

Vegmatics

Diesel to Vegetable Oil Conversions

Custom systems to run diesel engines on renewable fuel

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System Selection Booklet

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So why should you buy this, anyway?

If you have made it this far, you should already know why you should buy a vegetable oil conversion kit. But why from Vegmatics? These conversions are designed for the quality-minded person who wants a well-built conversion system without breaking the bank. We build and sell well-heated two-tank conversion systems that are built to last and designed not to cause any extra wear on your vehicle.

We build systems ranging from the cheapest on the market all the way to the upper levels of straight vegetable oil technology. All Vegmatics conversions use only the highest quality components at the lowest possible price and, as this is a small-volume business, are custom-built and installed for every application. We can work with you to build just about any conversion to suit your needs and budget.

Although vegetable oil conversions are a new and developing science, we use the most proven and reliable methods to convert your vehicle. Every conversion should be considered a bit experimental, and you have to be up for putting in the effort of collecting and filtering your own fuel. However, the overall experience of driving a converted car is both rewarding and money-saving. Our systems are always built in the best possible ways with the best currently available materials, and Vegmatics is committed to developing and improving our systems whenever it is feasible.

Unlike many other systems, Vegmatics conversions do not sacrifice quality of materials for low cost. Only a few metals are suitable for contact with vegetable oil – stainless steel and aluminum are among the best. Some plastics are also safe for use with vegetable oil. Only synthetic rubbers are compatible with vegetable oil, as high concentrations of vegetable oil will quickly corrode natural rubbers.

Some of the worst materials to put in contact with your oil are copper and plain carbon steel. These can catalyze polymerization reactions in oil, creating unstable, oxidized oil that does not burn as well, and can clog filters and injectors. Brass should also generally be avoided due to its copper content, although it is not as likely to cause problems as other metals. Finally, vegetable oil will corrode and dissolve the zinc from plated steel and galvanized components into a gummy sludge. Our conversions avoid copper, carbon steel, and zinc at all costs. Brass parts are only used in the cheapest system we sell, and only for parts in contact with flowing – not standing – oil. Even that system can be upgraded to use all stainless steel components for a small price increase.

Every component in the Vegmatics systems is carefully selected because it is known to be of high quality and reliable for use in vegetable oil conversions. Other converters sometimes do not take the materials and reliability side of designing conversions seriously enough. Greasecar has a copper heater coil inside the fuel tank, which is always in contact with oil. Even many high end kits use mainly brass fittings. Some kits even use configurations that can be dangerous to your vehicle. Greasecar in particular is known for having coolant leaks from the compression fittings inside their veggie fuel tanks – few things can destroy a diesel engine as quickly as making them try to burn water.

For further detail on the topic of material compatibility of vegetable oil, an excellent independent in-depth study is available online at <https://www.greenroadenergy.com/images/vegetableoilasfuel.pdf>

If you are looking to save money as well, you just might have come to the right place. The Minimalist kit available here costs just \$770 – making it the cheapest professionally built two-tank system available anywhere. Of course, you might want to toss in some upgrades and add on a few heaters to it, especially if you plan to use vegetable oil in cold weather. Our other systems are designed as full-featured systems for use in different climates and for different budgets. The following pages should offer sufficient information and advice to help you make informed decisions about what components you need and how to determine pricing. Various options are available for all systems, and a pricing index is at the end of this document. If you have any questions about components, installation, or general vegetable oil tech, please contact Vegmatics via the phone number or email address listed on the first page.

Systems and Components

Here you can choose a conversion based on your needs. Pick from one of the basic designs on this page, and read on to the next few pages for options for each system and more information about each component. The systems outlined on this page are intended for most Mercedes and VW applications – other vehicles may require additional parts to be properly converted. We can also design a custom conversion to suit your desires. Installation services are available on all systems for \$800.

The New Englander (\$1335): Full-featured system for colder climates
Fuel tank: Aluminum with electrical sender (thirteen-gallon tank in this example, other sizes available)
Fuel line material: J30R9 Fluoroelastomer lined hose, polyethylene tube, and aluminum tube
Fuel line configuration: Semi-looped return
Filter: Griffin G170 water-blocking spin-on filter (up to 45 gal/hr – other sizes available)
Tank Heater: Hot Fox heated fuel pickup
Filter Heater: Coolant coil-wrapped filter
Final Heater(s): 250 watt Vegmatics inline heater, 85 watt injector line heater
Fittings: All stainless steel, aluminum, or high-temperature vegetable oil-compatible plastic
Valves: Two Vegmatics 3-port solenoid valves
Also Included: Water temp gauge, fuel level gauge, necessary hardware, clamps, and electrical parts
Available Options: larger tanks and filters, stronger heaters, automatic switchover, auxiliary fuel pump

