



# Installation Instructions

KIT  
PC. No. 265073

MODIFICATION KIT FOR E-10 BRAKE VALVE ASSEMBLY 101270

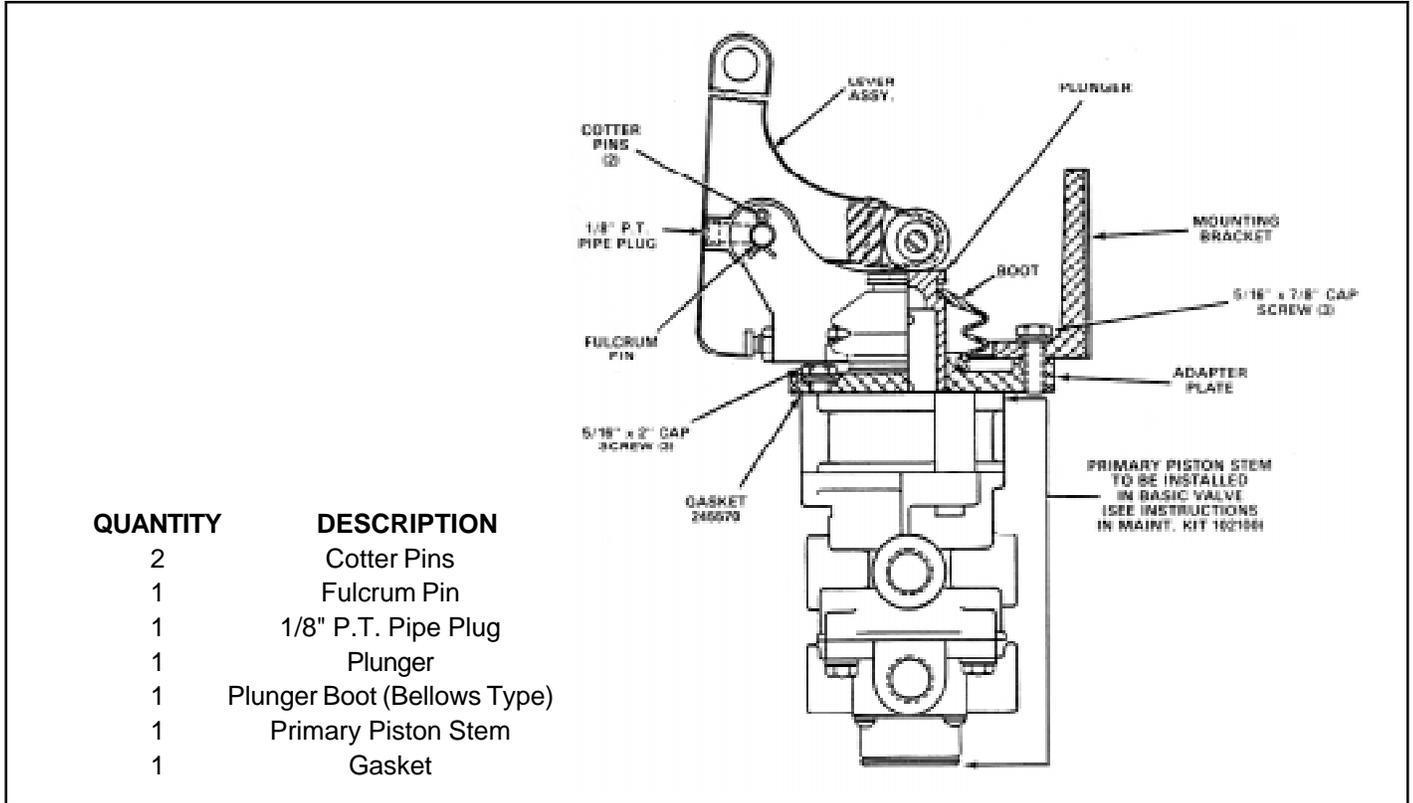


Figure 1

**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.

## IMPORTANT

This modification kit should be installed in conjunction with Maintenance Kit 102100. Installation instructions for the primary piston stem contained in this kit are **dependent** upon the instruction sheet contained in maintenance kit 102100.

Before proceeding, read and understand this instruction sheet and the sheet contained in maintenance kit 102100. When working on or around air brake systems and components, the following precautions should be observed:

1. Always block vehicle wheels. Stop engine when working under a vehicle. Depleting vehicle air system pressure may cause vehicle to roll. Keep hands away from chamber push rods and slack adjusters; they may automatically apply as system pressure drops.
2. Never connect or disconnect a hose or line containing air pressure. It may whip as air escapes. Never remove a component or pipe plug unless you are certain all system pressure has been depleted.
3. Never exceed recommended air pressure and always wear safety glasses when working with air pressure. Never look into air jets or direct them at anyone.
4. Never attempt to disassemble a component until you have read and understand recommended procedures. Some components contain powerful springs and injury can result if not properly disassembled. Use only proper tools and observe all precautions pertaining to use of those tools.
5. Use only genuine Bendix replacement parts and components.
  - A. Only components, devices, mounting and attaching hardware specifically designed **for use in air brake systems** should be used.
  - B. Replacement hardware, tubing, hose, fittings, etc. should be of equivalent size, type length, and strength as the original equipment.
  - C. Make certain that when replacing tubing or hose, all supports, clamps or suspending devices that were originally installed by the vehicle manufacturer are reinstalled.
6. Devices with stripped threads or damaged parts should be replaced. Repairs requiring machining should not be attempted.

