DQT | Diesel Quality Technology

Better Diesel Quality, Fuel Tank Protection, Equipment Performance & Environmental Footprint

www.dieselqt.com

“Prevention First”

The philosophy of our **DQT Platform** is to provide solutions that stop the development of problems, before they become problems as well as to create cleaner diesel for every liter our customers use.

DQT Co-Founder
Steve Schultz,

“If we stop moisture before it accumulates; we prevent much of the corrosion, bacteria-growth, particle intrusion and fuel degradation in fuel tanks and ultimately protect diesel equipment from service needs combined with also improving performance. And the further back in the downstream process we apply **DQT**, the healthier the fuel supply chain becomes.”

Christian Rabøl,
DQT Co-Founder,

“We never have to fix the problems that never happen. At **DQT**, we lead the way with preventative solutions because it’s most cost-effective, keeps fuel operations running at optimal performance, assures downtime does not interrupt business and maximizes fuel quality throughout the supply chain. And while we can solve challenges as far back as the refinery, it remains every diesel operator's responsibility to get the best diesel possible running through their fuel systems, firing through their injectors and burning in their engines”



The Power of DQT is Clear

DQT Diesel Quality Technology

With **DQT Solutions**; fuel companies, terminal & depot operators, data centers, diesel fleets and equipment operators can fix delivery inconsistencies, store diesel better for longer, improve diesel quality, reduce fuel inconsistencies & losses, maximize storage volume and reduce wear & damage to tank infrastructure & engine components.

And importantly, **DQT** reduces the need for fuel polishing, additives, biocides and other “fuel medicines”; saving costs, fuel losses and creating much better environmental outcomes across the supply chain.



How DQT Works:

Diesel Quality Technology (DQT) produces 3 indispensable actions required to achieve complete & consistent fuel purity and fuel storage & tank protection.

1. **Removes water & micro-particles from fuel without filtration or chemical additives.**
(**DQT** causes “amicable separation” of water from fuel without changing, adding to or altering the fuel molecules.)

2. **Attacks and captures water & micro-particles on contact.**
(**DQT** does not simply absorb, it actively captures water to secure it immediately and segregate it from the tank environment.)

3. **Isolates captured water to completely & permanently segregate it from the tank environment and prevent it from affecting stored fuel that is in the tank.**
(While secured in **DQT**, water is unable to cause bacteria-growth, corrosion, fuel degradation or emulsification into the fuel.)



Direct Benefits:

DQT Diesel Quality Technology

Better Diesel Quality

Cleaner Tank Conditions

Prevention of Corrosion & Sludge Formation

Improved Tank and Equipment Performance

Reduced Repairs, Losses, Downtime and Consumables Use

Reduced Environmental Impact



Why is Grey Diesel the problem?

DQT Diesel Quality Technology

Grey Diesel is created by the natural absorption & emulsification of water into diesels and biodiesels. This water attached to fuel is often called bound water.

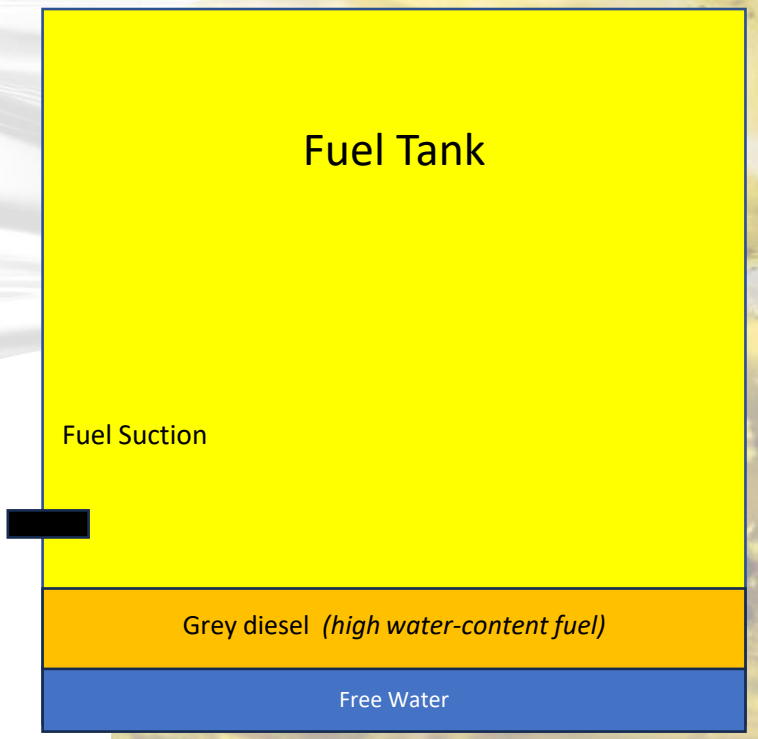
Grey Diesel creates a layer of off-spec fuel, containing bound water & a high concentration of particulate, that forms between the tank bottom & good fuel *(typically in the dead stock portion of the tank beneath the suction line).*



Why is Grey Diesel the problem?

