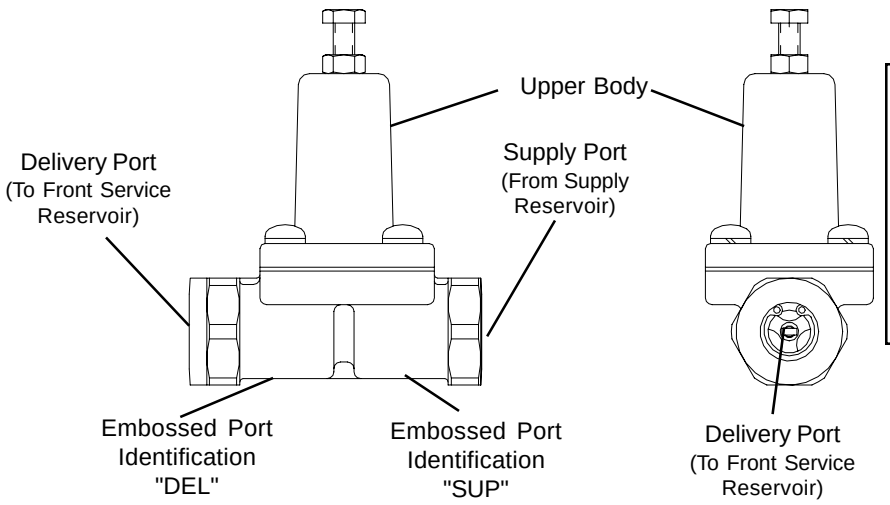
Installation Instructions

SC-PR SINGLE CHECK PROTECTION VALVE



WARNING:
This valve is factory preset and must not be re-adjusted in the field. An incorrect setting of this valve can result in inadequate air pressure retention in the front axle service reservoir or improper AD-SP air dryer operation.

Figure 1 SC-PR Single Check Protection Valve

SC-PR VALVE - GENERAL DESCRIPTION

The SC-PR, **S**ingle **C**heck **PR**otection valve, is used in conjunction with the Bendix AD-SP air dryer or competitive air dryers employing system air pressure to perform the purge function.

It is installed in the vehicle air system to allow the purge air to be drawn from the secondary reservoir. It also protects the air pressure in the front axle (secondary) service reservoir, in the event of a compressor, supply or rear axle reservoir failure, or malfunction of the AD-SP air dryer, purge control valving. Refer to figure 2.

IMPORTANT! PLEASE READ AND FOLLOW THESE INSTRUCTIONS TO AVOID PERSONAL INJURY OR DEATH:

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

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. **If the vehicle is equipped with air brakes, make certain to 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 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.**

