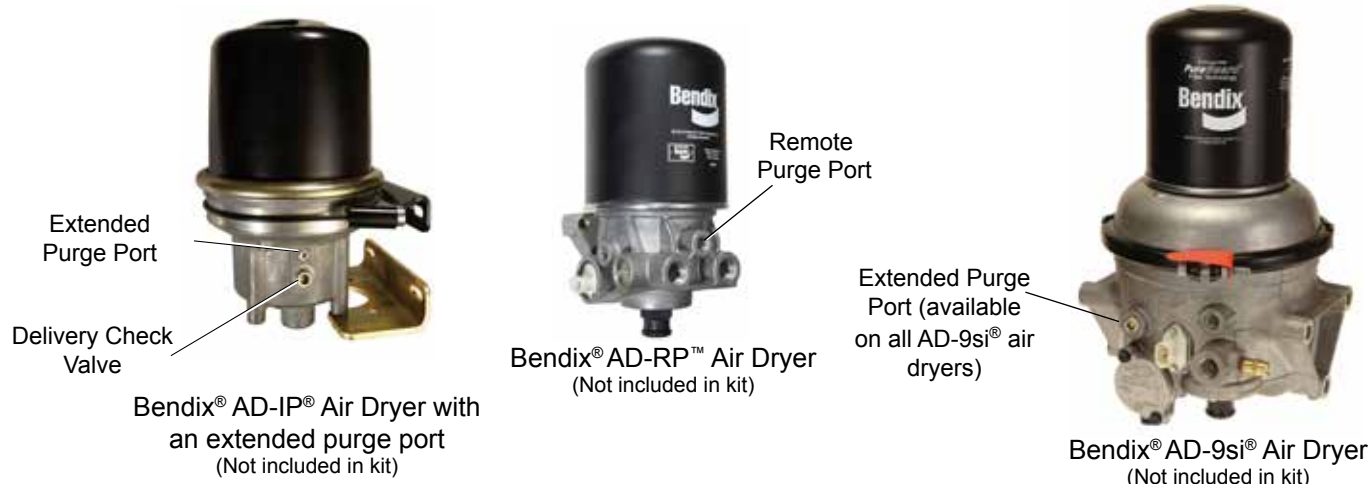




Installation Instructions

BENDIX® AD-9si®, AD-IP®, AND AD-RP™ EXTENDED PURGE AIR DRYER KITS



The current production Bendix® AD-IP® air dryer—manufactured after date code C0113T (March 1, 2013)—includes the extended purge port. Previously, the extended purge port was only available on the Bendix® AD-IP® extended purge air dryers. **Do not** attempt to install this kit on an air dryer without this port.

This kit can only be used in conjunction with a Bendix® AD-9si® or AD-IP air dryer with an extended purge port. It can also be used with the Bendix® AD-RP™ air dryer.

Extended Purge Kit		
Item	Description	Qty.
1	Reservoir	1
2	Air Line	1
3	Mounting Clamp	2
4	Lock Washers	4
5	Nuts	4
6	a. Mounting Clamp Plate	2
(a or b)	b. Flat Washers	4
7	Straight Fitting	1
8	90° Fitting	1
9	Bushing (for AD-9si air dryer)	1
10	Bushing (for 288 in³ reservoir)	1

