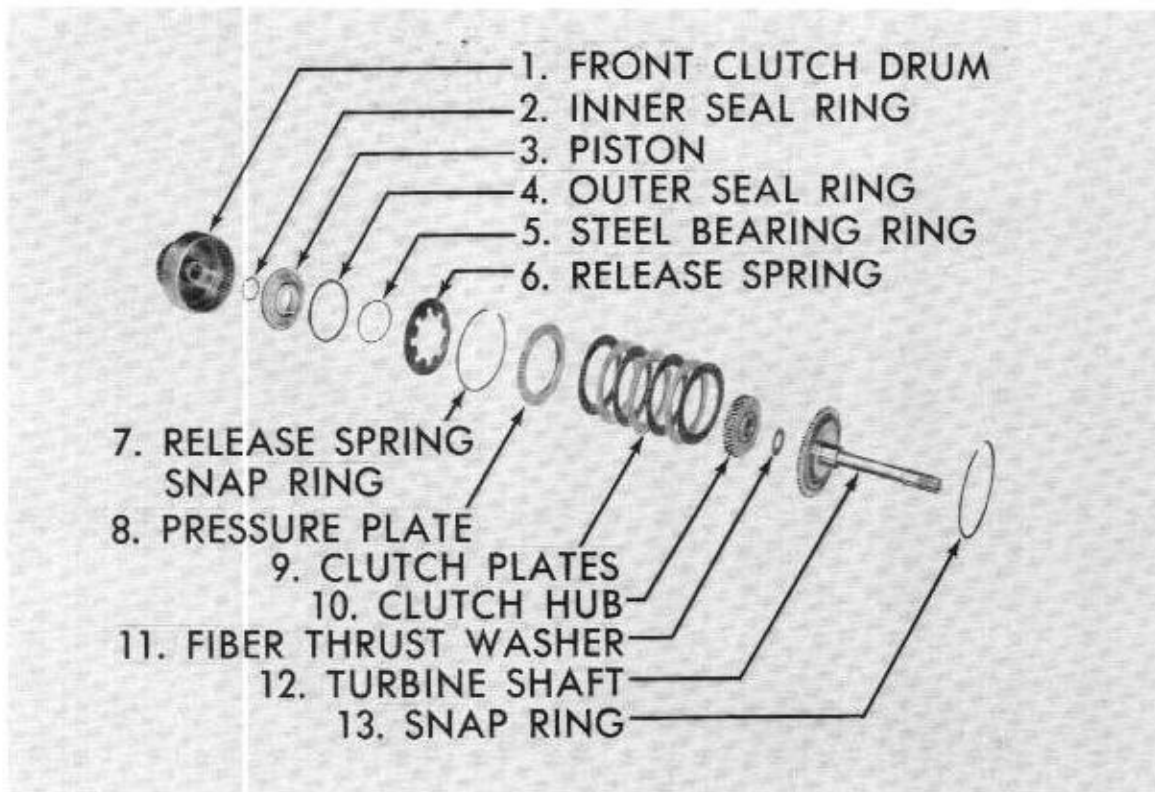


4. Install the steel thrust washer and bronze thrust washer on the shaft.



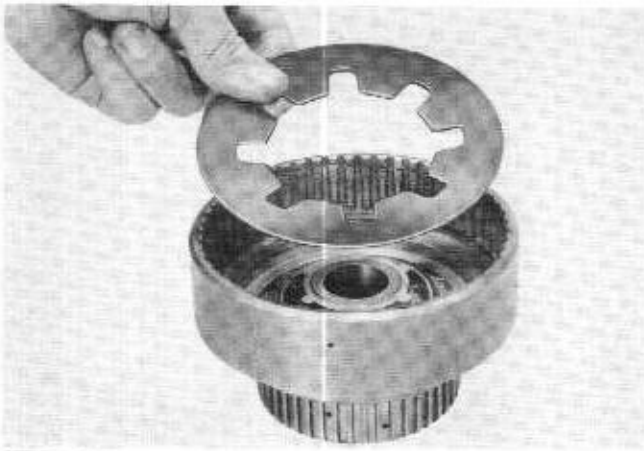
5. Install two seal rings in the upper grooves of the primary sun gear shaft. Make sure they move freely in the grooves.

**NOTE** With the rear clutch installed on the primary sun gear shaft, assembly of the front clutch is the next step. The reason the front clutch is not assembled until this point is that, by assembling it on the primary sun gear shaft, there is less chance for damage to parts, and it is easier and more efficient.

