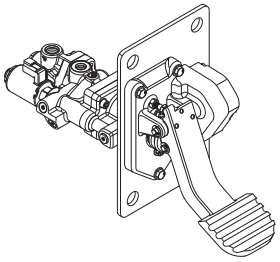

Tandem Modulating Valve
(with electronic pilot apply)
Service Instructions

TABLE 1 (Specifications)

Complete Unit Part Number	Valve Assembly Part Number	Repair Kit Number	Brake Pressure Setting	
			kPa	(PSI)
584-2470	585-8825	570-3071	4654 ± 172	(675 ± 25)

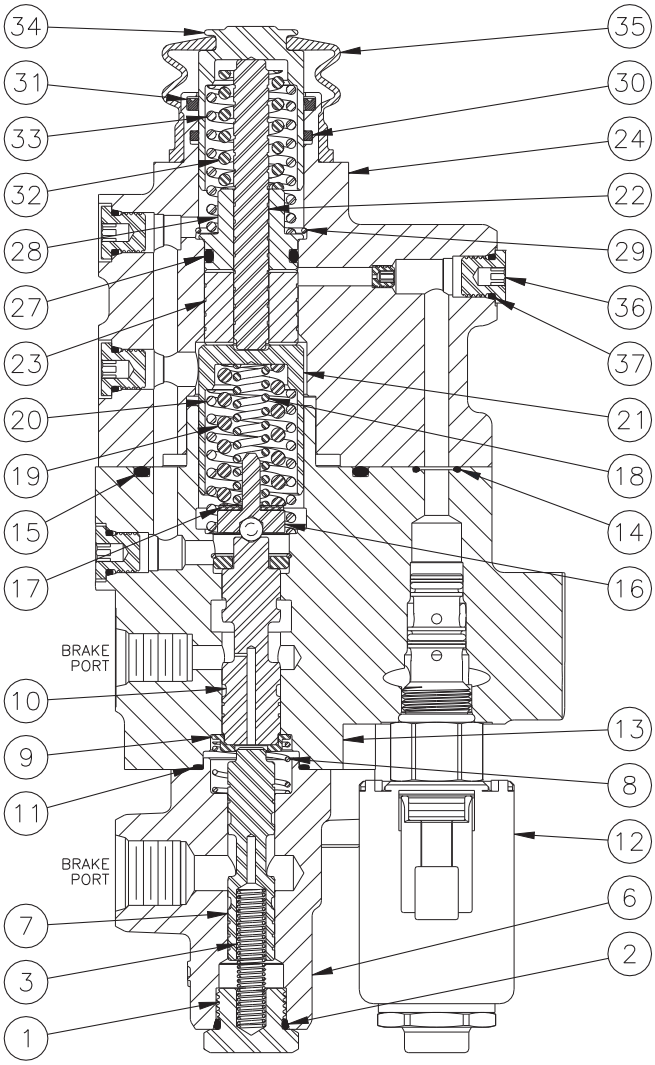

FIGURE 1
(valve assembly)

⚠ WARNING

Installation and test note: Piston (34) 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.

NOTE

Housings (6 & 13) and spools (7 & 10) are manufactured as matched sets. These sets, housing and spool, should not be intermixed with other parts.

There are five plugs similar to plug (36) that are used to seal machined cavities. These plugs do not need to be removed to service this valve.

DISASSEMBLY

(Refer to Figures 1 and 2)

