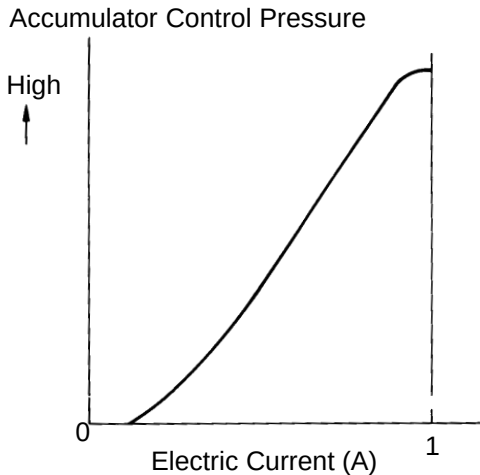


DTC	P1765	Linear Solenoid for Accumulator Pressure Control Circuit Malfunction (Shift Solenoid Valve SLN)
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CIRCUIT DESCRIPTION



AT5608

The shift solenoid valve SLN controls the hydraulic pressure acting on the accumulator control valve when gears are shifted and performs smooth gear shifting.

The ECM determines optimum operating pressure according to the signals from the throttle position sensor, vehicle speed sensor and direct clutch speed sensor and controls the volume of current flow to the solenoid valve.

The amount of current to the solenoid is controlled by the (*) duty ratio of ECM output signals, causing a momentary change to the hydraulic pressure acting on the clutches during gear shifting.

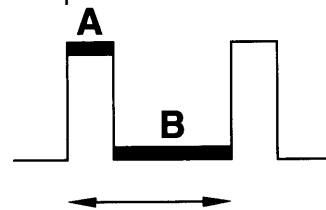
When the duty ratio is high, the hydraulic pressure acting on the clutches is low.

(*) 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

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



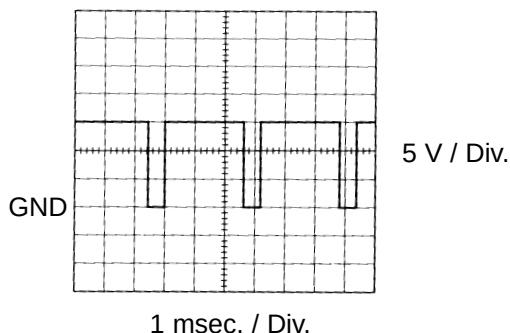
D00061 BE4056

D00060

DTC No.	DTC Detecting Condition	Trouble Area
P1765	After the engine is warmed up, the current flows to the shift solenoid valve SLN for 1 sec or more under condition (a) or (b): (a) Engine speed: 500 rpm or more (b) Park/neutral position switch: ON (P or N position)	• Open or short in shift solenoid valve SLN circuit • Shift solenoid valve SLN • ECM

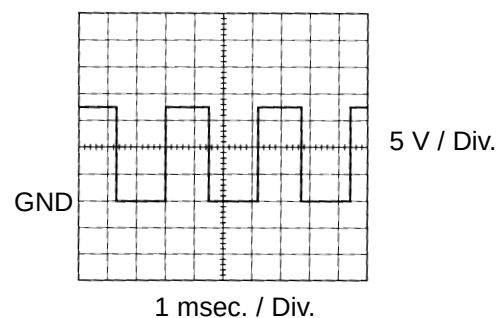
Reference

Waveform between terminals SLN⁺ and SLN⁻ when engine is idling.



