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MRO

Management



BRIGHT SKIES AHEAD

The industry expects a lively but challenging 2024

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Welcome...

The year ahead for the global MRO industry looks set to be an intriguing one.

With air traffic on an upward trajectory in 2023, MRO activities have been gaining momentum, and companies will be poised to capitalise on this throughout 2024.

However, the journey won't be without its challenges. Geopolitical and economic issues will create a complex backdrop for business, and persistent supply chain disruptions alongside both short- and long-term labour shortages will continue to be an industry talking point.

Looking beyond these concerns, digitalisation and sustainability will continue to be two key themes for 2024. Digitalisation holds great opportunities for further efficiency improvements, while sustainability is now clearly evolving from mere talk to a necessity for companies to act upon.

Our 2024 global industry outlook on page 24 combines insights from various industry players who provide their thoughts about what they think lies ahead over the next 12 months. The opinions portray a relatively positive and optimistic outlook with expectations of busy facilities. However, caution is advised, especially regarding the post-pandemic skills gap that continues to challenge the MRO sector.

As technological advancements accelerate and the need for education within the workforce persists, cultivating and retaining a highly skilled workforce capable of handling emerging technologies becomes essential.

One organisation demonstrating its commitment to training and development is the Qantas Group.



As detailed on page 38, their Engineering Academy is creating opportunities for aspiring engineers to embark on fulfilling careers in aviation.

Addressing industry challenges and opportunities, *MRO Management's* Predictive Aircraft Maintenance (PAM) 2023 conference took place in London in November. Bringing together over 160 delegates at the Ham Yard Hotel to share knowledge, experiences and to network, the event was positive, informative, and a great success. Thank you to everyone who took part. Information about an exciting PAM 2024 will be released soon.

As always, I hope you enjoy reading the issue and please do get in touch to share comments or even send in details about your latest projects to be considered as future print or online features.

Craig Waters

EDITOR

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Management

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Hangar Talk



Finnair/Mikko Pykkö

COMPONENT SUPPORT

Finnair extends E-190 component support agreement with AerFin

> AerFin has signed a seven-year extension of its component support contract for Finnair's fleet of 12 E-190 aircraft through to 2030.

Following Finnair's thorough cost review, market testing and auditing, AerFin was selected due to a proven track record and commitment to exceptional support, reliability and cost effectiveness.

AerFin's BeyondPool programme has been meticulously designed to adapt according to both the airline's

operational needs and evolving market conditions.

Finnair and AerFin's partnership has been in place since 2020. This new extension deepens the strategic partnership between the two companies, which includes the collaboration on the sustainable phase-out of an A319 aircraft, showcasing the shared commitment to innovative solutions that promote sustainability in aviation.

Juha Ojala, senior vice president, technical operations at Finnair, said:

"AerFin has been a reliable, high-quality and long-term partner.

"They have consistently demonstrated operational excellence and provided first-class support and we're very much looking forward to further enhancing the relationship between the two companies."

"AerFin has been a reliable, high-quality and long-term partner"



MRO AGREEMENT

Sanad inaugurates first LEAP Engine MRO Centre in SAMENA

Sanad has unveiled its LEAP Engine MRO Centre – the first for the South Asian, Middle East and North Africa (SAMENA) region.

The new state-of-the-art facility in Abu Dhabi spans over 5,000sqm and becomes part of the global LEAP MRO network.

It follows a landmark 11-year shop visit offload agreement, signed in June 2023, in partnership with GE Aerospace and Safran Aircraft Engines.

Sanad unveiled the new centre during a ceremony and showcased the first LEAP engine inducted in record time, marking the commencement of the LEAP engine MRO programme.

The centre began operations within a month of signing the deal and successfully completed the MRO process on the first LEAP engine from airline flydubai just four months after signing the agreement.

DRONE INSPECTIONS

Barfield signs contract with Viva Aerobus for A320 drone inspections

Barfield Inc, a subsidiary of Air France Industries KLM Engineering & Maintenance (AFI KLM E&M) in the Americas, has confirmed an agreement with Viva Aerobus to provide Donecle's drone solution for A320 fleet inspections.

It represents a milestone in the digitalisation of maintenance activities, and will mean Viva Aerobus can conduct indoor and outdoor aircraft inspections and train their operators.

Francisco Morgado Morfin from Viva Aerobus said: "Thanks to Donecle's unique and cutting-edge technology, we speed up our maintenance processes, improve our efficiency and increase reliability in our inspections. At the same time, it makes it easier for us to carry out traceability analysis by its data storage service."



Adobe Stock

Donecle's core solution is an autonomous drone which is designed to be capable of performing inspections without a pilot and GPS, and uses advanced artificial intelligence (AI) algorithms to detect any damage and defect on an aircraft's skin directly from a tablet interface.



BRIEFS

- MTU Maintenance Zhuhai has signed a MoU with MAB Engineering to support the setup of an engine on-site services facility. MTU Maintenance Zhuhai will provide its technical expertise and guidance to support the management of the project, including consultation on the required qualifications, certifications and tooling and facility layout design.

- Ontic is to acquire the engine fan products line from Curtiss-Wright's Sensors Division. Currently manufactured in Gilbert, Arizona in the US, the product line will now transition to Ontic's Chatsworth facility in California.

- Skyservice is to acquire the London Aviation Centre hangar facility at Vancouver International Airport from London Aviation Centre Ltd. The facility offers 64,000sq feet of hangarage equipped with 44ft doors that can accommodate jetliners such as the Boeing 737 BBJ MAX and Airbus ACJ series aircraft.

- Asia Digital Engineering (ADE) has obtained EASA Part 145 Maintenance Organisation approval, allowing it to provide aircraft maintenance support in APAC and beyond. ADE's Mahesh Kumar, commented: "This is a significant achievement, and is a result of all the hard work and commitment from the team at ADE."

- Jet Support Services, Inc (JSSI) has launched JSSI PartsHub, a purpose-built digital platform for procurement teams of operators and MROs worldwide that drives smarter and faster parts purchasing.

80

flydocs' deal with Cebu Pacific Air to digitise daily records will cover over 80 aircraft

64,000

The London Aviation Centre hangar facility offers 64,000sqf of hangarage

5,000

Sanad's LEAP Engine MRO Centre in SAMENA spans 5,000sqm



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DIGITALISATION

Cebu Pacific renews digital records contract with flydocs

flydocs has signed a five-year extended software deal with Cebu Pacific Air to digitise and automate processes of daily records and asset management for the airline's fleet of more than 80 aircraft.

The renewed partnership will provide the Philippines carrier with a seamless interface through flydocs' enhanced integration with the leading M&E software AMOS.

This integration will support aircraft records auditing and enable a fully paperless approach to records and asset management.

Shevantha Weerasekera of Cebu Pacific Air said: "Over the past three

years, as a long-term partner, we've grown with the support of flydocs as we have been able to successfully work through their commitment of being innovative to digitising our aircraft maintenance records.

"The integration of flydocs and AMOS will benefit us by improving operational efficiency, data accuracy, real-time information and compliance management."

"The integration of flydocs and AMOS will benefit us by improving data accuracy"



MRO AGREEMENT

Dowty and Norrønaflý sign authorised MRO agreement

Dowty has appointed Norrønaflý Propeller & NDT as an authorised Saab 340 MRO centre in Norway.

The MRO agreement promotes Norrønaflý as an authorised maintainer of Dowty R354, R375, R389 and R390 propeller types as installed on the Saab 340 platform.

The agreement also covers several Dowty metal propeller types fitted to other platforms, including the CASA 212 (R334), Jetstream 31/32 (R333), Gulfstream Commander (R306) and Fairchild SA227 (R321, R324).

Norrønaflý is a leading European maintenance centre for aircraft propeller service and has a long history of supporting aircraft propeller maintenance, including Dowty products.

Richard Gregson, OE product leader at Dowty, said: "Norrønaflý has an excellent reputation for its repair and overhaul services, and we look forward to working more closely with their team to better serve Dowty customers in the region."



THE ENGINE SPECIALISTS

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Location:

London Stansted Airport (STN), where we are conveniently located within easy reach of major hubs in the UK and Europe.

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Our purpose built 100,000 facility has workshop capacity for 30 engines with 8 dedicated workbays in the maintenance workshop and 8 dedicated workbays in the repair workshop, we also have storage capacity for 150+ engines in our dehumidified and temperature controlled dedicated building. We are solar powered and self sufficient.

Customers:

We work with some of the largest airlines and lessors in the industry offering a bespoke service to meet their needs, we will always find a solution for TAT, cost and slot availability, offering a best in class service

Staff:

Our diverse team have broad engine maintenance and repair experience. We have a fantastic mix of approved engine technicians, engine mechanics and apprentices

Engine Types:

Here is the current capability list, additional engine types are in the pipeline
CFM56-3/-5/-7, LEAP-1A/-1B, V2500, RB211-535, Trent 700, CF6-80C, CF34-8/-10, PW1000G, PW4000

Types of Workscopes:

We carry out various maintenance and repair workscopes, here is a flavour of the types of what we offer:

- EOL / C check
- Prelease inspection
- Borescope
- Conversions
- QEC builds
- LRU swaps
- Preservations
- SB/AD incorporation
- Stand swaps/repairs
- Top/Bottom case repairs
- Surgical strike repairs
- Module replacement
- LPT NGV replacement

Contact the team today to discuss your engine maintenance, repair and storage needs

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A large industrial jet engine is the central focus on the right side of the image, mounted on a complex assembly structure. In the background, two workers in dark blue shirts are visible; one is seated at a workstation with multiple computer monitors, and the other is standing nearby. The setting is a vast, brightly lit industrial facility with a high ceiling and yellow overhead crane beams. The overall atmosphere is one of precision and engineering.

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THEY'RE
ENGINEERED.**



MRO

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cfmaeroengines.com

TREND WATCH

The new partnerships, solutions and initiatives that are driving innovation in the MRO industry



01

FLEET SUPPORT

● After 15 years of cooperation, Emirates and OEMServices have extended their agreement for the component support of the airline's A380 fleet.

It will include the supply of spare parts, repair services and engineering support.

OEMServices' Didier Granger said: "The A380 has always been and will remain strategic for OEMServices, and in this perspective, to keep on supporting the key operator of this fleet is essential."



05

PEOPLE NEWS

● MAAS Aviation has named Andrew Hoad as its new chairman. Hoad originally joined MAAS in April 2022 as non-executive director.

A seasoned authority on the aviation sector, Hoad has previously held senior technical positions at prestigious airlines and large MROs.

