

BMW · POWERTRAIN

P1443

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1443 · BMW

Leakage Diagnostic Pump Control Circuit Signal High

P1443 on BMW vehicles means the engine control module (DME) has detected a high signal voltage on the control circuit for the leak diagnostic pump, which is part of the evaporative emissions (EVAP) system. The DME commands the pump on and off during a leak test, and a high signal indicates the circuit is open, shorted to voltage, or the pump module is not responding as expected.

SYSTEM

Powertrain

CODE TYPE

BMW specific

SEVERITY

Low

FIX DIFFICULTY

Intermediate

AREA

Auxiliary emission controls

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms.
- In some cases, a slight fuel odor may be present if the EVAP system cannot complete its self-test.
- Rough idle or hesitation in rare cases if the leak pump shares a circuit with other components.
- The remote start or fuel door release may be inoperative on models where the leak pump is tied into those systems.
- No driveability issues in most instances, as the leak diagnostic pump only operates during specific engine-off conditions.

Common causes, most likely first

- 1 Open circuit or high resistance in the wiring between the DME and the leak diagnostic pump control circuit.
- 2 Failed leak diagnostic pump module, often due to internal corrosion or water intrusion.
- 3 Short to voltage on the control circuit, which can be caused by chafed wires or a faulty relay.
- 4 Poor electrical connection at the pump connector or DME connector, often from corrosion or loose pins.
- 5 Faulty DME, though this is rare and should only be suspected after all other possibilities are ruled out.
- 6 Damaged or disconnected vacuum lines that cause the pump to run excessively and overheat the control circuit.
- 7 A blown fuse that supplies power to the leak pump, which can set a high signal code if the DME sees voltage on the control side without the pump operating.



How to diagnose and fix it

- 1 Verify the code with a BMW-specific scan tool and check for any related EVAP or DME codes that may indicate a broader issue.
- 2 Inspect the leak diagnostic pump connector and wiring for corrosion, loose pins, or chafed insulation, repairing as needed.
- 3 Check the fuse that supplies power to the leak pump and replace it if blown, then recheck for the code.
- 4 Measure resistance on the control circuit between the DME and the pump; compare to factory specifications and repair any open or high-resistance wiring.
- 5 Test the leak diagnostic pump by applying power and ground directly to confirm it operates; replace the pump if it fails to run or draws excessive current.
- 6 Check for a short to voltage on the control circuit by measuring voltage with the DME disconnected; repair any short to another wire.
- 7 Clear the code and perform a drive cycle that allows the EVAP monitor to run, then verify the repair by confirming the monitor completes without resetting the code.

Before you replace the leak pump

- A high signal code often results from a poor ground connection at the leak pump, not a failed pump, so always check grounds before condemning the module.
- Water intrusion into the leak pump connector is common on BMWs, especially in models where the pump is mounted under the rear of the vehicle, and can cause intermittent high signal codes.
- The leak diagnostic pump only runs under specific conditions, such as after the engine is shut off, so a fault may not appear during a short test drive and can be missed by generic scan tools.
- A faulty fuel cap or a leak in the EVAP system can cause the pump to run longer than normal, leading to overheating and a high signal code, so always perform a smoke test of the EVAP system.
- Some aftermarket scan tools misreport P1443 as a different EVAP code, so confirm the definition with a BMW-specific tool before starting diagnosis.

Can I keep driving with P1443?

You can continue driving with this code because it does not affect engine performance or safety, but the vehicle will not pass an emissions inspection until the fault is repaired. Avoid clearing the code repeatedly without fixing the underlying issue, as the EVAP monitor will not complete and the check engine light will return.



Tools that help

- BMW-specific scan tool or OBD-II scanner with manufacturer software
- Digital multimeter
- Wiring diagram for the specific BMW model
- Smoke machine for EVAP system testing
- Basic hand tools for connector and component access

Reading P1443

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

Often seen with

P1442 EGR Valve Position Sensor Signal Too High · **P1444** EGR Valve Position Sensor Range Performance · **P1442** Fuel Level Sensor Circuit Range Performance · **P1444** Canister Purge Volume Control Solenoid Valve · **P1444** EVAP Purge Flow Sensor Circuit Low Voltage · **P1442** EVAP Vacuum Switch High Voltage During Ignition On · **P1442** Secondary Air Injection System Monitor Circuit High Voltage · **P1444** Purge Flow Sensor Circuit Input Low · **P1442** EVAP Vacuum Switch High Voltage During Ignition On · **P1442** Leakage Diagnostic Pump Control Circuit Signal Low · **P1444** Diagnostic Module Tank Leakage DM-TL Pump Control Open Circu · **P0442** EVAP System Leak Detected (Small) · **P0455** EVAP System Leak Detected (Large) · **P0456** Evaporative Emission System Leak Detected (very small leak)

See it working

Watch the animated explainer [How Coil-on-Plug Ignition Works: Coil and Spark Plug](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/bmw-p1443/>

