

Weekly Aviation Headline News

WORLD NEWS

Finnair launches new Doha services

Finnair launched daily flights from Helsinki to Doha last week as it continues to expand its network. This route follows in the footsteps of Finnair's recently launched flights from Copenhagen and Stockholm to Doha. These new flights form part of Finnair's new long-term strategic partnership with fellow oneworld airline, Qatar Airways. The partnership includes a comprehensive codeshare agreement and shared passenger and cargo capacity between both airlines on the route.

Avion Express further strengthens its partnership with Sky Cana

Avion Express, a European narrow-body ACMI operator and member of the global aviation services group Avia Solutions Group, has just further strengthened its cooperation with Sky Cana, a start-up airline headquartered in Santo Domingo. The companies have been in partnership for a few years and now have signed a contract for two additional Airbus A320 aircraft, making it five aircraft in total. Under the agreement, Avion Express will operate the aircraft based in Puerto Plata Airport on behalf of the carrier for a period starting from December 2022.

Porter Airlines adds Calgary to list of destinations

Porter Airlines is adding Calgary to its growing network, with flights between Toronto Pearson International Airport (YYZ) and Calgary International Airport (YYC). The route will be served with its new Embraer E195-E2 aircraft. Porter has up to 100 E195-E2 aircraft on order, providing the ability to operate throughout North America, including destinations across Canada, the U.S., Mexico, and the Caribbean. The airline also serves a regional network of more than 20 destinations on its De Havilland Dash 8-400 fleet, operating from a base at Billy Bishop Toronto City Airport.



New 787s will replace older 767s and 777s at United.
© United Airlines

United solves current widebody replacement needs

By placing historic order for Boeing 787s

The big aviation news over the last week is undoubtedly United Airlines' historic order for up to 200 Boeing 787s that will bolster United's ambitions growth plans.

The deal involves a firm order for 100 new 787s plus options to add 100 more, representing the largest widebody aircraft order by a U.S. carrier in commercial aviation history. United said it also exercised options to purchase 44 Boeing 737 MAX aircraft for delivery between 2024 and 2026 -

consistent with the *United Next 2026* capacity plan - and ordered 56 more MAX aircraft for delivery between 2027 and 2028.

Collectively, United now expects to take delivery of about 700 new narrow and widebody aircraft by 2032. Following United's landmark order from Boeing, aviation analytics firm *Cirium* has analysed the global 787s orders and deliveries data (accurate as of December 12). Globally, there are 956 Boeing 787s in service, 482 more are on order (ex-

cluding the new United order) and a further 83 are in storage.

The 787 is the most flown widebody aircraft in 2022 and by variant, the 787-9 is the most popular. *Cirium* data reveals that 51,000 Dreamliner flights will take off in December 2022, ahead of the Boeing 777 (~48,000) and more than twice that

956 aircraft consists of 358 787-8s, 530 787-9s and 68 larger 787-10s. Back at United, the airline said the new orders will also lead to increased hiring, "we hired 15,000 people in 2022 and are on track to add another 15,000 next year," the airline said. Chief executive Scott Kirby added that the historic order

will accelerate the airline's growth plans to more locations around the world and deliver in the onboard experience.

United said the firm order for 787

“In partnership with Boeing, this order also helps United maintain flexibility with the timing of widebody aircraft retirements.”

United Airlines

of the A350 (22,000) — the aircraft to which the Dreamliner is most compared. The average age is 5.6 years, with the oldest operated by ANA at just shy of 12 years.

Cirium data shows the top 10 Boeing 787 operators are ANA (77) United Airlines (65) American Airlines (53) Japan Airlines (46) Etihad Airways (39) Qatar Airways (39) Air Canada (36) British Airways (32) China Southern Airlines (26) Ethiopian Airlines (26).

The current in-service 787 fleet of

aircraft addresses the airline's current widebody aircraft replacement needs through the next decade — their greatly improved maintenance and fuel burn economics will further United's efforts to improve its overall cost profile. In partnership with Boeing, this order also helps United maintain flexibility with the timing of widebody aircraft retirements.

The 787 order will replace around 100 older 767 and 777 aircraft in the fleet.

AIRCRAFT & ENGINE NEWS

Boom Supersonic to develop Symphony™, the sustainable and cost-efficient engine for Overture

Boom Supersonic, the company building the world's fastest airliner, has unveiled Symphony, a new propulsion system designed and optimised for its Overture supersonic airliner. Boom has also announced that it will be teaming with three industry leaders to develop Symphony including Florida Turbine Technologies (FTT) for engine design, GE Additive for additive technology design consulting, and StandardAero for maintenance. "Developing a supersonic engine specifically for Overture offers by far the best value proposition for our customers," said Blake Scholl, Founder and CEO of Boom Supersonic. "Through the Symphony programme, we can provide our customers with an economically and environmentally sustainable supersonic airplane—a combination unattainable with the current constraints of derivative engines and industry norms." Symphony will be a bespoke design leveraging proven technologies and materials to achieve optimal supersonic performance and efficiency. Overture's new propulsion system will operate at net-zero carbon and meet Chapter 14 noise levels. When compared to derivative approaches, Symphony is expected to deliver a 25% increase in time on wing and significantly lower engine maintenance costs, reducing overall airplane operating costs for airline customers by 10%. With Symphony's design already underway, Overture is on track to achieve type certification in 2029. Production is set to commence in 2024 at Overture's Superfactory in Greensboro, NC, with rollout in 2026 and first flight in 2027.

Blueberry Aviation completes remarketing of eleven ATR72-600 aircraft

Blueberry Aviation has recently delivered the last of eleven ATR72-600 aircraft to U.S. lessor Jetstream Aviation Capital. The delivery marks the completion of a repossession and remarketing project which started in 2021 following Avianca's Chapter 11. Blueberry Aviation was mandated by the French and Italian Export Credit Agencies (ECAs) to support the

Orders and deliveries – Boeing and Airbus

Airbus v Boeing: Orders and Deliveries

November 2022 YTD

Airbus			Boeing		
Type	Orders	Deliveries	Type	Orders	Deliveries
A220	126	45	737	457	333
A320 Family	770	440	747	0	5
A330	-75	28	767	31	31
A350	4	50	777	68	21
A380	0	0	787	15	21
Total	825	563	Total	571	411

Source: Airbus

Source: Boeing

Airbus reported 29 orders in November. These include six A321neos destined for German operator Condor and another two of the same type for British Airways. Condor's order list also includes four A320neos. Airbus delivered 68 aircraft to 40 operators in November with airBaltic receiving a further two A220-300s and Air China taking three A321neos.