## REMOVAL

1. Chock the vehicle wheels or park the vehicle by mechanical means. Drain all air system reservoirs.
2. Identify and disconnect all supply and delivery lines at the brake valve.
3. Disconnect the brake pedal linkage from the lever assembly of the brake valve.
4. Remove the four bolts that secure the brake valve and its mounting bracket to the vehicle.

## DISASSEMBLY AND ASSEMBLY (Refer to Figure 1)

Prior to removing, the mounting bracket and adapter plate from the basic brake valve, wipe the exterior of these components and mark their relationship to one another.

1. Place the E-10 in a bench vise and position the two No. 1 supply ports between the vise jaws. **Do not overtighten the vise as the E-10 body can be distorted.**
2. Remove and discard the cotter pins that retain the fulcrum pin.
3. Remove and discard the fulcrum pin. Remove and retain the lever assembly from the mounting bracket.
4. Remove and retain the three 5/16" x 7/8" cap screws and lockwashers that secure the mounting bracket to the adapter plate. Remove and retain the mounting bracket.
5. Remove and retain the three 5/16" x 2" cap screws and lockwashers that secure the adapter plate to the basic brake valve. Remove and retain the adapter plate.
6. Remove and discard the plunger and boot from the adapter plate.
7. Proceed to the instruction sheet contained in maintenance kit 102100. Comply with the instructions contained on that sheet with the following EXCEPTIONS;
  - A. Disregard removal instructions.
  - B. Discard item 20 along with items 19 and 8 in Step 10 of "Disassembly".
  - C. Use the modified primary piston stem contained in the modification kit (265073) during Step 8 of "Assembly".
  - D. After completing Step #16 of "Assembly" return to this instruction sheet.

## INSTALLATION (Refer to Figure 1)

1. Install gasket 245570 (contained in modification kit 265073) between the basic brake valve and the adapter plate. Position the adapter plate on the basic brake valve as marked during disassembly and secure it using three 5/16" x 2" cap screws and lockwasher. Torque to 80-120 inch pounds.
2. Install the bellows boot on the mounting plate making certain the boot bead is fully seated in the adapter plate groove.
3. Insert the lubricated plunger from the bottom side into the adapter plate bore making certain the boot upper lip is fully seated on the plunger groove.
4. Place the mounting bracket in the adapter plate in the position marked during disassembly and secure it to the adapter plate using three 5/16" x 7/8" cap screws and lockwashers. Torque to 80-120 inch pounds (9.0-13.6 N.M).
5. Install the lever assembly on the mounting bracket and insert the fulcrum pin through the mounting bracket and lever assembly.
6. Install a 3/32" cotter pin through the hole at each end of the fulcrum pin. Bend the legs of each cotter pin to secure.
7. Using the grease fitting in the lever assembly, lubricate the fulcrum pin with chassis lube.
8. After lubricating the fulcrum pin, remove and discard the grease fitting from the lever assembly. Install the 1/8" P.T. pipe plug in the lever assembly and torque to 35-55 inch pounds (4.0-6.2 N.M).

## **INSTALLATION ON VEHICLE**

1. Install the E-10 brake valve assembly on the vehicle using four mounting bolts to secure.
2. Reconnect the brake pedal linkage to the E-10 lever assembly.
3. Reconnect all air lines to the brake valve using the line identification made in Step 2 of the "Removal" instructions.
4. Before placing the vehicle in service, perform the "Operating and Leakage Checks".

## **OPERATING CHECKS**

Check the delivery pressure of both No. 1 and No. 2 circuits using test gauges known to be accurate. Depress the treadle to several positions between the fully released and fully applied positions, and check the delivered pressure on the test gauges to see that it varies equally and proportionately with the movement of the brake pedal.

After a full application is released, the reading on the test gauges should fall off to zero promptly. It should be noted that the No. 1 circuit delivery pressure will be about 2 psi greater than the No. 2 circuit delivery pressure with both supply reservoirs at the same pressure. This is normal for this valve.

## **LEAKAGE CHECKS**

1. Make and hold a high pressure (80 psi) application.
2. Coat the exhaust port and body of the brake valve with a soap solution.
3. Leakage permitted is a one inch bubble in 3 seconds.

If the brake valve does not function as described above or leakage is excessive, it is recommended that it be replaced with a new unit.