

TANDEM POWER BRAKE VALVE

Service Instructions

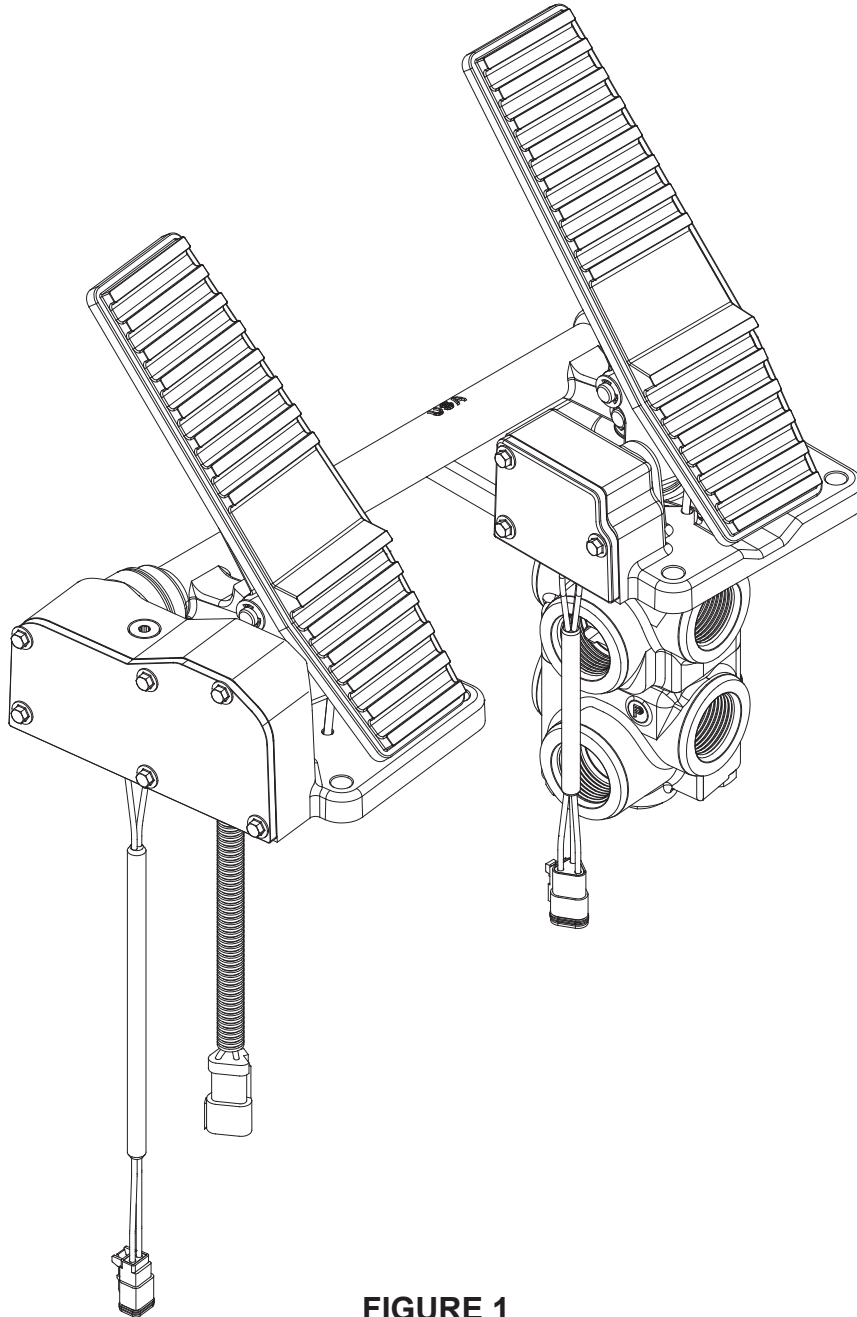