Boeing generated 21 orders in November including 18 737MAX aircraft for an undisclosed customer. The 767F continues to prove its popularity in the freighter market with an additional order from FedEx Express. Boeing delivered 48 aircraft in November including 10 737 MAX aircraft to Southwest Airlines and a 747-8F for Atlas Air. This is the first of two 747-8Fs Atlas Air will operate for its customer Kuehne+Nagel under a long-term agreement.

Jackson Square Aviation completes financing of three additional A321neo aircraft to Pegasus Airlines



Delivery of Airbus A320neo aircraft to Pegasus Airlines

© Jackson Square Aviation

Jackson Square Aviation has completed the financing of three additional Airbus A321neo aircraft to Pegasus Airlines, completing a four-aircraft package. "We are delighted to have worked closely with Pegasus and Airbus on completing the financing of these four Airbus A321neo aircraft," said Christophe Million-Rousseau, SVP Marketing and Capital Markets EMEA, adding: "This transaction reflects our strong partnership with Pegasus and demonstrates our commitment to creating tailored fleet solutions and financing the latest technology fuel-efficient aircraft to meet our customers' progressive business goals."

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AIRCRAFT & ENGINE NEWS

negotiation with the airline and manage the full repossession project. This included the on-site physical and records inspections as well as the valuation of the fleet, recovery from three different countries, ferry to and storage in France, managing the aircraft insurances as well as the remarketing and redelivery of the entire fleet to its new owner. Allen & Overy acted as legal advisor to the ECAs.

Titan Aircraft Investments and Georgian Airlines sign long-term agreement for one Boeing 737 aircraft

Titan Aircraft Investments has reported the placement of one Boeing 737-800SF converted freighter on long-term dry-lease with Georgian Airlines to support its network. Titan Aviation Holdings, a subsidiary of Atlas Air Worldwide Holdings, will manage this asset. "As we expand in the airfreight market, we are honoured to partner with Titan Aircraft Investments to bring more air cargo capacity to the region with the addition of the B737-800 freighter. We look forward to a strong partnership with Titan's excellent team as they help us meet market demand and capitalize on cargo flows between Asia and Europe," said Irakli Mezvrishvili, General Director of Georgian Airlines.

COMAC delivers first-ever 'Made in China' C919 jet to China Eastern Airlines

On Friday, December 9, China Eastern Airlines took delivery of the first-ever Commercial Aviation Corp of China (COMAC) C919 narrow-body jet. The plane is in a 164-seat configuration and has "the world's first C919" emblazoned on its side in Chinese and English. Its maiden route will be between Shanghai and the China's capital, Beijing. On delivery, the plane then took off for a short 15-minute flight to mark the historic



COMAC C919 aircraft

© Liebherr Aerospace

occasion. Designed to rival the Airbus A320neo and Boeing 737 MAX single-aisle jets, China Eastern's C919 is expected to enter into commercial service in spring next year, having received certification for safe operations in September this year and certification for mass production in November. This is the first of five C919s ordered by China Eastern with the remaining four due for delivery through 2024. COMAC is anticipating ramping up delivery to 25 units per year by 2030. Additionally, COMAC is heavily reliant on parts and components from Western countries, together with flight control systems and engines, from the likes of GE, Safran and Liebherr Aerospace (integrated air management system). To reduce the level of dependence, China is actively looking to increase the number of domestically produced parts for the C919, while also building an alternative engine, the CJ-1000A which is currently under construction.

IBA outlines Helicopter market's leasing and finance growth potential



H139 helicopter

© AirTeamImages

helicopters in this segment typically having a list price of between US\$5 million and US\$10 million. The medium-helicopter market (4 to 7 tonnes) is set to grow to around 4,200 assets in 2022. Leonardo deliveries outpaced other OEMs in recent years, while Bell's output has slowed. The list price range of this weight category is largely between US\$10 million and US\$18 million. The price range of the super-medium weight category (7 to 9 tonnes) is estimated to be between US\$15million and US\$22 million. Airbus and Leonardo are the main OEMs for this category. The long-term demand for this weight category is being driven by offshore oil and gas growth. In the heavy category (over 9 tonnes), Airbus and Sikorsky dominate this market with the H225 and S-92A respectively. 2022 has seen increased demand for the S-92, but any potential new built models are unlikely to enter the market until 2025. According to IBA, there has been increasing demand for this category in recent months due to offshore drilling activity. IBA experts also gave an overview on eVTOL aircraft, where wide-ranging interest has come from traditional airlines, lessors and taxi operators. The market is expected to grow by ~30x within the next ten years to around US\$700 million. Established industry investors now in the eVTOL market include Airbus, Beta Technologies, Elroy Air, Lilium, Vertical Aerospace Group and XTI Aircraft Company. (£1.00 = US\$1.23 at time of publication).

AIRCRAFT & ENGINE NEWS

Japanese carrier Oriental Air Bridge takes delivery of first ATR 42-600 aircraft



Oriental Air Bridge (ORC) has taken delivery of its first ATR42-600

© ATR

Japanese regional airline Oriental Air Bridge, operating as ORC, has taken delivery of its first ATR 42-600 aircraft which will also be covered by an ATR Global Maintenance Agreement contract (GMA). The aircraft, delivered in Toulouse was ordered in July and carries the brand-new ORC livery. ORC plans to start operating the ATR aircraft in July 2023 to further support the airline's domestic activities in providing reliable, essential connectivity from Nagasaki on the island of Kyushu in Japan. The ATR 42-600 is configured with a 48-seat cabin and equipped with the latest avionics. With the signing of an ATR GMA contract, ORC will also take full advantage of manufacturer expertise to support its ATR aircraft in service, thereby reducing maintenance costs while boosting operations.

Air New Zealand chooses VoltAero as "Mission Next-Gen Aircraft" partner

The announcement of VoltAero as one of Air New Zealand's "Mission Next-Gen Aircraft" demonstration partners positions the company and its Cassio electric-hybrid aircraft as a unique solution for the airline's sustainable fleet ambitions. VoltAero and Cassio are aligned to Air New Zealand's goal of working with world-leading innovators in introducing zero-emission passenger/cargo flights. The Cassio aircraft family provides outstanding safety with a dual source of electric-hybrid energy, along with the ability to utilize runways as short as 1,800 feet – opening the airline's regional airport network infrastructure for its operations. Additionally, Cassio's hybrid technology offers an optimised cost-of-ownership – minimising the need for heavier battery packs that would reduce flight range, while also avoiding higher cost per kilowatt/hour and diminished battery lifetime. VoltAero's proprietary electric-hybrid propulsion system has logged more than 10,000 km since 2019, operating in its full 600-kilowatt power definition aboard the company's Cassio 1 testbed airplane – performing flights on typical regional airline routes, as well as segments over water.



