

Specialty Fuel Systems

Dear Sirs:

Thank you for taking the time to familiarize yourself with our service. As the person in charge of your facility's stand-by generation, you understand the importance of the system. When the power goes out, whether from high loads in an area or from a natural disaster, you need to feel confident your generator(s) will perform as expected.

The primary cause of most diesel failures comes from improperly stored fuel. Fuel manufacturers recommend that fuel only be stored for 60-90 days, after that time the fuel begins to degrade.

The main problem with stored diesel fuel is it starts to form solids, which are formed because of an attraction through the electrons. This causes what is known as sludge or algae. With our system we remove all water and microbial growth, filter the fuel down to 2 microns, and break apart the solids. This process results in a very pure fuel for your generators and very little waste, it also gives you the confidence that your system will perform as needed.

I hope you will find our information and fuel improvement systems helpful.

Sincerely
Don Schramm
President
Specialty Fuel Systems
(772) 631-0059

Five Step Fuel Management Program

1. **Sample**
Examine fuel for contamination and deterioration caused by time and climate.
2. **Classification**
Run liqui-cult test to determine the extent of organic, inorganic, and fungal contamination.
3. **Prescription of Care**
The instalation of a project based purification system, or the implication of a semi-annual fuel polishing and stabilization program.
4. **Control**
Removal of water, bio-film, and treatment of fuel with catalyst.
5. **Prevention**
Semi annual examination of fuel and treatment or filtration and conditioning of tank on a timed schedule.

You can buy the most expensive, state of the art equipment, but without clean, good grade fuel it cannot do it's job. Storing diesel fuel or other distillate fuel for later use will quickly begin to degrade. Publications available from your engine builder recommends not using fuel that has been stored longer than 1 year. A sudden need for fuel that has been stored to run standby systems usually run until stagnant fuel clogs the filter shutting down the engine. This type of failure can shutdown life support systems, communication, evacuation in buildings, schools, and hospitals. Since no one can predict an emergency, the only safe method is to stop the potential problem before it starts.

Why the decline in middle distilates (diesel) ?

Mainly what we are seeing is due to the increased popularity of diesel power and the increased demand for diesel fuel. There was a time when diesel remained in the refinery storage tanks for the natural separation of particulates to settle, allowing the more stable fuel to be drawn off. Now with increased demand the fuel dosn't remain long enough in storage for the water and particulates to fall out of solution, until at the customers facility. Additional factors which contribute to the contamination of the fuel system and tank vary due to climate, tank design, and tank condition. These factors will determine how quickly the " bugs " develop into solids and sludge that clog fuel filters and damage engines.

Additives and Biocides ?

These very popular chemicals are similar to " antibiotics " that kill fuel bacteria. But like human antibiotics, the right one must be used for each microbial, in the right amount, and at the right intervals. Improper application is like stopping a human antibiotic after 3-4 days. The germs are still there, and will start increasing immediatly. In addition, some biocides are water-soluble and start forming other types of solids which can also be a problem. If successful, the affect of the additives alone is only temporary and will not eliminate the sludge problem.

Bacteria also presents other serious problems. The bacteria that lives in the water-fuel interface feed on nitrogen, sulfur, and iron oxides. This produces many byproducts, one of most concern is sulfuric acid, which causes pitting of important components, not the least of those being the fuel tank itself. Failure of the fuel tank ofcourse presents many additional problems, cost of repair, down time, and enviromental.

Summary

Hidden costs

1. *Liability due to down time.*
2. *Equipment replacement*
3. *Unrecoverable people hours.*
4. *Reputation and Goodwill*
5. *Possible attorney costs.*

Problems with stored fuels

1. *Water condensation and separation.*
2. *"Algae formation".*
3. *Dirt, Rust, and catalytic fines.*
4. *Fungi growth.*
5. *Clouding and gel formation.*
6. *Gums, resins, acids due to oxidation.*

Other contributing factors

1. *Unreliable quality of fuel supplied*
2. *Fouled injectors produce more exhaust - EPA standards.*
3. *Higher yearly maintenance cost....(fuel injector replacement for a 3516 is approx \$7500.00)*

