

GENERIC · CHASSIS

C0111

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

C0111

ABS Activation Excessively Long

C0111 means the antilock braking system (ABS) control module commanded the hydraulic pump or valve for longer than the software considers normal during a single activation event. The module monitors how long it keeps the pump running or a valve energized and sets this code when that activation exceeds its calibrated time limit, usually because a wheel is not responding as expected or a hydraulic component is sluggish.

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

Symptoms you may notice

- ABS warning light illuminated on the dashboard, often with no other noticeable change in braking feel
- Often no symptoms besides the warning light, especially if the excessive activation happened briefly and has not recurred
- A pulsing or grinding noise from the ABS hydraulic unit that lasts longer than usual when braking on slippery surfaces
- Brake pedal that feels unusually firm, spongy, or vibrates for an extended period during ABS engagement
- ABS activates on dry pavement during ordinary braking, or stays active after the vehicle has stopped
- Traction control or stability control warning light also illuminated on vehicles that share the ABS wheel speed sensors

Common causes, most likely first

- 1 A dirty, damaged, or improperly installed wheel speed sensor causing erratic or missing wheel speed signals
- 2 A wheel speed sensor ring or tone wheel that is cracked, corroded, or has debris stuck to its teeth
- 3 Air trapped in the ABS hydraulic unit or brake lines after recent brake service, causing slow pressure response
- 4 A sticking or contaminated ABS hydraulic valve or pump, often from old or degraded brake fluid
- 5 Wiring damage, corrosion, or a poor ground in the wheel speed sensor circuit or ABS module harness
- 6 A failing ABS control module that misinterprets activation timing or has internal driver faults
- 7 Low brake fluid or a restricted brake line that makes the ABS work harder to build and release pressure



How to diagnose and fix it

- 1 Scan all modules and record freeze-frame data for C0111, then check for related wheel speed sensor or ABS codes before touching any parts
- 2 Inspect each wheel speed sensor and tone ring for damage, debris, corrosion, and correct air gap, and compare live wheel speed readings while driving
- 3 Check brake fluid level and condition, and verify there are no leaks or restricted flex hoses at each corner
- 4 Bleed the brake system properly, including the ABS hydraulic unit using a scan tool with an automated bleed function if available
- 5 Perform resistance and voltage-drop tests on the wheel speed sensor circuits and ABS module grounds, repairing any damaged wiring or connectors
- 6 If hydraulic response is still slow, test or replace the ABS hydraulic unit or control module only after confirming the sensors and wiring are sound
- 7 Clear the code, road-test the vehicle on a safe surface to trigger ABS, and verify the code does not return before releasing the vehicle

Why C0111 is often a sensor problem

- A wheel speed sensor that drops out for a fraction of a second can make the ABS module hold activation longer than normal, setting C0111 without ever storing a sensor-specific code.
- Rust or debris buildup on the tone ring changes the air gap and signal quality, which is a common cause on older vehicles that see winter road salt.
- Air in the ABS hydraulic unit after a routine brake job is frequently overlooked because the pedal may feel acceptable, yet the pump runs longer and trips this code.
- C0111 does not automatically mean the ABS module is bad; technicians who replace the module first often find the same code returns because the real fault is a sensor or wiring issue.
- A weak battery or charging system voltage drop can cause the ABS module to log timing-related codes, so check battery and ground condition before condemning hydraulic parts.

Can I keep driving with C0111?

The vehicle remains driveable with normal braking in most cases, but ABS may not function correctly in an emergency stop, so keep speeds moderate and avoid slippery or loose surfaces until the fault is repaired. Do not ignore the warning light, because a prolonged ABS activation can also overheat the hydraulic unit and reduce braking performance.



Tools that help

- OBD-II scan tool with ABS and live wheel speed data capability
- Digital multimeter for circuit and sensor testing
- Brake bleeder kit or scan tool with automated ABS bleed function
- Feeler gauges for checking wheel speed sensor air gap
- Basic hand tools for wheel and sensor removal

Reading C0111

- 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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- 1** Brakes, steering and suspension.
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- 11** 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/c0111/>

