

GENERIC · CHASSIS

**C0584**

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

**C0584**

## Brake Booster Motor B Phase U-V-W Circuit Low

C0584 indicates that the brake booster motor's three-phase inverter has detected a low-voltage condition on one or more of its phase circuits, typically phase U, V, or W. The control module monitors the voltage drop across the motor windings and sets this code when the feedback signal falls below the expected threshold, which can be caused by a short to ground, an open circuit, or a faulty motor winding.

SYSTEM

**Chassis**

CODE TYPE

**Generic (all makes)**

SEVERITY

**High**

FIX DIFFICULTY

**Professional**

AREA

**Brakes, steering and suspension**

### Symptoms you may notice

- Illumination of the brake system warning light and possibly the ABS (Anti-lock Braking System) or traction control light.
- A noticeable reduction in brake assist, requiring increased pedal effort to stop the vehicle.
- The brake pedal may feel hard or unresponsive, especially during the first few presses after startup.
- Audible whining or grinding noises from the brake booster motor area when the brake pedal is applied.
- In some cases, the vehicle may enter a limp mode or disable certain driver-assist features that rely on brake pressure.
- Often no symptoms besides the warning light, as the system may default to a failsafe mode that still provides basic braking.

### Common causes, most likely first

- 1 A damaged or chafed wire in the brake booster motor phase circuit, often due to routing near hot or moving components.
- 2 Corrosion or water intrusion at the brake booster motor electrical connector, leading to increased resistance.
- 3 A short to ground in one of the phase wires, which can be caused by insulation breakdown or pinched harness.
- 4 An open circuit within the motor windings themselves, typically from thermal stress or manufacturing defects.
- 5 A faulty brake booster motor assembly, where the internal inverter or windings have failed.
- 6 A malfunctioning control module that incorrectly interprets a normal signal as low voltage, though this is less common.
- 7 Loose or improperly seated connector pins at the motor or module, causing intermittent low-voltage signals.



## How to diagnose and fix it

- 1 Inspect the brake booster motor harness and connector for obvious damage, corrosion, or loose pins, and clean or repair as needed.
- 2 Measure the resistance of each phase circuit from the control module connector to the motor connector to check for opens or shorts.
- 3 Perform a voltage drop test on the phase circuits under load to identify excessive resistance that may not show up in a simple resistance check.
- 4 Check for continuity to ground on each phase wire with the motor disconnected to rule out a short to ground.
- 5 If the wiring and connectors are intact, test the brake booster motor directly by applying power and ground to the appropriate terminals to verify operation.
- 6 Replace the brake booster motor if it fails the electrical tests or if the windings show abnormal resistance.
- 7 After repairs, clear the code and perform a road test to ensure the brake assist system functions correctly and the code does not return.

## Common Misdiagnosis Traps for C0584

- A low-voltage phase code does not automatically mean the motor is faulty; a simple chafed wire or corroded connector often mimics a failed motor.
- Technicians sometimes replace the brake booster motor only to find the code returns because the control module connector has a backed-out pin that was disturbed during the repair.
- Intermittent low-voltage faults can be caused by vibration or thermal expansion, so a wiggle test of the harness while monitoring live data is essential.
- The code can be set by a weak battery or charging system issue that causes a momentary voltage drop during engine cranking, so always check battery health first.
- Some vehicles use the same phase circuit for both brake assist and regenerative braking, so a fault may also affect hybrid or electric vehicle operation.

## Can I keep driving with C0584?

Driving with C0584 is not recommended because the brake booster motor may not provide adequate assist, significantly increasing stopping distances. If you must drive, proceed directly to a repair facility at low speed and avoid heavy traffic or emergency braking situations.

## Tools that help

- Digital multimeter with resistance and voltage drop capabilities
- OBD-II scan tool capable of reading ABS and brake system codes
- Wiring diagram for the specific vehicle to trace phase circuits
- Back probe pins and jumper wires for testing connectors without damage
- Insulation resistance tester (megohmmeter) for checking winding insulation



## Reading C0584

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

## Often seen with

**C0581** Park Brake Apply Performance · **C0582** Brake Booster Motor A Phase U-V-W Circuit Range/Performance · **C0583** Park Brake Release Performance · **C0585** Brake Booster Motor B Phase U-V-W Circuit High · **C0586** Brake Booster Motor B Phase U-V-W Circuit Range/Performance

## See it working

Watch the animated explainer [Turbocharger Trainer: Boost, Wastegate and Intercooler](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/c0584/>

