

Ask the Expert.....

VEHICLE AND DRIVING TIPS

With gas prices on the rise and the ever present pressure to keep maintenance costs under control, there is no better time than now to re-think vehicle maintenance and driving behavior and their impact on your fleet and personal vehicle.

The Car Care Council suggests you pay attention to these items, whether you are in a fleet or even your own personal vehicle:

1. **Vehicle gas caps.** About 17 percent of the vehicles on the roads have gas caps that are either damaged, loose or missing altogether, causing 147 million gallons of gas to vaporize every year and can also trigger needless visits to the Dealer to have the service engine soon light reset!
2. **Under-inflated tires.** When tires aren't inflated properly, its just as though you are driving with the parking brake on, which can cost you one or two miles per gallon. This suggests that a 10 to 15 % improvement in fuel economy is achievable with properly rotated and inflated tires.
3. **Worn spark plugs.** A vehicle can have either four, six or eight spark plugs which fire as many as 3 million times every 1,000 miles, resulting in a lot of wear and electrical and chemical erosion. A dirty spark plug causes misfiring, which wastes fuel. Spark plugs need to be replaced regularly.
4. **Dirty air filters.** An air filter that is clogged with dirt, dust and bugs restricts air flow and creates a 'rich' mixture- too much gas being burned for the amount of air, wastes gas and causes the engine to lose power. Replacing a clogged air filter can improve gas mileage by as much as 10 percent.

Some additional fuel saving and safety tips:

1. **Don't be an aggressive driver.** Aggressive driving can lower gas mileage (mpg) by as much as 33 percent on the highway and 5 percent on city streets.
 - A European study showed that aggressive 'jackrabbit' starts from traffic lights and hard breaking- reduced travel time by only four percent (the equivalent of 2.5 minutes out of a 60 minute trip). However consumption increased by 39 percent and some toxic emissions were 5 times higher.



2. **Avoid excessive idling.** Sitting idle gets zero miles per gallon. Letting the vehicle warm up for 30 seconds is sufficient even in cold winter climates. Gasoline engines consume between 1.5 and 4.0 liters (0.4 and 1.1 gallons) per hour depending on local conditions and engine condition.
 - Idling also creates unnecessary CO₂ and Green House Gases (GHG). For every liter of gasoline consumed, approx. 2.5 kg of GHG are created. For every gallon of gasoline consumed, approx. 20 lbs of GHGs are created.
3. **Observe the speed limit.** Gas mileage decreases rapidly at speeds above 60 mph or 100 km/hr. Each mile driven over 60 mph will result in an additional cost of 10 cents per gallon. To maintain a constant speed on the highway, use cruise control. Put another way, increasing your cruising speed from 100km/hr (60 mph) to 120 km/hr (70 mph) increases fuel consumption by about 20 percent.
 - Traveling at 5 km/hr over the speed limit doubles the risk of an injury crash, the same effect as a blood alcohol level of 0.05
 - Research in the US after raising the interstate speed limits show that an increase in mean speed of 2-4 miles/hr (3-6 km/hr) resulted in an increased number of fatalities by 19-34%.
4. **Combining errands** into one trip saves gas and time. Several short trips taken from a cold start can use twice as much fuel as a longer multi-purpose trip covering the same distance

Sources:

http://www.carcare.org/Articles/gas_prices.shtml

<http://oee.nrcan.gc.ca/transportation/idling/issues/why-idling-problem.cfm?attr=8>

Monash University: Accident Research Centre, The relationship between fuel economy & Safety Outcomes.