

At the Zarco 66 station in Lawrence, Kan., a revolution is being fueled. Alongside other blends of gasoline is E15, an ethanol and gasoline mix recently cleared by the EPA for commercial sale.

A mix of 15 percent ethanol and 85 percent gasoline, E15 jumps above E10 in the race to reach the Renewable Fuel Standard's alternative fuel goals. E15 proponents call it an accomplishment for American energy independence – green industry pros see it otherwise.

Even though the fuel burns

cleaner than E10 or straight gasoline, smoothing engine knocking, reports show it can damage off-road vehicles and small engines. It's approved for light-use vehicles from 2001 to the present, but the fuel could find its way into tanks and engines it's not made to power and do major damage.

READY OR NOT. E15 stems from the Renewable Fuel Standard, created under the Energy Policy Act in 2005, as a mandate that ethanol, advanced biofuels and cellulosic fuels be blended into gas at certain levels by goal years.

“The underlying assumption

of the Renewable Fuel Standard, gasoline usage will continue to increase forever, and the E85 flex fuel fleet would grow and expand just didn't happen,” says Kris Kiser, Outdoor Power Equipment Institute (OPEI) president.

Kiser's biggest concern isn't whether the goal is met, it's that the fuel was rushed to the market without enough testing on engines, light-duty vehicles and otherwise. “The two officially sanctioned tests were done by the Department of Energy and the National Renewable Energy Laboratory,” he says. “They tested 28 engines and four engine classes

of (OPEI's) 900 classes that are regulated. Everything failed. The Department of Energy tests on small engines – each of the 28 engines had either performance irregularity, failure, unintentional clutch engagement, it had some kind of problem.”

Scott Zaremba, president of Zarco 66, Inc., where E15 has made its debut, doesn't see the testing the same way. “The report I've seen was a large engine manufacturer testing auto engines,” he says. “They had failures with 15 percent, but what they forget to tell you is they also had failures on straight gasoline. When

What you need to know about the new ethanol blend.

By Kyle Brown



you look at the reports, they say 'could' or 'may.' There's nothing that says 'will.'"

Based on those reports, EPA determined the fuel safe for general use in some vehicles and moved forward on granting partial waivers for vehicles from 2001 and newer in 2011. Green industry pros, the oil industry and others questioned those waivers, and took the issue to the U.S. Court of Appeals.

"Our concern was that the language of the Clean Air Act says that when the EPA issues these waivers, the waiver needs to apply to the entire market," says Patrick Kelly, senior policy advisor for the American Petroleum Institute. "The Clean Air Act, as amended in 1990, is pretty clear that the EPA has the authority to issue a waiver of the CAA that says that 'This fuel blend is essentially deemed similar enough to the fuel that the vehicle was tested on for emissions that it's

acceptable for use in the marketplace.' But E15 potentially puts some cars over the limit in what they're able to tolerate. The fuel is not suitable for all engines in the fleet."

The U.S. Court of Appeals didn't directly disagree with that Aug. 17, but it did rule the associations didn't have the proper standing to raise the appeal in the first place, on question by Growth Energy, a representative of ethanol producers. The fuel would see the market.

MAKING THE BEST OF IT. With the waivers, the EPA cleared the fuel to reach consumers. It can be sold on its own at stations, or using blender pumps. "So for the consumer now, you've changed the fueling paradigm, which has existed in this country since the internal combustion engine was introduced," says Kiser.

However, the waivers didn't come without guidance for those

filling up – a Misfueling Mitigation Plan was reviewed by EPA in March, including a label to be posted at pumps listing restrictions for the fuel. "That's right on the dispenser," says Zaremba. "It says that E15 is only for 2001 and newer cars, trucks and SUVs. That's it. We make sure that it's prevalent so customers can see and understand that. Education is the No. 1 thing we try to do every day."

The label bars use in other vehicles, boats and gasoline-powered equipment, but buyers at the pump might not follow guidelines or be equipped to make that choice, says Kelly.

Though Zaremba tries to provide that education with the sale, he wants the manufacturers to help make the issue disappear in the future, he says.

"E15 is not approved to run in the small engines. We need to make sure today they are not using higher than an E10 blend. We

don't want them to put something in one of their engines that is not approved," he says.

LOOKING FOR OPPORTUNITY. Though it's raised questions for green industry dealers and consumers, like any market change, the introduction of E15 has also created products opportunities.

