



Aqua**fighter**[®] Dipstick Indicator

Instruction manual

This instruction manual applies to the following Aquafighter products, suitable for all diesel fuel tanks, above and underground.

999.023	Aquafighter Refillable Dipstick Indicator
999.024	Aquafighter Dipstick Indicator Refill

To achieve the maximum performance of your Aquafighter Dipstick indicator, it is important that the following instructions are followed closely.

Please note that:

- This Aquafighter product should NOT be used in gasoline tanks
- This Aquafighter product must only be used in according to the instructions provided in this Instruction manual
- In cases of exposure to skin, eyes or oral intake of diesel or diesel contaminated product, the procedures described in the diesel safety data sheet (SDS) must be followed

About Aquafighter

In today's highly efficient diesel engines, fuel injection systems often operate at 2,000 bar (30,000 psi) or even higher. In such extreme conditions water is your number 1 enemy. Aquafighter is there to protect your high value diesel powered equipment.

In the past, water finding paste was used to detect water in diesel tanks. However, as biodiesel has been introduced into almost all diesel formulations, this has rendered paste an unreliable method for water detection. In addition, biodiesel is significantly more hygroscopic than fossil diesel increasing the probability of water related fuel challenges compared to previous years.

Aquafighter Dipstick indicator is a unique product primarily intended to provide the user with a reliable indication on whether the diesel fuel tank contains excessively high levels of water. In addition, like other Aquafighter products,



the Aquafighter Dipstick indicator has a certain capacity to remove water from fuel. Aquafighter not only removes water in a free phase but also water that is finely dispersed, or even dissolved in the fuel. Aquafighter reduces the water content of diesel to achieve acceptable levels, i.e. water content below 200 mg/kg (200 ppm by mass) according to the European diesel specification EN590 (the maximum water and sediment content in ASTM 0975 is 0.05% volume equal to 500 ppm by volume).

It should however be noted that water is absorbed faster in warmer conditions and significantly slower when the climate is colder. Hence, longer working time should be allowed during cold periods and winter.

Diesel that is not clear and bright at room temperature will in most cases have a too high water content according to the standards and hence the engine manufacturer's requirements. Traditionally, "cloudy" diesel has been disposed of as hazardous waste, but with Aquafighter it is now possible to remove the excess water and bring the contaminated diesel back on specification.

Another important factor is that microbes rely on water to live and multiply. By removing unacceptable amounts of water in the diesel, the "conditions for life" for the microbes will be removed. Consequently, the risk of microbial blooms in diesel storage tanks where Aquafighter is used is minimized. Avoiding microbes significantly reduces the risk of diesel filter clogging - without the use of hazardous biocides.

How to use Aquafighter Dipstick indicator

Aquafighter Dipstick indicator consists of a "bag" with a high-tech water-absorbing material that can absorb approximately 500 times its own weight with water. At one end of Aquafighter Dipstick indicator, a solid cord in fuel-resistant synthetic fibre material is attached. The cord should be used to lower into, and later retrieve the Aquafighter Dipstick indicator from the tank.

Always make sure that the cord is not damaged or broken before use.

HIGH IMPORTANCE: The Aquafighter should never be lowered in a tank unless you are able to retrieve it using the cord attached.

Always hold the cord at the loose end when lowering the Aquafighter product into the tank. The cord is used to retrieve Aquafighter product from the tank. It is therefore **VERY IMPORTANT** to ensure that the end of this cord is available. It is recommended to secure the cord e.g. by making a loop around the filler pipe of inspection pipe. The cord must at all times be accessible from outside



of the tank and allowed to run all the way down to the bottom of the tank where the Aquafighter product should be allowed to rest to do its job.

Procedure for use

1. **Installation:** Carefully remove Aquafighter dipstick containing the filter from the airtight bag. Lower Aquafighter into the tank. **IMPORTANT** - take care of the bag as this will be used to dispose of the used Aquafighter filters (see section 3 below). Ensure that sufficient length of cord is left outside the tank so that it can be attached, e.g. by making a loop around the filler pipe, manhole cover or other suitable secure attachment.
2. **Inspection:** The Aquafighter dipstick is primarily used as an indication of water content and should therefore be inspected after a short period of time. If used for more longer term water absorption it must be inspected regularly, e.g. monthly, for water content / water absorption. If less than 50% of the Aquafighter has turned red, it can be returned to the tank. If more than 50% of the Aquafighter has turned red, replacement of the filter is recommended (see "Replacement" below).
3. **Replacement:** When more than 50% of the Aquafighter filter has turned red, replacement is recommended. Used Aquafighter filter must be safely placed in the bag it was delivered in, or similar, and disposed of at an approved collection point, e.g. the local recycling centre. The used Aquafighter filter will consist mostly of water, but small amounts of diesel can remain, and it should therefore be treated in the same way as other waste fuels, lubricating, or hydraulic oil, fuel and paint residues.

Note: *When handling the Aquafighter with a risk of diesel exposure, gloves and other adequate protective equipment should be used to avoid contact with skin or eyes. In case of diesel spills and/or diesel getting in contact with the skin or eyes, the procedures described in the diesel safety data sheet (SDS) must be followed.*

When using an Aquafighter for the first time, there may already be a volume free and/or dissolved water in the diesel tank that will be quickly absorbed. Consequently the Aquafighter will reach its maximum capacity and 50% red colour far sooner than normal during this first installation. It is therefore recommended to inspect the Aquafighter on first time installation after maximum of one week. If the Aquafighter needs to be replaced after a week, add a new Aquafighter into the tank and perform a new inspection within a week. Eventually it will take longer and longer between each required



replacement with a new Aquafighter. This simply means that the diesel in your tank has reached a level where water is no longer at harmful levels and the conditions for microbes to grow has been removed.

Product support

Comprehensive support is available either from your Aquafighter distributor, or from Conidia Bioscience via our websites:

www.aquafighter.com

www.conidia.com

If you have any additional technical queries regarding your Aquafighter products please contact: info@conidia.com

HEADQUARTERS & GLOBAL SALES OFFICE

Conidia Bioscience Ltd
Bakeham Lane, Egham,
Surrey, TW20 9TY, UK
+44 (0)1491 829102
info@conidia.com

 **Conidia**
Bioscience
WWW.CONIDIA.COM

US SALES OFFICE

Conidia Bioscience Inc
15 Briarwood Ln, Dover,
NH, 03820, USA
+1 407 616 0315
info@conidia.com