



# Installation Instructions

Kit Pc.  
No. 5002296

BCM-KW MODULE: BRAKE VALVE MOUNTING PLATE KIT

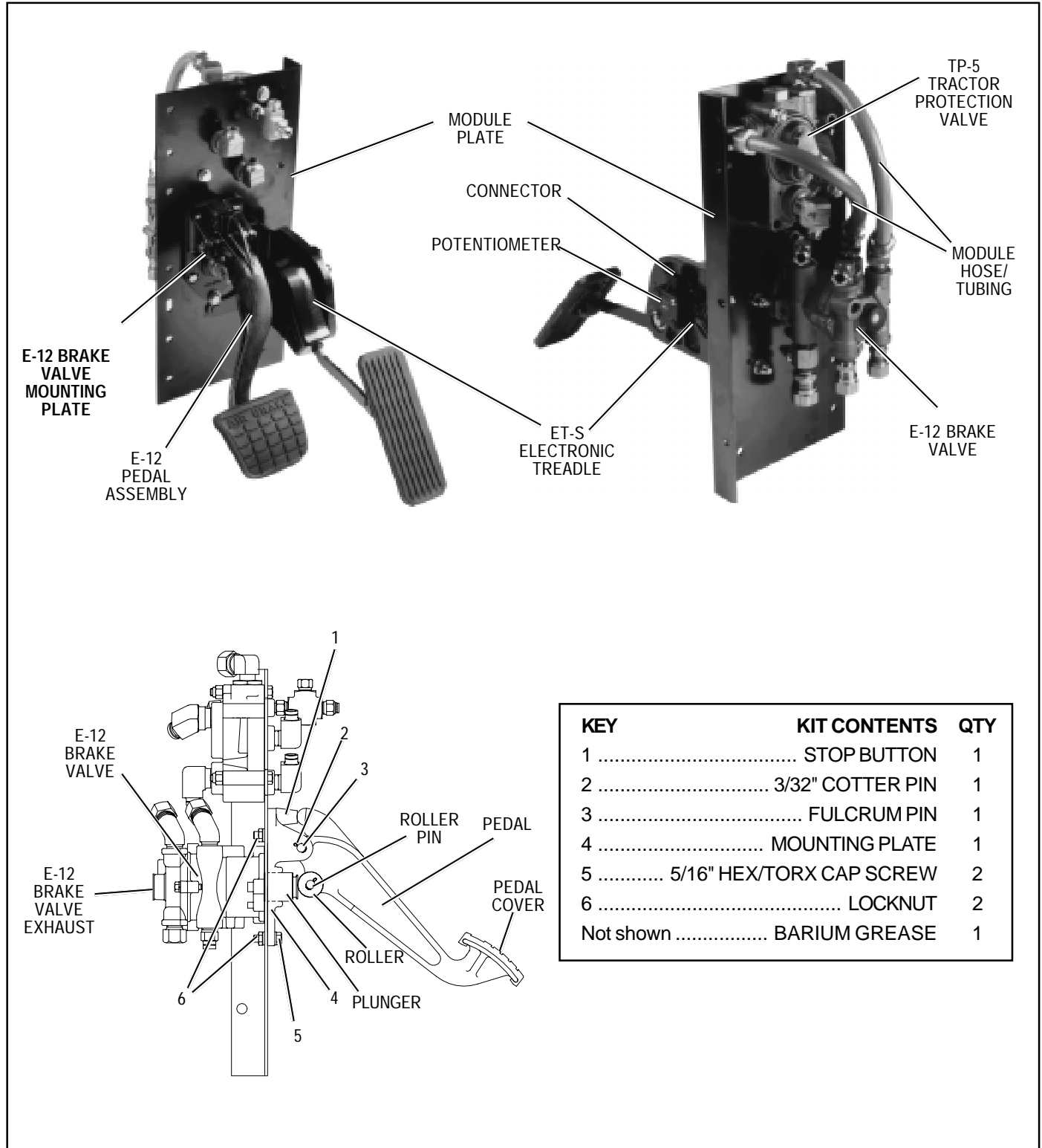
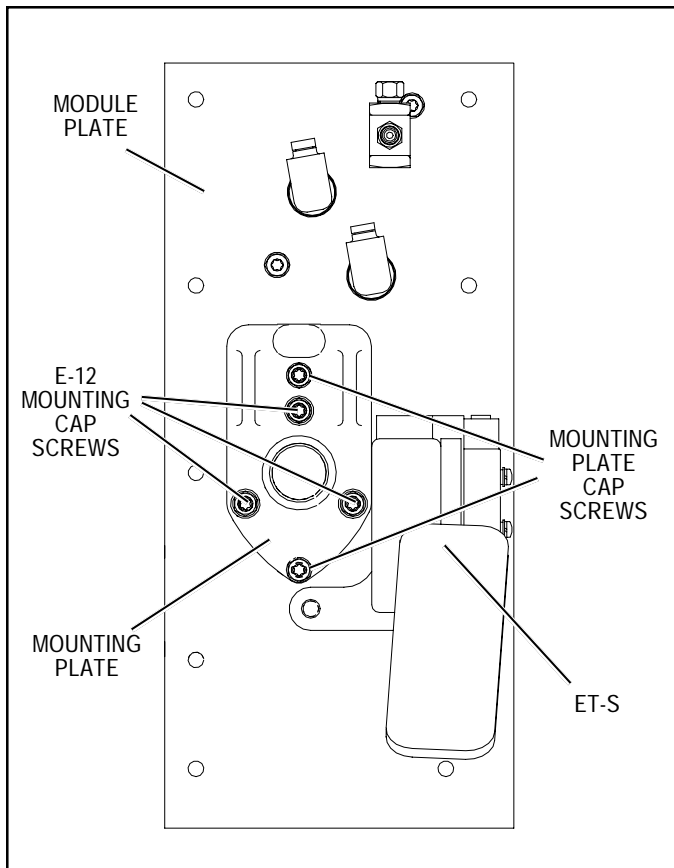