The Southerner (\$1265): Full-featured system for climates that rarely drop below freezing
Fuel tank: Aluminum with electrical sender (thirteen-gallon tank in this example, other sizes available)
Fuel line material: J30R9 Fluoroelastomer lined hose, polyethylene tube, and aluminum tube
Fuel line configuration: Semi-looped return
Filter: Griffin G170 water-blocking spin-on filter (up to 45 gal/hr – other sizes available)
Tank Heater: Vegmatics 170 watt electric pad heater
Filter Heater: Coolant coil-wrapped filter
Final Heater(s): Arctic Fox Midranger, 85 watt injector line heater
Fittings: All stainless steel, aluminum, or high-temperature vegetable oil-compatible plastic
Valves: Two Vegmatics 3-port solenoid valves
Also Included: Water temp gauge, fuel level gauge, necessary hardware, clamps, and electrical parts
Available Options: larger tanks and filters, stronger heaters, automatic switchover, auxiliary fuel pump

The Minimalist (\$770): Very basic two tank system for a simple, low budget conversion
Fuel tank: Plastic with built-in level gauge (twelve-gallon tank in this example, other sizes available)
Fuel line material: Polyethylene tube and aluminum tube
Fuel line configuration: Closed loop
Filter: Griffin G170 water-blocking spin-on filter (up to 45 gal/hr – other sizes available)
Tank Heater: Vegmatics 85 watt electric pad heater
Filter Heater: wrapped heater hose
Final Heater(s): 85 watt injector line heater
Fittings: All brass, aluminum, or high-temperature vegetable oil-compatible plastic
Valves: Two brass 3-port solenoid valves with viton seals
Also Included: Water temp gauge, necessary hardware, clamps, and electrical parts
Available Options: larger tanks and filters, stronger heaters, automatic switchover, auxiliary fuel pump, stainless steel fittings and valves

The Elite Fat-Burner (\$2030): The ultimate veggie system – we give it everything we've got
Fuel tank: Aluminum with electrical sender (thirteen-gallon tank in this example, other sizes available)
Fuel line material: J30R9 Fluoroelastomer lined hose, polyethylene tube, and aluminum tube
Fuel line configuration: Fully automated controlled loop with 32 gal/hr auxiliary fuel pump
Filter: Griffin turbine series water-blocking filter (up to 60 gal/hr – other sizes available)
Tank Heater: Hot Fox heated fuel pickup
Filter Heater: Coolant coil-wrapped filter
Final Heater(s): Arctic Fox Linehauler, 250 watt Vegmatics inline heater, 85 watt injector line heater
Fittings: All stainless steel, aluminum, or high-temperature vegetable oil-compatible plastic
Valves: Three Vegmatics 3-port solenoid valves
Also Included: Water temp gauge, fuel level gauge, necessary hardware, clamps, electrical parts, carbon fiber dash bezel, oil temperature gauge, water in fuel sensor
Available Options: larger tanks and filters, stronger heaters, higher flow auxiliary pumps

What is included?

Every Vegmatics system includes the following parts and components:

All necessary fuel line and hoses

All necessary fittings to assemble the system

Necessary wiring, fuses, and relays for all components

Hardware and clamps to assemble the system (additional brackets, etc. to be fabricated by the installer)

Gauges – fuel level and water temperature (so you can tell when the car is warm enough to switch over)

Dash bezel – white plastic (black available at no added cost, carbon fiber available on next page)

Hose insulation – to retain heat and protect against abrasion, impact, or other damage

Sight glass – glass fuel line section to see how long it takes to switch back to diesel

Hose-in-hose - aluminum fuel line for good heat transfer inside a large-diameter coolant hose

Injector line heater – electric heater to add important extra heat between your injection pump and engine

New Englander, Southerner, and Elite Fat Burner systems also include the following standard parts:

Only stainless steel, aluminum, and vegetable oil compatible plastic fittings

Ensure that your oil is as good when it reaches your engine as when you put it into your fuel tank.

Vegmatics stainless steel solenoid valves

Valves have a high flow coefficient and seal tightly even under high pressure.

Minimalist system also includes the following standard parts:

Brass, aluminum, and vegetable oil compatible plastic fittings

Brass is cheaper than stainless, and has low reactivity compared to copper, zinc, or carbon steel.

It is a safe but not ideal material to have in contact with flowing vegetable oil.

Brass solenoid valves

Cheaper than Vegmatics valves – made of brass and have a lower flow coefficient.

Material Upgrades (for Minimalist system)	Price
All stainless steel, aluminum, or plastic fittings (no brass)	+ \$60
Vegmatics stainless steel high flow solenoid valves	+ \$20

Accessories and upgrades for all systems:

If you drive an older vehicle with a tired fuel pump, you should add an auxiliary pump to your conversion. This aids with fuel flow, and puts less strain on your vehicle's stock fuel system. For vehicles with separate lift pumps and injection pumps (including Chevy/GMC 6.2 and 6.5 Diesels), adding a separate fuel pump for the vegetable oil system is necessary (in 6.2/6.5 applications, use the 11psi pump listed below). Other pressures and flow rates not listed here are also available.

If you prefer the simplicity of having a system that can switch to vegetable oil when the vehicle is warmed up and change back to diesel operation at the push of a button, the fully automated system is for you. The internal timers turn on your electric heaters and switch to vegetable oil at the proper time, and accurately and completely purge vegetable oil from your system using programmed settings. This makes driving the car on vegetable oil an effortless task, rather than requiring carefully timed solenoid switching or any guesswork. Installation includes configuring the shutdown timer to ensure that your fuel lines are cleared of vegetable oil before shutdown and indicators showing the system's status.

