



Installation Instructions

Air Dryer
Purge Valve Maintenance Kit

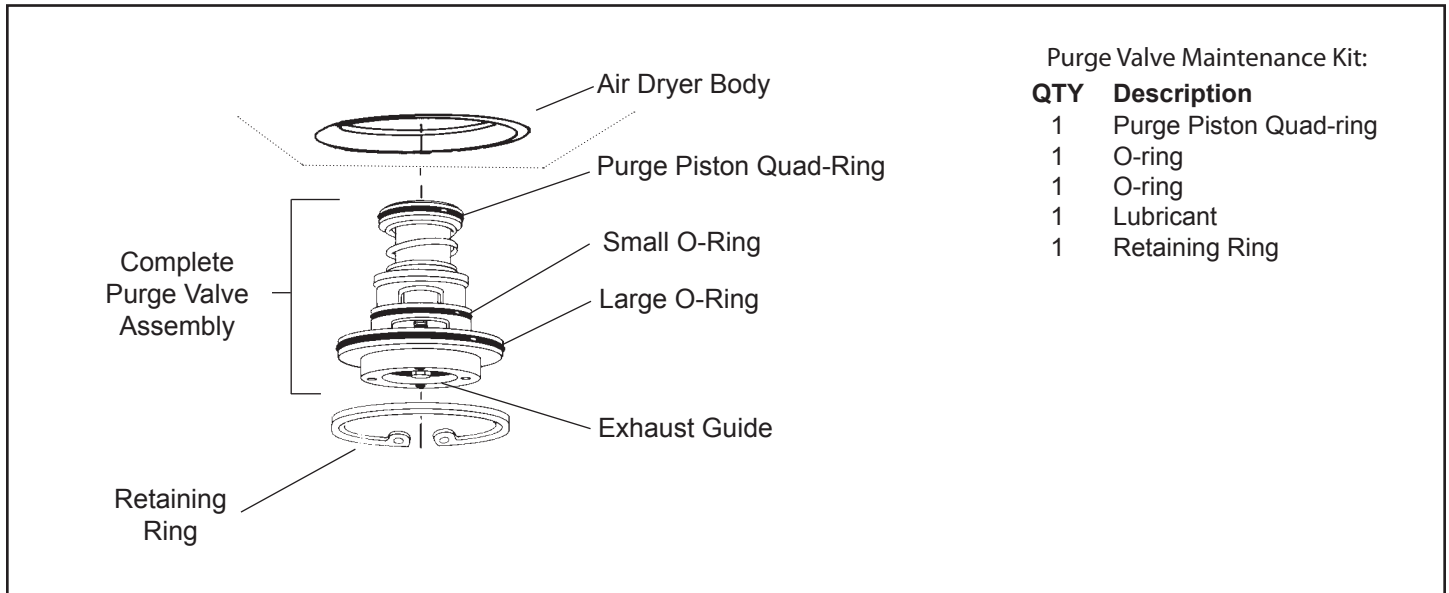


FIGURE 1 - AIR DRYER PURGE VALVE EXPLODED VIEW

KIT DESCRIPTION

These instructions provide the necessary information to service the air dryer purge valve assembly.

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. Always wear safety glasses.
2. Stop the engine and remove 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.
3. 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.
4. 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 an AD-IS® air dryer system or a dryer reservoir module, be sure to drain the purge reservoir.
5. Following the vehicle manufacturer's recommended procedures, deactivate the electrical system in a manner that safely removes all electrical power from the vehicle.
6. Never exceed manufacturer's recommended pressures.
7. 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.
8. Use only genuine Bendix® replacement parts, components and kits. Replacement hardware, tubing, hose, fittings, etc. must be of equivalent size, type and strength as original equipment and be designed specifically for such applications and systems.
9. 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.
10. Prior to returning the vehicle to service, make certain all components and systems are restored to their proper operating condition.
11. For vehicles with Antilock 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.

VEHICLE PREPARATION

1. Park the vehicle on a level surface and prevent movement by means other than the brakes.
2. Drain all reservoirs to 0 p.s.i.
3. Clean the exterior of the air dryer.

DISASSEMBLY

General

The following maintenance procedures do not require removal of the air dryer from the vehicle; however, if it is removed the following caution should be observed to prevent damage.

Caution: *While performing service on the air dryer, it is not recommended that a clamping device (vise, C-clamp, etc.) be used as damage may result to the air dryer. To hold the air dryer body, install a pipe nipple in the supply port and clamp the nipple into a vise.*

1. Loosen the inlet port where the discharge line from the compressor enters the air dryer, and allow any residual air to drain.
2. Remove and discard the retaining ring that secures the purge valve assembly in the air dryer body.
3. Remove the purge valve assembly from the air dryer body.
4. Remove and discard the large and small diameter o-rings from the purge valve housing.
5. Remove and discard the quad-ring from the purge piston.

CLEANING & INSPECTION

1. Clean the exterior of the purge valve housing and the purge valve piston.
2. Using a clean rag, wipe the body bore clean.
3. Inspect for physical damage to the body, broken and/or missing parts.
4. Inspect the interior and exterior of the body for severe corrosion, pitting and cracks. Superficial corrosion and or pitting on the exterior portion is acceptable.
5. Inspect the bores, valve seating and o-ring contact areas for deep scuffing or gouges or nicks that would not permit an airtight seal, also inspect for carbon accumulation. If carbon accumulation is severe, clean or replace the air dryer.
6. Inspect the purge piston o-ring contact areas for deep scuffing, gouges, or nicks that would not permit an air tight seal. Inspect for carbon accumulation. If carbon accumulation is severe, clean or replace the air dryer.
7. Any component exhibiting a condition described in step 3 to 6 should be replaced. *Note: Light exterior pitting is acceptable.*

ASSEMBLY

Be sure to use all components contained in this kit.

General

1. Lubricate the quad-ring, o-rings, and the quad-ring and o-ring grooves of the purge piston and purge valve housing. Lubricate the air dryer quad-ring bore for the purge valve assembly. **Important:** *Use only the lubricant packaged with this kit.*
2. Install the large and small o-rings on the purge valve housing placing each in its appropriate location. See Figure 1.
3. Install the quad-ring in its groove on the O.D. of the purge piston. **Warning:** Take care not to twist the quad-ring. Use all of the lubricant, making sure to apply a liberal amount to the quad-ring and its bore after installing the quad-ring.
4. Install the purge valve assembly in the air dryer while making certain the purge valve housing is fully seated against the air dryer body.
CAUTION: Carefully ease the purge valve assembly into position (using a gentle twisting motion if necessary) - do not force the purge piston as serious damage may be caused to the quad-ring.
5. Secure the purge valve assembly in the air dryer using the retaining ring. Make certain the retaining ring is fully seated in its groove.
6. Before placing vehicle back into service, perform the TESTING stated below.

TESTING

1. Close all reservoir drain cocks. Build up system pressure to governor cutout and note that the air dryer purges with an audible escape of air. "Fan" the service brakes to reduce system air pressure to governor cut-in. Note that the system once again builds to full pressure and is followed by an air dryer purge.
2. Check for excessive leakage. With the compressor in loaded mode (compressing air), apply a soap solution around the retaining ring that secures the purge valve assembly in the air dryer and around the exhaust guide (bore where purge valve is installed). Leakage should not exceed a 1 inch bubble in 1 second. If the leakage exceeds the maximum specified, remove the purge valve assembly and re-install. If leakage persists replace the air dryer assembly.