

GENERIC · POWERTRAIN

P2610

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P2610

ECM/PCM Internal Engine Off Timer Performance

P2610 means the engine control module (ECM) or powertrain control module (PCM) has detected a problem with its internal engine-off timer, which is the circuit that keeps track of time while the engine is shut down. The computer compares this timer against other internal clocks and expects them to agree, so when the timer signal is missing, erratic, or implausible, it stores this code and turns on the check engine light.

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

Symptoms you may notice

- The check engine light is illuminated, and often there are no other symptoms at all.
- The engine may crank longer than usual before starting, especially after sitting overnight.
- Intermittent no-start conditions where the engine cranks but does not fire.
- The scan tool may show pending or history codes related to the timer or communication bus.
- Remote start or scheduled climate features may stop working on vehicles that rely on the engine-off timer.
- Battery drain may occur if the timer circuit keeps the PCM awake when it should be asleep.

Common causes, most likely first

- 1 A weak or failing 12-volt battery that drops voltage below the PCM's threshold during cranking or while the engine is off.
- 2 Corroded, loose, or damaged battery terminals and ground straps that cause voltage fluctuations at the PCM.
- 3 An internal fault in the ECM/PCM timer circuit, which is the most direct cause but should be confirmed last.
- 4 Wiring harness damage between the battery, ignition switch, and PCM that interrupts the keep-alive memory power.
- 5 A faulty ignition switch or main relay that does not supply stable power to the PCM during key-off periods.
- 6 Software or calibration issues in the PCM that affect how the timer is read or stored.
- 7 Aftermarket accessories wired into the PCM power circuits that introduce noise or voltage drops.



How to diagnose and fix it

- 1 Perform a battery load test and check the charging system output; replace the battery if it fails or is marginal.
- 2 Inspect and clean the battery terminals, ground cables, and engine-to-chassis ground straps for corrosion or looseness.
- 3 Use a scan tool to clear the code and monitor the engine-off timer parameter while cycling the ignition key to see if the fault returns immediately.
- 4 Check the keep-alive memory power and ground circuits at the PCM connector with a multimeter while wiggling the harness to find intermittent opens.
- 5 Verify the ignition switch and main relay operation by testing for voltage drops and proper switching during key-on and key-off cycles.
- 6 If all external circuits and power supplies are good, follow the manufacturer's diagnostic flow for internal PCM timer faults before replacing the PCM.
- 7 After any repair, clear the codes and perform a road test with several key-off cycles to confirm the timer reads correctly and the code does not reset.

What the engine-off timer really does

- The engine-off timer is not just a clock; it helps the PCM manage evaporative emissions monitor schedules and catalyst warm-up strategies, so a faulty timer can cause other monitors to run at the wrong time.
- A marginal battery that still starts the engine can be the sole cause of P2610 because the PCM may see voltage dips below its operating threshold during cranking and flag the timer as implausible.
- Technicians often replace the PCM too quickly; the majority of P2610 cases trace back to power or ground issues, so those circuits must be ruled out before condemning the module.
- On some vehicles, the engine-off timer is part of the theft-deterrent system, and a failing timer can cause intermittent no-start conditions that mimic a security problem.
- Aftermarket remote starters or alarm systems tapped into the PCM's power circuits can introduce voltage spikes that corrupt the timer reading and set this code without any hard failure.

Can I keep driving with P2610?

You can usually drive the vehicle with P2610 because it rarely causes an immediate safety risk, but avoid long trips or leaving the car parked for extended periods until the cause is found. If the engine cranks longer than normal or stalls, have it diagnosed promptly because a failing power supply could leave you stranded.



Tools that help

- OBD-II scan tool with live data and the ability to read pending codes
- Digital multimeter with min/max recording
- Battery load tester
- Test light or logic probe
- Wiring diagram for the PCM power and ground circuits
- Socket set and terminal pick tools for inspecting connectors

Reading P2610

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

Often seen with

P0562 System Voltage Low · **P0563** System Voltage High · **P0600** Serial Communication Link Malfunction · **P0601** Internal Control Module Memory Checksum Error · **P0606** PCM Processor Fault

See it working

Watch the animated explainer [How a MAP Sensor Works: Engine Vacuum and Load](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p2610/>

