

# MRO

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# AVI TRADER MRO

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## Opinion

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# Dissecting Paris

**A**fter a week of mostly blue skies, thunderstorms promised a soggy finish to the trade days at Paris Air Show 2019.

The 2019 Paris Air Show saw the introduction of the brand new Airbus A321XLR with American Airlines, Indigo Partners and others flocking to get early production slots. This year's show also showed a sign of hope for the grounded Boeing 737 MAX which received a letter of intent for 200 aircraft from Anglo-Spanish International Airlines Group (IAG). Boeing, for its part, had 237 orders, but only 30 of them with firm orders. The announcement by the IAG Group was certainly the biggest surprise of the air show.

Airbus achieved new business for 363 commercial aircraft, comprising 149 firm orders and 214 commitments. In addition to these totals, airlines and lessors also converted 352 existing aircraft orders – mostly from the A320 single-aisle aircraft up to the larger A321neo and also to the new A321XLR.

Surprisingly, neither the A350 much less the now delayed 777X received new orders. Instead, the 787 ended up doing better, despite the good performance of the A330neo.

Keith Mwanalushi  
Editor



Photo: Airbus

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GE Aviation and Lufthansa Technik sign 777X MRO cooperation agreement  
Photo: LHT

### GE Aviation and Lufthansa Technik sign 777X MRO cooperation agreement

GE Aviation and Lufthansa Technik AG enlarge their collaboration on Boeing 777X MRO services. The companies have signed a maintenance, repair and overhaul (MRO) agreement under which Lufthansa Technik will be GE's authorized service provider for the backup generator/converter (BUG and BUC) and for certain Electrical Load Management Systems (ELMS) components on the new Boeing 777X aircraft. This long-term cooperation will cover the maintenance service offerings, warranty support and 24/7 asset exchange/loan services to worldwide 777X operators.

### Meggitt and Lufthansa Technik enter long-term partnership for MRO services in mainland China

Meggitt PLC and Lufthansa Technik have signed an agreement for the provision of comprehensive component MRO services for commercial aircraft in mainland China. Under the agreement signed at the Paris Air Show on June 20, Lufthansa Technik Shenzhen (LTS), a joint venture between Lufthansa Technik AG and Beijing Kailan Aviation Technology, will build local MRO capabilities for Meggitt products including heat exchangers, valves, fire detectors and fire suppression. The partnership will provide customers in mainland China with world-class repair and service levels for a range of products delivered from LTS's 25,000 m<sup>2</sup> facility.

### Embraer signs services and support pool contracts in Europe

Embraer has signed pool maintenance and parts agreements with European carriers at the Paris Air Show, reinforcing the customer trust and state-of-the-art support of the original manufacturer in maintaining an efficient operation through the TechCare technical expertise. Switzerland's Helvetic Airways signed a pool contract to cover four recently added E190 jets, and Aurigny Air Services signed an extension of their current agreement on parts maintenance to support the E195 operated by the Guernsey's carrier. Embraer's popular component support solution covers the access and repair of a comprehensive list of parts, including engine line-replaceable units (LRUs), and most airframe components, besides providing access to a vast repair service provider network.

### Safran signs global agreement with Pattonair

Aerospace supply chain provider, Pattonair, signed a global general terms of agreement (GTA) with Safran at the Paris Air Show, in one of the first contracts of its kind placed by the Group with a distributor. The umbrella agreement enables Pattonair to service multiple divisions and comes on the back of a series of new awards by several Safran companies, including Safran Nacelles, Safran Transmission Systems and Safran Ventilation Systems. Pattonair had built a successful relationship over a decade with Safran Helicopter Engines (SHE) and in 2016 earned SHE Gold Supplier status for its innovation, quality and service, paving the way for subsequent contracts with other Safran companies.



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Pilatus PC-24  
Photo: GKN Aerospace

### GKN Aerospace's JV in India to manufacture wiring systems for Pilatus PC-24

GKN Aerospace's Indian Joint Venture, Fokker Elmo SASMOS Interconnection Systems, in Bangalore has been awarded a contract to manufacture electrical wiring interconnection systems (EWIS) for the Pilatus PC-24. The multi-million-dollar contract of the program is another milestone in the business relationship between GKN Aerospace's FE-SIL and Pilatus Aircraft that currently includes the company providing wiring systems for the PC-21 and PC-7 MkII. Activities in Bangalore to start the production for PC24 EWIS involve more than 30 highly skilled operators in India. This number will grow after further production ramp-

up. More than 30 PC-24s are currently in operation around the world, including three PC-24s used as medevac aircraft for the Royal Flying Doctor Service of Australia. Pilatus plans on delivering about 40 PC-24 Super Versatile Jets in 2019 and 50 in 2020.

### MTU Maintenance Canada will relocate to new facility

MTU Maintenance Canada has taken possession of a brownfield site adding capacity to the Vancouver operations. The building is located next to Boundary Bay airport, in the Vancouver suburb of Delta, and was originally designed and operated as a maintenance facility for helicopters and helicopter engines. The

facility will immediately provide much-needed additional expansion space of around 60%. Following minor modifications by year-end, it also enables MTU Maintenance Canada to consolidate all of its repair activities, currently spread across three locations at Vancouver airport, into one location. The facility in Delta offers 235,000 ft<sup>2</sup> of space and is within thirty minutes of Vancouver airport. As the Boundary Bay building was previously constructed for aviation activities, MTU Maintenance Canada will be able to continue upholding its highest standards and only needs to carry out minimal changes to the existing infrastructure. All modifications and upgrades will be performed from Summer 2019 onwards and partial operations in the new facility could begin as early as Spring 2020. The move is expected to be fully completed one year later, with all aspects of the business relocated and under one roof by June 2021. This staggered approach will support the number-one priority set by the project team: no operational impact through the transition. Testing activities will continue to be carried out in the existing test cell at Vancouver airport.

### Precision Aircraft Solutions completes third B757-200 conversion for Asia Pacific

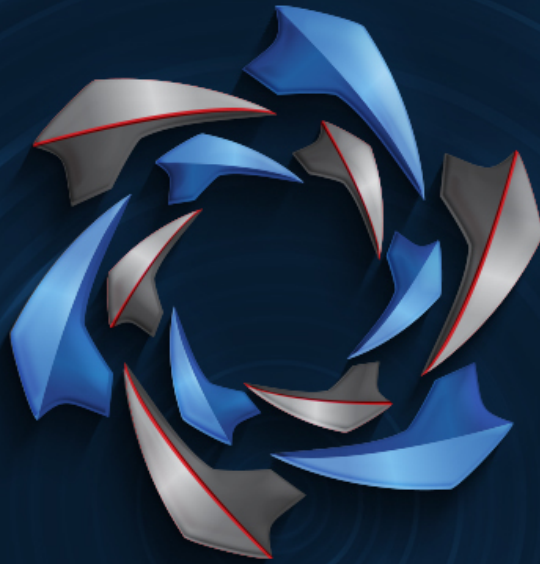
Precision Aircraft Solutions has completed its third Boeing 757-200 passenger-to-freighter conversion for Asia Pacific Airlines (APA). Conversion of MSN 25140 was completed at Flightstar Aviation in Jacksonville, FL and will be put into service soon after redelivery. The Asia Pacific Airlines 757-200PCF will enter service and support the expanding Pacific Asia network.

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Saft to equip MA700 with ULM® batteries  
Photo: Saft

### Saft to equip MA700 turboprop regional aircraft

Saft will provide two ULM batteries per aircraft for AVIC MA700 advanced turboprop regional aircraft. AVIC XAC Commercial Aircraft Co., a subsidiary of AVIC, manufactures the MA700: an 80-seat level turboprop

plane designed for short- and medium-route travel. Designed for high performance at elevated temperature and altitude, the MA700 is expected to embark on its maiden flight in 2020. Saft's products will form an integral part of this project, building on its existing work as a provider of batteries for AVIC MA60 and MA600 programs as well as CO-

MAC's ARJ21 and C919 jetliners. The ULM batteries provide safe and reliable power to start the Auxiliary Power Unit (APU) as well as emergency backup for critical systems. The ULM battery technology was selected as it offers the ideal combination of high performance, low weight and ultra-low maintenance requirements that enable significant reductions in the total cost of ownership (TCO) for the battery. Saft's ULM batteries are designed, manufactured and assembled in its Bordeaux (France) factory.

### Jetran awards Precision three 757-200s for P2F conversion

Jetran International (Jetran) has positioned three 757-200s, MSNs 24613, 24614 and 25296, that will be placed into freighter conversion at the Flightstar Aircraft Services facility in Jacksonville, FL. These aircraft will be Jetran's first 757-200PCFs with Precision and will be headed to Swiftair S.A, once completed.

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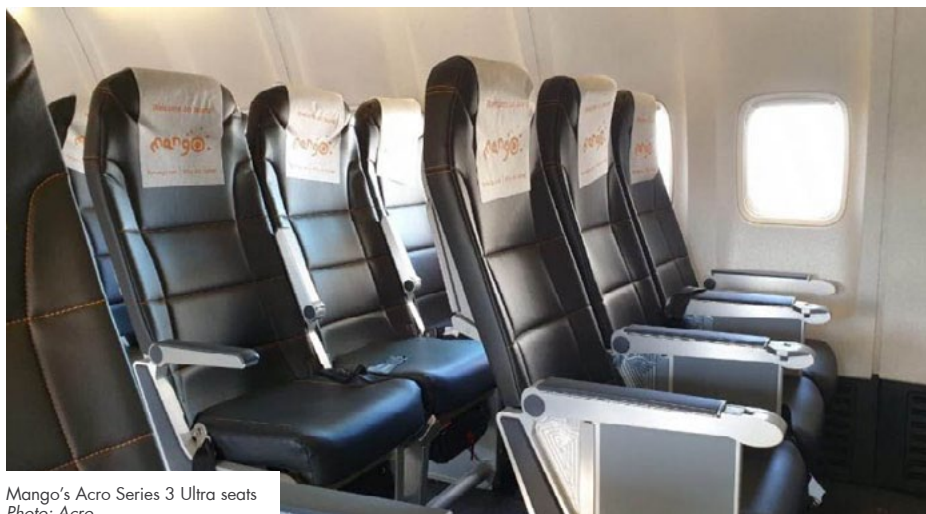
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Mango's Acro Series 3 Ultra seats  
Photo: Acro

### Mango Airlines selects Acro's Series 3 Ultra Economy Class seat

Johannesburg-based, low-cost carrier Mango Airlines has selected once again Acro's Series 3 Ultra Economy Class seat for two B737-800 aircraft. Acro has a long-standing relationship with the airline and this latest order results in the delivery of fourteen shipsets in total since Mango first selected the seat in 2014. Mango operates a fleet of B737 aircraft on domestic routes to major cities including Cape Town, Durban, George, Bloemfontein and Port Elizabeth and regional flights between Johannesburg and Zanzibar.

### Nordic Aviation Capital and GE finalize TrueChoice flight hour agreement

Nordic Aviation Capital (NAC) and GE Aviation finalized a TrueChoice™ Flight Hour agreement for its CF34-10E engines fleet. Under the agreement, NAC will offer GE Aviation-provided maintenance, repair and overhaul services to its CF34-10E lessees.

### Satair and Crane Aerospace & Electronics sign exclusive deal

Satair and Crane Aerospace & Electronics have signed an agreement covering the distribution of Crane Aerospace & Electronics' Tyre Pressure Indicating System (TPIS) for the A320neo and A330neo aircraft families. Using Crane Aerospace & Electronics' SmartStem® passive, wireless technology, these TPIS systems will improve operator maintenance cost by reducing the time required for daily tire pressure checks while delivering a significant improvement to reliability and accuracy and helping ensure safe operations in all conditions. Certified as standard line fit on all A330neos earlier this

year, a similar system is planned for certification on the A320neo in 2020. In addition, both systems will be available for retrofit to lower the maintenance cost on existing aircraft. The agreement marks an evolution in the relationship between Satair and Crane Aerospace & Electronics, who signed their first agreement in 2015 covering the distribution of a new Landing Gear Control Interface Unit for the A320 program family.

