

GENERIC · CHASSIS

C0020

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

## C0020

### ABS Pump Motor Circuit

C0020 indicates that the anti-lock braking system (ABS) control module has detected a fault in the electrical circuit for the ABS pump motor, which is the electric motor that pressurizes brake fluid during ABS activation. The module monitors the motor's power and ground circuits and sets this code when it sees an unexpected voltage, current draw, or open/short condition.

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

### Symptoms you may notice

- Illumination of the ABS warning light on the dashboard
- Often no symptoms besides the warning light, with normal braking performance
- ABS may be disabled, leading to wheel lockup during hard braking
- Traction control or stability control systems may also be disabled
- In some cases, a whirring or clicking noise from the ABS pump motor area when the key is turned on
- Brake pedal may feel different or pulsate unexpectedly if the motor runs erratically

### 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 at the ABS pump motor
- 3 Blown fuse or faulty relay supplying 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 motor)
- 6 Brake fluid leaks or low fluid level causing the pump to run dry and overheat

### How to diagnose and fix it

- 1 Check the ABS fuse and relay, and replace if blown or faulty
- 2 Inspect the wiring harness and connectors at the ABS pump motor for damage, corrosion, or loose pins
- 3 Measure resistance and voltage drop across the motor circuit to identify open or high-resistance connections
- 4 Test the ABS pump motor directly with power and ground to verify operation
- 5 Check brake fluid level and inspect for leaks that could cause pump motor strain
- 6 If the motor is faulty, replace the ABS pump motor or assembly as required
- 7 Clear the code and perform a road test to verify the repair and ensure the ABS light stays off



## Before you replace the ABS pump motor

- A weak or failing battery or charging system can cause low voltage that triggers C0020 without any fault in the ABS pump motor itself.
- Corroded ground connections, especially at the chassis or engine block, are a frequent cause of this code that is often overlooked.
- The ABS pump motor may test fine statically but fail under load; a voltage drop test while operating the motor is more reliable than a simple resistance check.
- Some vehicles set C0020 when the ABS module loses communication with the pump motor, which can be caused by a faulty module rather than the motor.
- After replacing the ABS pump motor, some vehicles require a scan tool to perform a calibration or bleed procedure for the ABS system.

## Can I keep driving with C0020?

It is generally safe to drive with C0020 as long as the brake pedal feels normal and the ABS light is the only warning, but remember that ABS may be disabled, so avoid hard braking or slippery conditions. Have the fault diagnosed soon to restore full braking safety.

## Tools that help

- OBD-II scan tool with ABS capability
- Digital multimeter
- Test light
- Socket set and wrenches
- Brake fluid and bleeder kit

## Reading C0020

- C** Chassis: brakes, steering and suspension.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 0** Brakes, steering and suspension.
- 20** 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 · **C0050** Right Rear Wheel Speed Sensor Circuit Malfunction · **C0110** ABS Pump Motor Circuit Malfunction · **C0121** Valve Relay Circuit Malfunction



### 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/c0020/>

