



Installation Instructions

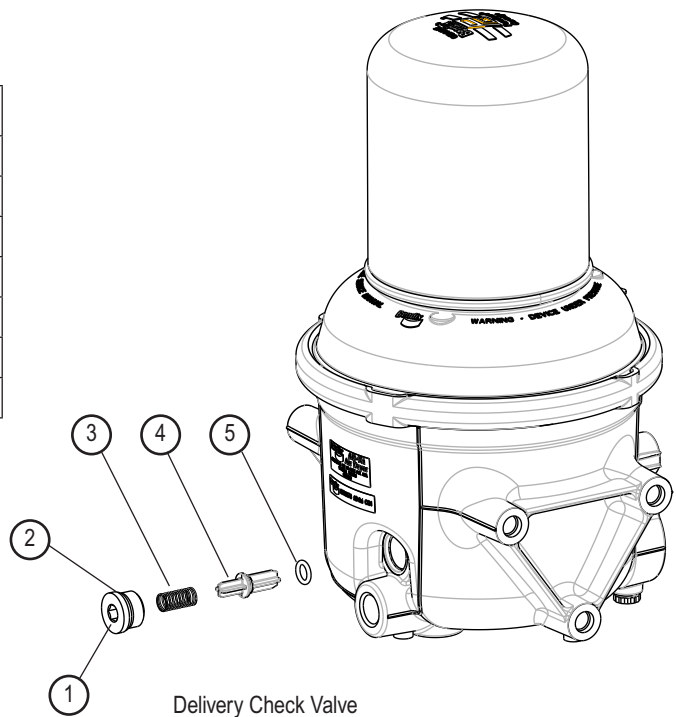
BENDIX® AD-9si™ AIR DRYER DELIVERY CHECK VALVE REPLACEMENT KIT



Delivery Check Valve

Bendix® AD-9si™ Air Dryer

Bendix® AD-9si™ Air Dryer Delivery Check Valve Kit Contents		
Item No.	Description	Qty.
1	Plug	1
2	Large o-ring	1
3	Spring	1
4	Check Valve Body	1
5	Small O-ring	1
6	Tube of Lubricant (not shown)	1



Delivery Check Valve

Figure 1 **Bendix® AD-9si™ Delivery Check Valve 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 delivery check valve. Be sure to use the entire contents of the kit when servicing the delivery check valve.

BENDIX® AD-9si™ AIR DRYER DELIVERY CHECK VALVE 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 exterior of the air dryer especially around the delivery check valve.
3. Remove the delivery check valve hex plug (1) with o-ring (2) from the air dryer body.
4. Remove the spring (3), check valve body (4) and o-ring (5) from the air dryer body.
5. Using a suitable solvent, thoroughly clean the delivery check valve bore using a clean cotton swab. Do not use abrasives or metal objects that could scratch to clean the bore. Scratches in the bore could necessitate replacing the AD-9si air dryer. Superficial external corrosion and/or pitting is acceptable.
6. Inspect for physical damage to the bore and the check valve seat within the air dryer body.
7. Discard all of the delivery check valve components removed.

INSTALLATION *(Refer to Figure 1)*

1. Using the lubricant (6) included in this kit, lubricate the small o-ring (5), large o-ring (2), o-ring groove on the check valve hex plug (1), and the air dryer's delivery check valve bore.
2. Install the large o-ring (2) on the check valve hex plug (1).
3. Install the small o-ring (5) on the check valve body (4) over the longer end—and larger diameter—set of four guide lands until it seats in the o-ring groove of the check valve body.
4. Place the check valve spring (3) over the check valve body's (4) shorter—and smaller diameter—set of four guide lands. Push the spring until it snaps into place.
5. Install the assembled check valve body (4), o-ring (5) and spring (3) in the delivery port so that the o-ring (5) rests on its seat and the end with the spring is visible.
6. Install the check valve hex plug (1) with o-ring (2) in the delivery check valve port. Torque to 720-840 in-lbs.

OPERATIONAL TEST

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

1. Close all reservoir drain valves.
2. Build up system pressure to governor cut-out and note that the AD-9si air dryer purges with an audible burst of air, followed immediately by approximately 40 seconds of air flowing out of the purge valve.
3. Apply and release the service brakes to reduce system air pressure to governor cut-in. Note the system once again builds to full pressure and is followed by a purge at the AD-9si air dryer exhaust.
4. It is recommended that the total air system be tested for leakage to assure that the AD-9si air dryer will not cycle excessively.

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