

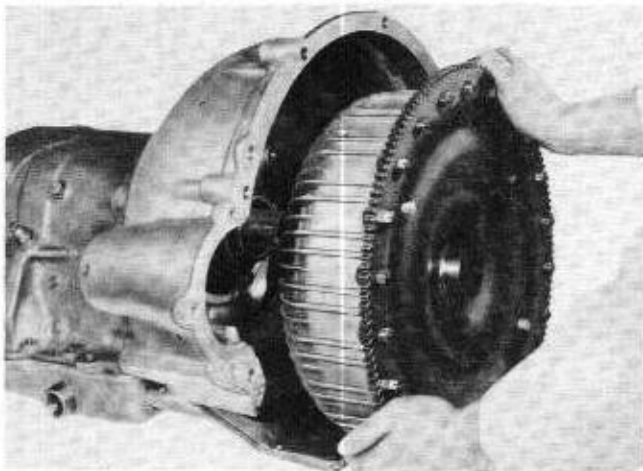
SECTION TWO—STRIPPING THE CASE**GENERAL NOTE**

The following sections follow a sequence, and have been organized, to provide mechanics with a sound method of speedily and accurately disassembling, cleaning, inspecting, repairing, assembling and installing individual components.

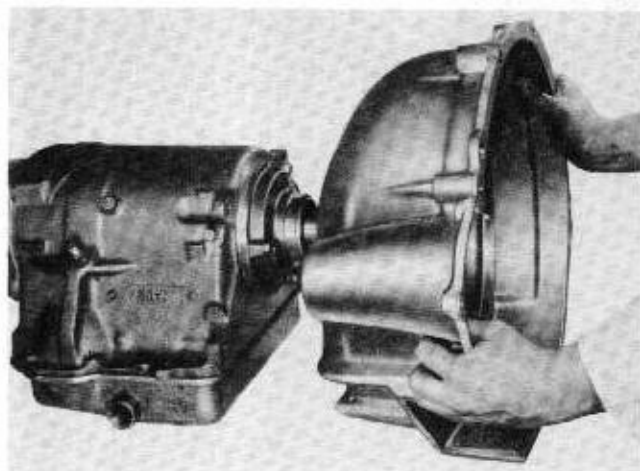
This is a departure from ordinary manuals but has been done to --

1. Insure that a minimum of loose parts are scattered around the work bench.
2. Eliminate extra handling of parts, and, therefore, to save time.
3. Insure quality control, and hence to eliminate comebacks and extra work.
4. Enable a mechanic to equal or beat flat rate allowances without endangering the quality of the job.

In addition to creating the above advantages, the organization of the information in this manual makes the manual easier to use in that it eliminates many unnecessary references to the same unit. The operations covered in these following sections have been worked out with practicing mechanics who utilize the following methods to eliminate confusion, damage to parts, wasted time and effort, and to insure the utmost in quality workmanship.

A. Removal of Converter from Transmission

1. Remove the converter by pulling it carefully out of the housing.

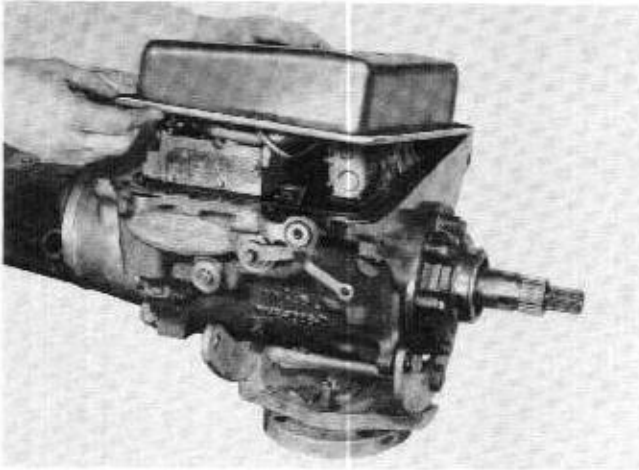


2. Remove the cap screws that secure the converter housing to the transmission and remove the converter housing.

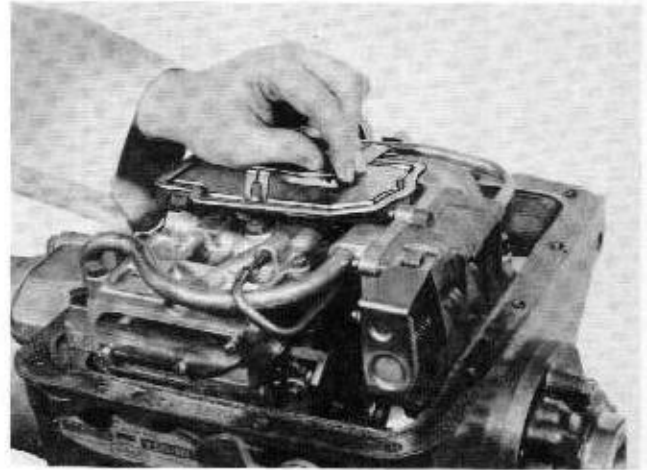
NOTE

Carefully clean the transmission exterior to keep dirt from getting inside the case, and place the unit in a holding fixture.

B. Removal of Oil Pan, Fluid Screen, and Tubes

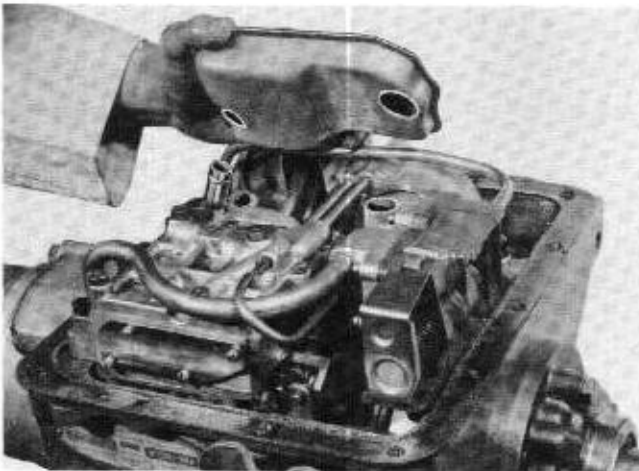


1. Remove bottom oil pan screws, and the bottom pan.

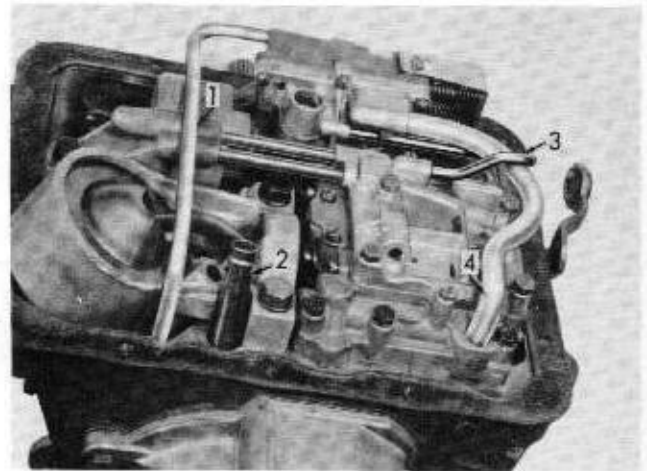


2. Remove the fluid screen retainer.

NOTE Earlier models do not have this retainer.

