

BENDIX® D-2®/SV-1™ GOVERNOR MODULE ASSEMBLY KIT

Remote Mount Governor Module

Bendix® D-2® Governor

Mounting Bracket

Exhaust Valve

Bendix® SV-1™ Synchro Valve

1/4" Tubing Tee (connection to the air dryer purge control port)

Bendix® SV-1™ Delivery Port 1/4" NPT (connection to compressor unloader port)

Governor Reservoir Port 1/8" NPT (connection to the supply reservoir must be 3/8 Synflex tubing or equivalent)

Bracket Mounting Holes (2)

Kit Contents	
Description	Qty.
Bendix® D-2®/SV-1™ Remote Mount Governor Module	1

Compressor Mount Governor Module

D-2 Governor

Mounting Bracket

Exhaust Valve

Bendix® SV-1™ Synchro Valve

Pipe Tee 1/8" NPT (Connection to the air dryer purge control port)

Bendix® SV-1™ Delivery Port - JIC (connection to compressor unloader port)

14" Metal Braided Hose Assembly (37° fittings)

Governor Reservoir Port 1/8" NPT (connection to supply reservoir must be 3/8 Synflex tubing or equivalent)

Bracket Mounting Holes (2)

Kit Contents	
Description	Qty.
Bendix D-2/SV-1 Compressor Mount Governor Module	1
14" Metal Braided Hose Assembly	1
Mounting Hardware Kit	1
Studs	2
Hex Nuts	2
Flat Washers	2
Lock Washers	2

Figure 1 – Bendix® D-2®/SV-1™ Remote Mount Module

Figure 2 – Bendix D-2/SV-1 Compressor Mount 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.
- ▲ 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.

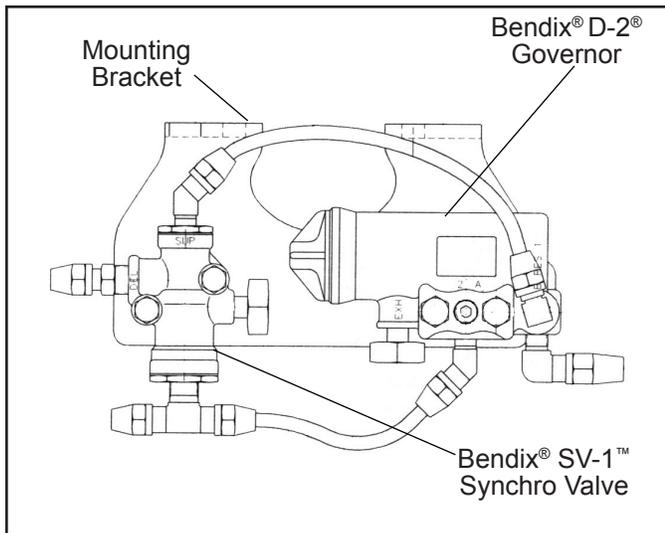


Figure 3 – Obsolete Remote Mount Module

The Bendix® D-2®/SV-1™ governor module is for use with the Bendix® DuraFlo 596™ compressor (refer to *Service Data Sheet SD-01-670*). The module offers convenient installation of the required components in a single, factory pre-assembled component group and provides for either direct mounting to the compressor or remote mounting as required by a specific application.

The module is primarily intended for use when changing over to (retrofitting) the DuraFlo 596 compressor. It can also be used as a replacement assembly, however, individual components (such as the D-2 governor and SV-1 synchro valve) may also be replaced as required by service.

Note: An earlier, and now obsolete, version of the remote mount module was in limited use. (See *Figure 3*.) The current module can be used to replace these earlier versions.

The module is comprised of a D-2 governor, SV-1 synchro valve, mounting bracket and various tubing or hose along with the appropriate fittings.

Two versions of the module are currently available; remote mount and compressor mount. Nylon tubing and tubing fittings are used on the remote mount model while metal braided hose and 37° hose fittings are used on the compressor mount version.

GENERAL

These instructions are general and are intended to be a guide. In some cases additional preparations and precautions are necessary. In all cases follow the instructions contained in the vehicle maintenance manual in lieu of the instructions, precautions and procedures presented here.

If the governor module is being installed for the first time on a newly installed DuraFlo 596 compressor, go directly to the Installation section. If the module is being used to replace an existing module, proceed to the Removal section.

REMOVAL

1. Remove as much road dirt and grease from the exterior of the compressor and module as possible.
2. Identify for re-connection, then remove the air dryer purge tubing or hose at the pipe tee installed in SV-1 valve on the module assembly. (See *Figure 1 or 2*.)
3. Identify for re-connection, then remove the 3/8" Synflex tubing or (equivalent I.D.) hose at the D-2 governor reservoir port (marked RES) on the module assembly. (See *Figure 1 or 2*.)

Note: The fitting in the governor reservoir port is not supplied with the D-2/SV-1 governor module and must be removed and reused in the replacement unit.

If the module is a compressor mount version (with metal braided hose) proceed to Step 4. For the remote mount module, go to Step 7.

