

## An Investigative Report for the Turbonator

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This report investigates the claims of Turbonator, Inc. The company sells a product known as the Turbonator which supposedly gives owners better engine performance and fuel economy for \$69.95. No actual testing was done by the company for this product and their claim is based on customer feedback only. A test by Popular Mechanics magazine of a similar product showed no improvement in performance or fuel economy. In some cases, performance was reduced. Customer feedback from other websites also show that the product does not work as advertised. Additionally, complaints have been filed with the Better Business Bureau about the product.

## Introduction

Gas prices have continued to climb as oil resources become scarcer and demand continues to rise. The price to fill up the tank has led many people to search for money-saving solutions. Because of this, many fuel-saving devices have entered the automotive accessory market. These devices require no serious modifications to the vehicle and claim to reduce fuel consumption and even increase performance in some cases. However, evidence supporting these claims is often lacking.

One such device is called the Turbonator. It's simply a round piece of metal designed to go into the air intake of an automotive engine. Once installed, it is supposed to increase performance and fuel economy. This report outlines all the facts that support and disprove Turbonator's claims.

## Product Details

The Turbonator is a small metallic device with no moving parts. It has a round shape with twisted spokes in the center that are supposed to increase air turbulence. The website claims that this increased turbulence will provide better fuel economy and increased horsepower.

Installing the Turbonator takes a few minutes. The most important installation step is locating the air intake hose. This hose is located between the air filter and the throttle body. The throttle body is a round metal tube that controls the amount of air let into the engine. When the gas pedal is pressed down the plate inside the throttle body opens and allows more air to be passed through the engine. This increases engine speed. The air intake hose is usually held in place by several screws and so installing the Turbonator requires few tools. (*Turbonator.com* [faq.html](http://www.turbonator.com/faq.html)).

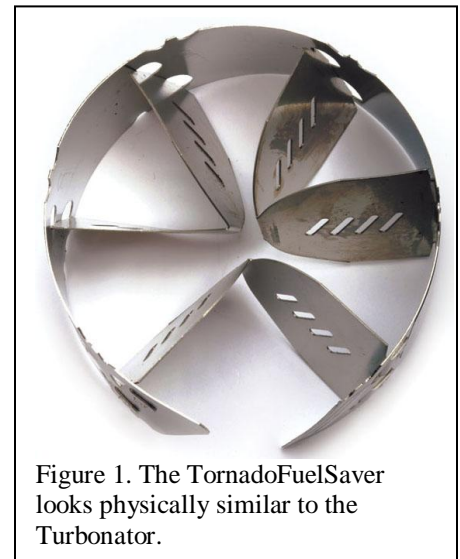


Figure 1. The TornadoFuelSaver looks physically similar to the Turbonator.

## Profile: Turbonator.com, Inc

The Turbonator is a product sold by Turbonator.com, Inc. which is located in Land O Lakes, Florida. The business was originally started in September 2001. The current president of the company is Ms. Nicole Markovic and the vice president is Nenad Markovic. ("BBB Reliability Report" 1). The Turbonator website address is <http://www.turbonator.com>.

## **Formal Complaints**

Eight complaints about the company have been filed with the Better Business Bureau (BBB) in the past 36 months. The company is listed as having an unsatisfactory record because they have not answered all of their complaints. Of the eight complaints, seven were addressed. One advertising complaint has been unaddressed (“BBB Reliability Report” 1).

## **Product Claims**

Turbonator.com, Inc’s disclaimer thoroughly refutes any claim that their product will definitely increase performance. The disclaimer states that results may vary and all claims on the website are based on feedback from customers (*Turbonator.com* Disclaimer.html).

Furthermore, the disclaimer describes all of the variables that may affect customer experiences, including “Vehicle make, vehicle model, vehicle model year, accrued vehicle mileage, vehicle condition, and tire pressure” (*Turbonator.com* Disclaimer.html).

Finally, the disclaimer informs the consumer that no results reported from the website have been concluded from laboratory tests: “It is due to these numerous but extremely important variables which are all a part of real world driving that Turbonator makes available reports from actual customers as opposed to making claims based on sterile lab testing in which few, if any, of the factors that influence fuel consumption are testable on a practicable level” (*Turbonator.com* Disclaimer.html). This is an important part of the disclaimer. It suggests that no formal testing has been performed by the company and any claim made on the website is feedback from customers.

## **Formal Testing**

While there seem to be few formal tests conducted on the Turbonator there have been tests performed on similar products. Turbonator.com Inc’s disclaimer refers to their product as a non-moving vortex generator. In September 2005, Popular Mechanics tested several products that claimed to improve fuel economy. Two vortex generators were included in this test. While neither was sold by Turbonator.com, Inc, both were in the same class of products and served a similar purpose.

The testing by Popular Mechanics was conducted on four full size trucks at the Universal Technical Institute in Houston, Texas. Testers used a dynamometer to test horsepower and torque with and without the vortex generators. To test fuel consumption they poured a measured amount of gas into the trucks and ran them at a steady 70mph until all of the gas was gone and the trucks came to a stop. They then repeated the process with the vortex generators. (Allen, par. 4).