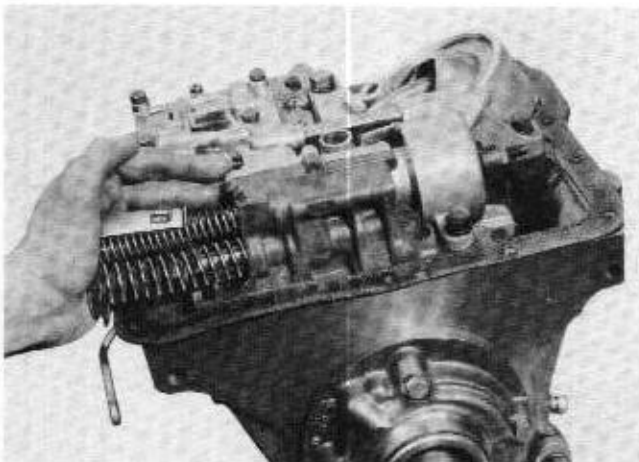


3. Remove the fluid screen.



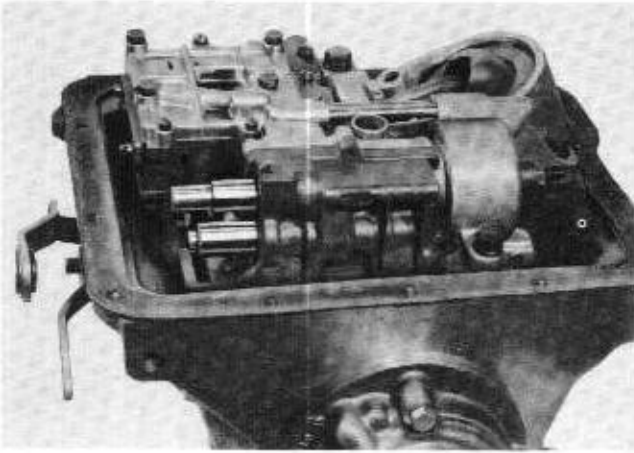
4. Remove (1) the lubrication tube, (2) the rear pump intake tube, (3) the compensator pressure tube and (4) the control pressure tube.

C. Removal of Pressure Regulator

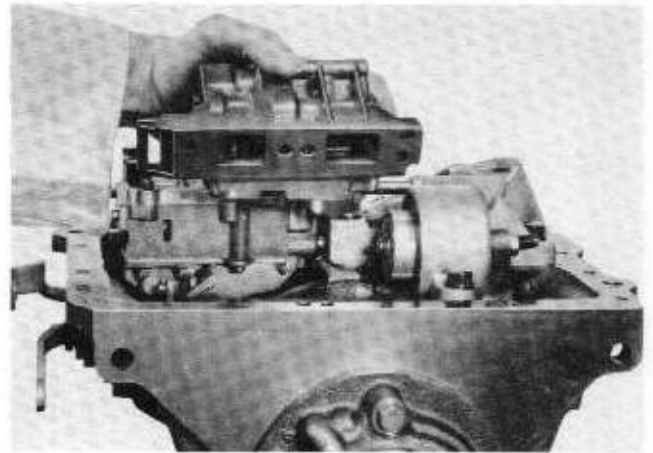


1. Press inward on the pressure regulator spring retainer, and remove the retainer, maintaining pressure on the springs to keep them from flying out. Remove the pressure regulator spring and pilots.

NOTE On pre-1955 models, the retainer is secured by two bolts.



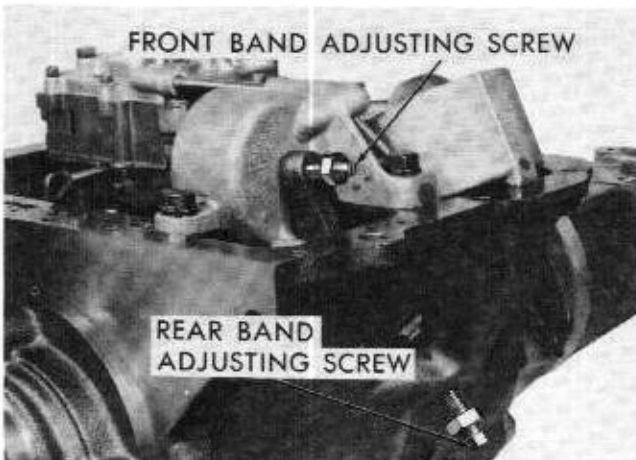
2. Remove the pressure regulator valves.



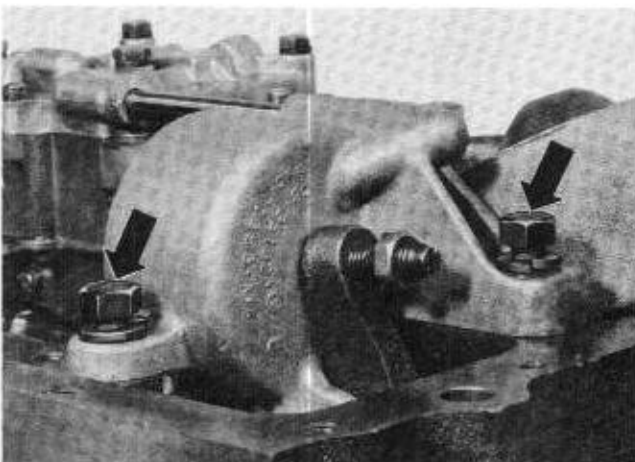
3. Remove the pressure regulator bolts, and remove the pressure regulator.

NOTE After removing the regulator body, replace the regulator valves in their bores to protect them.

D. Removal of Control Valve Assembly and the Front and Rear Servos

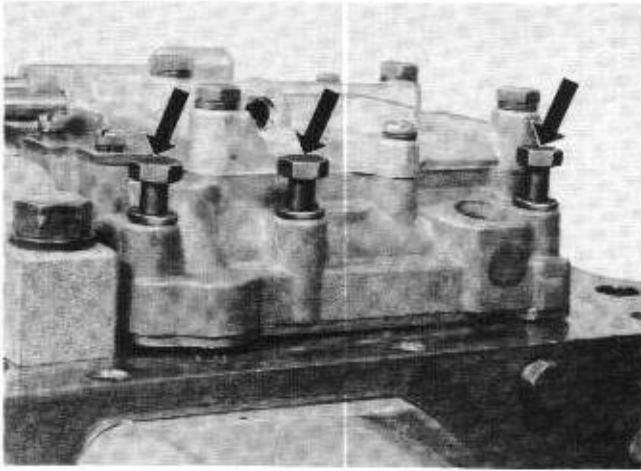


1. Loosen the band adjusting screw locknuts, and back off both adjusting screws five turns.

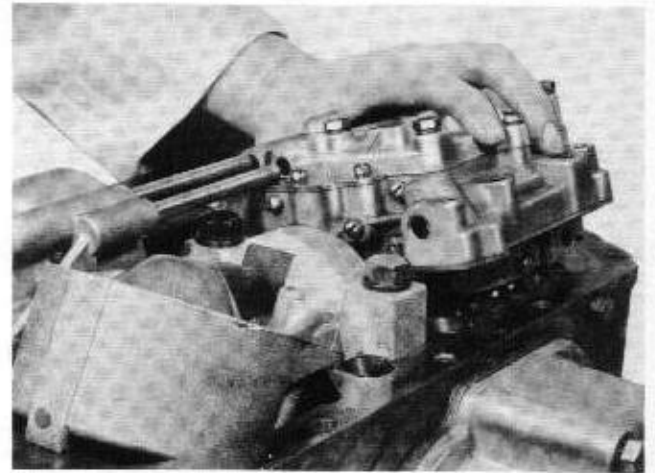


2. Loosen the front servo bolts.

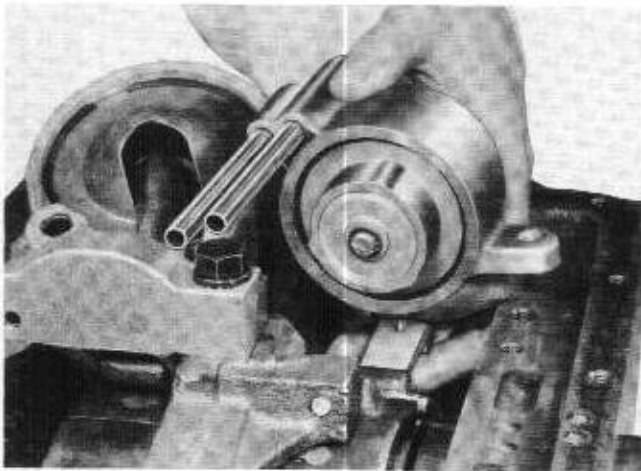
NOTE In some models the front servo is secured only by one bolt.



