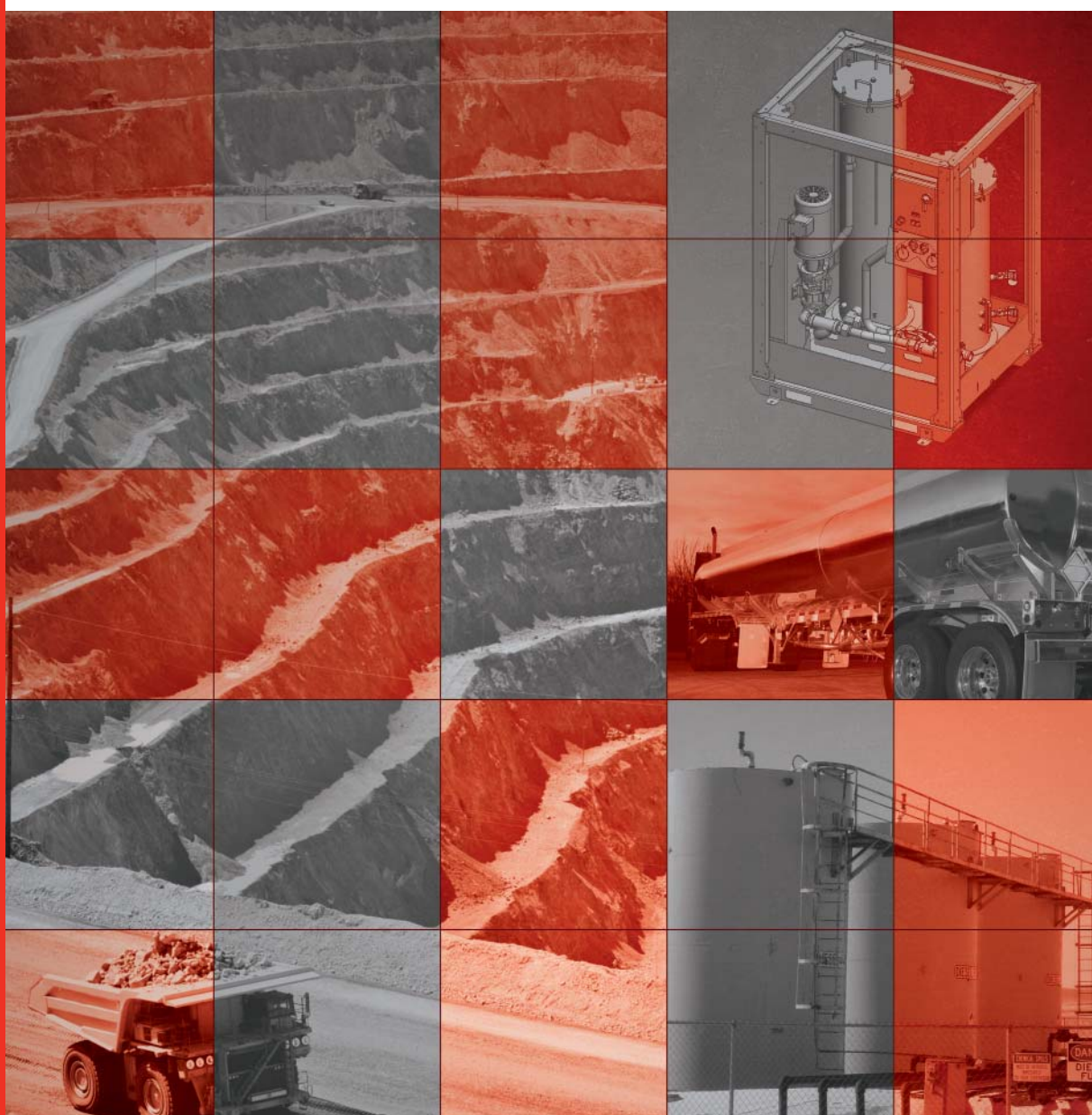




Fuel ReGen System

FUEL



The Importance of Fuel Quality for Today's High Horsepower Engines



Diesel Engines Have Changed

Modern diesel engines provide increased performance and greater reliability. However, this advanced technology has created tighter tolerances in high pressure fuel systems which can result in wear with the use of contaminated fuel. Wear to Fuel Injection Equipment (FIE) can decrease engine life and severely damage other engine components.

Sources of Contamination

Fuel contamination can occur throughout the handling process from several possible sources:

- » Fuel suppliers
- » Fuel storage facilities
- » Internal transport systems
- » Poorly maintained equipment



Fuel Requirements

The standard established by ISO (International Organization for Standardization) provides a common measurement system that engine and fuel system manufacturers use to designate acceptable particle levels in the fuel system. Determining fuel cleanliness requirements includes the measurement of both particle size and count. ISO 4406 utilizes a series of three numbers (18/16/13) to identify the particle count per milliliter at 4, 6 and 14 micron sizes. Engine manufacturers recommend ISO 18/16/13 or better as the cleanliness target in fuel tanks.