Hoad said: "It's the attention to detail and care that our people put into ensuring every livery we paint looks as good as new (if not better) that makes me proud to be part of MAAS."

"It is the attention to detail and care that our people put into ensuring every livery we paint looks as good as new (if not better) that makes me proud to be part of MAAS"

04

TRAINING & DEVELOPMENT

● Iberia Maintenance has welcomed 68 vocational training students who are starting their internships across several technical courses.

The internships will last between three and nine months, and will be carried out in classroom or Dual mode while adapting to a real working environment.



02

DIGITAL RECORDS

● Condor Flugdienst GmbH has awarded Gamit Ltd a 10-year contract for its ROAM (Records Online Asset Management) digital archive records solution and to provide fleet asset management.

Condor will utilise ROAM to further modernise its operations, seamlessly manage the technical documentation generated by its fleet to ensure key compliances and also harness the abilities which ROAM offers in end of lease (EOL) projects and aircraft transitions.



03

ENGINE SUPPORT

● Air Cairo and CFM International have signed a multi-year non-exclusive services agreement to cover the shop visits of 28 LEAP engines powering the 14 Airbus A320neo aircraft which are currently operated by the airline.

Air Cairo's Hussein Sherif Fahmi (pictured above, right) said: "This agreement reflects our commitment to innovation, customer satisfaction and sustainable air travel through the efficiency of the LEAP engine."



Adobe Stock

06

FACILITIES

● Emirates has announced a US \$950 million investment to build a new ultra-modern engineering facility at Dubai World Central (DWC).

The engineering complex will span over one million square metres and will be the largest and most advanced of its kind to be operated by any airline.

Construction work on Phase 1 is expected to begin in 2024 and be completed in 2027.

Emirates states it will create thousands of skilled jobs and add value to Dubai's economy.



07

COMPONENT REPAIR

● Honeywell has signed an agreement with Egyptair Maintenance & Engineering Co to provide flat-rate component repair services for the entirety of the 80-plus A320, A330, B737 and B777 Egyptair fleet.

Under the five-year agreement, Honeywell sites will repair key existing components and aircraft systems, including environmental controls, avionics and safety systems to keep Egyptair's fleet well maintained.

The deal is said to cut down on administration, lower costs and reduce complexity.



Adobe Stock

08

SUSTAINABILITY

● Pegasus Airlines has chosen the SkyBreathe 360° eco-flying platform to reduce fuel costs and CO₂ emissions from its flights.

The platform utilises sophisticated big data algorithms, machine learning and artificial intelligence to analyse numerous data from each flight and provide actionable insights, allowing airlines to enhance fuel efficiency strategies and reduce their consumption.

Trending stats

20,000

FL Technics' hangar in Punta Cana, Dominican Republic will span 20,000 square metres (from Industry Voices feature, p.16)

80

AELS has dismantled more than 80 Airbus and Boeing aircraft (from Green Sky feature, p.50)

8,500

The Qantas Group Engineering Academy is set to create 8,500 highly skilled aviation jobs over the next decade (from Training & Development feature, p.38)

\$138bn

Alton Aviation Consultancy suggests global MRO spend over the next decade will grow from \$112 billion to \$138 billion (from MRO Consolidation feature, p.34)

EMBRACING VALUES

Greg Macleod explains why investments in sustainability initiatives and workforce development are key priorities for GT Engine Services



“We take the development of our team incredibly seriously”

Greg Macleod, managing director, GT Engine Services



For more information on GT Engine Services, visit: gtes.aero

Founded in 2010, GT Engine Services (GTES) was formed around supporting engine lease companies, with a strategic decision to locate the business in South East England, within easy reach of the major airports and ferry ports.

We created a purpose-built workshop at Stansted Airport with a small, experienced team. During the early days, our offering was very much about looking after the engine leasing companies with QEC builds, end-of-lease checks and storage.

Our mainstay was the CFM56, but we soon got inquiries from carriers. While this was to be similar work, there were additional requirements involved with keeping engines operationally serviceable, and so we started services such as top case repairs and QEC swaps. Working with diverse types of customers and at an increasing amount helped reduce the seasonality issues of the business.

Fast forward a few years – what does GTES now offer? We have 16 fully equipped engine bays and our main engine is still the CFM56, but now mostly the -5 and -7. We have also invested heavily in the Leap-1A and 1B. We now have three main offerings:

1 Maintenance: this involves end-of-lease checks/off wing alignment checks and all the associated services that may need carrying out during a scheduled engine removal.

2 Repair: this is generally work carried out such as top case repairs module swaps or repairs, often referred to as hospital repairs or surgical strikes; over time we have purchased a complete suite of approved module tooling.

3 Storage: we offer what we consider to be premium storage, dehumidifying the facility and constantly monitoring the condition of the engines. We offer storage for up to 150 narrowbody engines, with 24-hour Aircraft On Ground (AOG) despatch.

The environment

We are never going to be a clean industry, but we can try and clean up our part of it. We have invested heavily in solar power, which was lucky as our supplier doubled our energy costs per unit earlier in the year without warning.

Because of this issue, we have recently invested in brand new battery technology to try and harness that PV power. While building this new infrastructure, we installed EV charging points for the staff and launched a green vehicle scheme. We also offer a lift share incentive and cycle to work scheme. Other initiatives include waste reduction workshops that have proved very worthwhile.

The team

As the famous adage goes, it is all about the team. We have spent a lot of time over the past 18 months discussing the vision



1

and values with the team, a cross-section of which produced our new values that now drive us forward:

- Customer driven: understanding their needs, exceeding expectations
- One team: together we succeed, divided we fail
- Respect and integrity: treating colleagues, customers and partners respectfully, operating with the highest integrity
- Embracing change: accepting that change is a constant
- Passion: taking ownership, driving performance.

“We are never going to be a clean industry, but we can try and clean up our part of it”

These values are embraced by the team and they are proud to follow them. We have introduced a quarterly Value Champion award which is voted for by the team and this has transformed the business culture.

We take the development of our team incredibly seriously, removing training bonds, allowing people to better themselves without feeling they are shackled to the company. We offer on-the-job technical training as well as management and leadership training. We also work very closely with the Stansted Airport College, selecting apprentices that are the best fit and nurturing them in their new career – this has been immensely successful.

Bonding within the team is very important. As well as the regular social events, we hold sporting challenges which have helped raise valuable funding for local charities.

What are the results of these changes? Strong sustainable growth, working with long-term partners to all of our advantages. Turnover alone has increased threefold since 2021, whilst maintaining good margins, and the headcount has almost trebled in the same period.

Many of the challenges we encounter will not come as a surprise – lack of skilled staff and inflation are two of the key issues, but supply chain issues also remain, although diminished. Interest rates have affected asset financing which has changed the landscape, and we find ourselves self-funding rather than being able to use institutional money.

The future as we see it is very much the narrowbody market. Leap engines are keeping us very busy; we always have at least four bays occupied by Leaps, but this is likely to ramp up to seven permanent bays in the new year. Whilst CFM56 engines are not going anywhere, we can continue extending life on these engines at very competitive rates. Our main base will remain at Stansted Airport, with other satellite bases to come, operating seven days a week and eventually 24 hours a day to satisfy our customers' needs. 

1. GT Engine Services is based at Stansted Airport, UK

2. Inside the GT Engine Services maintenance workshop



2

SETTING THE BAR FOR EXCELLENCE

FL Technics' chief executive **Zilvinas Lapinskas** explains how the company navigates the intricacies of seasonal demand and base maintenance dynamics across Europe, Asia-Pacific and the Americas



Interior of FL Technics' hangar in Kaunas, Lithuania

In the rather conservative but highly competitive aviation business, staying ahead of the curve is imperative for success. At FL Technics, we have not only embraced this philosophy, but we are also setting the bar for excellence; a goal that can be achieved by balancing the capacity of the company and our results with the demand for solutions from the aviation industry.

Global presence

FL Technics' international footprint is a testament to our commitment to serving diverse markets.

In Europe, where the aviation industry experiences a pronounced seasonal demand fluctuation, we have honed our strategy to efficiently manage increased workloads during peak travel seasons. Our presence in the Asia-Pacific region allows us to tap into the burgeoning aviation markets of countries like

Indonesia with future focus on Australia, where the demand for MRO services is driven by rapid fleet expansion.

In the Americas, we have positioned ourselves to cater to the diverse needs of airlines operating in North and South America, with strategic investments in the Caribbean.

Recent developments: Bali and Punta Cana

We continue to make headlines as a result of our ongoing strategic base maintenance developments.

In the Asia-Pacific region, we have recently announced a groundbreaking collaboration with Angkasa Pura Property to develop a 17,000 square metre MRO hub in Bali. This state-of-the-art facility is poised to enhance our capabilities in the region, providing timely and efficient base maintenance services to airlines operating in and around Bali.



"We have honed our strategy to efficiently manage increased workloads during peak travel seasons"



Zilvinas Lapinskas, chief executive, FL Technics



For more information on FL Technics, visit: fltechnics.com

Simultaneously, in the Americas, we are set to establish a significant presence with a 20,000 square metre hangar in Punta Cana, Dominican Republic. This underscores our commitment to meeting the growing demand for MRO services in the Americas. The new hangar in Punta Cana is poised to become a key hub for base maintenance, contributing to our goal of providing comprehensive MRO solutions on a global scale.

Ongoing commitment

As the aviation industry evolves, FL Technics remains committed to our clients and partners across the globe, demonstrating ever-growing demand for MRO solutions.

Our success is rooted in leveraging the expertise we've gained in Europe and making strategic investments to enter new markets and business areas.

From expanding our footprint in base maintenance to pioneering solutions in aircraft wheels and brakes, FL Technics is not just adapting to change – we are actively driving it.

Our journey is a testament to the resilience of our team and the focus on the quality of our services that defines FL Technics. 



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CUSTOMER PROXIMITY ENHANCES SUPPLY CHAIN

Bertrand Drugeon discusses the impact of supply chain challenges in the MRO sector on current service performances and shares how Thales is tackling the issues



A member of the Thales Aviation Global Services (AGS) team

Supply chain disruptions caused by the pandemic have had a major effect on businesses worldwide including MRO activities in the aviation sector.

This year the industry navigated the perfect storm as global air traffic rebounded, while workforce shortages and parts availability continued to affect MRO performances. Furthermore, the simultaneous challenge of increased passenger traffic with new aircraft builds is driving more customers to invest in spare parts and build their inventory to mitigate these supply chain risks.