VoltAero's Cassio 330 is shown in Air New Zealand's livery

© Air New Zealand/VoltAero



AIRCRAFT & ENGINE NEWS

SmartLynx Airlines now flies with two Airbus A330 for Condor



SmartLynx will operate another Airbus A330 for Condor

© SmartLynx

In June 2022, SmartLynx Airlines entered the long-haul market and started operations for Condor Flugdienst GmbH with an Airbus A330. For the winter season, another aircraft of the type has been added with services starting in December. The basis is a wet-lease agreement concluded with the German holiday airline. The current flight schedule from Frankfurt includes, at peak times, up to four-weekly connections to New York (JFK), two-weekly connections to Toronto (YYZ), and five-weekly connections to Punta Cana (PUJ) in the Dominican Republic. The two Airbus A330s have Business and Economy Class seats, are between eight and nine years old and fly in Condor colours. Passengers are looked after by a German-speaking Condor cabin crew and an English-speaking SmartLynx crew. All meals on board are provided by Condor. The cooperation between Condor and SmartLynx has been in place since 2018 and its continuation is part of SmartLynx's growth strategy to gain a foothold in the German long-haul dynamic business market.

MRO & PRODUCTION NEWS

AMTRA Aero and Nehalem Aviation Holdings sign joint venture agreement to create Nexus Aviation Ventures

AMTRA Aero, and Nehalem Aviation Holdings, have formed a joint venture, Nexus Aviation Ventures, to source, convert and lease Airbus A321 freighter aircraft. "We are excited to be working together with the Nehalem team. We believe the A321 platform is the future of narrow-body freighters", said Pablo Aguirre, Chief Commercial Officer of AMTRA. The joint venture has signed a purchase agreement for its first aircraft and has a second under LOI having secured conversion slots with 321 Precision Conversions in the second half of 2023. Expected delivery of the first freighter will be first quarter 2024. AMTRA Aero was formed in 2021 by the Coretz family, former owners of Omni Air International, as an aircraft and engine leasing platform. The joint venture will allow AMTRA to build a portfolio of A321 freighter aircraft that will be made available to cargo operators. AMTRA Aero forms part of a family of companies which include AMTRA Capital Partners LLC and Zoom International Airways LLC. The company is headquartered in Tulsa, Oklahoma. Nehalem was formed in 2020 and secured its first aircraft, a Boeing 757-200, which was converted by Precision Conversions to freighter configuration and leased to Amerijet Aircraft Leasing. The principles of Nehalem consist of the family offices of the McCullough and Erickson families who have worked together for over 20 years in various aviation business endeavours.

Embraer's E2 family of jets obtains type certification from Canadian authorities



© Embraer E195-E2 and E190-E2 formation flight

Brazilian planemaker Embraer has announced that it has received type certification from Transport Canada Civil Aviation (TCCA) for its E195-E2 and E190-E2 commercial jets, making this the fourth certification after Brazil's ANAC, America's FAA and Europe's EASA. This now means that deliveries can commence to Canada's Porter Airlines which has placed a firm order for 50 of E195-E2s with an option for a further 50. In 2021 Porter placed a firm order for 30 of the E2-family jets with an option for 50 more, placing a firm order for 20 more of the jets in 2022. The E2 is the world's most efficient family of single-aisle aircraft which incorporates sustainable technologies, superior cabin comfort, excellent economics and optimal range. As airlines look to reduce their carbon footprint by renewing ageing fleets the E2 will be at the heart of this transformation. The E195-E2 is the most environmentally friendly aircraft in its class, with a 25% lower fuel burn than the previous generation aircraft, with E190-E2 achieving 17% lower emissions. Both aircraft have the lowest levels of external noise, and the longest maintenance intervals in the single-aisle jet category – with 10,000 flight hours for basic checks and no calendar limit for typical E-Jet operations. This means an additional 15 days of aircraft utilisation over a period of ten years compared to current generation E-Jets.

MRO & PRODUCTION NEWS

GA Telesis Composite Repair Group establishes new GEnx nacelle capabilities

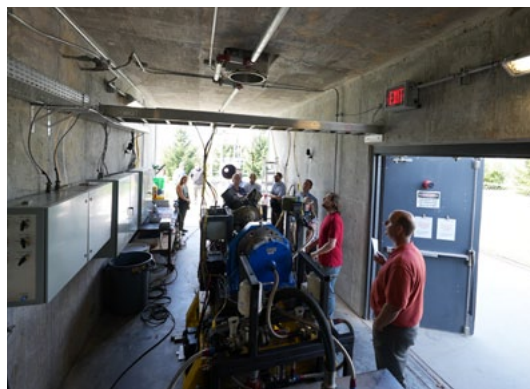
GA Telesis (GAT), a pioneering leader in integrated aviation services, has released that its MRO Services Composites Repair Group (company) has established capabilities to overhaul and repair nacelles for the GEnx engines. The repairs will be completed at its existing FAA/EASA/CAAC - certified composite repair facility in Fort Lauderdale, FL. Additionally, the company recently completed repairs on several GEnx fan cowls for a major U.S.-based aerospace company. This new GEnx capability will allow the company to support existing customers and add new customers to its portfolio. With over 1,000 active aircraft operating across the globe and more being produced, this market segment will play a significant role in the company's growth over the coming years. In April of this year, the company announced the introduction of Leap engine nacelle capabilities. Since then, the activity on this engine type has grown considerably. In addition, the company has provided repair and AOG services to operators and, more importantly, returning satisfied customers. In addition, the company has two autoclaves to accommodate sizes ranging from Cessna to B777 composite work.

