

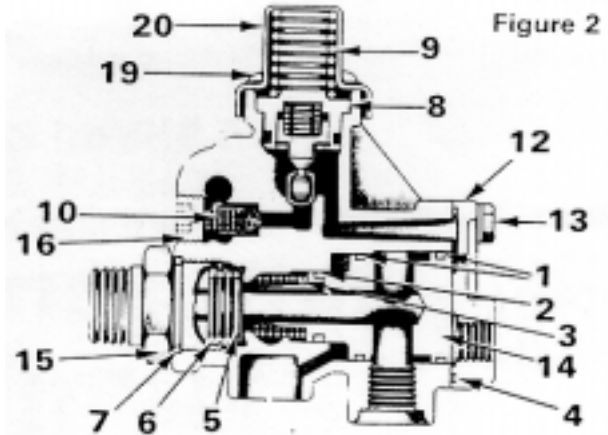
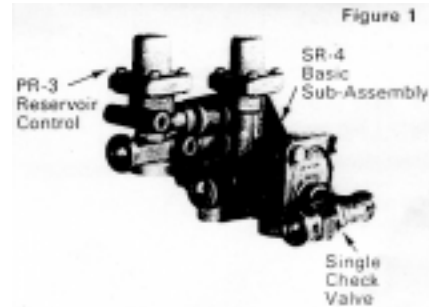


Installation Instructions

KIT
PC. No. 102048

MAINTENANCE KIT FOR SR-4 TRAILER SPRING BRAKE VALVE

QUANTITY	DESCRIPTION	KEY
2	O-Ring	1
1	O-Ring	2
1	Spring	3
1	Sealing Ring	4
1	Inlet Exhaust Valve	5
1	Inlet Exhaust Spring	6
1	O-Ring	7
1	Piston Assembly	8
1	Spring	9
2	Check Valve Assemblies	10
1	Diaphragm	11
1	Check Valve	24
1	Spring	23
1	Tube of Lubricant	
1	PR-3 Maintenance Kit	
1	O-Ring	27
1	Spring	29
1	Valve Seat	26
1	Valve	28



This kit consists of the following parts which are keyed to the circled numbers on the sectional drawings:

Figure 1 This kit consists of the parts listed above.

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.

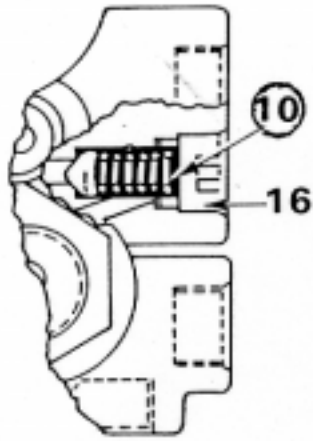


Figure 3

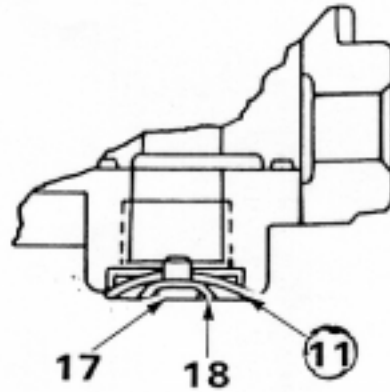


Figure 4

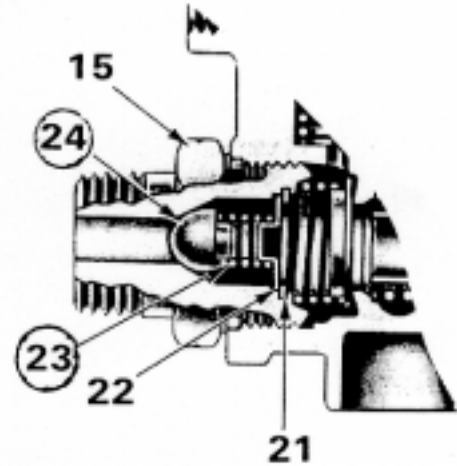


Figure 5

REMOVAL

Set the vehicle parking brakes and drain all reservoirs. Remove the complete SR-4 assembly as shown in Figure 1. Before complete disassembly, the SR-4 must be first disassembled into its three (3) MAJOR sub-assemblies as shown in figure 1. The PR-3 reservoir, control and the single check valve are nipple mounted to the SR-4 basic sub-assembly. The PR-3 reservoir control valve is rebuilt using the PR-3 maintenance kit Pc. No. 287366 and its instruction sheet, BWS-709, Which is included in this kit.

DISASSEMBLY SR-4 Sub-assembly

(Figures 2, 3, 4 and 5)

1. Remove the four round head machine screws (19) holding the spring retainer (20) to the body and remove the spring retainer.
CAUTION: The spring retainer is spring loaded and should be removed carefully.
2. Remove and discard the spring (9) and the piston assembly (8).
3. Note and mark the position of the control piston cover (12) on the valve body. Remove the four 1/4" x 20 hex head cap screws (13) and cover. Discard the sealing ring (4). Save special identification tag.
4. Remove the control piston (14) and spring (3). Remove and discard O-Rings (1) and (2) and spring (3).
5. Remove the two socket head pipe plugs (16) and remove and discard the two check valve spring assemblies (10). (See Fig. 3).
6. Remove the screw (17), washer (18) and discard the diaphragm (11). (Fig. 4) (If so equipped).
7. Remove check valve assembly (15) and remove and discard O-Ring (7), spring (6), and inlet exhaust valve (5).

