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Significant uncertainty but aviation remains agile

Following what has been the most turbulent year in modern aviation history, the new year and now a vaccine for the dreaded COVID-19 brings us some hope for things to come. The start of the year has seen several countries imposing further lockdowns and stricter travel restrictions, but these measures are necessary in order to eventually start the recovery process and avoid falling back into further national lockdowns. There is no doubt that the challenges of this pandemic will continue well into the new year but with the new vaccine (assuming it is made available on a global scale) we should start to see some positive signs by the latter half of the year.

In just the last several weeks we have seen some positive news coming from the MRO industry. MTU Maintenance Zhuhai in China and Pratt & Whitney signed a network agreement that covers the maintenance, repair and overhaul of Pratt & Whitney GTF PW1100G-JM engines at the facility in China. The facility has introduced PW1100G-JM capabilities immediately and expects to be able to carry out MRO work from mid-2021. MTU Maintenance Zhuhai estimates a volume of 1,000 shop visits in the next ten years.

Earlier this month APOC Aviation announced their first stock-hub outside of Europe with the opening of a new warehouse in Singapore adding new aircraft component solutions in the South East Asian market. Following this announcement, Revima too stated that they obtained Part-145 certification for their new landing gear overhaul facility in Thailand. The facility will be able to overhaul up to 600 landing legs annually and remarkably Revima were able to finalise the construction, training and set-up required to successfully obtain the initial Part 145 certification audits despite COVID limitations. Be sure to read more about the latest developments in Asia in the upcoming February edition.

In this issue, we have put together an exciting lineup of experts to discuss the spare engines market and how the key players are responding to lower demand for engine rental assets and the strategies that aircraft operators should have in place to ensure they have the right solution for their specific missions. Despite the dip in demand currently, there is optimism in the market for a rebound in the months to come.

Of course, another exciting development was the first delivery of the ATR 72-600 Freighter to launch customer FedEx in December. In this issue, our News Analysis examines the opportunities for the regional cargo sector and support services for operators of ATR's newest variant.

With the first edition of the year, I will take this opportunity to wish you all a much more rewarding 2021 with hopes of turning a crisis into opportunities for all of us

Keith Mwanalushi
EDITOR

The current situation has reduced the need for rental engine assets.

Photo: CSAT



CONTENTS



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14 Spare Engine Solutions



5



10



14



20



25

3 Editor's Page

5 Industry Briefs

10 News Analysis

Delivering more than just cargo

14 Spare Engine Solutions

Managing spare capacity

20 Integrated MRO Solutions

Aircraft fleet planning will be crucial

25 Industry Interview

David Rushe, Director – Sales & Marketing, EMEA
Magellan Aviation Group

28 People on the Move

AvAir acquires HAECO A320 rotatable pool

AvAir, an inventory solutions provider for the aviation aftermarket, has acquired Airbus A320 rotatable pool from HAECO ITM (HAECO ITM), a member of the HAECO Group. HAECO ITM provides services ranging from flexible inventory pooling options, Power-By-The-Hour support services and repair management to ad-hoc loans, exchanges and worldwide AOG support. With extensive component engineering and airline operating experience and strong in-house repair capabilities, HAECO ITM offers customised, innovative and cost-effective component management solutions with guaranteed service level and high-quality component maintenance at competitive cost, ensuring customer fleet performance and technical dispatch reliability whilst providing cost visibility. With this transaction, AvAir will add over 2,000 rotatable components including IDG's, Starters and Avionics for Airbus A320. The entire stock will be added to AvAir's growing Dublin facility to support their A320 customers in the region.

ST Engineering appointed MRO licensee for Honeywell components in LEAP-series engines

ST Engineering has entered into a ten-year agreement with Honeywell Aerospace that will see the group appointed as the only licensed MRO service provider based in Asia Pacific for Honeywell components installed on the LEAP-series engines. Under the agreement, ST Engineering is appointed to provide component MRO and warranty repair services to all Asia Pacific operators for Honeywell components installed on LEAP engines used in Airbus A320neo Family, Boeing 737 MAX and COMAC C919 aircraft. These component MRO services will play a complementary role to the other MRO solutions offered by the group which has plans to set up MRO capabilities for the LEAP-1A and LEAP-1B engine. ST Engineering became an official member of the Honeywell Channel Partner network in 2019, which gives it access to Honeywell's maintenance document and technical support for over 2,000 individual part numbers from avionics to electrical and mechanical components.

Atlas Air orders final four 747-8 Freighters

Atlas Air Worldwide announced an agreement to purchase four 747-8 Freighters. The order enables Atlas Air to leverage the operational advantages of the 747-8 Freighter to meet growing cargo demand around the globe. "The 747-8F is the best and most versatile widebody freighter in the market, and we are excited to bolster our fleet with the acquisition of these four aircraft," said John W. Dietrich, Atlas Air Worldwide President and Chief Executive Officer. "This significant growth opportunity will enable us to capitalize on strong demand and deliver value for our existing and prospective customers. The efficiency and capability of the 747-8F further complements our longstanding focus on leading edge technology. Dedicated freighters – like those operated by our Atlas, Polar and Southern subsidiaries – will continue to be in demand as the global airfreight market, particularly the e-commerce and express sectors, continues to grow." With a maximum payload capacity of 137.7 metric tonnes (137,750 kg), the 747-8 Freighter allows operators to access 20% more payload capacity while using 16% less fuel compared to previous generation 747s. The jet also features 30% quieter engines. The 747-8s in this agreement will be the final four aircraft to roll off the production line in Everett, Washington.



The Atlas order will be the last production 747-8Fs

Photo: Boeing

Elliott Aviation acquires Atlanta-based MRO, The Maintenance Group

Elliott Aviation, a leader in business aviation services since 1936, has announced it has acquired Atlanta-based MRO, The Maintenance Group. The Maintenance Group has been successfully operating at the DeKalb-Peachtree Airport (PDK) in Atlanta, GA, for over 25 years. The acquisition of The Maintenance Group adds the following additional airframe service capabilities to Elliott Aviation's portfolio of qualifications: Gulfstream G550/G450/G-V/G-IV/G-III/G-280/G-200/G-150/G-100, Falcon 2000/50/50EX, and Bombardier Challenger 350/600/601/650. In addition to the aircraft maintenance capabilities, Elliott Aviation's current facilities in Moline (MLI), Des Moines (DSM), and Eden Prairie (FCM) are authorized service facilities for Beechjet 400A/Hawker 400XP, Hawker, King Air, and Premier. Elliott Aviation is also an authorized service center for Embraer Legacy 400/500, Phenom 100/300, and TBM. Additionally, they regularly utilize their approvals within their 145-repair station for Challenger 300/604/605, several Learjet models, and most models of Cessna Citation. The Maintenance Group is equipped to handle major airframe inspections, structural repairs & modifications, wing corrosion repair, DAR import/export airworthiness approvals, STC installation & certification projects, and pre-purchase inspections. This adds an additional 40,000+ ft² to Elliott Aviation's nationwide footprint.

Aeropeople wins multi-million-pound deal with Virgin Atlantic

Aeropeople Engineering Services, part of Aeropeople, has won a three-year multi-million-pound contract with Virgin Atlantic Airways that will see it manage cabin interior maintenance, repair and refurbishment across the airline's entire global fleet. The deal will see Aeropeople establish a team of around 80 people based at Heathrow where they will work in partnership with interiors service provider Cabinair, part of the SA Group, to provide an end-to-end service for the airline across its Boeing 787 and Airbus A330/A350 aircraft.



