

MRO

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Rotable Inventory

Q&A:
Shannon Engine Support

People on the Move
latest appointments

In profile:
MTU Maintenance

MRO News
from around the world

AVITRADER
MRO

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Opinion

Please send your comments and queries to keith@aeropublications.co.uk

MRO industry gather in Amsterdam

Industry professionals once again gathered in the Dutch capital Amsterdam for this year's installment of MRO Europe in mid-October. It was another hive of activity showcasing anything and everything MRO related.

The event tackled several industry pressing issues and amongst them, the state on the industry, and the largest aircraft OEMs discussed how their new services strategies will change the MRO business and also the use of drones for maintenance. Another popular topic was how predictive maintenance systems and data analytics redefine the supply chain and enable it to evolve from reactive to proactive.

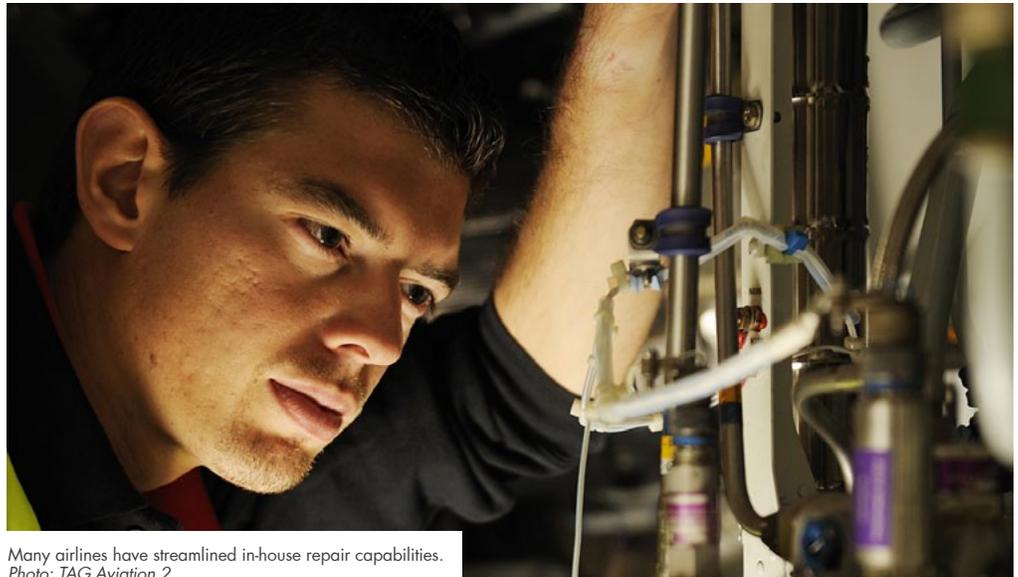
According to data from experts at Oliver Wyman, European MRO spend is expected to fare marginally better than that of North America. Western Europe MRO, as it grows at three percent annually, will lose four percentage points of market share and add \$5.5 billion to its current \$16.2 billion MRO demand. Eastern Europe, though continuing to suffer

from economic sanctions placed on Russia, is forecast to increase two percent annually.

Globally, MRO spend related to narrow-body and wide-body aircraft will comprise \$69.2 billion of the \$77.4 billion total, with regional jets and turboprops combining for an MRO spend of just \$8.2 billion. For 2018, narrow-bodies make up 57 percent of the fleet and 45 percent of MRO market share. Wide-bodies, on the other hand, make up 20 percent of the global fleet, but represent more than 44 percent of the MRO expenditures because the aircraft are more maintenance-intensive and more complex.

With the current saturation and over capacity identified in the European market it remains to be seen if further insolvencies will have an impact on the MRO market in the long run. It looks unlikely though.

Keith Mwanalushi
Editor



Many airlines have streamlined in-house repair capabilities.
Photo: TAG Aviation 2

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DO YOUR NACELLES NEED A SNAP™ SOLUTION?



The SNAP program by GA Telesis offers immediate access to the world's largest independent inventory of nacelle products combined with our expert nacelle repair and overhaul business. Custom tailored maintenance programs with pool access to help reduce costs coupled with a fixed-rate menu-driven approach that contains financing, consulting and engineering solutions.

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Comlux completes 11th VIP cabin interior on BBJ
Photo: Comlux

Comlux completes 11th VIP cabin interior on a BBJ

Comlux Completion, Comlux's completion and service center based in Indianapolis IN, accomplished their 11th VIP interior outfitting on a BBJ aircraft for a private customer based in the Far East. The luxurious cabin features at the front a spacious executive compartment, with four sets of Club-4. Instead of the traditional Hi/Lo tables, there are large pull out tables with easily attachable extensions newly designed and installed specifically for this aircraft. In the center section, a private dining/conference room features a massive table surrounded by six executive style seats. The overhead area portrays a grand ceiling dome with a handmade mother of pearl pattern. Decorated with a similar ceiling dome, the master suite at the rear includes a tranquil master bedroom and a spa-like private master lavatory. The entire aircraft has an infusion of an Asian inspired atmosphere. There is a cohesive blend of contrasting color palettes achieved by the use of supple white leather, rich warm mahogany veneer, plush taupe carpet, textured fabrics and gold accents throughout- inspiring luxury and relaxation.

Swiss International Air Lines chooses Joramco as maintenance provider

Swiss International Air Lines SWISS and Joramco have signed a five-year agreement by which Joramco will perform C-Checks and HMV checks on the SWISS Airbus fleet of A320s, A333s and A340s. The agreement also includes incorporation of ADs, SBs and structure repairs at Joramco's Base

Maintenance facility in Amman (Jordan). As of today, Joramco has performed 35 successful layovers for Swiss International Air Lines. SWISS and the Lufthansa Group are working in very close cooperation with Joramco to introduce new ways of working together. Both parties have just completed a week's workshop together to streamline their procedures and processes. The goal of the workshop was to improve TAT, material deliveries, order to invoicing, final documentation, cabin standards, in-house capabilities and have a technically acceptable aircraft on redelivery. The cooperation between Joramco and SWISS started early 2017.

OEMServices signs memo of understanding with Meggitt PLC to serve operators in the Middle East, Africa and Russia

Meggitt PLC and OEMServices have signed a Memorandum of Understanding (MoU) to provide component after-market services for airlines operating in the Middle East, Africa, Asia and Russia/CIS. OEMServices will provide distribution services for Meggitt in the named regions and a one-stop shop for repair operations utilizing dedicated global service centers and a 24/7 AOG hotline, committed to responding to operator needs within the hour. OEMServices' expertise in serving operators in these markets will ensure that Meggitt OE approved solutions are immediately available, optimizing repair turnaround times and minimizing operational interruptions. Adrian Plevin, Meggitt CSS Senior Vice President Sales & Marketing believes "Our partnership with OEMServices is a perfect op-

portunity for us to extend our global reach, ensuring that Meggitt original equipment solutions are available to operators worldwide, with the guaranteed service levels our customers expect."

Embraer and Air Peace sign multi-year Pool Program Agreement for six ERJ-145 jets

Embraer and Air Peace, Nigeria's leading private airline, have signed a multi-year Pool Program Agreement for spare parts and support covering more than 250 components for their six Embraer ERJ-145 jets. Based at Murtala Muhammed International Airport in Ikeja, Lagos State, the airline provides passenger and charter services and serves the major cities of Nigeria, the West Coast of Africa and hopes to launch its international operations soon. With their ERJ-145 jets, it aims to expand their local and regional routes and transform air travel in the country. The contract also contemplates access to a huge and reliable stock inventory of more than 150 different parts under the Embraer Parts Exchange Program (EPEP+), which provides part availability in far less time than usual, avoiding Aircraft on Ground situations and delays due to lack of specific parts.

STG Aerospace wins order from Volotea for 45 full-color liTeMood® LED cabin lighting systems

STG Aerospace, the pioneering aircraft cabin lighting specialist, has announced that its full-color Airbus liTeMood® LED cabin lighting system has been chosen by Volotea, the Spanish low-cost operator. Currently operating a mixed fleet of Airbus A319s and Boeing 717s, the airline plans to move to an all-Airbus fleet over the next five years, resulting in this current order with STG Aerospace for no fewer than 45 full-color liTeMood® systems. Installation on the first batch of aircraft have already begun. Having begun operations in 2012, Volotea currently flies to some 78 European destinations from bases in Spain, France, Italy and Greece. STG Aerospace introduced its dynamic, configurable, full color version of liTeMood® earlier this year for both single- and twin-aisle Airbus aircraft. The system provides a choice of over 16 million colors and can be used to create bespoke scenes (from northern lights to sunrises and sunsets to settings specifically designed to celebrate national holidays) in just minutes using a unique and patented wireless programming tool.



Lufthansa Technik, Safran Nacelles contract signing
Photo: Safran Nacelles

Safran and Lufthansa Technik sign co-operation agreement for maintenance and repair of A320neo nacelles

Safran Nacelles and Lufthansa Technik have signed a cooperative agreement for maintenance, repair and overhaul (MRO) services on Airbus A320neo nacelles powered by CFM International LEAP-1A engines. This agreement, signed at the MRO Europe exhibition, aims to provide operators with flexible and cost-effective services based on the expertise of both companies: Safran Nacelles which develops and produces A320neo nacelles, and provides services; and Lufthansa Technik - a leading provider of technical aircraft services in the world. Safran Nacelles and Lufthansa Technik will combine their expertise to quickly propose to operators the development of repair services approved by airworthiness authorities. The two companies will also rationalize and optimize the use of their respective nacelle end-item stocks worldwide. The results will be increased accessibility and solutions that best match market demand.

Southeast Aerospace achieves STC/VSTC for Cobham A300D Satcom on Boeing 737NG

Southeast Aerospace, a leader in STC certifications, has obtained an STC and China validation (VSTC) for the Cobham A300D Satcom system in a Boeing 737NG. This will provide a multitude of connectivity options for crews flying over open waters where typical terrestrial connection is lost. The STC covers the 600/700/800 and 900 series. Operators in China were required to meet the NextGen CAAC mandate for Satellite Communications Implementation Plan for Airline Operations

Control. "The Cobham A300 was the most compact and lightweight SwiftBroadband solution," said Rob Reed, Director of Aircraft Modification Programs. "The ability to stay connected, constantly, is critical for business and commercial aviation," he added. The Cobham A300D is also connected to an existing ACARS, which is a digital datalink system for transmission of short messages between aircraft and ground stations, to provide non-safety services.

Revima signs new contracts with major US carrier and with Air Serbia

REVIMA has entered into a long-term maintenance agreement for the support of all TSCP700 APUs operated by a US carrier. Through this multi-year agreement, Revima will provide APU and LRU repair and overhaul services for its new customer's aircraft fleet. The repairs will be carried out at Revima's main facility located in Normandy, France. Furthermore, Revima has entered into a Fleet Management Agreement to provide APU Health Monitoring Services for the Pratt & Whitney Canada APS3200 and Honeywell 131-9A APUs installed on A320-family aircraft operated by Air Serbia. The services include a state-of-the-art Health Monitoring System utilizing advance graphical applications, data analytics and expert knowledge to auto-generate maintenance alerts as a result of simple parameter and trend shifts to more complex multiple-parameter correlation shifts. The system modifies easily to adapt to multiple APU models across various aircraft platforms without needing any aircraft modifications. Air Serbia operates 21 aircraft, including the A319, A320, A330, ATR 73-200, ATR 72-500, and Boeing 737-300.

SR Technics Spain SA and Honeywell sign channel partner agreement

SR Technics, a world leading MRO service provider, has released that its Spanish subsidiary has signed a channel partner agreement for wheels and brakes with Honeywell International. The new agreement, which is in effect until 2023, builds on over twenty years of collaboration between the two companies. The channel partnership, which took effect on August 1, 2018, will allow SR Technics to offer competitive lead times and pricing on all Honeywell wheels & brakes products. SR Technics will also obtain full access to the Honeywell component maintenance manuals and other key IP documentation under the deal. By forming agreements with channel partners, Honeywell is enabled to ensure seamless quality services of their brand products. Therefore, becoming a channel partner to one of the top three wheels and brakes Original Equipment Manufacturers gives SR Technics a competitive edge, benefiting the MRO's existing customer base and increasing its appeal for other carriers in the region.

