

GENERIC · POWERTRAIN

P05E9

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P05E9

Engine Oil Bypass Valve Control Circuit Low

P05E9 indicates that the powertrain control module (PCM) has detected a low voltage condition on the control circuit for the engine oil bypass valve, which is used to regulate oil flow through the oil cooler or filter bypass. The PCM expects a certain voltage range on the circuit when the valve is commanded, and a low reading suggests a short to ground, an open circuit, or a faulty valve.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Vehicle speed, idle control and auxiliary inputs

Symptoms you may notice

- Illumination of the check engine light (malfunction indicator lamp).
- Often no symptoms besides the warning light.
- Possible reduced engine performance or fuel economy if the valve affects oil temperature regulation.
- In rare cases, the engine may enter limp mode or show a message on the driver information center.
- Oil pressure warning light may appear if the bypass valve fails to open and oil flow is restricted.

Common causes, most likely first

- 1 Faulty engine oil bypass valve solenoid (internal short or open).
- 2 Damaged or corroded wiring harness or connector at the valve.
- 3 Short to ground in the control circuit between the PCM and the valve.
- 4 Open circuit in the control circuit (broken wire or poor connection).
- 5 Failed powertrain control module (PCM) driver for the circuit.
- 6 Oil contamination or sludge affecting valve operation and circuit feedback.

How to diagnose and fix it

- 1 Verify the code with a scan tool and check for any related codes in other modules.
- 2 Inspect the wiring harness and connector at the oil bypass valve for damage, corrosion, or loose pins.
- 3 Measure resistance of the bypass valve solenoid and compare to manufacturer specifications.
- 4 Check for short to ground or open circuit in the control wire between the PCM and the valve.
- 5 Test the PCM output signal with a multimeter or oscilloscope if the circuit and valve test good.
- 6 Replace the oil bypass valve if faulty, clear codes, and verify the repair with a test drive.



What the oil bypass valve code hides

- A low circuit code often results from a short to ground in the wiring, not a failed valve, so always inspect the harness before replacing parts.
- Oil sludge or debris can cause the valve to stick and draw excessive current, mimicking an electrical fault.
- The PCM may set this code intermittently if the connector is loose or corroded, especially after exposure to road salt or moisture.
- Some vehicles use the oil bypass valve for oil temperature management, so a failure can affect fuel economy and emissions without obvious driveability symptoms.
- Do not overlook the ground circuit for the valve; a poor ground can cause a low voltage reading on the control circuit.

Can I keep driving with P05E9?

You can generally drive with this code if the engine runs normally and no oil pressure warning is present, but avoid heavy loads or extended high-speed driving until diagnosed. If the oil pressure light illuminates or you notice unusual engine noises, stop driving and seek professional service immediately.

Tools that help

- OBD-II scan tool
- Digital multimeter
- Wiring diagram for the specific vehicle
- Socket set and screwdrivers
- Oscilloscope (optional for signal testing)

Reading P05E9

P	Powertrain: engine, transmission and emissions.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
5	Vehicle speed, idle control and auxiliary inputs.
E9	The exact fault within that area.

Often seen with

P0524 Engine Oil Pressure Too Low · **P05E8** Engine Oil Bypass Valve Control Circuit/Open · **P05EA** Engine Oil Bypass Valve Control Circuit High · **P06DD** Engine Oil Pressure Control Circuit Performance/Stuck Off · **P06DE** Engine Oil Pressure Control Circuit Stuck On



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/p05e9/>

