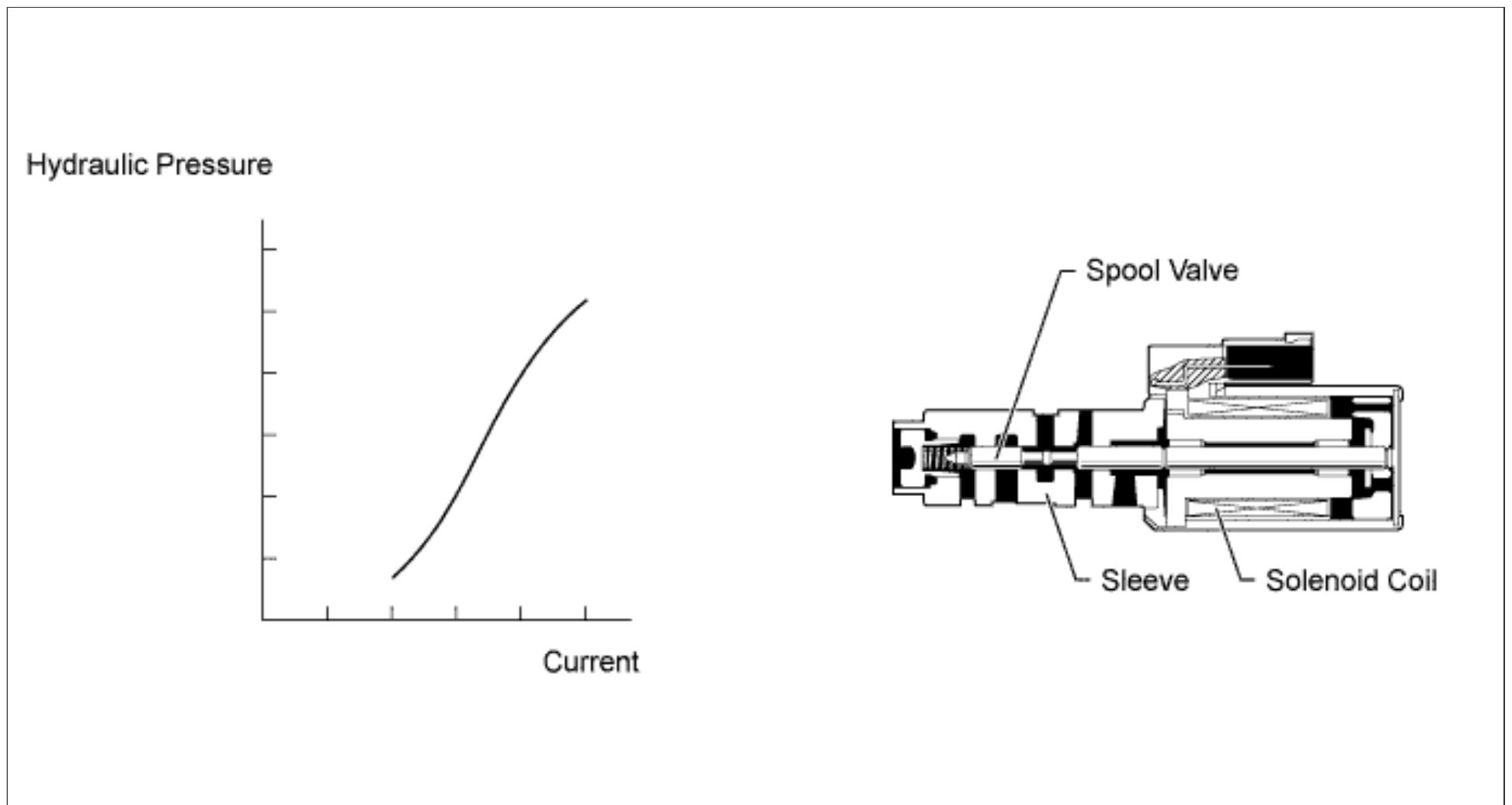


## DTC P2757 Torque Converter Clutch Pressure Control Solenoid Performance (Shift Solenoid Valve SLU)

for Preparation [Click here](#)

### DESCRIPTION

The ECM uses the signals from the throttle position sensor, air flow meter, turbine (input) speed sensor, output speed sensor and crankshaft position sensor to monitor the engagement condition of the lock-up clutch.



