



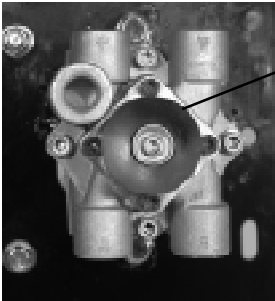
# Installation Instructions

KIT PC. No.  
5007784

Note: Retrofit section, steps 5 & 6 (page 2) Revised 2/2000.

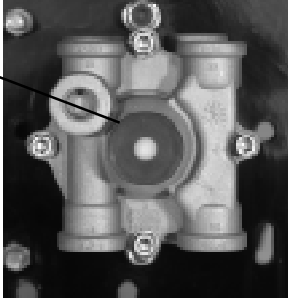
## KENWORTH T-2000 FIELD RETROFIT KIT FOR E-8P BRAKE VALVES

E-8P



E-8P Bottom View

Exhaust



E-12 Bottom View

Kit contents:		
Item	Description	Qty.
1	Plunger with vent	1
2	Cotter Pin	1
3	Zip Tie (Green)	1
4	RTV Sealant Tube	1
5	Barium Grease Packet	1
6	Alcohol Wipe	1
7	Application Glove / Latex	1

**Suggested tool list (not included in kit):**

- #20 TORX Screw Driver
- 10mm Socket Wrench
- Flashlight
- Clean Shop Rags
- Eye Protection

FIGURE 1 - KENWORTH T-2000 FIELD RETROFIT FOR E-8P BRAKE VALVES

### GENERAL

This kit contains all of the components required for weatherproofing the E-8P Dual Brake installed on Kenworth T-2000 Vehicles.

**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.

### INSPECTION

1. Identify and record the Vehicle Identification Number (VIN) on the service documentation.
2. Visually verify the vehicle is equipped with a Bendix® E-8P Brake Valve. (See figure 1.) If the vehicle has an E-12 Brake Valve discontinue this procedure. This procedure is applicable to vehicles with an E-8P brake valve only.

### RETROFIT

1. In the cab of the vehicle locate and remove the interior kick-plates that to allow access to the brake valve. Use a #20 TORX screw driver.
2. Do not disconnect any air lines to the brake valve.
3. Push the brake pedal up into the cab and remove the brake valve plunger. If pedal travel is limited and will not allow the plunger to be removed, it may be necessary to remove the cotter pin and roller on the brake pedal. Discard the cotter pin.
4. Inspect the plunger for evidence of ice or water. Discard the plunger.
5. **Caution: Use proper eye protection.** Randomly blow compressed air into the plunger guide to remove water that may be present in the cavity between the mounting plate and the valve piston. Go to step 7.