FIGURE 1 - BCM-KW MODULE

**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 a 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.**



**FIGURE 2 - BCM-KW (FRONT VIEW WITH BRAKE PEDAL REMOVED)**

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**

Refer to Figures 1 and 2 throughout.

1. Park the vehicle on a level surface and block the wheels.
2. Drain the air pressure from all vehicle reservoirs - note that air lines may still hold residual pressure.

***If repairs do not require BCM-KW Module removal from vehicle, proceed to step 6.***

**BCM-KW REMOVAL**

3. Unplug the cable assembly from the potentiometer on ET-S. Disconnect by lifting the lock tab and pulling the connectors until they disengage.
4. Remove and retain for reassembly the mounting hardware attaching the BCM-KW to the vehicle.
5. Securely clamp the BCM-KW, by clamping the Module Plate only. Make sure that the plate is not distorted.
6. Remove the Cotter Pin (2) holding the E-12 Fulcrum Pin (3). Set aside this pin and the Brake Pedal (4). Remove the Brake Pedal Plunger.
7. Release the E-12 valve and gasket by removing the three cap screws which pass through the Module Plate and Mounting Plate.
8. Remove the mounting hardware attaching the Mounting Plate.
9. Retain the Stop Button from the Mounting Plate for reuse.

**CLEANING AND INSPECTION**

1. Use suitable solvent (e.g. alkaline detergent and water) to clean all metal parts (note that mineral spirits may damage paint finish).
2. Inspect for severe corrosion, pitting, or cracks. Replace as necessary.

## **ASSEMBLY**

1. If the BCM-KW Module was removed from the vehicle, check that the Module Plate is securely clamped.
2. Insert the Stop Button retained during disassembly into the replacement Mounting Plate (4).
3. Insert and begin tightening the two E-12 Mounting Plate bolts. It is important to be sure that the plunger will pass freely through the aligned Mounting Plate and Module Plate holes when assembled. Use the plunger to check for this correct arrangement, and then tighten the bolts to between 75 and 110 lb. in.
3. Insert the three mounting bolts through the Mounting Bracket, the Module Plate, and the Gasket. Gradually tighten the bolts in turn to reach a final torque of between 75 and 110 lb. in. This procedure prevents any distortion of the brake valve which might affect its performance.
4. Coat the Fulcrum Pin (3) shaft with barium base grease and then it and the E-12 pedal can now be installed. A 3/32" Cotter Pin is used to lock the Fulcrum Pin into position.
5. If the BCM-KW module was removed from the vehicle see *BCM-KW Installation*.
6. Perform *Operation and Leakage Tests* before returning vehicle to service.

## **BCM-KW INSTALLATION**

1. Install the assembled BCM-KW Module into the vehicle. [If the O.E.M. gasket between the Module and vehicle requires replacement use Kenworth R42-1021.] Tighten the bolts to between 75 and 110 lb. in., making sure to prevent any distortion of the Module Plate.
2. Reconnect the cable connector by plugging it into the potentiometer's integral connector and pushing until the lock tab snaps into place.
3. Perform *Operation and Leakage Tests* before returning vehicle to service.

## **OPERATION AND LEAKAGE TESTS**

### **OPERATION TEST**

Check that the Pedal and Plunger move freely and that there is no binding.

### **LEAKAGE TEST**

Make and hold a range of pressure applications (e.g. 30, 50 and 80 psi) while testing the E-12 exhaust port for leakage by coating it with a soap solution. This test checks that the E-12 was reattached to the Module Plate without distortion. Permitted leakage at the exhaust port is a one inch bubble in 3 seconds in both the applied and released positions. If any other fittings were unfastened during the procedure, include these in the soap solution test. No leakage is permitted at fittings and must be remedied before returning vehicle to service.