4. Identify for re-connection, then remove the metal braided hose from the right angle fitting installed in the SV-1 valve delivery port on the module assembly. (See *Figure 2*.)
5. Remove the metal braided hose from the fitting installed in the compressor unloader port. (See *Figure 4*.)
6. Remove the two 13mm nuts and lock washers and flat washers that secure the module mounting bracket on the studs in the rear end cover of the compressor. Remove the module from the compressor. (See *Figure 4*.) Proceed to the Installation section.
7. Identify for re-connection, then remove the compressor unloader tubing at the fitting installed in the SV-1 valve delivery port (marked DEL) on the module assembly. (See *Figure 1*.)

Note: The SV-1 valve delivery port fitting is not supplied with the D-2/SV-1 governor module and must be removed and reused in the replacement unit.

8. Remove the two cap screws that secure the module mounting bracket to the vehicle and remove the module.

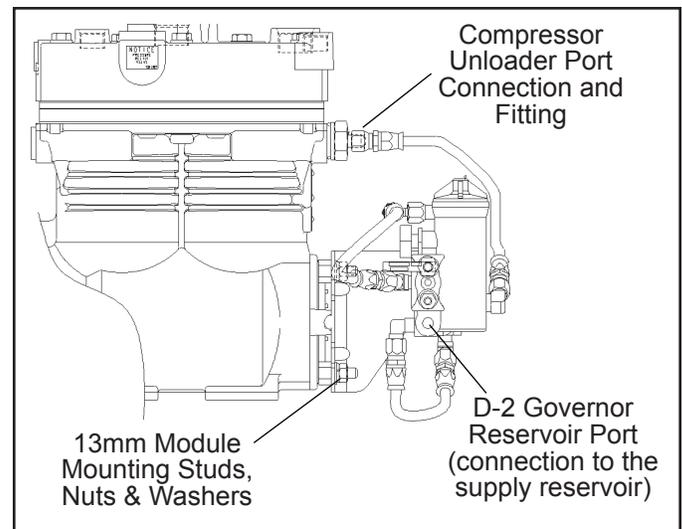


Figure 4 – Compressor Mount Module Installation

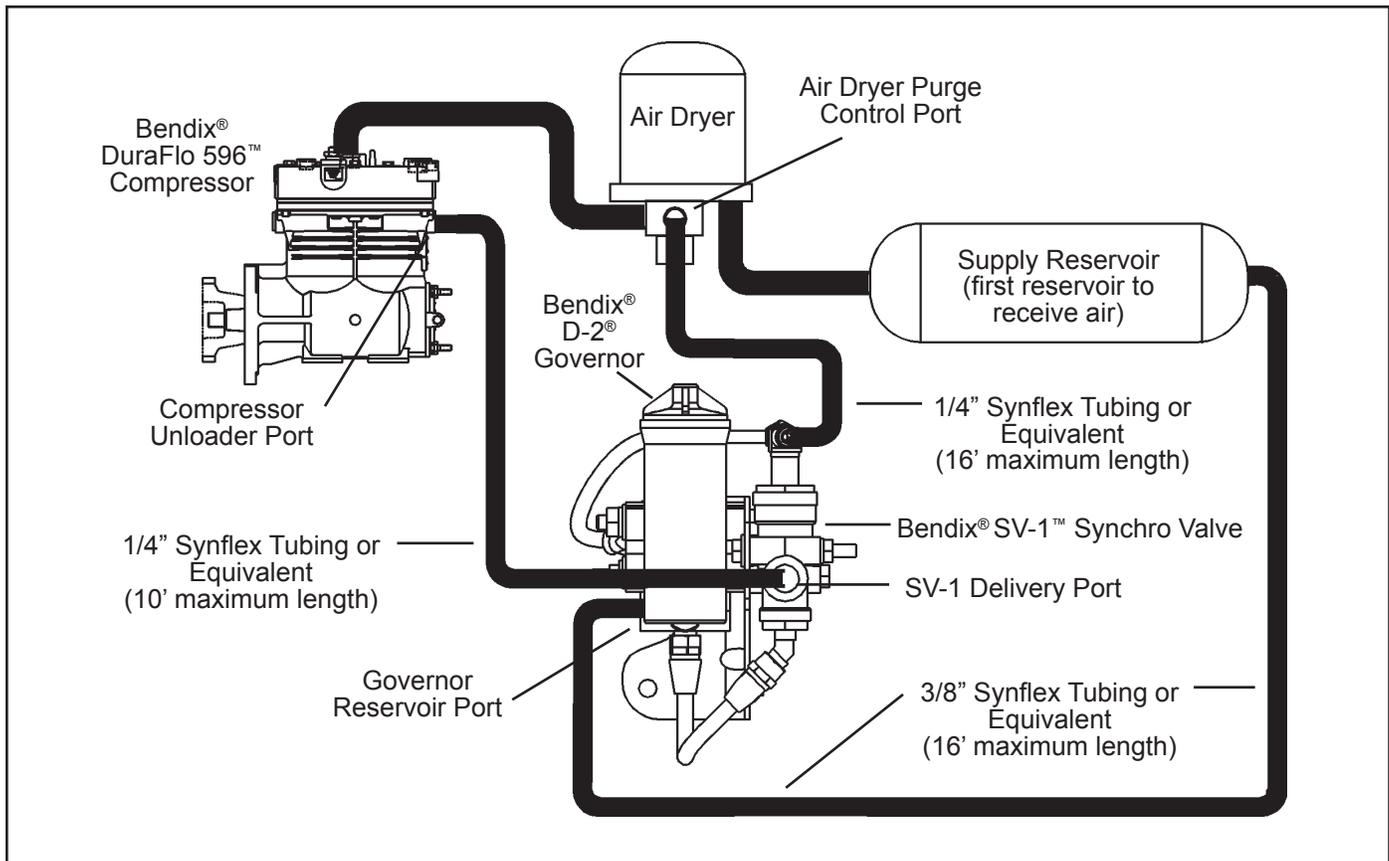


Figure 5 – Bendix® D-2®/SV-1™ Governor Module Installation

INSTALLATION

GENERAL INSTALLATION NOTES

1. Determine the type of installation and go to the appropriate section. Remote mount modules (part number 5007116) have nylon tubing and fittings while compressor mount modules (part number 5007404) are equipped with metal braided hose and 37° hose fittings.
2. All torques specified are assembly torques and typically can be expected to fall off after assembly is accomplished. **Do not re-torque** after initial assembly torques fall unless instructed otherwise.
3. It will be necessary to install several fittings that are not supplied in the kit. Read the appropriate instructions for the module being installed and obtain the fittings required. When using a thread sealant on the fittings, make certain the sealant material will not enter and contaminate the system.

COMPRESSOR MOUNTED MODULE - KIT 5007404

Fittings for the compressor unloader port, governor reservoir port and the pipe tee installed in the Bendix® SV-1™ valve are not included with the compressor mount module or kit.

1. Facing the rear of the compressor, remove the 13mm cap screw on the top left and bottom left of the compressor rear end cover. Install the two 13mm studs provided in the kit. The chamfered lead threads of the studs should be installed into the compressor. Torque to 195-212 in-lbs.
2. Install the governor module on the studs and orient it as shown in *Figure 4*. Secure the module bracket on the studs installing the flat washers, then lock washers and 13mm nuts. Torque the nuts to 195-212 in-lbs.
Note: Hold the stud hex when torquing the nuts.
3. Install one end of the 14 inch metal braided, hose assembly on the compressor unloader port fitting (not supplied in kit) and the other end on the right angle fitting located in the delivery port of the SV-1. (See *Figures 2 & 4*.)
