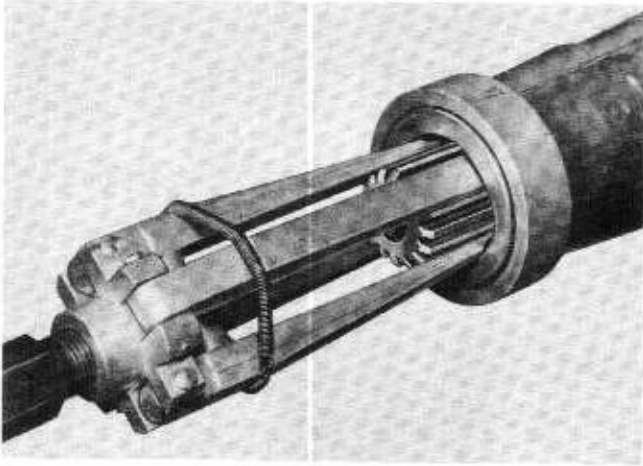


SECTION FOUR—ON-THE-CAR UNIT REPLACEMENTS

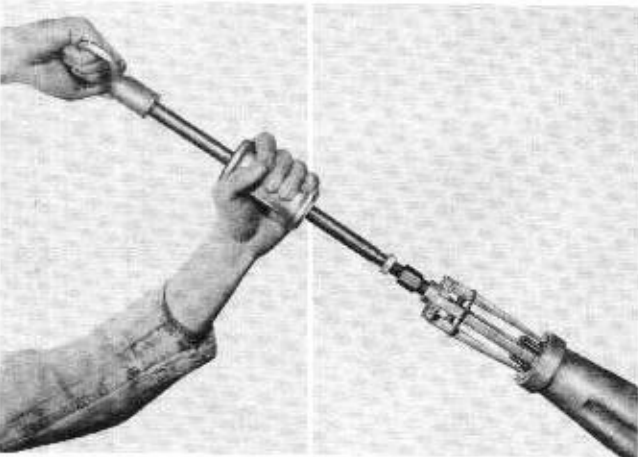
A. Extension Housing Rear Seal and Bushing Replacement

A commonly occurring condition is leakage at the extension housing rear seal . . . a condition that can be corrected without removing the transmission from the car. Replacing the seal requires the use of a seal remover, slidehammer and seal installer. There are different ones for different models -- and there are different makes. See the tool application chart in the appendix.

1. The first step is to disconnect the drive shaft at the rear.
2. Then, slide the drive shaft from the rear extension housing.