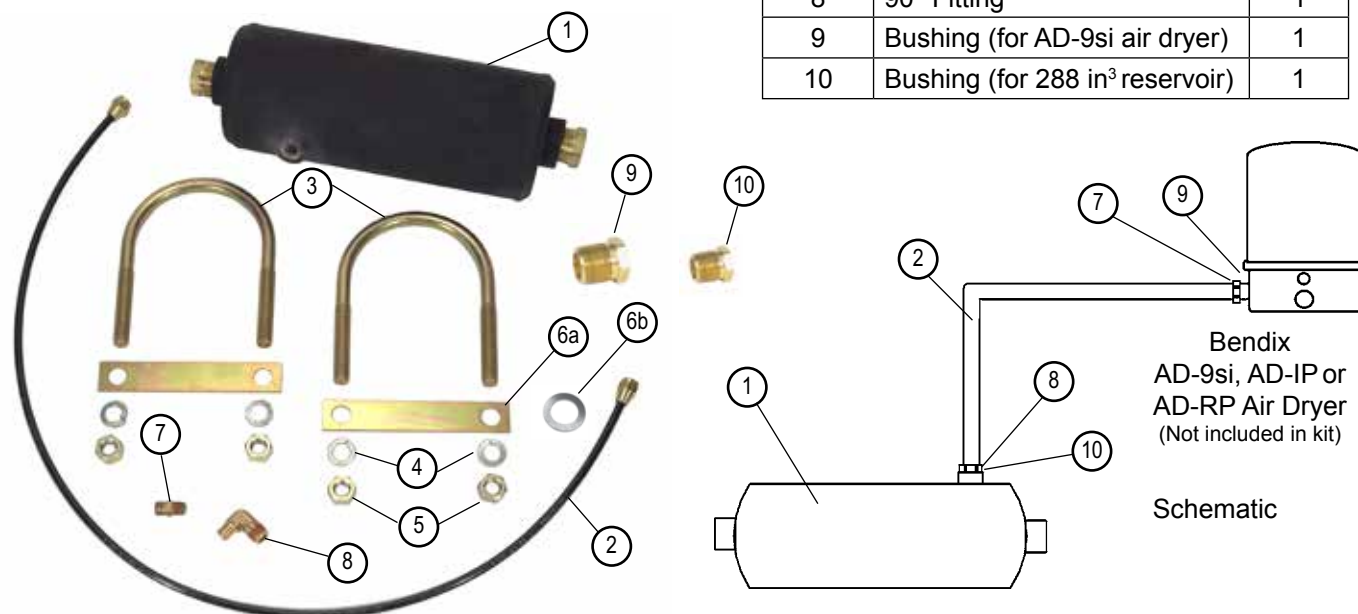


FIGURE 1 BENDIX® AD-9si®, AD-IP® AND AD-RP™ AIR DRYER EXTENDED PURGE KIT CONTENTS



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.
- ▲ Never exceed manufacturer's recommended pressures.
- ▲ You should consult the vehicle manufacturer's operating and service manuals, and any related literature, in conjunction with the Guidelines above.
- ▲ Never connect or disconnect a hose or line containing pressure; it may whip and/or cause hazardous airborne dust and dirt particles. Wear eye protection. Slowly open connections with care, and verify that no pressure is present. 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, wiring, 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 vehicle equipped with a Bendix® Wingman® system.

CAUTION: This kit can not be used in conjunction with a Bendix® AD-IP® or AD-RP™ air dryer that does not contain an extended purge port. Do not attempt to install this kit on an AD-IP® or AD-RP™ air dryer that does not have this port.

CLEANING AND INSPECTION

1. Inspect the exterior of the air dryer. Check all metal parts for severe corrosion, pitting and cracks. If this condition exists, replace the air dryer. Superficial corrosion and/or pitting is acceptable.
2. Inspect all air line fittings for corrosion. Repair or replace any leaking or damaged lines or fittings.
3. Using mineral spirits or an equivalent solvent, clean and thoroughly dry the extended purge port of the air dryer.

INSTALLING THE EXTENDED PURGE KIT

Use the contents of this kit for this installation. Refer to Figure 1.

1. Identify the reservoir (1) mounting location on the vehicle. The reservoir must be installed using the two mounting clamps (3), and be within three feet of the air dryer, to allow the air line (2) to connect the air dryer to the reservoir (1).

If mounting holes need to be drilled into the vehicle, use the mounting clamp plates (6a) from the mounting bracket assembly—if included in the kit—as a template. See Figure 2 for a mounting hole template for the 288 in³reservoir kit that does not contain a clamp plate.

Space the two mounting clamps (3) as far as possible from each other to allow for adequate support of the reservoir (1). **Note:** Check the vehicle manual before drilling a frame member.

2. Mount the reservoir (1) using the mounting clamps (3), mounting clamp plates (6a) or washers (6b), lock washers (4) and nuts (5). The mounting plates (6a) or washers (6b) should be placed on the opposite side of the frame rail from the reservoir. Torque the nuts (5) to 250–280 in-lbs for 3/8"-16 threaded mounting clamp (3). For 1/2"-13 threaded mounting clamp (3) torque to 619–694 in-lbs.

3. For the Bendix® AD-IP® extended purge air dryer:

Use an appropriate wrench to remove the pipe plug from the extended purge port of the air dryer. The port is identified with either a label stating, **"THIS PORT FOR EXTENDED PURGE VOLUME ONLY,"** or by **"EXT PT 22"** cast into the end cover. Install the straight fitting (7) into this port. Torque to 80–120 in-lbs.

CAUTION: If this port is not present on the AD-IP air dryer, do not install this kit.

For the Bendix® AD-9si® extended purge air dryer:

Use an appropriate wrench to remove the pipe plug from the extended purge port (PT 22) of the air dryer. Install bushing (9) into this port. Torque to 130–170 in-lbs. Then install the straight fitting (7) into bushing (9). Torque to 80–120 in-lbs. *Refer to Figure 1.*

For the Bendix® AD-RP™ remote purge air dryer:

Install bushing (9) into the remote purge port of the air dryer. Torque to 130–170 in-lbs. Then install fitting (7) into bushing (9). Torque to 80–120 in-lbs. *Refer to Figure 1.*

4. Install 3/4" NPT pipe plugs into each end of the reservoir (1) until finger tight. Continue installing the plugs until 2 to 3 turns from finger tight.
5. **For kits that contain a 288 in³ reservoir (1):** Install bushing (10) into the port on the side of the reservoir (1). Torque to 180–240 in-lbs. Then install the 90° fitting (8) into the bushing (10). Torque to 130–170 in-lbs. *Refer to Figure 1.*
6. Connect the air line (2) to the 90° fitting (8) in the reservoir (1) and the straight fitting (7) in the air dryer. Torque both to 60–90 in-lbs.
7. Conduct the *Operation and Leakage Tests* on the following page.