To give your veggie system a dash of style (no pun intended), we offer carbon fiber dash bezels to replace the standard black or white plastic bezel. Use it to show off to other vegetable oil system users stuck with mocked-together dashboards.

We offer an oil temperature gauge kit, in case you want to monitor the temperature of your oil before it enters your engine. It should be at a minimum of 160 degrees Fahrenheit before the injection pump.

We also offer a water-in-fuel sensor for protection against water in your vegetable oil. Water can destroy your injectors faster than anything else, so it is essential to remove it through proper filtering before putting the oil into your fuel tank. The fuel filter should remove any remaining water. However, if any water does end up traveling into your fuel lines it is better to know before it begins to damage your engine!

Part	Specifications and Use	Price (New Englander, Southerner, and Minimalist)	Price (Elite Fat Burner)
Electric fuel pump	Up to 4 psi and 25 gal/hour	+ \$60	\$0
Electric fuel pump	Up to 7 psi and 32 gal/hour	+ \$60	\$0 (included)
Electric fuel pump	Up to 4 psi and 34 gal/hour	+ \$110	+ \$50
Electric fuel pump	Up to 11 psi and 32 gal/hour	+ \$90	+ \$30
Electric fuel pump	Up to 8 psi and 45 gal/hour	+ \$115	+ \$55
Fully Automated system	Automated vegetable oil shutdown	+ \$120	+ \$60
Carbon fiber dash bezel	More stylish outward appearance	+ \$15	\$0 (included)
Oil temp gauge	For monitoring veggie oil temperature	+ \$55	\$0 (included)
Water in fuel sensor	Alerts you if water is in vegetable oil	+ \$140	\$0 (included)

Fuel tanks

We provide two different options for fuel tank material: you can use either a plastic (polyethylene) or aluminum tank. The Minimalist setup includes a 12-gallon plastic tank, all the other systems include a 13-gallon aluminum tank. Other sizes and capacities are also available as listed below. Prices are to be added or subtracted from the totals as presented above

12 and 13-gallon tanks should be suitable for most small cars. For larger cars and small trucks, 18 and 20-gallon tanks will be more practical. If you plan to drive for extended periods without refueling, tanks up to 55 gallons are available here. Even larger tanks, as well as truck bed tanks, are also available special order. We can have custom tanks built if none of the tanks available here suit your needs. When you check the dimensions for fitting the tank into your vehicle, remember that you need to keep some access space above your tank to fill it.

Aluminum tanks are generally stronger, and better able to withstand heat over time. Particularly when a heated fuel pickup is in use, aluminum tanks are more sturdy over time. All plastic tanks include a sight gauge on the tank for fuel readings. All aluminum tanks have an electrical level sender and include a gauge for your dashboard. Size and pricing information is available below.

Plastic Tanks:

Size	Space Required (L x W x H)	Price (Minimalist)	Price (New Englander, Southerner, and Elite Fat Burner)
12 gallons	24" x 18" x 14"	\$0 (included)	- \$110
12 gallons	23" x 14" x 17"	+ \$10	- \$100
18 gallons	43" x 15" x 10"	+ \$100	- \$10
20 gallons	28" x 15" x 15"	+ \$100	- \$10
26 gallons	30" x 19" x 15"	+ \$120	+ \$10

Aluminum Tanks:

Size	Space Required (L x W x H)	Price (Minimalist)	Price (New Englander, Southerner, and Elite Fat Burner)
13 gallons	19" x 17" x 13"	+ \$120	\$0 (included)
18 gallons	25" x 17" x 13"	+ \$150	+ \$30
26 gallons	37" x 17" x 13"	+ \$190	+ \$70
32 gallons	31" x 18" x 17"	+ \$220	+ \$100
39 gallons	37" x 18" x 17"	+ \$250	+ \$130
55 gallons	37" x 22" x 19"	+ \$330	+ \$210

Fuel Line Material and Configuration

Diesel fuel tanks have two fuel lines attached to them – a supply and a return. The injection pump draws fuel through the supply line. Then it sends some fuel into the engine and some fuel back to the tank through the return line. Our systems leave this configuration completely unchanged when the car is running on diesel, and use modified fuel routing for the vegetable oil.

There are three basic ways to set up your vegetable oil fuel lines so that your car better retains heat in the fuel system. The first, and simplest, is the closed loop. The “loop” is simply a return line that feeds back into the vegetable oil supply line. This recirculates fuel through the engine when running on vegetable oil. To return to diesel operation, vegetable oil is pushed backwards through the fuel lines by the diesel return line. Many vegetable oil kits use this approach. However, with a loop that is always on, should any air leak into the lines from a broken fitting or an empty tank, there is no simple way to get the air out and the lines must be re-primed. A closed loop is included in our Minimalist system.

