

GENERIC · POWERTRAIN

P0392

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0392

Camshaft Position Sensor 'B' Circuit Low (Bank 2)

P0392 means the powertrain control module (PCM) has detected a low-voltage condition on the camshaft position sensor 'B' circuit for bank 2, which is the side of the engine that does not contain cylinder number one. The PCM expects the sensor signal to toggle between a reference voltage and ground as the camshaft rotates, and a sustained low reading tells the computer the circuit is shorted to ground or the sensor is not producing a valid signal.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Ignition system and misfire

Symptoms you may notice

- Illumination of the check engine light, often with no other symptoms besides the warning light
- Rough idle or misfire because the PCM cannot reliably identify cylinder position for fuel and spark timing
- Extended cranking before the engine starts or an intermittent no-start condition
- Reduced engine power or limp mode as the PCM substitutes a default timing strategy
- Poor fuel economy and increased emissions from inaccurate fuel delivery
- In rare cases, a stall at low speed or during deceleration when the cam signal drops out

Common causes, most likely first

- 1 A short to ground in the sensor signal wire, often where the harness rubs against a bracket or passes near the exhaust manifold
- 2 A failed camshaft position sensor 'B' that has internally shorted or lost its output
- 3 Corroded, loose, or backed-out terminals at the sensor connector or at the PCM connector
- 4 A damaged reluctor wheel or tone ring on the camshaft that prevents the sensor from generating a clean signal
- 5 An open or high-resistance ground circuit shared by the sensor, which pulls the signal low
- 6 Metal debris or sludge buildup on the sensor tip interfering with the magnetic pickup
- 7 A PCM driver fault on the sensor input circuit, though this is the least common cause



How to diagnose and fix it

- 1 Scan all modules for stored and pending codes, then record freeze-frame data to confirm when the low signal was set
- 2 Inspect the sensor connector and the harness run for chafing, corrosion, or contact with hot or moving components
- 3 Measure reference voltage and ground at the sensor connector with the key on and the sensor unplugged
- 4 Back-probe the signal wire and check for a short to ground with a multimeter while wiggling the harness
- 5 Remove the sensor and inspect the tip and the reluctor wheel for debris, damage, or excessive end play
- 6 Substitute a known-good sensor or perform a resistance and waveform check with an oscilloscope to confirm the sensor output
- 7 Repair the wiring or replace the sensor as indicated, clear the codes, and verify the cam signal on a road test

What a low cam signal really tells you

- A low-voltage code on a cam sensor is more often a wiring short to ground than a failed sensor, so inspect the harness before condemning the part.
- Bank 2 refers to the side of the engine opposite cylinder number one, and on transverse V6 engines that bank is often buried against the firewall, making visual inspection easy to skip.
- A shared ground circuit between the cam and crank sensors can pull the cam signal low, so a crank sensor fault may be the real root cause.
- Some vehicles will run with a failed cam sensor by using the crank sensor alone, which means the driver may notice nothing beyond the warning light and postpone a repair that affects emissions and timing accuracy.
- Metal shavings on the sensor tip from a failing camshaft or bearing can mimic an electrical short, so always clean and recheck the signal before replacing the PCM.

Can I keep driving with P0392?

The vehicle is usually safe to drive short distances to a repair shop because the PCM can fall back on the crankshaft sensor for timing, but avoid heavy load, towing, or long trips until the fault is repaired. If the engine cranks for a long time, misfires, or stalls, stop driving and arrange a tow to prevent damage to the catalytic converter.

Tools that help

- OBD-II scan tool with live data and freeze-frame capability
- Digital multimeter with back-probe pins
- Oscilloscope for viewing the cam sensor waveform
- Socket and ratchet set for sensor removal
- Electrical contact cleaner and dielectric grease
- Factory service information for connector pinouts and bank identification



Reading P0392

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

Often seen with

P0340 Camshaft Position Sensor A Circuit Malfunction (Bank 1) · **P0345** Camshaft Position Sensor A Circuit (Bank 2) · **P0365** Camshaft Position Sensor 'B' Circuit (Bank 1) · **P0391** Camshaft Position Sensor 'B' Circuit Range/Performance (Bank 1) · **P0393** Camshaft Position Sensor 'B' Circuit High (Bank 2)

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/p0392/>

