



AP Diesel Fuel Treatment Launch

- Fuel Treatment Product Overview
- Additive Benefits
- Engine Performance Testing
- Competitive Testing



A photograph of Alliant Power Diesel Fuel Treatments products. In the center is a large black drum labeled 'ALLIANT POWER ULTRAGUARD DIESEL FUEL TREATMENT'. Surrounding it are several smaller containers: two white jugs labeled 'ALLIANT POWER ULTRAGUARD', two yellow jugs labeled 'ALLIANT POWER WINTERGUARD', and several small bottles labeled 'ALLIANT POWER LUBRIGUARD'. A blue starburst graphic with the word 'NEW' is positioned in front of the drum. The background is a dark, textured surface.

ALLIANT POWER

NEW

Introducing Alliant Power Diesel Fuel Treatments

Three Chemically Advanced Formulations that Provide Superior Fuel System Protection and Help Restore Engine Performance:

- **ULTRAGUARD™** Multi-Functional Fuel System Protection for All-Seasons
- **LUBRIGUARD™** Highly Concentrated Lubricant with Cetane Improver for Warm Environments
- **WINTERGUARD™** Improved Cold Starting and Anti-Gel Protection for Cold Environments

Available Through an Extensive Network of over 500 Diesel Vehicle Experts

ALLIANT POWER

AP Fuel Treatments

ALLIANT POWER
ULTRAGUARD™
DIESEL FUEL TREATMENT
Complete Fuel System & Injector Protection **+CETANE IMPROVER**
Cleans • Lubricates • Anti-Gel • Stabilizes
TREATS UP TO 60 Gallons (227L)

DANGER: HARMFUL OR FATAL IF SWALLOWED. COMBUSTIBLE VAPOR. HARMFUL. CAUSES EYE AND SKIN IRRITATION. KEEP OUT OF REACH OF CHILDREN. See back panel.

Made in USA

Contents: 16 FL OZ (1 PT) 473 mL

ALLIANT POWER
WINTERGUARD™
DIESEL FUEL TREATMENT
Extreme Cold Weather & Anti-Gel Protection **+ICE BLOCKER**
TREATS UP TO 125 Gallons (473L)

DANGER: HARMFUL OR FATAL IF SWALLOWED. COMBUSTIBLE VAPOR. HARMFUL. CAUSES EYE AND SKIN IRRITATION. KEEP OUT OF REACH OF CHILDREN. See back panel.

Made in USA

Contents: 16 FL OZ (1 PT) 473 mL

ALLIANT POWER
LUBRIGUARD™
DIESEL FUEL TREATMENT
Enhanced Lubricity & Fuel System Protection **+CETANE IMPROVER**
Extra Strength Lubricant • Cleans • Stabilizes
TREATS UP TO 125 Gallons (473L)

DANGER: HARMFUL OR FATAL IF SWALLOWED. COMBUSTIBLE VAPOR. HARMFUL. CAUSES EYE AND SKIN IRRITATION. KEEP OUT OF REACH OF CHILDREN. See back panel.

Made in USA

Contents: 16 FL OZ (1 PT) 473 mL

- **ULTRAGUARD** – Multi-Functional Additive
 - All-Season Protection: Cetane Improver, Lubricity Improver, Cleans & Protects, Fuel Stabilizer, Removes Water, Anti-Gel Protection
- **LUBRIGUARD** – Concentrated Lubricant
 - Enhanced Lubricity: For Dry Fuels, Cetane Improver, Cleans & Protects, Removes Water, Fuel Stabilizer
- **WINTERGUARD** – Extreme Cold Weather
 - Economical Protection: Anti-Gel, De-Icer, Improves Diesel Pour Point and Cold Filter Plug Point (CFPP)

AP Fuel Treatment

- Treat Rate: 1:500
- Sizes: 8 oz., 16 oz., 32 oz., 64 oz., 5 gal., 55 gal.

