

P2719-P2721 Clutch Pressure Control (PC) Solenoid 4

Diagnostic Instructions

- Perform the Diagnostic System Check – Vehicle on page 6-60 prior to using this diagnostic procedure.
- Review Strategy Based Diagnosis on page 6-57 for an overview of the diagnostic approach.
- Diagnostic Procedure Instructions on page 6-58 provides an overview of each diagnostic category.

DTC Descriptors

DTC P2719: Clutch Pressure Control (PC) Solenoid 4 System Performance

DTC P2720: Clutch Pressure Control (PC) Solenoid 4 Control Circuit Low Voltage

DTC P2721: Clutch Pressure Control (PC) Solenoid 4 Control Circuit High Voltage

Circuit/System Description

The clutch pressure control (PC) solenoid 4 is part of the control solenoid (w/body and TCM) valve assembly and is not serviced separately. The TCM supplies 12 volts to the clutch PC solenoid 4 through the high side driver 2 circuit. The TCM control the clutch PC solenoid 4 through the clutch PC solenoid 4 control circuit. The normally low clutch PC solenoid 4 flows fluid to the 2-6 clutch when commanded ON and exhausts fluid when commanded OFF. The clutch PC solenoid 4 regulates the transmission fluid pressure to the 2-6 clutch.

Conditions for Running the DTC

- The engine speed is greater than 500 RPM for 5 seconds or greater.
- The ignition voltage is between 8.6–19.0 volts.

Conditions for Setting the DTC

P2719

The TCM detects an invalid voltage in the clutch PC solenoid 4 control circuit for 4.4 seconds in a 5.0 second sample.

P2720

The TCM detects low voltage on the clutch PC solenoid 4 control circuit for 300 milliseconds in a 375 millisecond sample.

P2721

The TCM detects high voltage on the clutch PC solenoid 4 control circuit for 300 milliseconds in a 375 millisecond sample.

Action Taken When the DTC Sets

P2719

- DTC P2719 is a Type C DTC.
- The TCM freezes transmission adaptive functions.

P2720 and P2721

- DTCs P2720 and P2721 are Type A DTCs.
- The TCM forces High Side Drive 1 and 2 OFF.
- The TCM inhibits the TCC.
- The TCM commands maximum line pressure.
- The TCM freezes transmission adaptive functions.

Conditions for Clearing the DTC

- DTC P2719 is a Type C DTC.
- DTCs P2720 and P2721 are Type A DTCs.

Reference Information

Description and Operation

Transmission General Description on page 17-278

DTC Type Reference

Powertrain Diagnostic Trouble Code (DTC) Type Definitions on page 6-61

Scan Tool Reference

Control Module References on page 6-1 for scan tool information

Circuit Verification

- 1). Ensure the transmission fluid temperature is between 50–80°C (122–176°F).
 - 2). Perform the Control Solenoid Valve and Transmission Control Module Assembly Cleaning on page 17-99 to dislodge debris and free up the valves.
 - 3). Operate the vehicle in 2nd gear long enough to ensure at least a 3°C (5°F) rise in TCM temperature.
 - 4). Operate the vehicle within the Conditions for Running the DTC to verify the DTC does not reset. You may also operate the vehicle within the conditions that you observed from the Freeze Frame/Failure Records data.
- If the DTC does not reset, replace the control solenoid (w/body and TCM) valve assembly.

Repair Instructions

Important:

- Perform the Service Fast Learn Adapts on page 17-102 following all transmission related repairs.
- Before replacing the TCM, perform the Control Solenoid Valve and Transmission Control Module Assembly Inspection on page 17-98. Perform the Diagnostic Repair Verification on page 6-86 after completing the diagnostic procedure.
- Control Solenoid Valve and Transmission Control Module Assembly Cleaning on page 17-99
- Control Module References on page 6-1 for control solenoid (w/body and TCM) valve assembly replacement, setup, and programming