

GENERIC · POWERTRAIN

P0525

OBD-II TROUBLE CODE

P0525

Cruise Control Servo Control Circuit Range/Performance

This code indicates that the powertrain control module has detected an out-of-range or performance fault in the electrical circuit that controls the cruise control servo, which is the actuator that physically moves the throttle to maintain a set speed. The computer monitors the servo control circuit for expected voltage or current feedback and sets the code when the signal does not match the commanded output within a calibrated window.

SYSTEM

Powertrain

CODE TYPE

Generic (all makes)

SEVERITY

Low

FIX DIFFICULTY

Intermediate

AREA

Vehicle speed, idle control and auxiliary inputs

Symptoms you may notice

- The cruise control system fails to engage or drops out unexpectedly while driving
- The cruise control indicator light may flash or stay off when you try to set a speed
- The vehicle may revert to manual throttle control with no other drivability issues
- Often no symptoms besides the warning light, especially if the fault is intermittent
- In some vehicles, the cruise control may work only at certain speeds or after repeated attempts
- A stored code may be the only evidence if the servo circuit fails only under specific temperature or vibration conditions

Common causes, most likely first

- 1 A faulty cruise control servo actuator with worn internal motor brushes or a binding mechanism
- 2 Damaged or corroded wiring and connectors between the servo and the powertrain control module
- 3 A poor ground connection at the servo mounting point or chassis ground
- 4 A failed cruise control switch or stalk that sends incorrect commands to the module
- 5 A sticking or misadjusted throttle linkage or cable that loads the servo beyond its expected range
- 6 A defective powertrain control module driver circuit, though this is less common
- 7 Aftermarket electronic accessories improperly tapped into the cruise control wiring



How to diagnose and fix it

- 1 Inspect the cruise control servo connector and wiring for corrosion, chafing, or loose pins, and clean or repair as needed
- 2 Check the servo ground circuit with a multimeter for excessive resistance and clean the ground point
- 3 Test the servo motor and clutch with a bidirectional scan tool to command the actuator and observe feedback
- 4 Verify the cruise control switch inputs in live data to confirm the module receives correct set, resume, and cancel signals
- 5 Inspect the throttle linkage and cable for binding or incorrect adjustment that could overload the servo
- 6 If the servo fails electrical or mechanical testing, replace it and clear the code to verify the repair
- 7 As a last step, check for a faulty powertrain control module only after all other circuits and components test good

What the servo circuit test really reveals

- A servo that tests fine on the bench can still set this code when the throttle plate is carboned up and creates extra resistance that the module interprets as a performance fault.
- Intermittent codes often trace to a chafed wire inside the loom near the throttle body or firewall, where vibration wears through insulation without leaving visible external damage.
- Some vehicles use the cruise control servo as part of a traction control strategy, so a fault here can disable multiple driver aids and mislead you into chasing an ABS or stability control problem.
- A weak battery or charging system can cause the module to log this code because the servo circuit voltage drops below the expected threshold during engine cranking or high electrical load.
- Replacing the servo without checking the throttle cable free play often leads to a repeat code, since a tight cable preloads the actuator and skews the feedback signal.

Can I keep driving with P0525?

The vehicle remains safe to drive because the cruise control simply will not operate, but you should avoid using the cruise control until the fault is repaired to prevent unexpected disengagement. If the warning light is accompanied by other drivability symptoms, have the vehicle inspected promptly.

Tools that help

- OBD-II scan tool with bidirectional control capability
- Digital multimeter
- Wire probe set and electrical contact cleaner
- Service information for cruise control circuit diagrams and servo specifications
- Basic hand tools for connector and linkage access



Reading P0525

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

Often seen with

P0526 Fan Speed Sensor Circuit · **P0527** Fan Speed Sensor Circuit Range/Performance · **P0528** Fan Speed Sensor Circuit No Signal · **P0565** Cruise Control On Signal · **P0566** Cruise Control Off Signal

See it working

Watch the animated explainer [Car Won't Start? Step-by-Step No-Start Diagnosis](#) on Auto Veteran to see the parts involved moving.

Full guide, related articles and animations: <https://www.autoveteran.tech/dtc-codes/p0525/>

