The Covid Challenge

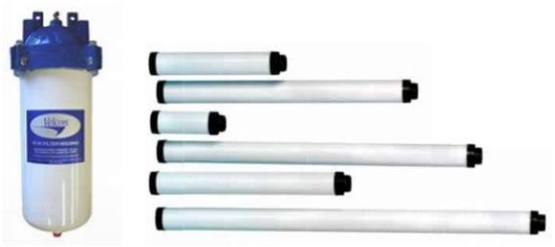
The Covid-19 challenges in Australia pale into insignificance when compared to the rest of the world from a health perspective but do the economics vary by country for the aviation sector?

We are all well aware of the lockdowns throughout Australia and know the effects on the economy have been significant, particularly in aviation. Each of the four distinct aviation categories have been affected to different degrees.

- General aviation, including the flying schools, was hit hard with lockdown restrictions, border closures and general economic uncertainty reducing flying by up to 100% at its most impacted. Today it is still down approximately 60% on its pre-Covid levels.
- Domestic airline travel is down about 73% on pre-Covid levels with border closures, quarantine requirements and public caution resulting in most having walked away from domestic travel for the moment.
- International travel, as we all know, is largely non-existent and is likely to remain this way for most of 2021. Even Emirates walked away from the Australian East Coast for some weeks but has now resumed limited services.
- Finally, agricultural flying. While this is possibly the only bright spot in the aviation community because of necessity, it is just a small segment of the industry in terms of total fuel volumes or flying activity.

Many within the aviation industry have either taken the opportunity to restructure or have been forced to downsize. Managers and owners that look strategically at their businesses to find selective growth or specialisation opportunities will emerge better than those that don't, so there is the potential for benefits in the next couple of years. At the moment though, it feels like riding a motorbike through a ploughed paddock to get to the gate at the far end.

Into Plane Filtration update



The business of developing new versions or models of aviation fuel filters is arduous to say the least. It takes an idea, a search for suitable materials and so much testing within the organisations and trials within the industry to gain the necessary approvals that a tortoise starts to look fast!

In 2020, JIG announced that they would not qualify any new filter elements to the EI1583 standard. Filter Monitor elements are qualified to this standard. The Energy institute withdrew the standard at the end of 2020.

Let's explain what this means.

Firstly, JIG and the Energy Institute (EI) do not, and never have, approved filter elements for use. There is no body that approves elements but JIG and the EI do test the filter elements under a range of scenarios to verify that they will work as expected meeting the appropriate performance criteria in the standard. If they do, they "qualify" them which is similar to saying

that they see no reason that they won't operate as the manufacturer states in compliance with the required standards.

Secondly, filter elements already qualified to EI1583 can continue to be manufactured and can continue to be used. JIG advised at the end of 2017 that 4 additional conditions needed to be applied in addition to the annual changeout requirement if Filter Monitors were to continue to be used. These are namely:

- Filter Monitor elements must be changed should the Differential Pressure reach 15psi (100kPa).
- There needed to be a means of halting the fuel flow should the dP reach 15psi (100kPa).
- When elements were changed, there needed to be a protocol to flush and check the hose-end strainers before the units were placed back into service.
- A risk assessment must be performed by organisations wishing to continue using 7th Edition Filter Monitor elements.

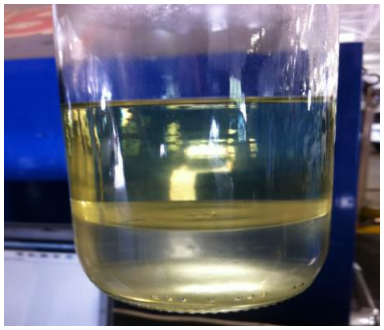
There are still 7th Edition Filter Monitor elements able to be purchased which is likely to continue until Velcon and Facet have replacements in the market that remove the Super Absorbent Polymer material they currently contain.

Faudi has a new Dirt Defence Filter combined with an Electronic Water Sensor (EWS) replacing their Filter Monitor elements. This is expensive because the EWS and, often an actuated valve must be installed with the associated electronics. If the EWs sense water, it shuts down the fuel flow and the affected "wet" fuel must be removed from the fuelling system before the fuel flow can be restarted.

Velcon and Facet are developing 'drop-in' replacements for the Filter Monitors. In reality, they were slow to start the process and have now been slowed further by reduced flying and real-world testing availability during Covid.

Regardless, 7th Edition Filter Monitor elements will continue to be available and **STAR** have a proforma Risk Assessment that is available to our clients to review and modify to suit their specific conditions to allow them to meet the JIG and EI requirements. If you would like our generic Risk Assessment, please contact us.

Effective slops management



Slops is the fuel drained off to perform samples and quality control tests that cannot be returned to storage. Fuel costs money so we aim to waste as little as we can.

Using a clear glass jar to take the samples for testing or a stainless-steel bucket for asset draining pre-sampling allows us to see free water and any sediment. By allowing time for any water and sediment to settle to the bottom, we can slowly and carefully drain the good fuel into another clean receptacle to return to storage and waste only a few drops of fuel

containing the water or sediment. Sometimes we have to wait for it to settle but settle it will.

Less waste results in lower waste costs and less environmental impacts. A real win-win!

Maintenance adds value

Effective maintenance providers have specialist knowledge and experience. Seeing small variations between visits and comparing other sites, allows them to quickly identify potential asset failures or conditions that present risks to reliability or fuel quality. A good maintenance provider is worth their weight in gold and, provided they're cost-effective, can save a site many thousands of dollars.

During an audit, **STAR** uncovered significantly maintenance deficiencies from the last owner of the assets. Our expertise helped the new owners identify what was needed to bring the site up to the required standards.

The wrong hose type resulted in needing to replace hoses well before their normal end of life. Cheap maintenance does not defer costs, it creates additional cost.

This should never have happened, a costly and unnecessary error.

STAR only works with highly reputable maintenance providers. We have evaluated them over a long period and trust their experience. We know they work efficiently, and that they are cost-effective.

Our preferred maintenance contractors are Aviation Components for regional Australia and the Pacific Islands, C&L Services in Sydney and Melbourne and Aviation Refuelling Maintenance in Adelaide and South Australia.

Aviation Refuelling Maintenance Pty Ltd

Why we do what we do !

During our careers in aviation fuels, we identified that there was no-one providing training, auditing or technical support to most organisations handling aviation fuels and refuelling aircraft.

As we had the knowledge and the passion to give back to an industry that had given us so much, we developed our STAR training, audits, and technical support to support organisations that had no access to these resources.

We charge only what it costs us to run the business and maintain the materials to meet all current standards making it affordable for every business so they can minimise their liabilities and risks.

We are truly here to help in every way we can. Training, Auditing, Technical support, Engineering, Maintenance, Fuel supply and pricing. Just call us.

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