### **Fuel Additives Questions & Answers**

### 1. Are fuel additives safe for Diesel engines?

Answer: Yes. Diesel products are identified and labelled appropriately for easy identification. They have been thoroughly tested in specific diesel applications.

#### 2. What's the shelf life? How long can I store it?

Answer: Fuel additives can be stored for a minimum of two years but is recommended to be used within 1-2 years. However, if stored properly, they can remain stable and retain their effectiveness for an indefinite period of time.

#### 3. Can I use fuel additives with other products?

Answer: Mixing fuel or lubricant additives is neither recommended nor should it be necessary. Most will say they are compatible.

#### 4. Can I use more than recommended?

Answer: It is not recommended to over treat. While over treatment doesn't harm the vehicle it is not the most effective way to utilize the product. Fuel additives have been formulated to work best at the recommended treat-rate.

#### 5. Are fuel additives recommended for use in 2-Stroke engines?

Answer: Not all fuel additives are designed for 2-stroke engines. Each product is designed differently and only when indicated it is safe to use it should be.

# 6. Are fuel additives recommended for use in small 4-Stroke engines typically found in motorcycles, ATV's, lawn mowers, power equipment and other like applications?

Answer: Yes. You should however read and check each product you want to use to ensure that it is fully compatible with your vehicle and for directions on usage.

#### 7. Why do I have to put fuel additives into the fuel on a nearly empty tank?

Answer: You don't, but for best results and to facilitate better mixing with your fuel, we recommend you add to a nearly empty tank, fill the tank, and then do not fill again until nearly empty. This will allow you to get the most benefit from the product chemistry due to longer use at the recommended effective concentration.

# 8. What happens if I put a fuel additive into a full tank of gas instead of a nearly empty tank?

Answer: It takes a little longer for the additive to mix thoroughly with your fuel. While there would be no negative effects, to get optimum results, the product should be thoroughly mixed with your fuel. This is accomplished more efficiently by filling a nearly empty tank.

#### 9. Can I use any fuel additive in a vehicle designed to use E-85 fuel?

Answer: No. Only products that are properly labelled to treat vehicles that are E-85 should be used.

#### 10. Can I use a fuel injector cleaner in an engine with a carburetor?

Answer: Yes, carburetor deposits are typically easier to clean than those found in fuel injectors and the chemistry used in the Injector Cleaner products will also effectively clean carburetors.

### 11. How many points does the Octane Boost increase the Octane rating?

Answer: 10 Octane points = 1 Octane level. Octane level is how gasoline is rated, for example, 87, 89, 91 and 93. For example, Gumout Octane Booster increases octane points by 8 points or .8 Octane level, although this may vary depending on the amount of fuel treated and the source of the gasoline itself.

#### 12. Are fuel additives good for turbo or Super Charged engines?

Answer: Yes.

#### 13. What is the fuel system?

Answer: A system that consists of the fuel tank, fuel lines, fuel pump, fuel filter and fuel injectors or carburetor. This system provides for gasoline storage in the vehicle, filters out particles, delivers it to the intake air system and mixes the air and gasoline, in the correct ratio, so it can be efficiently burned in the engine.

#### 14. What are fuel injectors?

Answer: Electrically operated valves that inject a fine spray of fuel, in the proper amount, into the intake port of the engine. The amount of fuel sprayed into the engine varies with engine temperature, speed and load and is controlled by the vehicles onboard computer.

#### 15. What is the combustion chamber?

Answer: The place in the engine between the cylinder head and the top of the piston where the fuel/air mixture is compressed by the piston and ignited by the spark plug.

#### 16. What's the difference in Fuel Injector Cleaner and Fuel System Cleaner?

Answer: Fuel Injector Cleaners are designed to clean through the fuel injector system including intake valves and ports and Fuel System Cleaners not only clean these parts but go beyond, to help remove deposits from pistons tops, cylinder heads and combustion chambers.

## 17. How do I use fuel stabilizer to maintain my lawn mower, snow blower, chain saw or string trimmer?

Answer: Use clean, fresh gasoline with a minimum octane rating of 87— the same gasoline you put in your car —and stabilize it throughout the season. This alone will ensure your lawn mower, snow blower, chainsaw, and string trimmer start quickly and run efficiently whenever you need it. Keep the tank full to minimize moisture accumulation and then add stabilizer according to package directions and then run the engine for a few minutes to circulate the solution through the carburetor.

**Note**: Ethanol issues continue to be a growing concern for smaller engines and it is recommended that an ethanol safeguard product be used to help to deal with the negative effects of ethanol on the fuel system. This includes moisture buildup, hose, gasket and seal deterioration, corrosive elements will build up in the tank, float bowl and on the fuel injection nozzles.