



Installation Instructions

Delivery Check Valve
Replacement Kit

Governor/Delivery Check
Valve Replacement Kit

AD-IS DELIVERY CHECK VALVE REPLACEMENT KIT

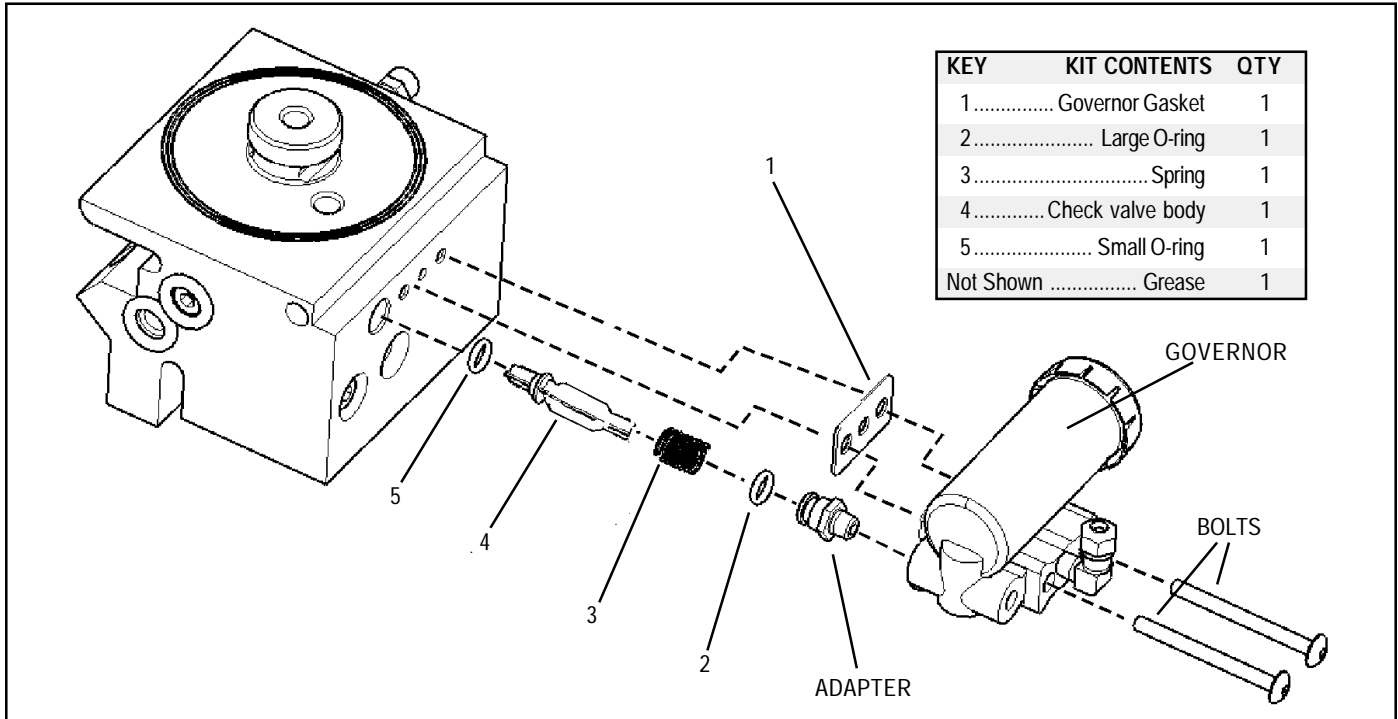


FIGURE 1 - AD-IS DELIVERY CHECK VALVE

KIT DESCRIPTION

This kit is intended for use in servicing the delivery port check valve components in an Bendix AD-IS air dryer.

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.
2. Stop the engine when working around the vehicle.
3. If the vehicle is equipped with air brakes, make certain to drain the air pressure from all reservoirs before beginning ANY work on the vehicle.
4. Following the vehicle manufacturer's recommended procedures, deactivate the electrical system in manner that removes all electrical power from the vehicle.
5. When working in the engine compartment the engine should be shut off. 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.

