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## One man's fish fry grease is another man's vehicle fuel

By STEVE ROCK The Kansas City Star

DORA, Mo. — As gas prices soar, some ingenious drivers are going somewhere other than the gas station to fill 'er up.

They're headed to their favorite restaurant.

That's right, people all over the country are converting their diesel engines to run on waste vegetable oil. The same stuff that bathed their crab Rangoon yesterday is powering their Volkswagen Jetta today. They're doing it for free, filling up their fuel tank with greasy gunk that restaurant owners are thrilled to give away.

And scores of those drivers are using Charlie Anderson's company, which he boasts is "here in the middle of nowhere," to do it. Greasel Conversions Inc. is one of the nation's leaders in an industry most people don't realize exists.

Greasel creates, sells and installs conversion kits for diesel engines. Anderson also offers ongoing support and advises clients on where to get their oil. Since restaurant owners typically have to pay to have cooking oil hauled off, they're usually happy to get rid of it.

As Anderson said: "Nothing about this business really seems logical."

Not Anderson's workshop, hidden off a gravel road in rural Ozark County about 65 miles northeast of Branson. Not the vehicle in his driveway, a 2000 Ford Excursion he's dubbed the "veggie burner," which smells a bit like french fries.

And certainly not the product, which seems too good to be true.

"You can't get this done at Jiffy Lube," Anderson said.

Some caution that altering an engine to use vegetable oil could harm a vehicle in the long term.

But industry experts estimate that more than 5,000 people across the United States are driving vehicles that run on waste vegetable oil. This isn't a new concept

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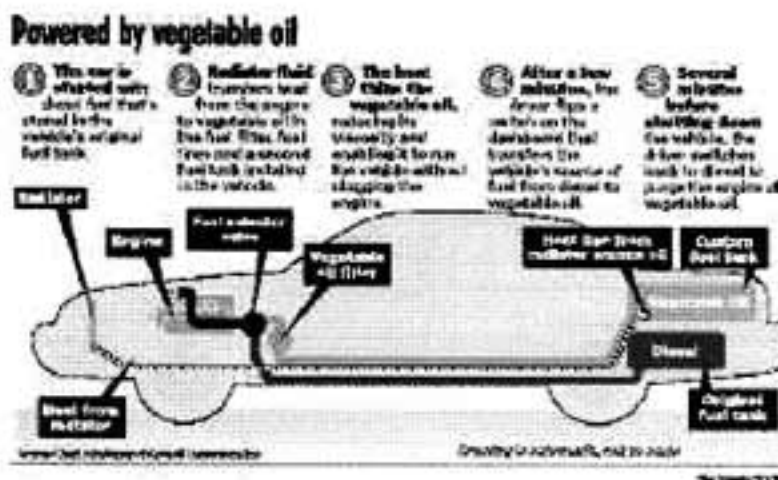
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## Enter Here



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Greasel Conversions Inc., founded by entrepreneur Charlie Anderson (left) sells kits that allow diesel vehicles to run on vegetable oil.



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— when Rudolf Diesel developed the first diesel engine around 1900, he planned to ultimately run it on peanut oil — but it has gained momentum as fuel costs and pollution concerns have escalated.

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The Rev. Thomas Alber of Jefferson City is among the believers.

An associate pastor at Immaculate Conception Catholic Church, Alber purchased conversion kits from Greasel for his 1978 Mercedes and his 1984 Ford pickup. He hits the benefit-dinner circuit to maintain his fuel supply, taking the oil from fish fries and chicken dinners.

"I really have no difficulty finding all the oil I need," Alber said.

As an added bonus, the scent emanating from his vehicle changes from one fill-up to the next. As Alber said: "I've had people ask me, 'Are you having a barbecue in there?'"

### Fuel for free

Anderson recently stopped at Rainbow Trout Ranch in Rockbridge, Mo., where vats fry the fish caught at nearby Spring Creek.

This is one of his fueling stations, one of the many places Anderson frequents to keep a steady supply of waste vegetable oil. Just outside the back door, in a 350-gallon tank, sits a batch of the stuff.

It's brown, thick and it stinks.

"Not exactly glamorous," Anderson said. "But it's still oil."

Diesel engines are versatile, able to use oil that has chemical structures similar to diesel fuel. One way vehicles can run on vegetable oil is through "biodiesel," a chemically modified vegetable oil that is more costly than diesel fuel but requires no engine modifications. Greasel does not deal with biodiesel, just waste vegetable oil.

