

# MRO

August 2020

## HEAVY CHECKS

Strategy to  
manage cost

## A321 Freighter

Vallair partners  
with CHAMP

## Supply Chains

AJW bags  
easyJet



## A slow but steady climb

Oliver Wyman's latest update on the impact of COVID-19 on the commercial MRO industry states that as of early July, almost 70% of the pre-COVID fleet of 27,884 commercial aircraft had been parked at some point this year, with many never to return to service.

Assuming a baseline scenario, the report says global demand for MRO in 2020 would be about \$50.3 billion, 45% lower than our original pre-COVID forecast of \$91.2 billion. All regions of the world, aside from China, will unsurprisingly experience declines in MRO spending of 40% or more. Simultaneously, MRO providers face disruption in the used serviceable materials (USM) market, as the inventory of sidelined and retired aircraft are stripped for parts. This cannibalisation will create a substantial ripple effect throughout aviation's supply chain and will make it critical for MRO providers to ensure reliable sources of used parts. Oliver Wyman forecasts spending on all parts and materials — used and new — in 2020 will be \$26 billion, down from a pre-COVID estimate for the year of \$60 billion. USM will constitute about 11% or \$2.8 billion. In 2019, the market for parts and materials was \$52 billion, of which about nine percent, or \$4.7 billion, was USM, according to Oliver Wyman.

On a positive note, despite the current crisis, it's good to see a major player like Lufthansa Technik taking in around 240 young people for vocational training. Despite the slowdown the company has continued to train. Out of the total of 240 new apprenticeships and places to study, 192 are directly attributable to Lufthansa Technik AG, the remainder to companies in the Lufthansa Technik Group or joint ventures.

It's refreshing to see the company preparing to emerge from the crisis in the best possible way and with a greater proportion of women in the technical professions.

And finally, welcome to our newly redesigned e-magazine featuring some new editorial segments. Despite the challenging times we all face we are endeavouring to expand and improve on the range of editorial and design. Watch this space for even more initiatives in the months to come!

Keith Mwanalushi  
Editor

Preparing for demographic changes after the crisis.

Photo: Lufthansa Technik



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## TGIS teams up with BCT Aviation Maintenance to create one-stop service for aviation sector

East Midlands-based global engine and aircraft consultants, TGIS Aviation Management, has announced a new service to the aviation leasing community. TGIS has teamed up with BCT Aviation Maintenance to offer a combined asset management, storage maintenance and return-to-service package. BCT can offer both EASA and FAA certification. Ian Smith, Technical Director of TGIS commented, "We wanted to offer a service to the aircraft leasing community that reflects the challenging times the commercial aviation sector finds itself in. Together with BCT, we are able to offer transition management and approved maintenance support during extended periods of aircraft inactivity. Using our combined core of industry experienced personnel, we are able to provide a cost-effective solution to the challenges ahead." Robert Brown, CEO of BCT Aviation Maintenance commented: "We are excited to work together with TGIS and look forward to providing support in the industry using our shared resources and knowledge".

## Norwegian extends cooperation with Lufthansa Technik

Norwegian Air Shuttle ASA and Lufthansa Technik have extended their cooperation for the overhaul of the carrier's 90 Boeing 737NG-strong fleet by another five years. The services are performed at Lufthansa Technik's location in Budapest, Hungary, within the framework of a Total Base Maintenance Support (TBS®) contract, with the first contract events planned for September 2020. The main characteristics of Total Base Maintenance Support TBS® are the guaranteed availability of layovers and a commercial service package geared to individual customer needs. As one of a total of five Lufthansa Technik overhaul sites in Europe, Lufthansa Technik Budapest will provide services within the framework of the new contract. As a TBS® customer, Norwegian also has access to the entire overhaul network of Lufthansa Technik for additional or unplanned maintenance events.



Norwegian and LHT extending cooperation for another five years  
Photo: Norwegian Air Shuttle

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## Great Dane Airlines selects AerFin's BeyondPool™ flight-hour solution

Danish Charter operator Great Dane Airlines, has become the latest airline to select AerFin's BeyondPool™ component Flight-Hour solution, signing a long-term Flight-Hour Agreement (FHA) to support the airline's fleet of three (3) E195 E-Jet aircraft. AerFin's BeyondPool™ is a fully bespoke, comprehensive E-Jet component FHA solution, covering repair, overhaul, pooling and on-site pro-

visioning of E-Jet rotatable component inventory and is fully supported out of Great Dane Airlines' main hub in Aalborg, Denmark. In addition, AerFin will also be positioning a comprehensive on-site stock of inventory into Hanoi, Vietnam – this, following the recent announcement that Great Dane Airlines will be providing ACMI capacity support for Vietnamese operator, Bamboo Airways.



Great Dane Airlines and AerFin sign long-term Flight-Hour-Agreement  
Photo: AirTeamImages



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# AMOS. AGAIN.



**“AMOS, which is already used as a standard tool by many LH group airlines, will also help us at Lufthansa to make our Technical Fleet Management processes even more transparent and, above all, even more efficient. Among other things, we are relying on the already very broad AMOS know-how of our sister companies. We chose AMOS because of its 30 years of success in the industry, but also because of its continuous product innovations, which help us to establish state-of-the-art processes in Technical Fleet Management at Lufthansa as well.”**

says CEO Lufthansa German Airlines  
Hub Frankfurt

## **Lufthansa and Lufthansa Cargo take off with AMOS, the world-class M&E software solution.**

Both carriers will implement AMOS including AMOSmobile, enabling paperless maintenance operations from the beginning.

The close cooperation of the Lufthansa group members will be further promoted by AMOScentral, which enables the exchange of data between AMOS instances while nevertheless allowing each group member to keep control over their individual AMOS environments.