4. Connect the air dryer purge tubing or hose to the fitting installed in the pipe tee on SV-1 (this fitting not supplied with the module or kit). (See *Figure 2*.)
Note: If an air dryer is not in use on the vehicle, install a plug in the SV-1 pipe tee.
5. Connect a length of hose to the D-2 governor reservoir port (marked RES) fitting (this fitting is not supplied with the module or kit) on the module assembly. (See *Figures 2 & 4*.)

Note: The governor reservoir port air line must be 3/8" Synflex tubing or equivalent I.D. hose or tubing.

REMOTE MOUNTED MODULE

Fittings for the compressor unloader port, Bendix® SV-1™ pipe tee and delivery port and governor reservoir port are not included with the remote mount module or kit.

1. Choose an appropriate location for the module on the vehicle. The location chosen should be protected from road and wheel splash. Ideally the module should be mounted with both the Bendix® D-2® and SV-1 exhaust valves toward the road surface. Secure the governor module bracket on the vehicle.
2. Connect a piece of 1/4" tubing to the compressor unloader port fitting (fitting not supplied) and the other end to a fitting located in the delivery port of the SV-1 valve (fitting not supplied). (See *Figure 1*.)
3. Connect the air dryer purge tubing or hose to a fitting (not supplied) in the SV-1 valve pipe tee on the module assembly. (See *Figure 1*.)

Note: If an air dryer is not in use on the vehicle, install a plug in the SV-1 valve pipe tee.

4. Connect a length of tubing to a fitting installed in the D-2 governor (fitting not supplied), reservoir port (marked RES) on the module assembly. (See *Figure 1*.)

Note: The governor reservoir port tubing must be 3/8".

OPERATING TESTS

Test and inspect the compressor and governor unloader system for proper operation and pressure setting. Start the vehicle engine and build up air pressure in the air brake system while observing the pressure registered by the dash gauge.

1. Cycle the compressor through the loaded and unloaded cycle several times by making a series of brake applications to reduce the air pressure. Make certain that the governor cuts out at approximately 130 psi (cut in should be approximately 110 psi).
2. Note that the Bendix® DuraFlo 596™ cycles to the loaded and unloaded conditions promptly. This can be definitely confirmed by installing a test gauge in the unused unloader port on the compressor and observing the reaction during transition from the loaded and unloaded condition. Air pressure should be applied and exhausted with a distinct "snap action" with no appreciable lag for build up or release of pressure. If prompt action is not noted, check the installation for kinked or restricted tubing or hose.
3. Using a soap solution, check for leakage at all air connections made during the installation. If leakage is detected, tighten the fittings as required.



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