

MRO

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Amsterdam reinforces greater need for industry collaborations

October is always a month to look forward to for aircraft operators, maintenance, aftermarket businesses and the trade media when they gather for the annual MRO Europe event. This year the event was back in full force in Amsterdam following the cancellation last year caused by the pandemic.

For those in attendance it seemed enormously gratifying to have face-to-face meetings and connections again after about 18 months of video and telephone communications with clients and customers. For us at AviTrader MRO we are certainly looking forward to getting out and about again to all the key events from next year as markets continue to recover.

A couple of interesting highlights from MRO Europe this year, of particular note is the announcement by Joramco signing a cooperation agreement with UUDS Aero to expand capabilities for cabin refurbishments and B737-800 passenger to cargo conversions. The Jordanian MRO will manage MRO capabilities for the P2F conversions while UUDS will manage the Supplemental Type Certificates (STC) for the aircraft modifications and supply modification. This comes at an opportune moment as we see a major drive towards cargo conversions and the 737-800 being the crown jewel in the market. COVID created the perfect storm for growth in the e-commerce and express delivery market thus driving conversion demand, especially in the narrowbody sector. It will be interesting to see how the conversions market pans out in the next few months and years and the aftermarket work that comes with it.

In this issue you will find more thoughts and analysis from exhibitors attending MRO Europe and the outlook and projections for the region.

Keith Mwanalushi
EDITOR



The aviation MRO industry gathered in Amsterdam for MRO Europe.

Photo: STS Aviation Group

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easyJet renews base maintenance contract with Lufthansa Technik



easyJet A320

Photo: easyJet

Lufthansa Technik AG has renewed a substantial base maintenance contract with easyJet for more than 140 aircraft of the airline's A320 family, which was initially signed back in 2016. This successful cooperation was now extended by another five years. The base maintenance services will be performed at Lufthansa Technik's facilities in Sofia / Bulgaria and additionally in Malta and Budapest / Hungary as required.

Brendan McConnellogue, easyJet Director of Engineering, noted: "We have used Lufthansa Technik Maintenance across a number of their sites over the years and have always found them to be a reliable partner in support of our A320 family maintenance. The renewal of this

contract ensures this working relationship continues and maintains easyJet's high standards of technical reliability."

Marcus Motschenbacher, Vice President & CCO Aircraft Maintenance Services of Lufthansa Technik, commented: "We are honored to extend our partnership with easyJet as one of Europe's leading airlines. The renewal of this contract proves that maintaining high quality of service standards over the term is of strategic importance."

Bamboo Airways strengthens partnership with AFI KLM E&M

Vietnamese carrier Bamboo Airways has entrusted AFI KLM E&M with a support program for its GENx engines, coupled with a first C-Check on its Dreamliners fleet. Both contracts came into effect in early October. A Bamboo Airways Boeing 787 has already undergone a C-Check at AFI KLM E&M's Amsterdam base, followed by the removal of a first GENx engine. The partners' objective is to capitalize on these scheduled maintenance visits to optimize logistics and TATs during engine shop visits.

This is a new mark of confidence in AFI KLM E&M from Bamboo Airways. The MRO has been accompanying the Vietnamese airline since its founding in 2018. At the end of 2020, Bamboo Airways joined the 787 Operators Community

led by AFI KLM E&M and has since benefited from full components support for its fleet, including repairs, logistics, the provision of an advanced stock at its Hanoi base and access to spare parts pools located around the world.

"We are pleased to continue to build on our trust-based relationship with Bamboo Airways," said Ton Dortmans, EVP KLM Engineering & Maintenance. "Over the past months we have worked closely together to address the crisis and implement all necessary adapted solutions. Today, we are more than ever committed to helping Bamboo Airways prepare for the restart of international traffic in the best possible conditions, and to support its strong growth ambitions in terms of fleet expansion and the opening of new routes, especially to Europe".



Bamboo Airways ordered 10 787-9s in 2019

Photo: Boeing

HAECO Composite Structures and GA Innovation China enter into consignment agreement

HAECO Composite Structures (Jinjiang), a member of the HAECO Group specializing in aerostructure repair for nacelles, radomes, and flight control surfaces, with a full complement of rotatable spares, has entered into a consignment agreement with GA Innovation China (GAIC), the first comprehensive aircraft asset management company in the Chinese mainland. The agreement covers reconditioning services including inspection, test, repair, overhaul, and upgrade/modification, as well as marketing, sales, and exchange/loan services. HAECO Composite Services has been providing industry renowned MRO services for more than a decade. GAIC has achieved the highest accreditations and approvals in the industry and is committed to providing top-ranking serviceable parts. HAECO Composite Services welcomes this opportunity to cultivate an alliance of mutual growth with GAIC.

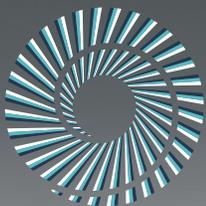
Honeywell and AJW Group announce global sole distribution agreement for B787 new products

AJW Group, an independent aircraft component parts, repair and supply chain solutions provider, and Honeywell, announced a worldwide sole distributor agreement for the global sales of 29 Honeywell standard-fit new products for the Boeing 787 platform.

Under the terms of the agreement, AJW will be the sole aftermarket distributor for all Honeywell new products fitted to the current and future fleet of Boeing 787 aircraft. The agreement will cover Initial Provisioning and on-going purchasing requirements for all operators and integrated service providers worldwide. The list covers parts ranging from Inertial Reference Units to Flight Control Modules and Global Navigation Satellite Systems Antenna to Dual Axis Modal Suppression Accelerometers, applicable to the B787 platform.

The collaboration includes AJW holding distribution inventory at its global facilities to meet the needs of worldwide B787 operators, complementing the extensive inventory of Boeing parts, maintenance, repair and overhaul services that allow AJW to deliver complete support solutions to customers.

Conrad Vandersluis, SVP Strategic Material & Asset Management, AJW Group, comments: "We are proud to announce the additional sole distribution agreement covering the B787 product along with the recent appointment as sole distributor for the latest A320/A330 ADRIU with Honeywell and look forward to a continuation of our long-standing relationship in offering world-class service to B787 operators worldwide."



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Lufthansa Technik and Japan Airlines extend Total Component Support (TCS) agreement



Photo: Japan Airlines Boeing 787

Lufthansa Technik and Japan Airlines have further deepened their trusted partnership by extending a long-term agreement on Total Component Support (TCS) services for Japan Airlines’ Boeing 787 fleet. The five-year TCS contract covers multiple components installed on Japan Airlines’ Boeing 787 fleet of 53 aircraft. The services to be rendered include maintenance, reliability monitoring and reliability enhancement programs, as well as logistic services. Kojiro Yamashita, Senior Vice President of Procurement at Japan Airlines, said, “We have signed a contract with Lufthansa Technik as a partner that shares and respects the value that JAL provides to customers, safe and stable operation. At the same time, JAL respects for Lufthansa Technik’s commitment to further advanced and high-quality maintenance. JAL is convinced that this contract will keep our strong partnership in future.”

EngineStands24 launches the new virtual platform

EngineStands24, a brand of Magnetic Group, has launched the new virtual aircraft engines stands lease platform which allows to shorten the engine stand lease process and gives the opportunity to clients to search, reserve and lease engine stands as well as to secure its delivery in just a few clicks.



Photo: EngineStands24

The newly launched platform aims to provide customers with a seamless engine stands lease process, with the ability to

reserve engine stands for the future lease virtually with options to choose from available stands from various locations, also providing real-time data about the availability around various EngineStands24 hubs around the globe. The new website also has new functionalities for customers who signed General Terms Agreement with the company, providing a simplified booking process. These modifications to the e-platform were created after the market research which pinpointed the most sought of solutions from the customers.

“We aimed to educate the industry about the importance of the well managed engine stands pool and also to provide the innovative, time and cost-saving solutions for those in need to lease engine stands – and the updated e-platform in the world which is getting more and more digital was a natural strategic step,” said Daiva Zemaite, Head of EngineStands24.

Since the pandemic, the company has experienced the growth in business as due to the global lockdowns and aircraft being grounded around the globe, the need for engine stands spiked. Responding to the increased demand, EngineStands24 has also updated their stand pool with stands for both narrow-and widebody aircraft engines. In addition, the company has equipped its stands tracking system, allowing customers to track stand movement in real-time.

Joramco signs MoU with UUDS AERO



Joramco has signed a cooperation agreement with UUDS at MRO Europe
Photo: Joramco

Joramco, the Amman-based maintenance, repair, and overhaul (MRO) provider and the engineering arm of Dubai Aerospace Enterprise (DAE), has signed a cooperation agreement with UUDS to expand capabilities for cabin refurbishments and B737-800 passenger to cargo conversions. Joramco is to manage MRO capabilities for the P2F conversions while UUDS will manage the Supplemental Type Certificates (STC) for the aircraft modifications and supply modification KITS.

CEO of Joramco, Fraser Currie, said, “We are excited about the potential of our agreement with UUDS. In order to satisfy our customers and market needs in a sustainable and efficient manner, we are developing our capabilities and drawing on UUDS’ know-how in the field of cabin refurbishment and B737-800 P2F certifications. The agreement acknowledges Joramco’s large scope of MRO certifications, and world-class technical abilities.”