Virgin Atlantic Airbus A350
Photo: Aeropeople

Saab and **Rolls-Royce** are undertaking a joint research program into fibre-optic sensing technologies for aerospace propulsion systems. Fibre-optic sensing technologies have the potential to provide a novel solution that acquires multiple measurements such as strain, pressure and temperature along a single wire. Compared to existing technologies, this low-weight integrated solution could offer higher temperature and accuracy within the harsh operating environment of an engine. Such advanced measurement systems compliment the journey to the intelligent engine and enhanced data driven engine services. Known as Project FibreSense, this collaborative research program between Rolls-Royce and Saab will develop and demonstrate fibre-optic sensing technology for aerospace propulsion systems. The research will take place within the Eureka Network projects program as a joint initiative between the **Swedish Innovair** and the **British Aerospace Technology Institute** (ATI). Eureka is an international co-operation program supporting collaborative market-oriented research and development projects for innovative products, processes and services. This joint initiative between the U.K. and Sweden aims to develop project proposals which have strong market potential in these countries and globally.

APOC Aviation acquires A320 airframe for part-out

APOC Aviation is collaborating with Elbe Flugzeugwerke GmbH (EFW) and Switzerland based Eco-FLY in the first part-out project to take place at Rothenburg (EDBR) airport in Germany. The A320 airframe (MSN 1823) was acquired by APOC from a leading US-based investment company and last operated by SmartLynx. EFW will undertake the part-out for APOC and, together with Eco-FLY, build best practice for fuselage disassembly to evaluate recycling concepts for aircraft on an industrial scale at the airport in Rothenburg to establish a blue-print for future programmes. APOC's access to flexible and immediate funding, swiftly secured through private placement, facilitated this prime asset purchase. However, Jasper van den Boogaard, VP Aircraft Acquisition & Trading, says that stitching this complex deal together required commitment and great teamwork from all parties. "Despite the difficulties of travel, by staying airside we were able to assemble the different strings that made closing agreements feasible in this highly challenging market. We're proud to engage EFW and acknowledge the investment and energy required to bring a sustainable industry to a region where there is a pool of talented technicians eager to embrace new skills."



APOC Aviation acquires A320 airframe for part-out
Photo: APOC Aviation

GKN Aerospace, SAMC and AVIC Supply sign JV agreement for advanced aerostructures

COMAC subsidiary SAMC (Shanghai Aircraft Manufacturing Company), AVIC Supply and GKN Aerospace have signed a joint venture (JV) agreement for the manufacture of composite and metallic aerostructures in Jingjiang, Jiangsu Province, China. The state-of-the-art, 80,000 m² facility in Jingjiang will be GKN Aerospace's first aerostructures JV in China. It will offer COMAC, AVIC and Western customers the opportunity to access an important local supply of advanced aerostructures in the country. The JV builds on COMAC, AVIC and GKN Aerospace's proven track record in the global commercial aviation industry. Production is scheduled to begin in the fourth quarter of 2021. In addition to the JV facility, GKN Aerospace is in final preparations to open (April 2021) a separate 20,000 m² site in Jingjiang, focusing on the manufacture of transparencies for the commercial market.



Photo: Signing ceremony of the joint venture agreement between GKN Aerospace, SAMC and AVIC Supply

Bombardier finalizes acquisition and full ownership of aircraft service center in Berlin

Bombardier, the Canadian plane and train maker has announced it has completed the acquisition of all issued and outstanding shares that it did not currently own from Lufthansa Technik AG and ExecuJet Aviation Group AG, for Berlin Service Centre. The company can now establish a wholly owned service center in Berlin which will enable it to expand its global customer support footprint. "We welcome the highly talented employees of the Berlin Service Centre to the Bombardier service network," said Chris Debergh, Vice President, OEM Parts and Services, Bombardier. "We value their expertise and customer focus – as part of the Bombardier team, they will continue to provide best-in-class aircraft maintenance services to our valued operators of Bombardier business aircraft." The center is strategically located at Berlin Brandenburg Airport, the service center has been providing exceptional MRO services to Bombardier business aircraft customers since 1997. With more than 160,000 sq. ft. (15,000 sq. meters) of service capacity and 240 highly skilled employees on site, the service center provides customers with the highest-level maintenance and support for Bombardier's growing fleet of Learjet, Challenger and Global business jets based in Europe, Russia, Africa and the Middle East. Berlin Service Centre was the first in Europe to perform maintenance on Bombardier's flagship Global 7500 aircraft. The state-of-the-art service center has recently been modernized and has also transformed its shop floor to maximize efficiencies and streamline processes.



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Bamboo Airways selects AFI KLM E&M for component support

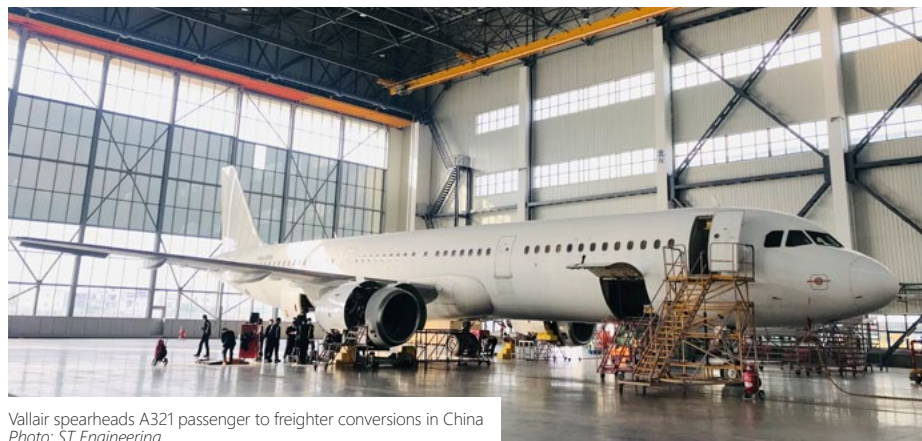
Bamboo Airways, the fast-growing new airline in Vietnam, has contracted Air France Industries KLM Engineering & Maintenance (AFI KLM E&M) to provide component support for its Boeing 787 fleet. The airline has opted for a long-term partnership and will enjoy access to high-performance services in component repair, logistics and spare parts access through an on-site stock based in Hanoi and several AFI KLM E&M pools located across the world. This long-term component contract, between Bamboo Airways and AFI KLM E&M covers component repair, spares pool access and logistics for a fleet of 14 aircraft. Moreover, Bamboo Airways becomes the 21st member to join the AFI KLM E&M 787 operators' community.



Bamboo Airways and AFI KLM E&M have signed a new component support contract
Photo: AFI KLM E&M

Vallair spearheads A321 passenger-to-freighter conversions in China

Vallair, the multi-faceted aviation business and launch customer of the Airbus A321 freighter, is pioneering the first passenger-to-freighter conversions to be undertaken in China. "We are excited to be embarking on the next phase of our A321 passenger-to-freighter conversion activity," says Gregoire Lebigot, CEO of Vallair. "MSN 1017 will be the first of nine aircraft scheduled to be converted in China, this is an important milestone." The work is being undertaken for Vallair by EFW at the ST Engineering facility in Guangzhou and the aircraft is planned for delivery in Q3 2021 to cargo-operator, SmartLynx. Vallair has previously partnered with EFW in Asia on the conversion of its inaugural A321F. This was undertaken at its Singapore facility and delivered to launch operator Qantas Freight in October. Recently, the company signed an MoU (Memorandum of Understanding) with U.S. operator GlobalX for ten conversions, and it has leased a further two to SmartLynx Malta. Lebigot goes on to say that the conversion of a younger aircraft variant will ensure that operators are flying with newer technologies and as the aircraft is still in production, few supply chain issues are anticipated. "Vallair is keen to introduce the A321F to the Chinese market as we see strong potential for the freighter in its active e-commerce sector. Our decision to commission the conversion process for a significant number of our lease portfolio 'in-country' demonstrates not only our confidence in the future implementation of this type, but also our commitment to local technical and engineering resources."



Vallair spearheads A321 passenger to freighter conversions in China
Photo: ST Engineering

APOC Aviation opens new warehouse facility in Singapore

As part of the on-going strategic plan to expand its global footprint, APOC Aviation, the innovative leasing, trading, aircraft component and part-out specialist, has announced the opening of its first facility outside Europe. The new APOC base in Singapore will hold stock of modern A320 Family and B737 components, providing the local market with faster access to their stock of spares inventory. Karim Grinate, Vice President – Component Sales at APOC Aviation comments: "An Asia Pacific base means our stock is in place ready to serve the region as Asian operators get their fleets flying again. We believe that through regional deployment, operating in local languages and within the same time zone, we can deliver the fastest and most efficient service to our customers."

