

16. Support the transmission on a transmission jack. Secure the transmission to the jack with safety chain. Remove the two engine rear support to transmission bolts. Remove the two crossmember to frame side rail attaching bolts and nuts. Raise the transmission slightly to take the weight off the crossmember. Remove the rear support to crossmember bolt and nut and remove the crossmember.
17. Lower the transmission slightly and disconnect the fluid filler tube.
18. Remove the remaining converter housing to engine attaching bolts. Move the transmission and converter assembly to the rear and down to remove it.

Installation

1. Torque the converter drain plug to specification as listed at the end of this Part.
2. If the converter has been removed from the converter housing, carefully position the converter to the transmission making sure the converter drive flats are fully engaged in the pump gear.
3. With the converter properly installed, place the transmission on the jack. Secure the transmission to the jack with safety chain.
4. Rotate the converter until the studs and drain plug are in alignment with their holes in the flywheel.
5. With the transmission mounted on a transmission jack, move the converter and transmission assembly forward into position, using care not to damage the flywheel and converter pilot. **The converter must rest squarely against the flywheel. This indicates that the converter pilot is not binding in the engine crankshaft.**
6. Install the lower converter housing-to-engine bolts. Torque bolts to specification. Remove the safety chain from the transmission.
7. Connect the fluid filler tube.
8. Install the crossmember.
9. Lower the transmission until the extension housing rests on the crossmember, and then install the rear support-to-crossmember bolts. Connect the exhaust inlet pipes at the exhaust manifolds (LTD II, Thunderbird and Cougar).
10. Install the converter attaching nuts. Install the access plates.
11. Connect the oil cooler inlet and outlet lines to the transmission case.
12. Coat the front universal joint yoke seal and spline with C1AZ-19590-B lubricant (or equivalent), and install the drive shaft. Be sure that the drive shaft markings match those of the companion flange for correct balance.
13. Connect the speedometer cable at the transmission.
14. Connect the manual selector rod or cable to the transmission manual lever.
15. Connect the downshift linkage at the transmission downshift lever.
16. Install the starter motor and connect the starter cables.
17. Connect the vacuum hoses to the vacuum diaphragm unit and the tube to its clip.
18. Lower the transmission and install the upper two converter housing-to-engine bolts. Torque bolts to specification as listed at the end of this Part.
19. Lower the vehicle and fill the transmission with transmission fluid, following the recommended procedure. Refer to Part 17-01.
20. Check the transmission, converter assembly, and fluid cooler lines for fluid leaks. Adjust the manual and downshift linkages. Refer to Part 17-02.

CONTROL VALVE BODY

Removal

1. Raise the vehicle so that the transmission fluid pan is accessible.
2. Drain the fluid from the transmission by loosening the pan attaching bolts starting at the rear of the pan and working toward the front. When most of the fluid has drained from the pan, remove the remainder of the attaching bolts. Remove the pan and gasket. **Discard the gasket. If the same fluid is to be used again in the transmission, filter the fluid through a 100-mesh screen before installing it in the transmission. Reuse the fluid only if it is in good condition.**
3. Disconnect the hoses from the vacuum diaphragm unit. Remove the diaphragm unit using Snap-On Tool S8696-A. **Do not use any tools on the diaphragm housing, such as pliers, pipe wrenches, etc. Do not allow solvents to enter the diaphragm unit. Remove the push rod.**
4. Remove the fluid filter retaining clip and the filter.

NOTE: The dacron oil filter cannot be cleaned. If it is contaminated, it must be replaced.
5. Remove the small compensator pressure tube (Fig. 8).

