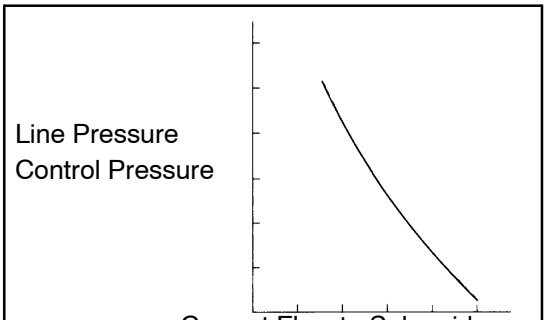
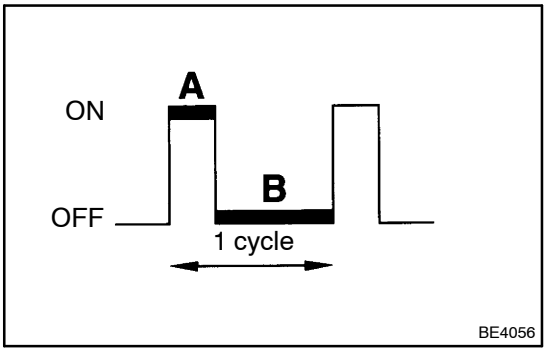
DTC	P2716/77	PRESSURE CONTROL SOLENOID ”D” ELECTRICAL (SHIFT SOLENOID SLT)





CIRCUIT DESCRIPTION

The throttle pressure that is applied to the primary regulator valve (which modulates the line pressure) causes the solenoid valve SLT, under electronic control, to precisely and minutely modulate and generate the line pressure according the extent of the accelerator pedal depressed or the output of engine power.

This controls the line pressure and provides smooth shifting characteristics.

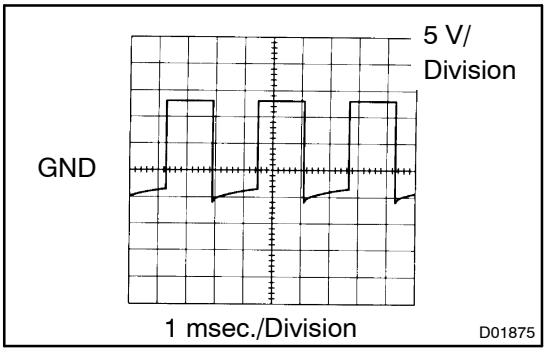
Upon receiving a signal of the throttle valve opening angle, the ECM controls the line pressure by sending a predetermined (*) duty ratio to the solenoid valve, modulating the line pressure and generating throttle pressure.

(*): 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 (%)

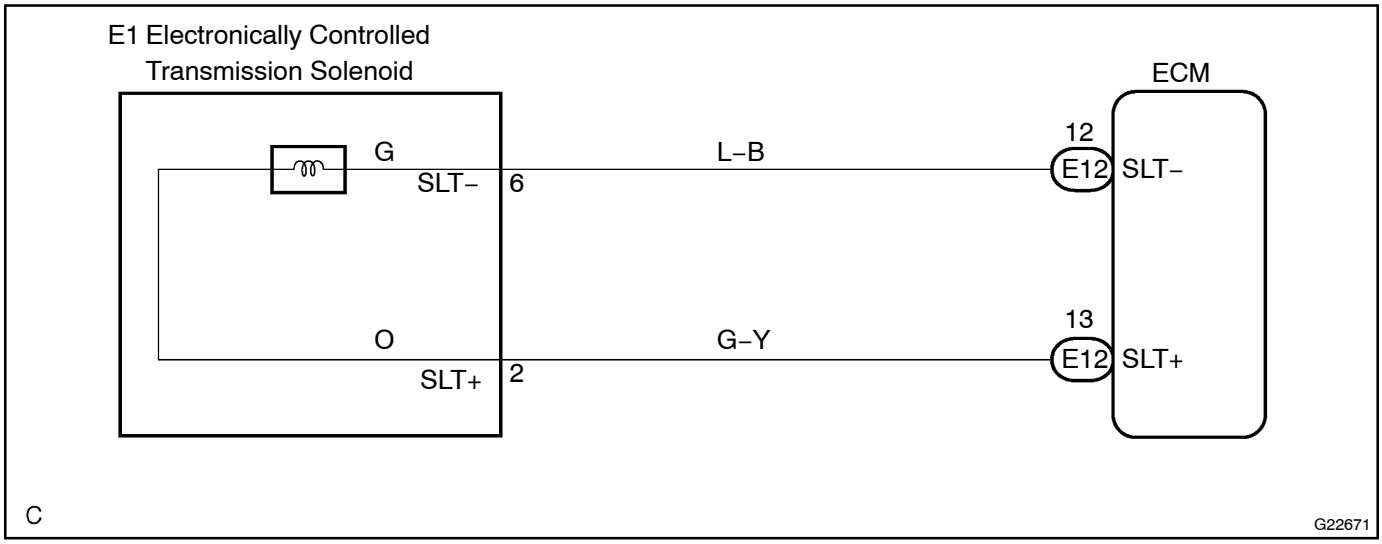
DTC No.	DTC Detection Condition	Trouble Area
P2716/77	ECM detects solenoid SLT circuit malfunction for 1 sec. or more (1–trip detection logic)	• Open or short in shift solenoid valve SLT circuit • Shift solenoid valve SLT • ECM



