

BMW · POWERTRAIN

P1439

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1439 · BMW

Purge Control Valve Control Circuit Signal Low

P1439 on a BMW means the digital motor electronics (DME) has detected a low signal on the control circuit for the fuel tank purge control valve, which is part of the evaporative emissions system. The computer expects to see a voltage near battery level on the valve's control wire when the valve is commanded off, and a low signal tells it the circuit is shorted to ground or the valve winding has failed.

SYSTEM

Powertrain

CODE TYPE

BMW specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Auxiliary emission controls

Symptoms you may notice

- Illumination of the check engine light, often with no other symptoms besides the warning light
- A faint fuel odor around the rear of the car, especially after refueling or when parked
- Rough idle or a slight stumble just after a cold start if the valve is stuck open
- Slightly increased fuel consumption in some cases due to incorrect tank venting
- In rare cases, a hard start after refueling because the tank is not venting properly

Common causes, most likely first

- 1 Failed purge control valve with an internally shorted solenoid winding
- 2 Chafed or pinched control wire between the DME and the purge valve shorting to ground
- 3 Corroded or water-intruded connector at the purge valve, common on BMWs with the valve mounted low near the intake
- 4 Failed DME output driver for the purge valve circuit after long-term exposure to a shorted valve
- 5 Rodent damage to the purge valve wiring harness in the engine bay
- 6 A short to ground in a shared harness splice that also feeds other emissions components



How to diagnose and fix it

- 1 Clear the code and verify it returns, then check for any related evaporative emissions codes stored alongside P1439
- 2 Inspect the purge valve connector and the harness run for corrosion, chafing, or rodent damage before touching any parts
- 3 Measure resistance across the purge valve solenoid terminals and compare to the BMW specification for the engine fitted
- 4 Disconnect the DME connector and check the control wire for continuity to ground with the valve unplugged to isolate a harness short
- 5 Command the purge valve on and off with a BMW-capable scan tool and listen for an audible click while watching live data
- 6 Replace the purge control valve if the winding is shorted or the valve fails the command test, then clear adaptations
- 7 If the circuit tests good but the low signal persists, test the DME output driver or send the unit for repair

What the low signal really tells you

- A low signal on this circuit almost always means the valve winding or its control wire is shorted to ground, not that the valve is stuck closed, so replacing the valve without checking the harness often wastes a part.
- BMW mounts the purge valve in a spot where road splash and oil mist collect, and a green-crusted connector pin is a more common cause of P1439 than a failed valve on higher-mileage cars.
- A shorted purge valve can back-feed the DME driver and damage it, so a new valve fitted to a damaged control unit will set the code again within a few drive cycles.
- This code can appear after engine bay work where the purge valve harness was disturbed or pinched during reassembly, so always ask whether any recent service preceded the light.
- P1439 does not mean the evaporative system has a large leak; leak codes such as P0442 or P0455 are separate faults and should not be chased on the basis of this circuit code alone.

Can I keep driving with P1439?

The car remains driveable with P1439 because the fault affects emissions control rather than engine operation, but avoid parking in an enclosed garage if you smell fuel and have the circuit inspected soon. Do not ignore a persistent fuel odor, and avoid topping off the tank past the automatic shutoff until the fault is repaired.

Tools that help

- BMW-capable scan tool with bidirectional control and live data
- Digital multimeter with resistance and continuity functions
- Back probe pins or breakout leads for the purge valve connector
- Wiring diagram for the specific BMW chassis and engine
- Basic socket and trim tool set for accessing the purge valve



Reading P1439

- P** Powertrain: engine, transmission and emissions.
- 1** Manufacturer-specific code (BMW): its meaning depends on the make.
- 4** Auxiliary emission controls.
- 39** The exact fault within that area.

Often seen with

P0440 Evaporative Emission Control System Malfunction · **P0442** EVAP System Leak Detected (Small) · **P0444** EVAP Purge Control Valve Circuit Open · **P0455** EVAP System Leak Detected (Large) · **P0458** Evaporative Emission System Purge Control Valve 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/bmw-p1439/>

