



## C05AA

# ABS Pump Motor Temperature Too High

The anti-lock braking system (ABS) control module has detected that the electric pump motor, which pressurizes brake fluid during ABS operation, has exceeded its safe temperature threshold. The module monitors motor temperature through internal logic or a dedicated sensor and stores this code when the reading stays too high for too long, often after repeated or prolonged pump activation.

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

## Symptoms you may notice

- ABS warning light illuminated on the dashboard
- Traction control or stability control warning light also on in many vehicles
- Often no symptoms besides the warning light during normal driving
- ABS may be disabled, so the brake pedal feels normal but wheels can lock during hard stops
- Pump motor may run continuously or stay on after the key is turned off in severe cases
- Burning smell or hot brake fluid reservoir area after repeated ABS use

## Common causes, most likely first

- 1 ABS pump motor failing internally and drawing excessive current, which generates heat
- 2 Restricted or contaminated brake fluid causing the pump to work harder than normal
- 3 Sticking ABS solenoid valve that forces the pump to run longer or against higher pressure
- 4 Poor electrical connection or high resistance in the pump motor circuit, leading to overheating
- 5 ABS control module fault that misreads temperature or fails to command the pump correctly
- 6 Air trapped in the ABS hydraulic circuit after recent brake work, causing the pump to cavitate and overheat
- 7 Mechanical binding in the pump motor bearings or brushes creating friction and heat



## How to diagnose and fix it

- 1 Scan all modules for stored and pending codes, and record freeze-frame data for the pump motor temperature and activation history
- 2 Inspect the ABS pump motor connector and wiring for corrosion, loose pins, or heat damage, and measure resistance and voltage drop under load
- 3 Check brake fluid level, condition, and contamination; flush and bleed the ABS system if the fluid is dark or overdue
- 4 Command the ABS pump motor with a scan tool and monitor current draw and temperature rise to confirm whether the motor itself is overheating
- 5 Test each ABS solenoid valve for proper operation and check for sticking or internal leaks that would make the pump run excessively
- 6 If the motor draws excessive current or fails a bench test, replace the ABS pump motor or the complete hydraulic unit as required
- 7 After repair, clear codes, perform an ABS bleed procedure, and road-test the vehicle to verify the code does not return

## What most technicians overlook on C05AA

- A low brake fluid level or air in the system is a common cause of pump motor overheating that many people miss because the pedal still feels normal.
- This code does not always mean the pump motor is bad; a sticking solenoid valve or a failing control module can force the pump to run continuously and overheat.
- After replacing the ABS pump or motor, the new unit often requires a scan-tool bleed procedure, and skipping it can cause the replacement to overheat and set the code again.
- A weak battery or poor ground can cause the pump motor to draw higher current and run hotter, so always check charging system health before condemning the pump.
- Some vehicles store C05AA after extended ABS activation on slippery surfaces, such as repeated snow or off-road use, and the code may be a temporary overheat rather than a hard failure.

## Can I keep driving with C05AA?

Because ABS may be disabled, avoid hard braking and slippery conditions until the fault is repaired, and do not continue driving if the pump motor runs continuously or you smell burning, as this can lead to brake fluid overheating or fire.



## Tools that help

- OBD-II scan tool with ABS and bidirectional control capability
- Digital multimeter with current clamp
- Brake fluid tester and bleed kit
- Infrared thermometer
- Factory service information for ABS bleed and diagnostics

## Reading C05AA

- C** Chassis: brakes, steering and suspension.
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- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
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- 5** Brakes, steering and suspension.
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- AA** The exact fault within that area.

## Often seen with

**C0035** Left Front Wheel Speed Sensor Circuit Range/Performance · **C0040** Left Rear Wheel Speed Sensor Circuit · **C0110** ABS Pump Motor Circuit Malfunction · **C0121** Valve Relay Circuit Malfunction · **C0161** ABS/TCS Brake Switch Circuit

## See it working

Watch the animated explainer [How ABS Works: Anti-Lock Brakes in X-Ray](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/c05aa/>

