



Installation Instructions

BENDIX® EVERFLOW® CONTINUOUS FLOW AIR DRYER MODULE

BENDIX® AD-IP® AIR DRYER (SHOWN) - QTY 2

INLET

'T' FITTING

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® CONTROL MODULE

Kit Contents:

Item No.	Description	Qty.
1	Bendix® EverFlow® Control Module	1
2	Wire Harness & Splice Kit	1
3	5/16" Lockwasher	2
4	5/16" Washer	4
5	5/16" Hex Nut	2
6	5/16" Cap Screw	2
7	3/8" Lockwasher	2
8	3/8" Cap Screw	2
9	3/8" Washer	2
10	Tubing Elbow	4
11	Brass Insert	4
12	Mounting Bracket	1

2.06"

.40"

.96"

2.98"

.36" Diameter - 2 Holes

12

FIGURE 1 - BENDIX® EVERFLOW® CONTINUOUS FLOW AIR DRYER MODULE



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.

Note: 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 module and will therefore void the warranty.

KIT DESCRIPTION

This kit is intended for installing the Bendix EverFlow control module (1). This module must be used in conjunction with two Bendix® **soft seat** AD-9®, AD-IP®, or AD-IS® air dryers or a combination of two. Components contained in this kit are shown in Figure 1 under kit contents. *The discharge line and associated fittings are not included in the kit.*

OPERATION OF THE BENDIX® EVERFLOW® CONTROL MODULE

The air dryers are plumbed in parallel, splitting from a common compressor discharge line, then recombining to a common delivery line to the reservoirs.

The EverFlow control module (1) monitors compressor charge time and, when the charge time exceeds 30 seconds, the module switches the drying load to the other air dryer in the system. The module continues to alternate between the dryers at 30 second intervals, allowing the unloaded dryer to purge while the other dries the incoming air.

LOCATING THE EVERFLOW CONTROL MODULE AND AIR DRYERS ON THE VEHICLE

The EverFlow control module (1) and air dryers must be mounted such that the distance between the module (1) and each air dryer is minimized. The preferred mounting is with the electrical connector parallel to the ground. A mounting bracket is contained in this kit, but is not necessary for installation. Refer to the installation instruction sheet packaged with the air dryer for location and mounting of each air dryer.

MOUNTING THE BENDIX® EVERFLOW® CONTROL MODULE

1. After positioning the EverFlow control module (1) according to the location requirements, mark the position of the pre-drilled mounting holes on the selected location. A template for the mounting pattern is included on page 4. If the bracket (12) is used for mounting, mark the hole location using the bracket as a template. **Note:** *Check the vehicle manual before drilling the selected location.*
2. Use at minimum, grade 5 mounting hardware. The mounting holes on the EverFlow control module are 3/8"-16 UNC x .7 in. deep. The mounting bolts must have a minimum thread engagement of 1/2 inch.

