HOW THE RIGHT PREMIUM DIESEL FUEL and SUPPLIER CAN SAVE YOU TIME AND SAVE YOUR FLEET MANY THOUSANDS OF $$$ IN THE COURSE OF YOUR BUSINESS.

Diesel additives have been around for many many years and its now with the price of fuel at an all-time high, fleet managers, just like you are looking to maximise on road time, reduce consumption, enjoy compliance and reduction in emissions, and get the biggest bang for the buck in the daily fight to keep costs under control.

Diesel is the biggest variable expense your operation has; don't you owe it to yourself to get more out of your diesel supplier and the best mile from your diesel fuel?

Diesel engines are crucial for many fleets to do their job and the business to operate. Due to the variable in quality diesel fuels coupled with climatic or storage conditions and other factors, it can be a challenge to keep these powertrains running to their optimum performance. This in turn can lead to down time, higher parts and maintenance costs and takes a huge toll on the entire fleets operating performance indicators.

Whether your fleet is static power generation, marine propulsion, excavation, mining, school busses or a heavy combination fleet in line haul, having the right diesel SUPPLIER and the right quality diesel to put in the tank is crucial to your business and profitability.

A fuel with additive, be is “Special Diesel”, “Vortex Diesel”, “Ultimate Diesel”, or some other hype marketing name, all those products have an additive in them to distinguish their performance from the norm, Standard or Truck Diesel. The fact that there are many levels of quality in “truck” or “standard” diesel is a tell tail of the industry.

Imagine a poor quality standard diesel with additive, the net effect is only to lift the performance of that fuel to that of a quality performing standard diesel. Measurements are easily made.

However, by adding an additive to a high-quality diesel, such as Mobil plus Fyrex Ci, you have a winning combination to provide following:

- **Improved Fuel Economy**
- **Increased Power**
- **Decreased Emissions**
- **Decreased Downtime**
- **Decreased Maintenance**

Those big FIVE benefits will add up to major cost savings for large or small fleets. Simply put a consecutive use of the correct fuel and additive will contribute to a healthier bottom line for any business using diesel power.

MYTHS and Misconceptions

Before exploring various types of additives and their targeted benefits it is important to address common perceptions and misconceptions about diesel fuel additives. Some fleet managers may be wary of additives due to poor past experience, snake oil salesmen providing over exaggerated performance or even a product with the wrong chemical formulations which may damage engines while attempting to improve performance.

It is common place today that diesel additives are used by all major companies to also improve their bottom line by offering alternatives to standard truck diesel. An exercise in perception versus reality is imperative for any fleet manager that wants to save money and time and keep their vehicles running smoothly.

1, Additive will have a negative impact on OEM warranties –

Some fleets may fear that using a diesel additive will lead the engine manufactures to void its warranty. Industry experience shows that is not a common practice and in fact highly atypical. In fact, fuel additive manufacturers with a high level of responsibility in todays market go to great lengths to ensure their product is repeatedly tested, measured and verify that the use of an additive will not harm a OEM diesel engine, exhaust systems or fuel injection system.

In many cases, OEM diesel engines have a recommendation in today’s environment to make an addition of some sort of additive to assist with the Ultra Low Sulphur Fuel as supplied by the oil companies to assist with upper cylinder lubricity.

2, Additives cause clogged Diesel Particulate Filters –

> There seems to be a misconception that an additive will prematurely clog DPF and components, this is why it is important to correctly select the right additive for your engines and use. By selecting an additive with low ash content or no ash content will eliminate the possibility of the problem.

Industry wide there are two (2) major concerns with the use of additives in diesel fuel, however both are proven to be falsehoods and misconception. Rather the use of consistent year-a-round use of diesel fuel additive can add up to significant savings for the fleets.

AGE MATTERS:

As diesel fuel additives become more sophisticated and refined in the quest to keep up to date with todays rapidly advancing diesel engine technology additives can now offer targeted benefits to meet the environment, mechanical loading and specific uses of the engine.

