



FUEL 501 –SOLUTIONS



SOLUTIONS FOR DIESEL FUEL SYSTEMS

Solutions for diesel fuel systems revolve around four focus areas: chemical treatment, fuel filtration, water remediation, and fuel ASTM lab testing. Each one of these are critical to ensuring long term storage of your fuel. If you remove any one these elements, you open your organization up to unnecessary risks. Let’s look at each one of these solutions individually to see what they should consist of, why they are important, and how it will mitigate risk for your organization.



Chemical Treatment

Chemical treatment can be a very confusing subject due to the claims made by most all the chemical manufacturers. A vast majority of their claims are inaccurate leaving their products ineffective. The amount of chemicals that is said to be in the product is unverifiable. As with any products, manufacturers have a choice of what quality of raw materials to use. Some use the cheapest raw materials or the thinnest metals to reduce cost and increase sales. The chemical additive industry is no different, the quality of the base chemicals or the type of chemicals used will vary from manufacturer to manufacturer. Each manufacturer of chemical additives must register their additive with the EPA and the EPA establishes limits for each chemical in mixtures for diesel fuel. This is where it can get confusing by reading labels or what sales representatives tell potential customers. They may claim to have lubricity chemicals or water removal chemicals but have only trace amounts due to cost.

So, what do you need to have in a chemical treatment additive and why?

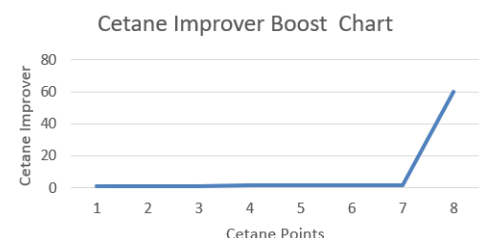
Injector Cleaner – this is to remove internal diesel injector deposits (IDIDs) formed by carboxylate salts and waxy soap deposits and EDID’s carbon coking deposits.

Water Dispersant – non-alcohol-based water demulsifier to remove the absorbed water.

Lubricity Additive – assists fuel pumps and injectors, reduces the wear scar on internal engine components which will reduce maintenance and costly repairs.

Corrosion Inhibitors – these inhibit rust and corrosion in the tank lines. Quality products will have a National Association of Corrosion Engineers (NACE) corrosion test rating of A.

Cetane Improver – cetane improvers can boost up to 7 points. Beyond 7 points the amount of cetane improver increases at a rate that is not feasible to maintain. Boosting cetane improves cold starting, helps





FUEL 501 –SOLUTIONS



eliminate black smoke, and increases both fuel mileage and power.

Fuel Stabilizers – neutralizes DSS and HDS acids, contains antioxidants, metal deactivators, and dispersants to keep the fuel stable over time and reduce the breakdown of the diesel fuel.

Fuel Services Group uses only the highest quality chemicals that are blended to the maximum allowed by the EPA to give you the greatest impact. We can maintain your fuel and fuel systems to keep them in tip top shape, some of the benefits of our chemical treatment are the following

- ✓ Increased engine performance
- ✓ Stability of your fuel
- ✓ Decreased wear and tear
- ✓ Decreased maintenance repair costs
- ✓ Improving cetane up to 7 points
- ✓ Reducing DPF regeneration cycles up to 50%
- ✓ Passes ASTM D2068 Filter Blocking Test
- ✓ Increases fuel mileage up to 7.3%
- ✓ Increases power by up to 12.5%
- ✓ NACE corrosion test rating A
- ✓ Lowers freeze point of water in fuel 32°F over competitors
- ✓ Military grade non-alcohol-based water demulsifier
- ✓ Restores power loss up to 67%
- ✓ Neutralizes DSS and HDS acids
- ✓ Removes IDIDs
- ✓ LX4 lubricity additive
- ✓ Rust inhibitor.

Fuel Filtration

There are solutions to fuel filtration that you may elect depending on cost, but cost is also relative. One option is to conduct fuel polishing on a set schedule such as annually depending on how often your fuel is rotated or utilized and new fuel is brought in. Another option is to install continuous filtration systems which will keep your fuel clean and dry. Whichever you choose, they will help keep your fuel clean. The costs must be evaluated as the cost of the continuous filtration is higher, it will pay for itself over a relatively short period of time and will keep your fuel cleaner and drier than doing it once a year. It really comes down to a cost benefit analysis and your comfort level of risk.

Fuel Services Group can offer both services from fuel polishing & filtering to installation of very reliable AXI filtration systems for any size tank.

Water Remediation

Water is the biggest threat to your fuel and fuel systems as we have seen throughout the various modules from Fuel 101 to Fuel 401. Therefore, water remediation is critical to reducing your risk, reducing bacteria/microbes, longevity of fuel, reducing costly repairs/maintenance and reducing rust/corrosion.

One way of water remediation is with continuous fuel filtration systems. Fuel filtering or polishing will remove the water for that period only, after they leave your system will generate



FUEL 501 –SOLUTIONS



water through the venting process, significant rain events, condensation, or other means. All these need to be addressed on a regular basis whether it is a company coming to remediate the water in your storage tanks or by the installation of continuous filtration systems. To do the cost benefit analysis as discussed in fuel filtration section, ensure you add the cost of water remediation to your costs of fuel polishing to evaluate the payoff period of the continuous filtration system costs.

Fuel Services Group performs water remediation from underground storage tanks (UST), aboveground storage tanks (AST), day tanks, sumps, and other systems.

Fuel ASTM Lab Testing

Fuel testing by an ASTM certified lab is critical to the longevity of your fuel as we have seen in Fuel 401. It is how you know that your chemical treatment, polishing or filtering, and remediation or filtering is working. It provides the assurance that your fuel is usable when you need it. The tests you select will need to be thorough enough to provide assurance that your systems will work. There are companies out there that are doing one or two tests and calling it “per D975 standards” and it just doesn’t work like that anymore. Ensure that your contractors are maintaining your systems and your trust by providing comprehensive testing that decreases your risk.

Fuel Services Group uses certified ASTM laboratories that perform the tests outlined in Fuel 401 to ensure your organization is confident in your systems and compliant with regulations.

BOTTOM LINE

The bottom line is with all the changes in fuel, your organization cannot afford to rely on contractors that are not specialized in fuel and fuel storage systems. You wouldn’t want a veterinarian performing your open-heart surgery, so why have contractors who are not aware of the specific standards and are not keeping up with fuel and fuel storage systems daily. Fuel Services Group is heavily involved in the fuel industry, NFPA recommendations for changes to the life safety code 110, fuel additive evaluations, and testing as well as storage tanks for diesel fuel. It takes all our time to keep up with and be excellent at fuel, fuel stability, fuel additives and fuel storage systems.

Let Fuel Services Group take care of your fuel and fuels systems and let the generator experts take care of your generators.

Contact us with questions, comments, or quotes at:

Mailing Address: Fuel Services Group
1151 W. Milham Ave, Suite 1026
Portage, MI 49024

Telephone: (269) 350-9019

Website: www.fuelservicesgrp.com

Email: sales@fuelservicesgrp.com