

P1751 Shift Valve 1 Performance

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 Descriptor

DTC P1751: Shift Valve 1 Performance

Circuit/System Description

The shift valve 1 (clutch select valve 2) is part of the lower control valve body. The shift valve 1 (clutch select valve 2) controls fluid to the R1 and 4-5-6 clutches. During this diagnostic test, intrusive actions are taken by the transmission control module (TCM) to test the clutch select valve 2 to see if the valve is stuck. The TCM commands the shift solenoid (SS) 1 ON to put pressure on the valve towards the spring and at the same time, elevates line pressure slightly to assist the spring side pressure. If the spring is broken, the valve will slip back towards the spring indicating a mechanical failure and the DTC will set.

Conditions for Running the DTC

- No ISS DTCs P0716 or P0717.
- No OSS DTCs P0722 or P0723.
- No TCC Performance DTCs P0741 or P0742.
- No TCC Electrical DTCs P2762, P2763, or P2764.
- The engine speed is greater than 500 RPM for greater than 5 seconds.
- The ignition voltage is between 8.6 volts and 19.0 volts.
- The transmission fluid temperature (TFT) is 20– 130°C (68–266°F).
- The calc. throttle position is 8 percent or greater.
- The engine torque is greater than 80 N·m (59 lb ft).
- The transmission input speed is greater than 1100 RPM.

- No upshift or downshift in process.

Conditions for Setting the DTC

The TCM detects attained gear slip is 100 RPM or greater 5 times during 5 samples.

Action Taken When the DTC Sets

- DTC P1751 is a Type B DTC.
- The TCM freezes transmission adaptive functions.

Conditions for Clearing the DTC

DTC P1751 is a Type B DTC.

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/System Verification

- 1). Perform the Transmission Fluid Check on page 17-102 to verify correct fluid level and condition. The transmission fluid level should be within the crosshatch band and the transmission fluid should be red or dark brown.

If the transmission fluid is low or discolored, refer to Transmission Fluid Replacement on page 17-151.

- 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 drive with the calculated throttle position greater than 8 percent and ensure the TCC is commanded ON and OFF a minimum of 5 times. The DTCs should not set.

If a DTC sets, inspect the lower control valve body for a stuck clutch select valve 2, a broken clutch select valve 2 spring, debris or damage and repair or replace as necessary.

- 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.

Repair Instructions

Important: Perform the Service Fast Learn Adapts on page 17-102 following all transmission related repairs. 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 Valve Lower Body and Upper Body Replacement on page 17-164

LAUNCH