Donaldson
FILTRATION SOLUTIONS

How to Use Water Absorbers

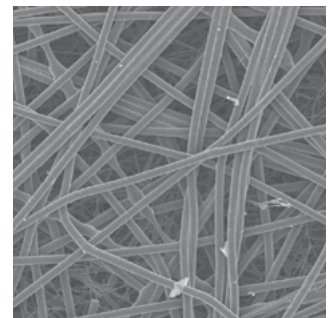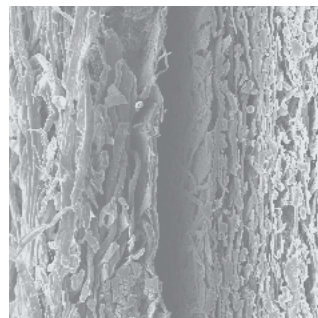## Adding Water Absorbers to a Bulk Filtration System

Free water is probably the single, most frequent cause of fuel system failure. OEs require that zero free water reach the HPCR fuel system. Water absorbers prevent free water from being dispensed into your equipment. Eliminating water will reduce rust, corrosion, wear, fuel degradation and other damage. It will also help prevent denied warranty claims.

HOW WATER ABSORBERS WORK

Particulate filters and water absorbers do two distinct jobs; the first removes hard particulate from fluids while the second removes free and emulsified water. Their medias are quite different, each designed to optimize the specific job at hand.

Particulate filters are made of synthetic fiber. The fibers' consistent size and shape allows the maximum amount of contaminant-catching surface area and specific pore size control. The result maximizes dirt catching efficiency and dirt holding capacity.

Absorbent   Particulate

Medias at 100x under SEM

Water absorbers, on the other hand, are the best solution for biodiesel and diesel fuel with additives. These filters use super-absorbent polymer technology with a high affinity for water absorption. The media quickly and effectively removes free water from petroleum-based fluids when differential pressure increases by 20lbs..

INSTALLING WATER ABSORBERS

The **DBB0248 Water Absorber** may be installed in combination with particulate filter(s). It fits all Clean Solutions heads and manifolds. It is also included in the **X011449 Clean & Dry Diesel Filter Kit.**

Clean and Dry Diesel Kit
X011449 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.

High Capacity Clean Diesel Kit

X011450 includes a dual head with two identical filters plumbed in parallel to accommodate higher flow rates and usage volumes.
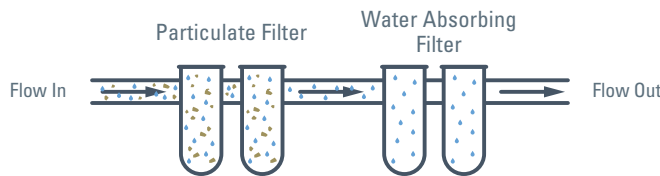
Connect heads in series

x2 Particulate Filters

x2 Water Absorbing Filters

For high flow applications (max. flow 450 lpm /120 gpm), we recommend buying two **High Capacity Clean Diesel Kits X011450.** Replace the second two DBB8666 4-micron particulate filters with DBB0248 water absorbing filters. Save the remaining DBB8666 as replacement filters.

Note: When one filter plugs, change both at the same time.

When plumbing absorbers together with particulate filters, they must be connected in **series**. The fluid should flow **first through the particulate filter** to clean it, and through the **absorber second** to remove free water.

The absorber is installed in the secondary position because the particulate filter is much better at catching and holding dirt. Dirt will not reach the absorber and therefore it will last much longer. In addition, this enables the differential pressure gauge on the absorber to work as a diagnostic tool alerting when there is a water problem in the tank so that appropriate measures may be taken. If the absorber were plumbed first, it would load with both dirt and water and this diagnostic ability would be lost.

For additional information, watch the **Donaldson Clean Solutions Webinar 3: Water in Diesel Fuel – Best Practices for Getting it Out.**

2 Dual Heads in Series

Particulate Filter

Water Absorbing Filter

Flow In

Flow Out

Remove dirt first, then remove water.

YOU MAY LIKE...

Another tool used to dramatically reduce contamination in fuel tanks is the **Donaldson Reservoir Air Dryer.** Contact your Donaldson representative to learn more or email us at **MyCleanDiesel@donaldson.com.**

Note: Water absorbers are not intended for use on ethanol blended gasoline.

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