Benefits:

- Restores engine power, torque, and economy
- Avg. 4.5 points cetane improvement resulting in: improved combustion, faster cold starts, and smoother running
- Cleans/Eliminates internal/external carbonaceous injector deposits
- Eliminates injector “stiction” commonly associated with CR Injectors
- Lubricates fuel system to reduce friction/wear & extend service life
- Helps remove water by demulsification
- Provides Anti-Gel protection
- Reduces ice formations of water in fuel
- Stabilizes fuel & protects against fuel system rust/corrosion
- Reduces particulates in exhaust aftertreatment systems (SCR & DPF)
- ULTRAGUARD outperforms many comparable additives in the market



AP Fuel Treatment

- Treat Rate: 1:1000
- Sizes: 16 oz., 64 oz., 5 gal.

Benefits:

- Concentrated lubricant to reduce friction/wear from dry fuels such as: Jet A, Kerosene, or #1 Diesel
- Helps maintain fuel system cleanliness
- Increases cetane for improved: combustion and smoother running
- Helps remove water by demulsification
- Protects against fuel system rust/corrosion
- Keeps fuel fresher longer and will protect against gums and varnishes
- Protects when ambient temperatures are greater than 40°F (4°C)
- Economical: \$0.05 per treated gallon relative to other brands that are \$0.10 - \$0.15



AP Fuel Treatment

- Treat Rate: 1:1000
- Sizes: 16 oz., 64 oz., 5 gal., 55 gal.

Benefits:

- Provides Anti-Gel protection. Five avg. diesel fuels down to -13°F (-25°C)
- Improves Diesel Pour Point and Cold Filter Plug Point (CFPP) up to 40°F (22°C)
- Reduces ice formations of water in fuel



Product Packaging

- Six various combinations covering three different Fuel Treatment products:
 - 8 oz. & 16 oz. Easy Pour Long Neck Bottles
 - 32 oz. & 64 oz. Rectangular Bottles
 - 5 & 55 Gallon Drum Containers



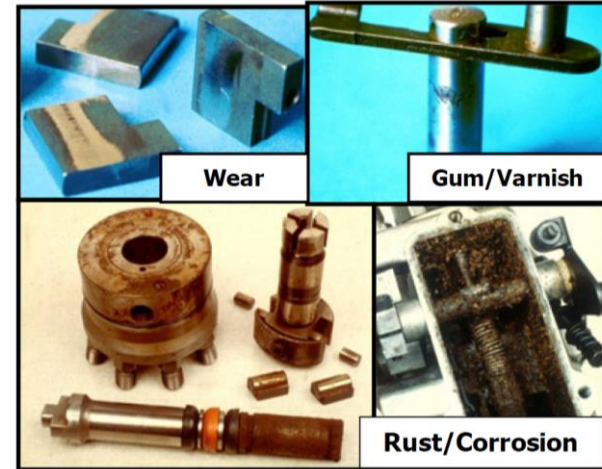
Products

- 13 part numbers
 - 6 ULTRAGUARD
 - 4 WINTERGUARD
 - 3 LUBRIGUARD

Product	Package Size	Package Qty.	US Gallons/Liters Treated
ULTRAGUARD	8 oz (237 mL)	24	30 gal (114L)
ULTRAGUARD	16 oz (473 mL)	12	60 gal (227L)
ULTRAGUARD	32 oz (946 mL)	12	125 gal (473L)
ULTRAGUARD	64 oz (1.9L)	6	250 gal (946L)
ULTRAGUARD	5 gal (19L)	1	2,500 gal (9,500L)
ULTRAGUARD	55 gal (208L)	1	27,500 gal (104,000L)
WINTERGUARD	16 oz (473 mL)	12	125 gal (473L)
WINTERGUARD	64 oz (1.9L)	6	500 gal (1,900L)
WINTERGUARD	5 gal (19L)	1	5,000 gal (19,000L)
WINTERGUARD	55 gal (208L)	1	55,000 gal (208,000L)
LUBRIGUARD	16 oz (473 mL)	12	125 gal (473L)
LUBRIGUARD	64 oz (1.9L)	6	500 gal (1,900L)
LUBRIGUARD	5 gal (19L)	1	5,000 gal (19,000L)

Why Fuel Additives are Needed?