AerCap signed financing transactions for approximately US\$8.3 billion in 2020

AerCap Holdings N.V. (AerCap) has announced its major business transactions during the full year and fourth quarter of 2020: during the full year 2020, AerCap signed financing transactions for approximately US\$8.3 billion. The company signed lease agreements for 97 aircraft, purchased 36 new aircraft, and executed sale transactions for 46 aircraft. During the fourth quarter of 2020 AerCap has signed financing transactions for approximately US\$2.8 billion. The company signed lease agreements for 31 aircraft, including nine wide-body aircraft and 22 narrow-body aircraft. AerCap purchased 18 aircraft, including 12 Airbus A320neo Family aircraft, one Boeing 787-9, and five Embraer E2s, and executed sale transactions for 12 aircraft, including two Airbus A320 Family aircraft, two Boeing 737NGs, two Boeing 737 Classics, two Boeing 757s, three Boeing 767-300ERs, and one Boeing 777-300 from AerCap's owned portfolio.



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The new ATR 72-600 will have significant maintenance and operational advantages.
Photo: ATR

ATR delivered its first purpose built regional ATR 72-600 Freighter to FedEx Express as part of the integrator's fleet renewal programme adding solutions to a growing regional cargo market, as **Keith Mwanalushi** finds.

Following a development period of just three years, the first ATR 72-600F was delivered to FedEx Express in December. This follows the 2017 signing of a firm order of 30 aircraft plus 20 options. "The project has been very demanding for all of our teams, especially given the challenging times we face but it was very rewarding," states Stefano Bortoli, Chief Executive Office of ATR during the virtual delivery press conference. Bortoli reiterates that every manufacturer is proud when it develops and delivers a brand-new aircraft and given the uniquely challenging year the industry and the world has faced. "Handing over to FedEx Express this very first ATR 72-600F is an exciting

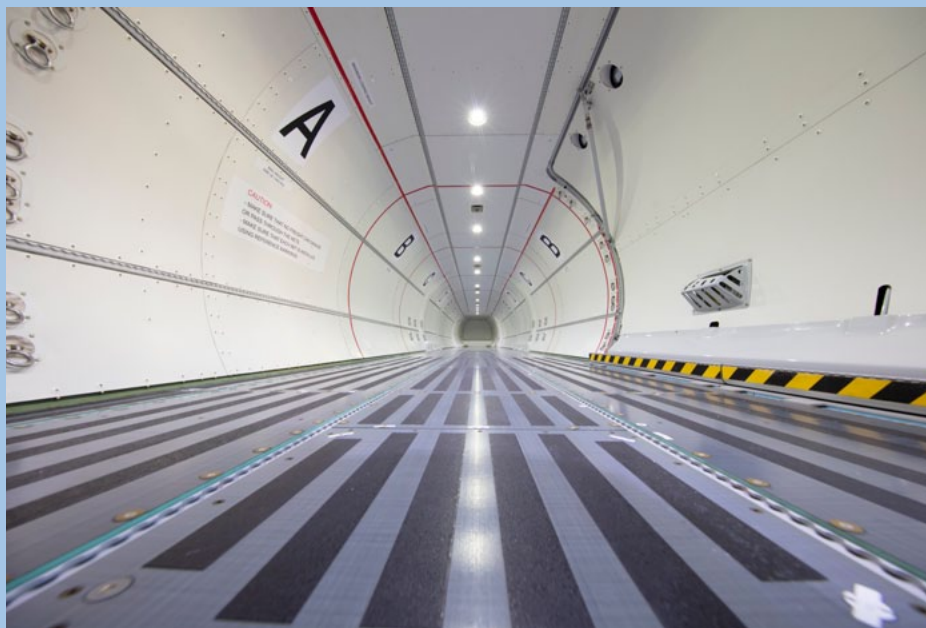
and rewarding moment for our whole team here in ATR."

With the need of this market in mind and with the vision of FedEx, Bortoli says ATR had developed the optimal regional freighter. "FedEx inputs have allowed us to engineer the best features for a freighter aircraft that meets the requirements of one of the most prominent operators in the world and we are sure that FedEx will reap the benefits of this brand-new purpose-built aircraft." He speaks.

The latest and third variant of the ATR family is equipped with a state-of-the-art cockpit for pilots, a brand-new windowless fuselage for optimised maintenance

and a wider cargo door for easier loading for handlers. "By integrating this new aircraft in the fleet FedEx are moving from our previous generation aircraft to the newest and most modern -600 series. A series that is more economical, more reliable and more environmentally responsible and above all, a series that comes with the most advanced technology that gives significant maintenance and operational advantages," Bortoli adds. FedEx are of course no stranger to ATR, with over 40 previous generation models in their existing fleet.

The ATR 72-600F has a 75m³ freight capacity. The purpose-built freighter's fuselage is a clean design, optimised for cargo



A new windowless fuselage for optimised maintenance.
Photo: ATR

and has been delivered by the turboprop manufacturer's Italian shareholder Leonardo, from their facilities in Naples. The aircraft's large cargo door facilitates the optimal loading of nine tonnes of payload and offers the option of carrying either bulk cargo or, when in Unit Load Device (ULD) mode, five 88" x 108" pallets or up to seven LD3 containers. Pilots can benefit from the latest upgradable Standard 3 avionics suite in the ATR 72-600, allowing the introduction of continuous cockpit innovations that improve efficiency.

Bortoli believes the delivery is timely especially with aircraft manufacturers being hit particularly hard following a very unusual year. "We have seen that e-commerce has continued to grow and the requirement to increase airfreight capacity to transport emergency goods is high. At ATR, we have responded to this request with quick conversion solutions from passenger to cargo and I am happy to say that eleven of our operators so far have benefitted from this and furthermore, IATA tells us that the available cargo capacity still does not meet demand. In the next 20 years we see a market of around 460 freighters, and these will be either converted or new."

The first delivery to FedEx will be operated by ASL Airlines Ireland, a FedEx ATR operator since 2000, as part of the FedEx

Express feeder fleet. Jorn Van De Plas, Senior Vice President Air Network and GTS Europe, FedEx Express says the newly delivered freighter marked an exciting new chapter for the FedEx Express feeder fleet. "This is an important step in our fleet renewal strategy, ensuring we remain the most flexible, reliable, and responsible network in the business.



ATR has developed significant product support.
Photo: ATR

"During what has been a difficult year both for businesses around the world and for communities, we are proud to remain at the heart of efforts to keep trade flowing and deliver goods across Europe. This new ATR feeder delivery lines up with our overall 'Reduce, Replace, Revolutionise' sustainability approach, replacing older, less efficient aircraft in a more sustainable way."

Partnerships and product support

Liebherr-Aerospace announced it had developed and manufactured the new integrated air management system on the newly delivered aircraft. Liebherr's footprint in the ATR family has now been expanded from pressurisation and anti-ice components to bleed and air management systems as well as ground cooling system.

Liebherr-Aerospace will also be responsible for product support of ATR's fleet under the ATR Global Maintenance Agreement (GMA). The two companies signed a 10-year commitment and Liebherr-Aerospace will be the exclusive product support provider for the new air management system worldwide. The agreement will be carried out by Liebherr-Aerospace's service stations in Toulouse (France), centre

of excellence for air management systems, Singapore and Saline, Michigan (USA). According to Liebherr, developments are well under way to provide ATR with cutting edge technology that includes predictive maintenance services. The goal is to reduce aircraft downtime, optimise spare parts inventory and increase reliability - all while reducing costs.

