

GENERIC · POWERTRAIN

P3485

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P3485

Cylinder 11 Exhaust Valve Control Circuit/Open

P3485 indicates that the powertrain control module has detected an open circuit or excessive resistance in the electrical path controlling the exhaust valve for cylinder 11. This circuit typically operates a solenoid or actuator that varies exhaust flow, and the fault means the commanded signal is not reaching the component as expected.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Intermediate	Auxiliary emission controls

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Rough idle or misfire-like shudder at low engine speeds
- Reduced engine performance or sluggish acceleration under load
- Audible ticking or tapping from the valve actuator area when the engine is running
- Intermittent driveability issues that come and go with temperature or vibration

Common causes, most likely first

- 1 Broken, chafed, or corroded wiring in the exhaust valve control circuit
- 2 Failed exhaust valve control solenoid or actuator
- 3 Loose or contaminated electrical connector at the actuator or PCM
- 4 Open winding inside the actuator coil
- 5 PCM driver circuit failure (rare but possible)
- 6 Exhaust valve mechanically stuck, causing the actuator to overheat and open-circuit

How to diagnose and fix it

- 1 Verify battery voltage and inspect the exhaust valve control fuse and relay
- 2 Visually inspect the actuator connector and wiring harness for damage or corrosion
- 3 Measure resistance across the actuator solenoid and compare to specification
- 4 Backprobe the control circuit at the PCM to check for continuity and short to ground
- 5 Command the actuator with a scan tool and observe circuit voltage or current feedback
- 6 Repair or replace damaged wiring, terminals, or the actuator as needed
- 7 Clear the code and perform a road test to confirm the repair



What the exhaust valve circuit test misses

- A stuck exhaust valve can mimic an open circuit because the actuator draws excessive current and the driver shuts down, setting P3485 without any wiring fault.
- Corrosion inside the actuator connector often looks clean from the outside, so a voltage drop test under load is more reliable than a simple visual inspection.
- The PCM may set P3485 intermittently if the circuit opens only when the engine bay is hot, so always wiggle-test the harness while monitoring live data.
- Replacing the actuator without checking for a mechanical bind in the exhaust valve often leads to a repeat failure within a few thousand miles.
- Some vehicles use a shared ground for multiple valve actuators, so a single bad ground can set codes for several cylinders at once.

Can I keep driving with P3485?

You can usually drive the vehicle short distances to a repair shop, but avoid heavy throttle or sustained high-speed driving because the exhaust valve may remain in a default position that reduces engine efficiency. If the check engine light begins flashing or the engine runs very rough, stop driving and have it towed.

Tools that help

- OBD-II scan tool with bidirectional control
- Digital multimeter
- Wire piercing probes or backprobe pins
- Service information for circuit specifications
- Basic hand tools for connector and actuator access

Reading P3485

- P** Powertrain: engine, transmission and emissions.
- 3** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 4** Auxiliary emission controls.
- 85** The exact fault within that area.

Often seen with

P0011 'A' Camshaft Position - Timing Over-Advanced or System Perfo · **P0300** Random/Multiple Cylinder Misfire Detected · **P3484** Cylinder 11 Deactivation/Intake Valve Control Circuit High · **P3486** Cylinder 11 Exhaust Valve Control Performance · **P3487** Cylinder 11 Exhaust Valve Control Circuit Low



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/p3485/>