### Embraer and Azul sign Pool Program agreement

Embraer and Azul Linhas Aereas Brasileiras, S.A. have signed a long-term Flight Hour Pool Program agreement to provide repairable component support for the carrier's brand-new fleet of Embraer E195-E2 jets, the second generation of the E-Jets family. Azul, which

placed a total order of 51 E195-E2, is the global launch customer for the new aircraft and will receive the first delivery during the second half of this year. The multiyear Flight Hour Pool Program agreement includes material services engineering and advanced component exchanges from Embraer spare parts facilities in Ft. Lauderdale, Florida, USA. Azul joined the Embraer Pool Program in 2008, when it began operating its first generation of E-Jets, and more recently, the Repair Management Program. With the new Flight Hour Pool Program agreement, the airline will now have coverage for its entire Embraer fleet.

### Locatory.com launches aircraft engine stand leasing for MROs and airlines

Locatory.com, an aviation IT company primarily acting as an aircraft parts locator, is continuously looking for opportunities in rapidly growing aviation market and frequently suggests new solutions for its clients. The company is spreading its services' portfolio not just with IT solutions but also with actual physical additions that would improve the work for MROs and airlines. Now, Locatory.com introduces its new service – aircraft engine stand leasing. The company starts its service by providing two options – stands for CFM56A/B and CFM56-7 engines. Locatory.com will offer a high-quality equipment lease for a preferred period so that clients all around the world could productively carry out maintenance operations. The engine stands will be checked and certified according to the highest standards and quality requirements. In addition, the company will offer worldwide shipping services for all leasing orders.



Photo: Locatory.com launches new service, engine stands leasing





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Based at the Baiyun International Airport in Guangzhou, the People's Republic of China, GAMECO today has a four bay wide-body hangar and an eight bay narrow-body hangar. GAMECO is a joint venture between China Southern Airlines Co. Ltd. (CSN)(50%) and Hutchison Whampoa (China) Ltd. (HWCL)(50%) from Hong Kong, specializing in aircraft and airborne component maintenance, repair and overhaul. To learn more about GAMECO.

please visit [www.gameco.com.cn](http://www.gameco.com.cn).



AerFin's facility in Caerphilly, South-Wales  
Photo: AerFin

### AerFin secures EASA Part 145 Certification

AerFin has received EASA Part 145 maintenance organization approval certification for its engine MRO services at its 100,000 ft<sup>2</sup> U.K. facility, extending its aftermarket services and move towards enhancing its MRO capability across multiple platforms. The approval will see AerFin's capabilities expanded to include engine piece part component inspection, testing, certification, borescope inspections and engine module swaps complementing AerFin's existing engine disassembly capabilities.

### Boeing and IAG build on 777X order with services agreements

Boeing and International Airlines Group (IAG) have signed two agreements on the first day of the Paris Air Show, that will provide key services for IAG's British Airways, including parts for the airline's Airbus A320 family and its Boeing 777 fleet. With the first agreement, Boeing will furnish British Airways with its Component Services Program where Boeing and its partners will own, manage, and maintain a global exchange inventory of parts for the airline's A320 and A320neo aircraft. This agreement – the first of its kind for Boeing – will open convenient access to parts for British Airways, which operates an extensive route network. British Airways has also signed an agreement for three Landing Gear Exchanges for its 777 fleet. Through the program, operators receive an overhauled and certified landing gear from an exchange pool maintained by Boeing, with stocked components and supporting parts shipping within 24 hours.

### ST Engineering's Aerospace arm enters into long-term collaboration with Honeywell

ST Engineering's Aerospace arm has entered into a long-term collaboration with Honeywell through an agreement that will have ST Engineering acting as a licensed repair center for Honeywell components. Under this agreement, ST Engineering becomes an official member of the Honeywell Channel Partner network and will have access to Honeywell's maintenance document and technical support for over 2,000 individual part numbers from avionics to electrical and mechanical components. As Honeywell's channel partner, ST Engineering will be using Honeywell's advanced technologies and software solutions to provide one-stop component repair and

overhaul services for operators worldwide.

### S7 Technics and Lufthansa Technik jointly present Cyclean®

Moscow Domodedovo-based S7 Technics and Lufthansa Technik have jointly held Russia's premiere presentation of Cyclean®, an aero engine cleaning process which has been developed by Lufthansa Technik and is now brought to the Russian aviation market by aircraft maintenance, repair and overhaul (MRO) services provider S7 Technics. Lufthansa Technik and S7 Technics signed their agreement for operating Cyclean® in Russia in the summer of 2018 and, after using it for less than 12 months, the Domodedovo station has now completed more than 250 individual engine washes, each one benefiting from the reduced time required for the procedure compared with other engine core cleaning systems. The other big advantage of Cyclean® is the possibility of operating it in outside air temperatures (OATs) as low as minus 10°C. "Before we got Cyclean® it would take between five and six hours to wash a pair of CFM56-5B/7B engines. Now it's down to three hours," reveals Andrey Soldatov, engineer at S7 Technics' engine lifecycle management department. "Another advantage is the lower OATs in which the equipment can be used. The previous technology we used allowed the cleaning procedure with OATs down to minus 5°C, which imposed significant limits in the autumn and spring periods," Soldatov adds. Another big advantage in adopting the Cyclean® system is the corresponding reduction in engine performance deterioration rates, primarily the exhaust gas temperature (EGT) margin, S7 Technics has found.



S7 Technics and LHT jointly held Russia's premiere presentation of Cyclean®  
Photo: S7 Technics





Photo: GAL Aerospace

### GAL Aerospace to introduce global field support for Regional Aircraft Interiors

GAL Aerospace has introduced Global After-market Field Support for the Regional Aircraft Interiors market. Through its subsidiary GAL AeroStaff, GAL Aerospace has been actively providing worldwide Customer Service, Field Support, and Technical Staffing on behalf of regional aircraft OEMs for the past ten years. Leveraging its experience supporting airlines around the globe, GAL is now raising the bar for cabin interiors support for all ATR, and Bombardier CRJ and Dash 8/Q400 families of regional aircraft. "When it comes to the aftermarket for cabin interiors, we are committed to providing the most responsive service in our industry," says Jonathan Cornwell, Vice-President of Business Development and Sales for GAL. "In addition to supporting our existing products, we are determined to earn recognition as the first call for airlines and leasing companies looking to modify, improve, or reconfigure their regional aircraft interiors. Having GAL-trained technicians closer to our customers' locations will allow us to respond with the immediacy operators expect."

### KLM UK Engineering & WestJet sign contract for Line Maintenance Support

Just a few weeks after signing an LOI (Letter of Intent) with AFI KLM E&M for GEnx engine support, Canadian airline WestJet has extended its partnership with the global MRO network in the field of 737 line maintenance. A European leader in the regional jets and narrow-body aircraft market and having internationally acknowledged expertise of the Boeing 737, Embraer 170/190, BAe146/Avro RJ, Fokker 70/100 & Airbus A320 Family aircraft, KLM UK Engineering has confirmed this new contract with WestJet. KLM UK En-

gineering commenced line maintenance support with WestJet in Glasgow, Scotland on their Boeing 737 fleet from April 2019.

### Avtrade secures 16 new component contracts in 2018

Independent aviation services provider, Avtrade, has secured 16 new component contracts in the last year. Airlines across four continents have taken advantage of its contract support which covers the whole spectrum of an extensive service portfolio, including Boeing and Airbus Repair Management, PBH, Leasing and MRO. Avtrade is not only a preferred partner of new customers, but a trusted ally of existing ones, with 25+ contracts renewed or extended by long-standing customers over the same term. In addition, the company has announced that 14 new contracts with maintenance partners have also been agreed, resulting in significant cost and efficiency savings to Avtrade and its customers. These contracts consolidate its reputation for offering fast, flexible support, combined with access to capital and the world's largest available component inventory. Its flexible and bespoke approach provides options such as price per transaction, fixed price, and flight-hourly or -monthly rates. It offers a choice

of total budgetary control or pay-as-you-go, giving customers complete control with zero operational risk. The company has tripled the aircraft under contract in the last five years.

### Pattonair wins Safran Ventilation Systems contract

Aerospace supply chain provider, Pattonair, has won its first contract from Safran Ventilation Systems (SVS). The contract, which is for up to five years, will commence in the coming months and ramp up throughout 2019. Pattonair will service SVS from a new Toulouse facility, providing advanced logistical services for the wide range of ventilation products SVS supplies for avionics and interior fans on multiple aircraft programs.

### RUAG optimizes maintenance visit for Bombardier Challenger 850 aircraft

RUAG MRO International has refreshed a Bombardier Challenger 850 belonging to VistaJet with a variety of aircraft services during a scheduled maintenance visit. Project management and services included aircraft maintenance, repair and overhaul (MRO), component MRO, aircraft painting, and the integration of both an avionics ADS-B out upgrade as well as a full cabin refurbishment. This is the first in a series of Challenger 850 projects which will be completed on behalf of VistaJet. The customer chose to optimize a scheduled MRO event on their Bombardier Challenger 850 to save on both time and costs. The aircraft, part of VistaJets' global business jet fleet of over 70 aircraft, required regular maintenance services, landing gear MRO, a full exterior repainting to feature the VistaJet livery, an ADS-B compliance upgrade and full cabin refurbishment. Managing the entire project, RUAG applied its MRO, aircraft painting and engineering expertise to reliably fulfill customer expectations. Currently, RUAG MRO International is supporting the second of the series of Challenger 850s, on behalf of VistaJet.

Bombardier Challenger 850 from VistaJet  
Photo: RUAG

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# LIEBHERR





Piuma Economy Class  
Photo: Geven

### Geven receives approval as "Boeing Offerable Seat Supplier"

Geven has been approved as "Boeing Offerable Seat Supplier" for line-fit installation of Economic Class seats on the 787 Dreamliner. This milestone is the result of a long Boeing evaluation and qualification process, involving all Geven departments, especially focused on engineering and manufacturing capabilities. During the past decade, Geven has reached and maintained high levels of performance, with outstanding on-time deliveries and after-sales support.

### ST Engineering's Aerospace arm sets up MRO JV with Vietnam Airlines

ST Engineering's Aerospace arm and Vietnam Airlines Engineering Company (VAECO), have set up a new joint venture company, Vietnam Singapore Technologies Engineering Aerospace Co. Ltd. (JVCo), in Vietnam. The setting up of the JVCo, which establishes the Group's first presence in Vietnam, follows a Memorandum of Understanding announced on April 26, 2018. The JVCo was set up with a paid up capital of US\$3.9m (approximately S\$5.3m) to provide component Maintenance, Repair & Overhaul (MRO) solutions. ST Engineering has a 49% stake in the JVCo, with the remaining 51% held by VAECO. The JVCo will leverage Vietnam Airlines' existing maintenance facilities at Noi Bai International Airport in Hanoi and Tan Son Nhat International Airport in Ho Chi Minh City by investing in new infrastructure for carrying out component MRO work at these facilities. The new component MRO facilities are expected to begin operations in mid-2019 to cater to Vietnam Airlines' requirements and the region's rising needs for aircraft component MRO services. These facilities will be equipped to support aircraft types including, but not limited to, the Airbus A320 Family, A350, Boeing 787 and ATR72, and carry out MRO work on pneumat-

ics, hydraulics, electrical components, wheels and brakes as well as safety equipment.

### CAS awarded Maintenance Approval Certificate from the Republic of Indonesia

Certified Aviation Services (CAS) has been awarded the Maintenance Approval Certificate from the Republic of Indonesia, Ministry of Transportation, Directorate General of Civil Aviation (DGCA). The scope of this certificate covers work for CAS' component repair shop in Fairhope, Alabama. The DGCA requires its candidates to assemble a safety management system (SMS). While the SMS is suggested by the FAA, it is a mandatory requirement in order to receive the DGCA. The completion of CAS' SMS not only enhances the safety of its employees and customers but also shows its commitment that safety and quality standards are continuously met. The certification authorizes CAS' component shop to not only complete component repair and overhaul services for airlines of Indonesia, but also with aircraft part brokers that work in company with the particular airlines.

