

GENERIC · POWERTRAIN

P2070

OBD-II TROUBLE CODE

P2070

Intake Manifold Tuning (IMT) Valve Stuck Open

P2070 indicates that the powertrain control module (PCM) has detected a fault in the intake manifold tuning (IMT) valve circuit or its mechanical operation, specifically that the valve is stuck in the open position. The PCM commands the valve to change position to optimize airflow at different engine speeds, and when the expected change in manifold pressure or airflow does not occur, it sets this code.

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

- Illumination of the check engine light, often with no other noticeable symptoms
- Reduced engine performance, especially at low or high RPM, due to incorrect intake runner length
- Poor fuel economy or rough idle quality
- Hesitation or stumble during acceleration
- In some cases, a noticeable loss of power at certain engine speeds

Common causes, most likely first

- 1 IMT valve actuator or solenoid failure, preventing the valve from moving
- 2 Vacuum leak or faulty vacuum lines supplying the actuator
- 3 Carbon buildup or mechanical binding of the valve flap in the intake manifold
- 4 Wiring damage (open, short, or corrosion) in the IMT valve control circuit
- 5 Failed intake manifold tuning valve position sensor (if equipped)
- 6 PCM software issue or internal driver fault (rare)



How to diagnose and fix it

- 1 Perform a visual inspection of the IMT valve, actuator, and vacuum lines for obvious damage or disconnection
- 2 Use a scan tool to command the IMT valve open and closed while watching live data for the valve position or manifold pressure change
- 3 Check the electrical connector and wiring at the IMT valve solenoid for power, ground, and signal integrity
- 4 Test the vacuum actuator with a hand vacuum pump to confirm it holds vacuum and moves the valve linkage
- 5 Remove the IMT valve or intake manifold to inspect for carbon buildup or mechanical binding, cleaning or replacing as needed
- 6 If the valve moves freely but does not respond to commands, test the solenoid resistance and compare to specifications
- 7 After repair, clear the code and verify the IMT valve operates correctly during a road test

What a stuck-open IMT valve really means

- A stuck-open IMT valve often has no effect on driveability at high RPM, so the code may be the only clue and should not be ignored.
- Carbon accumulation on the valve flap is a common cause that many technicians miss when they focus only on electrical tests.
- The IMT valve may be vacuum-operated or electrically actuated; misdiagnosis occurs when the wrong type is assumed.
- A faulty manifold absolute pressure (MAP) sensor can mimic IMT valve symptoms, so verify MAP readings before condemning the valve.
- Some vehicles use the IMT valve to improve low-end torque, and a stuck-open valve can cause a noticeable bog at low RPM that drivers may not associate with the check engine light.

Can I keep driving with P2070?

You can usually continue driving with P2070, but expect reduced performance and possibly worse fuel economy. Avoid heavy acceleration or towing until the fault is repaired, as the engine may not deliver full power.

Tools that help

- OBD-II scan tool with live data and bidirectional controls
- Hand vacuum pump
- Digital multimeter
- Basic hand tools (screwdrivers, wrenches, socket set)
- Inspection mirror and flashlight



Reading P2070

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

Often seen with

P0660 Intake Manifold Tuning Valve Control Circuit/Open (Bank 1) · **P0661** Intake Manifold Tuning Valve Control Circuit Low (Bank 1) · **P2004** Intake Manifold Runner Control Stuck Open (Bank 1) · **P2008** Intake Manifold Runner Control Circuit/Open (Bank 1) · **P2071** Intake Manifold Tuning (IMT) Valve Stuck Closed

See it working

Watch the animated explainer [Four-Stroke Engine Cutaway: Intake to Exhaust](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p2070/>