For your free no obligation evaluation of your system, please feel free to call;

Specialty Fuel Systems



SFS-103 1.75" X 3.25"



SFS-203 / 303 1.75" X 4.87"



SFS-503 / 403 1.75" X 6.5"



SFS-1503 / 1003 2.45" X 8.82"

Specialty Fuel Systems

Manufacturer of Stationary & Mobile Fuel Cleaning Systems

Dimensions: Width 15" Height 15" Depth 9"

**Features: Magnetics
Hydro-cyclone
Coalescence
Filtration**



Remote mountable control unit.

180 GPH to 9,000 GPH flow rates

The SFS Fuel Conditioning System restores fuel to its optimal condition, through the use of filtration and magnetic conditioning. This technique greatly reduces the need for excessive filter changes while increasing the combustability of the fuel. Thereby reducing the amount of visible exhaust and increasing horsepower.

Specialty Fuel Systems 12180 Philips Hwy | Jacksonville, FL | 32256 | 904.292.9444

www.aacleanfuel.com for Fuel Polishing Service Call 904.742.2124

Specialty Fuel Systems

Manufacturer of Stationary & Mobile Fuel Cleaning Systems



Machine as shown:

Variable speed
Digital flow gage
3 stage filtration
Aluminum construction
Hydro-cyclone

The SFS fuel polishing systems restore fuel to its optimal condition, through the use of filtration and magnetic conditioning.

This technique greatly reduces the need for filter changes, while also increasing the combustability of the fuel. Thereby reducing the amount of visible exhaust and increasing power.

The SFS fuel polishing carts are manufactured in a variety of sizes from 360 GPH. to 5,000 GPH. All units come with 20 ft. of suction and return hose. The units from 500 GPH. are available with 3 stage filtration.

The internal hydro-cyclone separates the water and any heavy particulates, which are then easily drained from the bottom of the unit. The magnetic system reduces the amount of solids in the fuel which results in fewer filter changes and gives your customer a better product.

180 GPH to 9,000 GPH flow rates

Specialty Fuel Systems

WHETHER IT'S AROUND THE BAY OR AROUND THE WORLD !



We all know the importance of maintenance and the pride that goes with it. But we also know the frustration we get when our cleaned and polished pride and joy lets us down in the middle of an enjoyable cruise. The concern now becomes one of inconvenience or worse yet danger to passengers, crew, and vessel.

Specialty Fuel Systems provides the needed maintenance or technology to keep your engine running at peak efficiency. Our technology enables us to clean and re-condition your diesel fuel allowing your engine to run more efficiently which means less smoke, less soot and fewer filter changes.

What this means to the seasonal boater is more time to enjoy the water, and less time changing fuel filters.

For the cruising boater we also offer on-board systems that enable you to filter and condition your fuel yourself. This becomes important when fueling up at suspect fuel docks in suspect countries.

Our Services :

