



Installation Instructions

BRACKET INSTALLATION FOR BENDIX® EVERFLOW® AIR DRYER ASSEMBLY

BENDIX® AD-IP® EVERFLOW® AIR DRYER ASSEMBLY

- Bendix® PuraGuard® Medallion
- EverFlow Control Module
- Bendix® AD-IP® Air Dryer

BENDIX® AD-IS® EVERFLOW® AIR DRYER ASSEMBLY

- Mounting Bracket
- Mounting Slots
- Bendix PuraGuard Medallion
- Packard Connector
- Supply Port

BENDIX® EVERFLOW® CONTROL MODULE

- Electrical Connector
- 1/8" NPT GOV CON 4
- 1/8" NPT Control Dryer #1
- 1/8" NPT RES 1
- 1/8" NPT Control Dryer #2
- 3/8"-16 UNC x 0.7" Deep Mounting Holes (2)

Bendix® EverFlow® air dryer assembly bracket kit piece number 5008483 consists of the following:

Description	Qty.
Mounting Bracket	1
3/8" Lockwasher	4
3/8" Hex Nut	4
3/8" Washer	8
3/8" Cap Screw	4

FIGURE 1 - BENDIX® EVERFLOW® AIR DRYER ASSEMBLIES



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.
- ▲ 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.
- ▲ You should consult the vehicle manufacturer's operating and service manuals, and any related literature, in conjunction with the Guidelines above.

The Bendix® EverFlow® air dryer assembly removes moisture and other contaminants normally found in the air brake system. Using alcohol, anti-freeze, oil or other de-icing substances in the brake system can damage the air dryers and control module and will therefore void the warranty.

KIT DESCRIPTION

This kit contains all of the components needed for replacing or installing the EverFlow air dryer mounting bracket on a vehicle frame rail or crossmember.

If the air dryer has a Bendix® PuraGuard® medallion mounted on top of the cartridge and/or a PuraGuard identifier on the side of the cartridge, then the EverFlow air dryer assembly is equipped with a Bendix PuraGuard oil coalescing cartridge. When servicing a PuraGuard air dryer, a PuraGuard cartridge must be used. Note: Replacing a PuraGuard cartridge with a standard cartridge may damage downstream components that are sensitive to oil.

REPLACING THE MOUNTING BRACKET

1. Remove the tie wraps that secure the EverFlow wiring to the mounting bracket. See Figure 4.
2. Disconnect all air lines and electrical connections. For ease of installation, mark all air lines and electrical connectors before removal.
3. Remove the air dryers and EverFlow control module from the mounting bracket retaining the mounting hardware. Discard air dryer mounting hardware. Retain the EverFlow mounting hardware.
4. Remove the mounting bracket from the frame rail and retain the mounting hardware.

MOUNTING THE EVERFLOW® AIR DRYER BRACKET ON THE VEHICLE

LOCATING THE MOUNTING BRACKET ON THE VEHICLE

If the mounting bracket removed is the same type as the one being installed, skip to "Mounting Bracket Installation" # 2.

1. The EverFlow bracket must be mounted vertically to ensure that the air dryers—when attached to the bracket—are vertical (purge exhaust toward road surface), and outside the engine compartment in an area of air flow while the vehicle is in motion. The mounting bracket must also be located with sufficient clearance to install the air dryers and the EverFlow module. The air dryers must not be exposed to direct wheel splash. If the air dryer is located directly behind the axle, a mud flap is required.
2. Maintain a minimum clearance of 12" between the assembly and any potential heat source (i.e. vehicle exhaust). If this is not feasible, a heat shield must be used.

