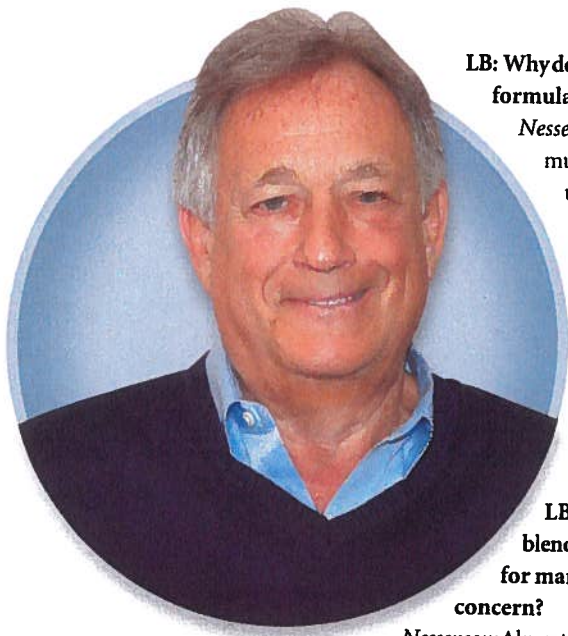


Ethanol 411

ValvTect founder Jerry Nessonson is an expert on fuel issues, including formulations specific to marine engines.



LB: Why do marine engines require specially formulated fuel or additives?

Nessonson: Marine engines operate at much higher rpm than other vehicles, using up to ten times more fuel per hour, which increases, among other problems, engine deposits, commonly known as “gunk.” Also, marine engines are used less frequently and in a hotter environment, so fuel tends to oxidize. Heat and humidity are the enemies of any fuel.

LB: Today’s 10 percent ethanol blend (E-10) has proved controversial for marine engines. Is there cause for concern?

Nessonson: Almost all marine engines built since the mid-1980s can use E-10 without causing engine damage, but it’s always best to check with the manufacturer. When fuel is treated with the proper additive, there should be no problem—if boaters keep their fuel systems free of contaminants.

LB: Will the pump always be labeled as E-10?

Nessonson: Most, but not all states, require pumps dispensing E-10 to be labeled. Just be aware that 90 percent of gasoline sold at land-based stations contains 10 percent ethanol.

LB: We read on fuel-testers.com that with E-10, many gas additives are no longer necessary and may increase the risk of water absorption. Is this true?

Nessonson: No. When E-10 is used in marine applications, it should always be supplemented with a multi-functional fuel additive. The additive should contain, in the proper proportion, a fuel stabilizer, corrosion inhibitor, water dispersant and detergent. Some companies claim that their product can “restore” phase-separated fuel. These additives generally contain a glycol base or other chemicals that absorb the water/ethanol mixture back into the fuel. This is not acceptable and can cause engine damage.

LB: What are the symptoms of a tank of unsuitable fuel, and what do you do about it?

Nessonson: If the engine starts to stall, the fuel or fuel tank may have too much water or other contamination. The boater needs to get to a safe place as soon as possible to check the fuel filters and water separators. Change them if needed (it’s a good idea to keep spares aboard). If the fuel is highly contaminated, have it pumped out and discarded properly.

LB: Does E-10 have a shorter life?

Nessonson: Yes. It can start to oxidize in a matter of weeks, depending on temperature. This is why boaters must use an additive with a stabilizer when using an ethanol gasoline, unless the fuel already contains a stabilizer.

LB: Should boaters purchase higher octane E-10 gasoline?

Nessonson: E-10 gasoline does not give the same octane performance as non-ethanol gasoline. Thus, an 87 octane E-10 is not the same as non-ethanol 87 octane. Ask the engine manufacturer for advice on the preferred octane, especially if the engine is pre-1990.

LB: Why should you never use E-15 in a boat, and how do you avoid it?

Nessonson: First, E-15 is not approved for use in any marine, off-road or pre-2001 automotive engine and cannot legally be sold. Once a warning label is approved and posted on fuel pumps, E-15 may be available at land-based gasoline stations. However, it is not legal for the station to sell E-15 to a person dispensing it into a boat. This creates a liability for the gasoline marketer, and most have indicated they will not sell E-15 unless they are exempt from this liability. Second, no marine engine manufacturer has approved E-15, so, if used, it would void the engine’s warranty. Third, most pre-1990 marine engines may have compatibility problems with seals and gaskets. This is a possible safety hazard and could cause engine damage. Although E-15 will not harm most newer marine engines (post-1990), the fuel/air ratio would need adjusting to accommodate the higher oxygen content of E-15 versus E-10. The bottom line to all boaters—Do NOT use E-15 at this time! ♦

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