

GENERIC · POWERTRAIN

P0337

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0337

Crankshaft Position Sensor A Circuit Low Input

P0337 means the engine computer has detected a low-voltage condition on the signal circuit from the crankshaft position sensor, often called the CKP sensor. The computer expects the sensor to produce a rapidly switching voltage as the crankshaft turns, and a sustained low reading tells it the signal is missing, shorted to ground, or otherwise out of range.

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

Symptoms you may notice

- The check engine light is on, often with no other symptoms besides the warning light.
- The engine may crank but fail to start because the computer cannot determine crankshaft position.
- Intermittent stalling or a sudden engine shutoff while driving, especially when the engine is hot.
- Rough running, misfiring, or a noticeable loss of power under acceleration.
- A tachometer that reads zero or jumps erratically while the engine is running.
- Hard starting or a longer-than-normal crank time before the engine catches.

Common causes, most likely first

- 1 A failed crankshaft position sensor that no longer produces a clean signal.
- 2 Damaged or chafed wiring between the sensor and the engine computer, often near hot exhaust components.
- 3 A poor electrical connection at the sensor connector, such as corrosion, water intrusion, or a backed-out terminal.
- 4 A short to ground on the signal wire, which pulls the voltage low and sets the code.
- 5 Metal debris or a damaged reluctor wheel on the crankshaft interfering with the sensor signal.
- 6 An engine computer fault, though this is far less common than sensor or wiring problems.



How to diagnose and fix it

- 1 Scan all stored and pending codes and record freeze-frame data to confirm P0337 is the primary fault.
- 2 Inspect the crankshaft position sensor connector and wiring for corrosion, chafing, or loose terminals.
- 3 Check the sensor signal circuit for a short to ground using a digital multimeter with the key on and engine off.
- 4 Measure the sensor resistance or output with a multimeter or oscilloscope and compare it to the manufacturer's specification.
- 5 Remove the sensor and inspect the tip and the reluctor wheel for metal shavings, cracks, or damage.
- 6 Replace the crankshaft position sensor if testing confirms it is faulty, then clear codes and verify the repair.
- 7 If the signal circuit tests good and the sensor is new, check the engine computer ground and power feeds before condemning the computer.

What a low CKP signal really tells you

- A low signal code often comes from a shorted signal wire rather than a dead sensor, so ohm-testing the harness before replacing parts saves money.
Heat and vibration can cause an intermittent CKP sensor failure that only appears when the engine is hot, making a cold-engine test misleading.
- Metal debris stuck to the sensor tip or a cracked reluctor wheel can mimic a failed sensor and will set the same code after replacement.
- A weak battery or poor engine ground can pull sensor reference voltage low and trigger P0337 without any fault in the sensor circuit itself.
Some vehicles will run with a failed CKP sensor by using the camshaft sensor, but the computer still sets P0337 and may limit performance.

Can I keep driving with P0337?

Do not drive the vehicle with P0337 because a failed crankshaft position sensor can cause sudden stalling or a no-start condition with no warning. If the engine is running, drive only to a safe location and arrange a tow or repair before continuing.

Tools that help

- OBD-II scan tool with live data and freeze-frame capability
- Digital multimeter
- Oscilloscope for viewing the CKP signal waveform
- Basic hand tools for sensor removal
- Feeler gauge or non-magnetic feeler tool for air gap measurement
- Wire-piercing probes and electrical contact cleaner



Reading P0337

- 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.
- 37** The exact fault within that area.

Often seen with

P0335 Crankshaft Position Sensor A Circuit Malfunction · **P0336** Crankshaft Position Sensor A Circuit Range/Performance · **P0338** Crankshaft Position Sensor A Circuit High Input · **P0339** Crankshaft Position Sensor 'A' Circuit Intermittent · **P0340** Camshaft Position Sensor A Circuit Malfunction (Bank 1)

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/p0337/>

