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As the world grows ever more environmentally conscious, pump gasoline, and in turn many classic cars, have felt the effects. Ethanol now makes up at least a portion of every fill-up. While this may suit newer models designed to take advantage of the benefits of ethanol-blended fuel, which cuts down on petroleum use and greenhouse gases, it can be a nightmare for those vehicles produced when full-service at the local filling station was still a viable option.

Ethanol is "hygroscopic," meaning it absorbs moisture. This can cause corrosion in both the fuel system and inside the engine. High levels of ethanol also may lead to increased moisture in the crankcase, which can cause rust and other corrosion problems over time.

Ethanol alone is corrosive to components made of aluminum and zinc, while gasoline-oxygenate blends (such as those found in pump gasoline) can also corrode magnesium and steel. This oxidation in fuel leads to fuel degradation and breakdown that results in gum formations and varnishes. The molecular makeup of the fuel will actually change, leading to a decrease in the octane rating and a lessening of fuel performance.

Using an additive like Carb Defender, Lucas Ethanol treatment and several others can help prevent corrosion, stabilize fuel, and clean deposits from ethanol

Carbureted engines are most at risk because carburetors are made from the exact materials that ethanol attacks. As I realize most of us in the club have fuel injected engines, but a few members vehicles have carburetors, and I don't want them left out. (I miss my 78 Corvette with the Quadrajets, I could rebuild those with no issues) Most carbureted engines fuel systems are vented to the atmosphere, which allows the ethanol-blended fuel to attract moisture from the air. In addition, problems caused by ethanol are made worse by long periods of storage between uses.

There are a variety of fuel additives on the market to combat these problems. While designed to remove ethanol, these products ironically often contain alcohol. This can also alter fuel itself. Using these

products is usually not a good idea, since you won't know exactly how fuel will perform and what effects it will have on the engine.

Most fuel additives that contain alcohol claim to prevent phase separation, which is the term used when ethanol-blended fuel becomes saturated with water.

One viable option is to utilize a known brand of fuel stabilizer and additive.

Many of the stabilizers create a chemical barrier so the fuel will not be altered. It provides fuel stabilization, deposit cleaning, and corrosion protection. It also will not affect the performance of O2 sensors or catalytic converters. In fact, it will help the engine run cleaner, which will promote better emissions. Essentially, this is the purpose of ethanol-blended fuel, so everybody wins. So my advice here is, if you have a fuel treatment/stabilizer that works for you, stay with it.

Mike