

DTC	P0748	Pressure Control Solenoid "A" Electrical (Shift Solenoid Valve SL1)
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DESCRIPTION

Shifting from 1st to 5th is performed in combination with the ON and OFF operations of the shift solenoid valves S1, S2, SR, SL1 and SL2 which are controlled by the ECM. If an open or short circuit occurs in any of the shift solenoid valves, the ECM controls the remaining normal shift solenoid valves to allow the vehicle to be driven smoothly (See page [AT-34](#)).

DTC No.	DTC Detection Conditions	Trouble Areas
P0748	The ECM checks for an open or short in the shift solenoid valve SL1 circuit. (1-trip detection logic) <ul style="list-style-type: none"> • Output signal duty equals to 100 %. (NOTE: SL1 output signal duty is less than 100 % under normal condition.) 	<ul style="list-style-type: none"> • Open or short in shift solenoid valve SL1 circuit • Shift solenoid valve SL1 • ECM

MONITOR DESCRIPTION

This DTC indicates an open or short in the shift solenoid valve SL1 circuit. The ECM controls the gearshift 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. And the ECM performs the fail-safe function and turns the other functioning shift solenoid valves "ON/OFF". (If an open or short circuit is detected, the ECM cuts the current to the circuit.)

If the ECM detects an open or short in the shift solenoid valve SL1 circuit, the ECM determines that there is a malfunction (See page [AT-34](#)).

MONITOR STRATEGY

Related DTCs	P0748 : Shift solenoid valve SL1/Range check
Required sensors/Components	Shift solenoid valve SL1
Frequency of operation	Continuous
Duration	1 second
MIL operation	Immediate
Sequence of operation	None

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TYPICAL ENABLING CONDITIONS

The monitor will run whenever the following DTCs are not present.	None
Battery voltage	10 V or more
CPU commanded duty	Less than 75 %
Ignition switch	ON
Starter	OFF

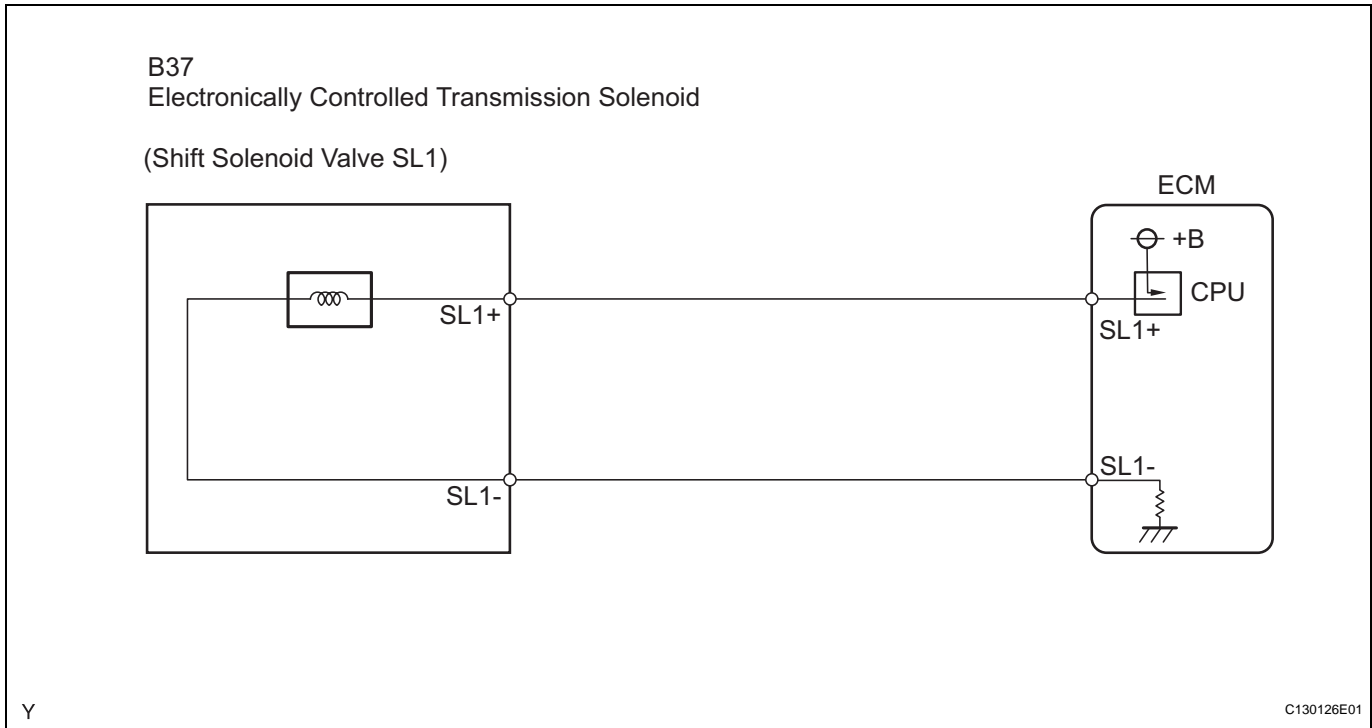
TYPICAL MALFUNCTION THRESHOLDS

Output signal duty	100 %
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COMPONENT OPERATING RANGE

