Cutting Costs: The Art Of Fuel-efficient Driving

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Even if your car is not as inherently economical as Suzuki's Baleno, there is much that you can do to minimise fuel costs.

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The personal views of guest contributor Giles Kirkland…

Cars are rarely cheap and, of course, the more you drive yours, the more you have to spend.

This is why many drivers value vehicles that offer plenty of miles to the gallon, but what about the car you currently have?

Fortunately, there are ways to improve your fuel efficiency. Also known as ‘hypermiling’, fuel-efficient motoring looks to improve your existing car, to make it more efficient, as well as some of your own driving habits. If you’re looking to save money at the pump (apart from shopping around for the lowest prices on offer locally for the same product of course…), here are a few factors you need to keep in mind…

Before you fill up, it’s worth shopping around to find the lowest price per litre of high quality fuel in your area.

Air Resistance And Weight

Even if your car performs as it should, the various resistive forces you face will burn up

energy that could otherwise be spent as momentum. The two biggest factors are air resistance and weight.

For the former, you should make your car more streamlined. A regular polish or wax coating will help preserve the smooth surface, while removing any unwanted fixtures, such as roof racks, is also helpful.

For weight, you should follow a similar principle. Of course, a car with four passengers is going to be heavier, but there's no need to have a full boot when you don't need it. Keep this in mind and you might just notice a sizable dent in your fuel consumption. Again, external fittings also add weight, in addition to adding air resistance.

Tyres And Ground Forces

A great deal of hypermiling focuses on ensuring that as much energy as possible is spent on movement so, for this reason, it should be no surprise to learn that the wheels are vital.

Choice of tyre is vital to obtain optimum mpg; wheel diameter can make a difference too!

When you buy some new tyres, look for ones with low rolling resistance. This refers to the energy that dissipates between the tyre and the road. The less resistance, the more efficient the tyres are, in terms of the amount of energy and fuel required to move the vehicle along. Fortunately, this information is readily available on the tyre labels.

Braking And Accelerating

Furthermore, when it comes to your approach to driving , how often you accelerate and brake, and the force with which these modes are activated, can also greatly determine how much fuel is used. ‘Gently does it’ and planning ahead make huge differences.

Gentle use of the car’s controls and planning ahead on the road can help save significant amounts of fuel.

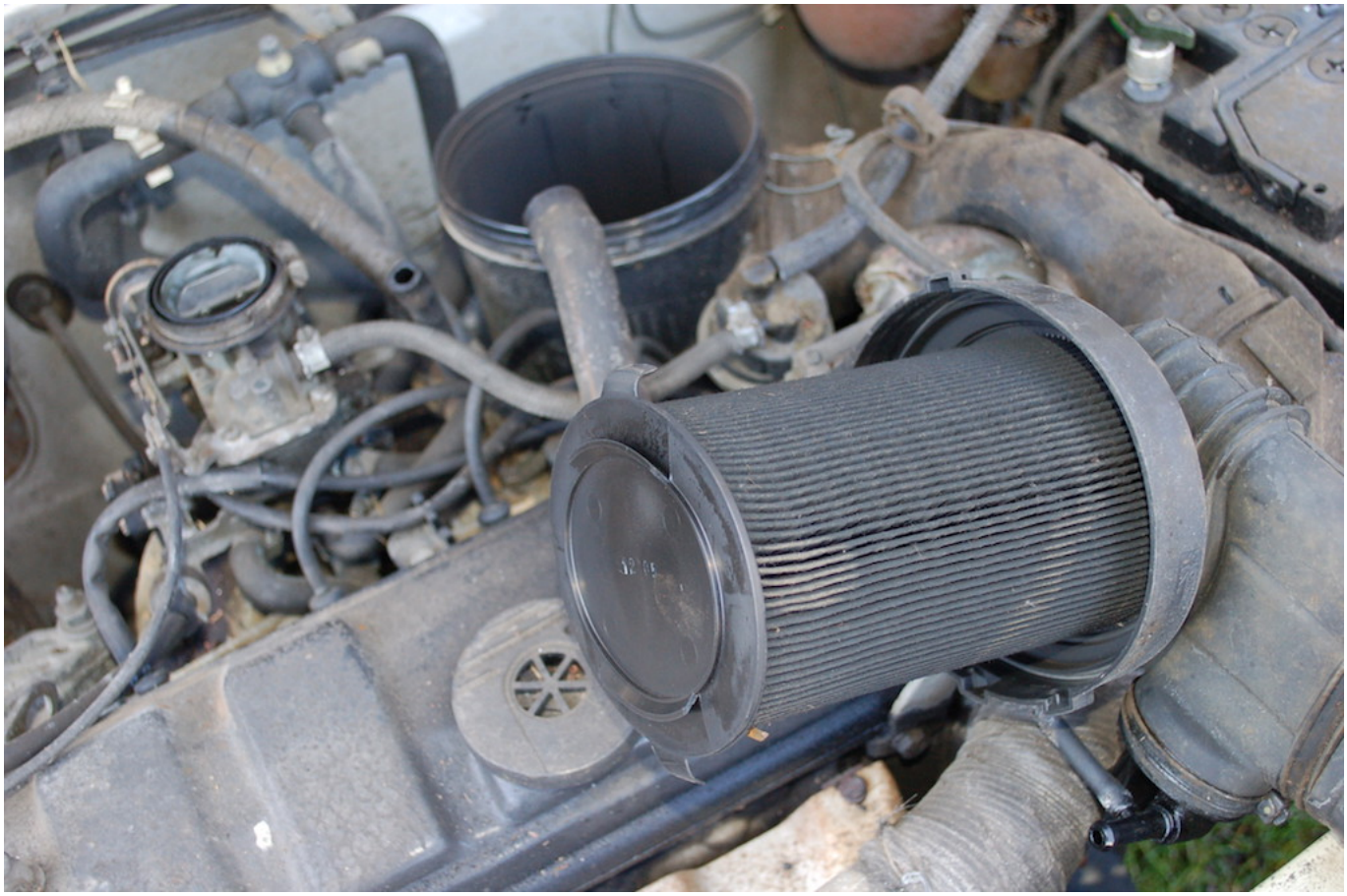
Many experts agree that in most cases a cruising speed of around 55 mph offers the optimum mileage per gallon. The more you move upwards away from this point, the more fuel you consume per distance travelled.

