

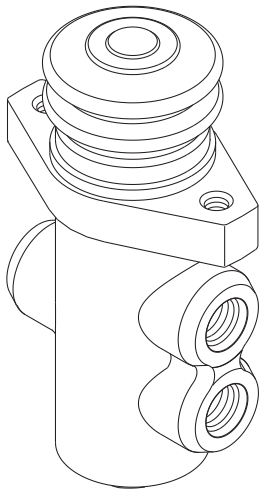
SINGLE MODULATING VALVE

Service Instructions

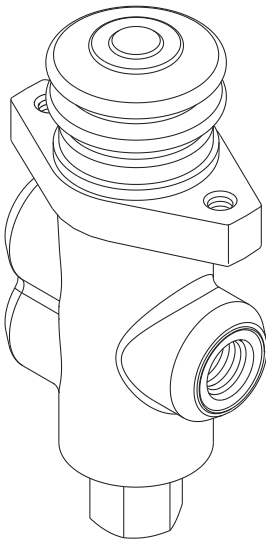
TABLE 1 (Specifications)

John Deere Part Number	John Deere Repair Kit Number	Brake Pressure Setting	
		bar	(PSI)
AN305764	AN306107	27.0 ± 1.7	(391 ± 25)
AN306673	AN306107	134.1 ± 6.9/-3.5	(1945 ± 100/-50)
AT418862	AN306107	55.2 ± 3.5	(800 ± 50)
AKK14387	AN306107	134.1 ± 6.9/-3.5	(1945 ± 100/-50)
AKK30778	AN306107	176.0 ± 5.0	(2553 ± 72)

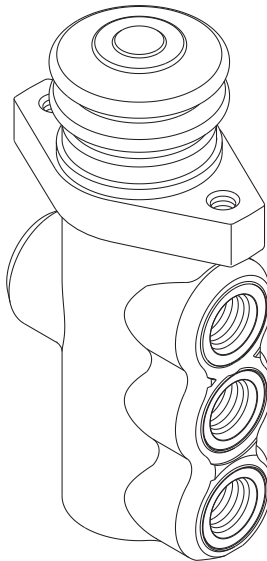
NOTE: The repair kit services several different valve designs and may contain parts not used to service your valve.



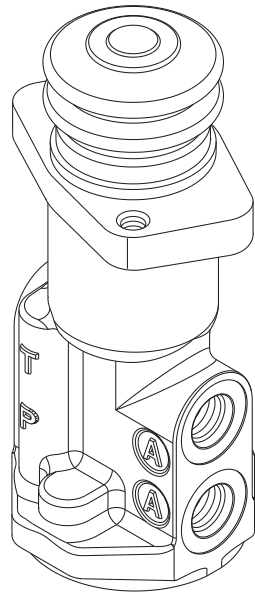
Part Number
AN305764



Part Number
AKK30778



Part Number
AKK14387



Part Number
AT418862

Part Number: AN305764

DISASSEMBLY

(Refer to Figures 1 and 2)

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. Remove boot (12) from piston (11) and housing (5).
2. Remove piston (11), springs (9 & 10), shim(s) (8), and retainer assembly (7) from housing (5). **NOTE: Be aware of the number of shim(s) being removed from housing.**
3. Carefully remove cup (6) from housing (5) bore. **NOTE: Be careful not to scratch or mar housing bore.**
4. Remove plug (1) and spring (3) from housing (5). Remove o-ring (2) from plug (1).
5. Carefully remove spool (4) from plug (1) side of housing (5). **NOTE: Be careful not to damage spool or housing bore.**

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.

2. Lubricate spool (4) with clean system fluid and carefully slide into plug (1) end of housing (5) bore. Note direction of spool (4). **NOTE: Spool must slide freely into housing bore. If either part is damaged, a new valve assembly may be required.**
3. Install new o-ring (2) on plug (1). **NOTE: AN305764 uses a #10 SAE o-ring.**
4. Install spring (3) and plug (1) into housing (5). Torque plug (1) 47.5-54.2 N·m (35-40 lb-ft).
5. Carefully install new cup (6) into housing (5) bore. Note direction of cup (6). **NOTE: Be careful not to scratch or mar housing bore.**
6. Install springs (9 & 10), shim(s) (8), and retainer assembly (7) in piston (11). Be sure to install the same number of shim(s) as were removed.
7. Carefully install piston (11) assembly into housing (5) bore.
8. Install new boot (12) on housing (5) and piston (11).

