

GENERIC · POWERTRAIN

P03E5

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P03E5

A Camshaft Position Actuator Position Sensor C Circuit Bank 1

P03E5 indicates that the powertrain control module (PCM) has detected an abnormal electrical condition in the circuit for the Camshaft Position Actuator Position Sensor 'C' on Bank 1. This sensor reports the actual position of the camshaft phaser, and the PCM compares that signal with the commanded position to set this code when the circuit voltage or signal pattern falls outside the expected range.

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.
- Rough idle or unstable engine operation, especially when cold.
- Reduced engine performance or a lack of power during acceleration.
- Poor fuel economy or increased emissions.
- In some cases, the engine may enter limp mode or exhibit hard starting.

Common causes, most likely first

- 1 Faulty camshaft position actuator position sensor 'C' on Bank 1.
- 2 Damaged or corroded wiring or connector at the sensor or PCM.
- 3 Open or short circuit in the sensor signal, power, or ground circuit.
- 4 Contaminated or sludged engine oil affecting sensor operation.
- 5 Mechanical binding or wear in the camshaft phaser or actuator assembly.
- 6 PCM internal fault or software issue (less common).



How to diagnose and fix it

- 1 Perform a visual inspection of the sensor, wiring, and connectors for damage or corrosion.
- 2 Check the engine oil level and condition; change oil and filter if contaminated.
- 3 Use a scan tool to monitor live data for the camshaft position actuator sensor and compare commanded versus actual position.
- 4 Test the sensor circuit with a multimeter for continuity, shorts, and reference voltage according to the manufacturer's procedure.
- 5 If the circuit tests good, remove and inspect the sensor for debris or mechanical damage; replace if faulty.
- 6 If the sensor and wiring are intact, inspect the camshaft phaser and actuator for mechanical issues.
- 7 Clear the code and perform a road test to verify the repair; reprogram the PCM if a software update is available.

Oil Quality and Circuit Checks Before Sensor Replacement

- A low oil level or degraded oil can cause the camshaft phaser to respond sluggishly, setting this code even when the sensor itself is functioning correctly.
- The sensor 'C' designation refers to a specific sensor in a multi-sensor system; misidentifying the sensor location can lead to replacing the wrong part.
- Intermittent wiring faults often appear only when the engine is hot or vibrating, so a wiggle test of the harness while monitoring live data is essential.
- This code can be set by a mechanical issue in the phaser that prevents it from reaching the commanded position, which the sensor faithfully reports as out of range.
- Some vehicles require a relearn procedure after sensor replacement; skipping it can cause the code to return immediately.

Can I keep driving with P03E5?

You can usually drive the vehicle with this code, but avoid aggressive acceleration or heavy loads because the engine may enter limp mode or suffer reduced performance. Have the fault diagnosed soon to prevent potential damage to the camshaft phaser or catalytic converter.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Basic hand tools (socket set, screwdrivers)
- Feeler gauges or sensor gap tool (if applicable)
- Oil change equipment



Reading P03E5

- 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.
- E5** The exact fault within that area.

Often seen with

P0010 'A' Camshaft Position Actuator Circuit (Bank 1) · **P0011** 'A' Camshaft Position - Timing Over-Advanced or System Perfo · **P0016** Crankshaft/Camshaft Position Correlation (Bank 1 Sensor A) · **P03E4** Cylinder 8 Combustion Performance · **P03E6** A Camshaft Position Actuator Position Sensor C Range/Perform

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/p03e5/>

