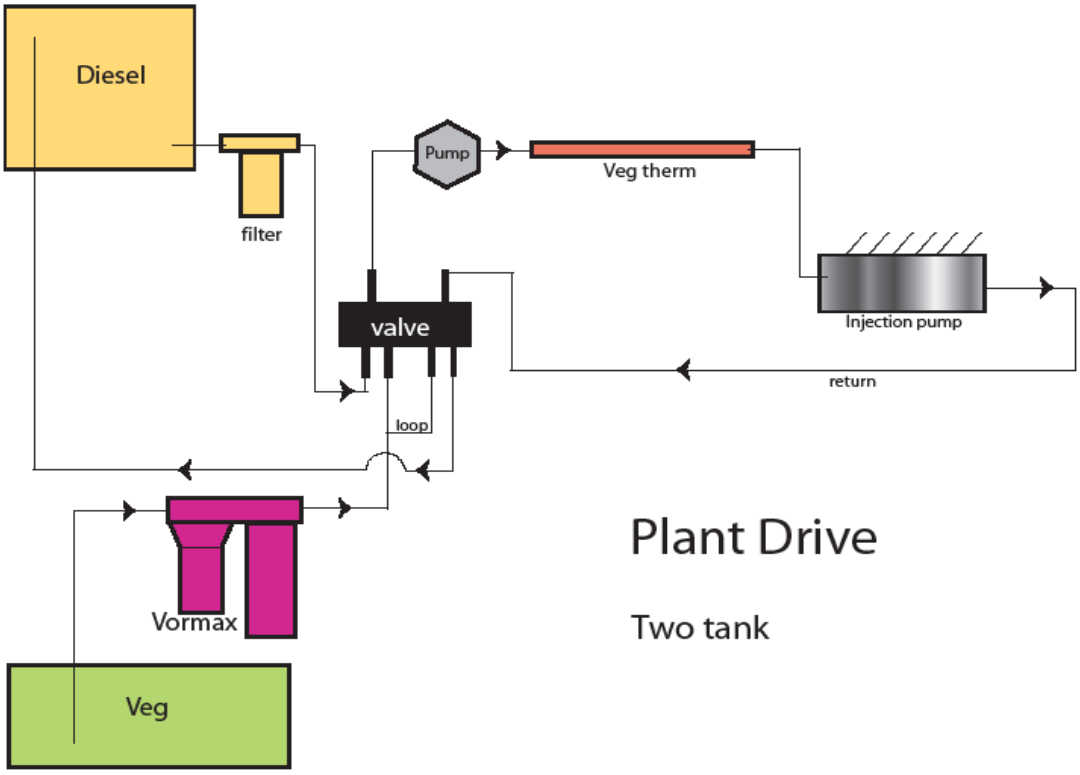
Powered by Waste Vegetable Oil (WVO)

2002 Volkswagen Jetta
1.9 Liter TDI Stock Diesel Engine

How it Works:



Converting the Car:

Any diesel car can be converted to run on waste vegetable oil (WVO). The County's car was converted in May 2006 by the Berkeley branch of PlantDrive™ using the kit described below.

The PlantDrive™ 2-tank WVO Conversion Kit contains:

- 15-gallon trunk-mounted auxiliary tank for waste vegetable oil
- In-tank HotFox™ for heating WVO
- Vormax™ water separator/filtration system
- Vegtherm™ in-line fuel heater
- Dash-mounted WVO fuel level gauge, warning light, and cut-over switch

Designed and Installed By:

Conversion cost in 2006: $4,449

- $1,699—parts & materials
- $2,750—installation labor

ABOUT THE WASTE VEGETABLE OIL CAR

The Oil...

What's the difference between Waste Vegetable Oil and Biodiesel?

Waste Vegetable Oil is used vegetable oil that would otherwise be disposed of as waste.

Biodiesel is a form of diesel fuel manufactured from vegetable oils (used or new) or animal fats. Biodiesel can be used in its pure form or blended with petroleum diesel in various proportions.

Where does the County get the oil from and how much does it cost? Alameda County gets its waste veggie oil for *free* from two local restaurants. The County's only cost is the staff time to pick up the oil.

What would happen to the oil if you didn't use it for fuel? Waste vegetable oil, while safe to use in a car, is considered hazardous waste. Restaurant owners pay to dispose of their waste vegetable oil properly.

Does the oil have to be specially processed? No. Unlike biodiesel, which has to be refined, the oil only has to be filtered before use. First, solids in the oil are allowed to settle to the bottom. Then, the oil is transferred to a simple filtering system. The car also has a final, internal fuel filter.

Which oil is best for fuel? PlantDrive™, who converted the County's car, recommends canola oil; it can be located in most areas of Canada and the United States as used cooking oil.

Performance...

Does it drive like a regular car? The car drives just like it did before conversion. The only difference is the engine needs to run on diesel for a minute or two at the beginning and end of each trip. The driver uses a simple switch to control which tank (diesel or waste veggie oil) the car uses.

Does the car get good mileage? The car gets about 40 miles per gallon—about the same as it would running on diesel.

Is there a "French-fry" smell when the car runs? There is a mild scent of cooking oil when the car is running.

Environmental Benefits...

Why is Waste Vegetable Oil considered "carbon neutral"? As a renewable fuel, vegetable oils are considered to be "CO_2-neutral." Carbon dioxide is captured when the plants are growing, released when the plant fuel is burning, and recaptured during the next growing season. By contrast, fossil fuels release carbon that has been stored for hundreds of millions of years.

Should we all drive Waste Vegetable Oil cars? While Waste Vegetable Oil cars are a good option, we need diversity and choice in fuels. There are several options for alternative fuel vehicles. The County owns more than 100 gas-electric hybrid vehicles and 4 waste vegetable oil vehicles. For more information on alternative fuel options, visit http://fueleconomy.gov

Cost Savings...

How long would it take to earn back the cost of converting the car and start saving?

Mileage	~40 mpg
Conversion Cost in 2008	$4,699
Annual Savings on Fuel Costs* (assuming U.S. average of 12,000 miles driven per year, 2008 CA diesel prices and 95% of fuel use from waste vegetable oil)	$1,440
Estimated Break-Even Point	3.3 years

*The County's cost savings to date have been lower as the car is driven less frequently (only ~10,500 miles in the more than 2 years since conversion).

Alameda County General Services Agency
Motor Vehicle Department