How do I get rid of Diesel Bug?

If Diesel Bug is present in your tank you can treat it through the use of a biocide treatment (shock dose) or with a fuel conditioner.

Biocides are contact killers and while they ensure 100% kill of bugs present it will not remove the dead material from the tank. Dead bugs are as bad, if not, worse than live ones as they are still able to be drawn through and block the fuel filters. If the microbial contamination is heavy the tanks may require a thorough cleaning to enable the solution/product to get to the bottom layers.

Fuel Conditioners are said to breakdown both the water and organic material into sub-micron molecules and spread them throughout the fuel. This allows contaminates to pass through the filters and injectors and be burnt out via the combustion process. Often these products also offer other benefits like added lubricity, corrosion prevention, reduced emissions and fuel economy.

Where can I find out more?

If you would like to find out more, or for assistance on testing and treating suspected Diesel Bug please contact your local Southfuels territory manager:

Territory Manager

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Fuel and Lubricant Specialists

FREE Report

Diesel Bug!

What is it? How do I detect it?

How do I get rid of it?

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What is Diesel Bug?

Diesel is susceptible to microbiological contamination, commonly referred to as the Diesel Bug.

This occurs when the grouping of micro-organisms (bacteria, yeast and fungi), often called microbes or bugs, come together and grow in the fuel to form what is termed biomass, a black or brown slimy material that is often found in the bottom of tanks, fuel lines and filters. While there are around 125 different types of microbes that have been found to grow in fuel there are about 30 that have the potential to cause problems in your tanks.

These problems include:

- Damage to the tank structures, fuel lines, pumps and injectors
- Blocked filters, loss of power (engine shutdowns)
- Poor fuel economy and excessive smoke

Pictured above: Diesel Bug forming between water and diesel

How does Diesel Bug become established?

Virtually all fuel tanks contain some moisture. When additional water accumulates in the tank and the temperature (anything above 10°C) and/or humidity is right it provides an ideal environment for growth of the bug to occur, which predominately occurs at the fuel-water interface. With bacteria and yeasts able to grow and divide every 20 minutes or so and fungi able to multiply after a life span of only 4 days it is no wonder growth rates can become expediential when the conditions in any tank are right.

Fuel is the food source, while water is the oxygen that provides the bugs with life! It only takes very small amounts of water (droplets in fact) to kick-start growth, thus keeping the water at bay is paramount.

What forms when the bug takes hold is typically a slimy mat between the water and the diesel and if this is pumped through to your vehicle's engine, the bug blocks the fuel filter and you stop!

How do I find out if I have Diesel Bug?

Prevention is much better than a cure. By keeping the water out you also keep the air out (its two life sources), however, if you do suspect Diesel Bug is present there are ways to test for this.

- Visually checking a fuel sample and judging whether it is "clear and bright". If the bug can be seen the infection has taken hold, do note however, that clear and bright fuel can sit on top of contaminated fuel. Make sure you take your sample from the bottom of a tank to get the most accurate reading.

- Fuel Test Kits, an on-site test that gives the user a quick (10 minutes processing time) and accurate way of determining whether the fuel is contaminated with Diesel Bug. The results enable real time decisions to be made before the contamination can cause further damage or operational problems.

- Laboratory testing, this involves sending tests away, which can take up to 8 days just to get the results. A sample should be put on test within 6 to 12 hours of being drawn as the bug can start to change or die off once removed from the tank, which is something not always achievable when sending samples off-site.