

# P0751 or P0752 Shift Solenoid (SS) 1 Valve 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 P0751:** Shift Solenoid (SS) 1 Valve Performance – Stuck Off

**DTC P0752:** Shift Solenoid (SS) 1 Valve Performance – Stuck On

## Circuit/System Description

The shift solenoid (SS) valve 1 is part of the lower control valve body. The SS valve 1 is a normally closed (NC) solenoid valve and controls fluid to the clutch select valve 3 and related clutches. During this diagnostic test, intrusive actions are taken by the transmission control module (TCM) to test the SS valve 1 to determine if the valve is stuck OFF. When in first gear engine braking, if first gear ratio is not achieved in a predetermined period of time and the closest gear ratio detected is fourth, the TCM commands second gear and if second gear ratio is attained, this would indicate a stuck OFF SS valve 1 and the DTC sets.

## Conditions for Running the DTC

### P0751

- The commanded gear slip or attained gear slip is at least 100 RPM.
- Intrusive Neutral Test neutral time is at least 3 seconds.
- First gear locked is commanded.
- The closest gear ratio is 4th gear.

**P0752**

- Commanded gear has achieved 1st lock, 1st free-wheel, or 2nd gear.
- Commanded gear is 3rd.

**Conditions for Setting the DTC****P0751**

Commanded gear equals first lock and gear ratio equals fourth and gear box slip is less than 100 RPM for 2.25 seconds.

**P0752**

Gear box slip is greater than 100 RPM for 3 seconds.

**Action Taken When the DTC Sets**

- DTC P0751 is a Type C DTC.
- DTC P0752 is a Type A DTC.

**Conditions for Clearing the DTC**

- DTC P0751 is a Type C DTC.
- DTC P0752 is a Type A DTC.

**Reference Information****Schematic Reference**

Automatic Transmission Controls Schematics on page 17-8

**Connector End View Reference**

Component Connector End Views on page 11-211

**Description and Operation**

Transmission General Description on page 17-278

**Electrical Information Reference**

- Circuit Testing on page 11-456
- Connector Repairs on page 11-478
- Testing for Intermittent Conditions and Poor Connections on page 11-460
- Wiring Repairs on page 11-465

### 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

## Special Tools

- DT-47825 Control Solenoid Test Plate
- J 21867 Pressure Gage

## 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). Engine idling at operating temperature. Attempt to clean or free up a potential sticking valve with the scan tool Service Cleaning Procedure. Refer to Control Solenoid Valve and Transmission Control Module Assembly Cleaning on page 17-99 for further instructions.
- 3). From a stop, accelerate to 56 km/h (35 mph) with the calculated throttle position greater than 15 percent. Perform this test 2 times. The DTCs should not set.
- 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.

## Circuit/System Testing

- 1). Ignition OFF, remove the line pressure test hole plug and install the J 21867 to the transmission.
- 2). Perform the Line Pressure Check on page 17-103. Verify the transmission line pressure gage is within the range specified in the Line PC Solenoid Valve Pressure table. Refer to Solenoid Valve Pressure on page 17-6.

If not within the specified range, repair as necessary. Refer to Fluid Pressure High or Low on page 17-129 for further diagnosis.

- 3). Ignition OFF, remove the control solenoid (w/body and TCM) valve assembly.
- 4). Install the DT-47825 to the control solenoid (w/body and TCM) valve assembly. Refer to Control Solenoid Valve and Transmission Control Module Assembly Solenoid Performance Test on page 17-100 for detailed instructions.
- 5). Perform the Control Solenoid Valve and Transmission Control Module Assembly Solenoid Performance Test on page 17-100. A pressure change should occur.

If a pressure change does not occur, 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 Module References on page 6-1 for control solenoid (w/body and TCM) valve assembly replacement, setup, or programming