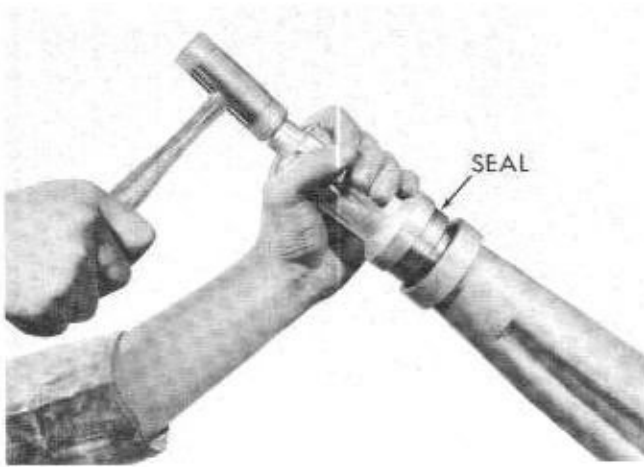


3. Next, place the remover over the shaft and push it into the seal.



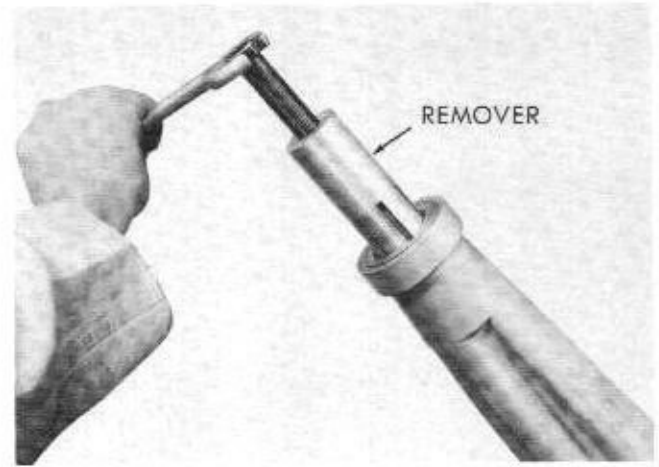
4. Next, screw the slidehammer into the end of the remover, and carefully tap the seal out of place.

5. Before installing a new seal, inspect the sealing surface of the universal joint yoke for scores. If they are found, replace the yoke.
6. Also inspect the counterbore of the housing for burrs. If they are found, polish them off with crocus cloth.
7. Coat the outer edge of the new seal with a non-hardening sealer.
8. Place the seal on the installer pilot with the felt side of the seal to the rear.

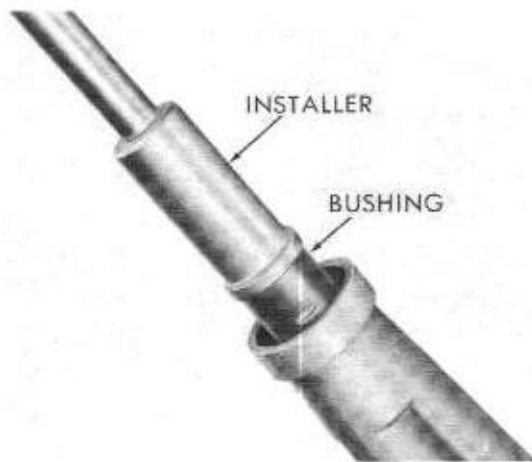


9. Then, place the installer, over the shaft and tap it until the seal seats firmly in the bore.

10. Next, install the drive shaft.



11. On some Mercurys and Fords, the bushing in the extension housing as well as the oil seal is replaceable. Where this is the case, the bushing and seal can be removed together in one operation, using a collet-type tool. All that is required is to push the remover in until it is just past the bushing. Then remove the seal and bushing as shown.



12. To install the bushing, place it on the tool.

13. Then, drive the tool and bushing into the housing until the tool seats. The bushing is thus automatically and properly located.

B. Replacement of Throttle and Manual Control Levers

There are times when, to correct leakage or replace damaged throttle and manual control levers, it is necessary to remove them.

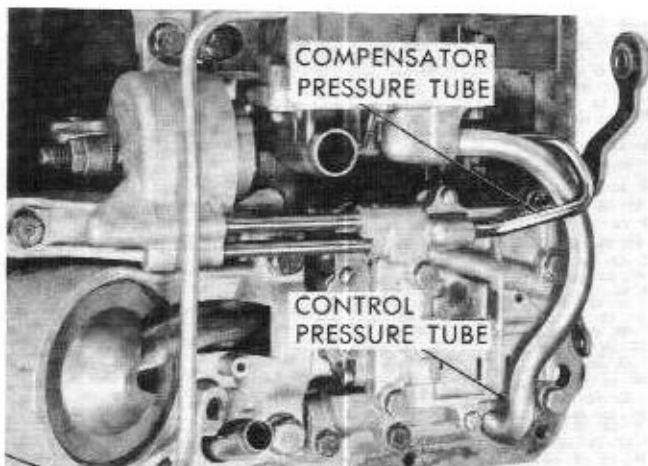
1. First, disconnect the control rods from the throttle and manual control levers.

