



Donaldson Delivers Clean Fuel Solutions™

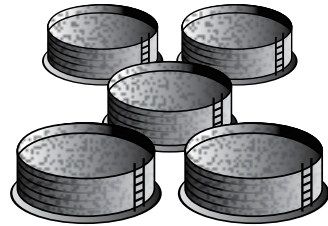
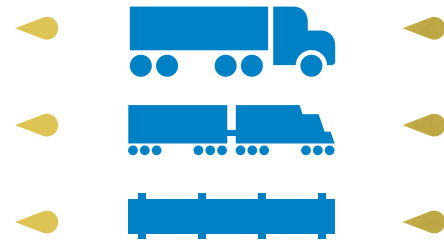
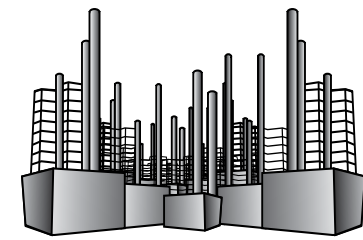
Clean Diesel Kits

What is dirty diesel costing you?

Achieve More.



Dirty Diesel...

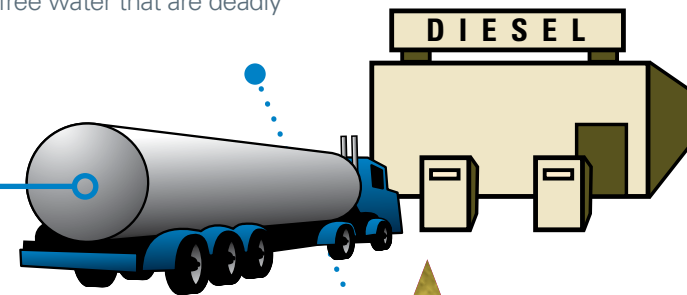


The diesel in your bulk tank is dirty. As diesel fuel travels by truck, rail or pipeline from refinery to terminal locations, then to local bulk storage and then to your bulk tank, it picks up dirt particles and free water that are deadly to today's engines.

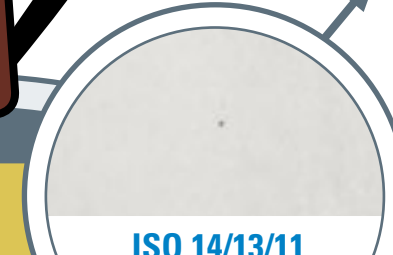
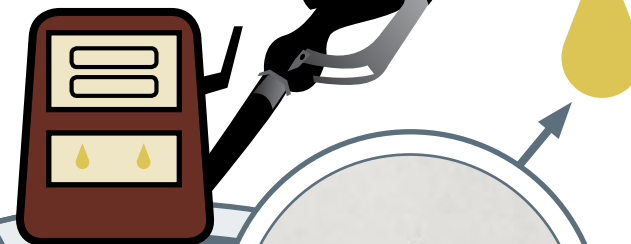


Tiny particles, big problems

A typical 10,000 gallon bulk delivery can contain more than 1.5 pounds of dirt and other particles (the equivalent of a 24 oz. soda bottle, packed with dirt!), and that's before it mixes with whatever contamination is lurking in your tank, waiting to cause problems with your injectors.



ISO 22/21/18
Typical cleanliness of delivery



ISO 14/13/11
Desired rating for diesel fuel before pumping into equipment

FUEL INJECTOR CLEARANCE

2-5 Microns



The typical clearance for a high pressure common rail fuel injector is less than 5 microns, and some injectors feature a clearance of less than 2 microns, so even the tiniest particles can cause problems.

SIZE OF FAMILIAR PARTICLES

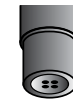
| | | |
|---------------------|-------------------|---|
| Grain of table salt | 100 μm | ● |
| Human hair | 80 μm | ● |
| White blood cell | 25 μm | ● |
| Talcum powder | 10 μm | ● |
| Red blood cell | 8 μm | ● |
| Bacteria | 2 μm | ● |
| Silt | <.5 μm | ● |

Any contaminants picked up during delivery mix with the sludge and rust already in your tank.

When delivered, every gallon of unfiltered diesel fuel can contain nearly 5 million particles of 14 microns or larger in size, more than 45 million 6-micron particles, and nearly 100 million 4-micron particles.

