



# Installation Instructions

## BENDIX® AD-9si™ AIR DRYER GOVERNOR REPLACEMENT KIT

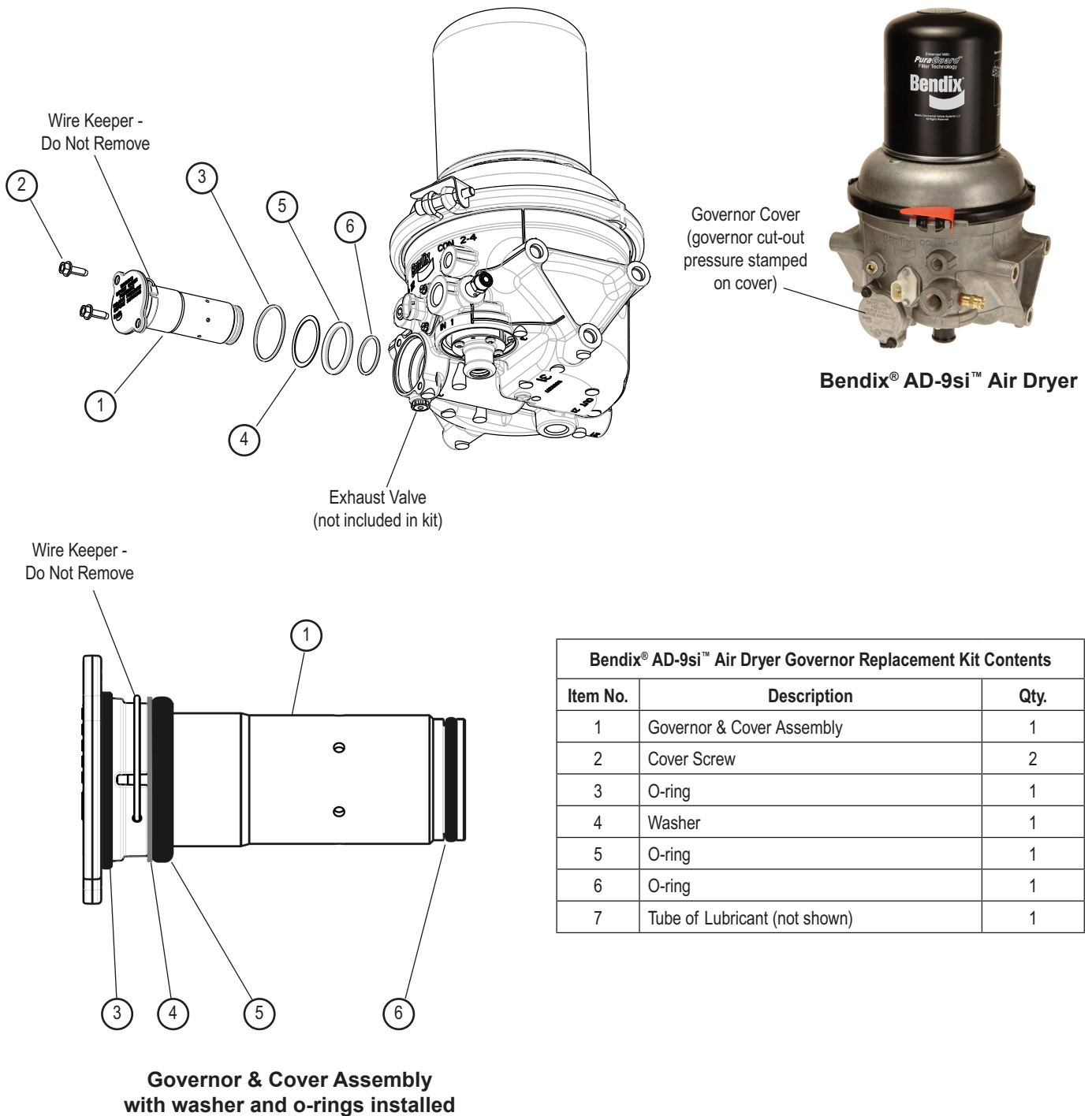


Figure 1 **Bendix® AD-9si™ Governor Replacement Kit**



## 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.
- ▲ You should consult the vehicle manufacturer's operating and service manuals, and any related literature, in conjunction with the Guidelines above.
- ▲ Never exceed manufacturer's recommended pressures.
- ▲ 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.
- ▲ 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.
- ▲ 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 Bendix® Wingman® Advanced™-equipped vehicle.

This kit is intended for use when servicing a Bendix® AD-9si™ air dryer governor. Be sure to use the entire contents of the kit when servicing the governor.

### **BENDIX® AD-9si™ AIR DRYER GOVERNOR CARTRIDGE REMOVAL** (Refer to Figure 1)

1. Park the vehicle on a level surface and prevent movement by means other than the brakes, such as chocking the wheels.
2. Drain all reservoirs to 0 psi and locate the AD-9si air dryer. Clean the governor cover.
3. Remove and discard the two screws (2) that secure the governor and cover assembly (1) to the air dryer body.
4. Remove the governor and cover assembly from the air dryer body.



**WARNING:** To prevent personal injury, never use pressurized air to force the governor from the air dryer end cover.

5. Thoroughly clean the governor and cover assembly bore using a clean, dry cloth. Never use metal objects that could scratch the bore when cleaning. Scratches in the bore could result in air leakage.
6. Remove and discard the governor and cover assembly (1), washer (4) and the o-rings (3), (5), and (6).

### **INSTALLATION** (Refer to Figure 1)

1. Prior to installation, verify that the pressure setting stamped on the governor assembly cover (1) matches the setting stamped on the removed governor assembly.
2. Using the lubricant (7) included in this kit, lubricate the governor bore, all three o-rings and their grooves.
3. Install o-ring (3), washer (4), o-ring (5) and o-ring (6) on the governor and cover assembly (1). Ensure all o-rings are properly installed and located as shown in Figure 1.