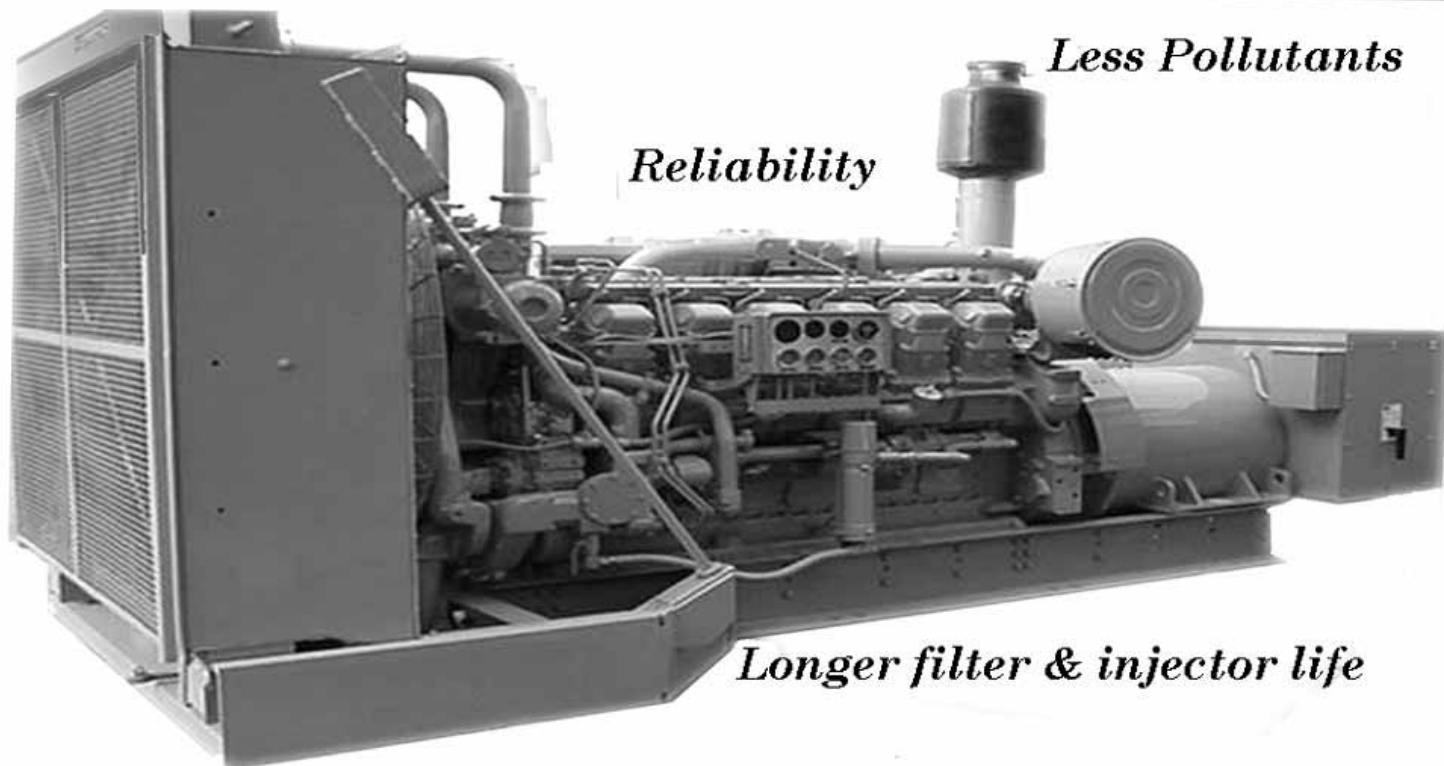
- * Filter & Recondition Fuel***
- * Stabilize the Fuel***
- * Increase Combustability (More Power)***
- * We come to you***

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SFS

Specialty Fuel Systems



Less Pollutants

Reliability

Longer filter & injector life

When you need your standby power will it be there ?

Emergency generators are the lifeblood of all essential community business's, government offices, police, fire departments, hospitals, communication companies, and many other business's.

Hospitals rely heavily upon emergency generators to provide life support operations as well as communications in the event of a major power failure. As hospitals depend on emergency generators, so do emergency generators depend on clean fuel.

Standard operating procedures on most generators and the installation of tanks, increase the chances of water and contaminants not being discovered until they cause a failure during a critical time.

Specialty Fuel System's management program consists of a biannual fuel sampling, laboratory testing and purification & conditioning of fuel. After the fuel is purified and reconditioned it is then treated with a fuel catalyst which stabilizes the fuel and prevents the formation of solids.

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Don't be left sitting on the side of the road.

We all know the engine is the heart of your Motor Coach, therefore the fuel is the life blood of your engine. Through our research we have found that approximately 90% of all diesel failures happen due to fuel related problems. These problems first start showing up as excessive smoke and exhaust soot which clings to the back of the coach. Other problems which may go unnoticed are loss of power, reduction of fuel economy, frequent filter changes, and reduced fuel injector life.

Our Services :

- * Clean and filter fuel*
- * Recondition and stabilize the fuel*
- * Reduce smoke and soot*
- * Increase combustability*
- * We come to you*

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