

MAZDA · POWERTRAIN

P1406

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1406 · Mazda

DPFE Sensor Downstream Hose Off Or Plugged

P1406 on Mazda vehicles means the powertrain control module (PCM) has detected that the downstream hose connected to the differential pressure feedback exhaust (DPFE) sensor is either disconnected or physically blocked. The PCM monitors the DPFE sensor signal and compares it to expected values; when the downstream hose is off or plugged, the sensor cannot correctly measure exhaust pressure differences across the EGR (exhaust gas recirculation) orifice, triggering this code.

SYSTEM

Powertrain

CODE TYPE

Mazda 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
- Rough idle or stumbling when the engine is cold
- Slight hesitation or surge during light acceleration
- Reduced fuel economy over time
- Failed emissions test due to incomplete EGR monitor
- In rare cases, a noticeable exhaust smell or hiss from the engine bay

Common causes, most likely first

- 1 Downstream hose disconnected from the DPFE sensor or the EGR tube
- 2 Downstream hose cracked, split, or melted from exhaust heat
- 3 Carbon or soot blockage inside the downstream hose
- 4 Blocked EGR passage or orifice preventing pressure signal
- 5 DPFE sensor internal failure mimicking a hose fault
- 6 Damaged or corroded electrical connector at the DPFE sensor
- 7 PCM software issue or faulty PCM (rare)



How to diagnose and fix it

- 1 Inspect the downstream hose visually for disconnection, cracks, or melting; reconnect or replace if damaged
- 2 Disconnect the hose and check for blockage by blowing through it; clear any carbon deposits or replace the hose
- 3 Check the EGR tube and orifice for carbon buildup; clean or replace as needed
- 4 Test the DPFE sensor with a multimeter or scan tool to verify signal output; replace if out of specification
- 5 Inspect the electrical connector and wiring for corrosion or damage; repair as necessary
- 6 Clear the code and perform a drive cycle to verify the repair; monitor readiness monitors

DPFE hose faults often misdiagnosed

- A disconnected downstream hose can cause no driveability symptoms at all, so many owners ignore the light until emissions testing fails.
- The DPFE sensor itself is frequently replaced unnecessarily when the real problem is a simple hose blockage or crack.
Carbon blockage in the downstream hose is common on higher-mileage Mazdas and can be cleared without replacing parts.
- A faulty EGR valve or clogged EGR passages can create pressure conditions that mimic a hose fault, leading to misdiagnosis.
- Always verify hose routing against the underhood vacuum diagram; incorrect routing can set P1406 even with new parts.

Can I keep driving with P1406?

You can generally continue driving with P1406 because it rarely affects engine safety or performance, but avoid long-term neglect since it can increase emissions and may lead to EGR system damage. Have the hose inspected and repaired at your earliest convenience, especially if you need to pass an emissions test.

Tools that help

- OBD-II scan tool
- Multimeter
- Hand vacuum pump
- Socket set
- Flashlight
- Compressed air



Reading P1406

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

Often seen with

P1402 EGR Valve Circuit Short To B+ · **P1401** EGR Valve Power Stage Short To Ground · **P1400** EGR Valve Circuit Electrical Malfunction · **P1400** Sub-Throttle Position Sensor · **P1401** Sub-Throttle Position Sensor Range Performance Problem · **P1400** Fuel Tank Pressure Control Solenoid Low Input · **P1402** Fuel Level Pressure Sensor Circuit Fault · **P1401** Fuel Tank Pressure Control System Performance · **P1400** EGRC Solenoid Valve · **P1402** EGR System · **P1401** EGR Temperature Sensor · **P1400** Manifold Differential Pressure Sensor Circuit · **P1401** EGR Lifting Sender B283 · **P1400** DPFE Sensor Circuit Low Input · **P1402** EGR Valve Position Sensor Circuit · **P1401** DPFE Sensor Circuit High Input · **P1401** EGR Control Solenoid Circuit Signal Low · **P1402** EGR Control Solenoid Circuit Signal High · **P1401** Exhaust Gas Recirculation Valve Position Circuit · **P1400** Exhaust Gas Recirculation Valve Position Control · **P1401** Differential Pressure Feedback Electronic Sensor Circuit High · **P1402** EGR Metering Orifice Restricted · **P1400** Differential Pressure Feedback Electronic Sensor Circuit Low · **P1402** Heated Catalyst Power Switch Overtemperature Condition Bank · **P1401** Heated Catalyst Current Too High During Heating Bank 1 · **P1400** Heated Catalyst Battery Voltage or Current Too Low During He · **P0401** EGR Flow Insufficient Detected · **P0402** EGR Flow Excessive Detected

See it working

Watch the animated explainer [How a Starter Motor Works: Pre-Engaged Starter](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/mazda-p1406/>

