

GENERIC · POWERTRAIN

P2018

OBD-II TROUBLE CODE

P2018

Intake Manifold Runner Position Sensor/Switch Circuit Intermittent (Bank 1)

P2018 is a generic powertrain code indicating that the powertrain control module (PCM) has detected an intermittent fault in the electrical circuit for the intake manifold runner position sensor or switch on bank 1. The PCM monitors the sensor signal for expected voltage changes as the intake manifold runner (also called a swirl flap or tumble flap) moves, and it sets this code when the signal drops out, jumps erratically, or fails to change when commanded. This intermittent condition can cause poor engine performance and may illuminate the check engine light.

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

Symptoms you may notice

- Check engine light illuminated, often with no other noticeable symptoms
- Hesitation or stumble during acceleration, especially at lower engine speeds
- Rough idle or unstable engine operation
- Reduced fuel economy due to incorrect intake air tuning
- In rare cases, a limp-home mode with limited power

Common causes, most likely first

- Wiring harness damage such as chafed, pinched, or corroded wires between the sensor and PCM
- Loose or corroded electrical connector at the intake manifold runner position sensor
- Faulty intake manifold runner position sensor or switch itself
- Carbon buildup or mechanical binding in the intake manifold runner mechanism causing the sensor signal to drop out
- Failed intake manifold runner actuator (vacuum or electric) that intermittently sticks
- PCM software glitch or internal driver fault (less common)



How to diagnose and fix it

- 1 Inspect the sensor connector and wiring for looseness, corrosion, or damage, and repair as needed
- 2 Check for technical service bulletins (TSBs) or software updates for the PCM related to this code
- 3 Perform a wiggle test on the harness while monitoring sensor data to identify intermittent opens
- 4 Measure sensor resistance and voltage with a multimeter and compare to manufacturer specifications
- 5 Command the intake manifold runner actuator with a scan tool and observe sensor signal for smooth operation
- 6 Remove and inspect the intake manifold runner for carbon buildup or mechanical binding, cleaning or replacing as necessary
- 7 Replace the intake manifold runner position sensor if all electrical and mechanical checks pass

Intermittent faults demand careful circuit testing

- A common misdiagnosis is replacing the sensor when the real problem is a chafed wire hidden inside the harness loom, so always perform a thorough wiggle test before condemning parts.
Carbon buildup on the intake manifold runner flaps can cause the sensor to report an intermittent signal because the flaps stick and do not follow the commanded position, mimicking an electrical fault.
- This code can be set by a momentary voltage drop that lasts only milliseconds, so a simple static resistance check may not reveal the fault; a lab scope or graphing multimeter is often needed.
- On some vehicles, a weak or failing vacuum actuator for the runner control can cause intermittent operation that sets P2018 without any driveability symptoms.

Always check for related codes such as P2019 or P2004, which may indicate a mechanical or performance issue with the same system, before focusing solely on the sensor circuit.

Can I keep driving with P2018?

You can generally continue driving with P2018, but avoid aggressive acceleration or heavy loads until the fault is repaired, as the intermittent runner control may cause hesitation or reduced power. If the engine runs poorly or enters limp mode, seek service promptly to prevent further damage.

Tools that help

- OBD-II scan tool with live data and actuator test capability
- Digital multimeter
- Lab scope or graphing multimeter
- Wiggle test probe set
- Hand tools for connector and component access



Reading P2018

- 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.
- 18** 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) · **P2019** Intake Manifold Runner Position Sensor/Switch Circuit (Bank

See it working

Watch the animated explainer [How a Supercharger Works: Roots Blower in X-Ray](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p2018/>