1. See machine servicing instructions to properly remove the modulating valve from the machine.
2. Note the electrical connector orientation on pilot valve (12). Loosen the solenoid nut on pilot valve (12), it is not necessary to remove it. Remove pilot valve (12) from housing (13) by turning on the wrench flats.
3. Remove boot (35) from piston (34) and housing (24).
4. Remove piston (34), springs (32 & 33), and pin (22) from housing (24).
5. Carefully remove cup (31), seal (30), and round ring (29) from housing (24) bore. **NOTE: Be careful not to scratch or mar housing bore.**
6. Remove retainer (28) from housing (24). Remove o-ring (27) from retainer (28).
7. Separate housings (13 & 24) by removing four cap screws (26) and four washers (25). Remove o-rings (14 & 15) and piston (23) from housing (24).
8. Remove plug (36) from housing (24). Remove o-ring (37) from plug (36).
9. Remove piston (21), springs (18, 19, & 20), shim(s) (17), and retainer assembly (16) from housing (13). **NOTE: Be aware of the number of shim(s) being removed from housing.**
10. Remove plug (1) and spring (3) from housing (6). Remove o-ring (2) from plug (1).
11. Separate housings (6 & 13) by removing two cap screws (4) and two washers (5). Remove o-ring (11), retainer (9), and spring (8) from housings (6 & 13).
12. Carefully remove spools (7 & 10) from housings (6 & 13). **NOTE: Be careful not to damage spools or housing bores.**

⚠ CAUTION

Do not intermix spools and housings. Spool (7) and housing (6) are a matched set as are spool (10) and housing (13).

ASSEMBLY

(Refer to Figures 1 and 2)

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

1. Clean all parts thoroughly before assembling. Look to be sure the orifice in plug (36) cavity of housing (24) is clean and free of obstruction. Do not attempt to remove the orifice.
2. Install new o-ring (11) in proper o-ring pocket on housings (6 & 13).
3. Lubricate spool (10) with clean system fluid and carefully slide into bottom end of housing (13) bore. Note direction of spool (10). **NOTE: Spool must slide freely into bore. If either part is damaged, a new valve assembly may be required.**
4. Install retainer (9) and spring (8) and reassemble housings (6 & 13) using two cap screws (4) and two washers (5). Use Loctite 242 on cap screws (4) and torque 27.1-33.9 N·m (22-25 lb·ft). **NOTE: Make sure housings line up correctly and that o-ring (11) remains in the pocket during assembly.**
5. Lubricate spool (7) with clean system fluid and carefully slide into the bottom of housing (6) bore. Note direction of spool (7). **NOTE: Spool must slide freely into bore. If either part is damaged, a new valve assembly may be required.**
6. Install new o-ring (2) on plug (1). Install spring (3) and plug (1) into housing (6). Torque end plug (1) 47.5-54.2 N·m (35-40 lb·ft).
7. Install new o-ring (37) on plug (36). Install plug (36) in housing (24) and torque 13.6-19.0 N·m (10-14 lb·ft).
8. Install new o-ring (27) on retainer (28). Install retainer (28) and round ring (29) in housing (24) bore.
9. Install new cup (31) and new seal (30) in housing (24) bore. Note direction and order of cup (31) and seal (30). **NOTE: Be careful not to scratch or mar housing bore.**
10. Assemble springs (18, 19, & 20), shim(s) (17), and retainer assembly (16) in piston (21). Carefully install piston (21) assembly into housing (13) bore.
11. Lubricate pin (22) and piston (23) with clean system fluid and slide pin (22) into piston (23). Install piston (23) into the bottom of housing (24) bore.
12. Install o-rings (14 & 15) and reassemble housings (13 & 24) using four cap screws (26) and four washers (25). Use Loctite 242 on cap screws (26) and torque 27.1-33.9 N·m (22-25 lb·ft). **NOTE: Make sure housings line up correctly and that o-rings (14 & 15) remain in the pockets during assembly.**
13. Install springs (32 & 33) in piston (34) and install piston (34) in housing (24) bore.
14. Install new boot (35) on housing (24) and piston (34).
15. Reinstall pilot valve (12) in housing (13) by turning on the wrench flats and torque 32.5-38.0 N·m (24-28 lb·ft). Position the electrical connector to the proper orientation and torque the solenoid nut 17.6-23.0 N·m (13-17 lb·ft).

NOTE

After service the valve must develop the pressure indicated in the specifications, TABLE 1. Shim(s) (17) are used to obtain the correct pressure setting. Contact MICO if brake pressure setting is not able to be obtained.

