

Technical Bulletin

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Subject: TEMPORARY AD-IS AIR DRYER BYPASS

This bulletin adds the steps to remove, clean and replace the Delivery Check Valve, during temporary AD-IS air dryer bypass. For additional information see Service Data Sheet SD-98-9808, "Dryer Reservoir Module with AD-IS Air Dryer".

To temporarily bypass the AD-IS air dryer, the following procedure must be followed.

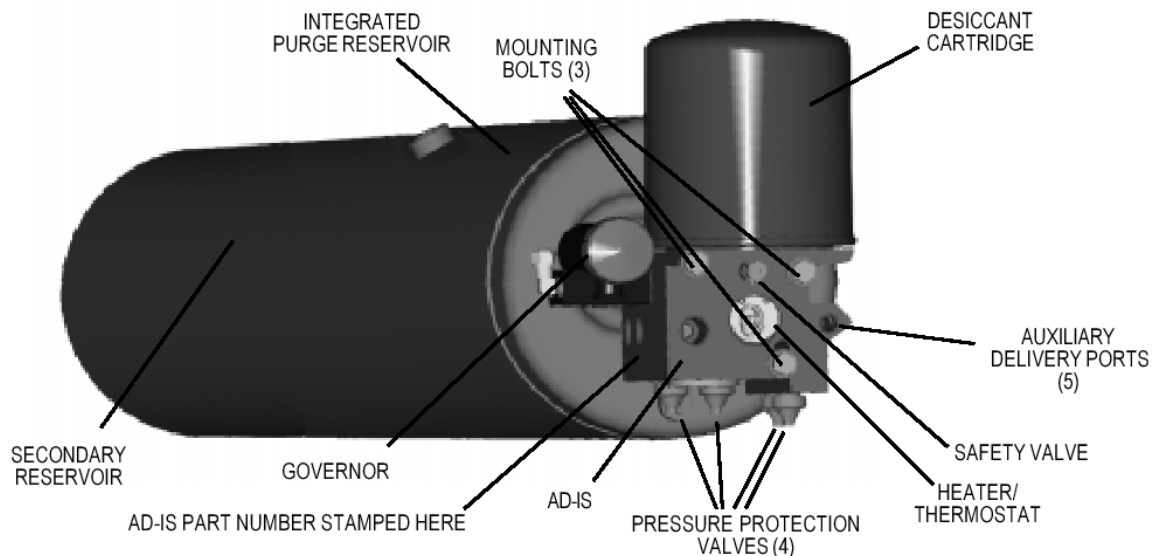


FIGURE 1 – Dryer Reservoir Module with AD-IS Air Dryer.

Follow the *Maintenance Precautions* outlined at the end of this document.

Make sure that all residual pressure has been released, then remove the air supply line from the compressor to the inlet port (1 IN). Remove the safety valve from the AD-IS body (see Figure 1 for location) and install a T-fitting into the port. Using any adapters necessary, re-install the safety valve in one of the branches of the T-fitting. Using any adapters necessary, install the air supply line into the remaining T-fitting port. After testing the T-fitting for any air leakage, using a soap solution after charging system pressure (a 1" bubble in 10 seconds is acceptable), the vehicle may be returned to temporary service.

Note: This is a temporary bypass of the air dryer, and full repair of the unit must be carried out at the earliest opportunity.

With the air dryer removed from the system, contaminants will be entering the air system: reservoirs will need to be manually drained daily until the repairs are completed. At end of each working day, park vehicle and slowly drain pressure through the drain valves – leave open to the atmosphere, for several hours if possible. When repairs are carried out, be sure to check that all reservoirs (including the purge reservoir incorporated into the secondary reservoir) are emptied of all contaminants.

If after bypassing the dryer reservoir module the system pressure still does not build, use the following procedure to remove, clean and reinstall the delivery check valve.