“The digital evolution of our support activities has been key in enhancing our ability to better serve our customers”

Customers at our core

The Thales Aviation Global Services (AGS) team continues to work through these unique market dynamics to secure and stabilise industrial performances and reduce any impact this might have on our customers.

With more than 40 repair and support centres worldwide, Thales facilities are located in close proximity to airline operations globally. This enables us to constantly improve the speed of delivery and access to services.

Sustainability focus

The repair of equipment conducted at Thales support centres is performed



“Customer proximity is key in our current supply chain environment”



Bertrand Drugeon, general manager - Europe, Thales Aviation Global Services



For more information on Thales Aviation Global Services, visit: thalesgroup.com

near our customers, resulting in reduced transportation throughout the repair process and minimising the environmental impact. As part of our efforts to optimise our operations, we are also focused on sustainability by working to repair, reuse and recycle as many parts as possible.

Digital evolution

The digital evolution of our support activities has been key in enhancing our ability to better serve our customers. Not only does digitalisation provide a more simplified and efficient repair process, but it also allows instantaneous feedback from our customers on their repair needs.

Meeting changing market demands

Throughout the year, Thales has hosted several events around the world, and we have met with hundreds of customers for an open dialogue about our products, innovations and sustainability initiatives.

Thales continues to invest in the expansion of our global MRO footprint and best-in-class facilities, providing premium services to meet the ever-changing market demands. 



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is flight**

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FAA, AND GCAA
CERTIFIED SOLUTIONS**

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Line Maintenance
Engine, Airframe and Materials Services
Aircraft Engineering
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Jason Dickstein, president,
Washington Aviation Group

Avoiding bad parts... and bad parts documentation

Jason Dickstein explains that a robust receiving inspection and detailed communication with parties in a chain of commerce is vital to protect your business and help the industry strive for zero-fraud



Visit washingtongroup.com for more information on the law firm which supports the aviation community

Since the summer, there has been a lot of talk about aircraft parts documentation. Much of this was generated by a company that has been accused of issuing falsified documentation with respect to engine parts. The core of the allegations centre around a claim that the company bought used parts, created false documentation, and then sold the parts as new parts.

The false documentation scheme seems to have been identified by an air carrier whose receiving inspector looked at the 'new' parts and thought that they did not look new. The receiving inspector identified this as a red flag that needed to be investigated. The company checked

"If you receive a life-limited part without back-to-birth traceability, then this can be a red flag"

the trace documentation by contacting the issuer and found that it was altered from the original. This resulted in additional investigations which revealed the scope of the falsifications.

There are several things we can learn from this event. It highlights the importance of a thorough receiving inspection. It shows that receiving inspectors need to feel comfortable segregating parts for further investigation. It also shows the importance of being willing to engage

in the investigation by communicating with parties in the chain of commerce. Robust implementation of these factors in your business model will help protect your business.

1 Receiving inspection

Train your receiving inspectors to look at the parts. Receiving inspection is an important part of every business that deals with aircraft parts. It is the opportunity to make sure that you are getting what you expected to get. To properly perform receiving inspection, there are at least three different investigations that have to be made:

1a) Look at the paperwork

You must check the paperwork to make sure it matches your internal documentation, like your purchase order. If part numbers on the documentation do not match your purchase order, these could be 'cover goods', offered because the original goods were unavailable. Cover goods can be acceptable substitutes, but may require some extra analysis to ensure they are acceptable for your intended installation. If the cover goods are based on an OEM substitution, then there should be documentation to show that the new OEM part number is a replacement for the number you ordered.



Sometimes cover goods are PMA alternatives. These can easily be verified by checking the PMA Supplement information on the FAA's website ([drs.faa.gov](https://www.faa.gov/drs)). If the FAA information identifies the PMA part as a substitute, then the FAA has reviewed and verified the engineering data to show it is acceptable. If the FAA database does not identify the PMA part as eligible for your installation, then check with the PMA manufacturer because the FAA online information might not yet be up to date if a new eligibility has recently been added. The PMA manufacturer should be able to share their latest PMA supplement with you.

You must ensure that the paperwork you receive meets your expectations. If you receive a life-limited part without back-to-birth traceability, then this can be a red flag. Even if it is not a legal requirement, it is a common commercial requirement. On the other hand, for non-life-limited parts, commercial traceability back to the last operator or back to the last certificated entity (like an overhaul shop) can be more common.

1b) Match the part to the paperwork

You must look at the parts to make sure they match the paperwork. This means checking whether the paperwork description matches the parts. If the nomenclature describes the part as a bushing but it appears to be a hinge, this is a disconnect that must be investigated. The documentation part numbers, serial numbers, lot numbers and so on should all be consistent with any comparable numbers printed on the part itself. If the documentation includes a serial number but the part does not include a serial number, then this is an issue that must be investigated.

1c) Look at the part

Finally, you must look at the part itself and ensure it is consistent with your expectations. If you are buying a new part, then is the part new? If the finish on the part appears to be marred, then the receiving inspector needs to identify whether this is marring that is consistent with storage or whether it appears more consistent with installation or use.

2 Investigation, when necessary

Don't be afraid to segregate a part that needs further investigation, and to keep it segregated until the investigation is complete. If something doesn't look right, then that feature should be investigated until you are satisfied with the answers you are getting.

Don't forget to protect your commercial rights, as well. Often, sales contracts may limit the period during which an inspection can occur. If you plan to reject a part, then make sure you identify the planned rejection to your source before the inspection period has concluded.

3 Communication

Communication is very important in our industry. Years ago, I was asked to support a prosecutor's office that was examining a traceability package associated with an aircraft part. They shared the package with me, and I noticed that the chain of commerce included a document signed by a good friend. I decided to start my



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“Receiving inspection is an important part of every business that deals with aircraft parts”

due diligence with that document. I called my friend, gave him the document control number, and asked whether the document he signed had been issued to the party whose name was on the document I had in my hand. It turned out that the control number on my document had never been used by his company. He confirmed that the document I was holding was not one issued by his company. This became a very useful starting point for our investigation, which ultimately provided the prosecutor's office with evidence that the documentation they had was fraudulent.

How do you get started in your own investigation?

Look for the contact information that is often found on the top of the commercial documentation. Usually there is a phone number – call the person who signed the document and verify the information that you think may be suspect. Don't have the right information? Look up the company on the internet and find their contact information on their website.

There is some common information that can typically be found in the commercial traceability documentation that accompanies most aircraft parts transactions. This information should align throughout the chain of commerce. If part numbers change in the documentation package, then ask “Why?”

If parts nomenclature is inconsistent through the chain of commerce, then this can also be a red flag. Sometimes there are legitimate reasons for changes – for example an alteration might have changed the dash number on the part. Nomenclature might have changed because the OEM changed the nomenclature in the IPC. But asking questions until you are satisfied with the answers can be a very effective approach.

Looking for commonality in the way that commercial information is presented? The Aviation Suppliers Association has a template for commercial documentation (the ‘ASA Statement Form 2020’). It is designed to have fields for the information that is most commonly requested in aircraft

parts commercial transactions. If your suppliers aren't using the ASA Statement, then show them where they can download a free template as well as free instructions (aviationsuppliers.org/ASA-Publications).

Conclusion

The trade association community is actively looking for ways to protect this industry. Fraud is rare in our industry but if it happens it can pose a severe safety jeopardy. As an industry we must continue to strive for a zero-fraud/zero-accident environment.

Fraud can be difficult to detect, but the industry is constantly striving to develop new tools to make it even harder to introduce fraud into the system. Groups such as the Modification and Replacement Parts Association (MARPA), the Aviation Suppliers Association (ASA) and the Aircraft Fleet Recycling Association (AFRA) are working on solutions to help protect our industry from fraud and make our parts community even more secure.

If you want to be a part of the solution, then consider joining one or more of these associations and working on their committees to develop the protocols and practices that will help keep our industry safe. 



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Sunny with occasional downpours

The MRO market in the coming year is set to be very busy, but industry optimism comes with more than one note of caution, as **Bernie Baldwin** reports

“If it's not one thing, it's another!” The exasperated comment often heard when someone overcomes one adverse event only to find themselves

facing another major challenge.

Such a feeling seems likely among MRO companies. Having fought through the Covid-19 pandemic, along came Russia's attack on Ukraine, supply chain issues and now further heavy conflict in the Middle East. All these have knock-on effects on the aviation industry and therefore on the MRO sector too.

Looking at how the global MRO market might fare in 2024, with much of the global fleet now returned to service after the pandemic and a growth phase under way, IBA president Phil Seymour reports that the demand across all types of maintenance is much higher than a typical/normal year. “For example,” he says, “as well as the delayed maintenance (pent-up maintenance demand), supply chain issues have meant that turnaround time is lengthening.

“The supply chain here includes both material shortages and manpower constraints. New material prices have increased and that has led to searching for used serviceable parts, PMA and not just new parts.”

Seymour continues: “With some older aircraft candidates, which traditionally would have been parted out to provide used material, going for freighter conversion, this has led to fewer opportunities to source that material. Also, the MROs (both airframe and engine shops) have suffered with staff shortages and, although that may be alleviated with new hires and apprenticeship schemes, it takes years to replace the experienced folks with the new hires. That slows down the process of teardown and inspection, and causes additional quality checks to be made. Add to that the current engine issues of the Pratt & Whitney GTF and we don't expect to see this improving until 2025 at the earliest.”

Louis Mallette, senior vice president operations at AJW Technique, notes that industry analysts are predicting a full recovery for the aviation sector in 2024.

He says: “The latest air travel outlook released by Airports Council International (ACI) predicts passenger traffic will reach 9.4 billion passengers globally next year. While this will increase flight schedules and no doubt fleet expansion for operators, the continued impact of labour shortages is still a factor to consider and will continue to affect the MRO sector.”

Mallette adds: “We are seeing growth in active fleets and a general increase in flying hours across all regions. Barring any geopolitical effects, which could upset air travel, we expect the component repair shops such as AJW Technique, to be operating at close to maximum capacity.”

Inga Douglas, chief commercial officer at Magnetic Group, believes that the estimations set during the pandemic about the fleet scrap rate were off the mark. She says: “Maintenance organisations, operators and asset owners feel that rather intensely due to the lack of capacity. The market is reacting to the demand by building and expanding facilities; however, that does not solve the main problem – insufficient workforce.