As for braking, you should avoid aggressive and sudden braking where possible. Instead, try bringing the car to a natural stop (this is called ‘gliding’ or ‘coasting’ by hypermilers). Of course, this isn’t always possible but, when it is, you will use the existing energy generated by the engine, rather than having it consume petrol at a high rate until as late as possible. (Note from Kim: ‘Coasting’ in the sense of the car travelling along with the engine disconnected from the drive wheels is frowned upon by many – and could well get you into trouble if it was proved that you were coasting athe time of an accident – since the vehicle is said then not to be under full control, especially when descending gradients, etc. However, of course even when changing gear there is a gap between the drive condition in one gear and the next…).

A common example among hypermilers is how to approach traffic lights. Many people prefer to ‘glide’ towards them, easing off the accelerator but not applying the brakes. If the lights stay red, the brakes can still be applied but, since you’re at a lower speed, less energy is lost. If the lights go green, you can reapply pressure to the pedal and ease back. Either case saves more fuel and, with practice, can be a rather efficient way to approach certain junctions.

Basic Maintenance

A little maintenance goes a long way. An internal combustion engine requires a delicate balance of oxygen and fuel. If it has a lack of one, it can’t use the other to its fullest efficiency. So, even something as simple as the air filter can cause problems with mileage. If it gets too clogged, your engine can’t reach its optimal running levels.



A choked air filter like this will not allow the engine to ‘breathe’ as designed and this will adversely affect performance and fuel consumption. Check/renew at least as often as specified by the car manufacturer. Use high quality filters too…

It is also essential that the spark plugs and high tension ignition components (petrol engines) are in excellent condition.

Furthermore, don’t forget to keep up with all the various fluids, such as antifreeze, coolant and oil. These are all required, regardless of the temperature (it’s a common misconception that you only need antifreeze in the winter and coolant in the summer). In many modern engines the oil MUST be clean and at the recommended viscosity in order to allow variable valve timing systems (for example) to function correctly and for the engine to run efficiently..

Taking care of your car's wheels and tyres is important too… The correct tyre pressure ensures optimum efficiency, with the tyre running in its intended shape. If you invest in a pressure gauge and pump, it doesn't take much to regularly check them and keep them inflated at the right levels.

Route Planning

Finally, where and when you drive can also be vital choices. If you avoid traffic, your journey will not require you to leave the car running in idle. Likewise, you can avoid steep hills if possible – especially uphill gradients. When descending, gravity and using natural momentum can help to an extent, but AT ALL TIMES with due regard to safety, of course; the car MUST be under proper control at all times.

In cities and towns, you might find a longer route is quicker if it involves bypasses or other areas without traffic lights or stops. Don't be afraid to experiment – sometimes an extra half mile might actually prove beneficial.

Finally, one last piece of advice: don't keep the motor running when you don't have to. If you're waiting to pick someone up, or otherwise not actively driving on the road, there's no need to burn fuel. Sure, you are not moving, but all that wasted fuel adds up each month. Thanks to modern fuel injection technology, it's cheaper to simply disconnect the engine.