



Installation Instructions

KIT
PC. No. 229423 &
289320

E BRAKE VALVE MAINTENANCE KITS

MINOR KIT - 229423

Qty.	Description	Key No.
1	Inlet Valve Spring	1
1	O-Ring(2.062" O.D.)	2
1	O-Ring(.691" O.D.)	3
1	Inlet Valve	4
1	O-Ring(1.412" O.D.)	5
1	Boot	6
1	Boot	7
1	Lubricant (BW-650M)	

MAJOR KIT - 289320

Qty.	Description	Key No.
1	Inlet Nut	8
1	Piston Return Spring	9
1	Graduating Spring	10
1	Spring Seat	11
1	Washer	12
1	Lockwasher	13
1	Cap Screw	14
1	Retaining Ring	15
1	Filter Screen	16

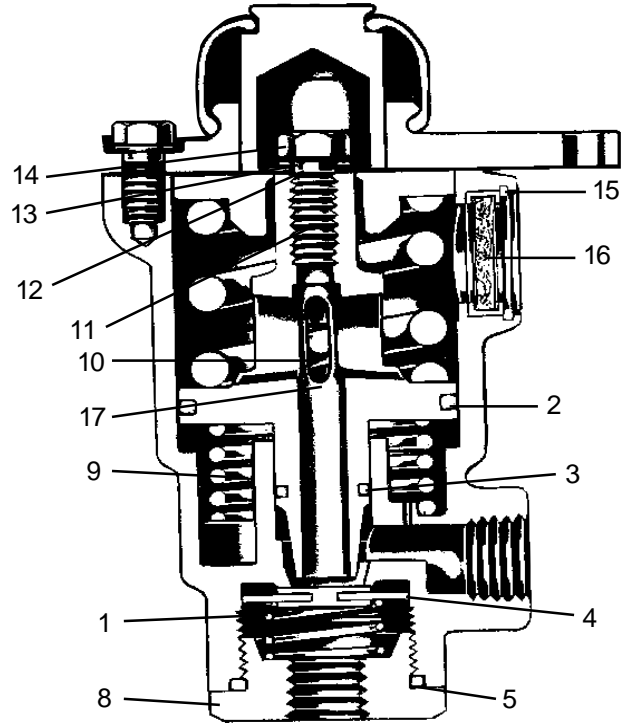


Figure 1 This kit consists of the parts listed above.

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.

REMOVAL

1. Block and hold vehicle by means other than air brakes and exhaust air pressure from reservoirs.
2. Disconnect air lines at valve; if lever operated, disconnect pedal rod.
3. Remove mounting bolts, and remove valve.

DISASSEMBLY

1. Remove treadle or lever assembly from mounting plate. Note: New treadle or lever parts are not included in kits; however, it is recommended that the treadle or lever assembly be dismantled, cleaned and inspected. Replace any worn parts.
2. Remove boot (6 or 7) from mounting plate. Remove mounting plate cap screws, mounting plate and plunger.
3. Remove piston and spring assembly front valve body. If using kit 289320 this assembly may be disassembled. If using kit 229423 remove O-Rings (2) and (3) from piston. Leave piston and spring assembly intact.
4. Remove piston return spring (9).
5. Remove inlet nut (8), inlet valve spring (1) and inlet valve (4). Remove O-Ring (5) from inlet nut (8).
6. Remove retaining ring (15) and filter screen (16) from exhaust.

CLEANING AND INSPECTION

Wash all metal parts that are to be reused in cleaning solvent and dry.

Inspect carefully for wear or deterioration and replace as necessary.

ASSEMBLY

1. Using lubricant furnished in kit, lightly lubricate all stems, bores and O-Rings.
2. Carefully install O-Rings (2) and (3) on piston (17). Install piston return spring (9) in body. Place graduating spring (10) over upper stem of piston. Place spring seat (11) over stem, flat surface up. Place lock washer (13) and flat washer (12) on cap screw (14) with lock washer adjacent to head of cap screw. Enter cap screw in piston stem and torque to 30-35 foot pounds.

3. Install inlet valve (4) and inlet valve spring (1). Install O-Ring (5) on inlet nut (8). Install inlet nut (8) and tighten securely.
4. Install filter screen (16) and retaining ring (15) in valve exhaust.
5. Install plunger into mounting plate. Install boot (6) or (7) as required. Assemble treadle plate to body with the three cap screws.
6. Assemble treadle or lever to mounting plate. Make certain all parts are properly secured in place.
7. Install valve in vehicle and connect air lines.

TESTING FOR SERVICEABILITY

Charge the air brake system to govern or cut-out and test valve as follows:

SERVICE CHECKS

Check the delivery pressure of the brake valve using a test gauge known to be accurate. Depress the pedal to several positions between the full released and fully applied positions and check the delivered pressure on the test gauge to see that it varies proportionately to the movement of the pedal. When the pedal is fully applied the reading on the gauge should be approximately full reservoir pressure. The gauge reading should fall to zero when application is released.

LEAKAGE TEST

With the valve fully released, check the exhaust for leakage. (Exhaust is located at screen on side of valve.) Leakage not to exceed a 1 inch bubble in 5 seconds. Make and hold an application; coat the exhaust with soapsuds; leakage not to exceed a 1 inch bubble in 3 seconds. Also coat with soapsuds around the plunger (top of mounting plate) and between the mounting plate and valve body. No leakage permitted.

