

GENERIC · POWERTRAIN

P00D6

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P00D6

HO2S Sensor Correlation Bank 2 Sensor 1/Bank 2 Sensor 2

P00D6 indicates that the powertrain control module has detected an implausible correlation between the upstream and downstream heated oxygen sensor signals on bank 2. The computer compares the switching activity of the pre-catalyst sensor with the more stable post-catalyst sensor and flags the code when their behaviors do not match expected patterns.

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
- A slight decrease in fuel economy as the system defaults to a less efficient fueling strategy
- Occasional rough idle or hesitation during acceleration if the correlation error affects fuel trim
- A failed emissions test due to the oxygen sensor monitor not completing or reporting a fault
- In rare cases, a sulfur or rotten egg smell from the exhaust if the catalyst is being overworked

Common causes, most likely first

- 1 A failing bank 2 sensor 1 (upstream) heated oxygen sensor that responds sluggishly or erratically
- 2 A failing bank 2 sensor 2 (downstream) heated oxygen sensor that no longer switches as expected
- 3 Exhaust leaks between the two sensors or near the manifold that introduce false air and skew readings
- 4 Wiring damage, corrosion, or loose connectors in the oxygen sensor circuits for bank 2
- 5 A restricted or contaminated catalytic converter on bank 2 that alters downstream sensor behavior
- 6 An engine misfire or vacuum leak on bank 2 that changes exhaust gas composition and confuses the correlation logic



How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data to confirm the code and check for related oxygen sensor or misfire codes
- 2 Visually inspect the bank 2 exhaust system for leaks, loose clamps, and damaged gaskets, repairing as needed
- 3 Check the wiring and connectors at both bank 2 oxygen sensors for corrosion, chafing, or poor pin fit
- 4 Use a scan tool to graph both oxygen sensor signals and compare their switching patterns against known good values
- 5 Perform a propane enrichment test or use a smoke machine to verify that no unmetered air is entering the exhaust
- 6 Replace the sensor that shows abnormal behavior, starting with the upstream sensor if its signal is lazy or flat
- 7 Clear the codes and complete a drive cycle to verify that the repair corrected the correlation fault

What the correlation code really means

- A P00D6 is often set by a lazy upstream sensor that still produces a signal but responds too slowly, which is easy to miss if you only check for a dead sensor.
- Exhaust leaks downstream of the upstream sensor can cause the downstream sensor to read lean and mimic a failed sensor, so always inspect the piping before replacing parts.
- The correlation logic compares switching frequency and amplitude, so a sensor that is biased rich or lean without setting a circuit code can still trigger this fault.
- Replacing both sensors at once without diagnosing the actual cause can lead to a repeat code if the real problem is a wiring issue or a small exhaust leak.
- A misfire on bank 2 can alter the oxygen content enough to set this code, so check misfire counters and fuel trims before condemning the sensors.

Can I keep driving with P00D6?

You can usually continue driving with this code, but avoid long trips or heavy loads until it is diagnosed because fuel economy and emissions may suffer. If the check engine light starts flashing or you notice a misfire, stop driving and seek service immediately.

Tools that help

- OBD-II scan tool with graphing capability
- Digital multimeter
- Smoke machine or propane enrichment kit
- Exhaust leak detector or stethoscope
- Basic hand tools for sensor and exhaust work



Reading P00D6

- 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.
- D6** The exact fault within that area.

Often seen with

P0130 O2 Sensor Circuit Malfunction (Bank 1 Sensor 1) · **P0136** O2 Sensor Circuit Malfunction (Bank 1 Sensor 2) · **P0150** O2 Sensor Circuit Malfunction (Bank 2 Sensor 1) · **P0156** O2 Sensor Circuit Malfunction (Bank 2 Sensor 2) · **P0420** Catalyst System Efficiency Below Threshold (Bank 1)

See it working

Watch the animated explainer [Manual Car Driving Simulator: Learn Clutch Control](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p00d6/>

