

# Mileage Improvers

High fuel prices cause many people turn to products or fuel additives that claim large gains in fuel economy.

The USA's Environment Protection Agency (EPA) has just concluded a series of scientific tests on a wide variety of devices and additives that are claimed to improve fuel economy. Of the hundreds tested, very few actually reduced fuel consumption.

Of the six that worked without illegally increasing air pollutants, one was a spoiler system that made a vehicle more aerodynamic, three shut off power to accessories such as the air conditioner and the other two provided ways to decrease idling time.



Most of the products marketed fall into five basic categories: vortex generators that create swirling air flow in the air intake, magnets that strap around or connect into the fuel lines, air-bleed devices, fuel additives and oil additives.

None of the magic pills and potions, fuel line magnets or vortex generators works, according to test results from the EPA.

Magnets make your speakers function and provide detailed images of the human body, but they aren't likely to save a cost conscious motorist any money at the gas pump, said EPA spokesman John Millett.

Car owners would be better to change a few of their driving habits and make sure their vehicles are properly tuned and maintained, he said.

Claudia Bourne Farrell, a spokeswoman for the US Federal Trade Commission, said that the Commission has evaluated many products that claim to enhance performance and has not seen any that lived up to their claims.

So why do these products keep selling? Why do so many people swear by them while others are completely convinced they are scams?

## “Results May Vary”

All fuel economy ‘improver’ packages and labels have disclaimers that say “results may vary”, because of driving habits, vehicle type, vehicle condition and road conditions.

In that simple caveat lie the reasons why people can install a device or use an additive that does nothing to change fuel economy but can see an improvement in fuel economy after adding it.

Many people install vortex generators or magnets at the same time as they give their vehicles a tune-up, so the devices get the credit for the improvement in fuel economy that really resulted from the tune-up.

Testing a product to determine if it has increased fuel economy requires an automotive laboratory with sophisticated equipment. The equipment is necessary to rule out the effects of different air temperature, humidity and road conditions that can cause fuel consumption to vary 10 or 20 percent.

Many fuel consumption 'improvement' device makers claim that their fuel-saving function is due to improved combustion quality, but in a modern 4x4 engine that's correctly tuned, less than one percent of the fuel that enters the combustion chamber isn't burned. Maximizing the burn further might lower emissions minutely, but would do virtually nothing for fuel economy.

## Real Economy Improvers

Regular servicing, maintaining correct tyre pressures and keeping your 4x4 as streamlined as possible are the starting points for improved fuel economy.

A well-serviced 4x4 rolls freely on lubricated and adjusted wheel bearings, doesn't have dragging brakes and its engine is operating at its optimum, with clean oil, fresh plugs and/or clean injectors.

Tyres inflated to the 4x4 maker's recommendation roll with less resistance than under-inflated ones. Don't run heavily-blocked mud tyres unless you really need them. 'Lug' tyres have a huge influence on rolling resistance – we regularly measure at least a five percent fuel consumption difference between mud tyres and road types.

If you need your roof rack only once or twice a year, take it off and stow it. A roof rack increases drag and drag eats fuel.

Once you've taken these fuel economy steps, take a critical look at your driving style. If you don't get high kilometres out of your 4x4 tyres and brake pads you're wasting fuel. Driving for economy means no hard-braking or hard-cornering.

Use anticipation when you're driving, so you don't have to brake hard to wash off speed and then have to build it up again.

Try cruising at lower speeds. It's easy to measure the difference in fuel consumption if you cruise on the bitumen at 95km/h instead of 110km/h. On dirt, knock your speed back to a more economical and safer 80km/h. In the case of the average diesel 4x4 you'll get at least a 10 percent fuel saving by slowing down.