



Service Data

SD-03-10433

Bendix® FCS-9700™ Fan Clutch Solenoid

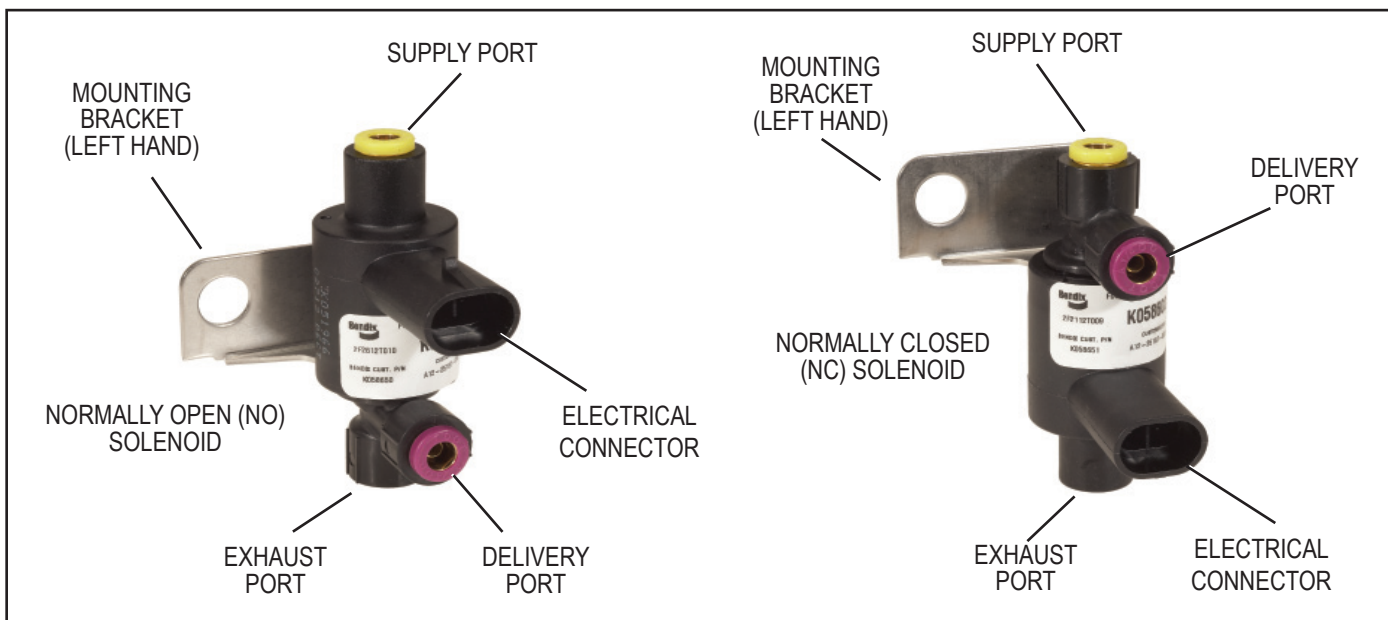


FIGURE 1 - BENDIX® FCS-9700™ FAN CLUTCH SOLENOID VALVES

DESCRIPTION

The Bendix® FCS-9700™ fan clutch solenoid, shown in Figure 1, is a low air flow solenoid used to control the fan clutch. A thermostat controls the solenoid operation.

The fan clutch solenoid is always mounted as a stand alone solenoid. Depending on the application, it can be a normally closed (NC) or normally open solenoid (NO). The integral mounting bracket comes in a right or left position and is not removable.

OPERATION

Because this solenoid valve is used for an auxiliary air function, a pressure protection valve, such as a Bendix® PR-3™ valve, must be installed to protect the air brake system. Based on the application, the solenoid will deliver or exhaust air. See Figure 2 for a typical system configuration.

PREVENTIVE MAINTENANCE

Important: Review the Bendix Warranty Policy before performing any intrusive maintenance procedures. The warranty may be voided if intrusive maintenance is performed during the warranty period.

