PBO test (september 2016)

How can you fight diesel bug?

The best weapon we have against all these organisms is their common factor: habitat. If there is no water in the tank, diesel bug cannot survive. In reality, it's impossible to prevent water entering your tank – tanks will suffer from condensation at the very least, even if you manage to avoid any water entering through the filler. However, you can limit the condensation by keeping your tanks topped up to minimise the volume of damp air in the top of the tank, and by regularly draining off the water and debris from the bottom of the tank. If your tank doesn't have a drain cock at the bottom, fit one at the lowest point, with a valve to allow you to run off fuel into a glass jar. When it runs pure, your tank is clean again.

Maintenance such as this can help keep your tank clean, but if you pick up diesel bug you will need to eradicate it. Additives are available, which split into two types: biocides and dispersants. Both rely on the bug's reliance on water: biocides by dehydrating the cells or blocking their ability to feed, and dispersants by lifting the water into suspension, destroying the micro-organisms' environment. They will then either starve or be burned in the engine, together with the water. In fact, slight moisture can increase engine power.

In company with our sister magazine Motor Boat and Yachting, we set out to test 12 of these treatments, assessing how effective they are at killing diesel bug and, more importantly, in producing a fuel that can be easily burned without blocking filters.

Grotamar :

Shock dose per litre: 2.5ml
Shock dose cost per litre: 8.7p
Maintenance dose p/lt: 0.15ml
Maintenance cost per litre: 0.5p
Bottle size: 1lt
Bottle cost: £34.99
www.echamicrobiology.co.uk

Contamination
pg cATP/ml before: 12.10
pg cATP/ml after 1 day: 3.88
pg cATP/ml after 10 days: 0.95
cATP reduction: -92%

Filtration results
Faster than control by: 47%

Grotamar 82 was developed to combat problems from low-sulphur biodiesel blends, and achieves its aim well. The 92% kill rate is good, and the sample proved the swiftest of the biocide-treated fuels through the filter. The product did a good job of dispersing the water into the fuel, although this is not its primary purpose. There were some minor deposits left in the bottom of the flask.

Soltron :

Shock dose per litre: 0.2ml
Shock dose cost per litre: 2p
Maintenance dose p/lt: 0.2ml
Maintenance cost per litre: 2p
Bottle size: 125ml
Bottle cost: £12.50
soltronjersey.com

Contamination
pg cATP/ml before: 62.65
pg cATP/ml after 1 day: 74.15
pg cATP/ml after 10 days: 12.39
cATP reduction: -80%

Filtration results
Faster than control by: 49%

The flask revealed minimal gummy deposits and a low debris level. The 24-hour data shows that Soltron set swiftly to work scattering microbe colonies, and the filter result was the best on test, showing that this is a good choice for breaking up contamination to be burned in the engine. Water dispersal was incomplete, but more time or a bigger dose are likely to solve this.