Installation Instructions

BENDIX® SMS-9700™ SOLENOID INSTALLATION

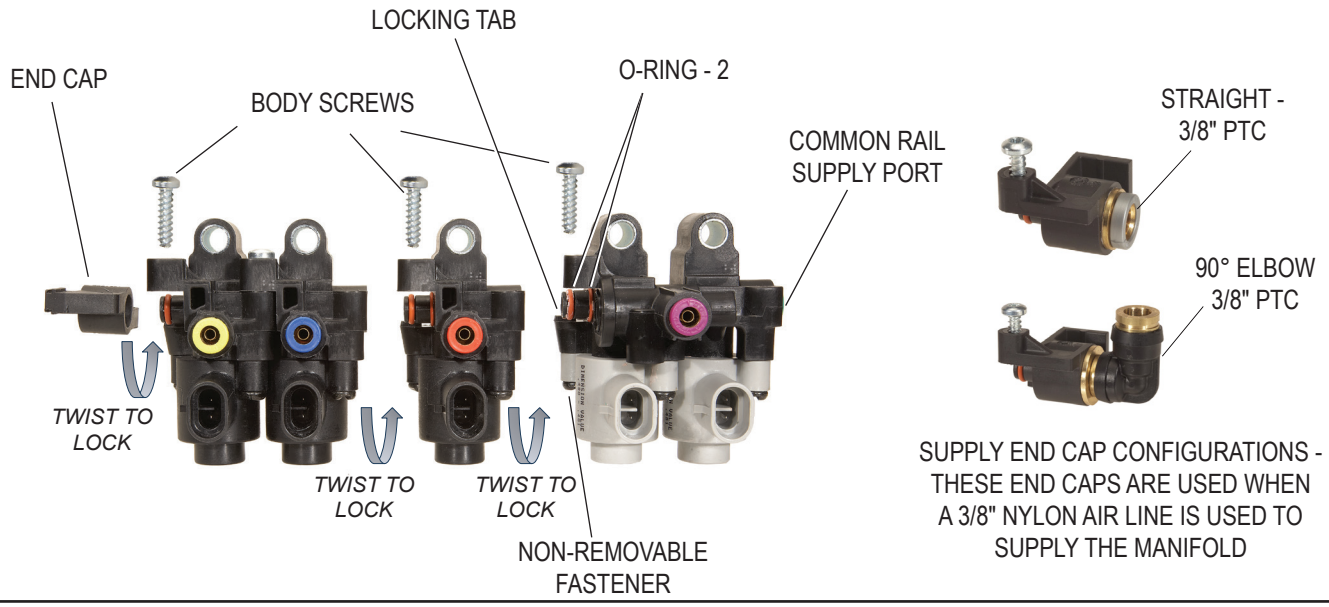

FIGURE 1 - ASSEMBLING THE BENDIX® SMS-9700™ SOLENOID

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 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.**

BENDIX® SMS-9700™ SOLENOID VALVE

GENERAL

This instruction sheet outlines the replacement of an individual solenoid valve within a solenoid module.

VEHICLE PREPARATION

Follow all standard industry safety precautions, including, but not limited to, those listed above.

1. Park the vehicle on a level surface and block the wheels and/or hold the vehicle by means other than the air brakes.
2. Drain the air pressure from all vehicle reservoirs.

REMOVAL

1. Prior to disassembly, remove as much contamination as possible from the exterior of the device.
2. Identify and mark, or label, the electrical connectors and air hoses and their respective connections on the valve to aid the technician during reinstallation.
3. Disconnect all air lines from the solenoid. Push-to-connect fittings require the collar to be pressed toward the valve body before the nylon line can be pulled. Note that the braided hose version uses compression fittings.
4. Disconnect the electrical connector from the solenoid.
5. Remove the mounting hardware and remove the solenoid(s) from the vehicle.

DISASSEMBLY

The Bendix® SMS-9700™ solenoids can not be rebuilt or repaired, they can only be replaced. *Refer to Figure 1*.

1. The SMS-9700 solenoids are fastened together with a twist-to-lock feature. To disassemble the banks, remove the body screw and twist the banks slightly to separate. Note that only body screws are designed to be removed. Other fasteners are designed to prevent removal.
2. If the solenoid being serviced is the last unit in a bank (opposite the supply port), it will have an end cap attached. This end cap is secured in the same manner as a solenoid and can be removed using the same procedure.

ASSEMBLY

1. Align the solenoid or supply port or end cap locking stem, then twist the banks until line-to-line contact is made. The bodies will "snap" into position when properly aligned.
2. Using the body screws, fasten the assemblies together. Torque the bolts to 25–30 in-lbs.
3. Gently remove the color ring from the supply port (if any) of the original solenoid valve and install it in the supply port of the new replacement. Repeat this procedure for the delivery ports.

Note: Follow procedures 1 and 2 to replace the supply port or end cap if needed.

INSTALLATION

1. Install the valve on the vehicle. Reuse the removed mounting hardware and tighten to 150–200 in-lbs. Note: The valve should be oriented such that the exhaust of the valve is no more than 45° from vertical.
2. Reconnect the hoses. Note that foreign material—alcohol, liquid lubricants, antifreeze, etc.—must not be poured into the ports.3. Install the electrical connectors.
4. Charge the reservoirs and check for operation and leakage.

OPERATION

These service instructions are a general guideline, and should be consulted in conjunction with the OEM's service manual.

ALERT: When servicing accessory solenoid valves that control safety critical accessories (i.e., fifth wheel lock, king pin release, etc.), ensure that all components of the redundant / backup system (i.e., two-step release system) are functioning as intended by the original equipment manufacturer.

When the solenoids are activated or deactivated, the solenoids will promptly exhaust (NO), apply (NC), or charge (latching) air pressure to an auxiliary device. Continuous exhausting of air pressure should not occur.

LEAKAGE CHECKS

With the air system fully charged, coat the exhaust ports of the solenoid with a soap solution. A one inch bubble in three seconds is permitted (175 SCCM).