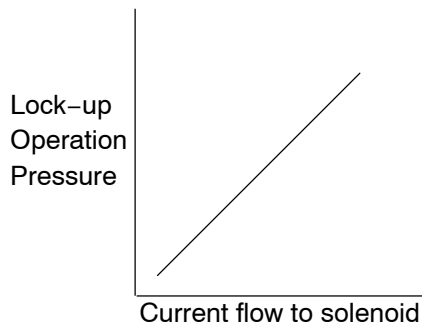


DTC	P2759	Torque Converter Clutch Pressure Control Solenoid Control Circuit Electrical(Shift Solenoid Valve SLU)
------------	--------------	---

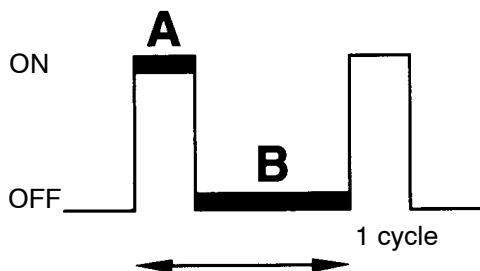


CIRCUIT DESCRIPTION

The amount of current flow to the solenoid is controlled by the (*) duty ratio of the ECM output signal. The higher the duty ratio becomes, the higher the lock-up hydraulic pressure becomes during the lock-up operation.

(*) Duty Ratio

The duty ratio is the ratio of the period of continuity in one cycle. For example, if A is the period of continuity in one cycle, and B is the period of non-continuity, then



(*)

$$\text{Duty Ratio} = \frac{A}{A + B} \times 100 (\%)$$

BE4056

D00160

DTC No.	DTC detection condition	Trouble Area
P2759	The following condition is detected. (1-trip detection logic) SLU output signal's duty ON of 3.3 msec. or more with duty ratio of least 95% lasts for 1 second.	• Open or short in shift solenoid valve SLU circuit • Shift solenoid valve SLU • ECM

MONITOR DESCRIPTION

The ECM controls the oil pressure to the lock-up clutch based on engine-load information from the throttle position sensor, crankshaft position sensor, input speed sensor, and the oil pressure sensor for shift-solenoid SLU. The ECM commands the shift-solenoid SLU using a duty-cycle control signal. In turn, the shift solenoid operates the lock-up control valve and cause lock-up or flexible lock-up of the torque converter clutch. The ECM illuminates the MIL and store the DTC when ECM detects an open or a short circuit malfunction in the shift solenoid valve SLU.

MONITOR STRATEGY

Related DTCs	P2759	Shift solenoid valve SLU/Range check
Required sensors/Components	Shift solenoid valve SLU	
Frequency of operation	Continuous	
Duration	1 sec.	
MIL operation	Immediate	
Sequence of operation	None	

Item	Specification	
	Minimum	Maximum
The monitor will run whenever the following DTCs are not present.	See page DI-369	
Solenoid current cut status	Not cut	
CPU commanded duty	19% or less	–
Battery voltage	11 V or more	–
Ignition switch	ON	
Starter	OFF	

Detection criteria	Threshold
Solenoid status from MIC	Fail

Parameter	Standard value
Output signal duty	Less than 100%

E1
Electronically Controlled
Transmission Solenoid

Diagram illustrating the wiring for the Electronically Controlled Transmission Solenoid (E1) connected to the ECM.

The solenoid assembly (E1) contains two solenoids: LG (Learner Gear) and BR (Brake Release).