DQT Diesel Quality Technology

- Grey diesel is a major issue at fuel depots and in large storage tanks because free water is often drained, and grey diesel is left behind. The water in grey diesel creates the same damage that free water would cause if it was not drained.
- At fuel depots & terminals, grey diesel is sometimes agitated or blended with on-spec fuel. This happens during train or boat delivery or is done on purpose to hide off-spec fuel and to maintain specification.
- By blending grey diesel into good fuel, this moisture is allowed to infect every downstream fuel tank. This contributes to many issues that fuel stations and other storage tanks develop.
- Grey Diesel is the cause of many inefficiencies, repairs and fuel losses in the downstream & equipment operation because it often goes unnoticed, and it gets through water separators & filtration systems.
- Biodiesels are highly hygroscopic and absorb significant amounts of water that cause faster bacteria growth, more corrosion, rapid fuel degradation, greater infusion of particles & difficulty in detection.
- Bound water retains large particles as well as micro-particle content in fuel. When bound water is removed, particles are also removed.
- **DQT** purifies grey diesel without the use of poisonous & corrosive fuel additives and prevents this grey diesel from being disseminated downstream or put into equipment tanks.
  *(**DQT** purifies diesel to as low as 30ppm water)*



Better Diesel Quality, Tank Conditions & Equipment Performance

DQT Diesel Quality Technology

The proprietary solutions within our **DQT Platform** achieve verifiably better results than other solutions by preventing both common and severe fuel problems before they begin rather than treating problems after they develop. Our solutions require less equipment, fewer resources, reduced costs and fewer consumables. This allows us to offer provably better diesel-quality & tank conditions than other solutions or combinations of solutions.

Regarding equipment performance, **TotalEnergies Mining Solutions** explains that “improvements in fuel cleanliness can result in the following benefits”:

- Extended component life
- Improvements in fuel economy
- Increase in engine power
- Reduction in emissions

https://miningsolutions.totalenergies.com/news/filtration-the-pill-for-cleanliness

“ From **Caterpillar Diesel Fuel System Care**: “90% of diesel troubles are due to dirt or water in the fuel. For successful operation it is necessary that these impurities be kept out of fuel”



Better Diesel Quality, Tank Conditions & Equipment Performance

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In summary, our solutions are demonstrably more beneficial for fuel quality, fuel storage, equipment performance and the environment for any diesel operation; anywhere in the world.

Better Fuel

- Fuel consistently purified to < 50ppm water without chemical additives
- Up to 90% reduction in particulate larger than 1 µm
- Remediation & prevention of “grey diesel”, off-spec fuel and waste fuel
- Prevents “emulsification creep” into higher layers of fuel
- Reduces or eliminates need for caustic fuel additives that can damage injectors & engine parts

Better Tank System Management

- Prevents bacteria growth & tank sludge
- Significantly reduces fuel tank & tank system oxidation from moisture
- Reduces or eliminates need for fuel additives that corrode metal and fiberglass tanks
- Ends need for poisonous & extremely corrosive biocides
- Reduces tank maintenance and cleaning
- **DQT** also has solutions for corrosion & leak control in tank sumps



***Fuel Recovery:**
DQT-FR Solutions recover off-spec diesel much more efficiently & effectively than fuel polishing.

7 New Realities as DQT Solutions Revolutionize Outcomes for Diesel Operations

DQT | Diesel Quality Technology

Fuel Purity
Upgrading fuel quality without additives or heavy filtration

Fuel Security
Making stored fuel an appreciating asset

Flexibility
Can be deployed anywhere in the world in any size diesel operation

Profitability
Saves money, waste, time and effort through simple, non-invasive processes

Tank System Protection
Reducing corrosion, eliminating corrosion contamination, stopping grey diesel accumulation and preventing bacteria growth

Environmental Responsibility
Less waste, fewer filter changes, minimized maintenance, reduced emissions, fewer additives and an end to dangerous, toxic & corrosive biocides

Fuel Preservation
Protecting & optimizing fuel supplies, stopping fuel degradation and safely storing fuel for longer periods

DQT | Diesel Quality Technology

Improving Efficiency, Saving Costs & Protecting the Environment within Diesel Operations

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