

Ethanol and more.

By now I am sure you have read about or experienced or know a guy who knows a guy who heard about a guy who's boat suffered aggravating expensive damage as a result of using ethanol laced fuel. Rumor and hearsay? Unfortunately no. Sadly most of the rumors and stories are true.

Ethanol or "E-10" means simply that the gasoline contains up-to 10% alcohol by volume. The grapevine has it that 15% ethanol fuel is coming. Putting aside the bureaucratic arguments such as ethanol is a bad idea based on bad science and twisted math and does nothing at all to help with greenhouse emissions, contains fewer BTU's resulting in more fuel burned for a given power etc., there are few things you should know to better arm yourself against this current threat.

This first thing you should know is that there is no middle ground. When speaking of boats you must avoid or embrace ethanol 100%. A full commitment is required regardless of the direction you take. This is because E-10 doesn't play well with conventional fuels. When mixed with common gasoline a phenomena known as "phase separation" occurs. In layman's terms this means that the liquid in your tank becomes (un-mixed) so to speak. You will wind up with several layers of fluids and none of them are fit to burn in your engine. The good news is that in SW Florida the majority of fuel docks and delivery trucks pump regular high-octane MTBE gasoline. Alternatively nearly all roadside gas stations are pumping E-10. For me and I think for you this makes the decision an easy one. From personal experience in the two gas boats I run one burns MTBE and the other runs E-10. This first boat is a 34' offshore center console with two very thirsty 250hp outboard engines. This boat has no trailer and is lift kept. As I am not about the schlep 54 five-gallon gas cans to the dock the decision is easy; Call the truck. On the other hand the Baitkiller, a 20' CC with a single little four-stroke outboard runs all weekend on about 12 gallons of gas. So Friday night sees me at 7-11 with three red cans getting ready for the weekend. If your boat is trailer kept the decision is already made for you too as you most likely fuel at a gas station on the way to the ramp. Neither of the two boats I mentioned has any fuel related troubles for a couple of reasons. The main reason is that I never mix fuels. The big boat has never tasted E-10 and never will if I can help it. The little boat I re-powered 3 years ago and made the committed switch to ethanol then.

To ready the little boat for E-10 I removed every piece of the fuel system I could and threw it away. I replaced the tank withdrawal tube, fuel hose, primer bulb and filter. The little spin-on filter was replaced with a large capacity Racor 10 micron assembly that features a see through bowl. When we commissioned the boat and fueled with E-10 I instantly started seeing water in the bowl. We ran the boat for three hours stopping every 30 minutes and draining about a cup of water from the filter. Since then I keep the tank as empty as I dare and have had no water issues at all in three years. (Touch wood).

The problem with E-10 is threefold and using it in watercraft demands a basic understanding of your boats fuel storage system and how that relates to ethanol. Ethanol and or alchahol is a great cleaning agent. It has the ability to dissolve the golden colored layer of fuel varnish that has accumulated in your tanks; lines, fittings and

accessories from years of using MTBE fuels. All this dissolved varnish has a tendency to plug filters; injectors, pumps and worse yet, re-solidify on hot intake valves causing major engine failures. That is why I stress replacing everything you can and cleaning the tank if possible before making the switch.

Another trait of alcohol fuel is that it absorbs moisture at an alarming rate. Do you recall the age-old rule of storing your boat with a full tank to limit the build-up of condensation? Today, just the opposite is true. If you plan to leave your boat unused for an extended period I highly suggest you burn off as much fuel as you dare before leaving. The reason is that boats have an open fuel storage system. The gas tank on your boat is vented without restriction to the outside air. In a car your tank is sealed and usually pressurized making atmospheric moisture absorption a mute point. That is why cars don't have water issues with E-10. I watched a You Tube video demonstration last week that was pretty conclusive. A mechanic filled two mayonnaise jars with gas. One he filled with E-10 and the other jar he filled with regular non-ethanol gas. He placed both jars on a workbench 6 feet from a fan. The fan was turned on and left running for one hour. At the end of that one-hour duration the jar containing the regular gas had no change in appearance. Conversely, the jar containing E-10 gas had turned cloudy and had accumulated an easy 1-inch of clear water in the bottom. Think about the wind blowing by your gas tank vent on your boat. The same thing is happening there.

In summary; when it comes to E-10 and your boat you should either avoid it or embrace it 100%. Make sure you run good 10-micron filters that can be easily drained of water and leave you tanks as low on fuel as you dare.

And of course remember that E-10 doesn't play well with other fuels.

Call your Congressman and let him know that you don't want E-15.

I have a few openings for yacht management and Capt. Services. Call the office for rates availability.