WestJet signs TTS contract with Lufthansa Technik

Canadian airline WestJet has signed a comprehensive Total Technical Support (TTS®) contract with Lufthansa Technik AG for the technical support of its future Boeing 787 fleet. WestJet also becomes the first customer for Lufthansa Technik's digital platform AVIATAR in the Americas. The agreement includes integrated component supply, aircraft production inspections and line maintenance. The airline has ordered ten Boeing 787-9 Dreamliners and has options for another ten jets, with the first aircraft to be delivered to WestJet at the beginning of 2019. Lufthansa Technik will ensure the global and fast supply of components to WestJet's 787 fleet as part of a Total Component Support (TCS®). The contract covers the global availability of 787 components. In addition to a spare parts pooling concept, Lufthansa Technik will also stock inventories at the airline's bases in Calgary and Toronto. Furthermore, Lufthansa Technik will support WestJet's Dreamliners with line maintenance services at up to ten stations worldwide and support the airline with engineering services such as maintenance planning and troubleshooting. Lufthansa Technik's proprietary Cyclean® system will be used for regular engine washes. Lufthansa Technik experts will also be monitoring and assuring the production quality of the airline's new 787s at the manufacturer's assembly site within the framework of an Aircraft Production Inspection Program (APIP).

Revima

Revima unveils new brand identity and broader service offering

Revima, a leading independent MRO (Maintenance, Repair & Overhaul) solutions provider, has unveiled its new brand identity and broader service offering in answer to its customers' expectations. Furthermore, Revima has announced strengthening its international footprint.

Over the last 60 years, Revima has built a solid MRO expertise, and is now one of the world leaders in its sector thanks to on-time delivery and dedicated customer support. Today, Revima supports aircraft operators, lessors, and repair stations worldwide, positioning the company as one of the most experienced MROs in the world, with extensive understanding of airline expectations, best in class value and services. The choice of adopting the brand Revima for its entire service-offering, accompanied by a new visual identity went hand in hand with a strategic process on branding. Revima, recognized internationally for its unique capabilities in APUs and Landing Gears, will be the brand of choice. The dynamic colors chosen for the new visual identity comprise a deep blue representing reliability and know-how, as well as a vibrant orange, representing warmth and friendliness, with an objective to underscore the group's vision. In this respect, the new visual identity is backed by the baseline "Service is our passion", bringing more dynamism and customer proximity. By using the term "passion", Revima's new baseline is designed to highlight its employees. It illustrates the values of the company: commitment, team spirit, keeping it simple and well-being. With committed and passionate employees across locations in France, Asia, North America and the Middle East, Revima boasts over 60 years of MRO expertise. Designed to strengthen the competitiveness of operators at the highest possible level, Revima's service offering is also backed by unmatched availability and reliability of its services. Revima will also be opening in 2020 a landing gear overhaul shop in Thailand, thus increasing its service capacity and client proximity in this key region of the world.

GKN Aerospace and UTAS sign lifetime Repair License Agreement

GKN Fokker Services and UTC Aerospace Systems (UTAS) have entered into a lifetime Repair License Agreement to support UTAS' hydraulic flight control components of the Bombardier CRJ200 and CRJ700/900/1000 aircraft in the

EMEA and APAC regions. The agreement includes a technology license, providing access to the technical data needed to maintain the Line Replaceable Units (LRUs) according to OEM standards and to OEM approved repairs; technical assistance, which provides training and assistance to deliver the required high quality standards; a spare parts purchase agreement, which is fundamental to offer a competitive solution based on the use of OEM-approved materials. As a UTAS licensee, GKN Fokker Services supports Airlines, MRO companies and Integrators with flexible, reliable and competitive OEM solutions for the flight controls installed on the CRJ fleet. The support includes OEM parts & warranty, dedicated 24/7 customer service, quick turn-around time, performance guarantee and reliability monitoring services to ensure top quality and exchange inventory available to support the next removal.

GA Telesis MRO Services Component and Composite Repair Groups receive CAAV approval to overhaul components and aerostructures for Vietnamese Airlines

GA Telesis MRO Services – Component Repair Group and Composite Repair Group operations have both received certification from the Civil Aviation Administration of Vietnam (CAAV). CAAV approval provides the organizations with direct access to one of the fastest-growing MRO markets in Asia for component and composite repair and overhaul. It will also allow the companies to further develop and expand their customer base in the region. The Component Repair Group and Composite Repair Group have previously been approved by the European Aviation Safety Agency (EASA), Civil Aviation Administration of China (CAAC), the Federal Aviation Administration (FAA), as well as countless other civil aviation authorities globally.

Embraer and Western Air sign Flight Hour Pool Program for ERJ-145s

Embraer have signed a Flight Hour Pool Program agreement with Western Air, from the Bahamas, to provide repairable component support for the carrier's fleet of ERJ-145 aircraft. Western Air recently purchased three ERJ-145s from Embraer, becoming the first operator of the aircraft in the country. The operator also plans to purchase additional aircraft by the end of the fourth quarter of 2018. The multi-year Flight Hour Pool Program for the carrier's fleet of Embraer jets includes material services engineering and advanced component exchanges from Embraer's spare parts warehouse in Fort Lauderdale, Florida.

Universal Avionics & Heli-One complete Transition to Hover certification testing

Universal Avionics (UA) has announced completion of certification testing with Authorized Dealer, Heli-One, for the company's Flight Management System (FMS) Transition to Hover feature. Testing occurred in Stavanger, Norway with a law enforcement AS332L/L1 Super Puma helicopter modernization program. Certification is now imminent. The new UA FMS feature allows a hands-free operation for the crew, enabling them to focus on other mission critical tactics. The pilot-friendly interface provides for an automatic approach based on a pilot Mark-on-Target activation. When activated, the FMS computes and provides coupled guidance downwind, performs an automatic course reversal, and communicates with the CDV-155 AFCS to trigger the descent and deceleration to achieve a hover 100 meters downwind of the target. At that point, the helicopter enters an automatic hover at the pilot-selected altitude.



Photo: Universal Avionics



Official opening of GKN Aerospace Malaysia
Photo: GKN Aerospace

GKN Aerospace officially opens state-of-the-art aero-engine repair facility in Malaysia

GKN Aerospace has officially opened its repair and research facility for aero-engine systems in Johor, Malaysia. GKN Aerospace Malaysia reached this significant milestone on Thursday October 4. GKN Aerospace Engine Systems Leadership came together with Federal and State Government officials from Malaysia, as well as investment partners and customers, to recognize GKN Aerospace's establishment in the region and the importance of growing the aerospace market in Southern Malaysia. At the Farnborough Air Show in July of this year, GKN Aerospace announced the establishment of the aero-engine repair site and the creation of 150 jobs, growing to 300 within two years. A team of 15 people has been built to date. GKN Aerospace has invested US\$30 million in the site and in its state-of-the-art equipment and technologies. The expansion to Asia is an important part of GKN Aerospace's long-term growth strategy and global operating model. The site will initially focus on servicing engine low pressure compressor (LPC) components for CFM56-5B, CFM56-7 and V2500 and will be operational in 2019. Research will be centered on the application of additive manufacturing technology into engine parts repair. The facility will complement GKN Aerospace's existing component repair facility in San Diego, CA to meet growing demand in the Asia Pacific region, with investments targeting the growth in the single-aisle market expected in the region. The support of the Malaysian Government and the Malaysian Investment Development Authority (MIDA) was essential in identifying the location for a suitable and competitive site and customers were closely involved and supportive from the start. GKN Aerospace already operates six facilities in Asia, delivering wiring systems, transparencies and services in China, India, Singapore, Thailand and Turkey. With

this latest expansion, GKN Aerospace's industry-leading engine systems business will have its first site in the Asia-Pacific region, which is a key growth market for the future.

Adient Aerospace starts operations

Boeing and Adient have released that their airplane seat joint venture Adient Aerospace is operational after securing regulatory approvals. The companies also appointed Alan Wittman as Chief Executive Officer and named the team that will lead Adient Aerospace in addressing the aviation industry's need for more capacity and quality in airplane seating. Industry analysts forecast the commercial aircraft seating market to grow from approximately US\$4.5 billion in 2017 to US\$6 billion by 2026. The joint venture between Boeing and Adient is developing a portfolio of seats for new airplane and retrofit configurations. Adient Aerospace has opened a customer service center in the Seattle, Washington area, and product development is underway in Kaiserslautern, Germany, as a continuation of work performed under an agreement the two companies signed in 2017. Adient Aerospace is initially developing lie-flat business class seating offerings for wide-body airplanes. Adient Aerospace CEO Wittman was most recently the director of Business Operations for Boeing's 787 Dreamliner program.

SOAR and SABENA AEROSPACE join forces

SOAR and SABENA AEROSPACE have signed a long-term working agreement to offer Aircraft On the Ground (AOG) Heavy Recovery and Field Repair Services to the commercial aviation community. Services from these quality providers include recovery, evaluation, repair and modification in the field. SOAR

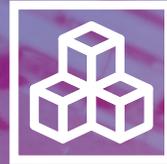
provides turnkey international AOG repair services, combined with dedicated global partners via the SOAR Network™ that are routed to respond quickly to aircraft incidents. With Partner companies such as SABENA AEROSPACE, SOAR will be able to dispatch a well-qualified team 24 hours a day, 365 days a year to provide repair teams, parts, materials, project planning, engineering, full support logistics, portable hangars and much more as part of its core portfolio offerings.

StandardAero extends long-standing relationship with Dumont Group

StandardAero has extended its long-running relationship with aviation services provider Dumont Group through a follow-on contract for Pratt & Whitney Canada (P&WC) JT15D-5R engine overhauls. These engines will power a Hawker 400XP light jet which will shortly be entering service with the Dumont JETS division, a premier Part 135 aircraft management and charter provider. Dumont Group, headquartered in New Castle, DE, is a long-standing customer of StandardAero, having used the company for a variety of overhaul, repair, preservation and teardown services on the P&WC JT15D and PW100 engine families.

GA Telesis announces large-scale ramp-up in Helsinki, GATES Engine MRO Operation

With record engine slot inputs in 2018 across all engine models, coupled with major commitments from existing and new customers of the CF6-80C2, CFM56-5B and CFM56-7B engines over the next 3 years, GA Telesis Engine Services (GATES), a wholly owned subsidiary of GA Telesis, a leader in integrated aviation services, intends to ramp up its engine MRO operations in 2019. GATES is seizing on the opportunity to increase its production capability. The Company is also investigating the potential of adding capabilities for three other engine models. The growth will come in the form of hiring additional technicians and support staff, along with a significant cap-ex spend for additional tooling machinery, as well as upgrading the company's ERP system. Commencing immediately, the initiatives will continue over the next five years, growing slot capacity by 150%. "Since the acquisition of GATES, we have doubled the size of the workforce and have made significant cap-ex investments in the business," said Jukka Laurila, President of GATES. "It is our intention to continue down this track and grow our existing customer relationships, while also expanding our customer network," he added.