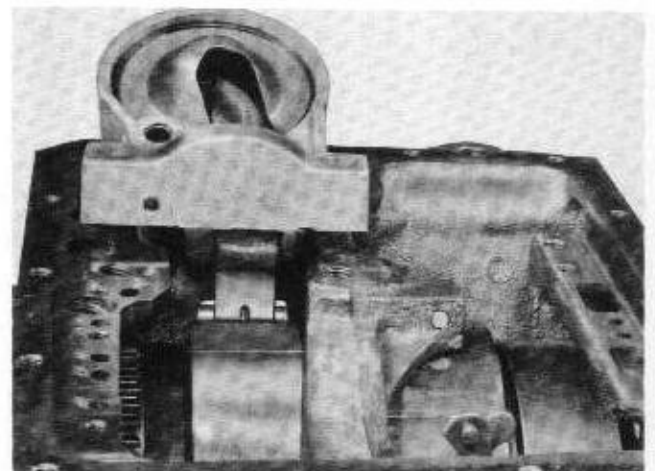
3. Remove the valve body bolts.



4. Lift the valve body and slide it off the servo tubes.

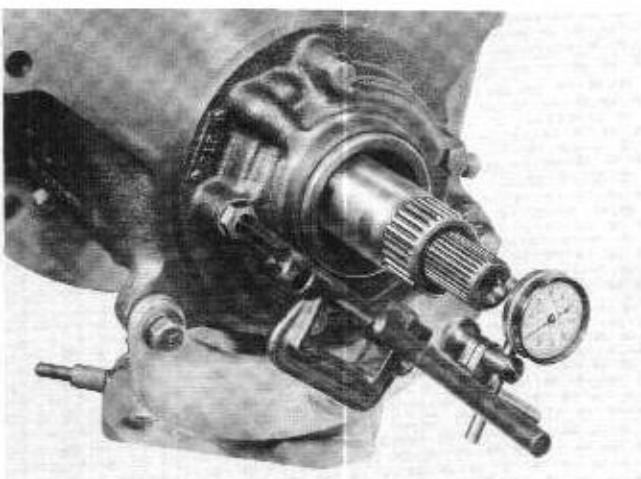


5. Remove the front servo bolts (or bolt) and remove the front servo.

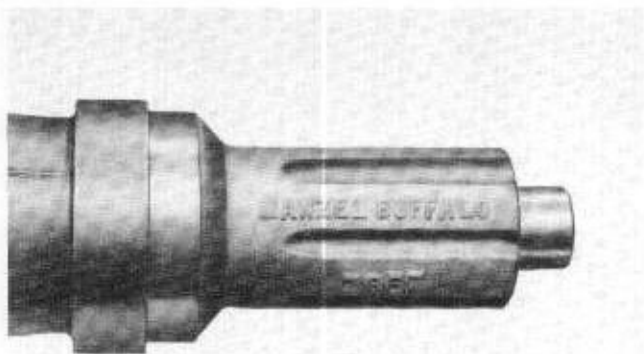


6. Remove the rear servo bolts, and remove the rear servo.

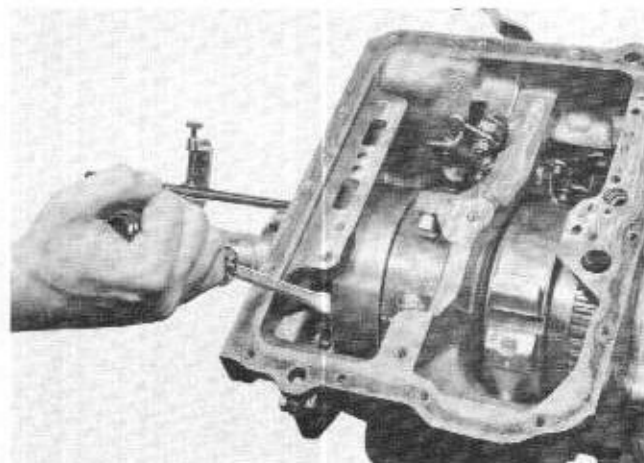
E. Checking Transmission End Play and Removal of Front Pump



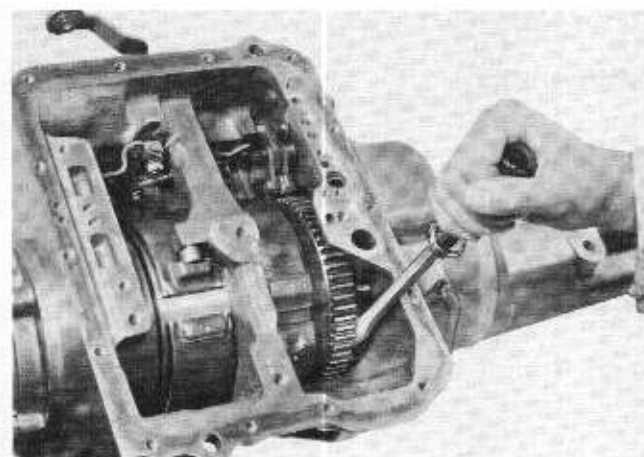
1. Remove one of the front pump bolts and screw the dial indicator support tool into the bolt hole. Mount a dial indicator on the support so that the dial tip contacts the end of the turbine shaft.



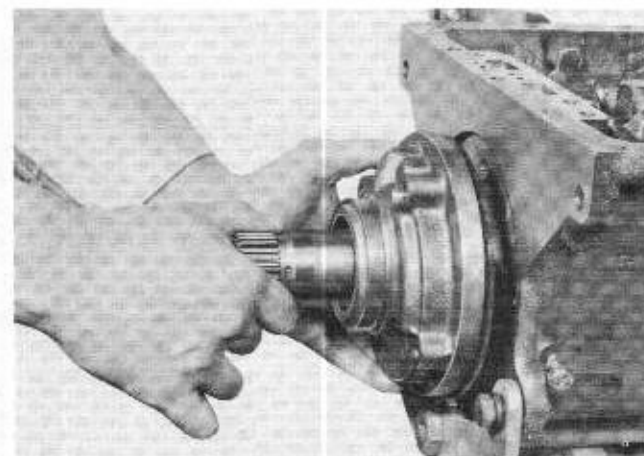
2. Install a rear extension housing seal replacer over the output shaft to support the shaft.



3. Then, pry the front clutch cylinder to the rear of the case with a large screwdriver. Set the dial indicator at zero, while maintaining slight pressure on the screwdriver.



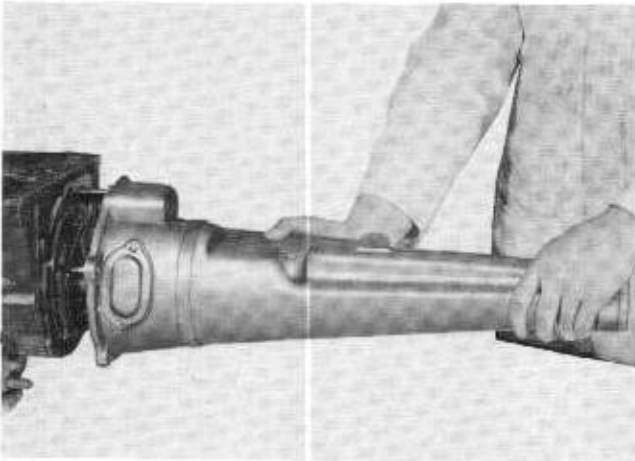
4. Now, with a large screwdriver, pry the gear train forward by inserting the screwdriver between the large internal gear and the case. The end play should be .010 to .029 inches. Record the end play to refer to during assembly. Remove the indicator and rear seal replacer.