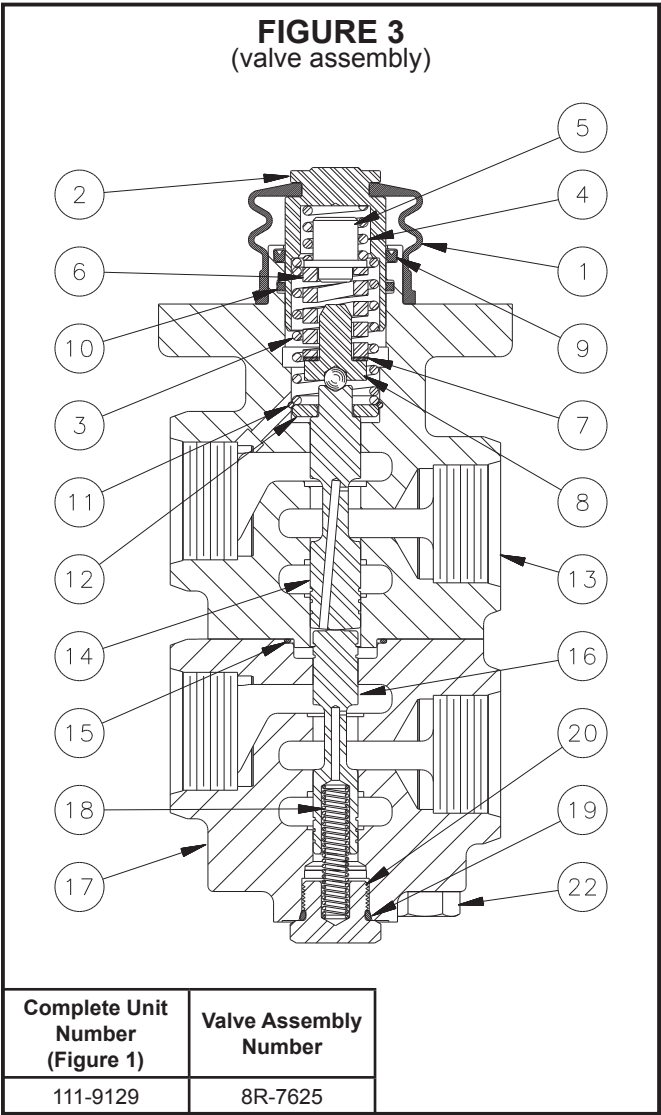
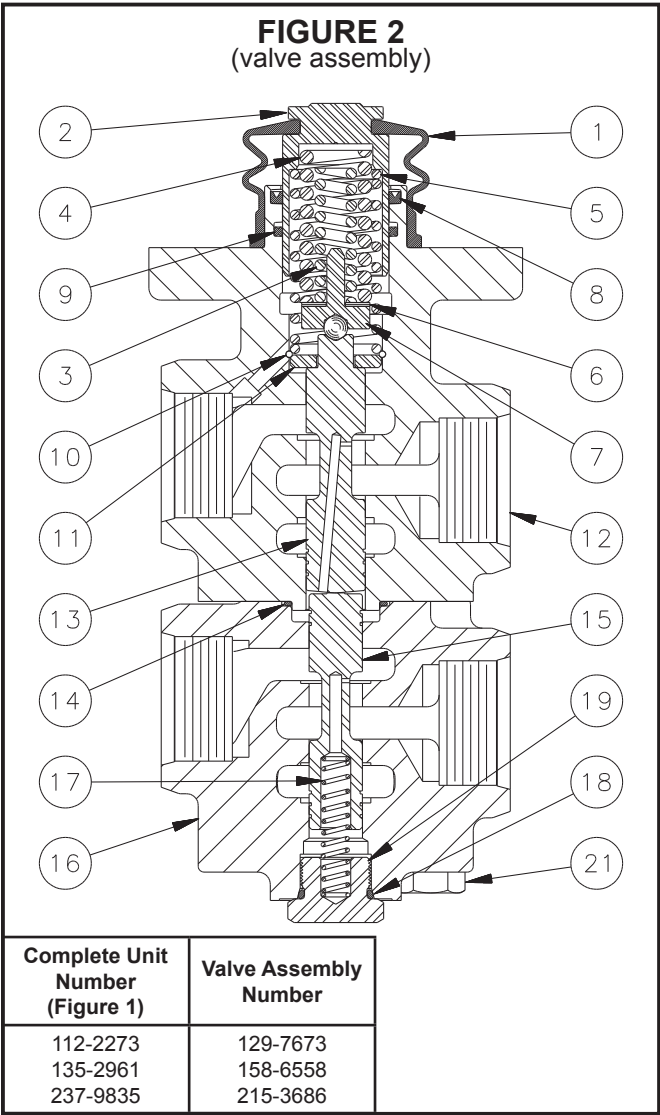


