

275FUEL - GENERAL

SUBJECT: The Introduction of FUELSTAT™ resinae Detection kit.

EFFECTIVITY: All

This service letter is issued to inform you about the recently introduced FUELSTAT™ resinae detection kit. This new product provides a simple and fast means to detect specific bacterial/Fungus growth in aircraft fuel systems.

Current procedures to detect fungus in aircraft fuel tanks are tests which are dependant on the development and counting of bacterial growth over a specified time using specific sample material. The Fuelstat™ resinae detection kit uses the method of measuring the weight of the filamentous fungus "Hormoconis resinae" actively growing in the sample. The reason for relying only on detecting active hormoconis resinae has several reasons:

1. Hormoconis resinae, when compared to single cell yeasts and moulds, produces far more biomass and is thus more likely to cause blockage problems.
2. Hormoconis resinae is by far the most common cause of microbial corrosion in aircraft tanks. Other filamentous fungi may be emerging as important, but these tend not to occur without hormoconis resinae being present and, in any case, are currently very un-common.
3. Hormoconis resinae grows between fuel and water, it usually starts by covering a small water droplet, holding it in place, and then continues to grow, actually generating more water under the mat due to its metabolism. In the process, Hormoconis resinae firmly attaches itself to the tank, while bacteria and yeasts require free water and are found mainly floating in the water phase and their presence is significantly reduced at each water drain.

This means that checking for Hormoconis resinae is more effective compared to checking for yeast and bacteria because they are less likely to adheres to surfaces and their presence is significantly reduced at each water drain.

The Fuelstat™ resinae kit consist of:

- A sample paddle, which is a plastic base with two Lateral Flow Devices (LFD), affixed and sealed in a foil pouch. There are 5 pouches, each containing also a disposable Pasteur pipette.
- Five 60 ml sample preparation bottles with "dropper" lid containing 1.0 ml of Aqueous Extraction Media.
- Instructions for use manual.

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How does it work?

1. A regular fuel sample is taken from the aircraft and/or fuel storage.
NOTE: Any water in the fuel sample will improve the detection of any hormoconis resinae so do not remove this water.
2. Depending the amount of free water available, the sample bottle is filled with the free water up-to the water phase line or, if this is not possible, the bottle is filled with fuel up-to the Fuel Phase line.
3. Shake the sample bottle for 5 seconds.
4. Discard the first 2 droplets from the sample bottle and put 4 drops on the well of the sample paddle. Wait 10 minutes before checking the result.
5. The sample paddle has two lateral flow device windows in which the appearance of indicating lines is used to provide an indication of the contamination level.

Dependant the contamination level Biocide treatments i.a.w the Aircraft Maintenance manual are required.

Fokker Services will introduce a full description about the use of the Fuelstat™ resinae in the AMM.

For detailed information about the Fuelstat™ resinae product information can be found on the web site: www.conidia.com