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New Additive Manufacturing Center
Photo: LHT

Lufthansa Technik establishes Additive Manufacturing Center

Lufthansa Technik has set up an Additive Manufacturing (AM) Center with the aim of bundling and expanding the competence and experience the company has gained using this technology in the past. Additive manufacturing is often referred to as 3-D printing. In addition to an unrivaled degree of freedom in designing the parts, additive manufacturing produces individual parts very quickly – a huge advantage when prototypes or one-off parts must be manufactured. In the highly weight-conscious world of aircraft, the lower weight of parts makes using the AM technology very attractive. Dr. Aenne Koester, head of the AM Center, explains: “The new AM Center will serve as a collaborative hub where the experience and skills that Lufthansa Technik has gained in additive manufacturing can be bundled and further expanded. The aim is to increase the degree of maturity of the technologies and to develop products that are suitable for production.” As the transfer of a new technology into the highly-regulated world of commercial aircraft operation and MRO poses a challenge, a joint team of Lufthansa Technik experts and AM specialists from numerous industry partners and research institutions are now developing strategies to support the introduction of this technology. As one example, a cooperation with Oerlikon AM aims at enhancing the understanding of process repeatability, a key element of industrialization and certification. The collaboration will also help drive the industrialization of additive manufacturing forward, as the study results will be shared with relevant industry bodies to support defining standards for the qualification and approval of aircraft components.

ST Engineering’s Aerospace Sector secures new contracts worth about \$590 million in 3rd quarter 2018

Singapore Technologies Engineering (ST Engineering) has announced that its Aero-

space sector secured new contracts worth about S\$590 million (US\$473 million) in the third quarter (3Q) of 2018 for services ranging from airframe, engine and component maintenance to engine wash. A number of the contracts secured in the third quarter 2018 are multi-year agreements, including a four-year ATR 72 landing gear overhaul agreement from an Asian airline, a five-year contract extension to maintain the PW4000 thrust reversers and inlets of a European operator’s A300-600 fleet, and heavy maintenance agreements from American freight operators. The Aerospace sector redelivered a total of 208 aircraft for airframe heavy maintenance and modification work in the third quarter, 2018. Additionally, a total of 11,992 components, 35 landing gears and 45 engines were processed, while 2,644 engine washes were conducted. The sector continued to expand its aftermarket services in nacelle systems by successfully setting up MRO capabilities for A320 V2500 and CFM56-5B nacelles. It is currently developing aftermarket capabilities in new-generation flight control and nacelle systems used in aircraft such as the Boeing 737MAX and Boeing 777. In China, the sector expanded its airframe maintenance portfolio when its Guangzhou facility obtained approval from the Civil Aviation Administration of China (CAAC) to carry out base maintenance for the Boeing 767.

Spatial commissioned by Pegasus Airlines to build A321NX Over Wing Exit Trainer

Spatial, a provider of cabin crew training simulators, has been commissioned by Pegasus Airlines to build an A321NX Over Wing Exit Trainer. Manufactured to replicate all the functionality of a real A321NX semi-automatic door, the high-fidelity simulator will enable Pegasus Airlines’ cabin crew to become fully proficient in all normal, abnormal and emer-

gency situations that may be encountered with this Airbus aircraft door type. Custom-built to the highest standards in just six weeks at Spatial’s 50,000 ft² in Dubai, the trainer was shipped and installed at Pegasus Airlines’ crew training center in Istanbul in October.

Skyways Technics A/S launches ATR leading edge and composite repair capabilities in Kuala Lumpur

Danish MRO Skyways Technics has opened brand new facilities located next to Subang Airport. The compound consists of EASA-approved shops, along with increased warehousing and office space. With extensive experience in regional aircraft composite repairs from its main base in Europe, Skyways Technics A/S aims to consolidate its reputation on structure and component MRO in the Asia-Pacific market. Since 2014, Skyways Technics Asia has already responded to Asian carriers’ demands through its pool of ATR42 and ATR72 leading edge and engine air intakes. Bi-turboprop operators can now send their components to Malaysia and save on TAT and freight costs, as well as benefit from a time- and cost-efficient service and support.

StandardAero to support Air Methods’ fleet of Airbus Helicopters AS350 and EC130 dynamic components

StandardAero has signed a three-year agreement with Air Methods to support its fleet of Airbus Helicopters AS350 and EC130 dynamic components. Over the course of this agreement, StandardAero will provide expert-level repair, light and major overhaul, testing and modification of dynamic components for Air Methods’ fleet of more than 120 AS350 and EC130 helicopters. All services will be completed at StandardAero’s Airframe Center of Excellence located in Vancouver, BC. As an approved Airbus Helicopters Repair Center, StandardAero possesses extensive dynamic component repair and overhaul capabilities for the popular H125/AS350, AS355 and H130/EC130 helicopter models, while also providing rental and exchange assets to its customers. In November 2017, StandardAero’s amended license extended these capabilities further to include global operators outside of North America, with services being offered to customers worldwide and conducted at StandardAero’s Vancouver, BC and Almondbank, Perth locations.



The first Trent 1000 at Delta TechOps
Photo: Delta TechOps

Rolls-Royce welcomes Delta TechOps into expanded service network

Rolls-Royce has welcomed Delta TechOps into its expanded service network as it begins work on its first Trent engine. Delta TechOps began operations as a Trent Authorised Maintenance Centre, with the induction of a Trent 1000 engine module. The 127,000 ft² state-of-the-art facility will also carry out services on the Trent 7000 and Trent XWB. Rolls-Royce has been responding with a range of activities to support customers experiencing disruption as a result of the requirement for increased inspections on Trent 1000 engines. These activities, which include an increase in maintenance capacity for affected engines, the introduction of a new inspection technique and the acceleration of a permanent fix for the issue, are all aimed at reducing the operational impact on customers. The addition of Delta TechOps supports the growth of maintenance capacity and also supports Rolls-Royce's wider services strategy to develop an increasingly capable, competitive and flexible CareNetwork. The new facility, in Atlanta, Georgia, has been created by converting several large hangar bays. The workshop consists of areas for engine assembly and disassembly; kitting parts; engines work in progress; shop materials and supplies, life limited parts and repair and support. A new test cell will open later this year capable of testing engines to 150,000lb thrust. Delta TechOps already carries out service support for Rolls-Royce BR715 regional jet engines.

AAR to provide after-hours logistics and technical AOG support for Eaton Aerospace

AAR, a global provider of aviation services to commercial airlines, will deliver after-hours

logistics and technical AOG support for Eaton Aerospace effective October 1, 2018. Under this agreement, AAR will serve as the single point of contact for all of Eaton's commercial customers after office hours. "We are excited to showcase our expanded AOG desk with one of our largest business partners," said Darren Spiegel, Vice President and General Manager, OEM Solutions, AAR. This arrangement will provide a seamless interface for Eaton's global customer base. If the requirement calls for products in AAR-Eaton's existing portfolio, AAR will provide support from its global warehouse network. For other Eaton products, AAR will work with Eaton to ensure the operator is fully supported.

Groundbreaking ceremony for TurbineAero's new building in Thailand: Robert Wilson named new CEO

TurbineAero announced the groundbreaking ceremony for a new building in the Free Zone of the AMATA CITY Industrial Estate, Chonburi, Thailand, outside of Bangkok. The 80,000 ft² new facility will house up to 250 employees and will handle high-technological testing, maintenance, repair and overhaul activities for aircraft components and systems for its worldwide customers, including APU MRO, LRUs and APU part repair. "We are delighted to start the construction of TurbineAero's new APU MRO facilities in Asia. This new building highlights the growth TurbineAero has witnessed over the last two years and confirms the development of the aerospace industry in Thailand which we are happy to be part of. This new facility will include three brand new full-digital auxiliary power unit test cells as well as the most modern Non-Destructive Testing, inspection, repair and overhaul equipment. The new state-of-the-art equipment and work floor lay-

out will enable us to further improve on turn-times, efficiency and performance," said Peter Gille, Vice President and General Manager of TurbineAero Repair-Asia. "The construction of a facility of this kind is complex and expensive and it proves the trust that our Board of Directors has in the Kingdom of Thailand and in the country's efforts on strengthening its position as innovation and service-based economy in South-East Asia." Along with the new building, Robert Wilson was announced as the new Chief Executive Officer (CEO) for TurbineAero. Prior to this, Wilson founded Aerospace Advisory Group in 2014 and served leading aerospace companies in consulting and board roles. He served 27 years in leadership roles at Honeywell, and predecessor companies, supporting commercial airlines, military and business aviation customers. The last nine years of his 27-year Honeywell career he served as the President of the Business & General Aviation business. Headquartered in Chandler, Arizona USA, TurbineAero is one of the world's leading independent aerospace component maintenance, repair and overhaul (MRO) service providers focused on auxiliary power units (APUs) and related products.

SR Technics and FEAM Maintenance/Engineering sign MoU to expand line maintenance network

MRO service provider SR Technics and FEAM Maintenance/Engineering, a U.S.-based MRO leader in aircraft line maintenance services, have signed a memorandum of understanding (MoU) on joint initiatives aimed at adding value for the current and prospective customers of both companies. In partnering with FEAM, SR Technics will expand its reach from multiple European locations to the U.S. market, where FEAM has numerous established aircraft maintenance stations. Conversely, FEAM will offer global solutions through its partnership with SR Technics. "Partnering with a world-class MRO such as SR Technics will create new opportunities for FEAM and more importantly, for FEAM customers," said Dan Allawat, Chief Operating Officer, FEAM. "We look forward to exploring areas of cooperation as a means to offer a broad spectrum of services to our collective airline clients. As part of SR Technics' growth objectives, this partnership will develop our service offering for our existing and future customers in the U.S.," said Jakob Straub, Head of Aircraft Services and Line Maintenance at SR Technics. "Together with our strong partner, we will be able to seize on market opportunities to maximize our potential and expand our presence, while ensuring reliability and fast turnaround times at attractive prices."



Bombardier Service Center Miami
Photo: Bombardier

Bombardier doubles customer services capabilities in Florida with new service center

Bombardier has released that it is increasing its customer service capabilities in the U.S. with a new service center at the Miami-Opa Locka Executive Airport (OPF) in Miami-Dade County, Florida. The new service center will more than double the company's current customer service footprint in Florida with new capabilities, including a paint facility for the center's vast customer base spanning the U.S. and Latin America. Planned for inauguration in 2020, the new service center in Miami will be fully equipped to perform scheduled and unscheduled maintenance, aircraft modifications, avionics installations, and aircraft on ground support (AOG) for Bombardier Learjet, Challenger and Global aircraft. Once the facility is fully ramped up, the new service center will nearly double Bombardier's employment in Florida to close to 300 employees. Located in Miami-Dade County, the Miami-Opa Locka Executive Airport (OPF) is the largest of the County's general aviation airports. Bombardier's approximately US\$100-million investment for its new service center will bring significant benefits to Miami-Dade County, including the development of a comprehensive aerospace cluster and the establishment of talent development partnerships with local colleges.

LORD Corporation opens US\$12 million manufacturing facility in Pont de l'Isère, France

LORD Corporation, a global diversified technology and manufacturing company, has officially unveiled its new, state-of-the-art manufacturing facility in Pont de l'Isère. The

83,000 ft² facility positions LORD for future growth while enabling the company to enhance its customer service. The new center replaces the company's previous facility in Saint-Vallier, with all 200 employees relocating to the new building. The facility supports LORD's Electromechanical Solutions business and is 30% larger than the business' previous facility with development and test labs, machining, mounting operation, a repair shop, sales and marketing, and general administration. Unique features include a showroom with demonstration equipment and an aircraft cockpit simulator which puts you in the pilot seat to experience the LORD cockpit controls and test how well you maneuver the aircraft. Additionally, nearly half of the parking lot will be installed with electric vehicle charging stations.