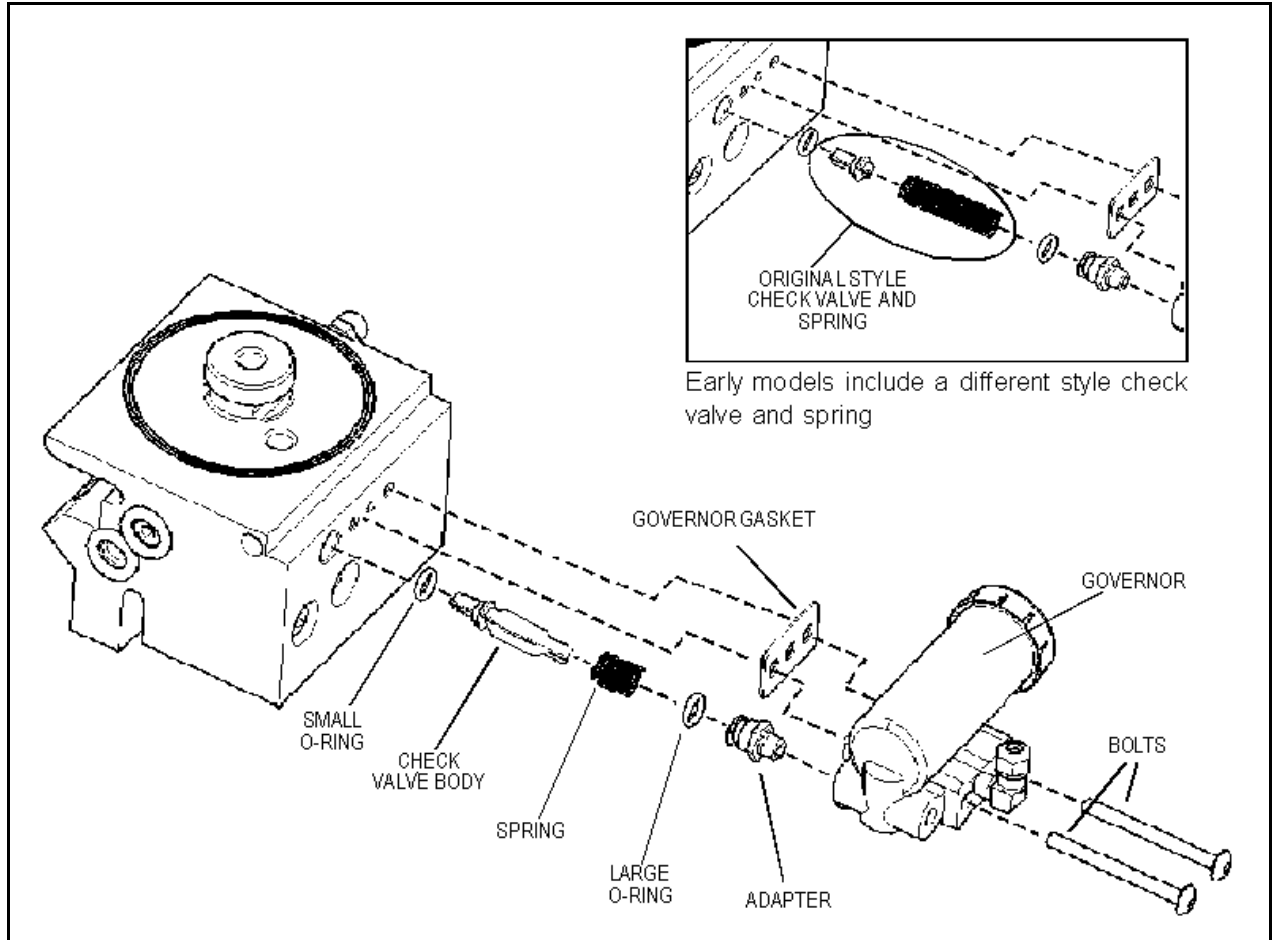


FIGURE 2 – Exploded view of Delivery Check Valve

DELIVERY CHECK VALVE CLEANING PROCEDURE

(Note: This is only required if system pressure does not build after temporary bypass above completed.)

See Figure 2 throughout this procedure. Depressurize the air brake system following the general safety precautions outlined elsewhere in this document.

This procedure 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's o-ring.
4. The spring/delivery check valve can now be removed. (Note: The spring/delivery check valve may be a previous design. See Figure 2.)
5. Remove o-ring from check valve 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. Clean the o-rings with a clean dry cloth. Do not use solvents.
3. Inspect for physical damage to the bore and the check valve seat. If the bore is damaged (by scratches etc. that would prevent delivery check valve from seating), replace the AD-IS.
4. Inspect the delivery check valve, o-rings, etc. for wear or damage. Replace if necessary using the check valve replacement kit available at authorized Bendix parts outlets.
5. Inspect all air line fittings for corrosion and replace as necessary.

ASSEMBLY

1. Lubricate the smaller o-ring and check valve body with barium or silicon grease.
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 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. Grease the adapter and the remaining larger o-ring and install it onto the fitting.
6. Position gasket, insert bolts through the governor and tighten (to 125 in-lbs.). (Note: Do not replace with a standard compressor/governor gasket.)
7. Reattach line to the governor.
8. Before placing vehicle back into service, check to see that the system pressure now builds to full operational pressure.

IMPORTANT: MAINTENANCE PRECAUTIONS

When working on or around a vehicle, the following general precautions should be observed.

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. 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 a 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.