

GENERIC · POWERTRAIN

P06E9

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P06E9

Engine Starter Performance

P06E9 indicates that the engine control module (ECM) has detected a performance problem with the starter system, typically when the engine is cranked or during an automatic start-stop event. The ECM monitors starter motor current, voltage drop, or cranking speed and sets this code when the observed behavior falls outside expected parameters.

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

Symptoms you may notice

- The engine may crank slowly or fail to crank at all when the start button or key is turned.
- A no-start condition where the starter does not engage or spins without turning the engine.
- Intermittent starting problems, especially when the engine is hot or after short trips.
- The check engine light or service vehicle soon message illuminates on the dashboard.
- The automatic start-stop system (if equipped) may be disabled or fail to restart the engine.
- Often no symptoms besides the warning light, with the vehicle starting normally.

Common causes, most likely first

- Weak or failing battery with low cold cranking amps (CCA) or a poor state of charge.
- Corroded, loose, or damaged battery cables and ground connections at the starter or chassis.
- Faulty starter motor or starter solenoid, including worn brushes or a sticking solenoid.
- Open or high-resistance circuit in the starter control circuit, such as a bad relay or fuse.
- Defective engine control module (ECM) or starter control module, though this is less common.
- Mechanical issues such as a seized engine or excessive resistance in the rotating assembly.
- Aftermarket accessories or improper wiring causing voltage drops during cranking.



How to diagnose and fix it

- 1 Perform a battery test with a conductance tester and verify state of charge; recharge or replace if below specification.
- 2 Inspect and clean battery terminals, ground straps, and the starter power feed for corrosion or looseness.
- 3 Check the starter control circuit fuses and relay; test the relay operation and replace if faulty.
- 4 Measure voltage drop across the battery cables and starter connections during cranking to identify high resistance.
- 5 Command the starter with a scan tool (if supported) and compare actual cranking current and speed to expected values.
- 6 Test the starter motor directly by applying battery voltage to the solenoid terminal; replace the starter if it fails to engage or draws excessive current.
- 7 If all electrical and mechanical checks pass, diagnose the ECM and starter control module for internal faults or software updates.

Starter performance code misdiagnosis traps

- A weak battery often sets P06E9 without any noticeable starting problem, so load-testing the battery is the first step before condemning the starter.
- Corroded ground connections on the engine block or chassis can cause voltage drops that mimic a failing starter, yet the starter itself is fine.
- The code can be set by the automatic start-stop system during a restart event, even if normal key starts work perfectly, leading to unnecessary starter replacement.
- Aftermarket remote starters or alarm systems with starter interrupt circuits can introduce resistance or intermittent opens that trigger this code.
- A seized or hydrolocked engine can cause the starter to draw excessive current and set P06E9, so always verify the engine turns freely by hand before replacing parts.

Can I keep driving with P06E9?

If the vehicle starts reliably and the only symptom is the warning light, you can drive it to a repair shop for diagnosis, but avoid long trips or situations where a no-start could leave you stranded. If the engine cranks slowly or fails to start, do not continue driving because the starter may fail completely and leave you unable to start the vehicle.

Tools that help

- OBD-II scan tool with live data and bidirectional control
- Digital multimeter with voltage drop capability
- Battery conductance tester
- Remote starter switch
- Socket and wrench set



Reading P06E9

- 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.
- E9** The exact fault within that area.

Often seen with

P0615 Starter Relay Circuit · **P0616** Starter Relay Circuit Low · **P0617** Starter Relay Circuit High · **P06E8** Sensor Power Supply C Circuit High · **P06EA** NOx Sensor Processor Performance Bank 1 Sensor 1

See it working

Watch the animated explainer [How a Starter Motor Works: Pre-Engaged Starter](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p06e9/>