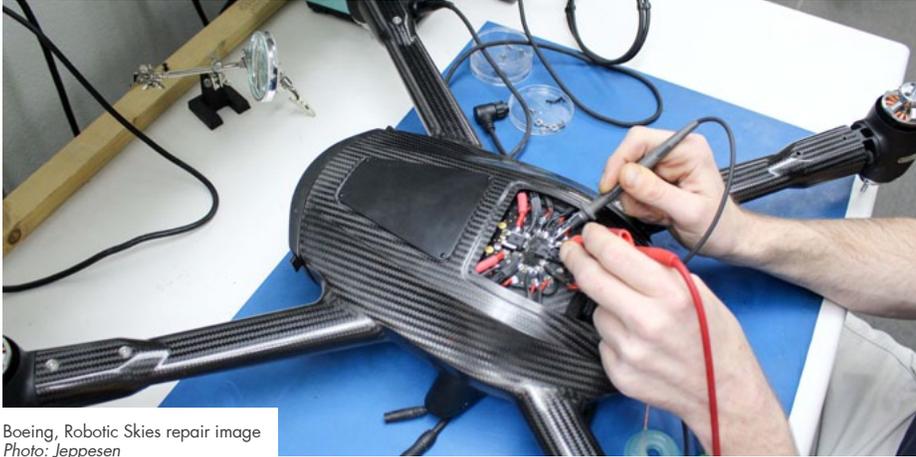
Battery station
Photo: APSS

IAI's BEDEK Aviation Group named official maintenance supplier of V2500 engines by HNA Group

IAI's BEDEK Aviation Group has entered an official supplier agreement with HNA Group from China. Under the agreement, BEDEK's Engine Division will serve as the maintenance and overhaul center for the V2500 engines of HNA Group's airlines. The engines will be sent to BEDEK by the customers and returned to China following servicing. The signing of the agreement was held at HNA Group headquarters in Haikou.

AeroParts & Supply Southwest completes facility upgrade and move at Dallas Executive Airport

AeroParts & Supply Southwest (APSS) has completed a facility move to an upgraded hangar and shop space located at Dallas Executive Airport (RBD) and is now fully operational. The well-established General Aviation parts, supply and repair company celebrated their grand opening of the facility in early September. The 3,808 ft² facility consists of larger shop space that includes an enclosed dedicated battery shop. The facility also consists of an expanded wheel and brake shop, warehouse and office space. In addition, the facility has a redesigned retail space for GA parts that makes it easier than ever for customers to select common parts. The move aligns with APSS's efforts to make online part buying easier with a revamped website featuring more robust parts search and online purchasing options, which launched earlier this year.



Boeing, Robotic Skies repair image
Photo: Jeppesen

Boeing teams with Robotic Skies

Boeing and its subsidiaries Jeppesen and Aviall have joined with Robotic Skies, a leading commercial unmanned aircraft system (UAS) support services provider, to develop and deliver industry-leading supply chain management and optimization, analytics, and maintenance, repair, and overhaul (MRO) services for the commercial and civil UAS markets. "Teaming with Boeing will allow both companies to elevate the commercial UAS customer experience and deliver operations solutions that would be difficult to achieve individually," said Brad Hayden, Robotic Skies, CEO. "This agreement represents a foundational step for the advancement of commercial UAS operations that will meet the requirements of today and help shape the future of unmanned flight." Boeing and Robotic Skies will jointly pursue opportunities to best leverage their extensive combined experience and solutions in manned aviation programs and extend them into the UAS market, including providing services for commercially focused regulatory compliance, ground support, training, MRO, parts distribution, field upgrades and vehicle retrofit capabilities. As their relationship continues to expand, the companies will provide unified operations services for both existing commercial UAS operators and for companies seeking to enter the UAS field for the first time.

Nycote selects Pexa as European distributor for its high-tech aerospace nylon epoxy coatings

Nycote has signed an exclusive distributor agreement with Pexa, a specialist distributor, for its high-technology surface coatings with the objective of enhancing safety and reducing maintenance costs for major aerospace providers around the globe. Nycote is a global leader in advanced coating technologies that increase asset lifespan, reduce maintenance costs and

ensure safety for aircraft manufacturers. Their coatings are approved by major OEM's such as Airbus, Boeing, and Embraer and are REACH compliant. Nycote combines the strength and flexibility of nylon with the hardness of epoxy, creating a clear, lightweight barrier that prevents corrosion and conductivity. Its one-coat, anti-corrosion products can be applied on an array of surfaces and can also be custom tinted. This agreement with Pexa, the UK-based distributor of high-tech surface coatings, offers unrivaled expertise in the marketing, delivery and technical support of specialty surface coatings. As a result, Nycote can expand its market coverage and provide European customers with technical support and stock availability. Pexa's field sales team are trained and qualified in the application of surface coatings, providing technical advice and support to customers throughout Europe.

GA Telesis MRO Services Composite Repair Group receives CAAC approval to overhaul nacelles for Chinese Airlines.

GA Telesis MRO Services Composite Repair

Group facility has received certification from the Civil Aviation Administration of China (CAAC). CAAC approval provides the Composite Repair Group with access to the world's largest major MRO market for nacelles and flight controls and will allow the company to develop and expand its customer base in the People's Republic of China. The Composite Repair Group has previously been approved by the European Aviation Safety Agency (EASA) and the Federal Aviation Administration (FAA) as well as countless other civil aviation authorities globally.

Lufthansa Technik and MTU Aero Engines lay foundation stone for joint MRO shop in Poland

Lufthansa Technik AG and MTU Aero Engines AG have laid the cornerstone for their new joint venture EME Aero in Jasionka, close to Rzeszów city, on September 28, symbolically launching one of the biggest and most advanced GTF MRO service centers worldwide. Pratt & Whitney GTF engines power five regional and narrow-body aircraft platforms, with the A220 and the A320neo family from Airbus and the Embraer E190-E2 already in commercial service. The total investment for the service center is €150 million (US\$174 million) by 2020. Plans are to have the facility – with its 40,000 m² of workspace – up and running by the end of 2019. Work on the construction site began in mid-June this year. The area has already been levelled and over 60,000 m³ of soil have been moved. The building platform is almost complete and foundation works have begun. The construction site for the EME Aero service center consists of about 160,000 m²; this corresponds to approximately 23 football fields. The construction of the facility, including one of the most advanced test cells worldwide, will be completed by the end of 2019.



Foundation stone laying ceremony
Photo: MTU

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Ribbon cutting at AerSale's new Parts Manufacturing business
Photo: AerSale

AerSale launches new Parts Manufacturing business

AerSale, a global supplier of mid-life aircraft, engines, used serviceable material, and MRO services, has launched a new business unit, AerSale Parts Manufacturing, in Roswell, New Mexico. An official ribbon-cutting ceremony was held on September 25, 2018. AerSale Parts Manufacturing has received Parts Manufacturing Approval (PMA) from the Federal Aviation Administration (FAA) to produce commercial and military aircraft parts (FAA PMA PQ03874SW). The business unit will also be responsible for developing proprietary systems such as AerSafe and AerTrak, which have been issued Supplemental Type Certificates (STCs) from the FAA to comply with the agency's various rules and mandates. The new business unit features a 17,000-ft², FAA-approved manufacturing facility with dedicated fabrication, warehousing and logistics, state-of-the-art LED lighting, and employee-designed-and-built wire harness manufacturing stations with the latest harness retention systems. Teams of aerospace professionals will handle all aspects of the manufacturing process including design, engineering, and production.

Eirtech secures B737 STC for Honeywell PM-CPDLC ACARS Mark II+ CMU upgrade

Eirtech Aviation Services have been granted an STC (Supplemental Type Certificate) on B737NG aircraft to install the Honey-

well ACARS Mark II+ CMU with all associated wiring changes. This allows aircraft fitted with these units to comply with the EASA Link 2000+ CPDLC mandate which is due in February 2020. This STC is applicable to the B737 series, specifically models: 737-600/-700, 737-8/-800, 737-900/-900. This solution will be of interest to airlines and aircraft leasing companies who have B737NG aircraft which are not yet compliant with the upcoming CPDLC mandate. Eirtech can supply a turnkey solution to include, engineering, STC with right to use letter, installation wiring kit with EASA Form 1 and supply of Honeywell CMU units.



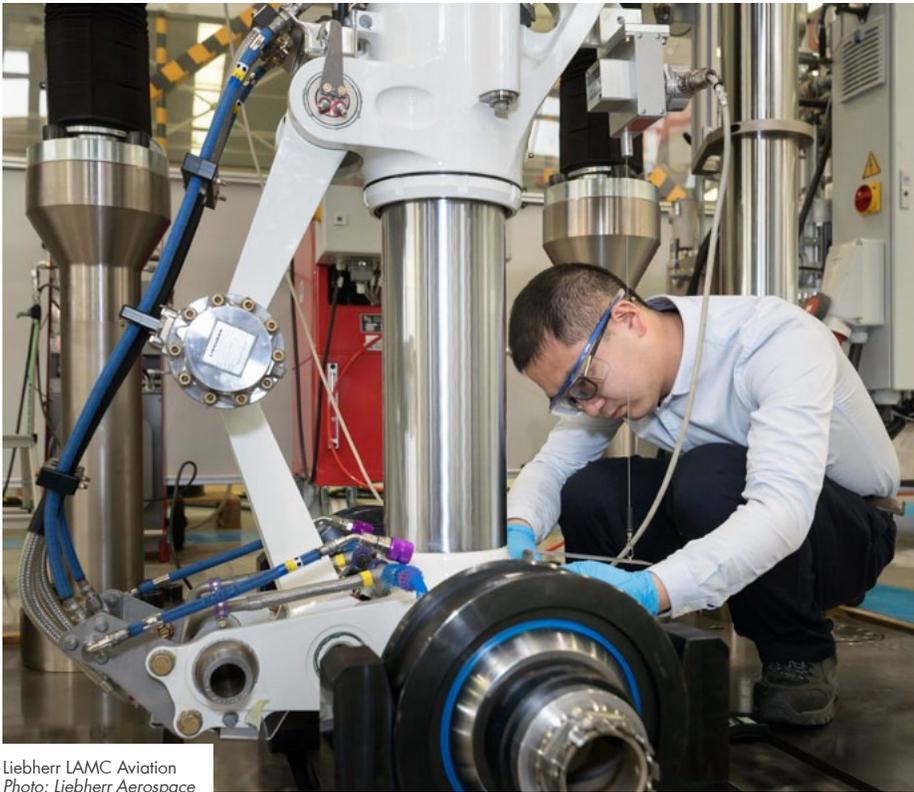
Photo: AirTeamImages

Bombardier CRJ Series certified for higher maintenance intervals

Bombardier Commercial Aircraft has reported that the Federal Aviation Agency (FAA) has granted approval for the maintenance intervals escalation of the CRJ700, CRJ900 and CRJ1000 aircraft. The line maintenance interval (A-check) is extended to 800 flight hours and the heavy maintenance interval (C-check) to 8,000 flight hours. The maintenance intervals have doubled since the launch of the CRJ aircraft family. The new maintenance intervals are applicable for new production deliveries as well as all CRJ700, CRJ900, and CRJ1000 aircraft in service.

Ellinair expands PBH contract with AJW Group

AJW Group, an independent specialist in the global management of aircraft spares, has expanded its Power-by-the-Hour (PBH) support contract with the Greek charter airline, Ellinair. The contract, which extends AJW's long-standing relationship with Ellinair, will see the business use its industry-leading expertise to manage the airline's total fleet of A320s, based at its operational headquarters in Macedonia International Airport, Thessaloniki. Just four years into its operation, Ellinair, part of the Mouzenidis Group, already operates flights to 42 destinations with a fleet of up to 10 aircraft (4 Airbus A320 family aircraft on Dry Lease and up to 6 seasonal aircraft on Wet lease).



