

## Diesel Doctor - More on your fuel problems.

Gone are the days of filling up your tank and forgetting about it. At Galway you described the issues you had with fuel pipe and injector failure. This month we look at the cause and prevention of this.

### A possible cause

Diesel injection equipment relies on fuel for lubrication. In rotary and distributor pumps found in today's modern common rail injection systems the moving parts are lubricated by fuel as it moves through the pump. Other systems such as injectors, unit injectors, unit pumps and in-line pumps are partially fuel lubricated - the mechanism consists of a plunger or needle operating in a sleeve or bore, fuel is used to lubricate the walls between the reciprocating piece and its container.

### Low sulphur means loss of lubricity

The most cost effective way to remove sulphur is to use a chemical process called hydro-processing,

the sulphur is replaced by hydrogen resulting in a cleaner burning fuel; however, hydrogen also reacts with other components removing the polar and aromatic compounds that provide conventional diesel with adequate lubricity.

This leads to increased fuel consumption from excessive pump wear or even potential catastrophic failure. Improving lubricity is clearly a fundamental of good engine management. We know that without lube oil engines grind themselves to a premature death; this statement is also true for fuel.

### Can lubricity be restored?

The International Council on Combustion Engines (CIMAC) highlight lubricity as one of the most important issues to consider, stating that lubricity characteristics can be restored through lubricity improving additives.

This presents another problem, there is a huge range of additives available. Most help counter lubricity



The Scottish vessel Cornucopia. Pic Ian Leask

but are sold as part of an additive 'package' so you are often paying for a whole bunch of un-needed chemicals. So look for something like our DieselAid L specifically designed to target loss of lubricity in fishing and work boats.

If you have a way of removing the water from fuel to tackle Diesel Bug then all you need is a one shot additive to give your fuel the lubricity it needs to protect your engine.

For further advice or information on any aspect of engine care please call us on +44 (0) 845 287 1546 visit our website [www.marship.eu](http://www.marship.eu) email us [info@marship.eu](mailto:info@marship.eu) or visit us at Skipper Expo Aberdeen.

MarShip UK is committed to looking after the vital elements of your engine – Fuel, Air and Oil. Peter Weide (MD), formally a Chief Engineer has worked in the industry for over 20 years.

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