

GENERIC · POWERTRAIN

P201D

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P201D

Intake Manifold Runner Control Actuator Internal Performance (Bank 1)

P201D indicates that the powertrain control module has detected an internal performance fault within the intake manifold runner control actuator on bank 1, meaning the actuator's own position feedback or electrical response does not match the commanded state. The computer monitors the actuator's internal circuits and position sensor, and it sets this code when the expected movement or signal range is not achieved within a calibrated time or threshold.

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 sluggish throttle response in certain rpm ranges
- Rough idle quality or unstable engine speed when coming to a stop
- Intermittent surging or uneven power delivery as the runner control attempts to move
- A stored pending code that may self-clear after several drive cycles if the fault is intermittent

Common causes, most likely first

- 1 Carbon buildup or mechanical binding inside the intake manifold runner control actuator assembly
- 2 Failed internal position sensor or worn electrical tracks inside the actuator
- 3 Open or shorted wiring within the actuator's internal harness or connector pins
- 4 Corroded or loose electrical connector at the actuator, causing intermittent signal loss
- 5 Actuator motor winding failure or degraded internal gears that prevent full travel
- 6 Software calibration issue in the powertrain control module that misinterprets actuator feedback
- 7 Vacuum or mechanical linkage damage that loads the actuator beyond its designed range



How to diagnose and fix it

- 1 Connect a scan tool and record all stored and pending codes, then command the runner control actuator through its full range while watching live position feedback for smooth correlation.
- 2 Visually inspect the actuator connector and harness for corrosion, pushed pins, or chafed wires, and perform a wiggle test while monitoring the position signal.
- 3 Measure resistance and voltage at the actuator connector according to the service information, comparing the internal position sensor signal to the commanded value.
- 4 Remove the actuator and inspect the intake manifold runner linkage for carbon binding, broken clips, or mechanical interference that prevents free movement.
- 5 Clean carbon deposits from the runner control mechanism and intake manifold passages, then re-test actuator travel with the scan tool.
- 6 Replace the intake manifold runner control actuator if internal electrical or mechanical failure is confirmed, then clear codes and perform a relearn or calibration drive cycle.
- 7 Verify repair by running the manufacturer's monitor readiness test and confirming the code does not return after multiple drive cycles.

What the actuator feedback really tells you

- A P201D is often set by a lazy or sticking actuator that still moves but cannot reach its commanded position within the calibrated time, so a simple key-on sweep test may look normal while a live graph reveals the slow response.
- Carbon buildup on the intake manifold runner flaps is a frequent root cause that mimics an actuator failure, and replacing the actuator without cleaning the runners will usually set the code again within a few hundred miles.
- The code can be triggered by a poor ground connection at the actuator mounting point, so checking ground integrity before condemning the part saves unnecessary replacement.
- Some vehicles require a relearn or adaptation reset after actuator replacement, and skipping that step will leave the code stored even with a perfectly functioning new part.
- An intermittent connector fault can set P201D only during cold starts or high-vibration conditions, so a road test with the scan tool graphing actuator position is more revealing than a static inspection.

Can I keep driving with P201D?

The vehicle remains safe to drive in most cases because the runner control fault mainly affects low-speed torque and emissions, but avoid aggressive acceleration or heavy load until the fault is repaired. If the check engine light begins flashing or the engine runs poorly, stop driving and have the vehicle inspected promptly.



Tools that help

- OBD-II scan tool with bidirectional control and live graphing capability
- Digital multimeter with back-probing pins
- Hand tools for actuator removal and intake component access
- Carburetor or intake cleaner and shop rags for carbon removal
- Service information or wiring diagram for the specific vehicle

Reading P201D

- 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.
- 1D** 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) · **P201E** Intake Manifold Runner Control Actuator Internal Performance · **P201F** Reductant Pump A Stuck On

See it working

Watch the animated explainer [How a Fuel Injector Works: Pulse Width and Spray](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p201d/>