5. Remove the remaining front pump bolts, and remove the front pump and the front pump gasket.

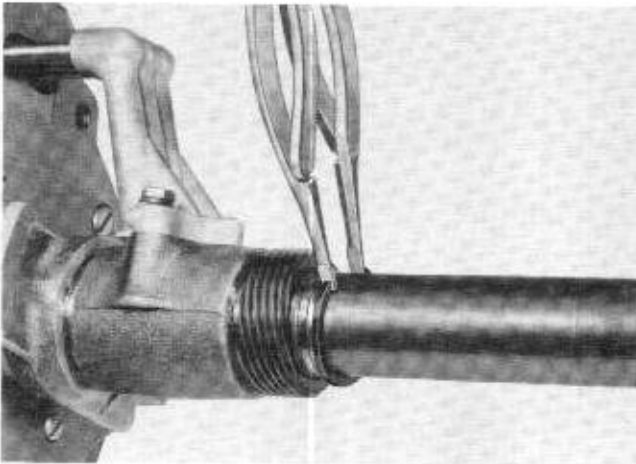
NOTE If necessary, tap the front pump housing with a soft mallet to loosen the pump from the case.

F. Removal of Extension Housing, Fluid Distributor, and Governor

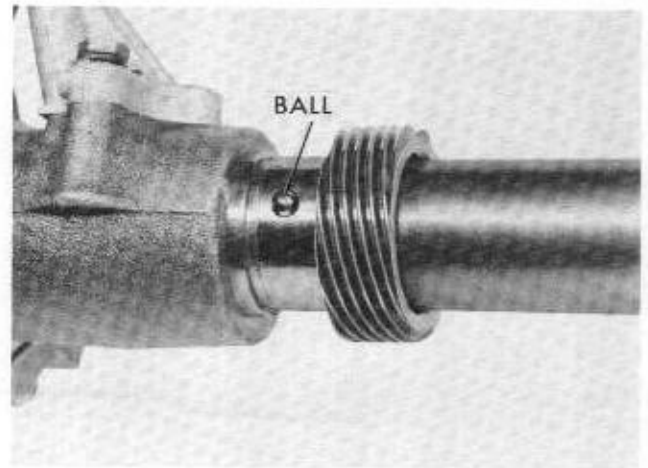


1. Remove the five rear extension housing bolts, and remove the rear extension housing.

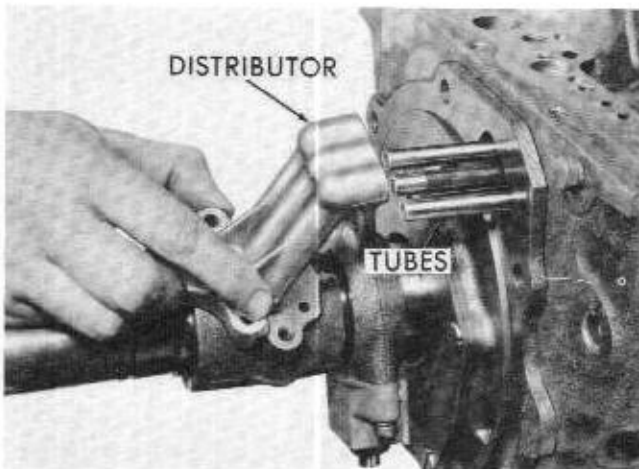
NOTE Carefully slide the housing off the output shaft to avoid damaging the rear seal.



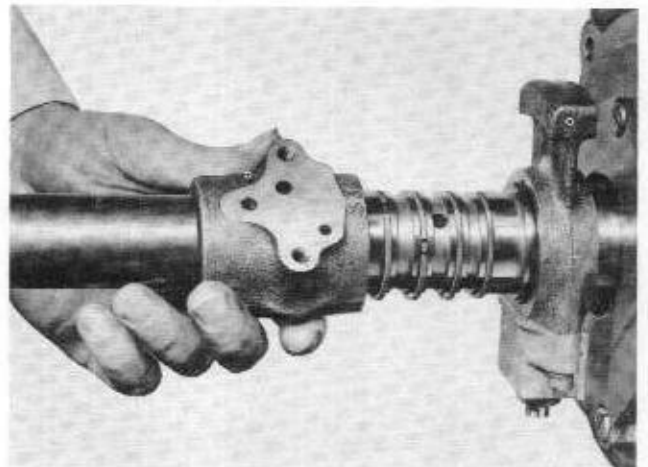
2. Remove the speedometer gear snap ring from the output shaft -- without moving the speedometer gear.



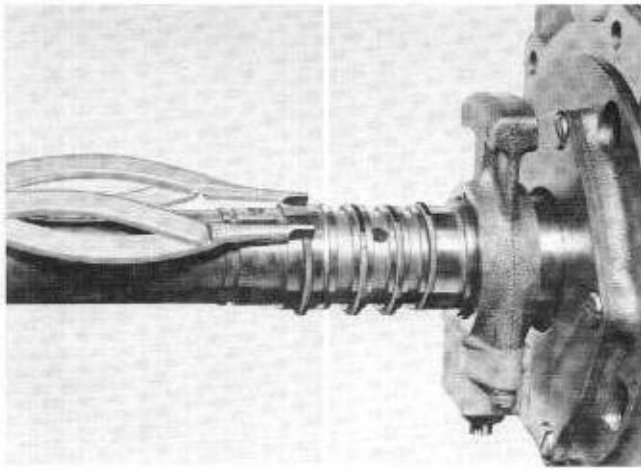
3. Remove the speedometer gear and the speedometer drive gear ball.



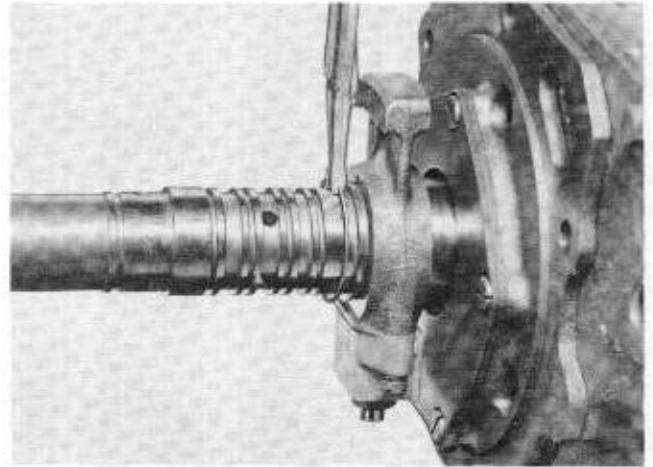
4. Remove the fluid distributor bolts, the fluid distributor, and the distributor tubes.



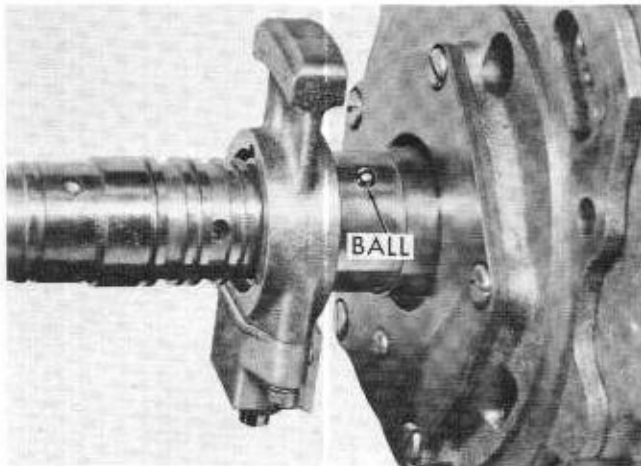
5. Remove the distributor sleeve from the output shaft.



