

GENERIC · POWERTRAIN

P34BB

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P34BB

B Camshaft Position Actuator Temperature Sensor Circuit High Bank 2

P34BB means the powertrain control module (PCM) has detected an abnormally high voltage on the signal circuit of the Bank 2 camshaft position actuator temperature sensor. The sensor is a thermistor that changes resistance with temperature, and the PCM interprets a high voltage as an open circuit or a sensor reading that is out of its expected range.

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 unstable engine operation when the camshaft actuator is not receiving correct temperature data
- Reduced fuel economy or slightly elevated emissions due to incorrect camshaft phasing
- Intermittent hesitation or stumble during acceleration if the fault is intermittent
- Possible extended crank time or hard starting in cold conditions
- A stored pending code or freeze-frame data showing the fault occurred under specific operating conditions

Common causes, most likely first

- 1 Damaged or disconnected sensor signal wire (open circuit) between the sensor and the PCM
- 2 Corroded, loose, or water-intruded connector at the camshaft position actuator temperature sensor
- 3 Failed camshaft position actuator temperature sensor (internal open circuit or resistance shift)
- 4 Chafed or broken wire harness near the bank 2 camshaft actuator or exhaust manifold due to heat or vibration
- 5 Poor ground connection for the sensor circuit, causing a reference voltage offset
- 6 Faulty PCM driver or internal circuit for the sensor signal (rare but possible)
- 7 Aftermarket or incorrect sensor installed that does not match the PCM calibration



How to diagnose and fix it

- 1 Use an OBD-II scan tool to confirm P34BB is active and record freeze-frame data for voltage and temperature readings
- 2 Visually inspect the sensor connector and wiring for corrosion, loose pins, or physical damage, and repair as needed
- 3 Measure sensor resistance with a multimeter and compare to the manufacturer's temperature-resistance chart to verify sensor integrity
- 4 Back-probe the signal circuit at the PCM and check for an open or short to voltage with a multimeter or lab scope
- 5 Check the sensor ground circuit for excessive resistance and repair any faulty ground connection
- 6 If wiring and ground are good, replace the camshaft position actuator temperature sensor with an OEM-quality part
- 7 Clear the code, perform a road test, and verify the repair by monitoring live sensor data for a stable temperature reading

Why this code often misleads technicians

- A high-voltage code on a temperature sensor is almost always an open circuit, so inspect the harness and connector before condemning the sensor itself.
- Heat damage from the exhaust manifold can melt or brittle the sensor wiring on Bank 2, causing an intermittent open that only sets the code when the engine is hot.
- The camshaft position actuator temperature sensor shares its reference voltage or ground with other sensors on some engines, so a fault elsewhere can skew this signal.
- A failed sensor may still read a plausible temperature when cold, so resistance must be checked across the full operating range after warming the engine.
- Aftermarket sensors with incorrect resistance curves are a common cause of repeat P34BB codes even after replacement, so use a known-good OEM part.

Can I keep driving with P34BB?

The vehicle is generally safe to drive with P34BB because the fault affects camshaft phasing rather than immediate engine operation, but avoid heavy load or aggressive driving until the cause is repaired. Prolonged driving with an open sensor circuit can lead to poor fuel economy and increased emissions, so schedule diagnosis soon.



Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Back-probe kit or breakout box
- Wire repair kit with crimp connectors and heat shrink
- Manufacturer service information for resistance charts and wiring diagrams

Reading P34BB

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

Often seen with

P0011 'A' Camshaft Position - Timing Over-Advanced or System Perfo · **P0021** 'A' Camshaft Position - Timing Over-Advanced or System Perfo · **P0340** Camshaft Position Sensor A Circuit Malfunction (Bank 1) · **P34B9** B Camshaft Position Actuator Temperature Sensor Range/Perfor · **P34BA** B Camshaft Position Actuator Temperature Sensor Circuit Low

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/p34bb/>

