

GENERIC · POWERTRAIN

P2120

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P2120

Throttle/Pedal Position Sensor/Switch 'D' Circuit

P2120 indicates that the engine control module (ECM) has detected an abnormal signal from the throttle or pedal position sensor circuit designated as 'D'. This sensor is typically part of a redundant pair that reports the driver's accelerator pedal input, and the ECM sets this code when the voltage on the 'D' circuit falls outside the expected range or does not correlate with the other sensor signals.

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

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms
- Reduced engine power or limp mode, limiting acceleration
- Hesitation or stumble when pressing the accelerator pedal
- Unresponsive or delayed throttle response
- In some cases, the engine may idle erratically or stall

Common causes, most likely first

- 1 Faulty accelerator pedal position sensor (APPS) assembly
- 2 Damaged or corroded wiring in the sensor 'D' circuit
- 3 Loose or poor electrical connection at the sensor or ECM
- 4 Failed ECM (less common)
- 5 Water intrusion or contamination in the connector
- 6 Aftermarket or improperly installed electronic throttle control components



How to diagnose and fix it

- 1 Inspect the accelerator pedal sensor connector for corrosion, looseness, or water intrusion and clean or repair as needed
- 2 Check the wiring harness for chafing, breaks, or short circuits between the sensor and the ECM
- 3 Measure the sensor 'D' signal voltage with a scan tool or multimeter and compare to manufacturer specifications
- 4 Perform a throttle relearn or calibration procedure if the sensor has been replaced or disconnected
- 5 Replace the accelerator pedal position sensor assembly if voltage readings are out of range
- 6 Test the ECM connector and pins for tightness and signal integrity
- 7 If all else fails, replace and reprogram the ECM as a last resort

Common Misdiagnosis of P2120

- Many technicians replace the accelerator pedal assembly without first checking the wiring harness for intermittent shorts, which is a frequent cause of this code.
A weak or failing battery or charging system can cause voltage drops that mimic sensor 'D' circuit faults, so always verify battery health before condemning the sensor.
- The 'D' circuit is often one of two or three redundant sensors; a failure in one may not cause drivability issues but will still set the code, leading some to ignore it until limp mode occurs.
- Aftermarket floor mats or debris can physically obstruct the pedal and cause the sensor to report implausible values, setting P2120 without any electrical fault.

On some vehicles, a faulty brake pedal switch or cruise control switch can interfere with the throttle position signal and trigger this code, so check related switches.

Can I keep driving with P2120?

You can usually drive the vehicle with P2120, but expect reduced engine power and possible limp mode. Avoid heavy acceleration and have the fault diagnosed promptly to prevent sudden loss of power.

Tools that help

- OBD-II scan tool with live data capability
- Digital multimeter
- Wiring diagram for the specific vehicle
- Socket set and screwdrivers for trim removal
- Contact cleaner and dielectric grease



Reading P2120

- 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.
- 20** The exact fault within that area.

Often seen with

P2121 Throttle/Pedal Position Sensor/Switch 'D' Circuit Range/Perf · **P2122** Accelerator Pedal Position Sensor D Circuit Low · **P2123** Accelerator Pedal Position Sensor D Circuit High · **P2135** Throttle/Pedal Position Sensor A/B Voltage Correlation · **P2138** Throttle/Pedal Position Sensor D/E Voltage Correlation

See it working

Watch the animated explainer [How a Coolant Temperature Sensor Works](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p2120/>