"We are honoured to have been selected by ATR back in 2016 to be the supplier of the new enhanced air management system for their fleet. This contract represents a major win for our organisation, because not only will we manufacture the system, but also, most importantly, we get to support it. Our focus on long-term customer satisfaction is what has earned us the repeat business of our valued customers, said Alex Vlieland, Chief Services Officer, Liebherr-Aerospace and Transportation SAS.

Market penetration

There are currently around 130 converted ATR freighter aircraft in operation, and according to ATR this represents one third of the global regional freighter fleet. The OEM says this new ATR 72-600F incorporates the benefits of this knowledge to provide FedEx with a freighter that conforms to needed requirements.

In the replacement market Bortoli sees the potential for the 72-600F in different geographies around the world and the po-



First ATR 72-600F delivery virtual press conference.

tential to more than double the total number of factory-built 72-600Fs.

Speaking virtually at the delivery press conference, Scot Struminger, EVP and CEO, Aviation at FedEx Express says following the single delivery in 2020 the company expects to be on its way to 30 firm orders over the next five years with the aim of receiving some six aircraft per year. "The first aircraft will be flying out of CDG to the Czech Republic, the second

airplane will come to the U.S and fly in the U.S and the third, fourth and fifth will service our Latin American region."

Bortoli confirms that in the last several months ATR have witnessed a surge of interest in the 72F and there are ongoing discussions with interested customers. He expresses confidence that by the end of 2021 ATR will secure at least one additional customer for the product.



“Handing over to FedEx Express this very first ATR 72-600F is an exciting and rewarding moment for our whole team here in ATR.”

Stefano Bortoli, CEO, ATR



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Managing spare capacity



Some operators have postponed MRO events by utilising spare engines.
Photo: Monty Rakusen's Studio

With the grounding of aircraft globally because of the coronavirus lockdown, **Keith Mwanalushi** asks industry experts about the state of the spare engine market and how airlines should be managing their engine support programmes.

Many are wondering if spare engine leasing can sustain itself as a business after several years of substantial growth. Considering, the current state of the spare engine market has been adversely affected by the extreme capacity drop that airlines have implemented out of necessity in response to the COVID pandemic. With an unimaginable fleet of parked aircraft, countless maintenance deferrals, and many premature and permanent retirements, it is incredibly challenging as an engine lessor to keep assets deployed admits Eddo Weijer, Vice President Engine Transactions at GA Telesis. GA Telesis immediately saw the economic impact on its utilisation, lease rates, and residual values – “We went from a very

tight market, with a shortage of spare engines and maintenance slots, to a heavily oversupplied market. It is a normal and typical reaction to pull back, and most companies need to first redeploy or monetise the off-lease inventory before reinvesting and growing their business. Yet, engines are still the most significant driver for an airline’s maintenance



Eddo Weijer, Vice President
Engine Transactions, GA Telesis

costs, and the market will evolve and improve as it has in the past. Thus, for those with a long-term view, access to real market data, and long-term capital, this could be a once-in-a-decade opportunity to make smart investments,” Weijer tells *AviTrader MRO*.

The effects of the coronavirus pandemic have depleted airline liquidity to historically critical levels, adding the additional

“We remain optimistic about the 2021 outlook for the spare engine market.”

Chris Watkins, General Manager, Kellstrom Aerospace Asset Management



It looks increasingly that airlines are choosing to enter spare engine contracts.
Photo: Patrick Delapierre

challenge of increased credit risk to the equation. That said, at Kellstrom Aerospace they have been able to support airline customers with innovative solutions to keep them flying at a lower cost during such a turbulent time. “We have remained dynamic during this time, providing so-

lutions such as sophisticated power-by-the-hour agreements, bespoke financing arrangements, and sunset fleet monetisation solutions,” says Chris Watkins, General Manager – Kellstrom Aerospace Asset Management. As passenger demand begins to return in 2021, Watkins expects certain cash conservation strategies, such as maintenance avoidance, to drive demand resurgence for green-time engines. Additionally, he mentions that Kellstrom’s MRO subsidiary, Vortex Aviation, is providing its customers with inexpensive maintenance solutions to maximise time in between major maintenance events as airlines look to push CAPEX out further. “We remain optimistic about the 2021 outlook for the spare engine market and look forward to continuing to support our core airline customers with creative solutions to improve their financial performance,” Watkins indicates.

The current and near-term market will remain challenging for everyone with available spares. Weijer reminds that engine leasing is based on relationships and un-

derstanding the operators needs which means that presenting the best alternatives on a case-by-case basis will ultimately lead to success. He says in this environment, it is essential to work together with your customer to help them provide a cost-saving solution. “This sometimes



Chris Watkins, GM – Kellstrom Aerospace Asset Management



Kevin Poulin, Director, Engine Purchasing and Sales, StandardAero



Anthony Spaulding Executive Vice President Magellan Aviation Group

means lowering the price or offering flexible pricing solutions until the situation improves. It can also mean finding exchange solutions to avoid maintenance or getting creative and source alternative engines or modules. GA Telesis is well-positioned in the market through the GA Telesis Eco-system. We can offer flexible leasing or exchange solutions together with maintenance financing solutions."

The reduction in activity has led to a general fall in engine MRO activity, which has therefore reduced the need for rental engine assets, observes Kevin Poulin, Director, Engine Purchasing and Sales at StandardAero's Airlines and Fleets division. "Conversely, some operators have sought to postpone MRO events by utilising spare engine assets, both those assets already in their inventories as well as third-party assets obtained from lessors or brokers. In terms of engine supply, the pandemic led to several companies selling off spare engine assets to raise capital, and the accelerated retirement of aircraft is also expected to lead to additional engine assets becoming available. In the short term, however, the uncertainty in the marketplace may have led some to third-party asset owners postponing teardowns and MRO events to mitigate their financial exposure, thereby affecting engine supply," Poulin highlights.

Tony Spaulding, Executive Vice President at Magellan Aviation Group advises that airlines will need to plan accordingly to balance both operational readiness and maintenance expenses to meet that de-

mand as it rises. He explains that this planing can be managed in a variety of ways: "One of which is the leasing of green-time engines, which is only a short-term solution that leaves unserviceable assets that will still need maintenance. Secondly, engine exchanges could satisfy operational readiness on unserviceable assets but, serviceable exchange assets will be competing with lease candidates as well." Finally, Spaulding says it will be essential to work with an MRO provider well in advance to jointly develop a plan to triage unserviceable assets from quick-turn repairs to full restoration SV to ensure slot availability and realistic turn-times. "These solutions, of course, are not a one size fits all prescription as passenger demand will return



Brian R. Hole, President Willis Lease Finance Corporation

differently for each airline and region but, the point is that airlines ensure engines are scheduled for an MRO visit as far in advance as possible. Yes, an obvious summary statement that needs serious review, alongside adding seat capacity, especially in light of smaller staff at every airline responsible for these critical decisions."

The pandemic's effect on fleet utilisation has certainly impacted the timing of demand, comments Brian R. Hole President at Willis Lease Finance Corporation – "But in our view the overall dynamic hasn't changed. The average age of the modern narrowbody fleet is very young, too young to retire en masse, and the engines on those aircraft will need to be overhauled in the next few years. Airlines will have even less capital available

to pay for those shop visits, and thus we expect there to be demand for engines to cover shop visits and to support shop visit deferrals or outright avoidance."

At Willis Lease they believe the question of demand is not if, but when, and Hole sees that wise airlines will be working now to develop engine support programmes such as those provided by Willis Lease that will guarantee engine availability to cover down-stream removals at a reasonable price.

Mike Cazaz, CEO and President at Werner Aero Services feels the demand for engines is non-existent currently. He says with airlines flying at less than 50% capacity and many aircraft stored, airlines do not utilise engines enough to create demand. "When they do need one, they will swap an engine with a stored aircraft. The cashflow issue is another reason why the demand for engines is almost none, as airlines are trying to preserve cash and will ground an aircraft, if needed, instead of spending money on engines. We do see small demand from the freight operators for widebody engines." Cazaz observes that the current supply of engines is much greater than anything seen in the last five to six years – "There is probably over supply at this point of engines in the market, mainly for narrow body aircraft."

