

#### FILTER-LESS FUEL PURIFICATION

Presented By

Diesel Filtration Products, LLC

#### Dieselcraft Fuel Purifiers

The Dieselcraft Purifier removes 99.997% of water and 95 % + of contaminates to < 10 microns. With no filter elements.





# Diesel Fuel -Contaminates Particulates & Water

#### **Particulates**

**Diesel fuel contaminants** include abrasive dust, water droplets, rust and organic materials such as lint and field dust. Common dust is composed of 98% by weight of silica or quartz which is very abrasive. Abrasive particles can cause damage to transfer pumps and fuel injection systems.

The most damaging particles for most injection systems are in the 5 to 15 micron particle size, even though the critical clearances are between one and three microns.

## Water is an engine's second biggest enemy after abrasive particulates

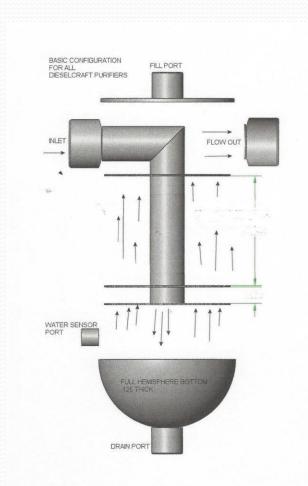
#### The problems water creates are:

- 1. Promotes corrosion of ferrous metals and die cast aluminum components in the fuel injection system.
- 2. Causes cavitation leading to nozzle tip failure.
- 3. Reduces lubricity, causing nozzle and pump plunger scoring.
- 4. Breeds microbial growth at the water/fuel interface which plugs filters.

### Water is an engine's second biggest enemy after abrasive particulates

- 5. Solid water (in large droplets or slugs) does not burn causing poor engine performance.
- 6. When emulsified water freezes, the finely dispersed ice crystals will plug the filters or jam sensitive control mechanisms in the fuel injection system.
- 7. Shortens the useful life of filters by swelling the filter media.

#### The DC Purifier Solution



The DC Purifier Removes 99.997% water and 95% of the contaminates based on Newton's 1St Law of Physics. Employing the "principle of inertia" contaminated fuel enters the Purifier and is direct down ward in a straight flow path at a predetermined velocity and for specific period of time. Dieselcraft Purifiers are engineered for maximum Residence Time (RT) in the system. The longer the RT, the cleaner the fuel. When the dirty fuel encounters the baffles, the water and solids, which have different specific gravities separate from the fuel. The heavy water & contaminates fall to the bottom reservoir and the lighter "clean fuel" rises to the activated alumina barrier which agglomerates any remaining free water that will fall to the reservoir for draining. The Dieselcraft "Clean Fuel" exits back to the fuel stream. Remember - All fuel is contaminated otherwise there wound not be "filters".

#### Dieselcraft Means Clean Fuel 24/7! Removes 99% Of H20 & 95% Dirt

- 1. Extends life of injectors and injector pumps
- 2. Reduce fuel related loss of power & maintenance
- 3. No internal or external parts require servicing or replacement (filters)
- 4. Enables "full flow filters" to be more efficient.
- 5. Extends useful life of primary & secondary filters
- 6. Engines run more efficiently
- 7. Improve fuel consumption
- 8. Reduce exhaust emissions decrease soot

#### Dieselcraft Purifier Model 8202 with Water Sensor



- On Board Capacity Range from 150 GPH to 2400 GPH
- Fuel Transfer Filtration Systems: 12,000 & 24,000 GPH
- Water Sensor Alarm or PLC Interface
- Purifier Mobil Fuel Polishing

#### Dieselcraft Installations









#### Dieselcraft Performs









#### Dieselcraft Fuel Stabilizer



- Proven Technology
- Non Additive Stabilizer
- Disrupts. Disperses. Destroys. "Sludge" Forming Micro-organisms
- More Complete Combustion
- Reduces Soot Formation
- Clean Injectors & Pumps
- Extends Life of Fuel Filters
- Improve Fuel Efficiency
- Reduce carbon buildup on pistons and injectors

### Disperses and Destroys Micro-Organism In Diesel Fuel

- Diesel Fuel is organic and naturally degrades over time.
- This degradation, oxidation and repolymerization can start in as little as 30 days after the <u>fuel is refined</u>. The byproducts of this process create sludge, acids and bacteria that now are present in the fuel tank.
- <u>Dieselcraft Fuel Non Additive Stabilizers</u> can reset the clock on fuel instability and breakdown to keep it fresh and contaminant free. Dieselcraft will restore fuel to its refined state and ASTM specifications.

# Magnetic Fuel Conditioning A Proven Technology

The use of "Magnetic Fuel Conditioning" to stabilize bacteria growth and a break-up agglomerated particle is well documented in papers and studies published by such authorities as:

- Society of Petroleum Engineers
- U.S Department of Energy
- •U.S. Navy.
- •Most major oil and oilfield supply companies (Shell, Caltex, Halliburton, Pemex) use magnetic treatment at their oil production facilities.

#### Dieselcraft Magnetic Fuel Stabilizer

The Dieselcraft Stabilized Fuel will improve fuel filterability, enhance combustion efficiency and reduce soot, particulates and other harmful emissions.

The Dieselcraft unit is engineered so that the fuel flows along and between the opposing and alternating magnetic fields and the serpentine pattern on the wall of the mixing chamber tumbles the fuel aiding in the dispersion process. The fuel that exits is now stabilized without the use of chemical additives. PERMANENTLY!

Dieselcraft Fuel Stabilizers are easily installed between the tank and the primary fuel filter, have no moving parts and require no electrical connections. They require no maintenance!

## The Purifier + The Stabilizer = Water, Dirt & Bacteria Free Fuel

On Land & Sea.. A Few of Many.













### Thank You