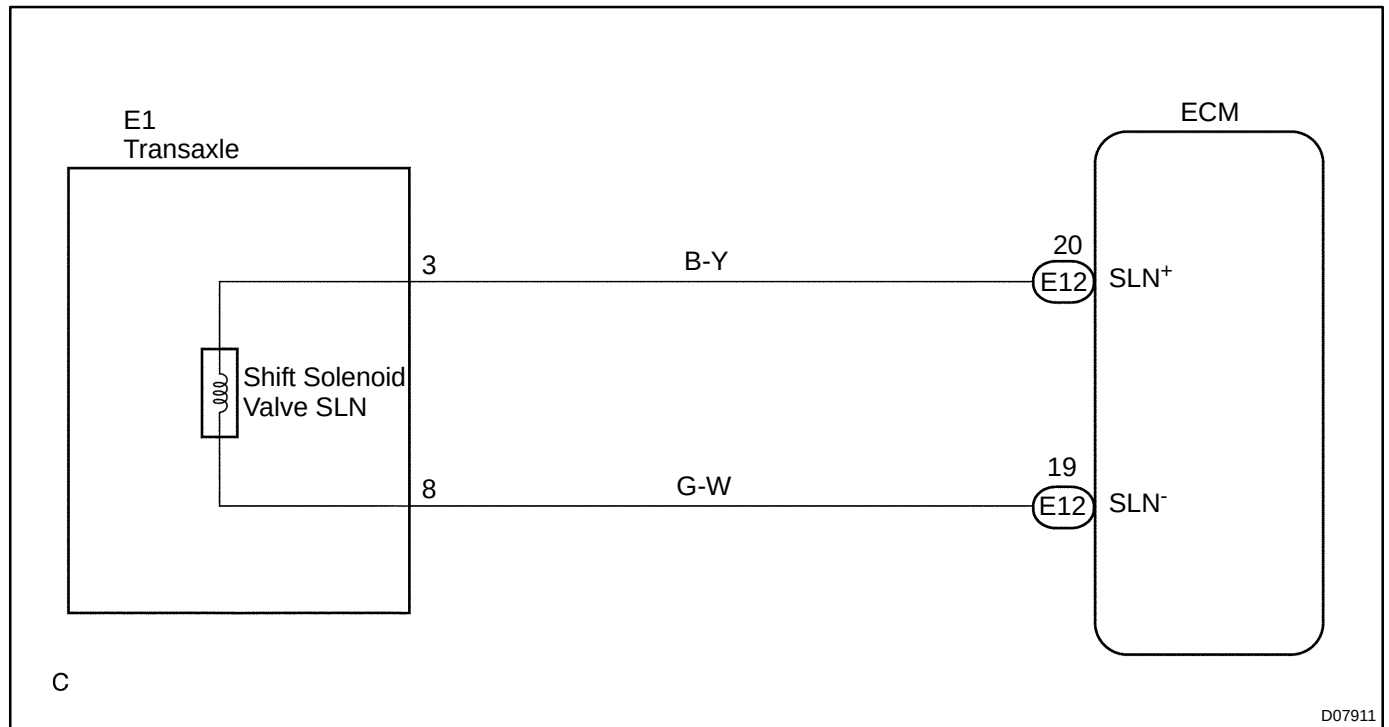
AT 8764 AT 8766

Waveform between terminals SLN⁺ and SLN⁻ during shift change.



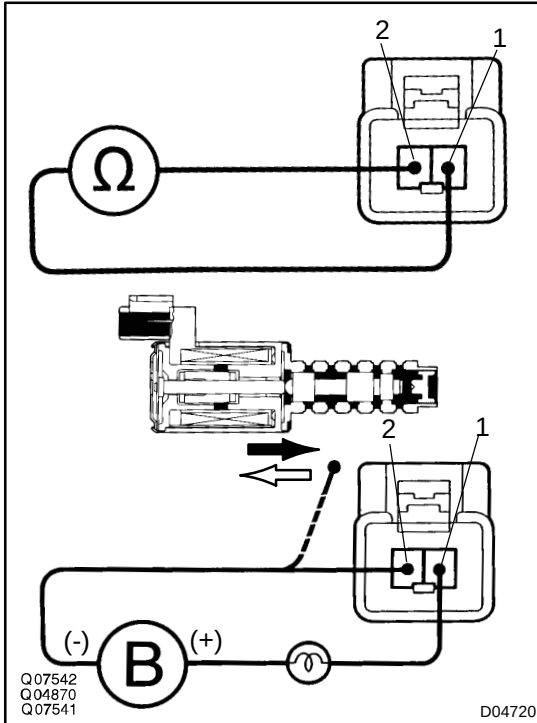
D00062

WIRING DIAGRAM



INSPECTION PROCEDURE

1 Check shift solenoid valve SLN.

**Check solenoid resistance and operation:****PREPARATION:**

Disconnect the shift solenoid valve SLN connector.

CHECK:

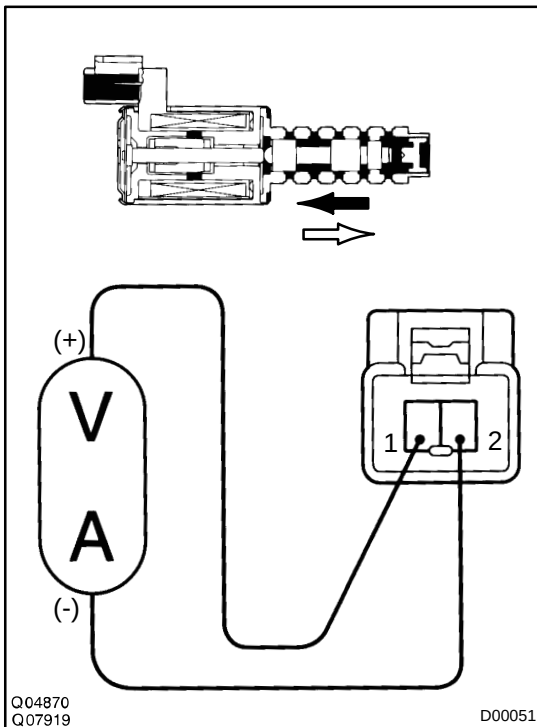
- Measure resistance between terminals 1 and 2 of solenoid connector.
- Connect positive $\oplus$ lead with an 8 - 10 W bulb to terminal 1 of solenoid connector and negative $\ominus$ lead to terminal 2, then check the movement of the valve.

OK:

(a) Resistance: 5.1 - 5.5 Ω

(b)

When battery positive voltage is supplied.	Valve moves in direction shown in illustration. (on the left)
When battery positive voltage is cut off.	Valve moves in direction shown in illustration. (on the right)

**Check solenoid operation:****PREPARATION:**

Connect positive $\oplus$ lead of the variable power supply to terminal 1 of solenoid connector and negative $\ominus$ lead to terminal 2.

CHECK:

- Check the movement of the valve when the voltage is gradually increased.
(A current greater than 1A should not be supplied.)
- Check the movement of the valve when the voltage is cut off.

OK:

(a) As the voltage is increased, the valve should move slowly in the $\leftarrow$ direction.

(b) The valve should return in the $\Rightarrow$ direction.

NG

Replace the shift solenoid valve SLN.

OK

2	Check harness and connector between battery and shift solenoid valve SLN, shift solenoid valve SLN and ECM (See page IN-31).
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NG

Repair or replace the harness or connector.

OK

Check and replace the ECM
(See page [IN-31](#)).