

P0342: CAMSHAFT POSITION SENSOR "A" CIRCUIT LOW (BANK 1)

OVERVIEW

Severity	:	High
DIY Difficulty Level	:	Intermediate
Repair Cost	:	\$200-\$400
Can I Still Drive?	:	No

What Does The P0342 Code Mean?

The automotive trouble code P0342 is one of several generic malfunction codes relating to the camshaft position sensor (CPS). Trouble codes [P0335](#) through [P0349](#) are all generic codes related to the CPS inferring different reasons for the failure.

In this instance, code P0342 infers the sensor's signal is too low, or not strong enough. The signal is low enough to be vague and difficult to interpret. P0342 refers to the Bank 1 "A" sensor. Bank 1 is the side of the engine that contains cylinder #1.

Description And Correlation Of The Crankshaft And Camshaft Position Sensors

It's important in today's vehicles to understand what these sensors are and how they interact. All distributorless ignition vehicles use a crank and cam sensor to take the place of the module and trigger wheel found in an electronic distributor.

The crankshaft position sensor (CPS) signals the engine control module the location of the pistons relative to top dead center in preparation for injecting fuel and firing the spark plugs.

The camshaft position sensor (CMP) signals the position of the camshaft intake lobe relative to the CPS signal and the opening of the intake valve for fuel injection on each cylinder.

Description And Location Of Sensors

The crank and cam sensors provide an "on and off" signal. Both are either hall effect or magnetic in function.

A hall effect sensor uses an electro-magnetic sensor and a reluctor. The reluctor is shaped like small cups with squares cut out of the sides making it resemble a picket fence. The reluctor spins while the sensor is stationary and mounted very close to the reluctor. Every time a post passes in front of the sensor a signal is produced, and when the post passes, the signal is off.

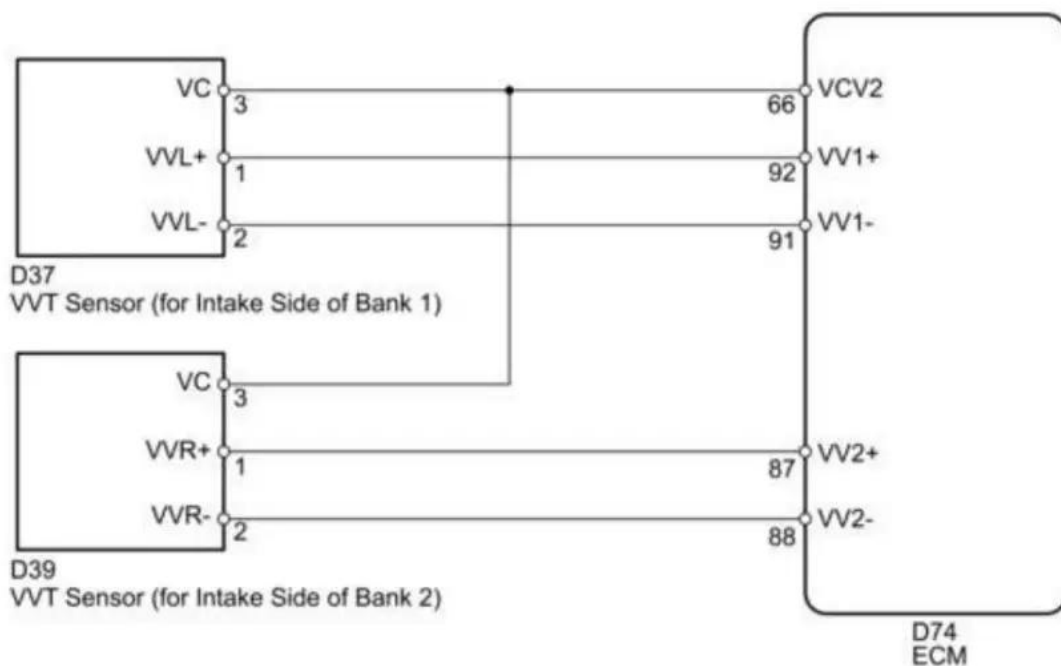
A magnetic pickup uses a stationary sensor and a magnet attached to the rotating part. Every time the magnet passes in front of the sensor a signal is produced.

Locations

A hall effect crank sensor is located on the harmonic balancer in the front of the engine. The magnetic pickup can be in the side of the engine block where it uses the center of the crankshaft for a signal, or it can be in the bellhousing where it uses the flywheel as a trigger.

The camshaft sensor mounts in the front or rear of the camshaft.

Note: In the case of GM vehicles, this code description is slightly different, it is CMP Sensor Circuit Low Input Conditions.



P0342 wiring diagram

What Are The Symptoms Of The P0342 Code?

Symptoms may include:

- Check engine light (malfunction indicator lamp) illumination and code P0342 set
- Lack of power
- Stalling
- Hard starting

What Are The Potential Causes Of The P0342 Code?

The causes for this DTC may include:

- Faulty camshaft position sensor
- Sensor harness is open or shorted
- Poor electrical connections
- Faulty starter
- Poor wiring to the starter
- Bad battery

How Can You Fix The P0342 Code?

Check the technical service bulletins (TSBs) for any that pertain to this code. TSBs are a list of complaints and failures dealt with at the dealer level and the manufacturers recommended correction.

- Check the condition of the battery. A low battery can cause the code to be set.
- Check all wiring to the starter. Look for corrosion, loose connections or frayed insulation.
- Check connector on camshaft sensor. Look for corrosion and bent pins. Apply dielectric grease to the pins.
- Check the starter for excessive draw indicating a weak starter.
- Replace the camshaft position sensor.

Example photo of a camshaft position sensor (CMP):

Related Camshaft Trouble Codes: [P0340](#), [P0341](#), [P0343](#), [P0345](#), [P0346](#), [P0347](#), [P0348](#), [P0349](#), [P0365](#), [P0366](#), [P0367](#), [P0368](#), [P0369](#), [P0390](#), [P0391](#), [P0392](#), [P0393](#), [P0394](#).

Reference Sources

[DIAGNOSTIC TROUBLE CODE DIAGNOSIS](#) - page 1F-56.