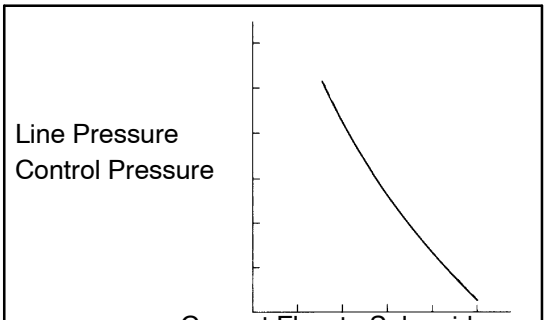
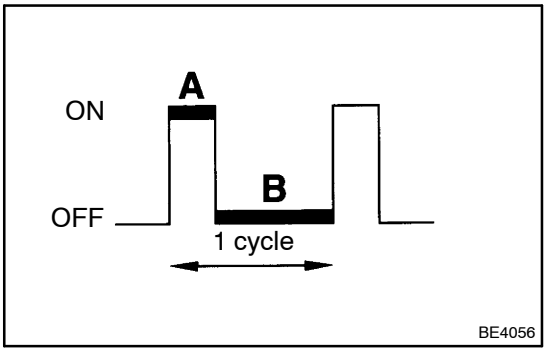
| DTC | 77(1) | LINEAR SOLENOID FOR LINE PRESSURE CONTROL CIRCUIT MALFUNCTION |
|---|---|---|




## CIRCUIT DESCRIPTION

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

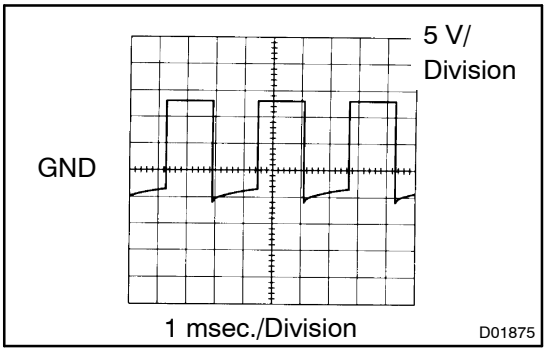
This controls the line pressure and provides smooth shifting characteristics.

Upon receiving the throttle valve opening angle signal, 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 Detecting Condition | Trouble Area |
|---|---|---|
| 77(1) | ECM detects solenoid SLT circuit malfunction for 1 sec. or more (1–trip detection logic) | • Open or short in shift solenoid valve SLT circuit<br>• Shift solenoid valve SLT<br>• ECM |

