

GENERIC · CHASSIS

C05BC

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

C05BC

Brake Booster Motor B Position Sensor Supply Circuit/Open

C05BC indicates that the antilock brake system (ABS) control module has detected an open circuit or supply voltage fault on the reference voltage line feeding the brake booster motor B position sensor. The sensor itself may be intact, but the module cannot confirm a valid supply, so it stores this code and typically disables the brake booster motor assist.

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

Symptoms you may notice

- Illumination of the ABS, traction control, and brake warning lights on the dashboard
- A hard brake pedal with noticeably increased pedal effort, especially during the first few presses
- Reduced or absent brake assist, making the vehicle feel like it has manual brakes
- A stored code in the ABS module that may not trigger any other drivability complaint
- Intermittent warning lights that come and go over bumps or in wet weather
- Often no symptoms besides the warning light if the fault is a soft open in the supply circuit

Common causes, most likely first

- 1 Corroded, loose, or backed-out terminal at the brake booster motor B position sensor connector
- 2 Chafed or broken supply wire between the ABS module and the sensor, often near a flex point or heat source
- 3 Internal open circuit in the brake booster motor B position sensor supply pin or its pigtail
- 4 Water intrusion into the sensor connector or ABS module connector causing corrosion and high resistance
- 5 Failed ABS control module driver circuit for the sensor supply voltage
- 6 Poor ground connection shared by the sensor and ABS module, causing a reference voltage drop



How to diagnose and fix it

- 1 Inspect the brake booster motor B position sensor connector for corrosion, loose pins, and water intrusion, then clean and reseal it
- 2 Measure supply voltage at the sensor connector with the key on and compare it to the specified reference voltage from the service information
- 3 Perform a wiggle test on the harness while watching live sensor data to reveal an intermittent open circuit
- 4 Check continuity and resistance of the supply wire from the ABS module connector to the sensor connector, repairing any chafed or broken section
- 5 Verify the sensor ground circuit has less than one ohm resistance to the ABS module ground point
- 6 Substitute a known-good sensor only after the supply circuit is proven good, then clear codes and confirm the fault does not return
- 7 If the supply circuit and sensor are both good, test the ABS module output and replace the module only as a last step

What the supply circuit code really means

- This code points at the voltage supply to the sensor, not the sensor signal itself, so replacing the sensor first is a common and expensive misdiagnosis.
- A weak or failing battery or charging system can drop reference voltage below the module threshold and set C05BC without any wiring fault at all.
- The same supply circuit often feeds more than one position sensor inside the brake booster motor assembly, so a single open can set companion codes that lead technicians toward the wrong component.
- Corrosion inside the connector is frequently caused by a missing or damaged weather seal, so the repair must restore the seal or the fault will return.
- The ABS module may set this code intermittently and self-clear after several good drive cycles, which can fool a quick scan into thinking the problem is gone.

Can I keep driving with C05BC?

Brake assist may be reduced or absent, so stopping distances increase significantly and the vehicle requires much higher pedal effort. Drive only directly to a repair facility at low speed, and avoid highways or heavy traffic until the fault is repaired.

Tools that help

- OBD-II scan tool with ABS module bidirectional and live data capability
- Digital multimeter with back-probe pins
- Wiring diagram and connector pinout for the brake booster motor circuit
- Terminal pick and contact cleaner
- Breakout box or fused jumper wires for circuit testing



Reading C05BC

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

Often seen with

C0040 Left Rear Wheel Speed Sensor Circuit · **C0051** Front Left ABS Solenoid 1 Circuit Malfunction · **C05BB** Brake Booster Motor A Position Sensor Supply Circuit Range/P · **C05BD** Brake Booster Motor B Position Sensor Supply Circuit Low · **C05BE** Brake Booster Motor B Position Sensor Supply Circuit High

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/c05bc/>

