DTC	P0340/12	Camshaft Position Sensor Circuit Malfunction

CIRCUIT DESCRIPTION

Camshaft position sensor (G2 signal) consist 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 rotate, 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 G+ signals and the actual crankshaft angle and the engine speed by the NE signals.

DTC No.	DTC Detecting Condition	Trouble Area
P0340/12	No camshaft position sensor signal to engine ECU during cranking	• Open or short in camshaft position sensor circuit • Camshaft position sensor • Starter • Engine ECU
	No camshaft position sensor signal to engine ECU with engine speed 600 rpm or more	

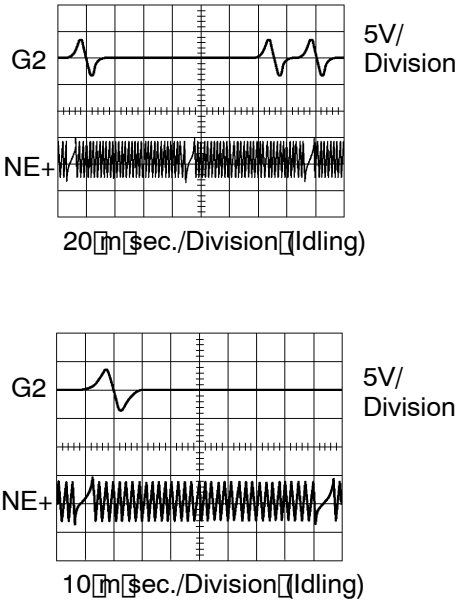
WIRING DIAGRAM

Refer to DTC P0335/12, 13 (Crankshaft Position Sensor Circuit Malfunction) on page DI–50 for the WIRING DIAGRAM.

INSPECTION PROCEDURE

HINT:
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 warmed up or not, the air–fuel ratio lean or rich, etc. at the time of the malfunction.

1	**Check resistance of camshaft position sensor (See page IG–1).**



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

NG → **Replace camshaft position sensor.**

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).