



# Installation Instructions

KIT PC. No.  
107216  
107217

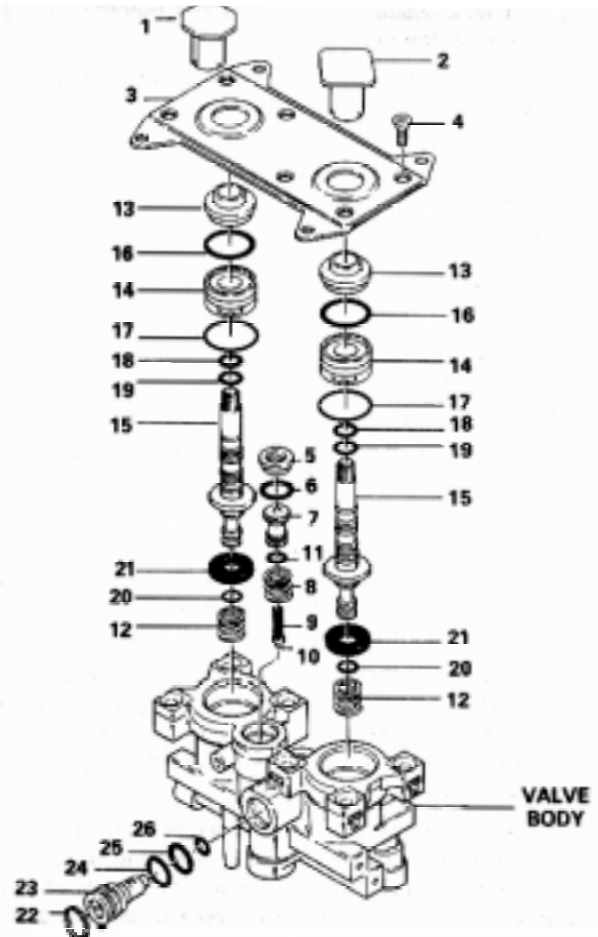
## MV-3 VALVE MAINTENANCE KITS

### Maintenance Kit Pc. No. 107216 Consists of:

Key No.	Qty.	Description
6	1	O-Ring
8	1	Override Spring
9	1	Spring
10	1	Check Valve
11	1	O-Ring
12	2	Plunger Spring
16	2	O-Ring
17	2	O-Ring
18	2	O-Ring
19	2	O-Ring
20	2	O-Ring
21	2	Exhaust Seal

### Dual Circuit Supply Valve Kit Pc. No. 107217 Consists of:

Key No.	Qty.	Description
22	1	Retaining Ring
23	1	Shuttle Valve
24	1	O-Ring
25	1	O-Ring
26	1	O-Ring



### **IMPORTANT! PLEASE READ AND FOLLOW THESE INSTRUCTIONS TO AVOID PERSONAL INJURY OR DEATH:**

When working on or around a vehicle, the following general precautions should be observed at all times.

1. Park the vehicle on a level surface, apply the parking brakes, and always block the wheels.
2. Stop the engine when working around the vehicle.
3. If the vehicle is equipped with air brakes, make certain to drain the air pressure from all reservoirs before beginning ANY work on the vehicle.
4. Following the vehicle manufacturer's recommended procedures, deactivate the electrical system in manner that removes all electrical power from the vehicle.
5. When working in the engine compartment the engine should be shut off. Where circumstances require that the engine be in operation, EXTREME CAUTION should be used to prevent personal injury resulting from contact with moving, rotating, leaking, heated, or electrically charged components.

6. Never connect or disconnect a hose or line containing pressure; it may whip. Never remove a component or plug unless you are certain all system pressure has been depleted.
7. Never exceed recommended pressures and always wear safety glasses.
8. Do not attempt to install, remove, disassemble or assemble a component until you have read and thoroughly understand the recommended procedures. Use only the proper tools and observe all precautions pertaining to use of those tools.
9. Use only genuine Bendix replacement parts, components, and kits. Replacement hardware, tubing, hose, fittings, etc. should be of equivalent size, type, and strength as original equipment and be designed specifically for such applications and systems.
10. Components with stripped threads or damaged parts should be replaced rather than repaired. Repairs requiring machining or welding should not be attempted unless specifically approved and stated by the vehicle or component manufacturer.

