

GENERIC · POWERTRAIN

P0342

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0342

Camshaft Position Sensor A Circuit Low Input

P0342 means the engine computer has detected that the camshaft position sensor A signal circuit is reporting a voltage lower than the expected range for the current operating conditions. The computer uses this sensor to identify which cylinder is on the compression stroke so it can sequence fuel injection and ignition timing correctly.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Intermediate	Ignition system and misfire

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Engine may crank but fail to start, or start after an extended crank
- Rough idle, misfire, or stalling, especially when the engine is cold
- Reduced engine power or limp mode due to the computer defaulting to a backup strategy
- Poor fuel economy or increased emissions
- Intermittent hesitation or surging during acceleration

Common causes, most likely first

- 1 Faulty camshaft position sensor
- 2 Damaged or chafed wiring in the sensor signal circuit, causing a short to ground
- 3 Corroded, loose, or disconnected electrical connector at the sensor
- 4 Failed or contaminated engine oil affecting sensor operation (in some designs)
- 5 Metal debris or damage on the camshaft reluctor wheel or sensor tip
- 6 Open or high-resistance ground circuit for the sensor
- 7 Rarely, a faulty engine control module (ECM) or poor connection at the ECM



How to diagnose and fix it

- 1 Inspect the camshaft position sensor connector and wiring for corrosion, damage, or looseness; clean and secure as needed
- 2 Check the sensor signal circuit for a short to ground using a digital multimeter and wiring diagram
- 3 Verify the sensor ground circuit has low resistance to the engine block or battery negative
- 4 Test the camshaft position sensor with a multimeter or oscilloscope according to the manufacturer's procedure
- 5 Replace the camshaft position sensor if testing indicates it is faulty
- 6 Clear the diagnostic trouble codes and perform a road test to confirm the repair
- 7 If the code persists, check the reluctor wheel for damage or debris and inspect the ECM connections

Don't overlook wiring and grounds

- A short to ground in the signal wire is more common than a failed sensor, so always inspect the harness for chafing near sharp edges or hot components.
- Oil contamination or sludge can interfere with the sensor's magnetic pickup, especially on engines with variable valve timing, so check oil condition and level.
- The engine may run surprisingly well with this code because the computer can substitute a default camshaft position, masking the fault until a hard start or misfire appears.
- Aftermarket sensors can have incorrect resistance or output, so choose a quality part that meets OEM specifications to avoid repeat failures.
- A weak battery or poor ground can cause false low-voltage signals, so verify the charging system and ground straps before condemning the sensor.

Can I keep driving with P0342?

You can often drive with this code, but the engine may enter limp mode or stall unexpectedly, so avoid heavy acceleration and long trips until it is repaired. If the engine is hard to start or misfiring severely, limit driving to reach a repair shop safely.

Tools that help

- OBD-II scanner
- Digital multimeter
- Oscilloscope (optional but helpful)
- Basic hand tools (socket set, screwdrivers)
- Wiring diagram for the specific vehicle
- Electrical contact cleaner



Reading P0342

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 3** Ignition system and misfire.
- 42** The exact fault within that area.

Often seen with

P0016 Crankshaft/Camshaft Position Correlation (Bank 1 Sensor A) · **P0335** Crankshaft Position Sensor A Circuit Malfunction · **P0340** Camshaft Position Sensor A Circuit Malfunction (Bank 1) · **P0341** Camshaft Position Sensor A Circuit Range/Performance · **P0343** Camshaft Position Sensor A Circuit High Input

See it working

Watch the animated explainer [Four-Stroke Engine Cutaway: Intake to Exhaust](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0342/>