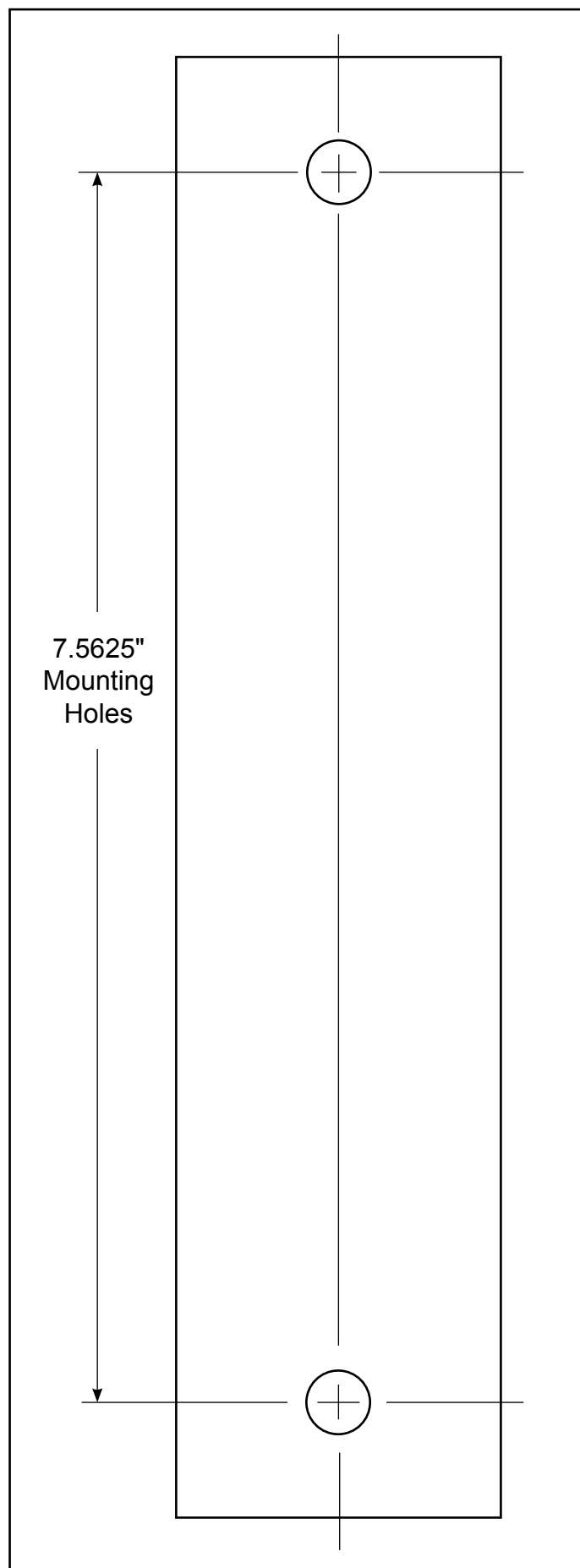
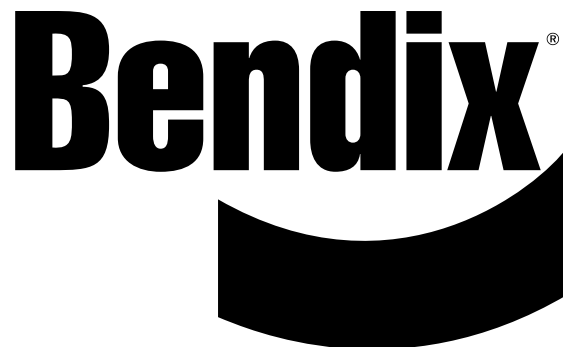


FIGURE 2 **MOUNTING HOLE TEMPLATE FOR 288 CUBIC INCH RESERVOIR KITS WITHOUT A CLAMP PLATE.**

OPERATION AND LEAKAGE TEST

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

1. Close all reservoir drain cocks.
2. Build up the system pressure to governor cut-out and note that the air dryer purges with an audible escape of air.
3. "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 a purge at the exhaust.
4. It is recommended that the following items be tested for leakage to ensure that the air dryer will not cycle excessively.
 - A. Total air system leakage (*See Bendix publication BW5057 "Air Brake Handbook"*).
 - B. Compressor unloader mechanism.
 - C. Governor.
 - D. Drain cock and safety valve in supply reservoir.
 - E. All air connections leading to and from the supply reservoir.



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