DTC	P2769/64	TORQUE CONVERTER CLUTCH SOLENOID CIRCUIT LOW (SHIFT SOLENOID VALVE SL)

DTC	P2770/64	TORQUE CONVERTER CLUTCH SOLENOID CIRCUIT HIGH (SHIFT SOLENOID VALVE SL)

CIRCUIT DESCRIPTION

The shift solenoid valve SL is turned ”ON” and ”OFF” by signals from the ECM in order to control the hydraulic pressure operation, the lock–up relay valve, which then the controls operation of the lock–up clutch.

DTC No.	DTC Detection Condition	Trouble Area
P2769/64	ECM detects short in solenoid valve SL circuit 1 time when solenoid valve SL is operated (1*1 or 2*2–trip detection logic)	• Short in shift solenoid valve SL circuit • Shift solenoid valve SL • ECM
P2770/64	ECM detects open in solenoid valve SL circuit 1 time when solenoid valve SL is not operated (1*1 or 2*2–trip detection logic)	• Open in shift solenoid valve SL circuit • Shift solenoid valve SL • ECM

HINT:

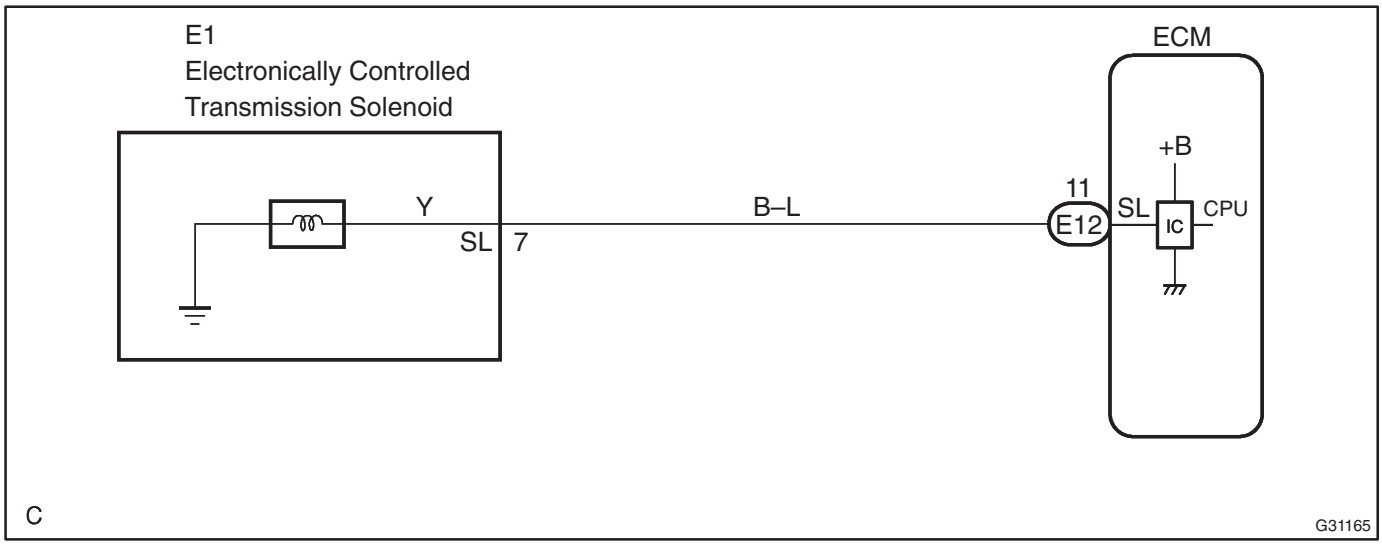
*1: Except *2

*2: Europe and Australia

MONITOR DESCRIPTION

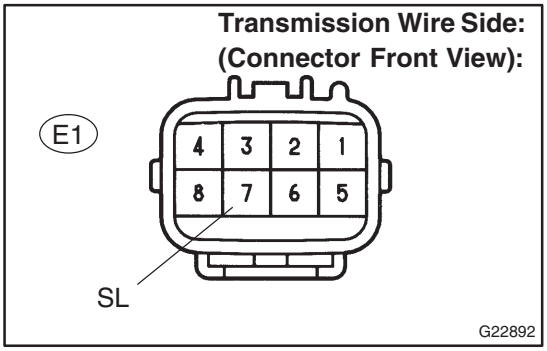
Based on the signals from the Throttle Position Sensor, the Airflow Meter and the Crankshaft Position Sensor, the ECM sends a signal to the SL Solenoid Valve to regulate the hydraulic pressure and provide smoother gearshifts. The shift–solenoid valve SL responds to commands from the ECM. The valve controls the lock–up relay valve to perform the torque–converter lock–up function. If the ECM detects an open or short circuit for shift–solenoid SL, it will illuminate the MIL.

WIRING DIAGRAM



INSPECTION PROCEDURE

1 INSPECT TRANSMISSION WIRE(SL)



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

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

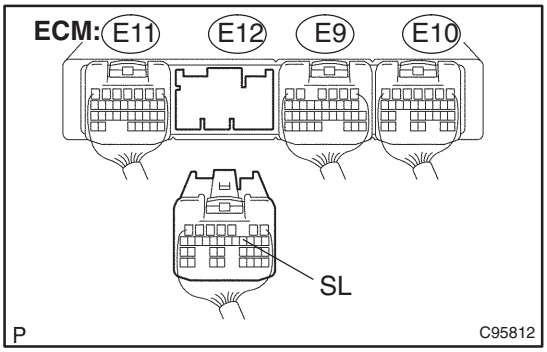
Standard:

Tester Connection	Specified Condition 20°C (68°F)
7 – 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 transmission.

(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)
E12 – 11 (SL) – Body ground	11 to 15 Ω

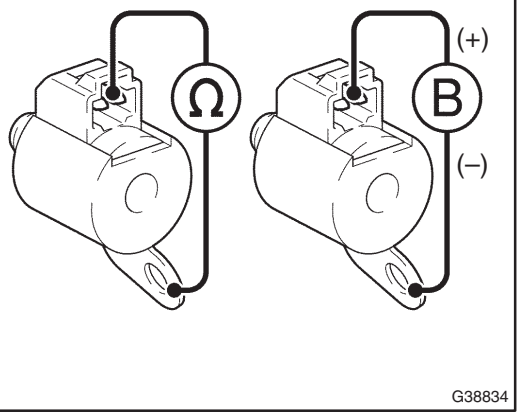
NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR (SEE PAGE 01–36)**

OK

REPLACE ECM (SEE PAGE 10–12)

3 INSPECT SHIFT SOLENOID VALVE(SL)

Shift Solenoid Valve SL:



(a) Remove the shift solenoid valve SL.

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

Standard:

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

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

OK:

The solenoid makes an operating sound.

NG → **REPLACE SHIFT SOLENOID VALVE(SL) (See Pub. No. RM1017E, page 40–20)**

OK

REPAIR OR REPLACE TRANSMISSION WIRE (See Pub. No. RM1017E, page 40–17)