2. Remove the control valve assembly as described in Part C., Page 95.

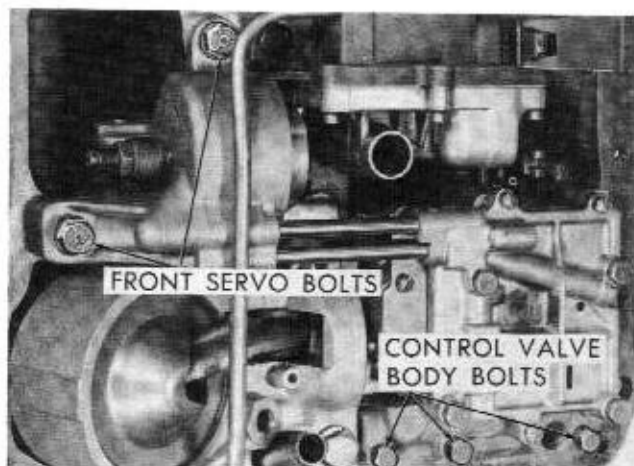
3. Remove the manual and throttle levers and the manual shaft seal as shown in Chapter IV, Section Three.
4. Install the manual shaft seal and the manual and throttle levers as described in Chapter IV, Section Three.
5. Install the control valve assembly as described in Part C., Page 96.
6. Connect the manual and throttle control rods to the levers, check the linkage for free movement, and add fluid to fill the transmission.
7. Then, check manual and throttle linkage adjustments, as already described in this chapter, and road test the car.

C. Replacement of Control Valve Body

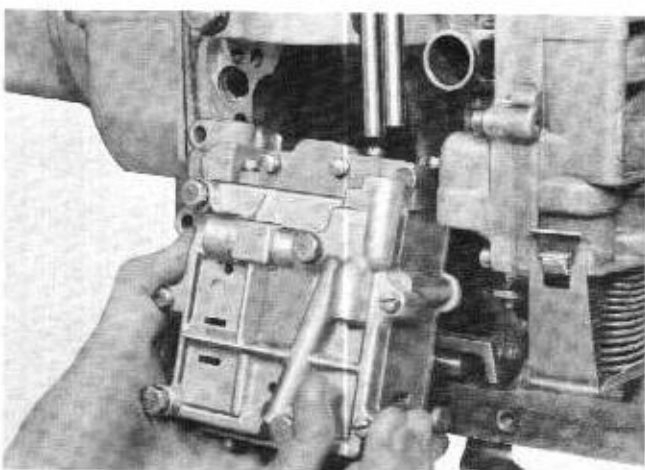
1. Drain the fluid from the bottom oil pan.
2. Remove the bottom oil pan and fluid screen.



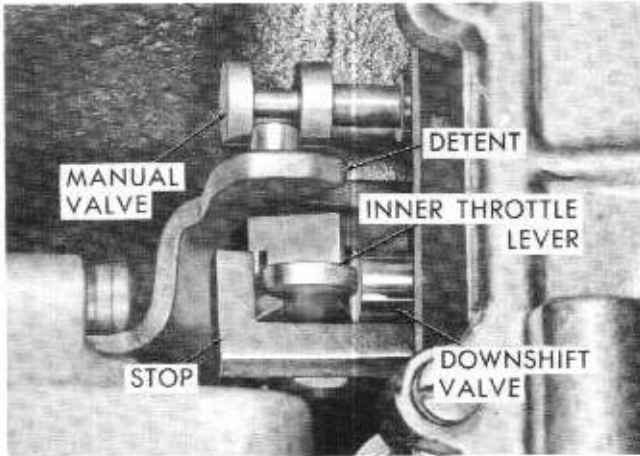
3. Remove the control pressure tube and the compensator pressure tube.



4. Loosen the front servo attaching bolt (or bolts) three turns, and remove the three control valve body bolts.
5. Lower the valve body and slide it off the servo tubes.