Then the ECM compares the engagement condition of the lock-up clutch with the lock-up schedule in the ECM memory to detect mechanical problems of shift solenoid valve SLU, the valve body and torque converter clutch.

DTC Code	DTC Detection Condition	Trouble Area
P2757	Lock-up does not occur when driving in the lock-up range (normal driving at 80 km/h (50 mph)), or lock-up remains ON in the lock-up OFF range (2-trip detection logic).	<ul style="list-style-type: none"><li>• Shift solenoid valve SLU remains open or closed</li><li>• Valve body is blocked</li><li>• Shift solenoid valve SLU</li><li>• Torque converter clutch</li><li>• Automatic transmission (clutch, brake, gear, etc.)</li><li>• Line pressure is too low</li></ul>

### MONITOR DESCRIPTION

Torque converter lock-up is controlled by the ECM based on the turbine (input) speed sensor NT, output speed sensor SP2, engine speed, engine load, engine temperature, vehicle speed, transmission temperature and gear selection. The ECM determines the lock-up status of the torque converter by comparing the engine speed (NE) to the input turbine speed (NT). The ECM calculates the actual transmission gear by comparing input turbine speed (NT) to the output shaft speed (SP2). When conditions are appropriate, the ECM requests lock-up by applying control voltage to shift solenoid SLU. When shift solenoid valve SLU is turned ON, it applies pressure to the lock-up relay valve and locks the torque converter clutch.

If the ECM detects no lock-up after lock-up has been requested or if it detects lock-up when it is not requested, the ECM interprets this as a fault in shift solenoid valve SLU or lock-up system performance.

The ECM will illuminate the MIL and store the DTC.

Example:

When one of the following conditions is met, the system determines that there is a malfunction.

- There is a difference in speed between the input side (engine speed) and output side (input turbine speed) of the torque converter when the ECM commands lock-up ON.  
The engine speed is at least 70 rpm more than the input turbine speed.
- There is no difference in rotation between the input side (engine speed) and output side (input turbine speed) of the torque converter when the ECM commands lock-up OFF.  
The difference between the engine speed and input turbine speed is less than 35 rpm.

### INSPECTION PROCEDURE

#### ACTIVE TEST

#### HINT:

Using the intelligent tester to perform Active Tests allows relays, VSVs, actuators and other items to be operated without removing any parts. This non-intrusive functional inspection can be very useful because intermittent operation may be discovered before parts or wiring is disturbed. Performing Active Tests early in troubleshooting is one way to save diagnostic time. Data List information can be displayed while performing Active Tests.

- a. Warm up the engine.
- b. Turn the engine switch off.

- c. Connect the intelligent tester to the DLC3.
- d. Turn the engine switch on (IG).
- e. Turn the intelligent tester on.
- f. Enter the following menus: Powertrain / Engine and ECT / Active Test.
- g. According to the display on the tester, perform the Active Test.

