

NISSAN · POWERTRAIN

P1387

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1387 · Nissan

CYP Sensor B No Signal

P1387 on Nissan vehicles means the engine control module has lost the signal from the cylinder identification sensor for bank B, which is the sensor that tells the computer which cylinder is on its compression stroke. The computer expects a pulse from this sensor every camshaft revolution, and when that pulse is missing or erratic, it flags the circuit as having no signal.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Nissan specific	Medium	Intermediate	Ignition system and misfire

Symptoms you may notice

- Illuminated check engine light, often with no other noticeable symptoms
- Rough idle or misfire-like shuddering, especially when the engine is cold
- Extended cranking before the engine starts or occasional no-start conditions
- Reduced engine performance and poor fuel economy due to inaccurate ignition timing
- Intermittent stalling or hesitation during acceleration
- A stored companion code for camshaft or crankshaft position correlation

Common causes, most likely first

- 1 Failed cylinder identification sensor (CYP sensor B) due to heat, oil contamination, or internal winding failure
- 2 Damaged or chafed wiring between the CYP sensor and the engine control module, often near the exhaust manifold or timing cover
- 3 Corroded or loose electrical connector pins at the sensor or ECM harness
- 4 Metal debris or excessive gap between the sensor and the camshaft reluctor wheel
- 5 Timing chain or belt wear that has altered the camshaft-to-crankshaft relationship beyond the sensor's expected window
- 6 Faulty engine control module driver circuit for the CYP sensor input (rare but documented)
- 7 Aftermarket camshaft or sensor installation with incorrect air gap or phasing



How to diagnose and fix it

- 1 Connect a scan tool and record all stored and pending codes, then clear codes and test-drive to see if P1387 returns immediately or only under specific conditions
- 2 Visually inspect the CYP sensor B connector and harness for chafing, oil intrusion, or loose pins, and check the sensor mounting for debris
- 3 Measure the CYP sensor resistance with a multimeter and compare to the Nissan specification for your engine, looking for an open or shorted winding
- 4 Back-probe the sensor signal wire at the ECM and crank the engine to confirm whether a pulsed voltage is present, which isolates a sensor fault from a wiring or ECM fault
- 5 Check the camshaft reluctor wheel for damaged teeth or excessive runout and verify the sensor air gap with a feeler gauge
- 6 Perform a continuity and voltage-drop test on the signal and ground circuits between the sensor and ECM to rule out high resistance in the harness
- 7 If the sensor and wiring test good, substitute a known-good CYP sensor or scope the signal at the ECM to confirm whether the module is misinterpreting a valid waveform

CYP Sensor B No Signal Diagnostic Traps

- A failed CYP sensor B often produces no driveability complaint at all, so many owners replace the sensor unnecessarily when the real fault is a chafed signal wire behind the timing cover.
- Nissan CYP sensors are magnetic pickup types, and a weak signal can be caused by metallic sludge buildup on the sensor tip rather than an electrical failure, so cleaning the tip and reluctor is a valid first step.
- A stretched timing chain on older Nissan engines can shift camshaft phasing enough to push the CYP signal outside the ECM's expected window, setting P1387 even though the sensor itself is healthy.
- Technicians sometimes misdiagnose P1387 as a crankshaft position sensor fault because the engine cranks but does not start, but the CYP sensor specifically identifies the compression stroke and its failure affects sequential injection timing.
- Aftermarket CYP sensors with incorrect internal resistance are a common comeback cause, so always verify the replacement sensor's resistance against the factory specification before installing it.

Can I keep driving with P1387?

You can usually drive the vehicle short distances to a repair shop, but avoid sustained high-speed driving or heavy load because the ECM may default to batch-fire injection and retarded timing, which increases fuel consumption and exhaust temperature. If the engine cranks excessively or stalls repeatedly, stop driving and arrange a tow to prevent catalytic converter damage from unburned fuel.



Tools that help

- OBD-II scan tool with live data and graphing capability
- Digital multimeter with resistance and voltage-drop functions
- Oscilloscope for waveform analysis of the CYP sensor signal
- Feeler gauge set for checking sensor air gap
- Factory service information for Nissan CYP sensor resistance and torque specifications
- Basic hand tools including socket set and trim removal tools for harness access

Reading P1387

P Powertrain: engine, transmission and emissions.

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

3 Ignition system and misfire.

87 The exact fault within that area.

Often seen with

P1386 Internal Control Module Knock Control Error · **P1386** CYP Sensor B Intermittent Interruption · **P1386** Knock Sensor Control Zero Test · **P1386** CYP Sensor B Intermittent Interruption · **P1386** Variable Cam Timing Overadvanced Bank 2 · **P1386** Control Module Self-test Knock Control Baseline Test Bank 1 · **P0011** 'A' Camshaft Position - Timing Over-Advanced or System Perfo · **P0335** Crankshaft Position Sensor A Circuit Malfunction · **P0340** Camshaft Position Sensor A Circuit Malfunction (Bank 1) · **P0345** Camshaft Position Sensor A Circuit (Bank 2)

See it working

Watch the animated explainer [How a MAF Sensor Works: Hot-Wire Airflow Explained](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/nissan-p1387/>

