



Union Hall in the Winter sunshine

The Diesel Doctor

Gone are the days of filling up your tank and forgetting about it.

Today’s diesel fuel is very much different to what was supplied even a few years ago; quality has steadily decreased as supply chains have increased. With ULSD (Ultra Low Sulphur Diesel) and Biodiesel being the only option, fuel degradation is becoming a real issue. Suppliers are not required to declare if they are supplying biodiesel, many will say they don’t but all too often they do, as they simply cannot afford to hold two types of diesel and road users are by far the bigger customer. Result, you get EN590 fuel, with a red dye in it. In the coming months we will identify the contaminants in diesel, the effects and the ways to remove them.

To summarise what are the contaminants in Diesel?

- Water, in three forms; Dissolved water; absorbed into the fuel like sugar in tea Emulsified water; suspended droplets in the body of the fuel that turn it milky. Free water: clearly see at the bottom of the tank
- Diesel Bug, in three forms; Bacteria; doubles in numbers every 20 mins and degrades fuel Mould; this is what blocks your filters. Yeast; a relatively slow growing fungi but no less harmful Biofilms; These are the real nasty’s they excrete acid and can put holes in your fuel tank, often seen as pitting to start with.
- Asphaltines, hard brittle particles that can cause injector problems in modern diesels.
- Gums; biodiesel is not as stable and can break down much earlier leaving soft sticky sediments.
- Wax; Crystals form and can block filters, manufacturers put cold flow improvers in the diesel but store it too long and a fuel bought in the summer might give problems in the winter
- Bio-diesel Effects; basically it’s a solvent, that’s why it harms engine seals but it also does a great job of cleaning the tank and collecting sediment at the bottom. It also absorbs up to 50 times more water from the air than normal diesel.
- Sludge; A collective term for all the above, sludge is not always “diesel Bug”, fuel starts degrading as soon as it’s in the tank and that degradation ends up as sludge.
- Dirt and suspended debris; always present and a direct result of poor fuel handling, poor tank maintenance etc.

Over the coming months we will discuss each issue and invite comments from readers who have specific problems and need advice or solutions.

In the meantime if you want to reduce your potential for problems, keep draining the water from your tanks.

If you have a question on fuel or fuel systems please email us at sales@marship.eu using the subject The Skipper and we will endeavor to answer your query in this column in the coming months

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