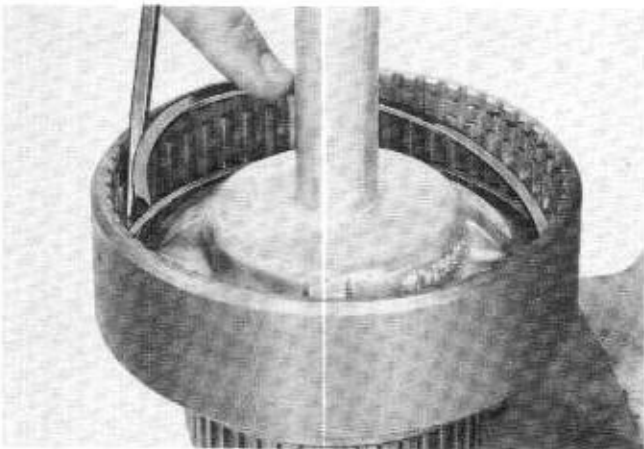


6. Install a new piston inner seal ring in the groove of the front clutch drum hub.
7. Install a new outer seal in the groove of the front clutch piston.
8. Install the piston in the front clutch cylinder.
9. Install the steel bearing ring in its seat on the piston.



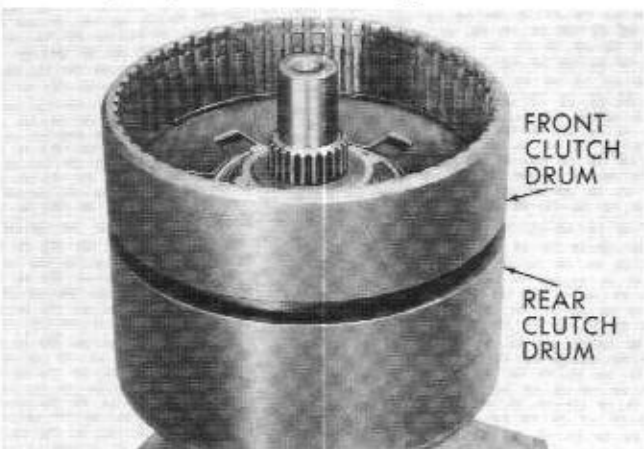


10. Install the release spring with its dished side up. Make sure the spring is centered on the shoulder.

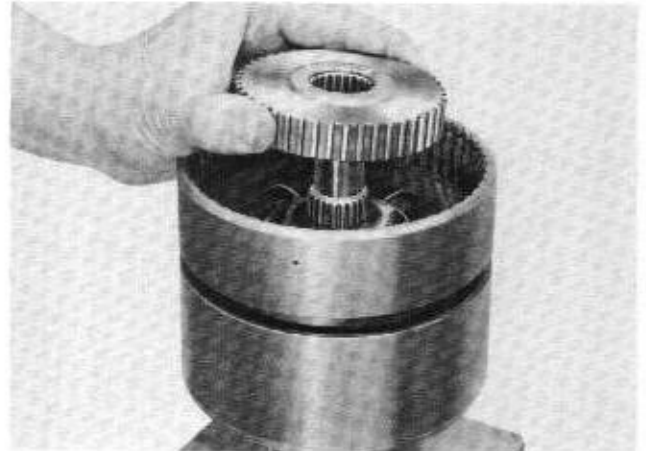


11. With the special tool shown, and an arbor press, compress the spring, and install the front clutch spring snap ring.

**NOTE** Make sure the snap ring is fully seated in its groove.



12. Install the front clutch drum on the primary sun gear shaft -- rotating the clutch units to mesh the rear clutch plate serrations with the front clutch hub splines.



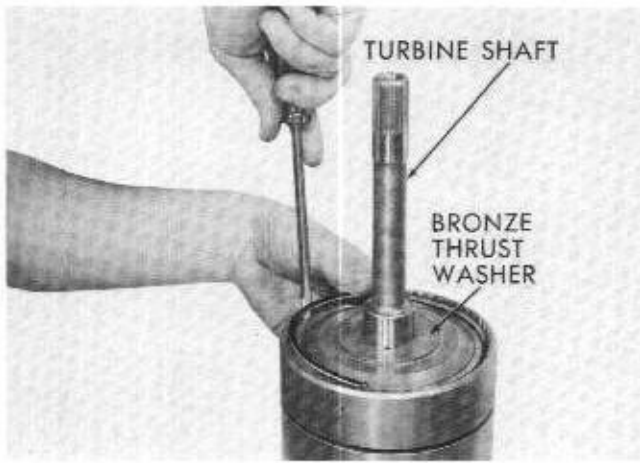
13. Install the clutch hub with the deep counterbore down.



14. Install the thrust washer on the clutch hub, and install the pressure plate in the drum... with its flat side up.

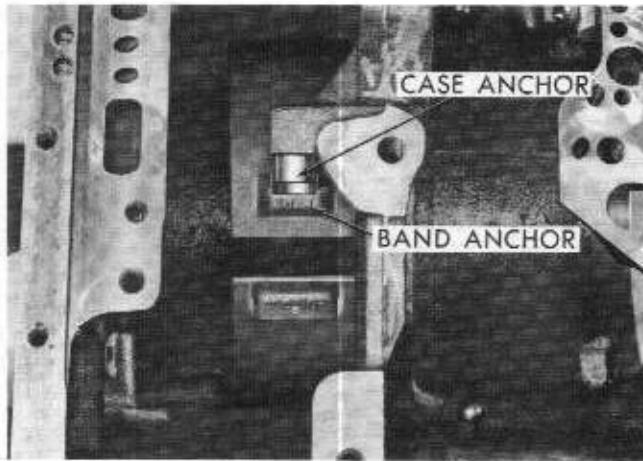


15. Install the bronze clutch plates and steel clutch plates alternately -- starting with a bronze plate. Lubricate the plates as they are installed.

