



C052D

ABS Pump Motor Control Circuit High

The anti-lock braking system (ABS) module has detected an abnormally high voltage on the electrical circuit that powers the ABS pump motor, which is the pump that pressurizes brake fluid during ABS activation. This code is stored when the module sees voltage on the pump motor control circuit that exceeds the expected range, typically because of a short to power, a faulty pump motor, or a wiring problem.

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

Symptoms you may notice

- The ABS warning light is illuminated on the dashboard, and the system may be disabled.
- The traction control and stability control warning lights may also be on, since these systems share the ABS pump.
- The brake pedal may feel different during hard braking, with reduced or no ABS pulsation.
- In some vehicles, the pump motor may run continuously or stay on after the key is turned off, draining the battery.
- Often no symptoms besides the warning light, especially if the high voltage is intermittent.

Common causes, most likely first

- 1 A short to power in the pump motor control circuit, such as a chafed wire touching a positive voltage source.
- 2 A faulty ABS pump motor with internal shorted windings or brushes that cause high current draw and voltage spikes.
- 3 A defective ABS control module with an internal driver circuit failure that incorrectly reports high voltage.
- 4 Corroded or damaged connectors at the pump motor or ABS module, creating high resistance or intermittent shorts.
- 5 A poor ground connection for the pump motor or ABS module, causing voltage to backfeed through the circuit.
- 6 Aftermarket electrical accessories improperly wired into the ABS circuit, introducing voltage where it should not be.



How to diagnose and fix it

- 1 Use a scan tool to retrieve all ABS codes and freeze-frame data, then clear the code and test-drive to see if it returns immediately or intermittently.
- 2 Visually inspect the pump motor harness and connectors for chafing, corrosion, or loose pins, especially near the ABS module and pump.
- 3 Measure voltage on the pump motor control circuit with the key on and engine off; compare to manufacturer specifications to confirm a high-voltage condition.
- 4 Disconnect the pump motor and check for voltage on the control circuit with the module disconnected; if voltage is present, trace the short to power.
- 5 Test the pump motor directly with a fused jumper wire or a scan tool activation test to see if it runs smoothly and draws normal current.
- 6 If the motor and wiring test good, substitute a known-good ABS module or perform a module diagnostic to rule out an internal driver fault.
- 7 Repair the shorted wire, replace the pump motor, or replace the ABS module as needed, then clear codes and verify the repair with a road test.

What most technicians overlook on C052D

- A shorted ABS pump motor can backfeed voltage into the control circuit and set this code even when the module and wiring are fine, so always test the motor separately.
- Intermittent high voltage often comes from a wire harness rubbing against a metal edge near the ABS pump, which only shorts when the suspension flexes or the engine moves.
- Some vehicles set C052D when the battery is weak or the charging system overcharges, because the module sees system voltage spikes as a high control circuit signal.
- A poor ground at the pump motor can cause the module to see high voltage on the control circuit due to a voltage drop across the ground path, mimicking a short to power.
- Replacing the ABS module without checking the pump motor and wiring is a common misdiagnosis that leads to repeat failures and unnecessary expense.

Can I keep driving with C052D?

The ABS and stability control systems are likely disabled, which increases stopping distance in emergency braking and reduces vehicle control on slippery surfaces. You can drive cautiously to a repair shop, but avoid hard braking, towing, or driving in wet or icy conditions until the fault is fixed.



Tools that help

- OBD-II scan tool with ABS capabilities
- Digital multimeter
- Fused jumper wire
- Wire piercing probes
- Manufacturer service information for wiring diagrams

Reading C052D

- 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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- 2D** 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 · **C052C** ABS Pump Motor Control Circuit/Open · **C052E** ABS Pump Motor Control Circuit Low

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/c052d/>

