

## **1. Will using a Vegistroke alternative fuel system affect my warranty?**

This is not a straight forward answer. According to provisions of the Magnusson/Moss warranty act of 1975 it is the dealerships responsibility to prove that the modification directly caused or affected the failure. Some dealers are more modification friendly than others. So what does that mean? Your results will vary. The Vegistroke system does not go through any of the stock fuel system other than the injectors meaning that if your turbo fails, your warranty is still likely intact, or if an oil seal fails, or a connecting rod breaks, you SHOULD be covered. But ultimately it is up to the dealer

## **2. Is there any power loss?**

No. Not when done correctly. Albeit there is a lower BTU content in general in bio fuel that translates to a slight mileage loss, not power loss. We have tested the system on stock and highly modified vehicles on a chassis dyno and at the racetrack and there was no change in power or real world track times. This includes towing as well. The system has been tested in towing situations up to and exceeding max GCVW in hot weather and cold weather, on diesel and SVO.

## **3. What kind of mileage can I expect?**

Fuel mileage will vary based on driving habits, vehicle modifications and oil type and quality. On Average you will see about a 5-10% loss in mileage while on oil. However the miles per gallon of diesel used will go up to between 50-80mpg in town and upwards of 300 miles per gallon of diesel used on road trips.

## **4. Do I have to filter the oil before using it?**

In short, YES. Unless you are starting with new oil (always preferable) the oil always need to be filtered and dewatered before putting it the system. 10 micron nominal is a good number to shoot for when filtering. If you see ads for systems that promote filter on the fly, or just put in any oil and go; make sure to research the claim. Search the forums for feedback on how well those “oil and go” systems work in reality. Bottom line is the better filtered the oil, longer the onboard filter will last.

### **5. Can I add power mods?**

Absolutely!! Again in a properly designed system power loss is not an issue, once the fuel is heated and to the engine, it is just like any other fuel. The power making principles are still the same. Add more fuel and more air you get more power.

### **6. Is it legal?**

The answer for this is rather ambiguous at best. When used for biodiesel it is 100% legal since Biodiesel is a recognized as a fuel by the EPA. Waste vegetable oil is not however a recognized fuel and by law illegal to run. But admittedly even by the EPA this is a legal flaw aimed primarily at enforcing fuel quality standards for large corporations making and selling fuel, not for prosecuting individuals using a fuel supplement. Specific laws regarding road tax will vary by state. Keep in mind, a two tank system is considered a supplemental system, not a replacement system. So long as you buy and use diesel in your primary tank, you are well protected.

### **7. How hard is it to install?**

Installation difficulty varies greatly and cannot be answered the same for everyone. Generally speaking on a scale of 1 to 10 with 1 being an oil filter change and 10 being an engine removal

and rebuild, the Vegistroke would rate a solid 5. All parts are included in the kit that is needed to install it and have a fully functional system that works from Florida to Alaska. That means no trips to the Hardware store for parts. Average install time is two 8 hour days including time for troubleshooting. Some adept customers have completed an install in as little as six and half hours.

## **8. What kind of return on investment (ROI) can i expect?**

Return on Investment. How long will it take to pay for the system? This number depends on a few factors such as how much driving you do, your vehicles average mpg, the cost of diesel, and cost of your alternative fuel. But the basic formula is - (miles driven monthly)/mpg to equal fuel consumed. Then multiply "fuel consumed" by cost of diesel. This gives you your cost of diesel per month. Divide cost of Alternative fuel setup by monthly diesel cost and that will give you your approximate ROI. Be sure to include any hidden costs such as filtering system, collection costs, installation, etc. Ex- 3,000miles per month divided by 15mpg=200gallons. 200gallons times 4.25 local diesel cost =\$850/month. \$5,000(system TOTAL cost) divided by 850=5.8 or just about 6 months.

## **9. What kind of oils can I use?**

Pretty much anything that is clean. The diesel engine was invented by Rudolph diesel at the turn of the century to run on Peanut oil. What we don't recommend is overused vegetable oil, engine oil, transmission fluid or stuff that was used as a lubricant in a metal wearing environment. Standard oils such as Rapeseed, Canola, Peanut, sunflower, Mineral, etc is perfectly fine. This system is also 100% biodiesel compatible.

