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Pratt & Whitney's PW307 engine family enters as newest variant in MTU's engine capabilities

The PW307 engine family powers the Dassault Falcon 8X in and has been in service since 2016.

MTU Maintenance recently achieved its latest milestone certification to carry out the PW307 maintenance, repair and overhaul. The PW307D is the newest variant to be added to MTU's engine capabilities in Berlin-Brandenburg. The PW307 engine family powers the Dassault Falcon 8X in and has been in service since 2016.

André Sinanian, Managing Director and Senior Vice President, MTU Maintenance Berlin-Brandenburg said, "We are delighted to be fully certified for the newest generation of PW300 engines. We have carried out all necessary preparations, such as correlating the test cell, and look forward to receiving the first engines. We are specialized in small to midsize fan engines and expect this program to run well into the 2030s."

The PW307 engine has a maximum take-off thrust of 6,400 pounds with each engine having more power than its predecessors. MTU Aero Engines have been manufacturing PW300 engine parts since 1985. They have a 15 percent stake in the PW307 engine program and are responsible for the development and production of the complete three-stage low-pressure turbine, including the exit case and the mixer.

MTU Maintenance Berlin-Brandenburg has been performing MRO and mobile repair services on the PW300 engine family since 2001. Engine service contracts are managed by Pratt & Whitney Customer Service Centre Europe, a joint venture between MTU Maintenance Brandenburg and Pratt & Whitney Canada, which is responsible for aftermarket services sales and marketing activities for P&WC engines across Europe, Africa and the Middle East.

Bamboo Airways to purchase GE's latest GEnx engines for Boeing 787 fleet

The MOU agreement is the largest deal in this signing series for Bamboo Airways.

Bamboo Airways have signed a Memorandum of Understanding (MOU) agreement with GE Aviation to purchase GEnx engines for its Boeing 787-9 aircraft order of 10 firm and 20 options valued at close to USD 2 billion (USD) list price. The MOU agreement is the largest deal in this signing series for Bamboo Airways. According to the agreement, GEnx engines to be delivered in 2022 will power the wide-body Boeing 787-9 Dreamliner fleet of Bamboo Airways. This fleet will operate on nonstop routes between Vietnam and the US, and the Boeing 787-9 is currently one of the few modern wide-body aircraft capable of fulfilling the requirements of long-distance international routes like this 13-hour flight between the two countries.

Dang Tat Thang, CEO of Bamboo Airways said, "GE is a large and prestigious corporation in engine manufacturing in the world. The selection of the GEnx engines for our Boeing 787-9 aircraft will help increase the operational efficiency and service quality of Bamboo Airways on Vietnam-US nonstop flights as well as many potential international routes. Besides consolidating and expanding the airline's modern fleet, the signing of this agreement with GE will lay a solid foundation to promote the development of this important route in the future."

Dave Kircher, GEnx General Manager at GE Aviation said, "GE is honoured to be a strategic partner to Bamboo Airways. The GEnx engines have proven performance with almost a decade of flying, and Bamboo Airways will fulfill its vision for long international routes thanks to the flying power and fuel efficiencies that the GEnx engine provides."

The signing ceremony took place on September 21, 2021 in New York, USA, under the witness of Vietnam President Nguyen Xuan Phuc.

The GEnx is a high-thrust jet engine developed for the Boeing 787 Dreamliner and 747-8 aircraft. It has the advantage of low fuel consumption and reduced CO_2 emissions up to 15 per cent compared to the GE's CF6 engine. Representing a giant leap forward in propulsion technology, GEnx uses lightweight durable materials and advanced design processes to reduce weight, improve performance, and lower maintenance, making it the best engine choice for many long-haul flights.

Rolls Royce signs HAL to manufacture engine parts for Adour engines, boost to Make in India

Rolls-Royce aims to strengthen the ecosystem for Adour engines in India by building on HAL's existing capabilities for manufacturing and supporting the Adour engines for Indian customers.

Rolls Royce have signed an agreement with Hindustan Aeronautics Limited to make engine parts for Adour engines. This will support Rolls Royce international defence customer base along with giving a boost to 'Make in India'. The agreement was signed by Mr. B Krishna Kumar, Executive Director (Engine & IMGT), HAL and Mr. Abhishek Singh, Senior Vice President – Defence, India and South East Asia, Rolls-Royce. Mr. C.B. Ananthakrishnan, Director (Finance), Mr. M.S. Velpari, Director (Operations) and Mr. Amitabh Bhatt, CEO (Bangalore Complex) from HAL were also present on the occasion.

Mr R Madhavan, Chairman and Managing Director (CMD), HAL said, "With over 30 years' experience of supporting repair and maintenance services for the Adour engines in India, HAL has the capability and capacity to support a large defence customer base. This is the first order for supply of spares for the Adour Global Supply chain. We plan to be a key player in the supply chain of Adour Engines and expect more orders to follow. We look forward to working with Rolls-Royce to build on this capability to serve global markets for supply of spares and MRO of Adour engines. This new partnership will create avenues for the two companies to expand the defence sourcing footprint in India."

Mr Kishore Jayaraman, President, Rolls-Royce India and South Asia said, "Our valued partnership with HAL has grown from strength to strength over the last few decades and this is a significant step towards strengthening the defence manufacturing ecosystem in India, and to help catapult India's vision for the defence sector to 'make in India' for the world."

Alex Zino, Executive Vice President – Business Development and Future Programmes (Defence), Rolls-Royce said, "We are excited to expand our long-standing partnership with HAL to support long term sustainment of our Adour engines for both Indian and global customers. We believe that HAL's expertise in manufacturing and supporting Adour engines will pave the way for several of our customers to successfully operate the Adour engines for many more years. This is our first defence supplies agreement in India and creates an opportunity for India to increase its defence exports given the robust demand forecast for high precision components in this sector."

Through this partnership, Rolls-Royce aims to strengthen the ecosystem for Adour engines in India by building on HAL's existing capabilities for manufacturing and supporting the Adour engines for Indian customers over several decades. This follows the Memorandum of Understanding (MoU) signed by Rolls-Royce and HAL during the Aero India 2021 event to establish an Authorized Maintenance Centre for Adour at HAL to support international military customers and operators.

DGCA certifies GATES to perform CFM engine overhaul

This certification is an important milestone as it has opened GATES to a strategic growth market for CFM56-5B/-7B engine overhauls in South Asia.

GA Telesis Engine Services ("GATES") has received certification from the Directorate General of Civil Aviation ("DGCA") in India to overhaul CFM56-5B/-7B engines. DGCA India approval is a significant milestone for GATES and opens access to a strategic growth market for CFM56-5B/-7B engine overhauls in South Asia.

Russ Shelton, President, Engine Strategy Group, GA Telesis, "We are very excited about the new opportunities the regionally recognized DGCA India certification unlock for our shop. We look forward to offering our world-class engine maintenance solutions to customers in India while also demonstrating our commitment to being a partner in their success."

Avinash Singh, Director of Business Development, Asia Pacific ("APAC") for GATES said, "Receiving certification in India is a noteworthy accomplishment for GATES and allows us to establish a strong footprint here with superlative engine maintenance services and unparalleled customer support. Moreover, the certification is well-timed as we have numerous ongoing campaigns with leading airline customers. We are honoured to receive this milestone approval, especially amidst the COVID-19 pandemic, and thank DGCA for their support."

In addition, this allows GATES to consolidate and further expand its growing customer base in India. GATES has also been granted certification by the FAA (United States), EASA (European Union), TCCA (Canada), CAAC (China), GACA (Saudi Arabia), DGAC (Mexico), ANAC (Argentina), DGAC (Indonesia), and ECAA (Egypt).

AMERON achieves PMA approval on overhaul kits M806012-1 and M806013-1

These kits will improve the aircraft industry's ability to keep operating with high-quality parts and short lead times.

AMERON recently achieved PMA approval on overhaul kits, P/Ns M806012-1 and M806013-1. The M806012-1 kit is used for the overhaul of 801307 series Cylinder and Valve Assembly (CVA) from OEM AVOX Systems. The PMA Overhaul Kit is similar to the OEM P/N 806012-01 in fit, form, and function. The M806012-01 kit consists of 15 parts, which are eligible to be installed on Airbus A300B4, A319, A320, A321, Boeing 727, 737, 747, 757, 767, 777, and Boeing (McDonnell Douglas) DC-9-41 series of aircrafts.

