

GENERIC · POWERTRAIN

P2015

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P2015

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

P2015 is a generic powertrain code indicating that the intake manifold runner position sensor or switch circuit on bank 1 is reporting a range or performance problem. The engine computer compares the expected position of the intake manifold runner flap to the actual signal from the sensor, and it sets this code when the two do not agree within a calibrated window.

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 at low engine speeds
- Reduced engine power or a limp-home mode in some vehicles
- Rough idle or unstable idle quality
- Poor fuel economy or increased emissions
- An audible rattle or ticking from the intake manifold area on some engines

Common causes, most likely first

- 1 Carbon buildup or mechanical binding on the intake manifold runner flaps, preventing full travel
- 2 A faulty intake manifold runner position sensor or switch
- 3 Damaged, disconnected, or corroded wiring or connector at the sensor
- 4 A failed or weak intake manifold runner actuator (vacuum or electric motor)
- 5 A vacuum leak or loss of vacuum supply to the runner actuator
- 6 A stuck or damaged runner control linkage or flap assembly
- 7 Rarely, a software calibration issue or a faulty engine control module (ECM)



How to diagnose and fix it

- 1 Connect a scan tool and read live data for the intake manifold runner position sensor while commanding the runner through its full range with the engine off.
- 2 Inspect the sensor connector, wiring, and vacuum lines for damage, corrosion, or disconnection, and repair as needed.
- 3 Remove the intake manifold or runner assembly and clean carbon deposits from the runner flaps and linkage, verifying free movement.
- 4 Test the runner actuator with a hand vacuum pump or by applying 12 volts directly, and replace it if it does not move the flaps smoothly.
- 5 Check for vacuum leaks at the intake manifold, actuator, and associated hoses using a smoke machine or carburetor cleaner.
- 6 Replace the intake manifold runner position sensor if live data shows an erratic or non-responsive signal.
- 7 After repairs, clear the codes and perform a drive cycle to confirm the monitor runs and the code does not return.

Before you replace the intake manifold

- Carbon buildup on the runner flaps is the most common cause of P2015 on direct-injection engines, and cleaning the flaps often fixes the code without replacing any parts.
- A vacuum leak at the runner actuator or a cracked vacuum reservoir can mimic a failed sensor, so always verify vacuum supply before condemning the sensor.
- On some vehicles, the runner position sensor is integrated into the actuator and cannot be replaced separately, so check the parts breakdown before ordering.
- The code can set intermittently due to a poor electrical connection at the sensor, so wiggle-test the harness while watching live data.
- A faulty engine control module is extremely rare; rule out mechanical binding and wiring issues first.

Can I keep driving with P2015?

You can usually drive the vehicle with P2015 set, but expect reduced performance and possibly worse fuel economy. Avoid heavy acceleration and towing until the fault is repaired, and address it promptly to prevent carbon buildup from worsening.

Tools that help

- OBD-II scan tool with live data and bidirectional control
- Hand vacuum pump
- Digital multimeter
- Socket and wrench set
- Carburetor cleaner or intake cleaner
- Smoke machine (optional for vacuum leak testing)



Reading P2015

- 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.
- 15** 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) · **P2014** Intake Manifold Runner Position Sensor/Switch Circuit (Bank

See it working

Watch the animated explainer [How a CVT Works: Belt and Pulley Transmission](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p2015/>