Diesel engines can't be totally reliant on vegetable oil. During cold weather, the oil hardens and is too viscous to run smoothly. Converted vehicles must maintain a separate tank for diesel fuel, used to start the vehicle until the conversion kit heats the vegetable oil to the proper viscosity.

But that will only take minutes, maybe less.

Then, with the flip of a switch, the veggie oil tank and fuel lines are engaged so the vehicle runs solely on vegetable oil.

That veggie-oil fuel can come from a variety of places.

Chinese restaurants are good, Anderson said, because he's found they use high-grade oil and change it often. Bar and grills are typically OK, too. And while vegetable oil from fast-food restaurants would work, he steers his customers away from it. Too often, he said, the oil there is changed infrequently and is full of food fragments.

"Chicken chunks, French fries ... you name it," Anderson said.

Regardless of where it came from, the waste vegetable oil must be filtered first to remove the gunk before being pumped into a vehicle's tank. With Anderson's Greasel system, that can be done fairly simply. The oil is pumped

from one container into a filter bag that sits atop a second container. Once the oil is filtered, it's ready to go.

Not everyone is a fan of using vegetable oil. There's a chance that altering a vehicle's fuel system could risk voiding manufacturers' warranties.

But that's not what bothers Bob McCormick.

McCormick, a senior fuels engineer for the National Renewable Energy Laboratory in Golden, Colo., said studies have shown that running vehicles on vegetable oil can reduce a car's lifespan.

"Those vehicles aren't going to last as long as they would running on conventional fuel," McCormick said. "Diesel engines are supposed to be low-maintenance and long-lasting engines. Running on straight vegetable oil, I don't think that's going to happen."

### **Business booming**

A tinkerer by nature, Charlie Anderson created his first conversion kit in 2001 with the idea that he might be able to make a buck or two.

"We were dirt poor," said Dawnette Anderson, Charlie's wife. "I said, 'You are crazy.' I thought it was just another one of his experiments."

This year, Anderson expects gross sales to exceed \$1 million.

Every week, Greasel ships out 10 to 15 conversion kits, sometimes more, to places as far away as Japan and France. Customers drive from all over the country to this sprawling acreage, which houses both Anderson's business and his home.

They buy conversion kits that sell from \$680 for smaller cars to \$2,000 or more for trucks. Installation costs are extra, and Anderson said Greasel can complete most conversions in 10 to 12 hours.

On this day, Greasel employee James Bain is preparing orders that will be shipped to California, Georgia, Illinois, New Hampshire and Canada.

"It's definitely busy around here," said Bain, who spent six years working on nuclear submarines while in the U.S. Navy.

For now, the entire operation consists of Anderson and Bain.

Bright financial projections notwithstanding, Anderson said he's still dealing with startup and overhead costs and jokes that he hopes to make more than minimum wage this year. He wants to see the company grow, but refuses to allow the company to become too corporate.

He likes the bucolic setting, the open spaces for his four children, the family horse, Manina, that saunters up during a lunch break and snatches a bite of his peanut butter and jelly sandwich.

"I'm all about growing the business," said Anderson, 32. "But I don't want to lose the quality of life."

Greasel, believed to be the only business of its type in Missouri and one of only a handful across the country, competes with companies such as Deep Fried Rides in Tennessee and Greasecar Vegetable Fuel Systems in Massachusetts. They're fighting for the allegiance of people such as Zac Martin, a Missouri native who lives in



Steamboat Springs, Colo.

Martin paid about \$500 for a Greasel conversion kit and installed it himself in his 2002 Volkswagen Golf. Now, after putting nearly 30,000 vegetable-oil miles on it, Martin couldn't be happier.

Like others, he reports that the mileage per gallon is remarkably comparable between vegetable oil and diesel fuel. He can't tell a lick of difference in the car's performance. And some studies have shown emissions are more environmentally friendly than those of diesel fuel or gasoline.

He even remembers being the center of attention at a Ruby Tuesday's restaurant once, with employees surrounding him as he pumped their waste oil out of a tank and hauled it off.

"They were like, 'What are you doing?' " Martin said. "I said, 'Getting fuel for my car!'"

"I really can't see a bad thing about it. As long as the kit is installed correctly and you're running it correctly, it works absolutely fine."

Unless, of course, you don't like the smell of fish.

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### ***First glance***

- *If you have a diesel engine, you can modify your vehicle to run on waste vegetable oil that most restaurants are glad to give away.*
- *The owner of a southern Missouri business that specializes in converting engines to run on waste vegetable oil says oil from a Chinese restaurant works best, because it is cleaner.*