

GENERIC · POWERTRAIN

P2012

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P2012

Intake Manifold Runner Control Circuit Low (Bank 2)

P2012 indicates that the powertrain control module has detected a low-voltage condition on the intake manifold runner control circuit for bank 2, which is the side of the engine that does not contain cylinder number one. The intake manifold runner control system uses a motor or solenoid to adjust airflow inside the intake manifold, and this code sets when the control circuit voltage falls below the expected range for the commanded state.

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
- A slight hesitation or stumble during light acceleration
- Reduced engine power or sluggish throttle response at lower engine speeds
- Rough idle quality or intermittent idle fluctuations
- Poor fuel economy compared to normal driving conditions
- In rare cases, a noticeable loss of low-end torque

Common causes, most likely first

- 1 Damaged or disconnected electrical connector at the intake manifold runner control actuator on bank 2
- 2 Open or shorted wire in the intake manifold runner control circuit, often due to chafing or heat damage
- 3 Failed intake manifold runner control solenoid or motor on bank 2
- 4 Corroded or loose terminals at the powertrain control module connector
- 5 Blown fuse or faulty relay that supplies power to the intake manifold runner control circuit
- 6 Internal fault in the powertrain control module, though this is less common



How to diagnose and fix it

- 1 Inspect the intake manifold runner control actuator connector on bank 2 for corrosion, loose pins, or damage, and clean or repair as needed
- 2 Check the wiring harness for the intake manifold runner control circuit for signs of chafing, heat damage, or open circuits, and repair any faults
- 3 Test the intake manifold runner control solenoid or motor with a multimeter to verify resistance and function, replacing it if out of specification
- 4 Verify that power and ground are present at the actuator connector with the key on, and trace back to the fuse or relay if missing
- 5 Check the powertrain control module connector for corrosion or loose terminals, and repair if necessary
- 6 Clear the diagnostic trouble codes and perform a road test to confirm the repair, monitoring live data for the intake manifold runner control circuit

Common misdiagnosis traps for P2012

- A low circuit code often results from a poor ground connection rather than a failed actuator, so technicians should always verify ground integrity before replacing parts.
- The intake manifold runner control system may be vacuum-operated on some engines, and a leaking vacuum line can mimic an electrical fault by causing the actuator to not respond.
- P2012 can be set intermittently by a loose connector that only loses contact during engine vibration, so a wiggle test of the harness while monitoring live data is a valuable diagnostic step.
- Some vehicles use a single intake manifold runner control actuator for both banks, and a fault on bank 2 may actually be caused by a shared power or ground circuit issue.
- The code does not always indicate a hard failure; a low voltage condition can be triggered by a weak battery or charging system problem, so checking system voltage is a wise first step.

Can I keep driving with P2012?

You can generally continue driving with P2012, but avoid aggressive acceleration and heavy load conditions until the fault is repaired, as the engine may not deliver full performance and fuel economy could suffer. 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 live data capability
- Digital multimeter
- Wire probe set
- Service manual or wiring diagram for the specific vehicle
- Basic hand tools for connector and component access



Reading P2012

- 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.
- 12** The exact fault within that area.

Often seen with

P2004 Intake Manifold Runner Control Stuck Open (Bank 1) · **P2011** Intake Manifold Runner Control Circuit/Open (Bank 2) · **P2013** Intake Manifold Runner Control Circuit High (Bank 2) · **P2014** Intake Manifold Runner Position Sensor/Switch Circuit (Bank · **P2015** Intake Manifold Runner Position Sensor/Switch Circuit Range/

See it working

Watch the animated explainer [Master the Four-Stroke Engine Cycle](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p2012/>