- Prevent/Address fuel system issues
- Help maintain & restore the performance of the engine
- Help supplement & Improve fuel quality:
 - Improve fuel lubricity – eliminate premature wear/tear of fuel system components
 - Increase fuel cetane – improve engine starting and reduce engine noise and smoke
 - Prevent rust/corrosion – demulsifiers and corrosion inhibitors to help remove water and protect the fuel system
 - Stabilize – prevent varnish and gums caused by oxidation
 - Clean/Prevent deposits – detergents that clean and prevent carbon and wax deposit build up
 - Improve pour point – prevent fuel gelling in colder temperatures
- Poor fuel quality leads to poor engine performance, reduced fuel economy, and higher maintenance costs



Why Fuel Additives are Needed?

■ Prevent internal and external deposits

There are Two Types of Diesel Injector Deposits

Traditional “coking” Deposits

- ▲ Deposits form inside nozzle fuel flow holes
- ▲ Deposits build up on tip of injector
- ▲ Affect fuel spray pattern and volume delivery



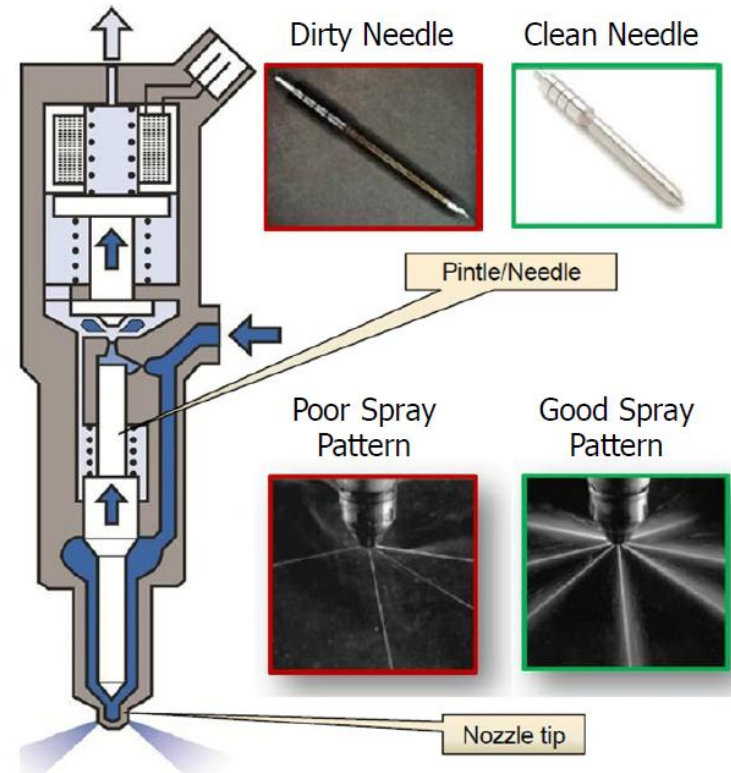
Newer Internal “sticking” Deposits

- ▲ Deposits form inside injector on internal moving parts
- ▲ Affect injection timing and fuel volume delivery

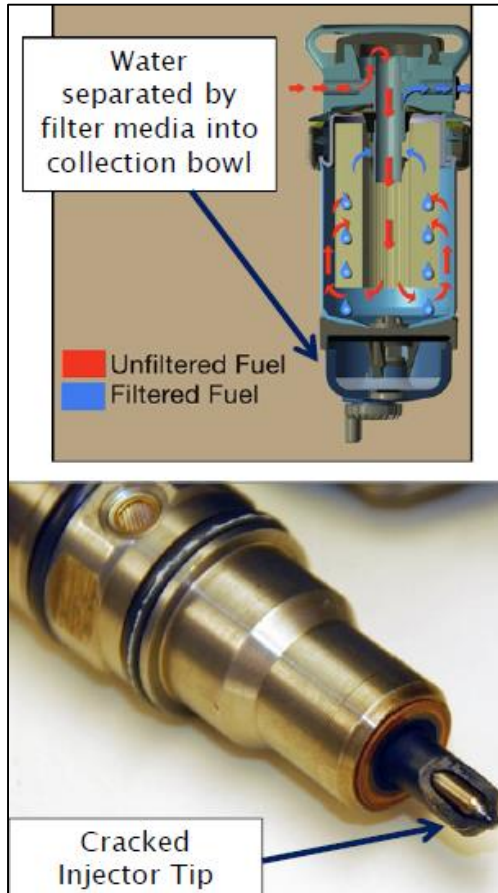


Why Fuel Additives are Needed?

