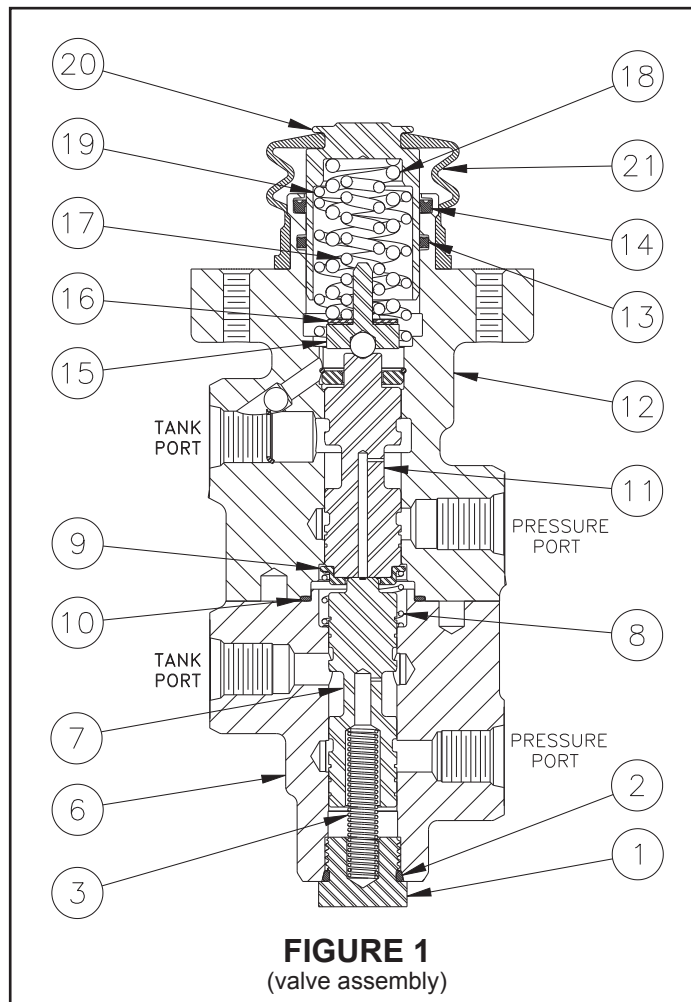


TANDEM MODULATING VALVE Service Instructions

TABLE 1 (Specifications)

Complete Unit Number	Valve Assembly Number	Brake Pressure Setting		Complete Unit Number	Valve Assembly Number	Brake Pressure Setting	
		bar	(PSI)			bar	(PSI)
444-7046	444-7048	33.8 ± 1.4	(490 ± 20)	591-0225	507-8825	33.8 ± 1.4	(490 ± 20)
492-2795	489-7491	46.5 ± 1.7	(675 ± 25)				
492-2796	489-7492	51.7 ± 1.7	(750 ± 25)				
563-3241	504-7491	52.7 ± 1.4	(765 ± 20)				
563-3242	504-7492	59.6 ± 1.4	(865 ± 20)				



⚠ WARNING

Installation and test note: Piston (20) 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.

Complete Unit Number	Valve Assembly Number
444-7046	444-7048
492-2795	489-7491
492-2796	489-7492
563-3241	504-7491
563-3242	504-7492
591-0225	507-8825

DISASSEMBLY

(Refer to Figures 1 and 2)

NOTE

Housings (6 & 12) and spools (7 & 11) are manufactured as matched sets. These sets, housing and spool, should not be intermixed with other parts.

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

DISASSEMBLY

(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.
2. Install new o-ring (10) in proper o-ring pocket on housings (6 & 12).
3. Lubricate spool (11) with clean system fluid and carefully slide into bottom end of housing (12) bore. Note direction of spool (11). **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) reassemble housings (6 & 12) using cap screws (4) and washers (5). 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-ring (10) remains in the pocket during assembly.**
5. Lubricate spool (7) with clean system fluid and carefully slide into 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 end plug (1). Install spring (3) and end plug (1) into housing (6). Torque end plug 47.5-61.0 N·m (35-45 lb·ft).

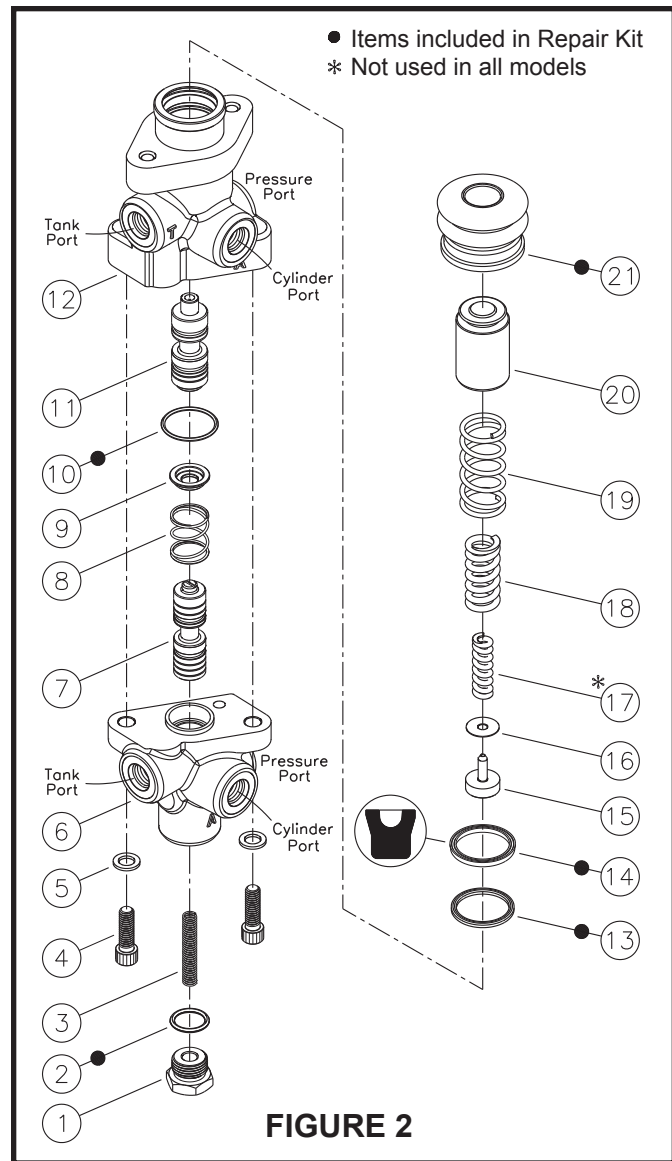


FIGURE 2

7. Carefully install new cup (14) and new seal (13) into housing (12) bore. Note direction and order of cup and seal. **NOTE: Be careful not to scratch or mar housing bore.**
8. Assemble springs (19, 18, & 17), shim(s) (16), and retainer assembly (15) in piston (20). **NOTE: Spring (17) is not used in all models.**
9. Carefully install piston (20) assembly into housing (12) bore.
10. Install new boot (21) on housing (12) and piston (20).

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.