

P0527: FAN SPEED SENSOR CIRCUIT RANGE/PERFORMANCE

OVERVIEW

Severity	:	Medium
DIY Difficulty Level	:	Intermediate
Repair Cost	:	\$50-\$250
Can I Still Drive?	:	Yes

What Does The P0527 Code Mean?

Some vehicles are equipped with a sensor at the end of the cooling fan that detects movement during vehicle operation. The sensor is used to determine if the fan is running on a fan clutch equipped vehicle, or used to verify fan speed commanded by the Powertrain Control Module (PCM) or Engine Control Module (ECM) matches the actual fan speed detected on an electric fan equipped vehicle.

The sensor used is a 3 wire, hall effect sensor which uses a 5 volt reference source from the PCM, a ground wire and a signal wire to the PCM to determine fan speed. For a P0527 to be triggered, the PCM/ECM has determined the actual fan speed does not match the desired or commanded speed.

Note: Be careful not to touch an electric fan as it may turn on even when the vehicle is not operating. This code is similar to [P0526](#), [P0528](#) and [P0529](#)

What Are The Symptoms Of The P0527 Code?

Symptoms of a P0527 DTC may include:

- Malfunction Indicator Lamp illumination (a.k.a. Check Engine Light)
- Vehicle may be overheating or running hotter than normal

What Are The Potential Causes Of The P0527 Code?

Potential causes of a P0527 code include:

- Fan clutch or electric fan is not operating at desired or commanded speed

How Can You Fix The P0527 Code?

Fan clutch equipped – Visually verify the fan is spinning while the engine is operating. If the fan is spinning very slowly on a cold start, replace the fan clutch assembly. It may be necessary to use an advanced scan tool to see the actual fan speed in relation to the desired fan speed.

Electrical fan equipped – Visually verify the fan is turning on and off when the PCM/ECM commands the fan to operate when the engine reaches certain temperatures. The fan may be automatically turned on when the air conditioner is turned on. Some fans may be turned on using an on/off relay or activated by Pulse Width Modulation (PWM) with variable speed fans.

It may be necessary to use an advanced scan tool to see the actual fan speed in relation to the commanded fan speed. If the fan speed is lower than specification, replace electrical fan assembly or fan motor.

Reference Sources

[P0527 Fan Speed Sensor Circuit Range/Performance](#), OBD-Codes.