6. Overhaul the valve body as described in Chapter IV. If it can't be repaired, replace it with a new one.

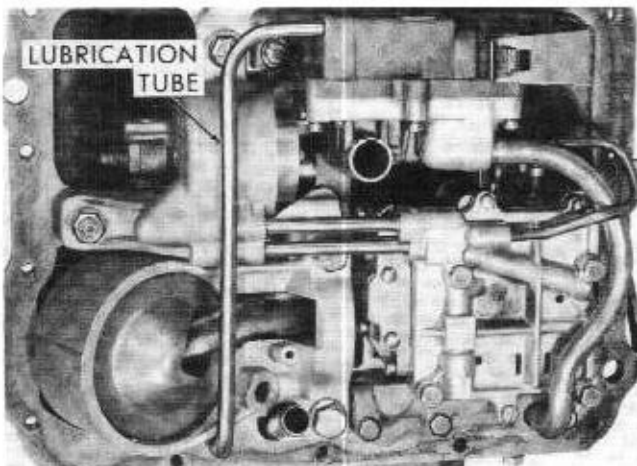


7. With the manual lever in neutral, slide the new or repaired control valve body onto the servo tubes. Position the inner throttle lever between the throttle lever stop and downshift valve, and make sure the manual valve engages the pin in the manual detent.

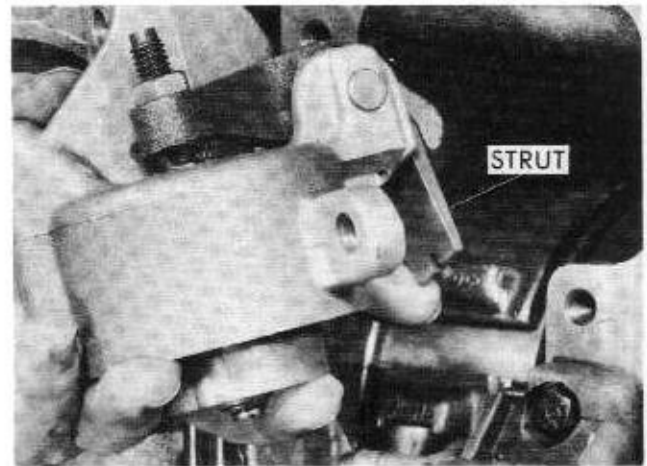
8. Install the three valve body bolts, and torque them 8 to 10 foot-pounds. Torque the front servo bolt (or bolts) 30 to 35 foot-pounds.
9. Install the compensator pressure tube and the control pressure tube.
10. Install the fluid screen.
11. Install the bottom oil pan.
12. Add fluid to fill the transmission.
13. Adjust all the linkage.

D. Replacement of Front Servo

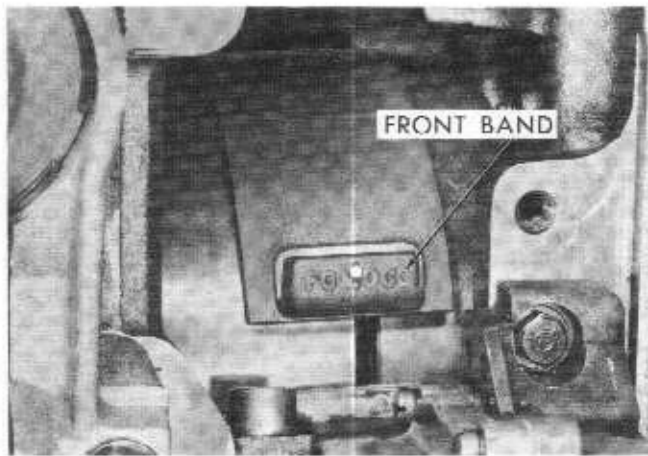
1. Drain the bottom oil pan.
2. Remove the bottom oil pan.
3. Remove the fluid screen.



