

# Installation Instructions

#### BENDIX® FCS-9700™ SOLENOID INSTALLATION

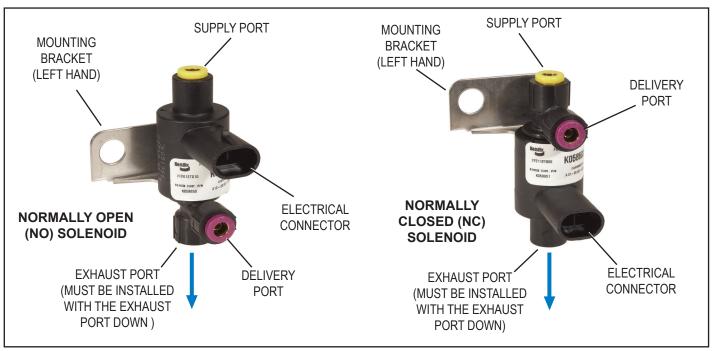


FIGURE 1 - BENDIX® FCS-9700™ FAN CLUTCH SOLENOID VALVES



# **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
- ▲ 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.
- electrical system in a manner that safely removes all electrical power from the vehicle.
- Following the vehicle manufacturer's recommended procedures, deactivate the

- ▲ 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
- 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® FCS-9700™ FAN CLUTCH SOLENOID

#### **GENERAL**

This instruction sheet outlines the replacement of the Bendix® FCS-9700™ fan clutch solenoid valve.

#### **VEHICLE PREPARATION**

Follow all standard industry safety precautions, including, but not limited to, those listed in the General Safety Guidelines.

- 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 removing the solenoids, remove as much contamination as possible from the exterior of the device.
- Identify, and mark, and disconnect the air lines to the solenoid. Push-to-connect fittings require the collar to be pressed toward the valve body before the nylon line can be pulled.
- 3. Identify, mark, and disconnect the electrical connector from the solenoid.
- 4. Remove the mounting hardware and remove the solenoid from the vehicle.

#### **DISASSEMBLY**

The Bendix FCS-9700 solenoid can not be rebuilt or repaired, it can only be replaced.

#### **INSTALLATION**

- Gently remove the color ring from the supply port of the original solenoid valve and install it in the supply port of the new replacement. Repeat this procedure for the delivery port.
- Install the valve on the vehicle using the mounting hardware that was previously removed. Tightening the mounting bolt to 150–200 in-lbs. Note that the valve should be oriented such that the exhaust of the valve is no more than 45° from vertical.
- 3. Reconnect the air lines and electrical connectors. Note that foreign material—alcohol, liquid lubricants, antifreeze, etc.—must not be poured into the ports.
- 4. Charge the reservoirs, then check for operation and leakage.

#### 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).

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