

GENERIC · POWERTRAIN

P34C2

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P34C2

B Camshaft Position Actuator Position Sensor A Circuit Low Bank 2

P34C2 indicates that the powertrain control module (PCM) has detected a low-voltage condition on the signal circuit for the Bank 2 'A' camshaft position actuator position sensor. This sensor reports the actual position of the camshaft phaser, and a low signal means the PCM cannot reliably determine the camshaft's position, which can disrupt variable valve timing and engine performance.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Intermediate	Auxiliary emission controls

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms.
- Rough idle or engine misfire, especially when the engine is cold or under light load.
- Reduced engine power or sluggish acceleration due to disabled variable valve timing.
- Poor fuel economy as the PCM defaults to a fixed camshaft timing strategy.
- In some cases, the engine may stall or hesitate during deceleration.
- A noticeable rattle or ticking noise from the timing chain area if the phaser is not being controlled properly.

Common causes, most likely first

- 1 A faulty camshaft position actuator position sensor on Bank 2.
- 2 Damaged, chafed, or corroded wiring in the sensor's signal circuit, including a short to ground.
- 3 A poor electrical connection at the sensor harness connector, such as loose pins or water intrusion.
- 4 A failed camshaft phaser or actuator that is mechanically stuck and not reporting a valid position.
- 5 A PCM internal fault causing incorrect signal interpretation, though this is rare.
- 6 Oil sludge or debris obstructing the phaser and affecting sensor reading, often due to infrequent oil changes.



How to diagnose and fix it

- 1 Connect a scan tool and verify P34C2 is the only or primary code; check for any related camshaft or crankshaft codes.
- 2 Inspect the sensor wiring and connector for damage, corrosion, or loose pins, and repair as needed.
- 3 Measure the sensor's reference voltage and ground at the connector with a multimeter to confirm power and ground integrity.
- 4 Test the signal circuit for a short to ground using a multimeter and wiring diagram; repair any short found.
- 5 Swap the Bank 2 sensor with a known-good sensor from the same bank (if accessible) to see if the code moves.
- 6 Replace the camshaft position actuator position sensor if testing confirms it is faulty.
- 7 Clear codes and perform a road test to verify the repair and ensure the code does not return.

Don't overlook the wiring harness

- A low signal code is frequently caused by a short to ground in the sensor wiring rather than a failed sensor, so always perform a voltage drop test on the ground circuit.
- Oil contamination at the sensor connector can bridge pins and create a low signal, especially on engines with variable valve timing that are prone to oil seepage.
- The PCM may set this code intermittently if the phaser is slow to respond, so a wiggle test of the harness while monitoring live data can reveal a bad connection.
- Replacing the sensor without checking the phaser for mechanical binding often leads to a repeat code, as a stuck phaser can damage the new sensor over time.
- This code can be triggered by a low battery or charging system issue that causes a momentary voltage drop, so check battery health before condemning the sensor.

Can I keep driving with P34C2?

You can usually drive the vehicle with this code, but avoid aggressive acceleration and heavy loads because the engine may enter a limp mode that reduces power. Have the fault diagnosed soon to prevent potential damage to the camshaft phaser or catalytic converter from prolonged misfueling.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Wiring diagram for the specific vehicle
- Basic hand tools (socket set, screwdrivers)
- Electrical contact cleaner and dielectric grease



Reading P34C2

- P** Powertrain: engine, transmission and emissions.
- 3** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 4** Auxiliary emission controls.
- C2** The exact fault within that area.

Often seen with

P0011 'A' Camshaft Position - Timing Over-Advanced or System Perfo · **P0014** Exhaust Camshaft Position - Over-Advanced (Bank 1) · **P0021** 'A' Camshaft Position - Timing Over-Advanced or System Perfo · **P34C1** B Camshaft Position Actuator Position Sensor A Range/Perform · **P34C3** B Camshaft Position Actuator Position Sensor A 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/p34c2/>