### Bii.aero teams up with Rostrom Leasing for CFM56 -3 engine parts

Specialist aircraft component support provider Bii.aero (Bii) has teamed up with Dublin-based aircraft and engine leasing firm Rostrom Leasing to market a suite of engine piece parts resulting from the phased tear-down program of selected B737-300 Classics and CFM56 spare engines formerly operated by Southwest Airlines. Bii has all available piece parts to serve the used materials market at its warehouse near LGW for sales and distribution. To

strengthen the expertise within the Bii team, the company has recently appointed James Burley to head up the engines' division. Burley has extensive experience in all aspects of commercial aircraft and engine leasing and technical management following his previous appointments with Avtrade and recently Aircraft Leasing and Management Ltd.

### S7 Technics provides newly painted livery for Air Astana Embraer E190

S7 Technics' Mineralnye Vody-based aircraft painting center has completed its first project on an Embraer aircraft. Air Astana dispatched one of its Embraer E190s to Mineralnye Vody for a planned refreshing of its paint under a long-term contract with S7 Technics. The aircraft is the fifth in Air Astana's fleet to have been painted by S7 Technics. To work on its first-ever Embraer E190, S7 Technics' painting center made extensive preparations, which included pre-ordering all painting materials, sealers and removers. "For us, any order is individual and there are certain peculiarities in painting an Embraer aircraft. For instance, after completing the painting work it is necessary to apply a polyurethane coat on the wing and stabilizers to protect the paint during operations. There are many such details, and our team was always in contact with Air Astana, to cater for all details of the technological process and complete everything on time," says Denis Sarbin, S7 Technics' sales manager. The ongoing cooperation in terms of aircraft painting between the Kazakh carrier and Russia's leading MRO services provider started in the spring of 2016. Since then, besides the E190, S7 Technics' painting team has redelivered a Boeing 757-200, an Airbus A320 and two Airbus A321s to Air Astana. By the end of 2019, the Mineralnye Vody shop will have painted several other aircraft for the airline.



S7 Technics aircraft painting centre completes first work on an Embraer aircraft  
Photo: S7 Technics



Photo: MTU

### MTU Maintenance and GoAir sign exclusive CFM56-5B contract

MTU Maintenance has signed an exclusive four-year CFM56-5B contract with GoAir, a low-fare carrier based in Mumbai, India. The contract covers the maintenance, repair and overhaul as well as spare engine support and on-site services for the CFM56-5B engines powering the airline's 17 A320 aircraft. Launched in 2005, GoAir is an aviation foray of the Wadia group, one of the largest conglomerates in India. The carrier operates 230 flights per day across the Indian subcontinent and international flights to Phuket, Male, Muscat and Abu Dhabi. With 144 A320neo aircraft on order, the airline is poised for further growth.

### Saudia Aerospace Engineering Industries opts for Aeroxchange's AeroBuy solution

Saudia Aerospace Engineering Industries (SAEI), a wholly owned subsidiary of Saudi Arabian Airlines Holding, has selected Aeroxchange's AeroBuy solution to drive asset optimization and increase supply chain transparency. SAEI is headquartered in Saudi Arabia at King Abdul Aziz International Airport (KAIA) in Jeddah. With over 59 years of experience, it is one of the largest Maintenance, Repair and Overhaul (MRO) service providers in the Middle East. SAEI provides full maintenance support to Saudi Arabian Airlines' (SAUDIA) fleet and also provides services to SAUDIA's affiliates and other major local regional and international airlines. "We are pleased to welcome SAEI onto the Aeroxchange platform and look forward to integrating SAEI's AMOS system seamlessly into the Aeroxchange e-commerce network," said Albert Koszarek, President and

CEO of Aeroxchange. "AeroBuy will provide SAEI full visibility across its entire purchase order process by automating and standardizing communication with its trading partners. This is a first step in a plan to automate SAEI's entire MRO supply chain. With SAEI's prestigious reputation, this new agreement adds substantial value to our efforts in expanding Aeroxchange's presence in the Middle East."

### Collins Aerospace celebrates 45-year relationship with Airbus with major nacelle delivery milestones

Collins Aerospace Systems celebrated its 45-year relationship with Airbus by delivering the 1,000th nacelle for the A320neo program, delivering the 9,000th V2500 nacelle, and continuing to support the ramp-up of the A220 nacelle program. The relationship with Airbus dates back to the A300, the first Airbus

aircraft. The milestones achieved are due to the strong collaboration and hard work from both companies. In support of the Airbus A320neo program, Collins has invested hundreds of millions of dollars to expand manufacturing capacity at six global sites.

Collins Aerospace's innovative nacelle system for the Airbus A320neo is performing with 99.99% percent dispatch reliability. There are currently more than 750 Collins nacelles operating on A320neo aircraft with 32 airlines.

### Lufthansa Technik ready to offer cabin completions for Airbus A220

Lufthansa Technik AG is ready to offer cabin completions for Airbus' smallest commercial aircraft family, the A220. The company has already developed a first VIP cabin interior concept, parts of which will be showcased for the first time at this year's European Business Aviation Conference and Exhibition (EBACE) in Geneva. The spacious SkyRetreat concept will feature a totally new and unconventional design approach. As a consequence, the cabin interior envisaged by Lufthansa Technik's designers for the Airbus A220 calls for a reduction to the essential, thereby cleverly and discreetly integrating latest cabin technologies, from 4K roll-up displays and smart touch surfaces to a totally unique Observation Lounge to be revealed in the coming months. "Although the A220 represents the new entry level of both Airbus' corporate jet portfolio as well as our completions offerings, it already provides an incredible amount of space for breathtaking VIP interiors," states Wieland Timm, Senior Director Sales, VIP & Special Mission Aircraft at Lufthansa Technik. "Our SkyRetreat concept makes optimum use of this spacious cabin and its technical features will provide our customers with a whole new sense of space and a unique travel experience."

A220 SkyRetreat  
Photo: LHT



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## TRB to supply materials for Airbus A380 luxury suites

TRB Lightweight Structures (TRB) has worked closely with international high-technology company Safran to create luxury 'Skyroom suites' for Singapore Airlines. Available on board five new Airbus A380 passenger aircraft, these private suites were commissioned to celebrate the airline's 70th birthday and feature over 100 different phenolic panels manufactured by TRB. Safran was appointed to design and build the luxury cabins and, with a tight deadline to meet, approached TRB, recognizing the company's expertise in composite materials and complex project management. The design of each room was dependent on its position within the aircraft, requiring the production of over 100 different types of complex, press-cured phenolic panels in a narrow timeframe. Every panel also needed to be supplied with a cure graph, and to undergo vigorous quality assurance checks to ensure a high standard finish. Safran assigned a program manager to work on site alongside the TRB team and this joint

effort ensured the project met all specifications and was delivered in a timely manner. The collaboration allowed TRB to showcase the management capabilities necessary to complete large-scale, complex projects in a relatively short space of time. Following the success of this project, TRB has also been chosen to manufacture over 100 doors as part of an ongoing scheme to fit Skyroom suites to the rest of the Singapore Airlines Airbus A380 fleet. Tim Harrison, Technical Sales Manager at TRB, commented: "We are pleased to have been chosen for this opportunity to demonstrate our engineering skills in the development of luxury facilities on board the A380 – one of the most advanced commercial aircrafts of its time."

## Acro moves one step closer to China seat production

Acro Aircraft Seating, the U.K.-based manufacturer of Economy Class and Premium Economy Class aircraft seats, has moved a

step closer to initiating additional production capabilities in China. The company established a facility in Shanghai in Q4 2018 with the intent to supply the Chinese civil aviation market with Acro's innovative seating products. Chris Leese-Wood, Acro's CEO and Accountable Manager said:

"We are delighted with the progress that both our U.K. Quality and Shanghai Production teams have made to realise our production capabilities in China. The Shanghai facility will be initiated under existing Acro regulatory approvals, with the intention of firstly servicing Asia's retrofit market and with line-fit programs to follow later." Earlier this year, Acro announced that it has secured its first Chinese carrier with the selection of Series 3ST+ by Spring Airlines as part of a major line-fit program, comprising forty-five Airbus A320 and fifteen A321 narrow-body aircraft. The company has also been selected to supply another Chinese carrier with its next-generation Series 6 Economy Class seat.

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Four Seasons A321LR seating  
Photo: Airbus

### Four Seasons selects A321LR for air cruises

Four Seasons Hotels and Resorts has chosen the A321LR as its private jet for luxury world-wide travel, launching a new role for the Airbus corporate jet family. The aircraft will enter service in 2021. Airbus' A321LR is one of the newest aircraft in its NEO family, and features new engines and wingtip-mounted Sharklets – as well as extra fuel tanks in the cargo-hold. These features give the A321LR the efficiency and range to fly nonstop to landmark sights around the world, while maintaining the ability to land at nearby airports.

### Aerostar reports heavy checks of 104 aircraft during 2018

During 2018, Aerostar recorded its highest-ever throughput of Boeing 737- and Airbus A320-family aircraft heavy checks with 104 aircraft passing through its Bacau facility for 'C' and 'D' checks (79 Boeing 737 family and 25 A320 family). These aircraft were from 22 different customers, of which seven were new customers. Included among the new customers was Air France which booked four A320-family aircraft in for heavy checks. The first aircraft, F-HEPG, was the prototype for the A320 installation of the Internet Connectivity via Satellite package; it is an Aero-conseil modernization bulletin implemented on three aircraft. The work also included a passenger cabin full refurbishment. Also in 2018 Aerostar performed Europe's first base maintenance inspection on an A320neo – LEAP 1A aircraft – of long-standing customer Pegasus Airlines of Turkey. By the end of 2018 a further four A320neos had passed through Aerostar's shops. So far in 2019, Aerostar has re-delivered a total of 26 aircraft to operators after heavy maintenance checks (19 B737 and 7 A320 aircraft). To meet increased

demand, construction is now well underway on a new four-bay MRO hangar at Iasi International Airport in northeast Romania and is expected to be completed at the end of 2019. This new hangar will increase AeroStar's throughput of Airbus A320ceo and neo families and Boeing 737 Classic and New Generation overhauls by up to 40%. The new facility lies 130 km north of AeroStar's existing business operations at Bacau where the two existing dedicated hangars provide six/seven aircraft bays which are invariably full during peak maintenance periods. AeroStar has also increased its capabilities and experience for the installation of STC modifications to include the Wi-Fi Global Airconnect System and ACARS Datalink Systems Installations. In parallel, AEROSTAR is continuing the courses to license the personnel and complete the Part-66 authorizations for the license personnel of the Part 145 organization, both for Bacau and the new Centre in Iasi.

### StandardAero introduces PT6A-68-series engine test cell at Summerside facility

StandardAero recently completed the correlation process for its newly upgraded Pratt & Whitney Canada PT6A-68 test cell at its Summerside, PEI facility in Canada. The company is now able to complete pass-off testing for PT6A-68-series engines overhauled at the Summerside facility, for customers in Canada, the United States and elsewhere. StandardAero has provided full service support for the PT6A-68 since 2013, previously from its Winnipeg, MB location. Work on the engine was transferred to the Summerside facility as part of the company's Center of Excellence (COE) activity, announced in May 2018. The facility, located in Slemon Park adjacent to Summerside Airport, has recently expanded its shop floor area by 30% to 130,000 sq. ft., while

expanding its workforce with the hiring of 80 additional employees. The 1,250 to 1,600 shp class PT6A-68 series powers a number of high-performance training aircraft.

### GDC engineering and Joramco sign LoI to form strategic partnership

GDC Engineering (GDC), an Aircraft Engineering and Certification services provider and Joramco, the Amman-based MRO, have signed a Letter of Intent (LoI). Under the LoI, GDC and Joramco will work to form a strategic, long-term partnership to pursue aircraft major and minor modifications and repair opportunities for commercial aircraft throughout the region, under GDC EASA Design Organization Approval. GDC will provide engineering and Part 21J certification services while Joramco will provide engineering, labor, equipment and facilities required to perform modifications and repair services in accordance with EASA & FAA regulations at its facility in Amman-Jordan. The ever increasing market provides an opportunity for Joramco to expand its already comprehensive MRO capabilities to aircraft beyond their current customer base while also allowing GDC to expand its offerings for modification services, including cabin refurbishments and reconfigurations, along with connectivity and IFE upgrades, including GDC's new smart plane offering.