Liebherr LAMC Aviation
Photo: Liebherr Aerospace

Liebherr LAMC Aviation (Changsha) delivers first C919 landing gear assembled in China

Liebherr LAMC Aviation (Changsha), the joint venture between the Chinese company LAMC (AVIC Landing Gear Advanced Manufacturing Corp.) and German-based Liebherr-Aerospace Lindenberg GmbH has delivered the first C919 landing gear system which has been assembled in China to its air framer customer COMAC. The assembly line for the landing gear of the C919 at Liebherr LAMC Aviation (Changsha) Co., Ltd. was built jointly by Liebherr and its partner LAMC based on the assembly facilities and testing equipment of Liebherr-Aerospace Lindenberg GmbH, Lindenberg (Germany), Liebherr's center of competence for landing gear and flight control systems. Arndt Schoenemann, Chairman of the Board of Directors of Liebherr LAMC Aviation (Changsha) stated: "The delivery of the first complete C919 landing gear system assembled in China by Liebherr LAMC Aviation (Changsha) to COMAC represents a further major milestone in the history of our joint venture. We are very happy to contribute together our experience and know-how to the success of the prestigious C919 program. It reflects an even more important step, because we are able to hand over the first system to our customer much earlier in the prototype phase of the C919 than originally planned." Liebherr LAMC Aviation (Changsha) will as-

semble the next C919 nose and main landing gears in Changsha. Step by step, the joint venture is taking over the direct procurement of the parts delivered by approved suppliers. Liebherr-Aerospace Lindenberg GmbH had been selected by COMAC to develop, manufacture, qualify, certify and service the landing gear system of the C919 whereas its sister company, Liebherr-Aerospace Toulouse SAS, center of competence for air management systems, provides also a major system on board the C919, the integrated air management system.

Airbus Partners with AMSilk for development of next-gen aerospace composite fibers

As the aerospace industry continues to move away from metal and steel fuselages and wings, adopting carbon fiber as a means to reduce weight and thus reduce fuel consumption, Aerobus, a leader in this change in construction materials has now teamed up with AMSilk to explore the potential use of Biosteel® fiber. Biosteel® fiber is identical in molecular composition to spider silk, a material known for its strength, flexibility and lightweight structure and Airbus is the first in the aerospace industry to experiment with this new material which will enable the aerospace giant to approach the design and

construction of planes in a totally new way. The intention is to produce a new composite material incorporating Biosteel® fiber which will have additional shock resistance and flexibility. AMSilk produces Biosteel® fiber through a closed-loop biotechnological process that renders the product highly sustainable, with no petroleum inputs. Through this joint cooperation agreement, the two companies are hoping to produce the first prototype composite in 2019. Commenting on the joint venture, Jens Klein, CEO of AMSilk said: "We are excited to be working with Airbus, the world leader in performance airplanes, to create a fundamentally new material. At AMSilk, we are committed to producing materials that are both high performing and sustainable, and the current partnership with Airbus is an opportunity to set a new, stronger and more sustainable course for the entire aerospace industry."

Weston Aviation agrees terms to open new FBO at Gloucestershire Airport

Weston Aviation, the UK and Ireland based FBO and Business Aviation specialist has agreed terms to open a new Business Aviation Centre and FBO at Gloucestershire Airport (EBGJ/GLO). Weston Aviation CEO and founder, Nick Weston said "We are delighted to be opening a new FBO facility at Gloucestershire Airport and this will be an exciting addition to our network of four locations in the UK and Ireland. Gloucestershire Airport is based in a location that offers significant potential for the development of business aviation growth and activity as well as encouraging new users of private air travel to and from the region." Established in 1995, Weston Aviation is the second-largest FBO network in the UK and Ireland in terms of locations, with additional FBO facilities at Cornwall Airport Newquay, Humberside International Airport and Cork Airport in Ireland. Weston Aviation also provides aircraft charter services, aircraft leasing and fuel services.

C&L Aviation Group signs Multi-Aircraft Service Agreement with JetSuiteX

C&L Aviation Services, a C&L Aviation Group company, has signed an agreement with JetSuiteX, to provide interior aircraft refurbishment, engineering, and exterior paint services to convert multiple EMB 145-family aircraft from standard regional aircraft to the luxurious 30 seat JetSuiteX brand interior with its distinctive red and white exterior paint scheme.

This includes new seat designs, upgrading interior panels, upgrading lavatories, installing LED lighting, Wi-Fi, electrical outlets, and more. In addition, the parties have signed an agreement for C&L to provide heavy maintenance, repair, and overhaul services for Jet-SuiteX's fleet of EMB 145-family aircraft with the first two aircraft already inducted.

Jazz Maintenance division receives Embraer certification

Jazz Aviation, a subsidiary of Chorus Aviation, has received Transport Canada certification for Jazz Technical Services (JTS) to perform airframe heavy maintenance on Embraer 135 and Embraer 145 regional aircraft. JTS is a division of Jazz Aviation, dedicated to maintenance, repair and overhaul ('MRO'). "Acquiring Embraer certification is an important next step in the evolution of our maintenance division and is in line with our plans for continued

growth and the ability to provide a broader range of maintenance services," said Colin Copp, President, Jazz Aviation. Jazz Technical Services is now certified to perform Embraer 135 and Embraer 145 work from its six-bay, 80,000 ft² heavy maintenance facility at Halifax Stanfield International Airport where over 400 maintenance professionals are employed supporting contracts for Canadian, U.S. and international customers.

Nolinor Aviation modernizing ten B737-200s with UA glass cockpit

Universal Avionics (UA) has announced that 10 Nolinor Aviation Boeing 737-200 aircraft are undergoing a modernization program for state-of-the-art avionics and glass displays. The aircraft upgrade includes 4 UA EFI-890R Advanced Flight Displays and the addition of a second UA UNS-1Lw Satellite-Based Augmentation System (SBAS)-Flight Management

System (FMS). The first upgrade has been completed and the aircraft has re-entered service, while the second aircraft installation is in process with UA Authorized Dealer, Mid-Canada Mod Center. The upgrade addresses equipment obsolescence and increasing difficulty in supporting older electromechanical instruments, greatly improving reliability and safety. The EFI-890R Advanced Flight Displays also allow Nolinor to focus on increasing dispatch reliability and mission completion – meeting the needs of mining companies and transporting more than a hundred passengers to extremely remote villages only accessible by air.

CTT Systems announces Cair™ VIP order for ACJ319neo

CTT SYSTEMS AB, a market leader of aircraft humidity control systems, has received a Cair™ VIP Inflight Humidification system



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order from Fokker Techniek BV for one Airbus ACJ319neo. Installation will take place during the green aircraft outfitting project performed by Fokker Techniek BV. The system installation will feature increased humidity in the entire aircraft cabin, which requires support from two humidifiers. This award is CTT Systems' 91st order for Airbus ACJ/Boeing BBJ VIP aircraft.

Lufthansa group chooses FL Technics for 28 Airbus 320s

After several ad-hoc maintenance projects, FL Technics, a global provider of integrated aircraft maintenance, repair, and overhaul services, has signed a long-term joint contract with Lufthansa group companies (network and point-to-point airlines) for MRO services. The first aircraft is scheduled for maintenance at the beginning of October 2018 in Vilnius (Lithuania) and will be followed by the

rest during the 2018 and 2019 season in FL Technics' Lithuanian hangars. "The Lufthansa Group airlines have a huge A320 Base Maintenance demand with some 300 aircraft in service and pooled within the LH Group Technical Fleet Management," said Thomas Rueckert, Vice President Base Maintenance Services at Lufthansa Technik. "Alongside our internal Lufthansa Technik capabilities, we employ a two-tier strategy by having an additional strong and reliable supplier – like FL Technics – at our side. We always tender demand beyond our own capacity to leverage the very dynamic MRO market. We are happy to have found high-quality services and a very attractive commercial offer from FL Technics.

TAM applies for Part 21 design approval

Täby Air Maintenance, TAM, is seeking approval for a Part 21 Design Organisation, thus

aiming to further enhance services to operators of the worldwide fleet of Saab 340 and Saab 2000 airliners. Plans call for a spring 2019 full design approval. "We constantly strive to provide operators with a seamless service, and with full in-house design and production capabilities, we can provide all necessary engineering, design, production and certification services," says Pär Gulle, TAM Managing Director.

"Our current production approval covers the manufacture of a wide range of parts, including mechanical and structural parts for installation on aircraft. With an approved design organization, we will also be able to provide STC, minor design changes and minor repairs for large and small aircraft (CS-23, CS-25, CS-27) related to i.e. installation of avionics equipment, electrical systems, structure and cabin interiors."

Finance News

Greybull Capital LLP to become the majority shareholder in Monarch Aircraft Engineering (MAEL)



Photo: Monarch Aircraft Engineering

Monarch Aircraft Engineering (MAEL), a leading aircraft MRO provider, has agreed the terms of the company's new ownership structure, with Greybull Capital LLP becoming the majority shareholder. As the restructuring progresses, MAEL's lenders, PNC, will continue to provide facilities and support, and many of the operator's key customers are also looking to support the business. In the last year MAEL's geographical footprint increased with the opening of a new component maintenance facility in Northampton which created more than 100 new jobs, taking the workforce to over 800 staff. MAEL additionally doubled the size of its industry-renowned apprenticeship scheme. MAEL is a leading independent aircraft maintenance company with a skilled and experienced management team which has strengthened the company's customer base through

new contracts with a number of leading airlines. MAEL's Luton and Birmingham, U.K., facilities have current contracted work which extends throughout 2019. MAEL was spun off as an independent company following the collapse of Monarch Airlines in October a year ago. MAEL's clients include among others Thomas Cook, Virgin Atlantic and Wizz Air.

Seabury Capital assists in launching Zephyrus Aviation Capital

Seabury Capital Group has announced its role as sole investment banking advisor on the successful acquisition of a leased portfolio of 21 aircraft by Zephyrus Aviation Capital (Zephyrus). Zephyrus is a fleet management solutions provider to lessors and commercial airlines focused on mid- to end-of-life aircraft and related engine leasing and trading. Seabury Capital leveraged its extensive industry relationships to identify the opportunity and then arranged for Zephyrus' best-in-class management team and equity sponsor to acquire the inaugural aircraft portfolio from Dublin-based Avolon. Zephyrus is capitalized by Virgo Investment Group (Virgo) as majority equity sponsor, with Seabury Capital retaining a minority stake. Zephyrus is led by a highly experienced team of former CIT Aerospace executives. Tony Diaz, former President of CIT Aerospace, and Damon D'Agostino, former Chief Commercial Officer of CIT Aerospace, are the company's non-executive Chairman and President & CEO, respectively. In addition, Robert Meade, CIT's former Head of Marketing, is Chief Commercial Officer, and Richard Genge, CIT's former Assistant Vice President – Marketing & Asset Sales, is Vice President.

Harris Corporation and L3 Technologies agree to combine in all-stock merger

Harris Corporation and L3 Technologies have agreed to combine in an all-stock merger of equals to create a global defense technology leader, focused on developing differentiated and mission-critical solutions for customers around the world. Under the terms of the merger agreement, which was unanimously approved by the boards of directors of both companies, L3 shareholders will receive a fixed exchange ratio of 1.30 shares of Harris common stock for each share of L3 common stock, consistent with the 60-trading-day average exchange ratio of the two companies. Upon completion of the merger, Harris shareholders will own approximately 54% and L3 shareholders will own approximately 46% of the combined company on a fully diluted basis. The combined company, L3 Harris Technologies, Inc., will be the sixth-largest defense company in the U.S. and a top-ten defense company globally, with approximately 48,000 employees and customers in over 100 countries. For the calendar year 2018, the combined company is expected to generate net revenue of approximately US\$16 billion, EBIT of US\$2.4 billion and free cash flow of US\$1.9 billion.

BOC Aviation signs US\$750 million syndicated loan

BOC Aviation has signed a US\$750 million unsecured syndicated Loan Facility with a tenor of five years. Following a strong response from lenders after its launch into general syndication, the Facility was increased to a final size of US\$750 million from an initial launch amount of US\$500 million. The Facility is BOC Aviation's largest single tranche unsecured term loan financing transaction. The borrower under the Facility is BOC Aviation (Ireland) Limited and the Facility is guaranteed by BOC Aviation. Agricultural Bank of China Limited, Singapore Branch, BNP Paribas, Citigroup Global Markets Singapore Pte. Ltd., DBS Bank Ltd., Development Bank of Japan Inc., The Hongkong and Shanghai Banking Corporation Limited, MUFG Bank, Ltd, Oversea-Chinese Banking Corporation Limited, United Overseas Bank Limited and Westpac Banking Corporation are the Original Mandated Lead Arrangers and Bookrunners (the OMLABs) for the Facility. Participating in the Facility are 19 financial institutions, including the OMLABs.