VSE Aviation announces successful launch and implementation of existing 15-year distribution agreement with Pratt & Whitney Canada

VSE Aviation, a wholly owned subsidiary of VSE Corporation, has announced the successful launch and the implementation of an existing, 15-year distribution agreement with Pratt & Whitney Canada (P&WC). Under the terms of the agreement, VSE will provide new engine line maintenance spare parts and engine accessory exchange support to P&WC engine operators, customers, and maintenance providers located throughout the United States. This program accelerates access to spare part support for aircraft operators and service providers by positioning products in-region for P&WC's broad customer base. VSE currently distributes both line maintenance parts and engine accessory exchanges from three U.S. locations: Miami, Florida; Phoenix, Arizona, and Independence, Kansas. Under the terms of the agreement, VSE will be a distributor for more than 6,000 flight-critical components used in more than 100 business and general aviation (B&GA) and regional aviation engine platforms. VSE will support customers with both new engine line maintenance spare parts and engine accessory exchange. VSE expects to service more than 5,000 U.S.-based aircraft with on-demand, flight-critical components on a 24/7 basis to support scheduled line maintenance and AOG (aircraft on-ground) events.

Vallair adds widebody maintenance at Châteauroux

Vallair will be extending its full maintenance capabilities with the addition of a state-of-the-art hangar at Marcel Dassault Airport in Châteauroux, France. Available from Q1 2022, the facility will be dedicated to the support of widebody Airbus and Boeing aircraft and accommodate up to five A321 size aircraft simultaneously, or a combination of A330/A340 and A321s. This unique, A380 capable, 8,500m² facility has already begun to positively impact on employment with the creation of nearly 200 jobs over the coming years which will be divided between Vallair employees and subcontractors. "This is a natural expansion for us," says Malcolm Chandler, Head of Commercial & Marketing at Vallair. "Our initial focus will be the Airbus A330 maintenance capabilities with a view to adding A340/A350, and possibly B777, at a later stage. Vallair will then be able to offer the full range of maintenance capabilities including NDT, lease transitions, LOPA change and cabin refurbishment, which will be offered alongside our current aerostructure services. Our existing composite facility in Châteauroux already offers repairs for critical parts such as nacelles, fan cowls, thrust reversers and flying control surfaces enabling our customers to benefit from cost effective solutions with quick turn-around-times.



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ELMS aviation signs MoU with LorEau Aviation

ELMS Aviation and sister company Complete Aircraft Group have signed a wide-ranging MoU with newly established MRO consultancy LorEau Aviation Group, based out of Dubai World Central Airport, UAE, on the opening day of MRO Europe in Amsterdam.

ELMS Aviation, a leading aviation personnel cloud-based compliance and competence management solution, was selected as a key contributor to LorEau Aviation Group's future MRO capabilities, which are currently focusing on Non-Destructive Testing (NDT) work; wheels, brakes, batteries, and line station support.

GKN Aerospace to lead development of Electric Fan Thruster for electric aircraft

Under the project, which spans over 1.5 years, GKN Aerospace and KTH (the Swedish Royal Institute of Technology) will together develop fan technology for smaller regional aircraft. The project will study aerodynamic design, performance, noise, and manufacturing technology for a nested fan powered by electricity, either from batteries, hydrogen fuel cells, or even more conventional hybrid propulsion solutions. The proposed propulsion solution with a nested fan instead of a conventional propeller offers significant advantages in three main areas: safety, noise level, and engine installation. By rapidly demonstrating fan technology for electric aviation, the EleFanT project will accelerate the pace of electric aviation development and position the participants for international aero-engine and aircraft development projects. Europe's aviation industry has set clear targets and adopted an ambitious roadmap to achieve net zero emissions by 2050. Parallel development of different types of propulsion solutions for aircraft engines is one of the important steps to take. GKN Aerospace in Trollhättan, Sweden with its leading innovative aero-engine solutions and KTH with its wealth of experience in technology development can make a vital contribution to this technology step.



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Safran launches Landing Life™, single brand grouping all landing and braking system support services

Safran Landing Systems is launching Landing Life™, a single brand designed to promote and clarify its full range of customer support services for landing gears, wheels, brakes, and associated systems. All these services have been grouped in a user-friendly customer portal. Addressing operators, maintenance centers, and leasing companies, Landing Life™ was designed around three main objectives: keep planes flying, reduce the total cost of ownership, and foster the sharing of expertise – all to maximize the user experience and customer satisfaction. Using the intuitive Landing Life™ portal, customers can immediately identify the appropriate solution for their needs, request emergency assistance in AOG (Aircraft on Ground) situations, search for information by product or aircraft type, consult technical publications, make online reservations for training sessions, and contact Safran's experts. Landing Life™

also offers new digital services that facilitate access to the company's experts, such as "Expert Link", a video assistance application that allows the customer's technicians, using a tablet or even just a smartphone, to consult Safran Landing Systems' support teams on any issues they may have. Whether out on the tarmac or in the shop, all communications are via a secure link. Advanced data analysis services, a key growth factor, allow the company's experts to provide operational recommendations to operators. These recommendations help improve equipment management efficiency, reduce maintenance costs (especially based on predictive maintenance), and avoid flight cancellations. Landing Life™ draws on a vast international network with nearly a dozen MRO (maintenance, repair, and overhaul) centers, operating 24-7 in all main regions around the world, including a guaranteed response time within four hours in AOG situations.

EVA Air selects REVIMA for APS5000 APU MRO

EVA Air and REVIMA entered into a long-term APU MRO agreement, under which REVIMA will provide Power By The Hour (PBTH) support to EVA Air's B787 APU fleet, services include APU and LRU repairs, Health Monitoring and Spare APU & LRU support solutions. Olivier Legrand, Revima Group President & CEO, commented: "We are extremely proud to have reached an agreement with EVA Air, a company with very high standards of quality and service. This long-term agreement is very comprehensive and includes the use of our technologically advanced predictive maintenance platform, with real time monitoring of APU parameters, for best-in-class APU availability and reliability. The agreement follows closely our selection for multi year A321 and A330 family landing gear programs. We've enjoyed a long and successful relationship with EVA Air on B747 and B777 landing gear programs. APS5000 APU repairs will be completed from our state-of-the-art APU facility in Normandy, France while A321 landing gear overhauls will be performed from our brand-new facility in Chonburi, Thailand." Stanley Huang, EVA Air Executive Vice President commented: "We are very grateful to REVIMA for providing a comprehensive long-term contract which covers maintenance, technical support, APU monitoring and training for the APU of EVA 787 fleet. This agreement can continuously optimize the reliability of our APU. We appreciate REVIMA's high-quality service on landing gear programs and look forward to further strengthening our cooperation in the future.."

IAI to convert A330-300 aircraft from passenger to freighter for Avolon

Israel Aerospace Industries (IAI) will convert an Airbus A330-300 aircraft from passenger to freighter configuration for aircraft lessor Avolon. As part of the agreement with Avolon, IAI will convert 30 Airbus A330-300 jets from passenger to cargo configuration between 2025 and 2028. The signing of the agreement with Avolon, the first customer for cargo conversions of this aircraft model, follows the backdrop of high profits in 2021 and the projected doubling of cargo aircraft traffic in the next 20 years due to increased e-commerce. Avolon has a fleet of 837 aircraft (as of June 2021) and in addition to being the first customer for cargo conversions for this aircraft, Avolon will fully take part in the aircraft conversion and licensing process. The A330-300 aircraft, which will be converted at IAI, will provide a competitive and advanced solution for cargo and commerce companies looking to expand and improve their wide-body cargo jet fleet. The converted model will increase cargo volume capacity with up to 27 main deck pallet positions and will improve the cargo loading capacity due to the unique cargo door placement and will support and enhance the operations surrounding cargo jet flights.

StandardAero extends multi-year engine contract to service Binter's fleet of ATR 72 turboprops

StandardAero has been selected by Gran Canaria-based regional airline Binter to provide maintenance, repair and overhaul (MRO) services for the Pratt & Whitney Canada PW127F and PW127M engines which power the airline's fleet of ATR 72 turboprop aircraft. Under the multi-year agreement, StandardAero will provide Binter with PW127F/M MRO services from its OEM-authorized PW100 Designated Overhaul Facility (DOF) in Gonesse, France. This exclusive multi-year contract extends a long-running relationship between the two companies, StandardAero having supported Binter from its DOF locations in France and Canada. The agreement also extends StandardAero's position as an engine MRO provider of choice for operators in Spain.

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Shifting trends create new **opportunities** for line maintenance in Africa



Direct Maintenance offers full technical line maintenance handling for China Southern's A330s in Nairobi.
All photos: Direct Maintenance

Direct Maintenance recently expanded its line maintenance services in Kenya and **Keith Mwanalushi** speaks to Victoria Goodenough, Business Development Manager about business continuity and opportunities in Africa.

In August, Direct Maintenance, a certified line maintenance service provider announced that they were expanding and taking over full technical handling for China Southern Airlines' line maintenance services in Nairobi, Kenya.

Since 2015 Direct Maintenance has provided line maintenance technical support and related planning services for A330 operations on the Changsha-Nairobi route for the Chinese carrier. "We have worked with China Southern since 2015 and in the past only provided on call technical assistance," explains Victoria Goodenough, Business Development Manager at Direct Maintenance. This is the first time a Chinese aircraft had been fully handled by an

authorised third-party line maintenance provider in Africa.