## Barfield enters unmanned aircraft maintenance repair market in new agreement with Robotic Skies

Barfield, a subsidiary of Air France Industries KLM Engineering & Maintenance (AFI KLM E&M) in the Americas, is now a Robotic Skies authorized repair station for unmanned aircraft component repair at its Louisville, KY facility. Robotic Skies capitalizes on Barfield's 75 years of experience in manned aircraft component repairs to adapt to the Unmanned Aircraft Systems (UAS) commercial industry with the same high-performance level. With the rapidly growing UAS market, Barfield is well positioned and ready to adjust its highly trained technicians, engineers and know-how to meet this emerging industry. Robotic Skies has partnered with Barfield to establish custom-made support programs locally for commercial UAS operators to support the rapid growth of this technology.



Barfield is now a Robotic Skies authorized repair station  
Photo: Barfield

## FL Technics renews GCAA Part 21 certificate

FL Technics, a global MRO services provider, has renewed its GCAA Part 21 (Design) certificate for yet another year. The news comes after a series of rigorous checks and audits performed by the GCAA of the UAE, prolonging FL Technics' certification in UAE for the fourth year since 2017. The Part 21 certificate is of great importance for FL Technics, as the MRO provider aims to offer clients the widest possible service portfolio. The certificate enables the company to continue carrying out interior, avionics and passenger cabin modifications as well as providing materials required for the project's implementation. FL Technics has previously performed projects for a number of carriers located in the Gulf region with the most recent works for flydubai. The renewal of the certificate will also allow the company to keep supporting its long-term customer, Wizz Air, with its newly established joint venture, Wizz Air Abu Dhabi. Additionally, the renewal will enable FL Technics to propose ideas and implement safety-oriented solutions related to the Covid-19 situation for all local operators to contribute to UAE airline market growth.

## Aviation Training Centre of Volga-Dnepr Technics Moscow receives EASA approval for Boeing 777-200/300 aircraft type training

Volga-Dnepr Technics Moscow Aviation Training Centre (VDTM ATC) has obtained European Aviation Safety Agency (EASA) approval to provide Boeing 777-200/300 (GE 90) aircraft type training to B1 and B2 categories of engineering and technical personnel. Since August 2020, VDTM ATC instructors have been able to provide theoretical and practical parts of training to all specialists of the industry. VDTM ATC, which opened its doors in 2016, offers more than 54 training programs, including

basic courses and training programs for aircraft types such as the Boeing 737NG, Boeing 737CL, Boeing 747-400, Boeing 747-8, Airbus A320 and the new Boeing 777. Apart from conducting training in one of the three ATC classes near Sheremetyevo airport, the center can provide theoretical and practical aircraft type training in the customer's premises in accordance with the current EASA approval (Out-House Location Approval).



Photo: Volga-Dnepr Technics Moscow Aviation Training Centre

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## Israel Aerospace Industries completes replacement of Pickle Fork frame fittings for B737-800 aircraft

As part of a routine C-Check for a Boeing 737-800 aircraft, conducted at BE-DEK MRO facility (part of IAI Aviation Group), an AD-mandated inspection was performed to detect cracks in the Pickle Fork frame fittings, which extend from the main deck to the aircraft landing gear bay. During the inspection, a crack was discovered on the lower section of the left Pickle Fork at station 663.75. Due to this finding, the IAI team was required to remove and replace the Pickle Fork fittings on both sides of the aircraft for the first time, at IAI, on a Boeing 737 NG. The replacement procedure is complex and requires extensive engineering work (no formal instructions have been published by Boeing) and involves the joint effort of a very highly skilled sheet metal team, and B1 & B2 engineers. The work was successfully accomplished in full coordination with the Boeing Company.

## Gulfstream opens customer support parts hub in Atlanta

Gulfstream Aerospace has opened a hub dedicated to worldwide aircraft parts distribution in Atlanta. Positioned within two miles of the Hartsfield-Jackson Atlanta International Airport, the warehouse's location will allow parts to be delivered around the world more quickly and efficiently. The new warehouse maintains approximately US\$23 million in parts inventory. Gulfstream's partner in this operation is Crane Worldwide Logistics, which provides the warehouse space and handles logistics services. The Gulfstream parts network includes the main Customer Support Distribution Center in Savannah with additional distribution centers in Van Nuys, California; Teterboro, New Jersey; Amsterdam; Basel, Switzerland; Hong Kong; and Singapore. Gulfstream's global parts inventory totals more than US\$1.3 billion.

## Diehl Aviation achieves listing as approved BFE supplier for Boeing platforms

Diehl Aviation, a solution provider for aircraft cabin interiors and aircraft systems products, has received approval by Boeing to offer Buyer-Furnished-Equipment (BFE) products to airlines for the installation on Boeing airplanes. BFE products are cabin interiors elements that airlines procure directly from the parts manufacturers, such as Diehl Aviation, for the installation on newly-built aircraft at the aircraft manufacturer's final assembly line. This marks a major milestone for Diehl Aviation in its collaboration with Boeing to offer jointly excellent solutions for airline customers.

This achievement follows Diehl Aviation's close collaboration with the aircraft manufacturer during Boeing's ecoDemonstrator flight test program in 2019, where one

area of testing was Diehl Aviation's capabilities related to galleys and intelligent galley applications. Galleys usually are BFE products on commercial aircraft.

In addition, Diehl Aviation also has other miscellaneous monuments for cabin interiors installation – such as front row monuments and bar units – in its portfolio, all of which are typically considered as BFE products. For decades already, the company has supplied BFE solutions to airlines for installation on aircraft from other manufacturers. The approved listing by Boeing now marks a significant milestone for Diehl Aviation, providing a new market access to airlines that are in the process of adding new Boeing aircraft to their fleet..

## APOC Aviation closes its fifth deal in 2020 and acquires another A320 for teardown

APOC Aviation has purchased another A320 family airframe for teardown. Built in 2000, the aircraft was last operated in Europe and it is the fifth narrow-body acquisition that APOC has successfully closed this year. Funding for the purchase was swiftly secured through private placement. It is anticipated that the first serviceable parts, including landing gear but not engines, will be parted out from the teardown facility in Spain in the fourth quarter of the year.

