

SECTION

D

SERVICING THE CONTROL VALVE

CONTROL VALVE

(Refer to Figure D-1)

Disassembly

1. Remove the valve spool end cap (26), spacer (25), "O" ring (24), mounting bracket (23) scraper seal retainer (21) with seal (22) and quad ring (20) from the front end of the valve assembly.
2. Remove the ferry head capscrews (1) using a 1/4" 12 pt. wrench and end cap (2).
3. Grasp the end of the spool (18) and pull out of the valve body (19).
4. Remove the snap ring (15), retainer (13), spacer (14), retainer (13), relief valve plug retainer (12), spacer (11) and quad ring (10) from the spool (18).
5. Remove the relief valve plug (3), "O" ring (4), shim (5), outer spring (6), inner spring (7), poppet (8) and poppet seat (9).
6. Remove the plug (16) with "O" ring (17).

Inspection

The valve body must be inspected for grooves, deep scratches and excessive wear. If the valve body has damaged threads, cracks or groove marks the body and spool must be replaced.

The valve spool must be inspected for grooves, deep scratches and excessive wear.

Check to see if the spool fits it's respective body bore with hand pressure and without excessive side clearance. If it is loose, scored or damaged the spool and body must be replaced.

Replace all "O" rings and oil seals during assembly.

Outer Spring (6) Inspection

Free Length -----	1.65
Total Coils -----	11.5
Active Coils -----	9.5
Wire Diameter -----	.1055
250 lbs. per inch	

Inner Spring (7) Inspection

Free Length -----	1.23
Total Coils -----	15
Active Coils -----	13
Wire Diameter -----	.059
95 lbs per inch	

Assembly

1. Install the relief valve poppet seat (9) poppet (8), inner spring (7), outer spring (6), shim (5) and plug (3) with a new "O" ring (4) in the valve body (19).
2. Install the quad ring (10), spacer (11), relief valve plug retainer (12), retainer (13), spacer (14), retainer (13) and snap ring (15) on the rear of the valve spool (18) and then into the valve body (19).
3. Install a new seal (22) in the retainer (21) with the lip towards the larger diameter opening.
4. Install the quad ring (20), retainer (21) with seal (22), mounting bracket (23), "O" ring (24), spacer (25) and valve spool end cap (26).
5. Install the plug (16) with "O" ring (17).
6. Install the end cap (2) using the ferry head capscrews (1). Torque to 225-275 inch lbs.