That's some dirty diesel!

...And the Damage It Can Do



Dirty diesel means costly downtime

Today's sophisticated diesel engines require cleaner fuel than ever before to operate efficiently, due to injection pressures of more than 30,000 PSI and extremely tight tolerances.

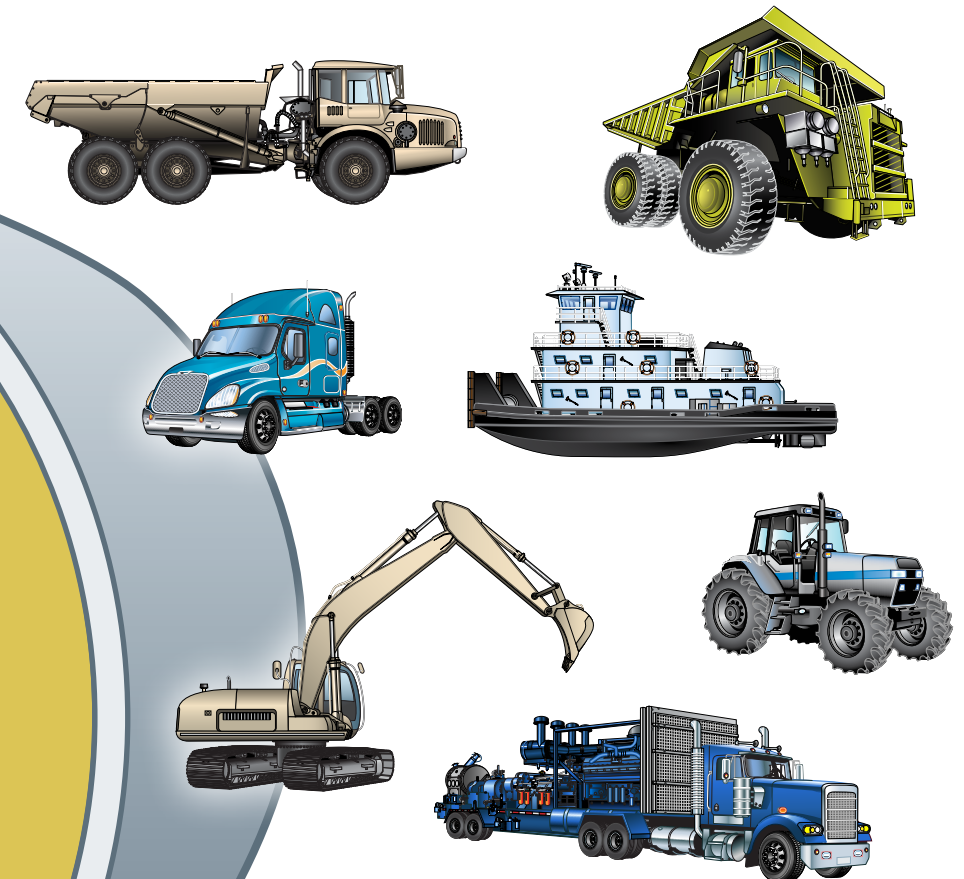
30,000 PSI!



In engines where precision is everything, you can't risk the damage done by high-velocity contaminant. At 30,000 PSI, microscopic particles act like a tiny sandblaster, gouging the injector and creating inefficient spray-patterns.

A fouled injector doesn't spray fuel efficiently and can lead to improper idle, irregular fuel distribution, unsuitable exhaust emissions and poor fuel economy.

If the fuel coming out of your bulk tank is dirty, the onboard filters on your vehicles and equipment need to work overtime to protect the engine. This means more clogged filters, more maintenance, more downtime and more money out of your pocket.



With tight tolerances and high rates of pressure, even microscopic particles in diesel will ruin your injectors and cost you thousands of dollars in downtime and replacement parts.

Clean Your Fuel In Minutes

Donaldson Clean Diesel Kits are the answer to your fuel cleanliness worries. You can't always control the cleanliness of diesel fuel delivered to you, but you can control how clean it is when you pump it into your vehicles and equipment.

Donaldson Clean Diesel Kits are easy to install on any fuel dispenser and come with everything needed to filter out even the finest contaminants before they enter your equipment's fuel system. With the easy-to-follow, step-by-step instructions, you'll have effective, efficient filtration in minutes.