Jasper van den Boogaard, VP Airframe Acquisition and Trading at APOC Aviation, says the company is confident it can continue to secure investment for the right assets.



*Jasper van den Boogaard,  
VP Airframe Acquisition &  
Trading, APOC Aviation*

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- A310-200/300
- A340-200/300
- A320 Family
- A320neo

### Bombardier Aviation reports revenue of US\$1.2 billion in second-quarter 2020

Bombardier's Aviation-segment has reported revenues of US\$1.2 billion during the second quarter, reflecting a lower level of production activity and deliveries as the corporation suspended business aircraft operations in Canada and key aerospace operations in Mexico and Belfast due to the COVID-19 pandemic. Starting in the last weeks of April and through the month of May, operations gradually resumed with new safety measures in place, allowing Aviation to deliver 20 business aircraft during the quarter, including five Global 7500s. Bombardier's worldwide customer service operations have continued to operate largely uninterrupted throughout the pandemic. Service centers have shown resilience maintaining a high level of activity at maintenance facilities, partially offset by lower revenues related to the decrease in customer flight utilization. Adjusted EBITDA and adjusted EBIT margins of 4.5% and (1.6%), respectively, reflect

lower volumes during the quarter as result of disruptions from the global COVID-19 pandemic, combined with low contribution of early Global 7500 units. Reported EBIT of US\$442 million during the quarter reflects the US\$496 million accounting gain on the disposal of the CRJ Series

aircraft program to Mitsubishi Heavy Industries, Ltd. As operations recover in the second half of the year, aircraft deliveries are set to accelerate relative to the first half of the year, towards a seasonal peak in the fourth quarter, supported by Aviation's US\$12.9 billion backlog.



Bombardier has delivered 20 business jets during the quarter, including five Global 7500s  
Photo: Bombardier

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# Candidate for Conversion

A321 cargo conversion in process.  
Photo: Vallair

The A321 freighter conversion programme continues to gain traction. **Keith Mwanalushi** checks in on the latest developments.

Vallair, the multi-faceted aviation business is the launch customer for the A321 cargo conversion. In July, the company announced signing an MoU with CHAMP Cargosystems to develop the first cargo management system and e-freight integrated solution for the Airbus A321 freighter.

The partnership between Vallair and CHAMP will be a collaboration and pooling of resources to provide CHAMP's weight and balance system for the new Airbus A321Fs and to establish a reliable e-freight system which can be utilised in conjunction with all of Vallair's future A321F conversions. Being able to offer CHAMP data and information on both the A321P2F and the A321PCF freighters will allow Vallair to contribute to a comprehensive cargo management system which is bespoke to these freighter variants. Vallair says this package will then be offered as a cost effective, load efficient solution

to their customers in conjunction with digitalised tracking of all cargo.

Alistair Dibisceglia, Chief Leasing and Trading Officer at Vallair explains to *AviTrader MRO* that Vallair's partnership with CHAMP will create all the required software to ensure that all weights and balances are correct increasing load efficiency, as well as offering digitalised tracking which will benefit the growing demands of e-commerce. "CHAMP is a long-established provider of IT solutions for the air cargo industry and by providing them with data from our P2F and PCF conversions, we are pioneering programmes for the A321Fs of the future." Dibisceglia

adds that considering the A321F is a new product, there are currently no aircraft in service which would require the retrofitting of this cargo management system.



Dibisceglia says the A321P2F is one of the most efficient freighters currently available.  
Photo: Vallair

"CHAMP is delighted to enter into this new partnership with Vallair and we are proud to be supporting not only a market leader but also another Luxembourg based company," says Arnaud Lambert, CEO of CHAMP Cargosystems. "Digitalisation has been the focus of the air cargo industry for the last five years and our customers are really seeing the benefits of our cargo management digital solutions as they come into fruition. Weight

“We are currently evaluating more than a dozen [A321] with more expected imminently.”

*Alistair Dibisceglia,  
Chief Leasing &  
Trading Officer*



A321Fs are coming on to the market.  
Photo: Qantas

and Balance is a proven powerful, yet intuitive-to-use digital solution for advanced load planning and is designed to optimise aircraft loading while ensuring regulatory compliance, minimise turnaround, make maximum use of available space, and reduce fuel burn. Currently there is no software for the A321F as it is a brand-new conversion, and we are excited to partner with Vallair and be the first to offer this solution to the market.”

Vallair saw huge potential in the A321 P2F a while ago not only as a replacement for the Boeing 757F, but as a key tool for the cargo industry to achieve the projected growth rate of the air freight market in

general – in particular driven by express services and e-commerce. Vallair is the launch customer for the A321 P2F signing agreements with two conversion specialists Precision Aircraft Solutions and EFW.

The A321 is the first derivative of the base-line A320, it has a stretched fuselage and entered service in 1994 with Lufthansa, around six years after the original A320. Since then, the A321 has grown in popularity on the passenger market and with the new more advanced fuel-efficient variants like the Neo coming along, these aircraft are opening new opportunities for airlines, chiefly on long haul thin routes.

In terms of the A321 feedstock situation,

Dibisceglia reports that Vallair is seeing a steady influx of A321s on to the market which has affected the stability of pricing. He says typically, they would expect a 20% - 25% decrease in price post COVID – “we are currently evaluating more than a dozen, with more expected imminently.

“As the A321Fs are coming on to the market, asset owners are looking to Vallair as we have demonstrated a proven exit strategy which maximises the life of their assets with all the associated industry benefits.”

The A321P2F will be the first aircraft to introduce a containerised lower deck to the market segment of narrowbody freighters; a significant game-changer as Vallair has continuously suggested. Dibisceglia explains the significance. “The ability to hold ten cargo containers will certainly be a game changer for any hub as it speeds up the loading process therefore reducing turnaround times. In addition, when it comes to the main deck, the A321P2F can offer a further fourteen cargo positions. From an operator’s perspective, the A321P2F is one of the most efficient freighters currently available delivering on range, payload and fuel consumption, and we certainly see it taking a place and the forefront of the freighter market.”



