

GM · POWERTRAIN

P1324

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1324 · GM

Crank RPM Too Low

P1324 on a GM vehicle means the powertrain control module (PCM) detected that the crankshaft position sensor signal indicates engine speed is too low during cranking, or the signal is erratic and cannot be trusted. The PCM compares the crank RPM it calculates from the crankshaft position sensor against expected values during start-up, and it sets this code when the measured RPM falls below the minimum threshold or the signal is inconsistent.

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

Symptoms you may notice

- The engine cranks but will not start, or starts only after extended cranking
- The engine may start and then stall immediately after firing
- A hard start or no-start condition that is worse in cold weather or when the engine is hot
- The tachometer may not move at all while cranking, or may jump erratically
- Often no symptoms besides the warning light if the fault is intermittent
- Possible rough running or misfire if the crank signal is weak but not completely lost

Common causes, most likely first

- Faulty crankshaft position sensor or a sensor that is contaminated with metal debris
- Damaged or corroded crankshaft position sensor wiring harness, especially at the connector or where it routes near hot or moving parts
- Worn or damaged reluctor wheel (tone ring) on the crankshaft, including cracked, missing, or misindexed teeth
- Excessive air gap between the crankshaft position sensor and the reluctor wheel due to a loose sensor or worn timing components
- Weak or failing battery or starter motor that cannot spin the engine fast enough during cranking
- Poor engine ground or corroded battery cables causing low cranking voltage to the PCM and sensor
- Mechanical engine problems such as a slipped timing chain or excessive crankshaft end play that affect the crank signal



How to diagnose and fix it

- 1 Check the battery state of charge and cranking voltage; a battery below 12.4 volts or cranking voltage below 9.6 volts can set this code
- 2 Inspect the crankshaft position sensor connector and wiring for corrosion, chafing, or loose pins, and repair as needed
- 3 Remove the crankshaft position sensor and check the tip for metal shavings or damage; clean or replace the sensor if contaminated
- 4 Measure the air gap between the sensor and reluctor wheel with a feeler gauge and compare to the GM specification for the engine
- 5 Use a scan tool to view live cranking RPM data; if the PCM reports zero or erratic RPM while the engine is cranking, suspect the sensor or signal circuit
- 6 Perform a resistance and AC voltage output test on the crankshaft position sensor while cranking, following the GM service procedure for the specific engine
- 7 If the sensor and wiring test good, inspect the reluctor wheel through the sensor hole for cracks, missing teeth, or debris, and check for timing chain slack

Crank RPM too low is not always the sensor

- A weak battery or a failing starter that spins the engine slowly can set P1324 even when the crankshaft position sensor is perfectly good, so always verify cranking speed before replacing parts.
- Metal debris stuck to the magnetic tip of the crankshaft position sensor is a common cause on high-mileage GM engines, and simply cleaning the sensor often resolves the code.
- A cracked or loose reluctor wheel on the crankshaft can mimic a bad sensor, and this is easy to miss because the sensor itself tests fine on the bench.
- Corroded engine ground straps, especially on older GM trucks and SUVs, can cause low reference voltage to the crankshaft position sensor and trigger P1324 without any sensor fault.
- P1324 can be stored intermittently by a sensor that only fails when hot, so a cold-engine resistance test may pass while the sensor still needs replacement.

Can I keep driving with P1324?

If the engine starts and runs normally, you can drive the vehicle to a repair shop, but avoid long trips and be prepared for a no-start condition. If the engine cranks but will not start or stalls repeatedly, do not drive it and have it towed to prevent being stranded.



Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Feeler gauge set
- Basic hand tools (socket set, wrench set)
- Battery load tester
- Oscilloscope (optional for signal waveform analysis)

Reading P1324

P	Powertrain: engine, transmission and emissions.
1	Manufacturer-specific code (GM): its meaning depends on the make.
3	Ignition system and misfire.
24	The exact fault within that area.

Often seen with

P0335 Crankshaft Position Sensor A Circuit Malfunction · **P0336** Crankshaft Position Sensor A Circuit Range/Performance · **P0337** Crankshaft Position Sensor A Circuit Low Input · **P0338** Crankshaft Position Sensor A Circuit High Input · **P0339** Crankshaft Position Sensor 'A' Circuit Intermittent

See it working

Watch the animated explainer [How a Knock Sensor Works: Spark Timing and Octane](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/gm-p1324/>