FIGURE 1
(complete unit)

TABLE 1 (Specifications)

Complete Unit Number (Figure 1)	Valve Assembly Number	Brake Pressure Setting	
		bar	(PSI)
112-2273	129-7673	43 ± 3.4	(625 ± 50)
111-9129	8R-7625	69 ± 5.2	(1000 ± 75)
135-2961	158-6558	43 ± 3.4	(625 ± 50)
237-9835	215-3686	43 ± 3.4	(625 ± 50)



⚠ WARNING

Installation and test note: Piston (2) 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 (Figure 1)	Valve Assembly Number
112-2273	129-7673
237-9835	215-3686

DISASSEMBLY

(Refer to Figures 2 and 4)

NOTE

Housings (12 & 16) and spools (13 & 15) are manufactured as matched sets. These sets (housing and spool) should not be intermixed with other parts.

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

CAUTION

Do not intermix spools and housings. Spool (13) and housing (12) are a matched set as are spool (15) and housing (16).

ASSEMBLY

(Refer to Figures 2 and 4)

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 (14) in o-ring pocket on housing (16).
3. Lubricate spool (13) with clean system fluid and carefully slide into bottom end of housing (12) bore. Note direction of spool (13). **NOTE: Spool must slide freely into bore. If either part is damaged, a new valve assembly may be required.**
4. Reassemble housings (16 & 12) using cap screws (21) and washers (20). Use Loctite 242 on cap

Items included in Repair Kit

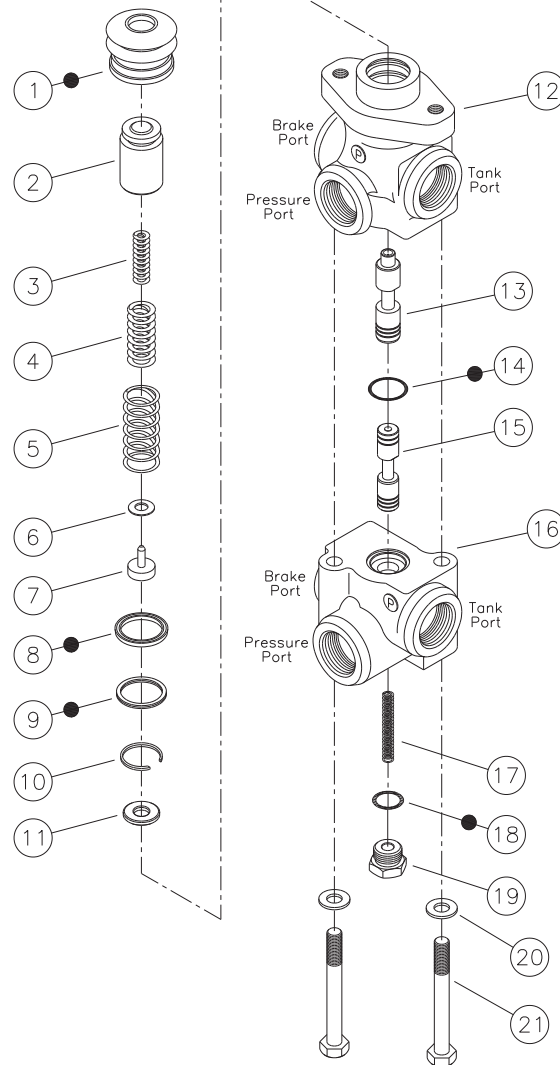


FIGURE 4

screws and torque 47.5-61.0 N·m (35-45 lb·ft). **NOTE: Make sure housings line up correctly and that o-ring (14) remains in the pocket during assembly.**

5. Lubricate spool (15) with clean system fluid and carefully slide into housing (16) bore. Note direction of spool (15). **NOTE: Spool must slide freely into bore. If either part is damaged, a new valve assembly may be required.**
6. Install new o-ring (18) on end plug (19).
7. Install spring (17) and end plug (19) into housing (16). Torque end plug 47.5-54.2 N·m (35-40 lb·ft).
8. Carefully install new cup (8) and new quad ring (9) into housing (12) bore. Note direction and order of cup and

quad ring. **NOTE: Be careful not to scratch or mar housing bore.**

9. Assemble springs (3, 4 & 5), shim(s) (6) and retainer assembly (7) in piston (2).
10. Carefully install piston (2) assembly into housing (12) bore.
11. Install new boot (1) on housing (12) and piston (2).

NOTE

After service, the valve must develop the pressure indicated in the specifications, TABLE 1. Shim(s) (6) are used to obtain the correct pressure setting. Contact MICO if brake pressure setting is not able to be obtained.

Complete Unit Number (Figure 1)	Valve Assembly Number
135-2961	158-6558

DISASSEMBLY

(Refer to Figures 2 and 5)

NOTE

Housings (12 & 16) and spools (13 & 15) are manufactured as matched sets. These sets (housing and spool) should not be intermixed with other parts.

