

GENERIC · POWERTRAIN

P034B

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P034B

Crankshaft Position Sensor - Crankshaft Direction Incorrect

P034B indicates that the engine control module has detected an implausible or incorrect direction of rotation from the crankshaft position sensor signal. The computer compares the crank signal to the camshaft position sensor and determines that the crank appears to be rotating in the wrong direction or the signal is inconsistent with expected engine rotation.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Ignition system and misfire

Symptoms you may notice

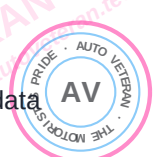
- Illumination of the check engine light, often with no other noticeable symptoms
- Engine may crank but fail to start or start with extended cranking
- Rough running, misfiring, or stalling shortly after start-up
- Reduced engine power or limp mode activation
- Intermittent no-start condition, especially when the engine is hot or cold
- Unusual noises from the engine bay if a mechanical fault is present

Common causes, most likely first

- 1 Faulty crankshaft position sensor or damaged reluctor wheel (tone ring)
- 2 Wiring damage (open, short, or chafed) between the crank sensor and the ECM
- 3 Corroded or loose electrical connectors at the crank sensor or ECM
- 4 Mechanical timing issue such as a stretched timing chain or jumped timing belt
- 5 Failed camshaft position sensor causing conflicting signals
- 6 ECM software calibration issue or internal fault (rare)

How to diagnose and fix it

- 1 Perform a visual inspection of the crankshaft sensor, reluctor wheel, and wiring for obvious damage or debris
- 2 Check for technical service bulletins (TSBs) or software updates related to this code for the specific vehicle
- 3 Use a scan tool to verify live data from both crank and cam sensors for consistency and correct direction
- 4 Test the crankshaft position sensor and its circuit with a multimeter (resistance, voltage, and continuity)
- 5 Inspect the reluctor wheel for cracks, missing teeth, or incorrect installation
- 6 Verify engine mechanical timing with a timing light or by aligning timing marks
- 7 If all else fails, substitute known-good sensors or perform a wiggle test on wiring while monitoring data



Crank Direction Code: Don't Jump to Sensor Replacement

- A stretched timing chain or belt can cause the crank and cam signals to fall out of sync, triggering P034B even when both sensors are good.
- Debris or metallic particles stuck to the reluctor wheel can distort the crank signal and mimic a direction error.
- Some aftermarket crankshaft sensors have incorrect internal circuitry that produces a reversed signal, leading to this code.
- The ECM may set P034B if the battery voltage is low during cranking, causing erratic sensor signals; always check battery health first.
- A failing camshaft position sensor can cause the ECM to misinterpret crank direction, so diagnose both sensors before replacing parts.

Can I keep driving with P034B?

If the engine runs smoothly and the only symptom is the check engine light, you may drive cautiously to a repair shop, but avoid heavy acceleration or long trips. If the engine misfires, stalls, or fails to start, stop driving and seek professional diagnosis immediately to prevent further damage.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Oscilloscope (for waveform analysis)
- Basic hand tools (socket set, screwdrivers)
- Feeler gauge or timing light (for mechanical timing check)

Reading P034B

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.
4B	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 · **P0336** Crankshaft Position Sensor A Circuit Range/Performance · **P0340** Camshaft Position Sensor A Circuit Malfunction (Bank 1) · **P0341** Camshaft Position Sensor A Circuit Range/Performance



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/p034b/>

