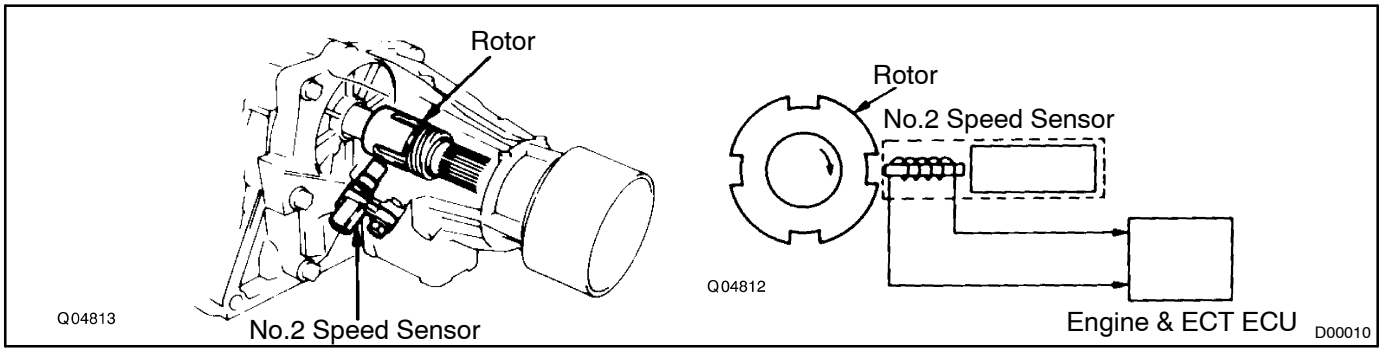
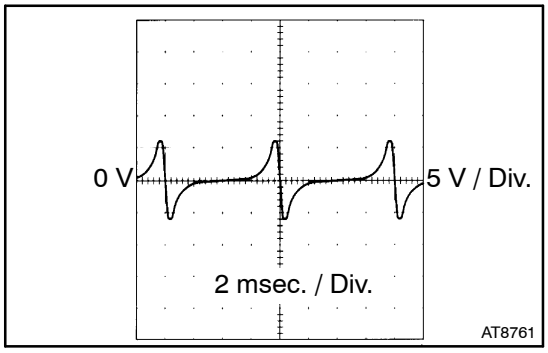
DTC	P1700/61	Speed Sensor No.2 Circuit Malfunction (No.2 Speed Sensor)

CIRCUIT DESCRIPTION

The No.2 speed sensor detects the rotation speed of the transmission output shaft and sends signals to the Engine & ECT ECU. The Engine & ECT ECU determines the vehicle speed based on these signals.
An AC voltage is generated in the No.2 speed sensor coil as the rotor mounted on the output shaft rotates, and this voltage is sent to the Engine & ECT ECU.
The gear shift point and lock–up timing are controlled by the Engine & ECT ECU based on the signals from this speed sensor and the throttle position sensor signal.
If the No.2 speed sensor malfunctions, the Engine & ECT ECU uses input signals from the No.1 speed sensor as a back–up signal.

