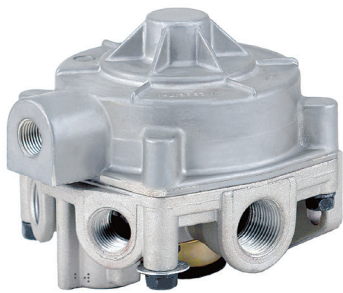


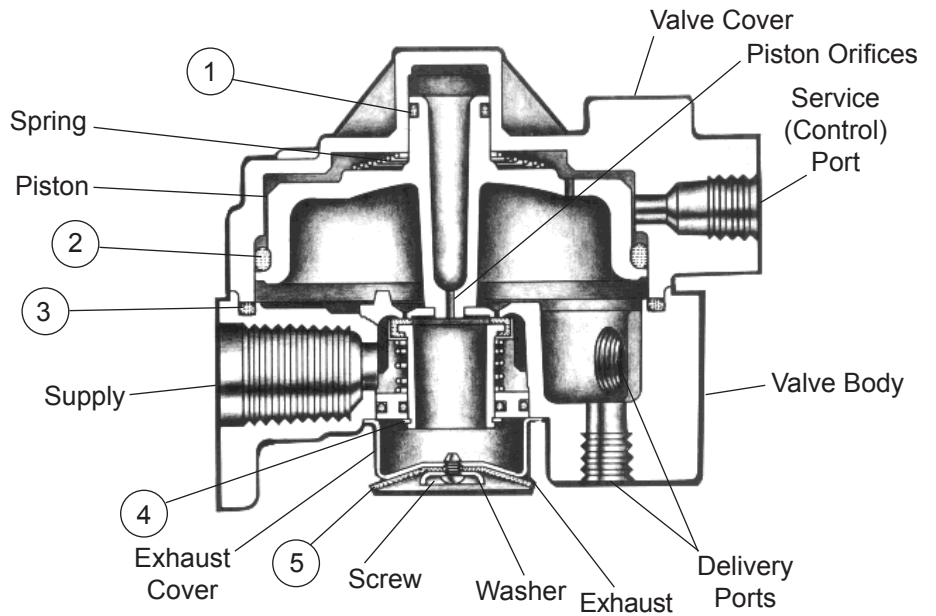
# Installation Instructions



## BENDIX® R-8P™ PILOT RELAY VALVE MAINTENANCE KIT



**Bendix® R-8P™ Pilot Relay Valve**



Kit Contents		
Item No.	Description	Qty.
1	O-Ring	1
2	O-Ring	1
3	Sealing Ring	1
4	Inlet / Exhaust Assembly	1
5	Exhaust Diaphragm	1
6	Tube of Lubricant	1

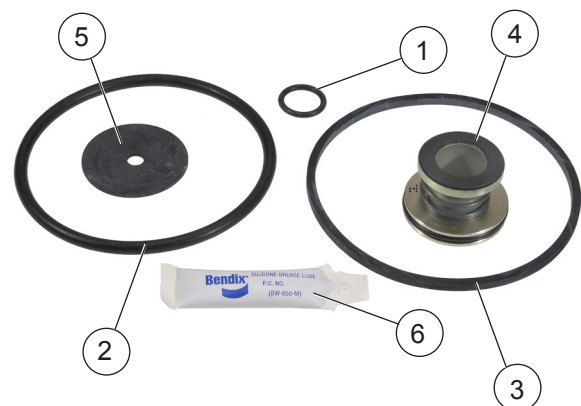


Figure 1 – Bendix® R-8P™ Pilot Relay Valve Maintenance Kit Contents

## 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.
- ▲ You should consult the vehicle manufacturer's operating and service manuals, and any related literature, in conjunction with the Guidelines above.
- ▲ 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.

## REMOVAL

1. Block or hold the vehicle by means other than the brakes.
2. Drain all air brake system reservoirs.
3. Identify, mark, and disconnect all air lines from the Bendix® R-8P™ pilot relay valve.
4. Remove the R-8P valve from its mount on the vehicle.

