

TANDEM POWER BRAKE VALVE

Service Instructions

Complete Unit Number	Valve Assembly Number	Repair Kit Number	*Machine or Vehicle Brake Pressure Setting	
			bar	(PSI)
226914A1	331967A1	331971A1	52.7 ± 2.4	(765 ± 35)
311476A1	331968A1	331971A1	59.6 ± 2.4	(865 ± 35)
179530A2	331969A1	331971A1	70.0 ± 2.4	(1015 ± 35)
370946A2	393884A2	331971A1	90.7 ± 2.4	(1315 ± 35)
388355A2	393885A2	331971A1	100.0 ± 1.7	(1450 ± 25)

* When recorded at 2 seconds after actuation.

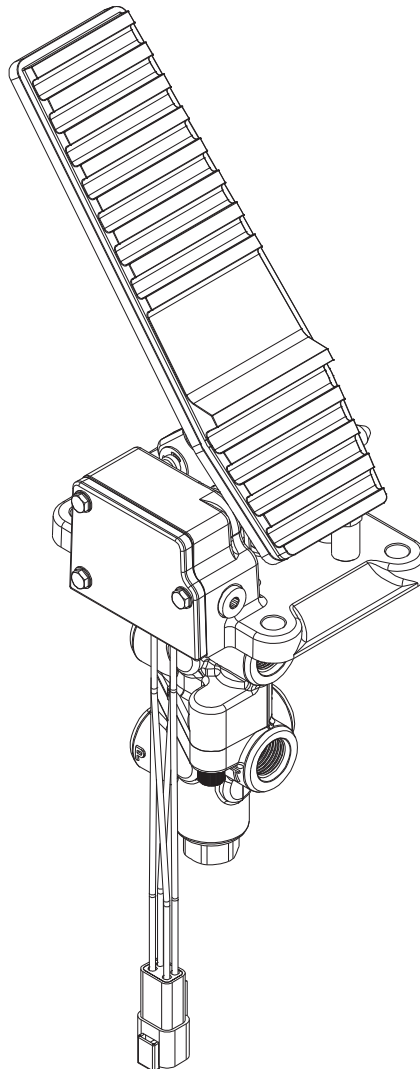
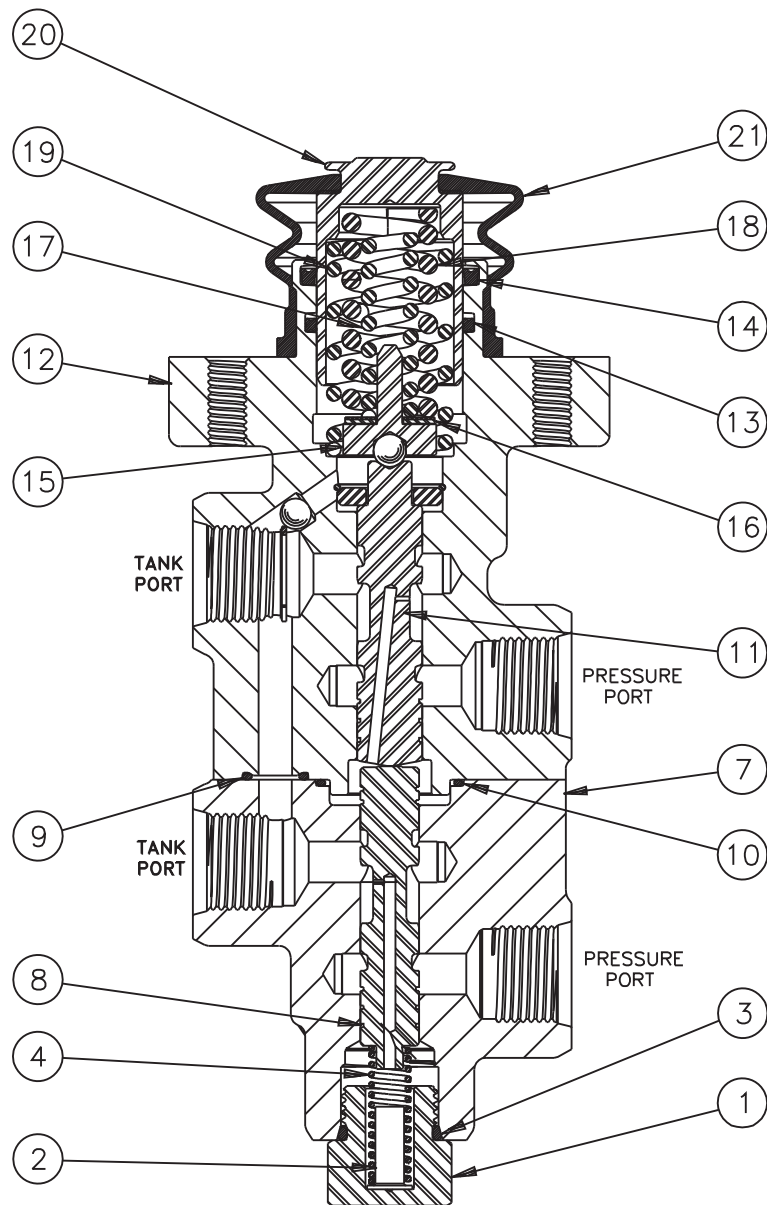


