

De-Bug technology one of a kind

A SMALL reduction in fuel consumption, in many cases of approximately 1.5 percent, and a reduction in exhaust pollutants will result from the use of a treatment for fuel systems marketed by a Wellington-based company.

In 1987, the company engaged the services of local scientists including microbiologists, physicists, nuclear physicists, marine engineers, design engineers and consultant scientists in many different mechanical and scientific fields. Their knowledge led to the development of the first De-Bug units.

Fuel contamination is caused by micro-organisms that grow in the fuel. They are present all the time in the air. When they are introduced into a fuel system, they grow at the interface between water and the fuel.

As they grow they form jelly-like masses that clog pipes, filters and pumps. By-products of their growth process include acids, which can corrode pipes and tanks, and H₂S gas.

The only solution until now has been to use biocides, powerful chemicals that kill the bacteria, but which are expensive and toxic to the operators. For this reason, the European Community is changing the law to ban the use of biocides. Lloyds of London has approached the local company for certification, as De-Bug provided the only alternative.

The unit consists of a bowl similar to a filter bowl, which is plumbed into the fuel supply line in front of the filters.

The unit contains permanent magnets, which subject the fuel, and the bacteria in it, to a magnetic field. The form of the field and its strength are designed carefully to kill the bacteria and break up their mass into tiny particles, allowing them to pass through the filter and into the engine where they are burnt.

The L40 De-Bug unit is suitable for engines up to 1 00hp, and the LI 000 for engines up to 600hp. The larger version L20,000 has a flow rate of 20,000 litres per hour.

De-Bug units have been fitted to more than 3000 commercial vehicles including luxury yachts, trucks and powerstations.