Due to the changing operational requirements for operators due to the COVID-19 pandemic and the desire to find a local solution, Goodenough certainly feels it is a fantastic opportunity to build on this existing relationship to provide extra support. "Our Nairobi station opened in 2012, so as an established station we were able to support them quickly and professionally and now we are happy to offer full technical line maintenance handling for China Southern's A330s at NBO including certified release prior to next flight. Our staff in Nairobi now have a direct communication with their China

Southern counterparts and are working more closely together than ever before. This is a relationship we look forward to building upon in the future."

As with other locations, the pandemic hit airline operations hard in Kenya, but business continuity strategies were paramount at Direct Maintenance – "When the pandemic hit the first priority was without a doubt the wellbeing of our staff; how to keep them safe and how we could help them manage this difficult situation from a health and personal perspective," Goodenough says. She explains that this included implementation of safe working practices and contingency plans to cope with unexpected changes. In addition to

NEWS ANALYSIS

this, Direct Maintenance like others had to adapt to customers' changing schedules and demands to offer a safe service.

"We did see a catastrophic drop in demand in some locations, especially in Africa," Goodenough recalls. "However, unlike Europe there was no furlough programmes or government support for businesses and to ensure that employees could be kept on when demand shrank." So Direct Maintenance took it upon itself to focus on ways to retain as many jobs as possible and this also meant some extreme and swift cost cutting exercises across the company and re-examining all parts of the business in detail.

"In Africa, it might have been easy to close these stations as work dried up, but the value of the skilled people we have in Africa was a great asset which we did not want to lose. We also wanted to ensure we were poised for the recovery meaning closure was not an option. We are proud that nearly all our employees remained with us to this day. We were extremely fortunate also that in our African stations including Kenya we had no breakouts of the virus, and we were able to maintain suitable levels of operations to meet the customer's needs," Goodenough states.

Direct Maintenance were also quick to shift focus from their traditional passenger carrying operators to supporting the increased demand for freighter operations

“In Africa, it might have been easy to close these stations as work dried up, but the value of the skilled people we have in Africa was a great asset which we did not want to lose.”

*Victoria Goodenough,
Direct Maintenance*

and new aircraft types being deployed on different routes. "We took the opportunity to use the lay time of our people to increase their training to better serve operators coming out of the pandemic – future proofing the business and expanding our scope across as many stations as possible. This investment also added to the retention of our people through the course of the pandemic and ensured an organisation ready to react in time for recovery to a new set of customer needs."

In terms of prospects for line maintenance operations at other African locations, Goodenough sees ongoing presence on the continent as critically important to operations and part of the Direct Maintenance DNA with loyal customers and strong relationships between local employees and the operators they serve. "We actively look to strengthen



Victoria Goodenough, Business Development Manager at Direct Maintenance.

our presence in Africa, with ongoing research into new stations, products and new customers. This is evident in the training we have conducted over the past 18 months which allows us to serve more operators with different fleets including the newest aircraft types. We are excited for the future development plans for Direct Maintenance across our entire network, and especially in Africa."

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- E190
- E195



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- A320 Family
- A320neo
- A330
- A340-200/300



Heston MRO expands services from down under

Heston MRO will handle all incoming and departing SIA passenger flights and a cargo service to Melbourne.
Photo: Heston MRO

Heston MRO has extended its service agreement with Singapore Airlines in Australia. Chief Executive Asta Zirlyte explains to **Keith Mwanalushi** about the full scope of services and the unique geographical opportunities.

Australian-based independent MRO provider Heston MRO and Singapore Airlines have extended their MRO partnership for another three years. Announced in September, and under the newly extended agreements, Heston MRO will handle all incoming and departing SIA passenger flights in Melbourne, Brisbane, and Perth, in Australia utilising Boeing 777, 787, A350 and A380 aircraft. The handling agreements also cover SIA's Boeing 747 freighter flights to Melbourne.

"The renewal of the agreement is the result of continuous cooperation and partnership between Heston MRO and Singapore Airlines that has lasted for more than a decade and it has been extended for Brisbane, Melbourne and Perth for an additional period of three

years," Asta Zirlyte, CEO at Heston MRO confirms to AviTrader MRO.

Zirlyte explains that the scope of services requested by Singapore Airlines are technical assistance with full license certification and aircraft release. In addition to the line maintenance services, Heston MRO will provide spare parts storage at each port and ground service equipment such as the air start unit, ground power unit, hi-lift platform, brake cooling generator and so on.

"Singapore Airlines is a premium class airline with high expectations and requirements from its partners worldwide, with clear and unquestionable service levels, in addition they have very high standards and requirements for handling their fleet – all of Heston MRO must be properly trained, inducted through the

various quality, regulatory and health and safety requirements," Zirlyte highlights.

She also states that Heston MRO is the largest independent MRO organisation in the region. Its Total Technical Care services are offered to airlines, leasing companies, and OEMs in the Australasian and Southwest Pacific region. "We provide a full range of scheduled and unscheduled line maintenance, engine on wing services, AOG recovery, consumables and components support services, Part 147 technical training, technical supervision and consultations."

Australia, like other far-reaching markets are traditionally challenged by their geographical location but Zirlyte stresses that each challenge creates business opportunities – "this is Heston MRO's approach to the geographical

“We also find demand for other services like technical training, and modifications, which we are introducing organically as part of Heston MRO growth journey.”

Asta Zirlyte, Heston MRO

location of Australia... the distance creates unique business formulas for MRO services in our region.”

Zirlyte observes that the Australian market has gone through an offshoring bonanza for heavy maintenance, some of which should have stayed inside the country. She says some specific checks and modification work should stay in the country considering the cost of ferry flights. In the components market, she says it is about logistics versus in-country stock. “Any stock availability inside the country cuts those AOG times and is a crucial part of any component solution.

“We also find demand for other services like technical training, and modifications, which we are introducing

The handling agreements also cover SIA's Boeing 747 freighter flights to Melbourne.
Photo: Melbourne Airport



organically as part of Heston MRO growth journey.”

Heston MRO is positioning itself to play an active role in the upcoming market recovery. “For the last twelve months the market demand has shown some stability at the very low levels, but we hope for the start of recovery in the next few months,” Zirlyte anticipates.

Since March 2020, Australia has had some of the world's toughest border rules - even putting restrictions on its own citizens from leaving the country, but from November borders will start to reopen and Zirlyte is hopeful that local politics will swiftly facilitate the restart of both domestic and international air travel.



Heston is one of the largest independent MRO organisations in the region
Photo: Heston MRO

SIMPLICITY FOR THE WIN



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USM trends **bolster** cost-effective return to service

Post COVID, there is likely to be even more acceptance for USM components.
Photo: Ascent Aviation



*As airlines begin to pull their aircraft from storage and examine their cost base, **Keith Mwanalushi** finds that used serviceable materials are creating an opportunity to help aircraft operators and MROs reduce costs while maintaining operational efficiency.*

USED SERVICEABLE MATERIALS



The USM market has become more competitive than ever.
Photo: Ascent Aviation

“It appears that most, if not all, airlines are now integrating USM components into their maintenance strategies to find ways to reduce maintenance costs.”

Mike Scott, Ascent Aviation Services

Even prior to the COVID pandemic, there has been a significant increase in the demand from airlines in Used Serviceable Material (USM) components, due to the significant cost savings that can be realised versus purchasing a new part from the OEM.

After the demand shock in mid-2020, at Pratt & Whitney for example, they initially saw a spike in supply, with few actual sales, until the market stabilised more in late-2020. “Throughout 2021 we experienced a better market-driven equilibrium between supply and demand, with USM pricing remaining generally lower than pre-pandemic,” comments Rob Grossman, Managing Director, Commercial Serviceable Assets (CSA), Pratt & Whitney. He says there continues to be a large, but shrinking quantity of parked aircraft, though those assets are only slowly retiring to meet the USM demand. “This limited retirement trend appears driven by market demand, and by extension, the prices those assets can command in the marketplace,

versus their potential future revenues for re-entering service later. I see a steady growth trend for USM as the overall market demand returns and prices rise again in the coming year,” Grossman anticipates.



Rob Grossman, Managing Director, Commercial Serviceable Assets (CSA), Pratt & Whitney

One way the pandemic changed the marketplace for USM was a dramatic increase of available whole assets and the expected reduction of “end of life” engine values from the peak in 2019, observes Michael Sawitoski, Director, GE & CFM Engine Part Sales at Magellan Aviation Group. “This, of course, is due to the combination of travel restrictions, grounded aircraft, and airline operators utilising green time on newer regional and narrowbody aircraft.”

With this oversupply, Sawitoski reckons the USM market has become more competitive than ever, however, he predicts that as aircraft are reintroduced into service and maintenance activities resume, there will be a sharp increase in the demand for USM as airlines replace their feedstock as well as the harvested parts that were removed from stored aircraft. “On a more positive note, cargo demand has helped stabilise the industry during the pandemic, offering steadiness in the widebody engine market in a time

where passenger travel was non-existent.”

Mike Scott, Senior Director of Sales at Ascent Aviation Services says in the post COVID environment, there is likely to be even more acceptance for USM components and finding any cost advantages, as the airlines continue to rebound from reduced demand that was experienced due to the lockdowns in most countries during the spring and summer of 2020. “It appears that most, if not all, airlines are now integrating USM components into their maintenance strategies to find ways to reduce maintenance costs,” he suggests.

