

DTC	P0340	Camshaft Position Sensor "A" Circuit (Bank 1 or Single Sensor)
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DTC	P0341	Camshaft Position Sensor "A" Circuit Range/Performance (Single Sensor)
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CIRCUIT DESCRIPTION

The camshaft position sensor (G2 signal) consists of a magnet, iron core and pickup coil. The G2 signal plate has 1 tooth on its outer circumference and is mounted on the intake camshaft. When the camshafts rotate, the protrusion on the signal plate and the air gap on the pickup coil change, causing fluctuations in the magnetic field and generating an electromotive force in the pickup coil. The NE signal plate has 34 teeth and is mounted on the crankshaft timing pulley. The NE signal sensor generates 34 signals at every engine revolution. The engine ECM detects the crankshaft angle and the engine speed based on the NE signals, and identify the cylinder on the G2 (Camshaft position sensor) and NE signals.

DTC No.	DTC Detection Condition	Trouble Area
P0340	No camshaft position sensor signal to ECM during cranking (2 trip detection logic)	<ul style="list-style-type: none"> • Open or short in camshaft position sensor circuit • Camshaft position sensor • Camshaft • Jumping teeth of timing chain • ECM
	No camshaft position sensor signal to ECM with engine speed 600 rpm or more (1 trip detection logic)	
P0341	While crankshaft rotates twice, camshaft position sensor signal will be input to ECM 12 times or more (1 trip detection logic)	

HINT:

- DTC P0340 indicate a malfunction related to the camshaft position sensor (+) circuit. (Wire harness (ECM camshaft position sensor) and camshaft position sensor)
- DTC P0341 indicate a malfunction related to the camshaft position sensor (–) circuit. (Wire harness (ECM camshaft position sensor) and camshaft position sensor)

WIRING DIAGRAM

Refer to DTC P0335 and P0339 on page [DI-90](#).

INSPECTION PROCEDURE

HINT:

Read freeze frame data using the hand-held tester or the OBDII scan tool, as freeze frame 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 camshaft position sensor (See page IG-1).
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Reference: INSPECTION USING OSCILLOSCOPERefer to DTC P0335 and P0339 on page [DI-90](#).

NG	Replace camshaft position sensor.
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2	Check for open and short in harness and connector between ECM and camshaft position sensor (See page IN-28).
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NG	Repair or replace harness or connector.
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3	Inspect sensor installation (See page EM-55) and tooth of intake camshaft (See page EM-12).
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NG	Tighten sensor. Replace intake camshaft.
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Check and replace ECM (See page IN-28).
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