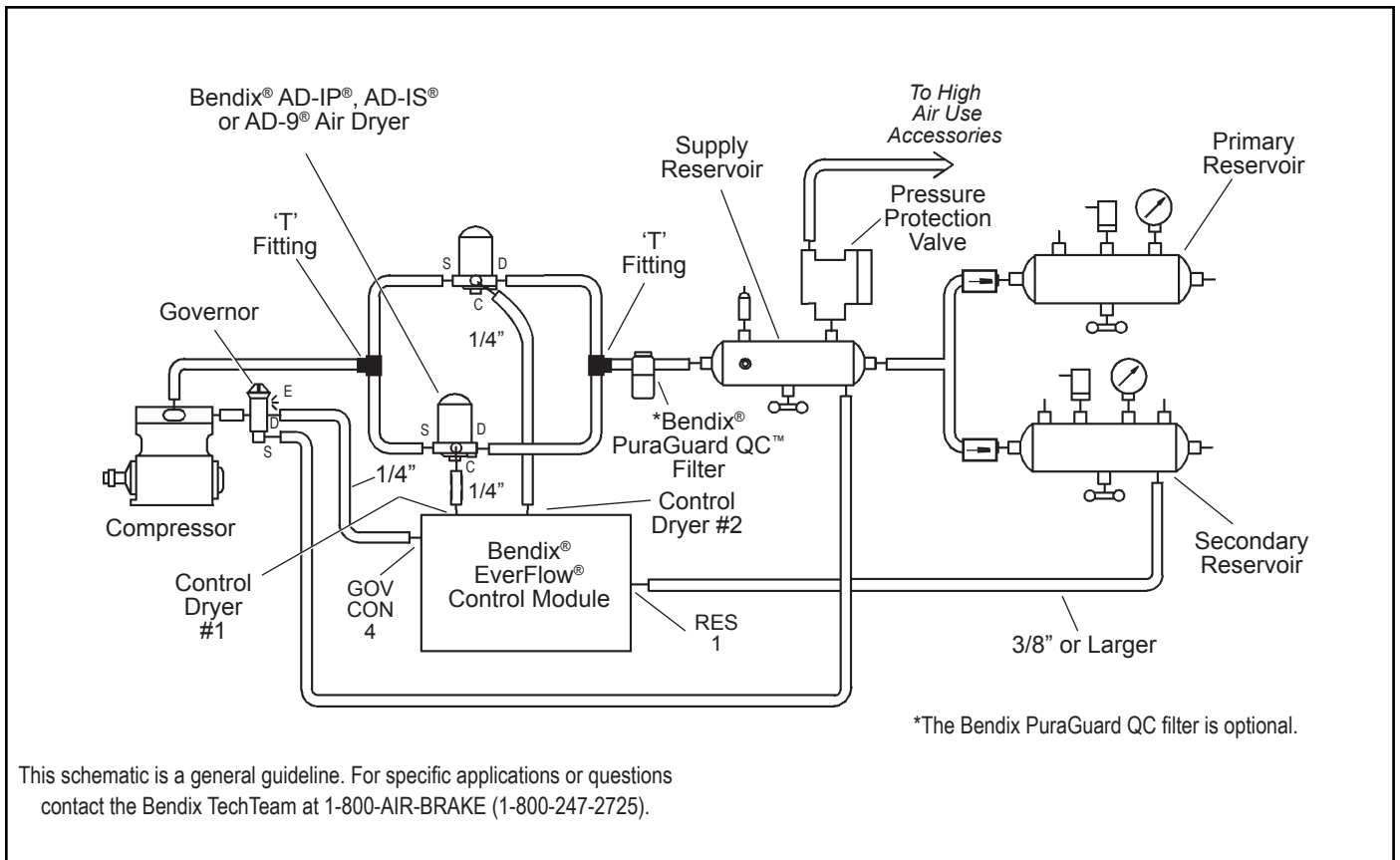


FIGURE 2 - BENDIX® EVERFLOW® AIR DRYER ASSEMBLY INSTALLATION

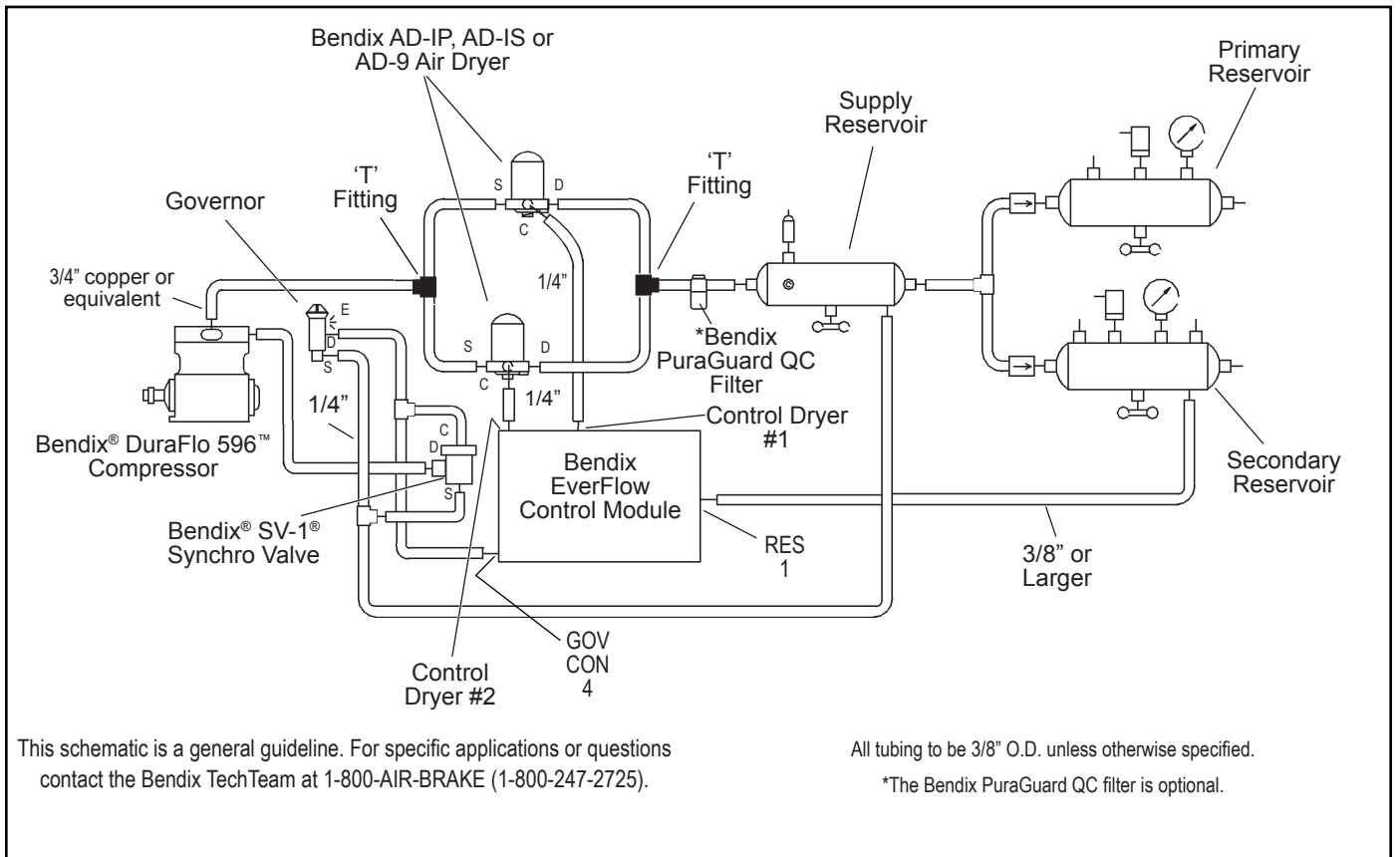


FIGURE 3 - BENDIX® EVERFLOW® AIR DRYER ASSEMBLY INSTALLATION WITH A BENDIX® DURAFLO 596™ COMPRESSOR

3. Drill the marked mounting holes and mount the Bendix® EverFlow® control module (1) using the mounting hardware contained in this kit. The 5/16" hardware, items 3, 4, 5 and 6 are used for fastening the mounting bracket to the vehicle. Items 7, 8 and 9 are used to secure the control module (1) to the bracket or vehicle. Torque the mounting bolts to 25-30 ft-lbs.

CONNECTING THE AIR HOSES

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

Air Dryer

1. Locate and mount the air dryer(s) per the recommended guidelines outlined in the air dryer installation instruction sheet.
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. For new installations, the discharge line from the compressor to the supply reservoir can be cut and fittings can be installed to facilitate installation provided that the discharge line recommendations in the air dryer installation guidelines are adhered to.
4. Install a 'T' fitting in the discharge line from the compressor to the supply port of both air dryers and the delivery lines from the air dryers to the supply reservoir. Use air lines of the same approximate inside diameter (ID) as the compressor discharge.
5. Connect the compressor discharge lines to the supply ports of the air dryers. Connect the delivery lines to the delivery ports of the air dryers.

EverFlow Module

1. The EverFlow control module (1) supply and control line ports are 1/8" NPT.
