

138 APA-400 DIESEL TREAT

APA-400 Diesel Treat is a multifunctional, ultra low sulfur compliant diesel fuel additive specifically formulated to provide maximum cold temperature protection against fuel gelling, waxing, and fuel line freeze-up, improved fuel efficiency, increased power, increased fuel lubricity, improved injector cleanliness and improved fuel stability. APA-400 Diesel Treat provides clean-up and keep clean performance throughout the entire fuel system, as shown by the Peugeot XUD9, DW10B and DW10C Internal Diesel Injector Depositing (IDID) Tests.

APA-400 Diesel Treat can be used in all types of diesel fuel including ultra low, low sulfur diesel fuel and biodiesel blends.

Features and Benefits

APA-400 Diesel Treat contains a highly concentrated multi-functional additive package, which provides the following performance benefits when used at the recommended treatment ratio:

- Increases cetane rating up to 5 points.
- Provides cold temperature protection against fuel gelling, waxing and fuel line freeze-up
- Clean-up & Keep clean performance proven in the Peugeot XUD9, DW10B and DW10C Internal Diesel Injector Depositing (IDID) Tests
- Restores, improves and maintains horsepower while improving fuel economy up to 3%.
- Excellent anti-wear protection for injectors and fuel pumps; supplemental ring and valve-train anti-wear protection; and lubrication of the upper cylinders, fuel pumps and injectors.
- Improves lubricity to meet EMA and NCWM limits.
- Increased fuel thermal stability to resist thermal degradation.
- Inhibition of oxidation during storage which extends storage stability.
- Rust and corrosion protection to the entire fuel system.

Coupled with this multifunctional additive package is a non-alcohol jet fuel deicer/water dispersant, HydroShield, which eliminates the problems associated with entrained and/or dissolved water present in the fuel by dispersing the water into tiny droplets. These tiny droplets are suspended in the fuel so they can be carried with the fuel in controlled amounts through the fuel filters, fuel lines, and into the combustion chamber to be burned with the fuel. Because the remaining water is dispersed and suspended in the fuel, APA-400 Diesel Treat prevents the formation of stable fuel-water emulsions. HydroShield is moisture removal additive technology that contains twice the industry standard for moisture elimination.

Improved Low Temperature Operability

APA-400 Diesel Treat contains a proprietary wax crystal modifier, cold flow improver, heavy wax modifier polymeric type additive system that when added to the diesel fuel before the fuel has reached its cloud point helps to prevent the formation of wax crystals. This proprietary additive system encapsulates and disperses the individual wax crystals to drastically reduce the size of the wax crystals and also allow them to flow through the fuel filters and lines and into the combustion chamber with the fuel.

APA-400 Diesel Treat can significantly improve the gelling point and low temperature operability of the fuel. **Improvement in low temperature operability is dependent upon the refining process used to make the ultra-low sulfur diesel fuel and its response to the additive.**

Prevention of Settling of Wax Crystals at Low Temperatures

APA-400 Diesel Treat contains a proprietary wax anti-settling agent (WASA) that is designed to prevent the paraffins and other waxy components, which can plug and clog filters and other fuel system components, from dropping out of the fuel and settling out over extended periods of time. This increases the diesel fuel's cold weather operability which reduces downtime and maintenance costs.

Increased Lubricity Protection with SynShield®

Today's diesel powered vehicles feature low emission engines that are more susceptible than ever to diesel fuel related wear. Diesel engine designs are employing the use of higher fuel injection pressures, hotter fuel return temperatures, higher operating temperatures and complex engine geometry to control emissions. All of these factors result in increased fuel system wear and can shorten engine life.

APA-400 is blended with Schaeffer's proprietary lubricity additive, Synshield® to protect today's diesel engines from fuel system related wear. Synshield® surpasses industry standards for diesel fuel lubricity; and is the only lubricity additive that does not contain sulfur or sulfur containing compounds to exceed the EPA's new standard. Synshield® prevents fuel system wear and injector scoring by forming a protective layer on the metal surfaces of the fuel system and injectors and provide boundary lubrication between metallic parts in critical fuel system components. This protective boundary lubrication film not only reduces friction and wear between the fuel system surfaces that are in relative motion but also increases fuel system component life, thus leading to less downtime and longer equipment life.

Bulk Treatment Ratio

One gallon of APA-400 Diesel Treat to 1,500 gallons of diesel fuel.
For hard to treat or unresponsive Ultra Low Sulfur Diesel Fuels use one gallon of APA-400 Diesel Treat to 750 gallons of diesel fuel.

Storage Requirements: It is recommended that this product be stored 15 degrees above its pour point.

APA-400 Diesel Treat is registered for use and meets the US EPA requirements for blending into low sulfur and ultra low sulfur diesel fuels. When used at the recommended treatment ratio, APA-400 Diesel Treat will not have any measurable effect on the cetane index or aromatic and sulfur content of the diesel fuel.

THIS DIESEL FUEL ADDITIVE CONTAINS LESS THAN 15PPM OF SULFUR AND COMPLIES WITH THE FEDERAL LOW SULFUR CONTENT REQUIREMENTS FOR USE IN DIESEL MOTOR VEHICLES AND NON-ROAD ENGINES.

THIS DIESEL FUEL ADDITIVE IS COMPATIBLE AND APPROVED FOR USE WITH DIESEL FUELS THAT MEET ASTM D975 AND BIODIESEL THAT MEETS ASTM D6751 AND BIODIESEL THAT MEETS EN 14214.

TYPICAL PROPERTIES

Specific Gravity	0.9271-0.9299
Flash Point °F/°C PMCC (ASTM D-93)	131°-136°/55°-58°
Pour Point °F/°C (ASTM D-97)	-30°/-34.4°
Ash Content %wt. (ASTM D-482)	0
Copper Strip Corrosion Test (ASTM D-130)	1a
Sulfur Content ASTM D-7039	<15 ppm