Héroux-Devtek completes acquisition of CESA

Héroux-Devtek a leading international manufacturer of aerospace products, has successfully completed the acquisition of Compañía Española de Sistemas Aeronáuticos, S.A. (CESA), a subsidiary of Airbus SE for a purchase price of €137 million (approximately CA\$206 million) enterprise value, including CESA's net outstanding debt of €23 million euros (approximately CA\$35 million), subject to customary closing adjustments. The transaction was funded through a combination of a CA\$50 million seven-year unsecured subordinated term loan provided by Fonds de solidarité FTQ, the Corporation's revolving credit facility and available cash on hand. In connection with this acquisition, the Corporation's credit facility was amended, increasing the borrowing limit to CA\$250 million from CA\$200 million. Headquartered in Madrid, Spain, CESA is a leading European provider of fluid mechanical and electromechanical systems for the aero-

space industry. Its main product lines include actuation and hydraulic systems as well as landing gear products. Management is updating its sales guidance for fiscal 2019 to reflect the CESA acquisition. Management now expects sales for fiscal 2019 to be in the range of CA\$460 million to CA\$470 million, representing an increase of approximately 20% over last year. Capital expenditures are expected to be approximately CA\$20 million. Management is also issuing new long-term sales growth guidance reflecting both the Beaver acquisition completed last July and the CESA acquisition. Management expects fiscal 2022 sales in the range of CA\$620 million to CA\$650 million. (€1.00 = US\$1.15 = CA\$1.49 at time of publication.)

Jet Aviation acquires KLM Jet Center in Amsterdam and Rotterdam



Edwin Niemöller

Photo: Jet Aviation

Jet Aviation has completed its acquisition of KLM Jet Center, a leading provider of comprehensive FBO/Handling services at Amsterdam and Rotterdam International Airports. With a new flagship operation and presence at two of Europe's top airports, the KLM Jet Center acquisition represents a significant step in strengthening Jet Aviation's position as a leading FBO service provider in Europe. "Amsterdam and Rotterdam are highly attractive destinations to business jet owners and operators," said Rob Smith, president of Jet Aviation. "The two FBOs support more than 7,500 annual movements and extend high connectivity to Jet Aviation network customers. Like us, the KLM Jet Center is known for its capabilities, expertise, strong values and commitment to customer service. We are delighted to welcome all 34 employees to the Jet Aviation family." Edwin Niemöller, who has served as FBO Director of the KLM Jet Center for more than a decade, will continue in his role as head of the Amsterdam and Rotterdam FBOs. KLM Jet Center began its handling services to business aviation as part of KLM Northsea Helicopters in 1986. The company offers ground handling, customer and crew services, flight planning and fueling services to business and general aviation customers at both locations and its Amsterdam FBO has consistently been voted one of the top-ten FBOs in Europe in recent years. Acquisition of the KLM Jet Center brings Jet Aviation's global FBO network up to 34 locations. The two KLM Jet Center FBOs will become Jet Aviation branded facilities this October.

DAE announces successful closing of US\$800 million revolving loan facility

Dubai Aerospace Enterprise (DAE) has successfully closed its US\$800 million revolving loan facility which was launched in May of this year. The credit facility, initially launched for an amount of US\$480 million, attracted the appetite from a broad group of banks and achieved substantial oversubscriptions. Al Ahli Bank of Kuwait (ABK) serves as the Coordinating Mandated Lead Arranger and Bookrunner, and together with UAE-based First Abu Dhabi Bank (FAB) act as Mandated Lead Arranger (MLA) and Bookrunner, while Noor Bank acts as Mandated Lead Arranger. FAB is also the Global Agent, Facility Agent and Investment Agent, whilst Noor Bank acts as the Islamic Structuring Agent. Eight additional banks have entered the facility using the accordion feature to bring the total of the facility size to US\$800 million.

Smiths Group acquires United Flexible for US\$345 million

Smiths Group has entered into an agreement to acquire United Flexible, a provider of flexible and rigid engineered solutions for the transfer of fluids and gases in performance-critical environments, from Arlington Capital Partners for an enterprise value of US\$345 million. United Flexible will be integrated into the Group's Flex-Tek division. The acquisition strengthens Flex-Tek's positions in aerospace and industrial end markets globally. United Flexible already supports important aerospace platforms, including the A320neo and PW1000G and F135 engines. It has four operations in the US and three in Europe, which will enhance Flex-Tek's geographic footprint. In the 12 months to 31 December 2018, United Flexible is expected to generate sales of US\$157 million and adjusted EBITDA of US\$32 million. The acquisition consideration will be payable from existing cash and bank facilities. Completion of the acquisition is expected to take place in the second half of FY2019 and is conditional upon regulatory clearances in the US, as well as other customary closing conditions.

Air Transport Services Group to acquire Omni Air International

Air Transport Services Group (ATSG) has agreed to acquire Omni Air International, a passenger ACMI and charter services provider with significant experience serving U.S. and allied foreign governments and commercial customers, for US\$845 million, subject to customary adjustments. The company did not assume any debt in connection with the acquisition. Omni Air is a leading provider of passenger airlift services to the U.S. Department of Defense (DoD) via the Civil Reserve Air Fleet (CRAF) program, and a worldwide provider of full-service passenger charter and ACMI services. Omni Air also carries passengers worldwide for a variety of private sector customers and government services firms. Omni Air, founded in 1993, is an FAR Part 121 certificated and IATA Operational Safety Audit registered airline. The combination with Omni Air is anticipated to add over US\$430 million in annualized revenues to ATSG. It also exceeds ATSG's investment hurdle and is expected to be immediately accretive to ATSG's adjusted earnings per share in 2019, with Adjusted EBITDA in line with ATSG's margin profile. After adjusting for the present value of tax benefits, which are estimated to be approximately US\$85 million, the implied acquisition multiple is

5.8x Omni Air's adjusted EBITDA for the trailing 12 months ending August 2018.

AeroCentury completes acquisition of JetFleet Holding

AeroCentury, an independent aircraft leasing company, has completed the acquisition of JetFleet Holding Corp. (JHC). JHC is the parent of JetFleet Management Corp., which has managed the Company's operations and aircraft portfolio since the Company's founding in 1997. ACY paid approximately US\$2.8 million in cash and 129,286 shares of ACY common stock to JHC shareholders. "We believe this acquisition will be a positive development for AeroCentury and appreciate the strong support we have received by both ACY and JHC shareholders. To our customers, the merger represents business as usual, since the same management team that has run AeroCentury remains in place and fully intact," said Michael Magnusson, CEO of AeroCentury.

Tokyo Century Corporation and All Nippon Airways Trading Company complete acquisition of GA Telesis shares



GA Telesis has announced completion of the previously announced share purchase by Tokyo Century Corporation and All Nippon Airways Trading Co., Ltd. (ANATC) from Global Principal Finance Company. The transaction provides the Company with shareholders that have a committed longterm growth strategy in the aviation industry. Tokyo Century and ANATC, respectively, hold a 49.2% and 10% interest in the Company. The Company is now working with its shareholders on the execution of its new engine leasing joint-venture, Gateway Engine Leasing, for launch prior to the end of the year. Tokyo Century has held an investment in GA Telesis since 2012 and elected to increase their stake to its current level. Tokyo Century has significant existing strategic investments in aviation including a 20% holding in Aviation Capital Group, the world's premier aircraft leasing company, as well as a 16.7% interest in Jetstar Japan. Established in 1970, ANATC has evolved from a service provider of aviation serviceable parts to a multinational service and solution provider that centers its business not only around aviation but also in various fields such as food and beverages, electronics, and daily living essentials. Building on a strong customer base in Asia and other regions, ANATC strives to provide customer-centric and value-added solutions and services to its customers.

Component Control has announced the successful “go live” status of **Barfield**. Barfield is a wholly owned subsidiary of **Air France Industries KLM Engineering & Maintenance (AFI KLM E&M)** and a leader in repair overhaul and support. Barfield has several locations including Miami, Tempe and Louisville that are now live on the Quantum Control ERP/MRO software. “We chose Quantum because of the overall product capabilities, aviation knowledge, flexibility, reliability and process support for our MRO business,” said Didier Astic, Vice President of Supply Chain & Asset Management at Barfield.

ADSoftware has announced an official partnership with aircraft manufacturer **ATR**, the leader for regional aircraft up to 80 seats. The collaboration is set to commence in October 2018. A leader in the manufacturing sector, the joint partnership between Airbus and Leonardo has over 200 operators in more than 100 countries, with over 1,500 aircraft sold to date. With a turnover of almost US\$1.7 billion, ATR aircraft are responsible for over 5,000 flights per day around the world. In addition to MRO and CAMO management, ADSoftware will work alongside ATR to develop new processes and methods to integrate and manage key technical data, including migration to new aircraft and phase-in/phase-out processes. With

these new features aircraft data integration will be quick and easy, allowing the operator to save time and money in the process.

Commsoft’s MRO IT system, OASES, has been chosen by private charter and aircraft management company, **Interflight Technical Services**, based at Biggin Hill in Kent. Replacing the company’s existing MRO IT software, OASES will be used for the CAMO control of two Hawker 800 business jets and will be deployed to support engineering operations in its hangar. Implementation of the OASES system is already underway. Renowned for the combination of its technical sophistication and intuitive user interface, OASES features a modular structure to provide for both flexibility and scalability. Interflight will be using the Core, Airworthiness, Planning, Material Management, Production, Warranty and Commercial modules which will be accessed through Commsoft’s Private Cloud service.

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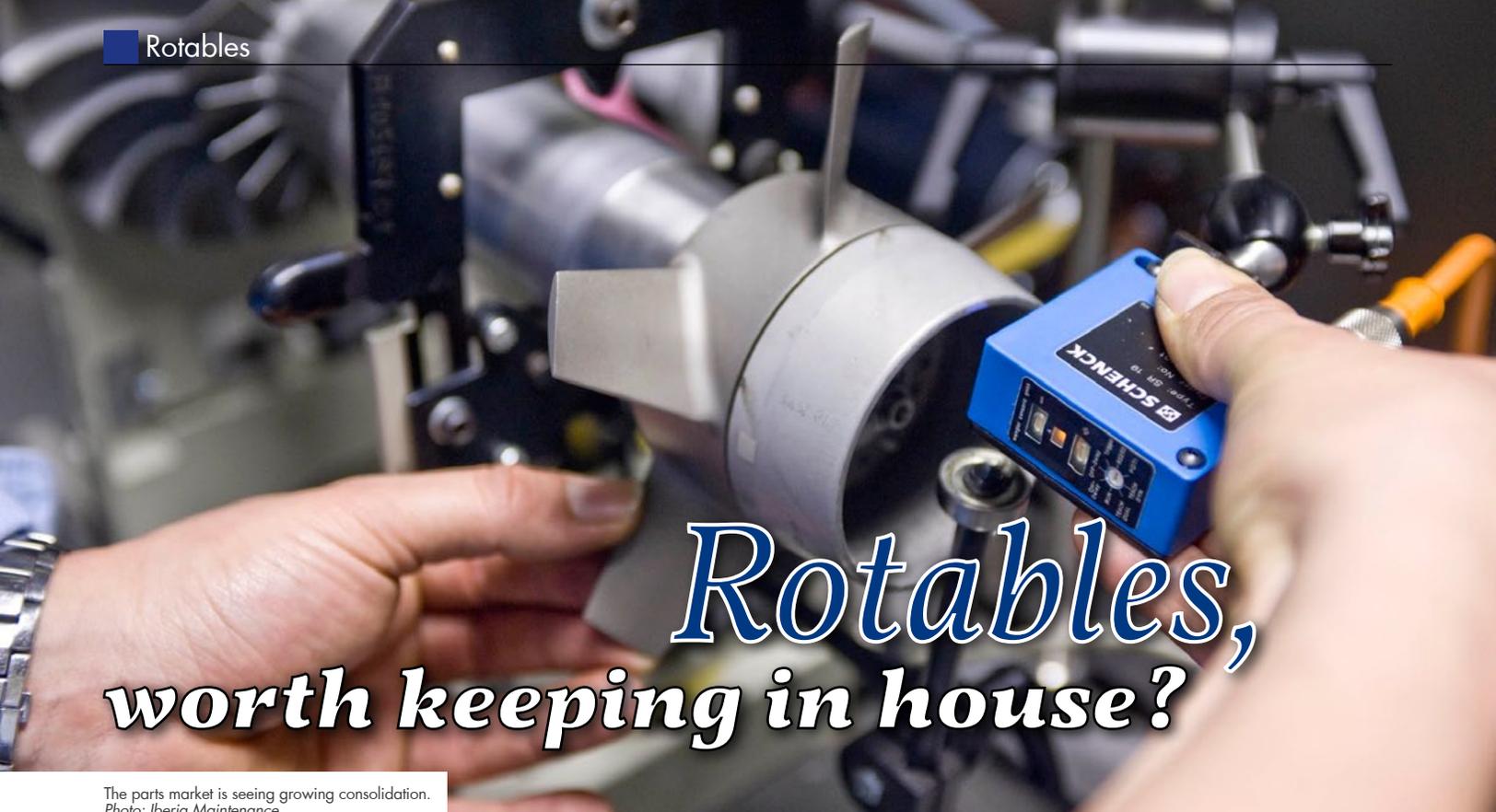
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Rotables, worth keeping in house?