### Airbus Helicopters and Hungarian Government to establish manufacturing site in Gyula

Airbus Helicopters and the Hungarian Government have selected the town of Gyula in the Békés County as the site for a new aerospace enterprise in Hungary. Gyula is located in the country's eastern part. The new installation will be built up from scratch and will be the core of an emerging Hungarian aeronautics cluster. At the end of 2018, Airbus Helicopters and Hungary had signed a Memorandum of Agreement to create an industrial cooperation for long-term aviation projects. The purpose of the plant is to manufacture high-precision metallic elementary parts for the dynamic systems of helicopters for the complete Airbus product range. Production is expected to start in 2021. The Hungarian Government plans to establish capabilities for metallic surface treatment and a Hungarian Aerospace Academy to support the new Airbus site by training the future workforce. The new entity will be a joint venture between Airbus and a Hungarian governmental partner. Airbus will hold the majority of the shares and will operate the plant.



Peter Landquist of CTT (left) and Benoit Defforge of ACJ  
Photo: Airbus

### CTT Systems partners with Airbus Corporate Jets to optimize humidification system for ACJ320 Family

CTT SYSTEMS AB (CTT), a market leader in aircraft humidity control systems, has signed a memorandum of understanding with Airbus Corporate Jets to optimize a humidification system for the ACJ320 Family to further improve efficiency and performance. Cabin humidity is typically low in VIP passenger aircraft cabins, but with a CTT humidification system it can be increased to better than 20% by continuously introducing moisture to improve passenger comfort and well-being. Moisture build-up in insulation blankets will be avoided by combining a dryer with the humidifier to achieve balanced humidity. "Our shared goal is to create evenly distributed humidification throughout the VIP cabins of Airbus corporate jets, while minimizing the potable water needed, bringing the benefit of our airliner experience to the world of private jets in an optimized and economic way," says Peter Landquist, Vice President Sales & Marketing, CTT Systems.



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### Passport and CF34 Authorized Service Center network expanding globally

GE Aviation has strengthened its service and support network in critical regions where the Passport-powered Bombardier Global 7500 and CF34-powered Challenger series aircraft and customers are based. GE Aviation named Bombardier's Tianjin Service Centre in China as an Authorized Service Center for GE's Passport and CF34-3 engines in April. With the announcement, GE has combined Passport and CF34-3 Authorized Service Centre agreements in place at eight Bombardier Service Centre facilities around the world. These include Tianjin in China, Biggin Hill in England, Singapore, and Hartford, Fort Lauderdale, Dallas, Wichita and Tucson in the United States. GE also has services agreements in place with Bombardier's European line station network and the fleet of U.S.-based mobile repair trucks. GE has a maintenance support agreement with Lufthansa Technik AERO Alzey GmbH (LTAA)

for dispatching mobile repair teams to locations outside the United States. LTAA's mobile repair teams will have ten dedicated technicians to support GE Passport operations. LTAA has been a member of GE's Authorized Service Center network for CF34-series engines since October 2014. The GE Strother mobile repair team is providing support in the Americas. Both the Strother and LTAA mobile repair teams supported the Global 7500 aircraft flight test program for Passport to gain operational experience with the engine and to ensure concierge-style service in parallel with entry into service. Both GE and LTAA have received EASA Part 145 certification for the Passport engine.

### GKN Fokker Services supplies ADS-B Out solution to Estafeta's Cargo Airline

GKN Fokker Services and Estafeta's cargo airline have signed a contract to deliver

GKN Fokker Services' customized ADS-B Out solution to Estafeta's cargo airline B737 fleet, that is servicing Mexican domestic and global markets. Estafeta, a logistics service provider, needed to equip their fleet in order to comply with the new ADS B-Out mandate with a deadline of 2020. Operating its cargo airline from the international Airport Ponciano Arriaga as their main hub, Estafeta placed an order with GKN Fokker Services to ensure compliance with the new regulations. In need of an ADS-B Out solution including standalone GPS, and flying a fleet with different configurations, the cargo airline was looking for a tailored solution. After a phase of extensive information exchange, GKN Fokker Services and Estafeta are closely working together to guarantee the timely installation of a solution that fits all requirements and specifications. Estafeta has also purchased the Traffic alert and Collision Avoidance System 7.1 (TCAS7.1) modification from GKN Fokker Services.



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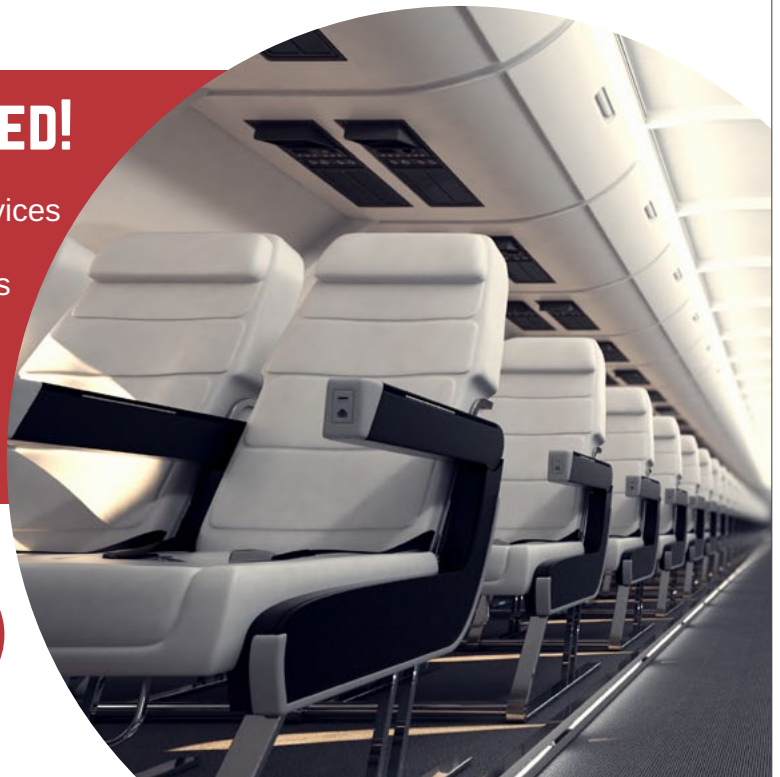




Photo: Inflight The Jet Centre secures Rolls-Royce ASC status

### Inflight The Jet Centre secures Rolls-Royce ASC status

Inflight The Jet Centre, part of the Inflight group of companies, based at London Stansted Airport, has received Authorised Service Centre status from Rolls-Royce to support the engines that power Embraer's Legacy 600 and 650 business jets. Effective immediately, Inflight will deliver the OEM's CorporateCare® and CorporateCare Enhanced MRO services to the Rolls-Royce AE 3007, covering line maintenance and power-by-the-hour support. The OEM's CorporateCare, the comprehensive, fixed-cost engine maintenance management program, protects against unforeseen costs and unscheduled events anywhere in the world and reduces the administrative burdens for operators, freeing them up to focus on their day-to-day business. Inflight is making an investment in parts and training in support of the contract. It is also adding personnel,

with an initial four Rolls-Royce trained technicians moving over to its London Stansted facility this month.

### Lufthansa Technik starts support for South African carrier Comair

Lufthansa Technik supports South African-owned carrier Comair with comprehensive technical services and integrated fleet management. Operations at the first two local line maintenance stations of the MRO company have already begun. Comair has contracted Lufthansa Technik to provide Total Technical Support (TTS®) for its Boeing 737 fleet. The agreement includes integrated fleet management, known as Technical Operations Management (TOM), engineering services, the provision of consumables and expendables, integrated component delivery as part of Total Component Support (TCS®) and the establishment of lo-

cal line maintenance stations. The first two such stations providing comprehensive line maintenance services have been set up in Johannesburg (up to A-checks in an own maintenance hangar) and Cape Town (up to weekly checks). Full technical support for the first Boeing 737-800 of Comair started in the middle of May 2019. On May 22, 2019, the first two local facilities of Lufthansa Technik Maintenance International in South Africa were officially opened. Ulrich Hollerbach, CEO of Lufthansa Technik Maintenance International, commented: "We have a lot of experience in setting up maintenance stations in different regions of the world, but South Africa is something special for us. It's a much bigger project than most, since we had to construct the entire organization literally from the ground up." 45 local mechanics, avionics technicians and managers are already working at the new stations – with more to follow this year. By the end of 2020, Lufthansa Technik will be servicing the entire Comair fleet and will have set up various line maintenance stations with up to 120 local employees.

### Honda Aircraft Company to expand production facility in Greensboro, NC

Honda Aircraft Company plans to expand its global headquarters in Greensboro, NC by investing an additional US\$15.5 million in a new 82,000-ft<sup>2</sup> facility on its 133+ acre campus in Greensboro. This will bring the company's total capital investment in its North Carolina facilities to more than US\$245 million. Scheduled to break ground in July 2019, the building will house a new wing assembly process for the HondaJet Elite. The new facility will allow for more wings to be assembled concurrently, resulting in a major increase in production efficiency. Additionally, this expansion will add more storage for service parts for the growing fleet of HondaJets around the globe. The facility is expected to be completed in July 2020.

### C&L Aviation Group receives EASA approval for Saab 340 ADS-B out solution STC

C&L Aviation Services (C&L) has received EASA approval for its Saab 340 A&B ADS-B solution. The STC certifies the installation of dual Garmin GTX-3000 transponders and uses either the Garmin GDL-88 SBAS/WAAS GPS or Universal Avionics SBAS/WAAS FMS GPS including the UNS-1Ew, UNS-1Espw, UNS-1Lw, and UNS-1Fw FMS



systems to comply with the FAA Automatic Dependent Surveillance-Broadcast-Out (ADS-B-Out) mandate requiring compliance before January 1, 2020, and the EASA requirement date of June 7, 2020. This is the first STC approval C&L has generated using their in-house engineering company, C&L Engineering Services. The company is working on several other STC projects, including ADS-B solutions for other regional and corporate aircraft types.

### Joramco performs first B787 C-check for Royal Jordanian airlines

Joramco, the Amman based MRO and the engineering arm of Dubai Aerospace Enterprise (DAE), has performed its first C-check on a Royal Jordanian Boeing 787 at its facility in Amman-Jordan. Jeff Wilkinson, Chief Executive Officer of Joramco said: "We are delighted to be increasing our B787 capability; the B787 is a key aircraft within our strategic plans and the increased scope of approval has been welcomed by our customers. We continue to build on Joramco's success as a leading MRO facility offering a globally competitive suite of MRO services".

### StandardAero adds Business Aviation Engine MRO capacity at Fleetlands, U.K. facility

StandardAero's Fleetlands, U.K., engine MRO facility has increased capacity by 50% to support its TFE731 engine line MRO services. As a result, StandardAero can fully process engine overhauls and has recently completed a pair of TFE731 Major Periodic Inspections (MPIs) within established U.S. shop turnaround time for a European customer. In addition, and since the beginning of this year, the company has also added capabilities including technicians, tooling, workstations and hardware, while adopting its global best practices developed over nearly 40 years of servicing TFE731 engines at its U.S.-based facilities. StandardAero is also continuing to invest into PW300-series capabilities at Fleetlands by adding additional capacity for PW305, PW307 and PW308 engine model MRO services, including rental engines that have been procured to support operators who may not have OEM rental coverage. On top of investments to expand and grow its engine MRO services, StandardAero has added new customer offices to provide operators with convenient workspaces on site and near the engine shop. Additionally, a new Mobile Services Center has been created at

the Fleetlands site, as a base for launching mobile support teams across the region.