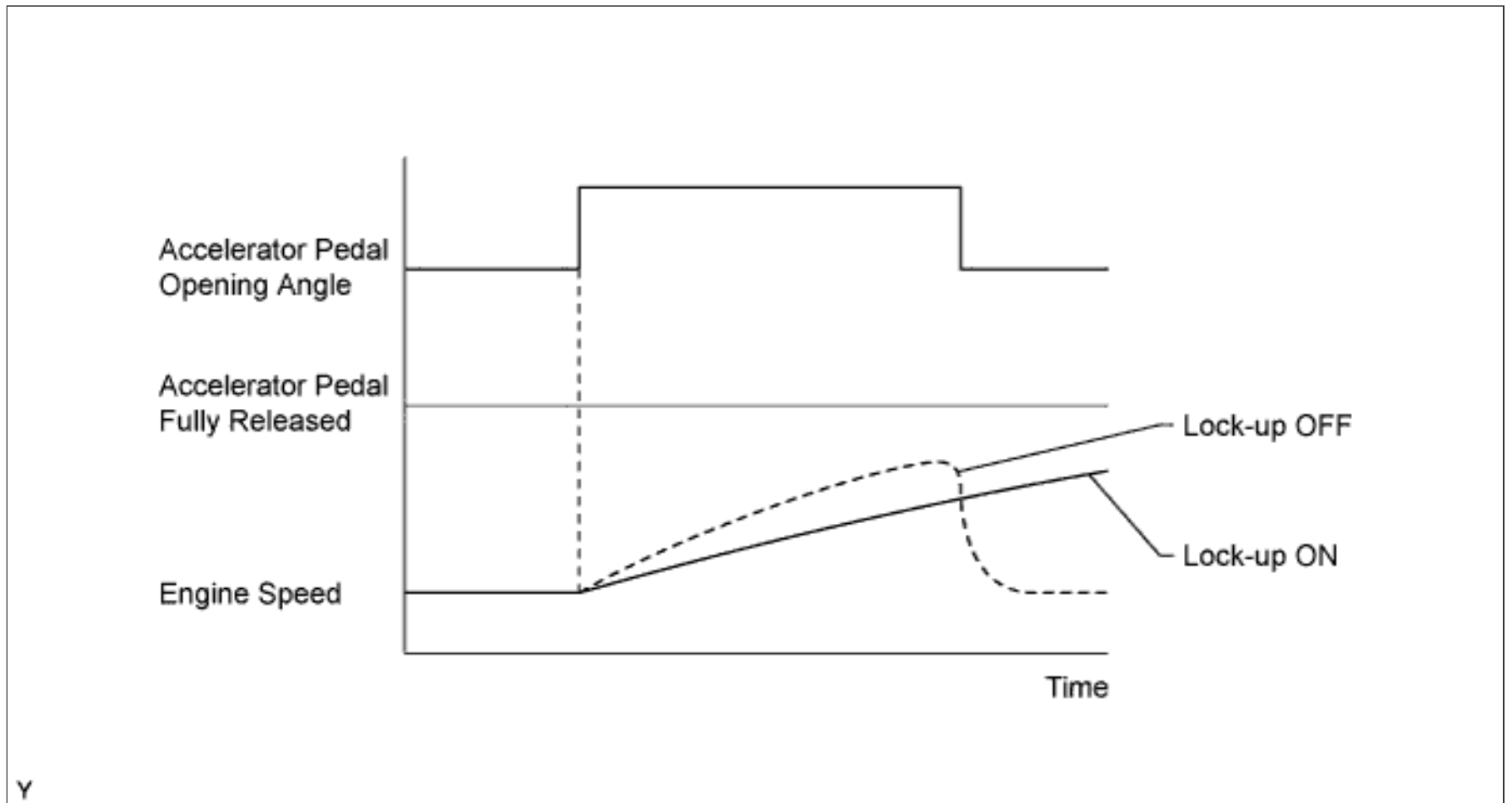
**Engine and ECT**

Tester Display	Test Part	Control Range	Diagnostic Note
Activate the Lock Up	Control shift solenoid valve SLU to set automatic transmission to lock-up	ON or OFF	Possible to check shift solenoid valve SLU operation. [Vehicle Condition] <ul style="list-style-type: none"> <li>• Throttle valve opening angle: Less than 35%</li> <li>• Vehicle speed: 60 km/h (36 mph) or more</li> </ul>

**HINT:**

- This test can be conducted when the vehicle speed is 60 km/h (36 mph) or more.
- Perform this test while driving in 5th or 6th gear.

- h. Lightly depress the accelerator pedal and check that the engine speed does not change abruptly.