2. With 1/4" tubing, the tubing elbows (10) and inserts (11) 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 tubing from the reservoir to the RES 1 port on the control module must be at least 3/8" in diameter.

Bendix® Tu-Flo® Compressor Installations

(See Figure 2.)

4. If the vehicle was equipped with an air dryer, connect the control line that was disconnected to the "GOV CON" governor control port of the Bendix EverFlow module.
5. 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.)

6. Install a 'T' fitting in the governor air supply port and connect 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.

Included with this kit is a wiring harness and splicer kit (2). Refer to the installation instructions for the specifics on splicing techniques.

Each air dryer and the EverFlow module can be connected to vehicle power independently of each other. When wired independently, each air dryer wire lead must contain a 10 amp fuse for a 12 volt system or a 5 amp fuse in a 24 volt system. A 5 amp fuse is necessary in the wire lead of the EverFlow module if it is wired on its own circuit in either a 12 volt or 24 volt system.

The EverFlow control module and air dryers can also be wired from a single lead with one 20 amp fuse in a 12 volt system or a 15 amp fuse in a 24 volt system. The fuse must be installed in the wire lead prior to the air dryers and the module.

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 to reduce system air pressure to the 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 the first (supply) reservoir.
 - (E) All air connections leading to and from the first (supply) reservoir.