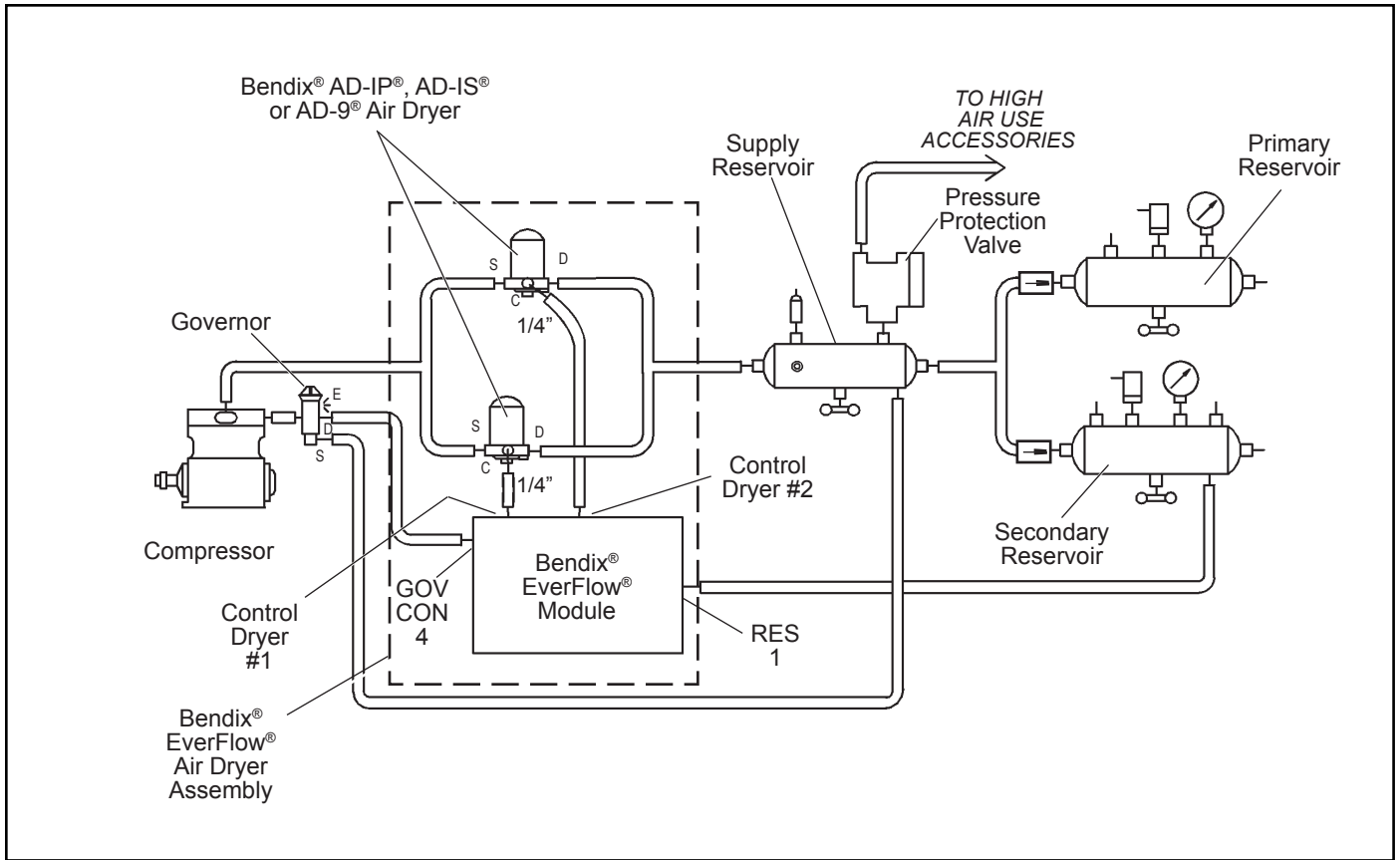


FIGURE 2 - BENDIX® EVERFLOW® AIR DRYER ASSEMBLY INSTALLATION

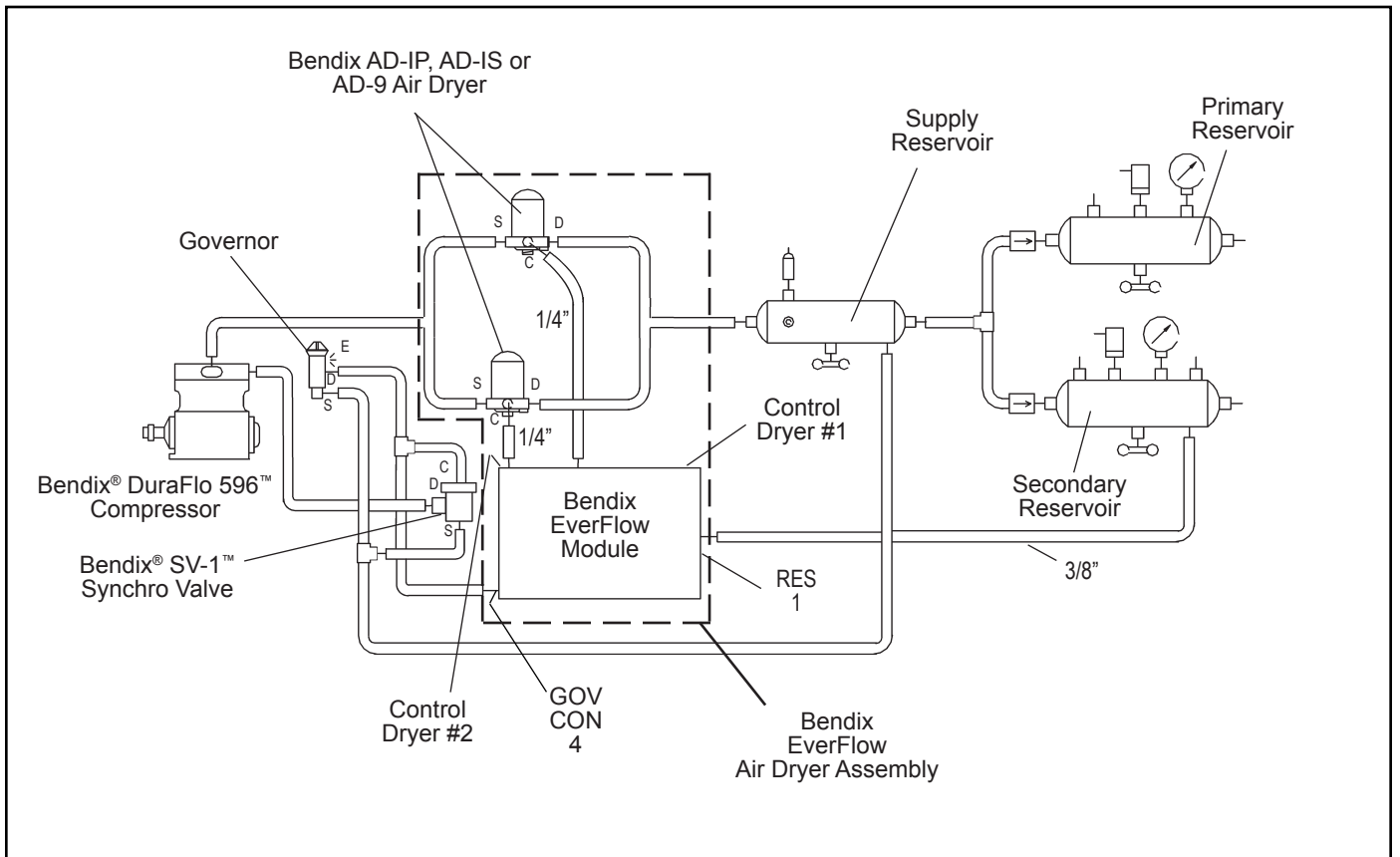


FIGURE 3 - BENDIX EVERFLOW AIR DRYER ASSEMBLY INSTALLATION WITH A BENDIX® DURAFLO 596™ COMPRESSOR

3. Make certain that adequate clearance from moving components (e.g., drive shaft, suspension, pitman arm, etc.) is provided.
4. Locate the air dryer assembly on the vehicle so that a minimum clearance of 1/2" for the Bendix® AD-IP® air dryer or 11" for the Bendix® AD-9® air dryer and 2" for the Bendix® AD-IS® air dryer is above the air dryer and is available to allow desiccant cartridge removal. A minimum of 8" inches clearance below the air dryer is required to allow for cartridge bolt removal. Both dryers can be removed for servicing the desiccant if clearance is an issue.
5. When choosing the mounting location for the bracket, note the discharge line length requirements stated under the heading "CONNECTING THE AIR LINES", elsewhere in this manual. **IMPORTANT NOTE:** *Under normal operating conditions, the maximum inlet air temperature for the air dryer is 160° Fahrenheit.* Ensure that the mounting location can support in excess of 70 pounds of weight.
