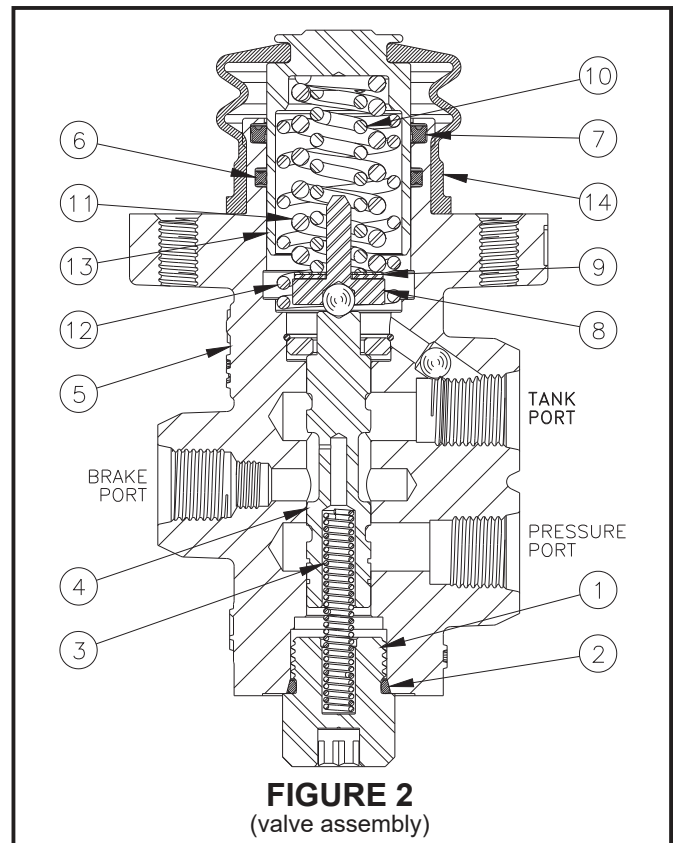
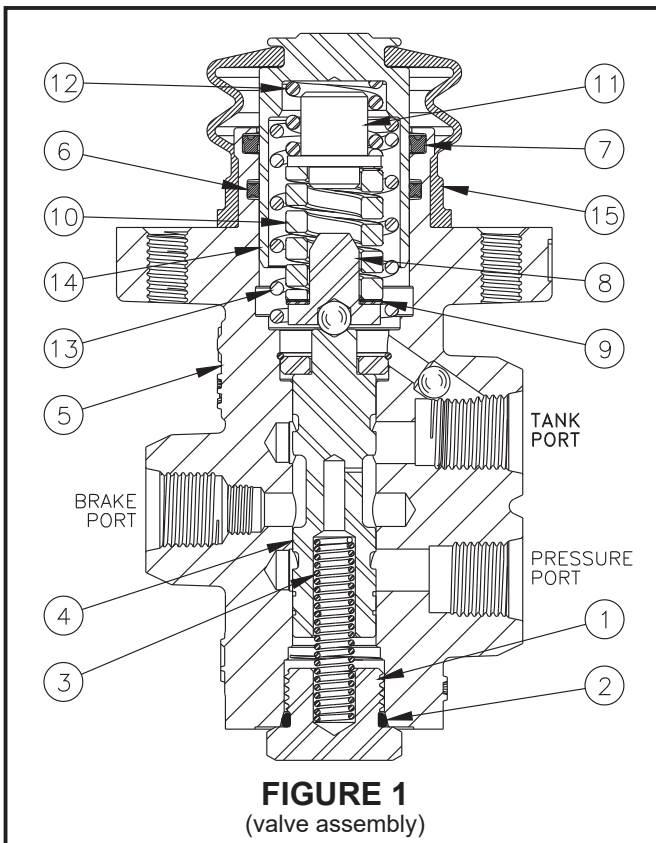


SINGLE POWER BRAKE VALVE

Service Instructions

TABLE 1 (Specifications)

