HEATBASE FACTSHEET 4
Water contamination in fuel tanks

Water can usually be found in the bottom of fuel storage tanks as a result of condensation, poorly fitting lids and seals, fuel deliveries in wet weather and ingress of snow through vent pipes and associated water from melting snow.

Bacteria in fuel (also known as the diesel bug) can be found at this level between water and fuel and can grow until the entire contents of the tank are affected. Degradation of the fuel hydrocarbons will result in a loss of calorific value of the fuels. Microbial sludge is also produced which causes problems with blockages in fuel filters and supply lines. With time a highly corrosive by-product can be produced which is similar to hydrochloric acid, which can corrode through steel oil tanks and degrade certain organic storage tank linings, oil lines and equipment, as well as affect certain types of seals within the fuel supply system.

It is important that water is removed from the fuel storage tank and disposed of accordingly. Although some literature says the waste water can be disposed of down a main sewerage drain providing there are no signs of fuel being present, there is still the possibility of contamination by organic acid by-products or some biocides used to treat the problem. Disposing of anything like this must be met with utter caution as you can be fined for contamination of sewerage systems etc., for failing to dispose of anything in the correct manner. According to the Environmental Agency, this water is classed as hazardous waste and should be disposed of accordingly.

Biofuel may contain small but problematic quantities of water, although it is hydrophobic (non-miscible with water molecules), it is also said to be hygroscopic (has the ability to attract and retain water molecules from the surrounding environment and atmosphere through either absorption or adsorption). Therefore, before using biofuels you must ensure your fuel tank is clear of water and sludge, and ensure that the tank is kept free of water whilst storing the fuel.

Some additives supplied by Oil companies have properties similar to Biofuel, and are sold to “clean” your tank but can cause major problems if there is any reasonable quantity of water or sediment etc., in the tank.

To remove small quantities of water or to try to prevent small amounts of new water settling within the tank, a water absorbing product can be purchased and fitted inside the oil tank; however this cannot be used to remove larger quantities of water and it must be removed manually.