

GENERIC · POWERTRAIN

P06E6

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P06E6

Sensor Power Supply C Circuit/Open

P06E6 indicates that the powertrain control module (PCM) has detected an open circuit or abnormal voltage on the power supply circuit for a specific sensor, designated as 'C' by the manufacturer. The PCM monitors the voltage feed to this sensor and sets the code when the signal falls outside the expected range, typically indicating a break in the wire, a poor connection, or a failed sensor.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Computer and output circuits

Symptoms you may notice

- Illumination of the check engine light (malfunction indicator lamp).
- Often no symptoms besides the warning light, especially if the affected sensor is not critical to driveability.
- Intermittent or erratic operation of the system that the sensor monitors, such as poor fuel economy or reduced performance.
- Possible rough idle or hesitation if the sensor is related to engine management.
- Failure of the vehicle to enter closed-loop fuel control or other advanced strategies.
- Other related diagnostic trouble codes may be stored if the sensor signal is used for multiple systems.

Common causes, most likely first

- 1 Open or damaged wire in the sensor power supply circuit (e.g., broken wire, corroded splice).
- 2 Poor electrical connection at the sensor or PCM connector (e.g., loose terminal, corrosion).
- 3 Failed sensor causing an internal open circuit on its power supply pin.
- 4 Blown fuse or faulty relay that supplies power to the sensor circuit.
- 5 Short to ground or short to voltage on the power supply wire, causing the PCM to detect an open.
- 6 Faulty PCM (rare, but possible if all other components check out).



How to diagnose and fix it

- 1 Verify the code with a scan tool and check for any related codes or freeze-frame data.
- 2 Inspect the sensor and its connector for corrosion, loose pins, or damage; clean or repair as needed.
- 3 Check the fuse and relay that supply power to the sensor circuit; replace if blown or faulty.
- 4 Perform a voltage drop test on the power supply wire from the PCM to the sensor to check for excessive resistance.
- 5 Disconnect the sensor and measure resistance on the power supply circuit to ground; compare to specifications.
- 6 If the circuit tests good, substitute a known-good sensor and clear the code to see if it returns.
- 7 If the code persists after all checks, diagnose the PCM and its connectors for internal faults.

Common Missteps When Diagnosing P06E6

- Many technicians replace the sensor first without checking the power supply circuit, but a simple voltage drop test often reveals a corroded wire or connector.
The 'C' circuit designation is manufacturer-specific, so always consult the service information to identify which sensor is actually involved before testing.
 - A blown fuse for the sensor circuit may be caused by a shorted sensor or wiring, so replacing the fuse without finding the short will lead to a repeat failure.
 - Intermittent open circuits can be caused by wire chafing at flex points, so a wiggle test of the harness while monitoring live data is a valuable step.
- This code can be set by a low battery or charging system issue that causes a momentary voltage drop, so always verify battery and charging system health first.

Can I keep driving with P06E6?

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 exhibits performance issues or multiple warning lights, stop driving and have it towed to prevent further damage.

Tools that help

- OBD-II scan tool
- Digital multimeter
- Wiring diagram (service information)
- Test light
- Wire repair kit (splices, heat shrink)



Reading P06E6

- 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.
- E6** The exact fault within that area.

Often seen with

P0641 Sensor Reference Voltage 'A' Circuit/Open · **P0651** Sensor Reference Voltage 'B' Circuit/Open · **P06E5** Glow Plug Control Module 1 Performance · **P06E7** Sensor Power Supply C Circuit Low · **P06E8** Sensor Power Supply C Circuit High

See it working

Watch the animated explainer [Helicopter Simulator: Take Off, Hover and Land](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p06e6/>