● Items included in Repair Kit

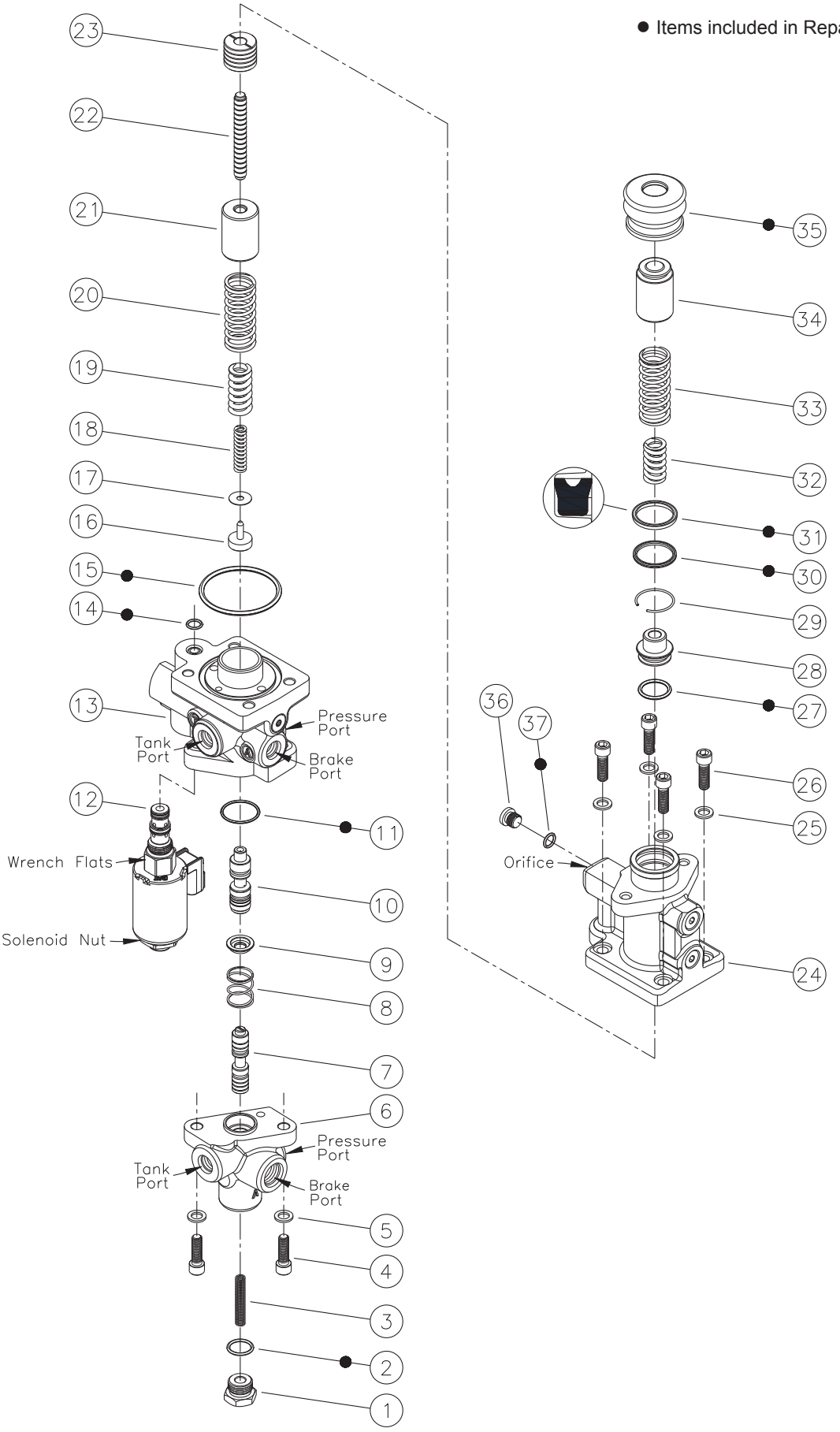

FIGURE 2