Avio Aero launches hybrid electric technology demonstration programme in Europe

Avio Aero, part of the GE Aerospace business, has launched a new technology demonstration programme that continues to advance development of hybrid-electric propulsion technologies for commercial aviation and supports efforts to make air transport more fuel efficient to reduce CO2 emissions. The Clean Aviation Joint Undertaking of the European Commission has awarded approximately €34 million (£30 million) over four years to a consortium led by Avio Aero for the AMBER demonstrator in a recently finalised agreement. Plans are to mature, integrate and validate key technologies necessary for a megawatt (MW)-class hybrid-electric propulsion system powered by hydrogen fuel cells. The AMBER demonstrator will study integration of hybrid-electric components — including a motor/generator, power converters and power transmission systems — with fuel cells for rig testing in the mid-2020s using Avio Aero's advanced catalyst turboprop engine. Hybrid-electric propulsion technologies can help improve engine performance, while also reducing fuel usage and emissions. The hybrid-electric technologies Avio Aero and its parent company GE Aerospace are developing are also compatible with alternative fuels like Sustainable Aviation Fuel (SAF) and with advanced engine architectures such as open fan.

Rolls-Royce, Pratt & Whitney, Virginia Tech sign new research partnership agreement

Rolls-Royce and Pratt & Whitney have signed a joint agreement with Virginia Tech for pre-competitive research focused on the impact of environmental contaminants on aeroengine operation and testing. The four-year project will leverage Virginia Tech's research and cross-discipline expertise on engine operation, instrumentation, and geosciences as well as the current research relationships that both Pratt & Whitney and Rolls-Royce have with the university. This research relationship continues the longstanding collaboration



Students at Virginia Tech conduct tests on an airplane engine
© P&W

between Rolls-Royce and Pratt & Whitney on issues that are common across the aerospace industry. The two companies have partnered on several government-based research projects, including a study focused on volcanic ash damage to aircraft engines. Work on this front has taken place in the U.S., UK and around the world, with various groups developing some of the basic understanding needed before complex modelling can be undertaken. The collaboration between Pratt & Whitney, Rolls-Royce and Virginia Tech in this research initiative is designed to add the more complicated engine testing available at Virginia Tech to further develop mitigation strategies, and to provide information back to these more basic research activities from actual engine operations. Detrimental effects of particle ingestion are common concerns in the aerospace industry and can lead to accelerated engine ageing and performance loss. The short-term goal for this work is leveraging learning from smaller engine tests, which will be performed on a Rolls-Royce M250® engine, to influence large-engine test programmes by accounting for the difference in engine architecture and operating conditions. The impact of environmental contaminants costs hundreds of millions of dollars of losses annually for both commercial and military operations as air travel has expanded around the world. This is a multifaceted problem that ranges from basic scientific questions about the complex chemistry of environmental contaminants within the engine, to fleet operations, maintenance procedures, engine design and even weather prediction. It spans a wide range of scientific issues to practical engineering problems which are well suited to a multi-discipline-focused project.

American Airlines partners with Safran to switch 737NG fleet from steel to lighter, more efficient carbon brakes



Safran and American representatives at the signing ceremony
© Safran

As part of its commitment to minimise the environmental impact of air travel, American Airlines (American) has partnered with Safran Landing Systems to upgrade its Boeing 737NG fleet from steel to carbon brakes, representing more than 300 aircraft currently in operation. Lighter than steel brakes, with up to 700 pounds (320 kg) of weight savings per aircraft, this upgrade to the Safran Landing Systems carbon brakes configuration will help American meet its sustainability commitments by reducing its greenhouse gas (GHG) emissions by 77 tonnes per Boeing 737NG aircraft every year. Thanks to its superior energy absorption and twice the endurance of the steel configuration, the Safran Landing Systems brake, compatible with both Boeing 737NG and Boeing 737 MAX families, provides operators with a significant improvement in operational performance and delivers the lowest operating costs on the market. This major initiative highlights Safran Landing System's and American's common sustainability values and reinforces their shared commitment of playing a leadership role in helping decarbonise the broader airline industry and meeting the aviation industry goal of net-zero GHG emissions by 2050.

FINANCIAL NEWS

Capital A to establish low-cost carrier in Cambodia

On December 9, 2022, Capital A Berhad, the parent company of AirAsia, released that the company, through its wholly owned subsidiary, AirAsia Aviation Group Limited (AAAGL), executed the following agreements (below) with the purpose of forging a joint venture with Sivilai Asia Co., Ltd (Sivilai Asia), a company incorporated in Phnom Penh, Cambodia, to establish a low-cost airline in the Kingdom of Cambodia based on the successful AirAsia business model. A share subscription agreement for AAAGL to invest 51% and Sivilai Asia to invest the remaining 49% of the issued and paid-up capital of a Cambodian joint venture company to be incorporated under the name AirAsia (Cambodia) Co., Ltd' or a similar name approved by the relevant governmental authorities (AirAsia Cambodia); and A shareholder's agreement with Sivilai Asia to operate, if permitted by the relevant Governmental Authorities, low-cost passenger air transportation and ancillary services on domestic routes in Cambodia and on international routes. The agreement records rights and obligations of each party relating to the operation and management as well as their shareholding in AirAsia Cambodia.

Amount of blocked airline funds rising by more than 25%

The International Air Transport Association (IATA) warned that the amount of airline funds for repatriation being blocked by governments has risen by more than 25% (US\$394 million) in the last six months. Total funds blocked now tally at close to US\$2.0 billion. IATA calls on governments to remove all barriers to airlines repatriating their revenues from ticket sales and other activities, in line with international agreements and treaty obligations. IATA is also renewing its calls on Venezuela to settle the US\$3.8 billion of airline funds that have been blocked from repatriation since 2016 when the last authorization for limited repatriation of funds was allowed by the Venezuelan government. "Preventing airlines from repatriating funds may appear to be an easy way to shore up depleted treasuries, but ultimately the local economy will pay a high price. No business can sustain providing service if they cannot get paid and this is no different for airlines. Air links are a vital economic catalyst. Enabling the efficient repatriation of revenues is a critical for any economy to remain globally connected to markets and supply chains," said Willie Walsh, IATA's Director General. Airline funds are being blocked from repatriation in more than 27 countries and territories.

MRO & PRODUCTION NEWS

Czech Airlines Technics continues base maintenance services of Finnair fleet for another three years



Finnair Airbus aircraft at CSAT hangar in Prague

© Czech Airlines Technics

Czech Airlines Technics (CSAT) long-term co-operation with Finnair is to continue. The original three-year base maintenance agreement was extended by another three years thanks to the exercised option. CSAT will thus continue to provide base maintenance checks and repairs for the carrier's Airbus A320-family narrow-body aircraft fleet in Hangar F at Václav Havel Airport Prague, where one maintenance line is dedicated to Finnair year-round. "We have a long history with CSAT, and we highly value our relationship. The extension of base maintenance agreement ensures the continuation of safe and reliable operations of our narrow-body Airbus fleet. CSAT is a customer-oriented organization with a strong will to develop. Committed people and open dialogue allow us to carry on the fruitful work on continuous improvement initiatives in good cooperation for our mutual benefit", said Ville Väyrynen, Head of Technical Operations Planning & Base Maintenance at Finnair.

