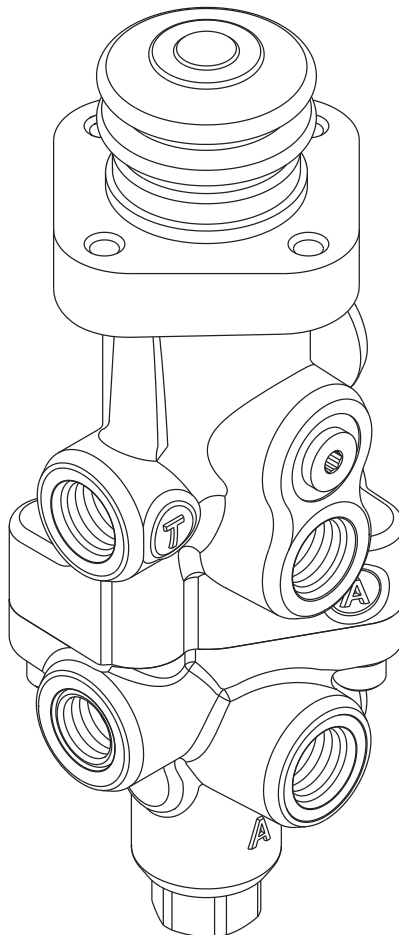


TANDEM MODULATING VALVE with Pilot Apply Service Instructions

TABLE 1 (Specifications)

Complete Unit John Deere Part Number	Valve Assembly John Deere Part Number	John Deere Repair Kit Number	Brake Pressure Setting	
			bar	(PSI)
AT396584	AT380782	AT380781	93.1 ± 3.5	(1350 ± 50)
AT431328	AT436956	AT380781	93.1 ± 3.5	(1350 ± 50)
AT427003	AT436955	AT380781	93.1 ± 3.5	(1350 ± 50)



(AT436955 shown)

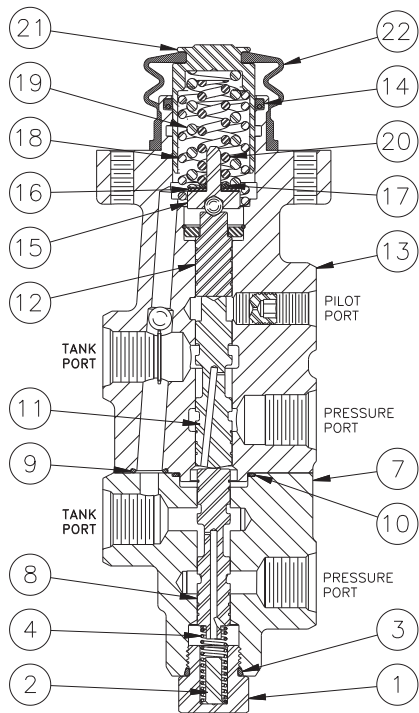


FIGURE 1
(AT380782)

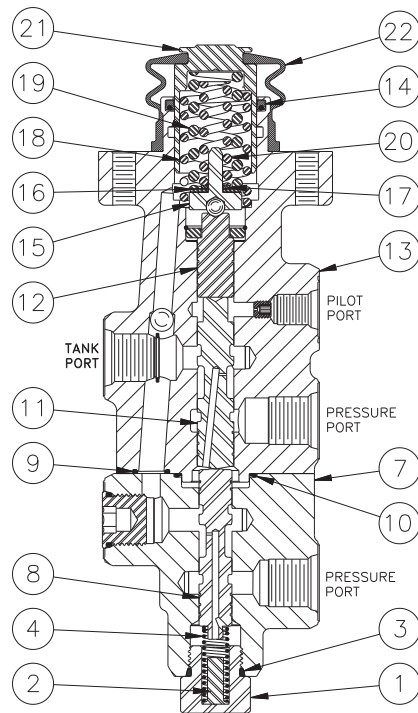


FIGURE 2
(AT436956)

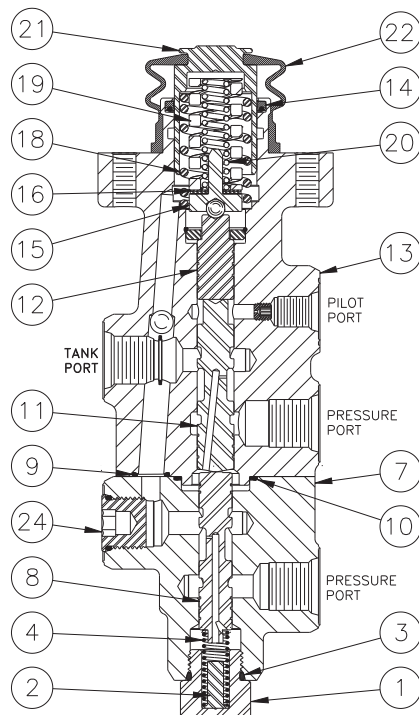


FIGURE 3
(AT436955)

⚠ WARNING

Installation and test note: Piston (21) must be retained mechanically. This will prevent it from blowing out at high velocity if an incorrect connection occurs from power source to tank ports. **Be sure the tank ports are connected directly to tank.** Failure to do this could result in serious injury or death.

DISASSEMBLY

(Refer to Figures 1 through 5 and Table 3)

NOTE

Housings (7 & 13) and spools (8, 11, & 12) are manufactured as matched sets. These sets, housing and spool(s), should not be intermixed with other parts.