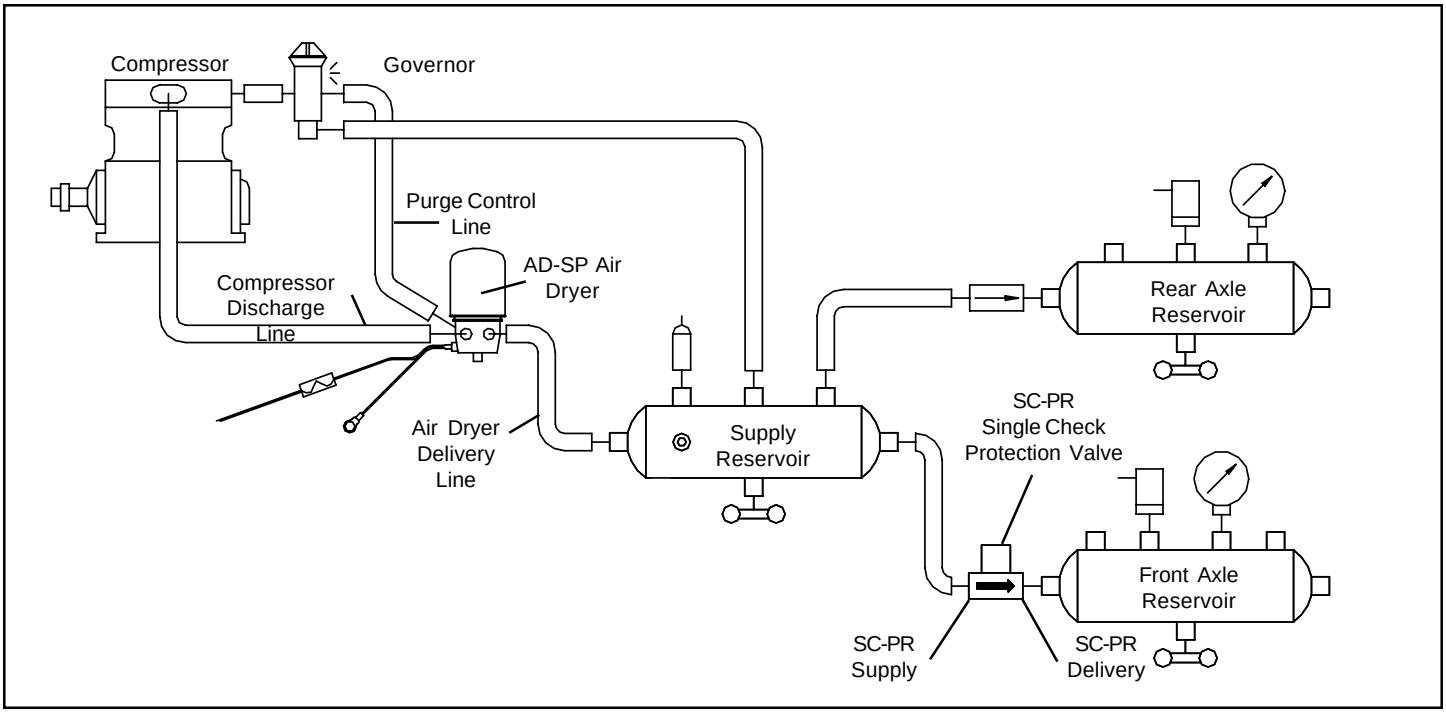


Figure 2 AD-SP Air Dryer installation w/ SC-PR Valve

VEHICLE PREPARATION

1. Park the vehicle on a level surface and prevent movement by means other than the brakes.
2. Drain all reservoirs to 0 p.s.i. (0 kPa).
3. Disconnect the supply air line from the SC-PR and remove the SC-PR from the vehicle.

INSTALLING THE SC-PR

1. Using the hex wrench flats, on the body next to the delivery port, install the heavy wall fitting, then install the SC-PR in the front axle service reservoir (secondary). Orient the SC-PR so that the upper body points away from the road surface. If thread sealing compound is used make certain this material does not enter the valve mechanism.
2. Install the supply line fitting in the SC-PR. If thread sealing compound is used make certain this material does not enter the valve mechanism. Install the supply line.
3. Test the SC-PR installation before placing the vehicle in service.

TESTING THE SC-PR

General Statement

The SC-PR valve is used in conjunction with the Bendix, AD-SP air dryer. When installed in the vehicle air system, it allows air dryer purge air to be drawn from the secondary reservoir. It also protects it protects the air pressure in the front axle (secondary) service reservoir, in the event of a compressor, supply or rear axle reservoir failure or malfunction of the AD-SP purge control valving. DO NOT ATTEMPT TO ADJUST THE **SC-PR** since its pressure setting affects the operation of the air dryer and protects the front axle service reservoir pressure.

Testing

Since the operation of the SC-PR is closely linked to the AD-SP air dryer the following testing includes the air dryer.

1. Close all reservoir drain cocks.
2. Build up system pressure to governor cutout while observing that both the front axle (secondary) and rear axle service reservoir dash gauges rise equally in pressure from 0 psi to governor cutout.
   If either gauge fails to display this condition, stop testing and **check the installation of the SC-PR**.
   Note that the AD-SP purges with an audible escape of air when governor cutout pressure is reached.
3. Note that the front axle (secondary) service reservoir pressure drops approximately 10 psi and that the rear axle service reservoir loses no air pressure.
4. With full pressure in the air system, turn the ignition off. Drain the supply reservoir and note that pressure in the front axle (secondary) service reservoir does not drop below 90 psi.