### Southwest Airlines to build new maintenance hangar in Denver

Southwest Airlines has announced that it intends to begin construction on its first maintenance hangar at Denver International Airport this summer. The nearly US\$100 million investment will allow Southwest's Mechanics to work on up to three aircraft inside the 130,000 ft<sup>2</sup> hangar. There will be parking and facilities outside the hangar for eight additional aircraft. Ground breaking is expected to occur within the next few months and the hangar is anticipated to be completed in late 2020. The facility can house the 75 Technical Operations Employees currently working in Denver, who are responsible for maintaining Southwest's all-Boeing 737 fleet. Once opened, it will join the six other hangars located in Atlanta, Chicago, Dallas, Houston, Orlando, and Phoenix. Overall, the carrier employs more than 4,000 people within its Technical Operations department. Denver International Airport is one of Southwest Airlines' top-five airports in terms of daily departures in its network of more than 100 cities and offers up to 224 daily departures to nearly 70 nonstop destinations. The carrier employs 4,200 people in Denver.

### CAS awarded Maintenance Approval Certificate from Civil Aviation Authority of the Philippines

Certified Aviation Services, (CAS), has been awarded the Maintenance Approval Certificate from the Civil Aviation Authority of the Philippines (CAAP AMO 483-F). The scope of this certificate covers work for CAS' LAX line maintenance station and its AOG Go-Team division. The CAAP AMO requires its candidates to assemble a safety management system (SMS). After the completion of the SMS it must then be approved by the Philippine's government. CAS completing and receiving approval of its SMS shows its commitment that safety and quality standards are always met. The certification authorizes CAS to provide line maintenance support at its LAX station on all Philippine's registered operators. It will also permit CAS' AOG Go-Team division to release any aircraft in its operations specification that is a Philippine's registered operator.

### AFI KLM E&M news from Paris Air Show 2019

AFI KLM E&M and **AIBD Assistance Services** (2AS), the exclusive airport ground handling services provider at AIBD (Aéroport International Blaise Diagne), signed on June 18, in presence of Senegal's Minister of Tourism and Air Transport Alioune Sarr, a partnership agreement to pool their expertise and resources in a joint venture dubbed 2AS Technics. 2AS Technics' operations will focus on line maintenance support for airlines based at or flying to the new Dakar airport. As the exclusive airport ground handling services provider at the airport under a ministerial decree, 2AS set up its 2AS Technics subsidiary to handle line maintenance services at the airport. 2AS Technics already supports regional airlines, including Senegal's new flag-carrier, Air Senegal. Through its partnership with 2AS and equity interest in 2AS Technics, AFI KLM E&M will contribute its expertise to the joint venture to deliver competitive, high-quality line maintenance to the international airlines operating to and from Dakar.

**Parker Aerospace**, a business group of Parker Hannifin Corporation and Air France Industries KLM Engineering & Maintenance have signed an agreement for long-term collaboration on Boeing 787 component maintenance, repair, and overhaul (MRO) services. The agreement, signed and announced at the 2019 Paris Air Show, covers the vast majority of repairable and test-only components for the Parker-designed 787 hydraulic system. The agreement between AFI KLM E&M and Parker Aerospace will also encompass the joint development of repair procedures to increase component and system reliability and reduce related maintenance costs for airline customers worldwide. Operators benefit from shared best practices and collaborative approaches to continuous improvement in repair performance. The collaboration focuses on repair development and work-scoping to help optimize on-wing time and reduce delays, cancellations, and overall cost.

AFI KLM E&M and **AZUR Aviation** have entered into an agreement for the (Part 21) cabin modification design of a 777-300ER for the Moscow-based airline. This is the third partnership between the two groups in this particular field, with AFI KLM E&M having already undertaken the modification of three of AZUR's Boeing 777-300ERs. For its range of services in 777 cabin modifications, AFI KLM E&M is able to draw upon

extensive experience in the design and delivery of these types of projects, developed on behalf of both its parent company and clients. This expertise has propelled the group MRO into a leading market position for 777 product modification, and enables it to provide its clients with reliable, high-quality solutions adapted to their individual needs.

**Airbus** & AFI KLM E&M have agreed a technical and commercial partnership to co-develop and manage a virtual engine run-up A320 maintenance PC-based training solution. Applicable to all A320 engine types, it will use high definition immersive 3D simulation and will be based on real operational scenarios and in-service aircraft maintenance procedures. The solution will offer a flexible alternative solution to training sessions performed on simulators, facilitating course scheduling and localisation, be it in training centres, in outstations or at the customer's base. With the new solution, technicians and mechanics requiring to be trained and qualified to perform engine-run-up tests, will be able to visualize an A320 cockpit in an immersive 3D environment and carry out the simulated Run up test operations. The software allows the monitoring of three stations from one PCs: one for the instructor to control the progress of the training performed by the trainees plus one for each trainee (captain & officer) all equipped with 3D goggles. AFI KLM E&M and Airbus will start using it in their own maintenance training centres before end of 2019, followed by partners' networks.

**Triumph Group** and Air France Industries KLM Engineering & Maintenance (AFI KLM E&M) are in discussions to enter a strategic alliance that will give airlines and MRO customers global coverage for maintenance, repair and overhaul (MRO) services in the aftermarket. The alliance would benefit airline customers by providing seamless global support regardless of location while simplifying the airlines' supplier bases all in a manner that leverages the cost-effective solutions these leading third-party and operator/MROs are able to deliver to airlines. The scope of the partnership would be wide ranging and include services such as maintenance, repair and overhaul (MRO), spares pooling, efficient transregional coverage, and repair development for the aerostructures and engine nacelles for some new generation of aircraft.

AFI KLM E&M and **Corendon Airlines** have renewed and extended the CFM56-7B engine support agreement that has



AFI KLM E&M and Corendon Airlines renew their partnership for CFM56-7B engine support  
Photo: AFI KLM E&M

united the companies for several years. The contract provides full engine support services, including the conduction of shop visits and supply of replacement engines, and now covers Corendon Airlines' Turkish and Maltese fleets. AFI KLM E&M has been providing support for Corendon Airlines via its aeronautic maintenance solutions for several years, for several products including 737NG component support and CFM56-7B engine support. Over the course of these partnerships, the two groups have formed a robust working relationship which has been further strengthened via this new agreement.

**AirAsia X**, part of the AirAsia Group, and AFI KLM E&M are extending their longstanding support partnership for the A330 fleet to include the A330neo aircraft, soon to be deployed by the airline group. Services provided will cover repair, pool access and associated logistic services. AirAsia X will be the first to operate these new-generation aircraft in Asia. Initiated in 2007, the contract that binds AirAsia X and AFI KLM E&M for A330 support services was renewed in 2018 for an extended period. This new agreement is a testament to the solid working relationship between the two groups. In 2016, this cooperation was also extended to the AirAsia fleet of 304 A320neo aircraft.

Cambodia-based airline **Lanmei Airlines**, has selected AFI KLM E&M to provide support services for its ten A320s. The contract covers a wide range of components, as it also extends to aerostructure and Line Replaceable Units (LRUs) for the V2500 and CFM engines these aircraft are equipped with. The services provided will include repairs, pool access, provision of a Main Base Kit (MBK) and AOG support in the Asia-Pacific region.

AFI KLM E&M and **Finnair** have renewed their maintenance and overhaul partnership on the carrier's fleet of CF6-80E1 engines. The agreement covers shop visits for all 16 Finnair engines as well as on-wing support services. AFI KLM E&M and Finnair have been working together in the field of aircraft maintenance for several years, especially in relation to the support for the Nordic carrier's fleet of CF6-80E1 engines. In view of the value of the services delivered by AFI KLM E&M since 2014, Finnair has decided to continue this partnership.



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Photo: Avia Solutions Group aircraft MRO and Reconfiguration Services

### Avia Solutions Group to acquire Chapman Freeborn

Avia Solutions Group, a global multipurpose aviation holding, has entered into an agreement to acquire 100 per cent of the shareholding in U.K.-headquartered Chapman Freeborn Group – a worldwide market leader for aircraft charter solutions. The acquisition agreement was signed in London, United Kingdom on June 14, 2019. The addition of Chapman Freeborn's worldwide businesses will bolster current business lines portfolio of Avia Solutions Group – a global holding company with 42 subsidiaries engaged in aircraft maintenance, pilot training, ground handling and fueling, aviation IT solutions and business aviation. As part of the Avia Solutions Group, Chapman Freeborn will maintain its existing product portfolio and continue to operate under the group's existing brands – including subsidiaries Chapman Freeborn Airchartering, Chapman Freeborn OBC, Intradco Cargo Services, Logik Logistics, Magma Aviation, and Wings 24. The consolidated revenues of the two entities were €800 million (US\$960 million) for 2018 and are forecasted to reach €1 billion (US\$1.2 billion) in 2019. After the acquisition is completed, subject to customary approvals, Avia Solutions Group will own 66 companies in 26 countries worldwide, with approximately 3300 professionals in total.

### Héroux-Devtek acquires Québec-based Alta Précision

Landing gear manufacturer Héroux-Devtek has concluded the acquisition of all the outstanding shares of Montreal-based Alta Precision Inc., a manufacturer of high-precision landing gear components. The transaction, which is subject to final purchase price adjustments, is valued at CA\$23 million (US\$17.3 million) and was funded through the Corporation's credit facilities. Héroux-Devtek, with its head office in Longueuil, Québec, has 1,960 employees around the world, of which approximately 800 are located in Québec following the acquisition of Alta Precision Inc. Since its inception in 1942, Héroux-Devtek has grown from a small repair and overhaul facility to a world-class supplier of landing gear and actuation systems, delivering on major platforms such as the Boeing 777 and 777X. This acquisition, along with those of CESA, Beaver and Tekalia announced over the last year, strengthen its leadership position around the world.

### United Technologies and Raytheon to combine to create defense and aerospace giant

United Technologies Corp and Raytheon Co will merge to create a new company in what is seen as the largest-ever merger in the aerospace sector. Subject to regulatory approval, the deal should go through by the end of the first half of 2020 and will create a company worth an estimated US\$121 billion. It is understood that the merged companies will be renamed Raytheon Technologies Corporation. The merger will create a conglomerate which will span commercial aviation and defense procurement and as United Technologies predominantly provides commercial plane makers with electronics, communications and other equipment and Raytheon primarily supplies the U.S Government with military aircraft and missile equipment, there is little overlap between the two companies, a point that will be emphasized to antitrust regulators. In combining resources, the overall anticipated cost synergies should exceed US\$1 billion by the end of the fourth year. According to Reuters, no shareholder of either company will receive a premium, with United Technologies shareholders holding a 57% stake and Raytheon shareholders holding 43%. United Technologies and Raytheon currently have a market capitalization of \$114 billion and \$52 billion, respectively. Having spent US\$23 billion in its acquisition of Rockwell Collins last year, United Technologies has confirmed it now intends to focus on the aerospace sector and is on course to separate its Carrier air conditioning and Otis lift businesses. The newly created company is expected to return between US\$18 billion and US\$20 billion of capital to shareholders in the first three years after the deal's completion, while it is believed that the new company will also assume approximately US\$26 billion in net debt.

### Aviation Capital Group increases unsecured revolving credit facility to US\$2.0 billion

Aviation Capital Group (ACG), a leading aircraft operating lessor, has announced the upside, amendment and extension of its five-year unsecured revolving credit facility with JPMorgan Chase Bank, N.A., as administrative agent, and the lenders named therein. Total commitments increased by US\$370 million, to approximately US\$2.0 billion, and the maturity date was extended to June 3, 2024. Together with another unsecured revolving credit facility, ACG has US\$2.2 billion of revolving commitments from 24 financial institutions globally.

### Bombardier closes sale of Q Series aircraft program to Longview

Bombardier has closed the previously announced sale of the Q Series aircraft program assets to De Havilland Aircraft of Canada (formerly Longview Aircraft Company of Canada), an affiliate of Longview Aviation Capital Corp., for gross proceeds of approximately CA\$300 million. Net proceeds are expected to be approximately CA\$250 million after the assumption of certain liabilities, fees, and closing adjustments. Longview will carry on the production of Q400 aircraft at the Downsview Facility in Toronto and will continue performing aftermarket services for Q Series aircraft. Bombardier will provide transitional services and will license certain intellectual property to Longview to facilitate a seamless transition of the Q Series aircraft program.