NOTE

After service, the valve must develop the pressure indicated in the specifications, TABLE 1 on page 1. Shim(s) (8) are used to obtain the correct pressure setting. Contact the manufacturer if brake pressure setting is not able to be obtained.

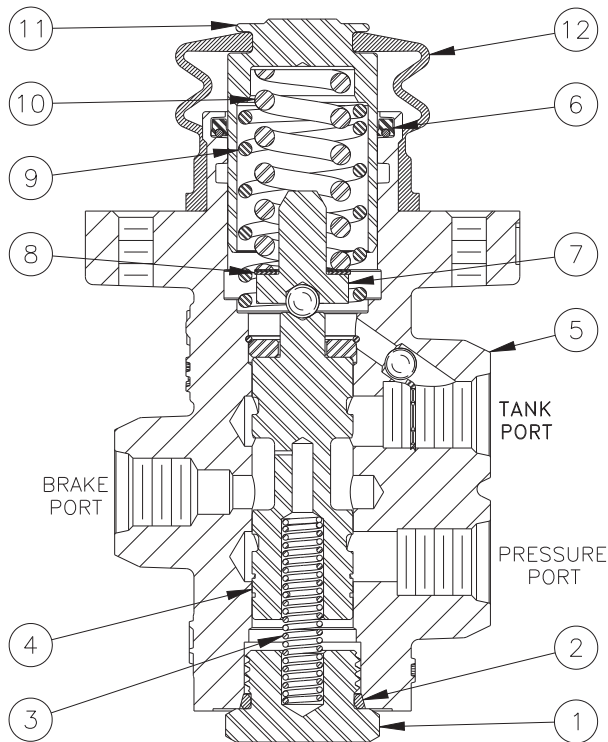


FIGURE 1

● Items included in Repair Kit

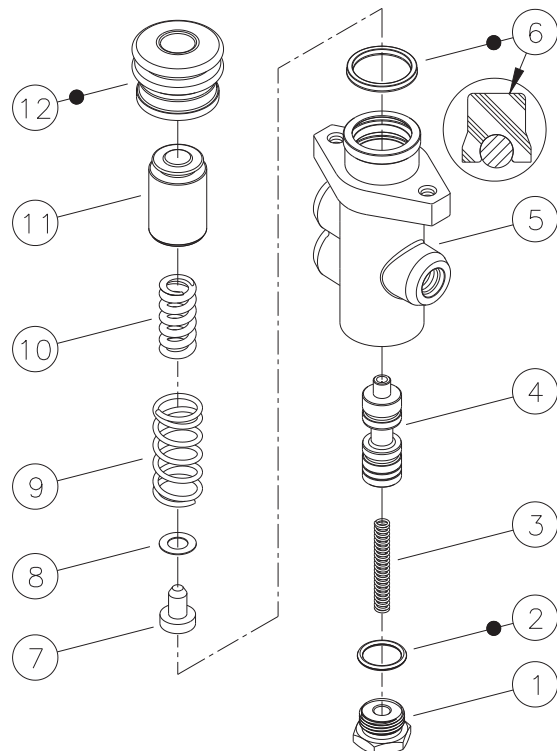


FIGURE 2

⚠ WARNING

Installation and test note: Piston (11) in Figures 1 & 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 port. **Be sure the tank port is connected to tank.** Failure to do this could result in serious injury or death.

Part Numbers: AKK30778

DISASSEMBLY

(Refer to Figures 3 and 4)

NOTE

Housing (6) and spool (5) are manufactured as a matched set. This set (housing and spool) must not be intermixed with other parts.