For example :

> **Marine Use :** Added biocide to reduce the occurrence of diesel bug
>
> **Fleet Line Haul :** Cetane booster, upper cylinder lubricant, injector conditioner
>
> **Static Engine :** Cetane booster, upper cylinder lubricant, ash reduction
>
> **Cold Climate :** Gell reduction and lower viscosity additive
>
> **Long Term Storage :** Biocide and de-emulsification additive

Additives obviously can improve diesel fuel in many areas of use, it is difficult for fleet managers to pick the most appropriate additive that will extract the most out of the diesel fuel in use and applied for the specific use.

For starters, the age of the fleet, engine, boat, equipment does matter. Older fleets with engines designed and built prior to 2007 requires engines to run Ultra Low Sulphur fuel, will want to seek out an additive that offers improved mileage while reducing emissions. Newer fleets with engines designed to operate on Ultra Low Sulphur fuel will likely consider an additive that offers lubricity, combined with better burn characteristics and lower emissions while providing improved economy.

Age is just one of a multitude of factors in the consideration of which additive to use in any given fleet or application. Diesel fuel additives have certainly become a science rather than black magic.

Additives for ALL SEASONS

For todays organisations, achieving and maintaining a healthy bottom line means keeping the fleet up and running all year long. Various types of additives are designed to solve specific engine challenges and more likely to occur in winter, say sub 2 deg Centigrade. Left untreated, issues arising from cold climate use can cost the fleet manager profitability through down time, or inefficiency.

If the cetane rating of the fuel becomes too low in winter time then the engines will be difficult to start, cause ignition post combustion timing issues and due to the content of wax in the diesel fuel as the conditions become colder, more wax will precipitate out of the fuel causing gelation in fuel lines, filters and injector pumps.

Challenges: Water damage, corrosion, Breakdowns and Costly Repairs

Water, all be it a small amount, occurs in all fuels, and is one of the biggest enemies of fleet

managers. Engines are designed and fitted with water separators which if not regularly serviced and drained, water will find its way through filters, lines, injector pumps and eventually to the engine. While a small amount of water in fuel is not a bad thing, the accumulation of fuel can cause huge problems in reduced efficiency, hydraulic compressions, post detonation and the like. Water injection was actually trailed and used in petrol engines for a limited time and during WWII the engineers building and testing Rolls Royce Merlin v12 engines found the engines produced higher HP in the mornings than in the afternoon due to the presence of condensation.

Water can condense in the hot fuel tanks from the heating effect of the diesel return line and, in the evening, when turned off, the water settles to the bottom of the fuel. Other issues can arise from the build-up of microorganisms (diesel bug) and can quickly cause blocked filters and a non-running engine.

Vehicles that do not use an additive for the reduction or de-emulsion of water will have more problems from the associated effects of water in the system than those that do use an additive specifically designed to treat water.

Obviously, the source of the diesel fuel is similarly important, yard tanks and storage farms can quite often become a suspect source of diesel fuel supply if water is the enemy, in this case, it is important to treat the fuel as it goes into the tanks or once stored to dose the tank with the appropriate additive.

Diesel Fuel Additives DO add up to a Wise Investment

Diesel fuel additive chemistry and formulation is a sophisticated process, while major oil companies continue to market and sell "Premium Diesel" you can be assured that the premium part is the result of a diesel additive joining with the diesel at the plant prior to shipment. It is highly unlikely that the oil company majors supply the technology and rely on third party developers to provide the technology. Providers use state of the art advanced technologies in hydrocarbon chemistry to create additives that are highly effective at solving or improving fuel problems. And can do so economically and efficiently, effectively decreasing maintenance issues, increasing productivity and eliminating organisms destined to ruin your day.

Invest in a robust fuel additive package designed for your specific fleet application, storage or environment. It will provide dividends for your fleet or operation.

Consider our range from FIMA, distributed by Onsite Fuel, we use and recommend their products in our own fleet. Contact your nearest fuel specialist to discuss the merits of refuelling with additive.

FIMA FYREX CI™, contains a biocide, de-emulsifier, a cetane boost, lubricity ingredients and is an all-year round diesel additive suitable for all diesel engines.

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