

GENERIC · POWERTRAIN

P0662

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P0662

Intake Manifold Tuning Valve Control Circuit High (Bank 1)

P0662 means the powertrain control module (PCM) has detected an abnormally high voltage on the control circuit for the intake manifold tuning valve on bank 1. The tuning valve normally changes intake runner length to optimize airflow at different engine speeds, and a high-voltage reading indicates an open circuit, a short to power, or a failed valve actuator.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Computer and output circuits

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Slightly reduced engine power or sluggish acceleration at certain RPM ranges
- Poor fuel economy or a richer-than-normal air-fuel mixture
- Rough idle or mild hesitation during light acceleration
- In rare cases, a noticeable loss of low-end torque or high-end power

Common causes, most likely first

- 1 Open or damaged wiring in the tuning valve control circuit (broken wire, corroded connector)
- 2 Failed intake manifold tuning valve actuator (open coil or internal fault)
- 3 Short to battery voltage in the control circuit, often from chafed insulation
- 4 Poor electrical connection at the valve or PCM connector (loose pins, corrosion)
- 5 Faulty PCM driver for the tuning valve circuit (less common)
- 6 Aftermarket or incorrect valve installed that does not match the PCM's expected resistance



How to diagnose and fix it

- 1 Connect a scan tool and verify P0662 is current; check for related codes and freeze-frame data
- 2 Visually inspect the tuning valve connector and wiring for damage, corrosion, or loose pins
- 3 Measure resistance across the tuning valve actuator and compare to the manufacturer's specification
- 4 Check for battery voltage on the control circuit with the key on and the valve commanded off; repair any short to power
- 5 Perform a wiggle test on the harness while monitoring the circuit voltage to reveal intermittent opens
- 6 If the circuit and valve test good, substitute a known-good valve or use a bidirectional scan tool to command the valve and observe operation
- 7 As a last resort, check the PCM driver output with an oscilloscope or replace the PCM after confirming all other possibilities

What a high-voltage tuning valve code really means

- A high-voltage code on a control circuit almost always points to an open circuit or a short to power, not a defective valve, so resistance and voltage checks are more reliable than swapping parts.
- Many vehicles use the same tuning valve on both banks; if bank 2 has a similar code, the fault is likely shared wiring or a common power feed rather than two failed valves.
- The PCM may set P0662 only after the engine reaches operating temperature and the valve is commanded through its full range, so a cold-engine test can miss an intermittent fault.
- A stuck-open tuning valve can cause a lean condition at idle that the PCM tries to compensate for, leading to fuel trim codes that appear unrelated to the tuning valve.
- Replacing the tuning valve without checking the connector for water intrusion or pin tension often leads to a repeat failure within a few thousand miles.

Can I keep driving with P0662?

You can usually continue driving with P0662 because the engine remains driveable, but avoid heavy acceleration or towing until the fault is repaired. Prolonged driving with a faulty tuning valve may reduce fuel economy and could eventually affect emissions compliance.

Tools that help

- OBD-II scan tool with live data and bidirectional control
- Digital multimeter
- Wire piercing probes or back-probe kit
- Oscilloscope (optional for PCM driver testing)
- Service information for wiring diagrams and resistance specifications



Reading P0662

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 6** Computer and output circuits.
- 62** The exact fault within that area.

Often seen with

P0661 Intake Manifold Tuning Valve Control Circuit Low (Bank 1) · **P0663** Intake Manifold Tuning Valve Control Circuit/Open (Bank 2) · **P0664** Intake Manifold Tuning Valve Control Circuit Low (Bank 2) · **P2004** Intake Manifold Runner Control Stuck Open (Bank 1) · **P2008** Intake Manifold Runner Control Circuit/Open (Bank 1)

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/p0662/>

