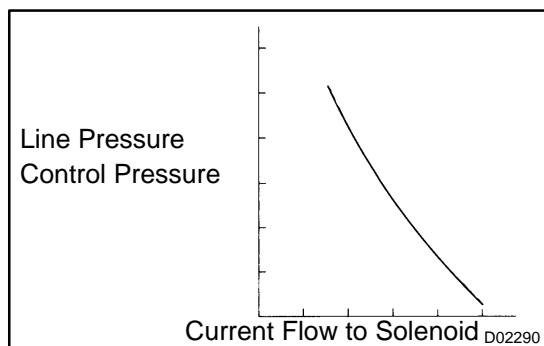


<b>DTC</b>	<b>P2716</b>	<b>PRESSURE CONTROL SOLENOID "D" ELECTRICAL (SHIFT SOLENOID SLT)</b>
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### CIRCUIT DESCRIPTION

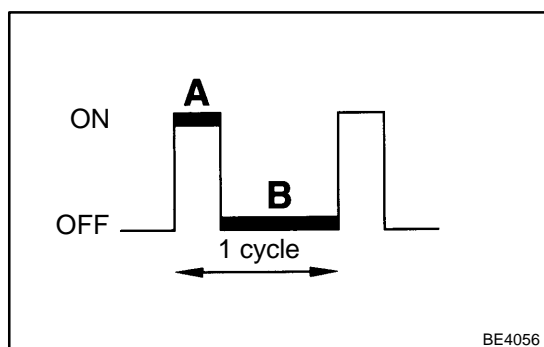
The throttle pressure that is applied to the primary regulator valve (which modulates the line pressure) causes the solenoid valve SLT, under electronic control, to precisely and minutely modulate and generate the line pressure according to the extent of the accelerator pedal depressed or the output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

This controls the line pressure and provides smooth shifting. 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

$$\text{Duty Ratio} = \frac{A}{A+B} \times 100 (\%)$$



DTC No.	DTC Detection Condition	Trouble Area
P2716	Condition (a) or (b) below is detected 1 sec. or more: (1-trip detection logic) (a) SLT- terminal: 0V (b) SLT- terminal: 12V	<ul style="list-style-type: none"> <li>• Open or short in shift solenoid valve SLT circuit</li> <li>• Shift solenoid valve SLT</li> <li>• ECM</li> </ul>

### MONITOR 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. 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.

### MONITOR STRATEGY

Related DTCs	P2716	Pressure control solenoid "D"/Range check
Required sensors/Components	Shift solenoid valve SLT	
Frequency of operation	Continuous	
Duration	1 sec.	
MIL operation	Immediate	
Sequence of operation	None	

### TYPICAL ENABLING CONDITION

Item	Specification	
	Minimum	Maximum
The monitor will run whenever the following DTCs are not present.	See page 05-369	
Solenoid current shut OFF	Not shut OFF	
Battery voltage	11 V or more	–
CPU commanded duty ratio	19 % or more	–

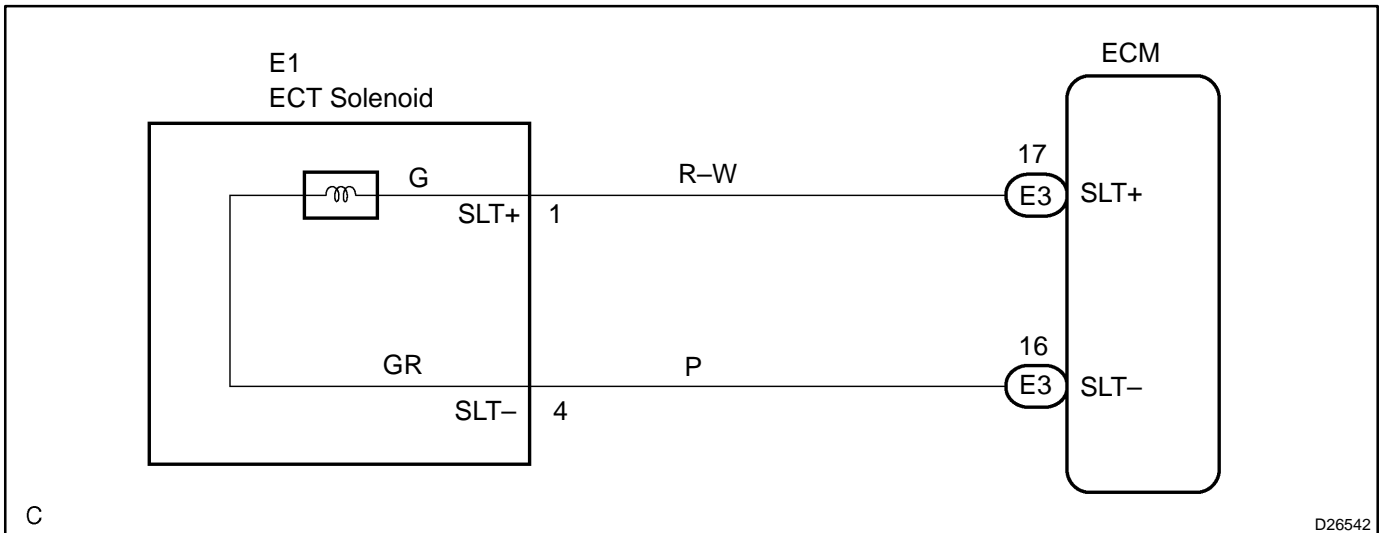
### TYPICAL MALFUNCTION THRESHOLDS

Detection criteria	Threshold
Diagnostic signal from MIC	Fail

### COMPONENT OPERATING RANGE

Parameter	Standard value
Shift solenoid valve SLT resistance	5.0 to 5.6 Ω at 20°C (68°F)

