DTC P0778 Pressure Control Solenoid "B" Electrical (Shift Solenoid Valve SL2)

for Preparation Click here

DESCRIPTION

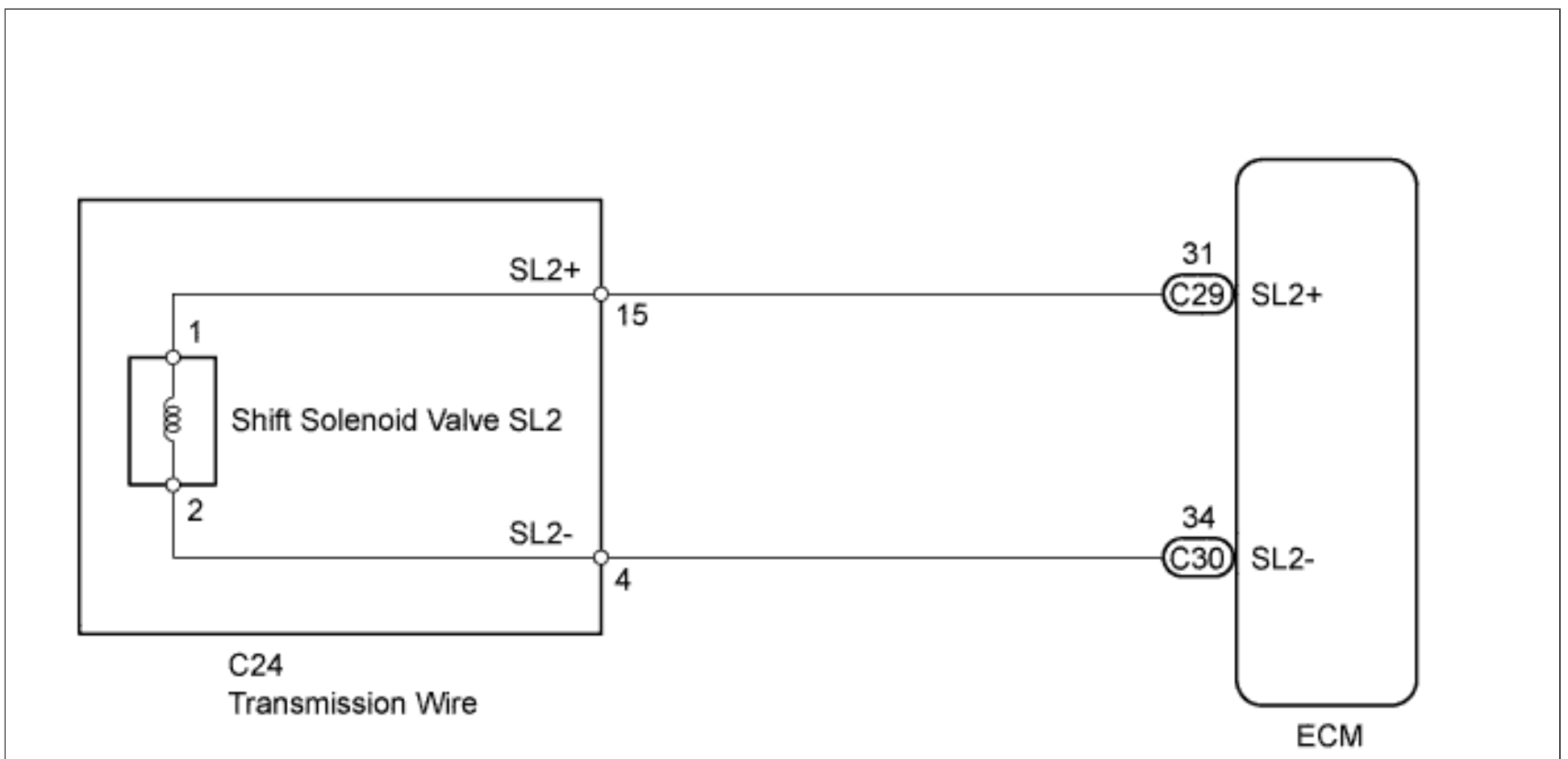
Shifting from 1st to 6th is performed in combination with the ON and OFF operation of shift solenoid valves SL1, SL2, S1, S2, S3, S4 and SR, which are controlled by the ECM. If an open or short circuit occurs in the shift solenoid valves, the ECM controls the remaining normal shift solenoid valves to allow the vehicle to be operated safely (Click here).

DTC Code	DTC Detection Condition	Trouble Area
P0778	The ECM checks for an open or short in the shift solenoid valve SL2 circuit while driving and shifting gears (1-trip detection logic). Output signal duty equals 100%. **HINT:** SL2 output signal duty is less than 100% under normal conditions.	• Open or short in shift solenoid valve SL2 circuit • Shift solenoid valve SL2 • ECM

MONITOR DESCRIPTION

This DTC indicates an open or short in the shift solenoid valve SL2 circuit. The ECM commands gear shifts by turning the shift solenoid valves ON/OFF. When there is an open or short circuit in any shift solenoid valve circuit, the ECM detects the problem, illuminates the MIL and stores the DTC. Also, the ECM performs the fail-safe function and turns the other normal shift solenoid valves ON/OFF. In case of an open or short circuit, the ECM stops sending current to the open or short-circuited solenoid.
While driving and shifting gears, if the ECM detects an open or short in the shift solenoid valve SL2 circuit, the ECM determines there is a malfunction (Click here).

