

GENERIC · POWERTRAIN

P00D8

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P00D8

Turbocharger/Supercharger Bypass Valve B Temperature Too High

P00D8 means the powertrain control module has detected that the temperature signal from the turbocharger or supercharger bypass valve B is higher than the calibrated safe limit. The computer monitors a dedicated temperature sensor or a modeled value for that bypass valve circuit and sets this code when the reading exceeds the threshold for a set time.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Fuel and air metering and auxiliary emission controls

Symptoms you may notice

- Illumination of the check engine light, often with no other symptoms besides the warning light
- Reduced engine power or limp mode when the bypass valve is commanded to protect the turbocharger or supercharger
- Rough idle or stumble after a cold start if the bypass valve is stuck partially open
- Poor acceleration or delayed boost response because the bypass valve cannot regulate charge air temperature properly
- A noticeable whistle or hissing sound from the turbocharger or supercharger area if the bypass valve is stuck or leaking
- In rare cases, an overheating smell or heat-related damage to nearby wiring and hoses

Common causes, most likely first

- 1 A failed temperature sensor integrated into the bypass valve B assembly or its signal circuit
- 2 A bypass valve B that is stuck closed or restricted, causing charge air to overheat
- 3 Damaged, chafed, or corroded wiring and connectors at the bypass valve B temperature sensor
- 4 A faulty powertrain control module driver circuit for the bypass valve B temperature input
- 5 Low coolant level or a cooling system fault that raises charge air temperature beyond normal limits
- 6 A restricted intercooler or charge air cooler that cannot shed heat before the bypass valve
- 7 Software calibration issues in the powertrain control module that misreport bypass valve temperature



How to diagnose and fix it

- 1 Scan all modules for stored and pending codes, then record freeze-frame data for P00D8 to see the temperature value and engine conditions at the time of failure
- 2 Visually inspect the bypass valve B connector, pins, and harness for corrosion, chafing, or loose terminals, and repair any wiring faults before replacing parts
- 3 Use a scan tool to compare the bypass valve B temperature reading with a known-good value or an infrared thermometer at the valve body when the engine is cold and again after warm-up
- 4 Check the charge air cooling system, including coolant level, intercooler condition, and any related hoses, for restrictions or leaks that could raise bypass valve temperature
- 5 Test the bypass valve B actuator and temperature sensor circuit with a multimeter for resistance and voltage values against the manufacturer's specification
- 6 Replace the bypass valve B assembly or its temperature sensor only after electrical and cooling system checks confirm the sensor or valve is at fault
- 7 Clear the codes, perform a road test with live data monitoring, and verify that the bypass valve B temperature stays within the normal range and the code does not return

Before you replace the bypass valve B

- A common misdiagnosis is replacing the bypass valve B assembly when the real problem is a chafed signal wire near the exhaust or turbocharger that shorts to ground only when hot.
- P00D8 can be set by a cooling system fault that raises charge air temperature, so always verify coolant level and intercooler airflow before condemning the valve.
- Some vehicles use a modeled bypass valve temperature rather than a physical sensor, meaning a faulty manifold absolute pressure sensor or intake air temperature sensor can skew the calculated value and set this code.
- A stuck-closed bypass valve B can cause elevated charge air temperature without any obvious drivability symptom, so the warning light may be the only clue until the valve is inspected.
- After repairs, the powertrain control module may need a relearn or adaptation reset for the bypass valve before the monitor will run and clear the code permanently.

Can I keep driving with P00D8?

You can usually drive the vehicle short distances at moderate speed to a repair shop, but avoid heavy throttle and sustained boost because a stuck bypass valve can overheat charge air and damage the turbocharger or supercharger. If the engine enters limp mode or you smell overheating, stop driving and have the vehicle towed.



Tools that help

- OBD-II scan tool with live data and freeze-frame capability
- Infrared thermometer
- Digital multimeter
- Basic hand tools and socket set
- Wiring diagram and manufacturer service information

Reading P00D8

- 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.
- D8** The exact fault within that area.

Often seen with

P00D5 HO2S Sensor Correlation Bank 1 Sensor 1/Bank 1 Sensor 2 · **P00D6** HO2S Sensor Correlation Bank 2 Sensor 1/Bank 2 Sensor 2 · **P00D7** Turbocharger/Supercharger Bypass Valve A Temperature Too Hig · **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/p00d8/>

