



## Is There Anything We Can Do Regarding Escalating Fuel Cost?

It seems like a long time and many millions of miles ago when gasoline had an octane rating of 80 and about the only thing a driver needed to know about fuel was how much was in the tank. Now the choices are bewildering: regular, midrange, or premium? What about detergents? Fuel additives, such as injector cleaners, dry gas, octane enhancers, national or local brands — and the list goes on.

### WHAT IS GASOLINE, ANYWAY?

Freshly pumped from the ground, petroleum is a dark, smelly, thick stew of hydrocarbon compounds. It's the task of the refiner to separate crude oil into its compound parts, then to remix them in various combinations to make useful products. This recipe for blending gasoline also calls for additives not found in crude oil.

### THE OCTANE MYTH

Aside from the price on the fuel pump, what do all of those symbols and numbers actually mean? Does regular or premium mean the same thing in all states?

**Answer: NO.**

### WHAT IS THAT YELLOW LABEL ON THE PUMP?

"RON + MON = AKI" or 87 octane, 89, or 90 and higher?

During a combustion cycle, when the fuel and oxygen mixture ignites all at once, it literally explodes in your engine. This produces an audible shock wave we often refer to as engine knock, or ping. Gasoline has additives that are formulated to resist this knock or ping, and the result is expressed as the fuel's octane number, such as 87, 89, etc. Also, your GM vehicles have computer-controlled sensors that correct this temporary condition without your knowing about it. By law, U.S. gas pumps are labeled with that yellow sticker containing an anti-knock index (AKI) number, which is actually an average of "RON+MON" (Research Octane Number + Motor Octane Number).

### SHOULD YOU PURCHASE FUEL BY BRAND POPULARITY OR BY PRICE?

**Answer: Octane rating & lowest price.**

Using an octane higher than required will bring no added benefits. The vehicle will not have better performance or better fuel economy — it will simply cost more. Every GM engine family has been carefully tested to determine its octane requirements under normal conditions. This requirement is listed in your Owner's Manual. The most common octane rating required for GM vehicles is 87.

### GASOLINES CONTAINING ENGINE CLEANERS

Some refiners tout the detergent qualities of their fuels. Consumers need to know that it's not necessary to purchase high octane to obtain cleaning benefits. The Environmental Protection Agency (EPA) requires all grades of gasoline, regardless of octane rating, to contain engine cleaning detergents to guard against harmful deposit buildup during the life of the engine.

### FUEL ADDITIVES & INJECTOR CLEANERS

Simply stated, properly formulated fuel, stored in clean tanks, should not need supplemental additives. In general, GM does not recommend additives.

### WHAT ELSE CAN BE DONE OTHER THAN SELECTING FUEL BY OCTANE RATING?

#### Drive Sensibly

Aggressive driving (speeding, rapid acceleration, and braking) wastes gas. It can lower your gas mileage by 33 percent at highway speeds and by 5 percent around town. Sensible driving is also safer for you and others, so you may save more than gas money.

#### Speed Control

Gas mileage decreases rapidly at speeds above 60 mph. Each 5 mph you drive over 60 mph is like paying an additional \$0.10 per gallon for gas. Observing the speed limit is also safer.

#### Keep Tires Properly Inflated

Tires can lose one pound of pressure per month under normal conditions. Additionally, tires can lose one pound for every 10 degree temperature drop. You can improve your gas mileage by around 3.3 percent by keeping your tires inflated to the proper pressure. The recommended tire inflation for your GM vehicle is located on the label inside the edge of your driver's door. Do not use the pressure indicated on the tire.

#### Avoid Excess Weight

A loaded roof rack, for example, can decrease your fuel economy by 5 percent. Reduce aerodynamic drag and improve your fuel economy by placing items inside the vehicle whenever possible.

#### Avoid Excessive Idling

Idling gets 0 miles per gallon. Today's vehicles do not require extensive warm-up periods.

#### Shop for the Lowest Price in Your Area

Search your area at [www.fueleconomy.gov](http://www.fueleconomy.gov).