

GENERIC · POWERTRAIN

P0393

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0393

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

P0393 means the engine computer has detected an abnormally high voltage on the camshaft position sensor 'B' signal circuit for bank 2, which is the side of the engine that does not contain cylinder number one. The computer expects the sensor to toggle between a low and high voltage as the camshaft rotates, and a signal stuck above the normal threshold tells it the circuit is shorted to power or the sensor has failed internally.

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
- Intermittent or complete engine stall, especially when the engine is hot or under load
- Rough running, misfiring, or a noticeable loss of power because the computer cannot accurately sequence fuel injection and ignition
- Extended cranking before the engine starts, or a no-start condition in more severe cases
- Poor fuel economy and elevated emissions caused by incorrect timing of the combustion events
- A slight hesitation or stumble during acceleration that the driver may feel as a momentary lag

Common causes, most likely first

- 1 A short to voltage in the sensor 'B' signal wire, often where the harness rubs against a hot or sharp engine component
- 2 A failed camshaft position sensor 'B' that internally shorts the signal circuit to its power feed
- 3 Corroded, pushed-back, or water-intruded terminals at the sensor connector or the engine computer connector
- 4 A damaged or improperly installed sensor reluctor wheel or tone ring that distorts the signal the sensor generates
- 5 An open or high-resistance ground circuit shared by the sensor, which forces the signal voltage to float high
- 6 A faulty engine computer driver circuit, though this is far less common than wiring or sensor faults
- 7 Aftermarket electrical accessories or a recent repair that pinched or misrouted the sensor harness



How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data for P0393, then inspect the bank 2 camshaft sensor 'B' harness and connector for chafing, corrosion, or loose pins before touching any parts
- 2 Measure reference voltage and ground at the sensor connector with the key on and the sensor unplugged, comparing readings to the factory specification for that circuit
- 3 Back-probe the signal wire at the sensor and at the computer while cranking to see whether the voltage is stuck high or actually toggling, which separates a sensor fault from a wiring fault
- 4 Perform a resistance and continuity test on the signal, power, and ground wires between the sensor and the computer, wiggling the harness to expose intermittent shorts
- 5 If wiring checks pass, substitute a known-good sensor of the correct type and clear the code to see whether the high-voltage condition returns
- 6 Inspect the reluctor wheel or camshaft tone ring for damage, debris, or incorrect installation that could hold the signal at a constant high level
- 7 After any repair, clear the codes, verify live camshaft signal data on a road test, and confirm the monitor runs to completion without resetting P0393

Why a high cam signal is rarely the sensor alone

- A shorted signal wire is more common than a failed sensor on this code, so technicians who replace the sensor first often see the code return within a few drive cycles.
- The sensor 'B' circuit on bank 2 is frequently damaged by heat from the exhaust manifold or by a valve cover gasket repair that traps the harness, which is why a visual inspection along the full wire run matters more than a quick connector check.
- A poor ground shared with other engine sensors can pull the signal voltage high and set P0393 even though the camshaft sensor itself tests good on the bench.
- Some vehicles set this code when the battery is weak or the charging system is noisy, because voltage spikes confuse the computer's signal interpretation, so check system voltage before condemning parts.
- P0393 does not always mean the engine will run badly; many vehicles default to a calculated camshaft position and drive almost normally, which leads owners to postpone a repair that later becomes a no-start.

Can I keep driving with P0393?

You can usually drive a short distance to a repair shop with P0393, but avoid heavy acceleration, towing, or long highway trips because a sudden loss of camshaft signal can cause the engine to stall without warning. If the engine is already running rough, misfiring, or stalling, stop driving and have the vehicle towed 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
- Wiring diagram and connector pinout for the specific vehicle
- Test light or jumper wires for circuit loading checks
- Basic hand tools for connector and harness access

Reading P0393

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.
93	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) · **P0392** Camshaft Position Sensor 'B' Circuit Low (Bank 2) · **P0394** Camshaft Position Sensor 'B' Circuit Intermittent (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/p0393/>