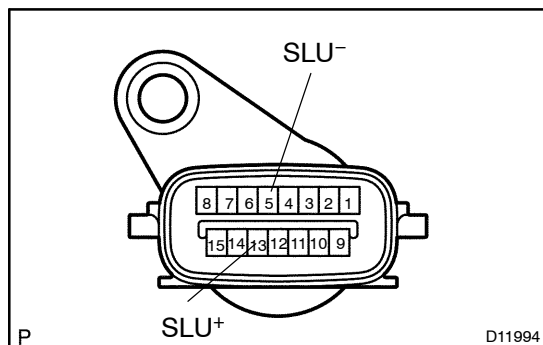
The wiring connections are as follows:

- SLU+ (13):** Connected to the LG solenoid and the ECM terminal 16 (SLU+).
- SLU- (5):** Connected to the BR solenoid and the ECM terminal 15 (SLU-).
- EB2 (2):** Connected to the LG solenoid and the ECM terminal 16 (SLU+).
- EB3 (3):** Connected to the BR solenoid and the ECM terminal 15 (SLU-).

The ECM (Electronic Control Module) is shown with terminals 16 (SLU+) and 15 (SLU-).

INSPECTION PROCEDURE

1 Check transmission wire.

**PREPARATION:**

Disconnect the transmission wire connector.

CHECK:

Measure resistance between SLU⁺ and SLU⁻ of transmission wire.

OK:

Resistance: 5.0 to 5.6 Ω at 20°C (68°F)

CHECK:

Measure resistance between terminals SLU⁺ and SLU⁻ of the transmission wire connector and body ground.

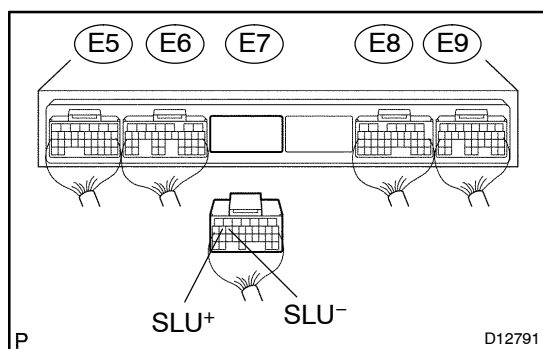
OK:

Resistance: 1 M Ω or higher

NG

Go to step 3.

OK

2 Measure resistance between terminal SLU⁺ and SLU⁻ of ECM connector.**PREPARATION:**

(a) Connect the transmission wire connector.

(b) Disconnect the connector of the ECM.

CHECK:

Measure resistance between terminals SLU⁺ and SLU⁻ of ECM connector.

OK:

Resistance: 5.0 to 5.6 Ω at 20°C (68°F)

CHECK:

Measure resistance between terminals SLU⁺ and SLU⁻ of the ECM connector and body ground.

OK:

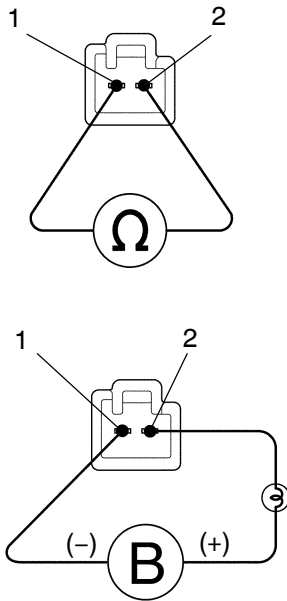
Resistance: 1 M Ω or higher

NG

Repair or replace the harness or connector (See page [IN-36](#)).

OK

Check and replace the ECM (See page [IN-36](#)).

3**Check shift solenoid valve SLU.**

D12795

PREPARATION:

- (a) Jack up the vehicle.
- (b) Remove the oil pan.
- (c) Remove the shift solenoid valve SLU.

CHECK:

- (a) Measure the resistance between terminals 1 and 2 of solenoid connector.

Standard: 5.0 to 5.6 Ω at 20°C (68°F)

- (b) Connect the positive (+) lead with an 21 W bulb to terminal 2 of solenoid connector and negative (-) lead to terminal 1 of the solenoid valve connector, then check the movement of the valve.

Standard: Solenoid sounds operation noise.**OK:****Standard****NG****Replace the shift solenoid valve SLU
(See page [AT-8](#)).****OK****Repair or replace the transmission wire
(See page [AT-6](#)).**