

GENERIC · CHASSIS

**C0522**

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

**C0522**

## Multi-axis Acceleration Sensor Module B Missing Calibration

C0522 indicates that the multi-axis acceleration sensor module, which measures vehicle motion in multiple directions for stability and safety systems, has not been calibrated or has lost its calibration data. The computer detects this when the sensor's internal calibration values are missing or invalid, often after battery disconnection, module replacement, or a software glitch.

SYSTEM

**Chassis**

CODE TYPE

**Generic (all makes)**

SEVERITY

**Medium**

FIX DIFFICULTY

**Intermediate**

AREA

**Brakes, steering and suspension**

### Symptoms you may notice

- Illumination of the stability control (ESC/ESP) warning light
- Illumination of the traction control warning light
- Illumination of the ABS warning light in some vehicles
- Reduced or disabled stability and traction control functions
- Often no symptoms besides the warning light
- Possible intermittent warning light operation if calibration is borderline

### Common causes, most likely first

- 1 Battery disconnected or replaced without recalibrating the sensor
- 2 Multi-axis acceleration sensor module replaced without performing calibration
- 3 Loss of calibration memory due to a voltage drop or module power interruption
- 4 Faulty multi-axis acceleration sensor module
- 5 Damaged or corroded wiring or connector at the sensor
- 6 Software or firmware issue in the stability control module requiring reflash
- 7 Improper installation or mounting of the sensor module



## How to diagnose and fix it

- 1 Verify battery voltage and condition; charge or replace if low
- 2 Check for and clear any related low-voltage or communication codes
- 3 Inspect the sensor module connector and wiring for damage or corrosion
- 4 Perform the manufacturer-specified calibration procedure using a scan tool
- 5 If calibration fails, test the sensor module's power, ground, and signal circuits
- 6 Replace the multi-axis acceleration sensor module if faulty, then recalibrate
- 7 Update the stability control module software if a known calibration issue exists

## Calibration is not a replacement cure

- Many technicians replace the multi-axis acceleration sensor only to find the code returns because they skipped the required calibration procedure after installation.
- A weak or failing battery that causes a voltage drop during cranking can erase calibration memory and set C0522 without any sensor fault.
- The multi-axis acceleration sensor is often mounted under the center console or seat, where spilled liquids or loose objects can damage it or its connector.
- C0522 can be set by a communication error between the sensor and the stability control module, so always check for related U-codes before condemning the sensor.
- Some vehicles require calibration to be performed on a level surface with specific fuel and load conditions, and skipping these steps leads to a failed calibration.

## Can I keep driving with C0522?

You can usually drive the vehicle, but stability and traction control systems may be disabled, reducing safety in slippery conditions or emergency maneuvers. Avoid aggressive driving and have the calibration performed as soon as possible.

## Tools that help

- OBD-II scan tool with stability control calibration capability
- Digital multimeter
- Battery charger or power supply
- Vehicle service information for calibration procedures
- Basic hand tools for trim and connector access



## Reading C0522

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

## Often seen with

**C0050** Right Rear Wheel Speed Sensor Circuit Malfunction · **C0521** Multi-axis Acceleration Sensor Module B Range/Performance · **C0523** Multi-axis Acceleration Sensor Module B Intermittent/Erratic · **C0524** Multi-axis Acceleration Sensor Module B Correlation · **U0122** Lost Communication With Vehicle Dynamics Control Module

## See it working

Watch the animated explainer [How a Knock Sensor Works: Spark Timing and Octane](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/c0522/>

