

GENERIC · POWERTRAIN

P00C2

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P00C2

Turbocharger/Supercharger Bypass Valve B Control Circuit High

P00C2 indicates that the powertrain control module (PCM) has detected an abnormally high voltage on the control circuit for the bypass valve of turbocharger or supercharger 'B'. The PCM commands the valve to open or close to regulate boost pressure, and a high voltage reading on the control circuit suggests a short to power, an open ground, or a faulty valve actuator.

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 or a limp mode condition due to disabled boost control
- Poor fuel economy or rough running if the valve sticks open or closed
- Audible hissing or whistling from the turbocharger area if the valve is stuck
- In some cases, the engine may enter a reduced power mode to protect the turbocharger

Common causes, most likely first

- 1 Damaged or shorted wiring in the bypass valve control circuit, particularly a short to voltage
- 2 Failed bypass valve actuator or solenoid
- 3 Corroded or loose electrical connectors at the valve or PCM
- 4 Faulty PCM driver for the bypass valve control circuit
- 5 Mechanical binding or sticking of the bypass valve, causing the actuator to draw abnormal current
- 6 Water intrusion or contamination in the valve connector or actuator



How to diagnose and fix it

- 1 Verify the code with a scan tool and check for any related codes in other systems
- 2 Inspect the bypass valve connector and wiring for damage, corrosion, or loose pins
- 3 Measure resistance of the bypass valve actuator and compare to manufacturer specifications
- 4 Check for short to voltage on the control circuit using a multimeter with the key on and PCM disconnected
- 5 Test the bypass valve for mechanical binding or sticking by applying vacuum or actuating it manually
- 6 If wiring and valve are good, test the PCM control signal with an oscilloscope or substitute a known-good PCM
- 7 Replace the faulty bypass valve actuator or repair the wiring as needed, then clear codes and verify the repair

Common Misdiagnosis Traps for P00C2

- A short to voltage in the bypass valve control circuit is often caused by a chafed wire near the turbocharger where heat and vibration damage insulation.
- The code can set intermittently due to a poor ground connection at the valve body, which is frequently overlooked during diagnosis.
- Replacing the bypass valve without checking the control circuit for a short to power can lead to repeat failure of the new part.
- Some vehicles use a single bypass valve for both turbochargers in a twin-turbo setup, so a fault may affect overall boost control and set additional codes.
- A stuck-open bypass valve may not trigger a drivability symptom immediately, but it can cause overboost or underboost conditions that eventually set other codes.

Can I keep driving with P00C2?

It is generally safe to drive with this code if the vehicle is not in limp mode, but avoid aggressive acceleration or heavy load until the fault is repaired. Prolonged driving with a faulty bypass valve can lead to turbocharger damage or reduced engine performance.

Tools that help

- OBD-II scan tool
- Digital multimeter
- Wire repair kit
- Vacuum pump or hand actuator
- Oscilloscope (optional for signal testing)



Reading P00C2

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 0** Fuel and air metering and auxiliary emission controls.
- C2** The exact fault within that area.

Often seen with

P00C1 Turbocharger/Supercharger Bypass Valve B Control Circuit Low · **P00C3** Turbocharger/Supercharger Bypass Valve B Control Circuit Ran · **P00C4** Turbocharger/Supercharger Bypass Valve B - Mechanical · **P0234** Engine Overboost Condition · **P0299** Turbo/Supercharger Underboost

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/p00c2/>