The second available setup is a semi-looped return. This is included in the New Englander and Southerner systems. In this setup, the vegetable oil return line is looped but also has a small-diameter return line that siphons away small amounts of contaminants and air. This way, the system has the heat retention of a looped return, without the risk of problems related to air and contaminants being stuck in the loop.

Finally, there is the controlled loop setup. This is included in the Elite Fat Burner system. In a controlled loop, three valves (rather than two) direct fuel flow. Both the diesel and vegetable oil tanks have return lines, and the vegetable oil is also looped. One of these valves controls switching between looping the vegetable oil and sending it through the heated vegetable oil return line. This way, backflushing of the system is eliminated so contaminants in the filter are will not be forced back into the vegetable oil tank. This method is also the most precise way to ensure that vegetable oil and diesel do not end up in each others' fuel tanks while switching fuels.

The New Englander, Southerner, and Elite Fat Burner all use aluminum tube for the hose-in-hose, polyethylene tube for fuel lines before the engine compartment and the semi-looped return line, and SAE J30R9 fuel line within the engine compartment. Polyethylene's insulating properties retain heat well before the fuel is fully heated, and aluminum tube allows for excellent heat transfer while within the coolant lines. J30R9 hose has a biodiesel- and vegetable oil-resistant fluoroelastomer inner lining and is better able to withstand the high heat and vibration that hoses experience in the engine compartment. The Minimalist system uses aluminum tube for the hose-in-hose and only polyethylene tubing for other fuel lines, which is an acceptable but not ideal material for use in the engine compartment.

Fuel Line configuration:

Type	Specifications	Price
Closed loop	Plain looped return	Included in Minimalist
Semi-looped	Small-diameter return line	Included in New Englander and Southerner, +\$70 for minimalist
Controlled loop	Third solenoid valve and heated hose-in-hose return line	Included in Elite Fat Burner, +\$120 for New Englander and Southerner

Fuel Line Materials:

Type	Specifications	Price
Polyethylene	Good heat retention	Included in all systems
J30R9	High strength and flexibility	+\$40 for Minimalist, included in all others.

NOTE: If you plan on running biodiesel in your car as well, and you own an older (pre-1994) diesel vehicle, you must replace any rubber fuel lines and seals with biodiesel-compatible lines. For information and pricing on fuel line replacement, send us an email (vegmatix@gmail.com) with your contact information and a description of your vehicle (make, year, model, and engine).

Filters

Your vegetable oil filter is what protects your engine from any dirt, water, or food particles that are in the oil you pour into your tank. Vegmatics uses Griffin filters, which are some of the most effective and reliable fuel filters and water separators available today.

Griffin spin-on filters have a clear bowl at the bottom, so you can see if the filter needs to be cleaned or have its element replaced. Filters are available in ten-micron and two-micron ratings. The filters use Griffin's "Microbloc" elements and are highly effective at stopping water from entering your fuel system. The spin-on filters are reliable, effective, easy to change, and have a clear plastic bowl at the bottom so you can see if there is any water build-up. Griffin filters are equivalent to Racor filters, and their elements are interchangeable with the widely available Racor elements. Larger filters are, of course, more suitable for larger vehicles.

Griffin turbine-series filters are top-notch when it comes to filtering vegetable oil. They are designed and rated for the high temperatures necessary for vegetable oil use. They have all the advantages of the spin-on filters, and are even more effective at removing water (rated at up to 99.8% for diesel). This is because fuel entering the filter moves through a small built-in centrifuge, which makes the filter effective at removing emulsified water from the oil. Replacement elements also cost roughly half that of spin-on filters, so the initial investment in a turbine-series filter can pay off over time. Griffin filters are equivalent to Racor filters, and their elements are interchangeable with the widely available Racor elements.

Type	Flow Rate	Size (diameter x height)	Price (Minimalist, New Englander and Southerner)	Price (Elite Fat Burner)
Griffin Spin-on	45 gph	4.5" x 9.5"	\$0 (included)	- \$40
Griffin Spin-on	60 gph	4.5" x 11"	+ \$20	- \$20
Griffin Spin-on	90 gph	4.5" x 12"	+ \$40	\$0
Griffin Turbine	60 gph	5.8" x 11.5"	+ \$40	\$0 (included)
Griffin Turbine	90 gph	6" x 17"	+ \$70	+ \$30
Griffin Turbine	180 gph	6" x 22"	+ \$90	+ \$50

Heaters

Heat is the most essential part of a vegetable oil system. If the oil does not reach at least 160 degrees before reaching the injection pump and injectors, it can cause internal engine damage and you will end up losing all the money you save on fuel to money you spend on repairs. Especially in colder environments, having sufficient heating capacity in your vegetable oil system is essential.

Coolant from a diesel engine at operating temperature reaches about 200 degrees Fahrenheit. This produces plenty of heat to use in your vegetable oil system, without putting any extra demand on your engine or alternator. Electric heat draws current from your alternator so it should be used sparingly, but it reached higher temperatures than coolant can and is a good method to give your oil a temperature boost before it enters the engine. It can also be applied in places (like your injector lines) where coolant hoses cannot fit. The Vegmatics system heats your oil with a balance of both coolant and electricity.