Complete Unit Part Number	Valve Assembly Number	Refer to Figures	Brake Pressure Setting	
			bar	(PSI)
159-4530	190-0655	1, 3	65.5 ± 1.4	(950 ± 20)
221-9262	216-5413	1, 3	72.4 ± 1.4	(1050 ± 20)
314-4235	292-9752	2, 4	67.2 ± 1.7	(975 ± 25)
315-5037	307-0042	2, 4	49.3 ± 1.7	(715 ± 25)
321-5086	292-9752	2, 4	67.2 ± 1.7	(975 ± 25)
342-9078	347-9130	2, 4	33.1 ± 1.4	(480 ± 20)
369-8079	422-9078	2, 4	26.7 ± 1.0	(381 ± 15)
426-2134	433-6774	2, 4	27.6 ± 1.4	(400 ± 20)
563-4599	563-8133	2, 4	46.5 ± 1.7	(675 ± 25)
574-6256	574-6253	1, 3	28.6 ± 1.4	(415 ± 20)
578-8987	578-9109	2, 4	67.6 ± 1.7	(980 ± 25)
582-9505	347-9130	2, 4	33.1 ± 1.4	(480 ± 20)
592-8435	592-8434	2, 4	75.2 ± 2.8	(1090 ± 40)
608-8271	612-9514	2, 4	26.3 ± 1.0	(381 ± 15)
611-7361	611-7364	2, 4	38.0 ± 1.4	(550 ± 20)
619-2753	611-7364	2, 4	38.0 ± 1.4	(550 ± 20)



⚠ WARNING

Installation and test note: Piston (14) in Figure 1 or piston (13) in Figure 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.

Part Numbers: 159-4530
221-9262

DISASSEMBLY

(Refer to Figures 1 and 3)

NOTE

Housing (5) and spool (4) are manufactured as a matched set. This set (housing and spool) must not be intermixed with other parts.

1. Separate pedal and base assembly (16) from valve assembly by removing two hex cap screws (18) and two washers (17).
2. Remove boot (15) from piston (14) and housing (5).
3. Remove piston (14), springs (13 & 12), retainer (11) spring (10), shim(s) (9) and retainer assembly (8) from housing (5). **NOTE: Be aware of the number of shim(s) being removed from housing.**
4. Carefully remove cup (7) and seal (6) from housing (5) bore. **NOTE: Be careful not to scratch or mar housing bore.**
5. Remove end plug (1) and spring (3) from housing (5). Remove o-ring (2) from end plug (1).
6. Carefully remove spool (4) from end plug (1) end of housing (5). **NOTE: Be careful not to damage spool or housing bore.**