“This continuous issue brings different market players, even competitors, into



1

“Could this be the time for 3D-printing/ additive manufacturing to make its mark on MRO processes?”

cooperation to grow the pool of aviation specialists – and make the aviation industry more attractive than ever. But, as with any growth-oriented goal, it takes time.

“It’s no secret that the next few years will be challenging,” Douglas continues. “It will test long-term relationships to avoid ‘no slot’ scenarios. The situation will require revision of maintenance planning, people training, investment to attract talents, raising capital for new technologies and their implementation, and inevitably, adapting pricing.

“Yet, not all is black and white. The upcoming changes can be perceived as welcome, too. As they inherently carry a new take on growth strategies, so the market will have to find a way. But after the past few years, the industry as a

whole has become more agile and had its stamina strengthened.”

Returning to the aforementioned fleet scrap rate, Douglas comments on the amount of work required for out-of-production types to keep flying and how the rate of these types exiting the fleet is changing. She explains: “A reduction in the aging fleet was expected. However, the tendency this time has been different and two-fold, both positive and negative.

“The demand and load at MROs goes beyond their capacity. But it also presents challenges, such as a high risk of unexpected repairs and issues with the supply chain, which may jeopardise the planning done at any MRO. So, fleet changes depend a lot on OEMs. That’s why, within the next few years, we hope to observe a new trajectory.”

Also assessing the work needed to keep out-of-production types airworthy is AJW Technique’s Mallette. He says: “Looking at narrowbody aircraft as we approach 2024, we see customers holding off on previously planned retirements, and continuing to fly older aircraft for a further one to three years, due to the GTF problems grounding a portion of the A320neo fleet.

“This is resulting in additional repair work flowing into our shops, as flying hours on the older aircraft will increase whilst the newer aircraft are parked. In addition, the delayed retirements will reduce the flow of surplus material, so repairing the unserviceable components will be needed and the OEM supply chains will need to continue their recovery efforts to support the industry.”



3



2

“It seems that if the overall outlook were a weather forecast, it might predict sunny periods but with occasional downpours”

According to IBA's Seymour, PSA storage charts using IBA Insight show many older stored aircraft are returning. He says: “This has also been exacerbated by the new aircraft production numbers dropping below the expectations, for example 737 MAX delays.”

Given the challenges in the supply chain, could this be the time for 3D-printing/additive manufacturing to make its mark on MRO processes? “It's assisting in some areas such as interior parts, but the heavy engineering aspects of aircraft structures and engine internal life-limited parts (LLPs) are the critical path,” says Seymour.

Laurynas Krasinskas, head of design and office of airworthiness at Magnetic Creative, believes that from a broad industry perspective, applying 3D-printing across MROs could be immensely beneficial. “But the practice also presents its own set of challenges,” he remarks, outlining both those and the benefits.

“Having in-house 3D printing capabilities would allow the production of specific aircraft components,

especially those no longer in production or challenging to source, all while reducing lead times and improving their ability to service a broader range of aircraft models,” Krasinskas explains. “3D printing also enables rapid prototyping when developing new repair and maintenance solutions. This is likely to enable quick testing and refining of designs before full-scale production, potentially saving time and resources.”

Krasinskas goes on: “Over time, having such a capability can lead to cost savings by reducing the reliance on external suppliers and decreasing the need for maintaining extensive inventories of spare parts. Moreover, traditional manufacturing processes often involve long lead times for ordering, producing, and delivering parts. 3D-printing can significantly reduce these lead times, enabling quicker turnaround for repairs and maintenance.

“Another benefit is that 3D printing can produce parts with complex geometries that are difficult or next to impossible to achieve with traditional manufacturing methods. It also improves performance and efficiency. Keeping up with advancements in 3D printing materials is essential. For this reason, MROs need to ensure they use materials suitable

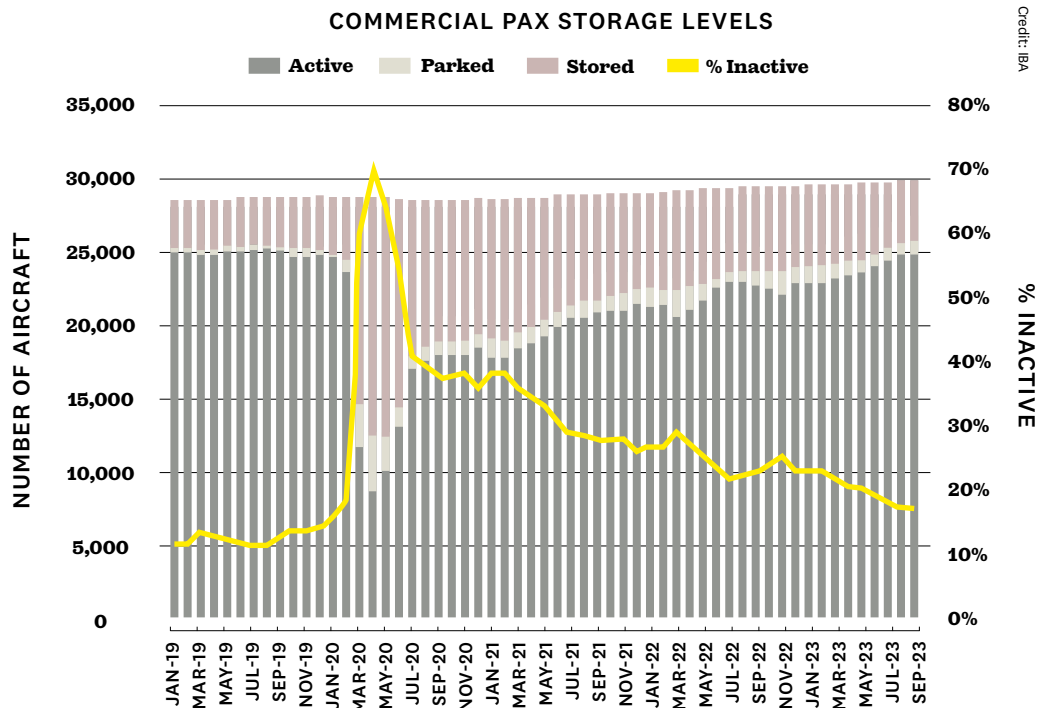
for aviation applications, including those with the required strength, durability and temperature resistance.”

The primary challenge comes from the area of certification and regulatory compliance. “Ensuring 3D-printed parts meet aviation industry standards and regulations can be complex. Obtaining the necessary certifications and approvals for 3D-printed components can be challenging and time-consuming,” Krasinskas elaborates. “Of course, choosing suitable materials for 3D printing is critical. Aircraft components require specific material properties, such as strength, durability and resistance to extreme temperatures. Identifying materials that meet these requirements can be a challenge.”

There is also a downside to production speed. Krasinskas adds: “While 3D printing can be faster than traditional manufacturing for some components, it may not be suitable for high-volume production or large structural parts. Balancing production speed and volume

1. MRO capacity in 2024 is likely to be challenged, something already anticipated by Magnetic Group 2. Louis Mallette, senior vice president operations, AJW Technique

3. Magnetic MRO's hangar in Tallinn



is critical. And though 3D printing offers design freedom, it can also lead to overly complex and costly designs. Striking the right balance between design complexity and functionality is essential.”

AJW Technique’s Mallette is less convinced about the immediate potential. He says: “On the component MRO side, 3D printing and additive manufacturing will have no real effect for the foreseeable future as we are required to use certified spare parts, typically purchased from the OEMs. Over time we would expect an increase in less critical areas such as cabin components. However, for AJW’s core component MRO business, we do not see any short- to medium-term effect.”

Noted earlier was the question of whether personnel numbers are going

to be able to meet the demand. Mallette says: “The MRO sector is struggling with the post-pandemic skills gap, impacted by the rapid pace of technological advancements and a need for education within the current workforce. Developing and maintaining a highly skilled workforce equipped to handle emerging technologies is not an option, it is essential.

“The availability of trained technicians is extremely limited, so workforce planning needs to be addressed more proactively and we need to account for the training required before the skilled technicians are effective. Existing technicians need training and upskilling, and we must also focus on attracting new talent from technology-hungry Gen-Z.”

Ene Krinpus, chief human resources officer at Magnetic Group, stresses that the lack of aviation professionals “is not a recent issue and has hindered the MRO sector for decades”. She notes that despite a need for “at least 600,000 new mechanics worldwide over the next decade”, technical trades are becoming less and less popular among younger generations.

Krinpus adds: “Subjects such as maths and physics are disappearing from high school curriculums, causing fewer people to choose engineering as a career path. The few choosing

it might not choose aviation, making the industry an underdog. Although many find aviation fascinating and awe-inspiring, it requires a lot of discipline, time, learning and an ‘innovation-forward’ approach.”

She continues: “Considering that there are more and more aircraft and components that need to be maintained but fewer professionals, the upcoming few years are likely to be exceptionally complicated workforce-wise. The only way for companies to tackle it is to put effort into popularising aviation as an industry and as a trade. Offer as much as possible in internships and apprenticeships and join forces to develop the needed workforce together rather than competing for each employee individually, which doesn’t benefit anyone long-term.”

Phil Seymour is unequivocal on whether personnel numbers will be able to meet the demand. “Simply put – no!” he declares.

Thus, from the comments, it seems that if the overall outlook were a weather forecast, it might predict sunny periods but with occasional downpours. The industry needs to ensure it has its umbrella at the ready. 

◀ Magnetic MRO says the market is reacting to growing demand by building and expanding facilities



MRO

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PREDICTIVE AIRCRAFT MAINTENANCE 2023

COLLABORATION IS KEY

The importance of industry collaboration in shaping the future of aviation technology was a key talking point at *MRO Management's Predictive Aircraft Maintenance (PAM) 2023* conference

Held at London's Ham Yard Hotel, the Predictive Aircraft Maintenance (PAM) 2023 conference brought together over 160 industry professionals from airlines, OEMs, MRO specialists and big data experts to explore how innovative digital predictive solutions are being utilised and what's next for the aviation sector.

Richard Brown, managing director of NAVEO Consultancy, returned as chair for this year's conference.

"I'm excited to hear how stakeholders are grasping the tremendous opportunities to leverage big data analytics to benefit the reliability of their operations," he said, during his opening welcome to delegates. "I'm particularly looking forward to learning from our speakers and panellists about their digital journey, how they overcame challenges and obstacles, what lessons they have learned and what they are striving for next. I'm interested in the reality, not just the theory."

The conference sessions started with a presentation by David Harper, fleet support director, customer and product support operations of GE Aerospace (event gold sponsor). Harper shared the organisation's journey in utilising machine learning to deliver predictive maintenance benefits to global airlines.