Two heaters – a high-flow hose-in-hose and injection line heater - come standard on all systems. The Vegmatics hose-in-hose heater is made of a an aluminum fuel line running inside a large diameter coolant hose for most of the way from your tank to the first fuel selection solenoid. This ensures that as long as your engine is up to temperature, the fuel is hot before it comes anywhere near the engine. Our injection line heater is a small electric heater that heats oil between the injection pump and the engine, ensuring that your oil does not cool off before reaching the injectors and reducing the risk of clogged injectors over time.

Type	Specifications	New Englander	Southerner	Minimalist	Elite Fat Burner
High-flow hose-in-hose	Aluminum fuel line inside coolant hose	\$0 (included)	\$0 (included)	\$0 (included)	\$0 (included)
85 watt injector line heater	Electric heater for injector lines	\$0 (included)	\$0 (included)	\$0 (included)	\$0 (included)

Tank heaters are very useful in any system. They keep the oil in your fuel tank warm, so that it can easily be drawn from the tank and into the engine. This is especially important if you are using oil that is solid at room temperature, or drive in areas where temperatures regularly drop below freezing. An electric pad heater is enough to keep the tank warm with liquid oil and warm climates, and comes with the Minimalist and Southerner systems. A coolant-heated fuel pickup is good for heating oil in colder environments and for oil that is solid at room temperature. It also provides concentrated heat to the oil as it leaves the tank, rather than simply heating the entire tank evenly. The Hot Fox from Arctic Fox is a commercially available tank heater and heated fuel pickup, built from stainless steel and engineered for large trucks working in the arctic. It is the best heated fuel pickup you can buy, and we offer them at bargain prices. They come standard on the New Englander and Elite Fat Burner systems. Pad heaters on these systems are available in addition to the Hot Fox, but are only necessary in extreme cold.

Type	Specifications	New Englander	Southerner	Minimalist	Elite Fat Burner
Heated Fuel Pickup	Hot Fox heated fuel pickup	\$0 (included)	+ \$175 (additional)	+ \$175 (additional)	\$0 (included)
85 watt pad heater	Stick-on heater for tanks and filters	+ \$35 (additional)	- \$15	\$0 (included)	+ \$35 (additional)
170 watt pad heater	Stick-on heater for tanks and filters	+ \$50 (additional)	\$0 (included)	+ \$15	+ \$50 (additional)
250 watt Arctic Fox pad heater	Stick-on heater for tanks and filters	+ \$80 (additional)	+ \$30	+ \$45	+ \$80 (additional)
370 watt Arctic Fox pad heater	Stick-on heater for tanks and filters	+ \$90 (additional)	+ \$40	+ \$55	+ \$90 (additional)

Heaters continued on next page

Filters are another part of your system that can use extra heat to perform better – a warmer filter will have improved flow and less pressure drop. Coolant heat can be used on filters; a metal coil wrapped around the filter is standard on the New Englander, Southerner, and Elite Fat Burner systems. Electric pad heaters also work as filter heaters. The Minimalist system does not include a filter heater.

Type	Specifications	New Englander	Southerner	Minimalist	Elite Fat Burner
Coiled Filter Heater	Heated metal coil around filter	\$0 (included)	\$0 (included)	+ \$50	\$0 (included)
85 watt pad heater	Stick-on heater for tanks and filters	- \$15	- \$15	+ \$35	- \$15
170 watt pad heater	Stick-on heater for tanks and filters	\$0	\$0	+ \$50	\$0
250 watt Arctic Fox pad heater	Stick-on heater for tanks and filters	+ \$30	+ \$30	+ \$80	+ \$30
370 watt Arctic Fox pad heater	Stick-on heater for tanks and filters	+ \$40	+ \$40	+ \$90	+ \$40

The final heat exchanger in your system provides a temperature boost before your oil enters the injection pump. In warmer climates, efficient Arctic Fox coolant heaters are effective at raising the oil's temperature enough that it will remain at acceptable temperatures (approximately equal to the coolant temperature) all the way through the injection pump. The Midranger is the standard final heat exchanger on our Southerner system, and the Linehauler is included in the Elite Fat Burner. Inline electric heaters, however, reach higher temperatures than coolant heaters and can provide a better temperature boost to oil used in colder climates. Vegmatics inline heaters are built with insulating shell layers directing heat towards your oil, and minimizing heat loss to the outside air. 250-watt inline heaters are standard on the New Englander and Elite Fat Burner systems. This is suitable for cars and small trucks - more powerful heaters are useful for vehicles that circulate more fuel. The only heater after the hose-in-hose on the Minimalist system is the injector line heater. Heaters are available either as replacements for or in addition to the system's included heater.