- Internal Diesel Injector Deposits (IDID) in the injection system will slow response or cause sticking of internal moving parts of HP Common Rail Injectors resulting in: Loss of Injection Timing and/or fuel delivery
- Types of IDID:
 - “Waxy” or “soap” deposits
 - “Lacquer” deposits
 - “Carbonaceous” deposits
- Typical engine issues consist of:
 - Excessive black smoke
 - Rough running
 - Reduction in fuel economy
 - Loss of power & torque
 - No start or hard start



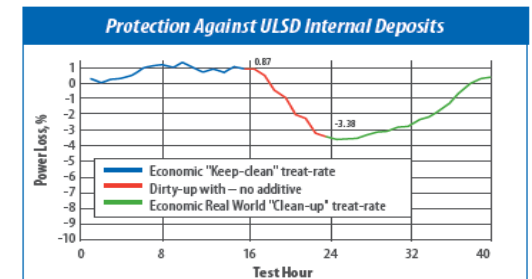
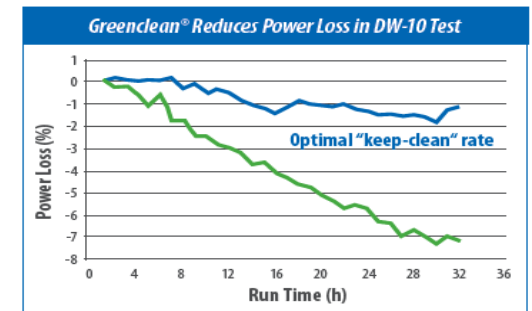
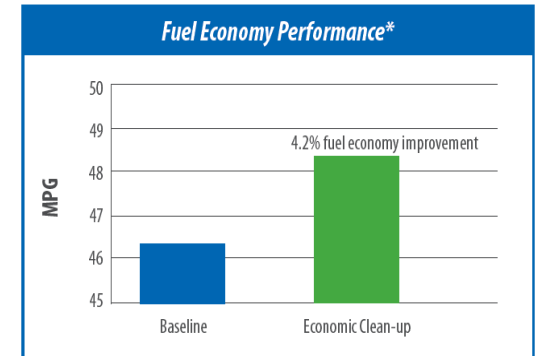
Why Fuel Additives are Needed?



- Alliant Power additives demulsify water
 - Water is taken out of suspension into a larger water molecule so the fuel filter/water separator can effectively capture the water
 - Demulsification is the best method to separate/remove water
 - Some competitive products remove water by emulsification
 - Water removal by emulsification will allow water to mix with fuel in order to bypass the filtration system and could lead to injector and fuel system issues (rust, corrosion, and possibly failure)
- ULSD & Bio-Fuels have a tendency of retaining high degree of moisture/water

