

MAZDA · POWERTRAIN

P1795

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1795 · Mazda

Idle Switch Circuit

P1795 on Mazda vehicles indicates that the Powertrain Control Module (PCM) has detected an unexpected signal from the idle switch circuit, which is part of the throttle position sensor assembly. The PCM expects the idle switch to close when the throttle is fully released, but the circuit voltage stays outside the expected range, so the computer flags the fault.

SYSTEM

Powertrain

CODE TYPE

Mazda specific

SEVERITY

Low

FIX DIFFICULTY

Intermediate

AREA

Transmission

Symptoms you may notice

- Illumination of the check engine light, often with no other noticeable symptoms.
- Engine idle speed may be higher or lower than normal, or may fluctuate.
- Hesitation or stumble when accelerating from a stop.
- Automatic transmission may shift harshly or at the wrong time due to incorrect idle signal.
- Poor fuel economy or increased emissions.
- In rare cases, the engine may stall when coming to a stop.

Common causes, most likely first

- 1 Faulty throttle position sensor (TPS) with integrated idle switch.
- 2 Damaged or corroded wiring or connector at the TPS or idle switch.
- 3 Open or short circuit in the idle switch signal wire.
- 4 Improperly adjusted throttle cable or throttle plate stop screw.
- 5 Carbon buildup on the throttle body preventing the throttle plate from fully closing.
- 6 Failed PCM (rare).

How to diagnose and fix it

- 1 Inspect the throttle body and clean any carbon deposits that may prevent the throttle plate from closing fully.
- 2 Check the throttle cable and linkage for binding or incorrect adjustment.
- 3 Disconnect the TPS connector and inspect for corrosion, bent pins, or loose terminals.
- 4 Measure the resistance or voltage of the idle switch circuit according to Mazda service information, and compare to specifications.
- 5 Test the TPS and idle switch operation with a multimeter or scan tool while slowly opening and closing the throttle.
- 6 Replace the TPS if it fails the electrical tests.
- 7 Clear the diagnostic trouble code and verify the repair by test-driving the vehicle and confirming the idle switch status changes correctly.



Idle switch faults often misdiagnosed

- A sticking throttle cable or carbon buildup on the throttle plate can mimic a failed idle switch, so always verify mechanical closure before replacing parts.
- The idle switch is often integrated into the TPS, and replacing just the switch may not be possible on some Mazda models.
- Incorrect base idle speed adjustment or a tampered throttle stop screw can set this code even when the switch itself is good.
- A faulty ground connection at the throttle body or engine block can cause erratic idle switch signals.
- Some aftermarket throttle body gaskets or spacers can interfere with the idle switch operation if not installed correctly.

Can I keep driving with P1795?

The vehicle is generally safe to drive with this code, but you may experience rough idle or hesitation. Avoid aggressive acceleration and have the fault diagnosed soon to prevent drivability issues or increased emissions.

Tools that help

- OBD-II scan tool
- Digital multimeter
- Throttle body cleaner
- Basic hand tools (screwdrivers, wrenches)
- Mazda service information or wiring diagrams

Reading P1795

P	Powertrain: engine, transmission and emissions.
1	Manufacturer-specific code (Mazda): its meaning depends on the make.
7	Transmission.
95	The exact fault within that area.

Often seen with

P0120 Throttle Position Sensor A Circuit Malfunction · **P0121** Throttle Position Sensor A Circuit Range/Performance · **P0122** Throttle Position Sensor A Circuit Low Input · **P0123** Throttle Position Sensor A Circuit High Input · **P0505** Idle Control System Malfunction



See it working

Watch the animated explainer [Four-Stroke Engine Notebook: The Otto Cycle Explained](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/mazda-p1795/>