6. If possible, locate the air dryers so that the air dryer purge exhaust does not expel contaminants on vehicle components. If this is not feasible, the purge exhaust may be redirected away from the vehicle. For AD-9 air dryers, the exhaust cover is available as a separate item from authorized Bendix parts outlets. A 1" inside diameter (ID) hose can be clamped on this exhaust cover to allow the exhaust to be redirected.
7. Do not tee the purge exhausts of the air dryers together for use with a single muffler.

MOUNTING BRACKET INSTALLATION

1. After positioning the bracket according to the location requirements, mark the position of the pre-drilled mounting holes on the selected location. Mark the hole location using the bracket as a template. **Note:** Check the vehicle manual before drilling the selected location.
2. Secure the mounting bracket on the vehicle using the 1/2"-20 hex head screws(4), lockwashers(4), washers(8) and hex nuts(4). Torque to 30–35 ft-lbs (360–420 in-lbs).
3. Components and location used to mount the bracket on the vehicle must be rigid enough to minimize air dryer vibration.

BENDIX AIR DRYER AND EVERFLOW CONTROL MODULE ASSEMBLY INSTALLATION

1. Secure the Bendix® EverFlow® control module to the mounting bracket using the previously removed hardware. For new installations, use 3/8"-16 x 3/4" (grade 5 minimum) mounting bolts. Torque to 30–35 ft-lbs (360–420 in-lbs). See Figure 1 for positioning.

