

GENERIC · POWERTRAIN

P06B7

OBD-II TROUBLE CODE

P06B7

Internal Control Module Knock/Combustion Vibration Sensor Processor 2 Performance

P06B7 indicates that the engine control module (ECM) has detected an internal fault in the processor circuit that handles the signal from the knock sensor or combustion vibration sensor number two. The ECM compares the processed vibration signal against expected values and sets this code when the internal processor performance does not match its programmed parameters, which can affect the timing control and engine protection strategies.

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, often with no other noticeable symptoms
- Reduced engine power or a limp-home mode in some vehicles
- Audible engine knock or pinging under acceleration if timing is retarded or advanced incorrectly
- Poor fuel economy or increased emissions due to altered ignition timing
- Rough idle or hesitation during acceleration in severe cases
- In rare instances, the engine may enter a fail-safe mode that limits RPM

Common causes, most likely first

- 1 Internal failure of the ECM processor circuit dedicated to the knock/combustion vibration sensor
- 2 Corroded, damaged, or loose wiring or connectors between the knock sensor and the ECM
- 3 Faulty knock sensor (sensor 2) sending erratic or no signal, which the ECM interprets as a processor performance fault
- 4 Electrical interference or poor grounding causing noise on the sensor signal circuit
- 5 Software or calibration issue within the ECM requiring a reflash or update
- 6 Mechanical engine noise (e.g., loose components, worn bearings) mimicking a faulty sensor signal and overloading the processor



How to diagnose and fix it

- 1 Inspect the knock sensor and its wiring for physical damage, corrosion, or loose connections; repair or replace as needed
- 2 Check the sensor signal circuit for shorts to ground or voltage, and verify the reference voltage at the sensor connector
- 3 Perform a resistance and continuity test on the knock sensor according to the manufacturer's specifications
- 4 Use a scan tool to monitor live knock sensor data and compare it with actual engine noise to identify erratic signals
- 5 Verify the ECM ground connections are clean and tight, as poor grounds can cause false processor performance codes
- 6 If all external circuits and sensors test good, reprogram the ECM with the latest calibration from the manufacturer
- 7 If the code persists after reprogramming, replace and program the ECM as the internal processor is confirmed faulty

Don't replace the ECM before checking these

- A faulty knock sensor or damaged wiring is far more common than an actual ECM failure, so always rule out external causes before condemning the module.
- This code can be set by mechanical engine noises that the ECM's processor cannot filter out, such as a loose heat shield or worn timing chain, so listen for abnormal noises.
- Some vehicles require a relearn or calibration procedure after replacing the knock sensor or ECM, and skipping it can cause the code to return immediately.
- P06B7 is often stored alongside other knock sensor codes (P0325, P0330) or communication codes (U0100), which can help pinpoint whether the issue is circuit-related or internal.
- Intermittent electrical interference from aftermarket accessories (e.g., poorly shielded audio equipment) can corrupt the sensor signal and trigger this code without any hard fault.

Can I keep driving with P06B7?

You can generally continue driving with this code, but avoid heavy acceleration or towing until it is diagnosed, as the ECM may not properly protect the engine from knock, potentially leading to long-term damage. If the engine runs rough or loses power, seek service promptly.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Oscilloscope (for signal analysis)
- Factory service information for wiring diagrams and testing procedures
- Basic hand tools (sockets, wrenches, screwdrivers)



Reading P06B7

- 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.
- B7** The exact fault within that area.

Often seen with

P0325 Knock Sensor 1 Circuit Malfunction (Bank 1) · **P0330** Knock Sensor 2 Circuit · **P06B6** Internal Control Module Knock/Combustion Vibration Sensor Pr · **P06B8** Internal Control Module Non-Volatile Random Access Memory (N · **U0100** Lost Communication With ECM/PCM A

See it working

Watch the animated explainer [How a Helicopter Flies: Rotor and Tail in X-Ray](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p06b7/>