Aircraft and engine phase-out strategies

Today's market has created an opportunity for many to review and determine whether existing business and processes offer the



Mike Cazaz, CEO at Werner Aero Services

best and most cost-effective solution. As Weijer from GA Telesis indicates, the current market is an excellent opportunity to look for cost-effective options and outside the box solutions.

"Selling an asset in a distressed market is difficult and frequently results in a book loss," Weijer notes. He explains that if an asset continues to generate cash flow, then immediate liquidation or phase-out may not be needed. "The industry is resilient and always comes back. Airlines could consider structuring a sale through a short-term sale-and-leaseback. There are still lessors looking to deploy capital, allowing the airline to boost its balance sheet and weather the storm. Like lessors, airlines too can take advantage of locking in long-term contracts at distressed price levels. This is particularly true for used aircraft, which are trading below intrinsic values today."

Kellstrom has been successful in assisting airlines develop strategies to accelerate retirements to bring down the total cost of operation. "The end goal is to invest as little as possible in these aircraft between now and the eventual phase-out while maximising the utilisation," says Watkins. He adds that power-by-the-hour engine leasing provides a flexible solution to operators so that they can remain operating while reducing maintenance costs as the retirement plan is implemented. "We have also partnered with major airlines, lessors, and MROs to provide sunset fleet solutions such as aircraft engine exchanges, inventory monetisation, surplus parts supply, component leasing, and fully customised retirement plans. All of these options help to reduce maintenance costs at the end of an aircraft's life, ultimately reducing the strain on working capital as airlines need time to boost their cash reserves once again."

Should an airline decide to phase out a sub-fleet of an aircraft type, Spaulding from Magellan reckons they need to look at ways of monetising the phased-out assets. He says the obvious is, of course, "what engines still have LLP and performance remaining that will be spare engines but, the key objective of this exercise is to look at what engines can be self-consumed to lower the cost of future SV's."

"In terms of engine supply, the pandemic led to several companies selling off spare engine assets to raise capital."

Kevin Poulin, Director, Engine Purchasing and Sales, StandardAero



The reduction in activity has led to a general fall in engine MRO activity.
Photo: StandardAero

Hole from Willis Lease emphasises the importance of delivering value for airlines in times like these. He highlights solutions by Willis Lease that can give operators access to a nearly \$2 billion portfolio of modern engines, liquidity to take assets off operator balance sheets and technical management through the subsidiary Willis Asset Management, which currently employs dozens of powerplant engineers managing roughly 800 engines for OEMs, aircraft lessors and airlines worldwide, that can help significantly reduce engine maintenance expense (or avoid it altogether). "We supply spare parts, through our subsidiary Willis Aeronautical Services, that will decrease the cost of engine maintenance that can't be avoided. We pride ourselves on listening to our customer's needs and then leveraging our capabilities as required to

address those needs and deliver maximum value," says Hole.

At Willis Lease they have also developed solutions to help airlines phase out aircraft fleets. "This programme provides liquidity to our customer by purchasing the aircraft targeted for phase out today and leasing those assets back to the customer during the phase out period." Hole further explains that the technical and asset management team then works closely with the airline's team to monitor engine performance and plan for engine removals. "If an engine removal is required during the phase out period, we simply provide a replacement engine to the airline at no incremental cost under the aircraft lease. This programme has saved airlines in Asia, Europe and the Americas millions of dollars in engine main-



Airlines should look at ways of monetising the phased-out assets.
Photo: Rakusen KLM UK E

tenance expense that otherwise would have been poured into assets set for retirement.”

At Werner Aero Services, Cazaz says they have the capacity to market and maximise the value of the assets. “We will evaluate the assets and propose the best way to phase-out, which could be through partnership with Werner to tear down the asset and sell them as individuals over a period of time.”

Ensuring spare engine availability

It looks increasingly that airlines are choosing to enter spare engine contracts for engines on a ‘just in time’ basis rather than keeping a portfolio of underutilised assets. And airlines will be looking for guaranteed availability of spare engines for both planned, and unplanned removals. From the perspective of a spare engine provider, Poulin feels this therefore places an emphasis both on the size of the available inventory (including through partners), and on the efficient management of one’s engine pool, in terms of engine returns, turnaround times and shipping.

Magellan’s Spaulding points out that this practice was satisfactory during the good times before this downturn as airlines transferred the risk to the OEM or MRO provider when there were several players in the market with a stable supply of engine assets to step in support the OEM and independent MROs with lease assets for SV support. “To overcome the expected eventual scarcity in lease-engine availability or shop capacity, airlines and MROs will need to plan now. This way, the entire supply chain can prepare to support the world fleet getting back in the air, which, of course, every one of us who is reading this wants to see for our industry in short order.”

At Kellstrom, they have recognised the need for airlines to maximise the efficiency of all their resources as they strive to reduce monthly overhead. Additionally, Watkins says the uncertainty surrounding external factors that have a direct effect on passenger demand has become increasingly difficult from a forecasting perspective. “To support our client base,

Kellstrom has been arranging power-by-the-hour engine leases to reduce operational costs when passenger demand softens. We strive to remain adaptable to the current market conditions to meet the needs of our airline customers.”

Most airlines maintain a spare ratio of 8-10% according to Weijer. He says most lessors can offer a single spare solution, but when it concerns a cost-saving-programme a partner able to provide an OEM-style solution is needed. He concludes: “After-market suppliers like GA Telesis are well equipped to offer these solutions. Most programmes are structured through GTA agreements, and beforehand each party has quantified their expectations and requirements on timing, numbers of engines needed, and the minimum technical requirements of the required spares. These programmes allow the supplier or lessor to use their spares and source the market for suitable replacements, providing the airline with a cost-effective resolution.”

**ALL
YOU NEED
IS LESS**

**ANYTIME. ANYWHERE.
IT'S THAT SIMPLE.**



Airlines will need to look closely at the fleet mix.
Photo: Lufthansa Technik

Aircraft fleet planning will be crucial

Fleet decisions will ultimately have an impact on airline operating costs particularly in the aviation recovery phase. **Keith Mwanalushi** examines the market for MRO solutions amid the current shifting trends.

Over the last several months aircraft operators have been faced with the conundrum of trying to keep their fleets flying without the usual load of passengers required to maintain revenue flows. And the effects of the COVID-19 pandemic have seen the rate of new deliveries fall and altered retirement thresholds.

To get back in the sky following the COVID crisis, several airlines may need to pull aircraft from storage and this could place a high demand for MRO services, but clearly not all aircraft will return to service at the same time, or return at all.

Embraer published a forecast that sees the number of regional jets increasing over the next several years. Pastor Lopez, President, MRO Services Group, GA Telesis, LLC says the current predictions are in favour of single-aisle aircraft as cross-country travel will be slower to recover from the implica-

tions of COVID-19. "The utilisation of regional jets aligns with the current aircraft load factor all airlines are experiencing. However, the limiting factor to a substantial expansion of RJ usage in the United States is the scope clause major carriers are bound by. As such, we are bullish on the 737 NG and A320 as these models fit well within the scope of GA Telesis capabilities."

At AAR Corp, they have been working very closely with airline partners in returning their stored aircraft to service and the demand has been manageable, reports Brian Sartain, SVP Repair and Engineering at AAR. "In fact, many of these storage programmes helped us preserve jobs for our mechanics through the worst of the crisis. I am aware that some storage facilities are suffering from a shortage of mechanics due to COVID related issues, but AAR has taken extra precautions to insure we

avoid that. We are seeing the older fleets of aircraft like 737-700 and A320CEO's being replaced by the 737MAX and in some cases E-Jets on thin routes and we have in-



Brian Sartain, SVP Repair and Engineering at AAR.



There is confidence in the market for airframe works on types like the 737NGs.
Photo: Patrick Delapierre

sured that we have those capabilities. As for older widebodies, many are transitioning to cargo service and we have seen an uptick in volume with those customers."

