

NO MORE CHEAP FUEL

To the old maxim that there are only two certainties in life: death and taxes, there's now a third element: fuel prices will continue to rise. So what can be done to reduce the size of the hole in your pocket?

The first step is to accept the fact that there are no magic potions or gadgets that have been scientifically proved to reduce fuel consumption. We've invited all the producers of add-ons and fuel additives to provide us with scientific test results that show a consumption improvement, but none has been forthcoming. There are plenty of anecdotal reports, but no hard facts. 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 of the gadgets that are supposed to improve fuel consumption by up to 20 percent aren't very expensive, so if they worked as claimed wouldn't vehicle makers fit them as standard equipment?

The USA's Environment Protection Agency has evaluated hundreds of different 'consumption improvers' and found that only six had a positive effect: 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.

Vehicle 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?

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.

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.

Are alternative fuels a way out of the fuel-price spiral? Probably not. The most optimistic view of alternative liquid fuel substitution suggests that crop or algae fuels can supplement our petroleum-based fuel needs by only 20 percent and prices won't necessarily drop by using that route. Already we're seeing the price of crop fuels rising as demand for ethanol and biodiesel increases.

LPG is plentiful in Australia, but excise may apply from 2011. In theory it will be capped at 12.5 cents per litre, but if usage increases the Federal Government will be tempted to raise its take.

Saving Fuel

Those of us who love driving in the bush are committed to running 4x4s. Unfortunately for us the larger 4x4s that we need are heavier and less streamlined than passenger cars and therefore have higher fuel consumption. On a long bush trip there's also the added weight of necessities: food, fuel, water and camping equipment. Nearly every bush-travel 4x4 has a roof rack, or is towing a trailer – further drag, meaning more fuel consumption.

Most 4x4s double as family transport or commuter vehicles when they're not bush tripping. Ideally your 4x4 should be reserved for short forays of this type and a more frugal vehicle used for longer journeys.

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 patterns and all-terrain treads.

Don't leave the roof rack in place and a load of camping and recovery gear on board when you're running around town. Lightening the vehicle will save 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 speeding, hard braking or hard cornering.

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

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 4x4 you'll get at least a 10 percent fuel saving by slowing down.