

GENERIC · POWERTRAIN

P34A7

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P34A7

A Camshaft Position Actuator Temperature Sensor Circuit High Bank 1

P34A7 indicates that the powertrain control module (PCM) has detected an abnormally high voltage signal from the camshaft position actuator temperature sensor on bank 1. This sensor monitors the temperature of the camshaft phaser or actuator, and a high voltage typically means the sensor circuit is open, shorted to voltage, or the sensor itself has failed.

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.
- Reduced engine performance or power, as the PCM may limit variable cam timing.
- Poor fuel economy due to incorrect camshaft timing adjustments.
- In rare cases, the engine may enter limp mode or stall.
- Intermittent symptoms if the fault is due to a loose connection or chafed wire.

Common causes, most likely first

- 1 Faulty camshaft position actuator temperature sensor.
- 2 Open or high-resistance in the sensor signal circuit.
- 3 Short to voltage on the sensor signal circuit.
- 4 Damaged or corroded sensor connector or terminals.
- 5 PCM internal fault affecting the sensor reference voltage.
- 6 Wiring harness damage from heat, vibration, or contamination.

How to diagnose and fix it

- 1 Perform a visual inspection of the sensor and its wiring for obvious damage, corrosion, or loose connections.
- 2 Use a scan tool to check for related codes and freeze-frame data to confirm the fault conditions.
- 3 Measure the sensor resistance and compare to the manufacturer's specification; replace if out of range.
- 4 Backprobe the sensor connector to check for reference voltage (typically 5V) and good ground.
- 5 Check the signal circuit for continuity and shorts to voltage using a multimeter; repair wiring as needed.
- 6 If the circuit and sensor test good, suspect a faulty PCM; perform further diagnostics before replacement.
- 7 Clear codes and verify the repair with a test drive, ensuring the code does not return.



Don't Replace the Sensor Blindly

- A high voltage code often results from an open circuit rather than a failed sensor, so check wiring continuity before condemning the sensor.
- Heat damage to the sensor connector is common on bank 1 due to proximity to exhaust components, causing intermittent high voltage signals.
- The PCM may set this code if the sensor signal exceeds 4.5 volts for a calibrated time, which can happen if the sensor ground is lost.
- A faulty camshaft actuator solenoid can sometimes cause abnormal temperature readings, leading to misdiagnosis of the temperature sensor.
- Always verify the sensor's reference voltage and ground at the connector; a missing ground can mimic a sensor failure.

Can I keep driving with P34A7?

It is generally safe to drive with this code as long as the engine is running smoothly and not overheating, but avoid aggressive driving or towing until repaired. Prolonged driving with a faulty camshaft actuator temperature sensor may lead to poor fuel economy and increased emissions.

Tools that help

- OBD-II scan tool
- Digital multimeter
- Wire probe set
- Service manual for wiring diagrams
- Socket set and ratchet

Reading P34A7

- P** Powertrain: engine, transmission and emissions.
- 3** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 4** Auxiliary emission controls.
- A7** 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) · **P0340** Camshaft Position Sensor A Circuit Malfunction (Bank 1) · **P0341** Camshaft Position Sensor A Circuit Range/Performance



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/p34a7/>

