

HOW FAR DOES IT GO?

At the end of a television commercial, the narrator says, "Your mileage may vary." No truer words have ever been spoken. Hybrid technology has done wonders to boost fuel economy figures, but range and mpg is highly dependent on driving style.

Up until five years ago, the EPA tested cars on three cycles, a city loop, a highway loop and a "cold soak" city cycle with the car heater on. As a result of the high mileage posted by hybrids, many of which have the ability to operate in electric mode, several vehicles were posting much higher mileage in the tests than in the "real world." To fix this problem, the EPA added two more high-speed test modes with more aggressive acceleration cycles, which resulted in mileage results that are more reflective of what consumers would experience.

Still, it is possible to beat those EPA estimates, as proven by *hypermilers* drivers dedicated to squeezing out the last drop of efficiency from their vehicles. *Hypermilers* have reported Prius mileage results in excess of 100 mpg and have driven 800 to 1,000 miles on a single tank of gas.



The term *hypermiling* is attributed to Wayne Gerdes, a Chicago area fuel economy enthusiast who has wrung high mileage from conventional cars to hybrids. From this relentless pursuit of mpgs has come an alphabet soup of techniques honed in both competition and out in the real world to maximize mileage. They include FAS, P&G, DWB and RR.

FAS

Forced Auto Stop is releasing the throttle at speeds below 40 mph, which will cause the engine to stop and in some instances allow the hybrid to operate in pure electric mode, thereby saving fuel.

P&G

Pulse and Glide is a variation of FAS in which you release the throttle turning the engine off, gliding perhaps down to 25 mph, then accelerating back up to 40 mph, repeating the operation. This uses the engine to accelerate only and prevents idling at a constant speed, which uses more fuel than the engine-off gliding. This technique is best practiced on light-traffic secondary roads.

DWB

DWB stands for "driving without brakes," or, more aptly put, minimal brakes.

This involves anticipating traffic flows, sharp turns and stop light changes, and using the car's regenerative braking system to slow the car down, which also puts more energy back into the battery pack – a winwin.

RR

Ridge riding is about as esoteric as *hypermiling* gets. It involves the huge grooves that are worn into pavement where most of the traffic drives. Ridge riding involves moving over to one side of the lane so that your wheels are on the top of the middle and outside ridge. It is most effective when the road is wet because water collected in those grooves acts as resistance to the tires and therefore costs gas mileage.

But you don't have to be a *hypermiling* geek to get the most out of a hybrid. Here are 10 simple techniques that can make a big difference in your fuel economy.

The first tip is to know your vehicle and make sure it is properly maintained:

- 1. Regularly check your tire pressure. Low pressure can rob your car of efficiency.
- 2. Clean out your trunk. Carrying unnecessary items in your car adds weight, and weight robs fuel economy. The same goes for exterior racks. Unless they are being used, their weight and aerodynamic drag penalizes mileage.
- 3. Get familiar with the driver feedback displays in your car. Just being aware of how hard you are accelerating and how much fuel you are using at a given speed can prove valuable.
- 4. Keep in mind that running accessories like the air conditioning also affects mileage.
- 5. Follow the recommended maintenance schedule for tune-ups and oil changes.

When you are behind the wheel, remember the following:

- 1. Be gentle with the brakes. Allow the regenerative braking system to do its part in slowing the car down while coasting.
- 2. Take the terrain into consideration. The engine is more efficient when it operates in a steady state, so when climbing a hill, let the incline bleed off speed rather than pushing down harder on the accelerator to maintain a set speed. On the other side of the hill, coast and allow the car to go faster rather than riding the brake to maintain a set speed.
- 3. Smart parking. Find the highest space in the lot and face out so that you don't have to use reverse to turn the car around.
- 4. Avoid short trips. A cold engine uses more fuel. By combining trips, you allow the engine to stay warm and will use less fuel than spacing several errands out over the course of the day.
- 5. Avoid unnecessary idling. While most hybrids are equipped with stop/start systems, when parked and waiting for someone, it's best to turn the car off completely.

Just a few of these tips can make a big difference, not only in your monthly fuel bill and number of trips to the gas station, but ultimately in the impact your transportation has on the environment.