

GENERIC · POWERTRAIN

P06AD

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P06AD

Control Module Internal Temperature Sensor B Circuit Low

P06AD means the control module's internal temperature sensor B is reporting a voltage below its expected range, so the module cannot reliably judge its own internal temperature. The computer has detected a low-voltage condition on that sensor circuit, which usually points to a wiring fault, a failing sensor inside the module, or a power/ground problem affecting the module.

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

Symptoms you may notice

- Illuminated check engine light or service vehicle soon message, often with no other symptoms
- Intermittent electrical glitches such as flickering dash lights or random warning chimes
- Reduced performance or limp mode if the module derates itself to protect its electronics
- No-start or stalling in severe cases when the module overheats without protection
- Other unrelated trouble codes stored in the same module due to unstable power or ground

Common causes, most likely first

- 1 Chafed, corroded, or disconnected wiring in the sensor B signal circuit inside or near the control module
- 2 Failed internal temperature sensor B inside the control module, often due to age or heat cycling
- 3 Poor ground connection at the module mounting point or engine/chassis ground strap
- 4 Low or unstable supply voltage to the module from a weak battery or failing alternator
- 5 Water intrusion or connector corrosion at the module harness causing a short to ground
- 6 Aftermarket electrical accessories tapped into the module wiring disturbing the reference voltage



How to diagnose and fix it

- 1 Check battery voltage and charging system output, then load-test the battery to rule out low supply voltage
- 2 Inspect the control module connectors for corrosion, water intrusion, or loose pins and clean or reseat as needed
- 3 Check the module ground circuit for excessive resistance with a voltage drop test under load
- 4 Backprobe the sensor B signal wire at the module connector and compare voltage to the manufacturer's specification
- 5 Wiggle-test the harness while watching live sensor B data to catch intermittent wiring faults
- 6 If wiring and grounds are good, follow the factory diagnostic flow for internal sensor B, which may require module replacement and programming
- 7 Clear codes and verify the repair with a road test and live data review of the internal temperature reading

What the internal temperature sensor really protects

- This code often sets from a weak battery or bad ground rather than a failed module, so always load-test the battery and check grounds before condemning the control module.
- The internal temperature sensor B is usually a backup or secondary sensor, so the module may still run normally and the code can be the only sign of a problem.
- A chafed harness near the module mounting bracket is a common hidden cause that only shows up when the engine moves or the vehicle hits bumps.
- Replacing the control module without checking the sensor B circuit voltage first is a costly misdiagnosis, because a shorted signal wire will damage the new module too.
- Aftermarket remote starters or alarm systems tapped into module wiring frequently disturb the reference voltage and set this code.

Can I keep driving with P06AD?

You can usually drive short distances to a shop, but avoid heavy loads, long trips, or high ambient temperatures until the fault is repaired because the module may lose its ability to protect itself from overheating. If the vehicle enters limp mode or stalls, stop driving and have it towed.

Tools that help

- OBD-II scan tool with live data and module-specific capabilities
- Digital multimeter with backprobe pins
- Battery load tester
- Factory service information for connector pinouts and voltage specifications
- Wire terminal removal tools and electrical contact cleaner



Reading P06AD

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.
AD	The exact fault within that area.

Often seen with

P0562 System Voltage Low · **P0563** System Voltage High · **P06AC** Control Module Internal Temperature Sensor B Range/Performan · **P06AE** Control Module Internal Temperature Sensor B Circuit High · **U0100** Lost Communication With ECM/PCM A

See it working

Watch the animated explainer [How Hydraulic Brakes Work: Pedal to Caliper](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p06ad/>

