



P00C1

Turbocharger/Supercharger Bypass Valve B Control Circuit Low

P00C1 indicates that the powertrain control module (PCM) has detected a low-voltage condition on the control circuit for the bypass valve of turbocharger or supercharger B. This circuit controls a valve that routes compressed air around the turbocharger or supercharger to prevent overboost and to improve response during sudden throttle changes. The PCM expects a certain voltage range on the control wire, and a reading below the threshold triggers 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 or power, especially under acceleration.
- Poor fuel economy or unusual engine behavior during boost transitions.
- Possible limp mode or reduced boost pressure if the PCM limits turbo operation.
- Audible hissing or whistling from the engine bay if the bypass valve is stuck open.
- Rough idle or stalling in some cases if the valve affects intake airflow.

Common causes, most likely first

- 1 Faulty bypass valve solenoid or actuator, causing an open or shorted circuit.
- 2 Damaged or corroded wiring harness or connector at the bypass valve.
- 3 Poor electrical connection at the PCM or a chafed wire along the circuit path.
- 4 Failed PCM driver for the bypass valve control circuit, though rare.
- 5 Aftermarket modifications or poor previous repairs affecting the circuit.
- 6 Internal short in the bypass valve causing excessive current draw and low voltage.



How to diagnose and fix it

- 1 Inspect the bypass valve connector and wiring for damage, corrosion, or loose pins.
- 2 Measure resistance of the bypass valve solenoid and compare to manufacturer specifications.
- 3 Check for voltage on the control circuit with the key on and engine off, verifying the PCM output.
- 4 Perform a wiggle test on the harness while monitoring voltage to detect intermittent faults.
- 5 If wiring and valve are good, test the PCM driver circuit with a load or oscilloscope.
- 6 Replace the bypass valve if it fails electrical tests, then clear the code and verify repair.
- 7 Repair or replace damaged wiring or connectors, then retest the circuit.

Bypass valve circuit checks before parts

- A low voltage code often results from a poor ground connection at the bypass valve or chassis, not a failed valve itself.
- The bypass valve may be mechanically stuck but still pass electrical tests, so verify its operation with a scan tool bidirectional control if available.
- Aftermarket air intake or intercooler piping can chafe the bypass valve wiring, leading to this code.
- This code can be set by a momentary voltage drop during engine cranking if the battery is weak, so check battery health first.
- Do not overlook the possibility of a faulty PCM if all other components test good; however, PCM failure is rare and should be the last suspect.

Can I keep driving with P00C1?

You can generally drive the vehicle with this code, but avoid aggressive acceleration or heavy load until repaired, as the bypass valve may not function correctly, potentially causing overboost or reduced performance. If the engine enters limp mode or you notice severe power loss, seek repair promptly.

Tools that help

- OBD-II scan tool with live data and bidirectional control
- Digital multimeter
- Wiring diagram for the specific vehicle
- Test light or load tester
- Basic hand tools for connector and component access



Reading P00C1

- 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.
- C1** The exact fault within that area.

Often seen with

P00C2 Turbocharger/Supercharger Bypass Valve B Control Circuit Hig · **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/p00c1/>