Scott indicates that utilising serviceable or repaired USM components versus purchasing new OEM components, can save anywhere from 25 to 50% off the material purchase cost, depending on the pedigree of the unit and demand factors. He says this is a significant savings in the overall maintenance costs for an aircraft whether during a heavy check or during routine line maintenance. The serviceable or overhauled USM component, having been to a 145 repair shop to be inspected, repaired, overhauled, and tagged with a dual release 8130-3 / EASA Form 1, will also have nearly identical reliability to the new OEM unit.

Back at Magellan, they recently had the opportunity to sit down with several



Mike Scott, Sr. Director of Sales,
Ascent Aviation Services

“USM will continue to play a great part in the recovery of our industry as it is much more cost-effective than factory-new material from the OEM.”

Michael Sawitoski, Magellan



Mike Sawitoski, Director, GE & CFM Engine Part Sales at Magellan

airlines and, in those conversations, Sawitoski reports that cash preservation was still of utmost importance, and it will continue to be even as demand in the industry returns. “USM will continue to play a great part in the recovery of our industry as it is much more cost-effective than factory-new material from the OEM. This, alongside the rising repair costs from MROs due to a labour shortage stemming from layoffs in the early days of the pandemic, ensures that USM becomes a much more attractive flight-plan for operators whose highest priority is conservative spending to preserve cashflow,” Sawitoski expands.

USM pricing varies substantially depending on the part and its pedigree, though in general, an operator may recognise savings of approximately 40% by utilising USM versus new material. Grossman highlights that the actual savings recognised for a given shop visit is typically much less though, because for many parts, new material is the only viable option. At Pratt & Whitney they offer a broad range of solutions to meet operator’s specific maintenance needs, including USM through their Commercial Serviceable Assets (CSA) business, as well as fleet management programmes, and

fixed price agreements. – “All of these solutions are geared to help our customers better manage their maintenance cost and mission profiles,” he adds.

Several airlines are also looking at ways to simply rely on the aftermarket USM supply chain more than carrying their own inventory levels, sees Jason Reed, President, Flight Solutions Group – A GA Telesis company. “Leasing inventory and AOG support was a common thread we saw with most airline activities over the last year.” He saw that those activities were focused mainly on USM due to high levels of availability – “our inventory lease and AOG teams showed a spike increase in demand and still sees that demand as a strategy by the airline community for the foreseeable future.

Maintenance strategies are typically focused on the inventories required to support a fleet. Reed says an airline will be subject to an annual price increase of 3%-5% for catalogue items and much more for non-catalogue items by purchasing new material. “The best hedge against those increases is to utilise USM materials that remain consistently priced year over year. In addition, those USM parts can lead to dramatic decreases in maintenance costs, especially for

USED SERVICEABLE MATERIALS

engine, APU, and landing gear green-time exchanges versus overhauls. With the forecast of increased teardowns over the next five years, an airline can now develop a complete maintenance strategy of avoiding as many overhauls as possible by substituting with USM materials and green-time assemblies," Reed tells.

Going one step further, Reed echoes similar scenarios where airlines and MROs have taken a lease versus buy mentality in the USM space to lower their overall capital costs. He says this lease strategy also creates a significant risk mitigation approach towards inventory book values 7-10 years out – "By leasing those inventories, their overall maintenance cost and CASM are further lowered."

Stephen Fer, General Manager at STRADE, (powered by SR Technics) feels a more dynamic market such as the USM market, driven by a proper demand and supply, offers airlines and MRO providers an actual and fair valuation of component assets. "Whereas traditional large flight hour programme agreements or new OEM parts have locked airlines into fixed, long-term, or restricted offerings, the USM market offers a dynamic solution where price, component conditions, and sourcing options can be optimised in accordance with individual financial and procurement strategies." Fer is adamant that USM



Stephen Fer, General Manager STRADE



STRADE, the new brand operating as an independent unit powered by SR Technics.

create an opportunity to help airlines and MROs reduce costs while maintaining operational efficiency.

Looking towards recovery, at STRADE, they see USM playing a key part in supporting the industry's increase in operations and demand for more affordable parts options. Fundamental to the notion of rebound, concerning USM, Fer points to trust in the capability of the market to cover operational needs and trust in having a reliable supply chain from a broader perspective, for instance, in terms of quality. Hence, the rebound will not be driven by the sheer perception of cost reduction but by the presence of trustworthy partners in the USM market.

The overall teardown business continued with around 700 aircraft torn down in 2020. Those teardowns coupled with already existing large aftermarket

USM inventories created a significant surplus of USM material due to a lack of demand in the last 18 months. That pipeline has opened again in the previous three months, with USM now moving at about 70% of 2019 levels, according to data from GA Telesis. "In addition, many OEMs stopped producing high volumes of parts for the last year, which will produce a new spares supply chain backlog in 2022. This will further drive the speed of aftermarket sales of USM in the coming year. GA Telesis is already seeing this effect and has already quickly returned to 2019 spares sale levels," says Reed.

Richard Hough, EVP and Chief Technical Officer at Engine Lease Finance (ELFC) argues that aside from this positive trend, it is still too early to make statements as to how the pandemic has changed the marketplace for USM, however, he says



Jason Reed, President, Flight Solutions Group

there are a few strong signals that the engine MRO market and therefore the USM market will be significantly different in the future. "The expected increase in aircraft retirements will result in an increased supply of USM, which has historically been a constraint on the size of the market because USM was unable to meet the market demand for such parts as the engine SV rate was greater than the required number of engines being parted out to support them."

Secondly, Hough stresses that this pandemic has highlighted the flaws of the "power by the hour" business model employed by the OEM's which will see a retrenchment of such offerings in the future and open the market for independent MRO's and therefore greater use of USM.

It's clear that the USM market offers alternatives to some very expensive repair and overhaul procedures, which can exceed the cost of a replacement through a USM by a mile. Further, integrating USM in the overall maintenance strategy also helps to ensure parts availability and avoids operational shortfalls due to supply chain issues at the OEM. René Popp, Head of Engineering, Asset & AOG Desk at Spairliners specifies that in cases of AOG events, it is also simply a faster alternative to the regular OEM

lead times. "At Spairliners, our customers benefit from quicker delivery of parts and lower turnaround times for repairs. Unfortunately, the costs that can be saved on the parts are currently completely offset by the costs for logistics, which have increased dramatically during the pandemic."

Spairliners is carefully monitoring the price development of USM and logistics, so the coming months will show if this combination results in a positive effect on the bottom line.

Hough figures that the availability of cheaper material alone will not accelerate the rebound in the aftermarket and until airlines have greater confidence that



Richard Hough, EVP and Chief Technical Officer at ELFC

the recovery in air travel is sustainable and profitable, where possible they will continue to focus on conserving cash by burning green time off stored and parked engines and leasing spares in preference to engine refurbishment. "When the market does recover and MRO activity increases, I believe that airlines will continue to place significant emphasis on minimising event costs and therefore seek to obtain USM wherever possible. The increased availability of USM through fleet retirements and engine part outs will provide the supply to match the increasing demand and ultimately result in a much

greater market share for USM than before the pandemic," he states.

Popp from Spairliners adds that although more USMs are available, the demand is also significantly increasing, which could in turn drive prices for USMs up and result in offsetting the positive effect, meaning that spending will rebound but could remain high – "However, it is already visible now, as more aircraft are back in the air, that the prices are beginning to stabilise," he notes.

As we see the global fleets of popular types like the B737, A320, EJETs and CRJs continue to return to service there is likely good opportunity for operators to integrate USM into their supply chain strategies as these platforms have clear USM availability and solutions available from players like AAR.

There will undoubtedly be components that are simply not out there in the USM space to support fleet demands as airlines fly their newer, right sized fleets. To tailor for this, AAR and its OEM Solutions business division has signed some key OEM distribution and support agreements to cover key components on the newer fleet variants or those with large fleet sustainment requirements such as the recent announcement with Arkwin supporting their product portfolio. Carl Glover, AAR's VP Sales & Marketing for



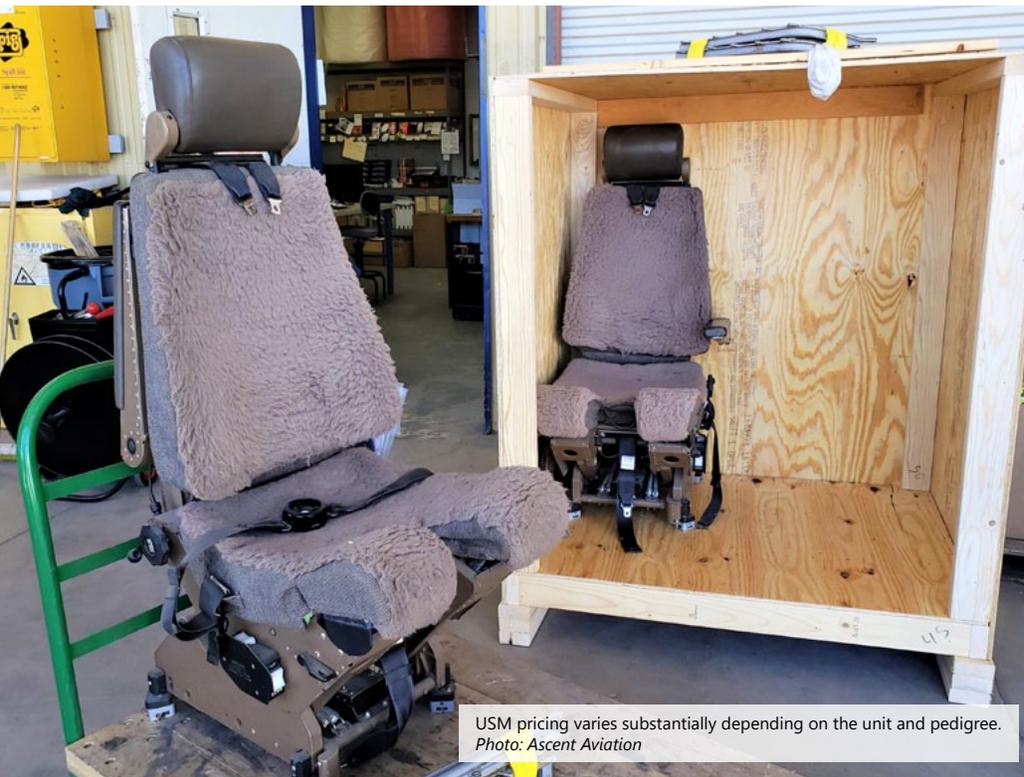
René Popp, the new Head of Engineering, Asset & AOG Desk at Spairliners