## **10. Can I use Home heating oil or Kerosene?**

Yes. For all intents and purposes home heating oil and diesel are the same thing. Just that

diesel is dyed for taxation purposes. In fact you would be more likely to face a fine for using Home heating oil than VO unless used in an off-road environment. Kerosene is just another grade of diesel and commonly used as a cold weather alternative due to its very low cloud point.

## SYSTEM SPECIFIC FAQs

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### 1. What kind of fuels can I use?

The system is designed to handle all vegetable based oils, hydrogenated and non-hydrogenated, B100 (100%bio), diesel, and kerosene. All seals are Viton and the hoses are made with a proprietary bio compatible composite.

### 2. Is the tank heated?

Yes it is. Dino Fuel tanks are heated by engine coolant. Our tanks are built to our specifications have a 1 piece aluminum tube built into the tank when it is made. This tube runs about an inch off the bottom of the tank and passes through the baffles in the tank. The tube is secured in place by tack welded stanchions inside the tank. There are no seams or welds of the tube inside the tank to ensure maximum integrity. And because it runs along the bottom of the tank thorough heating of the fuel is ensured even at low fuel levels. This design offered a 540%increase in heating surface area over the vertical mounted unit of the previous versions.

### 3. Is it automated?

Yes. Completely. That means that the system does not only come on when the engine and oil is warm, it also does its own purge and shutdown as well. This is done simply by turning the key off. Once you turn the key off that initiates a series of events that ends with the engine shutting off about 60 seconds after you turn the key off. Outwardly not much different from a turbo timer which is standard fare in the diesel world. Of course there is a master switch that allows you to override the system at any point should the truck need to be shut off in an emergency situation, or merely a drive through. And there is even a manual control for those who prefer to do things themselves.

## **4. How do we convert the 6.0?**

Ah yes, the 6.0. The reason why we offer a kit and no one else does is twofold. First when the 6.0 was released in 2003 as an option over the 7.3, it was very problematic. You name it, the engine had that issue. Leaking head gaskets, bad turbos, notoriously bad injectors, seal issues, programming issues, the list goes on. So naturally no one wanted the liability hassle with a hugely unreliable engine. Good news is the track record improved greatly after 04. The 05-07 6.0's were far better than their predecessors with redesigned major components. Although not quite as reliable as the 7.3 was, the newer 6.0's are far better than they were. The biggest remaining issue with the 6.0 is plugging of the EGR valve. Secondly, the fuel supply system on the 6.0 is a split filter design. There is a primary filter and pump on the frame under the driver door, then there is a secondary filter and pressure regulator under the hood. Since most companies use some parts of the stock fuel system, this proved a very difficult hurdle to work around. For the Vegistroke, however, this was easy. The fuel system although all new was still the same HEUI (Hydraulically actuated Electronically controlled Unitized Injector) design from the 7.3. This allowed us to adapt our Vegistroke system to the new motor with some very minor changes and not use any portion of the OEM fuel system other than the injectors themselves. The change made to the OEM system is replacing the factory fuel banjo bolts with our proprietary banjo bolt check valves.

## **5. Why don't we have a heat exchanger?**

Because our stuff is designed to actually BE a heat exchanger. That billet aluminum block IS a heat exchanger. For all of the fuel ports going through it there are also coolant ports to ensure

everything is nice and toasty. And since ALL the major components of the system are included in that one billet block, we don't need multiple H.E.'s to keep stuff warm. Same goes for the tank. The tank is built as a heated unit, so we do not need to add anything to it. And then the best one of all is the Engine itself. The 1994-2007 Powerstroke engine has no injection pump and has common fuel rails that are a part of the head. Meaning the fuel has to travel through the head to the injector. If the engine is hot, so is the fuel. And then when the system does a shutdown, diesel is actually purged back down the supply line toward the manifold. So even when the hot engine switches to the alternative fuel, it is still burning some diesel and is a gradual transition.

## **6. Can my wife drive it?**

Absolutely. That is one of the beauty's of the Vegistroke. It is designed to take care of itself. It will come on, and shut down on diesel without any driver interaction. As well as being a failsafe design, if something does go wrong the truck simply defaults back to diesel again without driver interaction. The green light goes out and that is about it.

## **7. How well filtered does the oil need to be?**

We recommend at least 10 micron nominal. The better the filtering, the longer the filter will last.