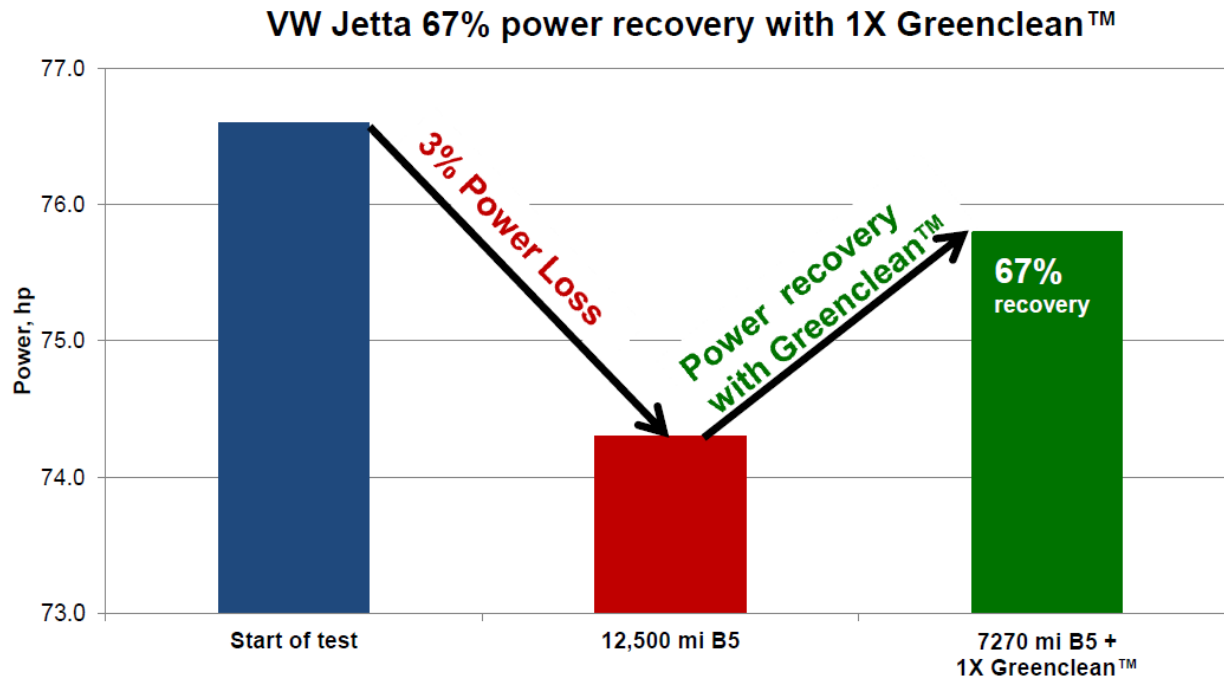
Engine Performance Testing

- **ULTRAGUARD** uses a patented technologically advanced detergency called “Greenclean®”. This detergency will help:
 - Restore/Maintain engine fuel economy
 - Restore/Improve power, torque, and acceleration
 - Protect against ULSD deposits
 - Reduce emissions
 - Enhance engine life
 - Reduce/Eliminate fuel system corrosion



Engine Performance Testing

Using **ULTRAGUARD** recommended treat rate of 1:500



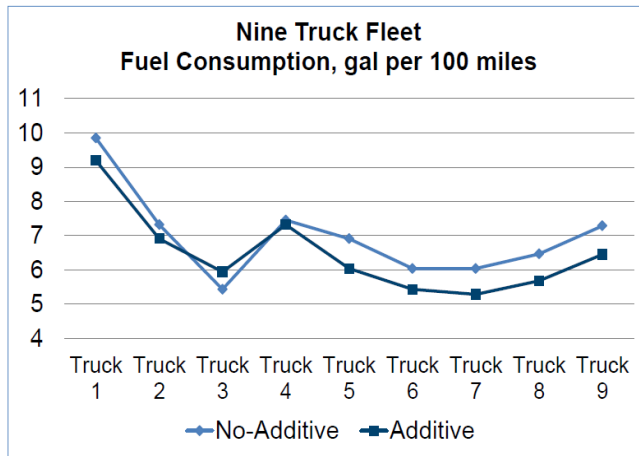
Engine Performance Testing

- Nine Truck Fuel Economy Fleet Testing
 - Trucks ranged in age from 1 – 7 years old
 - Baseline fuel consumption recorded prior to additizing fuel
 - Fuel consumption recorded for each truck with additized fuel
 - Average fuel economy of the trucks improved by 7.3%

