



C05C2

Brake Booster Motor A Over Temperature

The C05C2 code indicates that the brake booster motor, which provides vacuum assist for the brakes, has exceeded its safe operating temperature as detected by the control module. The computer monitors the motor's temperature through a sensor or calculated model and sets this code when the temperature surpasses a calibrated threshold, typically due to excessive or prolonged activation.

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

Symptoms you may notice

- Illumination of the brake system warning light or a generic check engine light
- Often no symptoms besides the warning light, especially if the over-temperature event was brief
- Reduced brake assist, requiring noticeably more pedal effort to stop the vehicle
- A brake pedal that feels unusually hard or firm during application
- In rare cases, a burning smell or visible smoke from the brake booster area after repeated heavy braking
- Intermittent operation of the brake assist, with the pedal feel changing between normal and hard

Common causes, most likely first

- 1 A failing brake booster motor that draws excessive current and overheats under normal load
- 2 A stuck or leaking brake booster check valve, causing the motor to run longer than designed
- 3 A restricted or clogged vacuum supply line to the brake booster, forcing the motor to work harder
- 4 A faulty brake booster temperature sensor providing inaccurate readings to the control module
- 5 Software or calibration issues in the brake control module that misjudge motor temperature
- 6 A short circuit or high resistance in the motor wiring or connector, leading to increased current draw
- 7 Mechanical binding in the brake booster assembly that increases the load on the motor



How to diagnose and fix it

- 1 Perform a visual inspection of the brake booster motor, wiring, and connectors for signs of overheating, corrosion, or damage
- 2 Use a scan tool to check for related codes and freeze-frame data to understand the conditions when the code set
- 3 Test the brake booster motor's current draw and compare to specifications to identify excessive load
- 4 Inspect the vacuum supply line and check valve for leaks or restrictions, replacing as necessary
- 5 Measure the resistance of the brake booster temperature sensor and compare to factory values
- 6 Check for technical service bulletins or software updates for the brake control module that address false over-temperature detection
- 7 If all electrical and vacuum checks pass, replace the brake booster motor assembly as the most likely faulty component

Overheating Brake Booster Motor Diagnosis Tips

- A common cause of this code that technicians overlook is a failing brake booster check valve that allows vacuum to bleed off, causing the motor to run continuously and overheat.
- The code does not always mean the motor is defective; a poor ground connection at the motor can increase resistance and cause excessive heat buildup.
- On some vehicles, the brake control module calculates motor temperature based on current draw and run time, so a software glitch can set a false over-temperature code without any actual overheating.
- Repeated short trips with frequent brake pedal use can trigger this code in vehicles with a marginal booster motor, even though the motor may still function normally under other conditions.
- Always verify the actual motor temperature with an infrared thermometer after a test drive to confirm whether the over-temperature condition is real or sensor-driven.

Can I keep driving with C05C2?

It is generally safe to drive with this code as long as the brake pedal feels normal and you do not notice reduced braking performance. Avoid repeated hard braking or prolonged brake pedal application, and have the system inspected promptly to prevent a potential loss of brake assist.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Vacuum gauge
- Infrared thermometer
- Factory service information for specifications and wiring diagrams



Reading C05C2

- 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.
- C2** The exact fault within that area.

Often seen with

C0040 Left Rear Wheel Speed Sensor Circuit · **C0045** Left Rear Wheel Speed Sensor Circuit Malfunction · **C05C1** Brake Pedal Position Sensor B Not Learned · **C05C3** Brake Booster Motor A Supply Circuit · **P0571** Brake Switch 'A' Circuit

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/c05c2/>