USED SERVICEABLE MATERIALS

Life Limited Parts (LLPs) to be selected over new, depending on the build life of the engine, and further cost savings can be found using USM HPT blades, LPT and HPC airfoils and other components. This should significantly reduce the engine maintenance cost without having a negative TOW impact if aligned to target build life.

Greenwell continues: "We are forecasting that there will be an increase in teardown activities to meet the growing demand for USM, with this expected to be a permanent shift of higher adoption rates of USM by airlines, therefore we expect the USM market to rebound quicker overall in terms of material spending than new parts."

Mike Cazaz, CEO at Werner Aero Services sums up saying that most of the transactions we are seeing today are of last minute or as-needed basis transactions rather than strategic purchasing, hence it is too early to point out any changes in the USM market because of the pandemic. "One can argue that this is the 'change' that the pandemic has caused, but I find it hard to believe that it is sustainable. The lessons we have taken from this pandemic experience so far; how to improve inventory management going forward and how to better manage future investments to minimise such as with this global disaster."



the Americas explains to this publication: "Under this agreement we are supporting both the operators and those MRO stations who are overhauling the Arkwin components with kits, rotables and other innovative support offerings."

Glover hints that some industry participants have made recent announcements of their intention to increase USM offering as part of their service offering to customers – "This is a

glowing endorsement to AAR's service and business model that there is a clear demand for USM and an integrated supply chain offering of new and used material in the support of the global fleet as our operators navigate the challenges of the pandemic and the market recovery."

At the Kellstrom Aerospace Group, they observed that the pandemic resulted in the greatest decline in USM demand the industry has endured and in contrast left 2019 as a peak in demand. The approach at Kellstrom is to use the pandemic as a mechanism to redefine the aftermarket supply chain, post COVID, that is more efficient and delivers more value to airlines and MROs than prior to the pandemic – according to David Greenwell, VP Sales & Marketing.

"During the pandemic we have worked with several airlines that have been adopting a more USM first approach to airframe rotatable and engine component procurement, we see that this adoption should continue, especially as savings can result in excess of 90% of the list price over purchasing new via exchanges," says Greenwell.

Engine overhauls are one of the highest maintenance cost drivers for an airline, and Greenwell indicates that optimising repair worksopes with USM can allow



Carl Glover, AAR Vice President Sales & Marketing for the Americas



Mike Cazaz, CEO at Werner Aero Services



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Demand for winter slots signals C Check return



There are many factors that drive the C Check downtime.
Photo: Joramco

The MRO sector has suffered from a wave of cancellations for heavy maintenance checks since the pandemic began. **Keith Mwanalushi** speaks to industry experts about the trends towards the restart of C Check activity.

Airlines and MROs are seeking opportunities to reduce aircraft downtime as safely as possible. Certainly, there are many factors that drive the downtime and whilst aircraft utilisation by the hour is the key factor, Fraser Currie, the new CEO at Joramco says the downtime is also driven by where and how the aircraft is used, especially the environmental conditions. "The standard scheduled downtime is driven by the workscope and especially the inspections. The finding from the inspections drives the downtime depending on the level of findings assessed at the evaluation phase," he tells *AviTrader MRO*.

At the start of the pandemic, Currie recalls that cancellations hit hard and the business model at Joramco was

adapted to fill hangars with a different mix of maintenance activity. He says the trend of activity during 2019 to now has seen a far greater emphasis on lease transitions, parking, storage, teardown and more recently return to operations. "The trend going forward from summer 2021 into the traditional high maintenance season September to March is looking very similar as it did prior to the pandemic hitting, which is extremely reassuring for the entire aviation industry and the travelling public," Currie states.

The pandemic saw large numbers of aircraft parked or stored but there is now an uptick in the numbers of aircraft returning to service. "In terms of selecting aircraft for reactivation, those requiring the least maintenance



Fraser Currie, CEO at Joramco

tasks prior to return to service are being selected in the first instance," observes Malcolm Chandler, Head of Commercial and Marketing, Vallair. He sees that of the reactivation candidates, should any aerostructure repairs be required, on the flaps or the thrust reversers for example, airlines are opting to 'rob' good parts from another stored aircraft instead of conducting the necessary work.

Chandler says several aircraft that were returned early from lease are finding new life which would typically be accompanied by heavy maintenance as well as painting. "Storage of the aircraft has also taken its toll on these mothballed aircraft, and we are seeing work coming into the shop because of damage caused by storage issues. Maintenance on landing gears has also been prolonged using 'ground use' gears – normally these would be overhauled at ten years hard time. Had 'ground use' landing gears not been used, the landing gear shops would certainly have been overwhelmed by the demand," he notes.

Chandler adds that the maintenance programme is tailored to the aircraft operation and utilisation, and as such there is little or no impact on C-Check downtime. "There are a significant number of customised maintenance programmes developed by the airlines over the years, and, as such, the old 'block check' C Check has disappeared in many cases. It should be remembered that the TAT is more often governed by the embodiment of airworthiness directives and service bulletins or other modifications."

Even before COVID, the MRO sector worldwide had a shortage of heavy maintenance visit (HMV) slots



James Palacios, VP & GM at The Aircraft Group



Malcolm Chandler, Head of Commercial and Marketing at Vallair

“There are a significant number of customised maintenance programmes developed by the airlines over the years, and, as such, the old ‘block check’ C Check has disappeared in many cases.”

Malcolm Chandler, Vallair

and an ever-increasing bow wave of checks were coming. "That wave may have temporality shifted to the right with COVID but is now even more pronounced since despite the aircraft being in storage, the heavy check clock kept ticking," says James Palacios, Vice President and General Manager at The Aircraft Group. He explains that as aircraft re-enter service, the already limited HMV MRO sector will be even more stressed, further exasperated by competing for slots with the popular passenger-to-freighter conversion market. He adds that a continuing trend and potential relief could come from OEMs and operators working with the FAA and EASA in extending the check limits to accommodate this back log – "Manpower shortages could equally result in wages trending up resulting in more costly HMVs in the near term."

Speaking on aircraft utilisation having a direct impact on the C Check

downtime, Palacios argues that that data can demonstrate a correlation between high utilisation and high cycle usage and check downtime and cost. "That is a key analysis focus of big data efforts to identify that sweet spot of when to bring the aircraft or engine in for maintenance and to strike the perfect balance between cost and utilisation."

At AFI KLM E&M they saw C Checks reduce during 2021-2021. They anticipate that stored aircraft will provide a good insight into the market ramp-up as many of these aircraft will require at least some base maintenance activity before flying. "The restart of C Check activity is the signal that airlines anticipate growth in their activity," suggests Vincent D'Andréa, AFI SVP Engineering and Airframe Maintenance. "We anticipate demand for European base maintenance winter slots to increase further still. He reckons it is difficult to predict if this will potentially exceed capacity in the coming years and

C CHECK DOWNTIME MANAGEMENT

MROs anticipate demand for European base maintenance winter slots to increase.
Photo: AFI KLM E&M



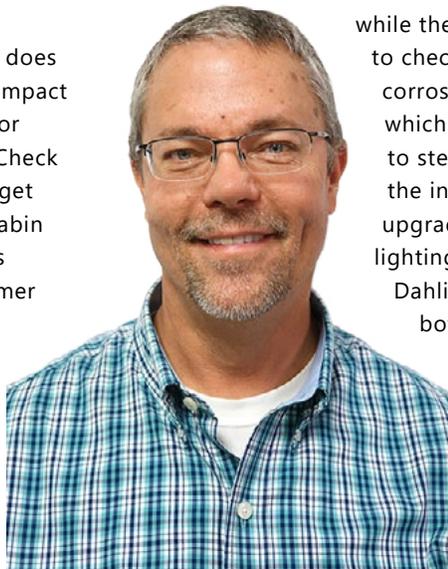
Several aircraft which were returned early from lease are finding new life.
Photo: Vallair



recent COVID induced trends of retiring older aircraft sooner than planned could net off any potential increased demand.

D'Andréa however does not see a significant impact of aircraft utilisation or load factor on the C Check downtime, except to get additional focus on cabin quality and aesthetics (depending on customer demands).