1. Remove boot (13) from piston (12) and housing (6).
2. Remove piston (12), springs (10 & 11), shim(s) (9), and retainer assembly (8) from housing (6). **NOTE: Be aware of the number of shim(s) being removed from housing.**
3. Carefully remove cup (7) from housing (6) bore. **NOTE: Be careful not to scratch or mar housing bore.**
4. Remove end plug (1), retainer (3), and spring (4) from housing (6). Remove o-ring (2) from plug (1).
5. Carefully remove spool (5) from plug (1) side of housing (6). **NOTE: Be careful not to damage spool or housing bore.**

ASSEMBLY

(Refer to Figures 3 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. Lubricate spool (5) with clean system fluid and carefully slide into plug (1) end of housing (6) bore. Note direction of spool (5). **NOTE: Spool must slide freely into housing bore. If either part is damaged, a new valve assembly may be required.**
3. Install new o-ring (2) on plug (1). **NOTE: AKK30778 uses a #8 SAE o-ring.**
4. Install spring (4), retainer (3), and plug (1) into housing (6). Torque plug (1) 47.5-54.2 N·m (35-40 lb-ft).
5. Carefully install new cup (7) into housing (6) bore. Note direction of cup (6). **NOTE: Be careful not to scratch or mar housing bore.**
6. Install springs (10 & 11), shim(s) (9), and retainer assembly (8) in piston (12). Be sure to install the same number of shim(s) as were removed.
7. Carefully install piston (12) assembly into housing (6) bore.
8. Install new boot (13) on housing (6) and piston (12).