Vallair sees huge potential in the A321 P2F.  
Photo: Keith Mwanalushi



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AJW's contract covers easyJet's full A320 fleet including both CEO and NEO aircraft.  
Photo: Keith Mwanalushi

# Easy does it

AJW Group renewed its seven-year complete supply chain solution contract with easyJet. **Keith Mwanalushi** speaks to Christopher Whiteside, Chief Executive at AJW about the significance of the partnership.

**G**ood news in the aviation industry has come far and between in the last few months so it was optimistically refreshing to see easyJet and AJW recently announce a continuation of their supply chain partnership which started in 2015.

In July, AJW announced it will continue to be responsible for around the clock planning and delivery of easyJet's demand and supply requirements from inventory management across the airline's extensive network; full component repair and

overhaul services as well as the provision, storage and distribution of all rotatable, consumable and expendable material.

AJW said the new seven-year contract introduces innovative solutions that will provide step-change improvements for the airline. AJW is developing and investing in process re-engineering and automation tools to drive superior performance, cost reduction and operational excellence across the board. AJW Technique, the Group's MRO facility, will continue to play a significant role in the

new contract as it repairs and overhauls easyJet components.

Christopher Whiteside, President and CEO of AJW Group says easyJet challenged AJW to set new and improved service levels that aim to minimise operational disruptions across their network to enhance their passenger experience. He says easyJet benefits from assured service levels but at significantly reduced costs due to removing the airline's requirement for seminal departments such as logistics and central warehousing; and a reduced

requirement for specialist procurement and repair management teams as well as reducing the burden on finance.

“LCCs do not want to be



Christopher Whiteside, President and CEO, AJW Group

a ground-breaking achievement for AJW Group and I am justifiably very proud of our team.”

Whiteside further confirms to *AviTrader MRO* that the contract covers easyJet’s full A320 fleet including both CEO and NEO aircraft components – “As the A320neo has over 95 percent airframe commonality in some cases the current CMM’s have been updated to reflect these part numbers. As the engine, airframe and cabin interior are different between the two models the CMM reference will differ but the repair principles are the same,” he explains

A key operational enhancement is the introduction of an EU-hub in Malpensa, Italy, which will

serve to further enhance operational efficiency across Europe. The EU-hub will

“LCCs do not want to be distracted by owning large support functions with their associated cost.”

*Christopher Whiteside,  
CEO, AJW Group*

supplement the current UK-hub to maximise up-time, availability and dispatch reliability, according to AJW.

When asked about the strategic reason of having the new EU-hub at Malpensa, Whiteside responds saying easyJet’s strategy is to minimise disruptions to their day-to-day operations; therefore, introducing an EU-hub will improve material support across their European network and will reduce the impact of AOG events. “The establishment of an EU-hub to augment the UK-hub provides increased operational resilience. In the post-BREXIT world, the introduction of the EU-hub will mitigate any potential cross border delays.”

The re-award of the contract to AJW was the result of a thorough tender process which started in January 2019.

distracted by owning large support functions with their associated cost,” sates Whiteside. “LCC’s increasingly not only want greater access to repair management data but sophisticated analysis of that data to enable the airline’s to make evidence based decisions. AJW continues to invest in additional automation and data analytics to enhance transparency and knowledge of all activities that supports easyJet operations.”

With this new contract, easyJet says they want to ensure they remained focused on improving efficiency and value in order to enhance operational performance, whilst ensuring that safety remains the highest priority.

Whiteside responds: “This contract renewal strengthens AJW’s position as the world’s leading independent provider of component support programmes and the contract length demonstrates the confidence that leading airlines, like easyJet, place on our ability to go above and beyond to deliver at every step. This is



The contract renewal strengthens AJW’s position.  
Photo: AJW



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Airlines will need to properly plan all heavy checks.  
Photo: Lufthansa Technik

## Heavy price, for heavy checks?

MROs are having to adapt to changing needs and schedules for heavy maintenance work due to uncertainties caused by COVID-19 and ultimately airline cost cutting strategies. **Keith Mwanalushi** reports.

**G**lobal demand for MRO in 2020 is expected to value at around \$50.3 billion, 45% lower than the original pre-COVID forecast of \$91.2 billion, according to experts at Oliver Wyman.

Given the current lower aircraft utilisation this has led to cash sensitivity on all sides, particularly the airlines, Marcus Motschenbacher, VP Base Maintenance Production EUMEA/Americas at Lufthansa Technik observes that whether heavy maintenance is due or not it has become a decisive factor in the airlines' forward strategy on what do with the respective aircraft – "Heavy maintenance events on older widebody aircraft, for instance, can easily cost a seven digit sum and thus airlines have become increasingly reluctant to invest this money."

Motschenbacher says events have been cancelled on short notice and fleet re-evaluations are taking place constantly. "The largest aircraft and especially those operating with four engines were the first victims to be parked and stored long term – some of the airlines have even already taken the decision not to operate them again. So, we see a significant amount of maintenance man hours that are leaving the MRO market."

Motschenbacher sees this trend continuing for the next two to three years and even beyond with the younger and more cost- and fuel-efficient aircraft not requiring a similar number of hours until they age significantly, i.e. past the 12-year mark.



Marcus Motschenbacher, VP President Base Maintenance Production EUMEA Americas at Lufthansa Technik

“We need to be very flexible to adapt our capacity to the constant planning changes and our customer.”

Óscar Pérez  
Heavy Maintenance Director, Iberia



AFI KLM E&M has continued heavy checks during the COVID-19 pandemic.  
Photo: Patrick Delapierre

Óscar Pérez, Iberia's Heavy Maintenance Director also observes the changing environment saying airlines are constantly reviewing the ramp up scenarios as well as fleet size and therefore their base maintenance needs too. "As a consequence, we [MROs] need to be very flexible to adapt our capacity to the constant planning changes and our customer's special requirements, including non-programmed schedules, short term demands, last minute cancellations and ad hoc requests. Simply put, one of our main challenges now is to design a tailor-made global support to our clients and contribute to their recovery and survival," states Pérez.



