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Grease is the word
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By BRIAN SPADORA
HERALD NEWS

Every french fry served in a Sparta saloon fuels Tom Fuscaldo's car farther down the highway.

Fuscaldo, 77, drives a blue 1984 diesel-powered Mercedes that has been modified to run -- quite nicely -- on waste vegetable oil. Waste vegetable oil, or WVO, is the greasy stuff left over after something is cooked in a deep fryer. The oil must be pumped through an electric filter to remove solid particles, but once it's ready it provides environmentally friendly fuel that gives off barbecue-scented exhaust. The car could also run on straight vegetable oil.

"If there was a closedown of all gas stations, I could go to a 7-Eleven and get salad oil," Fuscaldo said.

Fuscaldo, a lifelong Paterson resident, recently showed off his veggie oil-powered car and invited a reporter to take a test drive. Before the ride, he held up two 10-gallon tanks and said, "I used this much veggie oil to go four hours on the (Garden State) Parkway at normal, or slightly above normal, speed."

He directed the driver to Interstate 80 west for a trip out to Sparta's Village Saloon, the restaurant that supplies Fuscaldo with as many gallons of fryer oil as he cares to carry away.

After the car's temperature gauge read over 80 degrees Celsius, or about 176 degrees Fahrenheit, Fuscaldo flipped a small switch on the dashboard. With no perceptible change, the Mercedes started running on vegetable oil. The car must run on diesel petroleum until the engine warms up because the vegetable oil must be heated to flow properly.

On Interstate 80, the Mercedes sailed along, though not as fast as Fuscaldo would have liked. "I've gotten it up to 80 (miles per hour) on this stuff," he said. "Today, the traffic won't let you."

Fuscaldo became interested in biodegradable vegetable-based fuels through his nephew, John Puig, who has fit a dozen diesel cars with WVO systems in the past year.

Puig, 34, who lives in Florida and works as a ship's captain, said in a telephone interview that he learned about vegetable-oil fuels while working on a friend's organic farm. In 2002, Puig's friend switched his farm equipment over to a kind of fuel made of vegetable oil, alcohol and lye.

"I couldn't believe it," Puig said. "I was like, 'You're going to ruin the tractor!'"

But Puig started researching the subject and became a believer.

A few months ago, he convinced Fuscaldo to buy a used Mercedes, although any

diesel car would have worked. Older cars are easier to convert because they are not run by electronic systems, he said. Puig and his brother spent several hours installing the vegetable-fuel system in their uncle's car.

The type of Mercedes he recommends usually costs between \$2,000 and \$6,000, he said. Parts and labor to install the vegetable-fuel system run about \$1,800, and the filtration equipment used to prepare the fryer oil is about \$1,000, he said.

With gas prices hovering around \$3 a gallon, the conversion to vegetable fuel pays for itself in about 20,000 miles, Puig said.

"It's very easy to do, and I hope more people will do it," Puig said. He provides detailed directions for making the switch to vegetable-oil fuel on his Web site, www.naplesbiofuel.com.

There is no national organization keeping track of vehicles running on vegetable oil, but there are probably between 5,000 and 10,000 cars in the country, said Charles Anderson, owner of Golden Fuel Systems, a manufacturer of conversion kits based in Springfield, Mo.

"It's still fairly grassroots," Anderson said. But there were likely just 100 to 150 vegetable diesel cars in the country when Anderson started his business about six years ago, he said.

"It's already catching on to a pretty amazing extent," he said.

Despite getting to ride around on free, clean-burning fuel, Fuscaldo said there are a few drawbacks.

It takes a couple of hours to refine about 30 gallons of fryer oil into fuel, and Fuscaldo said he sometimes misses the convenience of pulling up to the pump instead of hoisting heavy gas cans by himself.

One other negative was unexpected.

He pointed to a maze of scratches on the Mercedes' trunk, which holds the 10-gallon vegetable oil tank. The damage was the work of his 100-pound pit bull, Schwartz.

"Diesel engines usually stink," he explained. "When you're running vegetable oil, they smell beautiful. They smell like a kitchen. Any time I came home (in the past) smelling like a kitchen, I had food for him."

For Schwartz, the smell of burning vegetable oil is a sign of food that isn't there.

"He has put quite a few scratches on the car looking for the food," Fuscaldo said.

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