Mike Cazaz, President and CEO at Werner Aero Services feels much will depend on how the aircraft have been stored. He says

taking aircraft out of long-term storage does require substantial amount of work, per OEM procedures. "Typically, engines are removed off the aircraft during long term storage and properly stored, so that won't be an issue. The issue is to verify that the airframe is in check. As an aircraft gets older, the material gets older and the wear and tear is tougher with the older airframe as supposed to a younger aircraft."

the part out market is very flat, effectively because nobody needs the spares."

At the Montpellier facility, Vallair offers all levels of maintenance and modification on the A320, B737 and the ATR and covers the aircraft cabin reconfiguration and exterior painting.



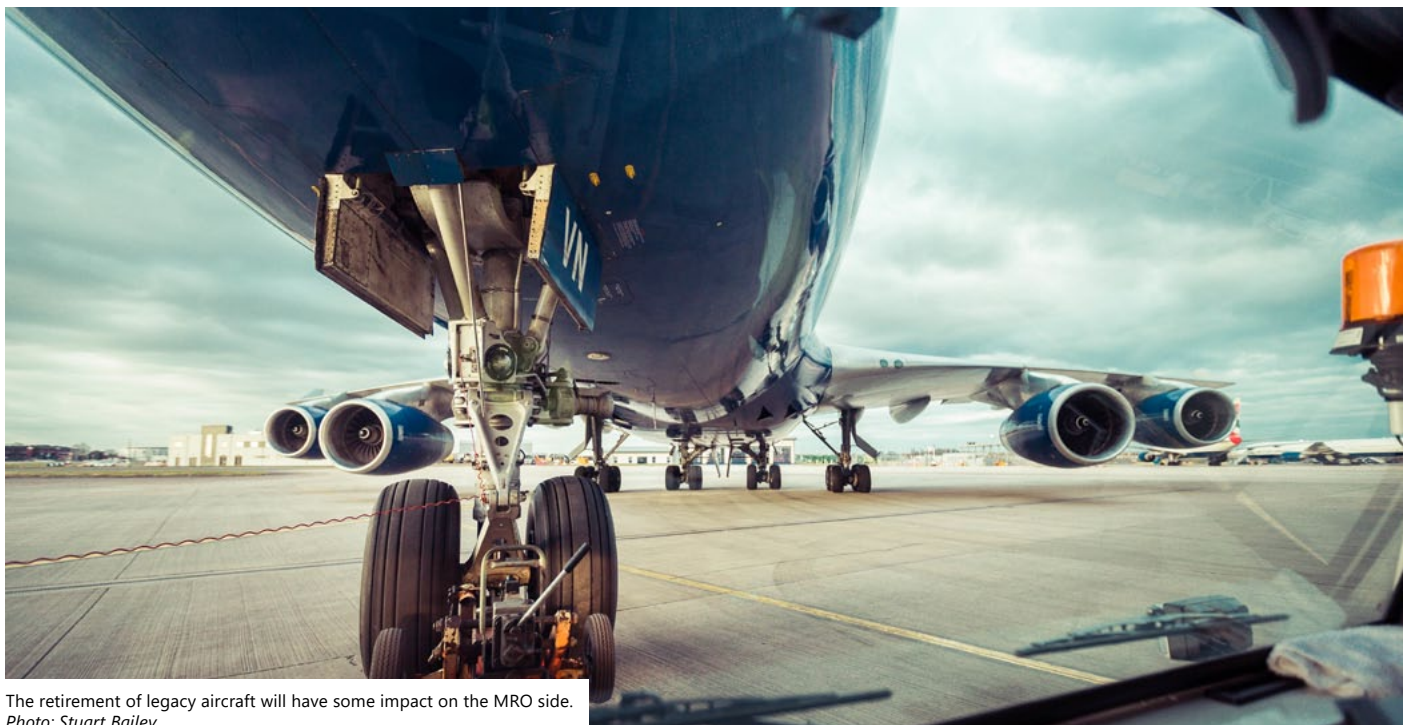
Mike Cazaz ,CEO at Werner Aero Services

At the Vallair MRO facility in Montpellier, South of France, they have seen an uptick in demand for storage and aircraft preservation. Vallair is active in the storage business with around 15 to 20 aircraft in storage in Montpellier and a similar number at the Chateauroux facility.

Asked if there could be a rush for services on older mature fleets post COVID, Malcolm Chandler, Head of Commercial and Marketing at Vallair believes, possibly not – "At the moment no, with the new fleets of about 10 years and younger we are starting to see some more traction. Anything older than the 10 to 12-year stage is looking at parking for longer term and potential part out. And now



Malcolm Chandler, Head of Commercial and Marketing at Vallair



The retirement of legacy aircraft will have some impact on the MRO side.
Photo: Stuart Bailey

Sajedah Rustom, CEO at AJW Group echoes similar sentiments saying they expect airlines to prioritise their younger fleet, particularly their smaller aircraft as operating costs will be lower.

The return of the older and larger aircraft will take a longer period and its likely only a portion of these aircraft will be brought back into service. Rustom explains that the majority of the effort will be at a line maintenance level, but as specific aircraft are brought back, component failures on start-up will lead to demand for exchanges to expedite the process, and an increase in demand for inspection/test and minor repair as units pull from parked aircraft are recertified to calibrate airworthiness.

“We do expect components requiring more comprehensive [and therefore expensive] repairs to be put on hold, or even scrapped and cannibalised to support lower cost repair on similar components,” says Rustom. “Nevertheless, we at AJW monitor the market diligently with endless digital tools driven by market intelligence that allow us to forecast and align our sales and operations plan along with changes in the industry. For instance, our new product introduction roadmap at AJW Technique considers platform capacity planning into 2021 and beyond, for us to prioritise development of in-house repair capabilities to support parts that are most in demand. It is an iterative and agile process that we run in collaboration with our top loyal customers. In the last

six months, despite the pandemic, we have implemented 37 new capabilities including the 787 slides programme which has seen tremendous success.”

Legacy fleets and adapting to a changing market

The pandemic has widely put an end to operations of some legacy aircraft like the passenger 747, with airlines replacing these with newer generation types which is a welcome boost for aircraft OEMs and their suppliers but will surely impact the various segments of the MRO market.



Sajedah Rustom, CEO at AJW Group

“Without technology, MROs would not be able to manage a healthy and sustainable cashflow during these times.”

Sajedah Rustom, CEO at AJW Group

INTEGRATED MRO SOLUTIONS

Rustom agrees that the retirement of some legacy aircraft such as the 747 will have major impacts on the supply chain, including the MROs. However, similarly to OEMs and other suppliers, she says MROs will need to shift their in-house capabilities and adjust to the changing market. AJW Technique's core capabilities are focuses mostly on narrowbody and twin-engine widebody (A330 and Boeing 767).

Rustom adds: "Whilst we expect a future reduction in overall 767 work for example, the A330 market continues to be strong. Even on the 767, we are seeing an upside in the freighter market, which will offset the reduction in the passenger fleet to some extent. So as the overall market recovers, we are well positioned to support the aircraft expected to be flying first, and do not expect to see a significant impact in the overall mix. Most of our technicians have 25 plus years of experience in the aviation market; they hold tribal knowledge that permits AJW to be flexible with any shift the market is making."

Lopez from GA Telesis also sees a slight impact on the MRO side because of the exit of the 747 but he also sees parked 747 freighters re-entering service. "We believe airlines will not immediately replace parked legacy aircraft as the demand for flying will remain below the pre-pandemic levels. Thus, our belief, reinforced by consulting firms, is that aircraft OEMs will be forced to reduce production rates. Compounding the lack of travel is the price of oil. If oil prices remain low, airlines do not have an economic incentive to invest in new, more efficient aircraft.

"We also believe aircraft OEM suppliers will be under pressure to reduce costs and boost other revenue streams due to the reduction of new aircraft production rates. This will place them in direct competition with independent MROs. At GA Telesis, we have worked on an OEM-alignment strategy for many years. So, in this respect, we are close to OEMs. We can deliver OEM quality at a sensible cost to our airline customers," Lopez states.

