

Natural Gas FAQ

Are LPG (liquefied petroleum gas, commonly known as "propane") and CNG (compressed natural gas, also known as "methane") the same fuel?

LPG and CNG have historically been the two most common alternative vehicle fuels, yet are quite different. CNG is a high-pressure gaseous fuel that always stays in gaseous form. LPG is a low-pressure fuel which is stored as a liquid. Above a certain temperature LPG becomes a vapor fuel which can be used for various applications, including propane stoves and also to power vehicles. LPG is much more expensive than CNG as a vehicle fuel while getting significantly less fuel economy / mileage than CNG as well. Is CNG safe?

Natural gas has one of the safest records of any transportation fuel. A study done by Power Labs Ltd. and the Institute for Gas Technology showed an extremely low failure risk for the large number of cylinders, even under the severe conditions encountered in natural gas vehicles. Over a 20-year period with 1.5 million cylinders in service worldwide, only 15 ruptures and 20 leaks were found. Other testing has shown that CNG tanks are as safe or safer than a gasoline tank, even when hit by a bullet or struck in a collision. There are two primary reasons: the physical properties of natural gas (natural gas is lighter than air so it vents when released), and the structural integrity of the CNG vehicle storage system. What happens in a collision?

The CNG tanks are located inside the trunk and below the car in areas providing side and rear crumple zones. GM's adoption of a strong body structure in the Impala also contributes to increased passenger safety. Furthermore, the modular structure of the tanks prevent them from moving into the passenger area in case of collision, thus guaranteeing its integrity in case of a collision.

What about performance?

Natural gas is rated at around 130 octane. It has plenty of zip! We are seeing equal or better torque with our CNG Impala prototype as compared to the stock gasoline configuration. How many vehicles run on CNG?

There are over 9,000,000 vehicles worldwide and approx. 150,000 in the USA. Here in the United States they are used in a wide variety of vehicles, including school and city bus fleets, airport shuttles, taxi's, Zamboni's, semi trucks, trash trucks, street sweepers, city, state and federal fleets of cars and trucks, military vehicles, and the guy that just passed you driving solo in the car pool lane, just to name a few. If you keep your eye out for the blue CNG diamond you will see it on many vehicles, especially in Utah and Oklahoma with the incredibly low fuel prices. What about range?

As a compressed gas, CNG tanks require more space per gasoline gallon equivalent, so range is somewhat limited vs. traditional fuels. Our Impala Retro-fit has over 350 mile highway range with the full 5-tank configuration (four in the trunk, one below where the gasoline tank used to be). As a comparison, the Honda Civic GX has a 240 mile highway range as it has just one tank in the trunk. What about gas mileage?

Fuel Mileage will vary based on a number of different areas, like Ambient temperature, pressure and engine condition. Our Platform is equal to or better than a stock gasoline configuration

Will CNG hurt my engine?

No. In fact being on the light end of the hydrocarbon scale, there is almost no carbon in CNG. Carbon is what turns engine oil black. One big benefit of CNG is the oil will stay cleaner and require less frequent changes, saving time, money, oil and oil filters. CNG is injected into the engine as a vapor, there is no "raw" fuel entering the cylinders which would tend to wash the lubricating oil off the cylinder walls. As a result, the piston rings stay better lubricated resulting in CNG engines lasting up to three times longer than the same engine on gasoline! There are fleets who have CNG vehicles with over 700,000 miles on them.