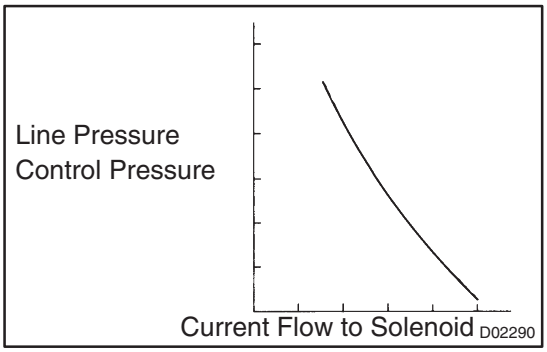
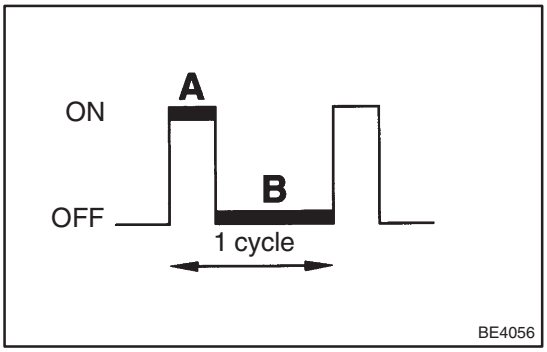
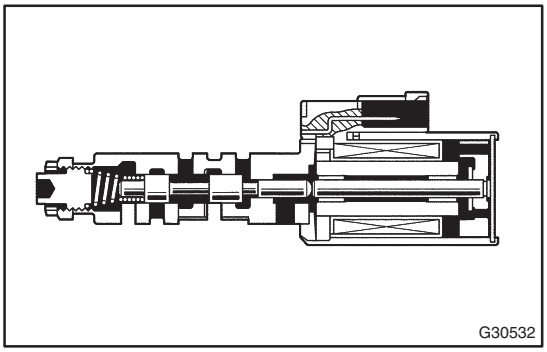
DTC	P2716/77	PRESSURE CONTROL SOLENOID ”D” ELECTRICAL (SHIFT SOLENOID SLT)







CIRCUIT DESCRIPTION

The linear solenoid valve (SLT) controls the transmission line pressure for smooth transmission operation based on signals from the throttle position sensor and the vehicle speed sensor. The ECM adjusts the duty cycle of the SLT solenoid valve to control hydraulic line pressure coming from the primary regulator valve. Appropriate line pressure assures smooth shifting with varying engine outputs.

(*): 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

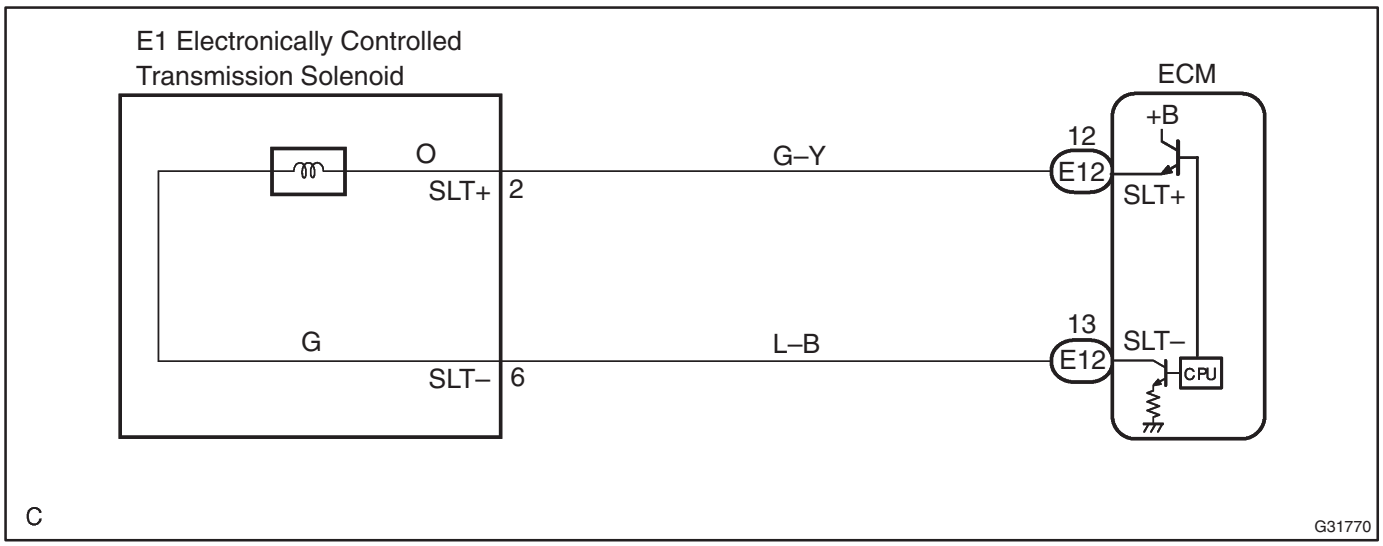
Duty Ratio = A/(A + B) x 100 (%)

