

GENERIC · POWERTRAIN

P0594

OBD-II TROUBLE CODE

P0594

Cruise Control Servo Control Circuit/Open

P0594 indicates that the engine control module (ECM) has detected an open circuit in the cruise control servo control circuit, meaning the electrical path to the servo is broken or has excessive resistance. The ECM commands the servo to adjust throttle position for cruise control, but the circuit's feedback does not match the expected voltage or current, setting this code.

SYSTEM	CODE TYPE	SEVERITY	FIX DIFFICULTY	AREA
Powertrain	Generic (all makes)	Low	Intermediate	Vehicle speed, idle control and auxiliary inputs

Symptoms you may notice

- Cruise control system fails to engage or disengages unexpectedly while driving
- Cruise control indicator light on the dashboard may flash or stay off when trying to activate
- No other drivability symptoms; the vehicle otherwise runs and drives normally
- Possible stored code without any noticeable performance change
- In some vehicles, a chime or message may appear indicating cruise control is unavailable

Common causes, most likely first

- 1 Broken or disconnected wire in the cruise control servo control circuit
- 2 Corroded or loose electrical connector at the cruise control servo
- 3 Failed cruise control servo motor or actuator
- 4 Open winding inside the servo motor
- 5 Faulty brake pedal position switch (often integrated with the cruise control circuit)
- 6 Damaged or shorted wiring harness due to chafing or rodent damage
- 7 Internal ECM driver circuit failure (rare but possible)



How to diagnose and fix it

- 1 Inspect the cruise control servo connector and wiring for obvious damage, corrosion, or loose pins
- 2 Check the cruise control fuse and relay, and replace if blown or faulty
- 3 Disconnect the servo and measure resistance across the servo motor terminals; compare to manufacturer's specification
- 4 Perform a voltage drop test on the control circuit while commanding the servo on with a scan tool
- 5 Check the brake pedal position switch for proper operation and continuity
- 6 Repair or replace any damaged wiring or connectors, then clear the code and verify the repair
- 7 If all external circuits test good, suspect the ECM and perform further diagnostics before replacement

Cruise Control Servo Circuit Pitfalls

- A common misdiagnosis is replacing the cruise control servo when the real problem is a faulty brake pedal switch, which can interrupt the circuit and set P0594.
- The code can be set by a simple blown fuse that also powers other systems, so always check fuses before condemning the servo.
- On some vehicles, the cruise control servo is integrated into the throttle body, and a dirty throttle body can cause intermittent servo operation and set this code.
- An open circuit can be caused by a chafed wire hidden inside a loom, often near the firewall or where the harness flexes with engine movement.
- P0594 does not always mean the servo is bad; the ECM may set it if it detects an unexpected voltage on the control circuit due to a poor ground connection.

Can I keep driving with P0594?

The vehicle remains safe to drive because cruise control is a convenience feature and its failure does not affect basic operation. Avoid using cruise control until the fault is repaired, and be aware that some vehicles may disable other driver-assist features that rely on the same circuit.

Tools that help

- OBD-II scan tool with bidirectional control capability
- Digital multimeter
- Wiring diagram for the specific vehicle
- Socket set and trim removal tools
- Test light



Reading P0594

- P** Powertrain: engine, transmission and emissions.
- 0** Generic (SAE) code: it means the same thing on every OBD-II vehicle.
- 5** Vehicle speed, idle control and auxiliary inputs.
- 94** The exact fault within that area.

Often seen with

P0565 Cruise Control On Signal · **P0566** Cruise Control Off Signal · **P0571** Brake Switch 'A' Circuit · **P0595** Cruise Control Servo Control Circuit Low · **P0596** Cruise Control Servo Control Circuit High

See it working

Watch the animated explainer [How a MAF Sensor Works: Hot-Wire Airflow Explained](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0594/>

