

GENERIC · CHASSIS

C0649

OBD-II TROUBLE CODE

C0649

Brake Pressure Sensor M Circuit/Open

C0649 indicates that the antilock braking system (ABS) control module has detected an open circuit in the electrical path for the brake pressure sensor 'M' circuit. This sensor monitors hydraulic brake pressure and reports it to the ABS module, so an open circuit means the module cannot receive a valid pressure signal from that sensor.

SYSTEM

Chassis

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Brakes, steering and suspension

Symptoms you may notice

- ABS warning light illuminated on the dashboard
- Traction control or stability control warning light may also be on
- Often no symptoms besides the warning light
- Reduced or disabled ABS function during hard braking
- Brake pedal may feel slightly different or require more effort in some vehicles
- Intermittent warning light that comes and goes with vibration or temperature changes

Common causes, most likely first

- 1 Broken, chafed, or corroded wire in the brake pressure sensor 'M' circuit
- 2 Loose or corroded electrical connector at the sensor or ABS module
- 3 Failed brake pressure sensor 'M'
- 4 Open circuit inside the ABS control module
- 5 Damaged wiring harness from road debris, rodent damage, or previous repairs
- 6 Poor ground connection shared by the sensor circuit

How to diagnose and fix it

- 1 Scan all modules for codes and record freeze-frame data to confirm C0649 is current and not history
- 2 Visually inspect the sensor connector and wiring for damage, corrosion, or loose pins
- 3 Disconnect the sensor and measure resistance across the sensor terminals to check for an open sensor
- 4 Check continuity of each wire from the sensor connector to the ABS module connector
- 5 Inspect the wiring harness along its routing for chafing, pinches, or rodent damage
- 6 Repair or replace the faulty section of wiring or connector, then clear codes and verify the repair
- 7 If wiring and sensor test good, diagnose the ABS module internal circuit or replace the module as needed



What a brake pressure sensor open circuit really means

- A common misdiagnosis is replacing the brake pressure sensor when the actual open circuit is in the wiring harness near the ABS module connector, so always check continuity end to end before condemning the sensor.
- The code can set intermittently due to a connector that loses contact only under vibration or temperature swings, so a wiggle test of the harness while watching live sensor data often reveals the fault.
- Some vehicles use the brake pressure sensor signal for hill-start assist, stability control, and adaptive cruise functions, so a fault here can disable multiple driver aids even if base braking feels normal.
- Corrosion inside a connector caused by a missing or damaged weather seal is a frequent root cause that visual inspection alone can miss unless the connector is opened and the pins examined closely.
- An open circuit can also be caused by a failed splice or junction point in the harness where multiple sensor grounds or signal wires meet, which is easy to overlook when tracing only the main wires.

Can I keep driving with C0649?

The vehicle remains safe to drive under normal conditions because base hydraulic braking is unaffected, but ABS and stability control may be disabled. Avoid hard braking or emergency maneuvers until the fault is repaired, and have the system diagnosed promptly.

Tools that help

- OBD-II scan tool with ABS module capability
- Digital multimeter
- Wiring diagram for the specific vehicle
- Back probe pins or breakout leads
- Trim removal tools for accessing harness routing

Reading C0649

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

Often seen with

C0035 Left Front Wheel Speed Sensor Circuit Range/Performance · **C0040** Left Rear Wheel Speed Sensor Circuit · **C0050** Right Rear Wheel Speed Sensor Circuit Malfunction · **C0648** Brake Pressure Sensor L Range/Performance · **C0650** Brake Pressure Sensor N Range/Performance



See it working

Watch the animated explainer [How ABS Works: Anti-Lock Brakes in X-Ray](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/c0649/>