The parts market is seeing growing consolidation.
Photo: Iberia Maintenance

In aviation MRO, rotables refer to components or inventory items that can be repeatedly and economically restored to a fully serviceable condition. **Keith Mwanalushi** looks behind the curtains to see how service providers manage such vital parts.

The aviation industry is renowned for its focus on efficiency and streamlining. Faced with the constant need to make cost savings, many airlines around the world have decided to streamline their in-house repairs departments.

Dave Shorter, Director of PBH at AJ Walter (AJW) observes that for decades, operators made do by forming patchwork agreements with local MRO providers leaving them with the headache of managing a host of individual relationships in any given region, potentially including negotiating language barriers and different customs regimes. "This approach is not only time inefficient but makes it difficult for operators to ensure competitive pricing due to a small number of regional suppliers.

"As a result, airlines are increasingly making the strategic decision to outsource their component MRO to aggregators like AJW Group, replacing a web of different suppliers with a single point of contact," says Shorter.



Dave Shorter, Director of PBH, AJ Walter

This type of arrangement, as Shorter explains, ensures better customer service, in the customer's preferred language, and generates cost savings derived from the aggregator's ongoing relationships with suppliers, where they benefit from economies of scale. "Large aggregators like AJW also have access to

a huge pool of component data across the aircraft they support. This enables them to benchmark an operator's performance anonymously against their competitors, and drive efficiencies for their customers by drawing on best practice learned through their work for multiple operators."

Devin Adderley, Vice President of Sales, MRO Services at GA Telesis says airlines are putting more pressure on performance and efficiency as well as holding the MROs accountable through penalties. "MROs are focusing more on their core competencies. The larger MROs will outsource items which are not part of their core competencies to the small MROs using the performance Metris required by the airlines DER repairs have also seen an increase in the MRO industry, but many airlines are not accepting of DERs. Performance is the key, if the MRO is performing on items repaired inhouse, they will continue to see growth on these items."

The industry has seen significant consolidation within the engine OEM market and the same is happening on the component OEM market, suggests Cornelius Dalm, Head of Sales, Account Management and Marketing at Spairliners GmbH.

"This means that individual OEMs will gain more and more power, and it is important that OEM-independent options are



Devin Adderley, Vice President of Sales, MRO Services, GA Telesis



A380 operators can go with Spairliners for full component support.
Photo: Spairliners

kept available for airlines in order to offer them cost-efficient and reliable MRO alternatives," Dalm explains.

Depending on the aircraft type some airlines have developed their own repair capabilities and are able to perform MRO services for their own inventory. "This trend I mainly see in the U.S for Ejet fleets of more than 70 aircraft. Then it makes sense for the airlines to manage their own inventory and perform at least some of the repairs themselves," adds Dalm.

On the Embraer Ejet market there are several independent repair shops around the world which offer repair capabilities for a certain scope, but Dalm observes there are only limited OEM-independent suppliers on the market which offer MRO services for the full Ejet scope such as Spairliners. "This means that the operator has the option to directly enter into and manage multiple contracts with different OEMs and or specialised repair shops or to contract the full scope with the aircraft OEM or Spairliners as an integrator for the full scope. In the A380 market there are way less options available. The A380 operators can only choose between the aircraft OEM or the component OEMs or go with Spairliners who offers full component support for the entire A380 scope."



Cornelius Dalm, Head of Sales, Account Management & Marketing, Spairliners

When asked if there are any sound arguments for keeping in-house repair shops, Dan Wadley, General Manager at Bii states: "Several component traders (and major operators)

have in-house capability, and for those who specialise in certain components (or have a large fleet to maintain at designated home bases) it makes perfect sense. In-house capability can afford better control of the repair cost and completely avoids the cost and time needed to ship to a separate repair shop."

There is much to be said about third party repair programmes, possibly being the best solution for expensive but repairable parts, some believe. "Third party MRO providers have the advantage in terms of being more local to the end user, as well as proving the most experience with a vast selection of issues, on a variety of subsystems and parts, and these from a wide selection of OEM's," comments Stephan Jezler, SVP Aviation International at RUAG Aviation.

Tom Covella, Group President of STS Component Solutions believes that third party repair programmes are definitely viable solutions for high dollar repairable parts. "However, this will be dependent on the third parties and what factors they are building into the overhaul and repair scheme. The OEMs obviously provide a high level of creditability with the repair of their own products as they have all of the design and manufacturing capabilities, tooling and test equipment on hand."

However, Covella says third party programmes have been developed to provide the same level of detail to meet or even exceed the stand-



Dan Wadley, General Manager – Bii

However, Covella says third party programmes have been developed to provide the same level of detail to meet or even exceed the stand-



Tom Covella, Group President of STS Component Solutions

ards established within the CMM. "At the end of the day if the component is achieving the desired reliability levels the argument can be had, does it matter who has overhauled or repaired the component?"

Darmilo Sosa, CEO at Wingbox Aviation believes third party repair for expensive but repairable parts may not be the best solution but a reliable solution. "Availability of parts is the critical advantage under the third-party package or programmes. Expensive repairable parts are normally in

a low stock in the market and if available in AOG or urgent it then cost more. The vendors normally stockpile optimal quantity to support all the accounts enrolled which give readily access to operators."

Shorter reckons although rotatable parts represent a relatively low level of demand events compared with consumable and expendable (C&E) parts, their value is significantly higher, both in terms of asset value and transactional cost. However, both rotatable parts and C&E parts are equally critical in terms of service level support for AJW's customers, as both can ground an aircraft.

An airline needs to ensure it has access to enough inventory that it can immediately draw on to replace a part while an unserviceable component is sent away for repair, Shorter from AJW continues. "It would be extremely expensive for an airline to own and stock every component at its bases and line stations. Many components would never be used, and surplus inventory generates no revenue and is a financial burden that airlines can do without."

He says AJW's power-by-the-hour (PBH) solutions enable airlines to overcome these inefficiencies through fixed flight-hour cost programmes tailored to their individual operational needs, allowing customers to manage cash flow.

GA Telesis undertakes rotatable exchange programmes. Adderley says the rotatable exchange programmes typically consist of items repaired in the GA Telesis MRO facilities. "It allows our customers free access on items being supported by our MRO facilities. Customers are also able to get advance exchanges which eliminates costly AOG situations.

"We also have dedicated rotatable exchange programmes which are similar to our shared rotatable exchange programmes, but the pool items have specific SBs, upgrades and other modification incorporated per the specific customer requirements. We also stock our dedicated rotatable exchange units globally in locations specified by the customer."

Adderley continues that rotatable programmes can save aircraft operator's money in several ways. He says should the MRO be willing to invest into a rotatable pool, this eliminates the need for the operator to make that investment. "Another option is also where an MRO would not only create a rotatable pool for the operator, but they will also purchase inventory from the operator which would then help to reduce inventory cost. As an MRO we are able to create a rotatable pool for an operator which would not only include purchasing inventory from the operator but also provide repair discounts along with other concessions that would provide significant savings across their inventory and MRO spend."

At RUAG Aviation, the operational model allows for both exchange and loaner programmes for rotatables, although exchanges are largely dependent on platform and customer policy. "Both options are supported by subsystems that are maintained to highest standards and reliability," notes Jezler.

He says many of RAUG Aviation's MRO customers choose to combine their heavy maintenance MRO visits with rotatable MRO as well. "Time-wise, this makes sense. Should the rotatable MRO requirements fall outside of a lengthy MRO visit, the loaner is installed so our customer may resume their operations according to schedule. A quick visit allows us to replace the loaner with their own system once the rotatable has been serviced according to the OEM requirements. We are also continuously reviewing the requirement of exchange and loan units and collaborating with partners to be able to fulfil such regional needs.

STS is involved in various rotatable exchange programmes too. "Some are flat rate exchange programmes, some are repair management and others are repair development," indicates Covella. He says each of these are established to provide operational cost reductions, but each airline may have a different strategic initiative.

Covella adds: "Factors that drive these rotatable exchange programmes include; inventory reduction, reliability improvement, predictability of repair costs; and reduction of BER (beyond economical repair) rates. These programmes are established with the OEMs and third-party component repair shops and focused on driving value and cost reduction opportunities."

Dalm also states that by joining Spairliners' component pool the operator no longer has to invest in his own inventory and does not have to manage the repair of his spare parts themselves. He says Spairliners owns more than 375 MUSD of assets for both A380 and Ejets and is currently supporting 172 Ejets and 42 A380s under exclusive agreements. "Such combined inventory brings real cost savings for our customers who benefit from this scale effect. Instead of investing individually in assets, airlines just pay for the use and access to our component pool, where we can spread the costs across all our customers. We call it 'pool effect.' In other words, we make use of the economies of scale that lead to cost savings for both, the airlines and Spairliners."

Bii's portfolio of MRO partners is carefully selected to ensure each component is repaired as efficiently as possible, tells Wadley. He says the cost, turnaround time and subsequent reliability of every repair managed by Bii is closely monitored to ensure that extremely high service levels are maintained. "To compete directly with workshops and OEMs, Bii recognises that it needs to add value to the repair process; our growing exchange pool allows us to provide guaranteed turnaround times, and our repair volume has allowed us to negotiate flat rate pricing for many components. Our customers know that Bii can be relied upon to maintain their spares within budget; in terms of both cost and time."



Darmilo Sosa, CEO Wingbox Aviation

In the hot seat.....

Tadhg Dillon, SVP Head of Sales and Marketing at Shannon Engine Support (SES)

AviTrader MRO: Can you give us a brief background about the business activities at SES?

Dillon: Shannon Engine Support Limited (SES), a wholly-owned subsidiary of CFM International, specialises in providing spare engine lease solutions to CFM56 and LEAP operators around the globe. Headquartered in Shannon, Ireland, with marketing offices in Beijing and Budapest, SES has a portfolio of more than 250 CFM56 and LEAP spare engines, including CFM56-5B, CFM56-7B, LEAP-1A and LEAP-1B engines.

AviTrader MRO: Do you specialise only on CFM products?

Dillon: Yes, we specialise in CFM products, we are the largest lessor of both CFM56 and LEAP engines.

AviTrader MRO: What kind of availability are you seeing on the CFM56 engines?

Dillon: Availability is tight, and we expect it to remain this way for the foreseeable future. Peak Shop Visits are forecasted for both the CFM56-5B and CFM56-7B engine types for the next five years, however this will be highly influenced by macro factors such as fuel prices, interest rates and aircraft part-out.