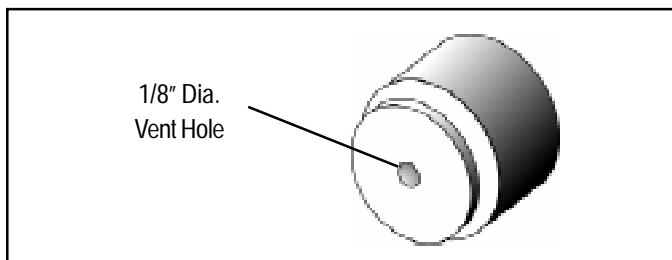


FIGURE 2 - E-8P PLUNGER WITH VENT

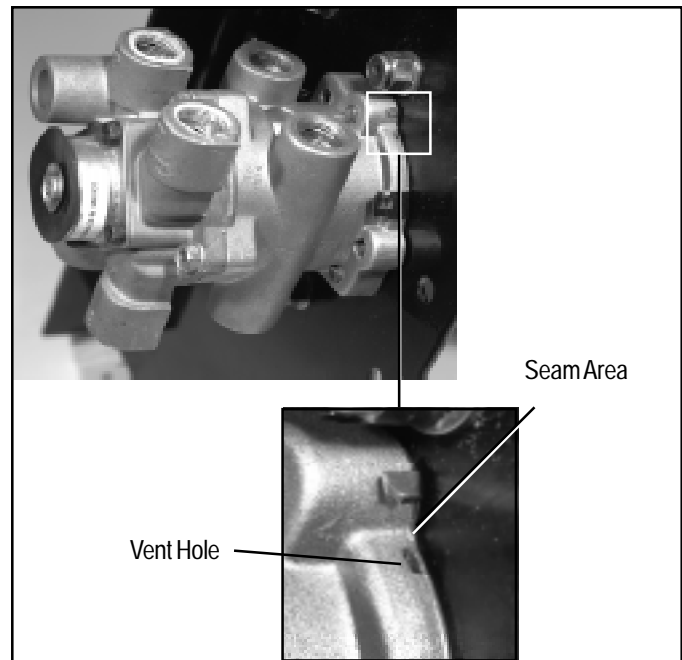


FIGURE 3- E-8P VENT HOLE

6. Partially remove the brake valve from the module plate by removing the three mounting bolts securing the brake valve to the pedal mounting plate. Dry the face of the brake valve with compressed air or a clean shop rag. Reinstall the brake valve and torque the mounting hardware to 80-120 in-lb.
7. Apply barium grease(5) around the outside of the new plunger(1). The new plunger must have a center vent hole as shown in figure 2. Install the new plunger. Replace rollers and cotter pin if previously removed.
8. Replace the kick panels and secure.
9. In the engine compartment identify the area of brake valve with the vent hole. If necessary for access, remove the horn using a 10mm socket wrench. Note the vent and seam area of the brake valve shown in figure 3. Using the alcohol wipe(6), clean this area to remove any traces of oil or dirt.

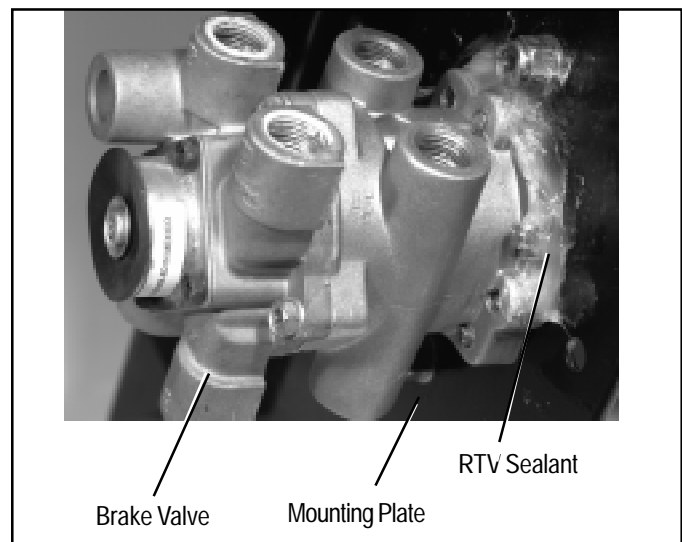


FIGURE 4 - E-8P WITH SEALANT APPLIED

10. Using RTV sealant(4), seal the vent hole at the top of the brake valve. Using your finger force the sealant into the breather cavity. A rubber glove(7) is included for ease of application. In addition, apply a 1/4" bead of sealant across the top seam of the brake valve between the mounting plate and brake valve mounting flange. The bead should cover both sides of the upper mounting boss, and over the boss as well. See figure 4.
11. Visually inspect to ensure the vent hole at the top of the brake valve is adequately sealed.
12. Mark the brake valve by securing the green zip-tie(3) around the brake valve body.
13. Disconnect the control line to the relay valve at the relay valve.
14. Start the vehicle and build system air pressure to governor cut-out.
15. Make a moderate brake application (2 sec) to vent the line. Be careful to secure the line such that it does not whip. During the brake application, check for delivery of air and signs of moisture being ejected from the line. If moisture is not found go to step 17.
16. Drain the air pressure from the system. Thoroughly clean the outside of the R-12 valve body. Verify the air system is at zero pressure. Remove the top cover of R-12 relay valve. **Note:** Be aware some relay valves contain an internal spring which applies force to the relay piston and cover. See figure 5. Inspect the valve for moisture. Remove any moisture found in the valve using compressed air or a clean shop rag. Replace the valve cover and torque the relay cover bolts to 80-120 in-lb.
17. Reconnect the relay valve control line.
18. Build up the system air pressure and check vehicle for leakage. Verify normal operation of the brake system by depressing the brake pedal and observing slack adjuster movement at the wheel ends.

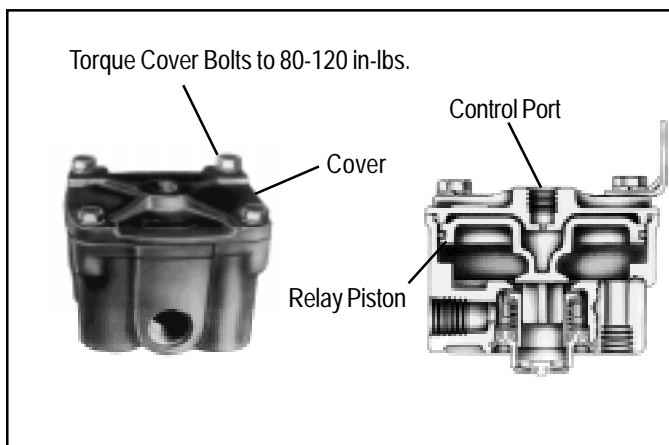


FIGURE 5- R-12 RELAY VALVE