**HINT:**

- When depressing the accelerator pedal while driving, if the engine speed does not change rapidly, lock-up is on.
- Slowly release the accelerator pedal in order to decelerate, but do not fully release the pedal. (Fully releasing the pedal will close the throttle valve and lock-up may be turned off automatically.)

**1.CHECK DTC OUTPUT (IN ADDITION TO DTC P2757)**

- a. Connect the intelligent tester to the DLC3.
- b. Turn the engine switch on (IG).
- c. Turn the intelligent tester on.
- d. Enter the following menus: Powertrain / Engine and ECT / DTC.
- e. Read the DTCs using the tester.

**Result**

Result	Proceed to
Only P2757 is output	A
P2757 and other DTCs are output	B

**HINT:**

If any other codes besides P2757 are output, perform troubleshooting for those DTCs first.

GO TO DTC CHART ([Click here](#))

A

## 2.INSPECT SHIFT SOLENOID VALVE SLU

- a. Remove shift solenoid valve SLU.
- b. Measure the resistance according to the value(s) in the table below.

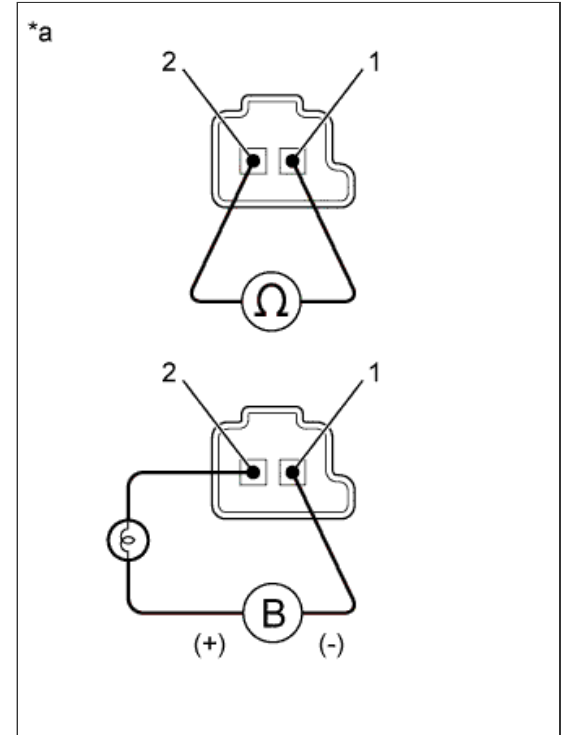
### Standard Resistance:

Tester Connection	Condition	Specified Condition
1 - 2	20°C (68°F)	5.0 to 5.6 Ω

- c. Apply 12 V battery voltage to the shift solenoid valve and check that the valve moves and makes an operating noise.

### OK:

Measurement Condition	Specified Condition
<ul style="list-style-type: none"> <li>• Battery positive (+) with a 21 W bulb → Terminal 2</li> <li>• Battery negative (-) → Terminal 1</li> </ul>	Valve moves and makes an operating noise



### Text in Illustration

*a	Component without harness connected (Shift Solenoid Valve SLU)
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NG

REPLACE SHIFT SOLENOID VALVE SLU ([Click here](#))

OK

## 3.INSPECT TRANSMISSION VALVE BODY ASSEMBLY

- a. Check the transmission valve body assembly.

### OK:

There are no foreign objects on each valve.

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REPLACE TRANSMISSION VALVE BODY ASSEMBLY ([Click here](#))

OK

## 4.INSPECT TORQUE CONVERTER CLUTCH ASSEMBLY

- a. Check the torque converter clutch assembly ([Click here](#)).

### OK:

The torque converter clutch operates normally.

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REPLACE TORQUE CONVERTER CLUTCH ASSEMBLY ([Click here](#))

OK

REPAIR OR REPLACE AUTOMATIC TRANSMISSION ASSEMBLY ([Click here](#))

