

SAVE YOUR FUEL



Q Hi Gavin, can you tell our readers in layman's terms what is bacteria in the fuel tank?

A Other names for the bacteria are Black Death, Cladosporia, Hormoconis Resinae or it's more commonly known name "Diesel Bug". This bug not only attacks diesel but also kerosene and even petrol, it is in fact a fungus which grows between the interface of the fuel and water, continually growing and dying creating a black sludgy slime.

Q Silly question but how does it actually get there?

A The spores of the fungus are airborne and can enter the fuel at any stage of its manufacture or storage, but what the bug does need to grow is Fuel and Water. The water acts as the host media and the fuel it's food, you might wonder how water gets into the fuel, but it can present itself through various ways. Some of the most common are, contaminated fill ups, condensation within the tank and what we find is a very common recurrence, leaking deck fillers.

Q Does this only occur on power boats because they carry more fuel or can it happen on Yachts too?

A No, not just power boats. Diesel Bug has no preferences as to the size tank it will attack, from yachts holding as little as 25 litres, Mega Ocean going vessels, to shore storage tanks holding 1000's of tons of fuel.

Q What are the consequences of having this in your tank?

A Fuel contamination will result in poor engine performance

We have heard the old saying "A tiger in your tank" well what about bacteria in your fuel tank? We met with **Gavin Tester** one of **Expresslube's** engineers and asked him all the questions you need answered.

and reliability, which can lead to the boats engine failure at critical times out at sea. Bacterial sludge is very acidic, and can corrode vital engine parts such as fuel pumps and injectors. Growth of Sulphate Reducing Bacteria (SRB) not to be confused with "Diesel Bug" can also cause spoilage of the fuel. In steel and aluminium tanks, growth of the SRB's in the water and the thick sludge of the dead diesel bug found at the bottoms of tanks can cause serious pitting, corrosion and even perforation.

Q For the average boater out enjoying their summer vacation, what symptoms would one expect?

A You could be unlucky and get engine failure, not a great experience in a choppy sea but things you should be looking out for are, plugged slimy filters, water in primary fuel filters, dark hazy fuel, loss of power, excessive smoke, corroded injectors and a foul fuel odour.

Q The big question, is it preventative and if so how?

A The best way to prevent microbial growth is to stop water getting in the tanks, you can minimise the risk by buying fuel from a reputable supplier, keeping the tanks topped up to

reduce condensation if you are not going to use the boat for long periods, adding a fuel additive and as I said before check seals around deck fillers. Regularly drain the water separator pre-filter of any free water and check fuel tank sumps if fitted, make sure the filters you have fitted are man enough for the job!

We offer a fuel polishing service using our unique portable fuel polishing/ filtration equipment.

The fuel polishing machine uses the fuel in the tank as the cleaning agent, it in fact operates very much like a dialysis machine extracting water and particulate from the fuel; where the 'bug' lives and multiplies. This machine operates at a high rate causing the fuel to be returned to the tank at a vast speed which in turn agitates the sludge and biomass ('dead bug') found either suspended in the fuel or at the bottom of the tank it's then drawn out and contained within the machine. With the water, bug and other small particulates, (access permitting) removed the customer



is left with:

- 1) Clean Tanks
- 2) Their original, "very expensive" fuel.

The length of time this process takes is determined by the tank access, amount of fuel and the severity of the contamination.

On completion the fuel is treated with a fuel conditioner and injector cleaner; "Fuel Doctor".

Q So it's really about good housekeeping or boat keeping we should say?

A Yes, it's about keeping on top of things and not letting the problem escalate.

Q How often should maintenance be carried out?

A With 80% of moored boat tanks breeding fuel bugs and over 50% of marine rescues attributed to contaminated fuel we would recommend to have your fuel polished and tanks cleaned out every 2 to 3 years before you get caught out. As they say: "Prevention is better than a cure". Treating the fuel tanks with Fuel Doctor a Non-Biocide additive in the future at every fill up will reduce free water and microbial growth to microscopic particles,



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disbursing them evenly throughout the fuel stock, allowing these contaminants to be passed safely through the combustion process before building to harmful proportions, this will also control the build-up of gums and varnish that occur throughout the fuel system, removing deposits that are formed at the valves and injectors due to higher temperature and pressures, SRB's will also be treated by the use of Fuel Doctor.

We do not recommend the use of biocide additives, it will kill the bug but will not break down the dead bug which in turn will lead to a build-up of dead organisms at the bottom of the tanks, and it also will not deal with the water.

Q Where's the furthest you have been called to?

A Expresslube have travelled all over the country from, Sennen Cove close to Lands End working for the RNLI decontaminating their Tyne Class Lifeboat to all the way up to Craobh Haven Marina to work on a Halberg Rassy Yacht and Fairline Turbo 36 in the Scottish Highlands.

Q What the most unusual job you've dealt with?

A Not unusual jobs, but we have worked on some very

interesting and stunning boats that are part of our British heritage. "Havengore" was used to convey Sir Winston Churchill's body up the Thames to Waterloo for his official state funeral in 1965, "Royal Nore" owned by the Port of London Authority, the prestigious royal and diplomatic launch for London and "HSL 102" which was one of the RAF's 100 class High Speed Launches used during the rescuing of Allied forces from the beaches of Dunkirk and pilots who had to "ditch" around England's shorelines during the 2nd World War, come to mind!

Q Do you ever do any work for the commercial side of the business?

A Yes, it's not just pleasure motorboats and yachts we get involved with. Commercial fishing boats, tugs and pilot boats have been a big part of our business over the past couple of years. Also in addition, we have cleaned out HGV truck tanks, below and above storage tanks as well as construction and plant equipment, static generators and domestic heating oil tanks along with work for the MOD since the start of the company in 2002.

Q All this time around boats, what do you do to wind down and relax?

A Relaxing isn't on the agenda at the moment as Louise my partner and I are expecting our first baby at the end of August! So I have been busy decorating and preparing for that. But when I do have free time I enjoy watching most sports, playing golf and chilling out with friends and family.

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