Output signal duty	Less than 100 %
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WIRING DIAGRAM



INSPECTION PROCEDURE

HINT:

The shift solenoid valve SL1 is turned on/off normally when the shift lever is in the D position:

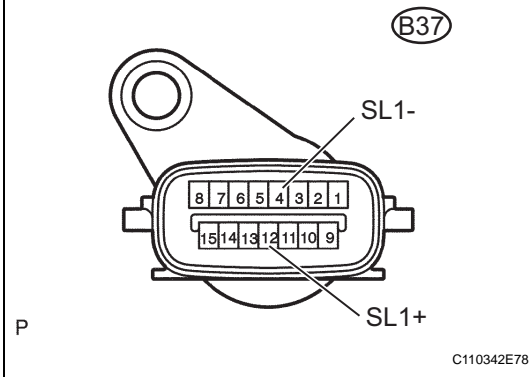
Gearshift controlled by ECM	1st	2nd	3rd	4th	5th
Shift solenoid valve SL1	OFF	OFF	OFF	OFF	ON

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1 INSPECT TRANSMISSION WIRE (SL1)

Transmission Wire Side:

(Connector Front View):



(a) Disconnect the transmission wire connector from the transmission.

(b) Measure the resistance.

Standard resistance

Tester Connection	Specified Condition
12 (SL1+) - 4 (SL1-)	5.0 to 5.6 Ω at 20°C (68°F)

(c) Measure the resistance.

Standard resistance (Check for short)

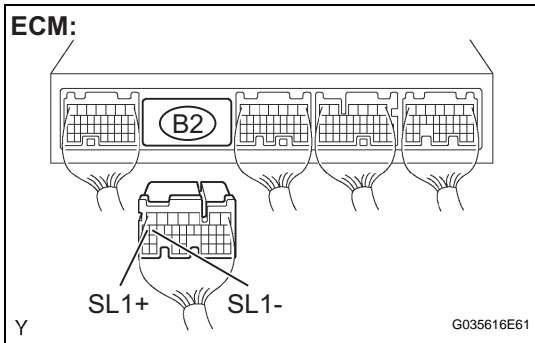
Tester Connection	Specified Condition
12 (SL1+) - Body ground	10 kΩ or higher
4 (SL1-) - Body ground	10 kΩ or higher

NG

Go to step 3

OK

2 CHECK HARNESS AND CONNECTOR (TRANSMISSION WIRE - ECM)



- (a) Connect the transmission connector to the transmission.
- (b) Disconnect the connector from the ECM.
- (c) Measure the resistance.

Standard resistance

Tester Connection	Specified Condition
B2-19 (SL1+) - B2-18 (SL1-)	5.0 to 5.6 Ω at 20°C (68°F)

- (d) Measure the resistance.

Standard resistance (Check for short)

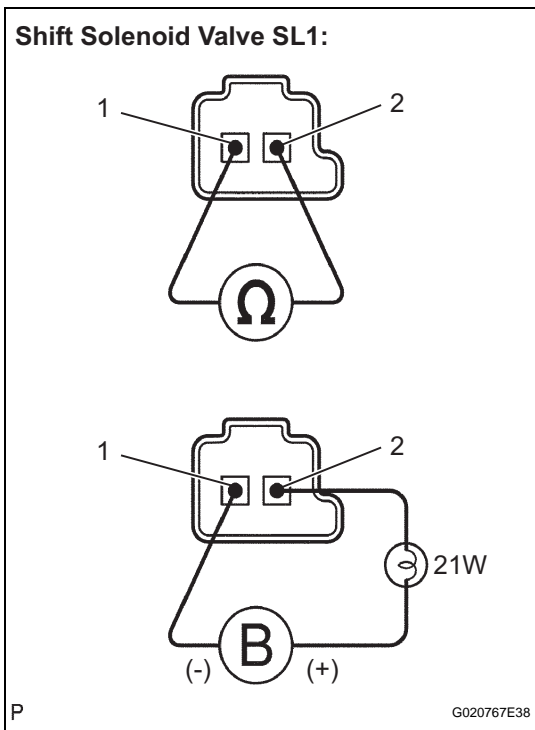
Tester Connection	Specified Condition
B2-19 (SL1+) - Body ground	10 kΩ or higher
B2-18 (SL1-) - Body ground	10 kΩ or higher

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

REPLACE ECM

3 INSPECT SHIFT SOLENOID VALVE SL1



- (a) Remove the shift solenoid valve SL1.
- (b) Measure the resistance.

Standard resistance

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

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

OK:

The solenoid makes operating sounds.

NG → **REPLACE SHIFT SOLENOID VALVE SL1**

OK

REPAIR OR REPLACE TRANSMISSION WIRE