

## P0594: CRUISE CONTROL SERVO CONTROL CIRCUIT /OPEN

### OVERVIEW

Severity	:	<div><div>Medium</div></div>
DIY Difficulty Level	:	<div><div>Intermediate</div></div>
Repair Cost	:	\$150-\$300
Can I Still Drive?	:	Yes

### What Does The P0594 Code Mean?

There are many benefits that come along with the cruise control feature. On long trips, you do not have to consistently monitor and adjust speeds according to traffic and traffic laws. You press a button or two, and a combination of sensors, solenoids, modules, etc. make sure to keep the vehicle moving at the specified speed until you or possibly outside influences, deactivate or adjust the speed accordingly.

Not to mention, the vehicle will have a good idea on how to keep the fuel economy at a good level throughout the trip because well, when we drive we don't necessarily factor everything we could to keep costs down.

Luckily for us, the ECM (engine control module) is responsible for the seamless yet efficient operation of the cruise control. The proper functioning of the systems relies on many sensors, switches, modules, VSS, etc. One of them being the cruise control servo. Most times, these are responsible for controlling the throttle when you set and/or adjust the cruise control. By controlling the throttle and adjusting accordingly, with this servo, the ECM can adjust the speed easily and efficiently.

Many times, these servos are controlled mechanically via vacuum lines and throttle cables. The vacuum to the servo is controlled by solenoids who are in turn, controlled by the ECM, who can interpret every other value before specifying throttle position, speed, etc. This fault refers to the

circuit involved, refer to the service manual to determine exactly what physical circuit you are working with/ diagnosing.

The P0594 Cruise Control Servo Control Circuit /Open and related codes (P0525, P0595 and P0596) are set when the ECM monitors a malfunction within the cruise control servo control circuit. In the case of the P0594 specifically, it is set when a general malfunction or open electrical condition is detected in said circuit.

## What Are The Symptoms Of The P0594 Code?

Symptoms of a P0594 diagnostic code may include:

- Cruise control inoperative
- Erratic cruise control operation
- Vehicle speed stuck
- Vehicle speed limited with cruise control active
- Inaccurate vehicle speed setting when compared to desired or set speed
- Specific cruise control(s) functions malfunctioning/erratic

## What Are The Potential Causes Of The P0594 Code?

Causes for this P0594 cruise control code may include:

- Defective/damaged cruise control servo
- Cruise control servo cable broken/stuck/disconnected/mis-adjusted
- Wiring issue
- ECM (engine control module) issue
- Module water intrusion
- Connector issue

## How Can You Fix The P0594 Code?

The first step in the troubleshooting process for any malfunction is to research the Technical Service Bulletins (TSB) for known issues with the specific vehicle.

Advanced diagnostic steps become very vehicle specific and may require the appropriate advanced equipment and knowledge to perform accurately. We include basic steps below but refer to a vehicle year/make/model/powertrain specific repair guide for specific steps for your vehicle.

### Basic Step #1

Generally speaking, cruise control servos are mounted in the engine compartment somewhere. Most times, they are in close proximity to the throttle body, after all they do control vehicle speed

using this. Once located, do a general visual inspection. Look at the cable, check for fraying, kinks, corrosion or any signs of malfunctioning. If the servo cable does not move freely when controlling the throttle, the ECM could interpret it as a performance issue.

How does the servo look? These are usually vacuum controlled, so its physical condition could indicate a problem. It's important to check all the vacuum lines running to the servo itself. Any cracked or deteriorated lines should be taken as a sign of your vacuum system's health so I recommend replacing all of the vacuum lines involved as they are inexpensive and could save you problems in the future.

## Basic Step #2

On to the electrical side of things, verify the connector on the servo. Any broken tabs or loose connections should be repaired. The harness may be running through tight areas and/or moving parts, so be aware of any chafing areas that could cause an issue and repair any broken/ damaged wires.

## Basic Step #3

Depending on your OBD2 scan tool's capabilities, you can potentially monitor the servo's operation with it connected to the vehicle. Sometimes you may be given percentages or maybe electrical values. Either way you can compare the values to its physical operation by watching it under the hood, with the wheels off the ground. This is an old procedure and may cause issues especially when talking about more modern vehicles.

That said always ensure any diagnosing/ repair procedures are also recommended by your vehicle's manufacturer. If you neglect to do your research here, you could easily damage other vehicle components.

## Severity Description

I am going to set the severity for this code to medium. As far as most cruise control OBD2 fault codes go, they are fairly minor. That being said, in this case, because the cruise control servo is not only directly connected to the throttle control via cable but is responsible for throttle position at times, it would be more severe than most.

To stress a point, if you neglect any active OBD2 fault, you run the risk of not being aware of any new fault codes. Even when symptomless, if left unattended, OBD2 fault codes can lead to more serious and expensive problems.

## Reference Sources

[P0594 Cruise Control Servo Control Circuit /Open](#), OBD-Codes.