

15. Remove the extension housing attaching bolts and housing.
16. Remove the output shaft and rear support assembly.
17. Remove the parking pawl pin from the case with a magnet.
18. Working from inside of the case, drive on the shoulder of the toggle lever (Fig. 32) pin with a small punch to move the retaining plug part way out of the case. Remove the plug with a pair of pliers.
19. To remove the toggle lever pin, slide the toggle lever toward the front of the case. Cock the lever to one side to apply pressure on the pin, then move the toggle to the rear of the case to move the pin outward. Repeat this procedure until the pin can be removed from the case. Lift the pawl and toggle from the case as an assembly.
20. Remove the pawl and toggle lever as an assembly.

Installation

1. Position the new parking pawl and link assembly, then install the toggle lever pin and the plug.
2. Secure the pawl to the case with the pawl pin.
3. Position a new gasket on the rear support. Hold it in place with transmission fluid or petroleum jelly.
4. Make sure that the thrust washer is in place, then position the support and output shaft in place, making sure that the pressure tubes are entered in the case.
5. Position a new gasket on the extension housing and secure the extension housing to the case with the attaching bolts.
6. Install the rear servo and strut as outlined under Rear Servo Installation.
7. Install the main control valve assembly as outlined under Control Valve Body Installation.
8. Torque the front servo attaching bolts to specification as listed at the end of this Part.
9. Install the main pressure oil tube and the small compensator pressure tube to the control valve body and pressure regulator.
10. Adjust the front and rear bands as outlined in this Part.
11. Position the vacuum control rod in the case and install the vacuum diaphragm unit. Connect the vacuum hoses.
12. Install the screen, transmission pan and a new gasket.
13. Connect the speedometer cable to the extension housing.
14. Position the crossmember to the frame side supports, and install the attaching bolts and nuts. Torque bolts to specification.
15. Remove the transmission jack from under the vehicle. Install the rear support-to-crossmember nuts. Torque nuts to specification.
16. Adjust the transmission control linkage. Refer to Part 17-02.
17. Install the drive shaft, then lower the vehicle.
18. Fill the transmission to the correct level with the specified fluid. Refer to Part 17-01.

DISASSEMBLY AND ASSEMBLY

TRANSMISSION

Before removing any of the subassemblies, thoroughly clean the outside of the transmission to prevent dirt from entering the mechanical parts.

During the repair of the subassemblies, certain general instructions which apply to all units of the transmission must be followed. These instructions are given here to avoid unnecessary repetition.

Handle all transmission parts carefully to avoid nicking or burring the bearing or mating surfaces.

Lubricate all internal parts of the transmission with transmission fluid before assembly. **Do not use any other lubricants except on gaskets and thrust washers which may be coated with petroleum jelly to facilitate assembly. Always install new gaskets when assembling parts of the transmission.**

Tighten all bolts and screws to the recommended torque as listed at the end of this Part. For detail cleaning and inspection operations refer to Part 17-01.

Disassembly

1. After the transmission has been removed from the vehicle, place the assembly in the transmission holder shown in Fig. 15.