The first product tested was the TornadoFuelSaver. This product is shown in figure 3 and is currently listed on <http://tornadofuelsaver.com> for \$49.99. The second product is called the Intake Twister. According to the article, it was purchased for \$20. The article states: "Both devices reduced peak horsepower by more than 10 percent. The intake Twister increased fuel consumption by about 20 percent; the Tornado FuelSaver provided no significant change" (Allen, par. 7).

The author of the article hypothesizes that, "Turbulence, coupled with the restricted airflow caused by the device, can only reduce the amount of air sucked into the manifold. Less air means less power" (Allen, par. 7).

These tests conclude that vortex generators have no positive impact on horsepower and fuel economy. The author of the article stresses that most vehicles already burn 99 percent of the fuel they use so there is little waste (Allen, par. 10).

There is also evidence that Turbonator would have very little effect on turbulence inside the engine because it is placed before the throttle body. In order for a modern engine to run, turbulence of air must occur inside the combustion chamber. This turbulence is responsible for accelerating the burning of fuel and this makes the process more efficient. In a normal engine the air speed in this section of the engine is at 200-300 miles per hour (See figure 2). At that speed any swirling effect made by a vortex generator would be destroyed as the air hit the throttle blade, which lies on the left side of the figure 2 ("Review: Avoid Cyclone, Turbonator, Surbo, etc" par 1).

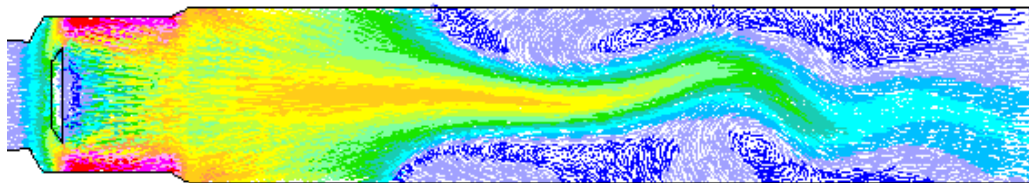


Figure 2. Air passes through the throttle body on the left side of the diagram and continues into the engine. Areas in dark red are moving the fastest, while areas of white and very light blues are moving the slowest.

## Customer Testimonials

Many testimonials have been written both for and against the Turbonator. Unsurprisingly, the Turbonator website has no negative customer reviews or testimonials. A few examples and summaries of the two categories are below.

### Positive Testimonials

Testimonials vouching for the Turbonator could for the most part only be found on their website. Listed below are two of the better examples of the testimonials for the Turbonator.

Justin Main of Toronto, Canada claims, "I purchased two Turbonators, one for my brother and myself. We thought it would be fun since we are such rivals, to put mine on and race. We both have the same model Honda Civic and mine now with the Turbonator made him eat my dust" (*Turbonator.com* Feedback.html).

In a separate testimonial Dr. Brian Coyle of San Jose, California reports, "I purchased two Turbonators for my Chrysler Sebring and immediately noticed the increase in power. It was more than I expected. I am already noticing the improved gas mileage. I like them so much, I am ordering two more for my brothers. Now, it feels like my car has a turbo charger" (*Turbonator.com* Feedback.html).

### Negative Testimonials

On the other hand, many complaints appear in forums and personal websites. Listed below are two examples of the testimonials against the Turbonator.

In a customer complaint published on motorsm.com 'H.' of Torrance, Florida complained about the Turbonator he installed in his 1995 Toyota Tacoma. 'H.' stated, "Performance and mileage did not improve any amount. I looked into returning it and found they had a restocking fee. So, whether you keep the Turbonator or return it this person makes money" (MotorSm 1).

As quoted from 'SkpBarberGrad' of CarReview.com, "I am an ASE certified technician, and have worked for several performance shops. The following are not opinions, they are observations from my experience". In one of his main points he explains how performance intakes and filters work. He writes, "Everyone knows that the added mileage/performance from an aftermarket filter/intake comes from opening up airflow. That's pretty much universally agreed upon". He continues, "So how can anyone of you contend that something that then restricts the airflow and forces air to change direction is going to have the same effect" (Car Review Forums 1).

## Conclusion

The claims made by Turbonator that their product increases both horsepower and gas mileage does not have enough support to be warranted as true. In reports from both Popular Mechanics and Consumer Reports the product and all of its cousins failed to produce the desired effect for the consumer. The evidence found actually contradicts the statements made by Turbonator. The research shows that there is no significant effect and sometimes a decrease in both horsepower and gas mileage in various vehicles that were tested.

Additionally, explanations by internet users such as SkpBarberGrad on the basics in performance intake and filters also show that the product cannot give the results that are claimed by Turbonator. Even though most of the statements are worded very carefully to avoid being false, the claim about increased horsepower and gas mileage are not supported in any third party tests.

## References

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