



## Myths - Leaded 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: More Tetraethyl Lead is better.  
Fact: *Tetraethyl Lead (TEL) increases the octane number of the gasoline. It reduces spark plug life, contaminates crankcase oil, and reduces exhaust system life. More is not better.*
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: Propylene oxide is great stuff.  
Fact: *It can be after you find out that it eats soft parts in the fuel system, needs to run richer, needs to be stored in a cool place, evaporates easily, and can be a disappointment with improper tuning.*
8. Myth: Aviation Gasoline is a good substitute for racing gasoline.  
Fact: *Aviation Gasoline is designed for engines that run at 2700 to 2800 RPM at 10,000 feet. If your race engine runs under these conditions, then aviation gasoline is the hot tip.*

9. Myth: I can improve the racing gasoline by adding a little of this or a little of that.  
Fact: *We put a lot of scientific effort into making high quality racing gasoline. Being a backyard blender can be hazardous to your health and to your car's performance. Don't do it.*
10. Myth: I can save money by mixing street gasoline with racing gasoline.  
Fact: *Race engines and performance street engines are built for max performance. You will make more power with racing gas, especially if you use **Rockett Brand™ 100 Unleaded Racing Gasoline** in a street engine.*
11. Myth: Octane number is power.  
Fact: *Octane number is resistance to detonation. Higher octane will increase power **only** if detonation has been present with lower octane gasoline.*
12. 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.*
13. Myth: Detonation and Pre-ignition are the same.  
Fact: *Detonation can hurt your engine; Pre-ignition will destroy it.*
14. Myth: I want a slow burning gasoline for my race engine.  
Fact: *Slow burning gasolines are not conducive to making maximum power. There is not much time for combustion to take place at 6,000 to 10,000 RPM. Fast burn is best.*
15. Myth: All racing gasolines are the same.  
Fact: *There are a variety of ways to make racing gasoline, depending on what type of blending stocks are used. Some are better than others. All gasolines are not created equal.*
16. Myth: Storing racing gasoline in plastic jugs is fine.  
Fact: *Gasoline is best stored in sealed metal containers. Dark plastic jugs are acceptable, but light colored plastic jugs allow gasoline color changes and tetraethyl Lead (TEL) deterioration. The plastic caps can create sealing problems. Use a metal container with a good sealing screw cap and be sure of what you have.*
17. Myth: To see if one racing gasoline is better than another, just pour it in and run it.  
Fact: *A different gasoline has to be part of the tune-up; just like spark timing, carb jetting, camshaft, valve lash, etc. Don't over-simplify it. See #15 above.*

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