

GM · POWERTRAIN

P1393

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1393 · GM

Wheel Speed Sensor 1 G-Sensor Circuit High Voltage

P1393 on a GM vehicle means the body control module or electronic brake control module has detected an abnormally high voltage signal on the wheel speed sensor circuit that also incorporates the G-sensor (acceleration sensor) input, indicating an open circuit, short to voltage, or sensor fault. The computer expects a fluctuating low-voltage signal as the wheel rotates and the vehicle moves, but instead sees a signal stuck above the normal threshold, so it sets this code and may disable antilock braking and stability control functions.

SYSTEM

Powertrain

CODE TYPE

GM specific

SEVERITY

Medium

FIX DIFFICULTY

Intermediate

AREA

Ignition system and misfire

Symptoms you may notice

- Antilock brake system (ABS) warning light illuminated on the dashboard
- Traction control or stability control warning light on, often accompanied by a message in the driver information center
- ABS and stability control systems temporarily disabled, which may be felt as a lack of pedal pulsation during hard braking
- Speedometer or odometer erratic or inoperative if the affected sensor also feeds the speed signal
- Often no symptoms besides the warning light, with normal braking performance in everyday driving

Common causes, most likely first

- 1 Damaged or corroded wheel speed sensor wiring harness, especially at the connector or where the harness flexes near the wheel
- 2 Faulty wheel speed sensor itself, with an internal open circuit or short that drives the signal voltage high
- 3 Contaminated or damaged sensor tone ring or reluctor wheel, causing an irregular signal the module interprets as high voltage
- 4 Water intrusion or corrosion in the sensor connector or module connector, creating a high-resistance path
- 5 Failed electronic brake control module (EBCM) or body control module (BCM), though this is less common than wiring or sensor faults
- 6 Aftermarket or incorrect sensor installed previously, with resistance or output characteristics outside GM specifications



How to diagnose and fix it

- 1 Inspect the wheel speed sensor harness and connector at the affected wheel for chafing, corrosion, or loose pins, and repair as needed
- 2 Measure the sensor resistance with a digital multimeter and compare to GM specifications for the vehicle, replacing the sensor if out of range
- 3 Check for a short to voltage on the signal circuit by backprobing the connector with the key on and observing the voltage with the sensor disconnected
- 4 Clean or replace the tone ring or reluctor wheel if it is rusted, cracked, or contaminated with metallic debris
- 5 Clear the code and perform a road test while monitoring live wheel speed data on a scan tool to confirm all four sensors read consistently
- 6 If the signal remains high with a known-good sensor and wiring, test the EBCM or BCM inputs and replace the module only after all other causes are ruled out
- 7 Verify the repair by clearing codes, completing a stability control system relearn if required, and confirming no warning lights return after several drive cycles

Why this code often misleads on GM trucks

- A common miss is replacing the wheel speed sensor when the real fault is a corroded connector pin or a harness rubbed through near the wheel well, so always inspect the wiring before condemning the sensor.
- On some GM vehicles, this code can be set by a weak or failing battery or charging system that causes the module to see erratic voltage, so check battery and ground connections before deeper diagnostics.
- The G-sensor portion of this circuit is sometimes shared with the yaw rate sensor on vehicles with stability control, and a fault there can trigger P1393 even when the wheel speed sensors themselves test fine.
- After replacing a sensor or module, some GM models require a steering angle sensor and yaw rate sensor relearn procedure, and skipping it can cause the code to return immediately.
- A dirty or damaged tone ring on the axle or hub can produce a signal that looks like high voltage on a scan tool, so visual inspection of the ring is as important as electrical testing.

Can I keep driving with P1393?

You can usually drive the vehicle with this code because normal braking remains functional, but antilock braking and stability control are disabled, so avoid hard braking, slippery surfaces, and towing until the fault is repaired. If the brake pedal feels abnormal or the warning light is accompanied by a red brake light, stop driving and have the vehicle inspected immediately.



Tools that help

- Digital multimeter with backprobing pins
- OBD-II scan tool with live wheel speed and ABS data capability
- Jack and jack stands or a lift for wheel-end inspection
- Wiring diagram for the specific GM vehicle and circuit
- Basic hand tools for connector and sensor removal

Reading P1393

P Powertrain: engine, transmission and emissions.

1 Manufacturer-specific code (GM): its meaning depends on the make.

3 Ignition system and misfire.

93 The exact fault within that area.

Often seen with

P1394 Ignition Coil Power Output Stage 2 Malfunction · **P1394** Wheel Speed Sensor 1 G-Sensor Circuit Intermittent · **P1394** Glow Plug Circuit High Input Bank 2 · **P1394** Wheel Speed Sensor 1, G-Sensor Circuit Intermittent · **C0035** Left Front Wheel Speed Sensor Circuit Range/Performance · **C0040** Left Rear Wheel Speed Sensor Circuit · **C0050** Right Rear Wheel Speed Sensor 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/gm-p1393/>

