FuelLIFT®
The Organic Diesel Fuel Catalyst

FuelLIFT
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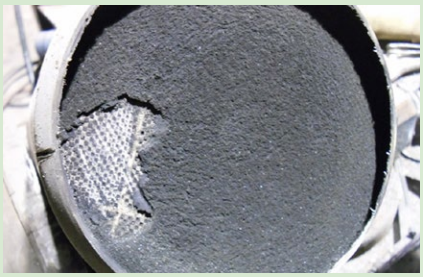
Technical Document

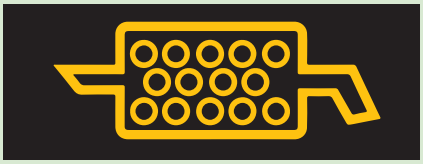
Common Problem:
DEF System/Injector Sensor Failures and Excessive DPF Carbon Deposition

DEF (Diesel Exhaust Fluid) and heavily-soiled DPF (Diesel Particulate Filter) issues commonly result in excessive regeneration, increased fuel expense and costly downtime.



The supplemental diesel injector is found after the exhaust side of the engine and its purpose is to inject fuel into the exhaust and heat up the catalytic converter and diesel particulate filter for regeneration. This component often fails causing the DEF system to fail. Injecting extra diesel straight into the exhaust results in substantially lowered MPG in addition to the cost of the DEF fuel.

When the two temp sensors (pre and post DEF injector), the two pressure sensors (pre and post particulate filter) or the DEF injector itself fail or fall beyond normally expected values, the system to fails. These failures slowly cripple and/or disable the vehicle.



Repairing these issues is very costly and requires vehicle computer programming at the dealer level.

FuelLIFT General Description

FuelLIFT is an organic liquid substance with active enzymes that works to enhance the burning process in the combustion chambers of diesel engines and can be described as a 'combustion enhancer.' FuelLIFT enhances the essential oxygen and hydroxyl radicals needed during the critical stages of the combustion cycle. These intermediate combustion particles improve combustion of the fuel, reduce soot formation, and lower the emissions of unburned hydrocarbons. FuelLIFT lowers the flame temperature in the engine, resulting in lower nitrogen oxide (NOx) emissions.

FuelLIFT organic nanoparticles bond with diesel fuel molecules allowing for more effective atomization. The higher molecular weight diesel molecules, bonded to the catalyst particles, react more readily with oxygen which allows for a more complete fuel burn. The FuelLIFT catalyst initiates combustion within the diesel spray envelope by lowering the activation energy for the initiation of combustion.

An average diesel droplet diameter is 30 microns. FuelLIFT catalyst particles are calculated to be less than 0.2 microns in diameter and have been tested to show no wear effect on engine components.

FuelLIFT Soot Formation Amelioration

- According to COMO paper EX1, soot will enter the lubrication oil at the rate of .0048 ounce for every gallon of fuel burned.
- According to Gulf Coast Filter Company, a truck will burn 1,786 gallons of fuel every 12,500 miles, at 7 mpg. During this 12,500 mile interval, more than half a pound (8.75 ounces) of soot will enter the oil. Ultimately, this soot will become trapped in the diesel particulate filter.
- FuelLIFT reduces soot formation and consequently reduces soot contamination of the lube oil. As such, DPF contamination is substantially reduced or eliminated.

The FuelLIFT Effect

- ***Increases fuel efficiency by a net average of 10% or more (positive ROI)***
- ***Decreases particulate emissions through enhanced fuel burn***
- ***The 100% organic formula is non-toxic and non-hazardous and contains no caustic chemicals***
- ***Cleans engine components including diesel fuel filters***
- ***FuelLIFT is highly concentrated (1 to 8000 ratio of catalyst to diesel fuel)***
- ***Reduces engine wear***