David Miret Mora, technical director at AJW Group (event silver sponsor) was next to provide insight on the adoption of predictive maintenance. He shared the results of *MRO Management's* reader survey which found that there is a lot of optimism around predictive aircraft maintenance, but there is a need for more collaboration and an increase in ongoing research before universal adoption can be achieved.

Next to the stage was Jaime Ferrer Perez, digital services marketing manager at Airbus (event silver sponsor), with a presentation to emphasise the evolution of TechOps methods and processes alongside the increasing availability of relevant data for maintenance activities.

He said predictive maintenance can be used to reduce the \$42 billion's worth of inefficiencies in aviation by turning unscheduled maintenance into planned.

He also highlighted that Airbus estimates the sector will need to increase its workforce by 2.2 million, including one million in maintenance for the 45,000 aircraft that will be flying in 20 years.

"Predictive maintenance is part of something bigger," he said. "It's actually, I think, a key step in the transformation of TechOps from a reporting organisation to what it will become in the future."

"Moving towards data-driven TechOps will allow operations to be fully driven based on the airline's objectives and not maintenance requirements and other constraints."

"For that we need tools and data to accurately know the condition of the aircraft and to know what's going to happen, to simulate events. We need to deploy the right analytics to make the right decisions."

The day continued with a panel discussion moderated by Richard Brown



1. ABN's Lee Hayhurst welcomes delegates
2. David Harper from GE Aerospace
3. The PAM 2023 audience
4. The venue was London's Ham Yard Hotel
5. The OEM panel discussion



“I’M EXCITED TO HEAR HOW STAKEHOLDERS ARE LEVERAGING BIG DATA ANALYTICS”



with panellists Crispijn Huijts, digital products and services manager at Air France Industries KLM Engineering & Maintenance, Michael Bitzer, managing director of Rheinland Air Service, and Antony Nardoza, vice president of technical and programmes at OEMServices, to explore the various aspects of predictive maintenance from an MRO perspective.

Next was Boeing's Steve McFeely, managing director of maintenance and MRO solutions – digital aviation solutions, who told the conference audience that data is often described as the 'new oil' due to its importance in modern economies, but according to Boeing it's more like the new sunlight.

"It [data] powers modern economies in the same way that oil powered traditional economies. But we prefer to think of data as the new sunlight; it's sustainable, renewable, and it keeps on generating economic value for ever, and the more you have the more value you can generate.

"What we should really be talking about is how we drive value. We are clearly at an inflection point. Recent advances in machine learning, generative AI and other advances like quantum computing will transform what's possible."

Craig Waters, *MRO Management* editor, was next to moderate a panel discussion to explore predictive maintenance from an OEM perspective. Panellists included Derek Cedillo, director of remote monitoring and technical operations at GE Aerospace, Airbus' Jaime Ferrer Perez and Darren Macer, Boeing's senior

technical fellow – predictive maintenance and health management. The panellists discussed many issues including each organisation's digital journey so far, the importance of standards, regulations and improving collaboration, and how to make the most out of predictive maintenance technology.

The editorial director of Aviation Business News (ABN), Lee Hayhurst, moderated the final two panel discussions of the day. The first focused on predictive maintenance from a technology perspective, the second from the standpoint of airlines.

During the first, Jason Cordoba, chief executive of CordobaQ, David Marty, head of digital sales and marketing at Airbus, and Peter Knight, principal analytics engineer at GE Aerospace explored advances of software, modelling and analytics in predictive maintenance, and discussed the latest trends in how software can be used to collect, interpret and analyse data.

"WE PRIDE OURSELVES ON WORKING COLLABORATIVELY WITH OTHER STAKEHOLDERS TO GATHER DATA AND MAKE SURE IT IS ACCURATE"

The airline perspective panel included Amanda Bock, senior analytics engineer – propulsion engineering at Delta Air Lines, Matias Bjerregaard, predictive maintenance specialist at Scandinavian Airlines, and Craig Lynch, predictive maintenance specialist at easyJet. The panellists discussed how their airlines are navigating challenges in adopting innovation but also the opportunities that predictive maintenance gives them for better visibility of their fleets.

Bjerregaard said: "We are very much still on our journey with predictive maintenance; it is important for us to learn how to effectively use all available resources in the most clever way. But we also understand that we can't move forward without changing how we do things."

A special networking evening of bowling and karaoke marked the end of a successful first day.

Day two kicked off with Lee Carey, vice president of asset management



2



3

1. Bowling during the networking evening
2. The airline panel discussion
3. Delegates during a coffee networking break
4. EirTrade Aviation's Christen Grant

“WE NEED TO DEPLOY THE RIGHT ANALYTICS TO MAKE THE RIGHT DECISIONS”

of EirTrade Aviation (event platinum sponsor), delivering a presentation exploring the role of predictive maintenance in the aircraft end-of-life and disassembly process. Carey highlighted that in an industry constantly under environmental scrutiny, it is imperative that innovative solutions and sustainable options are explored throughout the disassembling process of an aircraft.

To follow was a panel discussion moderated by Richard Brown to delve into the environmental, social and governance benefits of predictive maintenance throughout an aircraft's life cycle. Panellists included Gohar Abbasi, vice president of asset solutions and P2F at Avolon, Karl Davies, EMEA sales director at CFM Materials, and

Christen Grant, marketing and business development manager at EirTrade Aviation, to discuss how the industry can – through the application of predictive technologies and data analytics – take a more joined-up approach to maintenance and repair from the first day of operation to the point where the aircraft is decommissioned and enters the afterlife.

Talking about the power of data, Grant said: “Data is at the forefront of what we're doing. We have a robust internal system which is reliant on us gathering data externally. We pride ourselves on working collaboratively with other stakeholders to gather data and make sure it is accurate.”

Guillaume Limouzy, airline sales director for EMEA at StandardAero (event silver sponsor) was next with an insight into the organisation's approach that combines predictive maintenance methodologies with artificial intelligence, revolutionising maintenance paradigms for legacy engines. The presentation uncovered how StandardAero leverages AI-driven solutions to augment routine operations, elevating dispatch reliability and bringing about substantial reductions in costs.

Next up was Wouter Vreeburg, predictive maintenance engineer at KLM Engineering & Maintenance

(event bronze sponsor) who shared the challenges and successes in adopting new prognostics into airline operations, and that ultimately, more data will help them deliver more benefits.

A panel discussion on predictive maintenance from a regulatory perspective followed, moderated by ABN's Lee Hayhurst with Jason Dickstein, president of Washington Aviation Group, Lucy England, commercial and regulatory aviation lawyer at Fox Williams, Kate Staples, director of governance and legal services at the Care Quality Commission, and Mike Rhead, associate general counsel at ZeroAvia. The panel discussed topics including data ownership, and the role of regulators in encouraging the future use of predictive tech and how collaboration will be key.

The penultimate presentation came from Dr Ip-Shing Fan, senior lecturer in enterprise systems at Cranfield University who said that the uptake and impact of predictive maintenance depends on the analytical maturity of aviation businesses, and that access to data is a common hurdle. Dr Fan explained how Cranfield University has developed a three-stage model evaluating the business benefits achievable according to levels of access to data and integration with operation.

The conference concluded with an insightful presentation by Daniel Williams, chief technology officer for aviation at Microsoft UK, to highlight the importance of technology and artificial intelligence in future predictive aircraft maintenance and why it's such an important topic for Microsoft.

A big thank you to all delegates, speakers, sponsors and exhibitors for making PAM 2023 such a fantastic event. Predictive Aircraft Maintenance will be back for 2024 – look out for more information soon. 



4



MRO MERGERS ON THE RISE

Scaling up in the aviation MRO sector is considered a pathway to growth. **Kevin Rozario** looks at some recent acquisitions and the reasons for them



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MRO CONSOLIDATION

◀ Global MRO spend will grow 2.2 per cent annually over the next decade (according to Alton Aviation Consultancy)

MRO companies in a post-pandemic environment see scaling up to offer more services through a single entity as a good thing as they seek to tighten up partnerships with OEMs (see p.50 in the October 2023 issue of *MRO Management*). After supply-chain failures, staff shortages and negative stories about fake engine parts dogging the MRO sector, moves towards a broader service base have been taking place.

The biggest was Heico closing its deal to buy Wencor Group – a commercial and military aircraft aftermarket player – for around \$2 billion in August. The acquisition was described by Heico's chief executive Laurans A Mendelson as “transformative, providing a unique and growing portfolio of proprietary cost-saving solutions for our airline and OEM customers”. The deal didn't do much for Heico's share price which has dropped from \$176 when it was announced to \$161 at the beginning of November.

Companies often claim that, through basic M&A synergies, 2+2=5, thanks to the stripping out of OPEX costs, duplicated headcounts and other savings. The combined business can also be more responsive to its OEMs with the right bolt-on. But there can be pitfalls lurking in the shadows.

Another recent post-pandemic integration to broaden services was Ametek MRO consolidating Miami-based Avtech with Muirhead Avionics in a facility close to London Heathrow Airport. The aim is to create what the company calls a “top-tier European facility”. David Bentley, divisional vice president and business unit manager at Ametek MRO said the move “capitalises on the core competencies we have... and provides further impetus for growth”.

How will it do that? By consolidating the two operations and all customer support services in a new, high-tech facility at a global hub like Heathrow, the company expects to increase the repair capabilities and expertise offered by Avtech, cut costs and generate other gains for customers.

Bentley said: “The majority of Avtech's customers are based in Europe so we can deliver a more local service with faster turnaround times for both commercial and military applications. The relocation not only makes logistical and commercial sense but enables us to merge the skills of both specialist avionics MRO teams.”

Between them, Muirhead Avionics and Avtech have multiple approvals from large OEMs to repair their components. Pooling these accreditations makes sense to widen the joint MRO offer. Ametek also has ambitions to expand its capabilities and is investing in ATEC software and test equipment to target future repair releases from OEMs for new aircraft types.

The joint programme will focus on developing navigational, radio and display repairs utilising the ATEC test platform. It will also develop further capability for ADIRUs, flight deck displays and radio altimeters on next-gen aircraft.

Relocating a business, and team, from Miami to London will, however, not be for everyone, but the parent company is banking on the joint proposition creating a new avionics centre of competence that will see strong demand.

Theory and practice

The benefits of M&As are often easy to express on paper, but more problematic to put into place in practical terms – even for the small ones. Unifying IT systems, processes and work cultures can be highly complex – and may never be fully achievable.