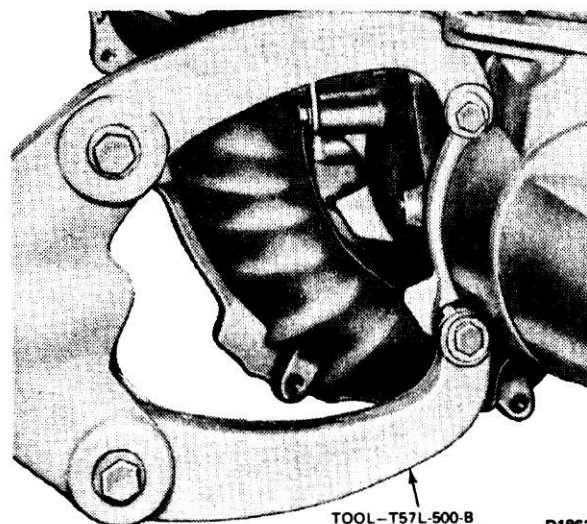


FIG. 15 Transmission Mounted in Holding Fixture—Typical

2. Remove the transmission pan, gasket, and screen retainer clip.
3. Lift the screen from the case.

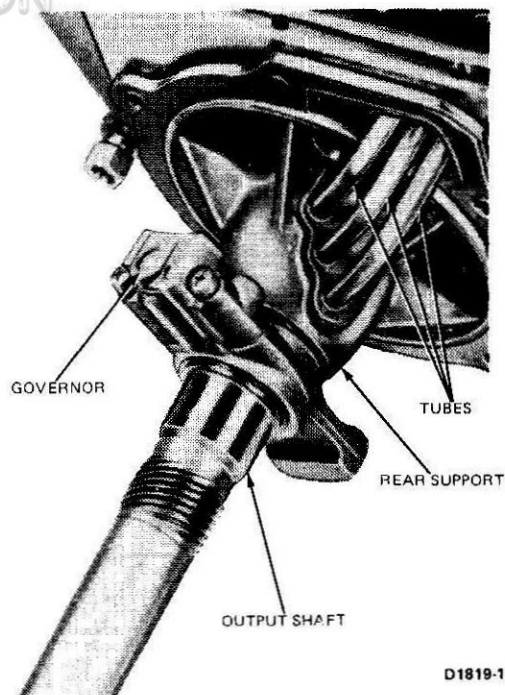


FIG. 16 Rear Support and Output Shaft Installed

4. Remove the spring seat from the pressure regulator. **Maintain constant pressure on the seal to prevent distortion of the spring seat and the sudden release of the springs.**
5. Remove the pressure regulator springs and pilots, but do not remove the valves.
6. Remove the small compensator pressure tube from the pressure regulator and the control valve body.
7. Remove the main pressure oil tube first, by gently prying up the end that connects to the main control valve assembly, then, remove the other end of the tube from the pressure regulator. **Be sure to remove the tube in this manner. Failure to do so, could kink or bend the tube causing excessive transmission internal leakage.**
8. Loosen the front and rear servo band adjusting screws five turns. Loosen the front servo attaching bolts three turns.
9. Remove the vacuum diaphragm unit and push rod.
10. Remove the control valve body attaching bolts. Align the levers to permit removal of the valve body. Then lift the valve body clear of the transmission case. Pull the body off the servo tubes and remove from the case.
11. Remove the regulator from the case. **Keep the control pressure valve and the converter pressure regulator valve in the pressure regulator to avoid damage to the valves.**
12. Remove the front servo apply and release tubes by twisting and pulling at the same time. Remove the front servo attaching bolts. Hold the front servo strut with the fingers, and lift the servo assembly from the case.
13. Remove the rear servo attaching bolts. Hold the actuating and anchor struts with the fingers, and lift the servo from the case.

Transmission End Play Check

1. Remove one of the front pump attaching bolts. Mount the dial indicator support Tool 77067 in the front pump bolt hole. Mount a dial indicator on the support so that the contact rests on the end of the turbine shaft.
2. Install the extension housing seal replacer on the output shaft to provide support for the shaft.
3. Pry the front clutch cylinder to the rear of the transmission with a large screwdriver. Set the dial indicator at zero while maintaining a slight pressure on the screwdriver.
4. Remove the screwdriver and pry the units toward the front of the transmission by inserting the screwdriver between the large internal gear and the transmission case.
5. Record the indicator reading for use during transmission assembly. End play should be 0.010 to 0.029 inch (minimum end play is preferred). If end play is not within specifications, a new selective thrust washer must be used when the transmission is assembled.
6. Remove the indicator support, and then remove the seal replacer from the output shaft.

Removal of Case and Extension Housing Parts

1. Remove the remaining front pump attaching bolts. Then remove the front pump and gasket. **If necessary, tap the screw bosses with a soft-faced hammer to loosen the pump from the case.**
2. Remove the lubrication tube from the case. Remove the five transmission to extension housing bolts. These bolts also attach the rear support to the case. Remove the extension housing.
3. Remove the output shaft assembly (Fig. 16). To facilitate output shaft removal, insert a screwdriver between the output shaft ring gear and pinion carrier and pry the output shaft rearward. **Be careful not to bend the pressure tubes between the rear support or distributor sleeve and case as the tubes are removed from the case.**
4. Remove the four seal rings from the output shaft with the fingers, to prevent breaking the rings.
5. Remove the governor snap ring from the output shaft. Using a soft-faced hammer, tap the governor assembly off the output shaft. Remove the governor drive ball (Fig. 17).
6. Remove the rear support and gasket from the output shaft. Remove the needle bearings and race from the rear support (Fig. 17).
7. Remove the selective thrust washer from the rear of the pinion carrier and remove the pinion carrier.
8. Remove the primary sun gear rear thrust bearing and races from the pinion carrier.
9. **Note the rear band position for reference in assembly.** The end of the band next to the adjusting screw has a depression (dimple) in the center of the boss. Squeeze the ends of the rear band together, tilt the band to the rear, and remove the rear band from the case.