

KEEPING ENGINES PROTECTED IN COLD WEATHER IS A PRIORITY. KEEPING BETTER DIESEL FUEL IN THE TANK IS THE ANSWER.

At Cenex®, it's our priority to study and understand your business. This allows us to anticipate and address your changing needs. Based on knowledge and experience, we've developed multiple Cenex Winterized Premium Diesel Fuels to meet the demands of new and existing engine technology and to deliver the cold-weather protection your engines need — all while optimizing power and performance.

It's time to think about what your fuel is doing to improve your business. Count on Cenex Winterized Premium Diesel Fuels to deliver:

- Maximized performance and fuel efficiency
- Improved horsepower and quick, reliable starts even in extreme cold
- Reduced downtime and maintenance costs
- Extended life of injectors/injector pumps

Cenex knows you need to keep vehicles at their peak performance and your operation profitable. Cenex Winterized Premium Diesel Fuels are the fuels to help you do it.



CENEX® PREMIUM DIESEL FUELS FEATURES AND BENEFITS CHART

FEATURE	WHAT IT DOES	HOW YOU BENEFIT
Wax Crystal Modifiers*	Wax crystal modifiers change the size and shape of wax crystals, preventing them from bonding together • Wax crystals stay small enough to flow through the fuel filter • They create a porous wax cake on the fuel filter, allowing continued fuel flow until the engine heats up	• Significantly increased cold weather operability • Reduced downtime
De-Icers*	Dramatically lower the point at which any water in the fuel system freezes	• Fewer moisture-related problems
Wax Anti-Settling Agents*	Reduce settling of wax crystals in vehicle tanks and above ground storage tanks, which clog filters and other fuel system components	• Enhanced cold weather operability • Reduced downtime • Reduced maintenance costs
Injection Stabilizer	Addresses fuel oxidation problems in new engine technology fuel injectors and prevents internal diesel injector deposits (IDID) from forming deep inside high-precision injectors.	• Less filter and injector replacements in new engine technologies • Less downtime and maintenance costs
Detergents	Aggressive detergent components keep fuel systems clean and performing at their optimum level.	• Improved fuel efficiency (up to 5% better in comparison to a typical #2 diesel fuel) • Greater horsepower • Extended life for fuel pumps and injectors
Cetane Improver	Cetane is a measure of diesel engine startability. The higher the cetane number, the quicker the fuel will ignite. Cenex Premium Diesel Fuel has a typical cetane number of 48.	• Reduced strain on engines and electrical systems • Less downtime and maintenance cost • Quicker, more fuel-efficient starts • Smoother running engines • Better cold weather starts
Lubricity Improver	Friction-reducing agents provide 10-15% better protection against friction and wear on the fuel pump than typical #2 diesel fuel.	• Protects moving parts from excessive wear • Extended life for the fuel pump
Demulsifiers	Demulsifiers force water to the bottom of the tank, allowing for easy drainage and removal. This prevents unwanted moisture from being carried through the fuel system and reduces the volume of water entering the combustion chamber.	• Easier removal of water from storage tank • Less wear on injectors • Fewer filter replacements • Prevents algae formation in storage tanks
Corrosion Inhibitors	Provides superior corrosion protection, preventing the formation of rust on metal parts.	• Saves the cost of rebuilding injector pumps • Reduces downtime and repair costs • Slows the natural degradation of diesel fuel caused by exposure to oxygen • Prevents corrosion-caused leaks, blockages and breaks in metal parts
Storage Stabilizers	Reduces gum and varnish buildup and contains components to extend the storage life of diesel fuel.	• Tolerates temperature extremes • Extends storage life of diesel fuel by 3-6 months.

* Winter fuel additives are in Cenex® Wintermaster®, Cenex Roadmaster XL® - Seasonally Enhanced, and Ruby Fieldmaster® - Seasonally Enhanced fuels only.



OUR ENERGY COMES THROUGH®

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Cenex® Winterized Premium Diesel Fuels

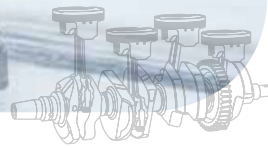
Better cold-weather protection starts with *better diesel fuel in the tank.*



PREMIUM DIESEL FUEL

Fueling innovation for enhanced performance.





BETTER DIESEL FUEL FOR A BUSINESS THAT DEMANDS EFFICIENCY

Cenex® Winterized Premium Diesel Fuels deliver the serious weather protection your diesel engines need — while optimizing power and engine performance. Unlike typical winterized diesel fuels, they contain an advanced performance additive package that allows for extreme-low-temperature operability. So you can count on Cenex Winterized Premium Diesel Fuels even when it's bitter cold outside.

CENEX® WINTERIZED PREMIUM DIESEL FUELS, SPECIALLY FORMULATED FOR EXTREME WINTER CONDITIONS:

Three options to choose from to meet your needs. Use the chart to the right for a detailed product comparison.

Cenex® Wintermaster®

With an operability of -30°F and cold filter plugging point (CFPP) of -55,°F⁺⁺ you can count on Cenex Wintermaster for the most extreme winter conditions.

Cenex Roadmaster XL® and Ruby Fieldmaster® Seasonally Enhanced

Cenex Seasonally Enhanced Premium Diesel fuels are formulated for moderate climates and provide excellent shoulder season flexibility. Cenex Seasonally Enhanced products offer a CFPP of -25°F.

