

GENERIC · CHASSIS

C0238

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

C0238

Speed Wheel-to-Wheel Mismatch

C0238 means the anti-lock brake system (ABS) module has detected a mismatch in the wheel speed signals reported by two or more wheel speed sensors. The module compares the speeds of all four wheels and flags this code when one wheel's reported speed differs from the others by more than the programmed tolerance for a set period of time.

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
- Traction control or stability control warning light also on
- Often no symptoms besides the warning light
- Momentary wheel lockup or ABS activation at low speeds
- Reduced or disabled ABS and traction control functions
- Slight pulling or uneven braking feel in some cases

Common causes, most likely first

- 1 Contaminated or damaged wheel speed sensor tone ring (reluctor ring)
- 2 Faulty wheel speed sensor or damaged sensor wiring/connector
- 3 Excessive wheel bearing play or hub runout affecting sensor signal
- 4 Mismatched tire sizes or uneven tire wear between wheels
- 5 Debris or corrosion between the sensor and tone ring
- 6 ABS module internal fault or software issue
- 7 Low tire pressure on one wheel altering rolling circumference

How to diagnose and fix it

- 1 Inspect all four tires for size, wear, and pressure; correct any mismatch
- 2 Scan all modules for stored codes and view live wheel speed data on a test drive
- 3 Visually inspect each wheel speed sensor, connector, and tone ring for damage or debris
- 4 Clean or replace a damaged tone ring or sensor as indicated by the data
- 5 Check wheel bearings for play and hub runout with a dial indicator
- 6 Repair or replace damaged sensor wiring and clear codes
- 7 If all else checks out, diagnose the ABS module or perform software update/replacement



Wheel speed mismatch traps to avoid

- A mismatched tire size or severely uneven wear is one of the most common causes and is often overlooked because the sensors themselves test fine.
- Debris stuck to a tone ring can mimic a failing sensor, so clean the ring before condemning any part.
- Wheel bearing play can alter the air gap and produce a mismatch without any noise, so always check bearing condition.
- This code does not always mean a sensor is bad; the ABS module itself can set it if internal processing is faulty.
- After any repair, a test drive with live wheel speed data is essential to confirm the mismatch is gone before returning the vehicle.

Can I keep driving with C0238?

The vehicle remains driveable, but ABS and traction control may be disabled, increasing stopping distance in slippery conditions. Avoid hard braking or driving on wet or icy roads until the fault is repaired.

Tools that help

- OBD-II scan tool with ABS live data capability
- Digital multimeter
- Jack and jack stands
- Tire pressure gauge and tread depth gauge
- Dial indicator for hub runout
- Basic hand tools

Reading C0238

C	Chassis: brakes, steering and suspension.
0	Generic (SAE) code: it means the same thing on every OBD-II vehicle.
2	Brakes, steering and suspension.
38	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 · **P0500** Vehicle Speed Sensor 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/c0238/>