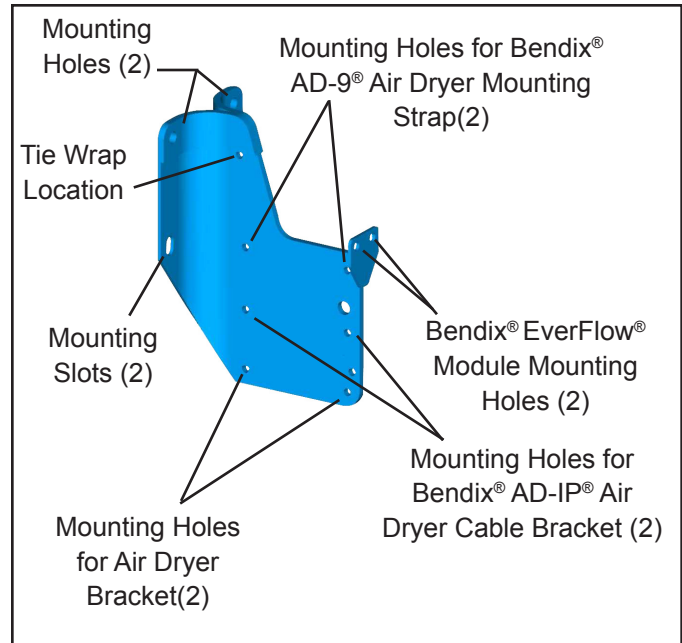


FIGURE 4 - BENDIX® EVERFLOW® MOUNTING BRACKET

2. Mount the air dryers to the mounting bracket through the pre-drilled holes. See figure 3 for the air dryer mounting bracket and cable bracket locations. Using the hardware contained in this kit secure the air dryers. Torque to 25–30 ft-lbs (300–360 in-lbs).

CONNECTING THE AIR LINES

Follow Figures 1, 2 & 3 for air line arrangement.

Air Dryer

1. For new installations, the discharge line from the compressor to the supply reservoir can be cut and fittings can be added to facilitate the installation. Ensure lines are sloped toward dryers and avoid 90° elbows.
2. If the vehicle was equipped with an air dryer, disconnect and remove the supply line, control line and the heater wire from the dryer.
3. 'T' the discharge line from the compressor to the supply port of both air dryers and 'T' the delivery lines from the air dryers to the supply reservoir. Use air lines of the same approximate ID as the compressor discharge line.
4. Connect the compressor discharge line to the supply port of the assembly made in paragraph 3. Connect the delivery line to the delivery port of the assembly as indicated in paragraph 3.

Bendix® EverFlow® Control Module

1. The Bendix® EverFlow® air dryer control module supply and control line ports are 1/8" NPT.
2. With 1/4" tubing, the tubing elbows, and the inserts connect the control ports of the air dryers to the control ports of the EverFlow module. Make these lines as short as possible.
3. The air line from the reservoir to RES 1 on the EverFlow control module must be at least 3/8" diameter tubing.

Bendix® Tu-Flo® Compressor Installations (See Figure 2.)

1. If the vehicle was previously equipped with an air dryer, connect the control line that was disconnected to the "GOV CON" port of the Bendix EverFlow module.
2. For new installations, install 1/4" tubing from the "UNL" port of the governor to the "GOV CON" port of the EverFlow module.

Bendix® DuraFlo 596™ Compressor Installations (See Figure 3.)

1. Connect the control line that was disconnected from the air dryer control port to the Bendix® SV-1™ synchro valve (delivery) to the "GOV CON" governor control port of the EverFlow module.

Wiring

Note: *The voltage of the Bendix EverFlow assembly must be equivalent to the vehicle voltage. Since two dryers are used in the system, fusing of the electrical line must accommodate both heaters in the dryers and the EverFlow module. Damage could result if not adhered to.*

1. Use Bendix cable assembly—Bendix kit piece number 5008484—to make the electrical connection to the air dryer and the EverFlow module. Use tie wraps to secure to the bracket.

TESTING THE AIR DRYERS

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. If the charge time exceeds 30 seconds, the EverFlow module will activate the second air dryer. The two will cycle in 30 second intervals.
4. Rapidly apply the service brakes several times 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 air dryer exhaust.
5. 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" or visit our internet site: www.bendix.com).
 - (B) Compressor unloader mechanism.
 - (C) Governor.
 - (D) Drain cock and safety valve in first (supply) reservoir.
 - (E) All air connections leading to and from the first (supply) reservoir.

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