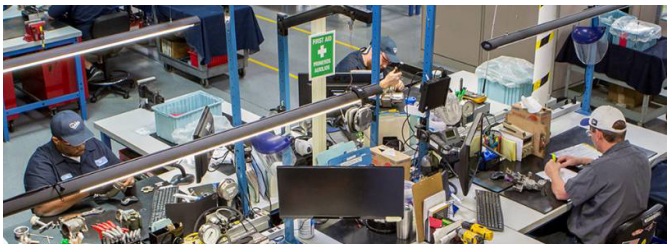
While the M806013-1 kit is used for the overhaul of 895 series Cylinder and Regulator Assembly (CRA) from OEM AVOX Systems. The PMA Overhaul Kit is similar to the OEM P/N 806013-01 in fit, form, and function. The 14 components in the kit are eligible to be installed on Bombardier CL-600, Embraer EMB-120, EMB-135BJ, Textron Aviation (Hawker Beechcraft) 1900C, 1900D, Gulfstream GIV, Textron Aviation (Cessna) 560 and 650 series of aircrafts.

Adam Brammer, Divisional Vice President and Business Manager of AMERON said, "We are proud to continue offering new solutions that improve the aircraft industry's ability to keep operating with our high-quality parts and short lead times. Our products, now including the M806012-1 and M806013-1, provide the same or better quality than the OEM. We also offer same day shipment for most of our aftermarket products."

AMERON recommends these oxygen cylinders be evaluated for overhaul every three to five years to maintain proper functionality.

Collins Aerospace welcomes Fokker Services Americas as critical partner in the third-party MRO network

The team at Fokker Services Americas leverages this expertise and transfers key learnings to provide excellent repairs for newer capabilities.



Collins Aerospace has signed a seven-year overhaul and repair agreement with Fokker Services for their pneumatic MRO capabilities. These diverse pneumatic capabilities at the Fokker Services Americas facility in LaGrange, GA, ensures full reliability of well-established aircraft platforms. This includes the Airbus A300, Boeing 747 and 767, Embraer ERJ135 and ERJ145, and Fokker 50 and 60. This contract highlights their expertise in the aerospace aftermarket sector and builds on its history of providing high-quality maintenance programs through OEM partnerships.

Craig Winter, Managing Director at Fokker Services Americas said, "We have a truly diverse catalogue of pneumatic MRO capabilities. By supporting a broad mix of components for Collins Aerospace, we are their one-stop shop and simplify their supplier base when it comes to repairs. We are well equipped to take on a vast range of part repairs, all while ensuring a seamless redelivery schedule with our well-established supply chain network."

Fokker Services Americas has a long history of providing pneumatic MRO services for its customers. The on-site state-of-the-art test stands, such as the Eddy Current Dynamometer Air Starter test stand, Air Driven Pump test stand and Air Cycle Machine test cell, help to cut down turnaround times and ensure those products are delivered in optimal airworthy condition. With a deep knowledge of long-standing component maintenance capabilities, the team at Fokker Services Americas leverages this expertise and transfers key learning's to provide excellent repairs for newer capabilities.

James Lyman, Director, Repair Services Supply Chain Management, Power and Controls of Collins Aerospace said, "We welcome Fokker Services Americas to their expanded role as a critical partner in Collins' third-party MRO Network. Their broad range of MRO capabilities will support Collins' strategy to manage the lifecycle of our products."

Fokker Services has collaborated with Collins Aerospace for many years. In 2015, Fokker Services Americas became the official partner for on-site Ball Bearing Air Cycle Machine maintenance. Today, Fokker Services also has an MRO license agreement with Collins Aerospace for Mechanical Systems and Power & Controls products, as well as an OEM parts supply agreement for Electrical Power Generation products. The relationship Fokker Services maintains with worldwide civil aviation authorities such as the FAA, EASA and CAAC further facilitates this continued partnership.

Pratt & Whitney joins FAA's prestigious CLEEN III initiative for ultra-quiet engine fan and advanced combustion technology

Pratt & Whitney will match the FAA's USD 25 million funding for the development of technologies that will continue to make jet engines more fuel efficient, leading to lower emissions, and helping make air travel more sustainable.

As a part of Federal Aviation Administration's Continuous Lower Energy, Emissions and Noise (CLEEN III) initiative, Pratt & Whitney and FAA are investing USD 50 million to develop an ultra-quiet engine fan and advanced combustion technology designed to reduce noise, emissions, and fuel consumption. This is the third phase of FAA's CLEEN III initiative. Pratt & Whitney has been an FAA partner since the program's inception in 2010.

Frank Preli, vice president of propulsion and materials technologies at Pratt & Whitney said, "We are honoured to continue to partner with the FAA to explore advanced engine technologies and deliver additional significant fuel savings and environmental benefits. This third award is a result of our proven track record over the last 11 years, working on FAA CLEEN I and II strategies and deliverables."

Tom Pelland, senior vice president of GTF engines at Pratt & Whitney said, "Our GTF engines already offer the highest efficiency and lowest CO_2 emissions for single-aisle aircraft – with a dramatically smaller noise footprint. Today's FAA CLEEN III award will help us build on that success and aligns with our focus on driving sustainable solutions for our customers and the industry."

Pratt & Whitney will match the FAA's USD 25 million funding for the development of technologies that will continue to make jet engines more fuel efficient, leading to lower emissions, and helping make air travel more sustainable. Pratt & Whitney ushered in a new era of commercial propulsion with the introduction of the Geared Turbofan (GTF) engine for single-aisle aircraft in 2016. Since its introduction in 2016, the GTF family of engines has helped 54 operators save more than 500 million gallons of jet fuel and avoid 4.9 million metric tonnes of CO_2 over 9.3 million flight hours.

Previous CLEEN awards in 2010 and 2015 supported the development of an ultra-low fan pressure ratio engine coupled with a short inlet, as well as compressor and turbine technologies that build upon the company's revolutionary geared engine architecture. Pratt & Whitney will use these advancements as a base to drive even higher efficiency and lower greenhouse gas emissions in its GTF engines.

Expanding MRO markets of the world

The COVID-19 pandemic sure put a big dent in the expected surge of the MRO markets across the world. Pre-COVID19 MRO market was valued at USD 616.01 billion in 2020 as per the Mordor Intelligence Report. It is expected to be worth USD 701.30 billion by 2026. It is no secret that North America and Europe rule the roost when it comes to the highest penetration of global distributors. Currently, North America is the largest MRO market in the world accounting for nearly 40 per cent of the global business while most the MRO market concentration in Asia is confined to China, Singapore, Malaysia and Dubai.

Asia-Pacific – Fastest Growing MRO Market

Asia- Pacific is predicted to be the fastest growing MRO market hubs in the world with Singapore enjoying the stage for the world's leading MRO hub with 3 per cent of the global market share and 25 percent of Asian market share. More than 100 leading international MRO companies operate from Singapore. Favourable policies, strong network of original equipment manufacturers and availability of skilled manpower are some of the factors that have contributed to the development of the MRO industry in Singapore.

Just last year Airbus opened its new integrated campus of 51,000 square meters in Singapore's Seletar Aerospace Park as an expansion of its existing site, housing the Airbus Asia Training Centre (AATC). Besides SIA Engineering Company Limited (SIAEC) is all set to develop a new Engine Services Division to grow its engine service business. This division will focus on increasing value to its OEM partners and airline customers to enhance integration in the engine MRO value chain and to strengthen their engine eco-system.

China, with around 300 MRO companies, is another strong contender. As per a forecast by Airbus, China will have around 3,238 aircraft by 2026, which reflects the large and rapidly growing size of the market in China. As per the global Industry Analysts report Japan and Canada are forecasted to grow at 2.2 percent and 2.3 percent respectively. Within Europe, Germany is forecast to grow at approximately 2.8 per cent CAGR. Low labour, service costs, easy access to skilled labour and enhanced service levels, have made Asia-Pacific a highly attractive outsourcing and MRO destination. Asian operators are driving MRO growth with low-cost labour markets such as Vietnam and Thailand. Airline operators worldwide are currently outsourcing nearly 30 per cent of wide-body heavy airframe maintenance needs to China and Asia-Pacific region.

A burgeoning middle class in Asia, especially in China and India, is generating more demand for air travel, which over time will shift the distribution of the global fleet. Besides buying aircraft, China and other Asian nations are also investing in new airport infrastructure and in aircraft manufacturing and aftermarket MRO services to accommodate the rising demand, much of which will be for domestic travel. As a result, Asia

is likely to be responsible for a bulk of the growth in the global fleet and MRO expenditures. By the end of the decade, China will become the biggest global market for air travel, and as a region, Asia is expected to increase its share of the global fleet by almost nine percent.

