

GENERIC · POWERTRAIN

P2010

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P2010

Intake Manifold Runner Control Circuit High (Bank 1)

P2010 indicates that the powertrain control module (PCM) has detected an abnormally high voltage on the intake manifold runner control (IMRC) circuit for bank 1, which usually points to an open circuit, a short to voltage, or a faulty actuator. The IMRC system adjusts intake runner length or port flow to optimize airflow at different engine speeds, and a high-voltage fault means the PCM cannot reliably command the runners to move.

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 low to mid RPM
- Rough idle or hesitation during light throttle application
- Poor fuel economy due to inefficient intake tuning
- In some cases, a noticeable lack of top-end power or an engine that feels flat under load

Common causes, most likely first

- 1 Open circuit or high resistance in the IMRC actuator control wire, such as a broken wire or corroded connector
- 2 Short to voltage on the IMRC control circuit, often from chafed wiring rubbing against a metal bracket
- 3 Failed IMRC actuator or solenoid that no longer responds to PCM commands
- 4 Sticking or binding intake manifold runner linkage, causing the actuator to draw abnormal current or fail to reach its commanded position
- 5 Faulty PCM driver for the IMRC circuit, though this is less common and should be confirmed last
- 6 Corroded or damaged electrical connector at the IMRC actuator or at the PCM
- 7 Aftermarket or incorrect actuator replacement that does not match the original resistance or feedback characteristics



How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data to confirm P2010 is the only IMRC-related code and to note engine conditions when it set
- 2 Visually inspect the IMRC actuator, its connector, and the wiring harness for obvious damage, corrosion, or loose pins
- 3 Disconnect the IMRC actuator and measure resistance across its control terminals, comparing to the manufacturer's specification
- 4 Check for short to voltage on the control wire by measuring voltage with the actuator disconnected and the key on, engine off
- 5 Command the IMRC actuator with a scan tool and observe whether the runner linkage moves smoothly through its full range
- 6 Perform a voltage drop test on both the power and ground sides of the IMRC circuit under load to reveal hidden resistance
- 7 If wiring and actuator test good, substitute a known-good actuator or perform a bidirectional PCM test before condemning the PCM

What a high-voltage IMRC code really means

- A high-voltage code on an actuator circuit often indicates an open circuit rather than a shorted actuator, so a disconnected or broken wire is a more common cause than a failed solenoid.
- Many technicians replace the IMRC actuator only to find the real problem is a binding runner linkage that overloads the new part and sets the code again within a few drive cycles.
- The PCM may set P2010 intermittently if the wiring harness rubs against the engine block only during certain engine movements, so a wiggle test while monitoring live data is essential.
- Some vehicles use the IMRC circuit to control both bank 1 and bank 2 runners through a shared ground, and a fault on the shared ground can set codes for both banks even if only one actuator is defective.
- A dirty or carbon-fouled intake manifold can cause the runner flaps to stick, leading to a high-voltage code because the actuator cannot move the flaps to the commanded position and the PCM sees unexpected feedback.

Can I keep driving with P2010?

You can usually continue driving with P2010 because the engine remains driveable, but avoid aggressive acceleration and heavy load until the fault is repaired to prevent potential catalytic converter damage from prolonged rich or lean operation. If the check engine light begins flashing or you notice severe power loss, stop driving and seek professional diagnosis.



Tools that help

- OBD-II scan tool with bidirectional control and live data capability
- Digital multimeter with voltage, resistance, and voltage-drop functions
- Wiring diagram and connector pinout for the specific vehicle
- Hand tools for removing intake components and accessing the actuator
- Vacuum pump or smoke machine for checking related intake leaks if runner operation is suspect

Reading P2010

- 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.
- 10** 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) · **P2007** Intake Manifold Runner Control Stuck Closed (Bank 2) · **P2011** Intake Manifold Runner Control Circuit/Open (Bank 2)

See it working

Watch the animated explainer [Disc Brake Trainer: How Car Brakes Stop a Wheel](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p2010/>