ISO 4406 Definition of Particles

Fuel Status	ISO Code 4406	Particle Counts (per Milliliter Fluid Sample)	Comments
Fuel Supply Unacceptable	22	Up to 40,000 particles > 4µm	Typical levels of incoming fuel (Primary source of fuel contamination)
	20	Up to 10,000 particles > 6µm	
	18	Up to 2,500 particles > 14µm	
Tank Filtration	18	Up to 2,500 particles > 4µm	Maximum recommended by engine manufacturer (Second leading source of contamination)
	16	Up to 2,500 particles > 6µm	
	13	Up to 80 particles > 14µm	
On Board Filtration	15	Up to 320 particles > 4µm	Preferred by engine manufacturer
	13	Up to 80 particles > 6µm	
	10	Up to 10 particles > 14µm	
HPCR* Acceptable	12	Up to 40 particles > 4µm	Preferred by fuel injector manufacturer
	9	Up to 5 particles > 6µm	
	6	Up to .64 particles > 14µm	

* High Pressure Common Rail

Improve Fuel Cleanliness with the Fuel ReGen System



Protect Your Investment

Because of capital intensive equipment, high horsepower equipment users depend on vehicle uptime for the overall success of their operation. Fuel storage is essential to the business, as is the delivery of clean fuel to prevent premature injector or engine failure. The Cummins® Fuel ReGen System protects against the ongoing issue of fuel cleanliness.



Unmatched Efficiency

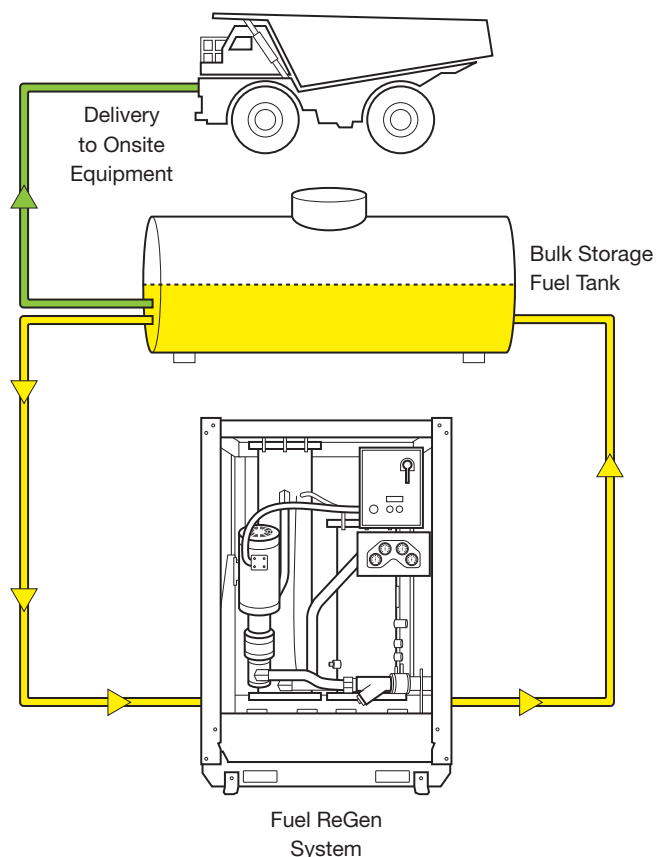
Designed for use on storage tanks of 35,000 litres and larger,* the Fuel ReGen system runs 24/7 in a continuous recirculation configuration. Processing 190-380 l/min, the system cleans fuel with unmatched efficiency:

- 99% emulsified water removal per SAE J1488
- 99% free water removal per SAE J1839
- 95% particulate removal @ 4 micron per ISO 19438
- 99% particulate removal @ 6 micron per ISO 19438

Simple System Integration

The compact Fuel ReGen System fits conveniently in a small footprint, requiring only a standard 2" hose and standard site electrical connections to connect to the bulk storage tank. Controls, pump, Winslow depth filter and coalescing filter are housed in a single durable unit that allows for easy lifting by crane or fork truck. Once installed, monitoring and servicing are simple with integrated features, including:

- Pressure relief and drain valves
- Pressure gauges
- Top-load filter servicing



* Units can be customized based on site requirements.

Product Specifications

Characteristic	FK22000	FK22001
Max Flow Rate	190 l/min	380 l/min
Required Power	480V, 3-phase	480V, 3-phase
Motor Rating	3.5 Hp	10 Hp
Current Draw	5 amps	15 amps
Max Pump Speed	1750 rpm	1750 rpm
Max Pump Differential Pressure	8.5 bar	8.5 bar
Nominal System Operating Pressure	2-4 bar	2-4 bar
Max System Pressure	5 bar	5 bar
Min Inlet Pressure	Low net positive suction head required	Low net positive suction head required
Inlet/Outlet Fittings	2" cam-and-groove design	2" cam-and-groove design

With our broad experience in integrated solutions for the engine, Cummins Filtration offers the best products to meet the rigorous requirements of modern high pressure fuel systems. State-of-the-art technologies ensure maximum protection and top performance in your fuel system for longer life, optimum fuel efficiency and increased productivity.

Once fuel has been cleaned by the Fuel ReGen System and is ready for delivery to the equipment tank, Cummins Filtration recommends Fleetguard Fuel Island Filtration and On-engine Remote Mount and Spin-on Fuel Processors with patented StrataPore™ media to fully protect fuel injectors.



Note: Individual Fuel ReGen System performance results may vary due to specific operating conditions.

For more detailed information on these and other fuel system products, please refer to the **Fleetguard Technical Information Catalog – LT32599** or visit **Fleetschool** at cumminsfiltration.com.

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For more information, visit cumminsfiltration.com

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