While the aviation industry has started recovering, it is expected to take time to reach to pre-pandemic levels. The outbreak has coerced various regulators and aviation organizations to explore options for ensuring remote working and social distancing. The new policy announced by the Federal Aviation Administration (FAA) is expected to allow the use of remote technology and video links for conducting inspections and validating regulatory compliance amid COVID-19.

Global players mainly focus on the technological development, aftermarket services and enhancing their capabilities to cope up with the ever-rising demand. The post pandemic surge in partnerships, agreements and MoUs are some of the key initiatives taken by the industry stalwarts to boost the MRO sector.

Some of the key manufacturers include Airbus, Boeing Company, AAR Corporation, Bombardier Inc., Embraer S.A., Delta TechOps, General Dynamics Corp., Hong Kong Aircraft Engineering Company (HAECO) Ltd., GE Aviation, Honeywell Aerospace, Lufthansa Technik AG, Rolls-Royce plc, MTU Aero Engines AG, FL Technics, SIA Engineering and Safran SA.

Significant contribution of Engine MRO market

As per the Global Market insight report, the engine MRO services segment will account for 35per cent of the commercial aircraft MRO market share by 2027. Engine MRO includes field maintenance and depot maintenance. Depot-level maintenance of engines includes major repair, material maintenance, complete or partial rebuilding of engines, and parts assemblies. It also contains technical assistance, manufacturing of parts, and testing. Field-level maintenance involves on-equipment maintenance activities and shop-type work. Shop-type work includes software maintenance, repair of subassemblies, commodity-oriented assemblies, and fabrication or the manufacturing of repair components. Engines will dominate the business over the forecast period. Furthermore, the market is becoming more competitive and its dynamics are more complex.

MRO Software investments

Increasing investments in aircraft MRO software are also predicted to offer new growth opportunities. Aircraft MRO software includes software components for maintenance tracking, maintenance scheduling, logbook tracking, budget forecasting, manuals, flight time tracking, electronic task card management, service bulletins management, and work order management. It also includes features aiding compliance with regulatory organizations such as FAA and ICAO. It is majorly used to streamline maintenance processes and reduce downtime. It is significantly modified based on the changes, which are associated with big data and analytics in the aviation industry. This industry generates an enormous amount of data, which will benefit the MRO companies in improving their operational efficiency and providing customized solutions that cater to the demands of the airlines.

A growing number of air passenger carriers on account of the rising number of passengers choosing air travel is expected to boost the demand for MRO facilities. The relaxation in foreign direct investments for the airline industry is encouraging airlines companies to outsource maintenance activities to sure the smooth functioning of aircraft. The aircraft market will showcase a high growth rate, attributed to the rising number of air passengers flying per year due to flight frequencies, affordable prices of tickets, and route availability. These factors are slated to drive the demand and need for MRO services, in turn, fostering the industry growth.

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Embraer to provide material support for Alliance Airlines E190 fleet

The agreement covers more than 300 repairable components and includes both materials and technical administration services supported from Embraer Asia Pacific's facility in Singapore.

Embraer recently signed a multi-year agreement with Alliance Airlines which will provide materials support for the carrier's fleet of E190s. Through Embraer's Services & Support portfolio of solutions, the agreement covers more than 300 repairable components and includes both materials and technical administration services supported from Embraer Asia Pacific's facility in Singapore.

Lee Schofield, Chief Executive Officer of Alliance Airlines said, "Alliance has world leading on time and operational performance, a key attribute sought by our customers in Australia and the broader region. The Repair Management Service Program we have with Embraer will enhance our fleet performance and strengthen our business as it grows."

Johann Bordais, President & CEO, Embraer Services & Support said, "Alliance has a committed fleet of 32 E190s with 12 E190s currently in Australia with the remaining 20 to enter revenue service during the next 12 months. We are glad to partner with Alliance Airlines at this pivotal moment. Alliance Airlines has rapidly grown its fleet of E-Jets which has proven to be instrumental as domestic aviation grows in Australia. This services agreement will enable Alliance to secure their fleet availability with effective, efficient and competitive solutions."

Embraer provides support to airlines worldwide, with its technical expertise and its vast component services network. The results are significant savings in repair and inventory carrying costs and a reduction in warehousing space and resources required for repair management, while ultimately providing guaranteed performance levels.

Embraer Services & Support's portfolio offers a wide range of competitive solutions designed to every customer to support the growing fleet of Embraer aircraft worldwide and deliver the best after-sales experience in the global aerospace industry.

Cobham extends Pool Program agreement with Embraer to support E190

Embraer's Pool Program offers full repair coverage for components and parts, airframe maintenance, and unlimited access to a large stock of components.

Cobham Australia has extended their Pool Program agreement with Embraer to support the E190 fleet. The agreement extension now covers a greater scope in this program.

Embraer's Pool Program offers full repair coverage for components and parts, airframe maintenance, and unlimited access to a large stock of components at the company's distribution centers. Operators benefit from significant savings

on repair and inventory costs, reduction in required warehousing space and resources required for repair management, while ultimately providing guaranteed performance levels.

Singapore is the base for Embraer's warehouse in the Asia Pacific region. A large majority of Embraer's customers in Asia Pacific are enrolled in the pool program and the 12-month average schedule reliability of the E-Jet fleet in the region stands at 99.97 percent Completion Rate (CR) and a Schedule Reliability (SR) of 99.59 per cent.

Magnetic MRO strengthens ties with Aviopars to optimize supply chain and stock management

This agreement will benefit customers as it will increase the tire maintenance effectiveness and thus provide superior service to operators.

Magnetic MRO recently signed a Consignment Stock Agreement with Avioparts. The agreement will cover the supply of ATR tires, allowing Magnetic MRO Wheels and Brakes workshop to achieve the delivery of tires and its components required for the maintenance within the minimal time-frame, thus optimizing the maintenance time, minimizing TAT and improving the efficiency further.

Kaarle Karp, Head of Supply Chain at Magnetic MRO said, "We have already been working closely with Avioparts for a few years thus the recent agreement is a step further in our partnership with them – and we are thrilled to start this new chapter as we are always striving to optimize our supply chain and stock management across the company. I am positive this partnership will be beneficial not only to both parties but to our customers also as it will increase tire maintenance effectiveness and provide superior service to flight operators."

David Fojon President & CEO at Avioparts said, "Avioparts is very proud to be supporting Magnetic MRO with Aircraft Tyres, along with other consumable requirements like Lubricant's, Hydraulic fluids, Greases and Chemicals. We are especially pleased to demonstrate the flexible arrangements we have in place for them giving them the edge over their competitors in auto stock replenishment, use of our online web portal where they can view all our product range with pricing, view shelf life remaining, order for next day despatch, download all documentation including Invoices, EASA form 1's, etc."

Avioparts is a world leading supplier of lubricants, aircraft parts and logistic solutions for aircraft maintenance that has been in operation since 1993.

AAR extended the power-by-the-hour component support contract with Volotea

The partnership started in 2016 with four A319 aircraft and the fleet has grown now to nearly 40 aircraft today.

AAR extended its power-by-the-hour (PBH) component support contract with Volotea. The partnership started in 2016 with four A319 aircraft and the fleet has grown now to nearly 40 aircraft today.

Nicholas Gross, AAR Vice President Integrated Solutions said, "We are honoured to extend this successful partnership with Volotea. Our proven ability to provide European component and logistic support across Volotea's rapidly evolving and growing network of 17 operating bases and operations to over 100 cities was key to this extension," said Nicholas Gross, AAR Vice President Integrated Solutions."

Isidre Porqueras, Volotea COO said, "Following a selection process that prioritized value and reliability, we are excited to confirm AAR as the provider for component services for our fleet of A320 family aircraft. We look forward to having AAR in support of the next phase of our growth."

The agreement includes the positioning of Main Base Kits at Volotea's operating bases throughout Europe, access to AAR's component pool inventory from logistic centres in Europe and the management of the component repair cycle.

SR Technics Malta sign Aerospheres UK as key suppliers for chemical deliveries

The partnership will benefit both organizations through economies of scale and on-time deliveries, thereby reducing investments in inventory and products scrapped.

SR Technics recently signed a Chemical Consignment agreement with Aerospheres UK Ltd in Malta. The partnership will cover the storage and supply of Aerospheres' own paints, adhesives, sealants, cleaners and lubricants required for aircraft maintenance. All materials will be stored at the SR Technics Malta facility.

Paul Thompson, CEO at Aerospheres said, "We are excited that SR Technics is now part of our consignment program. The partnership will benefit both organizations through economies of scale and on-time deliveries, thereby reducing investments in inventory and products scrapped. A fantastic customer to service, and we look forward to supporting them."