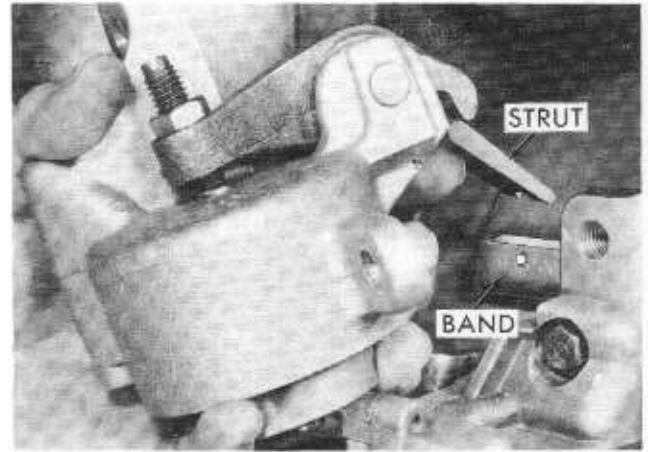
4. Remove the lubrication tube. Loosen the three control valve body bolts, and remove the front servo bolt (or bolts).



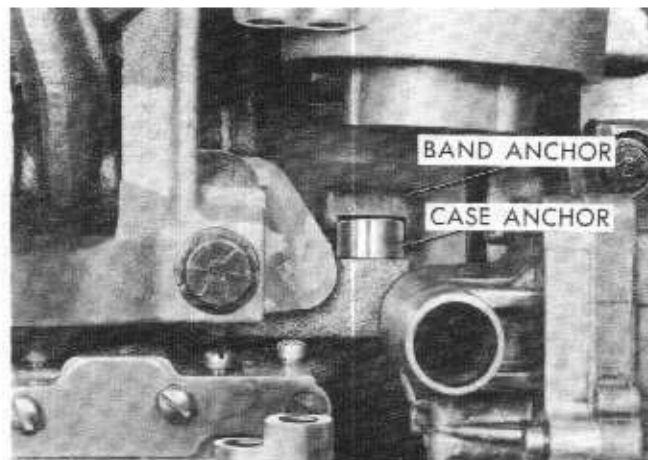
5. Remove the front servo, holding the strut in place. Overhaul the front servo as described in Chapter IV.



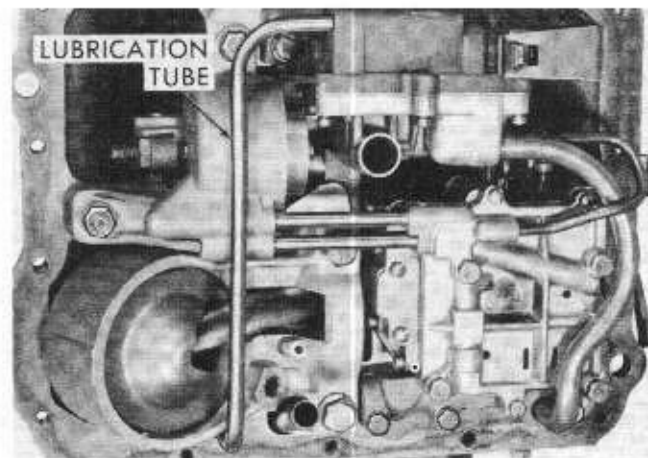
6. To install the front servo, first position the front band forward in the case, with the band ends down.



7. Align the large end of the servo strut with the servo actuating lever, and align the small end with the band end.



8. Rotate the band, strut, and servo to align the servo with the tubes in the valve body. The anchor end of the band must also align with the anchor in the case.

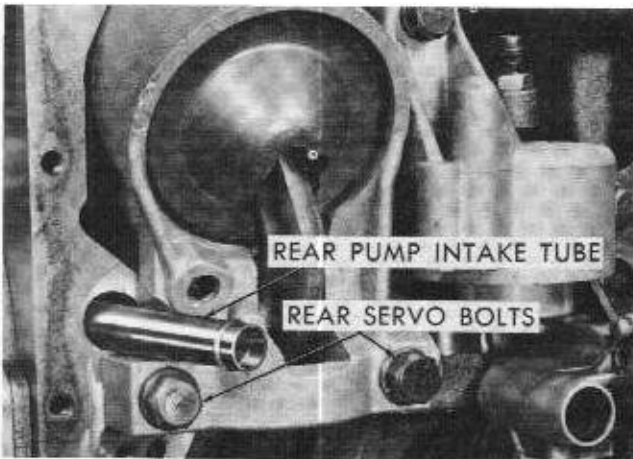


9. Install the servo bolt or bolts and torque 30 to 35 foot-pounds. Tighten the three control valve body bolts 8 to 10 foot-pounds, and install the lubrication tube.