Ruili Airlines becomes first Chinese airline to be part of Embraer's Energia Advisory Group



Rendering of Ruili Airlines' Energia family

© Embraer

Ruili Airlines has signed an agreement with Embraer to join its Energia Advisory Group – Energia is Embraer's project developing sustainable aircraft for the future. The companies will work together on the design requirements for next-generation sustainable aircraft and the potential market in

China. Based at Kunming Changshui International Airport, Ruili Airlines is a full-service premium carrier focused on innovation. The airline operates a domestic and international route network across China and Southeast Asia. "I welcome Ruili Airlines, the first Chinese airline to join our Energia Advisory Group. The partnership between Embraer and Ruili Airlines is a significant step for the Energia project," said Arjan Meijer, President and CEO, Embraer Commercial Aviation. "We look for partners around the globe to share their innovative ideas and operational insights, adding their expertise to the sustainable aviation mission. Ruili Airlines' perspective will be invaluable in the development of the Energia family of aircraft." Ruili Airlines will work with Embraer to help define performance and design requirements for its Energia concept aircraft, two 19-30-seat designs featuring hybrid electric and hydrogen electric propulsion technologies.

FINANCIAL NEWS

The top five markets with blocked funds (excluding Venezuela) are: Nigeria: US\$551 million, Pakistan: US\$225 million, Bangladesh: US\$208 million, Lebanon: US\$144 million and Algeria: US\$140 million. Repatriation issues in Nigeria arose in March 2020 when demand for foreign currency in the country outpaced supply and the country's banks were not able to service currency repatriations. Despite these challenges, Nigerian authorities have been engaged with the airlines and are, together with the industry, working to find measures to release the funds available. Airlines have also restarted efforts to recover the US\$3.8 billion of unrepatriated airline revenues in Venezuela. There have been no approvals of repatriation of these airline funds since early 2016 and connectivity to Venezuela has dwindled to a handful of airlines selling tickets primarily outside the country. In fact, between 2016 and 2019 (the last normal year before COVID-19) connectivity to/from Venezuela plummeted by 62%. Venezuela is now looking to bolster tourism as part of its COVID-19 economic recovery plan and is seeking airlines to restart or expand air services to/from Venezuela. Success will be much more likely if Venezuela is able to instil confidence in the market by expeditiously settling past debts and providing concrete assurances that airlines will not face any blockages to future repatriation of funds. (£1.00 = US\$1.24 at time of publication).

Finnair extends its €600 million pension premium loan

In its Stock Exchange Release on May 20, 2020, Finnair announced that the Finnish Government had approved that the State of Finland guaranteed Finnair's pension premium loan up to €540 million. With the state guarantee and

MRO & PRODUCTION NEWS

GE Aerospace teams up with Magnetic Engines for provision of on-wing repairs

GE Aerospace, a world leader in the provision of jet engines, has signed an agreement with Magnetic Engines, part of the Magnetic Group, to support the company's on-wing repairs for the CFM56-5B and CFM56-7B engines. This form of support benefits OEM customers through its flexibility, enabling turn-around times to be reduced, thus saving on costs. Magnetic Group is made up of four individual entities: MAGNETIC CREATIVE provides design and manufacturing services for both aircraft interior and exterior. MAGNETIC ASSETS provides aircraft with engines, landing gears for lease, engine transportation stands, and spare parts and components solutions. MAGNETIC MAINTENANCE provides aircraft line maintenance, base maintenance, and aircraft engine repair and management. MAGNETIC TALENTS offers a full range of engineering and CAMO services, together with various industry-related EASA Part-147 trainings.



CFM56-5B engine

© Magnetic Group

Lufthansa Technik to provide component support for Avianca



© Avianca Boeing 787-6 aircraft

Lufthansa Technik and the Colombian carrier Avianca have signed a comprehensive Total Component Support (TCS®) contract covering repair and overhaul of components for Avianca's Boeing 787 fleet. The new contract will provide pool support for up to 16 aircraft in the next nine years solidifying the partnership between the companies that started more than ten years ago. Álbért Pérez Subiros, Avianca's Vice President of Maintenance, said: "The agreement we have reached with Lufthansa

Technik is in line with our goal of becoming an increasingly competitive airline. Through this contract, we will be able to have on-time availability of 787 components, making our cost scheme more efficient, while guaranteeing quality, reliability and availability of the double-aisle fleet in our long-range network." With this TCS® agreement, Avianca now benefits from an individual supply concept that enables short and rapid transport paths.

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FINANCIAL NEWS

the following pension premium loan, Finnair aimed to further secure its cash position and business continuity after the exceptional situation caused by the COVID-19 pandemic. Further, a commercial bank guaranteed up to €60 million of the loan. The arrangement was compliant with the EU state aid regulations and was approved by the European Commission on May 18, 2020. Finnair drew down the €600 million pension premium loan in three tranches in 2020 and based on the agreed schedule, the loan was planned to be repaid in two €300 million tranches in December 2022 and in June 2023. The EU Commission's competition authority approved the extension of the €540 million guarantee related to the pension premium loan on June 20, 2022. To maintain its cash funds in the prevailing uncertain operating environment, the company has agreed with other parties to extend the guarantees and the loan. The loan maturity has now been extended until 2025 and the repayment schedule also amended so that the company will amortise the loan by €100 million every six months. However, the remaining two €100 million tranches will be paid in full on May 15, 2025. As opposed to the previous schedule, the loan will not be amortised in December 2022. (£1.00 = €1.16 at time of publication).

DAE increases bond repurchase programme by US\$300 million

Dubai Aerospace Enterprise (DAE) has released that its Board of Directors and Shareholders have authorised an additional US\$300 million for bond repurchases to be conducted through open market transactions. To date, DAE has repurchased approximately US\$815 million of principal amount of its publicly traded bonds under the previous authorisations of US\$900 million. DAE now has US\$385 million of available authority to repurchase bonds. DAE Chief Executive Officer Firoz Tarapore said: "Today, we are increasing our available authorisation as the current interest rate environment is creating opportunities for us to acquire our outstanding debt at compelling price levels." DAE currently has US\$3.2 billion of publicly traded bonds outstanding in the capital markets. (£1.00 = US\$1.24 at time of publication).

