DTC	P0976	SHIFT SOLENOID "B" CONTROL CIRCUIT LOW (SHIFT SOLENOID VALVE S2)

DTC	P0977	SHIFT SOLENOID "B" CONTROL CIRCUIT HIGH (SHIFT SOLENOID VALVE S2)

CIRCUIT DESCRIPTION

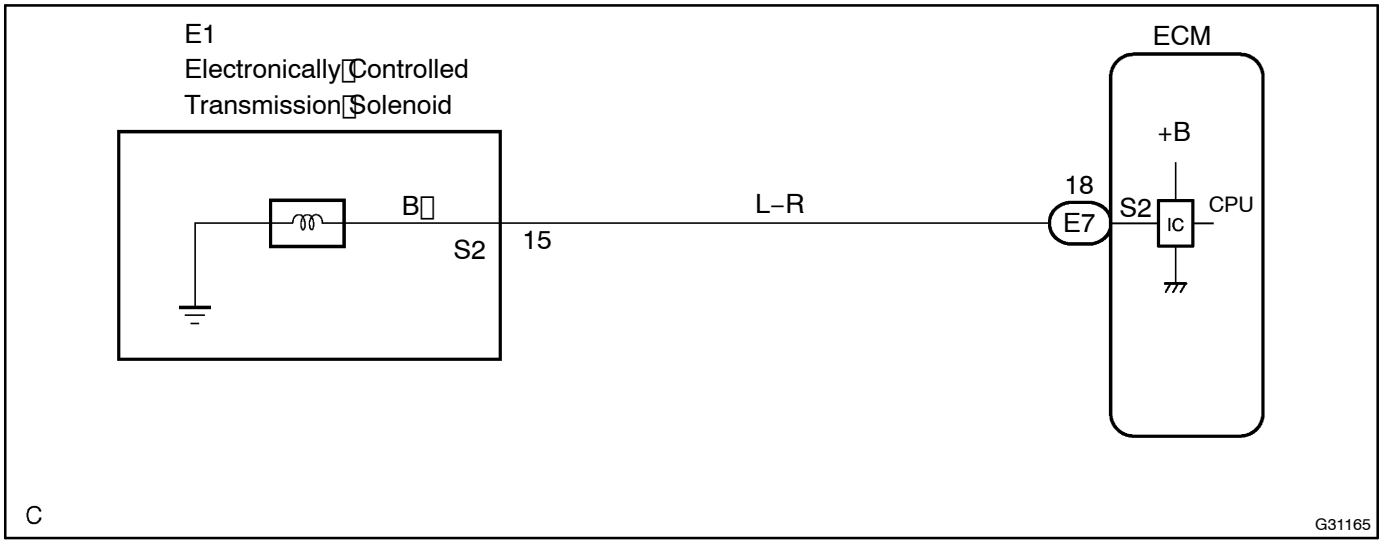
Shifting from 1st to 6th is performed in combination with "ON" and "OFF" operation of the shift solenoid valves SL1, SL2, S1, S2, S3, S4 and SR, which is controlled by the ECM. If an open or short circuit occurs in either of the shift solenoid valves, the ECM controls the remaining normal shift solenoid valve to allow the vehicle to be operated smoothly. (In case of an open or short circuit, the ECM stops sending current to the circuit.)
Fail safe function (see page 05–553).

