

GENERIC · POWERTRAIN

P06AA

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P06AA

Control Module Internal Temperature B Too High

P06AA indicates that the control module responsible for monitoring internal temperature has detected its 'B' temperature sensor reading excessively high, often due to a fault in the module's internal thermal management or a related circuit. The computer sets this code when the internal temperature exceeds a calibrated threshold, typically to protect the electronics from heat damage.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Professional	Computer and output circuits

Symptoms you may notice

- Illumination of the check engine light or service engine soon light, often with no other noticeable symptoms.
- Intermittent electrical glitches such as flickering dashboard lights or erratic gauge behavior.
- Reduced performance or limp mode if the module enters a protective strategy.
- Hard starting or stalling if the affected module controls engine functions.
- Overheating warnings or messages on the driver information display.
- No symptoms besides the warning light in many cases, especially if the fault is intermittent.

Common causes, most likely first

- 1 Faulty internal temperature sensor B within the control module.
- 2 Poor electrical connection or damaged wiring to the module's temperature sensing circuit.
- 3 Overheating of the control module due to a failed cooling fan or blocked ventilation.
- 4 Software error in the module causing false high-temperature readings.
- 5 Voltage supply issues or ground problems leading to incorrect sensor readings.
- 6 Physical damage or corrosion inside the module affecting temperature sensing.
- 7 Extreme underhood temperatures from other faults, such as a restricted exhaust or cooling system failure.



How to diagnose and fix it

- 1 Use an OBD-II scanner to verify the code and check for related freeze-frame data, then clear the code to see if it returns.
- 2 Inspect the control module's wiring harness and connectors for signs of damage, corrosion, or loose pins.
- 3 Check the module's cooling system, including fans and ventilation paths, for proper operation and obstructions.
- 4 Measure the module's supply voltage and ground circuits to ensure they are within specification.
- 5 Consult the factory service information for specific pinpoint tests for the internal temperature sensor circuit.
- 6 If the sensor circuit tests good, reflash or reprogram the module with the latest software from the manufacturer.
- 7 Replace the control module if internal sensor failure is confirmed and all external factors are ruled out.

Hidden Causes of P06AA You Might Overlook

- A failing cooling fan or a blocked air duct to the module can cause overheating that triggers this code, even if the module itself is healthy.
- In some vehicles, a low battery or charging system issue can cause voltage spikes that confuse the module's temperature sensing, leading to a false P06AA.
- The code may be set by a software glitch that can be resolved with a simple reflash, so avoid replacing the module before checking for updates.
- Corroded grounds or poor connections at the module can mimic an internal sensor failure, so always perform a thorough visual and voltage drop test.
- P06AA is often accompanied by other codes related to the same module; diagnosing those first can provide clues to the root cause.

Can I keep driving with P06AA?

If the check engine light is on but the vehicle runs normally, you can drive cautiously to a repair shop, but avoid heavy loads or long trips. If the vehicle enters limp mode or shows overheating warnings, stop driving and seek professional assistance to prevent module damage.

Tools that help

- OBD-II scanner with live data capability
- Digital multimeter
- Factory service information or wiring diagrams
- Infrared thermometer
- Basic hand tools for trim and connector removal



Reading P06AA

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 6** Computer and output circuits.
- AA** The exact fault within that area.

Often seen with

P0601 Internal Control Module Memory Checksum Error · **P0606** PCM Processor Fault · **P06A9** Sensor Reference Voltage D Circuit Range/Performance · **P06AB** Control Module Internal Temperature Sensor B Circuit · **P06AC** Control Module Internal Temperature Sensor B Range/Performance

See it working

Watch the animated explainer [How a Gyroscope Works: Gimbals and Precession](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p06aa/>