11. Prior to returning the vehicle to service, make certain all components and systems are restored to their proper operating condition.

### DISASSEMBLY OF THE MV-3 VALVE (Refer to Figure 1)

If using Kit No. 107216, follow steps 1 through 8 only of disassembly section.

If using Kit No. 107217, follow steps 1 through 3 then steps 9 and 10 only of disassembly section.

1. Remove the red(1) and yellow(2) buttons from the stems of the spools on the MV-3 valve by turning in a counterclockwise direction.  
**CAUTION: NOTE THE ORIENTATION OF THESE BUTTONS IN RELATION TO THE VALVE TO BE SURE THEY WILL BE REPLACED PROPERLY**
2. Remove and save the mounting hardware from the four corners of the cover plate(3).
3. If totally removing the valve from the vehicle, remove and identify the air lines from the back of the valve.
4. Remove the six Phillips head screws(4) from the cover plate(3) and carefully remove the cover plate(3) from the valve.
5. Remove the cap(5) and o-ring(6) from the bore of the tripper valve. Remove the piston(7), spring(8), spring(9) and check valve(10). These parts will all fall out of the cavity of the MV-3 by tilting the body forward. Remove the o-ring(11) from its groove on the piston(7).
6. Remove the two main spools from the body of the MV-3 valve by grasping the plunger(15) and pulling firmly. Remove the two springs(12) from the bottom of each spool cavity.
7. Pull the guide cap(13) and guide spool(14) over the threaded end of one of the plungers(15). Remove the o-ring(16) from the guide cap(13) and the o-ring(17) from the guide spool(14). Remove o-rings(18,19 & 20) and the exhaust seal(21) from the plunger. (Refer to Figure 2).
8. Repeat Step 7 on the remaining spool assembly.
9. Remove the retaining ring(22) from the cavity of the MV-3 body that contains the dual circuit supply valve.
10. Using a pair of needle nose pliers, grasp the bar in the center of the cap(23) and remove the dual circuit valve assembly. Remove the three o-rings(24, 25 & 26) from the valve or from the cavity of the body, if some have remained there. Other than the three external o-rings, *do not* disassemble the piston assembly further.  
**NOTE:** If during the removal of this assembly from the body the cap dislodges from the rest of the valve, the balance of the parts can be removed by the use of a bent wire. The spring, piston and o-ring that are internal to the dual circuit valve assembly are non-serviceable.
11. Discard all parts that have replacements provided in the kits being used.

### CLEANING & INSPECTION

The non-metallic components which comprise most of the parts of the MV-3 **should not be immersed in any solvent type cleaner**. Old lubricant should be wiped out with a clean dry cloth.

If any visible damage to the body or the spools can be detected, the complete unit must be replaced.

### ASSEMBLY OF THE MV-3 VALVE (Refer to Figure 1)

If using Kit No. 107216, follow steps 1 then 4 through 15.

If using Kit No. 107217, follow steps 1 through 3 then 12 through 15.

### Dual Circuit Supply Valve

1. Lubricate all o-rings, bores and sliding surfaces with silicone lubricant. Bendix Pc. No. 291126 or Dow Corning 55-M.
2. Install o-rings(24, 25 & 26) onto the dual circuit supply valve(23). Then install the assembly into its cavity in the body (small diameter to enter first).
3. Install the snap ring(22) making sure it is fully seated in its groove.