6. Remove the four seal rings from the output shaft.

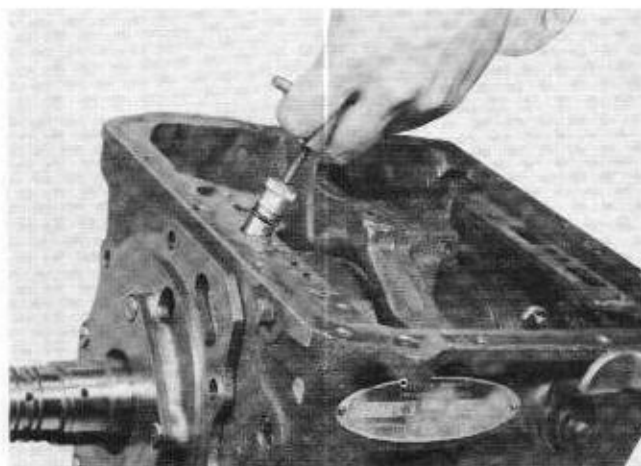


7. Remove the governor snap ring.

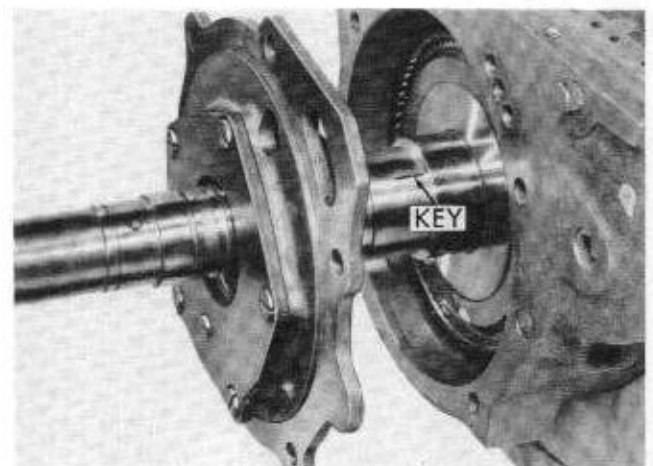


8. Slide the governor assembly off the output shaft, and remove the governor drive ball.

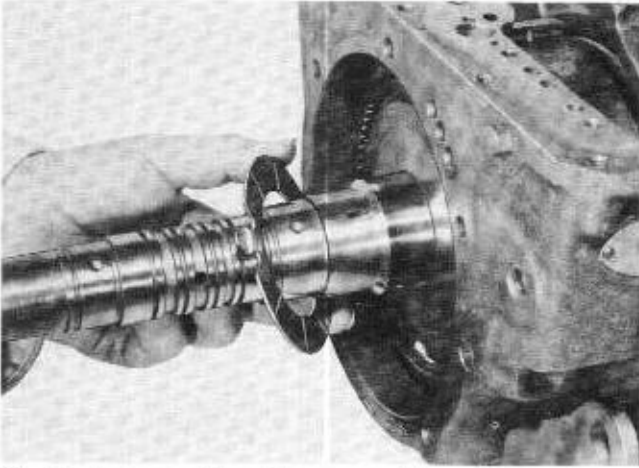
G. Removal of Rear Pump and Pinion Carrier



1. Using the special tool shown, remove the rear pump discharge tube.

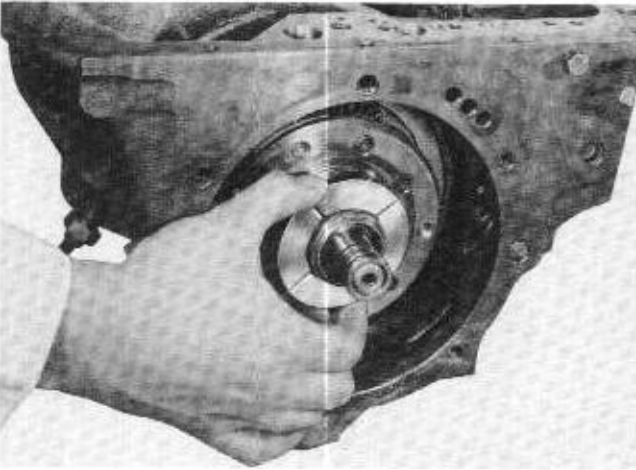


2. Remove the rear pump from the case, remove the rear extension housing and pump gaskets, and remove the rear pump drive key from the output shaft.

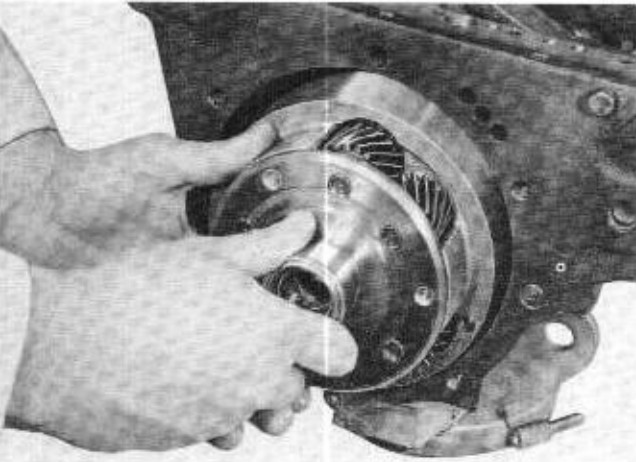


3. Remove the bronze thrust washer from the output shaft.

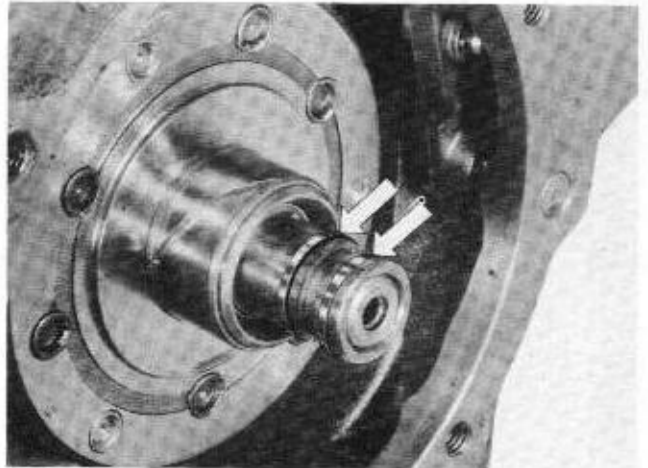
NOTE Sometimes this sticks in the rear pump.