Eric Dahlinger, Sales Manager at PWI Inc reckons that one way for MROs to add value during any of the larger-scale



Eric Dahlinger, Sales Manager at PWI

maintenance events downtime is to address opportunities outside of the C Check itself. "For instance, while the interior is removed to check for airframe corrosion or damage, which is an opportunity to step back and look at the interior. Items such as upgraded carpets and cabin lighting are two examples."

Dahlinger stresses that both cabin features can be changed or upgraded within a typical C Check timeframe and by addressing these passenger-facing interior components,

the operator can improve the flight experience in a way that is visually obvious. He says that unlike the critical but invisible nature of an airframe check, new LED lighting and carpet design and textures and fabrics are easily noticed and appreciated. And because both are easily installable in a short period of time, downtime is not extended.

"Cabin upgrades accomplished within C Check downtime at least reinforce, if not widen, the breadth of services MROs provide to operators, while improving revenue per visit. And neither of these two upgrades demand a full-blown interior shop," Dahlinger points out.

Minimising downtime during C Check procedures

Over the years, longer intervals between maintenance checks have become popular as they can lead to fewer HMV's during an aircraft's lifetime. And all parties have an incredibly important part to play in ensuring the downtime is optimised. "The process starts with preparation and planning to ensure that both parties understand the scope and have the capability, capacity, tooling and experience to perform the check," explains Currie from Joramco. He says the check will benefit from a strong open and professional relationship between the MRO and the airline and he feels checks inevitably go smoother when the parties have an open and proactive communication

“The trend going forward from summer 2021 into the traditional high maintenance season September to March is looking very similar as it did prior to the pandemic hitting, which is extremely reassuring for the entire aviation industry.”

Fraser Currie, Joramco



The restart of C Check activity is a signal that airlines anticipate growth.
Photo: Joramco

channel. “The MRO’s execution of the check from pre-input planning to daily progress monitoring and ultimate release requires not only the engineers but all departments, especially the supply chain.”

Currie reminds that aircraft maintenance is heavily regulated and audited both by the regulators, the MRO and the airline – “what we see is that a company and a workforce that is clear on its processes and procedures will succeed every time. In emphasis, downtime can be minimised and optimised with laser focused attention to planning, procedures and communication.”

Chandler from Vallair points out that airlines can take many varied steps toward minimising the downtime during C-Check procedures, but the first is to know the customer and

their expectations. “This is particularly relevant within the cabin where some issues may just be of an aesthetic nature only and not a defect. Often though, the cabin can be the driver for the TAT. Preplanning is imperative, and ensuring that airworthiness directive kits, and modification kits etc are on site and complete, and that the consumables and expendables have not been overlooked.” He further stresses that understanding the operator’s into service date and to ensure that adequate workforce is available to meet it and having the capability in reserve for any unexpected findings, are also best practice to minimise downtime.

To avoid materials delays which too often extend check time due to lengthy lead times, complicated even more by COVID, operators should start procuring critical and commonly required material

well in advance of the check, Palacios from The Aircraft Group advises. He adds: “Technical organisations like us, who offer comprehensive services, can cut down those lead times since we have direct access to used serviceable material, repair management and component exchanges, and even new OEM parts through our distribution channels.”

An airline can adapt its maintenance schedule to adapt downtime to the network requirements, without any negative impact on the operational performance, reliability nor product quality, according to D’Andréa. He ends the conversation saying it is always healthy to rechallenge the content of the workscope, especially operator items that can be added to the manufacturer manual, to confirm it is necessary.



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Europe prepares for renewed possibilities

The 2021 MRO Europe event opened its doors on October 19th.
Photo: Aviation Week Events and Twitter

As the aviation industry gathered in Amsterdam for the MRO Europe 2021 event, **Keith Mwanalushi** speaks to some exhibitors about how they are preparing for the return of MRO and aftermarket activity, especially in the European region.

For the last 18 months or so business communications have been limited to video and telephone calls but finally, all roads led to Amsterdam in the Netherlands for much needed face to face connections. The team at Aero Norway were excited to participate at MRO Europe and showcased their outstanding performance of CFM56-3, -5B and -7B engine MRO as well as future steps into the LEAP programme. "Furthermore, we have used this time to prepare for the future by improving our infrastructure,"



Ramon Peters, Global Sales & Marketing Director, Aero Norway



tells Ramon Peters, Global Sales and Marketing Director at Aero Norway. Peters reports that big progress has been made on the internal fast track process, enabling them to handle short customer TAT requests whilst also adding economical advantage without affecting current workload – "As quality is a given, we felt that this fast track would benefit our customers, from a TAT and economical perspective as well as creating additional value."

During the pandemic, the Aero Norway board, management and all employees agreed to a reduction of remuneration to keep everybody on board – "no one was forced to leave," Peters points out. Luckily, he says this was only for a short period, and ensured that Aero Norway kept all its talented workforce and maintained its work culture. "This means that we are still staffed on 2019 levels and even recently hired six new technical apprentices

in September. This also includes our environmental responsibility, reducing our waste and review a low carbon emission engine test cell, these are only a few of our improvements. Getting back on track for an increase of CFM56 MRO and preparing for LEAP MRO are our main goals, we look confident to the future," Peters adds.

At Vallair, they were showcasing six complementary business units - trading and leasing, cargo conversions, aircraft MRO, engines, aerostructures and painting and aircraft disassembly from their various bases in Montpellier, Chateauroux and Luxembourg. "We were on site to discuss the aviation industry requirements," says Steve Pike, Aerostructure and MRO Sales Service Manager. He explains that 2021 has been a busy year for Vallair with its A321 cargo conversion deliveries and preparations for a new hangar facility due to open in the first quarter of 2022. "MRO Europe provides Vallair with a platform to showcase our multi-faceted business units and capabilities and personal approach to supporting our airline customers in their respective markets."

Vallair just announced that it is adding a purpose-built MRO facility in Chateauroux. The full-service aircraft



Steve Pike, Aerostructure and MRO Sales Service Manager at Vallair



Derk Nieuwenhuijze, VP Digital, Marketing & Communication at AFI KLM E&M

MRO hangar is adjacent to its existing aerostructures repair and logistics facility, as well as extensive parking and storage area in Chateauroux. The new facility will accommodate four A321s or a combination of A330 and A321s.

Peters remarks that the aim now is to support operators throughout these challenging times and to be prepared for the surge in demand expected from the fourth quarter. Vallair currently has seven aircraft scheduled for such work in Chateauroux, with another five expected over the coming weeks. "This will be our initial orderbook." Vallair currently has three Airbus A321F conversions in operation, two of those with a European based operator.

At the aerostructure facility also in Chateauroux, the facility is supporting several clients within the region with CF56, V2500, PW4000 and Trent 700 aerostructure repairs to engine inlet cowls and thrust reversers. Vallair also supports Airbus and Boeing flight control repairs and overhaul for the aftermarket.

AFI KLM E&M set up a lavish booth at #2080 and were obviously present on home turf. "Our main objective is to reconnect in person and further develop our relations with our customers," speaks Derk Nieuwenhuijze, VP Digital, Marketing and Communication.

AFI KLM E&M were busy showing some innovations in their "The MRO lab" corner. Nieuwenhuijze feels innovations are now more than ever pivotal for

the future of airlines and MROs alike. "This is why we are demonstrating new tools and technologies that could help the airlines to manage smoother operations. As examples, our predictive maintenance suite, PROGNOS, new part repairs developments, VR and AR training technologies or other digital tools."

Going forward, the issue is about the speed of recovery. Nieuwenhuijze cautions that the market is hard to predict with still a lot of changes and unforeseen events. "That is why we have done our utmost to maintain our capacity in order to be able to meet the demand for the restart."

GA Telesis had representation from all their aftermarket component, tooling and logistics groups, along with MRO services business units and GATES engine MRO. "We were very excited to be in front of our European customers again," declares Abdol Moabery, Chief Executive. That said, he stresses that their MRO business units never really slowed down. "While we had some reductions in component or engine inputs for a short period, the MRO side remained resilient. In fact, we added several new capabilities through the pandemic, including a new engine test cell in Finland, a new transmissivity test cell and autoclave in our aerostructures centre, and a new SPAH [Specialised Procedures Aeroengine Hospital] in Finland, with a second one being built as a greenfield project in the USA."

And all things considered, Moabery



Abdol Moabery, Chief Executive at GA Telesis

reports that GA Telesis are operating at beyond 2019 levels with the pandemic condition, "so we know we have to prepare for an increase in volumes when long-haul international flight frequencies resume. We are very prepared for this and are ready for the challenge. Our plan is very simple; we plan to address the market size that is available to us. Our market outlook is very positive, and we forecast significant growth in the region."

At the HAECO Group, there is additional focus on the EMEA region now within the newly established HAECO Group Commercial organisation. Klaus-Peter Leinauer, VP Group Commercial

"We are still very confident that the European MRO market will recover soon and that there will be huge demand in the next couple of years due to deferred MRO activities.

*Klaus-Peter Leinauer,
HAECO Group*

EMEA, together with the EMEA commercial team were geared to meet existing customers in the region and at the same time develop new opportunities and grow the business according to HAECO's group strategy. "An event like MRO Europe is a perfect platform for that as we are able to meet existing and future customers, listen to them and discuss how our wide range of services and solutions can add value to their business.

"We are still very confident that the European MRO market will recover soon and that there will be huge demand in the next couple of years due to deferred MRO activities," Leinauer adds.

