

GENERIC · POWERTRAIN

P2007

OBD-II TROUBLE CODE

P2007

Intake Manifold Runner Control Stuck Closed (Bank 2)

P2007 indicates that the powertrain control module has commanded the bank 2 intake manifold runner control actuator to change position, but the runner position sensor reports that the runner remains stuck closed. This code is set when the actual runner position does not match the commanded position within a calibrated time and range, typically causing reduced low-end torque and poor engine breathing.

SYSTEM Powertrain	CODE TYPE Generic (all makes)	SEVERITY Medium	FIX DIFFICULTY Intermediate	AREA Fuel and air metering and auxiliary emission controls
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Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms.
- Reduced engine power and sluggish acceleration, especially at lower engine speeds.
- Rough idle or idle instability due to restricted airflow at low RPM.
- Poor fuel economy as the engine struggles to breathe efficiently.
- In some cases, a slight hesitation or stumble during light throttle application.

Common causes, most likely first

- 1 Carbon buildup or mechanical binding causing the intake manifold runner flap to stick in the closed position.
- 2 Failed intake manifold runner control actuator, such as a broken linkage or seized motor.
- 3 Faulty intake manifold runner position sensor providing an incorrect closed signal.
- 4 Damaged or disconnected vacuum lines supplying the actuator, if vacuum-operated.
- 5 Wiring issues such as open circuits, chafed wires, or corroded connectors between the actuator, sensor, and PCM.
- 6 Internal PCM driver failure for the runner control circuit, though this is less common.



How to diagnose and fix it

- 1 Verify the stored code with a scan tool and check for any related pending or history codes in the intake manifold runner control system.
- 2 Inspect the intake manifold runner linkage and flap for mechanical binding, carbon accumulation, or physical damage.
- 3 Command the runner control actuator through the scan tool and observe whether the runner position sensor follows the commanded position.
- 4 Check the actuator's electrical connector and wiring for corrosion, loose pins, or open circuits, and repair as needed.
- 5 Test the actuator motor and position sensor according to the manufacturer's service information, replacing faulty components.
- 6 If vacuum-operated, inspect all vacuum hoses and the vacuum reservoir for leaks or disconnections.
- 7 Clear the code and perform a road test to confirm the runner control system operates correctly and the code does not return.

Carbon Buildup Often Mimics Actuator Failure

- Carbon accumulation on the intake manifold runner flaps is a frequent cause of sticking, especially on engines with direct injection, and cleaning the flaps can resolve the code without replacing parts.
- A stuck-closed runner can sometimes be caused by a broken plastic linkage that is not sold separately, requiring replacement of the entire actuator assembly.
- The code may set intermittently if the runner sticks only under certain temperature or load conditions, so a single clear-and-drive may not confirm a repair.
- Technicians sometimes overlook a faulty position sensor that reports closed even when the runner is moving, leading to unnecessary actuator replacement.
- On some vehicles, the bank 2 runner control is integrated into the intake manifold, making diagnosis of the mechanical components more labor-intensive.

Can I keep driving with P2007?

The vehicle is generally safe to drive with P2007, but you may experience reduced performance and fuel economy. Avoid aggressive acceleration or heavy load conditions, and have the fault diagnosed promptly to prevent potential damage to the intake system.

Tools that help

- OBD-II scan tool with bidirectional control capability
- Digital multimeter for circuit testing
- Hand tools for removing intake components
- Vacuum pump and gauge for vacuum-operated systems
- Service information for actuator testing and specifications



Reading P2007

- 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.
- 07** 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) · **P2006** Intake Manifold Runner Control Stuck Closed (Bank 1) · **P2008** Intake Manifold Runner Control Circuit/Open (Bank 1) · **P2009** Intake Manifold Runner Control Circuit Low (Bank 1)

See it working

Watch the animated explainer [How Regenerative Braking Works in Electric Cars](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p2007/>

