

GENERIC · CHASSIS

C0080

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

C0080

Wheel Speed Mismatch (Front Axle)

C0080 indicates that the anti-lock brake system (ABS) control module has detected a mismatch in wheel speed signals between the two front wheels while the vehicle is moving. The module compares the signals from the front left and front right wheel speed sensors and sets this code when the difference exceeds a calibrated threshold for a given period, suggesting one wheel is reporting a speed that does not agree with the other.

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

Symptoms you may notice

- Anti-lock brake system (ABS) warning light illuminated on the dashboard
- Traction control or stability control warning light may also be on
- Often no symptoms besides the warning light, with normal braking performance
- ABS may deactivate, leading to wheel lockup during hard braking
- Possible pulling or uneven braking feel if one front wheel speed signal is erratic
- Cruise control may become inoperative on some vehicles

Common causes, most likely first

- 1 Contaminated or damaged front wheel speed sensor (dirt, metal debris, or physical damage)
- 2 Wiring fault in the front wheel speed sensor circuit (open, short, or chafed harness)
- 3 Damaged or corroded wheel speed sensor connector
- 4 Debris or corrosion on the wheel speed sensor tone ring (reluctor ring)
- 5 Excessive wheel bearing play or a failing wheel hub assembly causing an erratic signal
- 6 Mismatched tire sizes or severely unequal tire wear between the front wheels
- 7 Faulty ABS control module (less common)



How to diagnose and fix it

- 1 Inspect both front tires for size, wear, and pressure differences and correct as needed
- 2 Visually inspect the front wheel speed sensors, connectors, and tone rings for damage or debris, and clean or replace as required
- 3 Use a scan tool to read live wheel speed data from both front sensors while driving to identify which signal is erratic or missing
- 4 Check the resistance and continuity of the front wheel speed sensor circuits and repair any wiring faults
- 5 Perform a wheel bearing play check and replace the hub assembly if excessive play is found
- 6 Clear the code and road test to verify the repair; if the code returns, perform a pinpoint test per the manufacturer's procedure
- 7 If all sensor and wiring checks pass, diagnose or replace the ABS control module as a last resort

What Most Techs Miss on C0080

- A mismatched tire size or uneven wear between the front wheels can set C0080 even when both sensors are functioning correctly, so always verify tire condition before replacing parts.
- Debris stuck to the tone ring or sensor face is a frequent cause that is often overlooked during a quick visual inspection, especially after driving on gravel or muddy roads.
- The code does not always mean a sensor has failed; a loose wheel bearing can produce an erratic signal that mimics a bad sensor, so check bearing play before condemning the sensor.
- On some vehicles, a weak battery or low charging voltage can cause the ABS module to log false wheel speed mismatches, so check the charging system if the code appears intermittently.
- After replacing a wheel speed sensor or hub, the ABS module may need a calibration or learn procedure on certain models, and skipping it can cause the code to return.

Can I keep driving with C0080?

The vehicle remains safe to drive under normal conditions because base braking is unaffected, but the ABS and traction control systems may be disabled, so avoid hard braking or slippery surfaces until the fault is repaired. Do not ignore the warning light, as loss of ABS can increase stopping distance in an emergency.

Tools that help

- OBD-II scan tool with live wheel speed data capability
- Digital multimeter
- Jack and jack stands or a lift
- Tire tread depth gauge and pressure gauge
- Basic hand tools (sockets, wrenches, screwdrivers)



Reading C0080

- 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.
- 80** 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/c0080/>

