

MAZDA · POWERTRAIN

P1191

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1191 · Mazda

TP Controlled Circuit

P1191 on Mazda vehicles indicates that the powertrain control module (PCM) has detected an out-of-range condition in the throttle position (TP) controlled circuit, which typically involves the TP sensor signal or the motor control circuit inside the electronic throttle body. The PCM monitors the expected voltage or current on this circuit and sets the code when the actual value deviates from the commanded value for a calibrated time, often due to a faulty throttle body, wiring issue, or poor connection.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Mazda specific	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 vehicle speed
- Hesitation or stumble during acceleration
- Unstable or fluctuating idle speed
- Poor throttle response or delayed acceleration
- In rare cases, the engine may stall or refuse to start

Common causes, most likely first

- 1 Carbon buildup or wear inside the electronic throttle body causing the throttle plate to stick
- 2 Faulty throttle position sensor or integrated throttle body assembly
- 3 Damaged, corroded, or loose wiring in the TP controlled circuit
- 4 Poor electrical connection at the throttle body or PCM connectors
- 5 PCM software issue or internal fault (less common)
- 6 Aftermarket or improperly installed throttle body
- 7 Intake air leaks or vacuum leaks affecting throttle control



How to diagnose and fix it

- 1 Inspect the throttle body and intake tract for carbon buildup or obstructions; clean the throttle bore and plate with approved cleaner
- 2 Check all wiring and connectors between the throttle body and PCM for damage, corrosion, or looseness; repair as needed
- 3 Perform a throttle body calibration or relearn procedure using a scan tool after cleaning or replacement
- 4 Test the throttle position sensor and throttle motor circuits with a multimeter for opens, shorts, or excessive resistance
- 5 If the throttle body is faulty, replace it with a quality OEM or equivalent unit and perform the calibration
- 6 Verify the repair by clearing the code and test-driving the vehicle under various conditions to ensure the code does not return
- 7 If the code persists, check for PCM software updates or consult a Mazda specialist for further diagnosis

Common Misdiagnosis Traps for P1191

- Many technicians replace the throttle body immediately, but a dirty throttle body often causes this code and can be fixed with a thorough cleaning and calibration.
- A weak battery or poor ground connection can cause voltage drops that mimic a faulty throttle body, so always check battery health and grounds first.
- The TP controlled circuit may include the accelerator pedal position sensor on some Mazda models, so inspect that circuit as well before condemning the throttle body.
- After replacing the throttle body, a relearn procedure is mandatory; skipping it will cause the code to return even with a new part.
- Intermittent wiring faults can be temperature or vibration sensitive, so wiggle-test the harness while monitoring live data to catch them.

Can I keep driving with P1191?

You can usually drive the vehicle to a repair shop, but avoid aggressive acceleration or heavy loads because the engine may enter limp mode without warning. If the engine stalls or loses power suddenly, pull over safely and seek immediate assistance.

Tools that help

- OBD-II scan tool with live data and bidirectional control
- Digital multimeter
- Throttle body cleaner and soft brush
- Socket set and screwdrivers
- Wiring diagram for the specific Mazda model



Reading P1191

- P** Powertrain: engine, transmission and emissions.
- 1** Manufacturer-specific code (Mazda): its meaning depends on the make.
- 1** Fuel and air metering.
- 91** The exact fault within that area.

Often seen with

P0121 Throttle Position Sensor A Circuit Range/Performance · **P0122** Throttle Position Sensor A Circuit Low Input · **P0123** Throttle Position Sensor A Circuit High Input · **P2101** Throttle Actuator Control Motor Circuit Range/Performance · **P2135** Throttle/Pedal Position Sensor A/B Voltage Correlation

See it working

Watch the animated explainer [How a Supercharger Works: Roots Blower in X-Ray](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/mazda-p1191/>

