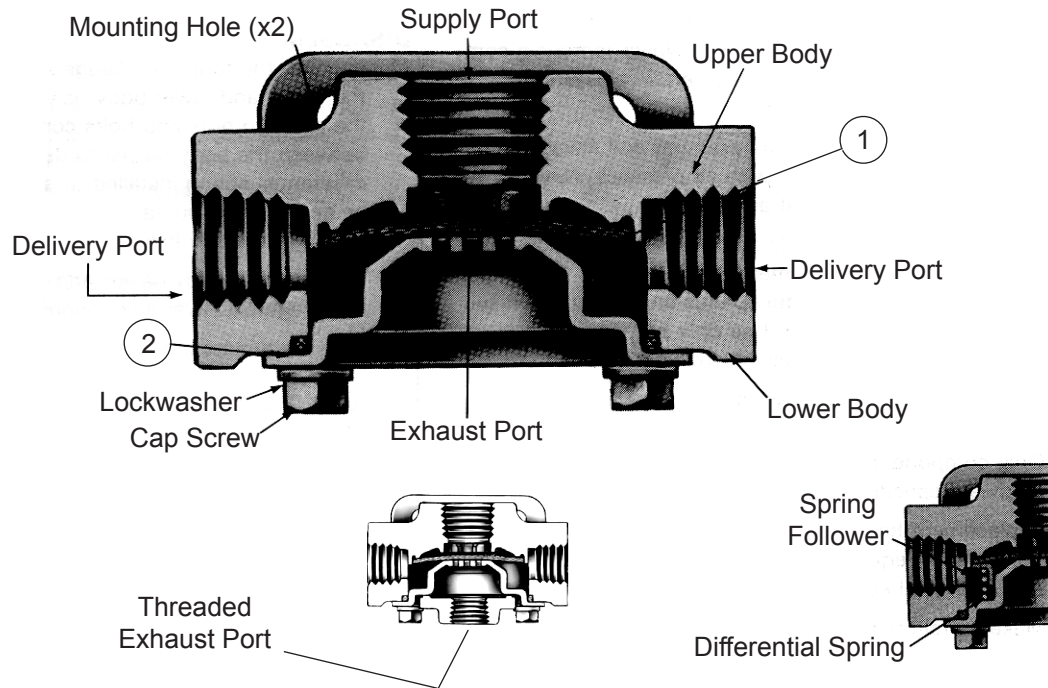


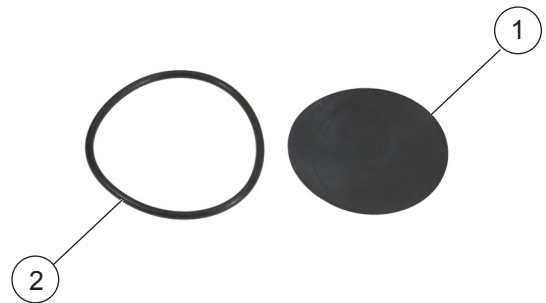
Installation Instructions



BENDIX® QRN™ QUICK RELEASE VALVE MAINTENANCE KIT



Bendix® QRN™ Quick Release Valve



Kit Contents		
Item No.	Description	Qty.
1	Diaphragm	1
2	Sealing Ring	1

Figure 1 – Bendix® QRN™ Quick Release 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. Park the vehicle on a level surface. Block the wheels and/or hold the vehicle by means other than the air brakes.
2. Drain all air brake system reservoirs.
3. Identify, mark, and disconnect all air lines from the valve.
4. Remove all tubing or hose fittings from the valve.
5. Remove the valve mounting hardware and the valve.

DISASSEMBLY

1. Remove the four 1/4" flange nuts and bolts that secure the upper and lower body halves. NOTE: Before removing the last two nuts and bolts completely, check the opening between the body halves to determine if the Bendix® QRN™ has a differential spring installed. If so, a light spring load should be anticipated and can be easily controlled by manually holding the body halves together.
2. Separate the body halves and remove the diaphragm (1) (and diaphragm follower and spring if so equipped).
3. Remove the sealing ring (2) between the body halves.