At Magellan, like others, the focus at MRO Europe was to reconnect with customers. They were highlighting their engine lease pool to help operators optimise cash flow while reintroducing their aircraft into service. "Our engine leasing team does a great job of providing custom-tailored options that are in line with each customers' individual needs. Many customers have different requirements, but the best way of preparing for the return of MRO and aftermarket activities is by talking to our customers and understanding their USM requirements as they go through the planning stages for re-activating their aircraft," states Richard O'Grady VP, Sales and Marketing at Magellan.

O'Grady mentions that one of the hurdles that they are facing now is longer than usual lead times. He explains: "Now, whether that is from the repair shops or freight transit times or both in some cases, but we know that our customers will not have the luxury to accept long lead times. So, we have focused our efforts on identifying the right parts to send to the shop and investing in the repair and overhaul of those parts now, so they are



Richard O'Grady, VP, Sales & Marketing at Magellan

readily available to our customers."

While the pandemic has had a detrimental effect on the European MRO and aftermarket sectors, at Magellan their outlook for the region is very positive. "We expect steady growth in demand for

both airframe and engine material, which is why we continue to acquire assets even during such a turbulent period as the last 18 months." O'Grady says they are seeing a steady increase in demand for engine material,

especially for V2500 select one material, which is driven by the latest AD. "While that AD has been around for close to 12 months, it is only in the last four to six months that we have seen the impact in the market. We can see this trend continuing for engine parts as the information we are receiving



Klaus-Peter Leinauer, Vice President Group Commercial, EMEA, HAECO Group.



The recovery of air travel within Europe will be slower than some other regions.
Photo: Prague Airport

from the engine MROs suggests that bookings for engine shop visits are on the rise," he remarks.

Kellstrom Aerospace's entire EMEA team was at MRO Europe meeting new and existing customers to discuss how they can best support in the areas of factory new material (OEM), USM, repair management and technical services, asset leasing, trade and exchange engine hospital visit and field services, and the maximisation of aircraft portfolio value. Jeff Lund, CEO states that the key to success will be how you cope with the supply chain; particularly in the areas of factory new parts (OEM), used serviceable material, repair management and technical services. "Here at Kellstrom we are of the opinion that once market recovery is in full swing, aftermarket

“Our position is that Q4 will see an upturn in passenger aircraft and engine maintenance events as airlines start to prepare for an anticipated increase in travel demand in Q1 and Q2 2022.”

Al Malecha, Kellstrom Aerospace

demand will outpace current supply chain capacity. Kellstrom is laser focused on this issue and taking the appropriate action to ensure we are well prepared and ahead of the inevitable impact.”

Lund explains that long lead times associated with the production of factory new OEM parts and subsequently, the long lead times for the repair of USM are now, and will continue to have, a major impact on the MROs ability to support the customer in a timely manner. “To mitigate the impact and ensure the availability of material Kellstrom is taking measures to ensure that we are well prepared and have stock of these materials in the desired condition on the shelf ready to go to support not only the one-off requirement, but also to support the MROs as shop inductions continue to ramp back up to pre-COVID levels.” He says they are in close contact with airlines, repair facilities and MROs within the region to make certain that they have the necessary visibility of forecasted shop events and the anticipated increase in operational tempo to adequately plan for the required inventory.

“Given the number of different countries throughout the region and the constantly changing travel restrictions,

one of the most difficult challenges of this process is the ability to predict the volume and velocity of demand recovery while maintaining the right balance of inventory,” Lund continues.

Still at Kellstrom, Al Malecha, Managing Director, for the EMEA region is of the opinion that given the current logistical network shortfalls and limitations that the demand for aftermarket material and services will rebound faster than the supply chain can support. “This will be particularly evident in the European market where uncoordinated travel and border restrictions, coupled with extended lockdowns and severe personnel reductions industry wide, have only served to compound over-extended logistical resources and supply chain networks.”

Adding to the problem is that cash conscious airlines within Europe have only returned to service with enough passenger aircraft to handle the surge of the peak holiday travel season with the goal to maximise seat occupancy and load factors and to generate as much revenue as possible to see them through the end of the year and into Q1 2022 without having to add additional resources in the form of aircraft, crews, maintenance and support staff, etc. Since 50% of all cargo pre-COVID was



Jeff Lund, CEO, Kellstrom Aerospace



There is a positive outlook for recovery in the European MRO sector.
Photo: CSAT

transported in the bellies of passenger aircraft, this “planned shortage” of network capacity will only serve to exacerbate the current situation and put further strain on the supply chain, Al Malecha states. “Our position is that Q4 will see an upturn in passenger aircraft and engine maintenance events as airlines start to prepare for an anticipated increase in travel demand in Q1 and Q2 2022.”

Also, participating at MRO Europe are Czech Airlines Technics mainly promoting their base maintenance division, landing gear overhaul, line and component maintenance, aircraft spare parts segment and other services but also showcase the opening of a new aircraft paint shop for narrow-body aircraft in Prague and the expansion within their base maintenance division while launching a sixth line in the hangar facility.

“Last autumn, we decided to offer customers short-term and long-term aircraft storage, both at Prague Airport

and at other airports in the Czech Republic and Slovakia,” says Pavel Hales, CEO at Czech Airlines Technics (CSAT). “We are also very pleased that we have significantly expanded our co-operation with major leasing companies, offering them complete support, including aircraft storage, maintenance, CAMO support and other services. It is an interesting segment which fits perfectly into our structure and builds on the current comprehensive range of services we provide.”

During the summer season, at CSAT, they already saw an increased demand for slots within the base maintenance division, especially from leasing companies. “In the upcoming main maintenance season, we already have fully booked capacity for base maintenance lines by airlines in our hangar at Václav Havel Airport Prague. After the end of the main season, we will continue to perform aircraft base maintenance checks and delivery and redelivery works for lessors.”

As Hales highlights, the impact of the pandemic was different in every division.



Pavel Hales, CEO, Czech Airlines Technics

For example, he says there was no impact in landing gear maintenance, in other divisions they were able to focus on another service, product or clients, such as lessors. He adds: “Despite the challenging times, we have managed to keep most of the experienced and qualified employees to continue to provide the best possible services to our clients. During the pandemic, on the other hand, we have revised the current company’s processes, and we are entering the next period with increase work efficiency across all departments.”

Elsewhere onsite, the team from EirTrade Aviation attending MRO Europe and say they have already noticed a significant improvement in both airline and MRO activity. One of their primary objectives is to continue expanding their inventory across all platforms to support operator needs as air travel recovers. The current engine platforms being supported by EirTrade include CFM56-5B/7B, V2500-A5, PW4000, RB211 & CF6 platforms. Furthermore, EirTrade has continued to invest heavily in the A320, A330, B737, B757 and B767 inventory pools.

EirTrade's Vice President of Asset Management Lee Carey says as the remaining green time is utilised on

surplus engines, the demand for heavy shop visits should increase exponentially for narrowbody engine types and therefore stimulate an increase in the demand for USM. "However, the market will remain highly competitive in the short-term for USM given the number of aircraft and engines being retired and disassembled. During this time EirTrade will continue to support the organisation's clientele base with the highest quality service at competitive pricing."

EirTrade is currently very active in the market acquiring aircraft and engines across multiple platforms to support this growing demand.



Lee Carey, VP Asset Management at EirTrade

AEROSTAR - BREAKING THROUGH THE CRISIS



Aerostar opened a new MRO facility in August 2020.
Photo: Aerostar

Exhibiting at MRO Europe at Booth 4091, for AEROSTAR in Romania, it was clear from the beginning of the pandemic that, when the recovery takes place, there would be a significant increase demand for MRO services. The slowdown in the market was taken as an opportunity to invest in multiple recurrent training courses for all personnel, while, in parallel, type rating courses were continued for younger employees assigned to be the company's future generation of licensed staff.

Also, despite the crisis, AEROSTAR reached a new milestone in its history in August 2020 with the opening of a brand new three-bay maintenance facility at Iasi in northeast Romania, 130km north of Aerostar's existing business operations at Bacau where two hangars provide seven

aircraft bays. Iasi is dedicated to the Airbus A320 and Boeing 737 aircraft families and, in early September 2020, the first aircraft arrived for a maintenance check, an Airbus A320neo (LEAP-1A), operated by long-term customer Pegasus Airlines of Turkey.

Even though the business environment has been extremely affected by the COVID-19 pandemic, the company's 2020 goals have been successfully achieved, giving confidence for better results for 2021. This will be helped by extending the portfolio to include the Airbus A320neo (PW1100) and the Boeing 737 MAX.

Dan Velescu, Director MRO Civil Aviation Division, said: "The new maintenance facility in Iasi will help to strengthen and confirm the company's position as the main independent provider of MRO services both in Romania and in the region. This will see a continuation of more than 20 years of MRO experience, offering flexibility and high-quality standards, all being tailored and customised for each client to better meet their specific needs."

Grigoris Filip, General Director of AEROSTAR, added: "We want to once again reassure our current and potential customers that they can rely on AEROSTAR as a solid and reliable partner within the commercial MRO field."



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Supporting maintenance processes in the cockpit is vital.
Photo: SCAC



Steve Wells, Managing Director, Muirhead Avionics

Q & A

In the hot seat...

Steve Wells,
Managing Director,
Muirhead Avionics

What attracted you to this industry?