DISASSEMBLY - Check Valve Assembly (15) Figure 5

1. Remove retaining ring (21) and spring retainer (22) from check valve assembly (15) Retain items 21 & 22 for reuse.
2. Remove and discard valve spring (23) and valve (24).

DISASSEMBLY - Single Check Valve (Figure 6)

1. Remove cap nut (30) from body (25).
2. Remove and discard all internal components, valve seat (26), O-Ring (27), valve (28) and spring (29).

ASSEMBLY

NOTE: Prior to the assembly of new parts in valve, clean all internal parts and passages with a suitable solvent equivalent to mineral spirits. Grease all O-Rings, bores, pistons, and internal parts with BW-650-M lubricant supplied in kit.

ASSEMBLY - SR-4 Sub-Assembly (Figures 2, 3, 4, and 5)

1. Install the two check valve assemblies (10) in their respective cavities and install the pipe plugs (16) and torque to 150-170 inch pounds.
2. Install the O-Rings (two of (1) and one (2)) on the control piston (14) (Figure 2).
3. Place spring (3) over the piston and install in body.
4. Place the sealing ring (4) in its groove in the cover (12). Assemble cover to body, as marked at disassembly. Replace special identification tag. Torque the four cap screws (13) to 40-60 inch pounds.
5. Install the piston assembly (8) into the body.
6. Install the spring (9) and cover (20) and torque screws (19) to 20-30 inch pounds.
7. If so equipped, re-assemble the exhaust diaphragm (11) to the exhaust port with washer (18) and screw (17), Torque the screw to 15-25 inch pounds.

ASSEMBLY - Check Valve Assembly (15) (Figure 5)

8. Install spring (23) on valve (24) and spring retainer (22) and install in body (15).
9. Install retaining ring (21). Make sure it is properly seated.
10. Insert the inlet exhaust valve (5) into the valve body, flat side adjacent to the inlet exhaust valve seat.
11. Position the inlet exhaust spring (6) on the inlet exhaust valve, install O-Ring (7) on the check valve assembly (15) and install. Torque to 200-300 inch pounds.

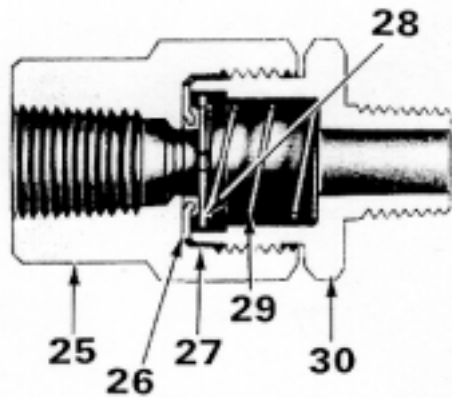


Figure 6

ASSEMBLY - Single Check Valve (Figure 6)

1. Position valve seats (26) in body (25).
2. Place O-Ring (27), valve (28) and spring (29) in body (25).
3. Assemble cap nut (30) in body (25) using care to assure that valve (28) remains free to move within the check valve assembly. Torque to 125-250 inch pounds.
4. Test valve in accordance with Bendix recommendations (reference Installation and Service Data Sheet SD-03-44).

INSTALLATION

1. Clean air lines connecting to valve.
2. Inspect all lines and/or hoses for damage and replace as necessary.
3. Install valve and tighten.
4. Connect air lines to valve (plug any unused ports).
5. Test valve in accordance with the "Operating and Leakage Tests".

OPERATING AND LEAKAGE TESTS

Check the tractor dash gauge against a test gauge known to be accurate prior to performing these tests. Connect the tractor air lines to the trailer on which the SR-4 trailer spring brake valve is to be tested. Block all wheels, or otherwise hold both vehicles by a means other than air brakes during these tests.

1. Install two separate test gauges or one dual test gauge with one line to the front service reservoir and the other line to the rear service reservoir. Build the tractor and trailer to full system pressure by placing the trailer supply valve in the charge position and the parking control valve in the brakes released position.

NOTE: As system pressure reaches approximately 55 p.s.i., the rear service reservoir and the spring brakes should build up to approximately 60 p.s.i. before the front service reservoir begins to charge. When full system pressure has been reached and the spring brakes fully released, it is acceptable to have a slightly lower pressure reading in the service reservoirs than is registered on the dash gauge. Soap suds should be applied to the reservoir mounting cap nut, and each of the stamped pressure protection caps. No leakage permitted. Soap suds should be applied to the exhaust port and the vent. Leakage of a 1" soap bubble in five seconds is permissible.

2. Place the trailer supply valve in the exhaust position; the spring brakes should be applied. Disconnect the trailer supply line and soap the hose coupling to check for leaks. A 1" soap bubble in not less than five seconds is permissible.
3. Reconnect the trailer supply hose coupling and recharge the trailer system. The spring brakes should release. Shut off the engine, leaving the ignition on and open the drain cock on the front or rear trailer reservoir. The tractor air system should bleed down to approximately 55 p.s.i. with low pressure indication occurring at or before 60 p.s.i. The tractor air system should bleed down to approximately 55 p.s.i. and the spring brakes on tractor and trailer should remain released. After the system is stabilized, leakage at the open drain cock in the trailer should not exceed a 1" bubble in five seconds.
4. Close the drain cock on the trailer reservoir chosen in step 3, recharge the system, stop the engine and open the drain cock on the reservoir not drained in step 3. Again, the tractor air system should bleed down to approximately 55 p.s.i. The spring brakes should remain released on both the tractor and trailer. Leakage at the open drain cock should not exceed a 1" bubble in five seconds. As this test is completed, close the drain cock on the trailer reservoir.