

GENERIC · CHASSIS

C05A6

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

C05A6

ABS Pump Motor Supply Voltage B Circuit High

C05A6 means the antilock braking system (ABS) control module has detected that the supply voltage on the pump motor's B circuit is higher than the expected range, typically near or above battery voltage when the pump should be off or at a controlled level. The module stores this code when the voltage on that dedicated feed circuit exceeds its calibrated threshold, indicating a short to voltage, a faulty pump motor, or a wiring problem rather than a normal low-voltage condition.

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 steadily on the dashboard, often accompanied by the traction control and stability control lights.
- The ABS system may be disabled, so the wheels can lock during hard braking and the pedal may feel different or pulse abnormally.
- Often no symptoms besides the warning light, especially if the overvoltage condition is intermittent or only occurs under specific electrical loads.
- In some vehicles, the cruise control or hill-start assist may stop working because those functions rely on ABS wheel-speed data.
- A faint electrical burning smell or a warm ABS pump motor area may be noticed if the pump motor is internally shorted and running when it should not be.
- The battery may drain overnight or the ABS fuse may blow repeatedly if the high voltage is caused by a short to power on the pump circuit.



Common causes, most likely first

- 1 A short to voltage on the pump motor B circuit wiring, often where the harness rubs against a metal bracket or passes near a high-current conductor.
- 2 A faulty ABS pump motor with an internal short that backfeeds voltage onto the B circuit even when the module commands the motor off.
- 3 A defective ABS control module with a failed internal driver or voltage-sensing circuit that incorrectly reports high voltage on the B circuit.
- 4 Corroded or damaged connector pins at the ABS pump motor or control module that create a high-resistance path and voltage reflections.
- 5 A poor ground connection for the ABS pump motor or module, which can cause the module to see an elevated voltage on the B circuit relative to its ground reference.
- 6 An overcharging alternator or a battery with an intermittent high-voltage condition that raises the entire electrical system above normal, though this usually sets multiple codes.
- 7 Aftermarket electrical accessories improperly tapped into the ABS pump circuit, injecting voltage when the pump should be isolated.

How to diagnose and fix it

- 1 Verify the battery and charging system are healthy by checking battery voltage at rest and with the engine running, and load-test the battery if it is more than a few years old.
- 2 Inspect the ABS pump motor harness and connector for chafed wires, corrosion, or loose pins, paying close attention to areas near sharp edges and heat sources.
- 3 With the key on and the pump commanded off, measure voltage on the pump motor B circuit at the module connector and compare it to battery voltage to confirm the overvoltage condition.
- 4 Disconnect the pump motor and recheck the B circuit voltage at the module; if the high voltage disappears, the pump motor is the likely source of the short.
- 5 Check the ground circuit for the ABS pump motor and control module using a voltage drop test while cranking or operating the pump, repairing any high-resistance ground.
- 6 If wiring and grounds are good, substitute a known-good ABS pump motor or control module as a test, following the manufacturer's diagnostic procedure for the specific vehicle.
- 7 Clear the code and perform a road test with ABS activation to confirm the repair, then verify no related codes return after a full drive cycle.



What the B circuit voltage really tells you

- A high voltage reading on the pump motor B circuit does not automatically mean the pump motor is bad; a shorted harness or a bad ground can make the module see high voltage on a circuit that is otherwise intact.
- Many technicians replace the ABS pump motor only to find the code returns because the real problem is a corroded ground strap that raises the module's reference voltage and skews its voltage sensing.
- This code can be set by a momentary voltage spike from a failing alternator or a jump-start, so always check for a stored history of overvoltage codes in other modules before condemning ABS parts.
- The pump motor B circuit is often a dedicated feed that is only powered during ABS operation, so a short to voltage on that wire may not show up until the module runs a self-test or the pump is commanded on.
- On some vehicles, the ABS module shares a ground with the body control module, and a poor body ground can cause this code along with unrelated electrical gremlins like flickering lights or false door-ajar warnings.

Can I keep driving with C05A6?

Because the ABS may be disabled and the pump motor circuit has a high-voltage fault that could overheat wiring or drain the battery, limit driving to a short distance to a repair shop and avoid heavy braking or slippery conditions. Do not continue driving if the warning light is accompanied by a burning smell or repeated fuse blowing.

Tools that help

- Digital multimeter with min/max and voltage drop capability
- OBD-II scan tool with ABS module access and live data
- Wiring diagram and connector pinout for the specific vehicle
- Test light or load probe for circuit testing
- Basic hand tools and terminal removal tools
- Battery load tester and charging system analyzer

Reading C05A6

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.
A6	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 · **C05A5** ABS Pump Motor Supply Voltage B Circuit/Open · **C05A7** ABS Pump Motor Supply Voltage B 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/c05a6/>

