

GENERIC · POWERTRAIN

P2008

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P2008

Intake Manifold Runner Control Circuit/Open (Bank 1)

P2008 indicates that the powertrain control module has detected an open circuit or excessive resistance in the intake manifold runner control circuit for bank 1. The intake manifold runner control system uses a vacuum actuator or electric motor to move a flap inside the intake manifold, altering runner length to optimize airflow at different engine speeds. When the circuit is open, the computer cannot command the runner to change position, which may reduce low-end torque or fuel efficiency.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Fuel and air metering and auxiliary emission controls

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Reduced engine power or sluggish acceleration, especially at lower engine speeds
- Rough idle or hesitation during light throttle application
- Decreased fuel economy due to inefficient intake tuning
- In some vehicles, a noticeable lack of torque below 3,000 RPM

Common causes, most likely first

- 1 Broken or disconnected vacuum hose between the intake manifold and the runner control actuator
- 2 Failed intake manifold runner control solenoid or actuator
- 3 Corroded or damaged electrical connector at the runner control solenoid
- 4 Open or shorted wire in the runner control circuit (power, ground, or signal)
- 5 Failed intake manifold runner control valve or flap mechanism stuck due to carbon buildup
- 6 Faulty powertrain control module (rare, but possible if all other components test good)



How to diagnose and fix it

- 1 Inspect all vacuum hoses and connections at the intake manifold runner control actuator for cracks, leaks, or disconnection
- 2 Check the electrical connector at the runner control solenoid for corrosion, loose pins, or damage; clean and reseal as needed
- 3 Test the runner control solenoid with a multimeter for correct resistance and verify it receives power and ground when commanded
- 4 Apply vacuum directly to the actuator to confirm the flap moves freely and does not stick
- 5 Check the wiring harness for continuity and shorts between the solenoid and the powertrain control module
- 6 Replace the faulty runner control solenoid, actuator, or vacuum hose as needed
- 7 Clear the diagnostic trouble code and perform a road test to verify the repair and ensure the monitor runs to completion

Before replacing the intake runner solenoid

- A simple vacuum leak from a cracked hose often mimics a failed solenoid, so always inspect hoses before condemning electrical parts.
- Carbon buildup on the intake runner flaps can cause them to stick, setting a circuit code even when the solenoid and wiring are good.
- Some vehicles use a single runner control solenoid for both banks; a fault on bank 1 may be caused by a shared component that also affects bank 2.
- The code can be set intermittently by a loose connector that only loses contact during engine vibration, so wiggle-test the harness while monitoring live data.
- Do not overlook the possibility of a faulty powertrain control module driver, but only after all other circuit tests pass.

Can I keep driving with P2008?

You can usually continue driving with P2008, but expect reduced performance and fuel economy; avoid heavy acceleration or towing until the fault is repaired, and address it promptly to prevent secondary issues.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Hand vacuum pump
- Socket and wrench set
- Wire probe and jumper wires



Reading P2008

- P** Powertrain: engine, transmission and emissions.
- 2** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 0** Fuel and air metering and auxiliary emission controls.
- 08** The exact fault within that area.

Often seen with

P2004 Intake Manifold Runner Control Stuck Open (Bank 1) · **P2005** Intake Manifold Runner Control Stuck Open (Bank 2) · **P2009** Intake Manifold Runner Control Circuit Low (Bank 1) · **P2010** Intake Manifold Runner Control Circuit High (Bank 1) · **P2070** Intake Manifold Tuning (IMT) Valve Stuck Open

See it working

Watch the animated explainer [How a Knock Sensor Works: Spark Timing and Octane](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p2008/>

