

BMW · POWERTRAIN

P1452

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1452 · BMW

Diagnostic Module Tank Leakage DM-TL Switching Solenoid Control Circuit Signal High

This code means the BMW diagnostic module for the tank leakage system (DM-TL) has detected a high signal on the control circuit for its switching solenoid, indicating an open circuit, short to voltage, or a failed solenoid coil. The engine control module expects a specific voltage or current on the solenoid control wire and saw a value above the acceptable threshold, so it flags the circuit as faulty.

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 around the rear of the vehicle if the solenoid fails to seal the tank vent line
- Intermittent check engine light that may clear and reset after several drive cycles
- Failure to complete an emissions readiness monitor for the evaporative system
- Rough idle or slight hesitation in rare cases where the solenoid affects purge flow

Common causes, most likely first

- 1 Open or damaged wiring in the switching solenoid control circuit, including a broken wire or poor connector pin fit
- 2 Short to voltage on the control wire between the DM-TL module and the switching solenoid
- 3 Failed switching solenoid coil (open or shorted internally)
- 4 Corroded or water-intruded electrical connector at the DM-TL module or solenoid
- 5 Faulty DM-TL diagnostic module output driver
- 6 Engine control module software or internal driver fault (less common)



How to diagnose and fix it

- 1 Clear the code and perform a road test to confirm it returns, noting any freeze-frame data
- 2 Visually inspect the switching solenoid, its connector, and the wiring harness for chafing, corrosion, or loose pins
- 3 Measure resistance of the switching solenoid coil and compare to specification to rule out an open or shorted coil
- 4 Back-probe the control circuit at the solenoid and monitor voltage while commanding the solenoid on and off with a scan tool
- 5 Check for a short to voltage on the control wire by measuring voltage with the solenoid disconnected and the key on
- 6 Inspect the DM-TL module connector and test its output signal with a lab scope or bidirectional scan tool
- 7 Repair or replace the faulty wiring, solenoid, or module as indicated by the test results, then clear codes and verify the repair

What BMW technicians check before replacing the DM-TL module

- A high signal code often results from a simple open circuit in the harness near the fuel tank where road debris or moisture damages the wire, so always inspect the loom before condemning the solenoid.
- The DM-TL switching solenoid is part of the tank leakage diagnostic system and may not affect driveability at all, leading some owners to ignore the code until an emissions test fails.
- A short to voltage on the control wire can be caused by a rubbed-through harness near the fuel filler neck or rear suspension, which is easy to miss during a quick visual check.
- Replacing the DM-TL module without first verifying the solenoid coil resistance and circuit integrity is a common misdiagnosis that leads to repeat failures.
- This code can set intermittently if the connector at the solenoid is not fully seated or has water intrusion, so always perform a wiggle test while monitoring live data.

Can I keep driving with P1452?

The vehicle is generally safe to drive with this code because it affects only the evaporative emissions system and not engine performance. Avoid topping off the fuel tank past the automatic shutoff and schedule diagnosis soon to prevent a failed emissions test.

Tools that help

- OBD-II scan tool with bidirectional control capability
- Digital multimeter
- Lab scope (optional but helpful)
- Wire terminal pick and electrical contact cleaner
- Factory service information for circuit diagrams and resistance specifications



Reading P1452

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

Often seen with

P1451 Secondary Air Injection Circuit Short To Ground · **P1453** Exhaust Gas Temperature Sensor 1 Open Short To B+ · **P1451** Barometric Pressure Sensor Performance · **P1451** Canister Vent Solenoid Circuit · **P1453** Fuel Tank Pressure Relief Valve Malfunction · **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 · **P1453** Secondary Air Injection Pump Relay Control Circuit Electrical · **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 Turbocharger Works, Step by Step](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/bmw-p1452/>