No two vehicles operate under identical conditions; as a result, maintenance intervals may vary. Experience is a valuable guide in determining the best maintenance interval for air brake system components. At a minimum, the solenoid should be inspected every 6 months or 1500 operating hours, whichever comes first, for proper operation. Should the solenoid not meet the elements of the operational tests noted in this document, further investigation and service of the valve may be required.

SERVICE CHECKS

When the in-cab switch is pressed to activate or deactivate the fan clutch, the Bendix FCS-9700 solenoid will promptly exhaust (NO) or apply (NC). Note that the solenoid part number label is marked with an NO or NC for identification. 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 1-inch bubble in three (3) seconds is permitted (175 SCCM).

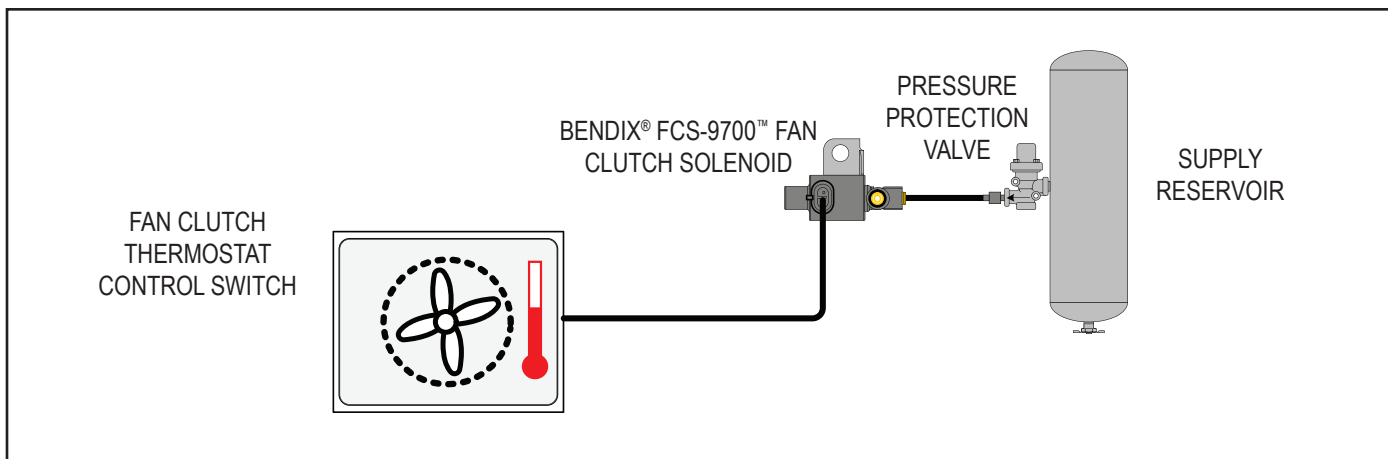


FIGURE 2 - TYPICAL SYSTEM CONFIGURATION

If the solenoid does not function as described above, or if leakage is excessive, it is recommended that it be replaced with a genuine Bendix® service replacement.

REMOVAL

1. Prior to removing the solenoid, apply the parking brakes and drain all the vehicle reservoirs. Refer to the General Safety Guidelines in this manual before performing any service.
2. 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 bolt and remove the solenoid from the vehicle.

DISASSEMBLY

The Bendix® FCS-9700™ solenoid can not be serviced or repaired, it can only be replaced with service replacement solenoids.

INSTALLATION

1. Install the valve on the vehicle by tightening the mounting bolt to 150-200 inch pounds.
2. Reconnect the air lines and electrical connectors.
3. Charge the reservoirs, then check for operation and leakage.

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 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. Always wear safety glasses.
2. 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.
3. 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.
4. 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 or a dryer reservoir module, be sure to drain the purge reservoir.

5. Following the vehicle manufacturer's recommended procedures, deactivate the electrical system in a manner that safely removes all electrical power from the vehicle.
6. Never exceed manufacturer's recommended pressures.
7. 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.
8. 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.
9. 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.
10. Prior to returning the vehicle to service, make certain all components and systems are restored to their proper operating condition.
11. 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.