CLEANING & INSPECTION

1. Clean the upper and lower body halves, also diaphragm follower and spring (if applicable) in mineral spirits. Do not immerse nonmetallic components for a prolonged period of time (no more than 10 minutes). Dry all parts thoroughly.
2. Inspect the upper body for galled threads and cracks. If found, the entire QRN valve should be replaced.
3. Inspect the interior valve portion of the lower body for heavy corrosion and pitting. If found, replace the entire QRN valve assembly.
4. If applicable, inspect the diaphragm follower and spring for any corrosion and pittings. Replace the entire QRN valve assembly if found.

ASSEMBLY

1. Place the supply port of the upper body down on a clean, level work surface. Install the flat circular diaphragm (1) in the upper body making certain it is CENTERED.
2. If applicable, install and center the diaphragm follower with its flat flange side against the diaphragm (1). Install the spring on the diaphragm follower.
3. Install the sealing ring (2) on the lower body and carefully install the lower body on the upper body. Make certain that the diaphragm (1) remains centered in the upper body and the sealing ring (2) enters its groove in the upper body.
4. Install the four 1/4" flange nuts and bolts and torque to 60 in-lbs (6.78 Nm).

INSTALLING THE QRN

1. Mount the QRN valve on the vehicle.
2. Install the tubing or hose fittings in the upper body of the QRN valve. If a thread sealant is used, make certain that this material will not enter the valve during use.



WHEN INSTALLING FITTINGS, DO NOT TORQUE BEYOND;

12 ft-lbs. (16.3 Nm) for the supply port;

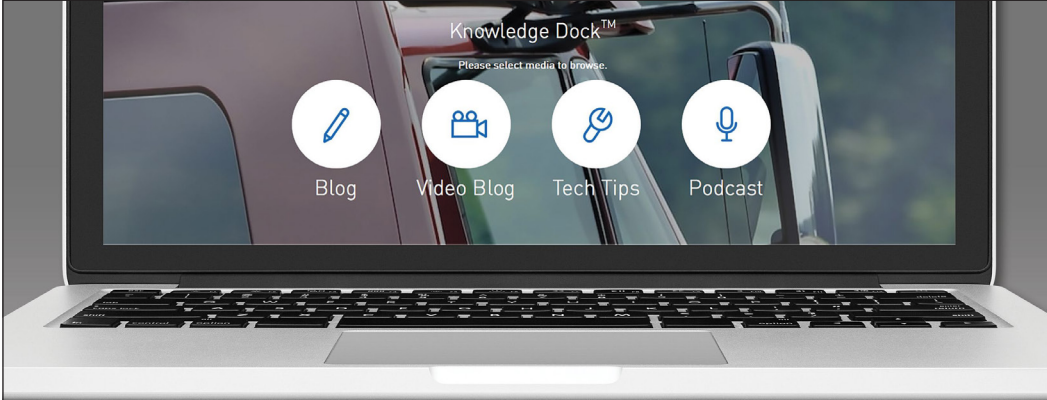
10 ft-lbs. (13.6 Nm) for the delivery ports; or

DAMAGE TO THE UPPER BODY MAY RESULT.


3. Connect the air lines to the QRN valve as identified in Step 4 of the "Removal".
4. Perform the "Operating and Leakage Tests" before placing the vehicle in service.

OPERATING AND LEAKAGE TESTS

1. Apply 100 psi (689 kPa) air pressure to the supply port of the QRN valve and note that the device connected to the QRN valve responds promptly.
2. With 100 psi (689 kPa) air pressure applied to the QRN valve's SUPPLY port, apply a soap solution to the exhaust port and around the junction of the upper and lower body halves.
 - A. No leakage is permitted between the body halves.
 - B. Leakage of greater than a 1" (25.4 mm) bubble in 3 seconds at the exhaust port is unacceptable.
3. Release the air pressure at the supply port and note that the device connected to the QRN valve responds promptly and returns to a zero air pressure condition.
4. If the QRN valve does not function as described or if leakage is excessive, it must be replaced with a new or remanufactured exchange unit.



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