

GENERIC · POWERTRAIN

P34BA

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P34BA

B Camshaft Position Actuator Temperature Sensor Circuit Low Bank 2

P34BA indicates that the powertrain control module (PCM) has detected a low signal voltage from the bank 2 camshaft position actuator temperature sensor circuit. This sensor monitors the temperature of the camshaft phaser or actuator, and a low reading means the circuit is likely shorted to ground or the sensor's internal resistance has dropped below the expected range.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Auxiliary emission controls

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms.
- Rough idle or engine misfire if the faulty actuator affects camshaft timing on bank 2.
- Reduced engine performance or power, especially under load.
- Poor fuel economy due to incorrect camshaft timing adjustments.
- In rare cases, the engine may enter limp mode or stall when the PCM cannot trust the actuator temperature data.

Common causes, most likely first

- 1 A short to ground in the sensor signal wire or connector.
- 2 A failed camshaft position actuator temperature sensor with an internal short.
- 3 Corroded, loose, or damaged electrical connector at the sensor or PCM.
- 4 Wiring harness chafing against engine components, causing a short to ground.
- 5 A faulty PCM driver circuit for the sensor (less common).
- 6 Oil contamination or sludge buildup affecting the sensor's internal electronics.



How to diagnose and fix it

- 1 Use a scan tool to verify P34BA is active and check for any related codes in other modules.
- 2 Visually inspect the sensor and its connector for damage, corrosion, or loose pins; repair as needed.
- 3 Disconnect the sensor and measure resistance across its terminals; compare to the manufacturer's specification to confirm sensor failure.
- 4 With the sensor disconnected and ignition on, measure voltage on the signal wire to ground; a low voltage (near 0V) indicates a short to ground in the harness.
- 5 Isolate the short by disconnecting the PCM and checking continuity from the signal wire to ground; repair the harness if a short is found.
- 6 If the harness and sensor are good, test the PCM's internal driver circuit or substitute a known-good PCM for diagnosis.
- 7 Clear codes and perform a road test to confirm the repair and ensure the code does not return.

What a low actuator temperature signal really means

- A low signal voltage does not always mean the sensor itself has failed; a chafed wire shorting to ground is equally common and often overlooked.
- Oil sludge or contamination inside the sensor can cause a low resistance reading, so a sensor that tests bad may be a symptom of poor maintenance rather than the root cause.
- The PCM may set P34BA intermittently if the short only occurs when the engine is hot or vibrating, so a wiggle test of the harness is essential during diagnosis.
- Some vehicles use the same sensor for both bank 1 and bank 2; swapping sensors side-to-side can quickly confirm whether the fault follows the sensor or the wiring.
- A low signal can also be caused by a poor ground connection at the sensor housing, which is often missed when only the signal wire is checked.

Can I keep driving with P34BA?

You can usually drive the vehicle with this code, but avoid heavy acceleration or towing until it is repaired, because incorrect camshaft timing can cause poor performance and increased emissions. If the engine runs rough or enters limp mode, seek service promptly.

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 P34BA

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

Often seen with

P0011 'A' Camshaft Position - Timing Over-Advanced or System Perfo · **P0012** 'A' Camshaft Position - Timing Over-Retarded (Bank 1) · **P0021** 'A' Camshaft Position - Timing Over-Advanced or System Perfo · **P34B9** B Camshaft Position Actuator Temperature Sensor Range/Perfor · **P34BB** B Camshaft Position Actuator Temperature Sensor 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/p34ba/>