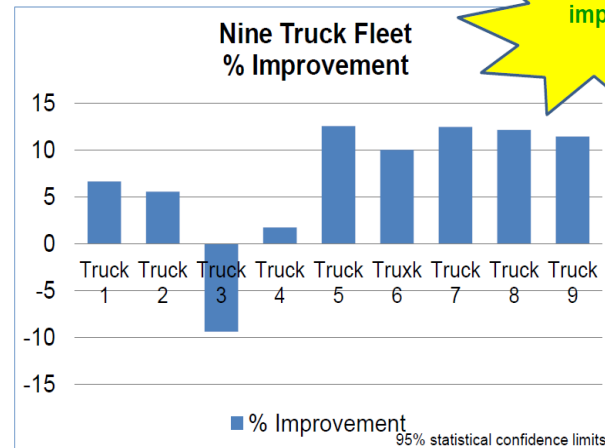


**Recommended
Treat Rate 1:500**

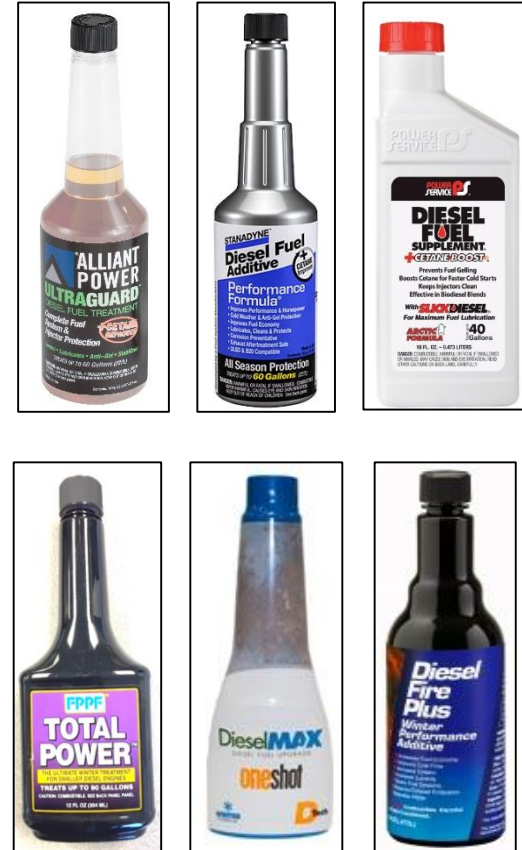
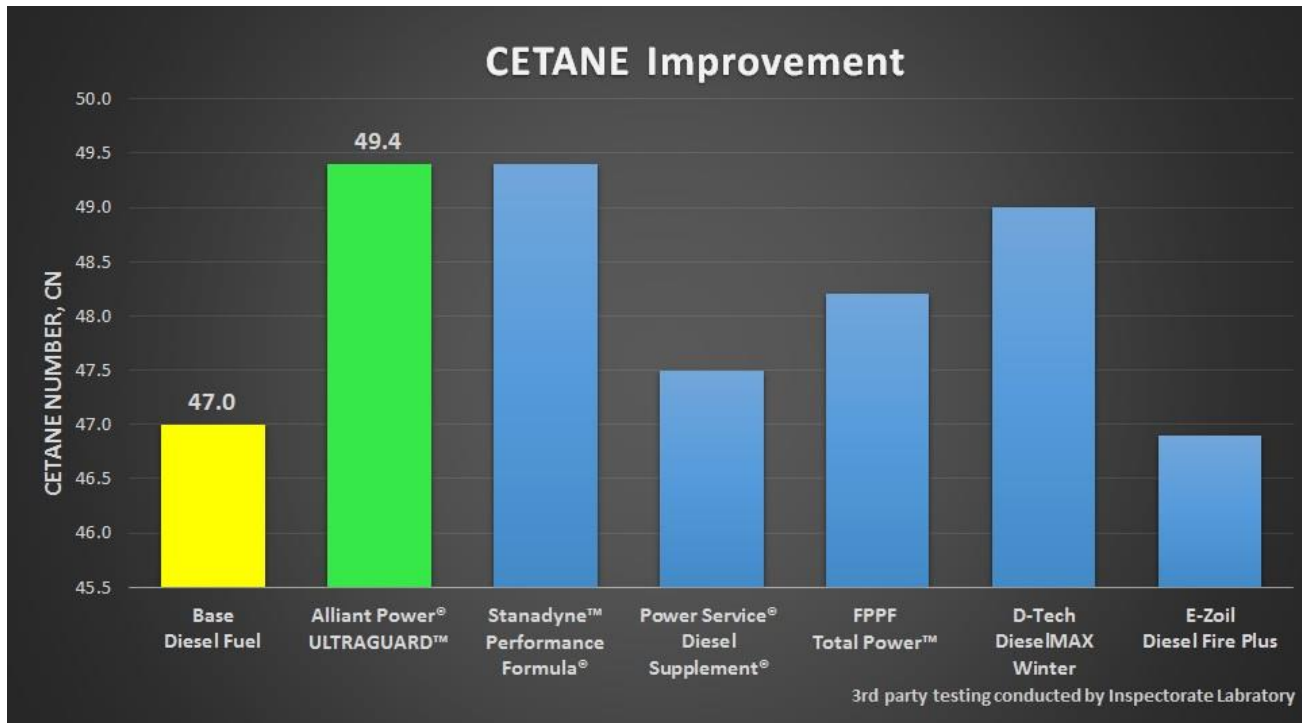
Greenclean® Fuel Economy Field Test