Mike Sigley, Head of Supply Chain, Aircraft Services at SR Technics Malta Ltd said, "This new partnership will help render our supply chain more efficient and effective. It allows us to continue reducing our supplier base while driving down operational costs. We are happy to have Aerospheres onboard with us as a key supplier."

As there is an average ten-day period from the purchase of hazardous materials in the United Kingdom to incoming goods inspection and delivery in Malta, the ability to have inventory on- site will allow Aerospheres to provide almost same-day delivery while saving on inventory holding costs.

Aerospheres UK Ltd is a leader in the real-time distribution of aviation-related chemicals for commercial airline and MRO operations worldwide.

321 Precision Conversions signs HAECO Americas for Airbus 321 structural modifications and heavy maintenance

The work will commence from January 2022 at HAECO's Lake City, Florida facility.

HAECO Americas recently signed an agreement with 321 Precision Conversions to provide heavy maintenance and structural modifications for its Airbus A321 aircraft passenger to freighter conversions.

Gary Warner, President of 321 Precision Conversions, said: "The wide-ranging maintenance and conversion experience offered by HAECO is a natural fit for our Airbus A321-200 PCF programme as we continue to expand conversion kit capacity to meet high customer demand. We look forward to a long and successful partnership."

Bill Collins, President of HAECO Americas, said: "We are delighted to partner with Precision and hope to expand our relationship as the aviation industry continues its recovery. Our newly renovated and expanded Lake City facility is perfectly equipped to convert and service these aircraft." The work will be performed at HAECO's Lake City, Florida facility, beginning in January 2022. Extensive interior and exterior modifications will be made to convert the aircraft from passenger to cargo use. HAECO Americas specialises in airframe maintenance, modifications and repairs.

Airbus' wings of tomorrow to assess industry feasibility of future wing production

The three wing demonstrators will bring together more than 100 new technologies to explore new manufacturing and assembly techniques with the goal of making aviation more sustainable.

Airbus recently reached a key milestone with the assembly of its full-size wing prototype for its Wings of Tomorrow programme. This programme will not only test the latest composite materials and new technologies in aerodynamics and wing architecture but, importantly, explore how wing manufacturing and industrialisation can be improved to meet future demand as the sector emerges from the pandemic.

Three full-size prototype wings will be manufactured in total: one will be used to understand systems integration; a second will be structurally tested to compare against computer modelling, while a third will be assembled to test scaling-up production and compare against industrial modelling.

Sabine Klauke, Airbus Chief Technical Officer said, "Wing of Tomorrow, a crucial part of Airbus' R&T portfolio, will help us assess the industrial feasibility of future wing production. High-performing wing technology is one of several solutions – alongside sustainable aviation fuels and hydrogen – we can implement to contribute to aviation's decarbonisation ambition. Wing of Tomorrow is also an example of how large-scale industry collaboration will be critical to achieving our sector's agenda for a more sustainable future."

Wing of Tomorrow, part-funded by the UK's Aerospace Technology Institute, is a fully transnational Airbus programme involving global partners and teams across Airbus' European sites, including Bremen in Germany, where the 'Wing Moveables' team is based. The three wing demonstrators will bring together more than 100 new technologies to explore new manufacturing and assembly techniques with the goal of making aviation more sustainable.

Sub-assembly of the complex wing cover took place at Airbus' Filton site, England, having been manufactured at the National Composite Centre in Bristol. The wing cover and a major component from GKN Aerospace – the Fixed Trailing Edge – were delivered to the Advanced Manufacturing Research Centre, Wales, facility on Airbus' wing-production plant in Broughton, Flintshire, for assembly to begin.

Seabury Solutions to power LAS Cargo with Alkym Platform

This implementation of Alkym in LAS Cargo will allow to advance in the technological value proposition focused on digital transformation in the processes.

LAS Cargo has selected Seabury Solution's Alkym suite to implement the applications for Planning, Engineering, Maintenance Control, Purchasing and Repairs, Inventory, Receiving and Dispatch, Reliability, MRO, as well as the mobile application for mechanics and inspectors for their fleet. Following an exhaustive selection process, LAS Cargo enlisted the support of Seabury Solutions, licensing several modules of the Alkym suite.

Seabury Solutions is a subsidiary of New York-based Seabury Capital Group LLC and the market leader in delivering aircraft M&E and MRO software solutions for the aviation industry.

Manuel Roché, Seabury Solutions' VP, Sales & Marketing LATAM said, "Digital innovation continues to be top-of-mind for executives across the airline industry. The digital economy is expanding at its fastest pace and the shift to digital transformation initiatives among carriers, including cargo operators, is being accelerated by the effects of the pandemic."

For airlines, this means that acting fast is key. But to act faster, airlines need technology solutions that advance their digital transformation agendas and are supported by a technological partner that can implement and comprehensively support solutions for their new processes.

Juan Pablo Bonilla, LAS Cargo IT Manager said, "The implementation of Alkym in LAS Cargo allows us to advance in our technological value proposition focused on digital transformation in the processes. We are sure that with this application in a 100 percent cloud infrastructure and with the support of Seabury Solutions we will be able to advance in this way."

Maurice Thorin Brauer, Chief Executive Officer of LAS Cargo said, "LAS Cargo is focused on an ambitious transformation plan that involves a change from corporate governance and its strategic plan, which is centered on a digital culture to provide technological solutions to all stakeholders. Alkym plays an important and fundamental role in the optimization of our processes in the maintenance area."

With the implementation process currently under way, the Alkym software is already supporting the airline's M&E and MRO operations. LAS Cargo will continue to receive ongoing support from the Seabury Solutions team for the software's support, maintenance, and updates in the future.

United and Honeywell sign largest publicly announced SAF agreement in aviation history with Alder fuels

As a part of the agreement United will be purchasing 1.5 billion gallons of SAF from Alder.

United and Honeywell announced a joint multimillion-dollar investment in Alder Fuels, known for producing sustainable aviation fuel. Alder technologies along with Honeywell's Ecofining process will have the ability to produce a carbon-negative fuel at spec with today's jet fuel. This fuel will be a 100 per cent drop-in replacement for petroleum jet fuel. As a part of the agreement United will be purchasing 1.5 billion gallons of SAF from Alder. This purchase agreement is one and half times the size of the known purchase commitments of all global airlines combined, making this the largest publicly announced SAF agreement in aviation history.

United CEO Scott Kirby said, "Since announcing our 100 percent green commitment in 2020, United has stayed focused on decarbonizing without relying on the use of traditional carbon offsets. Part of that commitment means increasing SAF usage and availability since it's the fastest way to reduce emissions across our fleet. However, to scale SAF as quickly as necessary, we need to look beyond existing solutions and invest in research and development for new pathways like the one Alder is developing. United has come further than any other airline making sustainable travel a reality by using SAF to power flights. Our leadership gives customers confidence that they are flying with an airline that recognizes the responsibility we have to help solve climate change."

Darius Adamczyk, Honeywell chairman and chief executive officer said, "As a pioneer of the SAF market with UOP Ecofining™ technology, our work with United and Alder on this new technology will help transform the industry and support the growth of a zero-carbon economy. This solution will not only advance United's SAF commitment but can help the aviation industry meet its commitments to decouple increases in carbon emissions from growth in passengers."

Honeywell first pioneered SAF production technology and will use its proven development process to partner with Alder to commercialize its technology

United's purchase agreement with Alder also surpasses the previous record set by the airline in 2015 through its investment in Fulcrum BioEnergy with its option to purchase up to 900 million gallons of SAF.

United's joint investment in Alder is the latest by United Airlines Ventures, a venture fund launched earlier this year that focuses on startups, upcoming technologies, and sustainability concepts that will complement United's goal of net zero emissions by 2050 — without relying on traditional carbon offsets. In 2020, United became the first airline to announce a commitment to invest in carbon capture and sequestration and has since followed with investments in electric vertical takeoff and landing aircraft and 19-seat electric aircraft that have the potential to fly customers up to 250 miles before the decade's end.

Alder Fuels is a cleantech company that is pioneering first-of-its-kind technologies for producing sustainable aviation fuel (SAF) at scale by converting abundant biomass, such as forest and crop waste, into sustainable low-carbon, drop-in replacement crude oil that can be used to produce aviation fuel.

Alder's technology and demand for its fuel from the aviation industry will create a large new market for biomass from regenerative practices. Use of this biomass further enables Alder's production process to be carbon negative over the fuel's lifecycle.

