

GENERIC · POWERTRAIN

P2617

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P2617

Crankshaft Position Signal Output Circuit/Open

P2617 indicates that the powertrain control module (PCM) has detected an open circuit or abnormal voltage on the crankshaft position signal output circuit, which is the path the PCM uses to send a reference signal to other modules or systems. The PCM monitors this output circuit and sets the code when the expected voltage or signal is missing, often resulting in an engine that cranks but does not start or runs poorly.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Intermediate	Computer and output circuits

Symptoms you may notice

- Engine cranks but does not start or may stall immediately after starting
- Intermittent stalling while driving or at idle
- Rough running or misfire due to lost crankshaft position reference
- Tachometer may read zero or fluctuate erratically
- Often no symptoms besides the warning light if the fault is only in the output circuit to another module

Common causes, most likely first

- 1 Open or damaged wire in the crankshaft position signal output circuit between the PCM and the receiving module
- 2 Corroded or loose electrical connector at the PCM or at the crankshaft position sensor
- 3 Failed crankshaft position sensor or its internal output driver
- 4 Faulty PCM driver circuit for the crankshaft position output
- 5 Aftermarket alarm or remote start wiring that has tapped into or damaged the crankshaft signal wire
- 6 Poor ground connection at the PCM or engine block causing reference voltage loss



How to diagnose and fix it

- 1 Inspect the crankshaft position sensor and its connector for physical damage, corrosion, or loose pins
- 2 Check the wiring harness between the sensor and PCM for chafing, breaks, or pinched sections, especially near hot or moving components
- 3 Measure resistance and continuity of the signal output wire from the sensor connector to the PCM connector
- 4 Verify the sensor receives proper power and ground, and check for a clean ground at the PCM
- 5 Use a scan tool to monitor crankshaft position signal live data while cranking or wiggling the harness to catch intermittent opens
- 6 If the circuit tests good, substitute a known-good crankshaft position sensor to rule out a failing sensor
- 7 If all external circuits and the sensor are verified good, diagnose the PCM output driver or replace the PCM as a last resort

What the output circuit really does

- P2617 is often set by a problem in the output side of the crankshaft signal, not the sensor input side, so replacing the sensor without testing the output wire can be a wasted repair.
- A common missed cause is an aftermarket remote starter or alarm that has spliced into the crankshaft signal wire, creating a high-resistance or intermittent connection.
- Some vehicles will run normally with this code because the output signal is only used by a secondary module such as the transmission control module or instrument cluster, so the engine may start fine.
- A weak or failing crankshaft position sensor can produce an output signal that is present but distorted, setting P2617 without a complete open circuit.
- Corrosion inside a connector can create an open circuit only when the engine bay is hot or wet, leading to intermittent no-start conditions that do not appear during a cold shop test.

Can I keep driving with P2617?

If the engine starts and runs normally, you can drive the vehicle to a repair shop, but avoid long trips or heavy load because the fault may cause an unexpected stall. If the engine cranks but does not start or stalls repeatedly, do not drive and have the vehicle towed to prevent a safety hazard.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Wiring diagram for the specific vehicle
- Test light or logic probe
- Terminal pick and electrical contact cleaner



Reading P2617

- P** Powertrain: engine, transmission and emissions.
- 2** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 6** Computer and output circuits.
- 17** The exact fault within that area.

Often seen with

P0335 Crankshaft Position Sensor A Circuit Malfunction · **P0336** Crankshaft Position Sensor A Circuit Range/Performance · **P0725** Engine Speed Input Circuit Malfunction · **P2616** Camshaft Position Signal Output Circuit High · **P2618** Crankshaft Position Signal Output Circuit Low

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/p2617/>