### WIRING DIAGRAM

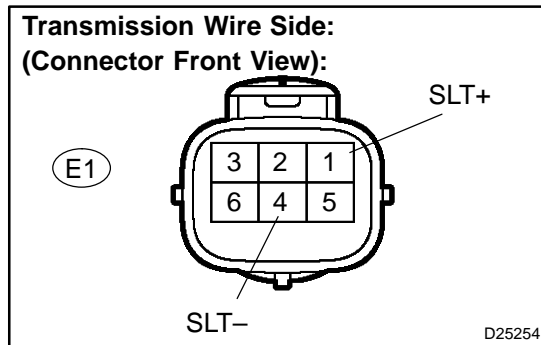


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## INSPECTION PROCEDURE

### 1 INSPECT TRANSMISSION WIRE(SLT)



- Disconnect the transmission wire connector from the transaxle.
- Measure the resistance according to the value(s) in the table below.

**Standard:**

Tester Connection	Specified Condition 20 °C (68 °F)
1 (SLT+) – 4 (SLT-)	5.0 to 5.6 Ω

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

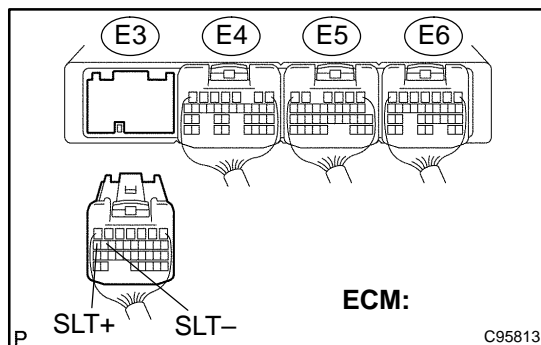
**Standard (Check for short):**

Tester Connection	Specified Condition
1 (SLT+) – Body ground	10 kΩ or higher
4 (SLT-) – Body ground	

**NG** → Go to step 3

**OK**

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



- Connect the transmission wire connector to the transaxle.
- Disconnect the ECM connector.
- Measure the resistance according to the value(s) in the table below.

**Standard:**

Tester Connection	Specified Condition 20 °C (68 °F)
E3 – 17 (SLT+) – E3 – 16 (SLT-)	5.0 to 5.6 Ω

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

**Standard (Check for short):**

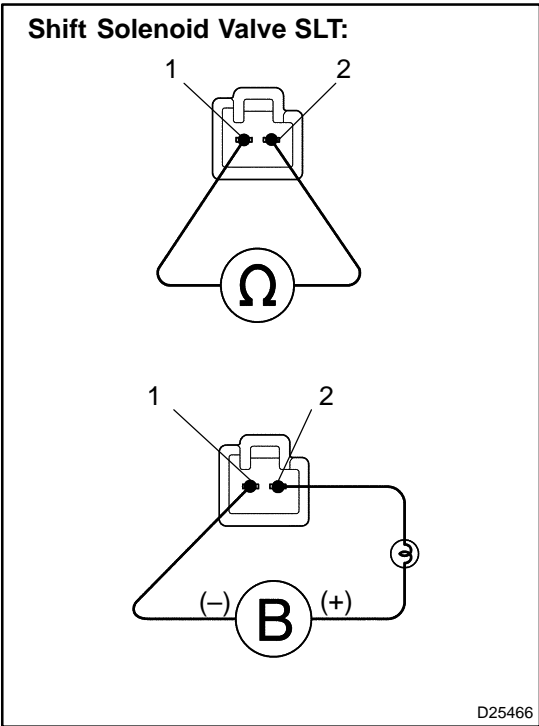
Tester Connection	Specified Condition
E3 – 17 (SLT+) – Body ground	10 kΩ or higher
E3 – 16 (SLT-) – Body ground	

**NG** → REPAIR OR REPLACE HARNESS OR CONNECTOR (See page 01-30)

**OK**

REPLACE ECM (See page 10-11)

**3 INSPECT 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 (+) battery lead with a 21 W bulb to the terminal 2 of the solenoid valve connector and the negative (-) battery lead to the terminal 1 of the solenoid valve connector for checking the solenoid valve operation.

**Standard:**

**The solenoid makes an operating noise.**

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

**OK**

**REPAIR OR REPLACE TRANSMISSION WIRE (See page 40-27)**