

DTC	P0335/12, 13	Crankshaft Position Sensor Circuit Malfunction (NE Signal)
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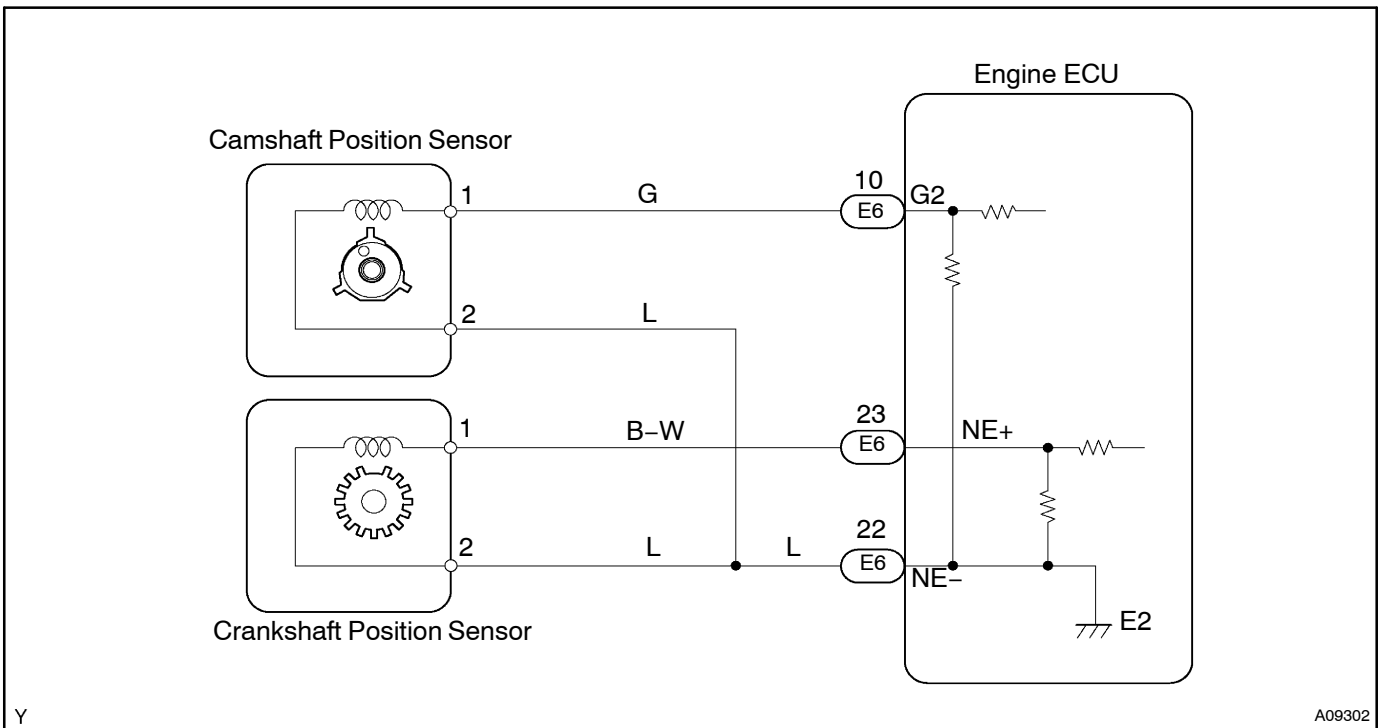
CIRCUIT DESCRIPTION

The crankshaft position sensor, which detects the engine speed and crankshaft angle signal (NE signal), has been installed on the oil pump body.

The NE signal plate of the crankshaft timing pulley has 34 teeth. The NE signal sensor generates 34 signals of every engine revolution. The engine ECU detects the standard crankshaft angle based on the G signal, and the actual crankshaft angle and the engine speed by the NE signal.

DTC No.	DTC Detecting Condition	Trouble Area
P0335/12, 13	No crankshaft position sensor signal to engine ECU during cranking (2 trip detection logic)	<ul style="list-style-type: none"> • Open or short in crankshaft position sensor circuit • Crankshaft position sensor
	No crankshaft position sensor signal to engine ECU with engine speed 600 rpm or more (2 trip detection logic)	<ul style="list-style-type: none"> • Crankshaft timing pulley • Engine ECU

WIRING DIAGRAM

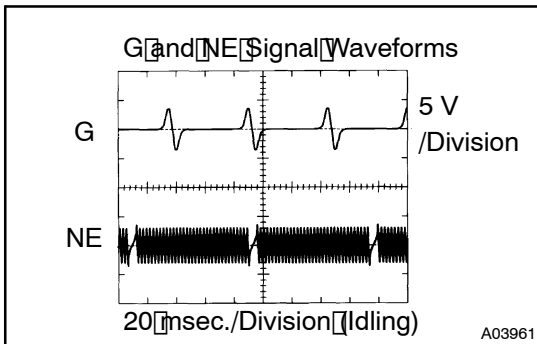


INSPECTION PROCEDURE

HINT:

- Perform troubleshooting of DTC P0335/12, 13 first. If no trouble is found, troubleshoot the following mechanical systems.
- Read freeze frame data using hand-held tester. Because freeze frame records the engine conditions when the malfunction is detected. When troubleshooting it is useful for determining whether the vehicle was running or stopped, the engine was warmed up or not, the air-fuel ratio was lean or rich, etc. at the time of the malfunction.

1 Check resistance of crankshaft position sensor (See page G-1).



Reference: INSPECTION USING OSCILLOSCOPE

During cranking or idling, check the waveform between terminals G2 and NE-, and NE and NE- of the engine ECU connector.

HINT:

The correct waveforms are as shown.

NG

Replace crankshaft position sensor.

OK

2 Check for open and short in harness and connector between engine ECU and crankshaft position sensor (See page IN-32).

NG

Repair or replace harness or connector.

OK

3 Inspect sensor installation and signal plate teeth of crankshaft timing pulley.

NG

**Tighten sensor.
Replace crankshaft timing pulley.**

OK

Check and replace engine ECU (See page IN-32).