"Fuel treatments are springing up all over the place. We have two that just became members of OPEI," says Kiser. "Now you have a bunch of guys getting ready to put boutique fuel on the shelf, like Stihl and Briggs & Stratton. It's expensive, but it's safe – there may be a trend toward that."

Beyond fuel treatments, Zaremba says there's the potential for future engine builds. "They're going to have to change some components in their engines to make sure they don't have any issues with ethanol fuels," he says. "They could em race what it's doing, and make sure what

Locally strong

When Troy Karlin, partner at All-N-1 Landscape in Lawrence, Kan., needs to refuel his Ford Ranger, he looks for a local Zarco 66 station, where he can find one of the few places in the U.S. that E15 blend gasoline is currently sold.

"We are huge fans of Zarco 66 and Scott Zaremba," says Karlin. "We'll use it every chance we get. I will personally go out of my way, and I've kind of instructed my guys to do it every chance we get on every piece of equipment."

Though he knows some equipment can be damaged by the ethanol-based fuel, he uses it where he's able, along with biodiesels for some of his fleet. A voided warranty isn't much of an issue to him, he says, since his equipment is already past that point, he says.

"We've looked into it and our warranties are already expired. So we don't care about the warranty," he says. "We don't have any brand-new equipment. So if the warranty's already past, we like the ecological benefits."

Karlin's All-N-1 has company goals that lean toward environmentally friendly practices, with green roofs, rain gardens and edible landscaping. But while

the cleaner-burning E15 comes closer to meeting that aim, there's a larger concept at work for him.

"For me, it's about strength in our community by relocalizing, and getting some fuel security in the community and for our local farmers," he says. "If we can develop a local market, they'll have options."

That goes along with one of the reasons Scott Zaremba is the first to market with E15 at his Zarco stations, he says.

"I've watched over the years as our country has been held hostage for the most part by transportation energy that comes from overseas," he says. "So I said, 'Why in the world would we not want to pursue products that one can be overall better for the environment and also be able to produce the jobs locally with locally based products?'"

E15 may not be the perfect fuel, and needs more testing to reach the broader market of vehicles and any small-engine use, but starting the movement to work with manufacturers to develop engines to better handle alternative fuel is part of that process, he says.

"We need to be thinking ahead and we need to be moving forward," says Zaremba. "It's not infinitum, and it's not going to be around and available always."

they're manufacturing will embrace whatever's coming down the pipeline, because we don't

know what we're going to be able to produce next as the price of oil stays high."

"Most everybody has a product that's warranted to E10," says Kiser. "In relatively short order,

you'll see people saying, 'We have an engine product that runs on E10 to E20. If you want to be safe in the marketplace, buy my product.' There's opportunity."

But dealing with E15 in the short-term and handling alternative fuels with the RFS in the future means an active role in working with the EPA and the government to make certain that the right tests and goals are set in place. "Talk to your congressman and your senator, tell them to clean this up. The underlying statute – tell them they've got to fix it," Kiser says. "EPA is essentially following the law, forcing into the marketplace this biofuel." **GCI**

Kyle Brown is assistant editor of GCI and editor of Green Industry Supply Chain Management.

3 Keys

When working with small engine equipment, here's what consumers need to know about how E15 can be used:

1 Read and follow the owner's manual. The hope is that dealers and distributors will draw folks' attention to it, that their machine is an E10-designed machine and its warranty would only cover up to E10. Any fuel above that may damage your equipment and void your warranty. The manual is crucial in preventing some unfortunate product testing. "What they need to know is what products can be used with that piece of equipment, and that information is going to come from the manufacturer," Zaremba says. "Right now, EPA has not said it's appropriate for those. But we don't want people to test it on their own. We want to test it in a lab and make sure there's not an issue."

2 Don't put any fuel containing more than 10 percent ethanol (E10) in small engine products, unless the machine is built to handle it. Don't assume that the fuel used for a vehicle is the same as the fuel used in a gasoline can. "The engines are very susceptible to ethanol," says Kiser. "It phase separates faster, it absorbs water, and it stales twice as fast. This is not something you can leave in your machine or even in your gas cans."

3 Check the gas pump to be sure that it is dispensing E10. Some gas pumps may offer both E10 and E15, or have blender pumps that dispense mid-level ethanol fuels for flex-fuel automobiles. "You potentially have somebody coming up with their car and what they've got on the trailer, and generally, people like to just slip their card once," says Kelly.

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