

GENERIC · POWERTRAIN

P006C

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P006C

MAP - Turbocharger/Supercharger Inlet Pressure Correlation

P006C indicates that the powertrain control module has detected a disagreement between the manifold absolute pressure sensor reading and the expected turbocharger or supercharger inlet pressure under specific operating conditions. The computer compares the MAP signal against a modeled value derived from other sensors such as the barometric pressure, mass airflow, and throttle position, and sets this code when the correlation falls outside the calibrated range.

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 noticeable symptoms
- Reduced engine performance or a lack of boost from the turbocharger or supercharger
- Rough idle or stumbling during acceleration
- Poor fuel economy or increased fuel consumption
- Hesitation or delayed throttle response when accelerating
- In rare cases, the engine may enter limp mode to protect the turbocharger

Common causes, most likely first

- 1 Faulty manifold absolute pressure sensor or its electrical connector
- 2 Leaking or disconnected charge air cooler piping or intake hose between the turbocharger and intake manifold
- 3 Restricted or clogged air filter or intake tract
- 4 Malfunctioning turbocharger wastegate or supercharger bypass valve
- 5 Exhaust leak before the turbocharger affecting boost pressure
- 6 Faulty barometric pressure sensor or mass airflow sensor providing incorrect reference data
- 7 Wiring damage or corrosion in the MAP sensor circuit



How to diagnose and fix it

- 1 Inspect all intake and charge air hoses for cracks, loose clamps, or disconnections and repair as needed
- 2 Check the air filter and intake tract for restrictions and replace the filter if dirty
- 3 Test the MAP sensor with a scan tool to compare its live reading against expected values and a known-good sensor
- 4 Verify the MAP sensor connector and wiring for corrosion, chafing, or loose pins and repair the harness
- 5 Check the turbocharger wastegate or supercharger bypass valve for proper operation and freedom of movement
- 6 Perform a smoke test on the intake system to locate any hidden leaks
- 7 If all else checks out, reprogram or replace the powertrain control module as a last resort

What the MAP correlation code really means

- A dirty or failing mass airflow sensor can skew the modeled pressure calculation and trigger P006C even when the MAP sensor itself is perfectly functional.
Small intake leaks after the turbocharger often cause this code without any audible whistle, so a smoke test is more reliable than a visual inspection.
- The code can be set by a sticking turbocharger wastegate that prevents the expected pressure rise, which many technicians overlook while focusing on sensors.
- P006C is sometimes stored intermittently due to a poor electrical connection at the MAP sensor, so always wiggle-test the harness while watching live data.
Replacing the MAP sensor without checking the charge air system for leaks is a common misdiagnosis that leads to a repeat repair.

Can I keep driving with P006C?

You can usually continue driving to a repair shop, but avoid heavy acceleration and sustained high-speed driving because incorrect boost pressure can stress the turbocharger. If the engine enters limp mode or performance drops severely, pull over and arrange a tow to prevent further damage.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Smoke machine for intake leak testing
- Hand tools for hose clamp and sensor removal
- Vacuum/pressure gauge



Reading P006C

- 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.
- 6C** The exact fault within that area.

Often seen with

P006D Barometric Pressure - Turbocharger/Supercharger Inlet Pressure Sensor Circuit Range/Performance · **P0106** MAP/Barometric Pressure Sensor Circuit Range/Performance · **P0107** MAP/Barometric Pressure Sensor Circuit Low Input · **P0108** MAP/Barometric Pressure Sensor Circuit High Input · **P0235** Turbocharger Boost Sensor A Circuit Malfunction

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/p006c/>