Type	Specifications	New Englander	Southerner	Minimalist	Elite Fat Burner
In-line coolant heater (small)	Trendsetter heat exchanger	- \$20 replace + \$50 add	- \$70	+ \$50	- \$90
In-line coolant heater (medium)	Midranger heat exchanger	+ \$50 replace + \$120 add	\$0 (included)	+ \$120	- \$20
In-line coolant heater (large)	Linehauler heat exchanger	+ \$70 replace + \$140 add	+ \$20	+ \$140	\$0 (included)
170 watt inline heater	High-temp inline electric heater	- \$10	- \$60 replace + \$60 add	+ \$60	- \$10
250 watt inline heater	High-temp inline electric heater	\$0 (included)	- \$50 replace + \$70 add	+ \$70	\$0 (included)
335 watt inline heater	High-temp inline electric heater	+ \$10	- \$40 replace + \$80 add	+ \$80	+ \$10
420 watt inline heater	High-temp inline electric heater	+ \$20	- \$30 replace + \$90 add	+ \$90	+ \$20

Pricing Index - New Englander:

Component Size/Type	Specifications and Use:	Price
NEW ENGLANDER SYSTEM		\$1335
Installation (optional)	Complete installation of system in your vehicle	\$800
Plastic Tanks		
12 gallons	24" x 18" x 14"	- \$110
12 gallons	23" x 14" x 17"	- \$100
18 gallons	43" x 15" x 10"	- \$10
20 gallons	28" x 15" x 15"	- \$10
26 gallons	30" x 19" x 15"	+ \$10
Aluminum Tanks		
13 gallons	19" x 17" x 13"	\$0 (included)
18 gallons	25" x 17" x 13"	+ \$30
26 gallons	37" x 17" x 13"	+ \$70
32 gallons	31" x 18" x 17"	+ \$100
39 gallons	37" x 18" x 17"	+ \$130
55 gallons	37" x 22" x 19"	+ \$210
Fuel Line Configuration		
Semi-looped	Small-diameter return line	\$0 (included)
Controlled loop	Third solenoid valve & hose-in-hose return line	+ \$120
Filter		
Griffin Spin-on	45 gph	\$0 (included)
Griffin Spin-on	60 gph	+ \$20
Griffin Spin-on	90 gph	+ \$40
Griffin Turbine	60 gph	+ \$40
Griffin Turbine	90 gph	+ \$70
Griffin Turbine	180 gph	+ \$90
Tank Heaters		
Heated Fuel Pickup	Hot Fox heated fuel pickup	\$0 (included)
85 watt pad heater	Stick-on heater for tanks and filters	+ \$35 (additional)
170 watt pad heater	Stick-on heater for tanks and filters	+ \$50 (additional)
250 watt Arctic Fox pad heater	Stick-on heater for tanks and filters	+ \$80 (additional)
370 watt Arctic Fox pad heater	Stick-on heater for tanks and filters	+ \$90 (additional)
Filter Heaters		
Coiled Filter Heater	Heated metal coil around filter	\$0 (included)
85 watt pad heater	Stick-on heater for tanks and filters	- \$10
170 watt pad heater	Stick-on heater for tanks and filters	\$0
250 watt Arctic Fox pad heater	Stick-on heater for tanks and filters	+ \$30
370 watt Arctic Fox pad heater	Stick-on heater for tanks and filters	+ \$40
Inline Heaters		
In-line coolant heater (small)	Trendsetter heat exchanger	- \$20 replace, + \$50 add
In-line coolant heater (medium)	Midranger heat exchanger	+ \$50 replace, + \$120 add
In-line coolant heater (large)	Linehauler heat exchanger	+ \$70 replace, + \$140 add
170 watt inline heater	High-temp inline electric heater	- \$10
250 watt inline heater	High-temp inline electric heater	\$0 (included)
335 watt inline heater	High-temp inline electric heater	+ \$10
420 watt inline heater	High-temp inline electric heater	+ \$20
Accessories and add-ons		
Electric fuel pump	Up to 4 psi and 25 gal/hour	+ \$60
Electric fuel pump	Up to 7 psi and 32 gal/hour	+ \$60
Electric fuel pump	Up to 4 psi and 34 gal/hour	+ \$110
Electric fuel pump	Up to 11 psi and 32 gal/hour	+ \$90
Electric fuel pump	Up to 8 psi and 45 gal/hour	+ \$115
Fully Automated system	Automated vegetable oil shutdown	+ \$120
Carbon fiber dash bezel	More stylish outward appearance	+ \$15
Oil temp gauge	For monitoring veggie oil temperature	+ \$55
Water in fuel sensor	Alerts you if water is in vegetable oil	+ \$140
TOTALS		

Pricing Index - Southerner:

Component Size/Type	Specifications and Use:	Price
SOUTHERNER SYSTEM		\$1265
Installation (optional)	Complete installation of system in your vehicle	\$800
Plastic Tanks		
12 gallons	24" x 18" x 14"	- \$110
12 gallons	23" x 14" x 17"	- \$100
18 gallons	43" x 15" x 10"	- \$10
20 gallons	28" x 15" x 15"	- \$10
26 gallons	30" x 19" x 15"	+ \$10
Aluminum Tanks		
13 gallons	19" x 17" x 13"	\$0 (included)
18 gallons	25" x 17" x 13"	+ \$30
26 gallons	37" x 17" x 13"	+ \$70
32 gallons	31" x 18" x 17"	+ \$100
39 gallons	37" x 18" x 17"	+ \$130
55 gallons	37" x 22" x 19"	+ \$210
Fuel Line Configuration		
Semi-looped	Small-diameter return line	\$0 (included)
Controlled loop	Third solenoid valve & hose-in-hose return line	+ \$120
Filter		
Griffin Spin-on	45 gph	\$0 (included)
Griffin Spin-on	60 gph	+ \$20
Griffin Spin-on	90 gph	+ \$40
Griffin Turbine	60 gph	+ \$40
Griffin Turbine	90 gph	+ \$70
Griffin Turbine	180 gph	+ \$90
Tank Heaters		
Heated Fuel Pickup	Hot Fox heated fuel pickup	+ \$175 (additional)
85 watt pad heater	Stick-on heater for tanks and filters	- \$15
170 watt pad heater	Stick-on heater for tanks and filters	\$0 (included)
250 watt Arctic Fox pad heater	Stick-on heater for tanks and filters	+ \$30
370 watt Arctic Fox pad heater	Stick-on heater for tanks and filters	+ \$40
Filter Heaters		
Coiled Filter Heater	Heated metal coil around filter	\$0 (included)
85 watt pad heater	Stick-on heater for tanks and filters	- \$15
170 watt pad heater	Stick-on heater for tanks and filters	\$0
250 watt Arctic Fox pad heater	Stick-on heater for tanks and filters	+ \$30
370 watt Arctic Fox pad heater	Stick-on heater for tanks and filters	+ \$40
Inline Heaters		
In-line coolant heater (small)	Trendsetter heat exchanger	- \$20 replace, + \$50 add
In-line coolant heater (medium)	Midranger heat exchanger	+ \$50 replace, + \$120 add
In-line coolant heater (large)	Linehauler heat exchanger	+ \$70 replace, + \$140 add
170 watt inline heater	High-temp inline electric heater	- \$10
250 watt inline heater	High-temp inline electric heater	\$0 (included)
335 watt inline heater	High-temp inline electric heater	+ \$10
420 watt inline heater	High-temp inline electric heater	+ \$20
Accessories and add-ons		
Electric fuel pump	Up to 4 psi and 25 gal/hour	+ \$60
Electric fuel pump	Up to 7 psi and 32 gal/hour	+ \$60
Electric fuel pump	Up to 4 psi and 34 gal/hour	+ \$110
Electric fuel pump	Up to 11 psi and 32 gal/hour	+ \$90
Electric fuel pump	Up to 8 psi and 45 gal/hour	+ \$115
Fully Automated system	Automated vegetable oil shutdown	+ \$120
Carbon fiber dash bezel	More stylish outward appearance	+ \$15
Oil temp gauge	For monitoring veggie oil temperature	+ \$55
Water in fuel sensor	Alerts you if water is in vegetable oil	+ \$140
TOTALS		

Pricing Index - Minimalist:

Component Size/Type	Specifications and Use:	Price
MINIMALIST SYSTEM		\$770
Installation (optional)	Complete installation of system in your vehicle	\$800
Material Upgrades		
Stainless/aluminum/plastic fittings	Better material compatibility than brass	+ \$60
Vegmatics stainless steel valves	Better flow rate and material compatibility	+ \$20
Plastic Tanks		
12 gallons	24" x 18" x 14"	\$0 (included)
12 gallons	23" x 14" x 17"	+ \$10
18 gallons	43" x 15" x 10"	+ \$100
20 gallons	28" x 15" x 15"	+ \$100
26 gallons	30" x 19" x 15"	+ \$120
Aluminum Tanks		
13 gallons	19" x 17" x 13"	+ \$120
18 gallons	25" x 17" x 13"	+ \$150
26 gallons	37" x 17" x 13"	+ \$190
32 gallons	31" x 18" x 17"	+ \$220
39 gallons	37" x 18" x 17"	+ \$250
55 gallons	37" x 22" x 19"	+ \$330
Fuel Line Configuration and Material		
Closed loop	Plain looped return	\$0 (included)
Semi-looped	Small-diameter return line	+ \$70
J30R9 fuel line at injection pump	High strength and flexibility at high temperatures	+ \$40
Filter		
Griffin Spin-on	45 gph	\$0 (included)
Griffin Spin-on	60 gph	+ \$20
Griffin Spin-on	90 gph	+ \$40
Griffin Turbine	60 gph	+ \$40
Griffin Turbine	90 gph	+ \$70
Griffin Turbine	180 gph	+ \$90
Tank Heaters		
Heated Fuel Pickup	Hot Fox heated fuel pickup	+ \$175 (additional)
85 watt pad heater	Stick-on heater for tanks and filters	\$0 (included)
170 watt pad heater	Stick-on heater for tanks and filters	+ \$15
250 watt Arctic Fox pad heater	Stick-on heater for tanks and filters	+ \$45
370 watt Arctic Fox pad heater	Stick-on heater for tanks and filters	+ \$55
Filter Heaters		
Coiled Filter Heater	Heated metal coil around filter	+ \$50
85 watt pad heater	Stick-on heater for tanks and filters	+ \$35
170 watt pad heater	Stick-on heater for tanks and filters	+ \$50
250 watt Arctic Fox pad heater	Stick-on heater for tanks and filters	+ \$80
370 watt Arctic Fox pad heater	Stick-on heater for tanks and filters	+ \$90
Inline Heaters		
In-line coolant heater (small)	Trendsetter heat exchanger	+ \$50
In-line coolant heater (medium)	Midranger heat exchanger	+ \$120
In-line coolant heater (large)	Linehauler heat exchanger	+ \$140
170 watt inline heater	High-temp inline electric heater	+ \$60
250 watt inline heater	High-temp inline electric heater	+ \$70
335 watt inline heater	High-temp inline electric heater	+ \$80
420 watt inline heater	High-temp inline electric heater	+ \$90
Accessories and add-ons		
Electric fuel pump	Up to 4 psi and 25 gal/hour	+ \$60
Electric fuel pump	Up to 7 psi and 32 gal/hour	+ \$60
Electric fuel pump	Up to 4 psi and 34 gal/hour	+ \$110
Electric fuel pump	Up to 11 psi and 32 gal/hour	+ \$90
Electric fuel pump	Up to 8 psi and 45 gal/hour	+ \$115
Carbon fiber dash bezel	More stylish outward appearance	+ \$15
Oil temp gauge	For monitoring veggie oil temperature	+ \$55
Water in fuel sensor	Alerts you if water is in vegetable oil	+ \$140
TOTALS		