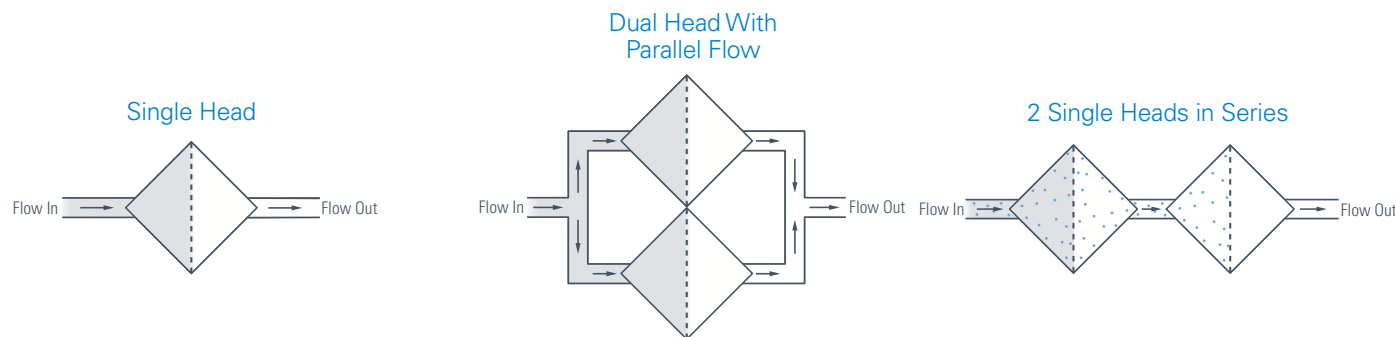
Every clean diesel kit protects your engines, reduces your maintenance costs and prevents unplanned downtime.

Each kit:

- Provides filtration to ISO 14/13/11 diesel cleanliness in a single pass
- Is recommended for all diesel and biodiesel blends



Donaldson: Unmatched Filtration in a Single Pass



Compact X011745 | Standard X011448

Dirty diesel flows down into the filter then emerges spotlessly clean before dispensing into your equipment.

High-Capacity X011450

The High Capacity kit uses **parallel filtration to increase flow**. A dual head is fitted with two identical diesel filters. The diesel flow is split between the two filters. Half passes through one filter and half passes through the other filter. This doubles total capacity.

Clean & Dry X011449

The Clean & Dry Kit uses **two single heads hooked up in series** to accomplish two different jobs. The first head holds a particulate filter that cleans the fuel. The second head holds a water absorber that removes free water, ensuring only clean, dry diesel reaches your equipment.

We Have the Kit You Need

Clean Diesel — Easier Than You Think

Changing the filter on your Clean Diesel Kit is much more efficient than changing the filters on board your vehicle. Onboard filters can plug at unpredictable times, which means your equipment is out of commission at unpredictable times. Once the kit is installed on your pump, clogged filters can be swapped out in minutes with a few turns of the wrist and without a single minute of downtime for your machinery.

Kit Installation in Minutes



A pump without a Clean Diesel Kit installed.



Minimal tools or expertise required.



It only takes minutes to start pumping clean diesel!

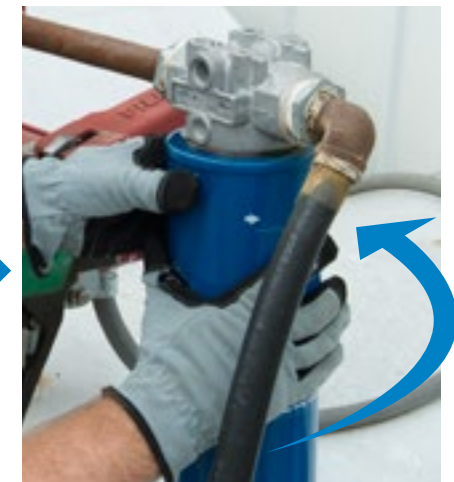
Filter Service In Seconds



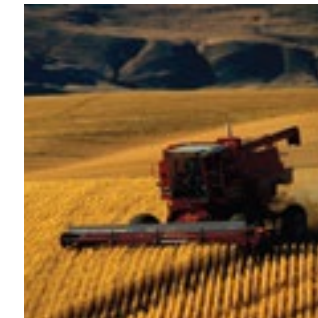
Loosen used or clogged filter.



