

GENERIC · POWERTRAIN

P000A

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P000A

A Camshaft Position Slow Response Bank 1

P000A means the engine computer has detected that the bank 1 camshaft is not changing its timing position as quickly as the computer commanded, based on the camshaft position sensor signal. The computer compares the actual cam angle to the target angle and flags the code when the response is slower than expected over a calibrated time window.

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
- Rough idle or unstable engine speed when the camshaft phaser is commanded to move
- Reduced engine power or a hesitation during acceleration
- Poor fuel economy or increased emissions
- Intermittent stalling when coming to a stop
- A rattle or ticking noise from the front of the engine on cold starts

Common causes, most likely first

- 1 Dirty or degraded engine oil causing the camshaft phaser to respond slowly
- 2 A sticking or clogged oil control valve (OCV) solenoid for the camshaft phaser
- 3 Worn or damaged camshaft phaser components, such as the phaser spring or locking pin
- 4 Low oil pressure or a restricted oil passage feeding the phaser
- 5 A faulty camshaft position sensor or damaged wiring to the sensor
- 6 An engine computer calibration issue or a failing variable valve timing (VVT) solenoid driver



How to diagnose and fix it

- 1 Check the engine oil level and condition, then change the oil and filter if it is overdue or contaminated
- 2 Scan all modules for stored and pending codes, and record freeze-frame data for P000A
- 3 Inspect the camshaft position sensor and its wiring for damage, corrosion, or loose connections
- 4 Remove and clean or test the oil control valve solenoid for the bank 1 camshaft phaser
- 5 Verify oil pressure at the phaser feed port and check for restricted oil passages
- 6 Command the camshaft phaser with a scan tool and compare actual cam angle to the commanded angle
- 7 Replace the faulty phaser, solenoid, or sensor only after confirming the root cause with live data

Oil quality and phaser response are linked

- A slow camshaft response is frequently caused by oil that has lost its viscosity or is contaminated, so a simple oil change can resolve the code on many engines.
- The oil control valve solenoid can test electrically good but still stick mechanically, so a resistance check alone does not rule it out.
- A camshaft position sensor that is slightly out of range can mimic a slow phaser without setting a separate sensor code.
- Some engines use a single oil control valve for both banks, so a bank 1 code can appear even when the valve serves both sides.
- After replacing phaser components, the engine computer may need a relearn procedure before the code stays cleared.

Can I keep driving with P000A?

You can usually drive the vehicle short distances to a repair shop, but avoid hard acceleration and sustained high speeds because slow camshaft response can affect valve timing and emissions. If the engine runs rough, stalls, or loses significant power, stop driving and have it towed.

Tools that help

- OBD-II scan tool with live data and bidirectional control
- Oil pressure gauge
- Digital multimeter
- Basic hand tools and socket set
- Feeler gauge or camshaft phaser inspection tools



Reading P000A

- 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.
- 0A** The exact fault within that area.

Often seen with

P000B B Camshaft Position Slow Response Bank 1 · **P000C** A Camshaft Position Slow Response Bank 2 · **P0011** 'A' Camshaft Position - Timing Over-Advanced or System Perfo · **P0014** Exhaust Camshaft Position - Over-Advanced (Bank 1) · **P0016** Crankshaft/Camshaft Position Correlation (Bank 1 Sensor A)

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/p000a/>