Jet Parts Engineering acquires Northeast Aero Compressor

Jet Parts Engineering (JPE), a leading PMA parts and engineered repairs provider, has reported the acquisition of Northeast Aero Compressor (NEACO), a certified 145 repair station, specialising in the maintenance

MRO & PRODUCTION NEWS

EirTrade Aviation Maintenance gains EASA Part 145 Line Maintenance approval

EirTrade Aviation Maintenance has received EASA Part 145 Line Maintenance approval for the Airbus A320 and Boeing 737 families of aircraft at its facility in Ireland West Airport, Knock. The stringent process has taken over 12 months, with the help of the Irish Aviation Authority, to establish the procedures, personnel, facilities, tools and equipment to meet the requirements.

According to Andy Cahill, Line Maintenance Manager at EirTrade Aviation Maintenance, the initial catalyst behind gaining the EASA Part 145 approval was to enhance the services offered at the airport. "No other company offers line maintenance services at the airport, so our services now allow potential airline and lessor customers to benefit from cost savings and faster TATs."

EirTrade Aviation Maintenance has the capacity to expand line maintenance capabilities at Knock with the development of additional hangar facilities and add further aircraft types, including regionals. "But this is for future consideration", says Steven Trowell, Accountable Manager. "Our approval covers the Airbus 318/319/320/321 (CFM56); Airbus 319/320/321 (CFM LEAP-1A); Airbus A319/320/321 (IAE V2500); Boeing 737-600/700/800/900 (CFM56); Boeing 737-7/8/9 MAX (CFM LEAP-1B) – we are very pleased to focus on these popular types and be ready to upscale to meet the ensuing demand when scheduled and charter operations step-up at Ireland West Airport" says Jim Maguinness, Quality Manager.



EirTrade staff representing the new EASA certification
© EirTrade

AeroSHARK from Lufthansa Technik and BASF now certified for Boeing 777



AeroSHARK modification for SWISS' Boeing 777

© SWISS

The European Union Aviation Safety Agency (EASA) has granted Lufthansa Technik a so-called Supplemental Type Certificate (STC) that officially paves the way for the series modification of two Boeing 777 variants with the fuel-saving AeroSHARK riblet films. Through the STC, the sub fleet-wide roll-out of this sustainability technology, developed jointly by Lufthansa Technik and BASF, can now commence

at the launch customers Lufthansa Cargo and Swiss International Air Lines (SWISS). The next modification layovers in Frankfurt and Zurich are already scheduled for early January. Thanks to its special surface structure of microscopic ribs - so-called riblets - AeroSHARK reduces the frictional resistance of the aircraft skin. As a result, the fuel consumption and CO2 emissions are reduced by around one percent. For each Boeing 777-300ER operated by SWISS, this means annual savings of around 400 tonnes of kerosene and more than 1,200 tonnes of carbon dioxide. The slightly shorter Boeing 777F saves around 370 tonnes of fuel and 1,170 tonnes of CO2 each year. A first AeroSHARK-equipped Boeing 777-300ER of the Swiss airline (HB-JNH), which also completed the flight test programme for the now-received certification, had already begun daily operations in October using a temporary "Permit-to-Fly" from the Swiss Federal Office of Civil Aviation (FOCA) that was valid for this single aircraft only. The STC issued by EASA now allows Lufthansa Technik to serially apply the nature-inspired riblet films to any given Boeing 777-300ER and 777F aircraft.

FINANCIAL NEWS

of complex pneumatic, hydraulic, fuel and electromechanical systems while incorporating DER repair and PMA capabilities. The acquisition of NEACO by JPE creates a diversified leader in PMA parts, DER repairs and component repair/overhaul capabilities to offer a broad array of aftermarket services to its commercial, cargo, regional and military aircraft customers. JPE plans to invest significantly in NEACO's Bohemia, NY facility to expand its technical resources and meet high market demands for aftermarket repairs. "Jet Parts Engineering is thrilled to partner with NEACO and continue to deliver high-quality solutions in the aftermarket. Linda and Mike Gibson have built a terrific team," said Anu Goel, CEO of Jet Parts Engineering. "NEACO is a huge opportunity to add a highly complementary portfolio of component repairs to our existing PMA and DER offerings." NEACO was founded in 1989 with the mission of becoming a preeminent aerospace industry leader. For over three decades, NEACO has remained dedicated to continually building a knowledge base and new aviation capabilities. The team at NEACO have rigorously reviewed and audited their procedures over the years, ensuring their fast and accurate service exceeds the expectations set by their customers and the FAA.

Delta provides 2023 guidance for margin expansion and significant earnings growth of between US\$5 and US\$6 a share

Delta Air Lines highlighted the company's financial outlook and strategic priorities to the investment community on December 15, in New York. "2022 is proving to be a pivotal year as we rebuild the world's best-performing airline. Thanks to the exceptional work of our people, we navigated challenges while continuing to strengthen our competitive advantages, enhancing the power of our trusted consumer brand," Chief Executive Officer Ed Bastian said. "Demand for air travel remains robust as we exit the year and Delta's momentum is building. Our 2023 outlook for 15 to 20% revenue growth over 2022 and margin expansion support a near doubling of EPS to US\$5 to US\$6 per share, keeping us on track for our 2024 earnings target of over US\$7 per share." The update comes as Delta closes out the final weeks of 2022, a year of significant progress in the restoration of the airline's financial foundation. Delta is delivering on key operational and commercial milestones and is ahead of its financial plan for the first year of the airline's three-year plan, established last December. Full year 2022 GAAP EPS is expected to be US\$2.12 to US\$2.17. Adjusted EPS of US\$3.07 to US\$3.12 reflects

MILITARY AND DEFENCE

German Heron TP awarded type certificate from German Military Aviation Authority



© IAI's Heron TP UAV

The German Heron TP (GHTP) remotely piloted aircraft system (RPAS), is a unique German and Israeli Project, contracted to Airbus and IAI for modification, production and operation by the German Airforce. The Type Certificate is the result of years of intensive type certification effort by the prime contractor Airbus DS Airborne Solutions GmbH (ADAS), a 100% Airbus subsidiary and its partner the GHTP OEM Israel Aerospace Industry (IAI) together with the German Military Aviation Authority (GMAA). The type certificate attests to GHTP's compliance with the latest version of military airworthiness standard (STANAG 4671). The effort included adaptations of multiple systems to be compliant with the required standards, compilation and review of hundreds of documents and multiple reviews and tests, in close cooperation between GMAA, ADAS and IAI. All this was performed, and brought to very successful conclusion, despite the challenges imposed by the COVID-19 pandemic.

