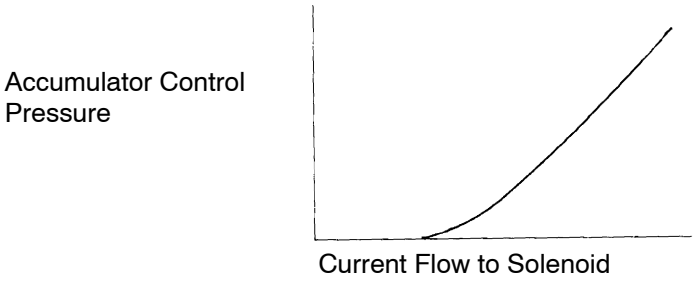
DI2LF–03

DTC	P1765/46	Linear Solenoid for Accumulator Pressure Control Circuit Malfunction (SLN Solenoid)

CIRCUIT DESCRIPTION

The SLN solenoid valve controls the hydraulic pressure acting on the accumulator control valve when gears are shifted and performs smooth gear shifting. The Engine & ECT ECU determines optimum operating pressure according to the signals from the throttle position sensor, vehicle speed sensor and O/D 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 Engine & ECT ECU output signals, causing a momentary charge 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.



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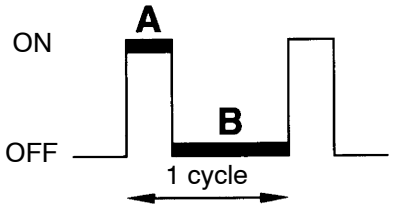
(*) Duty Ratio
The duty ratio is the ratio of the period of continuity in one cycle.
For example, if A is the period of continuity in one cycle, and B is the period of non–continuity, then



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

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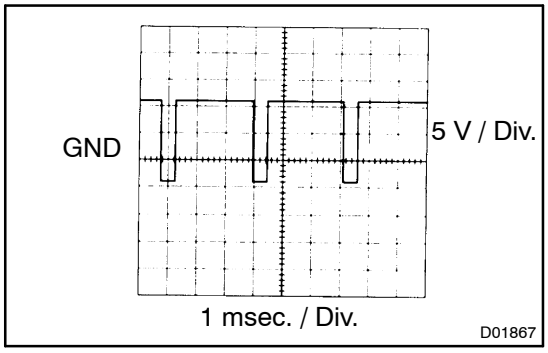
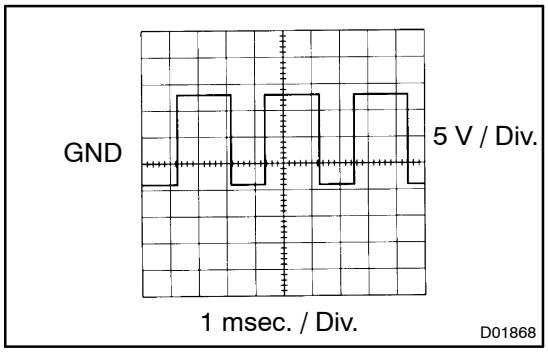
DTC No	DTC Detecting Condition	Trouble Area
P1765/46	All conditions below are detected for 1 second or more (2–trip detection logic). 1. Engine & ECT ECU outputs duty signal to SLN solenoid valve at 90 % or higher duty ratio 2. Current to SLN solenoid valve: 230 – 430 mA or less	• Open or short in SLN solenoid valve circuit • SLN solenoid valve • Engine & ECT ECU