Óscar Pérez, Iberia Heavy Maintenance Director

Pérez feels that demand is therefore showing different behaviours: heavy maintenance summer season is higher than usual due to lower fleet utilisation in the summer peak period. Another fact is that aircraft retirement has reduced the requests for old aircraft heavy checks. "Conversely, there is much higher demand on redelivery-lease returns checks, and the outlook is that this product will be part of our portfolio for the coming years."

Over in the U.S, Brian Sartain, SVP Repair and Engineering at AAR Corp reports that the number of heavy checks performed by customers decreased significantly as operators pursued cost-reduction strategies – "Some operators ceased maintenance altogether, and for those customers we were able to help them by parking aircraft at our facilities and running storage programmes for them."

This time has also allowed AAR to invest in training and development activities that are progressing their technician's careers. The re-emergence of the cargo business has seen AAR investing new aircraft-type training to able to accommodate more cargo carriers than in the past. "We expect those customers to remain with us as the economy recovers."

On the engine leasing and trading business front, AAR have benefitted from the desire of airlines to lower costs with Used Serviceable Material (USM). "In a number of areas of the company we have reduced our footprint and cost structure to survive this downturn and should be well-positioned to see an L-shaped recovery with traffic levels driving back to pre-COVID levels earliest by mid -2023."

As many aftermarket forecasts show, Sartain believes there will be a big spike in the aftermarket at that point as green time runs out at many airlines. "We expect that the changes in the retail economy towards home delivery of goods will likely drive more cargo content. In addition, we have seen some projects on the market for temporary passenger to freighter interior modifications that we can accommodate through our engineering services group."

The winter season is set to be challenging as operators try to balance capacity with reduced passenger demand without the cushion of a busy summer season behind them. As the winter season is also the time of year when most heavy checks occur amongst European and North American operators, David Rushe Sales and Marketing Director - EMEA at Magellan Aviation Group feels operators will be trying to minimise their heavy check throughputs. "Indeed, for mid-older

life aircraft which have seen values decline this year, the cost of upcoming maintenance events will be a key factor in determining their longevity of operation," he says.

On the engine sector, Magellan has held the opinion that engine leasing demand will recover before engine parts demand.

Rushe, reckons as with airframe checks, operators will look to lease or buy in engines to avoid shop visit costs. "This trend has been evident on certain mature-phase widebody engines for a number of years now, however, declining engine values have meant that can be cost-effective to pursue this strategy on narrowbody engines."

Considering the volume of heavy maintenance is slated to significantly reduce in 2020/21 there have been some calls by the aftermarket sectors to have more comprehensive analysis across the supply chain so that companies can adjust to spikes in demand for services.

Rushe says prior to the COVID-19 crisis, Magellan had already begun to focus its efforts on newer technology aircraft and engine platforms and these will still dominate the aftermarket in terms of demand as the market recovers. "Magellan constantly optimises its inventory levels to ensure we have tier 1 and tier 2 material going through the repair shops. There is a strong likelihood that operators and MROs will look to USM to help keep check costs down as the market picks up and providers will need to be positioned well with ready-to-go inventory."

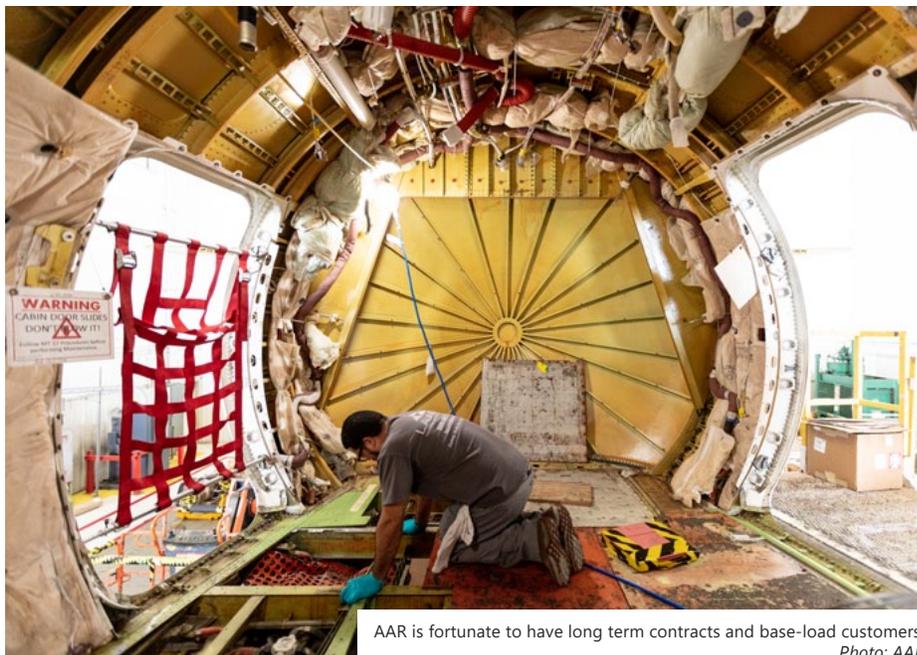
Rushe adds that there is certainly room for consolidation across the supply chain and as OEMs face twin-pronged challenges of 1) managing production rates for new aircraft and 2) supporting large numbers of mature types still in service, there is a possibility of further M&A activity when it comes to the aftermarket.

**Priorities before the next C Check**

Given that some aircraft may still have time remaining to the next C Check, from an MRO perspective, what should be the priority



Paul Horstink, Iberia Line Maintenance Director



AAR is fortunate to have long term contracts and base-load customers. Photo: AAR

for aircraft operators with especially older fleets in temporal storage?

