

GENERIC · CHASSIS

C054B

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

C054B

Vacuum Sensor A Circuit Low

C054B indicates that the powertrain control module (PCM) or body control module (BCM) has detected a voltage signal from Vacuum Sensor A that is lower than the expected range for the current operating conditions. This sensor monitors vacuum pressure in systems such as the brake booster or EVAP system, and a low signal typically points to a circuit fault, a failed sensor, or a vacuum leak.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Chassis	Generic (all makes)	Medium	Intermediate	Brakes, steering and suspension

Symptoms you may notice

- Illumination of the check engine light or service vehicle soon message
- Often no symptoms besides the warning light
- Reduced engine performance or poor fuel economy if the sensor affects fuel trim
- Hard brake pedal or increased stopping effort if the sensor is part of the brake booster vacuum circuit
- Rough idle or stalling due to incorrect vacuum readings affecting air-fuel mixture
- Inability to complete an emissions self-test or readiness monitor

Common causes, most likely first

- Failed vacuum sensor A (internal short or open circuit)
- Damaged or disconnected vacuum hose or tube leading to the sensor
- Corroded, loose, or damaged electrical connector at the sensor
- Open or shorted wire in the sensor signal circuit (low voltage side)
- Poor ground connection for the sensor or PCM
- Vacuum leak in the intake manifold or brake booster system
- Faulty PCM or BCM (rare)

How to diagnose and fix it

- Inspect the vacuum sensor and its connector for physical damage, corrosion, or loose pins
- Check all vacuum hoses and tubes for cracks, disconnections, or leaks
- Measure reference voltage and ground at the sensor connector with a multimeter
- Test the sensor signal voltage with a vacuum pump applied and compare to specifications
- Check continuity and resistance of the signal circuit between sensor and PCM
- Replace the vacuum sensor if it fails electrical or vacuum testing
- Clear the code and verify repair with a test drive and monitor readiness



Don't overlook the simple vacuum leak

- A low voltage signal from the vacuum sensor often results from a simple vacuum leak rather than a failed sensor, so always perform a smoke test before replacing parts.
- The code can be set by a poor ground connection at the sensor or PCM, which is frequently missed during diagnosis.
- On some vehicles, a faulty brake booster check valve or leaking booster diaphragm can cause this code without any obvious brake performance change.
- The sensor may share a reference voltage circuit with other sensors, so a short in a related circuit can trigger C054B along with other codes.
- Replacing the sensor without checking the wiring harness for chafing or corrosion often leads to a repeat failure.

Can I keep driving with C054B?

If the only symptom is the warning light, the vehicle is generally safe to drive, but avoid heavy braking or towing until the fault is repaired. If you notice a hard brake pedal or reduced engine performance, have the vehicle inspected promptly.

Tools that help

- OBD-II scanner
- Digital multimeter
- Hand vacuum pump with gauge
- Smoke machine
- Wire repair kit

Reading C054B

C	Chassis: brakes, steering and suspension.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
5	Brakes, steering and suspension.
4B	The exact fault within that area.

Often seen with

C054C Vacuum Sensor A Circuit High · **P0171** System Too Lean (Bank 1) · **P0172** System Too Rich (Bank 1)
 · **P0455** EVAP System Leak Detected (Large) · **P0456** Evaporative Emission System Leak Detected (very small leak)



See it working

Watch the animated explainer [How a Fuel Injector Works: Pulse Width and Spray](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/c054b/>