As a child I was always interested in aircraft, living as I did close to Heathrow Airport, and I made regular visits with school friends where we spent hours plane spotting. Later during my school days electronics became a hobby, so avionics was the logical career path and I studied this at college. I have worked in this area of aviation (both civil and military) ever since. From apprentice to service management, I have worked my way up

through the business until taking on my current role of Managing Director and Divisional Vice President.

What does a typical day involve in your role?

I tend to be very hands on due to my background. So, a normal day will encompass the usual catch up on overnight emails, team meetings, and reviewing the monthly KPIs checking on our service levels. Negotiations with customers, strategic development and

building our OEM relationships all form part of the day's work.

Briefly, tell us about your key capabilities at Muirhead Avionics?

Muirhead Avionics' extensive avionics capabilities cover navigation, primary and secondary radar, communications, flight data recorders, cockpit displays and cockpit voice recorders, flight systems, instrumentation and test equipment.

The strength of our business has always been our alignment with OEMs. We have OEM approved repair station status for most of the products we repair, and our exclusive sales agreements allow Muirhead Avionics to offer extensive capabilities on a wide range of avionics systems - we are expanding these relationships frequently. Our primary capabilities underwrite OEM quality because we speak their language. The legacy equipment expertise we have enables us to support them with high-value-added, fully approved, specialist, component MRO. We are chosen by the helicopter, governmental, military, commercial, and bizjet sectors.

In addition to MRO capabilities, Muirhead also has representational sales agreements with OEMs specialising in aircraft Ground Support Equipment (GSE) and military systems and we are also a UK and European dealer for our partners.

What is the connection with AMETEK?

Muirhead Aerospace was acquired by AMETEK Inc. in 2008. This relationship brings financial stability, eliminates risk, protects investment, and underpins Muirhead Avionics' innovation. Across the group of MRO organisations, we share compliant, ethical practices, which add value to processes where safety and the environment are paramount.

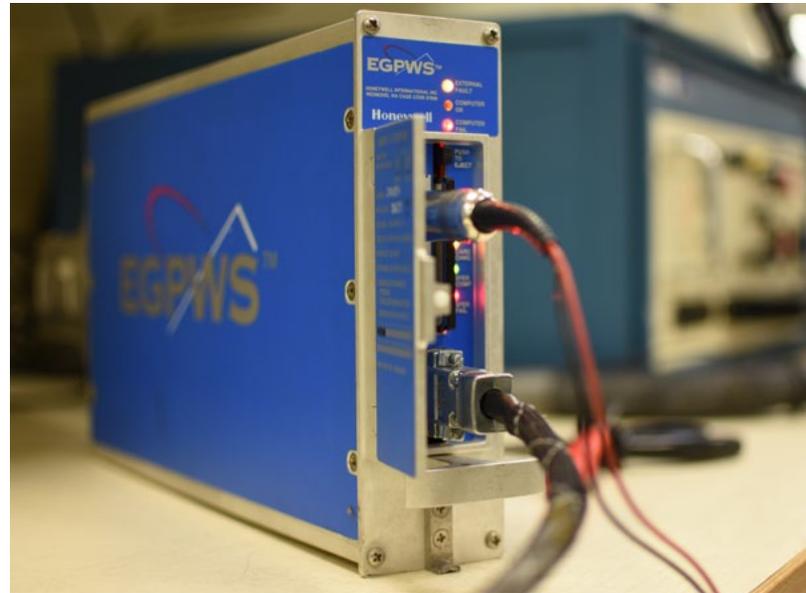
Tell us about your presence at MRO Europe this year and what you are highlighting here?

We will be showcasing our extensive repair capabilities, our OEM relationships, and our reliability and service levels. We bring great flexibility of service to our customers offering exchanges, loans and inventory support alongside our MRO activities. We will also be presenting the wider AMETEK MRO range of MRO support that covers the whole organisation's global competencies.

Clearly the pandemic has disrupted the European MRO and aftermarket sectors, so what is your outlook for this region?



Muirhead Avionics' extensive avionics capabilities include cockpit displays.
Photo: Muirhead Avionics



The Honeywell Enhanced Ground Proximity Warning System (EGPWS) reduces the risk of controlled flight into terrain. Photo: Muirhead Avionics

We see signs of recovery, but there is still a long way to go. At Muirhead Avionics - we experienced significant increase in activity prior to the lifting of restrictions as operators prepared for opening routes and destinations. We have the flexibility and the resources to react quickly to dynamic market recovery, but we acknowledge a state of uncertainty continues to affect us all.

What impact has the pandemic had on the business?

The inability to network and meet face to face has hindered the development of new customer relationships, but of course like everyone else we have coped. We are incredibly pleased to have the chance to participate in MRO Europe. So many of our customers will also attend the show and we will have the opportunity to share business opportunities and find new solutions. The lack of personal contact is becoming a factor, particularly in Asia where the personal touch is so important - and that is a region of potential for us as we pursue our growth strategy.

Additionally, our sizeable product sales and military MRO related business has seen us through these tough times, and we have built up our product dealerships and representations and our component management activities.

What is your key priority as markets begin the recovery process?

Adding to our capabilities for a newer generation of aircraft. We see older aircraft being grounded/torn down and the pace of this might increase, or even lessen, as operators right-size their fleets. Although legacy equipment MRO is a fundamental part of what Muirhead Avionics offers we have a well-developed plan of expansion into new markets both general aviation and rotary.

Importantly, the pandemic has given us to impetus to reorganise the business and prepare for the changes that lie ahead. We are focused on new products and services that will meet our customers' needs as they evolve.



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Christian Dery

GA Telesis, LLC (GAT) Flight Solutions Group (FSG) has announced the appointment of **Christian Dery** as Vice President, Tooling & GSE. Dery will be responsible for developing and managing the Tarmac Solutions team driving Ground Support Equipment (GSE) and the tooling distribution business strategy globally and leading regional sales teams functionally. Dery brings 30 years of experience in aircraft parts manufacturing, aftermarket sales and marketing, and contract administration in the GSE and tooling sector. Before joining GA Telesis, he was VP of Business Development and Marketing with Groupe DCM and a member of its Board of Directors.



Oren Poleg

Israel Aerospace Industries' (IAI) President & CEO **Boaz Levy** has appointed **Oren Poleg** as President and CEO of IAI North America, an IAI subsidiary (IAI NA). The nomination follows the appointment of Colonel (Ret.) **Amir Geva** to EVP North America at IAI's headquarters, and additional management changes recently implemented by the CEO. In his new position, Poleg will work to expand IAI's footprint in North America, including through advancement of mergers and acquisitions to help the company grow in the world's largest defense market. He is replacing Lt. Gen. **Ted F. Bowlds** (USAF, Ret.), PhD., who has served as acting CEO of IAI NA since July 2020.



Stephen Spillane

TrueNoord, the specialist regional aircraft lessor, has announced the appointment of **Stephen Spillane** to the position of Technical Manager, reporting to **Richard Jacobs**, Chief Commercial Officer. Joining the Dublin team, Spillane will provide technical support worldwide and further enhance TrueNoord's technical services in Dublin. Throughout his career, Spillane's experience across multiple roles has gained him significant knowledge and understanding in the technical and managerial aspects of the aviation industry. During the COVID-19 pandemic, he secured multiple transfers of ownerships and registration changes for GECAS' B737 Cargo Program, and successfully engineered the management of GECAS' first delivery. This new role within the dynamic regional aircraft leasing sector will provide the platform where he can further develop his experience in the technical management of leased aircraft.



Grazia Vittadini

Rolls-Royce has released that **Grazia Vittadini**, former CTO at Airbus, will be joining as Chief Technology Officer, Designate, to succeed **Paul Stein** when he steps down next year after almost 12 years leading the company's pioneering research and technology efforts. Separately, **Harry Holt**, Chief People Officer, has decided to leave to take up the post of Chief Operating Officer at Vertical Aerospace. His successor will be announced in due course. Vittadini, who will join on November 2, 2021, spent almost 20 years at Airbus and over the last decade held a number of senior positions, most recently Chief Technology Officer. As CTO, she piloted Airbus into bold, new, and sustainable technologies, ranging from electrification and hydrogen-based propulsion to digitization and Artificial Intelligence, autonomy, connectivity and advanced materials, while creating a diverse, high-performing technology organization. She stood down from her CTO role at Airbus in July and leaves at the end of October.



Conor Brannigan

Magma Aviation, the innovative air cargo solutions company, has promoted **Conor Brannigan**, from Deputy CEO to CEO, following him joining the business in July 2021. **Ross Wilson**, former CEO, moves to the role of Strategic Advisor to the Magma Aviation Board of Directors. Since Magma Aviation launched in 2010, Wilson has been at the forefront of the business and instrumental in building it to the success it is today. He will continue to play an indispensable role in developing Magma Aviation further in this new role as Strategic Advisor.



Adam Voss

Joramco, the Amman-based aircraft maintenance, repair, and overhaul (MRO) facility, and engineering arm of Dubai Aerospace Enterprise (DAE), has named **Adam Voss** as its new Chief Operating Officer (COO) reporting directly to **Fraser Currie**, Joramco's CEO. Voss has more than 30 years' aviation experience in the maintenance and engineering of large commercial aircraft. He has worked across the Middle East, U.K., Asia, India, South Africa, and Australasia for leading carriers, most recently heading up South African Airways Technical as its CEO.



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