WIRING DIAGRAM



INSPECTION PROCEDURE

HINT:

Shift solenoid valve SL2 is turned ON/OFF normally when the shift lever is in D:

ECM gear shift command	1st	2nd	3rd	4th	5th	6th
Shift solenoid valve SL2	ON	ON	ON	ON	OFF	OFF

1.INSPECT TRANSMISSION WIRE (SHIFT SOLENOID VALVE SL2)

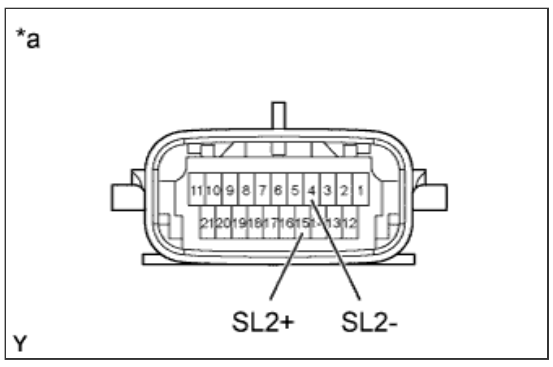
a. Disconnect the C24 transmission wire connector.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Condition	Specified

		Condition
15 (SL2+) - 4 (SL2-)	20°C (68°F)	5.0 to 5.6 Ω
15 (SL2+) - Body ground	Always	10 kΩ or higher
4 (SL2-) - Body ground	Always	10 kΩ or higher



Text in Illustration

*a	Component without harness connected (Transmission Wire)

NG → Go to step 3

OK

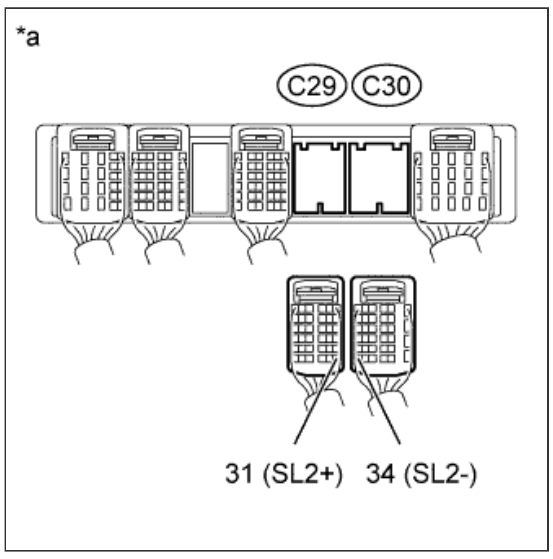
2.CHECK HARNESS AND CONNECTOR (TRANSMISSION WIRE - ECM)

a. Disconnect the C29 and C30 ECM connectors.

b. Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Condition	Specified Condition
C29-31 (SL2+) - C30-34 (SL2-)	20°C (68°F)	5.0 to 5.6 Ω
C29-31 (SL2+) - Body ground	Always	10 kΩ or higher
C30-34 (SL2-) - Body ground	Always	10 kΩ or higher



Text in Illustration

*a	Front view of wire harness connector (to ECM)

NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE ECM (Click here)

3.INSPECT SHIFT SOLENOID VALVE SL2

a. Remove shift solenoid valve SL2.

b. Measure the resistance according to the value(s) in the table below.

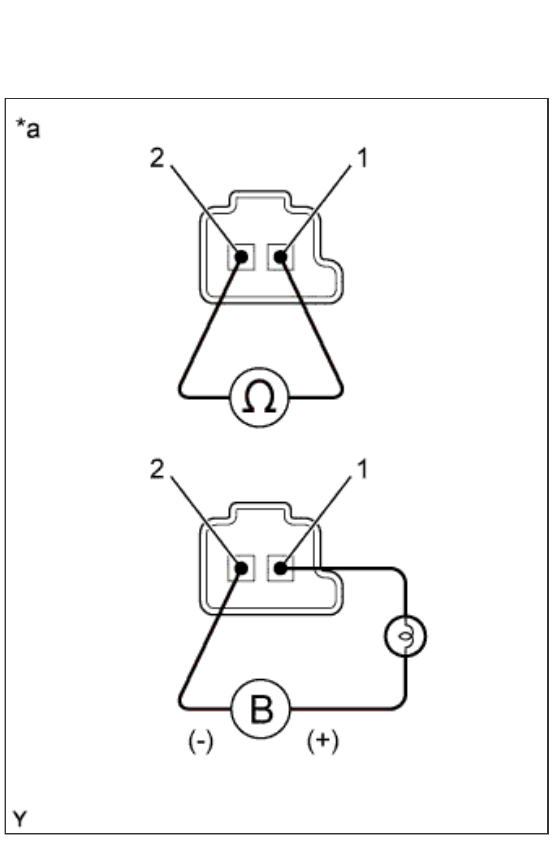
Standard Resistance:

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
• Battery positive (+) with a 21 W bulb → Terminal 1 • Battery negative (-) → Terminal 2	Valve moves and makes an operating noise



Text in Illustration

*a	Component without harness connected (Shift Solenoid Valve SL2)

NG → REPLACE SHIFT SOLENOID VALVE SL2 (Click here)

OK

REPAIR OR REPLACE TRANSMISSION WIRE (Click here)