Bryan Sherbacow, CEO of Alder Fuels and senior advisor to World Energy said, "Aviation poses one of the greatest technology challenges for addressing climate change and SAF has demonstrated the greatest potential. However, there is insufficient raw material to meet demand. Alder's technology revolutionizes SAF production by enabling use of widely available, low-cost and low-carbon feedstock. The industry is now a major step closer to using 100 percent SAF with our drop-in fuel that accelerates the global transition to a zero-carbon economy."

Honeywell innovation established the SAF market with its UOP Ecofining process, which is the first technology used to maximize SAF production for commercial aviation. Building on Honeywell's focus to create sustainable technology, Honeywell will utilize its expertise and proven process of developing sustainable fuels alongside Alder, applying proprietary hydroprocessing design to the process to jointly commercialize the technology. Commercialization is expected by 2025.

Boeing selects Hexcel's additive Manufacturing technology for 777X structures

The parts will be manufactured at Hexcel's additive manufacturing site near Hartford, Connecticut.

Hexcel Corporation has been awarded a multi-year contract to produce aerospace structures made with HexPEKK-100 for the Boeing 777X. The parts will be manufactured at Hexcel's additive manufacturing site near Hartford, Connecticut.

Colleen Pritchett, Hexcel President — Aerospace, Americas & Fibers said, "We are pleased that Boeing has selected our additive manufacturing technology for these parts, and we appreciate their confidence in HexPEKK solutions for commercial aerospace applications," said

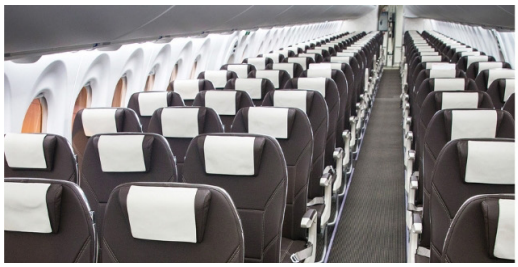
HexPEKK components can be manufactured-to-print for commercial aerospace, defense and space applications where complexity, lightweight and strong mechanical performance are critical. These 3D-printed parts meet interior aircraft smoke and toxicity requirements. HexPEKK end-use components – as well as the company's HexAM additive manufacturing process – were added to Boeing's Qualified Provider List (QPL) in 2019.

HexPEKK parts selected by Boeing for the 777X family include various air flow ducting applications, as well as other supporting elements on the aircraft. Production of these parts is expected to begin later this year.

AJW joins hands with Autostop Aviation and launches AJW Techniques Interiors

The new AJW Technique Interiors division will offer synthetic leather, seat cover manufacturing, life vest pouches, carpet kitting and much more...

AJW Group recently signed a 10-year agreement with the largest seat cover manufacturing facility in Europe, Autostop Aviation and launched AJW Technique Interiors. Autostop Aviation are the producers of SkyLeather, the revolutionary synthetic leather for airlines, designed by the automotive industry, to offer this world-class product to its global customer base.



Christopher Whiteside, Chairman and CEO of AJW Group, said, "AJW prides itself on transforming aviation efficiency, and the announcement of the new AJW Technique Interiors division offering synthetic leather, seat cover manufacturing, life vest pouches and carpet kitting, to name a few, will bring game-changing savings and efficiencies to airlines across the globe."

Sajedah Rustom, CEO of AJW Technique said, "We are ecstatic to expand the renowned Technique brand into aircraft interiors, delivering world-class services to our customers, who have come to regard us as their dependable, one-stop source for flawless repair execution."

SkyLeather available in any colour and grain, is a new cost-effective, lightweight, and unparalleled product boasting advanced durability, soft to touch, antimicrobial and, with easy clean technology. The Polyurethane synthetic leather is both vegan and eco-friendly.

Autostop brings years of automotive seat cover manufacturing experience into this product, to meet quality and compliance demands of aviation. The partnership offers airlines lean seat cover manufacturing with embedded Six Sigma principles, practiced as standard in the automotive industry. With 1mm quality tolerances and volume pricing, airlines benefit from the highest reliability and efficiency.

The in-house, synthetic leather production gives airlines the opportunity to benefit from a one-stop-shop facility, with design, development, testing and production of seat covers, all housed under one roof.

'EirTrade eyeing robust expansion plans '

COVID-19 pandemic is behind us. The aviation industry is gearing up, tourists have started traveling and business aviation is picking pace. Although people are cautious about air travel, operators are leaving no stones unturned to take care of safety precautions for travellers. Aircraft are coming out of parking, and this is putting added pressure on MROs to overhaul and send the aircraft back in air. In a candid conversation with **EirTrade Director, Bill Thompson,** he speaks about how EirTrade is dealing with this demand by aggressively acquire unserviceable assets, how they tackled the pandemic and EirTrade's expansion plans going ahead, in an exclusive Interview with **Swati.k.**. Read On to find more...!

Q- First of all, congratulations on opening the Dallas facility, any particular reason for selecting this location for the facility

A- Thank you. Dallas is an ideal centralized location in the US and our new facility is located close to the Dallas, Ft. Worth airport. Additionally, there are a good number of seasoned aviation professionals in the DFW area, with many already having a great deal of experience supporting the aviation aftermarket; more specifically having direct experience with the repair, sale and distribution of used serviceable engine and airframe material.

Q- EirTrade's expansion into US markets, your views? Going ahead what are your expansion plans in the future.

A- Initially, our primary focus is supporting major engine and airframe MRO facilities and airlines operating in North America by providing customised

> *"While the COVID-19 pandemic has had a severe impact on the aviation industry, the overall effects on the EirTrade Dallas facility have been somewhat minimal and have not thwarted our initial operations nor stunted our initial growth plans."*

material solutions across a wide variety of engine models. Looking forward, EirTrade will likely evolve into providing asset management services for some of our larger customers that will include short-term engine leasing.

Q- What are the specific MRO operations you have planned for this facility?

A- There are no immediate plans to provide MRO Services from our Dallas facility. Going forward, however, we may provide engine storage and preservation services at our facility.

Q- How has the COVID-19 pandemic affected your operations and what are your plans for recovery?

A- Fortunately, we opened our warehouse on June 1st of this year and have been operating in a mostly post-pandemic environment. We have been able to attract talented aviation professionals to support our initial growth. While the COVID-19 pandemic has had a severe impact on the aviation industry, the overall effects on the EirTrade Dallas facility have been somewhat minimal and have not thwarted our initial operations nor stunted our initial growth plans.

Q- With more and more aircraft coming out of storage as air travel resumes, will the MROs be buckled under extra maintenance workload? What are your plans to tackle this problem?

A- As more aircraft are placed back into service, many will require engine and aircraft maintenance and the MRO organizations will face additional strain on their current operations. The demand for material to satisfy these augmented maintenance requirements, will also surge. Our continuing plans are to aggressively acquire unserviceable assets to service the increasing material demand through used serviceable material offerings. Of course, used serviceable material will also assist both MROs and airlines to control their cost budgets at the same time.

Q- What are your views on the upcoming Passenger to Freighter conversions market?

A- We have worked closely with partners that are actively pursuing aircraft for freighter conversion. In most ways, the additional freighter conversion activity generates renewed life for these mature commercial engine types that will extend their product life cycles. As such, EirTrade is targeting many of these engine types installed on freighter aircraft and acquiring unserviceable engines to provide used serviceable material support for the remainder of their product life span.

‘At Magnetic MRO – Everything’s possible’

The constantly evolving aerospace logistics or the supply chain sector has seen massive transformation with advanced digitization. Every OEM, operator and MRO reply on the advanced digitised technology for smoother and optimised supply chain operations. However, after the COVID-19 pandemic the supply chain industry like everything else is starting to pick up pace. In an exclusive Interview with **Kaarle Karp, the head of Supply Chain at Magnetic MRO**, he speaks about how the partnership with SkySelect came at a right time to help make them right procurement decisions, how COVID-19 pandemic helped them strive harder by coming out of their comfort zones and adapting to newer normal and their business relations with Avioparts, **Swati.k** finds more...

Q - What are your observations of the changing trends in Supply chain operations Pre and Post Covid-19 pandemic?

