

Ethanol *In* Small Engines

Tests Show Ethanol Not Cause Of Buildup In Small Engines

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Using ethanol in small engines is the subject of some research by Bradley Schad, director of ethanol policy at the Missouri Corn Growers Association, Missouri Corn Merchandising Council.

"Ethanol has gotten a bad wrap in small engines, catching the blame for the problems actually caused by the new fuel formulation in

mation.

"There is some leeway depending on where the gasoline is refined," he said. "Not all fuels are the same. Some have stabilizers in them, but you basically have 30 days to get it used up once it is purchase at the retail location."

Schad recommends that people make sure to stabilize that fuel. That will cure 90 percent of the problems.

"We're not pushing ethanol on the small engines. We can only go to E10 legally in the small



use today," he said. "I work with small engine dealers and they've seen a lot of problems with gum up and varnish in the carburetor. This is not an ethanol issue, but we're getting the blame for it. The thing about the fuel we have today is the shelf life is so short that it starts varnishing within 30 days. That's why you get the varnish buildup in the carburetor. In turn, that buildup can run your engine lean, causing real harm and actually burning the engine up. We're working to prove that ethanol is not the cause of these problems."

In an E10 blend (10 percent ethanol, 90 percent gasoline), the 90 percent gasoline is actually the culprit," he said. To prove that it's not the ethanol he has taken some small engines for testing the past three years. In some, he went all the way to E85 just by adjusting the amount of fuel going to the engine.

"We didn't change any fuel lines, or anything in the carburetor, besides putting a bigger jet in it," Schad added. "I have a fuel injected four wheeler that I've adjusted to run on E85. I bought a programmer to adjust the fuel map because its fuel injected, but no parts were changed.

He's from the Show-Me State so as an easy way to prove that problems aren't due to ethanol. Bradley took straight ethanol, straight gasoline, and an E10 blend. He then took different engine components which would come in contact with fuel in a small engine and let each sit in the various fuel blends over an extended period of time.

"You can see deterioration of parts and changes in fuel color in the gasoline and the E10 blends, but those problems don't occur with the straight ethanol," he reported. "Because you have problems with straight gasoline, you know ethanol is not to blame."

In a recent study, Oklahoma State University documented the different changes in gasoline formulation over the years. Available online, the "Changes in Gasoline IV" study shows today's formulation of gasoline is actually more corrosive to the plastic parts than ethanol is.

The corrosion and deterioration of fuel lines is another issue that ethanol is getting blamed for. However, the gasoline itself actually causes the deterioration.

The 30-day shelf life of petroleum is an esti-

mates," he noted. "And, we're not talking about E15. It's only approved for on-road vehicles, 2001 and newer, and we want to make sure the public knows that. But the gasoline we have today is a different fuel.

"Back when my dad was young, and even when I was younger, the fuel we had would last a lot longer," he continued. "It could last six months or even a year and would remain viable for use in a small engine. But the fuel we have today just starts varnishing so quickly, due in part to updated regulations."

Schad concluded by saying the E10 blend is great for small engines.

"What we're saying is we don't want to get the blame for problems unrelated to the ethanol," he said. "We want people to be comfortable using E10, knowing it's a safe, high performance product.

"Ethanol is also a cleaner, more efficient fuel. The greatest benefit is it's produced here at home by Missouri farmers. We have a thriving industry here - one of the only industries that is growing and providing American jobs and increasing economic activity here at home"

Basically, that is his take-home message: Ethanol is cleaner, better for the environment, great for the economy and it's providing American jobs.

"Ethanol is a great fuel and it's a high octane fuel, producing more power for your cars," he continued. "I actually use an 85 percent ethanol blend (E85) in a flex fuel truck and I enjoy the additional power. So I see a benefit there."

Among the equipment that he has used E85 in are a fuel-injected four-wheeler, a 2007 Honda Rancher; and a Stihl Farm Boss chainsaw; all with only minor changes to the equipment. He also has a Poulan blower, a John Deere Gator, Briggs and Stratton lawn mower, Shindaiwa line trimmer, Generac generator, Mercury 8HP outboard, all that run on anything from E15 to E20 without any issues.

"We've been running ethanol in this equipment for three years," he added. "We're conducting this testing to prove that it's not the ethanol that's causing problems." Δ

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