

FORD · POWERTRAIN

P1513

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1513 · Ford

Intake Manifold Runner Control Stuck Closed

P1513 on Ford vehicles means the powertrain control module (PCM) commanded the intake manifold runner control (IMRC) to move but did not see the expected change in manifold runner position, so it flags the runner as stuck closed. The IMRC system uses vacuum or an electric actuator to open a set of butterfly valves in the intake, altering airflow for low-end torque versus high-rpm power, and this code tells you the valves never opened when asked.

SYSTEM

Powertrain

CODE TYPE

Ford specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Vehicle speed, idle control and auxiliary inputs

Symptoms you may notice

- Illumination of the check engine light, often with no other symptoms the driver can feel.
- Noticeable loss of power at higher engine speeds because the intake runners stay in the long-runner position.
- Sluggish acceleration or poor throttle response, especially during passing or merging.
- Rough or unstable idle in some cases if the stuck-closed runners upset airflow at low speed.
- A slight decrease in fuel economy as the engine struggles to breathe at higher rpm.
- On some Ford models, a hesitation or stumble when the PCM commands the runners to open under load.

Common causes, most likely first

- 1 A vacuum leak or disconnected vacuum hose feeding the IMRC actuator, preventing it from pulling the runners open.
- 2 A failed IMRC actuator diaphragm or electric motor that no longer moves the linkage.
- 3 Carbon buildup or mechanical binding in the intake runner butterfly valves or linkage, holding them closed.
- 4 A faulty IMRC position sensor or wiring fault that reports the runners as closed even when they move.
- 5 A failed IMRC solenoid or control module that does not route vacuum or power when commanded.
- 6 A stuck or damaged intake manifold runner control valve assembly itself, common on older Ford intakes.
- 7 Rarely, a PCM driver fault or corroded connector pins at the IMRC solenoid or actuator.



How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data to confirm P1513 is active and not a history code from a previous repair.
- 2 Visually inspect the IMRC vacuum hoses, actuator linkage, and electrical connectors for cracks, disconnects, or corrosion.
- 3 Command the IMRC open and closed with a scan tool while watching the position sensor or actuator movement to verify the fault.
- 4 Use a vacuum gauge or hand pump to test the actuator diaphragm and confirm it holds vacuum and moves the linkage freely.
- 5 Clean or free up the intake runner butterfly valves and linkage if carbon or mechanical binding is holding them closed.
- 6 Test the IMRC solenoid for correct vacuum routing and electrical resistance, and repair any wiring faults found.
- 7 Replace the failed IMRC actuator, solenoid, or valve assembly as needed, then clear the code and verify the runners open on a road test.

What Ford techs check before replacing the IMRC

- A disconnected or cracked vacuum hose at the IMRC actuator is the most common cause on Ford engines, and it is easy to overlook because the hose hides under the intake plenum.
- The code does not always mean the actuator is bad; a binding butterfly shaft or carboned-up intake runners can hold the valves closed even with a good actuator.
- On some Ford models the IMRC position sensor is separate from the actuator, and a faulty sensor can set P1513 even when the runners move correctly.
- A vacuum leak elsewhere in the intake system can reduce vacuum to the IMRC actuator and trigger this code without any obvious driveability symptom.
- Do not replace the intake manifold before testing the solenoid and actuator, because a cheap solenoid or hose failure mimics a failed manifold runner assembly.

Can I keep driving with P1513?

You can usually drive the vehicle with P1513, but expect reduced high-rpm power and slightly worse fuel economy, so avoid heavy acceleration or towing until it is repaired. If the check engine light begins flashing or you notice severe misfiring, stop driving and have it diagnosed promptly.



Tools that help

- OBD-II scan tool with bidirectional control and live data capability
- Hand vacuum pump with gauge
- Vacuum gauge
- Basic socket and wrench set
- Digital multimeter
- Carburetor or intake cleaner and soft brushes

Reading P1513

P	Powertrain: engine, transmission and emissions.
1	Manufacturer-specific code (Ford): its meaning depends on the make.
5	Vehicle speed, idle control and auxiliary inputs.
13	The exact fault within that area.

Often seen with

P1517 Main Relay Circuit Electrical Malfunction · **P1516** Intake Manifold Changeover Valve Circuit Open · **P1515** Intake Manifold Changeover Valve Circuit Short To Ground · **P1514** Intake Manifold Changeover Valve 2 Circuit Short To Ground · **P1516** Idle Air Control Solenoid Signal 4 Circuit Low Input · **P1515** Idle Air Control Solenoid Signal 3 Circuit High Input · **P1517** Idle Air Control Solenoid Signal 4 Circuit High Input · **P1514** Idle Air Control Solenoid Signal 3 Circuit Low Input · **P1517** Cranking Neutral Drive Fault · **P1514** High Load Neutral Drive Fault · **P1516** Gear Change Neutral Drive Fault · **P1515** A/T To M/T Codification · **P1517** Cranking Neutral Drive Fault · **P1514** High Load Neutral Drive Fault · **P1516** Gear Change Neutral Drive Fault · **P1517** Throttle Actuator Control (TAC) Module Performance · **P1514** Throttle Body Performance · **P1516** Throttle Actuator Control (TAC) Module Throttle Actuator Pos · **P1515** Control Module Throttle Actuator Position Performance · **P1517** Intake Manifold Runner Control Input Error · **P1516** Intake Manifold Runner Control Input Error · **P1517** Throttle Actuator Control (TAC) Module Performance · **P1516** Throttle Actuator Control (TAC) Module Throttle Actuator Pos · **P1515** Control Module Throttle Actuator Position Performance · **P1514** Throttle Body Performance · **P2004** Intake Manifold Runner Control Stuck Open (Bank 1)

See it working

Watch the animated explainer [Engine Cooling System Trainer: How Engines Stay Cool](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/ford-p1513/>

