

GENERIC · CHASSIS

C05A7

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

C05A7

ABS Pump Motor Supply Voltage B Circuit Low

This code indicates that the anti-lock brake (ABS) control module has detected an abnormally low voltage on the electrical circuit that supplies power to the ABS pump motor, specifically on the 'B' circuit if the system uses redundant feeds. The module monitors the voltage on this supply line and sets the code when the signal falls below the expected threshold, which can prevent the pump from running during an ABS event.

SYSTEM

Chassis

CODE TYPE

Generic (all makes)

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Brakes, steering and suspension

Symptoms you may notice

- The ABS warning light illuminates on the dashboard, often accompanied by the traction control light if equipped.
- The ABS system may be disabled, meaning the wheels can lock during hard braking, though normal braking usually remains functional.
- A stored code C05A7 is present when scanning the ABS module, often with no other noticeable driving symptoms.
- In some cases, the pump motor may run continuously or not at all, leading to a whining noise or a lack of ABS operation.
- If the low voltage is severe, the module may also set related codes for pump motor performance or power supply.

Common causes, most likely first

- 1 A weak or failing vehicle battery or charging system, causing overall low system voltage that affects the ABS pump circuit.
- 2 Corroded, loose, or damaged wiring or connectors on the ABS pump motor supply circuit, particularly the ground or power feed.
- 3 A blown fuse or faulty relay that supplies power to the ABS pump motor, leading to low voltage on the B circuit.
- 4 High resistance in the pump motor itself, drawing excessive current and causing a voltage drop on the supply line.
- 5 A fault within the ABS control module, such as a defective internal driver or voltage sensing circuit, falsely detecting low voltage.
- 6 Poor ground connection for the ABS pump motor or module, causing a voltage drop under load.



How to diagnose and fix it

- 1 Perform a thorough visual inspection of the ABS pump motor wiring, connectors, and grounds for corrosion, looseness, or damage.
- 2 Check the battery voltage and charging system output to ensure the electrical system is operating within specifications.
- 3 Test the fuse and relay that supply power to the ABS pump motor, replacing any that are faulty.
- 4 Measure voltage at the pump motor connector while the pump is commanded on with a scan tool, comparing to the module's voltage reading.
- 5 Perform a voltage drop test on both the power and ground circuits to the pump motor to identify excessive resistance.
- 6 If voltage is low only at the pump, suspect the pump motor or module; bench-test or replace as needed following manufacturer procedures.
- 7 Clear the code and verify the repair by commanding the pump motor with a scan tool and confirming the code does not return.

Don't overlook the simple power supply

- A weak battery or failing alternator is a frequent root cause of this code, as the ABS module is sensitive to system voltage drops during cranking or heavy electrical loads.
- The 'B' circuit designation often refers to a secondary power feed; technicians who only check the main pump supply may miss a fault on the redundant circuit.
- Corrosion inside a connector can cause a voltage drop that only appears under the high current draw of the pump motor, so a static voltage check may pass while the circuit fails under load.
- Some vehicles set this code intermittently due to a poor ground connection that only acts up when the vehicle is driven over bumps or in wet conditions.
- Replacing the ABS module without first verifying the pump motor's current draw can lead to a repeat failure if the motor is drawing excessive current.

Can I keep driving with C05A7?

You can generally continue driving with this code because normal braking remains functional, but the ABS system may be disabled, so avoid hard braking or slippery conditions where wheel lock could occur. Have the fault diagnosed promptly to restore full safety system operation.

Tools that help

- OBD-II scan tool with ABS module capability
- Digital multimeter with voltage drop testing function
- Wiring diagram for the ABS system
- Basic hand tools for connector and fuse access
- Test light or load tester for circuit verification



Reading C05A7

- 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.
- A7** 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 · **C05A6** ABS Pump Motor Supply Voltage B Circuit High · **C05A8** ABS Pump Motor Supply Voltage B Circuit Range/Performance

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/c05a7/>