#1 Diesel Fuel with Cenex Premium Diesel Fuel Additive

Use it to blend down your Cenex Premium Diesel Fuel tanks during transition ensuring additives remain at proper levels.

A SMALL CHANGE THAT ADDS UP TO A MORE PROFITABLE OPERATION.

Cenex Winterized Premium Fuel is an investment that pays for itself with cold-weather protection, fuel-efficient starts, a smoother running engine and proven power. The most important difference is the one you'll see on the bottom line.

⁺⁺ Indicates operability of the fuel up to 13°F below the cloud point

FUEL INJECTOR DEPOSITS

Internal diesel injector components within HPCR engines are much smaller, lighter and more intricate than direct inject diesel engines manufactured prior to 2007. With injection that occurs multiple times per combustion cycle at engine pressures up to 35,000 PSI, even the smallest deposit can cause issues within the tight tolerances of the injector (typically 1 to 3 microns). When using typical #2 diesel fuel, deposits occur in two places:

Deposit locales



Nozzle coking deposits occur in the injector nozzle tip. These orifices spray microscopic fuel droplets into the combustion chamber and, because they are so finite, they can become clogged by even the smallest amount of deposits. These deposits may only be a stain or varnish; however, they can lead to power deficiencies and decreased fuel efficiency.

Internal diesel injector deposits (IDID) are of critical concern with high-pressure injection engine technologies. Unlike conventional deposits, IDID form deep inside the high-precision injectors, causing havoc due to tight tolerances. These deposits can appear suddenly inside the injector and can significantly reduce power, fuel economy, and in some cases can result in injector failure.



FUEL-FILTER PLUGGING

In addition to forming deposits in the fuel injection system, another known issue that affects high-pressure injection (HPI) systems is premature fuel filter plugging. Fuel filters capture unwanted contaminants from the fuel, and left unchecked can cause serious damage. With the extreme high temperatures and pressures generated by HPI engine technology, typical #2 diesel is thermally decomposed in the injection system and results in fuel filter plugging. As the flow of the fuel through the fuel filter becomes restricted or plugged, a loss of power will result.



Fuel filter after 12,000 miles using typical #2 diesel.



Fuel filter after 30,000 miles using Cenex Premium Diesel Fuels.

Black sludge, a common problem, is a critical issue in HPCR engines operating at high temperatures, where contaminants from unburned fuel and combustion soot combine to further diminish performance.

ENHANCED CENEX® PREMIUM DIESEL FUELS MEET THE DEMANDS OF HIGH-TECH ENGINES

The fuel performance considerations that come with today's highly advanced engines make a clear case for Cenex® Premium Diesel Fuel, which meet or exceed the Premium criteria established by the NCWM/EMA/TCM.*

Laboratory and field tests confirm the upgraded injection stabilizer in Cenex Premium Diesel Fuels successfully removes and prevents IDID, including carbonaceous, soap/metal carboxylates and lacquer type deposits, as well as a dramatic reduction in fuel filter plugging while maximizing power in today's high tech engines.

Cenex Premium Diesel Fuels optimize performance with a complete, high-quality, balanced additive package, that:

- Improves fuel economy by as much as 5%
- Increases fuel lubricity by 10-15%
- Improves power by up to 4.5%

Above claims are in comparison to a typical #2 diesel fuel.

*National Conference on Weights and Measures/Engines Manufacturers Association/The Maintenance Council

Cenex® Winterized Premium Diesel Fuels Comparison

Cenex Wintermaster® Cenex RMXL® SE* #1 Diesel with CPDA‡
Cenex RFM® SE††

ATTRIBUTES / BENEFITS

	Cenex Wintermaster®	Cenex RMXL® SE* Cenex RFM® SE††	#1 Diesel with CPDA‡
Cold filter plugging point (CFPP)	-55° ⁺⁺	-25°	**
Operability F°	-30°	**	**
Optimizes performance in all diesel engines	✓	✓	✓
Improves fuel economy by as much as 5%	✓	✓	
Increases fuel lubricity by 10-15%	✓	✓	✓
Improves power by up to 4.5%	✓	✓	
Typical Cetane Number	48	48	43
Extends life of injectors / injector pumps	✓	✓	✓
Reduces downtime and maintenance costs	✓	✓	✓
Performs better than standard diesel fuels in modern diesel engines	✓	✓	✓

ADDITIVE PACKAGE COMPONENTS

Injection Stabilizer	✓	✓	✓
Lubricity Improver	✓	✓	✓
Demulsifiers	✓	✓	✓
Storage Stabilizers	✓	✓	✓
Corrosion Inhibitors	✓	✓	✓
Detergents	✓	✓	✓
Cetane Improver	✓	✓	✓

* Cenex RMXL® SE — Cenex Roadmaster XL® Seasonally Enhanced Premium Diesel

† Cenex RFM® SE — Cenex Ruby Fieldmaster® Seasonally Enhanced Premium Diesel

‡ CDPA — Cenex Premium Diesel Additive package

[°] Indicates operability of the fuel up to 13 degrees F below the cloud point

^{**} Contact your authorized Cenex Premium Diesel Fuel Distributor

Contact your local authorized Cenex Premium Diesel Fuel Distributor today to find out how Cenex Winterized Premium Diesel Fuels can help improve the bottom line of your operation, or visit cenex.com to learn more.