### Spools (Refer to Figure 2)

4. Install o-rings(18, 19 & 20) and the exhaust seal(21) onto the stem of plungers(15).

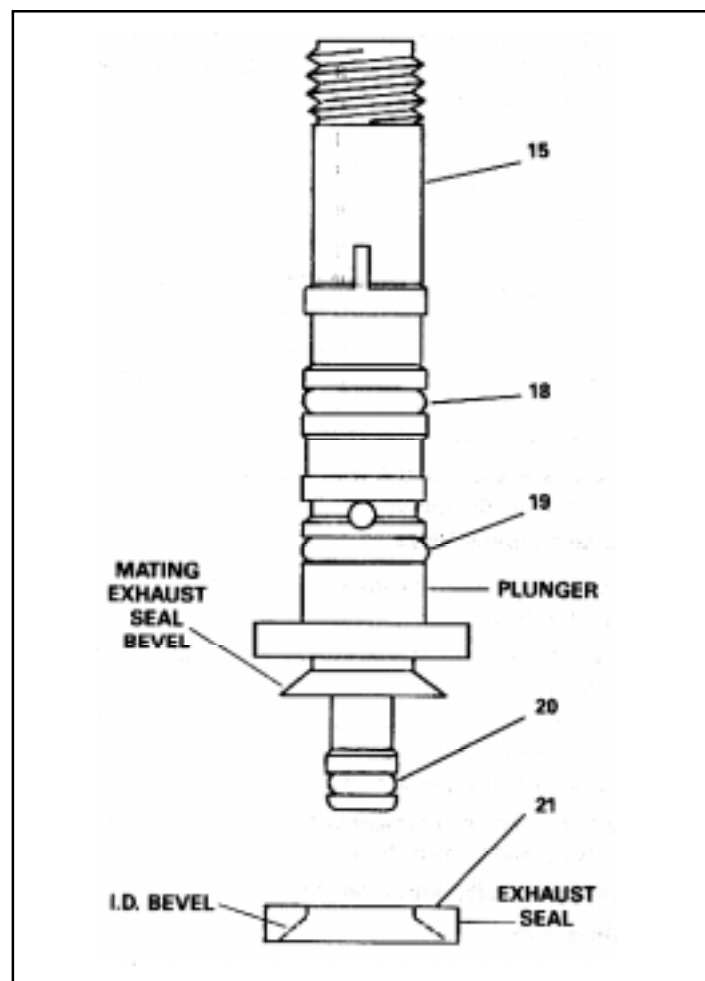


Figure 2

**CAUTION: THE EXHAUST SEAL(21) MUST BE INSTALLED SO THAT ITS BEVELED SURFACE MATES WITH THE BEVELED SURFACE OF THE PLUNGER (Figure 2).**

5. Install o-ring(17) onto the guide spool(14) and o-ring(16) onto the guide cap(13). Place the guide cap on top of the guide spool and install entire assembly over the threaded end of the plunger(15) and press down firmly until it snaps into place.

6. Install spring(12) over the boss in the bottom of the spool cavity in the body of the MV-3 valve. Place the spool assembly into the body, keeping the spool square to the body press and turn the stem until the spool is fully seated in its cavity. Note the assembly is keyed and may only be installed one way.
7. Repeat Steps 2, 3 and 4 with the remaining components for the opposite spool.

#### **Dual Circuit Supply Valve**

8. Install o-ring(11) into its groove on the piston(7) and o-ring(6) onto the cap(5).
9. Install spring(8) on the piston(7) and spring(9) on the boss of the check valve(10).
10. Install the spring and check valve into its cavity in the body of the MV-3 valve (tapered end of check valve to enter cavity first). Make sure the spring(9) is centered in the bore.
11. Install the piston assembly into the cavity making sure the spring(9) mates with the bore of the piston.
12. Install the cap(5) with o-ring(6).

#### **Final Assembly**

13. Install the cover plate(3) onto the valve body and retain with the six Phillips head screws. Torque to 25 in.lbs.
14. Attach the red(1) and yellow(2) buttons onto the threaded stems of the spools, making sure that they are oriented correctly as noted in Step 1 of "Disassembly" procedure.
15. Reattach the MV-3 valve to the dash using the hardware removed in Step 2 of "Disassembly." If air lines were removed during disassembly, reconnect to proper ports.

#### **Service Test**

Perform operating and leakage test as outlined in SD-03-3415, then test drive vehicle at a slow speed in a safe area prior to placing unit back into service.