5. Remove the selective washer from the rear of the pinion carrier.

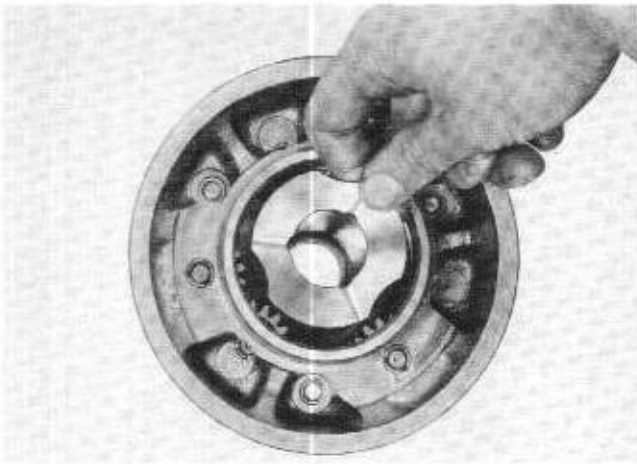


4. While holding the rear drum forward, remove the output shaft.



6. Remove the two seal rings from the primary sun gear shaft.

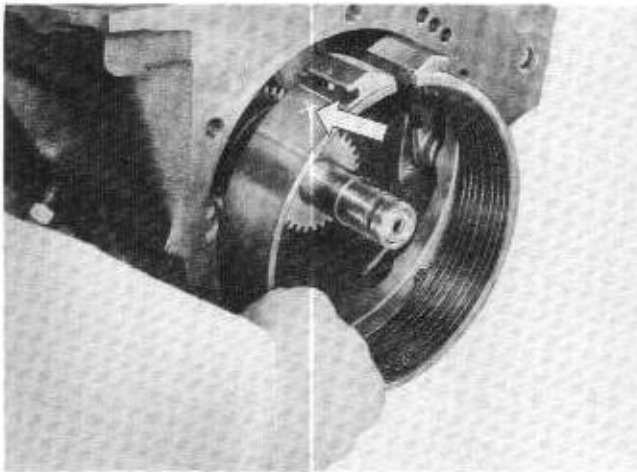
7. Remove the pinion carrier from the case.



8. Remove the bronze thrust washer from the pinion carrier.

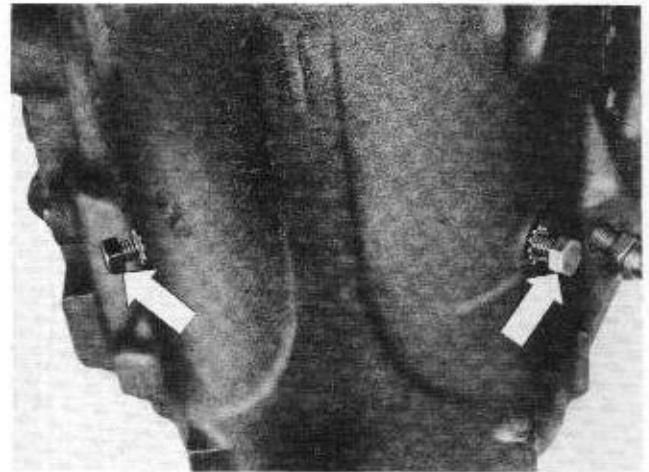
NOTE This thrust washer sometimes stays on the primary sun gear shaft. If this happens, remove the washer from the shaft.

H. Removal and Separation of Clutches and Primary Sun Gear Assembly

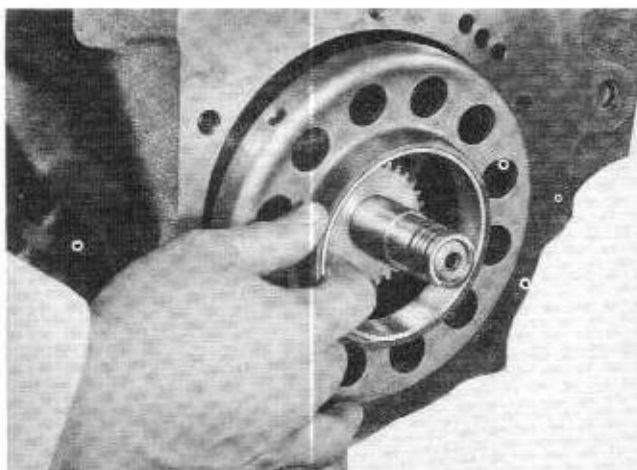


1. Mark the rear band to assure correct assembly, and remove it from the case.

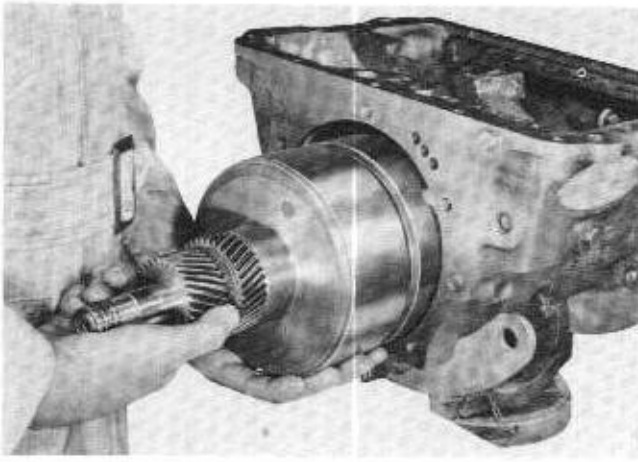
CAUTION Do not distort the band.



2. Remove the two center support bolts -- one of which is located on each side of the case.

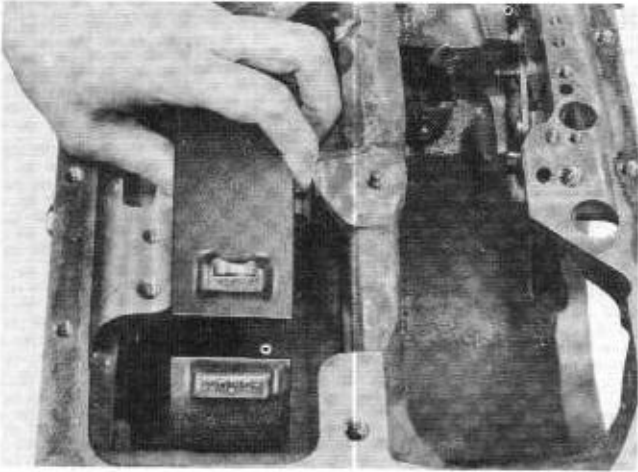


3. Then, remove the center support -- tapping the turbine shaft with a soft hammer to loosen the support.

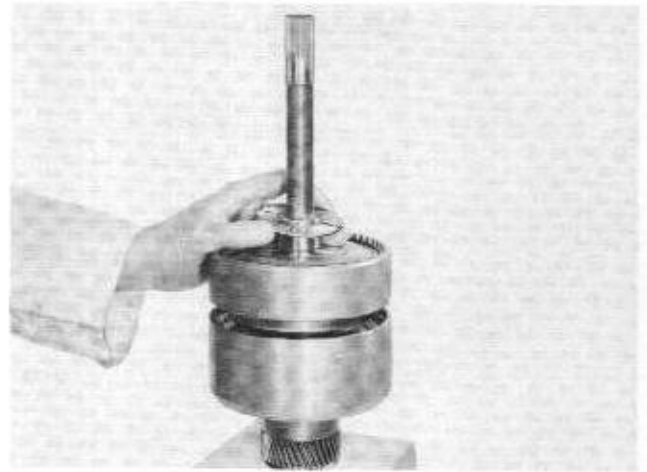


4. Now, remove the rear and front clutch assemblies as a unit, and install them into a holding fixture.

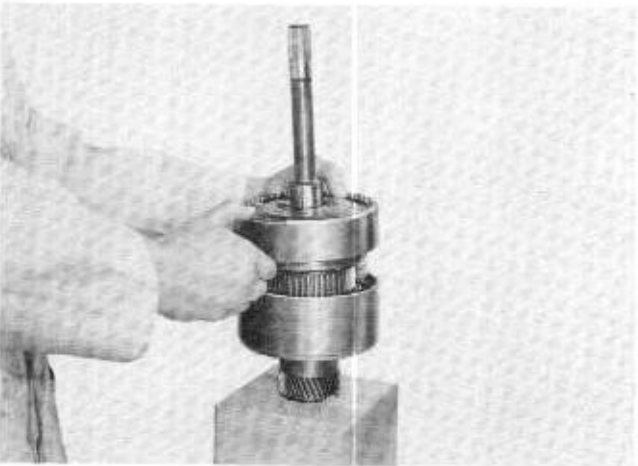
CAUTION Do not separate the clutch assemblies.