Line up threads.



Hand-tighten.



Compact X011745

For flow rates up to 32 GPM / 122 LPM

The **Compact Clean Diesel Kit** is designed for use on mobile service trucks, slip tanks, inside fuel dispensers and other tight locations.

Kit contents:

- Compact diesel filter (service part number DBB5333)
- Single-filter head (NPT 1.25)
- Pressure gauge
- Gauge adapter



High-Capacity X011450

For flow rates up to 125 GPM / 473 LPM

The **High-Capacity Clean Diesel Kit** works for operations with high-flow delivery systems that regularly need large quantities of clean diesel delivered efficiently.

Kit contents:

- Dual-filter head
- 2 Diesel filters (service part number DBB8666)
- Pressure gauge
- Gauge adapter
- Flange adapters
- Connecting bolts



Standard X011448

For flow rates up to 65 GPM / 246 LPM

The **Standard Clean Diesel Kit** is perfect for smaller operations that need clean fuel delivered efficiently in any environment.

Kit contents:

- Single-filter head
- Diesel filter (service part number DBB8666)
- Pressure gauge
- Gauge adapter



Clean and Dry X011449

For flow rates up to 50 GPM / 189 LPM

The **Clean and Dry Diesel Kit** removes fuel contamination, stops water as it leaves the bulk tank and provides extra protection for your fuel in storage with the T.R.A.P.™ Breather.

Kit contents:

- Two single-filter heads
- Diesel filter (service part number DBB8666)
- Water-absorbing filter (DBB0248)
- Pressure gauge
- Two gauge adapters
- Connecting nipple
- T.R.A.P.™ Breather and installation hardware



The Donaldson T.R.A.P. (Thermally Reactive Advanced Protection) Breather protects the fuel in your bulk tank by stripping moisture and removing particulate from the incoming air, without affecting flow rates of fluid into and out of the tank.



A story inspired by those who work in the field.



The ability to offer real solutions to real world challenges is what sets Donaldson Clean Solutions apart.

Stop fuel problems **before** they happen

We were inspired to create Donaldson Clean Diesel Kits by a group of innovators who solved a difficult onsite filtration problem in the harshest possible environment: the South African mining industry. Keeping equipment running in these dusty, treacherous conditions was a **difficult task** in its own right, and the problem was compounded by dirty, low-quality diesel that constantly clogged onboard fuel filtration systems.

In an **industry that never quits**, downtime due to clogged filters is an unacceptable expense. These innovators used available parts and developed a system to filter the dirty diesel as it left the bulk tank. With significantly cleaner diesel now being pumped into the vehicles and equipment, onboard fuel filters were able to do their job more effectively and efficiently, and downtime at the mine was reduced significantly.

We appreciate this kind of **innovative thinking**, and we thought, "If it's possible to adapt an effective bulk-fuel filtration system in one of the harshest environments on Earth, what could we create for our customers?" We listened and we went to work to create a host of products that work in **real-world situations**, from the farms in the North American Heartland to the mines of South Africa.

And now there's a **Clean Diesel Kit available for any operation** in just about any industry.

Fuel related issues shouldn't slow you down. **Achieve More** with Donaldson Clean Solutions.



NEED MORE CAPACITY?

Donaldson Clean Diesel Kits are suitable for nearly every on-the-job operation, but if you find that your fleet of equipment requires a filtration system that can handle higher capacity with no loss of efficiency, Donaldson has the solution.

Contact your Donaldson distributor to find out more about our high-capacity manifold filtration systems.

MyClean**DIESEL**.com

Achieve More.

Visit mycleandiesel.com for your own Clean Solutions.



Donaldson Company, Inc.
Minneapolis, MN USA

855-518-7784 (USA)

MyCleanDiesel.com
DonaldsonFilters.com

Need a Clean Solution?

As a global organization, we have offices throughout the world. Please direct your inquiry to clean.solutions@donaldson.com. This will enable us to address your inquiry in the shortest possible time.

Mexico
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Brazil

Europe & Middle East
South Africa
South East Asia

Greater China
Japan
Korea

Australia
India

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