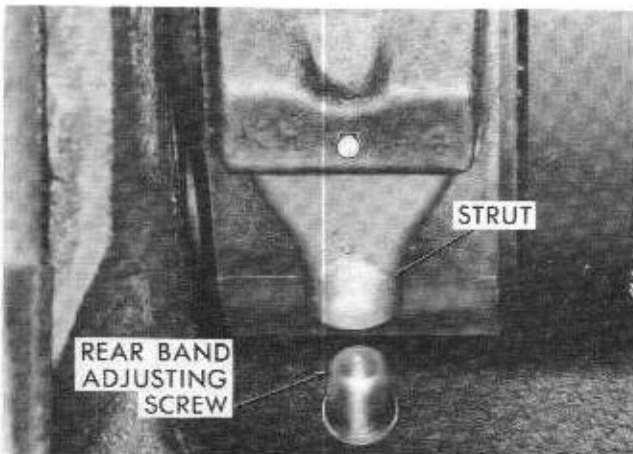
10. Adjust the front band as described in Chapter III, Section Three.
11. Install the fluid screen.
12. Install the bottom oil pan, using a new gasket.
13. Fill the transmission.

E. Replacement of Rear Servo

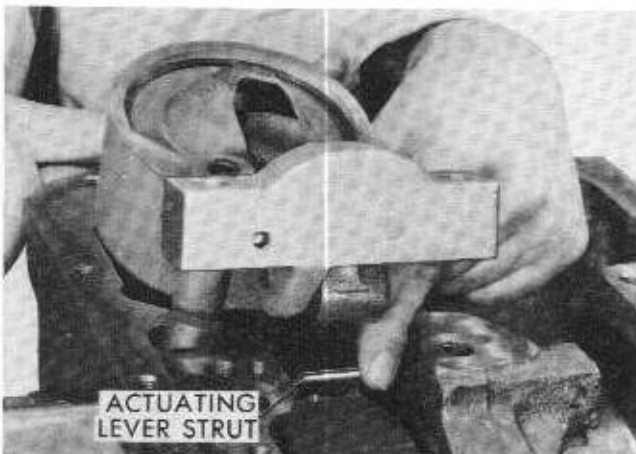
1. Remove the control valve body as described in Part C. Page 95.
2. Remove the lubrication tube.



3. Remove the rear pump intake tube, and the rear servo bolts, and remove the rear servo. Overhaul the servo as described in Chapter IV.



4. To install the rear servo, first position the anchor strut on the band, and rotate the band so that the strut goes over the adjusting screw.

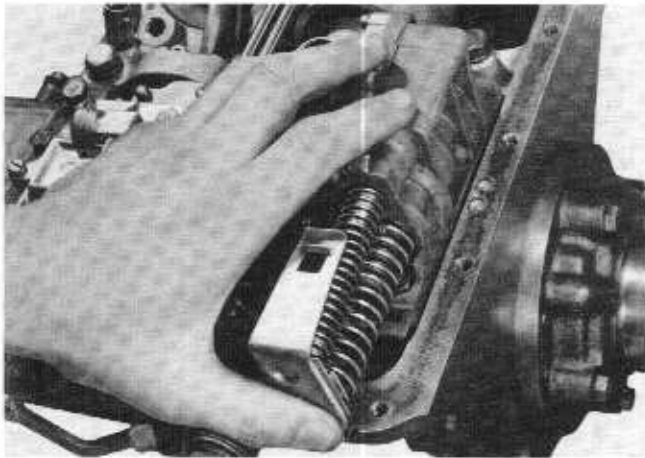


5. While holding the anchor strut in place, position the actuating lever strut so that it will engage both the band and actuating lever, and install the rear servo.