NOTE

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

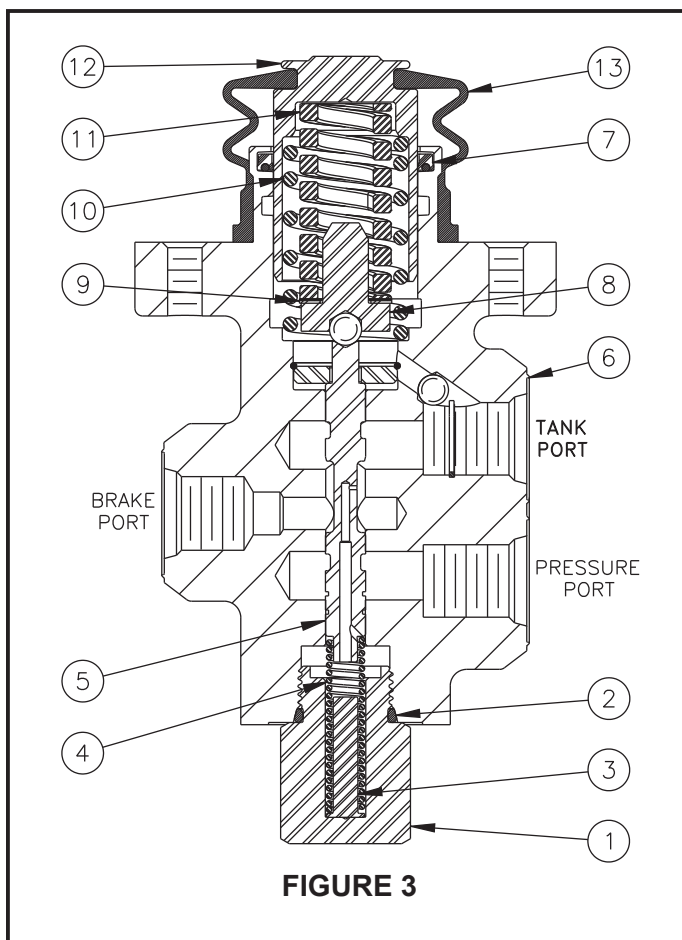


FIGURE 3

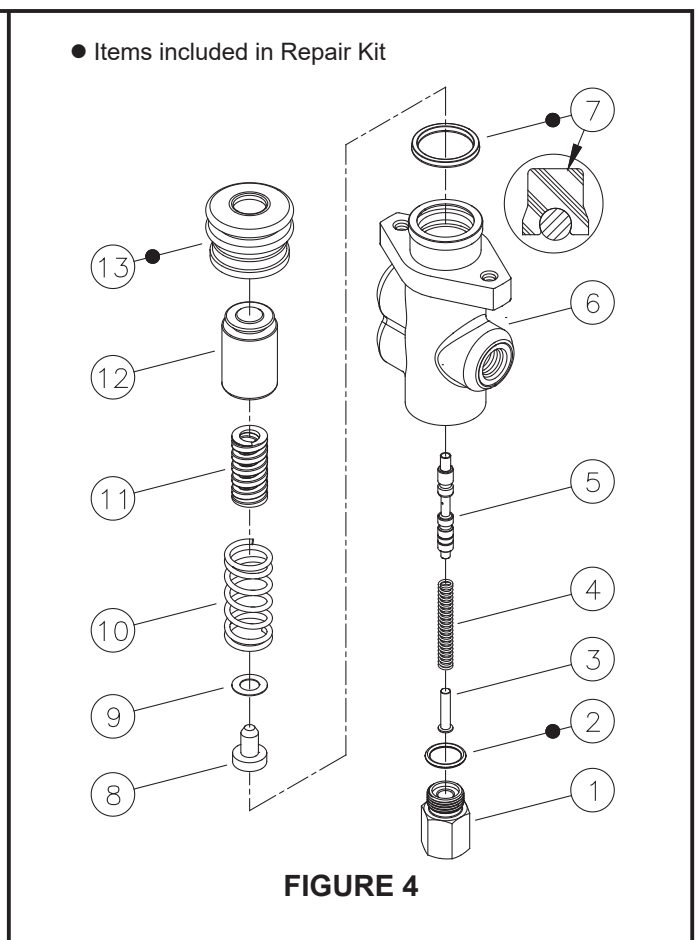


FIGURE 4

⚠ WARNING

Installation and test note: Piston (12) in Figures 3 & 4 must be retained mechanically. This will prevent it from blowing out at high velocity if an incorrect connection occurs from power source to tank port. **Be sure the tank port is connected to tank.** Failure to do this could result in serious injury or death.

Part Numbers: AN306673, AKK14387

DISASSEMBLY

(Refer to Figures 5 and 6)

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. Remove boot (12) from piston (11) and housing (5).
2. Remove piston (11), springs (9 & 10), shim(s) (8), and retainer assembly (7) from housing (5). **NOTE: Be aware of the number of shim(s) being removed from housing.**
3. Carefully remove cup (6) from housing (5) bore. **NOTE: Be careful not to scratch or mar housing bore.**
4. Remove plug (1) and spring (3) from housing (5). Remove o-ring (2) from plug (1).
5. Carefully remove spool (4) from end plug (1) side of housing (5). **NOTE: Be careful not to damage spool or housing bore.**

ASSEMBLY

(Refer to Figures 5 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. Lubricate spool (4) with clean system fluid and carefully slide into plug (1) end of housing (5) bore. Note direction of spool (4). **NOTE: Spool must slide freely into housing bore. If either part is damaged, a new valve assembly may be required.**
3. Install new o-ring (2) on end plug (1). **NOTE: AN306673 and AKK14387 use a #8 SAE o-ring.**
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 cup (6) into housing (5) bore. Note direction of cup (6). **NOTE: Be careful not to scratch or mar housing bore.**
6. Install springs (9 & 10), shim(s) (8), and retainer assembly (7) in piston (11). Be sure to install the same number of shim(s) as were removed.
7. Carefully install piston (11) assembly into housing (5) bore.
8. Install new boot (12) on housing (5) and piston (11).

NOTE

After service, the valve must develop the pressure indicated in the specifications, TABLE 1 on page 1. Shim(s) (8) are used to obtain the correct pressure setting. Contact the manufacturer if brake pressure setting is not able to be obtained.

