

GENERIC · CHASSIS

C052B

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

C052B

ABS Pump Motor Control Range/Performance

C052B indicates that the anti-lock braking system (ABS) control module has detected a problem with the electrical circuit that powers the ABS pump motor, specifically that the motor's current draw or speed is outside the expected range during self-test or activation. The module monitors the pump motor's performance and sets this code when the motor fails to run as commanded or draws abnormal current.

SYSTEM

Chassis

CODE TYPE

Generic (all makes)

SEVERITY

High

FIX DIFFICULTY

Professional

AREA

Brakes, steering and suspension

Symptoms you may notice

- The ABS warning light illuminates on the dashboard and may stay on continuously.
- The traction control system (TCS) or stability control (ESC) warning light may also turn on, as these systems often share the same pump.
- The ABS pump may run continuously or not at all when the key is turned on, which can be heard as an unusual noise or silence.
- During braking, the ABS may not activate, leading to wheel lockup under hard braking.
- In some vehicles, a chime or message may appear indicating a brake system fault.
- Often no symptoms besides the warning light, especially if the pump motor failure is intermittent.

Common causes, most likely first

- 1 Faulty ABS pump motor (worn brushes, seized bearing, or internal electrical failure).
- 2 Damaged or corroded wiring or connectors between the ABS control module and the pump motor.
- 3 Blown fuse or faulty relay that supplies power to the ABS pump motor.
- 4 Poor ground connection for the ABS pump motor circuit.
- 5 Failed ABS control module (internal driver circuit for the pump motor).
- 6 Low battery voltage or charging system issue causing the pump motor to draw excessive current.
- 7 Contamination or debris in the brake fluid causing pump motor strain.



How to diagnose and fix it

- 1 Verify battery voltage and charging system output; a weak battery can cause false pump motor codes.
- 2 Check the ABS pump motor fuse and relay, replacing them if blown or faulty.
- 3 Inspect the wiring harness and connectors at the ABS pump motor and control module for corrosion, damage, or loose pins.
- 4 Perform a resistance test on the pump motor circuit and compare to manufacturer specifications.
- 5 Command the ABS pump motor on with a scan tool and observe current draw and operation; compare to expected values.
- 6 If the motor fails to operate or draws excessive current, replace the ABS pump motor or assembly as required.
- 7 After repairs, clear the code and perform a road test to verify the ABS system operates correctly and the code does not return.

Before you replace the ABS pump motor

- A weak battery or poor ground can mimic a failed ABS pump motor, so always load-test the battery and check ground connections before condemning the pump.
- The ABS pump motor may only run during self-test or ABS activation, so a fault can be intermittent and not present during a static inspection.
- Corroded connectors at the pump motor are a common cause, especially in areas with road salt, and can often be cleaned rather than replacing the motor.
- Some vehicles require programming or coding of a new ABS module or pump motor after replacement, which a general scan tool may not support.
- The code can be set by a pump motor that runs but is slow due to internal wear, so comparing live data to specifications is crucial.

Can I keep driving with C052B?

It is not safe to drive with this code because the ABS may be disabled, increasing stopping distance and risk of wheel lockup during emergency braking. Avoid driving until the fault is repaired, especially in wet or slippery conditions.

Tools that help

- OBD-II scan tool with ABS capabilities
- Digital multimeter
- Battery load tester
- Wiring diagram for the ABS circuit
- Socket set and hand tools



Reading C052B

- 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.
- 2B** 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 · **C052A** Steering Angle Sensor Module Correlation · **C052C** ABS Pump Motor Control Circuit/Open

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/c052b/>