RNZAF gains access to Lufthansa Technik's parts inventory to support its four new Boeing P-8As



RNZAF Poseidon P-8A aircraft

© Boeing

Boeing Co. has signed a Total Component Support (TCS) deal with Lufthansa Technik for sustainment services to the Royal New Zealand Air Force's (RNZAF) growing fleet of Boeing P-8A aircraft. Lufthansa Technik' TCS services will enable the RNZAF to reduce its investment in aircraft parts as the programme for the 737 covers over 400 commercial common parts included in the configuration of the P-8A, a military derivative of the popular 737 commercial airliner. The agreement will also improve aircraft readiness through the RNZAF having access to the German company's maintenance, repair and overhaul (MRO) global supply chain. Boeing and Lufthansa Technik signed a strategic Memorandum of Understanding (MOU) back in 2021 to support Germany's P-8A Poseidon fleet, which was then expanded this year to a three-party agreement that now includes ESG Elektroniksystem- und Logistik-GmbH. In July 2018, the government of New Zealand announced the purchase of four P-8A Poseidon aircraft which will replace its aging fleet of P-3K2 maritime patrol aircraft. The first P-8A was delivered this month, with three remaining aircraft due to be delivered in 2023. The P-8A is essential element for global anti-submarine warfare, intelligence, surveillance and reconnaissance, and search-and-rescue operations.

Boeing Co. has signed a Total Component Support (TCS) deal with Lufthansa Technik for sustainment services to the Royal New Zealand Air Force's (RNZAF) growing fleet of Boeing P-8A aircraft. Lufthansa Technik' TCS services will enable the RNZAF to reduce its investment in aircraft parts as the programme for the 737 covers over 400 commercial common

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FINANCIAL NEWS

an increased outlook for the December quarter compared to prior guidance provided in October. In 2023, Delta expects to deliver strong top-line growth and significant operating leverage on a full restoration of its network and continued improvements in premium and loyalty revenue. Non-fuel unit costs are expected to decline 5 to 7%, driving margin expansion and a near doubling of adjusted EPS to between US\$5 and US\$6. The company expects to generate more than US\$2 billion of free cash flow, enabling further debt reduction. The company is reiterating 2024 targets, including earning of over US\$7 per share and strengthening the balance sheet to return to investment grade metrics. (£1.00 = US\$1.22 at time of publication).

MILITARY AND DEFENCE

AAR expands Ontic partnership

AAR CORP, a leading provider of aviation services to commercial and government operators, MROs and OEMs, has expanded its partnership with Ontic by signing a military customer support distribution contract extension and a new long-term global commercial distribution agreement. Under the military customer support distribution contract extension, AAR will continue to provide supply chain solutions, including warehousing, logistics and supply chain management, for Ontic's Cheltenham MRO. AAR will also continue to deliver global distribution services, including sales and international government customer support of electronic assemblies,

INFORMATION TECHNOLOGY



Swiss-AS VAECO/Vietnam Airlines signing ceremony

© Swiss-AS

Vietnam Airlines Engineering Company (VAECO), a subsidiary of **Vietnam Airlines**, has signed agreements with **Swiss Aviation Software (Swiss-AS)** and **NGS Equipment and Communication Joint Stock (NGS)**, the Swiss-AS local partner in Vietnam, who will support Swiss-AS in the process of implementing the AMOS MRO software solution. Five years ago, Swiss-AS released the AMOS MRO edition, specifically designed to fulfil the needs of MRO providers. This AMOS edition has been successfully implemented several times since its release, while the Swiss-AS AMOSmobile packages for stores management (AMOSmobile/STORES) and line/base maintenance (AMOSmobile/EXEC) fully met the functional requirements that VAECO and Vietnam Airlines were looking for in their tender process. AMOS includes the tools required to fully manage the maintenance programme with more efficient data synchronisation, allowing the business to pursue the goal of reducing costs and maintenance time, without any concessions being made in terms of safety and quality, as well as improving the operational readiness factor of the fleet. Furthermore, AMOS provides state-of-the-art modules for planning and controlling all maintenance processes, including optimised assignment of staff resources when defining the production plan – with the objective of increasing labour productivity and efficiency. The full integration of real-time data in AMOS over the different data streams in AMOS – from material management, to engineering, to planning and production – enable informed and effective business decisions to be made and therefore minimise flight disruptions, delays, and cancellations. Once the AMOS implementation has been completed, VAECO foresees that labour productivity will increase by 15-20%, that maintenance turnaround times of aircraft will shorten and that the higher manpower productivity will allow VAECO to extend its third-party maintenance market share, which is currently in great demand as a result of the airline industry having returned to profitability after the COVID-19 pandemic.

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MILITARY AND DEFENCE

flight control units, gyroscopes and altimeters, for military operators. This comprehensive supply chain agreement primarily focuses on Western and European platforms and serves the F-15, F-16, Hawk and Sea King aircraft, which are experiencing an increased operational tempo. AAR will also become Ontic's global exclusive OEM product distributor for the Twin Commander and Metro Merlin airframes. This new agreement increases AAR's product offerings for commercial customers and provides Ontic's customer base with lead time compression and elevated service levels.

OTHER NEWS

Sabre Corporation, a leading software and technology provider that powers the global travel industry, has renewed a global distribution agreement with **China Southern Airlines** as the carrier ramps up overseas routes. The multi-year renewal ensures that China Southern can continue distributing its content to the vast network of travel agents and corporations connected to Sabre's global distribution system (GDS). The deal strengthens a long-standing relationship between China Southern, which is China's largest carrier by passenger volume, and Sabre, with the airline also using Sabre's fares and contract management solutions. As China Southern steadily resumes international routes and looks forward to further travel recovery in China, the airline will be using Sabre technology to get its fares and offers in front of agents and their travellers, worldwide. With main hubs at Guangzhou Baiyun International Airport and Beijing Daxing International Airport, China Southern Airlines is preparing for increasing future tourism, having recently announced the resumption of routes to major international destinations.