At Vervon which bought aviation maintenance management software player Rusada in October, the company does not shy away from the complexities. Bill Thompson, enterprise account executive at Vervon, told *MRO Management*: “Acquisitions can provide the customer with familiarity: (seeing) brand ‘x’ on the hangar at their nearest airport and knowing they can get service where needed.

“On the other hand, the challenges of shop efficiencies, quality control, resource and compliance management and local technical proficiencies all have unique variables to be included when



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4

“M&As can also negatively impact competition and pricing in what is already a well consolidated industry”

‘remodelling’ a new location to conform to the parent company’s way of conducting business. This requires a thoughtful approach towards forward-thinking, long-term objectives.”

In the case of the Rusada acquisition, those objectives have been well defined. Vervon believes that Rusada’s aviation maintenance management software and track record are complementary to its own software solutions which support 25 per cent of the worldwide commercial fleet, and over 100 OEMs. Chief executive Norman Happ said: “The combined power of our teams, the expanded range of products and our robust customer base will enable Vervon to serve aviation operators of all sizes around the world.”

Areas of focus for the combined entity will be asset management, maintenance planning, supply chain optimisation, compliance monitoring and data analytics.



1

Higher margins: a path to profit

Another acquisition announced in Q1 2023 was that of independent provider of aircraft MRO and fleet management software Trax USA Corp. It was bought by aviation services company AAR Corp for \$120 million (plus up to a \$20 million earn-out payment). The announcement alone spiked AAR’s share price to \$55.26; by early November it was trading at \$62.

Investors were convinced by the strategic imperative to buy the 110-employee, Miami-based MRO. The aim was simple: to offer digital solutions focused on aviation aftermarket customers. In a statement AAR, with \$2 billion in consolidated sales in FY2023, said: “Trax adds established, higher-margin aviation aftermarket software offerings with recurring revenue to AAR’s portfolio, and its complementary customer base provides opportunities to cross-sell products and services.”

Trax’s solutions include a web-based eMRO software solution for managing aircraft maintenance and fleet management, including materials planning and purchasing, engineering, scheduling, regulatory compliance, work orders and personnel. It also has eMobility products offering mobile applications such as task cards, digital manuals, electronic logbooks, fleet status and warehouse management.

AAR has also launched a paperless hangar initiative and will be supporting the business “by investing in its platforms

and by leveraging our global relationships to help Trax reach additional customers”, according to AAR’s chief executive John M Holmes. He added: “We believe that over time this combination will allow more customers to better access AAR’s parts and services offerings.”

Mergers can clearly have benefits – and on both sides – especially when talking about the consolidation of smaller repair stations into larger, more established MROs. Vervon’s Thompson said: “An established industry name buying smaller repair centres can increase the company’s profile, footprint and sphere of influence. It provides a growth path that facilitates the expansion of Tier 1 or Tier 2 MROs and, as a side effect, elevates the absorbed entity into a tier it would not have been able to reach on its own. Great examples are the expansion of companies like Duncan Aviation, Standard Aero, West Star, Jet East and other MROs of this calibre.”

1. John M Holmes, chief executive, AAR

2. Demand for aircraft parts and maintenance is estimated to top \$100 billion by 2025 (ICF, Aviation Week, Naveo analysis) 3. MRO was one of just four segments (out of 11) whose return on invested capital (ROIC) improved between 2019 and 2022 (according to McKinsey) 4. Heico chief executive, Laurans A Mendelson

However, M&As can also negatively impact competition and pricing in what is already a well consolidated industry. There are also cases and times when being able to call on a smaller, independent MRO has its benefits. In the current period of long TATs and in-shop queues at some bigger workshops, the option to go to a specialist player may have an advantage, assuming it has the ability to source the parts required.

With older aircraft, too, there is also a worry over IP management. Thompson said: "A large percentage of legacy (pre-2000) aircraft still in service continue to operate with originally equipped systems. These were developed by organisations that have been absorbed by other companies or OEM solutions that are no longer available and, for one reason or another, the data has been lost to the sands of time."

Bright outlook and more mergers

According to an annual review of the aviation value chain published in October, management consultancy McKinsey

"Companies that managed to survive the pandemic in reasonable financial shape have a good opportunity to snap up those that might be weaker or struggling"

assessed that MRO was one of just four segments (out of 11) whose return on invested capital (ROIC) had improved between 2019 and 2022, but only just at 0.9 per cent. The others were fuel producers, manufacturers and freight forwarders, the latter with a whopping 16.6 per cent rise.

The global MRO market is also set for growth, with spend this year expected to return to pre-pandemic levels, while demand for aircraft parts and maintenance is estimated to top \$100 billion by 2025, growing at a CAGR of 6.6 per cent (source: ICF, Aviation Week, Naveo analysis).

A longer outlook from Alton Aviation Consultancy suggests that global MRO spend will grow 2.2 per cent annually over the next decade, from \$112 billion to \$138 billion, in response to faster

than expected traffic recovery and fewer retirements.

This uplift means that M&As, and integrations overall, seem destined to continue. Companies that managed to survive the pandemic in reasonable financial shape have a good opportunity to snap up those that might be weaker or struggling as has been seen in the past 18 months.

An analysis from Capstone (based on company releases and financial data from Capital IQ) shows that within North American aviation, the support services and MRO sector saw steadily rising M&A activity until 2019 followed by a sharp drop. However, it picked up again in 2021 and was stable last year compared to some other aviation sectors, so prepare for further dealmaking as conditions improve. 

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SUPERCHARGING AUSTRALIAN ENGINEERING TRAINING

Every day, Qantas' team of aircraft engineers enhances the airline's safety reputation. Now, the organisation is actively seeking the next generation of talent through its Qantas Group Engineering Academy

With a legacy of more than a century of engineering excellence and a sterling reputation for safety, Qantas is stepping up to meet the growing demand for highly skilled aircraft maintenance engineers. In 2023 alone, the airline giant is set to deliver approximately two million hours of training. This initiative is a testament to Qantas' commitment to shaping the future of aviation in Australia and the broader industry.

Building a robust pipeline of engineers

With the aviation sector's ever-increasing need for engineering talent, the Qantas Group recognised that a strategic approach was essential to meet their growing demands. Over the next decade, the group anticipates the requirement for hundreds of new engineering recruits annually, not only to support its

growth but also to address attrition as experienced engineers retire. To fulfil this need, the Qantas Group Engineering Academy was conceived, aimed at building a robust pipeline of engineers within Australia and nurturing the next generation of engineering talent.

Hands-on experience

The establishment of the Qantas Group Engineering Academy is part of the company's substantial investment in recruitment and training. This far-reaching plan is set to create 8,500 highly skilled aviation jobs over the next decade. The Academy's objective is not solely to provide engineering talent for the Qantas group but to cater to the broader aviation industry, including defence contractors and general aviation. All trainees at the Academy will be employees of the Qantas Group, a unique feature that ensures they are compensated while learning and gaining hands-on experience.

Strategic locations

The Academy offers trainees the opportunity to choose between studying in either Brisbane or Melbourne, both selected as locations for the Academy. The overwhelming response from aspiring aviation engineers was evident, as more than 1,600 individuals expressed their interest in joining the Academy as of late June 2023. The training facilities are strategically positioned close to airports in Brisbane and Melbourne, where Qantas and Jetstar have

a strong engineering presence. This proximity allows trainees to benefit from a dynamic learning environment that encompasses both classroom instruction and real-world practical experience.

Training structure

From 2025, the Academy, in partnership with training provider Aviation Australia, plans to train up to 300 engineers annually across both sites. The Academy's curriculum will be enriched by Qantas Group and Aviation Australia's combined engineering training expertise. Collaboration with unions and the wider aviation industry is underway to ensure that the training structure aligns with industry standards and expectations.

Diverse talent pool

The Qantas Group has long been an advocate for diversity and equal opportunity within the aviation industry. Just as the Group has championed its pilot academy's efforts to increase the representation of women in aviation, it is now setting its sights on a similar goal for engineering roles. Currently, only around seven per cent of engineers at Qantas are female, but the expression of interest in the Academy demonstrates a significant increase, with approximately 16 per cent of applicants being female. This initiative is poised to expand access to a more diverse pool of talented individuals who are eager to contribute their skills and knowledge to the aviation industry.

When information about the Academy was released earlier this year, Qantas Group chief executive Alan Joyce said in a press release that the Academy meant many more trainees would be able





Qantas 2

“From 2025, the Academy, in partnership with training provider Aviation Australia, plans to train up to 300 engineers annually across both sites”

to access the world-class engineering training programmes the national carrier was known for. “Qantas has a proud history of having some of the best engineers in the world and we want to make sure it stays that way,” he said. “Training is in our DNA. Like our Pilot Academy, this will build our pipeline of talent for both the Qantas Group and Australian aviation more broadly.”

In the same press release, Aviation Australia’s chief executive Bill Horrocks said the Qantas Group Engineering Academy will be a key contributor to the Australian aviation sector helping

to address the engineering skills shortfalls. “Selecting Aviation Australia as Qantas’ training partner for the Academy recognises the important role that we play as the nation’s premier aircraft maintenance engineering training provider,” he explained. “Our training combines job-ready skills and education to translate into employment outcomes. Our training facilities will provide students with the day-to-day experience of a working hangar, as well as supervised training on aircraft, for a seamless transition into operational environments.”

TRAINING & DEVELOPMENT

1. Qantas Boeing 787-9 Dreamliner
2. The group is aiming to significantly increase the representation of women in engineering roles

A bright future

The establishment of the Qantas Group Engineering Academy marks a pivotal moment in the history of aviation in Australia. With its rich legacy and unwavering commitment to excellence, Qantas is taking significant steps to ensure that the future of aviation engineering remains bright. The Academy is set to create opportunities for aspiring engineers to embark on a fulfilling career in aviation. As the Qantas Group invests in training and recruitment, it is not only securing its own future but contributing to the growth and success of the entire aviation industry in Australia. 

For more information about the Qantas Group Engineering Academy, visit qantas.com/engineeringacademy



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TRACK

A man with a beard and safety glasses, wearing a dark blue polo shirt and blue gloves, is working on a complex engine component in a workshop. He is focused on the task, with his hands positioned on the engine. The background shows a typical industrial setting with white tiled walls and various equipment.