• Items included in Repair Kit

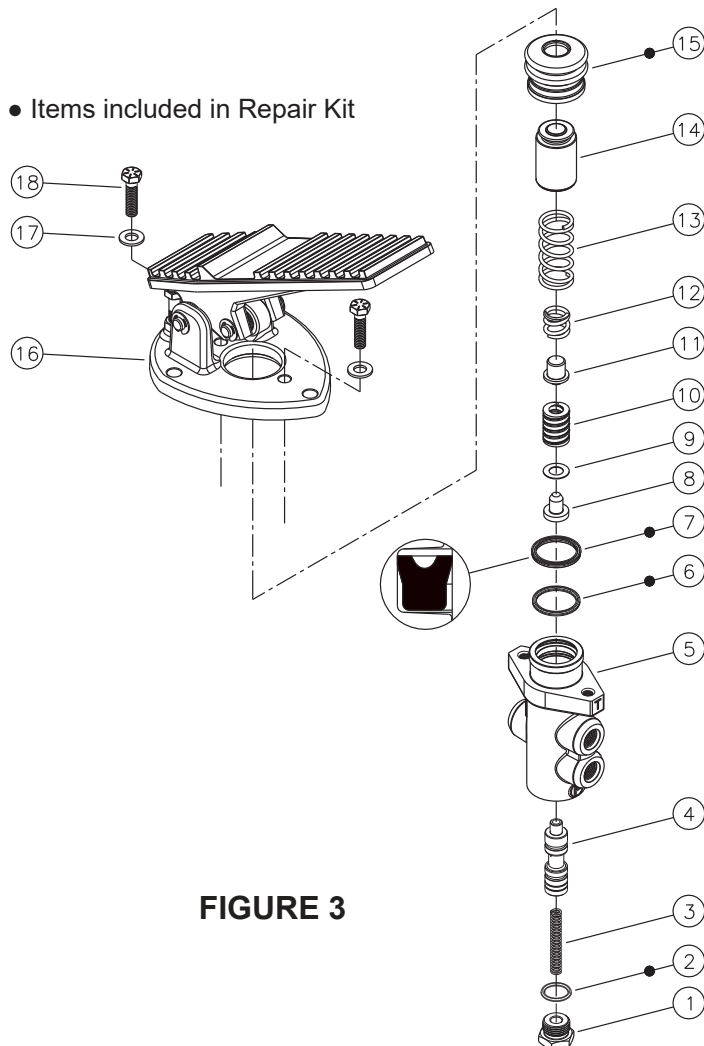


FIGURE 3

ASSEMBLY

(Refer to Figures 1 and 3)

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

1. Clean all parts thoroughly before assembling.
2. Lubricate spool (4) with clean system fluid and carefully slide into plug (1) end of housing (5) bore. Note the direction of spool (4). **NOTE: Spool must slide freely into bore. If either part is damaged, a new valve assembly may be required.**
3. Install new o-ring (2) on end plug (1).
4. Install spring (3) and end plug (1) into housing (5). Torque end plug (1) 47.5-54.2 N·m (35-40 lb·ft).
5. Carefully install new seal (6) and new cup (7) into housing (5) bore. Note direction and order of cup and seal. **NOTE: Be careful not to scratch or mar housing bore.**
6. Install springs (13 & 12), retainer (11), spring (10), shim(s) (9), and retainer assembly (8) in piston (14). Be sure to install the same number of shim(s) as were removed.
7. Carefully install piston (14) assembly into housing (5) bore.
8. Install new boot (15) on housing (5) and piston (14).
9. Attach valve assembly to pedal and base assembly (16) using two washers (17) and two hex cap screws (18). Torque cap screws 24.4-29.8 N·m (18-22 lb·ft).

NOTE

After service, the valve must develop the pressure indicated in the specifications, TABLE 1. Shim(s) (9) are used to obtain the correct pressure setting. Contact manufacturer if brake pressure setting is not able to be obtained.

Part Numbers:	314-4235	426-2134	608-8271
	315-5037	563-4599	611-7361
	321-5086	578-8987	619-2753
	342-9078	582-9505	
	369-8079	592-8435	

DISASSEMBLY

(Refer to Figures 2 and 4)

NOTE

Housing (5) and spool (4) are manufactured as a matched set. This set (housing and spool) must not be intermixed with other parts.

1. Separate pedal and base assembly (15) from valve assembly by removing two hex cap screws (17) and two washers (16).
2. Remove boot (14) from piston (13) and housing (5).
3. Remove piston (13), springs (10, 11, & 12), shim(s) (9) and retainer assembly (8) from housing (5). **NOTE: Be aware of the number of shim(s) being removed from housing. Not all models use spring (10).**
4. Carefully remove cup (7) and seal (6) from housing (5) bore. **NOTE: Be careful not to scratch or mar housing bore.**
5. Remove end plug (1) and spring (3) from housing (5). Remove o-ring (2) from end plug (1).
6. Carefully remove spool (4) from end plug (1) end of housing (5). **NOTE: Be careful not to damage spool or housing bore.**

