

GENERIC · POWERTRAIN

P2565

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P2565

Turbocharger Boost Control Position Sensor Circuit High

P2565 indicates that the powertrain control module (PCM) has detected an abnormally high voltage signal from the turbocharger boost control position sensor circuit. This sensor reports the physical position of the variable geometry turbocharger (VGT) vanes or the wastegate actuator, and a high voltage typically means the signal wire is shorted to power, the sensor ground is open, or the sensor itself has failed.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

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 noticeable symptoms.
- Reduced engine power or limp mode due to the PCM limiting boost pressure.
- Poor acceleration and sluggish throttle response, especially at low engine speeds.
- Decreased fuel economy because the turbocharger cannot regulate boost efficiently.
- In some cases, a slight hesitation or surge during acceleration as the PCM struggles to control boost.
- On vehicles with a driver information display, a message such as 'Engine Power Reduced' may appear.

Common causes, most likely first

- 1 A short to voltage on the signal wire between the boost control position sensor and the PCM.
- 2 An open or high-resistance ground circuit for the boost control position sensor.
- 3 A failed boost control position sensor, often due to internal wear or contamination.
- 4 Corroded, loose, or damaged electrical connectors at the sensor or PCM.
- 5 A faulty turbocharger actuator assembly that binds and forces the sensor out of its normal range.
- 6 Rarely, a PCM internal fault causing it to misread the sensor voltage.



How to diagnose and fix it

- 1 Perform a visual inspection of the sensor, its wiring harness, and connectors for chafing, corrosion, or loose pins.
- 2 Use a scan tool to read the boost control position sensor voltage and compare it to the manufacturer's specification with the key on and engine off.
- 3 Backprobe the sensor connector to measure reference voltage, ground continuity, and signal voltage; repair any wiring faults found.
- 4 If wiring is intact, command the turbocharger actuator with the scan tool to verify that the sensor signal changes smoothly through its range.
- 5 Replace the boost control position sensor if it fails electrical or functional testing, then clear the code and verify the repair.
- 6 If the sensor is integrated into the turbocharger actuator, replace the actuator assembly as a unit when diagnosis confirms internal failure.
- 7 After repairs, perform a road test to confirm that the code does not return and that boost pressure behaves normally.

Before you replace the turbocharger

- A high voltage code is frequently caused by a simple wiring short to power, so always inspect the harness near hot exhaust components where insulation can melt and contact the signal wire.
- The boost control position sensor is often part of the turbocharger actuator assembly, and replacing the entire turbocharger is rarely necessary if only the sensor or actuator has failed.
- On some vehicles, a sticking variable geometry turbocharger mechanism can force the sensor to report an out-of-range high voltage, mimicking a sensor failure and leading to unnecessary part replacement.
- A poor ground connection at the sensor can cause the signal voltage to float high, so check ground continuity and resistance before condemning the sensor.
- This code can set intermittently due to vibration or temperature changes, so wiggle-test the harness while monitoring sensor voltage to catch an intermittent fault.

Can I keep driving with P2565?

You can usually drive the vehicle with this code, but the engine may enter limp mode with reduced power, so avoid heavy acceleration and towing until the fault is repaired. Prolonged driving with a faulty boost control system can lead to poor fuel economy and, in some cases, damage to the turbocharger or catalytic converter.



Tools that help

- OBD-II scan tool with live data and bidirectional control capabilities
- Digital multimeter with backprobe pins
- Wiring diagram for the specific vehicle
- Basic hand tools for connector and sensor removal
- Vacuum pump or pressure gauge for actuator testing (if applicable)

Reading P2565

- P** Powertrain: engine, transmission and emissions.
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- 2** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
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- 5** Vehicle speed, idle control and auxiliary inputs.
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- 65** The exact fault within that area.

Often seen with

P0045 Turbo/Super Charger Boost Control Solenoid Circuit/Open · **P0234** Engine Overboost Condition · **P2563** Turbocharger Boost Control Position Sensor Circuit Range/Per · **P2564** Turbocharger Boost Control Position Sensor Circuit Low · **P2566** Turbocharger Boost Control Position Sensor Circuit Intermitt

See it working

Watch the animated explainer [Turbocharger Trainer: Boost, Wastegate and Intercooler](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p2565/>