A - Supply Chain is constantly in transformation regardless Covid-19 pandemic. Biggest changing trends are related with digital transformation. Magnetic MRO started to transform its supply chain digital solutions approximately a year before Covid-19 and made first important steps right before all was closed down. Funny to say, but timing was perfect in our case. With our partner SkySelect, first steps were to automate procurement processes, shipments tracking, orders follow up and more. It still requires fine tuning every day as we constantly looking leaner solutions, therefore can’t say we are finished with automation and digitalization part. Cooperation with SkySelect has helped us to make right procurement decisions much faster - thanks to their smart algorithms, integration with suppliers systems, we have managed to cut the corners and find shortcuts to work more transparent and faster. Changes have been successful and written into our processes. I would say that Covid-19 pandemic kicked us out of comfort zone and forced to think out of box much faster and pushed into fast pace digitalization transformation. In upcoming years industry will see much more digital

transformation and adoption of the new technologies to grow their business which is unavoidable and is very much needed. When aviation industry digitalization part has been far behind from other industries, we probably see fast pick-up in upcoming years. Luckily, within last 2 years there has been positive trend of new digital solutions to help airlines and MRO's to work more effectively. Historically we know that Airlines and MRO business were separated in order to focus more on their core business - flying, I have strong inner feeling that it's not far when Supply Chain operations will be separate from MRO business fully and become individual support function and both businesses can focus on their main function, one for the maintenance and other part for supply chain. Is it going to be new trend that we will see hopefully soon.

Q- What are the reasons behind selecting Avioparts as ideal partners for optimizing company's supply chain?

A- Magnetic has clear vision to strengthen its wheels and brake shop activities, have stronger presence on the market globally and meet our customer needs, therefore we always looking various solutions to serve Magnetic MRO customers best possible way. There is no big story or hidden reasons why Avioparts selected - the important role in this decision was possibility to have consignment stock and not to freeze our own capital and reduce inventory holding cost. Not to depend on manufacturers lead times which may impact our operations. Administrative part is mainly managed by Avioparts, their EU location is preferred as there are no additional customs formalities which plays big role today.

Q- How will you describe your business relations with Avioparts over the last few years?

A- Last few years we have been moving slowly but firmly into more business every day. Consignment Stock contract will boost business even more. When overall business will recover, we are ready to support our customers without having any disruption, like many airlines are experiencing now. It is strategic move to be ready when skies are open again and more wheels and tires are needed.

Q- What are your expected outcomes out of this partnership? How will it benefit your customers?

A- One of the main reasons we signed the consignment contract was to improve service levels and minimize TAT for wheel repairs and avoid stock out situations. Airlines value time the most and every minute is important. Our wheels and brake shop is big enough to manage high volumes, but same time relatively small to be flexible. Flexibility is also key word what customers are expecting and we have possibility to offer this.

Q- How has Magnetic MRO faired in the pandemic havoc? What are your recovery strategies?

A- Companies who adapted new reality faster and were more flexible will have less harm today. MRO's, airlines or repair shops who were slower, dependant on governmental aid and hoping that Covid will fade are still in difficult situation. Magnetic MRO started to put strategy in place before first big Covid wave hit the Europe. Lessons from China were quickly adapted and implemented in our case. Our advantage was probably info we received from Hangxin. Based on information we had available, light measures and actions were planned already in February, tangible actions were made already in March, when there was more confidence that aviation sector will take the enormous hit.

Our core businesses, heavy maintenance didn't have that hard hit, but several other units providing luxury services got the hit we all felt.

First strategy is to stay alive, literally - we have done everything to avoid the virus. From the Supply Chain perspective, we did several changes in our structure which were unavoidable. Lowered headcount where we saw long term impact and retained critical positions and skills. Step by step we have started to hire again, new positions are needed to grow business more.

Also, we know that cash is the king so stop bleeding the money and control receivables; keeping the liquidity is really important.

It is a good lesson for all companies to look more out of box solutions to survive. There are hundreds of books about risk management we can read how to tackle risk, but not many books how to come out of crises, therefore, there we can only assume which methods work best. And apart from financial part, pandemic has affected negatively many people's mental health and created new barriers, therefore speaking with colleagues, having team events, calling each other and speaking about business and showing how business is going is relatively important.

Q- How do you see the global aerospace logistics and supply chain industry evolving in terms of market forecasts and revenue?

A- The industry has become cost conscious whereas end users buy directly thus leaving less room for brokers. This fact alone has made the whole supply chain leaner.

However, despite the network is leaner and one would expect cost lowering, then costs aren't down. The reason is increased E-commerce, which increases the costs and the overall cost 'delta' fades.

The ultimate logistics challenge is not just Covid - it is the combination of Covid, plus Brexit and without any doubt the often-underestimated global geopolitical situation, whereas sanctions, KYC and AML requirements have made the smooth operation more complicated than ever. Therefore, we shall not get blinded by the fact, as if the software is making us more efficient, while the efficiencies are eroded by above factors. Simple example: we are not yet solving Brexit, while a new tsunami is at our door.

In summary: the losers are those, who seek ultimate Zen in supply chain and logistics. The winning formula evolves flexibility and avoiding rigid evergreen solutions.

Q- As the aerospace industry is gearing up for a comeback from the pandemic, what advice will you give to the young talent looking at this space as their career.

A- Probably it's the best time to join the aerospace and start your new interesting career. New blood is required to reshape our industry, bring in the right attitude, shake the old industry specialist and show how smart and innovative tools can help to recovery process. Think out of box and use your strengths. Here at Magnetic MRO we say: everything is possible.

Direct Maintenance expands Germany ops with two line maintenance stations

Line maintenance stations will be providing line maintenance services for a variety of narrow and wide body aircraft types, including B787, A350. B777, A330, A320.

Direct Maintenance recently expanded their operations in Germany with two new Line Maintenance stations in Frankfurt and Munich airports. Two new stations in Germany are the latest developments since the company has started operating in Cologne-Bonn airport since July 1 2021. Line maintenance stations will be providing line maintenance services for a variety of narrow and wide body aircraft types, including B787, A350. B777, A330, A320.

Jacco Klerk, CEO & Managing Director at Direct Maintenance said, "This year, we have been and are still busy working out our future strategic plans on developing and growing Direct

Maintenance in Germany and beyond. We are confident because of the ongoing customer service success our team delivers to our clients, staged re-emerging post-pandemic flights and changes in the German market thus we are proactively expanding within the region. Also, we will continue to support our ongoing investments in our existing stations, extending our capabilities to serve more aircraft types and airlines across a network of stations. Next to Germany, we do have more and other plans across Europe and Africa, too – and we are looking forward to announce further expansion in months to come."

Together with Magnetic MRO Line Maintenance, Direct Maintenance now covers over variety of aircraft and engine combinations, including A320NEO, A350-900/1000, A380, B737 MAX, B747-8 and B787 in over 20 different locations in Europe and Africa.

Breeze confirms 20 additional orders of A220-300 taking the total fleet to 80 aircraft

Breeze recently revealed the new A220-300 livery with a fresh paint job completed at Airbus' Mobile facility in Alabama.

Breeze Airways has confirmed a purchase agreement of additional 20, A220-300 aircraft with Airbus. This order brings Breeze's total order book to 80 A220-300s. Breeze recently revealed the new A220-300 livery with a fresh paint job completed at Airbus' Mobile facility in Alabama. The deliveries of the aircraft will begin later this year and will continue by approximately one A220 per month over the next six and half years. Breeze will begin flights with the new fleet in the second quarter of 2022.

The A220 superior efficiency will support Breeze' business objectives to offer a great travel experience, with low fares and high flexibility. Breeze is expected to provide nonstop service between underserved routes across the US at affordable fares.

The A220 is the only aircraft purpose-built for the 100-150 seat market and brings together state-of-the-art aerodynamics, advanced materials and Pratt & Whitney's latest-generation PW1500G geared turbofan engines. Benefitting from the latest technologies, the A220 is the quietest, cleanest and most eco-friendly aircraft in its category. Featuring a 50 per cent reduced noise footprint and up to 25per percent lower fuel burn per seat compared to previous generation aircraft, as well as around 50 per cent lower NOx emissions than industry standards, the A220 is a great aircraft for urban operations.

Over 170 A220s have been delivered to ten operators in Asia, North Americas, Europe, and Africa, proving the great versatility of Airbus' latest family member.

Breeze started airline operations in May 2021. This first A220 is the first new aircraft that will be operated by the airline.

Duncan Aviation leading the way for safe flying through multiple installations of Aviation Clean Air

Duncan has so fardeveloped STCs for Bombardier Global, Bombardier Challenger 300/350, Dassault Falcon 7X, and Dassault Falcon 2000/2000EX aircraft, with optional installation packages.

Duncan Aviation recently developed the Supplemental Type Certificates (STCs) and installation packages for Aviation Clean Air (ACA) ionization system for several aircraft. In response to the COVID-19 pandemic and for ease of flying of passengers, Duncan started this process in late 2020 and continued throughout 2021. They have so far developed STCs for Bombardier Global, Bombardier Challenger 300/350, Dassault Falcon 7X, and Dassault Falcon 2000/2000EX aircraft, with optional installation packages that include everything necessary for installing the ACA Ionizer system. In the last few months, Duncan Aviation partnered with Peregrine Avionics to develop STCs for the Gulfstream GIV and the Challenger 604. Duncan Aviation has developed ACA Ionizer installation packages for those two aircraft, as well.

