

GENERIC · POWERTRAIN

P06E4

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P06E4

Control Module Wake-up Circuit Performance

P06E4 indicates that the engine control module (ECM) has detected a performance fault in the wake-up circuit that it uses to rouse other control modules from a low-power sleep state. The ECM monitors the voltage and timing on this circuit and sets the code when the wake-up signal does not behave as expected, such as staying low when it should pulse high or rising too slowly.

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 or service vehicle soon message illuminates on the dashboard.
- Often no symptoms besides the warning light, with the vehicle starting and running normally.
- Intermittent failure of non-critical modules such as the radio, climate control, or power windows to wake up when the ignition is switched on.
- A dead battery after the vehicle sits for a day or two because one or more modules fail to go back to sleep.
- Multiple unrelated warning lights or communication codes appearing at the same time due to modules not waking correctly.
- Occasional no-crank or delayed crank condition if the wake-up circuit feeds the body control module or powertrain control module.

Common causes, most likely first

- A faulty or chafed wire in the wake-up circuit, often where it passes through a door jamb, under the dash, or near a hinge.
- Corroded or loose terminals at the control module connectors or at the splice point where the wake-up line branches to several modules.
- A failing control module that is pulling the wake-up line low or high when it should not, especially a body control module or gateway module.
- A weak or failing relay that supplies power to the wake-up circuit, causing slow or intermittent voltage rise.
- Water intrusion into a module connector or fuse box, leading to corrosion and high resistance on the wake-up line.
- An aftermarket accessory wired into the wake-up circuit, such as an alarm or remote starter, that loads the line incorrectly.



How to diagnose and fix it

- 1 Connect a scan tool and record all stored codes in every module, then clear codes and test-drive to see if P06E4 returns alone or with companion codes.
- 2 Inspect the wake-up circuit wiring for chafing, corrosion, and loose connectors, focusing on areas near hinges, door jambs, and under-dash splice points.
- 3 Measure resistance and voltage on the wake-up line at each module connector with the ignition off and on, comparing to the manufacturer's expected values.
- 4 Check the power supply and ground to the module that originates the wake-up signal, including the relay and fuse, for voltage drops under load.
- 5 Disconnect suspect modules one at a time to see if the wake-up line voltage returns to normal, isolating a module that is loading the circuit.
- 6 Repair or replace the faulty section of wiring, terminals, or the offending module, then clear codes and verify the wake-up signal with a lab scope.
- 7 Perform a parasitic draw test after the repair to confirm all modules go to sleep and the battery does not drain overnight.

Wake-up circuit faults that fool good technicians

- A wake-up circuit is often a low-current signal line shared by several modules, so one bad module can pull the entire line down and set P06E4 even though the ECM itself is fine.
- Aftermarket alarms, remote starters, and dash cameras tapped into the wake-up wire are a frequent cause that many technicians overlook during diagnosis.
- The code can set intermittently from a wire that only chafes when the vehicle is moving or when a door is opened, so a static wiggle test may not reproduce the fault.
- A weak battery or poor ground can cause slow voltage rise on the wake-up line and trigger P06E4 without any wiring fault at all.
- Some vehicles use a dedicated wake-up wire from the body control module, while others use a controller area network (CAN) bus wake-up message, so the diagnostic approach differs by architecture.

Can I keep driving with P06E4?

You can usually continue driving if the vehicle starts and runs normally, but avoid leaving it parked for long periods until the fault is repaired because a module that fails to sleep can drain the battery. If multiple warning lights appear or the engine cranks slowly, have the vehicle checked promptly.



Tools that help

- OBD-II scan tool with module-level code reading capability
- Digital multimeter with min/max recording
- Automotive lab scope for capturing wake-up signal waveforms
- Wiring diagram and connector pinout for the specific vehicle
- Parasitic draw tester or clamp meter
- Trim removal tools for accessing module connectors

Reading P06E4

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.
E4	The exact fault within that area.

Often seen with

P06E5 Glow Plug Control Module 1 Performance · **P06E6** Sensor Power Supply C Circuit/Open · **U0100** Lost Communication With ECM/PCM A · **U0140** Lost Communication With Instrument Panel Cluster · **U0155** Lost Communication With Body Control Module

See it working

Watch the animated explainer [How a Turbocharger Works, Step by Step](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p06e4/>