Greenclean® Fuel Economy Field Test

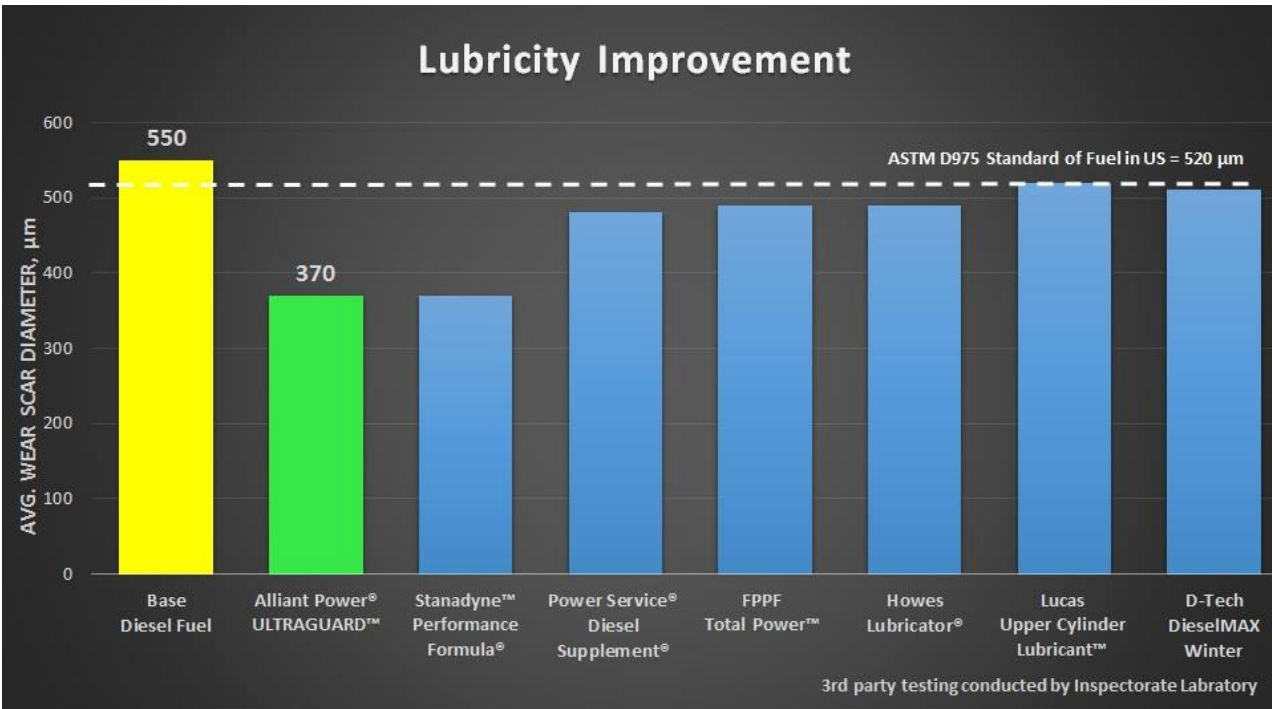


Competitive Testing



Independent testing conducted by Inspectorate Labs

Competitive Testing



Independent testing conducted by Inspectorate Labs

Competitive Testing

Cold Filter Plug Point (CFPP) Improvement, °F



Advantages of AP Fuel Treatments

- Outperforms competitive brands
- Better technical and service support from Alliant Power Service Network
- AP Fuel Treatments will help:
 - Eliminating engine performance problems
 - Restore/Improve engine performance and economy
 - Extend reliability/life of all fuel system types:
 - HP Common Rail, unit injectors, rotary pumps, in-line pumps
 - Reduce expensive engine/fuel system repairs
- Contact your closest Alliant Power Authorized Service Dealer for price and availability:
<http://alliantpower.com/dealer-locator>

Thank you for your support!!!