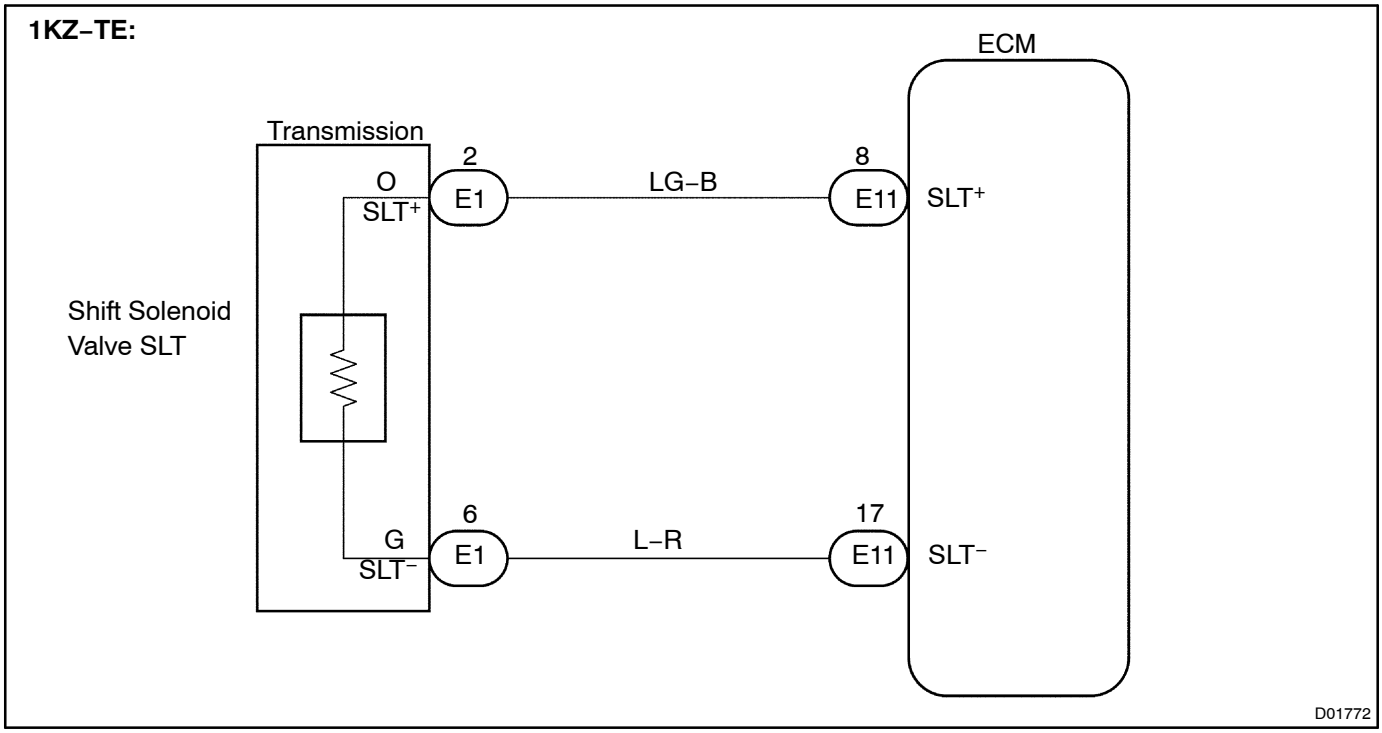



Reference:

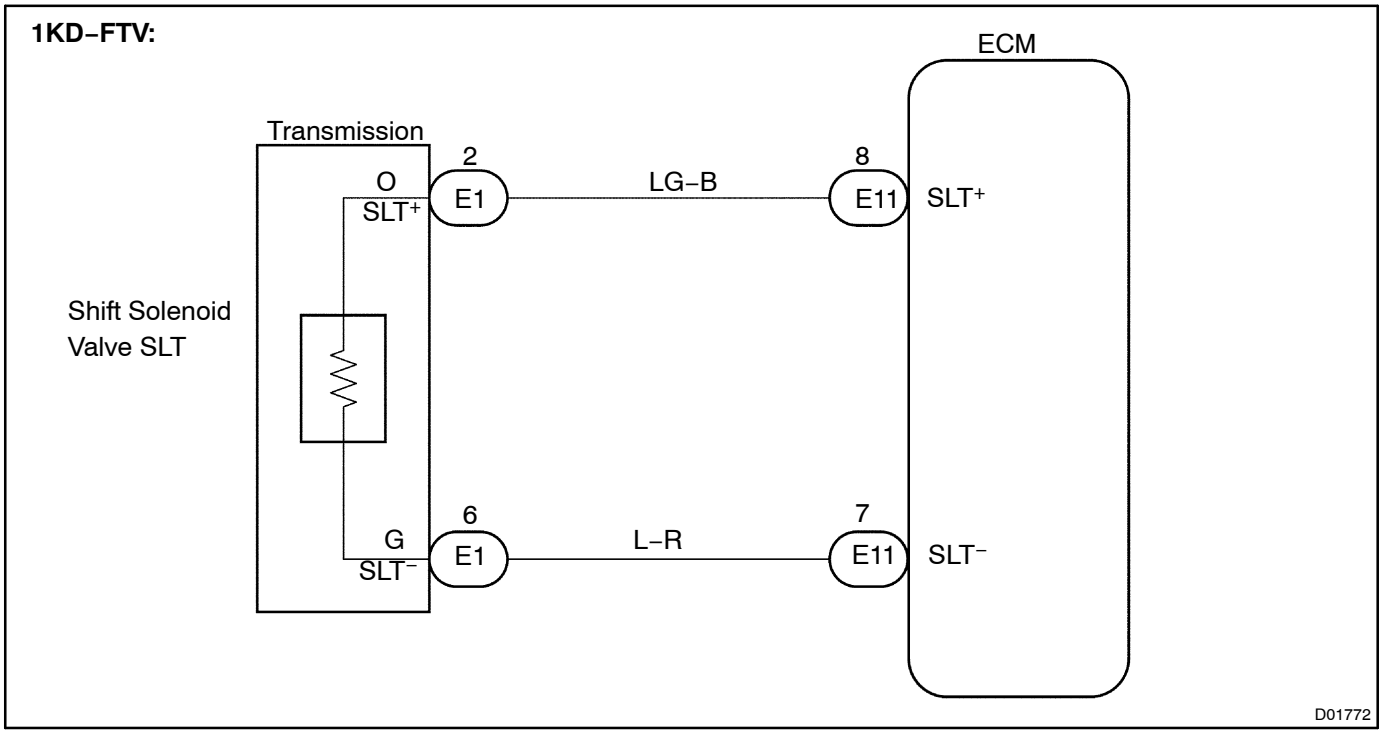
Refer to the chart for the waveform between terminals $SLT^+$ and $SLT^-$ during engine idling.

