

GM · POWERTRAIN

P1595

OBD-II DIAGNOSTIC TROUBLE CODE (DTC)

P1595 · GM

Speed Control Solenoid Circuit Open Or Shorted

P1595 on a GM vehicle means the powertrain control module (PCM) has detected an open or shorted electrical circuit in the speed control solenoid, which is the actuator that adjusts the throttle cable to maintain the set speed. The PCM monitors the solenoid's command wire for expected voltage and current, and when the feedback falls outside the normal window it flags the circuit as open or shorted.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	GM specific	Low	Intermediate	Vehicle speed, idle control and auxiliary inputs

Symptoms you may notice

- The cruise control will not engage or will drop out as soon as you release the accelerator pedal
- The cruise control indicator lamp may flash or stay off when you press the set button
- The engine may idle or run normally with no other drivability complaints
- Often no symptoms besides the warning light, especially if the driver never uses cruise control
- On some GM trucks and SUVs the cruise control may work intermittently before failing completely
- A stored P1595 may be the only code present, with no other modules reporting faults

Common causes, most likely first

- Broken or chafed wire in the speed control solenoid harness, commonly at the throttle body or along the intake manifold
- Corroded or loose connector terminals at the speed control solenoid or at the PCM
- Failed speed control solenoid itself, with an open winding or shorted internal coil
- Blown fuse or poor ground connection shared by the speed control circuit
- Damage to the throttle cable or cruise control servo linkage that prevents the solenoid from moving freely
- Water intrusion or road debris damage to the solenoid connector on older GM trucks and SUVs
- Rarely, a faulty PCM driver circuit, which should only be suspected after all wiring and solenoid checks pass



How to diagnose and fix it

- 1 Inspect the speed control solenoid harness and connector for chafing, corrosion, or loose pins, and repair any damaged wire or terminal
- 2 Check the fuse and ground for the speed control circuit with a test light or multimeter before replacing any parts
- 3 Measure the resistance of the speed control solenoid winding and compare it to the GM service specification for your engine and model
- 4 Back-probe the solenoid command wire at the PCM and verify voltage and current behavior while commanding the solenoid on with a scan tool
- 5 If the circuit tests good but the solenoid does not actuate, replace the speed control solenoid and clear the code
- 6 After repair, clear the PCM codes and perform a road test engaging cruise control at several speeds to confirm the code does not return
- 7 If the code persists after all circuit and solenoid checks, diagnose the PCM driver circuit or replace the PCM only as a last resort

What most techs miss on P1595

- A chafed harness near the throttle body or intake manifold is the most common cause on GM trucks and SUVs, and the damage often hides under the loom or behind the engine
- The speed control solenoid can test good on resistance but still fail under heat or vibration, so a wiggle test and a live scan tool command are more reliable than a static ohm check alone
- P1595 does not always mean the solenoid is bad; a poor ground or a blown fuse in the cruise control circuit will set the same code and is far cheaper to fix
- On some GM vehicles the cruise control switch on the turn signal stalk or the brake pedal switch can cause intermittent cruise complaints that mimic a solenoid fault, so check those inputs before condemning the solenoid
- Clearing the code without repairing the circuit will usually result in the code returning after a few drive cycles, so always verify the repair with a road test

Can I keep driving with P1595?

The vehicle remains safe to drive because the fault only disables cruise control, but you should avoid using the cruise control until the circuit is repaired. Do not attempt to hold speed with the cruise control engaged if it is behaving erratically, and have the fault diagnosed when convenient.



Tools that help

- Scan tool with bidirectional control capability
- Digital multimeter
- Test light
- Wire terminal pick and crimping tool
- GM service information for wiring diagrams and resistance specifications

Reading P1595

- P** Powertrain: engine, transmission and emissions.
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- 1** Manufacturer-specific code (GM): its meaning depends on the make.
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- 5** Vehicle speed, idle control and auxiliary inputs.
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- 95** The exact fault within that area.

Often seen with

P1594 Automatic Transmission Diagnosis Input Signal Circuit Malfun · **P1596** Automatic Transmission Diagnosis Input Signal Circuit High I · **P1594** Charging System Voltage Too High · **P1596** Speed Control Switch Always High · **P1594** Charging System Voltage Too High · **P1596** Speed Control Switch Always High · **P1594** B Camshaft Position Actuator Control Open Circuit Bank 2 · **P0500** Vehicle Speed Sensor Malfunction · **P0562** System Voltage Low · **P0571** Brake Switch 'A' Circuit

See it working

Watch the animated explainer [Helicopter Flight Simulator: Learn the Three Controls](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/gm-p1595/>