FIGURE 1
(Complete Unit)

FIGURE 2
(Valve Assembly)



Complete Unit Number (Figure 1)	Valve Assembly Number
226914A1	331967A1
311476A1	331968A1
179530A2	331969A1
370946A2	393884A2
388355A2	393885A2

⚠ 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.

DISASSEMBLY

(Refer to Figures 2 & 3)

NOTE

Housings (7 & 12) and spools (8 & 11) are manufactured as matched sets. These sets (Housing & Spool) should not be intermixed with other parts.

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

CAUTION

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

ASSEMBLY

(Refer to Figures 2 & 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 & 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 spool/housing assembly may be required.
4. Reassemble housings (7 & 12) 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 spool/housing 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 47.5-54.2 N·m (35-40 lb-ft).
8. 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.**

● Items included in Repair Kit

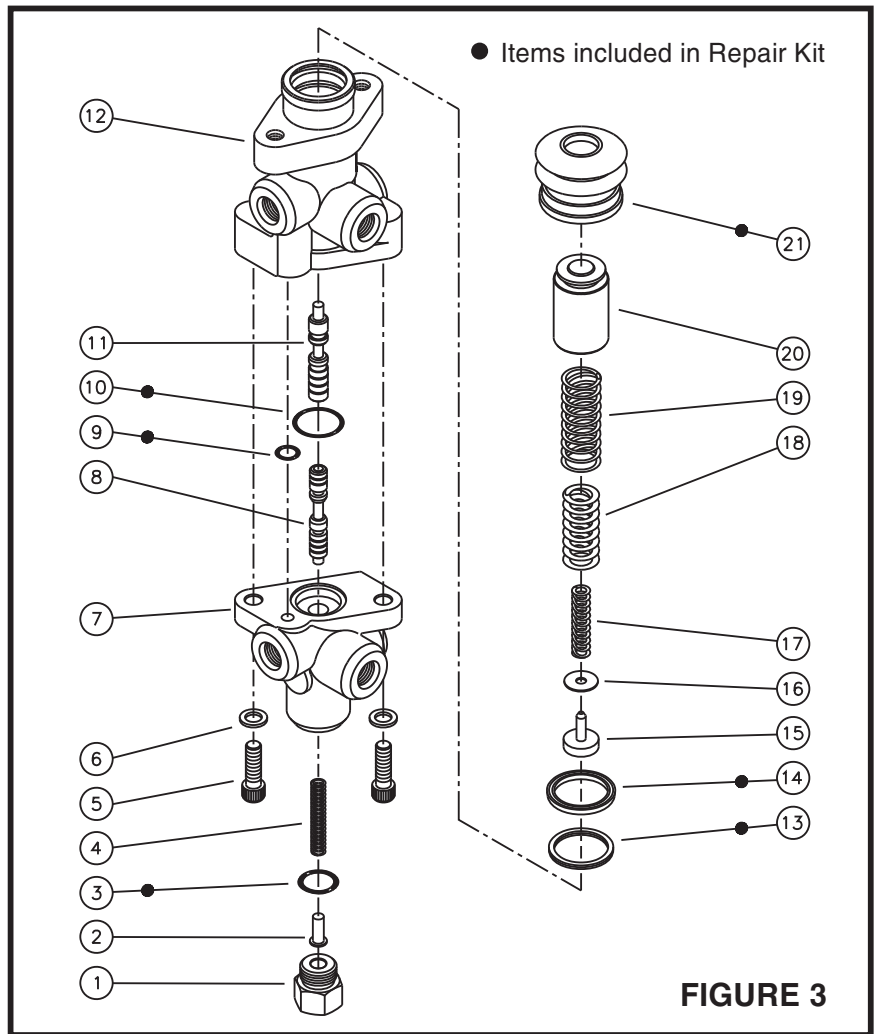


FIGURE 3

9. Assemble springs (17, 18 & 19), shim(s) (16) and retainer assembly (15) in piston (20).
10. Carefully install piston (20) assembly into housing (12) bore.
11. Install new boot (21) on housing (12) and piston (20).

NOTE

After the valve is reinstalled on vehicle, it must develop the pressure indicated in the specifications, TABLE 1. Shim(s) (16) may be added or removed to obtain the correct pressure setting.