1. Remove boot (1) from piston (2) and housing (12).
2. Remove piston (2), springs (3, 4 & 5), shim(s) (6) and retainer assembly (7) from housing (12). **NOTE: Be aware of the number of shim(s) being removed from housing.**
3. Carefully remove cup (8) and quad ring (9) from housing (12) bore. **NOTE: Be careful not to scratch or mar housing bore.**
4. Remove end plug (19) and spring (17) from housing (16). Remove o-ring (18) from end plug (19).
5. Separate housings (12 & 16) by removing cap screws (21) and washers (20). Remove o-ring (14) from housing (16).
6. Carefully remove spools (13 & 15) from housings (12 & 16). **NOTE: Be careful not to damage spools or housing bores. Retaining ring (10) and spacer (11) need not be removed from housing (12).**
7. Remove plug (23) from housing (12). Remove o-ring (22) from plug (23).

CAUTION

Do not intermix spools and housings. Spool (13) and housing (12) are a matched set as are spool (15) and housing (16).

ASSEMBLY

(Refer to Figures 2 and 5)

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 (14) in o-ring pocket on housing (16).
3. Lubricate spool (13) with clean system fluid and carefully slide into bottom end of housing (12) bore. Note direction of spool (13). **NOTE: Spool must slide freely into bore. If either part is damaged, a new valve assembly may be required.**
4. Reassemble housings (16 & 12) using cap screws (21) and washers

Items included in Repair Kit

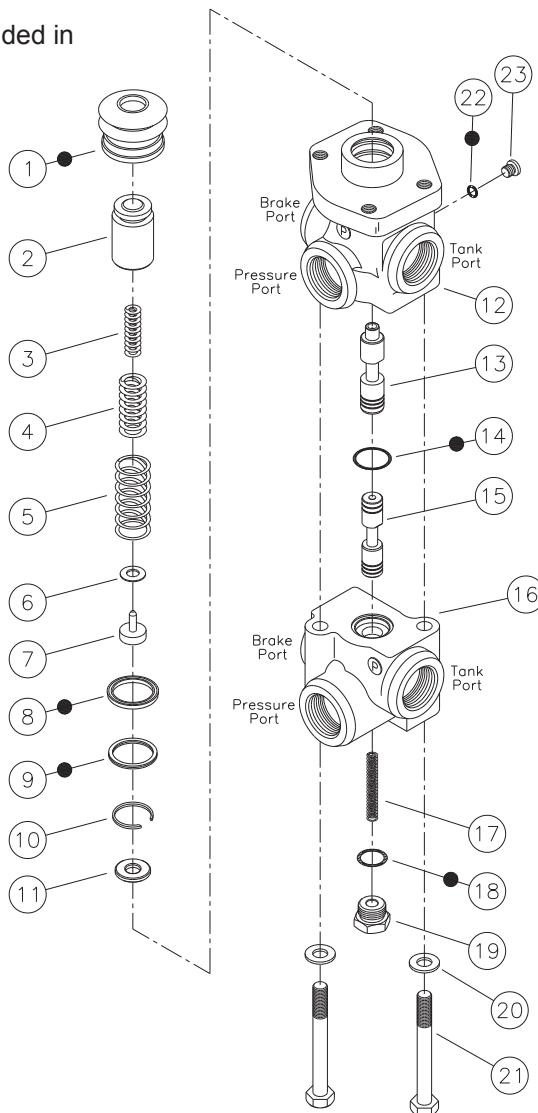


FIGURE 5

- (20). Use Loctite 242 on cap screws and torque 47.5-61.0 N·m (35-45 lb-ft). **NOTE: Make sure housings line up correctly and that o-ring (14) remains in the pocket during assembly.**
5. Lubricate spool (15) with clean system fluid and carefully slide into housing (16) bore. Note direction of spool (15). **NOTE: Spool must slide freely into bore. If either part is damaged, a new valve assembly may be required.**
6. Install new o-ring (18) on end plug (19).
7. Install spring (17) and end plug (19) into housing (16). Torque end plug 47.5-54.2 N·m (35-40 lb-ft).
8. Carefully install new cup (8) and new quad ring (9) into housing (12) bore. Note direction and order of cup and quad ring. **NOTE: Be careful not to scratch or mar housing bore.**
9. Assemble springs (3, 4 & 5), shim(s) (6) and retainer assembly (7) in piston (2).
10. Carefully install piston (2) assembly into housing (12) bore.
11. Install new boot (1) on housing (12) and piston (2).
12. Install new o-ring (22) on plug (23). Install plug (23) in housing (12) and torque 7.4-8.5 N·m (65-75 lb-in).