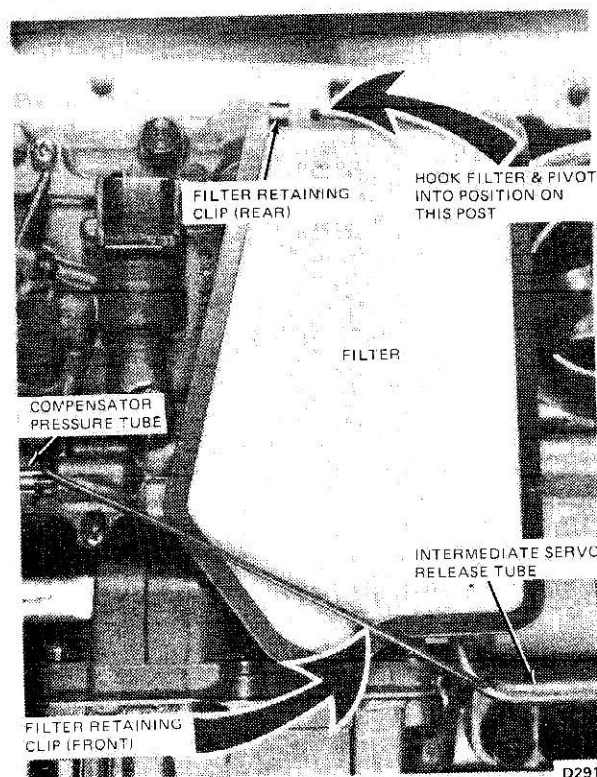


FIG. 8 Fluid Filter Transmission

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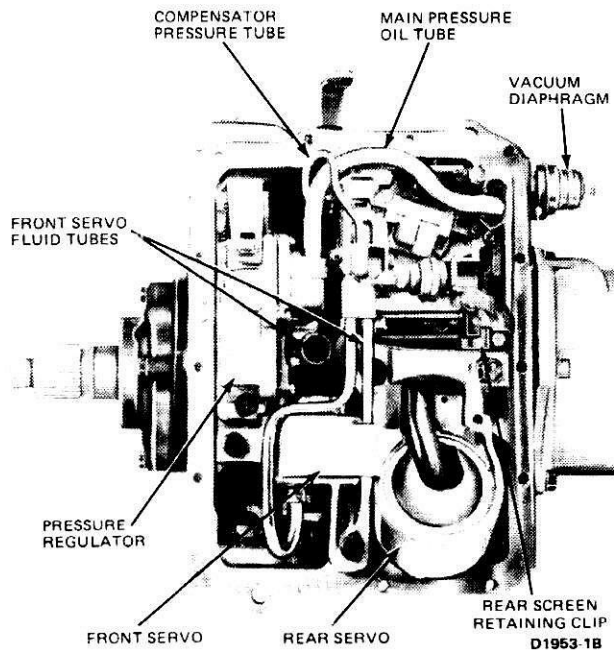


FIG. 9 Typical Hydraulic Control System

6. 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.**
7. Loosen the front servo attaching bolts three turns.
8. Remove the three control valve body attaching bolts, and lower the valve body while pulling it off the front servo tubes. **Be careful not to damage the valve body or the tubes.**

Installation

1. Before installing the control valve body, check for a bent manual valve by rolling it on a flat surface.
2. Install the control valve body by aligning the front servo tubes with the holes in the valve body. Shift the manual lever to the 1 detent, and place the inner downshift lever between the downshift lever stop and the downshift valve. **The manual valve must engage the actuating pin in the manual detent lever.**
3. Install but do not tighten, the control valve body attaching bolts.
4. Move the control valve body toward the center of the case until the clearance is less than 0.050 inch, between the manual valve and the actuating pin on the manual detent lever.
5. Torque the attaching bolts to specification as listed at the end of this Part. Be sure that the rear filter retaining clip is installed under the valve body bolt as shown in Fig. 8.
6. Install the main pressure oil tube. **Be sure to install the end of the tube that connects to the**

pressure regulator first. Then, install the other end of the tube into the main control valve assembly by tapping it gently with a soft hammer.

7. Install the compensator pressure tube to the pressure regulator and the control valve body.
8. Turn the manual valve one full turn in each manual lever detent position. If the manual valve binds against the actuating pin in any detent position, loosen the valve body attaching bolts and move the body away from the center of the case. Move the valve body only enough to relieve the binding. Torque the attaching bolts and recheck the manual valve for binding.
9. Position the push rod in the bore of the vacuum diaphragm unit. Using the diaphragm unit as a guide, insert the push rod into the threaded opening of the case. Torque the diaphragm unit to specification as listed at the end of this Part. Connect the vacuum hoses.
10. Torque the front servo attaching bolts to specification.
11. Adjust the front band as outlined in this Part.
12. Install the fluid filter by hooking the filter on the rear filter clip (Fig. 8) and pivoting it into position.
13. Install the filter retaining clip (front); attach one end to the compensator pressure tube and the other end to the intermediate servo release tube (Fig. 8).
14. Position a new pan gasket on the bottom of the transmission case, and install the pan. Torque the pan screws to specification.
15. Adjust the rear band as outlined in this Part.
16. Fill the transmission with fluid. **If the fluid that was drained from the transmission is to be used again, filter the fluid through a 100-mesh screen as it is poured back into the transmission. Re-use the fluid only if it is in good condition.**
17. If the control valve body was replaced, adjust the transmission control linkage. Refer to Part 17-02.

FRONT SERVO

Removal

1. Drain the fluid from the transmission, and remove the pan and fluid screen.
2. Remove the vacuum diaphragm unit.
3. Loosen the three control valve body attaching bolts.
4. Remove the attaching bolts from the front servo (Fig. 9), hold the strut with the fingers, and remove the servo.

Installation

1. To install the front servo, position the front band forward in the case, with the end of the band facing downward. Make sure the front servo anchor pin is in position in the case web. Align the large end of the servo strut with the servo actuating lever, and align the small end with the band end.
2. Rotate the band, strut, and servo to align the anchor end of the band with the anchor in the case. Push the servo body onto the control valve body tubes.