# WIRING DIAGRAM

**1KZ–TE:**

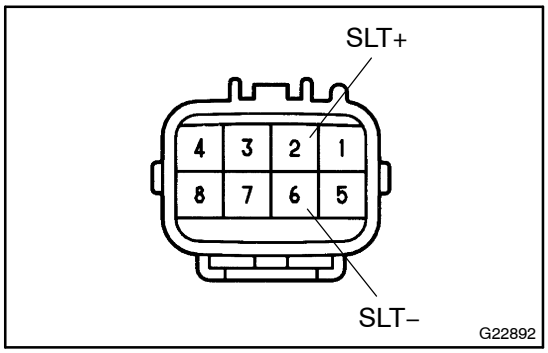



**1KD–FTV:**



# INSPECTION PROCEDURE

## 1 INSPECT TRANSMISSION WIRE(SLT)



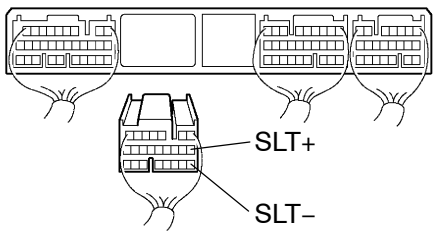

(a) Disconnect the transmission wire from the transmission.
(b) Measure resistance between terminals SLT+ and SLT– of transmission wire.
**OK:**
**Resistance: 5.0 – 5.6 Ω at 20 °C (68 °F)**
(c) Measure resistance between terminals 2 and 8 of the transmission wire connector and body ground.
**OK:**
**Resistance :1 MΩ or higher**

**NG** → **Go to step 3**

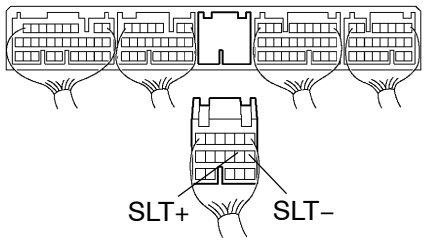
**OK**

## 2 CHECK HARNESS AND CONNECTOR(TRANSMISSION WIRE–ECM)

**1KZ–TE:**




**1KD–FTV:**




N

G22963

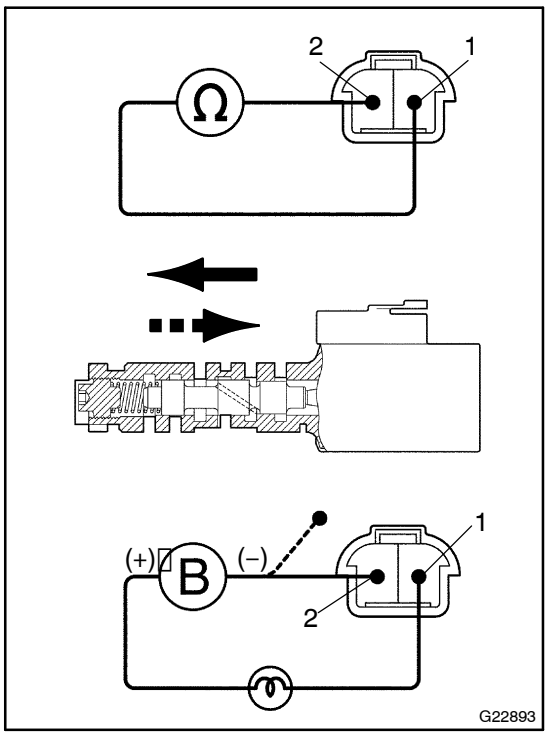
(a) Connect the transmission wire from the transmission.
(b) Disconnect the ECM connector.
(c) Measure resistance between terminals SLT+ and SLT– of ECM.
**OK:**
**Resistance: 5.0 – 5.6 Ω at 20 °C (68 °F)**
(d) Measure resistance between terminals SLT+ and SLT– of the ECM connector and body ground.
**OK:**
**Resistance : 1 MΩ or higher**

**NG** → **REPAIR OR REPLACE HARNESS OR CONNECTOR(See page 01–36)**

**OK**

**CHECK AND REPLACE ECM(See page 01–36)**

## 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 40–54)**

OK

**REPAIR OR REPLACE TRANSMISSION WIRE (See page 40–50)**