● Items included in Repair Kit

* Not used in all models

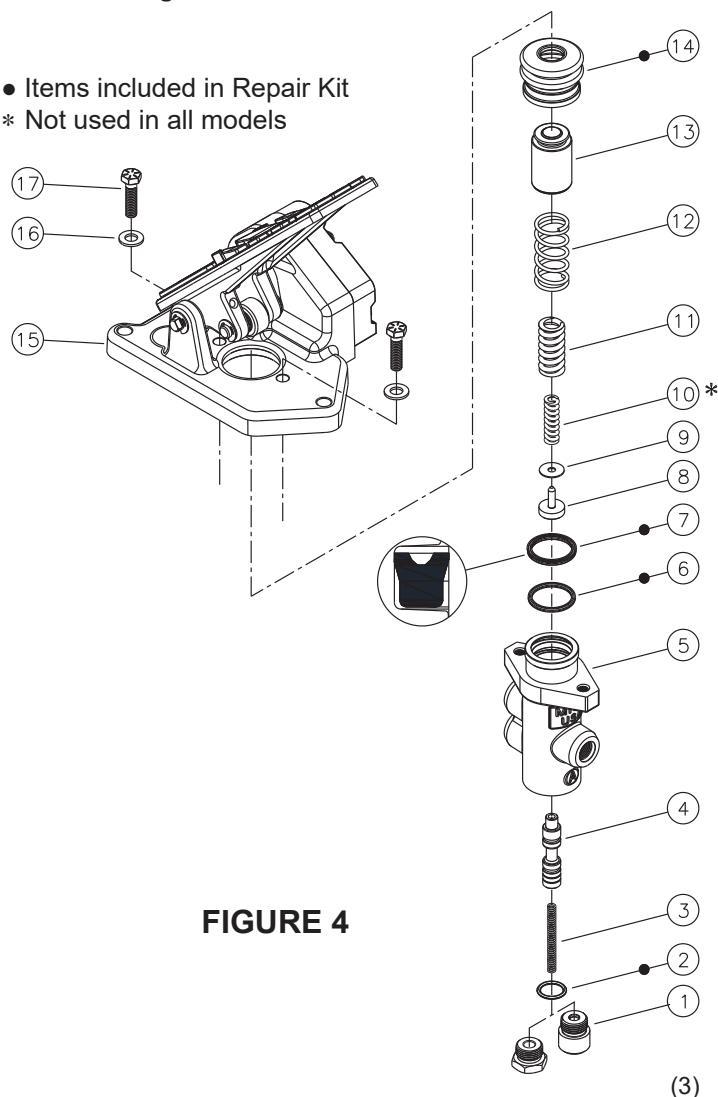


FIGURE 4

ASSEMBLY

(Refer to Figures 2 and 4)

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

1. Clean all parts thoroughly before assembling.
2. Lubricate spool (4) with clean system fluid and carefully slide into plug (1) end of housing (5) bore. Note the direction of spool (4). **NOTE: Spool must slide freely into bore. If either part is damaged, a new valve assembly may be required.**
3. Install new o-ring (2) on end plug (1).
4. Install spring (3) and end plug (1) into housing (5). Torque end plug (1) 47.5-54.2 N·m (35-40 lb·ft).
5. Carefully install new seal (6) and new cup (7) into housing (5) bore. Note direction and order of cup and seal. **NOTE: Be careful not to scratch or mar housing bore.**
6. Install springs (10, 11, & 12), shim(s) (9), and retainer assembly (8) in piston (13). Be sure to install same number of shim(s) as were removed. **NOTE: Not all models use spring (10).**
7. Carefully install piston (13) assembly into housing (5) bore.
8. Install new boot (14) on housing (5) and piston (13).
9. Attach valve assembly to pedal and base assembly (15) using two washers (16) and two hex cap screws (17). Torque cap screws 24.4-29.8 N·m (18-22 lb·ft).

NOTE

After service, the valve must develop the pressure indicated in the specifications, TABLE 1. Shim(s) (9) are used to obtain the correct pressure setting. Contact manufacturer if brake pressure setting is not able to be obtained.