Pricing Index – Elite Fat Burner:

Component Size/Type	Specifications and Use:	Price
ELITE FAT BURNER SYSTEM		\$2030
Installation (optional)	Complete installation of system in your vehicle	\$800
Plastic Tanks		
12 gallons	24" x 18" x 14"	- \$110
12 gallons	23" x 14" x 17"	- \$100
18 gallons	43" x 15" x 10"	- \$10
20 gallons	28" x 15" x 15"	- \$10
26 gallons	30" x 19" x 15"	+ \$10
Aluminum Tanks		
13 gallons	19" x 17" x 13"	\$0 (included)
18 gallons	25" x 17" x 13"	+ \$30
26 gallons	37" x 17" x 13"	+ \$70
32 gallons	31" x 18" x 17"	+ \$100
39 gallons	37" x 18" x 17"	+ \$130
55 gallons	37" x 22" x 19"	+ \$210
Fuel Line Configuration		
Controlled loop	Third solenoid valve & hose-in-hose return line	\$0 (included)
Filter		
Griffin Spin-on	45 gph	- \$40
Griffin Spin-on	60 gph	- \$20
Griffin Spin-on	90 gph	\$0
Griffin Turbine	60 gph	\$0 (included)
Griffin Turbine	90 gph	+ \$30
Griffin Turbine	180 gph	+ \$50
Tank Heaters		
Heated Fuel Pickup	Hot Fox heated fuel pickup	\$0 (included)
85 watt pad heater	Stick-on heater for tanks and filters	+ \$35 (additional)
170 watt pad heater	Stick-on heater for tanks and filters	+ \$50 (additional)
250 watt Arctic Fox pad heater	Stick-on heater for tanks and filters	+ \$80 (additional)
370 watt Arctic Fox pad heater	Stick-on heater for tanks and filters	+ \$90 (additional)
Filter Heaters		
Coiled Filter Heater	Heated metal coil around filter	\$0 (included)
85 watt pad heater	Stick-on heater for tanks and filters	- \$10
170 watt pad heater	Stick-on heater for tanks and filters	\$0
250 watt Arctic Fox pad heater	Stick-on heater for tanks and filters	+ \$30
370 watt Arctic Fox pad heater	Stick-on heater for tanks and filters	+ \$40
Inline Heaters		
In-line coolant heater (small)	Trendsetter heat exchanger	- \$90
In-line coolant heater (medium)	Midranger heat exchanger	- \$20
In-line coolant heater (large)	Linehauler heat exchanger	\$0 (included)
170 watt inline heater	High-temp inline electric heater	- \$10
250 watt inline heater	High-temp inline electric heater	\$0 (included)
335 watt inline heater	High-temp inline electric heater	+ \$10
420 watt inline heater	High-temp inline electric heater	+ \$20
Accessories and add-ons		
Electric fuel pump	Up to 4 psi and 25 gal/hour	\$0
Electric fuel pump	Up to 7 psi and 32 gal/hour	\$0 (included)
Electric fuel pump	Up to 4 psi and 34 gal/hour	+ \$50
Electric fuel pump	Up to 11 psi and 32 gal/hour	+ \$30
Electric fuel pump	Up to 8 psi and 45 gal/hour	+ \$55
Fully Automated system	Automated vegetable oil shutdown	+ \$60
Carbon fiber dash bezel	More stylish outward appearance	\$0 (included)
Oil temp gauge	For monitoring veggie oil temperature	\$0 (included)
Water in fuel sensor	Alerts you if water is in vegetable oil	\$0 (included)
TOTALS		