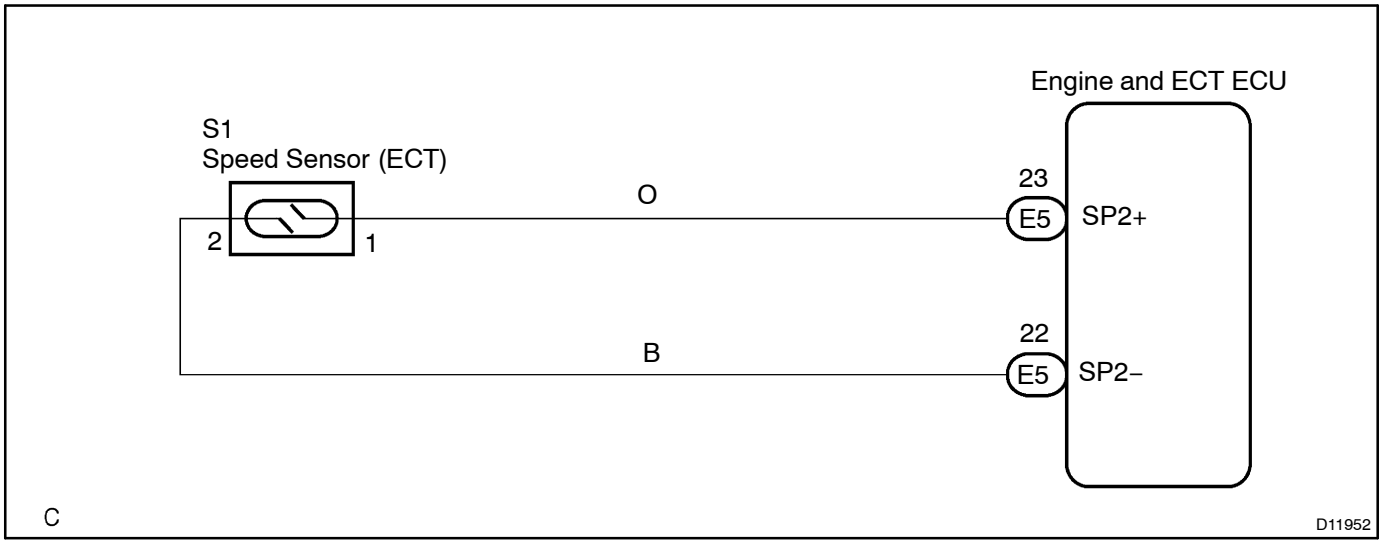


DTC No.	DTC Detecting Condition	Trouble Area
P1700/61	All conditions below are detected 500 times or more continuously. (2 trip detection logic) (a) No signal from No.2 speed sensor is input to Engine & ECT while 4 pulses of No.1 speed sensor signal are sent. (b) Vehicle speed: 9 km/h (5.6 mph) or more for at least 4 seconds (c) Neutral start switch: OFF (Other than P or N)	• Open or short in No.2 speed sensor circuit • No.2 speed sensor • Engine & ECT ECU



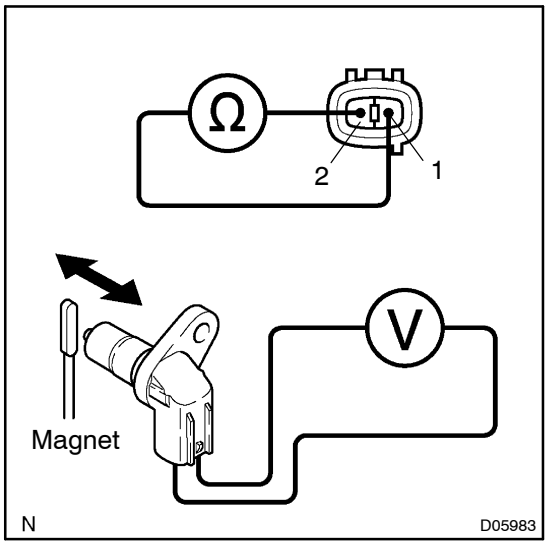
HINT:
Refer to the chart for the wave from between terminals $SP2^+$ and $SP2^-$ when vehicle speed is approx. 60 km/h (37 mph).

WIRING DIAGRAM



INSPECTION PROCEDURE

1	**Check No.2 speed sensor.**



PREPARATION:

Remove the No.2 speed sensor from the transmission.

CHECK:

(a) Measure resistance between terminals 1 and 2 of No.2 speed sensor.

(b) Check voltage between terminals 1 and 2 of No.2 speed sensor when a magnet is put close to the front end of the No.2 speed sensor then taken away quickly.

OK:

(a) Resistance: 560 – 680 Ω at 20 °C (68 °F)

(b) Voltage is generated intermittently.

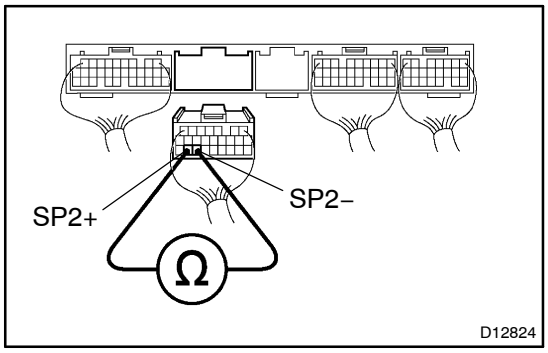
HINT:

The voltage generated is extremely low.

NG	**Replace the No.2 speed sensor.**

OK

2	**Check vehicle speed value or resistance between terminals SP2+ and SP2– of Engine & ECT ECU.**



PREPARATION:

(a) Install the No.2 speed sensor to the transmission.

(b) Disconnect the connector from Engine & ECT ECU.

CHECK:

Check resistance between terminals SP2+ and SP2– of Engine & ECT ECU.

OK:

Resistance: 560 – 680 Ω at 20 °C (68 °F)

CHECK:

Measure resistance between terminals SP2+ and SP2– of the ECM connector and body ground.

OK:

Resistance: 1 MΩ or higher

OK → **Check and replace the Engine & ECT ECU (See page IN–26).**

NG

Check and repair the harness and connector between Engine & ECT ECU and No.2 speed sensor (See page IN–26).