DECODEMYCAR • FREE DIAGNOSTIC CHECKLIST

P0171 Diagnostic Checklist

System Too Lean (Bank 1) — find the real cause before you pay a mechanic.

■ CAN I KEEP DRIVING WITH A P0171 CODE?

Usually yes, short-term — if the engine idles smoothly and has normal power. But don't ignore it for weeks: a lean mixture burns hotter than normal, which wears out your exhaust valves and can eventually damage your catalytic converter. Stop driving if the light is flashing or the engine stumbles.

What "too lean" actually means

Your engine needs a precise mix of air and fuel — roughly 14.7 parts air to 1 part fuel. "Too lean" means there's too much air compared to fuel reaching cylinder bank 1 (the side of the engine where cylinder #1 lives). The moment that ratio drifts, your computer sets the P0171 code.

■■ THE GOLDEN RULE: DON'T SHOOT THE MESSENGER

Your oxygen sensor just *reports* the lean mixture — it's almost never the part that's actually broken. Replacing the O2 sensor first, before ruling out a leak or a dirty sensor, is the single most common (and most expensive) mistake people make with this code.

The 3 usual suspects (in order of likelihood)

1	2	3
Vacuum leak	**Dirty MAF sensor**	**Weak fuel supply**
Most common. A cracked or loose intake hose lets extra unmetered air sneak in.	Dust/oil film makes it under-report airflow — looks just like a leak to the computer.	A clogged fuel filter or failing fuel pump starves fuel when the engine is under load.

Also worth knowing: watch for a rough idle, occasional stalling, or a slight loss of power when accelerating. None are emergencies on their own, but together with a P0171 they confirm the engine is genuinely running lean.

Your 3-step driveway checklist (do this before buying any part)

1 **Inspect the intake boot — $0**

Follow the rubber tube connecting the air filter housing to the throttle body. Look closely along its length for cracks, splits, or a clamp that's wiggled loose — one of the most common sources of this code.

2 **Run the soapy water test — $0**

Mix dish soap with water in a spray bottle. With the engine running, mist the hose connections, intake gaskets, and throttle body base. Bubbles forming pinpoint exactly where unmetered air is sneaking in.

3 **Clean the MAF sensor — ~$8–$12**

Remove the MAF sensor (just after the air filter box) and spray it with a dedicated MAF sensor cleaner only — never brake cleaner, which can destroy the sensing wire. Let it air dry completely before reinstalling.

What a fix typically costs

Likely cause	Typical cost	Notes
Vacuum leak (hose/clamp)	$5–$20	Often just a hose or clamp replacement
MAF sensor cleaning	$8–$12	Cleaner only — fixes it permanently for many drivers
MAF sensor replacement	$60–$200	Only if cleaning doesn't resolve it
Fuel filter / fuel pump	$50–$400+	Least common cause — rule out the other two first

These are typical ranges, not quotes — actual pricing varies by vehicle, part brand, and labor rates.

Want the full P0171 breakdown?
Severity, every cause, and the complete repair-cost guide — free, no signup:
decodemycar.com/p0171

This checklist is general guidance to help you understand a P0171 code — it isn't a substitute for a professional diagnosis. Component locations, part costs, and repair difficulty vary by make, model, and year, so treat the details above as typical, not guaranteed for your specific vehicle. © DecodeMyCar · decodemycar.com