



Myths - Unleaded Racing Gasoline

1. Myth: The higher the octane, the slower the burn.
Fact: *In many cases, high octane gasoline has faster burning characteristics than low octane gasoline. It is rarely slower.*
2. Myth: Too much octane reduces horsepower.
Fact: *Trying a higher octane fuel and getting less performance is usually due to introducing additional variables with the different gasoline which can be overcome by re-tuning the engine.*
3. Myth: Too much octane will burn up my engine.
Fact: *The only time your engine is aware of octane is when it doesn't have enough. Using a higher octane than the engine needs does not hurt or help.*
4. Myth: Street gasoline with oxygenates is junk.
Fact: *Street gasolines of today, especially in California, are the best performance gasolines next to racing gasoline.*
5. Myth: Leaded gasoline makes more horsepower than unleaded
Fact: *Leaded gasoline is legal for "sanctioned off-highway events only" and does not allow the engine to make more power unless detonation is present. More power can be made with a street legal oxygenated unleaded gasoline than with leaded gasoline as long as there is no detonation.*
6. Myth: Adding nitromethane to gasoline improves power.
Fact: *Nitro knocks the octane number down severely, and makes the mixture way too lean. Jeff Smith, formerly of Hot Rod Magazine, tried this a few years back and destroyed an engine before he got the A/F ratio correct.*
7. Myth: Octane number is power.
Fact: *Octane number is resistance to detonation. Higher octane will increase power **only** if detonation is present.*
8. Myth: The octane requirement of my engine is always the same.
Fact: *Operating conditions like air temperature, barometric pressure, humidity, and coolant temperature have an impact on engine octane requirement.*
9. Myth: Detonation and Pre-ignition are the same.
Fact: *Detonation can hurt your engine; Pre-ignition will destroy it.*

10. **Myth:** Mixing regular and premium gasolines is not a good idea.
Fact: *All gasolines are miscible and no adverse effects will develop when mixing two or more grades. It is not really necessary to mix gasolines since there are three grades of unleaded gasoline at most service stations.*
11. **Myth:** Octane number is simply a ploy by the oil companies to sell more expensive gasoline.
Fact: *Approximately 70% of the cars on the road in the U.S. are satisfied with 87 octane or lower. The other 30% need a higher octane gasoline. The higher octane gasolines are available for the people that have cars that need these products because of high compression ratio, or high performance in general. Many automobile manufacturers recommend the use of premium grade gasolines in some or all of their engines (Cadillac, BMW, Corvette, Mercedes Benz, Lincoln, etc.). We make **Rockett Brand™ 100 Octane Unleaded Gasoline** for people with high performance cars that want a higher octane gasoline than what is normally available at the pump .*
12. **Myth:** Gasoline is the same all year in all parts of the U. S.
Fact: *Gasoline is “seasonally adjusted” based on the temperature that is anticipated in that particular marketing area. Changes are made at least six times per year in all areas of the U.S. except Hawaii. A “ seasonal adjustment” means that the gasoline is blended to vaporize more readily in the winter than in the summer. This feature allows cold starts without stall, and good driveability (no hesitations, stumbles, etc) while the engine is warming up.*
13. **Myth:** My owner’s manual says to use premium grade gasoline, but I use 87 octane and don’t hear any ping.
Fact: *Many engines that have premium fuel recommendations also have knock sensors. The knock sensor knows when the engine pings and retards the spark timing until ping is gone. This all takes place at a sound level below what the human ear can detect, so the knock sensor may be saving your engine even though you don’t know it. The retarded timing will reduce horsepower and fuel economy, so it is best to stay with the car manufacturer recommendation for gasoline octane.*
14. **Myth:** I buy premium grade gasoline because it has more and better additives to keep my injectors and valves clean.
Fact: *All gasolines sold in the U.S. are required by law to contain an additive that will keep injectors and valves clean. Tests are required and the additive must be licensed with EPA before it can be used. Most companies use the same amount of additive in all grades of their gasoline.*

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