



DIESEL BUG

<http://www.diesel-bug.com/>

Facts, opinions and information about diesel bug

First of all, the name “diesel bug” is a commonly applied description for a collection of yeasts, microbes and algae that live at the interface of water and fuel, breed rapidly, and sink to the bottom of the fuel tank when dead.

The presence of diesel bug can be indicated by a jelly like slime that will show on the fuel filter or in the glass bowl of a fuel polishing machine during the fuel cleaning process.

Diesel bug lives, breeds and thrives on the water content, hydrocarbons and nutrients of the diesel and as all diesel fuel contains water it has a ready food supply if it finds its way into your fuel tank. The bacteria only need a water content of about 100 parts per million to feel at home. Fuel lines and filters can be blocked, and uneven wear and misfiring can take place in the engine if the injectors are affected. An engine failure at sea or on an inland river can be disastrous.

From January 1st 2011 new EEC regulations required lower sulphur content in the supply of diesel for off road vehicles (boats included). In the UK the fuel suppliers meet this requirement by supplying dyed EN590 DERV, which is the same fuel used in diesel vehicles but with a red dye in it. It contains up to 7% bio-fuel and the EEC have plans to gradually increase this percentage over the coming years.

It seems that it is generally agreed by the experts that the biggest problem comes from that water content of the new diesel supplies and the environment it creates to establish diesel bug. All diesel contains some element of water, but the new diesel supplies have higher content.

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Additives and Treatments

There are a number of products on the market aimed at killing diesel bug and there is good evidence that they work. They are added to the fuel tank and go to work on killing off the microbial life that is present at the time.

Unfortunately, they do not remove the water from the bottom of the fuel tank, and unless the treatments are added at each fill up, when a fresh supply of diesel bug could be

imported from the filling stations contaminated storage tank, the problem can simply re-establish itself.

The only way to remove the water (the root cause of the problem as diesel bug needs water to thrive and reproduce) is to either drain it off, if a drain tap is fitted, or have the water removed by fuel polishing.

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Fuel Polishing

This is the procedure whereby the contents of the fuel tank are sucked out, passed through cyclonic filters (to remove the heavier water content) and also through micron fine filters to remove any other substances like sludge, diesel bug jelly, rust and debris, then returned to the tank.

No fuel is lost – polished fuel is returned to the tank under pressure which stirs up the contents of the fuel tank as the polishing process continues to run.

The contents of the tank are recycled a number of times until the fuel is running clear with no water, diesel bug or other debris showing in the inspection bowls.

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Diesel Bug Test Kits

A number of these appear on the internet, but so do articles calling their usefulness into question - <http://www.tb-training.co.uk/M16.htm>

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Recommendations to combat diesel bug

First of all, have your fuel tank polished to remove the water, existing diesel bug and other contamination present.

Have an engineer, or yourself, change the fuel filter and clean the fuel lines.

Run the engine to confirm all is back in working order. It is common for a boat owner to only realise he has a diesel bug, or water problem, when the engine stops running !

Keep your fuel tank topped up to reduce the air gap at the top which will produce water through condensation when temperature drops.

Use an additive to kill off any diesel bug imported from a contaminated fuel storage tank when filling up.

Following the above steps can combat diesel bug but it will be necessary to keep an eye on the water content of your tank as all diesel contains water, and some major suppliers

say some diesel blends can break down after only 6 months.

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Finally a sobering tale

After buying a narrow boat from a hire company (who obviously get through a lot of diesel fuel and have their storage tanks regularly filled, and in who's interest it is to have good quality fuel and reliable running engines) the new owners set off on their new "live aboard" floating home destined for a far off marina to moor up and meet their new live aboard neighbours.

All went reasonably well, and on the last leg of their journey they entered a fast flowing river, and navigated the last tidal section to be welcomed into the lock for the final run to their new home.

On arrival and mooring up the engine failed.

An engineer suspected diesel bug and advised them to have their fuel polished by the local diesel bug removal man.

Approximately **15 gallons** of water were sucked out of the tank.

The lesson

Just because the engine is running at the moment, it doesn't mean there isn't a problem just around the corner. Better to be safe than sorry.

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