Mike Cazaz anticipates that older airframes such as the B747 will end up having more supply of spare parts in the aftermarket which will end up competing with the cost



MRO landing gear services.
Photo: GA Telesis

of the repair of the components. He says those who still operate these aircraft will find that in most cases it will be cheaper and quicker to buy a serviceable unit off the market, than to send their unit for an MRO visit – "That will significantly decrease the demand for repairs and overhauls of spare parts and engines for these legacy aircraft."

The impact for AAR has been two-fold, in the airframe market they have focused on domestic airframes almost exclusively and most of their passenger-carrying customers utilise AAR for narrow-body maintenance. "We have seen a quick recovery there and the retirement of airframes like the 767 and 747 from passenger service has led to increased cargo fleets that we can service here in the States. In the engine market, the retirement of these airframes has led to greater availability of

“Aircraft OEM suppliers will be under pressure to reduce costs and boost other revenue streams.”

Pastor Lopez, President, MRO Services Group, GA Telesis

Used Serviceable Material (USM) and as the largest supplier of these parts in the Americas, this has been a great opportunity for us to support our customers still flying those airframes whether in the passenger or cargo markets," Sartain mentions.

Vallair have placed some cargo aircraft with operators during the pandemic. They took two aircraft off lease earlier in the year from South America and have now been placed with operators. Obviously, the big news from Vallair these days is the A321 cargo conversion programme and there have been some significant orders coming in.

In October last year, Vallair signed an agreement with SmartLynx to lease two newly converted A321-200 freighters. This was quickly followed by the signing an



Alya Al Qalam AL Yafie, Manager Development Engineering with Oman Air

LoI (Letter of Intent) with US based Global Crossing Airlines Inc. (GlobalX) to lease ten converted A321 freighter aircraft in the most significant deal in the history of the A321F. More recently, Vallair announced the first A321 passenger to freighter conversions to be undertaken in China.

Integration of MRO solutions through technology

Alya Al Qalam AL Yafie, Manager Development Engineering with Oman Air sees a number of disruptive technologies which could reshape and enhance MRO solutions, one of them being Blockchain which is one of the leading technologies that can be used to improve record-keeping and enable faster lease turnover while maintaining a high standard of data privacy – “Another good example of these applications is data analytics and machine learning technology which allows data collection and analysis to recognise patterns and make predictions that can effectively take the variability out of processes. Predictive maintenance is a powerful tool for MRO’s as it helps to predict maintenance needs in advance to better anticipate component failure and reduce unexpected maintenance costs.”

At Swiss AviationSoftware (Swiss-AS) they have not slowed down throughout 2020 in terms of development according to Sales Representative, Chris Clements. “We have been able to maintain our development roadmap with little or no adjustment. AMOS has a full range of functions and technology that enables our customers to maintain not only the stringent safety and quality standards required of them, but with our mobile options the users can work whilst adhering to the social distancing issues we have to work with today.”

Swiss-AS have made some advances in AMOS to enable customers to work paperless, using AMOSmobile/EXEC and AMOSmobile/STORES and exchange work package’s electronically are all benefits that can improve the execution of maintenance regardless of the age of the aircraft, Clements clarifies. “We have seen an increase in requests coming from both within the AMOS community and in pre-sales to help customers shape their digital transformation – including the introduction of paperless and digital processes based on AMOS. However, despite the industry interest it is not an overnight transformation.”

In today’s world, a digitised MRO has not only become an enabler for increased efficiencies and forecasted work assessment; it has become a requirement to keep MROs profitable post-COVID 19, as Rustom from AJW notes. She says predictive maintenance initiated by aggregated data modelling for estimated removals and aircraft health monitoring systems implemented by airframe OEMs has massively changed the game and continues to provide benefits to MROs and other vendors across the chain.

“All MROs have had to revisit their replenishment cycles and align with a lower demand for repairs especially for older platforms due to low utilisation,” states Rustom.

“Access to market intelligence and integrated customer solutions has allowed us to assess whether parts require repair or if used serviceable material provides the customer with a more competitive proposition. Without technology, MROs would not be able to manage a healthy and sustainable cashflow during these times. Other technologies such as RFID, augmented reality, 3D printing, enables faster turnaround time and transparency with customers, making the MRO a differentiator in the market.”

The pandemic has pushed the need for digital solutions as cost structures have quickly become too heavy to support a lower volume of work. As Rustom points out, it has been extremely important at AJW to fast track their digital roadmap and automate as much of the workflow as possible with digital solutions that have not only helped to manage work inflow, resource allocation and inventory levels, but also streamline day-to-day activities, eliminate waste and maximise component touch-time – providing benefits to both the company and customers.



Chris Clements, Sales Representative at Swiss-AS



In the hot seat.....



David Rushe

Director – Sales & Marketing, EMEA
Magellan Aviation Group

What attracted you to this business?

Any family member, friend, or (especially) my wife will say that I have been fascinated by aviation as a child and as an adult and it is hard to shut me up when I get talking. After moving from Dublin to London, I joined the IBA Group in 2008 and studied the EASA Part 66 Approvals. I have been at Magellan since early 2014 and it has been great to be part of the growth and diversification of the company since then. I recently moved back to Dublin and I am looking forward to being able to spend more time at our EMEA HQ in Shannon.

What does a typical day's work entail in your job?

Let me give an outline of the day's work pre-COVID 19, in the hope that I and anyone reading this, sees a return to normal life soon. Despite Magellan's expansion in recent years, the structure and fundamentals of the business have remained sound. Given my responsibility to lead the growth of the business in the EMEA region, travel is a large and necessary part of my role. Magellan's GM, Ben Murphy, spent a lot of time cultivating Magellan's presence in Africa and the Middle East, laying the foundations for a thriving area of the business. The other key area of my role is asset origination to help grow our engine and airframe USM and engine leasing businesses. Engine and airframe assets are regularly under review and I am actively involved in the evaluation process for EMEA acquisitions as well as pre-purchase aircraft inspections, supported by other members of the asset origination team. With bases in Charlotte, NC, Ireland and Singapore, our daily sales activities cover all time zones, and we have regular internal meetings to ensure alignment on sales and marketing campaigns, pricing, repairs, quality issues, and budgets. Asset managers have a responsibility to monitor budgets for programmes and will take an active role in supporting the sales team with pricing. I am a familiar face at industry conferences and have the pleasure of participating as a speaker on occasion. Outside of this, I am an ISTAT certified appraiser and regularly attend associated events.



Briefly, give us an overview of Magellan's activities in MRO and the aftermarket?

For over 20 years, Magellan has been supporting airline, MRO, and lessor customers with spare engines and used serviceable material (USM) and some of the founding partners are still steering the organisation. Outside of our main bases, Magellan has a presence in the UK, Germany, Lithuania, China, and Israel. Marubeni's global network also provides support in these and other regions, notably the Middle East and East Africa, which has been helpful in my role. Magellan's airframe USM business is focused on Airbus, Boeing, Bombardier, Embraer, and ATR types. Recent years have seen us move towards post-2002 build assets as global fleet trends migrate to younger aircraft. Indeed, 2019 saw unprecedented levels of asset acquisition activity. Our engine lease pool has seen exponential growth and now stands at 65+ engines. The genesis of the lease pool was investment in turboprop and regional jet aircraft, so it historically had a sub-70 seat bias. Recent years have seen a diversification of the pool to include CF34-8, CFM56, V2500, and PW4000 engines. Lease pool utilisation has been impacted by COVID-19 fleet trends in 2020 but we are well-positioned to support our customers with their spare engine needs as aircraft are reactivated and fleet strategies are firmed up in 2021. We have dedicated repair management teams in North America and Europe to ensure high-demand parts are available in recertified condition. 2020 has brought inconsistency to the inherent seasonality of demand for spare parts, but Magellan has kept the lines of communication open with our customers to ensure we are meeting their expectations with repair shop lead-times.

How has Covid-19 affected the business?

