

GENERIC · CHASSIS

C051C

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

C051C

Multi-axis Acceleration Sensor Module A Range/Performance

The C051C code indicates that the multi-axis acceleration sensor module A, which measures vehicle motion in multiple directions, has detected a range or performance error. The computer compares the sensor's output against expected values and other sensor inputs, and it flags this code when the signal falls outside the allowable range or does not behave as expected during self-tests.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Chassis	Generic (all makes)	Medium	Intermediate	Brakes, steering and suspension

Symptoms you may notice

- Illumination of the stability control or traction control warning light
- Often no symptoms besides the warning light
- Reduced or disabled stability control and traction control functions
- Intermittent activation of the electronic stability program (ESP) without cause
- Malfunction indicator lamp (MIL) may also be illuminated if the fault affects emissions-related systems
- Unexpected braking or power reduction in some driving situations

Common causes, most likely first

- 1 Faulty multi-axis acceleration sensor module A
- 2 Damaged or corroded wiring or connector at the sensor
- 3 Poor electrical connection due to loose pins or terminals
- 4 Sensor mounting bracket loose or damaged, causing misalignment
- 5 Water intrusion or contamination in the sensor housing
- 6 Voltage supply or ground circuit issues to the sensor
- 7 Internal failure in the stability control module interpreting sensor data



How to diagnose and fix it

- 1 Inspect the sensor and its wiring for physical damage, corrosion, or loose connections
- 2 Check the sensor mounting for tightness and correct orientation
- 3 Measure reference voltage and ground at the sensor connector with a digital multimeter
- 4 Perform a wiggle test on the harness while monitoring sensor data with a scan tool
- 5 Compare live sensor readings with known good values or a known good sensor if available
- 6 Replace the multi-axis acceleration sensor module A if tests confirm it is faulty
- 7 Clear the code and perform a road test to verify the repair and ensure the code does not return

Common misdiagnosis traps for C051C

- A loose or improperly mounted sensor can set this code even if the sensor itself is functioning correctly, so always verify mounting integrity first.
- Corroded connectors or chafed wires are frequent culprits that mimic sensor failure, and a thorough visual inspection often reveals the true cause.
- The code can be triggered by a low battery or charging system issues that cause voltage spikes or drops, affecting sensor performance.
- After replacing the sensor, some vehicles require a calibration or relearn procedure using a scan tool to avoid recurring codes.
- This code may appear alongside other stability control codes, but addressing the acceleration sensor first can resolve multiple warnings.

Can I keep driving with C051C?

It is generally safe to continue driving with this code, but stability and traction control systems may be disabled, reducing safety in slippery conditions or emergency maneuvers. Avoid aggressive driving and have the fault diagnosed promptly to restore full vehicle safety features.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Wiring diagram for the specific vehicle
- Socket set and trim removal tools
- Sensor calibration tool if required



Reading C051C

- 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.
- 1C** The exact fault within that area.

Often seen with

C051D Multi-axis Acceleration Sensor Module A Missing Calibration · **C051E** Multi-axis Acceleration Sensor Module A Intermittent/Erratic · **C051F** Multi-axis Acceleration Sensor Module A Correlation · **C0520** Brake Pedal Force Sensor Circuit · **C0521** Multi-axis Acceleration Sensor Module B Range/Performance

See it working

Watch the animated explainer [How a Coolant Temperature Sensor Works](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/c051c/>

