DI0S5-12

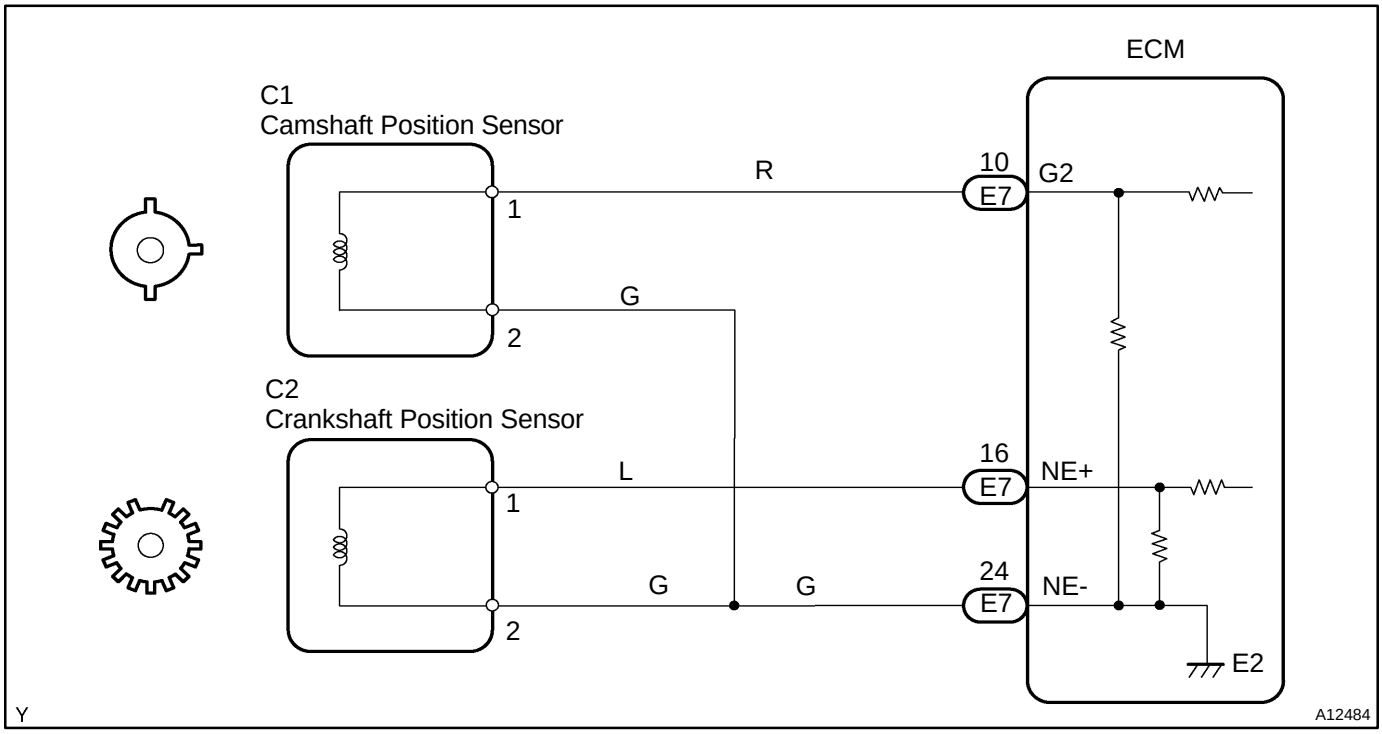
DTC	P0335	Crankshaft Position Sensor ”A” Circuit Malfunction

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 has 34 teeth. The NE signal sensor generates 34 signals at every engine revolution. The ECM 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 Detection Condition	Trouble Area
P0335	No signal of crankshaft position sensor to ECM during cranking (2 trip detection logic)	• Open or short in crankshaft position sensor circuit • Crankshaft position sensor • Crankshaft timing pulley • ECM
	No signal of crankshaft position sensor to ECM with engine speed 600 rpm or more (2 trip detection logic)	

WIRING DIAGRAM

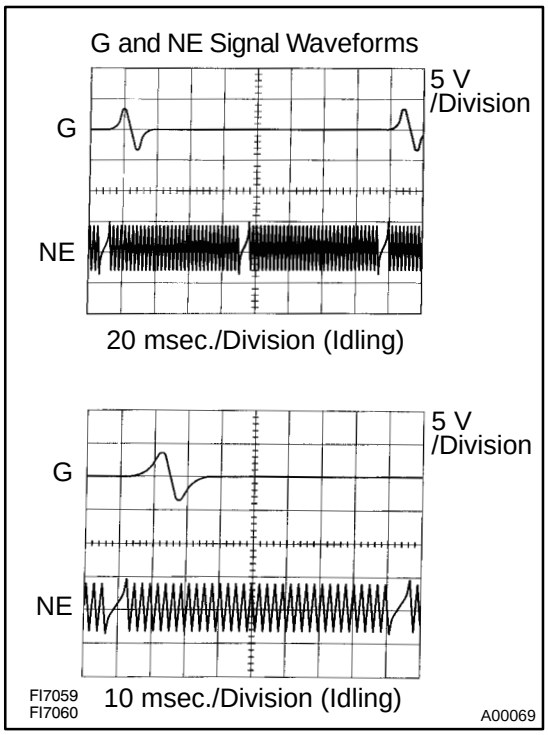


INSPECTION PROCEDURE

HINT:

- Perform a troubleshooting of DTC P0335 first. If no trouble is found, troubleshoot the following mechanical systems.
- Read freeze frame data using TOYOTA hand-held tester or OBD II scan tool, as freeze frame data records the engine conditions when a 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 IG-1).**



Reference: INSPECTION USING OSCILLOSCOPE

During cranking or idling, check the waveform between terminals G2 (California Spec.) or G+ (Except California Spec.) and NE-, and NE+ and NE- of the ECM 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 ECM and crankshaft position sensor (See page IN-28).**

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

OK

3	**Inspect sensor installation and teeth of crankshaft timing pulley.**

NG → **Tighten the sensor. Replace crankshaft timing pulley**

OK

Check and replace ECM (See page IN-28).