DI4EC–08

DTC	P0340	Camshaft Position Sensor Circuit Malfunction

CIRCUIT DESCRIPTION

The camshaft position sensor (G2 signal) consists of a signal plate and pick up coil. The G2 signal plate has one tooth on its outer circumference and is mounted on the camshaft.
When the camshaft rotates, the protrusion on the signal plate and the air gap on the pick up coil change, causing fluctuations in the magnetic field and generating an electromotive force in the pick up coil.
The NE signal plate has 34 teeth and is mounted on the crankshaft. The NE signal sensor generates 34 signals for every engine revolution. The engine ECU detects the standard crankshaft angle based on the G2 signals and the actual crankshaft angle and the engine speed by the NE signals.

DTC No.	DTC Detecting Condition	Trouble Area
P0340	No camshaft position sensor signal to engine ECU during cranking (1 trip detection logic)	• Open or short in camshaft position sensor circuit • Camshaft position sensor • Starter • Engine ECU
	Open in NE– circuit (2 trip detection logic)	

WIRING DIAGRAM

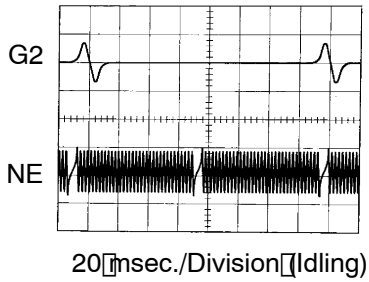
Refer to DTC P0335 on page DI–74.

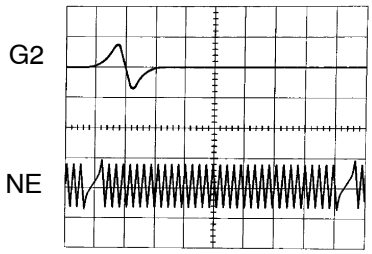
INSPECTION PROCEDURE

HINT:
Read freeze frame data using the 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 camshaft position sensor (Signal generator) (See page IG–1).**

G2, NE Signal Waveforms





A01991
A01992

A02359

Reference: INSPECTION USING OSCILLOSCOPE
During cranking or idling, check the waveform between terminals G2 and NE–, NE+ and NE– of the engine ECU.
HINT:
The correct waveform are as shown.

NG → **Replace camshaft position sensor (See page IG–5).**

OK

2	**Check for open and short in harness and connector between engine ECU and camshaft position sensor (See page IN–19).**

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

OK

3	Inspect sensor installation.

NG → Tighten the sensor.

OK →

Check and replace engine ECU (See page IN-19).