Nate Klenke said, "We want to make it easy for our clients to keep the air in their aircraft as free of harmful pathogens as possible. Our development of multiple STCs with PMA installation packages along with the experience we've gained from multiple installations makes Duncan Aviation an excellent choice for the installation or a source for the STCs and PMA packages."

Manager of Avionics Install Line Pat Mapes said, "When we say the package includes everything, we mean every screw, nut, bolt, and switch necessary for the installation. There's been great interest in the industry in the ACA system. Our sales teams are fielding calls from customers who are interested in this system because it is designed to neutralize harmful pathogens like those that cause COVID-19, so if customers want peace of mind as they fly, this is the system for them."

The installation packages include the ionizers and Parts Manufacturer Approval (PMA) parts kits developed by Duncan Aviation. Throughout the remainder of the year, Duncan Aviation will be developing ACA ionization packages for several additional makes/models.

Senior Avionics Sales Rep Steve Elofson said, "Quotes for and sales of the ACA installation packages have remained steady throughout the last year. We're hearing from clients who have scheduled maintenance events or who are already going to be here in Lincoln, Nebraska, or at one of our other facilities. This is one of those upgrades that our clients do when they're here for another event."

The installation of the ACA packages can be done at any of Duncan Aviation's three main facilities (Battle Creek, Michigan, Provo, Utah, or Lincoln, Nebraska) and at many of the Duncan Aviation Satellite Shops located throughout the United States. Designed to be installed in an aircraft's existing environmental control system, the ACA ionizers operate in the aircraft's ductwork. The ionized hydrogen molecules neutralize pathogens and remove allergens and unpleasant odors, including those from pets, cigarette and cigar smoke, engine exhaust, cooking, lavatories, and VOCs (volatile organic compounds).

The installation packages include the ionizers and Parts Manufacturer Approval (PMA) parts kits developed by Duncan Aviation.

ExecuJet MRO expands line and heavy maintenance for Indian registered Falcon jets with DGCA approval

Dubai is in close proximity to India, coupled with the strong business links between the two countries, means Dubai is ideally situated to provide maintenance to Falcon operators from India.

India's Directorate General of Civil Aviation (DGCA) has certified ExecuJet MRO Services in Dubai to carry out line and heavy maintenance on various types of Indian-registered Dassault Falcon business jets.

Nick Weber, Regional VP Middle East at ExecuJet MRO Services, "The Indian DGCA certification includes line and heavy maintenance on Falcon 7X and 8X aircraft as well as several variants of Falcon 2000 and Falcon 900 aircraft. India is a key market for us and there are many Indian-registered business jets coming to Dubai regularly. Dubai's close proximity to India, coupled with the strong business links between the two countries, means Dubai is ideally situated to provide maintenance to Falcon operators from India."

ExecuJet MRO Services Middle East is a wholly owned Dassault Aviation subsidiary and is certified for the entire range of Falcon aircraft. As a Dassault-owned facility, ExecuJet can carry out work covered under the manufacturer's warranty coverage and programs. ExecuJet has invested significantly in Dassault tooling to support the Falcon range and has sent maintenance personnel to Dassault Aviation in Bordeaux for practical training.

"Business aviation is a truly global business and this is why ExecuJet is certified by 15 international regulators including the European Aviation Safety Agency (EASA), US FAA, the United Arab Emirates' General Civil Aviation Authority (GCAA), and others," Weber further added.

ExecuJet MRO Services in Dubai has a comprehensive maintenance, repair and overhaul capability, serving multiple aircraft brands. It is an Embraer authorised service centre equipped to do line and heavy maintenance on the complete range of Embraer business jets from the Phenom 100 through to the Lineage 1000. It is also certified to do line and heavy maintenance on Bombardier's Global Express, Challenger and Learjet aircraft, as well as most Hawker business jet models.

Jet Aviation's Singapore facility awarded with Aerospace Standards EN 9110 certification

Following Basel's certification in January 2018, this is Jet Aviation's second MRO site to achieve this internationally recognized industry standard.

Jet Aviation's maintenance facility in Singapore has been awarded with Aerospace Standards (AS/EN) EN 9110 certification in recognition of its quality management system. AS/EN certifications are based on ISO 9001 quality standards adapted for the aviation, space and defence (ASD) industry. Following Basel's certification in January 2018, this is Jet Aviation's second MRO site to achieve this internationally recognized industry standard.

Louis Leong, Jet Aviation's VP South-East Asia and GM of Singapore said, "This certification is a significant testament to our ongoing commitment to the highest industry standards and best practices."

Developed by the International Aerospace Quality Group (IAQG), AS/EN 9110 certification is the quality standard for repair stations, including criteria critical to the maintenance of commercial, private, and military aircraft. The only organizations eligible for this certification are those whose primary business

focus is in supporting MRO (maintenance, repair, and overhaul) and CAMO (continuing airworthiness management organization) services for civil and military aviation products of Original Equipment Manufacturers (OEM).

"As part of the certification process, we participated in a series of demanding, independent audits by Bureau Veritas to establish our focus on continuous improvement and service excellence — from our documentation processes that improve output consistencies and our quality monitoring procedures for early defect detection and rectification, to the regular review of practices to identify obsolete or inefficient processes and our general rigor regarding proper documentation and maintenance procedures. AS/EN 9110 certification is a great achievement for Singapore, and a great credit to our team. Requiring participation in a series of demanding, independent audits by Bureau Veritas, this certification is a significant testament to our ongoing commitment to the highest industry standards and best practices. It's a great achievement for Singapore, and a great credit to the team." Leong further added.

Located at Singapore's Seletar Airport, Jet Aviation's maintenance facility in Singapore is a Factory Authorized Service Centre and Warranty Repair Facility for a wide range of aircraft types and models, including Gulfstream, Embraer, Daher-Socata and Boeing Business Jets. It is also the designated Maintenance Response Team for Pratt & Whitney Canada 307 and 308 series engines and the Rolls-Royce AE3007 series engine for the Asia Pacific region.

Collins Aerospace's multi-spectral imaging sensor to provide real-time visual intelligence to Global Hawk

For decades, Collins has been a leader in making MSI sensors for high altitude ISR both fieldable and operational for military missions.

United States Air Force recently completed its first RQ-4B Global Hawk Block 30 unmanned aerial system (UAS) operational mission carrying Collins Aerospace's MS-177 multi-spectral imaging (MSI) sensor. The MS-177 long range wide area multi-spectral imaging (MSI) sensor enhances the Global Hawk's ISR mission capabilities by providing greater standoff range and more actionable intelligence to address challenges and achieve overmatch on the battlefield.

Dave McClure, vice president & general manager, ISR & Space Solutions for Collins Aerospace said, "Sensors will play a key role in helping the Global Hawk support the Joint All Domain Command and Control (JADC2) battlespace as it provides near-real-time visual intelligence to the USAF, thereby increasing situational awareness for the joint force. For decades, Collins has been a leader in making MSI sensors for high altitude ISR both fieldable and operational for military missions."

The Northrop Grumman Global Hawk is the premier autonomous high-altitude, long-endurance ISR platform for the US Air Force and global partners. No other system provides a better combination of range, endurance and payload capacity, as demonstrated by the US Air Force's continuous use of Global Hawk to collect intelligence and deter regional threats for the past two decades. The MS-177 family of systems are long-range ISR sensors that provides advanced multispectral imaging capability enabling high-resolution, long-range focus and precise identification of targets and situational awareness, day, or night, on land or sea.

The MS-177 family of systems are long-range ISR sensors that provides advanced multispectral imaging capability enabling high-resolution, long-range focus and precise identification of targets and situational awareness.

The MS-177 sensor evolved from the proven Senior Year Electro-Optical Reconnaissance System (SYERS)-2C flown on manned aircraft. SYERS has serviced combatant commander's intelligence needs for more than 20 years and has regularly been enhanced to keep pace with evolving war fighter threats. The MS-177 now provides increased mission capabilities to the RQ-4B Global Hawk Block 30 UAS to meet current and evolving mission needs and threats.

StandardAero to provide cloud-based Predictive Maintenance, Readiness and Reliability to US Air Force critical military platform

StandardAero's Engineering Services team has successfully developed multiple diagnostic and predictive maintenance tools for a number of engine fleets.