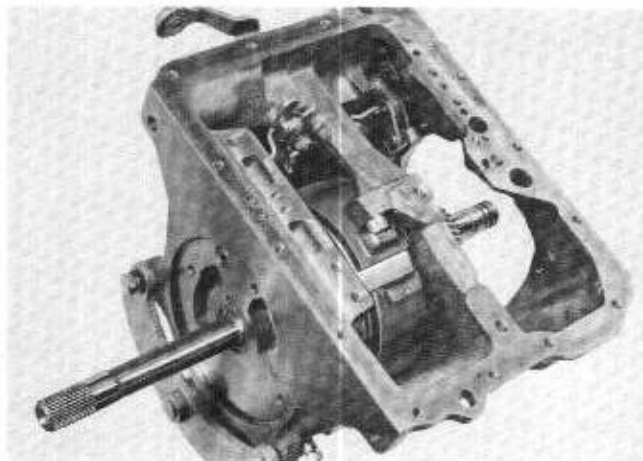


16. Install the turbine shaft.
17. Install the bronze thrust washer on the turbine shaft.
18. Install the snap ring...making certain it is fully seated in its groove.

#### D. Installation of Clutches in Transmission Case

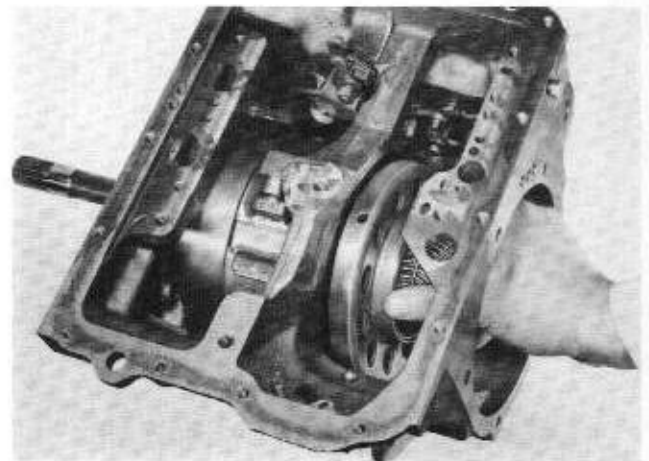


1. Install the front band in the case--indexing the anchor end of the band with the anchor in the case.

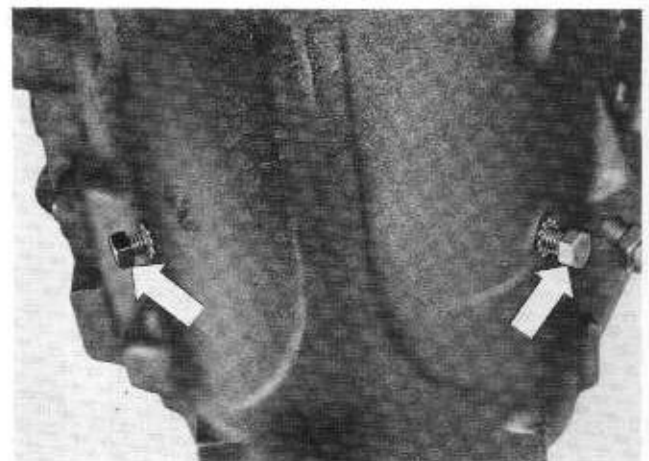


2. Lift the clutch assemblies out of the bench fixture, and install them in the case. At the same time slip the front band over the front clutch drum.

**CAUTION** Do not permit the clutches to separate.



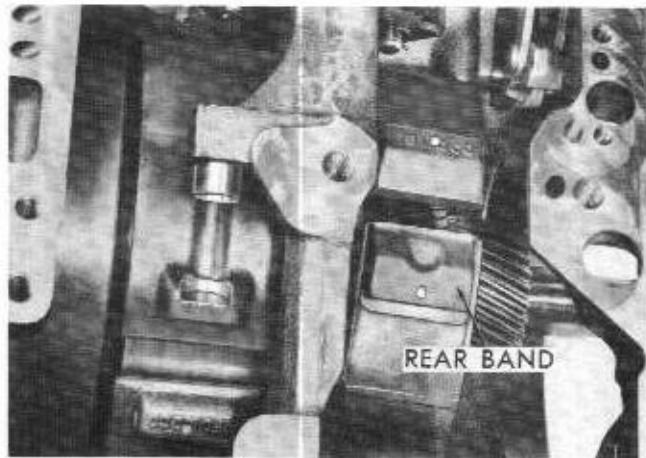
3. Install the center support.



4. Install the two support bolts (one on each side of case). Torque these bolts 28 to 33 foot-pounds.

## Chapter IV

### Section SEVEN



5. Install the rear band with strut ends up.