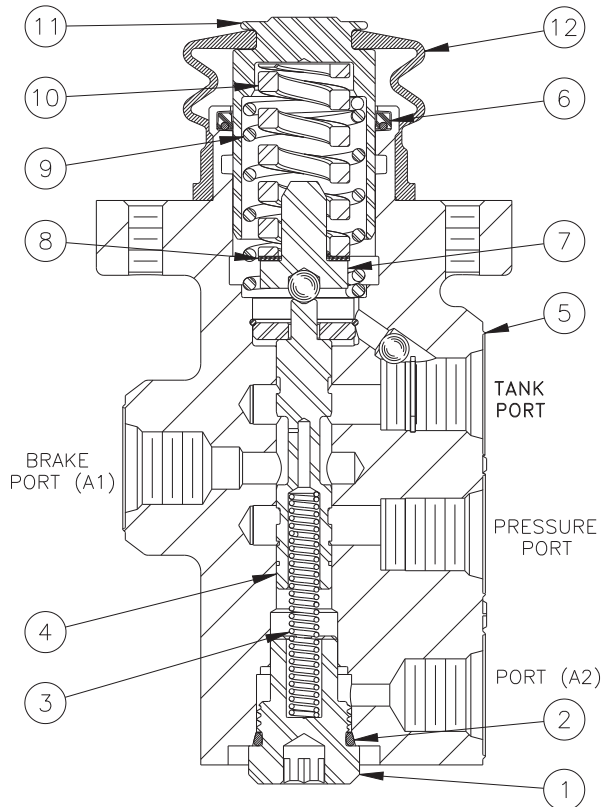


FIGURE 5

● Items included in Repair Kit

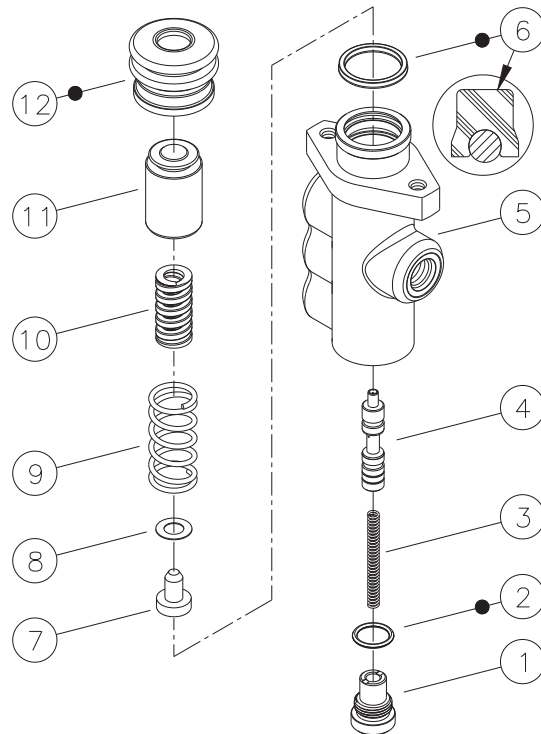


FIGURE 6

⚠ WARNING

Installation and test note: Piston (11) in Figures 5 & 6 must be retained mechanically. This will prevent it from blowing out at high velocity if an incorrect connection occurs from power source to tank port. **Be sure the tank port is connected to tank.** Failure to do this could result in serious injury or death.

Part Number: AT418862

DISASSEMBLY

(Refer to Figures 7 and 8)

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. Remove boot (12) from piston (11) and housing (5).
2. Remove piston (11), springs (9 & 10), shim(s) (8), and retainer assembly (7) from housing (5). **NOTE: Be aware of the number of shim(s) being removed from housing.**
3. Carefully remove cup (6) from housing (5) bore. **NOTE: Be careful not to scratch or mar housing bore.**
4. Remove end plug (1) and spring (3) from housing (5). Remove o-ring (2) from end plug (1).
5. Carefully remove spool (4) from end plug (1) end of housing (5). **NOTE: Be careful not to damage spool or housing bore.**

ASSEMBLY

(Refer to Figures 7 and 8)

LUBRICATE ALL RUBBER COMPONENTS FROM 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 direction of spool (4). **NOTE: Spool must slide freely into housing bore. If either part is damaged, a new valve assembly may be required.**
3. Install new o-ring (2) on end plug (1). **NOTE: AT418862 uses a #6 SAE o-ring.**
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 cup (6) into housing (5) bore. Note direction of cup (6). **NOTE: Be careful not to scratch or mar housing bore.**
6. Install springs (9 & 10), shim(s) (8), and retainer assembly (7) in piston (11). Be sure to install the same number of shim(s) as were removed.
7. Carefully install piston (11) assembly into housing (5) bore.
8. Install new boot (12) on housing (5) and piston (11).

