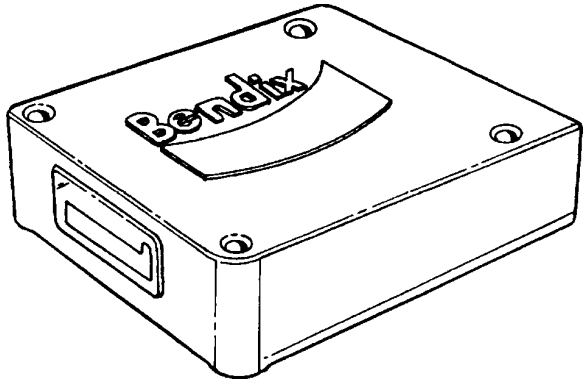
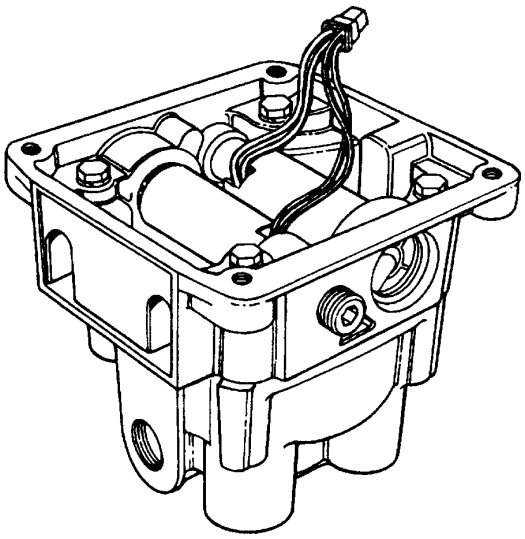
Installation Instructions

REPLACEMENT OF: EC-12 CONTROLLER OR M-12 MODULATOR



EC-12 CONTROLLER



M-12 MODULATOR

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.**

REMOVAL

1. Park the vehicle on a level surface and block the wheels and/or hold the vehicle by means other than the air brakes.
2. Drain air pressure from all vehicle reservoirs.
3. Identify, mark, or label all air lines and wiring cables and their connections on the valve or antilock controller to facilitate installation.
4. If replacing the controller, it may be possible (depending on mounting location) to remove and replace the controller without removing the entire antilock assembly. If this is the case:

A. Remove the controller's 14-pin connector by loosening its 1/4 inch screw.

B. Remove the bolts that secure the controller to the modulator. Lift the controller off the modulator. Detach the 4-pin wire harness from the controller by depressing the lock tab on the side of the connector and pulling the connector from its socket. Remove and discard the gasket on the bottom of the controller.

5. If replacing the modulator, or if space limitations make it necessary to remove the entire antilock assembly before removing the controller:
   A. Disconnect all air lines and wiring.
   B. Remove the antilock assembly from the vehicle. Save the mounting hardware that connects the assembly to the vehicle.
   C. Remove the bolts that secure the controller to the modulator. Lift the controller off the modulator. Detach the 4-pin wire harness from the controller by depressing the lock tab on the side of the connector and pulling the connector from its socket. Remove and discard the gasket on the bottom of the controller.

CLEANING AND INSPECTION

1. Using mineral spirits or soap and water, remove any contamination from the component that will be reused (either the controller or the modulator). Thoroughly dry the component. If the modulator will be reused, be sure to keep contamination away from open ports.
   CAUTION: Precautions must be taken to keep the solenoids dry and contaminant-free. Failure to comply can result in damage and/or malfunction.
2. Inspect the component being reused for severe corrosion, pitting, or cracks. Superficial corrosion and/or pitting on the component's exterior is acceptable.
3. If reusing the modulator, inspect all air line fittings and plugs for corrosion. Clean all old thread sealant from the pipe threads. Inspect the solenoid leads for cuts, chaffing and damage.
4. If reusing the controller, inspect the 14-pin connector. The connector termination should be tight, with no evidence of damage.

Any component exhibiting a condition described in INSPECTION steps 2, 3, and 4 should be discarded and replaced before proceeding.

INSTALLATION

1. Install the gasket onto the controller, then plug the electrical connector from the modulator into the socket in the bottom of the controller. Press in until the lock tab engages. Ensure engagement by pulling lightly on the connector.
2. Place the controller onto the modulator and secure with its four bolts. Torque to 30-60 in. lbs.
3. If the antilock assembly was removed, replace it on the vehicle using the mounting hardware saved during REMOVAL. Connect all air lines using the identification made during REMOVAL, step 3. If a nipple was used to mount the MC-12 to a reservoir, and it needs to be replaced, BE SURE TO USE A SCHEDULE 80 (HEAVY WALL) SHORT COUPLE PIPE NIPPLE. Connect the 14-pin connector and secure with its screw. (DO NOT over-torque–30 in. lbs. maximum)

OPERATIONAL AND LEAKAGE TEST

Refer to appropriate section of the Bendix antilock troubleshooting diagram included with this instruction sheet.

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