5. Lift the front band from the case.

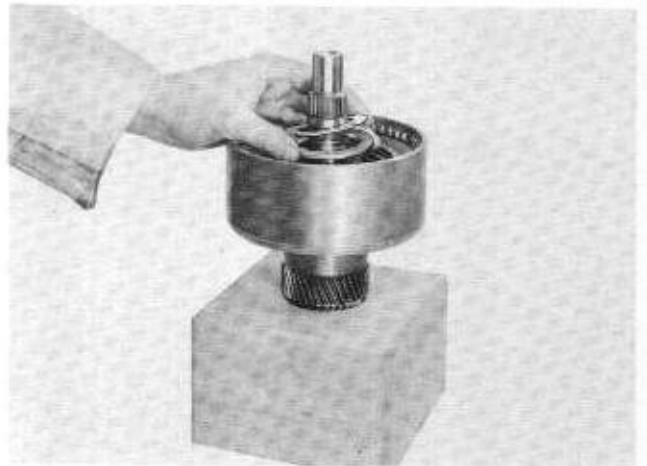


6. Remove the thrust washer from the front of the turbine shaft.

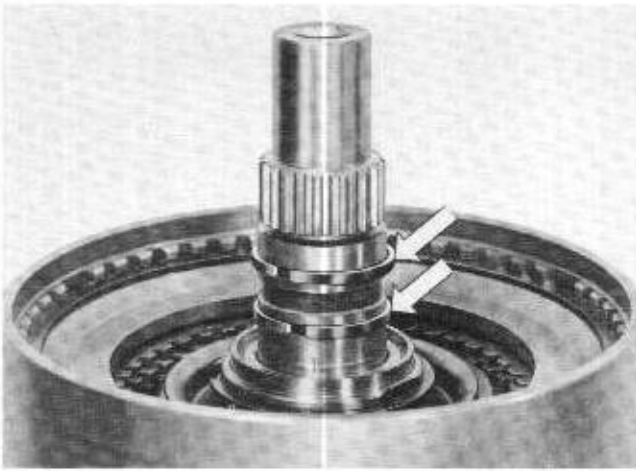


7. Lift the front clutch assembly off the primary sun gear shaft.

CAUTION Do not rock the assembly while lifting it. This prevents damage to the seal rings.

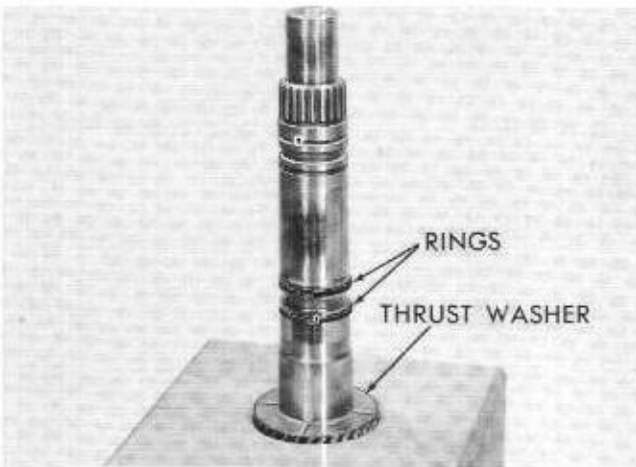


8. Remove the bronze and steel thrust washers from the primary sun gear shaft.



9. Remove the front clutch seal rings from the primary sun gear shaft.

CAUTION Use extreme care when removing these rings, for they are very easily broken.

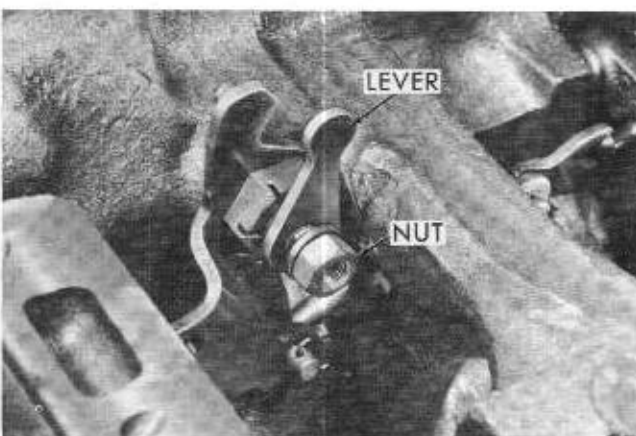


10. Lift the rear clutch assembly off the primary sun gear shaft.

CAUTION To avoid any damage to the rear clutch seal rings, do not rock the clutch assembly.

11. Remove the rear clutch seal rings from the primary sun gear shaft, and remove the thrust washer.

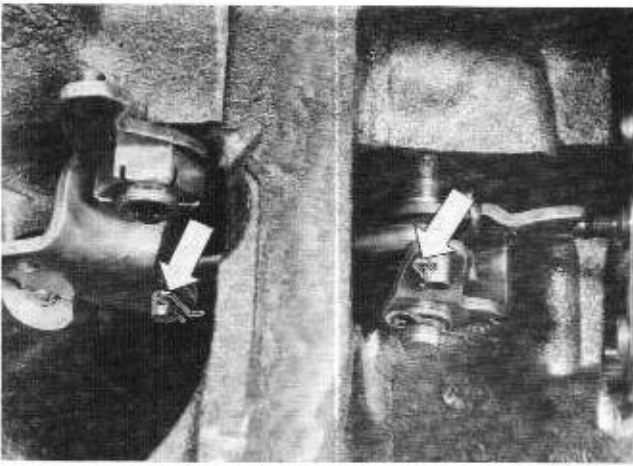
I. Removal of Transmission Case Linkage



1. Remove the throttle lever nut, and remove the inner throttle lever.



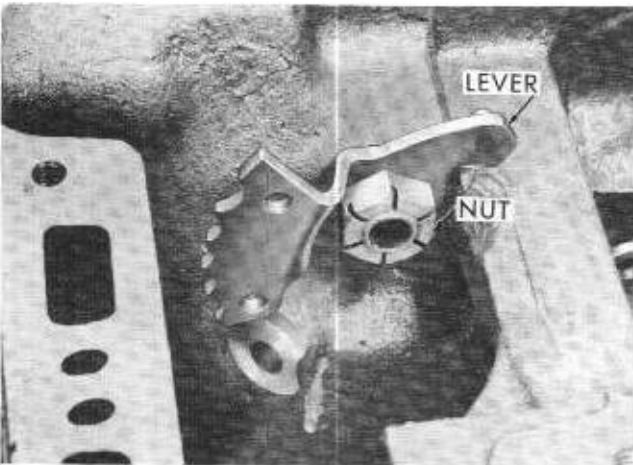
2. Remove the outer throttle lever and the throttle shaft seal.



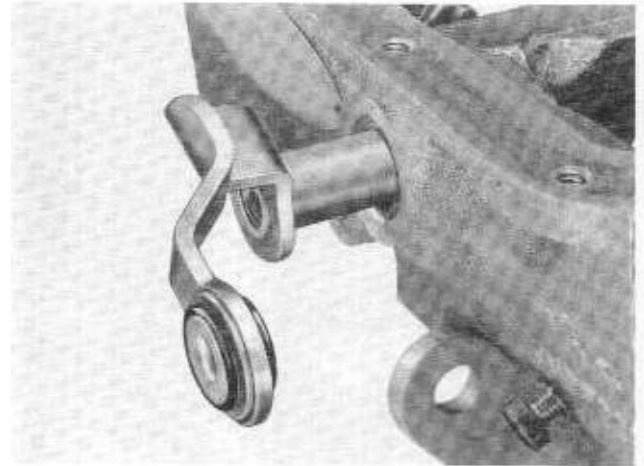
3. Remove the cotter pin from each end of the parking pawl rod, and remove the rod.



