

GENERIC · POWERTRAIN

P34AA

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P34AA

A Camshaft Position Actuator Temperature Sensor Circuit Low Bank 2

P34AA indicates that the powertrain control module (PCM) has detected an abnormally low voltage signal from the camshaft position actuator temperature sensor on bank 2. This sensor monitors the temperature of the camshaft phaser or actuator assembly, and a low signal typically means the circuit is 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, particularly when the engine is cold
- Reduced engine performance or poor fuel economy due to incorrect camshaft timing
- Intermittent stalling or hesitation during acceleration
- Possible extended crank time or hard starting in cold weather

Common causes, most likely first

- 1 Faulty camshaft position actuator temperature sensor (internal short to ground)
- 2 Damaged or chafed wiring harness between the sensor and PCM, causing a short to ground
- 3 Corroded or loose electrical connector at the sensor or PCM
- 4 Contamination or sludge buildup on the sensor tip, altering its resistance
- 5 PCM internal fault (rare, but possible after other causes are ruled out)



How to diagnose and fix it

- 1 Use a scan tool to verify the code and check live data for the actuator temperature sensor voltage; compare bank 2 to bank 1 if available.
- 2 Visually inspect the sensor and its connector for corrosion, oil intrusion, or loose pins, and clean or repair as needed.
- 3 Disconnect the sensor and measure resistance across its terminals with a multimeter; compare to the manufacturer's specification (a very low or zero reading indicates a failed sensor).
- 4 Check the sensor signal wire for a short to ground by measuring continuity between the signal wire and chassis ground with the sensor and PCM disconnected.
- 5 If the circuit tests good, replace the camshaft position actuator temperature sensor with a quality part and clear the code.
- 6 After repair, road-test the vehicle to confirm the code does not return and that live data reads within normal range.

What a low signal really tells you

- A low signal code often results from a sensor that has failed internally and is shorted to ground, but a chafed wire rubbing against the engine block can produce the same reading and is frequently overlooked.
- Oil contamination in the connector is a common cause on engines with variable valve timing, as leaking camshaft seals can push oil into the harness.
- This code does not always mean the sensor is bad; a poor ground connection at the PCM or a shared ground circuit with other sensors can drag the signal voltage low.
- On some vehicles, the actuator temperature sensor is integrated into the camshaft phaser assembly, so a low signal may require replacing the entire phaser rather than just the sensor.
- Intermittent low signal codes that appear only in cold weather often point to a sensor whose resistance changes with temperature, and the sensor may test fine when warm.

Can I keep driving with P34AA?

You can generally drive the vehicle with this code, but avoid aggressive acceleration and heavy load until it is repaired, as incorrect camshaft timing can affect engine performance and emissions. If the engine runs rough or stalls, have it checked promptly to prevent further damage.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Wire probe set or back-probe pins
- Socket and ratchet set
- Electrical contact cleaner



Reading P34AA

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

Often seen with

P0011 'A' Camshaft Position - Timing Over-Advanced or System Perfo · **P0016** Crankshaft/Camshaft Position Correlation (Bank 1 Sensor A) · **P0021** 'A' Camshaft Position - Timing Over-Advanced or System Perfo · **P34A9** A Camshaft Position Actuator Temperature Sensor Range/Perfor · **P34AB** A 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/p34aa/>