AND

TRACE

A strategic area of MRO, spare parts inventory management is characterised by increased lead times and labour shortages. At the same time, efforts are also under way with parts traceability and operational optimisation. *Mario Pierobon* finds out more



SPARE PARTS INVENTORY MANAGEMENT

◀ Embracing technology can drive further operational efficiencies

The current challenges regarding spare parts inventory management have reduced the availability of piece parts and manpower to an unprecedented level, states Bruno Tricoire, senior vice president for components at Air France Industries KLM Engineering & Maintenance (AFI KLM E&M). “We have strong recruitment actions, and manpower is now gradually recovering,” he says. “However, new line replaceable units (LRU) and piece parts deliveries are still critical and affecting all MRO activities, whether performed by OEMs, airlines, or MROs like us. One of the new challenges for several OEMs is the increased competition with other industries inside their own Tier 1 and Tier 2.”

Spare parts lead time

According to Tim Russo, president of STS Component Solutions, inventory availability and increasing manufacturer lead times are indeed at the forefront of challenges related to inventory management. “While there are a number of ways to mitigate these challenges, our group has invested heavily in technology and inventory forecasting tools to leapfrog the status quo and provide value to our customers,” he explains. “While ensuring part availability is always the primary goal, providing resources and options when one does not have a part is also critical. Our team continually looks to provide multiple options to our customers, especially when part availability is scarce.”

Indeed, the past few months and in particular since Covid-19 have seen some dramatic changes in terms of MRO turnaround time, affirms chief executive of DBK Aero Delphine Kennedy. “What we used to see in terms of repairs and overhaul of our components was fairly quick, namely six to ten days for tests, 20 days for repairs and 30 days at most for overhauls,” she says. “Currently, however, we are talking somewhere around 30 days just for bench test, more than 60 days for repairs and significantly more to get back overhauled units.”

The availability of parts is a current challenge that did not exist earlier, points out Didier Granger, president and chief executive of OEMservices. “This is due to shortages of the supply chain combined with a strong demand from the airlines,” he explains. “At the present time, the availability drives the value of the parts, implying a fair market value appreciation for used serviceable materials (USM), reaching sometimes a higher price than a new manufactured part. The level of the technical standard of the parts is also key, since the supply of recent standards procures more reliability and safety to the end-customers.”

While there are exceptions, the current social and political climate with crisis in multiple regions of the globe makes it harder and harder for MROs to get the raw material and finish the USM components, highlights Kennedy. “We have heard from OEMs that they aim to be back to normal to supply the spares needed by mid-2024, but we believe this target is difficult to reach. We cannot pretend to foresee the future, but we do not expect much to change for a good couple of years unfortunately.”



2

“As the industry reaches new levels of growth, it is important to continue to challenge the status quo”

Labour shortage and traceability

There are other constraints impacting the current supply chain, according to Russo. “Pre-Covid, the challenge of labour and employee turnover was less impactful to organisations,” he says. “Post-Covid, there has been a shift within the ranks of most organisations which has created increased turnover, which can lead to less efficient processes and a potential knowledge gap when compared to the pre-Covid work environment.

Organisations that identified this quickly and invested in training and on boarding and created hybrid work environments have been positioned much better over the past few years.”

According to Granger, while the supply of parts remains key, it is also important that it comes with the right technical and traceability standard. “Traceability of parts is becoming more and more important, and a full back to birth traceability is often requested. It is a trend in our activities to ensure and guarantee a full detailed traceability in the years to come. The industry will have to cooperate in this objective,” he says.

Operational efficiency

As the industry reaches new levels of growth, it is important to continue to challenge the status quo, explains Russo. “It is necessary to embrace technology and drive further operational efficiencies, that improve the operations and also make it easier to do business,” he says.

Quality is the first goal in spare parts inventory management together with flight safety, affirms Tricoire. “In addition, we strongly believe that customers can benefit from advanced services to improve their operational performance,”

he says. “One example is the predictive maintenance service that we propose under our Prognos brand, and that can reduce operational disturbances by anticipating components failure before they happen.”

Granger further highlights that, looking to the future, the search for optimisation needs to consist of improved prediction of removals, tracking of the supply chain and interconnectivity of the various players. “IT tools improvements, communication, processes and disruptive approaches such as predictive maintenance and artificial intelligence will drive the works that our sector will require,” he says.

The whole sector – including MROs and OEMs – should focus even more on additional repairs development and develop a regional supply chain approach and the ‘green supply chain’, according to Tricoire. He concludes: “Both are important leverages to reduce costs, improve efficiency and match sustainability commitments.”

1. Traceability of parts is becoming more and more important
2. Quality is the first goal in spare parts inventory management



1

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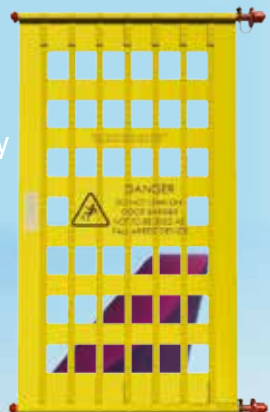


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Derrick Siebert, vice president commercial engine services, Lufthansa Technik



Dimitrios Ladas, director engine maintenance, Air Canada

Give & take

Derrick Siebert and **Dimitrios Ladas** share insights into how they have enhanced their longstanding partnership, which has proven to be instrumental in advancing maintenance practices

we moved to a larger facility to facilitate further growth. Our collaborative efforts have been driven by a shared commitment to pushing the boundaries of engine maintenance, and Air Canada's recognition of our solution-oriented approach and technical expertise has been key to our collective success.

With access to Lufthansa Technik's expertise, can you provide specific examples of how this knowledge transfer has already positively impacted Air Canada's maintenance and engineering practices, leading to improvements or innovations in operations?

Ladas: Lufthansa Technik is a supplier who does not say no to new ideas. They will study the new requests and then start to look at different possibilities to help their customer. Such was the case when we started the MES shop in Montreal. This has allowed Air Canada to have a flexible maintenance programme with shorter turn times and available spare allotment. We started with low pressure turbine swaps between engines, performing top and bottom case repairs and airfoil replacements including high pressure turbine blades. Today, we perform more extensive work scope like full core replacements.

Siebert: I think that our collaboration has marked a positive evolution in maintenance practices. Previously, it was common practice in the industry to operate engines until they had to be extensively overhauled. This resulted in material wear and expensive workshop visits. All of this was also not very

sustainable. Keeping engines on-wing is the best option, repairing them close to where the aircraft is operated is the next.

In response, we introduced our MES, a concept of 'surgical strike' work scopes. This approach emphasises precision and targeted interventions, moving away from extensive overhauls to smaller, more focused tasks. It ensures quicker turnaround times, minimising downtime and reducing unnecessary expenses, helping our customers to reduce their engine maintenance costs by more than 20 per cent. Thus, by adopting a more customer-oriented mindset, we have been tailoring our interventions to the specific needs of Air Canada, fostering a collaborative and adaptive maintenance strategy.



1

MRO Management: Could you provide some background on Lufthansa Technik and Air Canada's relationship regarding the engines overhaul of your fleet?

Dimitrios Ladas: The relationship grew out of the need to have the CFM fleet maintained after the 2012 closure of Aveo's engine shop in Montreal. The relationship started with routine maintenance and then a year later with Mobile Engine Services (MES) work, helping us to be more competitive from a managing engine cost perspective.

Derrick Siebert: Indeed, together we developed and shaped our collaboration. It began with a modest team of five mechanics in a shop-in-shop set-up within Air Canada's hangar. I am grateful that over the years, our services have evolved to become a significant element of Air Canada's engine maintenance philosophy. Adapting to more complex work scopes, we've witnessed a notable rise in the number of events, and in 2019



2

“Our collaborative efforts have been driven by a shared commitment to pushing the boundaries of engine maintenance”

How do these services by Lufthansa Technik enhance Air Canada’s operational reliability and customer service?

Ladas: These services allow Air Canada to have a lighter maintenance programme to save time and money by reducing transportation delays and costs. The MES shop proximity allows our engineers to view the engines and hardware up close and get hands-on experience. In addition, Lufthansa Technik uses the Engine Maintenance Services (EMS) as a support to back-stop and technical requirements including training, tooling and engineering.

How will this benefit the airline, and how does it fit into the broader strategy of both companies?

Ladas: This is a very different type of maintenance philosophy for any airline as

it shifts cost to future, all the while making sure the engine has multiple smaller visits allowing for a more reliable product.

Siebert: This also aligns with Lufthansa Technik’s broader strategy of providing comprehensive, high-quality services to our partners worldwide, contributing to their operational efficiency and cost-effectiveness. This said, we are planning to extend Lufthansa Technik’s MES particularly in North America.

Collaboration often involves challenges and lessons learned. Can you discuss any challenges that have arisen during the partnership so far and how you’ve worked together to overcome them, ultimately strengthening the cooperation?

Siebert: Over the years, we have of course faced challenges; just imagine



3

two strong engineering companies discussing MRO specifications. Our close communication and collaborative problem-solving approach have been key in overcoming these challenges, fostering a stronger relationship with Air Canada. I would even say that this partnership has helped us to communicate in a much more customer-oriented way and to

1, 2 & 3 Lufthansa Technik’s MES shop in Montreal



“Lufthansa Technik aims to evolve alongside Air Canada, anticipating industry trends and ensuring our partnership remains at the forefront of innovation and efficiency”

make our work more transparent to Air Canada and beyond. What do you think, Dimitrios?

Ladas: Like any partnership, this is a long-term relationship which requires give and take. When we experienced an Airworthiness Directive (AD) for the Front Outer Seal Life-Limited Parts (FOS LLP), Lufthansa Technik came to the table to support Air Canada with multiple bays and a quick turn time to make sure we did not ground any planes. In return we may sell our used Life-Limited Parts to Lufthansa Technik to support another customer to make sure the shop reduces bottlenecks.

Looking ahead, what are the key goals and aspirations for the future of this partnership between Lufthansa Technik

and Air Canada, and how do you envision it evolving to meet the changing needs of the aviation industry?

Ladas: Air Canada has a very strong need to have the Lufthansa Technik MES shop capable of adding future services and engine types to support Air Canada and other customers. Newer engine platforms are having some teething pains and Lufthansa Technik would be the right MRO to help our industry. I am looking forward to seeing added capabilities in the years to come.

Siebert: Lufthansa Technik aims to evolve alongside Air Canada, anticipating industry trends and ensuring our partnership remains at the forefront of innovation and efficiency. We want to explore new possibilities in maintenance, especially with the increasing cost

pressures in MRO and the technical challenges our customers face. Working on Pratt & Whitney and GE engine types, our focus is on collaborating to deliver optimal solutions for our customers.