Signing of Lol between MTU and e.SAT GmbH

Photo: MTU

### MTU Aero Engines takes stake in new Silent Air Taxi hybrid-electric small aircraft

Hybrid, safe and practically noiseless: These are the attributes of an innovative small aircraft, dubbed Silent Air Taxi, e.SAT GmbH, a company based in Aachen, Germany, plans to bring to the market. The new air taxi, which is capable of carrying five passengers, was presented to the public for the first time last week. On June 17, the project reached the next milestone: On the first day of this year's International Paris Air Show, e.SAT GmbH and MTU Aero Engines signed a letter of intent (Lol). The parties agreed that the German engine manufacturer will take a stake in the development and production of the unique hybrid-electric powertrain for the new aircraft and acquire shares in the recently founded company in the amount of €10 million (US\$11.2 million). "The Silent Air Taxi is a very ambitious endeavor and a promising concept for the future. The prospects are good for the project to become a reality," said MTU's Chief Operating Officer Lars Wagner. "It perfectly fits into our technology initiative on alternative propulsion systems. This is why we not only contribute our expertise but also take a financial stake in the company." Responsibility for the development of the hybrid-electric powerplant rests with e.SAT Powertrain GmbH, a subsidiary of e.SAT GmbH.

### Safran to implement €2.3 billion ordinary share buy-back program

Safran intends to implement a €2.3 billion ordinary share buy-back program to run over the two years following completion of the tender offer for Zodiac Aerospace shares. To date, Safran already contributed 14.5 million shares to its program for a total of €1.6 billion euros. On May 27, Safran has entered into an agreement with an investment service provider for a follow-on repurchase tranche. According to this agreement, Safran will acquire up to €150 million worth of ordinary shares no later than June 28, 2019. The average price per share will be determined based on the mean volume-weighted market price observed during the entire duration of the agreement. The unit price may not exceed the maximum of €155 per share set by the May 23, 2019 shareholders' meeting. (€1.00 = US\$1.12 at time of publication.)

### ATSG's bank credit facility expands to support fleet growth

Air Transport Services Group has obtained lender commitments for a one-year extension through May 2024 of its secured credit facility, and an expansion of the facility's revolver portion. The amendment to ATSG's agreement with a consortium of banks, led by SunTrust, increases the revolving credit portion of the facility by US\$100 million, to US\$645 million. ATSG is exercising its access to additional credit, with lender consent, through an accordion feature of the facility. The exercise reduces the additional credit available under the accordion feature to US\$300 million from US\$400 million.

### Héroux-Devtek reports fiscal 2019 net income of CA\$26.2 million

Héroux-Devtek, a leading international manufacturer of aerospace products, has reported strong results for the fourth quarter and fiscal year ended March 31, 2019. For fiscal 2019, consolidated sales reached CA\$483.9 million, up 25.2% from CA\$386.6 million in fiscal 2018. Commercial sales were at CA\$236.3 million, up from CA\$195.1 million a year ago, while defense sales stood at CA\$247.6 million, up from CA\$191.5 million last year. Sales growth was mainly driven by CESA and Beaver, followed by increased deliveries for the Boeing 777 and 777X programs, higher sales in the business jet market from the ramp-up of deliveries for the Embraer 450/500 program and higher sales of spares to the U.S. Government. Year-over-year fluctuations in the value of the Canadian currency versus foreign currencies had a positive net impact on sales of US\$4.3 million. Gross profit for fiscal 2019 increased to CA\$83.2 million, or 17.2% of sales, from CA\$61.3 million, or 15.9% of sales last year. Operating income was CA\$37.2 million, or 7.7% of sales, from CA\$23.4 million, or 6.0% of sales a year ago. Adjusted operating income grew to CA\$41.6 million, or 8.6% of sales, up from CA\$30.3 million last year, or 7.8% of sales. Adjusted EBITDA reached ca\$74.2 million, or 15.3% of sales, up from ca\$56.9 million, or 14.7% of sales last year. Net income stood at CA\$26.2 million an increase from CA\$13.7 million in fiscal 2018. Adjusted net income stood at CA\$30.4 million an increase from CA\$24.2 million last year. (US\$1.00 = CA\$1.35 at time of publication.)

### FL Technics finalizes year 2018 with €10,8 million net profit

FL Technics, a global provider of integrated aircraft maintenance, repair and overhaul services, earned €119 million in revenue in 2018, which is approx. 14% more than in 2017 (€103 million) and reached net profit of €10.8 million (€5,7 million in 2017). FL Technics has expanded their clients' portfolio by signing Lufthansa Group for an €11 million contract for 28 aircraft per annum for base maintenance services. The company signed a long-term line maintenance contract with Wizzair for 11 Airbus A320 family aircraft in the Vienna line station. It also has increased its training program scope for the Boeing 777, Airbus A320 NEO, ATR 42/72, Boeing 767, and Airbus A330. Now, FL Technics has 240 technical training programs in 59 locations worldwide. FL

Technics Indonesia earned a Part-145 certificate from U.S Federal Aviation Authority to provide maintenance and repair services to aircraft registered in the United States. The company has established FL ARI – a joint venture with China Airlines Leasing Group Holdings Limited (CALC) and its subsidiary Aircraft Recycling International (ARI) that will service aircraft in Harbin (China). FL ARI will operate a 15,000 m<sup>2</sup> hangar with four slots for narrow-body aircraft.

### Boeing invests in Commercial UAS services provider Robotic Skies

Boeing has announced its investment in Robotic Skies, a services provider that connects manufacturers and operators of commercial unmanned aircraft systems (UAS), with a global network of more than 170 civil aviation authority-certified repair stations. The investment is part of Boeing's disciplined, long-term strategy of entering into value-added partnerships that enhance and accelerate growth and deliver key differentiators for customers. "Unmanned and autonomous commercial aircraft operations are increasingly mirroring those in manned aviation, including the need for quality maintenance provided by certified technicians," said Brad Hayden, founder and CEO of Robotic Skies. "This latest investment will allow us to continue to grow our global footprint and expand operational capabilities to support customers." Boe-



Photo: Robotic Skies

ing HorizonX Ventures led this funding round with participation from Thayer Ventures, Sun Mountain Capital and KickStart Seed Fund. The investment builds on a previously-announced collaboration with Robotic Skies, Boeing Global Services and its subsidiaries Aviall and Jeppesen to provide enhanced commercial UAS services.

## Information Technology



Signing of Memorandum of Understanding between Leonardo and GE Aviation  
Photo: GE Aviation

**GE Aviation** and **Leonardo** have signed a partnership Memorandum of Understanding to continue developing and implementing digital transformation across Leonardo's operations in the U.K. and to jointly develop digital products to open new business opportunities. GE Aviation's digital services offering, Digital Works, embeds GE experts within the customer team to help plan, build and accelerate digital transformation. The key objectives for the partnership are to improve business performance and reduce costs by develop-

ing digital tools and a digitized support environment to enhance the way Leonardo manages availability of its contracted fleet. Leveraging GE Aviation IP and jointly developing new tools will drive business growth for both organizations.

**Rolls-Royce** and **Singapore Airlines** have agreed a co-innovation agreement that builds on the existing relationship between the two firms to identify untapped opportunities to enhance flight efficiency, safety and aircraft availability through digital applications and services. It also launches a pioneering working partnership between the companies through which they will use a secure digital platform to collaborate on the creation of aviation-specific digital solutions. Rolls-Royce and Singapore Airlines recognise the need for a globally-connected platform to encourage teamwork and to accelerate development of new digital applications and services. Now established and in operation, this platform can also facilitate collaboration with industry peers on the development of digital solutions for the industry.

**FLYdocs**, a global leader in digital aviation records and data management, recently signed a ten-year contract with **Regional Jet Center** for the ongoing management of their aircraft maintenance records across a fleet of 49 aircraft. Regional Jet Center, part of the **KLM Group**, is a leading MRO for line maintenance on the Embraer 170 and 190 series, and this partnership serves as an important step



in strengthening the MRO's commitment to digital innovation. Using the cloud-based FLYdocs® platform, Regional Jet Center will have access to a centralized digital replica of all aircraft technical records – right back to birth.

**GE Aviation** and **Aviation PLC** have signed an agreement to provide the AirVault Asset Transfer System across the lessor's fleet of ATR72 turboprops, A220-300, A320 and A321 narrow-body jets, Boeing 777-300ER and Airbus A330-300 twin-aisle airplanes. The implementation is starting in June, with anticipated completion this year. By providing the expertise to digitally manage mission-critical records across Aviation's fleet, we're strengthening the focus on asset lifecycle management and aircraft transition optimization for the aviation industry," said Gib Bosworth, global lessor director for GE Aviation. The combination of GE's domain expertise in flight analytics and engine diagnostics to bring disparate data together and the digital leased asset transfer system capability will further enable web-based fleet maintenance across the aviation leasing market. The Asset Transfer System is a collaborative tool that streamlines and simplifies the way that leased asset documentation is managed between airlines and lessors by allowing operators to organize records in accordance with industry standard. The system enhances the efficiency of lease returns several ways by helping operators harmonize and standardize files, perform collaborative document reviews with their lessor partners, and transfer files through an intuitive digital user interface which includes SPEC 2500 functionality.



Photo: Revima

**Revima**, a leading independent aviation MRO solutions provider, has selected **IFS Applications 10** to drive the company's international expansion and support its complex maintenance operations. Propelled by strong growth, Revima is currently in the process of establishing a new, ultra-modern MRO facility in Thailand. The 130,000-ft² site will become operational in early 2020 and will provide advanced MRO services for landing gear to customers in the Asia Pacific region. "Our accelerated growth coupled with the decision to build a new facility in Thailand were the catalysts for deploying advanced business processes and harmonizing them throughout the company," said Olivier Legrand, President & CEO, Revima. "IFS Applications distinguished itself from the competition through its robust, out-of-the-box MRO capabilities, which are delivered through a modern and intuitive user

experience. Another deciding factor was IFS's numerous customer references in the global aerospace sector." IFS Applications 10 will be deployed at Revima's facilities in Chonburi, Thailand, Caudebec-en-Caux and Saint-Ouen-l'Aumône France, supporting more than 1,000 MRO specialists when fully implemented.



PAS takes off with AMOS  
Photo: Swiss-AS

**Swiss-AS** and **Petroleum Air Services** have signed agreements regarding the purchase and implementation of AMOS. PAS was searching the market for a fully integrated turnkey solution that provides the option to adapt to new requirements without changes to the source code and reached the conclusion that AMOS provided the best-fit solution for their requirements. AMOS will be implemented without any customer specific changes and PAS can rely on a proven software that reflects industry-best-practices and allows managing both their aircraft and helicopters within one single system. When selecting AMOS, customers also obtain a comprehensive maintenance agreement that guarantees two major releases per year. This assurance proved to be one key factor in convincing PAS that AMOS was indeed the future-proof solution it was looking for.

To support maintenance and supply chain operations, **ADSoftware** is now offering a logbook application and a mechanic-oriented application. eLOG is the electronic logbook solution. It has been used by pilots at one of ADSoftware's largest customers (approximately 80 A/C). One of the strengths of the solution is that it is fully integrated with the existing desktop applications, making every flight input easier. All the flight times are reviewed and signed off by each pilot before being transferred to the database directly from the mobile device, hence eliminating the need for paper-based communication. The app also allows for the filling in of complaints that will then be reviewed by maintenance and necessary maintenance tasks performed. Digitalizing this workflow saves time, paper and reduces mistakes or omissions. The application is interfaced with a pilots' and mechanics' qualifications database giving an added layer of safety to the operator. eWORK is the application that mechanics can use to collect work orders that have been assigned to them. They will see their tasks and they can access the relevant documentation. If they need materials or tooling, they can place their request on the app. The time they spend performing their work is monitored and uploaded to the database. This creates a comprehensive view of the costs of an action and makes it easy to invoice it to customers (or to perform financial analysis of production processes).

**Ideagen**, the UK-based, global software firm, has announced it is to supply its software to a major aircraft maintenance organization in the Middle East. **Joramco**, an independent commercial aircraft maintenance, repair and overhaul (MRO) organization based in Jordan, will adopt Ideagen's Q-Pulse, Q-Pulse Risk and PleaseReview products. Joramco will use Ideagen's software as it aims to automate

and support key processes associated with its quality, safety, risk and regulatory requirements. Operating for more than 50 years, Joramco – majority owned by Dubai Aerospace Enterprise (DEA) since 2016 – has maintained a strong track record as a leading commercial aircraft MRO organization.