NOTE

After service, the valve must develop the pressure indicated in the specifications, TABLE 1 on page 1. Shim(s) (8) are used to obtain the correct pressure setting. Contact the manufacturer if brake pressure setting is not able to be obtained.

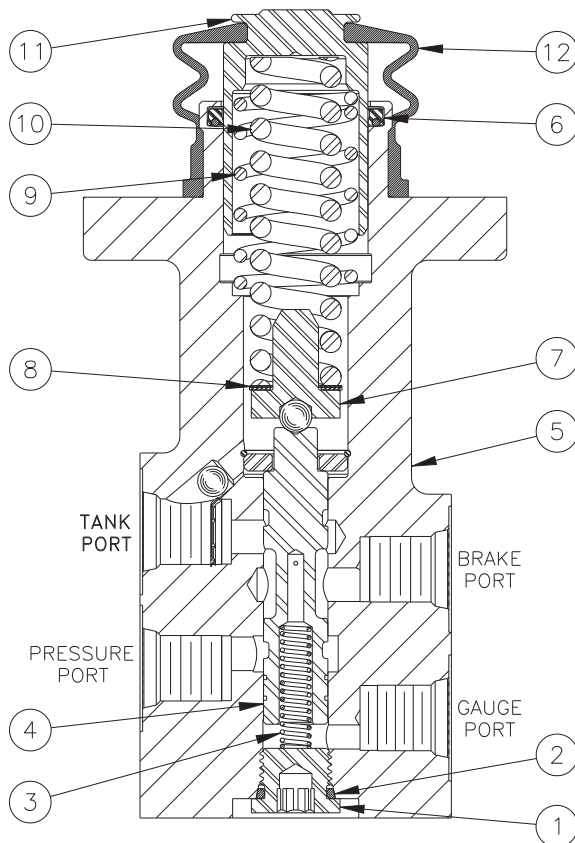


FIGURE 7

● Items included in Repair Kit

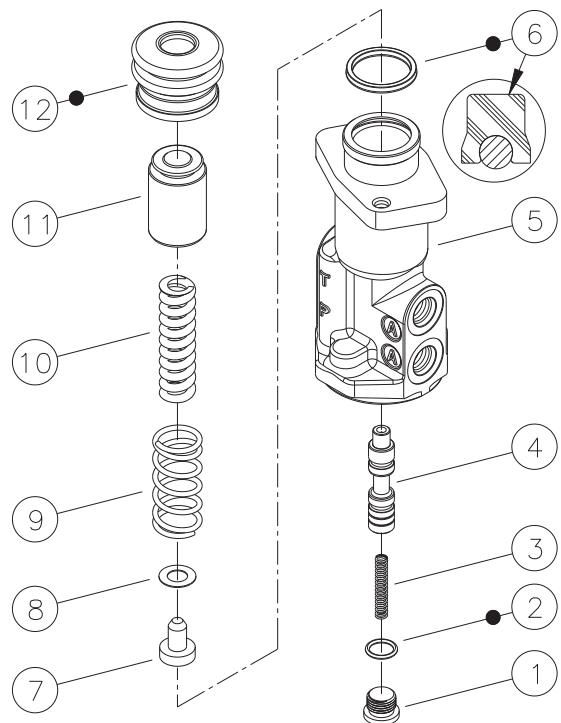


FIGURE 8

⚠ WARNING

Installation and test note: Piston (11) in Figure 7 & 8 must be retained mechanically. This will prevent it from blowing out at high velocity if an incorrect connection occurs from power source to tank port. **Be sure the tank port is connected to tank.** Failure to do this could result in serious injury or death.