



## P1512 · Toyota

### Boost Pressure High

P1512 on Toyota vehicles indicates the engine control module (ECM) has detected boost pressure higher than the expected threshold for the current operating conditions. The ECM compares the turbocharger's actual boost, measured by the manifold absolute pressure (MAP) sensor, against its commanded target and flags this code when the pressure exceeds the calibrated limit.

| SYSTEM     | CODE TYPE       | SEVERITY | FIX DIFFICULTY | AREA                                             |
|------------|-----------------|----------|----------------|--------------------------------------------------|
| Powertrain | Toyota specific | Medium   | Professional   | 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 triggered by the ECM to protect the turbocharger and engine
- Audible pinging or knocking under acceleration due to excessive cylinder pressure
- Black smoke from the exhaust caused by over-fueling in response to high boost
- A sudden loss of power or hesitation when the turbocharger overboosts
- In some cases, the engine may enter a fail-safe mode that limits boost to a safe level

### Common causes, most likely first

- 1 Faulty turbocharger wastegate actuator or stuck wastegate valve, preventing proper boost regulation
- 2 Malfunctioning boost control solenoid (also called the turbo boost control valve) that fails to bleed off pressure
- 3 Disconnected, cracked, or obstructed vacuum hose between the wastegate actuator and the boost control solenoid
- 4 Sticking or failed variable nozzle turbo (VNT) mechanism on engines equipped with variable geometry turbochargers
- 5 Faulty manifold absolute pressure (MAP) sensor providing an inaccurate high reading to the ECM
- 6 Restricted or damaged intercooler or intake piping causing a pressure spike
- 7 ECM calibration issue or faulty boost control circuit wiring, though less common



## How to diagnose and fix it

- 1 Inspect all vacuum hoses and connections between the wastegate actuator, boost control solenoid, and intake manifold for cracks, leaks, or disconnections
- 2 Test the wastegate actuator for proper movement using a hand vacuum pump and verify the wastegate valve opens and closes smoothly without binding
- 3 Check the boost control solenoid for correct operation by applying voltage and listening for a click, and measure its resistance against the manufacturer's specification
- 4 Verify the MAP sensor reading with a scan tool against a known good sensor or mechanical boost gauge to rule out a false high-pressure signal
- 5 Inspect the turbocharger's variable nozzle mechanism (if equipped) for carbon buildup or sticking, and clean or replace as necessary
- 6 Perform a boost pressure test using a mechanical gauge to confirm actual boost levels and compare with the ECM's commanded boost
- 7 If all mechanical and electrical checks pass, reprogram or replace the ECM only after confirming the fault is internal to the module

## Overboost Often Traces to Wastegate Sticking

- A common oversight is assuming the turbocharger itself is failing when the real culprit is a sticking wastegate flapper or a worn actuator linkage that prevents the valve from opening fully under high exhaust flow.
- On Toyota diesel engines with variable nozzle turbochargers, carbon buildup on the VNT mechanism is a frequent cause of overboost that many technicians miss because the actuator moves freely when tested off the vehicle.
- The boost control solenoid can fail intermittently, especially when hot, so a bench test at room temperature may pass while the solenoid sticks underhood; always test it at operating temperature if possible.
- A restricted intercooler or collapsed charge pipe can cause a pressure spike that the ECM interprets as overboost, so inspect the entire intake tract for obstructions or damage before condemning the turbo.
- P1512 can be set by a faulty MAP sensor that reports a higher-than-actual pressure, leading to unnecessary turbo replacement; always cross-check live MAP data against a mechanical gauge.

## Can I keep driving with P1512?

Driving with P1512 is not recommended because excessive boost can damage the turbocharger, head gasket, or pistons over time. If you must drive, avoid hard acceleration and keep engine load low, and have the vehicle diagnosed promptly to prevent costly repairs.



## Tools that help

- OBD-II scan tool with live data capability
- Hand vacuum pump with gauge
- Mechanical boost pressure gauge
- Digital multimeter
- Socket and wrench set
- Factory service information for Toyota boost control specifications

## Reading P1512

**P** Powertrain: engine, transmission and emissions.

**1** Manufacturer-specific code (Toyota): its meaning depends on the make.

**5** Vehicle speed, idle control and auxiliary inputs.

**12** The exact fault within that area.

## Often seen with

**P0234** Engine Overboost Condition · **P0235** Turbocharger Boost Sensor A Circuit Malfunction · **P0236** Turbocharger Boost Sensor A Circuit Range/Performance · **P0243** Turbocharger Wastegate Solenoid A Malfunction · **P0299** Turbo/Supercharger Underboost

## 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/toyota-p1512/>

