



DIESEL OWNERSHIP INFORMATION

THINGS THAT ALL NEW OR EXPERIENCED DIESEL OWNERS NEED TO KNOW

Diesel engines operate a little different than a normal gasoline engine. There are a few things that all diesel owners should know in order to help avoid trouble with these complex and expensive investments.

1. ***Fuel filters should be replaced every 15,000 miles to help reduce the risk of having any contamination reach the high-pressure pump or injectors.***

The fuel systems are extremely finicky and sensitive to dirt or contamination. Water in the fuel also creates havoc for the fuel system components, which are capable of producing over 50,000 psi of pressure in some applications. We recommend using only Original Equipment Manufacturers filters when available, as they will reflect any updates or changes that are required by the manufacturer if a known condition arises which demands a change in the design of the filter.

2. ***Def or Diesel Exhaust Fluid.***

Modern diesel engines may be equipped with an emissions system that requires diesel exhaust fluid to be added to a separate tank. ***Do not mix or add this to the fuel system!!!***

Contamination of the fuel system with DEF can cause catastrophic damage and the entire fuel system to have to be flushed and/or replaced. Make sure you refer to your owner's manual if you have to add DEF. If you are uncomfortable with adding DEF, seek professional assistance to avoid a costly mistake. A container of DEF and the proper filling adaptor is a good idea to have with you on an extended trip, as low DEF can cause the computer system to limit your power and speed.

3. ***Where you get fuel is just as important as the filters!***

Fuel and service stations that do not sell a lot of diesel fuel have a higher chance of water contamination or algae growth in the tanks if not treated properly. For that reason, we recommend making sure you get your fuel from stations that move a larger volume of diesel fuel. Truck stops that are busy, not run down, and clean, decrease the chances of getting a bad load of fuel.

4. ***Adding fuel system lubricants is a great way to increase the lifespan of your high dollar fuel system components!***

The pumps and injectors in the modern diesel engines can be very costly to replace. Sometimes a complete system has to be replaced if the high pressure pump fails and sends debris through the whole system. This can push in excess of \$5000.00 on some vehicles. The best way to prevent this is by adding a fuel system lubricant to the fuel during fill ups. There are a lot of them on the market, and any of them are better than none at all. You will notice a

smoother running engine and increased lifespan of critical system components. The ultra-low-sulfur fuels just do not have enough to keep the systems properly lubricated alone.

5. Do not run your diesel out of fuel!

When traveling long distances, it is good to carry a little extra "known good fuel" with you. Sometimes the distance can be long between fuel stops that are viable. Having a spare 5 gallons on board should help you from having to purge and bleed a fuel system! Consider a $\frac{1}{4}$ tank as empty and refill at that point. Keeping more than $\frac{1}{4}$ tank of fuel will help keep your supply pump cool and functioning and help resist the chance of running the system empty. It can sometimes take up to 30 minutes to purge the air from a diesel fuel system. Some of the times the batteries will not have enough capacity to get the entire system purged without charging. You don't want that on the side of the road!

6. Change your engine oil!

Some of the components such as pumps and injectors actually utilize engine oil for function also. Some diesel trucks may not start if the oil level is too low, as supply is cut to critical components at that point. Changing your engine oil is the cheapest insurance you can buy for your truck. I personally change my diesel truck's oil every 5,000 miles. This is considered overkill by the manufacturer, but they also want to sell you a new one down road. We want to make yours last as long as possible. A 7500 mile service is ok, if you do not operate your diesel in extremely hot, cold, dusty, or high load conditions.... But why did you buy a diesel? Oil changes on these trucks are expensive, as the filters are a lot larger than a normal car, the oil capacity is nearly three times that of a car, and several now require synthetic oils. We do not recommend using the manufacturer's maintenance intervals unless you like trading trucks often or expensive repairs.

7. Let the turbo cool after driving.

Turbocharged engines can develop a lot of exhaust heat when under load. The turbo uses exhaust gases as part of its function, thus making the turbo rather warm to say the least. It's a good idea to let your engine idle for a little bit, about a minute, before shutting it down. This lets the turbo, which uses engine oil, to cool off a little before it stops spinning. This will help increase the life of the turbo over time.

8. Cold temperatures and your diesel.

The newer high-pressure fuel systems on the modern diesels have greatly helped with starting issues that have plagued diesel owners for years. A few quick tips to help with this are as follows:

Make sure your batteries are good and fully charged. Slow cranking speeds can actually keep your diesel from starting at all. Glow plugs also use a lot of amperage to warm up the cylinders. Batteries that test weak, or are over five years old, should be replaced prior to cold weather operation.

Ensure you allow your glow plug system to cycle. There is typically a lamp on the dash that will let you know when they are engaged. Not being in a hurry, and cycling the key again after the light goes out, will be even more beneficial if the temps climb below the 30 degree mark. Give it about ten seconds between cycles to let the control systems reset. This gets the combustion chambers warmed up and ready to go to work.

Plug in the block heater when needed. This will provide benefits in several ways. It will keep the fuel and oil temperatures elevated enough to help aid in cold starting and help you reach operating temperatures quicker. This will allow your heater to work a lot faster also, which is nice on cold days! We recommend, if your vehicle is setting overnight in under 30 degree temperatures outside, plugging in if possible. Just don't forget to unplug before you pull away!

Add fuel system anti-gel additives when temps will be sustained under 25 degrees for longer periods of time. A gelled fuel system will require the entire vehicle to be warmed up and emergency additives to get flowing again. We highly recommend fuel filter replacement if fuel system gelling occurs.

Let your diesel warm up after starting. Diesel engines do not build heat like a gasoline engine. Give them some time to warm up when it is cold out. This allows all of the oil systems to get flowing easier, to get heat out of your heater, and a fuel system that doesn't have to work as hard.

9. **The cooling system (antifreeze).**

The cooling system, or systems, on your diesel is critical to long life of your engine and turbo. Electrolysis and corrosion are major issues for aluminum. Yes, some trucks and cars have two separate systems! Make sure you have a qualified service facility check it yearly. Adjust PH and corrosion inhibitors as necessary and service it as needed. Typically the antifreeze system(s) should be serviced every three years.

10. **Get a bi-annual inspection.**

Even if you change your own oil and filters, you should let a professional service facility that is experienced in diesels give them a spring and fall check over. This will help you stay in front of expensive upcoming repairs or maintenance that may be coming up and allow you to budget to make sure you protect one of your biggest investments.

11. **Enjoy the benefits of having some of the most powerful engines on the road!**

We do not recommend the use of tuners or modifications to the controls systems. There can be legal fines associated with this and some repair facilities will not work on modified units at all. This can greatly limit you if you travel and could really dampen a trip. There are a lot of aftermarket companies that provide power-adders and modified emissions system components for modern diesels. If you are using your diesel for off-road performance usage, make sure that the company you source is knowledgeable and established. Small mistakes in the tuning and fuel systems on a diesel can cause catastrophic results if not done correctly. There is no such thing as a cheap diesel engine!

12. **Maintenance on diesels is expensive compared to gas engine equipped vehicles.**

Hopefully you did your research and were aware of the added expenses associated with diesels before purchase. Make sure, that whatever the age of the driver, that they can maintain the vehicle properly. A poorly maintained diesel can cause a large hole in a bank account, which is not good for the owner of the unit and is hard on the relationship with the facility sourced to fix it when it breaks. It's a lot easier and cheaper to maintain it than it is to repair it.

If you have any questions feel free to contact us at Myers Garage at 317-994-5436. One of our great staff will happy to assist in all of your diesel needs.