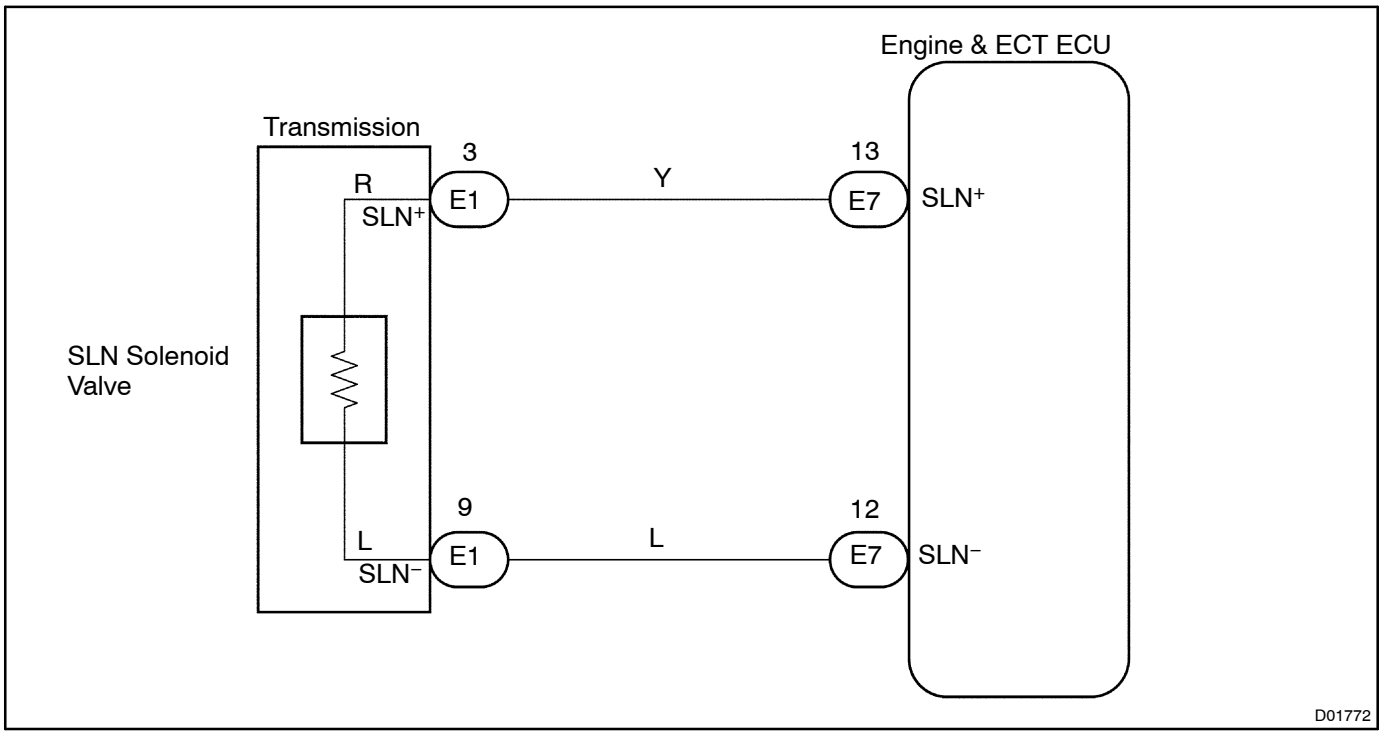
Reference:

- Refer to the chart for the wave form between terminals SLN⁻ and E1 when engine is idling.



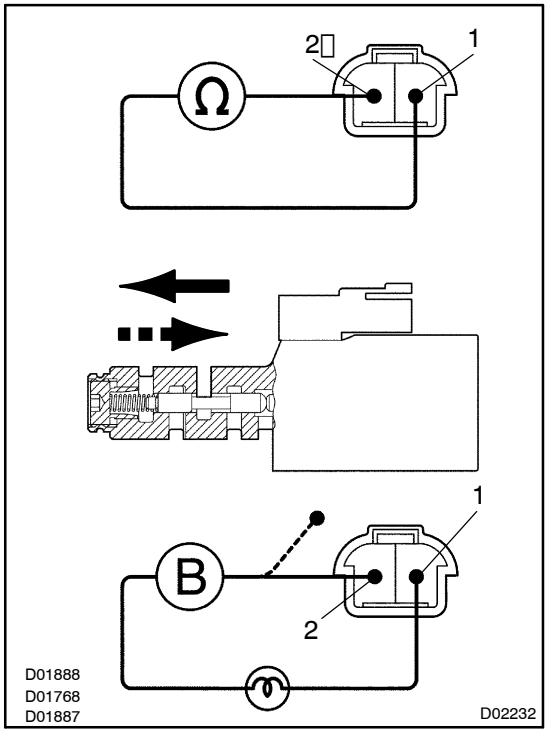
- Refer to the chart for the wave form between terminals SLN⁻ and E1 during shift change.

WIRING DIAGRAM



INSPECTION PROCEDURE

1	Check SLN solenoid valve.



PREPARATION:

(a) Jack up the vehicle.
(b) Remove the oil pan.
(c) Disconnect the solenoid connector.

Check solenoid resistance:

CHECK:

Measure resistance between terminals 1 and 2 of solenoid connector.

OK:

Resistance: 5.0 – 5.6 Ω at 20°C (68°F)

Check solenoid operation:

CHECK:

Connect positive (+) lead with an 8 – 10 W bulb to terminal 1 of solenoid connector and negative (–) lead to terminal 2, then check the movement of the valve.

OK:

When battery voltage is applied.	Valve moves in ◀ direction in the illustration on the left.
When battery voltage is cut off.	Valve moves in ■■▶ direction in the illustration on the left.

NG → **Replace SLN solenoid valve.**

OK

2	Check harness and connector between SLN solenoid valve and Engine & ECT ECU (See page IN–35).

NG → **Repair or replace harness or connector.**

OK

Check and replace Engine & ECT ECU (See page IN–35).