## Other News



GA Telesis and ICBC Aviation Leasing, signing of MoU at Paris Air Show Photo: GA Telesis

**ICBC Aviation Leasing** and **GA Telesis** have signed a Memorandum of Understanding (MOU) at the Paris Air Show to agree on building a marketing alliance in assisting airlines in their fleet renewal activities by trading out of mature or end-of-life aircraft and in providing spare engine financing and leasing solutions. "As a world-leading commercial aircraft leasing company, with the strong backing of **ICBC Bank**, ICBC Aviation has experienced significant growth in terms of fleet size, customer base, and global branding. ICBC has successfully become a major aircraft leasing player in the world, and through this alliance and MOU, we will provide airlines with comprehensive fleet renewal solutions while further strengthening the relationship and scope with ICBC Aviation," commented Abdol Moabery, President & CEO of GA Telesis.

**SmartSky Networks** announced that it has initiated the final site completion phase of its next generation Air-to-Ground (ATG) network for business and commercial aviation, launching later in 2019. SmartSky's airborne network, which began its nationwide deployment a few years ago, incorporates many 5G wireless technologies that have been experienced during a large number of highly successful inflight demonstrations for the media and market. The company's unique technology has received the critical threshold regulatory certifications from the **Federal Aviation Administration** and the **Federal Communications Commission**. SmartSky's track record of innovation speaks for itself. "We are able to provide customers an experience in flight comparable to their in-home experience. We have 128 patents granted and another 90 pending to protect the many innovations required to make a next-generation network live up to customer expectations," said SmartSky Chairman and CEO Haynes Griffin. "Further, SmartSky agrees with the market that cybersecurity is critical to business, and therefore we won't put our customers' data at risk by relying on Chinese companies such as **ZTE**." ZTE has been under significant scrutiny by the U.S. government.

The major provider of broadband connectivity products for aviation, **Gogo**, has announced its intention to create a contiguous U.S. and Canada air-to-ground (ATG) network which will be designed for use by business aviation aircraft, commercial regional jets and smaller mainline jets. It is anticipated the network will be operational for business and commercial aviation by 2021. Oakleigh Thorne, CEO of Gogo, commented that: "We expect to launch Gogo 5G at the same time as the terrestrial telecommunications companies are deploying the same generation of technology on the ground – a first in the inflight connectivity industry. Gogo 5G is the next step in our technology evolution and is expected to deliver an unparalleled user experience, pairing high performance with low latency and network-wide redundancy." The 5G network will be built on Gogo's existing infrastructure of over 250 towers, using unlicensed spectrum in the 2.4GHz range, along with a proprietary modem and advanced beamforming technology. Gogo's 5G infrastructure will support all spectrum types (licensed, shared, unlicensed) and bands (mid, high, low), which will enable Gogo to take advantage of new advances in technology as and when they have been developed. In a similar way in which wireless carriers provide redundancy across their networks, Gogo will continue to employ its 3G and 4G networks throughout the continental U.S. and in Canada which can be used as backup to the 5G network when needed. Compared to satellite technologies, ground-based network technologies normally deliver certain operational advantages such as lower cost of operation and lower latency. Gogo will provide straightforward upgrade routes to 5G connectivity for existing Gogo air-to-ground customers.

**IBA Group**, the specialist aviation consultancy, has established a representation in Tokyo, Japan. The move is a further example of IBA's ongoing commitment and growing presence in Asia Pacific, and an example of the continued popularity and demand for aviation investment in the region. IBA's main services include aviation data, appraisals, asset management and advisory. "Introducing formal and experienced representation in Japan builds on our strategic plan for closer ties with the aviation community across the wider Asia region. In the coming months we will also be announcing representation in China to further strengthen our capability with another local team," says Phil Seymour, CEO of the IBA Group. IBA's associates in Japan include Reina Akiyama and John Duley. "Their significant experience in aviation, software, and their understanding of the complexities of aviation jurisdictions and the market will hone our core service provision and tailored customer programs" he adds. IBA hopes to further strengthen ties with the Japanese aviation community over the coming months and the team will facilitate the delivery of IBA's aviation data intelligence platform IBA.iQ. IBA.iQ is an online analysis tool providing data on portfolio values, historical data, utilization of aircraft, fleet data and the impact of macro-economic variables.





# GEARED SOLUTIONS



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A350-1000 landing at Paris Airshow.  
Photo: Airbus

The Paris Air Show is the world's foremost event for the aviation and aerospace sectors. **Keith Mwanalushi** speaks to some of the participants about the highlights and significance of the show.

The Paris Air Show continues to be the world's largest aerospace event, involving some 2,400 exhibitors from 50 countries, 350,000 visitors, 300 top level delegations and around 3,000 journalists. Exhibitors always represent a wide section of the aviation, aerospace sectors and supply chains from all over the world – and one of those taking part this year was GAMECO. The Paris Air Show gave GAMECO the opportunity to meet existing business partners and extend the network and footprint further.

The company is steadily growing in all its business sectors – “Just recently we broke ground for our third supersize base maintenance complex,” declares Norbert Marx, CEO and General Manager. “Together with our new component business centre and a composite repair centre, the now operational landing gear facility and our developing cooperation with airframe OEMs and other first and second tier OEMs, GAMECO is positioned ideally in the important China and APAC MRO market. This our message here in Paris.” He says.

Marx says GAMECO's product range can be best described as a one stop solution for airlines and other customers, covering MRO work on all Airbus and Boeing aircraft, a wide range of component/composite repair capabilities as well as B737/B777 and A320/A330 landing gears.

“Paris [show] is a great opportunity for face to face meetings with a broad range of industry players, in which GAMECO can inform them about our plans and opportunities,” he adds.

Experts from AAR Corp converged on Paris to demonstrate how their global supply chain expertise, parts supply capabilities and digital services can be tailored to needs. From the government arena, AAR highlighted the Landing Gear Performance-Based Logistics programme (LGPBL), which has delivered approximately 2,300 assets

to the U.S. Air Force since the start of the contract in September. AAR's LGPBL led a technical review of 504 components to resolve material discrepancies impairing procurements which were slowing turnaround times.

Nicholas Gross, SVP Integrated Solutions at AAR explains that AAR is in the process of reforming their supply chain by identifying and reducing the inefficiencies hindering their existing processes, an effort the Air Force has not undertaken in over 30 years – “Also, we recently secured a seven-year MRO contract on the Royal Danish Air Force F-16s.”

Also present at the show, Eric Young SVP OEM Solutions says AAR's high-performing PAARTS Store continues to see record growth every month and was a featured integrated solution at the Paris Air Show to demonstrate how quickly customers can order and receive the parts they need right when they need them. “Also, we are highlighting the start of our global partnership with BASF to serve the aircraft ozone and Volatile Organic Compounds (VOC) converter market as we work together to improve air cabin quality and health conditions for flight passengers and crew.”

Paul Richardson VP Sales EMEA, also at AAR highlights the strong representation of AAR's global capabilities and partnerships – “We are integrating the latest technologies into our digital service offer-



Nicholas Gross SVP Integrated Solutions, AAR





RAS showed its latest development of an ATR 72 conversion into a Maritime Patrol Aircraft.  
Photo: RAS

ings, like Airvolution™, the PAARTS™ Store, Airinmar's component repair management, and business units like Composites and Mobility Systems continue to innovate their manufacturing, which we featured at the show."

With most of the industry being represented at the show, it was an opportunity to showcase the state-of-the-art technologies and services that Pratt & Whitney provides its customers. "We fully expected to leave Paris this year with a firm understanding of where the industry is, where it's headed and how we can continue to be leaders in providing our customers with the best products and solutions for their fleet," states Joe Sylvestro, Vice President, Aftermarket Operations at Pratt & Whitney.

The powerplant company was showcasing the Pratt & Whitney GTF™



Joe Sylvestro, Vice President, Aftermarket Operations at Pratt & Whitney

engine technology, featuring the revolutionary fan drive gear system, which is a scalable architecture that currently powers five aircraft platforms, enabling sustainable economic growth and new routes for operators.

"We see continued strong orders and broad customer interest for the GTF engine family," says Sylvestro.

As far as solutions go, P&W was showcasing the Engine-Wise™ service solutions, which

encompass all the initiatives going on to help operators optimise engine performance and keep their fleets running smoothly. "Along with this, we will have digital displays that will showcase our maintenance, repair and overhaul capabilities that visitors can explore."

Elsewhere, Rheinland Air Service (RAS) were showcasing the latest development of an ATR 72 conversion into a Maritime Patrol Aircraft for the Pakistan Navy. Secondly, it was the public premiere for RAS Special Mission Aircraft department.

"Primarily we are showcasing our latest development project, the ATR 72 conversion to a Maritime Patrol Aircraft, we partnered with a German company AeroData AG to install several mission critical sensors," indicates Nikolaos Mavrikis, Director Special Mission Aircraft at RAS.

Mavrikis explains that the aircraft includes an AESA multimode radar, an electronic support measure system combined with a chaff and flare dispenser. "The platform is also equipped with an acoustic processing system and can release sonobuoys from four launchers to detect submarines. All received data are transmitted to the mission management system and presented to the four operators consoles to provide maximum situational awareness."



Nikolaos Mavrikis, Director Special Mission Aircraft, RAS



Airbus celebrated its 50<sup>th</sup> anniversary with a special formation at the 2019 Paris Air Show.  
Photo: Airbus

Rheinland Air Services used the Paris platform to connect with several vendors, which should help the company implement new technologies – “We strongly believe that technologies such as AI, predictive analytics and numerous trending technologies can reduce costs while enabling improved maintenance options for our customers. Furthermore, tailored maintenance programmes, extended modification capabilities, conversions as well as innovative cabin products for our special mission aircraft division are very important topics for discussions during the Paris show and were on top of our agenda,” Mavrikis reports.



Ambiance at Paris Air show.  
Photo: Airbus

For the STS Aviation Group, this year’s show provided an interesting forum to meet with current business partners and customers and highlight the new additions to the STS portfolio, and to explore possibilities on how STS can further enhance and broaden its solution driven capabilities and services.

“In addition to offering our global customer base a state-of-the-art virtual engineering programme, key service offerings showcased at the event included liaison engineering support, quality assurance engineering, damage tolerance analysis and custom certification programmes,” says Mark Smith, Group President of STS Aviation Group. “During the show, we also highlighted our company’s aircraft maintenance programmes assistance service offering as well as our team’s custom aircraft reliability programmes.”

Regarding components, STS introduced its aircraft galley ‘Smart Stock’ programmes and new galley MRO support capabilities. Tom Covella, Group President of STS Component Solutions says these new integrated capabilities will allow STS to provide a turnkey solution to operators and lessors on galley support programmes for standard maintenance and modification programmes.

Covella adds: “From a components perspective, STS will be looking at new opportunities with our existing business partners, and new capabilities and product lines that will further complement our existing product line portfolios, capabilities and services.”

AS the industry congregates in Paris, the folks at GAMECO see big trends that include digitisation and approach to big data, in which





Looking to the sky. Attendees at the Paris Air Show.  
Photo: Airbus

MRO data management plays an important role. Marx says this trend is in a defining and critical phase and GAMECO needs to be in touch with the latest developments in the market to drive its internal solutions. "Another important trend is the growing move of OEMs into the aftermarket. GAMECO, building an MRO platform together with China Southern Airlines and the engine overhaul experts from MTU Zhuhai, is ideally positioned for cooperation with OEM's.

"At the Paris Air Show we wanted to listen to the plans and needs of the OEMs and promote this opportunity. Of course, we also addressed other trends, like the growing modification demand, innovative cabin solutions and had meetings with leasing companies. It was a long list that we prepared," Marx reveals.



Brian Sartain SVP Repair and Engineering  
at AAR

Also, during the show, AAR announced it will begin a two-year repair management contract providing complete repair loop services and supply management for Global Aerospace Logistics (GAL) clients in the United Arab Emirates. AAR support will include UH-60 Black Hawk, CH-47 Chinook, Twin Otter and C-208 Caravan platforms.

