



Resuming Operations post Covid-19 Guidance for Operators at Airports

Recommissioning Measures for Filter Elements and Filter Vessels

- ▶ Filter vessels should have been drained and sampled at least weekly under maximum achievable flow conditions during the Covid-19 pandemic where possible. If weekly flushing is not possible elements should be removed and the vessel decommissioned.
- ▶ For filter elements that have not been used for more than a month (30 days), the filter vessel should be opened to visually inspect for microbiological growth, other contamination and damage.
- ▶ If any filter elements are damaged, replace all elements. For filter/water separators (FWS), all coalescer elements should also be replaced if any are showing signs of microbial contamination. Separator elements should be cleaned and tested for water repellency. Any separators that cannot be reactivated for water repellency should be replaced.
- ▶ Replace all filter elements where they have been removed and allowed to dry out (even if only partially).
- ▶ Clean any contamination from the inside of the vessel and replace lid seals if required.
- ▶ Recommission filter vessels with new filter elements. When new filter elements have been installed in mobile refuelling equipment, a minimum of 4500 litres of aviation fuel should be circulated at maximum achievable flow rate preferably back to storage.
- ▶ After the circulation where the fuelling vehicle is still fitted with filter monitors, inspect and clean hose end strainer according to JIG Bulletin No 105; check for flushed fibres.
- ▶ After recommissioning, perform and record routine checks of filtration equipment, including accessories as per standard operating procedures.

Our goal is to protect your filtration system by preventing harmful contaminants from entering it. **Want to know the best way to prevent microbial growth?**

Microbiological Contamination

- ▶ Typical contaminants that can be found in aviation fuels include free water, particulates, microbiological growth, and surfactants. In addition, upstream of airport, distribution systems can be contaminated by chemicals and other product grades such as gasoline and diesel.
- ▶ Microbiological contamination can occur anywhere in the aviation fuel supply system, but rapid proliferation only occurs where water is present. So effective water management is the primary tool to prevent this type of contamination. Fuel soluble biocides are not permitted in the fuel supply chain, approved additives are only allowed for aircraft use.
- ▶ Microbiological contamination can cause severe equipment damage and corrosion. Failure to prevent the accumulation of contaminants prior to use will result in increased fuel system wear and can have a negative impact on fuel management costs.
- ▶ It is critical to avoid transmission of microbially contaminated fuel to aircraft, so water management by frequent periodic flushing of low points and tank and filter sumps is a key operation.



Example of leopard spotting



Example of microbes in a sample jar

Thoughts on Preventive Maintenance

- ▶ Check the stock level and shelf life of all stored filter elements according to the manufacturer's recommendation. Check the short term availability from suppliers. Always use elements on a first in - first out basis.
- ▶ Check the remaining service life of the filter elements currently in service.
- ▶ Check the dP logs of the installed filter elements for any significant increase or decrease. Investigate and replace them if necessary.
- ▶ Microbiological growth can be a problem in vessels that have had a reduced level of throughput from normal operation. Check membrane colour records and filter sump drains for any indications of contamination.
- ▶ Where concerns appear, it is best to isolate the filter, drain down and conduct an internal inspection. Pay particular attention to the condition of your filter vessel, especially the cleanliness of the filter elements, inlet chamber and the water sump. Check the lid seal for condition and replace where damaged or after the third compression.
- ▶ Airports operating to the JIG standards should have a transition plan in place for the phasing out of FM technology.

▶ EXTENDING THE ELEMENT CHANGEOUT DATE IS NOT AN OPTION!

Filter Type	Operational Lifetime	Storage Lifetime
Coalescer	3	5
Separator (Teflon®)	10	5
Separator (Synthetic)	3	5
Microfilter	5	5
Dirt Defence Filter	5	5

Manufacturer recommendation: 20°C and max. 50% humidity after date of shipment out of stock of FAUDI Aviation GmbH

Maintaining Aviation Fuel Quality

- ▶ Clean, dry aviation fuel is a basic prerequisite for aircraft operational safety.
- ▶ Fuel contamination can be controlled by applying good housekeeping, quality assurance and maintenance practices.
- ▶ Managing aviation fuel quality following an operational shutdown or reduced throughput from the pandemic is critical to safety. Industry leading companies select equipment and expertise of FAUDI Aviation to manage water and particulate in order to control and mitigate the contamination risk of microbial growth.
- ▶ Predicting future demand and gaining insight into the supply network is critical as the industry moves out of the pandemic and back into normal routine operations.
- ▶ Our dedicated team of experts will gladly support your operations and provide you with the necessary information and equipment.

FAUDI Aviation provides the most innovative filtration and sensor solutions to meet the evolving needs of the aviation fuel industry. **We are here to support and answer any questions you may have.**

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Recommended industry links:

- https://www.jig.org/standards-publications/?slug=bulletin#view_results
- https://www.airlines.org/wp-content/uploads/2020/06/A4A-Bulletin-2020.2_Recommissioning-Due-to-COVID-19.pdf
- <https://www.iata.org/en/programs/ops-infra/ground-operations/>