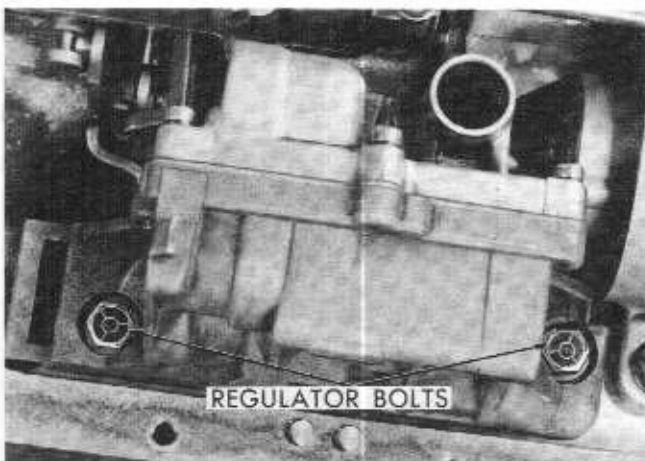
6. Install the rear servo bolts, and torque them 40 to 45 foot-pounds.
7. Install the rear pump intake pipe.
8. Install the lubrication tube.
9. Install the control valve body as described in Part C., Page 96.
10. Fill the transmission.
11. Adjust the rear band.

F. Replacement of Pressure Regulator

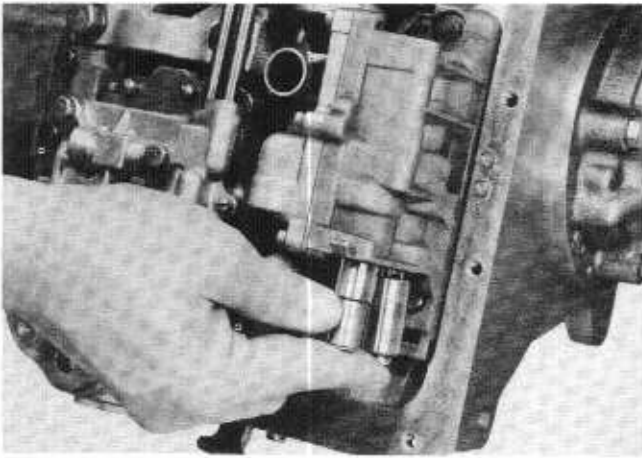
1. Drain the bottom oil pan.
2. Remove the bottom oil pan.
3. Remove the fluid screen.
4. Remove the lubrication tube.
5. Remove the compensator pressure tube and the control pressure tube.



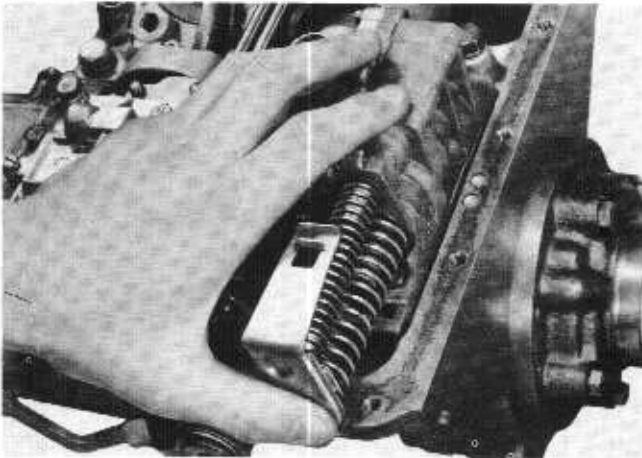
6. Remove the pressure regulator spring retainer, springs, spacers, and valves from the regulator assembly.



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



8. To install the pressure regulator, position it on the case and install its bolts. Torque these bolts 17 to 22 foot-pounds. Check the converter pressure and control pressure valves for freedom of movement in their bores.