As AAR strives to make their operations more efficient, the MRO provider will look for new and different tools and innova-

tions to augment our technology initiatives. "In addition, we will look for ways to team with our OEM partners to drive improvements for our customers. The Paris Air Show is the prime opportunity to review new offerings from our partners," mentions Brian Sartain, Repair and Engineering at AAR.

Pratt & Whitney continues to remain focused on the growth of the aftermarket capabilities. Sylvestro says with the steady ramp up of production of the newest engines and the large number of fleets powered by the mature engines, P&W must be laser focused on being as efficient as possible to provide value to its customers. "We are also focused on a variety of manufacturing technologies to drive production, speed and reduce cost, along with developing strategies to develop our workforce for the next generation of MRO work."

Another notable signing at the Paris show was Pattonair, which signed a global general terms of agreement (GTA) with Safran in one of the first contracts of its kind placed by the Group with a distributor.

The umbrella agreement enables Pattonair to service multiple divisions and comes on the back of a series of new awards by several Safran companies, including Safran Nacelles, Safran transmission systems and Safran ventilation systems.

For others like CAS Aircraft Maintenance, the key message in Paris was how best to support airlines and OEM's during AOG situations with cost and turn time solutions.

# Driving innovation

Innovation is key to more efficient MRO services.  
All photos: Air France Industries KLM Engineering & Maintenance – Patrick Delapierre

Innovation is already part the AFI KLM E&M DNA for a long time. In a fast moving MRO industry it is key to keep on developing our own unique added value to the MRO services that we provide.

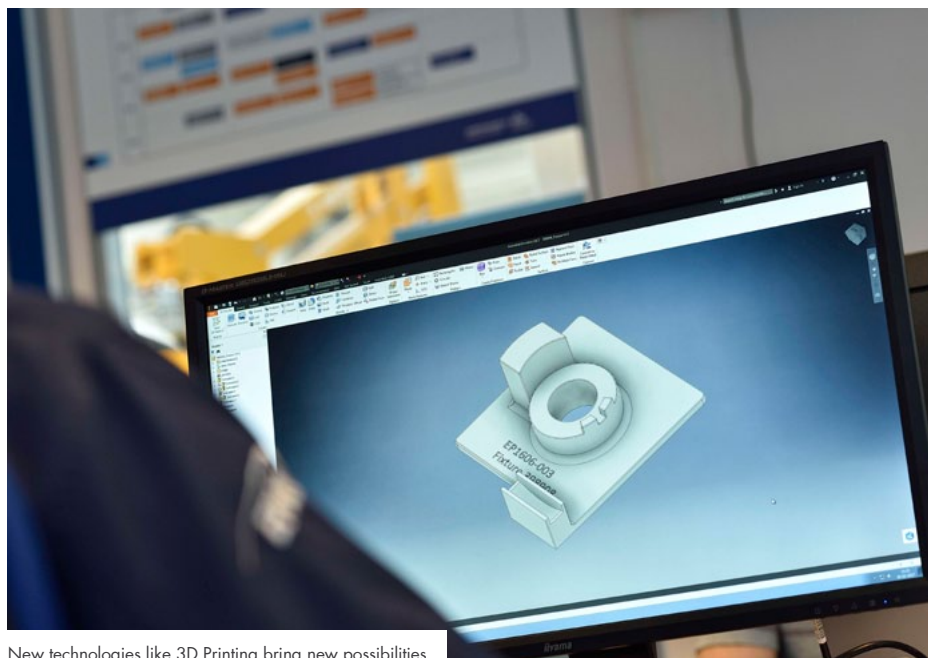
This year AFI KLM E&M is celebrating 25 years of its participative innovation programme where all staff members can submit and implement innovative ideas at all time, this represent around 4000 ideas per year. The most important is to make sure our people have this open mindset, be humble and ready for change as we all see that the pace of change is accelerating.

A couple of years ago AFI KLM E&M decided to formalise this DNA and created the award winning 'The MRO LAB' initiative to bundle our internal participative innovation efforts and to increase possible participation with external parties. The MRO LAB embodies the essence of AFI KLM E&M vision on innovation, which is that innovation thrives when you disrupt limitations of today by using the technology of tomorrow.

The external partners help to discover the new technologies. By bringing those in contact with the real environment (aircraft hangar,

engine repair workshop and equipment, logistics center) and the real AFI KLM E&M technicians the new ideas and solutions arrive. Co-innovating with partners relies on the

people in the network (leading innovators and other people on the field) who can oversee these collaborations.



New technologies like 3D Printing bring new possibilities.





Drones will continue to impact MRO processes.

For that reason several places of innovation have been created throughout AFI KLM E&M. Recently they started also to add FabLabs near the facilities. These are places where the staff can, with help of experts, freely experiment with the possibilities of new technologies like 3D printing, Programming, Artificial Intelligence, Augmented and Virtual reality, Robotics, Internet of Things, Robotic Process Automation. Of course in the hope that understanding of new technologies will trigger ideas in the working environment.

Very visible result of the AFI KLM E&M innovation efforts is PROGNOS, the AFI KLM E&M predictive maintenance solution. "That solution has moved a lot in the past two years," says James Kornberg, AFI KLM E&M Director Innovation. "It now covers more aircraft types and systems but still with the same recipe for success of combining AI based Big Data processing with engineering expertise and the operator experience to predict failures, trigger repairs upstream, and avoid AOG situations."

PROGNOS and The MRO LAB innovations have had strong resonance in the MRO mar-

ket. On their request AFI KLM E&M is now implementing PROGNOS and The MRO LAB Co-innovation at the customer.

### We, robots

Several advances have been made in the automation sphere. Drone inspections continue to be developed, but those mini-aircraft are not the only machines to roam the ramp and the hangars, assisting our technicians in their work. "We are rolling out robots able to reach parts of the fuselage that are difficult for humans to access, or robots that will take the strain on complex, dangerous, or repetitive tasks."

### Virtualisation now a reality

During the Paris Air Show, AFI KLM E&M provided an opportunity to set foot in the reality of new-generation maintenance methods. Or, rather, the realities, plural. Think virtual reality, used by cabin modifications teams

to view the outcome of an engineering task before integration. Or mixed reality, used to train technicians and supplementing theory lessons: did you know that, these days, using smart glasses, an instructor can show trainees parts that would normally be inaccessible?

### AFI KLM E&M and its network

Barfield, our US subsidiary, was also present in Paris to showcase a brand-new solution for inspecting electrical systems. And don't miss the opportunity to visit the booth of our partner Latécoère. The OEM will be giving a sneak preview of how it aims to integrate LiFi technology into an aircraft cabin: a modification that is now certified and integrated by AFI KLM E&M. "This 53rd Paris Air Show was a thrilling experience as we're currently at a turning point in aircraft maintenance. We're no longer just talking about experiments, but truly operational solutions serving people and aircraft."



Roger Ross

StandardAero has appointed **Roger Ross** as President of the company's Airlines and Fleets division. He will be located at the company's Scottsdale, Arizona, headquarters and be responsible for the largest division of StandardAero, with multiple sites in the U.S., Canada, Europe, Africa and Australia. Ross previously served as President of Esterline Technologies, Sensors and Systems and has more than 25 years of accomplished leadership in the Aerospace Industry. During his

career, Ross managed a number of successful operations for Goodrich Aerospace, rising through leadership positions in operations and engineering, covering MRO and Engine Programs as well as Aerostructures and Actuation systems. Following the acquisition of Goodrich by United Technologies, Ross continued to manage large global business P&Ls for both OEM and Aftermarket systems in multiple domestic and international locations.

MRO service provider, SR Technics, has appointed **Abdel Farah** as Area Sales Director for the Asia, Australia and Indonesia market. Farah joined SR Technics in February 2015 as a Customer Program Manager, moving to the Commercial Department in March 2019 with the responsibility of the marketing and sales strategy as well as customer relations. With over 20 years of service in the Aircraft Maintenance Repair & Overhaul business, Farah is an experienced aviation professional, who is based in Melbourne, Australia. He will also serve as Managing Director, SR Technics Australia

Specialist aircraft component support provider Bii.aero has announced the appointment of **James Burley** as their new Commercial Manager. Capitalizing on his previous sales experience, Burley will focus on establishing and managing the strategic growth of Bii's broad inventory of Boeing and Airbus aircraft spares. He will also play a key role in developing and enhancing Bii's use of analytics to support company growth. Burley's previous positions include roles with AvTrade, AJW Aviation and Aircraft Leasing & Technical Management Ltd.



Warrick Hood

**Warrick Hood** has joined C&L Aviation Group as Senior VP responsible for the company's growing ATR program. Hood will oversee ATR parts' distribution, aircraft support, consignments, and other programs for regional aircraft operators around the world. Hood brings with him extensive knowledge of aviation purchasing, logistics, business development, inventory management, and accounting procedures from his 13 years of international aviation experience. He has

developed strong relationships with European and African regional airlines, specializing in ATR, ERJ, Beechcraft, and Cessna aircraft, and has utilized those relationships to support customers creating solutions for their regional aircraft. Previous to his employment with C&L, Hood was Managing Director for ACIA Aero Parts Company.

ARGUS International has named **Doug Schwartz** as Vice President and he has been selected to lead the Operational Excellence Program (OEP), a new position within ARGUS International. Schwartz recently retired from Conoco Phillips as general manager of global aviation services. Schwartz will be responsible for all activities related to growing and developing ARGUS' OEP. Members of the program include industry-leading corporate flight departments that have achieved their stage-three ISBAO certification. These departments operate at an exceptional level and are committed to continuous improvement.



Luis da Silva

CDB Aviation, a wholly owned Irish subsidiary of China Development Bank Financial Leasing, has announced the latest addition to its global commercial team; **Luis da Silva** has been appointed as Head of Commercial, the Americas. Da Silva has over two decades of experience in aviation and aircraft leasing, with his career predominantly focused on marketing and sales activities in Latin America and the Caribbean. Prior to CDB Aviation, he served as Senior Vice President and Regional Manager Latin America for GECAS. Previously, he held senior sales positions within Airbus, based in both Toulouse and Miami, where he cultivated the manufacturer's relationships with airlines in Latin America. De Silva started his career as a network planning analyst at DHL Worldwide Network. He will be based in the company's Luis Americas headquarters located in Fort Lauderdale and will report to **Patrick C. Hannigan**.



Stéphane Dubois

**Stéphane Dubois** was named Safran Executive Vice President, Human Resources on June 5. He replaces **Jean-Luc Bérard**, who was at the same time appointed Special Advisor to the Chief Executive Officer, in charge of corporate social responsibility (CSR) policy. Stéphane Dubois is also a member of the Group's Executive Committee.

Macquarie Group has announced the appointment of **Kate Vetch** as the new Regional Head of Compliance for Macquarie Group in Europe, the Middle East and Africa (EMEA), subject to regulatory approvals. This will take effect from early September 2019. Vetch will join Macquarie as an Executive Director and will sit on the EMEA Management Committee alongside **Paul Plewman**, the EMEA region's new Chief Executive Officer. Following this appointment, **Richard Brearley**, currently Regional Head of Compliance, EMEA will move into the Chief Executive's office to focus on regulatory projects on behalf of Macquarie in EMEA.



Karim Grinate

Innovative aircraft and engines leasing, trading and part-out specialist APOC Aviation, has appointed **Karim Grinate** as new sales manager. Alongside his worldwide sales responsibilities, Grinate will focus on establishing world-class status for APOC's AOG department in tandem with its enhanced stock inventory of Boeing and Airbus spare parts. Headquartered in The Netherlands, APOC Aviation's expanding global footprint includes three regional sales offices in Colombia, Lithuania and Miami. It will be Grinate's role to strengthen ties with existing customers and build new business opportunities for APOC's aircraft parts division. Previous experience includes senior positions with Qatar Airways Cargo, Oman Air Cargo and Air France – KLM Cargo. This valuable experience and knowledge of the cargo process will spearhead APOC's parts distribution improvements.