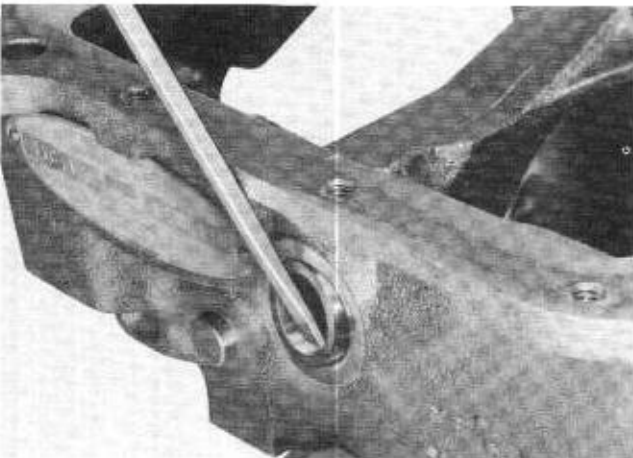
4. Remove the detent ball and spring by rotating the manual shaft.



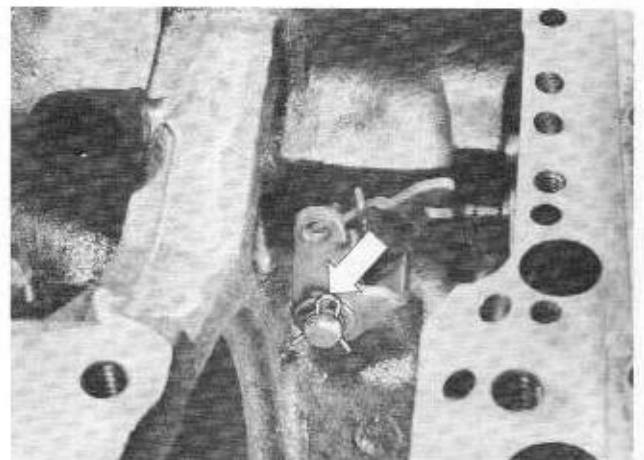
5. Remove the manual lever shaft nut, and remove the detent lever.



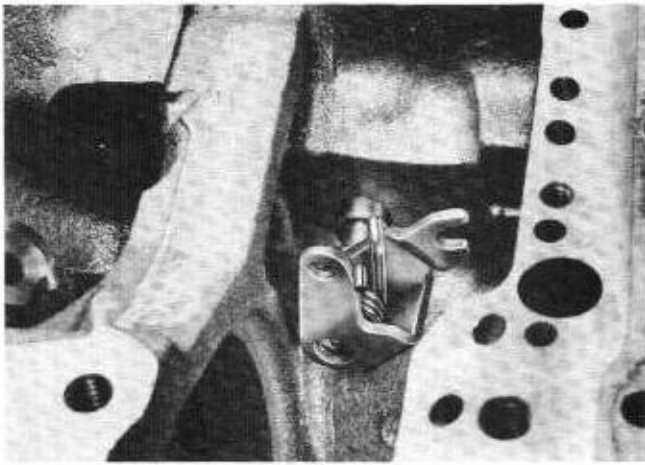
6. Remove the manual lever from the case.



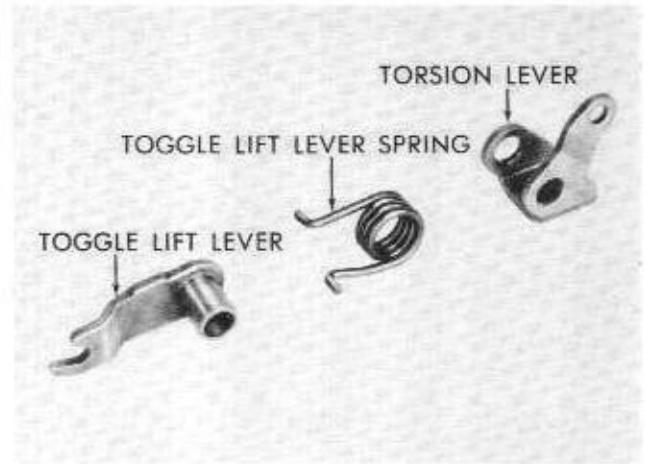
7. Remove the manual shaft seal.



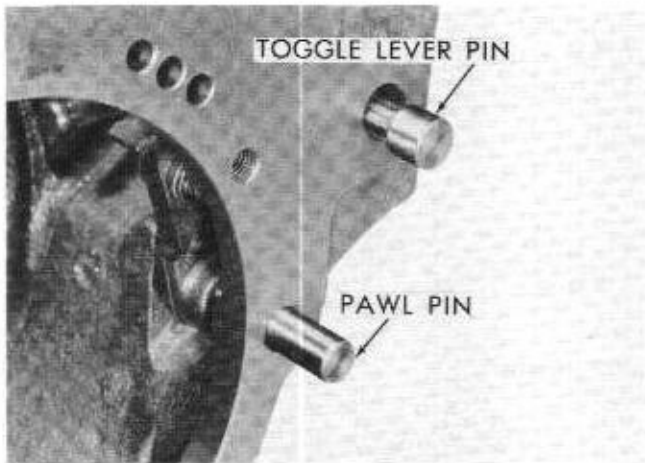
8. Remove the torsion lever clip and washer.



9. Release the torsion lever spring, and remove the torsion lever assembly.

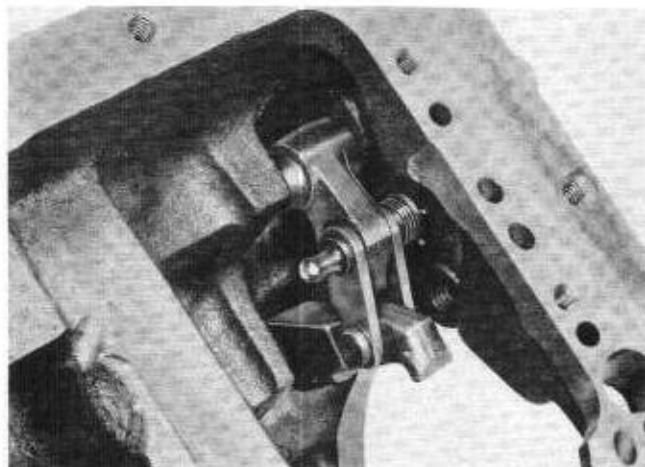


10. Disassemble the torsion lever assembly.

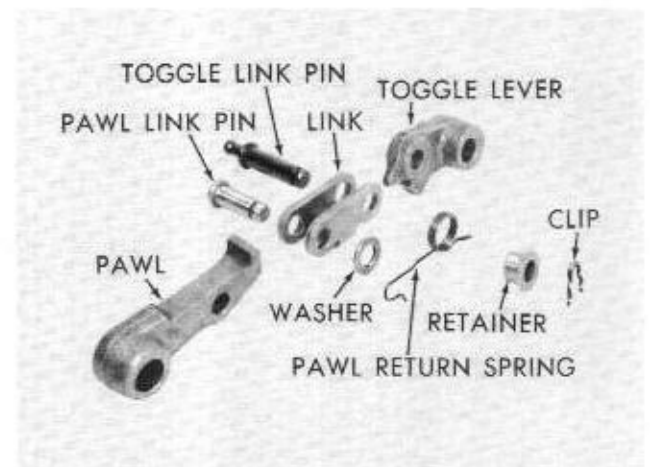


11. Remove the pawl pin from the case, and remove the toggle lever pin and its plug by working the toggle fore and aft in the case.

NOTE It may be necessary to tap the lever with a soft hammer to remove plug.



12. At the same time, remove the toggle and pawl assembly from the case.



13. Disengage the pawl return spring from the pawl link pin, and remove the pin and pawl. Remove the toggle link pin retainer clip. Remove the toggle link pin and separate the parts.