Additionally, we envision being a strategic partner for Air Canada and others in matters of sustainability, for example, in the context of Sustainable Aviation Fuel (SAF) and its implications for MRO services. There is much more to come, and we are really excited about it. 

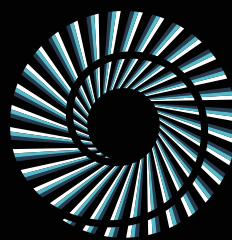
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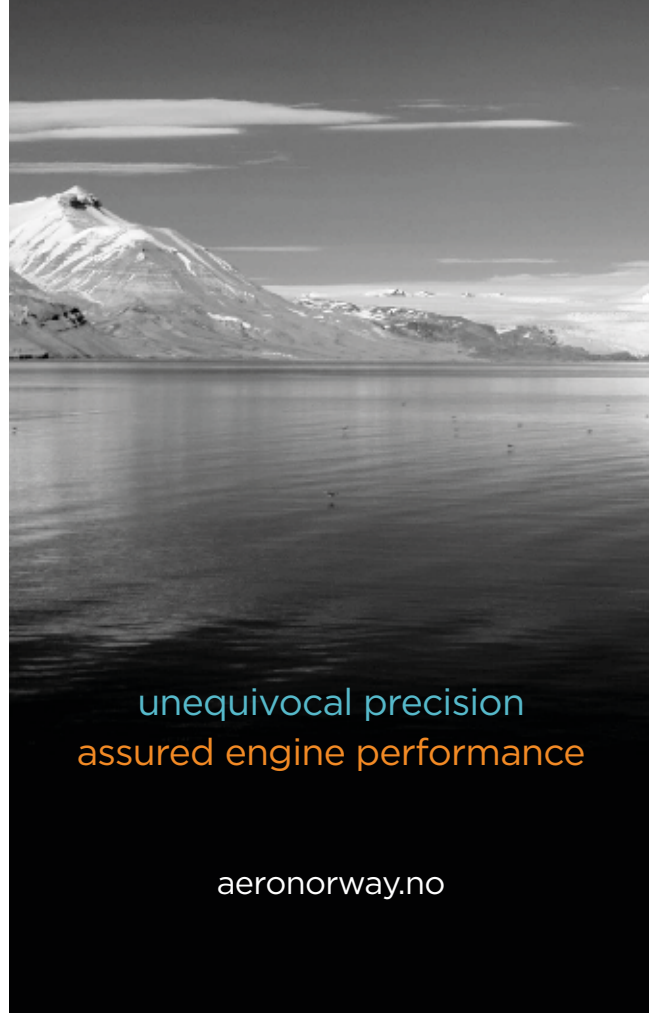
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Toma Matutyte, chief executive, Locatory.com

Shocking revelations

Toma Matutyte considers what the implications of the recent ‘fake parts scandal’ will have on the global MRO industry

The recent so-called ‘fake parts scandal’ involving UK-based parts distributor AOG Technics Ltd has sent ripples of distress and disquiet through the aviation industry as shocking revelations unveiled an extensive aviation fraud, raising serious concerns about safety and the authenticity of components used in the aerospace sector. What’s even more unsettling is that these counterfeit parts have infiltrated not only airlines but also distribution channels and maintenance facilities worldwide, tainting a significant portion of the world’s most frequently used airliner fleet.

AOG Technics now finds itself at the centre of a bewildering deception. This shocking discovery came to light when TAP Air Portugal raised concerns about engine bushings that they had received from AOG Technics. Supposedly brand new, these parts showed significant wear, despite their documentation proclaiming a pristine condition. On 21 June, TAP reported the discrepancy to Safran.

Upon inspection, Safran quickly determined that the paperwork was fraudulent, with discrepancies in the signature and reference along with purchase order numbers on the part. To date (at the time of writing this article),

Safran and GE have unearthed more than 90 other similarly forged certificates. Counterfeit parts have been found on 126 engines, all linked to AOG Technics.

What we all see now is an aviation world that is currently in a frenzy, with airlines and repair facilities scrambling to uncover the truth and rectify the damage caused by such deception.

Different carriers that have discovered counterfeit parts have been advised by regulators to remove them. The scandal has sent shockwaves across the globe, affecting aircraft powered by CFM56 engines, a workhorse of aviation, frequently seen on older-generation Airbus SE A320 and Boeing 737 aircraft.

Such engines presently number over 22,000 units still in operation. The proliferation of the fabricated certificates has reached as far as China and Australia, exposing how global the issue has become. As the CFM56, manufactured by CFM International, has long held the title of the world’s best-selling aircraft engine, the ripple effect of this scandal is undeniable, but what does it signify for the MRO industry?

There are several possible implications, as the aviation MRO sector is poised for increased regulatory scrutiny and stricter compliance measures. As the scandal unfolded, it was widely highlighted that the European Union Aviation Safety Agency has no power

126

Counterfeit parts have been found on 126 engines, all linked to AOG Technics

to investigate AOG Technics because such suppliers are not regulated. In its statement for the media, the FAA said it encourages companies to maintain a system to detect unapproved parts and to review their suppliers.

Maintenance companies and airlines that fall into the jurisdiction of the FAA and are performing the plane repair processes on their own have the legal responsibility to ensure any component installed on an aircraft is an approved, legitimate part. Yet, this whole situation has proved once more that the FAA lacks the resources to ensure its role as a regulating authority.

Moreover, there could also be a quality assurance reassessment as MRO facilities will need to revisit their procedures and quality control principles. This then leads to the issue

“The industry’s ability to respond effectively will determine its resilience and continued trustworthiness in the eyes of airlines and passengers”



Adobe Stock

2

“The AOG Technics scandal serves as another reminder of the critical role that MRO companies play in maintaining the safety and reliability of the aviation industry”

of security of supply chains as MRO companies will need to collaborate with trusted suppliers and enhance supply chain transparency to prevent counterfeit parts from infiltrating the system.

Also, don't forget that reputation is everything in the MRO industry. Companies may need to rebuild or reinforce their reputation, demonstrating their commitment to safety, quality and compliance. Yet, those market players that adapt swiftly and demonstrate their commitment to safety and quality may

find new business opportunities. Airlines and regulators will be seeking reliable partners in the MRO sector who can provide the highest levels of assurance and compliance.

The AOG Technics scandal serves as another reminder of the critical role that MRO companies play in maintaining the safety and reliability of the aviation industry. While these developments present immediate challenges, they also offer opportunities for innovation and growth for MRO companies that

can adapt to the evolving landscape of aviation safety and compliance.

The short-term implication, which is already manifesting itself, and will undoubtedly have further impact on the future of the whole sector, is the growing need for a timely supply of critical parts for the affected airplanes. Airplane parts suppliers and, especially, marketplaces for aerospace parts and supplies, play a crucial role in supporting the MRO sector, airplane operators and the whole aviation industry in an unforeseen situation such as this. The industry's ability to respond effectively will determine its resilience and continued trustworthiness in the eyes of airlines and passengers.

As the aviation industry embarks on this journey of introspection and reform, the MRO sector will stand at the forefront of ensuring that aircraft continue to fly safely and reliably. The implications of the AOG Technics scandal may have the scope big enough to reshape the MRO industry, with an enduring commitment to safety and mutual trust among the business partners within the sector. 



Adrien Daste/Safran

1

1. The CFM56 has long held the title of the world's best-selling aircraft engine

2. TAP Air Portugal was the first to raise the alarm about AOG Technics parts



Johan Vlastuin
chief executive, AELS

MAKING A DIFFERENCE THROUGH AIRCRAFT CIRCULARITY

AELS' **Johan Vlastuin** explains that the organisation's main goal is to intensively facilitate circularity in the aircraft industry

We are convinced that we can make a change in the world of aviation by getting as many aircraft parts as possible back into the sector and to support that activity via our contributions to the Aircraft Fleet Recycling Association (AFRA).

We perform the full cycle in-house, from acquiring complete airframes, disassembly and dismantling to selling the components and controlling the remaining material streams. This also guarantees a 100 per cent trace from the parts, a must in our industry. After all,

“We love to make a difference in the circularity of the aviation industry with our own AELS approach”

the main advantage of reusing aircraft components is to lower the impact on the environment and maximise the utilisation of our resources.

AELS is determined to contribute to this – it is our mission and we do it with passionate commitment. Our company core values of ‘Being the Best’, ‘Outside the Box’, ‘Sustainable’ and ‘Smile’ help us to make a real difference for our stakeholders and partners and towards our customers.

Back in 2006, our founder Derk-Jan van Heerden asked himself: “What happens when an aircraft is no longer flying?” This question led to him setting up the company. Since then, AELS has dismantled more than 80 Airbus and Boeing aircraft. The aircraft types, both narrowbody and widebody, such as B777, B737, A320fam, A330 and A340 come from all over the world to be

dismantled at our facility at Twente Airport in The Netherlands.

AELS is the only company in Europe that handles the entire supply chain for aircraft at the end of their financial lifetime, from acquisition, disassembly and dismantling to component management and material recycling. For more than 16 years, AELS has grown in this unique niche and is known as a leading and sustainable player in the aircraft parts aftermarket.

Literally all parts of the aircraft, from cockpit instruments to toilet units, can be reused for years to come. The strong requirement here is that the components are disassembled, inspected and recertified. Our dedicated experienced technicians closely follow the guidelines so that aircraft parts can be safely offered to the market after recertification.

All these steps are taken under full supervision of AELS, an essential part of our approach. Since we focus on traceability, we know exactly which path a component has taken so we have complete confidence in sending them back into the industry. All materials that do not return to operational aircraft, or to alternative reuse, such as for educational use, are being recycled and reused as raw material to produce other products.

This approach has been awarded with an AFRA BMP Diamond Level status. It makes us proud that we meet the requirements of this important AFRA certification. We also hold the ASA-100 accreditation for ensuring the quality that our customers require. This all demonstrates that AELS is committed to achieve the best sustainable aircraft recycling. 



◀ Dismantling of a B777

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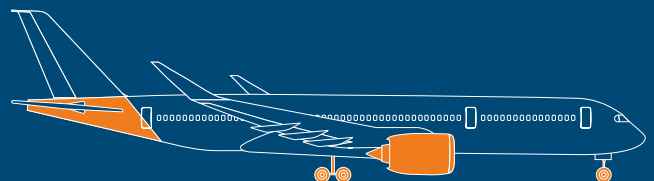


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