

MAZDA · POWERTRAIN

P1444

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1444 · Mazda

EVAP Purge Flow Sensor Circuit Low Voltage

P1444 on Mazda vehicles means the powertrain control module (PCM) has detected a low-voltage condition on the evaporative emission (EVAP) purge flow sensor circuit. The sensor reports the actual flow of fuel vapor being drawn from the charcoal canister into the intake, and a low signal tells the PCM that the circuit is grounded, shorted, or the sensor output has dropped below its expected range.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Mazda specific	Low	Intermediate	Auxiliary emission controls

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- A faint fuel odor around the engine bay or near the charcoal canister
- Slightly rough idle or a stumble when the purge solenoid is commanded open
- Occasional hesitation during light-throttle acceleration
- Failed emissions inspection due to the stored EVAP fault
- In rare cases, a slight drop in fuel economy if the purge system stays disabled

Common causes, most likely first

- 1 A short to ground in the purge flow sensor signal wire, often from chafing against a bracket or heat shield
- 2 A failed purge flow sensor that has internally shorted and now outputs a constant low voltage
- 3 Corroded or pushed-back pins in the sensor connector or PCM connector
- 4 A faulty purge solenoid that is stuck open and skews the sensor's flow reading low
- 5 A restricted or disconnected vacuum hose between the canister, purge valve, and sensor
- 6 A PCM driver circuit fault that pulls the sensor reference voltage low
- 7 Liquid fuel entering the EVAP line and contaminating the sensor element



How to diagnose and fix it

- 1 Connect a scan tool and record the freeze-frame data and purge flow sensor voltage with the key on and engine running
- 2 Visually inspect the purge flow sensor, its connector, and the wiring harness for chafing, corrosion, or loose pins
- 3 Disconnect the sensor and measure reference voltage and ground at the connector with a digital multimeter
- 4 Check the signal wire for continuity to ground with the sensor and PCM disconnected to rule out a short
- 5 Command the purge solenoid open and closed with the scan tool while watching sensor voltage to confirm the sensor responds
- 6 Replace the purge flow sensor if wiring checks pass but the signal remains below specification
- 7 Clear the code, perform an EVAP monitor drive cycle, and verify the repair with a scan tool

What the purge flow sensor voltage really tells you

- A low-voltage code often appears after a purge solenoid sticks open, so replacing the sensor without checking solenoid operation frequently leads to a repeat repair.
- The purge flow sensor on many Mazda engines is integrated into the purge valve assembly, meaning a failed sensor may require replacing the whole unit rather than a separate part.
- A pinched or disconnected vacuum hose between the canister and the purge valve can mimic a failed sensor by reducing actual flow below the expected threshold.
- Liquid fuel from overfilling the tank can travel down the EVAP line and coat the sensor element, causing a low signal that clears after the sensor dries and the line is cleared.
- The PCM may set P1444 only during a specific EVAP monitor test, so the code can reappear days after clearing even when the wiring looks perfect during a static inspection.

Can I keep driving with P1444?

The vehicle remains safe to drive because this fault affects only the evaporative emission control system and does not alter engine performance or braking. Avoid topping off the fuel tank past the first click and schedule diagnosis soon to prevent a failed emissions test.

Tools that help

- OBD-II scan tool with live data and bidirectional control
- Digital multimeter
- Vacuum gauge or hand vacuum pump
- Wiring diagram for the specific Mazda model
- Socket set and trim removal tools



Reading P1444

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

Often seen with

P0441 EVAP System Incorrect Purge Flow · **P0442** EVAP System Leak Detected (Small) · **P0443** EVAP Purge Control Valve Circuit Malfunction · **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/mazda-p1444/>

