



# Installation Instructions

## BENDIX® AD-IP® AIR DRYER DESICCANT CARTRIDGE AND CARTRIDGE O-RING REPLACEMENT KITS

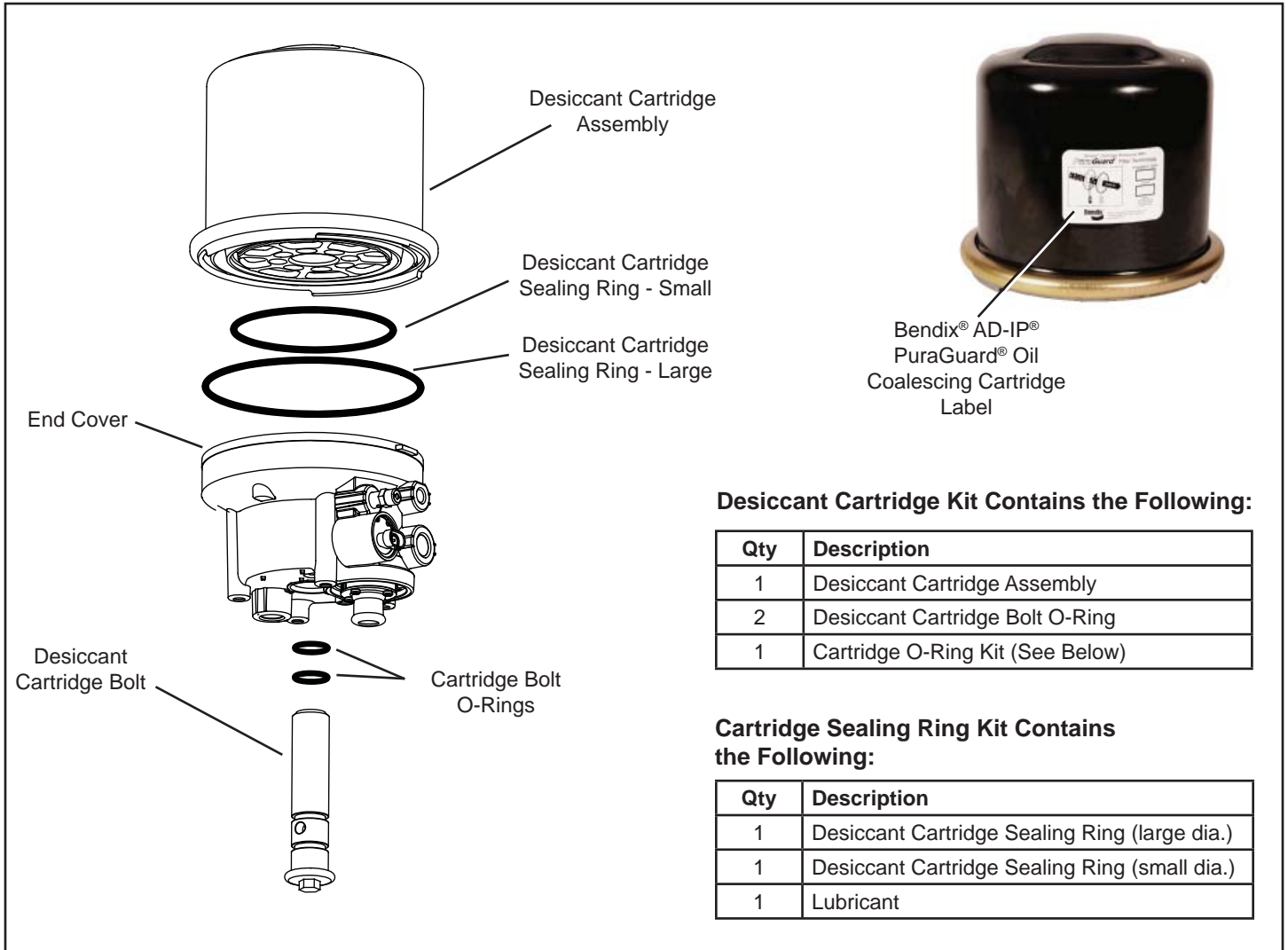


Figure 1 Bendix® AD-IP® Air Dryer Desiccant Cartridge and Cartridge O-Ring Replacement Kits

