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Lower Sulfur NRLM Diesel: *A Cleaner Burning Fuel*

An Overview for End-Users of Non-Road, Locomotive & Marine Diesel Fuel

Dear Diesel Fuel End-User:

The U.S. Environmental Protection Agency (EPA) began the phase-in of a new, cleaner burning off-road diesel fuel for **non-road, locomotive and marine (NRLM)** use on June 1, 2007. On December 1, 2007, Low Sulfur Diesel (LSD) fuel meeting a sulfur content of 500 part-per-million (ppm) or less is the only fuel permitted for off-road diesel vehicles and equipment, marine and locomotive engines. By December 1, 2010, all NRLM diesel fuel will be required to meet the Ultra-low Sulfur Diesel (ULSD) standard of 15-ppm sulfur.

There are new federal requirements end-users must be aware of as this phase-in moves forward. This guide - a service of the New England Fuel Institute (nefi.com) - will inform you, as an End-User of NRLM diesel fuel, of what you need to know to comply with these new federal requirements.

Special notes regarding Heating Oil and Kerosene:

Heating Oil (No. 2 Fuel Oil):

While there has been discussion of lowering the sulfur content of heating oil in some states and regions, and though some policymakers have already moved in this direction, there is currently no federal requirement.

However, use of high sulfur heating oil (greater than 500-ppm sulfur content) in NRLM applications is prohibited as of December 1, 2007.

Kerosene:

The EPA essentially classifies kerosene as a diesel fuel therefore has made off-road kerosene subject to the new NRLM diesel fuel regulations. The only exception is kerosene used in space heating applications, in which case the use of high sulfur kerosene is still permitted.

Type↓	Fuel Use→	Dyed Ultra-low Sulfur Diesel (15-ppm ULSD)	Dyed Low Sulfur Diesel (>15-ppm to 500-ppm LSD)	Dyed High Sulfur Diesel & Heating Oil (Greater than 500-ppm)
Off-Road Diesel Vehicles		May use now	<i>Must use</i> as of 12/1/2007	<i>Prohibited</i> as of 12/1/2007
Locomotive & Marine Engines*		May use now	<i>Must use</i> as of 12/1/2007	<i>Prohibited</i> as of 12/1/2007
Stationary Engines**		May use now	<i>Must use</i> as of 10/1/2007 for stationary engines mfg. or rebuilt on or after 4/1/2006	<i>Prohibited</i> as of 10/1/2007 in stationary engines mfg. or rebuilt on or after 4/1/2006
Dispensers of NRLM Diesel Tank size: 550 gals or greater†		May dispense now	End-user tanks <i>must dispense</i> for NRLM engine use as of 10/1/2007	End-user tanks <i>are prohibited</i> from dispensing for NRLM use as of 10/1/2007
Dispensers of NRLM Diesel Tank size: <i>Less than</i> 550 gals		May dispense now	End-user tanks <i>must dispense</i> for use in NRLM engines as of 12/1/2007	End-user tanks <i>are prohibited</i> from dispensing for NRLM use as of 12/1/2007

* Except marine residual fuel used by very large engines on ocean-going vessels.

** Excludes space heating equipment, such as oil fired burners.

† **IMPORTANT:** These tanks must comply with EPA Labeling Requirements. Smaller tanks should be labeled in order to assure fuel quality.

