

GENERIC · CHASSIS

C0645

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

C0645

Brake Pressure Sensor L Circuit/Open

C0645 indicates that the anti-lock brake system (ABS) control module has detected an open circuit or excessive resistance in the electrical path for the left brake pressure sensor circuit. The module monitors the sensor's signal and return voltage, and when the expected voltage falls outside the normal range, it stores this code and typically illuminates the ABS warning light.

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, often with no other noticeable symptoms
- Traction control or stability control warning light also on, because these systems share the brake pressure sensor
- Reduced or disabled ABS function, which may only become apparent during hard braking or slippery conditions
- A soft or inconsistent brake pedal feel in some cases, though this is less common with an open circuit
- Intermittent warning light that comes and goes with vibration or temperature changes, indicating a loose connection

Common causes, most likely first

- 1 Broken or chafed wire in the brake pressure sensor circuit, often near the sensor connector or where the harness flexes
- 2 Corroded, loose, or water-intruded electrical connector at the brake pressure sensor
- 3 Failed brake pressure sensor itself, where the internal element opens or the signal output drops out
- 4 Open circuit inside the ABS control module, though this is less common than wiring or sensor faults
- 5 Damaged or improperly installed pigtail harness repair that introduces high resistance
- 6 Blown fuse or poor ground connection shared by the ABS module and sensor circuit



How to diagnose and fix it

- 1 Scan all modules for codes and record freeze-frame data to confirm C0645 is current and not a history code from a previous repair
- 2 Visually inspect the brake pressure sensor connector and harness for corrosion, chafing, or loose pins, and clean or repair as needed
- 3 Measure resistance and voltage on the sensor circuit at the connector and compare with manufacturer specifications to locate an open or high-resistance point
- 4 Perform a wiggle test on the harness while watching live sensor data to catch intermittent opens
- 5 Check the sensor's reference voltage and ground at the module side to rule out a module fault before replacing parts
- 6 Replace the brake pressure sensor if the circuit tests good but the sensor output is out of range, then clear codes and verify the repair
- 7 If the fault persists after sensor and wiring repairs, diagnose the ABS control module for internal open circuits

What most technicians overlook on C0645

- A brake pressure sensor open circuit can set this code without ever affecting normal braking feel, so drivers often ignore it until ABS is needed in an emergency.
- The sensor connector is frequently the real culprit because it sits low on the hydraulic unit where road splash and salt accumulate, causing pin corrosion that mimics a failed sensor.
- Replacing the sensor without first checking circuit resistance at the connector often leads to a repeat code, since the open may be in the harness rather than the sensor.
- Some vehicles use a shared five-volt reference for multiple sensors, so a short or open elsewhere on that reference line can set C0645 along with codes for other sensors.
- A weak battery or charging system fault can cause the ABS module to log this code intermittently, so always verify system voltage before condemning the sensor circuit.

Can I keep driving with C0645?

You can usually drive the vehicle with C0645 stored because normal hydraulic braking remains functional, but the ABS and stability control systems may be disabled. Avoid hard braking or slippery road conditions until the fault is repaired, and treat the warning light as a prompt to schedule diagnosis soon.

Tools that help

- OBD-II scan tool with ABS module capability and live data
- Digital multimeter with back-probing pins
- Wiring diagram for the brake pressure sensor circuit
- Contact cleaner and dielectric grease for connector repair
- Basic hand tools for sensor replacement



Reading C0645

- 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.
- 45** The exact fault within that area.

Often seen with

C0640 Brake Pressure Sensor J Range/Performance · **C0641** Brake Pressure Sensor K Circuit/Open · **C0642** Brake Pressure Sensor K Circuit High · **C0643** Brake Pressure Sensor K Circuit Low · **C0644** Brake Pressure Sensor K 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/c0645/>

