

**Select from the CamGuard
family of quality products
for specific applications**



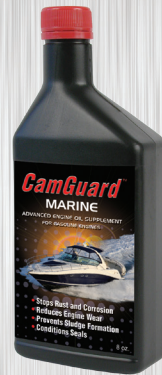
Aviation



HD/Diesel



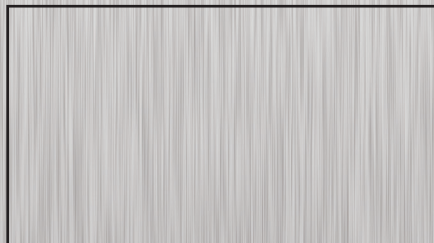
Automotive



Marine



Small Engine



Rev 9/17/15

CamGuard™

HD DIESEL

ADVANCED ENGINE OIL SUPPLEMENT



- **Increases Fuel Economy**
- **Decreases Engine Wear**
- **Prevents Deposit Formation**
- **Fights Rust & Corrosion**
- **Conditions Seals**

CamGuard HD Diesel is a blend of high performance additives that fortify Heavy-Duty (HD) Diesel oils to provide the utmost in engine protection. Commercial HD oil formulations are at best a compromise due to cost, new oil specification delays and government regulations. Cost pressures lead to reduced additive concentrations as well as the inability to utilize the latest additive technology, both of which lead to less than optimum performance.

CamGuard HD Diesel delivers uncompromised performance using the *most advanced additive technology available* to dramatically lower friction, reduce wear, decrease deposit buildup and prevent corrosion when used in commercial HD Diesel oils.

CamGuard HD Diesel utilizes the latest generation of friction modifiers that provide a measurable increase in fuel economy throughout the oil change interval. HD oils have no requirement for fuel economy improvement, as do their automotive counterpart, which makes little sense when the benefits far outweigh the costs.

CamGuard HD Diesel contains advanced antiwear additives that provide a dramatic reduction in wear when compared to current ZDDP (zinc) containing oils. This improvement in wear performance is very important in older technology engines utilizing the mandated reduced zinc (ZDDP) oils. An additional benefit of reduced wear is less iron in the oil, which promotes oxidation and deposit formation.

CamGuard HD Diesel provides enhanced engine *and* lubricant protection in the face of high soot loadings, increased NOx levels, and is excellent for engines utilizing EGR, which is so hard on lubricants.

CamGuard HD Diesel utilizes advanced antioxidants to prevent cylinder varnish and ring belt deposits. This is particularly important in the high fueling rates and higher temperature profiles typical of these hard working engines.

CamGuard HD Diesel contains potent multi-metal corrosion inhibitors that prevent rust and corrosion in seasonally or infrequently used engines.

CamGuard HD Diesel contains seal conditioners that nullify the effects of heat and time to keep seals supple, flexible, and performing like new.

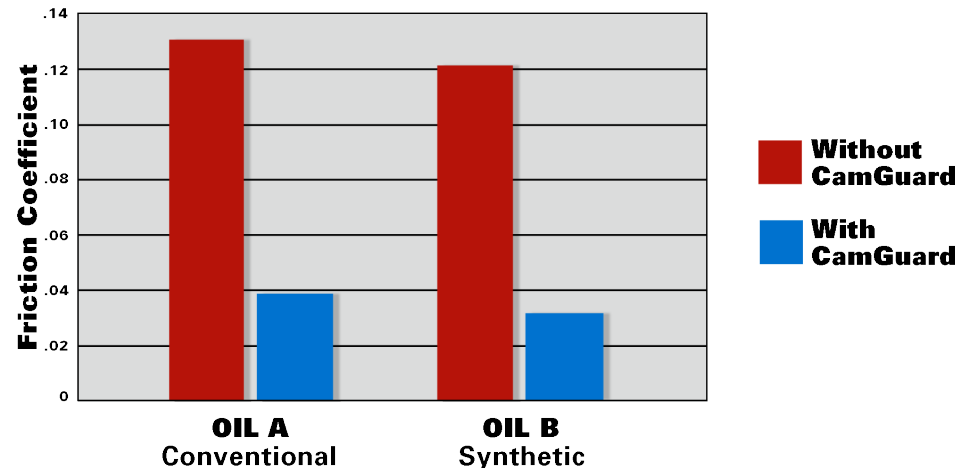
CamGuard HD Diesel is safe for use in all Heavy Duty Diesel engines and will not affect modern emission systems.



Manufactured by Aircraft Specialties Lubricants

aslcamguard.com

Friction Reduction with CamGuard HD



The graph above shows the friction coefficients of two of the top selling Heavy-Duty diesel oils with and without CamGuard HD. The friction coefficient serves as an excellent indicator of fuel economy and is a primary consideration of automotive oils. In Heavy-Duty diesel oil testing, fuel economy is not measured or even considered.

The tests were performed at an independent lab utilizing an industry standard method (*FALEX Block on Ring tribometer*). The test procedure consists of heating the oils to 200 degrees F, then slowly raising the contact pressure and measuring the coefficient of friction.

The red bars show the friction coefficients for each untreated oils. The blue bars show the friction coefficient with 5% CamGuard HD. This remarkable reduction in the friction offers substantial benefits in terms of boosting fuel economy and reducing oil temperatures over untreated commercial Heavy-Duty oils.



The CamGuard Story begins with CamGuard Aviation which was developed as an ultra-high performance aviation product.

The two photos at the left are pistons out of Lycoming IO-540 aircraft engines. The top piston is from our FAA certification engine using CamGuard for 500 hours. The certification test was in an aerobatic aircraft that utilized very high power settings resulting in extremely high temperatures.

The bottom piston was taken from a normal use engine, without CamGuard, for 500 hours. The difference in deposits is striking.

CamGuard is the only lubricant product to undergo certification testing in the extremes of aerobatic use.