9. Install the spacers, valve springs, and retainer.

10. Install the compensator pressure tube and the control pressure tube.

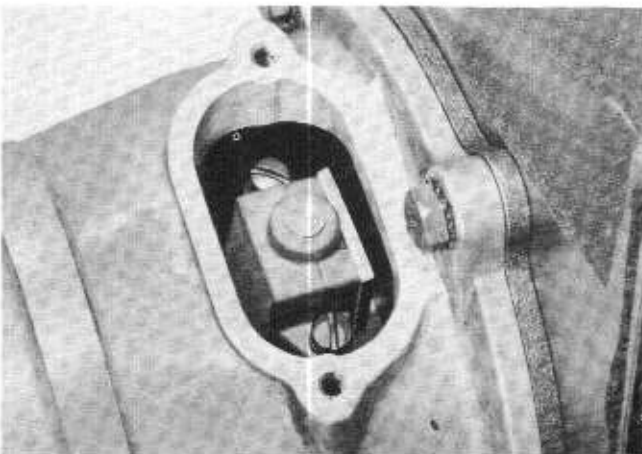
11. Install the lubrication tube.

12. Install the fluid oil screen.

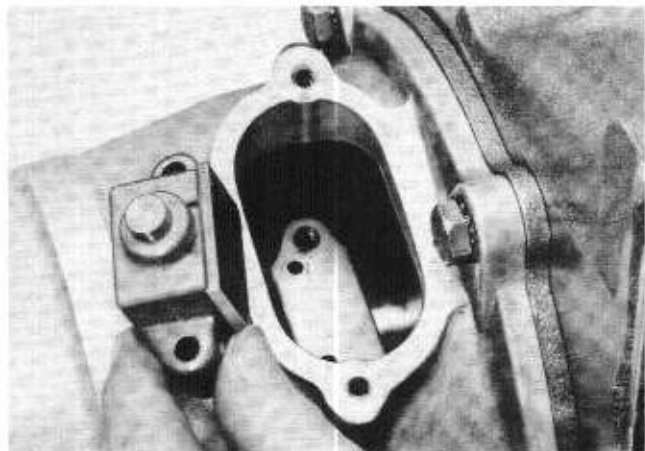
13. Install the bottom oil pan, using a new gasket.

14. Fill the transmission with fluid.

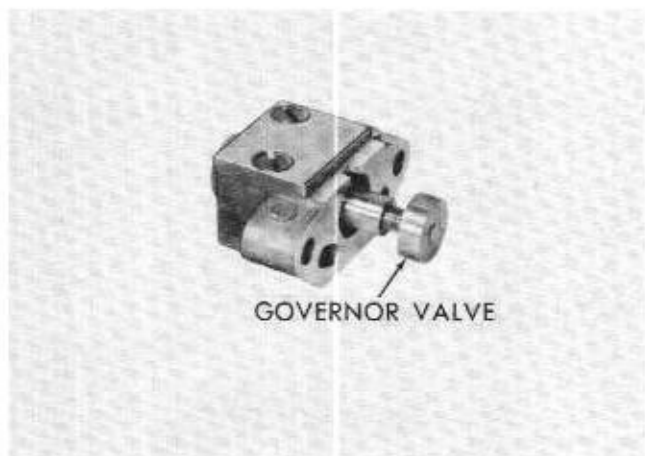
G. Replacement of Governor



1. Remove the governor inspection cover, and rotate the drive shaft until the governor assembly is aligned with the inspection hole.



2. Remove the two governor bolts, and remove the governor assembly from the counterweight.



3. Before installing the new governor assembly, remove the valve from the governor body, and lubricate it with transmission fluid. Install the valve in the governor body, making sure it moves freely in the bore.

4. Position the governor assembly on the counterweight.

NOTE Be sure to align the fluid passages in the governor body with those in the counterweight.

5. Install the governor bolts, and install the inspection cover, using a new gasket. Torque the cover screws 4 to 6 foot-pounds.