NOTE

After service, the valve must develop the pressure indicated in the specifications, TABLE 1. Shim(s) (6) are used to obtain the correct pressure setting. Contact MICO if brake pressure setting is not able to be obtained.

Complete Unit Number (Figure 1)	Valve Assembly Number
111-9129	8R-7625

DISASSEMBLY

(Refer to Figures 3 and 6)

NOTE

Housings (13 & 17) and spools (14 & 16) are manufactured as matched sets. These sets (housing and spool) should not be intermixed with other parts.

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

CAUTION

Do not intermix spools and housings. Spool (14) and housing (13) are a matched set as are spool (16) and housing (17).

ASSEMBLY

(Refer to Figures 3 and 6)

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 (15) in o-ring pocket on housing (17).
3. Lubricate spool (14) with clean system fluid and carefully slide into bottom end of housing (13) bore. Note direction of spool (14). **NOTE: Spool must slide freely into bore. If either part is damaged, a new valve assembly may be required.**
4. Reassemble housings (13 & 17) using cap screws (22) and washers (21). Use Loctite 242 on cap screws

Items included in Repair Kit

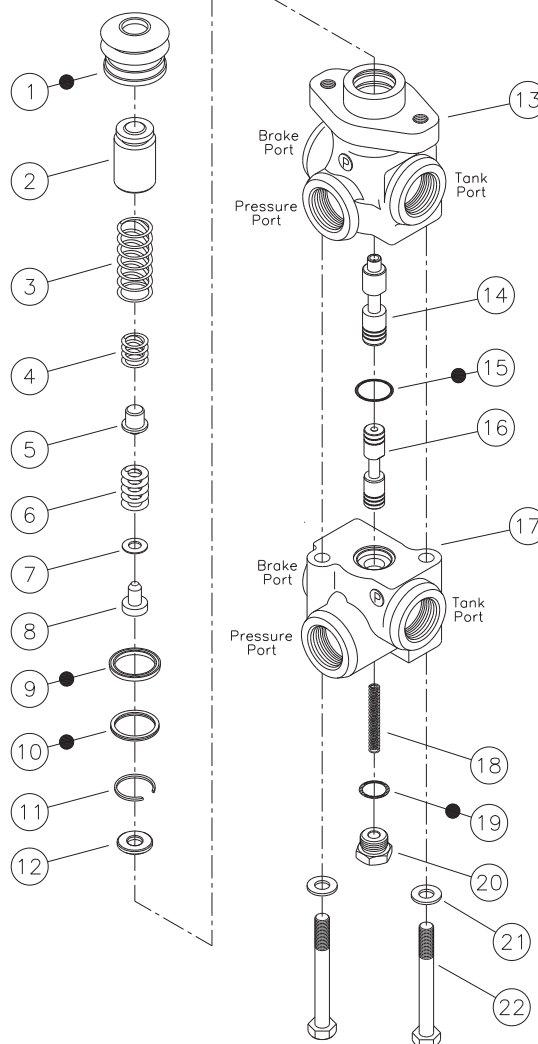


FIGURE 6

and torque 47.5-61.0 N·m (35-45 lb·ft).

NOTE: Make sure housings line up correctly and that o-ring (15) remains in the pocket during assembly.

5. Lubricate spool (16) with clean system fluid and carefully slide into housing (17) bore. Note direction of spool (16). **NOTE: Spool must slide freely into bore. If either part is damaged, a new valve assembly may be required.**
6. Install new o-ring (19) on end plug (20).
7. Install spring (18) and end plug (20) into housing (17). Torque end plug 47.5-54.2 N·m (35-40 lb·ft).
8. Carefully install new cup (9) and new quad ring (10) into housing (13) bore. Note direction and order of cup and seal. **NOTE: Be careful not to scratch or mar housing bore.**

9. Assemble springs (3 & 4), retainer (5), spring (6), shim(s) (7) and retainer assembly (8) in piston (2).
10. Carefully install piston (2) assembly into housing (13) bore.
11. Install new boot (1) on housing (13) and piston (2).

NOTE

After service, the valve must develop the pressure indicated in the specifications, TABLE 1. Shim(s) (6) are used to obtain the correct pressure setting. Contact MICO if brake pressure setting is not able to be obtained.