6. 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.
7. Never exceed recommended pressures and always wear safety glasses.
8. 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.
9. Use only genuine Bendix replacement parts, components, and kits. Replacement hardware, tubing, hose, fittings, etc. should be of equivalent size, type, and strength as original equipment and be designed specifically for such applications and systems.
10. Components with stripped threads or damaged parts should be replaced rather than repaired. Repairs requiring machining or welding should not be attempted unless specifically approved and stated by the vehicle or component manufacturer.
11. Prior to returning the vehicle to service, make certain all components and systems are restored to their proper operating condition.

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. (0 kPa).
3. Clean the exterior of the air dryer.

DISASSEMBLY

General

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

1. Remove line from governor and mark for easy reinstallation.
2. Remove bolts attaching the governor to the AD-IS and retain for reassembly.
3. Remove governor and the adapter fitting along with the adapter's o-ring. Remove governor gasket and discard.
4. The spring/delivery check valve can now be removed. (Note: The spring/delivery check valve being replaced may be a previous design.)
5. If you are replacing the governor at this time, remove the adapter fitting (along with any other fittings to be re-used) from the governor body.

CLEANING & INSPECTION

1. Use a suitable solvent to clean all metal parts, and use a cotton swab to clean the bore (Note: Do not use abrasives or tools to clean the bore: any scratches caused may necessitate replacing the AD-IS.) Superficial external corrosion and/or pitting is acceptable.
2. Inspect for physical damage to the bore and the check valve seat.
3. Inspect all air line fittings for corrosion and replace as necessary.
4. Remove the o-ring from the adapter fitting. Follow step 5 if the governor is to be replaced at this time.
5. Inspect and clean any fittings removed from the governor to be re-used. Replace as necessary.

ASSEMBLY

See Figure 1.

1. Lubricate the smaller o-ring and check valve body with the supplied grease. *Note: Use only the grease packaged with this kit.*
2. Install this o-ring on the check valve body by sliding the o-ring over the set of 4 tapered guide lands. The o-ring groove holds the o-ring in its correct location.
3. At the other end of the check valve body, the supplied spring is installed over the set of 4 straight guide lands. When the spring has been pushed to the correct location, the check valve body is designed to hold the end of the spring in position - be sure that the spring is not loose before continuing with this installation.

4. Install the assembled check valve body/o-ring/spring in the delivery port so that the o-ring rests on its seat and the free end of the spring is visible.
5. If installing a new governor at this time, install the adapter fitting into the new governor.
6. Grease the adapter and the remaining larger o-ring and install it onto the fitting.
7. Position gasket supplied in kit. (Note: Do not use a standard compressor/governor gasket.) Insert bolts removed during disassembly and tighten (to 125 in-lbs).
8. Reattach line to the governor.
9. Before placing vehicle back into service, perform the OPERATIONAL TESTS stated below.

OPERATIONAL TESTS

Install an accurate pressure gauge in one of the spare governor ports labeled "RES". Close all drain cocks and test the delivery port check valve assembly by building the air system to governor cutout. Shut off the engine. Check all lines and fittings leading to and from the air dryer for leakage and integrity. Note the pressure on the air gauge after the governor cutout pressure is reached, a rapid loss of pressure could indicate a leaking delivery port check valve. To troubleshoot for delivery check valve leakage, allow system to reach full pressure and the governor will start the purge cycle (listen for the release of air as the Air Dryer purges). After 30 seconds the purge cycle will be completed. Open the drain cock on the integrated purge reservoir and wait 10 seconds to allow any residual purge pressure to be released. Carefully remove the air dryer cartridge and then test for air leaking through the center of the threaded boss by applying a soap solution. Repair the delivery check valve if there is excessive leakage - exceeding a 1 inch bubble in 5 seconds. Regrease the seal on the air dryer cartridge before reinstalling. Be sure to close the drain cock on the purge volume before restoring vehicle to service.