(MORE)

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FREQUENTLY ASKED QUESTIONS

Q. Why the need for the new diesel fuel?

The new diesel fuel will contain significantly lower levels of sulfur to reduce air pollution and cases of pulmonary lung disease, according to the EPA. A reduction in sulfur by 99% from 5,000 parts-per-million (ppm) sulfur to only 15-ppm Ultra-low Sulfur Diesel (ULSD) fuel over the next three years will reduce the amount of ozone (smog) and fine particulate matter emitted into the air we breathe. The EPA also says there will also be health benefits, including a reduction in the number of premature deaths, chronic bronchitis and asthma, particularly among children. More information on the EPA clean diesel program can be found at: <http://www.epa.gov/otaq/highway-diesel/regs/index.htm>

Q. Are all diesel fuels moving towards the Ultra-Low Sulfur (15-ppm) standard?

Yes. On October 1, 2007, the EPA will require that distributors sell only NRLM diesel fuel with a sulfur content of 500-ppm or less (ULSD or LSD). Distributors may no longer distribute high sulfur diesel or heating oil for NRLM applications as of October 1, 2007. In 2010, the sulfur level in all diesel fuel for use in on-road and non-road vehicles (and equipment) will drop to 15-ppm. This fuel will also be required for use in all marine & locomotive engines in 2012.

Q. Are heating, heavy marine or aviation fuels affected?

No. The regulations do not affect distillate fuel (No. 2, No. 4, diesel fuel, kerosene, etc) for use in space heating, industrial boiler, heavy marine or aircraft applications. Consumers of these fuels have no new compliance requirements.

Q. How will the new fuel standards affect my off-road diesel engines?

The new, lower sulfur diesel fuels will be better for your diesel engines. On December 1, 2007, all mobile NRLM diesel engine vehicles and equipment, irrespective of make and model year, must use 500-ppm "LSD" under federal regulations. The New England Fuel Institute recommends contacting your manufacturer about appropriate fuel use, especially if intend to run Ultra-low Sulfur Diesel fuel (15-ppm) in an older diesel engine.

Q. How do the new rules affect stationary engines?

Stationary engines built or modified after April 1, 2006 must use NRLM diesel fuel with a sulfur content of 500-ppm or less. Stationary engines built before this date may continue to use higher sulfur fuels. A stationary engine includes any internal combustion engine that converts heat energy into mechanical work and is not mobile. Examples include stationary engines used to generate electricity and operate compressors and pumps at power and manufacturing plants. The exemption also covers stationary (but portable) engines used in emergencies, such as generators and water pumps.

Q. What else must an end-user know about the regulations?

First, and foremost, you will not be able to take delivery of high sulfur diesel or heating oil for use in any NRLM engine after October 1, 2007. Only 500-ppm or 15-ppm diesel fuel will be available for these purposes. However, you may continue to use any high sulfur fuel that you have in storage until Oct. 1, 2007 (tanks equal to or greater than 550 gals) or Dec. 1, 2007 (tanks under 550 gals). Second, lower sulfur diesel fuels are more expensive to refine than heating oil so there may be a price differential between the two products depending on local market conditions. Contact your supplier for details on what kinds of fuel will be available.

Finally, if you dispense distillate fuel (diesel, kero, etc) from fixed tanks or skid tanks with a capacity of 550 gallons or greater, **federal law requires that you affix special decals** near the dispenser mechanisms indicating the sulfur content of the fuel in the tank. Decals may be placed on the tank itself in a conspicuous location if there is no room on the dispenser. **These decals were required for on-road diesel fuel as of June 1, 2006 and a new set of decals for dispensers of off-road fuels were required as of June 1, 2007.**

Q. Where can I get the new fuel dispenser decals required by the EPA?

The New England Fuel Institute offers sulfur content disclosure decals, as required by the EPA, for dispensers of distillate fuel (diesel, kero, etc). They are high quality, EPA-approved, and comply with all federal regulations. An order form is available online at www.nefi.com or upon request by calling (617) 924-1000 or emailing LRAC@nefi.com.

Q. What are the penalties for non-compliance?

Failure to comply with the EPA's ULSD regulations **could result in a fine of up to \$32,500 per day, per violation.**

Q. What if I have additional questions about ULSD?

The EPA and industry groups have teamed up to create an on-line information resource for businesses and consumers, the "Clean Diesel Fuel Alliance," providing useful information about the transition to cleaner burning diesel fuel (below).



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