The US Air Force has awarded StandardAerowith a contract to applyPredictive Maintenance, Readiness and Reliability tools to the TF33 engine program. The contract deliverables will provide the USAF the capability to optimize the readiness, reliability and costs associated with the maintenance performed on these engines, driven by advanced machine learning integration and utilizing government cloud hosting. Most urgently, the contract will deliver supporting tools that provide a near term boost in asset availability, while also providing long-term supply chain predictive analytics. For this contract, StandardAero is leading a team network that includes IBM, Isobar Public Sector and Reliability Concepts International.

Marc Drobny, President of StandardAero's Military & Energy division said, "We are excited to adapt our tools to this critical military platform. The Air Force has been on the leading edge of Predictive Maintenance philosophy and implementation and StandardAero is proud to play a leading role in their development team."

StandardAero's Engineering Services team has successfully developed multiple diagnostic and predictive maintenance tools for a number of engine fleets, including the C-130's T56 engine, the T-38's J85 engine, the C-5's TF39 engine, as well as the F100-220 engines used on the F-15 and F-16 fleets. The requirement to establish the predictive maintenance capability in a cloud-based platform makes this contract unique compared to previous StandardAero on premises support.

StandardAero's predictive maintenance methodologies and reliability centered maintenance practices have been proven to improve reliability while reducing life cycles support costs in aircraft engines, and these concepts can be applied to other mechanical systems as well.

Collins to provide NP2000 propeller systems for US Air Force's C-130H aircraft

USAF has now ordered NP2000 upgrades for a total of 83 C-130H aircraft.

US National Guard and Air Force Reserve have selected Collins Aerospace to deliver NP2000 propeller systems for an additional 26 C-130H aircraft. Collins has installed the system on 16 Air Force C-130H to date, including aircraft for the Georgia, Nevada and Wyoming Air National Guard units. The Air Force plans to retrofit approximately 140 C-130H with NP2000 and has now ordered NP2000 upgrades for 83 C-130H aircraft.

Quinlan Lyte, senior director, Propeller Systems for Collins Aerospace said, "NP2000 incorporates advanced technologies that provide operators increased thrust, reduced maintenance and enhanced crew comfort," said Quinlan Lyte, senior director, Propeller Systems for Collins Aerospace. For these reasons, the Air Force has made NP2000 a central part of its C-130H modernization efforts."

With its eight composite blades and digital Electronic Propeller Control System (EPCS), NP2000 offers a 20 percent thrust increase during take-off, a 50 percent reduction in maintenance man-hours and a 20db sound reduction in the cockpit compared to legacy systems. NP2000 is also in service with US and international customers on the E-2 and C-2 aircraft. The system has accumulated more than 1 million flight hours since entering service in 2004.

Airbus brings a complete bouquet of aircraft manufacturing and servicing to India through C295 programme

For the first time, an Indian private company will be wholly manufacturing an aircraft in India.

Indian Air Force (IAF) has acquired 56 Airbus C295 to replace the legacy AVRO fleet. This is the first 'Make in India' aerospace programme in the private sector in which full development of a complete industrial ecosystem right from the manufacture to assembly, test and qualification, till delivery and maintenance of the complete lifecycle of the aircraft will be done in India.

Under the contractual agreement, Airbus will deliver the first 16 aircraft in 'fly-away' condition from its final assembly line in Seville, Spain. The subsequent 40 aircraft will be manufactured and assembled by the Tata Advanced Systems (TASL) in India as part of an industrial partnership between the two companies.

The first 16 aircraft will be delivered over four years after the contract implementation. All the IAF C295s will be handed over in transport configuration and equipped with an indigenous Electronic Warfare Suite.

Michael Schoellhorn, CEO of Airbus Defence and Space said, "This contract will support the further development of India's aerospace ecosystem, bringing investment and 15,000 skilled direct jobs and 10,000 indirect positions over the coming 10 years. The C295 has proven again as the segment leader, and with the addition of India as a new operator, the type will enlarge its footprint even more, not only on the operational aspects but on its own industrial and technological development".

Sukaran Singh, Managing Director and Chief Executive Officer, Tata Advanced Systems Limited, said, "This is a moment of pride for Tatas and a milestone for the Indian military manufacturing ecosystem. For the first time, an Indian private company will be wholly manufacturing an aircraft in India. This endeavour demonstrates Tata Advanced Systems' capabilities as a defence manufacturer to build globally competitive complex platforms in India."

'Make in India' is at the heart of Airbus strategy in India, with the company constantly increasing the country's contribution to its global product portfolio. The C295 programme will see Airbus bring its complete bouquet of world-class aircraft manufacturing and servicing to India in collaboration with our industrial partners, including the Tatas and leading defence public sector units such as Bharat Electronics Ltd. and Bharat Dynamics Ltd, as well as private Micro, Small and Medium Enterprises.

With a proven capability of operating from short or unprepared airstrips, the C295 is used for tactical transport of up to 71 troops or 50 paratroopers, and for logistic operations to locations that are not accessible to current heavier aircraft. It can airdrop paratroops and loads, and also be used for casualty or medical evacuation (medevac), as demonstrated during the COVID-19 crisis, using either basic litters or mobile intensive care units (ICU) with life support equipment. The aircraft can perform special missions as well as disaster response and maritime patrol duties.

The IAF becomes the 35th C295 operator worldwide, with the programme reaching 278 aircraft, 200 of which are already in operation and have booked more than half a million flight-hours.

Fraser Currie takes over new the CEO of Joramco as Jeff Wilkinson takes on expanded role in DAE

Joramco recently made an important announcement by announcing Fraser Currie as its new Chief Executive Officer effective from 1st October 2021. He will succeed Jeff Wilkinson, who is taking an expanded role at DAE Engineering to grow the engineering division's footprint. Joramco is the Amman based maintenance, repair and overhaul provider and engineering arm of the Dubai Aerospace Enterprise (DAE).

Commenting on his appointment, Mr. Currie said, "I am delighted to take the helm of such a competent and capable team. Joramco has gone through a very successful transformation over the past few years, and I am looking forward to developing the company further with a clear vision. I would also like to use this opportunity to thank Jeff Wilkinson for his years of commitment and strategic leadership to transform the operational cadence of Joramco and look forward to continue working with him as part of DAE's wider engineering ambition."

Jeff Wilkinson replied, "I would like to congratulate Fraser Currie on his appointment. Having worked closely together over the last years and significantly growing the revenue and customer base, I am confident that Fraser will lead Joramco into its next phase of growth".

Mr. Currie joined Joramco in April 2018 as Chief Commercial Officer. Prior to joining Joramco, Mr. Currie held the position of Chief Executive Officer at Texel Air, a Bahrain based cargo airline. Mr. Currie has 38 years of industry experience, the last 17 years of which at senior executive levels. Mr. Currie holds an MBA from the Open University.

Jeff Wilkinson will take up an expanded role at DAE Engineering to grow the engineering division's footprint.

International CALENDAR

2021

Date	Event	Venue
03- 05 Oct	ISTAT EMEA 2021	Edinburgh, Scotland
05-06 Oct	Helitech World Expo	London
12-14 Oct	NBAA Business Aviation Convention & Exhibition	Las Vegas, NV
19-21 Oct	MRO Europe	RAI Amsterdam, The Netherlands
26-28 Oct	World ATM Congress	Madrid, Spain
01-04 Nov	Aerospace Incubator	Miami, FL
14-16 Nov	ISTAT Americas 2021	Austin, TX
14-18 Nov	Dubai Air Show	DBC, Dubai

2022

Date	Event	Venue
27-28 Jan	Aero-Engines Americas	Miami, FL
09-10 Feb	MRO Latin America	Cancun, Mexico
15-20 Feb	Singapore Airshow	Singapore
22-23 Feb	AIME 2022	Dubai, UAE
22-23 Feb	MRO Middle East	Dubai, UAE
03-04 Mar	PBExpo	Miami, FL
06-09 Mar	World Defense show	Riyadh, Saudi Arabia
07-10 Mar	HAI Heli Expo	Dallas, TX
28-31 Mar	AEA International Convention & Trade Show	New Orleans, USA
26-28 Apr	MRO America	Dallas, TX, USA
03-05 May	NBAA Maintenance Conference	San Antonia, TX
23-25 May	EBACE	Geneva, Switzerland
07-08 Jun	Engine Leasing, Trading & Finance	London, UK
09-11 June	France Air Expo	France
22 Jul	AERO South Africa	South Africa
06-08 Oct	Istanbul Airshow	Istanbul Atatürk Airport, Istanbul

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