### KIT DESCRIPTION

These kits are intended for use in servicing Bendix® AD-IP® air dryers with either standard air dryer cartridges or PuraGuard® oil coalescing type air dryer cartridges. The instructions are the same for each of these air dryer types. **Caution:** Bendix® AD-IP® PuraGuard® oil coalescing type air dryers must be serviced with a Bendix® AD-IP® PuraGuard® oil coalescing cartridge. Verify the new cartridge contains the appropriate identification label as shown in Figure 1.

### 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 end cover.

### DISASSEMBLY

#### General

This maintenance kit does not require removal of the air dryer from the vehicle.

1. Using a wrench or a socket, loosen the desiccant cartridge bolt.
2. Separate the desiccant cartridge from the end cover.
3. Pull the desiccant cartridge bolt out of the end cover and remove the desiccant cartridge. Note: if replacing the cartridge the old desiccant cartridge may be returned to an authorized Bendix parts outlet for credit towards a remanufactured exchange desiccant cartridge.

**CAUTION NOTE: Disassembly of the desiccant cartridge assembly should not be attempted! Detail parts for the cartridge are not available and the cartridge contains a 150# spring which can not be mechanically caged.**

## 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 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 a Bendix® 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® brand 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 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.

4. **Cartridge kit only:** Remove and discard both o-rings from the desiccant cartridge bolt.

### **CLEANING & INSPECTION**

1. Using a clean rag, wipe the inside of the end cover clean. Pay particular attention to the cartridge bolt bore in the end cover and the sealing surfaces for the large and small diameter desiccant cartridge sealing rings.
2. Inspect for physical damage to the end cover.
3. Inspect all air line fittings for corrosion and replace as necessary.
4. Inspect the desiccant cartridge bolt paying particular attention to the threads and o-ring grooves. If the bolt threads are damaged sufficiently to cause it to be difficult to hand thread it into the new desiccant cartridge, replace it using a desiccant cartridge bolt kit. Thoroughly wipe and clean the o-ring grooves.

### **ASSEMBLY**

1. Lubricate the o-rings, desiccant cartridge bolt o-ring grooves (cartridge kit only), the large and small diameter desiccant cartridge sealing rings, and the corresponding grooves in the desiccant cartridge. Lubricate the end cover bore for the desiccant cartridge bolt. ***Important: Use only the lubricant packaged with this kit.***
2. Install both o-rings on the desiccant cartridge bolt (cartridge kit only) and using a twisting motion, insert the assembled desiccant cartridge bolt in the end cover.
3. Install the desiccant cartridge on the end cover making certain the cartridge is properly seated and flush on the end cover. *Note: It may be necessary to rotate the cartridge slightly until the anti-rotation lugs are properly aligned and allow the cartridge to rest flush against the end cover.*
4. Using a wrench or a socket, tighten the desiccant cartridge bolt, to secure the desiccant cartridge to the end cover. Torque the desiccant cartridge bolt to 70 foot pounds. ***CAUTION: Do not over torque.***
5. Before placing vehicle back into service, perform the TESTING that follows.

## TESTING

1. Close all reservoir drain cocks. Build up system pressure to governor cut-out and note that the Bendix® AD-IP® 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 around the head of the desiccant cartridge bolt and around the circumference of the desiccant cartridge where it is in contact with the end cover. With the compressor in loaded mode (compressing air), apply a soap solution to the areas specified and observe that leakage does not exceed a 1 inch bubble in 1 second. If the leakage exceeds the maximum specified, remove and re-install. If leakage persists replace the air dryer assembly.