

LUBE

TECHNI-GRAM



LEWIS FOX
DIRECTOR OF TECHNOLOGY

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LOW-SULFUR FUEL PROBLEMS CONTINUE

As emission regulations continue to tighten in markets around the world, the production of low-sulfur diesel fuels also continues to increase. Unfortunately for trucking fleets, this means the problems associated with low-sulfur diesel fuels increase as well.

To help engine and vehicle builders meet advanced low emission standards, many legislative and regulatory agencies continue to rely on legislation that mandates low-sulfur diesel fuels. Unfortunately, most naturally occurring lubricity enhancers in the fuel are also removed along with the sulfur. Since these enhancers are what give diesel fuel its ability to lubricate and protect fuel injection systems, low-sulfur diesel fuels definitely require lubricity-improving additives in order to minimize damage to fuel delivery and injection systems.

Once thought of as cold weather problem solvers, fleet owners are now viewing premium fuel improvers as year-round problem solvers. Low-sulfur diesel is a less stable, more abrasive fuel than its high-sulfur predecessor, and widespread problems such as fuel pump failures due to the reduced lubricity of low-sulfur fuel, as well as clogged or fouled fuel filters, have been added to the typical cold weather fuel gelling problems. To add to fleet managers' woes, more state and federal agencies are encouraging individuals to report smoking vehicles either on-line at sites such as www.smokingvehicle.org, or by phone using 1-800-"SMOG" numbers.

WINTERTIME MAGNIFIES FUEL PROBLEMS

Wintertime operation of diesel-powered equipment can be extremely difficult if the fuel is not recognized as the most important part of a quality equipment maintenance program. Through the use of a *Premium* Diesel Fuel Improver that will not cause operating problems (in winter or in summer), trucking fleet owners can be assured of maximizing the benefits from their fuel dollars spent and minimize fuel related field service maintenance cost.

SWEPCO customers have found that the use of SWEPCO's *Winter Formula* 501 Premium Diesel Improver completely resolves all of the common difficulties experienced with diesel powered equipment in cold weather. SWEPCO 501 *Winter Formula* has all the benefits and potency of the standard SWEPCO 501 Premium Diesel Improver Formula, plus the additional *anti-gelling* benefit that prevents plugging of fuel filters and other fuel system components in cold weather.



... to keep it running

THE NEGATIVES OF BLENDING NO. 1-D FUELS (KEROSENE)

Many trucking fleets have traditionally utilized “fuel blending” (the mixing of two different fuels) for minimizing cold weather operating problems. Of course, blending of No. 1-D raises the operating cost for trucking fleets, and it often does not eliminate cold weather problems for the diesel equipment.

Ex.

If, the cost of **No. 2-D** diesel fuel is **\$1.40** per gallon

and

the cost of **No. 1-D** (kerosene) is **\$1.65** per gallon

then, a **75% / 25% blended fuel** will cost **\$1.4625** per gallon

$(\$1.40 \times 75\% + \$1.65 \times 25\%)$

An increase of **\$0.0625 (6.25 cents)** per gallon of fuel used

In addition to the cost per gallon change, other negative things happen to the diesel fuel when blended with kerosene (No. 1-D fuel):

The **BTU Content of blended fuel will be lower** than No. 2-D diesel fuels (and fuel oils), thus the power production (BHP) will be less. Lower BTU Content per gallon provides less energy to the engine and results in lower power production.

The **Fuel Economy (Fuel Efficiency)** will be lower with blended fuel.

The **Fuel Lubricity Protection** will be reduced with blended fuel. In addition to poorer lubrication value from the fuel (increases fuel system wear), the thinner viscosity created leads to injector leakage and “chatter.”

SUMMARY

According to current industry publications, diesel fuels treated with the right chemical additives are the best possible solution to insure proper equipment operation at all times...especially during cold weather. While in the past many trucking fleets only considered using Premium Fuel Improvers during colder months, today’s low-sulfur fuel makes the use of Premium Fuel Improvers year-round a necessity in order to optimize fuel efficiency and prevent operational problems throughout the entire life of the equipment. Quality Fuel Improvers such as SWEPCO’s 501 Premium Diesel Fuel Improver pay dividends to the fuel user that far exceed their nominal cost.