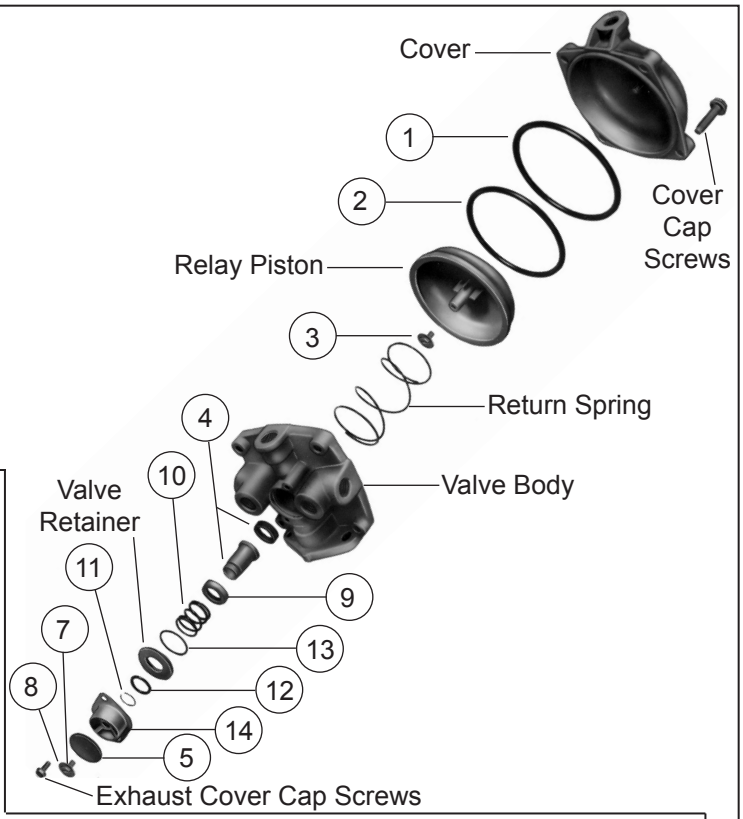
Installation Instructions

BENDIX® R-6™ RELAY VALVE MAINTENANCE KIT

Bendix® R-6™ Relay Valve

Kit Contents		
Item No.	**Description**	**Qty.**
1	Cover Sealing Ring	1
2	Relay Piston O-Ring	1
3	Exhaust Valve Seat	1
4	Inlet / Exhaust Valve Body	1
5	Exhaust Diaphragm	1
6	Tube of Lubricant	1
7	#10 Torx Screw	1
8	Diaphragm Washer	1
9	Valve Retainer	1
10	Valve Spring	1
11	Retaining Ring	1
12	O-Ring	1
13	Sealing Ring	1
14	Exhaust Cover	1
15	Adhesive/Sealant	1



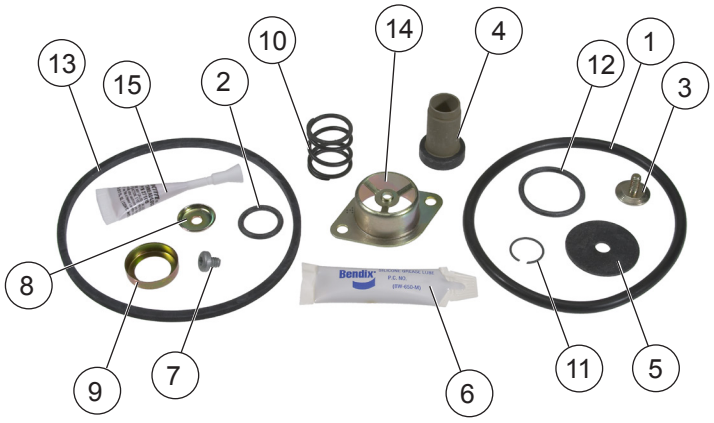


Figure 1 – Bendix® R-6™ Relay Valve Maintenance Kit Contents

REMOVAL

Block and hold the vehicle on a level surface by means other than the air brakes. Drain the air brake system reservoirs. Identify the air lines to facilitate re-installation. Disconnect the air lines from the valve. Remove the mounting bolts, then the valve.

DISASSEMBLY

NOTE: Prior to disassembly, mark location of the cover to the body to facilitate assembly.