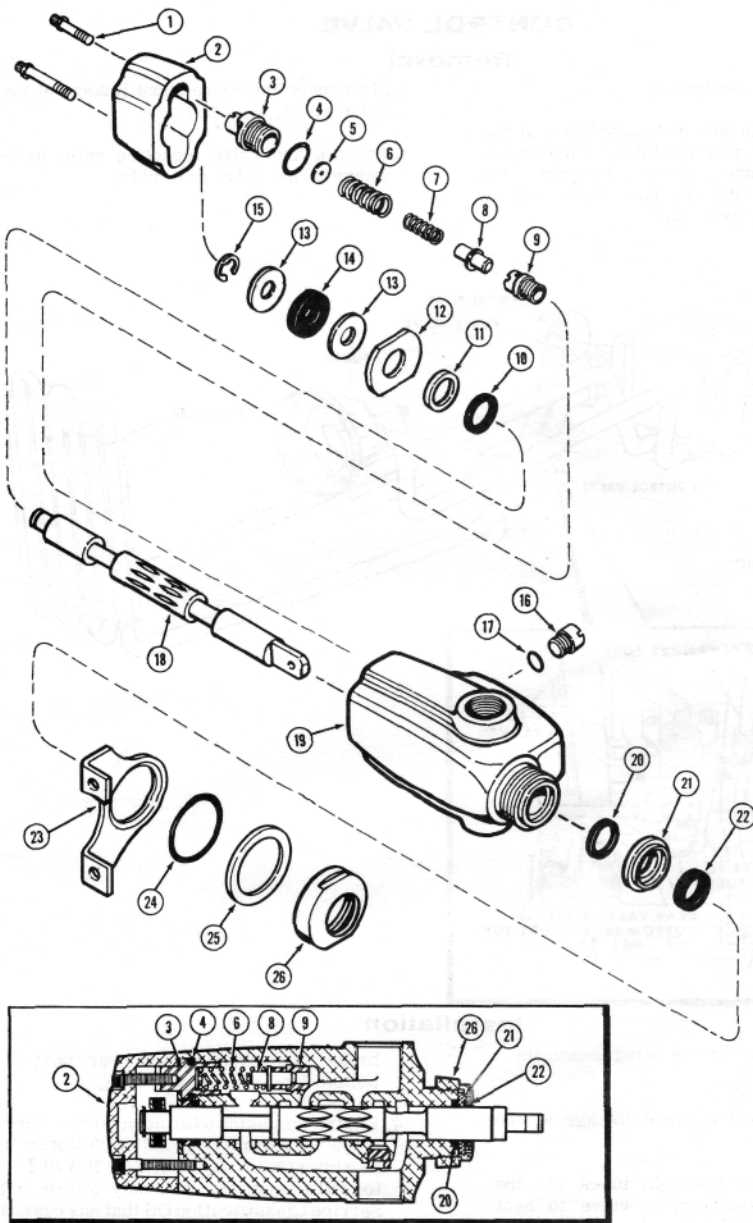
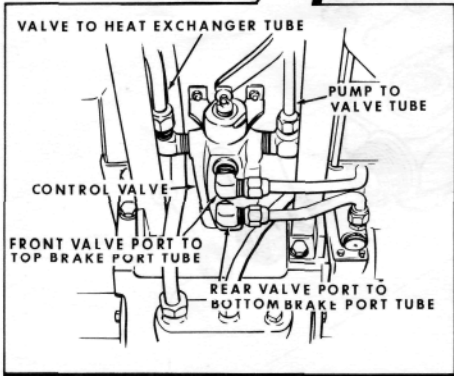
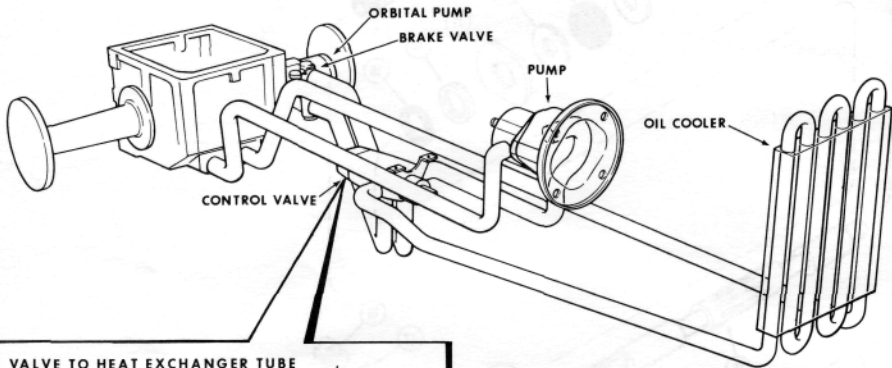


Figure D-1

CONTROL VALVE

Removal

1. Drain the transmission.
2. Disconnect the four hydraulic tubes at the valve, (pump to valve tube, valve to heat exchanger tube, front valve port to top brake port tube and rear valve port to bottom brake port tube).
3. Disconnect the valve spool linkage at the valve spool.
4. Remove the valve mounting nuts, lockwashers and valve assembly.



Installation

1. Install valve assembly using lockwashers and nuts.
2. Connect the valve spool linkage at the valve spool.
3. Connect the four hydraulic tubes at the valve, (pump to valve tube, valve to heat exchanger tube, front valve port to top brake port tube and rear port to bottom brake valve port tube).
4. Fill transmission with clean oil to one inch below top cover using SAE 5W20 Motor Oil in winter (Below 32°F.) or SAE 20W40 Motor Oil in summer. Use only MS or DM Service Classification Oil that has passed AMA Test Sequences I, II, III.