

## BioArmor Diesel Engine Protectant *(all natural)*

BioArmor is a Lubricity enhancing biodiesel fuel additive that is made from 100% biodegradable agricultural oils. Primarily a lubricant, BioArmor also protects the consumer's engine from wear by cleaning pistons and valves, and by lubricating pumps, injectors and turbo chargers.

DSG Canada has conducted various functional and performance testing on BioArmor at the University of Saskatchewan by Professor Barry Hertz, POS, and at their own engine test cell laboratory in Saskatoon. Lubrication quality tests conducted in December 2004 showed impressive results:

- By adding a 0.1% dosage of BioArmor, the lubricity number for the diesel fuel produced an increase of 27.5% over a base test fuel.
- By adding a 1.0% dosage of BioArmor, the increase in the lubricity number was 42% (An increase in the lubricity number indicates that the fuel's lubrication qualities has improved).



Biodiesel processing at POS Pilot Plant, Saskatoon.

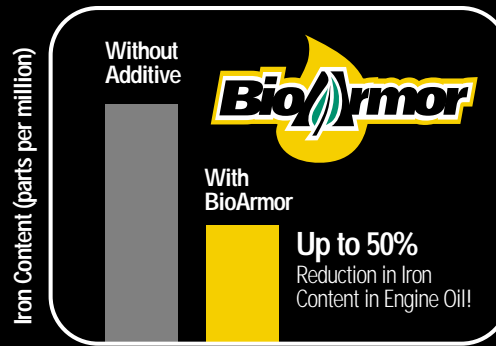
BioArmor's unique blending recipe also provides other performance benefits:

- **Cetane enhancer provides cleaner burning and easier starts**
- **Prevents water emulsions, corrosion and rust**
- **Cleans pumps, injectors and upper cylinders**
- **Reduces fuel consumption**
- **Improves pulling power**
- **Reduces engine "knock"**

DSG Canada's diesel fuel technicians have over 20 years of experience maintaining, rebuilding and increasing performance of diesel engines, and over 10 years manufacturing a premium line of diesel fuel additives.

Many farmers are already using and have been impressed with the high quality of DSG Additives. **Rick Kohut** who farms in Alberta near the Saskatchewan border recently had this to say about DSG additives: **"You offer an excellent fuel additive. It saved me downtime and thousands of dollars on my V-12 payloader"**.

**Made by diesel experts, for knowledgeable operators.**



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### Swift Current Diesel

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Contains **100% Biodegradable Agricultural Oils!**

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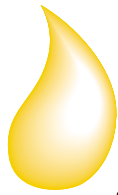
## Diesel Fuel Conditioner

Protects Your Engine With Natural Enhanced Bio Lubricant



The Real **Diesel Specialists**

**In order to reduce greenhouse gas emissions**, authorities have ordered the reduction of sulfur in diesel fuel. Removal of sulfur greatly reduces the lubricating value of diesel fuels. In addition, poor handling practices, contamination, condensation, heat, cold and other issues can also negatively affect the quality and performance of diesel fuel. Engines using exhaust gas recyclers are also prone to excessive carbon contaminating engine oil. As a result, diesel engines that are not treated effectively with a top quality diesel fuel additive can be subjected to excessive and premature wear and expensive breakdowns.



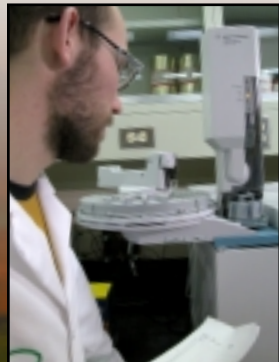
## Superior Enhanced Lubricant...by adding BioArmor to your diesel...

**BioArmor's** natural vegetable oils provide a superior level of lubrication than that found in petroleum based diesel fuel. Diesel fuel, when it leaves the refinery is not necessarily poor in quality. However, fuel handling, storage conditions, condensation and other factors can adversely affect the quality of diesel fuel. In addition, the engine oil in modern engines with exhaust gas recyclers will become contaminated with carbon deposits, causing premature thickening of oil. These are very dangerous conditions that can be avoided by the use of **BioArmor**, which provides enhanced lubrication and cleaning while reducing dangerous exhaust emissions.<sup>1</sup>



*Parts damaged and overheated (discolored) from diesel fuel with poor lubrication.*

**FACT:** A lack of lubricity in your injection system will cause a seizure of a system's plungers, injector nozzles and other components. In the engine, a lack of lubricity will cause the piston rings and valve guides to stick.



*Laboratory tests for BioArmor quality control.*

DSG Canada is the only additive manufacturer in North America that has day-to-day hands on experience with diesel engine and fuel injection repair. This translates into a huge technical advantage for our customers, because we have to answer to them, and we are obliged to provide them with **additives that actually do meet performance claims.**



*Additive testing on DSG's engine test cell.*

## Environment Friendly.

Carbon Dioxide is a greenhouse gas that contributes to global warming by preventing some of the sun's radiation from escaping the earth. Biodiesel additives are produced from oils derived from vegetable or animal sources that can act as a partial or complete substitute for diesel fuel. Burning a biodiesel additive drastically reduces the sulfur oxide and sulfate emissions, two major contributors to acid rain. Unlike petroleum based diesel fuel, biodiesel additive is free of sulfur impurities and therefore it reduces hydrocarbon emissions, carbon monoxide, and soot particles that previously would have been released into the air.<sup>2</sup>



**FACT:** Agriculture is an important industry in Canada and specifically the Prairie provinces. Climate change may threaten farms by increasing the risk of drought, dust storms, and insect infestations. Farmers may need to irrigate their crops more, while changes in the growing season would affect the types of crops grown.

The production of Biodiesel in the long run will contribute to rural renewal by creating a demand for oilseeds, which can be grown on marginal lands or replace low value crops.



**FACT:** The average weight and number of cubs born to polar bears in the Hudson Bay region dropped by 15% between 1981 and 1998. Polar bears are very unlikely to survive as a species if there is an almost complete loss of summer sea-ice cover, which is projected to occur before the end of the century by some climate models.

<sup>1&2</sup> *Just the Basics: Biodiesel article. U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy*