Paul Horstink, Iberia's Line Maintenance Director responds saying operators should look at opportunities and go beyond parking storage programmes and get proactive with issues such as fixing-cleaning-preventive maintenance and the like. "They also should consider the value of an MRO such as Iberia where we can provide storage and the heavy needs preventing the need to position aircraft post storage thus saving the associated costs," he advises.

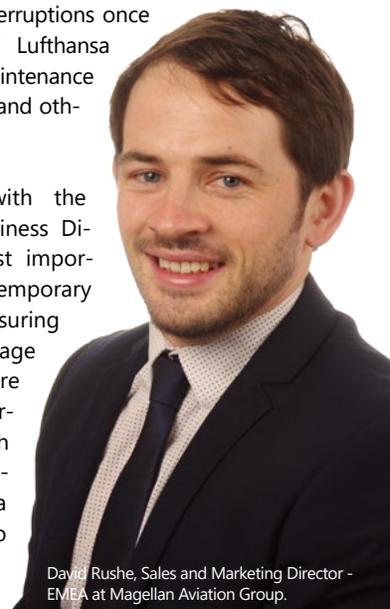
Sergei Shkolnik, Head of the Base Maintenance at Magnetic MRO says priorities can be difficult to predict as it all depends on how secure the airline is financially. "However, it is likely that aircraft operators will use aircraft which have time left until the next C Check more likely than the aircraft for which the check is due shortly."

Vincent d'Andrea Air France Industries SVP Airframe added: "C Checks and D Checks volume may be deferred to the next few years due to storage and ability to postpone visits or at least calendar intervals following OEMs given possibilities. Moreover, all airlines reassess their fleet

plan and mainly for old legacy aircraft they may decide to stop operating them, keeping the most cost-effective fleet in operation. This will have an impact especially on the D Checks' volume as aircraft could be torn down before the heavy maintenance event."

Mr Motschenbacher at Lufthansa Technik feels it is advisable to select a good infrastructure and an MRO that can continuously support the aircraft during and out of storage. "Ferry flight considerations need to be also considered where the aircraft goes for the nearing C-Check. And it is advisable – once the operator has obtained a minimum clarity – to reserve slots quickly to ensure that the aircraft can operate without interruptions once out of storage." Lufthansa Technik base maintenance deals with these and other aspects.

As observed with the CFM56 Airworthiness Directive, the most important aspect of temporary storage is ensuring that aircraft storage programmes are followed rigorously and with the best mechanics to ensure a flawless return to service, says Sartin from AAR.



David Rushe, Sales and Marketing Director - EMEA at Magellan Aviation Group.

“We have been working with our customers to service those aircraft and have returned a number of airframes to service successfully already.”

**The D Check and counting the cost**

Due to the nature and the cost of a D check, most airlines — especially those with a large fleet have to plan D checks for their aircraft years in advance and in the current climate, that’s if they still have those aircraft at all.



AAR is fortunate to have long term contracts and base-load customers that are already planning for the return to capacity to fleet and heavy check services. “In addition, prior to the COVID out-

Brian Sartain, SVP Repair and Engineering at AAR Corp

break we were investing heavily in workforce development programmes with our partner schools and programmes like the Embry-Riddle Skill Bridge programme to transition veterans into aviation maintenance. Despite the downturn we have continued to invest in these programmes so that we can maintain the most qualified and diverse workforce in the industry,” Sartain indicates.

At Iberia Maintenance, they are seeing a reduction in widebody demand while a steady one in narrowbody with some airlines deferring D checks on widebodies for cash preservation purposes.

Shkolnik from Magnetic MRO does not anticipate much demand in terms of these major heavy checks in the short term – “The situation still lacks clarity therefore it is more likely that many airlines will be postponing scheduling their future checks until the situation becomes more clear.”

Motschenbacher echoes similar sentiments saying the classic heavy D-Checks will become scarce in the upcoming years. He says especially, for those aircraft that might have been selected for an ESG programme, they

might likely never see this investment into them. “The whole D-Check supply chain from cabin material etc. needs to be looked into. However difficult this is at this stage, it is important for the airlines to make a choice on which tail signs they intend to operate and talk to MRO providers much in advance, especially for D-Checks, particularly for widebodies, especially if the downtimes are to be allocated in the winter timeframe.”

Despite the lower volume of work required, Lufthansa Technik are seeing increased traffic of RFPs and slot requests/screening.

**Embracing new technologies**

In February 2020, AFI KLM E&M announced the renewal of its cooperation with Donecle as the market interest in the use of drones for inspections increases.

During this pandemic, Helene Druet, Head of Marketing at Donecle confirms to AviTrader MRO that customers and prospects have shown renewed interest in the system’s ability to immediately upload and share inspection data remotely. “Indeed, with current travel restrictions, this is a relevant way to provide a complete and objective view of an aircraft’s structural conditions and share it between internal teams or between MROs and airlines.”

Druet notes that another concern of the industry is linked to the upcoming spike in maintenance work which has been delayed because of the pandemic situation, in a context of skilled labour shortage (resulting from both the combination of layoffs due to COVID-19 crisis and a global trend of global labour shortage since several years in the maintenance world). In such context, she says solutions such as automated drones will be a force multiplier both in terms of physically conducting inspections but also to analyse inspection data and issue reports.

Druet further explains the efficiencies derived from the technology saying aircraft visual inspection is a long and challenging process, putting people at risk (working at height), with low traceability over time. “We offer an automated drone inspection solu-

“There is a strong likelihood that operators and MROs will look to USM to help keep check costs down as the market picks up.”

*David Rushe  
Sales and Marketing Director -  
EMEA at Magellan Aviation Group*

tion to make inspections faster, safer, more efficient and reliable. Our technology combines a full automated drone [no pilot required] which acquires HD pictures of the airframe in less than one hour for a narrowbody, to an image analysis software which helps the inspector to easily detect defects.”