## DISASSEMBLY

1. Note and mark the position of the valve cover to the body.
2. Remove the four 5/16"-18 hex screws and separate the cover from the body.
3. Remove and discard the sealing ring (3) from the body.
4. Remove the piston and spring from the cover and retain all parts.
5. Remove and discard the o-ring (2) from the piston.
6. Remove the screw, washer, and diaphragm (5) from the exhaust cover. Discard the diaphragm (5).
7. Remove the four 10-24 screws which secure the exhaust cover to the body.
8. Remove and discard the inlet exhaust assembly (4) from the body.
9. Clean all remaining parts in a cleaning solvent equivalent to mineral spirits. Make certain all surfaces, bores, and passages are clean and dry.

## ASSEMBLY

NOTE: Make certain both piston orifices are **open** and not clogged. Grease all o-rings, o-ring grooves and bores with the lubricant (6) provided in this kit.

1. Install diaphragm (5) and diaphragm washer and secure with screw. Torque screw to 15-25 in-lbs.
2. Install the inlet and exhaust valve assembly (4) in the valve body. Position exhaust cover assembly so that all holes are properly aligned and secure with four 10-24 screws. Torque screws to 20-30 in-lbs.

3. Install the sealing ring (3) in the valve body.
4. Install o-rings (1) & (2) on the piston.
5. Install the spring in the valve cover so that the large diameter end of the spring will rest on the piston.
6. Install the piston (with its o-rings installed) in the valve cover. NOTE: Make certain the spring is centered and not binding.
7. Install the valve cover on the valve body in the same position as marked in Step 1 of "Disassembly". Secure the cover to the body using the four 5/16" hex head cap screws. Torque to 120-150 in-lbs.

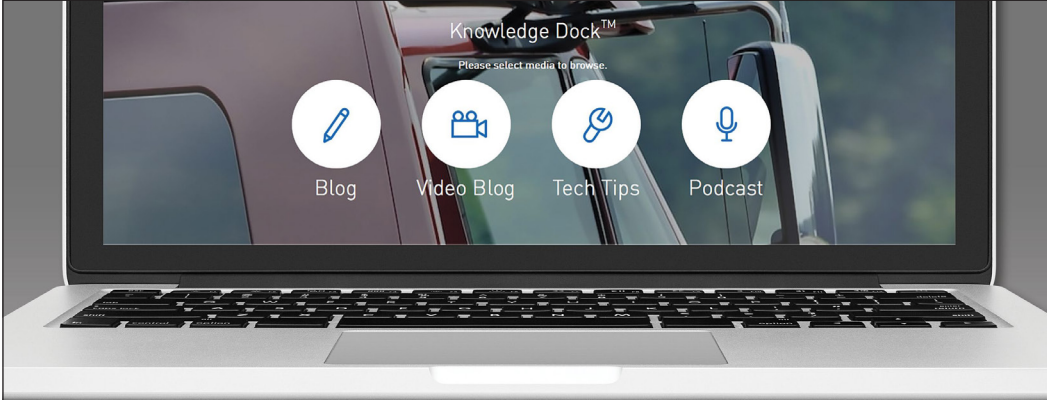
## INSTALLATION

1. Mount the R-8P on the vehicle.
2. Connect the air lines to the R-8P valve using identification made during Step 3 of "Removal" instructions.
3. Perform "Operating and Leakage Checks" before placing the vehicle into service.

## OPERATING AND LEAKAGE CHECKS

1. Block the wheels and fully charge the air system. Adjust the brakes.
2. Apply and release the service brakes several times and check for prompt response of the brakes at all appropriate wheels.
3. With the air system fully charged, apply a soap solution to the exhaust of the R-8P valve. Leakage of a 1" bubble in 5 seconds is permissible.
4. Make and hold a full brake application and again apply a soap solution to the R-8P exhaust. Leakage of a 1" bubble in three seconds is permissible.
5. With the brakes still applied, apply a soap solution around the valve where the cover meets the body. No leakage at this point is permitted.


If the valve is unable to pass these operating and leakage checks, it is recommended that it be exchanged for a genuine Bendix® remanufactured exchange unit.



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