Our main streams of business have been adversely impacted by the impact of COVID-19 on the global industry. MROs and airlines are our principal customers and with utilisation levels down across the industry, USM consumption is significantly below 2019 levels. As airlines continue to reassess and consolidate their fleets, spare engine oversupply is evident across all types. However, we are seeing signs of life in demand for our PW100 and CF34-8 models. We would expect an uptick in demand for our green-time mid-high thrust CFM56-5B/7B and V2500-A5 engines into 2021. The wide-body market has been more heavily impacted by COVID-19 and Magellan does not have much exposure in this sector. We have a historical affiliation with the PW4000 model, which is bearing fruit recently given the buoyant demand for widebody freighters.

The continued growth of Magellan Expendables, Magellan's subsidiary C&E business, has been a welcome boon. The expendables business has benefitted from a steady consumption of single-use material during storage checks. Magellan Expendables has acquired a diverse range of material from the market in recent years and the full integration of our C&E stock on Magellan's inventory management system has given our customers greater visibility. Internally, Magellan has thankfully remained open for business throughout the pandemic and most employees were able to work within local restrictions. Remote working was a relatively seamless transition for me given the amount of time I am on the road.

Do you see any challenges in valuing assets due to the market downturn?

The depression in demand across almost all aircraft models has

“In 3 to 6 months, we will hopefully have a more definitive picture of the fleet plans for the major operators and increased heavy checks.”



led to value revision by most established appraisal firms. Normally, it is best policy to avoid knee-jerk reactions to the impact of market conditions asset values, however, some types have seen a permanent step-change in residual values. There was downward pressure on A319 and 737-700 models prior to the pandemic and these are the narrowbody models that we would expect to be offered for teardown in greater numbers in 2021. Thankfully, there is a high degree of crossover with higher capacity models so USM demand will not reflect whole asset value trends. On the wide-

we will hopefully have a more definitive picture of the fleet plans for the major operators and increased heavy checks. We anticipate accelerated demand for Tier 1 & 2 airframe parts at this point, particularly the A320ceo/737NG segment. Pricing will recover somewhat with A320neo/737 MAX-compatible parts fetching premiums versus 2019 levels. Magellan's buying activity has been purely focused on younger build assets where USM demand is most buoyant and scrap risk is lowest. Indeed, we have consigned younger A320ceo airframes recently where there is a notable degree of crossover with the A320neo.



What is your comment on recent quality issues, updates, and directives on disassembling?

2020 has been a busy year for Magellan's Quality Division and Brexit has presented some ambiguities on the shipment of aircraft parts as we have historically disassembled most EU-acquired assets in the UK. There is uncertainty as to how this will evolve in the future, given EASA/CAA realignment and customs issues.

Magellan recently secured ASA-100 accreditation as driven by FAA Advisory Circular 00-56 - an emphasis on impartiality, competence and reliability in the handling, storage, and distribution of aircraft parts.

Magellan's team in Asia has been working with our customers in China to seek clarity on recent directives from the CAAC relating to the purchase of teardown airframe parts from outside of CAAC-approved teardown facilities on the Chinese mainland. This directive could create challenges given Magellan's established relationships with Chinese end-users.

body side, it is unlikely that oversupply trends on A330-200 and 777-200/ER models will change. USM values are declining.

Looking at pure part-out valuations, there are certainly challenges at present. As market demand remains sluggish, USM material requests are less frequent, therefore it is difficult for Magellan's inventory analysts to get an accurate feel for true USM values. Whilst values for certain components decrease in a soft market, repair and fixed cost inputs remain static and will increase as a percentage of overall fair market value. Market downturns also increase the propensity for our customers to look for exchanges for components rather than buy outright. This is evident at present, particularly as lessors transition aircraft.

Notably, engine LLP pro-rata rates and high-value component values across narrow body platforms have remained solid, despite some aggressive OEM discounting on new parts.

Do you foresee oversupply in the spare parts market and what implications can you anticipate because of reduced utilisation across the market?

There is oversupply at present on the airframe side, given the volume of stored airframes, with or without engines. In 3-6 months,

2020 was an extremely difficult year across the board. What is your outlook for 2021?

With the news of more harmonised air traffic arrangements between major markets and vaccine distribution underway, there are reasons for cautious optimism going into 2021. From Magellan's perspective, we are confident in our USM and leasing product mix. Whilst our acquisition activity was much quieter in 2020 compared to 2019, we were still able to complete transactions amidst hostile market conditions. Magellan also secured several assets on consignment. We have expanded our consignment relationships with Boeing, as well as many leading lessors, facilitating expansion of our A320 and A320 inventory.

To finish on a positive, Magellan has historically performed well in emerging regions and such markets will be key areas of expansion in the coming years. With the support of Marubeni, we are well placed to broaden our scope of services and engage with new customers. We have also expanded our commercial, quality, and logistics teams including a new customs division, so we are well equipped organisationally for the year ahead and we look forward to meeting our customers and suppliers when we are all ready to do so.

»»»»→ on the move



Paul Moats

Stevens Aerospace and Defense Systems (Stevens) has appointed **Paul Moats** to Maintenance Director with the company's AOG division. Moats joined Stevens in early 2020 as a second shift supervisor at the Greenville, S.C. (GYH) facility, co-located with the company headquarters. Prior to joining Stevens, Moats spent 26 years at Textron Aviation working Citations, Hawkers and other airframes in many positions including A&P mechanic, scheduler, AOG Team lead and Field Service Engineer.



Harel Locker

Photo: Haim Zach

Harel Locker, Chairman of Israel Aerospace Industries (IAI) Board of Directors, has announced his intention to step down in 90 days. Locker assumed the position in September 2017. During his tenure, IAI underwent significant changes to its business structure. The company improved its bottom lines and for the first time passed the US\$4 billion sales threshold. In addition, for two consecutive years IAI presented its largest profits since the company was established.



David Settergren



Jay Aiken

in aircraft and engine aftermarket commercial MRO sales, leasing, and maintenance. Before joining SR Technics, Aiken held numerous roles of increasing responsibilities with Aero Capital Solutions, where he was responsible for sales and leasing in the Americas, and StandardAero, where he led the Americas engine MRO sales team. Prior to that, he held a range of posts at Delta Airlines including TechOps MRO sales, maintenance supervision, project management, flight operations, and supply chain.



Nigel Patterson

position of Head of Services Sales at Airbus North America.

Certified Aviation Services (CAS) has released, that **Nigel Patterson** has agreed to join its CAS Team as Vice President of Sales and Contracts. As newly appointed VP of Sales and Contracts, Patterson will manage and direct all sales and contract operations and functions to achieve volume and profit goals. Responsibilities will include managing key customer relationships and participate in closing strategic opportunities. Patterson brings with him over 32 years of result-oriented aircraft OEM experience where he recently occupied the

SR Technics has announced new appointments of top business development and commercial executives, reporting directly to Senior Vice President **Caroline Vandedrinck**. **David Settergren** started with SR Technics as Vice President Asia in mid-November 2020. A seasoned aviation professional, Settergren has over 25 years of experience in the Asia Pacific/Oceania region and had demonstrated success in both commercial and business jet sectors. While honing his expertise in areas like marketing, sales, contract negotiation, business development and customer management, he held a range of posts at GE Aviation, GECAS, AerSale and Global Jet Capital before founding and serving as CEO of DS Aviation Consulting. **Jay Aiken**, who commenced his duties as Vice President Americas in January 2021, brings 30 years of experience

Nasmyth Group has extended its presence in Japan, China and Canada. With an established trading position in each of the three countries, Nasmyth is ideally placed to invest in the development and expansion of its precision engineering businesses in East Asia (including China and Japan) and Canada. Nasmyth Group has appointed **Patrick Carroll**, an experienced businessman working within the sectors of civil and defense aerospace, space, marine and subsea products and engineering quality services. Carroll, located in Tokyo, Japan, is to head up the drive to reposition Nasmyth Group and to achieve further rapid expansion in this dynamic market.