DTC No.	DTC Detection Condition	Trouble Area
P0976	ECM detects short in solenoid valve S2 circuit 2 times when solenoid valve S2 is operated (1–trip detection logic)	• Short in shift solenoid valve S2 circuit • Shift solenoid valve S2 • ECM
P0977	ECM detects open in solenoid valve S2 circuit 2 times when solenoid valve S2 is not operated (1–trip detection logic)	• Open in shift solenoid valve S2 circuit • Shift solenoid valve S2 • ECM

MONITOR DESCRIPTION

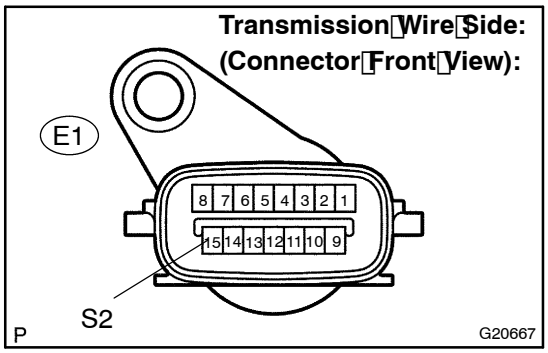
These DTCs indicate an open or short in the shift solenoid valve S2 circuit. When there is an open or short circuit in any shift solenoid valve circuit, the ECM detects the problem and illuminates the MIL and stores the DTC. When the shift solenoid valve S2 is on, if resistance is 8 Ω or less, the ECM determines there is a short in the shift solenoid valve S2 circuit.
When the shift solenoid valve S2 is off, if resistance is 100 kΩ or more, the ECM determines there is an open in the shift solenoid valve S2 circuit (see page 05–553).

WIRING DIAGRAM



INSPECTION PROCEDURE

1 INSPECT TRANSMISSION WIRE(S2)



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

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

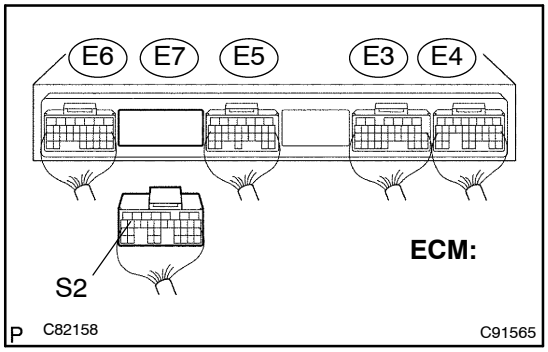
Standard:

Tester Connection	Specified Condition 20°C (68°F)
15 – Body ground	11 to 15 Ω

NG → Go to step 3

OK

2 CHECK HARNESS AND CONNECTOR(TRANSMISSION WIRE – ECM)



(a) Connect the transmission connector to the transaxle.

(b) Disconnect the connector from the ECM.

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

Standard:

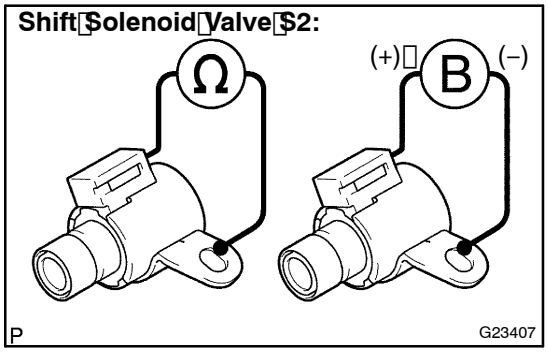
Tester Connection	Specified Condition 20°C (68°F)
E7 – 18 (S2) – Body ground	11 to 15 Ω

NG → REPAIR OR REPLACE HARNESS OR CONNECTOR (SEE PAGE 01–44)

OK

REPLACE ECM (SEE PAGE 10–21)

3	INSPECT SHIFT SOLENOID VALVE (S2)



(a) Remove the shift solenoid valve S2.

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

Standard:

Tester Connection	Specified Condition 20°C (68°F)
Solenoid Connector (S2) – Solenoid Body (S2)	11 to 15 Ω

(c) Connect positive (+) lead to the terminal of solenoid connector, negative (–) lead to the solenoid body.

OK:

The solenoid makes an operating noise.

NG → **REPLACE SHIFT SOLENOID VALVE (S2)**

OK

REPAIR OR REPLACE TRANSMISSION WIRE (SEE PAGE 40–28)