

CHRYSLER · POWERTRAIN

P1109

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1109 · Chrysler

Secondary Port Throttle System

P1109 on Chrysler vehicles indicates a fault in the secondary port throttle system, which is the small throttle valve that controls airflow through the secondary intake port on engines with a dual-port intake manifold. The powertrain control module (PCM) monitors the secondary port throttle actuator and its position sensor, and it sets this code when the commanded position does not match the actual position or when the circuit is out of range.

SYSTEM

Powertrain

CODE TYPE

Chrysler specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

**Fuel and air
metering**

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms.
- Reduced engine performance at higher engine speeds or under heavy load, where the secondary port is normally opened.
- A slight hesitation or stumble during acceleration when the PCM commands the secondary port throttle to open.
- Poor fuel economy or increased emissions due to incorrect airflow through the intake manifold.
- In some cases, a rough idle or stalling if the secondary port throttle is stuck partially open or closed.
- A noticeable lack of power above 3,000 RPM on engines that rely on the secondary port for high-speed breathing.

Common causes, most likely first

- 1 Carbon buildup or mechanical binding on the secondary port throttle plate or shaft, preventing it from moving freely.
- 2 Faulty secondary port throttle actuator (motor or vacuum diaphragm, depending on the system) that fails to move the valve.
- 3 Failed secondary port throttle position sensor (TP sensor) or a wiring issue in its circuit, causing the PCM to see an incorrect position.
- 4 Open or shorted wiring, corroded connectors, or poor grounds in the secondary port throttle actuator or sensor circuits.
- 5 A stuck or leaking vacuum supply line or solenoid that controls the secondary port throttle on vacuum-operated systems.
- 6 PCM internal fault or corrupted software, though this is rare and should only be considered after all mechanical and electrical checks pass.
- 7 Intake manifold vacuum leaks or restrictions that affect the secondary port throttle's operation.



How to diagnose and fix it

- 1 Connect a scan tool and verify the P1109 code is current, then check for any related codes and freeze-frame data to understand the conditions when the fault set.
- 2 Inspect the secondary port throttle valve for carbon buildup, sticking, or mechanical damage; clean it with intake-safe cleaner and verify it moves freely by hand.
- 3 Test the secondary port throttle actuator with a scan tool bidirectional control (if available) and observe whether the valve moves and the position sensor tracks correctly.
- 4 Check the wiring and connectors at the secondary port throttle actuator and position sensor for corrosion, chafing, or loose pins; repair as needed.
- 5 Measure resistance and voltage on the actuator and sensor circuits according to the factory service information, and compare to specifications.
- 6 On vacuum-operated systems, inspect the vacuum lines, solenoid, and reservoir for leaks or failure; replace faulty components.
- 7 If all electrical and mechanical checks pass, reflash or replace the PCM only after confirming power and ground integrity to the module.

Secondary port throttle faults often misdiagnosed

- Many technicians replace the secondary port throttle actuator when the real problem is carbon buildup on the throttle plate, so always clean and verify free movement before condemning parts.
- A faulty secondary port throttle position sensor can set P1109 even when the actuator works perfectly, so check sensor signal voltage and sweep with a scan tool.
- On some Chrysler engines, a vacuum leak at the intake manifold gasket or a cracked vacuum line can cause the secondary port throttle to behave erratically and set this code.
- P1109 can be stored intermittently due to a loose ground connection at the engine block or a chafed wire in the harness near the throttle body, so wiggle-test the harness while monitoring live data.
- Do not confuse P1109 with codes for the main electronic throttle control (ETC) system; the secondary port throttle is a separate valve and requires its own diagnostic path.

Can I keep driving with P1109?

You can usually drive the vehicle with P1109 set, but avoid heavy acceleration and high-speed driving because the secondary port throttle may not open, reducing power and increasing emissions. If you notice severe hesitation, stalling, or a significant loss of power, have the vehicle inspected promptly.



Tools that help

- OBD-II scan tool with bidirectional control and live data capability
- Digital multimeter for circuit testing
- Hand tools (screwdrivers, socket set) for removing intake components
- Intake-safe throttle body cleaner and shop rags
- Vacuum gauge for testing vacuum-operated systems
- Factory service information or wiring diagrams for circuit specifications

Reading P1109

P Powertrain: engine, transmission and emissions.

1 Manufacturer-specific code (Chrysler): its meaning depends on the make.

1 Fuel and air metering.

09 The exact fault within that area.

Often seen with

P1108 Oxygen Sensor Heating Circuit Bank 2 Sensor 1 Output Too Low · **P1110** Oxygen Sensor Heating Circuit Bank 2 Sensor 2 Short To B+ · **P1110** Atmospheric Pressure Sensor Low Input · **P1108** BARO Circuit High Input · **P1110** Intake Valve Timing Control Solenoid · **P1110** Intake Air Temperature Sensor Signal Dynamic Chamber Circuit · **P1108** BARO Circuit High Input · **P1108** BARO to MAP Sensor Comparison Too High · **P1108** Dual Alternator Battery Lamp Circuit Malfunction · **P1108** BARO To MAP Sensor Circuit Comparison Too High · **P0121** Throttle Position Sensor A Circuit Range/Performance · **P0122** Throttle Position Sensor A Circuit Low Input · **P0123** Throttle Position Sensor A Circuit High Input

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/chrysler-p1109/>