- 1. Remove boot (22) from piston (21) and housing (13).
- 2. Remove piston (21), springs (18, 19, & 20), washer (17), shim(s) (16), and retainer assembly (15) from housing (13).
NOTE: Be aware of the number of shim(s) being removed from housing. Not all models use washer (17).
- 3. Carefully remove cup (14) from housing (13) bore.
NOTE: Be careful not to scratch or mar housing bore.
- 4. Remove end plug (1), retainer (2), and spring (4) from housing (7). Remove o-ring (3) from end plug (1).
- 5. Separate housings (7 & 13) by removing cap screws (5) and washers (6). Remove o-rings (9 & 10) from housings (7 & 13).
- 6. Carefully remove spools (8, 11, & 12) from housings (7 & 13).
NOTE: Be careful not to damage pools or housing bores.

CAUTION

Do not intermix spools and housings. Spool (8) and housing (7) are a matched set as are spools (11 & 12) and housing (13).

- 7. Remove plug (23). Remove o-ring (24) from plug (23).
- 8. Remove plug (25). **NOTE: Replacement o-ring for plug (25) is not included in the repair kit. Not all models use plug (25).**

ASSEMBLY

(Refer to Figures 1 through 5 and Table 3)

LUBRICATE ALL RUBBER COMPONENTS FROM REPAIR KIT WITH CLEAN TYPE FLUID USED IN THE SYSTEM.

- 1. Clean all parts thoroughly before assembling.
- 2. Install new o-rings (9 & 10) in proper o-ring pockets on housings (7 & 13).
- 3. Lubricate spools (11 & 12) with clean system fluid and carefully slide into bottom end of housing (13) bore. Note direction and order of spools (11 & 12). **NOTE: Spools must slide freely into bore. If any parts are damaged, a new valve assembly may be required.**
- 4. Reassemble housings (7 & 13) using cap screws (5) and washers (6). Use Loctite 242 on cap screws and torque 27.1-33.9 N·m (22-25 lb·ft). **NOTE: Make sure housings line up correctly and that o-rings (9 & 10) remain in their pockets during assembly.**
- 5. Lubricate spool (8) with clean system fluid and carefully slide into housing (7) bore. Note direction of spool (8).
NOTE: Spool must slide freely into bore. If either part is damaged, a new valve assembly may be required.
- 6. Install new o-ring (3) on end plug (1).
- 7. Install spring (4), retainer (2), and end plug (1) into housing (7). Torque end plug (1) 47.5-54.2 N·m (35-40 lb·ft).
- 8. Carefully install new cup (14) in housing (13) bore. Note direction of cup. **NOTE: Be careful not to scratch or mar housing bore.**
- 9. Assemble springs (18, 19 & 20), washer (17), shim(s) (16), and retainer assembly (15) in piston (20). **NOTE: Not all models use washer (17).**

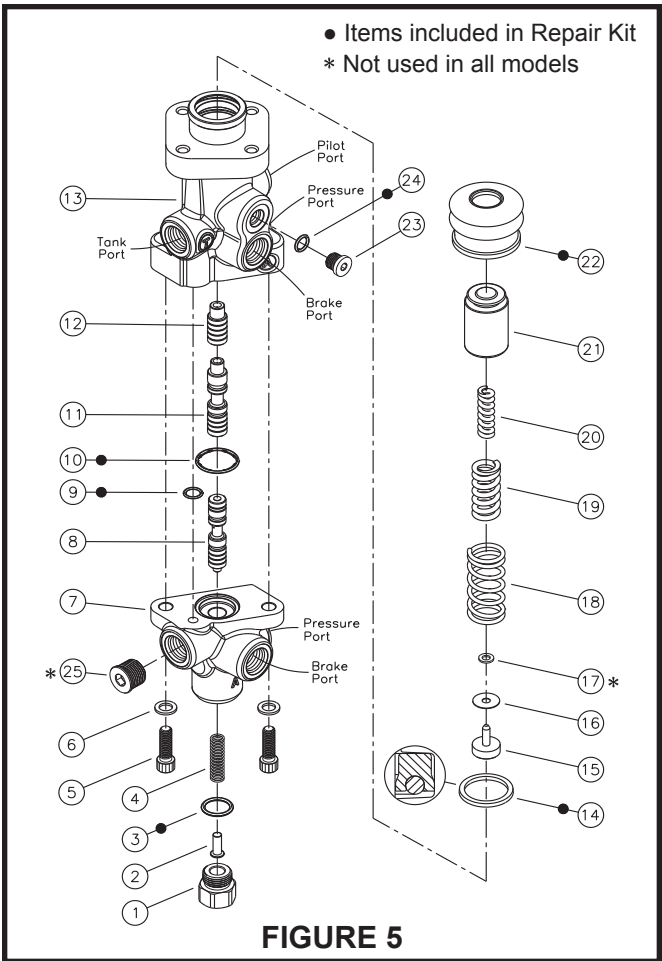


FIGURE 5

TABLE 3 O-ring Identification

Item Number	Description	Quantity
3	O-ring, 0.644 I.D. x 0.830 O.D. x 0.087 thick	1
9	O-ring, 0.364 I.D. x 0.504 O.D. x 0.070 thick	1
10	O-ring, 0.980 I.D. x 1.120 O.D. x 0.070 thick	1
24	O-ring, 0.351 I.D. x 0.495 O.D. x 0.072 thick	1

- 10. Carefully install piston (21) assembly into housing (13) bore.
- 11. Install new boot (22) on housing (13) and piston (21).
- 12. Install new o-ring (24) on plug (23). Install plug (23) in housing (13) and torque 13.6-20.3 N·m (10-15 lb·ft).
- 13. Install plug (25) in housing (7) and Torque 27.1-33.9 N·m (20-25 lb·ft). **NOTE: Replacement o-ring for plug (25) is not included in the repair kit. Not all models use plug (25).**

NOTE

After service, the valve must develop the pressure indicated in the specifications, TABLE 1. Shim(s) (16) are used to obtain the correct pressure setting. Contact MICO if brake pressure setting is not able to be obtained.