DTC No.	DTC Detection Condition	Trouble Area
P2716/77	Open or short is detected in shift solenoid valve SLT circuit for 1 second or more while driving (1–trip detection logic).	• Open or short in shift solenoid valve SLT circuit • Shift solenoid valve SLT • ECM

MONITOR DESCRIPTION

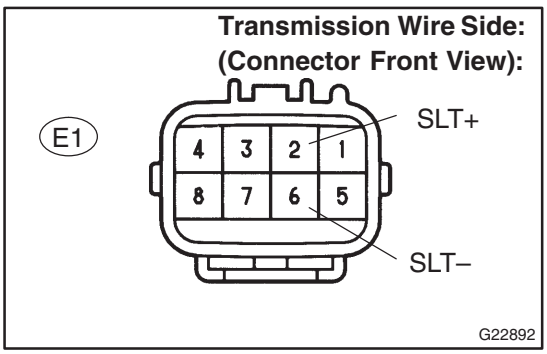
When an open or short in the linear solenoid valve (SLT) circuit is detected, the ECM interprets this as a fault. The ECM will turn on the MIL and store the DTC.

WIRING DIAGRAM



INSPECTION PROCEDURE

1	INSPECT TRANSMISSION WIRE(SLT)



(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)
2 (SLT+) – 6 (SLT–)	5.0 to 5.6 Ω

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

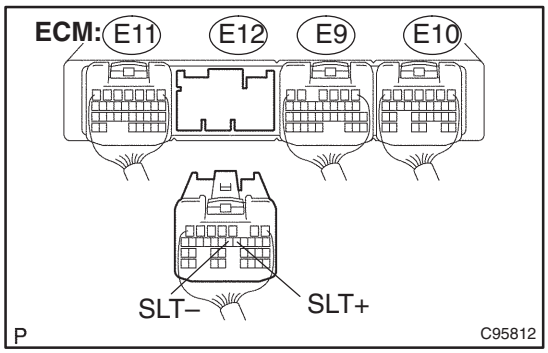
Standard (Check for short):

Tester Connection	Specified Condition
2 (SLT+) – Body ground	10 kΩ or higher
6 (SLT–) – Body ground	↑

NG → **Go to step 3**

OK

2 CHECK HARNESS AND CONNECTOR(TRANSMISSION WIRE – ECM)



(a) Connect the transmission wire connector to the transmission.

(b) Disconnect the ECM connector.

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

Standard:

Tester Connection	Specified Condition 20°C (68°F)
E12 – 12 (SLT+) – E12 – 13 (SLT–)	5.0 to 5.6 Ω

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

Standard (Check for short):

Tester Connection	Specified Condition
E12 – 12 (SLT+) – Body ground	10 kΩ or higher
E12 – 13 (SLT–) – Body ground	↑

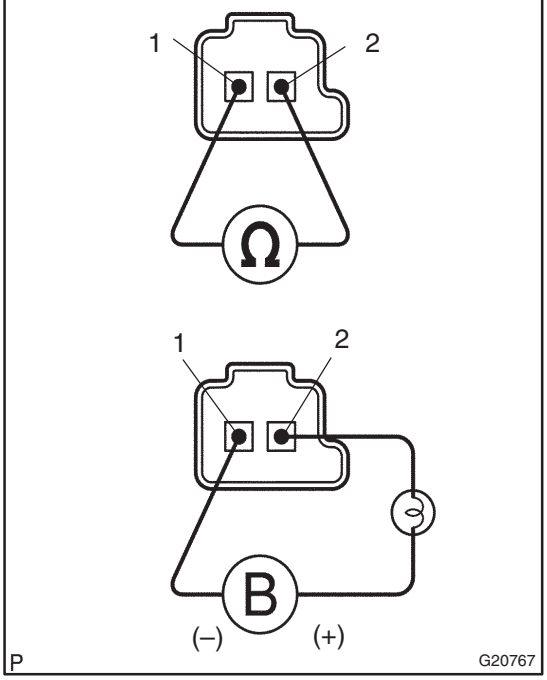
NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR (SEE PAGE 01–36)**

OK

REPLACE ECM (SEE PAGE 10–12)

3 INSPECT SHIFT SOLENOID VALVE(SLT)

Shift Solenoid Valve SLT:



(a) Remove the shift solenoid valve (SLT).

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

Standard:

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

(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 an operating sound.

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

OK

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