1. Remove the cover cap screws. Remove the cover with relay piston and return spring (if so equipped).
2. Remove the relay piston from the cover.
3. Remove the relay piston o-ring (2) from the relay piston and the cover sealing ring (1) from the body.
4. Remove the exhaust cover cap screws, exhaust cover (14) and inlet/exhaust valve (4) from the body.
5. Remove the exhaust valve seat (3) from the relay piston, exhaust diaphragm (5), and diaphragm washer (8).

GENERAL SAFETY GUIDELINES

WARNING! PLEASE READ AND FOLLOW THESE INSTRUCTIONS TO AVOID PERSONAL INJURY OR DEATH:

When working on or around a vehicle, the following guidelines should be observed AT ALL TIMES:

- **▲Park the vehicle on a level surface, apply the parking brakes and always block the wheels. Always wear personal protection equipment.**
- **▲Stop the engine and remove the ignition key when working under or around the vehicle. When working in the engine compartment, the engine should be shut off and the ignition key should be removed. 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.**
- **▲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.**
- **▲If the work is being performed on the vehicle's air brake system, or any auxiliary pressurized air systems, make certain to drain the air pressure from all reservoirs before beginning ANY work on the vehicle. If the vehicle is equipped with a Bendix® AD-IS® air dryer system, a Bendix® DRM™ dryer reservoir module, or a Bendix® AD-9si® air dryer, be sure to drain the purge reservoir.**
- **▲Following the vehicle manufacturer's recommended procedures, deactivate the electrical system in a manner that safely removes all electrical power from the vehicle.**
- **▲Never exceed manufacturer's recommended pressures.**
- **▲Never connect or disconnect a hose or line containing pressure; it may whip and/or cause hazardous airborne dust and dirt particles. Wear eye protection. Slowly open connections with care, and verify that no pressure is present. Never remove a component or plug unless you are certain all system pressure has been depleted.**
- **▲Use only genuine Bendix® brand replacement parts, components and kits. Replacement hardware, tubing, hose, fittings, wiring, etc. must be of equivalent size, type and strength as original equipment and be designed specifically for such applications and systems.**
- **▲Components with stripped threads or damaged parts should be replaced rather than repaired. Do not attempt repairs requiring machining or welding unless specifically stated and approved by the vehicle and component manufacturer.**
- **▲Prior to returning the vehicle to service, make certain all components and systems are restored to their proper operating condition.**
- **▲For vehicles with Automatic Traction Control (ATC), the ATC function must be disabled (ATC indicator lamp should be ON) prior to performing any vehicle maintenance where one or more wheels on a drive axle are lifted off the ground and moving.**
- **▲The power MUST be temporarily disconnected from the radar sensor whenever any tests USING A DYNAMOMETER are conducted on a vehicle equipped with a Bendix® Wingman® system.**
- **▲You should consult the vehicle manufacturer's operating and service manuals, and any related literature, in conjunction with the Guidelines above.**

ASSEMBLY

NOTE: All torques specified on this sheet are assembly torques and can be expected to decrease after assembly. DO NOT retorque after the initial assembly torque decreases. For assembly, hand wrenches are recommended instead of air tools.

1. Prior to assembly, lightly lubricate the relay piston guide post, o-rings, sealing rings, and cover bore with the lubricant (6) provided in this kit.
2. Install items (4), (9), (10), (11), (12), (13), and the valve retainer in the order shown in Figure 1, then lubricate the outside of the inlet/exhaust valve body. Insert this assembly in the valve body.
3. Install the exhaust cover (14) and secure it with 10-24 screws. Torque to approximately 20-30 in-lbs.
4. Securing with the #10 Torx® screw (7), install the exhaust diaphragm (5) and diaphragm washer (8) into the exhaust cover (14).
5. Install the cover sealing ring (1).
6. Install the relay piston o-ring (2) on the relay piston, then position the relay piston in the cover.
7. If the valve utilizes the relay piston return spring, position the spring over the guide in the body.
8. Position the cover/relay piston assembly in a relative position with the body; if equipped with a return spring, make sure the exhaust seat is inside the spring.
9. Install the cover cap screws. Torque to 80-120 in-lbs.

INSTALLATION

Clean the air lines connecting to the valve. Inspect all lines and/or hoses for damage and replace as necessary. Install the valve and tighten mounting bolts. Connect air lines to the valve (plug any unused ports).