Druet says a report with all damages, including information on their type, size and location, is automatically generated and data are stored on a cloud platform to build a digital history of past inspections. “Our solution also addresses use cases such as lightning strikes inspections, damage mapping, paint wear evaluation, or placards checks to ensure compliance with regulations.

“Our solution helps the operators and MROs to save time during visual inspections, anticipate repairs to be done during the heavy check, and get historical records of inspections to easily retrieve past damages and repairs.”

Ultimately, the evolution of the MRO activity will closely follow that of the world’s commercial fleets and their use.



Sergei Shkolnik, Head of the Base Maintenance at Magnetic MRO



# An inside job

Seat repair and refurbishment.  
All photos: Jetglow

Jetglow is an aircraft interiors refurbishment and graphics production business, based in the North of England. Founded in 2008, it has grown quickly over the last decade and at the end of 2019, the business was acquired by a team of private investors. The new owners (together with the original founder) have ambitious plans for growth and this will enable Jetglow to continue to provide high quality outputs with quick turnaround at a cost-effective price.

Jetglow are located close to Leeds Bradford Airport and at their workshop they currently offer complete aircraft interior and exterior refurbishment for both commercial and general aviation aircraft with EASA Part 145 and Part 21 Sub Part G approvals. The Jetglow workshop team are ready to work at any location and can also support AOG requirements. In addition, the graphics team, work from a state-of-the-art facility, producing interior and exterior decals, everything from seat row

designations to full external aircraft livery.

## Expansion

Jetglow are proud to announce the opening of their brand new 25,000 sq. ft EASA Part 145 workshop in Leeds in the UK. This new facility will help Jetglow achieve their growth ambitions and secure future business. The new headquarters boasts a fully equipped seat repair and refurbishment department for passenger, pilot and cabin attendant seats. It also has two large preparation and two paint booth areas for the refurbishment of interior and exterior aircraft components.

Jetglow can also confirm the appointment of Damian Protano as Sales SVP. With over 10 years of experience within the aviation sector, Damian joins Jetglow as a senior member of the leadership team. Damian brings a wealth of aircraft interiors experiences and has worked with the aircraft

leasing community, international carriers, regional carriers, MRO's and OEM's. Damian feels this is an exciting time to join the Jetglow team and to expand the brand of Jetglow to the aviation community. Jetglow have moved to new facilities and expanded capabilities to offer more services to existing and new customers.



Damian Protano Sales SVP

Managing Director Philip Rushfirth commented, "We are delighted to confirm the expansion of Jetglow regarding the new facility and Damian joining the team. We look forward to working alongside the aircraft lessors, domestic and international airlines in the future."



Window thickness measuring equipment.

### Workshops

Jetglow have a dedicated seat workshop which has the capability to perform refurbishments on aircraft passenger, pilot and cabin attendant seats. The experienced Jetglow team of seat fitters can work on-wing or at their state-of-the-art repair facility in Leeds. The seat workshop team also have the capability for IFE and ISPS integrations into aircraft seats, plus can carry out OEM service bulletins.

The Jetglow workshop houses state-of-the-art preparation and spray booths which facilitates complete refurbishment of aircraft interior and exterior components. The large capacity spray booth is capable of painting oversize interior or exterior panels from the largest engine fan cowls, translating sleeves, radomes, to the largest cabin ceiling and side wall panels.

Jetglow can also offer an extensive interior and exterior painting service at any location. The workshop team can respray engines, cowls, inlets, c ducts, cargo doors, all passenger entry doors / exit doors, wings and flaps. Jetglow specialise in the tenting out of areas of the fuselage/empennages/wings etc and the re-spraying of those areas using portable extraction. This process

can be carried out during maintenance inputs along with the operators engineering requirements without impacting any maintenance activities on the aircraft. The Jetglow capabilities allow them to refurbish complete cabin interiors from large commercial, corporate and helicopter aircraft.

The Jetglow C19 rating gives the workshop team the ability to service and repair most passenger cabin acrylic windows, their window thickness measuring equipment ensures that window repairs/polishing never go out of OEM limits.

Jetglow have a dedicated team of inspectors who ensure all the work carried out is to the highest quality level and the Part 145 work performed by Jetglow is released with EASA form one certification.

### Graphics

With over 20 years of experience, the state-of-the-art graphics department can design and produce a wide range of decals, placards and branding livery for both the Interior and exterior of the aircraft. Jetglow graphics can and does supply mandatory markings, decals and placards for all commercial and general aircraft exteriors and

interiors. They can also custom design kits specific to your aircraft fleet. All aircraft interior decals are manufactured from materials that meet CS25.853/ FAR25.853 Appendix F requirements. Jetglow can also provide a fully experienced team of decal fitters, painters and trimmers that can be dispatched to any location to meet the needs of our customers. All decals which are produced by Jetglow are released with EASA Part 21 Subpart G certification.



Jetglow workshop houses preparation and spray booths

## Q&amp;A

In the hot seat.....

## Alan Barnes

General Manager, Inflite The Jet Centre

**What attracted you to this business?**

**Barnes:** Living in Hertfordshire I would often gaze up at the sky and watch aircraft (BAe 146s) depart and arrive at the Hatfield site where they were manufactured. So, I guess my interest grew from there and I found myself joining the team as an engineering apprentice. That is where the journey began....

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

**Barnes:** In my role as GM of Inflite The Jet Centre Ltd, my day is varied. My first task is to ensure that our operations are on track and schedules in good order. Each morning starts with our production meeting, of which I am an attendee. From here my day progresses to fulfil Inflite's desire for continued improvement. We have several key initiatives open and they require regular oversight. In addition, I manage Inflite's interface with our partnered OEMs; Embraer as an Authorised Service Centre, Rolls Royce for the AE3007 platform and Honeywell as their Authorised Dealership. I will often be engaged with each to synergise campaign and product delivery to their respective element of the market.

