

GENERIC · CHASSIS

C054C

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

C054C

Vacuum Sensor A Circuit High

C054C indicates that the vehicle's computer has detected an abnormally high voltage signal on the vacuum sensor A circuit, which typically measures intake manifold vacuum or a related vacuum supply. The powertrain control module (PCM) or body control module (BCM) sets this code when the sensor's output voltage exceeds the expected range for the current operating conditions, often indicating an open circuit, short to voltage, or sensor failure.

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, especially if the fault is intermittent
- Rough idle or stumbling if the vacuum reading is used for fuel delivery
- Poor fuel economy or reduced engine performance
- Erratic operation of vacuum-operated accessories such as brake assist or climate control doors
- Possible transmission shift harshness if vacuum is used for shift pressure control

Common causes, most likely first

- 1 Faulty vacuum sensor A (internal short or signal wire shorted to voltage)
- 2 Open or damaged ground circuit at the sensor
- 3 Corroded or loose electrical connector at the sensor
- 4 Damaged wiring harness causing a short to voltage on the signal circuit
- 5 Failed PCM or BCM driver circuit (rare)
- 6 Vacuum leak or disconnected vacuum hose causing the sensor to read out of range (indirect cause)

How to diagnose and fix it

- 1 Verify the code with a scan tool and check freeze-frame data for vacuum sensor voltage
- 2 Inspect the sensor connector and wiring for corrosion, loose pins, or chafing
- 3 Measure reference voltage and ground at the sensor connector with a digital multimeter (DMM)
- 4 Backprobe the signal wire and compare voltage to the scan tool reading to isolate a wiring or sensor fault
- 5 Check for vacuum leaks or disconnected hoses that could cause an out-of-range reading
- 6 Replace the vacuum sensor if wiring and vacuum supply are confirmed good
- 7 Clear the code and perform a road test to confirm the repair, verifying live data returns to normal



What a high vacuum signal really means

- A high voltage on the signal circuit often indicates an open circuit rather than a sensor that is reading too much vacuum, so check continuity before condemning the sensor.
- Some vehicles use the vacuum sensor for brake booster or EVAP system monitoring, so a fault can set without any driveability complaint.
- A short to voltage on the signal wire can be caused by a rubbed harness near hot exhaust components or sharp brackets, which visual inspection may miss.
- The PCM may substitute a default vacuum value when the sensor fails, masking symptoms until the fault becomes hard-failure.
- Aftermarket accessories tapped into the sensor wiring can introduce voltage backfeeds that set this code intermittently.

Can I keep driving with C054C?

The vehicle is generally safe to drive to a repair shop because the fault often affects only emissions or accessory operation, but avoid towing heavy loads or aggressive driving if you notice rough running or poor brake assist. If the check engine light flashes or the engine runs poorly, stop driving and seek service immediately.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter (DMM)
- Vacuum gauge
- Wire piercing probes or backprobe pins
- Service information for connector pinouts and voltage specifications

Reading C054C

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.
4C	The exact fault within that area.

Often seen with

C054D Vacuum Sensor B Circuit/Open · **P0105** MAP/Barometric Pressure Circuit Malfunction · **P0106** MAP/Barometric Pressure Circuit Range/Performance · **P0107** MAP/Barometric Pressure Circuit Low Input · **P0108** MAP/Barometric Pressure Circuit High Input



See it working

Watch the animated explainer [How Crank and Cam Position Sensors Work](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/c054c/>