4. Install the governor and cover assembly (1) into the AD-9si air dryer body. Position the cover so that the text is upright and the governor cover mounting holes align with the mounting holes in the air dryer housing. Gently push the assembly against the air dryer body to ensure that the governor and cover assembly (1) will seat properly when the mounting screws are installed. Secure the assembly with the two mounting screws (2) contained in this kit. Torque to 85-125 in-lbs. Do not use the cover screws to force the cover against the body.

### **OPERATING AND LEAKAGE TEST**

Before placing the vehicle in service, perform the following tests.

#### **Operating Tests**

Start the vehicle engine and build up air pressure in the air brake system and check the pressure registered by a dash or test gauge at the time the governor cuts-out, stopping the compression of air by the compressor. The cut-out pressure should be in accordance with the pressure setting of the piece number being used. This is the higher value shown on the governor cover.

With the engine still running, make a series of brake applications to reduce the air pressure and observe at what pressure the governor cuts-in, starting the compression of air by the compressor. As in the case of the cut-out pressure, the cut-in pressure should be in accordance with the pressure setting of the piece number being used. This is the lower value shown on the governor cover.

**Note:** The governor used on the AD-9si air dryer is a non-adjustable type only.

#### **Leakage Test**

1. Apply a soap solution around the governor cap and to the exhaust port with the system in the governor cut-out mode. Slight bubble leakage is permitted, however, leakage must not exceed a one inch bubble in less than 5 seconds. Excessive leakage indicates an o-ring is cut or out of position. Follow these instructions, starting at the beginning of the document to repair the leakage.
2. The bottom of the AD-9si air dryer contains a black plastic exhaust valve near the governor cover. This valve exhausts air when the governor transitions from unloaded to charging mode. Any air passing through the valve during any other condition may indicate a leakage within the governor.

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