**What is the most challenging part of your job?**

**Barnes:** My success has always been when being part of a team. From my early days when playing football or today in manag-

ing this continually active MRO, we rely on people. On the flip side, Inflite's customers are also people and they quite rightly demand to be best served in this corporate sector. This can be challenging but on the whole, it is part of the role that I enjoy most. Even when good, bad, or indifferent.

**Briefly, tell us about the range of MRO services provided.**

Alan Barnes, General Manager.  
All photos: Inflite The Jet Centre

**Barnes:** Inflite The Jet Centre Ltd is part of the Inflite group of aviation companies. We serve manufacturing, surface treatments, component overhaul, corporate aircraft maintenance and VVIP FBO services. We are truly the UK's one stop shop. We are Embraer's longest established Authorised Service Centre and are fully

equipped and endorsed to serve every Embraer Executive platform currently in operation around the clock. Our teams are equipped to serve all scheduled, unscheduled and AOG needs. In addition, and by way of working with our partners, we can deliver significant upgrade and modification, as well as administering each of the OEMs warranty and PBH programmes.

**What opportunities are you now tapping into with the integration of Excellence Aviation last year?**

**Barnes:** The integration of the Excellence businesses is key to our overall strategy for the future. We see an obvious need to serve London bound and based Bombardier traffic. Excellence has a great team of highly skilled and equipped technicians and all are well versed to serve both the Global Express and Challenger platforms. Now with the integration and Inflite's pedigree in heavy maintenance, we see much to explore.

**What has been the market response to the addition of Global 700 series approval?**

**Barnes:** The market response has been positive and our geographic location and integrated VVIP FBO plays its part as a fantastic 'shop window' for us to display and deliver our maintenance services from. We support several existing and contracted customers and we will continue to slowly build upon this sound foundation

and grow these and new relationships to the next level of base maintenance commitment.

**Are there plans to expand MRO services outside London Stansted?**

**Barnes:** Inflight and Excellence will always remain dynamic in its thinking. It is in our DNA. As of today, Inflight and Excellence have additional line stations at Luton, Farnborough and Oxford. In addition, we are currently considering further, a mobile support team to serve the SE quarter in a more flexible manner. Our separate AOG team remain ready to deploy wherever required to serve.

**What impact has Covid-19 had on the business?**

**Barnes:** The present global situation has not helped anyone and aviation has taken some massive hits. We are not immune to such. We've had several international customers not be able to maintain their schedules to come in for heavy checks, which definitely has an effect. However, it is one that we as an industry must react to and recover from. Here at Inflight we have maintained a dynamic approach to everything and we will take whatever steps are required to best serve the market and safeguard the needs of the business in the long term.

**Considering Covid-19's effect on the aviation industry, what key trend are you seeing for your MRO services in the coming year?**



There is a full MRO facility at London Stansted.

**Barnes:** There has been a slowdown and effect on the schedule, however this is now on the up and my immediate focus and that of my team is prepare to serve this upturn in demand. Constant improvement results and change will be introduced to improve our overall performance and service delivery.

We will be working closely with those we have engaged, and new customers, to make this phase as feasible and palatable as is possible. So, despite some very unsettling times, I do see improvements and the light at the end of the tunnel.



# PEOPLE

## »»»» → *on the move*



Martin O'Boyle

North American Aerospace Industries Corporation (NAAI), a provider of sustainable end-to-end aircraft recycling solutions, has appointed **Martin O'Boyle** as Business Development Manager – MRO. In this role, O'Boyle will have the responsibility for developing the company's MRO business in North America. He brings to his new position extensive technical and commercial experience working across aviation for airlines, aircraft lessors, corporate operators, OEMs and maintenance facilities. Before joining NAAI, O'Boyle served as Head of Civil Aviation Business Development for Sabena Aerospace. Part of his role was to set up a joint venture in Africa where he was responsible for business development, operations, and the project's management.

**Eleana Tan** has decided to retire from her position as Chief Corporate Officer, a role she took on in mid-2017 to oversee the Group's newly set up corporate management services, and with functional responsibilities for IT, Procurement as well as Estate & Facilities Management. Before this appointment, she was the Chief Financial Officer from 2008.



Eleana Tan



Liam Serh Ghee

Singapore Technologies Engineering has announced leadership changes that will take effect on October 1, 2020. **Lim Serh Ghee**, currently President of ST Engineering's Aerospace sector, will assume a new role as Chief Operating Officer for the Group. His responsibilities include driving operational and cost efficiencies across the Group and promoting further integration of the Group's business sectors. He will also oversee IT, Procurement and Estate & Facilities Management functions, and remain as a member of the Management Committee. He will step down as President of Aerospace sector upon assuming his new role.

**Jeffrey Lam**, currently Deputy President of the Aerospace sector will be appointed as President of the Aerospace sector. In this role, he will continue to drive the growth of the sector, focusing on enhancing its position as a global integrated aviation solution provider with original equipment manufacturing and aftermarket capabilities. He will be appointed a member of the Management Committee.



Jeffrey Lam

GA Telesis has announced that former GE Managing Director of Services Sales, **Russell Shelton**, has joined the company as President of its Engine Strategy Group. Shelton will oversee the company's long-term engine MRO Strategy, coined Turbine Vision. This will also include the leadership of the company's Engine Services operation in Finland. Shelton recently retired from GE, where he led the services sales team's reconstitution to refocus on services growth. He created a global team while re-integrating the commercial leadership responsibilities from other organizations. This resulted in double-digit yearly revenue and margin growth from 2015 forward.



Caroline Vandedrnick

SR Technics has appointed **Caroline Vandedrnick** as Senior Vice President Sales with effect from September 1, 2020. She will report directly to **Jean-Marc Lenz**, Chief Executive Officer, and will be leading the new Sales organization. **Michael Sattler**, Chief Commercial Officer, will be leaving SR Technics at the end of August 2020. Vandedrnick has more than 25 years of experience in aviation, during which she has held various senior commercial positions for international aviation companies. She joined SR Technics in 2016 as Vice President Americas and has played a key role in driving SR Technics' sales organization forward.