



ValvTect Technical Bulletin

“Use of Ethanol Gasoline in Marine Engines”



As you may know, refiners are expanding the distribution of ethanol blended gasoline to meet recent federal requirements. This includes gasoline sold at marinas.

ValvTect Marine Gasoline is the only gasoline specially formulated to prevent problems caused by ethanol. However, due to higher moisture in the marine environment, and due to certain incompatible fuel system components used in some older boats, you must also properly prepare your fuel system before switching to fuel containing ethanol or you may experience problems even when using ValvTect Marine Gasoline.

Because of these concerns about ethanol, ValvTect wants to provide important information to help make the transition smoother and help prevent ethanol related problems.

Phase Separation

Ethanol attracts water. Gasoline tanks containing more than 0.35% water are at risk of having ethanol phase separate into an alcohol and water layer at the bottom of the tank. When this happens, the fuel's top layer contains reduced level of high octane ethanol and a substantially reduced octane gasoline. Engines are not able to effectively burn the lower octane fuel efficiently or the alcohol and water mixture. Do not attempt to “fix” this fuel! The fuel must be properly discarded.

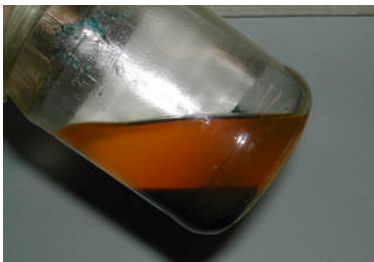


Fig 1. Phase separated fuel from boat tank.

In order to avoid phase separation, make certain there is no water in the boat's gasoline tank before

fueling with ethanol blends. Refuel only when the gasoline level is less than ¼ tank, especially during the first and second fill after transition.

Storage of Ethanol Gasoline

If a boat is to be stored for more than 60 days, it is recommended the tank be filled to 7/8th capacity with ValvTect Marine Gasoline which is specially formulated to keep the fuel stable and provide moisture control. This will also help avoid moisture buildup and allow for expansion. Non-ValvTect gasoline should be treated with ValvTect Marine Fuel Stabilizer or ValvTect Octane Performance Improver.

Fiberglass Fuel Tanks

Gasoline containing 10% ethanol has been documented to cause a chemical reaction with certain resins used in some fiberglass fuel tanks. This can result in a deterioration of tank walls and, in extreme cases, leakage with the risk of causing an explosion. In addition, the resin absorbed in the fuel can plate on intake valves. This may result in engine failure.

It is STRONGLY recommended that boaters contact their boat manufacturer to make sure their fuel tank is compatible with ethanol fuel. Bertram, Tripp Angler, and Hatteras are some of the boat manufacturers that used these fiberglass fuel tanks in older models and have had tank failure problems.

Solvent Characteristics of Ethanol

Ethanol acts as a solvent which will breakdown any deposits and sediment buildup in your fuel tank or fuel system. All Certified ValvTect Marinas were advised to pump out all water and/or sediment in their gasoline storage tanks and install special ethanol compatible fuel filters. prior to taking delivery of ethanol gasoline.

We recommend that boaters carry additional ethanol compatible fuel filters and tools needed to replace fuel filters in the event a filter becomes clogged. In addition, it is advised that boaters check with their marine dealer or engine manufacturer to be sure the fuel filter being used is suitable for 10% ethanol gasoline.

Rubber Components

Older engines and their fuel system components may be susceptible to ethanol damage.

We suggest that all rubber components exposed to fuel on both new and older boats be inspected on a yearly basis and replaced immediately if necessary by an experienced mechanic.

Fuel Quality

Follow your marine engine manufacturer's recommendations for minimum octane levels. Use ValvTect Marine Gasoline, sold only at Certified ValvTect Marinas, to provide the best possible performance and protection against ethanol related problems. Non-ValvTect Marine Gasoline should be treated with ValvTect Marine Gasoline Stabilizer or ValvTect Octane Performance Improver.

We encourage you to further research this topic through your marinas, marine engine builders and boat fuel tank manufacturers,

For a list of Certified ValvTect Marine Fuel Marinas please visit: www.valvtect.com, click on the ValvTect Marine Fuel Logo and then on the State to narrow your search or call 1-800-728-8258.

Have a happy and safe boating season!!

ValvTect Marine Fuels

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