



P212A

Throttle Position Sensor/Switch G Circuit

P212A indicates that the engine control module has detected an abnormal signal from the throttle position sensor or switch circuit designated as 'G', which is part of the accelerator pedal position sensing system on many vehicles. The computer compares this signal with other throttle position inputs and sets the code when the voltages do not correlate within the expected range.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Medium	Intermediate	Fuel and air metering

Symptoms you may notice

- The check engine light or electronic throttle control warning light illuminates on the dashboard.
- The engine may enter limp mode, limiting power and vehicle speed.
- Poor accelerator response or a delay when pressing the pedal.
- Rough idle or stalling when coming to a stop.
- Often no symptoms besides the warning light, especially if the fault is intermittent.

Common causes, most likely first

- 1 Faulty throttle position sensor or accelerator pedal position sensor G.
- 2 Wiring damage such as chafed, corroded, or broken wires in the sensor circuit.
- 3 Loose or corroded electrical connector at the sensor or throttle body.
- 4 Failed or sticking electronic throttle body actuator.
- 5 Engine control module software issue or internal fault.
- 6 Poor ground connection for the sensor or throttle body.



How to diagnose and fix it

- 1 Use an OBD-II scanner to read all stored codes and freeze-frame data, then visually inspect the sensor and throttle body connectors for corrosion or damage.
- 2 Check the sensor's reference voltage and ground circuits with a multimeter, comparing readings to manufacturer specifications.
- 3 Perform a wiggle test on the wiring harness while monitoring live data to identify intermittent faults.
- 4 Clean the throttle body and perform a throttle relearn procedure if the sensor is dirty or the throttle plate is carboned up.
- 5 Replace the throttle position sensor or accelerator pedal assembly if resistance or voltage readings are out of spec.
- 6 Repair or replace damaged wiring and connectors, then clear codes and verify the repair with a test drive.
- 7 If the fault persists, reprogram or replace the engine control module as a last resort.

Don't overlook the pedal sensor on P212A

- Many technicians replace the throttle body first, but on a significant number of vehicles the 'G' circuit refers to a redundant sensor inside the accelerator pedal assembly, not the throttle body itself.
- A dirty throttle body can cause the sensor voltages to fall outside the expected correlation range, setting P212A even though the sensor is electrically healthy.
- Intermittent P212A codes are often caused by a poor ground connection that only acts up under vibration or temperature changes, so a static multimeter test may pass.
- Some vehicles require a relearn or calibration procedure after any sensor or throttle body service, and skipping it will cause the code to return immediately.
- P212A can be set by a low battery or charging system fault that causes voltage spikes, so always check battery health and charging voltage before condemning sensors.

Can I keep driving with P212A?

You can usually drive the vehicle to a repair shop, but expect reduced engine power and avoid highways or situations where sudden acceleration is needed. If the vehicle enters limp mode or stalls repeatedly, stop driving and arrange a tow.

Tools that help

- OBD-II scanner with live data capability
- Digital multimeter
- Wire probe set
- Throttle body cleaner
- Basic hand tools (screwdrivers, socket set)



Reading P212A

- P** Powertrain: engine, transmission and emissions.
- 2** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 1** Fuel and air metering.
- 2A** The exact fault within that area.

Often seen with

P2120 Throttle/Pedal Position Sensor/Switch 'D' Circuit · **P2122** Accelerator Pedal Position Sensor D Circuit Low
 · **P2123** Accelerator Pedal Position Sensor D Circuit High · **P2125** Throttle/Pedal Position Sensor/Switch 'E' Circuit
 · **P2138** Throttle/Pedal Position Sensor D/E Voltage Correlation

See it working

Watch the animated explainer [How Hydraulic Brakes Work: Pedal to Caliper](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p212a/>

