

The Problems With Ethanol

A must read for boat and other vehicle owners.

In the spring and early summer of this year (2010), we at White Lake Marine have experienced no less than an epidemic of boat owners complaining about ethanol related fuel problems. These problems range from poor performance due to hard starting, rough running, hesitation, and even stalling -- to clogged up fuel filters and injectors, and also gummed up carburetors. In addition, more and more customers are continuing to bring their boats in for repairs for the same symptoms.

In the meanwhile, we have spent many hours researching this new dilemma for our dealership and valued customers. Besides reading much material on the subject, we have spoken at length with officials at Pleasure Craft Marine and Indmar, well known manufacturers of marine engines. We have also consulted with personnel at oil and gasoline distributors, including one terminal where ethanol is actually blended with fuel. And last but not least, we have consulted with personnel with the manufacturers of Sea Foam and Marine Sta-bil which are special stabilizers for ethanol gasoline.

After doing the research and collecting facts and opinions from many different sources, we have come to realize there are several common sense questions that need to be answered. The following is a brief overview of these issues:

Why is ethanol just now becoming such a huge problem?

Prior to 2009, ethanol was not in all the fuel we use in many regions of the southeastern United States. However, in the summer and fall of that year -- and particularly in the first six months of this year -- all the gasoline distributors began converting their stations over to ethanol fuels. Also, bear in mind that, thanks to our politicians, there is no notification required by law unless more than ten percent of ethanol is added to fuel. Even premium gas now has ethanol.

Unsuspecting boat owners purchased this ethanol blended fuel and stored their boats for the winter. As it turns out, vehicles which sit for long periods of

time, such as boats, lawn mowers, weed eaters, tractors etc are more susceptible to ethanol problems. The reason is as follows:

Ethanol is a magnet for water. It attaches itself to water, whether from the bottom of the tank where natural condensation has occurred, or even from the air in the tank. Normally, water falls to the bottom where it is out of harms way until it reaches an unsafe level. However, ethanol actually “pulls” the moisture out of the air into the gasoline and suspends this water in the fuel, contaminating the whole tank. Being suspended in the fuel, the engine is then burning a mixture of gasoline and water -- all the time. Eventually, the ethanol separates from the gasoline (phase separation) and falls to the bottom of the tank still attached to the water, forming a “glob” of sticky material. When this substance accumulates high enough in the tank, then the engine is drawing in pure ethanol and water -- stalling the engine.

Cars and trucks are generally used every day, and therefore, use up the ethanol fuel in a more timely fashion, giving it less time to cause problems. However, be sure it is in fact accumulating moisture in those tanks as well over a longer period of time, and if allowed to accumulate, water can wreak havoc on the entire fuel system.

Another potential problem exists with the gas stations:

Bear in mind that ethanol is very corrosive and attacks aluminum and fiberglass tanks. It also attacks rubber fuel lines and other fuel system components unless they were manufactured specifically for use with ethanol. According to the oil and gas distributors we spoke with, they cleaned their station tanks before adding ethanol fuels. However, it is true that some station owners did not, and as a result, the new ethanol fuels scrubbed and scoured their tanks free of old rust and accumulated debris. Then this loosened material actually went into many vehicles causing much damage. We know of one person whom this has already happened to, and reports of many others.

It is also noteworthy to mention that, due to the problems with ethanol, the oil companies refuse to allow ethanol fuels to be pumped in their main pipelines. They insist it be blended at the terminals where trucks are loaded for shipment to gas stations. It is not good for the oil companies -- but it is fine for our vehicles.

Another potential problem with gas stations is the fact that whereas ethanol is separating from fuel and collecting moisture in our vehicles, it is also happening in the tanks at the gas stations -- a fact you won't hear much about. However, it is common sense, as the same conditions exist in those underground tanks as does in vehicle tanks. As long as the station owners are vigilant and check their tanks on a frequent basis, and then pump out any ethanol and water collected on the bottom, then perhaps all will be well. However, when left to accumulate to a certain level, a concentration of water and ethanol is pumped into vehicles, again causing much harm. One station attendant at a large Exxon station confided they must check their tanks every day because of this very problem.

