

GENERIC · POWERTRAIN

P0085

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0085

Exhaust Valve Control Solenoid Circuit Low (Bank 2)

P0085 indicates that the powertrain control module (PCM) has detected an abnormally low voltage on the control circuit for the bank 2 exhaust valve control solenoid, which is part of the variable valve timing system on that cylinder bank. The PCM expects to see a specific voltage range when commanding the solenoid, and a low reading tells it the circuit is likely shorted to ground or has excessive resistance.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Fuel and air metering and auxiliary emission controls

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Rough idle or misfire, particularly when the engine is cold
- Reduced engine power or sluggish acceleration
- Poor fuel economy
- Intermittent stalling or hesitation during acceleration

Common causes, most likely first

- 1 Faulty bank 2 exhaust valve control solenoid (internally shorted or open coil)
- 2 Damaged or chafed wiring in the solenoid control circuit, causing a short to ground
- 3 Corroded or loose electrical connector at the solenoid or PCM
- 4 Failed PCM driver for the solenoid circuit (rare but possible)
- 5 Engine oil sludge or debris clogging the solenoid screen, leading to electrical overload

How to diagnose and fix it

- 1 Perform a visual inspection of the solenoid, its connector, and the wiring harness for damage or corrosion
- 2 Use a digital multimeter to check the solenoid's resistance and compare it to the manufacturer's specification
- 3 Check for continuity and short-to-ground in the control wire between the solenoid and PCM
- 4 Test the solenoid with a known-good signal or scan tool bidirectional control to confirm operation
- 5 If the solenoid fails electrical tests, replace it and clear the code
- 6 If wiring is faulty, repair or replace the affected section of the harness
- 7 After repairs, clear codes and perform a road test to verify the fault does not return



Don't overlook the oil circuit

- A low-voltage code for the exhaust valve control solenoid is often caused by a shorted solenoid coil rather than a wiring problem, so resistance testing is more reliable than a simple visual check.
- Oil sludge or debris can clog the solenoid's internal screen, causing it to draw excessive current and set a low-voltage code even though the electrical circuit appears intact.
- The PCM may set P0085 intermittently if the connector is loose or corroded, so wiggle-testing the harness while monitoring live data can reveal the fault.
- Replacing the solenoid without checking the oil condition and maintenance history can lead to a repeat failure if sludge is the root cause.
- On some vehicles, a failing bank 2 exhaust camshaft phaser or timing chain tensioner can cause the solenoid to work harder and eventually set this code, so mechanical timing issues should be ruled out.

Can I keep driving with P0085?

You can usually drive the vehicle with P0085 set, but avoid heavy acceleration and prolonged driving until the fault is repaired, as continued operation may lead to poor performance and potential damage to the variable valve timing system.

Tools that help

- OBD-II scan tool with bidirectional control capability
- Digital multimeter
- Test light
- Socket set and ratchet
- Electrical contact cleaner
- Vehicle-specific service information for resistance specifications

Reading P0085

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
0	Fuel and air metering and auxiliary emission controls.
85	The exact fault within that area.

Often seen with

P0011 'A' Camshaft Position - Timing Over-Advanced or System Perfo · **P0086** Exhaust Valve Control Solenoid Circuit High (Bank 2) · **P0087** Fuel Rail/System Pressure - Too Low · **P0088** Fuel Rail/System Pressure - Too High · **P0089** Fuel Pressure Regulator 1 Performance



See it working

Watch the animated explainer **Four-Stroke Engine Cutaway: Intake to Exhaust** on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0085/>

