

GENERIC · CHASSIS

C05AF

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

C05AF

Brake Booster Motor B Current Sensor Circuit Range/Performance

The C05AF code indicates that the brake booster motor's current sensor circuit is reporting a range or performance problem, meaning the antilock brake system (ABS) module sees a current signal that is out of expected bounds during self-test or operation. The computer has detected that the feedback voltage from the current sensor does not correlate with the commanded brake booster motor operation, which can affect brake assist performance.

SYSTEM

Chassis

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Brakes, steering and suspension

Symptoms you may notice

- Illumination of the ABS warning light, brake system warning light, or both on the dashboard
- Often no symptoms besides the warning light, with normal brake pedal feel and function
- Reduced or inconsistent brake assist, requiring more pedal effort during hard stops
- A stored trouble code in the ABS module that may be accompanied by a soft or spongy brake pedal
- Intermittent operation of the brake booster motor, sometimes accompanied by unusual noises from the booster area

Common causes, most likely first

- 1 Faulty brake booster motor current sensor or its internal circuitry
- 2 Damaged, chafed, or corroded wiring in the current sensor circuit (open, short, or high resistance)
- 3 Loose or corroded electrical connector at the brake booster motor or ABS module
- 4 Failed brake booster motor drawing excessive or insufficient current
- 5 Internal fault in the ABS control module affecting current sensor signal processing
- 6 Low battery voltage or poor ground connection causing erratic sensor readings



How to diagnose and fix it

- 1 Verify battery voltage and condition, and check all ground connections related to the ABS system
- 2 Inspect the brake booster motor current sensor connector and wiring for damage, corrosion, or loose pins
- 3 Measure the current sensor signal voltage and compare to manufacturer specifications during a commanded motor test
- 4 Check the brake booster motor for proper operation and current draw using a scan tool with bidirectional controls
- 5 Perform a voltage drop test on the current sensor circuit to identify excessive resistance
- 6 If the sensor signal is out of range, replace the brake booster motor current sensor or the motor assembly as required
- 7 After repairs, clear the code and perform a road test to verify the fix and ensure the code does not return

Current Sensor Circuit Checks Before Parts

- A common oversight is assuming the current sensor itself is faulty when the real problem is a poor ground connection at the brake booster motor, which skews the current reading.
- The code can be set by a weak battery or charging system issue because low voltage during engine cranking can cause the ABS module to misinterpret current sensor signals.
- Technicians often replace the ABS module prematurely when the fault lies in the current sensor wiring harness, especially where it routes near heat sources or moving components.
- Some vehicles require a relearn or calibration procedure after replacing the brake booster motor or sensor, and skipping this step can cause the code to reappear immediately.
- Intermittent C05AF codes are frequently caused by a chafed wire that only shorts when the engine moves under load, so a wiggle test of the harness while monitoring sensor data is essential.

Can I keep driving with C05AF?

The vehicle is generally safe to drive with this code because the conventional braking system remains functional, but brake assist may be reduced in an emergency. Avoid heavy braking or towing until the fault is repaired, and have the system diagnosed promptly to prevent further damage.

Tools that help

- OBD-II scan tool with ABS and bidirectional control capability
- Digital multimeter with voltage and resistance measurement
- Wiring diagram for the brake booster motor current sensor circuit
- Test light or jumper wires for circuit testing
- Socket set and trim removal tools for accessing components



Reading C05AF

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.
AF	The exact fault within that area.

Often seen with

C0040 Left Rear Wheel Speed Sensor Circuit · **C0051** Front Left ABS Solenoid 1 Circuit Malfunction · **C05AE** ABS Pump Motor Calibration Not Learned · **C05B0** Brake Hydraulic Circuit C Leak · **U0121** Lost Communication With Anti-Lock Brake System (ABS) Control

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/c05af/>