Other harmful effects of ethanol.

While the purpose of ethanol is supposedly to lessen our dependence on foreign oil, and since it burns more cleanly due to its plant (non petroleum) origins, it is also used as a less expensive method of boosting gasoline octane. When the ethanol separates from gasoline, then the fuel loses its octane rating, causing pinging or spark knocking in engines, again causing potential harm.

Also, ethanol is a dry fuel in that it scours the oil film from cylinder walls, causing piston rings and other components to wear prematurely. Reports of [ethanol damage](#) to engines are being made more frequently, and [lawsuits](#) are becoming more common. A search on the internet for ethanol problems will give pause for serious reflection. However, beware there are some websites that give false information such as one which states that vehicles manufactured since 1970 can safely use ethanol. Don't believe it -- as experience has proven otherwise.

What can I do about the problem with ethanol?

Generally speaking, the gasoline distributors have left a few stores scattered around that still have non-ethanol fuel. For our local customers, there is only one in Elizabethtown and two country stores where farmers have specifically requested non-ethanol fuel. The gasoline at White Lake Water Sports (the marina pier on White Lake) has always been and continues to be ethanol free, and signs are posted to that effect. The stations mentioned are the Happy Mart (Atex gas) near Dorman Chevrolet in Elizabethtown, Longs Store on Hwy 210 near the intersection of Hwy 41, and Potters Store in Kelly.

You should immediately try and locate an ethanol free store in your area and use it in everything you own -- especially those vehicles that sit idle for long periods of time. It would be wise to call a few gasoline distributors in your area and they will advise you which of their stores have non-ethanol gas. The station attendants often do not know for sure, since it may not be posted on the pumps.

Secondly, you should get a can of Sea Foam or the new Marine Sta-bil and put it in every vehicle. (Sea Foam can be found at automotive parts stores, Super Wal-Marts, and marine dealers. Marine Sta-bil can be found at marine dealers and some parts stores.) This will help disperse the water already accumulated in the tank and help to make it burn with minimal harmful effects. These special stabilizers literally take the water away from the ethanol by isolating the water molecules. They also have cleaning agents and emulsifiers to liquefy the gum and varnish already formed in the system. If problems still persist you will have to have your tank cleaned and new filters installed. By the way, the stabilizers used in the past, including regular Sta-bil, have only a minimal effect with ethanol fuels.

If you must use ethanol gasoline in your boat or other vehicles that are idle for long periods of time, you will have to use one of these stabilizers in every tank of gas -- or else pay someone to remedy the inevitable problems which will occur.

According to Sea Foam, for your everyday car or truck, you should use a can of their stabilizer in your fuel tank every 3,000 or 4,000 miles. This will ensure the moisture and phase separation will be reduced to a minimum, thereby preventing or minimizing any long term ill effects.

Another point to be made is ethanol causes poor gas mileage, especially when phase separation occurs. We have found that a tank full of non-ethanol fuel and a can of one of these special stabilizers will restore fuel economy and give a noticeable increase in performance.

You will probably be interested in knowing there are at least three contenders for the best treatments for ethanol gasoline. The following websites may be helpful.

[Sea Foam](#)

[Marine Sta-Bil](#)

[Startron](#)

Why are our local and federal governments allowing this travesty?

Our only answer is “don’t forget to vote.” This is a serious matter, as are many other things being imposed upon us as a nation. The EPA is actually entertaining the idea of [allowing fifteen percent](#) ethanol in gasoline. However, they have postponed their decision until the fall of this year -- most likely until after the elections. We hope you don’t develop voter apathy as it will make you stay home on voting day, and voter “amnesia” could make you forget this and many ills plaguing our society and cause you to vote the same problems back into office. We at White Lake Marine treasure our constitutional freedoms and our Christian heritage as a nation. We wish the best for every one of our customers and friends alike. Happy boating.