



**INCREASED PERFORMANCE**FOR YOUR DIESEL ENGINE

# **Power and Protection for Todays Engines**

Engine designs continue to evolve as requirements for improving fuel efficiency and decreasing emissions get stricter every year. The modern technology in today's engines benefits from fuel with improved performance and properties over typical ultra-low-sulfur diesel (ULSD). The precision components used in high-pressure common rail (HPCR) diesel engines benefit from a fuel with added protection against corrosion, deposit buildup, oxidation, sludge, and wear.

Diesel Express is engineered to keep engines clean, remove engine deposits, and improve the operation of all diesel-powered equipment designed for on-road, off-road, and marine use. A clean engine operates smoothly, ensuring maximum power and efficiency while reducing the risk of unscheduled maintenance.

#### **Corrosion Protection:**

Water finds its way into diesel fuel through condensation and leads to corrosion as well as microbial growth. Corrosion is not only a problem for the integrity of the tank, but also fills the fuel with particles that can block filters and/or cause damage to injectors or fuel pumps.

The best way to minimize the risk of corrosion is to follow good fuel quality management processes to identify and remove excess water, utilizing prevent caps to cut down on condensation buildup and purchasing a quality diesel fuel with enhanced corrosion protection. The corrosion preventive found in Diesel Express is designed to protect all metal found in the fuel system, including tanks, lines, pumps, filters, and injectors.

### **Detergents:**

Using diesel fuel with added detergents is becoming more important as the technology of engines continues to evolve and change. With prolonged use, typical ULSD fuel does not contain detergents and is likely to build up carbon and deposits that affect the injector operation. Poor injector operation leads to poor fuel delivery, loss of power, and decreased efficiency, leading to downtime for replacement.

The detergent in Diesel Express is engineered to clean up internal injector deposits, remove carbon buildup, and restore engine operation, as proven in the latest DW-10 performance test.



## Stability:

Today's modern HPCR engines place stress on the ULSD fuel we use. Fuel leaving the tank is exposed to very high temperatures and pressures on the way to the combustion chamber. Not all of this fuel is injected into the chamber to combust. The fuel left in the injector is recirculated back to the equipment tank to start the journey over again. This recirculation can cause fuel to oxidize and begin breaking down. Diesel Express slows oxidation and thermal breakdown to extend the storage and usable life of the fuel.

### **Lubricity:**

Fuel not only combusts within the engine, but also lubricates and protects fuel system components from excessive wear. Original equipment manufacturers (OEMs) recommend additional lubricity to extend the life of critical fuel pump and injector parts.

#### **DIESEL EXPRESS BENEFITS:**

- Prevents and cleans up internal injector "sticky" deposits
- Helps keep injectors clean for more efficient engine operation, reducing the extent of both power and emissions deterioration; meets the latest DW-10 performance tests
- Increases lubricity, extending the life of critical fuel pump and injector parts
- Increases fuel stability and corrosion control, reducing filter plugging, sludge formation, and fuel system corrosion
- Lowers maintenance costs
- Extends filter and engine life
- Prevents sludge buildup in the fuel tank
- Provides thermal stability
- Reduces black smoke and particulates

The need to use a quality diesel fuel with improved properties over typical ULSD continues to become more important every day engine technologies get more sophisticated and put more stress on the fuel.

Diesel Express is engineered to meet, exceed, and provide the attributes and protections that engine manufacturers agree are needed for engines to perform with the efficiency and longevity of the design.

