

GENERIC · POWERTRAIN

P0386

OBD-II TROUBLE CODE

P0386

Crankshaft Position Sensor 'B' Circuit Range/Performance

P0386 indicates that the powertrain control module (PCM) has detected an abnormal signal from the crankshaft position sensor 'B' circuit, meaning the sensor's output is outside the expected range or performance criteria. The PCM compares the 'B' sensor signal with other timing references and sets this code when the signal is erratic, missing, or inconsistent.

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
- Intermittent engine stalling or rough running, especially when the engine is cold or under load
- Difficulty starting or a no-start condition if the signal is lost completely
- Misfire-like symptoms, such as shaking or hesitation during acceleration
- Reduced fuel economy or poor engine performance due to incorrect timing

Common causes, most likely first

- 1 Faulty crankshaft position sensor 'B' itself, due to internal failure or damage
- 2 Wiring issues in the sensor circuit, such as open, short, or high resistance in the signal or ground wires
- 3 Corroded or loose electrical connectors at the sensor or PCM
- 4 Damaged reluctor wheel (tone ring) on the crankshaft, causing an irregular signal
- 5 PCM software or internal fault, though less common
- 6 Mechanical problems like a loose crankshaft pulley or timing chain issues affecting sensor reading

How to diagnose and fix it

- 1 Perform a visual inspection of the sensor, wiring, and connectors for obvious damage or corrosion
- 2 Use a scan tool to check for related codes and freeze-frame data to understand when the fault occurs
- 3 Test the sensor's resistance and signal output with a multimeter or oscilloscope according to manufacturer specifications
- 4 Check the reluctor wheel for damage or debris that could disrupt the signal
- 5 Repair or replace any damaged wiring or connectors, then clear codes and retest
- 6 Replace the crankshaft position sensor 'B' if testing indicates it is faulty
- 7 If the problem persists, diagnose the PCM and perform software updates or replacement as needed



Crankshaft Sensor B Circuit Pitfalls

- A common mistake is replacing the sensor without checking the reluctor wheel, which can be damaged or dirty and cause a new sensor to read incorrectly.
- Intermittent faults often stem from wiring harness chafing near hot or moving components, so a wiggle test while monitoring live data can reveal the issue.
- Some vehicles use multiple crankshaft sensors for redundancy, and a fault in 'B' may not disable the engine but can affect timing precision and fuel efficiency.
- The PCM may set P0386 due to a mismatch between the crankshaft and camshaft signals, so checking for camshaft codes is essential before condemning the crank sensor.
- After repairs, a relearn or adaptation reset may be required for the PCM to recognize the new sensor correctly.

Can I keep driving with P0386?

If the engine runs smoothly and the light is steady, you can drive cautiously to a repair shop, but avoid heavy acceleration or long trips. If the engine stalls, runs rough, or the light flashes, stop driving and seek immediate professional diagnosis to prevent damage or safety risks.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Oscilloscope (for signal analysis)
- Basic hand tools (wrenches, sockets, screwdrivers)
- Feeler gauge or non-magnetic feeler gauge for air gap check
- Manufacturer service information for specifications

Reading P0386

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.
86	The exact fault within that area.

Often seen with

P0335 Crankshaft Position Sensor A Circuit Malfunction · **P0336** Crankshaft Position Sensor A Circuit Range/Performance · **P0385** Crankshaft Position Sensor 'B' Circuit · **P0387** Crankshaft Position Sensor 'B' Circuit Low · **P0388** Crankshaft Position Sensor 'B' Circuit High



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/p0386/>