AviTrader MRO: Investors are buying up surplus CFM56 engines and parts, resulting in artificial value inflation. Do you agree with this?



Dillon says the value inflation is more a result of limited supply.
Photo: SES

Dillon: I think the value inflation is more a result of limited supply.

AviTrader MRO: What sort of lease programmes do you offer?

Dillon: SES offers a range of lease programmes that cover both the CFM56 and LEAP market. Our programmes include short term, long term, operating leases with our main focus on customised solutions. Customised Solutions are bespoke programmes

designed with our customers to support their long-term spare engine requirements.

AviTrader MRO: What has been the market response to the addition of the LEAP engine to your portfolio in 2016?

Dillon: It has been favorably received by our customer base and we continue to work very closely with them to understand their future LEAP requirements in this very dynamic market.

AviTrader MRO: Are there plans to support other engine types?

Dillon: Not at this time, we are a wholly own subsidiary of CFM and we will continue to support both the market and our parents with both CFM56 and LEAP engines.

AviTrader MRO: What's next in the pipeline at SES?

Dillon: We will continue to grow our portfolio and customer base. SES strive to offer an innovative product line, but our focus will always be on providing the best service to our customers.



SES senior management.
Photo: SES

MTU: The engine experts



The company has a 4,500-strong workforce.
All photos: MTU Maintenance

MTU Maintenance understands that operators increasingly require services tailored to their specific needs in order to control and optimise cost. Additionally, the MRO provider knows that residual value is key to lessors and asset managers.

MTU Maintenance offers customised service solutions for aero engines and special-ised in meeting these needs. The company offers a wide range of individually-tailored solutions encompassing innovative MRO services, integrated leasing and asset management.

It is MTU Maintenance's people who make the difference: They are passionate about engines and dedicated to supporting customers. The team marry world-class engineering with intelligent creativity and never give up unless an optimal solution has been found.

This is demonstrated by MTU Maintenance's track record of great customer relationships. The company's 4,500-strong workforce currently perform 1,000 shop visits a year for more than 200 airline customers. MTU Maintenance has over 30 engines in its portfolio and locations in the Americas, Europe and Asia.

More performance

For operators of newer engines, it is all about generating more flight hours with customised MRO. MTU Maintenance reduces

engine removals through fleet management, predictive maintenance, engine trend monitoring and on-site services. Once an engine comes into the shop, the MRO provider uses customised workscoping, alternative repairs and engineering expertise to help lower costs.



The company has over 30 engines in its portfolio.



MTU Maintenance offers customised service solutions for aero engines.

More efficiency

When it comes to the latter part of the lifecycle, MTU Maintenance understands that engines need additional care. Which is why the team also provides smart strategies for mature engines. Its solutions include alternatives to MRO, such as smart repairs and tailored worksopes, material salvation and intelligent tear-downs. Furthermore, these services can be combined with alternatives to MRO such as green-time engine leasing.

More value

At the end of life, asset owners are looking to get the most value from their engines. There is no single best exit strategy for assets, it can range from generating additional income through green-time lease out to sale, exchange and trade all the way to maximising the material value of the asset through teardown and material management. MTU Maintenance finds the best solution.

More flexibility

MRO solutions for lessors and asset owners are all about risk mitigation, easy transfers and predictable costs. MTU Maintenance provides this in the form of a portable MRO solution across the lifecycle. Transfers between operators are not restrict-

ed by operational or geographical constraints, maintenance reserves reside with the lessor and the programme is flexible: entry and exit is possible at any time and also includes intelligent end-of-life strategies.

On top and on demand

In addition to fully integrated solutions, customers can also rely on MTU Maintenance for:

- AOG support
- Engine and module MRO
- On-site services
- Inspection, diagnostics and investigation
- LRU and parts management
- Predictive maintenance
- Spare engines
- Spare engine, LRU and QEC parts
- Parts and accessory repair
- Teardown services

Aircraft Transition Management

AviTrader MRO: What is an aircraft transition?

Renga: In general, an aircraft transition is the process that is performed when transitioning the aircraft from one operator to the other, or from the actual operator to the lessor. That means, the current operator is returning (redelivery) the aircraft to the owner or selling it to the next operator if it is self-owned.

Often, the aircraft transition is a three-step process: It goes from the current operator, which is called the *phase-out*, then to the lessor and to the new operator, which is referred to as the *phase-in*.

AviTrader MRO: Why is it so important?

Renga: Due to changing market conditions and technological advancement, airlines are constantly challenged to adapt and re-evaluate their assets. Often, this leads to changes in their fleet and therefore multiple legal and contractual requirements that have to be fulfilled prior to transitioning their aircraft to another operator.

AviTrader MRO: When do you have to perform an aircraft transition?

Renga: An aircraft transition is either performed at the end of a lease period or when selling the aircraft. This can take place throughout the year but more often during lower vacation seasons due to less required resources for passenger transportation. Lately, many airlines have been performing aircraft transitions due to bankruptcy or fleet harmonization, as a new generation of aircrafts and engines is emerging. More importantly, however, the phase-out of an aircraft starts very early on when the aircraft is initially entering an operators' fleet. A strong data configuration management during the aircrafts' life-cycle often leads to a higher time and cost efficiency during the delivery process.

AviTrader MRO: What is required for it?

Renga: Preferably, a state-of-the-art software that keeps track of the entire documentation of an aircraft. This facilitates a smooth transition from the current operator to the lessor. However, many organizations still rely on hardcopy documents, therefore, an efficient data configuration management would be the best option.

AviTrader MRO: What are the current trends with regards to aircraft transition?

Renga: Digital solutions and artificial intelligence are increasing in aircraft transition and also in the aircraft asset management market. These tools provide a better data structure and facilitate the identification of legal and contractual requirements. In addition, it provides an additional step towards minimizing CO2 emissions due to paperless operations

AviTrader MRO: What are the involved risks?

Renga: There are some considerable risks along the entire value chain of an airline operator, particularly during the phase-out period. The most prominent ones though lay on the operational and financial side. Aircrafts leaving a fleet always indicates a challenge to the operational stability of an airline, as it is very resource demanding which therefore may create extensive backlogs. This can put the relevant



organizational units under substantial pressure and lead to **delays, penalty payments, and lack of efficiency.**

On the other side, there are legal as well as contractual requirements, and also delivery conditions that need to be met. If those are not managed properly, this could lead to extensive **financial burdens** for the operator.

AviTrader MRO: What are the most important things to take care of when performing an aircraft transition?

Renga: In general, I recommend them to create an internal awareness about the importance of an aircraft transition and its organizational challenges. This means planning ahead on how to perform a transition and manage resource bottlenecks in order to provide operational stability and meet contractual requirements, resulting in better cost management.

Giovanni Renga is Managing Partner and head of aircraft asset management at Amros-Global. Amros is a renowned aviation advisory firm, dedicated to customized tailored solutions. At Amros, Mr. Renga has successfully led more than 100 aircraft transitions for private operators, airlines and aircraft leasing companies, generating more than several millions in savings.



Frank Boni

AJW Group has appointed **Frank Boni** as Vice President of MRO Sales. Boni, who joins AJW on November 1, 2018, has over 25 years' experience in the aviation industry with substantial expertise in MRO services, sales and operations. Boni will be responsible for sales of the company's MRO services worldwide for the Group. He will also work closely with AJW's leadership, commercial, technical and business improvement teams to develop the maintenance and repair capabilities of AJW Technique, its state-of-the-art MRO facility in Montreal.



Youssef Bahsoun

AJW Group has appointed **Youssef Bahsoun** as Technical Services Manager. Youssef will be based at AJW Technique, the company's state-of-the-art MRO facility in Montreal, and starts his new role on October 9. He will lead the key technical relationship with Bombardier Business Aircraft as part of AJW's long-term repair management contract with them and will also manage component reliability for all of AJW's power-by-the-hour (PBH) customers in the Americas region. Bahsoun

has extensive experience in the aerospace sector, especially components maintenance. During his career at Air Canada Technical Services

(ACTS), he held the position of Sr. Manager Engineering Components Maintenance and chaired an AMC Industry Working Group on the "aspects of NFF and its impact on components reliability". Prior to Joining AJW Group, Youssef held senior positions at Air Canada, GAMCO / Gulf Air, ACTS / AVEOS and Emirates including the position of Chief of Office of Airworthiness for the airline's EASA Part 21 Design Organisation.



Guillaume Faury

The Board of Directors of Airbus has selected **Guillaume Faury** as the future Airbus Chief Executive Officer (CEO). Faury, who currently serves as President Airbus Commercial Aircraft, will succeed **Tom Enders** who remains CEO until the Annual General Meeting (AGM) on April 10, 2019, when the appointment of Faury as executive member of the Board will be submitted to shareholders. Guillaume Faury served in various senior management roles at Eurocopter from 1998 to 2008. Starting in Engineering, then Flight Test, he later became Executive Vice President for Commercial Programmes, then Executive Vice President for Research and Development. In 2009, Faury joined Peugeot S.A., where he served as Executive Vice President for Research and Development as a Member of the Managing Board. In May 2013, Faury returned to Airbus as CEO of Airbus Helicopters and in early 2018 he took the helm of Airbus Commercial Aircraft.

Other News

MTU Maintenance has launched Technical Asset Management Services (TAMS) for asset owners. This range of services covers comprehensive technical consulting and fleet management, transitions management and housekeeping support for aircraft engines. "We are delighted to be launching TAMS, our new, intelligent and customized service, as a response to market demands and to complement our existing services," says Martin Friis-Petersen, Managing Director **MTU Maintenance Lease Services B.V.** "As an MRO provider, asset manager and lessor, we are in a unique position to understand the individual requirements of operators and asset owners, mitigate risk and optimize residual value." This includes workscoping, shop visit management, engine exchanges and assistance with engine lease returns, as well as engine record reviews. "Asset owners benefit from the comprehensive engine know-how within the MTU Maintenance network paired with the expertise we have gained as an engine lessor," Friis-Petersen adds. MTU Maintenance Lease Services' (MLS) has a team of around 50 experts, who support over 160 transitions per year with a growing pool of engines for lease and sale. The MLS team also draws on the first class, in-house resources of MTU Maintenance, an MRO provider with nearly 40 years' technical expertise, a worldwide network and MRO specialists on hand to perform physical inspections and in-situ repairs. TAMS is highly customized and can be integrated into further services as and when desired. Additionally, TAMS is supported by industry-leading software that enables the complete digitization of documents, traceability of parts and, through a cloud-based platform, ease of access to up-to-date information for all parties involved.

Global ONE Media Limited has been selected by **AirChinaMedia Co.** to license and deliver inflight entertainment IFE content for television, as well as domestic and international movies in multiple languages for its massive global fleet. The contract was signed in September 2018. Global ONE Media Beijing team will lead AirChina's contract with support by IFE teams in **One Inflight Ltd. U.K.** and the company's global network.

Panasonic Avionics Corporation (Panasonic) and **EGYPTAIR** have signed an agreement to provide inflight entertainment and connectivity (IFEC) solutions for the carrier's new fleet of 15 A320neo aircraft. Panasonic's X-Series IFEC platform has been selected by EGYPTAIR to be line-fit installed on the new narrow-body aircraft, with the first aircraft due to enter service with the airline in 2020. EGYPTAIR's passengers will enjoy a personalized home theater experience with 13-inch HD personal screens in Business Class complete with a video handset and high-power charging facilities at every seat. In Economy Class, each passenger will have a 10-inch HD screen incorporating a USB power point, with charging facilities at each seat group. Passengers will be able to stay connected through Panasonic's inflight Wi-Fi service, with a host of next-generation connectivity benefits from fast internet to video streaming, all powered by its new satellite modem which offers bandwidth up to twenty times greater than previously available. EGYPTAIR's passengers will be able to enjoy a host of other amenities including inflight shopping options and 3-D flight path moving maps.