CLEAN IT UP: MarShip's fuel purifier removes impurities and the water from diesel that allows bacte riato thrive in your fuel tank

Keepingit clean

The advent of low-sulphur fuels and biofuels has resulted in a significant increase in diesel bug

Quentin Bates

Gone are the days when you could fill up your diesel tank and forget about it, former ship's engineer Peter Weide of MarShip UK said, commenting that the advent of low-sulphur fuels and biofuels has resultedin a significant increase in diesel bugs.

"If you value your engine and your livelihood, then fuel management is essential. In short it's critical that any water isremoved from thefuel, as this will ensure engine components last longer and the breeding ground for diesel bugs is removed," he said, and told FNI that the high levels of sulphur that fuels previously had acted as a biocide, killing off unwanted growths.

"That protection is now gone and to make matters worse, EN590fuelwithupto12%biofuelis steadilyfinding its wayinto the marine market. Biofuel is hygroscopic, absorbing 30 times more moisture fromthe airthan previously and a magnet to the bugs which attach themselves to the water droplets and sink to the bottom of the tank," he said.

"These bacteria double in numbers every twenty minutes and live for approximately eighteen hours during which they excrete waste and after which they die off to leave sludge atthe bottom of the tank whichclogs filters and stops the engine. Worse still, this sludge corrodes steel tanks, so look out for the tell-tale signs of pitting corrosion."

"Think again if you imagine you don't use bio-diesel. EN590 is the European standard for diesel fuel and is the most commonly available type as it's well established in the supply chain for road use. Initially it wasn't supplied for marine use, but as many suppliers aren't in aposition to hold more than one type, they opt for the one that has the greatest turnover – which is normally EN590.

"So marine users can find themselves using this without knowing it, as suppliers are under no obligation to declare it." While petro-diesel can absorb 50ppm of water, biodiesel can absorb as much as 1500ppm when most international fuel standards recommend a maximum water content of 200ppm.

Peter Weide's company, MarShip UK, has developed systems for cleaning both fuel and lube oil of water and contaminants.

"The good news is there is a simple solution, remove the water. MarShip UK supply a fuel purifier which removes water and contaminants from your fuel," he said, and explained that the problems relating to water in diesel fuel are well documented, and that water is present in all fuel tanks, either introduced with the fuel, from leaks or most often from condensation.

"Although most diesel engines can handle a certain percentage of water in fuel without obvious running problems, water will cause engine damage, particularly modern high power engines with common rail fuel injection.

"Water can lead to misfiring, wear to injectors and pumps, corrosion and the possibility of explosive damage to fuel injectors as the combustion process superheats any water present.

"Older engines could also cope with some water without missing a beat, but now that modern diesel engines have tolerancesof a thousandth of a millimetreand fuel pressures of as high as 20,000psi, uncontaminated fuel is essential," he said, adding that some engine manufacturers are now nolonger allowingwarranty claims on fuel equipment as fuel quality cannot be controlled.

BUDGET: Developed by former ship's engineer Peter Weide, MarShip UK's fuel purifier costs less than a tank of diese l