Reference:

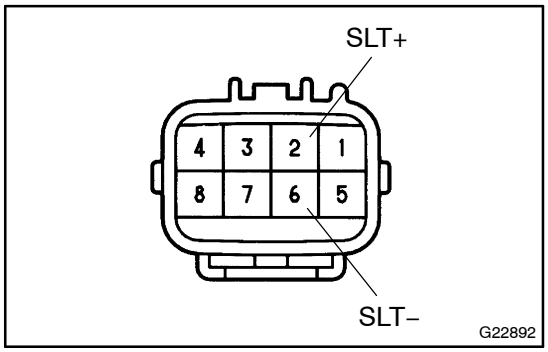
Refer to the chart for the waveform between terminals SLT^+ and SLT^- during engine idling.

WIRING DIAGRAM



INSPECTION PROCEDURE

1	INSPECT TRANSMISSION WIRE(SLT)



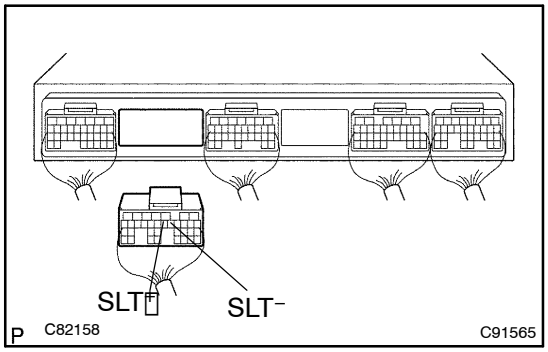
(a) Disconnect the transmission wire from the transmission.
(b) Measure resistance between terminals SLT+ and SLT– of transmission wire.
OK:
Resistance: 5.0 – 5.6 Ω at 20 °C (68 °F)
(c) Check the continuity between the wire harness side connectors.
OK:
Standard (Check for short):

Symbols	Specified condition
SLT+ ⇔ Body ground	No continuity
SLT– ⇔ Body ground	

NG → **Go to step 3**

OK

2 CHECK HARNESS AND CONNECTOR (TRANSMISSION WIRE – ECM)



(a) Connect the transmission wire from the transmission.
(b) Disconnect the ECM connector.
(c) Measure resistance between terminals SLT+ and SLT– of ECM.
OK:
Resistance: 5.0 – 5.6 Ω at 20°C (68°F)
(d) Check the continuity between the wire harness side connectors.
OK:
Standard (Check for short):

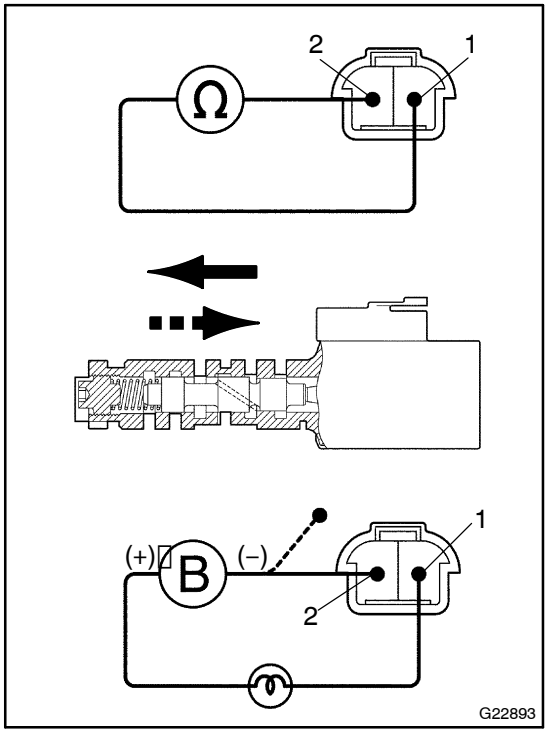
Symbols	Specified condition
SLT+ ⇔ Body ground	No continuity
SLT– ⇔ Body ground	

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR (See page 01–35)**

OK

CHECK AND REPLACE ECM (See page 01–35)

3 INSPECT SHIFT SOLENOID VALVE (SLT)



(a) Remove the shift solenoid valve SLT.
(b) Measure resistance between terminals 1 and 2 of solenoid connector.
Resistance: 5.0 – 5.6 Ω at 20°C (68°F)
(c) Connect positive (+) lead with an 8 – 10W bulb to terminal 1 of solenoid connector and negative (–) lead to terminal 2, then check the movement of the valve.
OK:

When battery positive voltage is applied.	Valve moves in ← direction in illustration on the left.
When battery positive voltage is cut off.	Valve moves in ■ ■ ➡ direction in illustration on the left.

NG → **REPLACE SHIFT SOLENOID VALVE (SLT) (See page 40–20)**

OK

REPAIR OR REPLACE TRANSMISSION WIRE (See page 40–17)