

BMW · POWERTRAIN

**P1450**

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1450 · BMW

## Diagnostic Module Tank Leakage DM-TL Switching Solenoid Open Circuit

P1450 on BMW vehicles indicates that the engine control module (DME) has detected an open circuit in the switching solenoid that is part of the Diagnostic Module Tank Leakage (DM-TL) system, which is BMW's evaporative emissions leak detection pump. The DME monitors the solenoid's electrical circuit and sets this code when the expected voltage or current is outside the normal range, typically because the solenoid coil or its wiring is broken.

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.
- A slight fuel odor may be present if the tank venting system is not sealing properly.
- In some cases, a rough idle or hesitation may occur if the open circuit affects other shared circuits.
- The vehicle may fail an emissions inspection due to the stored code and pending readiness monitors.
- No drivability issues are typically reported because the DM-TL system only operates during specific off-cycle conditions.

### Common causes, most likely first

- 1 Failed DM-TL switching solenoid with an open internal coil.
- 2 Corroded, broken, or disconnected wiring between the DME and the switching solenoid.
- 3 Loose or damaged electrical connector at the switching solenoid.
- 4 Blown fuse that supplies power to the DM-TL system.
- 5 Faulty DME driver circuit for the solenoid (rare but possible).
- 6 Damage to the wiring harness from rodents, heat, or chafing.



## How to diagnose and fix it

- 1 Use a scan tool to confirm P1450 is the only code and check for any related evaporative emissions codes.
- 2 Visually inspect the DM-TL switching solenoid connector and wiring for corrosion, damage, or looseness.
- 3 Check the fuse that powers the DM-TL system and replace if blown.
- 4 Measure the resistance of the switching solenoid coil with a multimeter and compare to BMW specifications; an open circuit indicates a failed solenoid.
- 5 Test for voltage and ground signals at the solenoid connector while commanding the solenoid on with a scan tool; lack of signal points to a wiring or DME issue.
- 6 If the solenoid tests good, check continuity of the wires between the solenoid and the DME, repairing any breaks or shorts.
- 7 Replace the faulty switching solenoid if it fails electrical testing, clear the code, and verify the repair with a drive cycle.

## What the DM-TL solenoid test really shows

- The DM-TL switching solenoid is often misdiagnosed as a leak detection pump failure, but P1450 specifically points to an open circuit in the solenoid circuit, not a leak.
- A common oversight is failing to check the electrical connector for water intrusion, which can cause an open circuit even if the solenoid itself is good.
- The DME may set P1450 intermittently if the wiring harness has a loose connection that only breaks under vibration or temperature changes.
- Replacing the solenoid without checking the fuse and wiring can lead to a repeat code if the root cause is a blown fuse or damaged wire.
- Some BMW models use a combined DM-TL module where the solenoid is not serviceable separately, requiring replacement of the entire unit.

## Can I keep driving with P1450?

The vehicle is safe to drive with P1450 because the fault only affects the evaporative emissions system and does not impact engine performance or safety. However, you should avoid ignoring the code, as it will prevent the vehicle from passing an emissions test and could mask other evap system issues.

## Tools that help

- OBD-II scan tool with BMW-specific software
- Digital multimeter
- Wire probe set
- Socket set
- Torx screwdrivers



## Reading P1450

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

## Often seen with

**P1451** Secondary Air Injection Circuit Short To Ground · **P1451** Barometric Pressure Sensor Performance · **P1451** Canister Vent Solenoid Circuit · **P1451** Barometric Pressure Sensor Performance · **P1451** EVAP Control System Canister Vent Solenoid Circuit Malfunction · **P1451** Barometric Pressure Sensor Performance · **P1451** Diagnostic Module Tank Leakage DM-TL Switching Solenoid Control · **P0440** Evaporative Emission Control System Malfunction · **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 a Car Thermostat Works: Wax Pellet and Cooling Fan](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/bmw-p1450/>