Starting December 16, **SAS** will offer more-frequent departures between Copenhagen Airport and Shanghai Pudong International Airport. After operating the second-weekly flight for the first time on December 16th, SAS will fly from January 6, from Copenhagen to Shanghai every Tuesday and Friday and from Shanghai to Copenhagen every Thursday and Sunday, throughout the winter season. The flights are conveniently timed with late evening departures from Copenhagen and early morning arrivals back in Copenhagen to ensure full connectivity for passengers and air cargo with the SAS network. SAS operates the Shanghai route with the Airbus A350. Apart from offering passengers a unique travel experience, this aircraft has a much lower fuel consumption and up to 30% lower CO2 emissions than previous comparable aircraft.

INFORMATION TECHNOLOGY



Passenger terminal

© Collins Aerospace

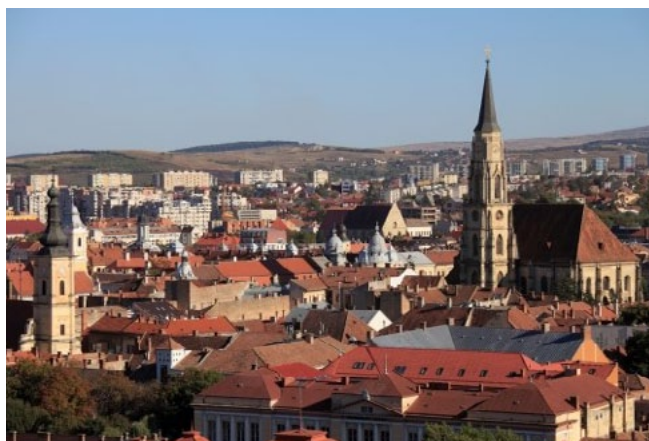
Collins Aerospace and **Materna IPS** have signed a memorandum of understanding to work together to provide passenger processing for airlines and airports around the world. This focus on creating value from data is a key aspect of this collaborative approach and will result in increased efficiencies and enhanced passenger experiences. "Materna IPS's self-service solutions

are in line with increasing demand for a full end-to-end self-service journey and complement Collins' commitment to delivering the next generation of digital solutions to the global aviation ecosystem," said Rakan Khaled, General Manager, Airport Solutions at Collins Aerospace. Materna IPS is an international service provider for automated passenger handling for airlines and airports, providing self-service hardware, software implementations and service delivery and maintenance. Collins' Connected Aviation Solutions provide a connected, seamless and sustainable airport experience with a wide variety of software and hardware solutions for airport operations, to include passenger processing and baggage management. All are designed to quickly move travellers from the front door of the airport to the boarding gate for their flight. Airports and airlines will be able to optimise their passenger processing using the Materna / Collins integrated solution sets, which integrate key data points to monitor, adapt and improve visibility of their operations. The companies have already started to collaborate on several recent proposals for current and prospective customers.

OTHER NEWS

SITA and **TechTalent Software** have announced a strategic partnership to launch a research and development centre in Cluj-Napoca, Romania.

The new centre will support SITA's focus on accelerating the development of new passenger processing and government solutions. As the recovery in air travel gathers pace, there is a strong demand for more automation from airports, governments and airlines, driving substantial investment in the technology that SITA provides. TechTalent Software will open and run a development centre in Romania through a Build-Operate-Transfer (BOT) agreement as part of the partnership. This will allow SITA to rapidly scale its development teams. With the first employees already in place, the office is expected to expand to more than 60 software engineers, testing teams and scrum masters by 2023. SITA has decided to invest in Cluj-Napoca because of the deep skills in leading-edge technologies available, the open-minded continuous learning culture and the great gender balance of female and male technology professionals. With over 1,200 IT companies employing more than 20,000 employees and constant support from local authorities and universities, Cluj-Napoca is well on its way to becoming a central digital hub in Eastern Europe.



© SITA to invest in a new research and development centre in Cluj-Napoca, Romania

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OTHER NEWS



L3Harris to partner with Spirit Airlines for the Spirit Wings Pilot Pathway programme

© L3Harris

Spirit Airlines has announced a partnership with **L3Harris** to launch the new Spirit Wings Pilot Pathway, a partnership programme in Sanford, Florida, that aims to expand the carrier's pipeline of highly skilled, professional pilots. L3Harris' flight academy is conveniently located near one of Spirit's largest operations in Orlando, Florida, providing graduates with numerous opportunities to build relationships, access the airline's nearby training facilities and advance to a rewarding career as a Spirit First Officer. Spirit Wings Pilot Pathway is designed to mentor future Spirit First Officers as they progress through their path to the flight deck. Candidates may apply for the programme after successfully completing L3Harris Flight Academy training and achieving approximately 500 total flight hours. If successful in Spirit's interview process, they will receive a Conditional Offer of Employment, a Spirit Electronic Flight Bag and mentorship as they work toward completing the minimum required hours for an Airline Transport Pilot certificate. "Spirit Wings Pilot Pathway demonstrates the confidence international airlines have in our training, and the programme ensures students have access to mentoring and employment opportunities at one of the leading airlines in the U.S.," said David Coward, VP and General Manager for L3Harris Training Services. Spirit is expanding rapidly with new stations starting operations across the United States, Latin America and the Caribbean. The carrier is also adding dozens of new aircraft, with 33 more planes projected for delivery in 2023. The growth provides First Officers with opportunities to quickly upgrade to Captain and fly some of the newest aircraft in the industry. Spirit's Pilots also receive great training and enjoy some of the best quality of life in the aviation field.

AviTRADER™
publications

AviTrader Publications Corp.

Suite 305, South Tower

5811 Cooney Road

Richmond, BC

Canada V6X 3M1

Publisher

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INDUSTRY PEOPLE



Jeff Shaw

- Pro Star Aviation, an innovative aerospace modification centre, has promoted **Jeff Shaw** to Director of Sales and Marketing. Shaw has served as Director of Business Development at Pro Star Aviation for over six

years. He was responsible for programme development and company direction to maintain an edge in the avionics and installation upgrade industry. He will lead a team of three regional sales managers, two inside sales managers and an administrative assistant in his new role. His primary function will be to lead the strategic efforts in growing Pro Star Aviation's footprint in the Northeast. Shaw's career in aviation spans over 25 years, starting as an Ops Agent with the airlines. He's

served as an Avionics Technician and Chief Inspector and earned his BS in Aviation Management at Florida Tech and AS in Aviation Technology at NH Technical College. He holds an FAA Commercial Pilot-Instrument rating and A&P certificate.



Andy Hudson

tion Management at Florida Tech and AS in Aviation Technology at NH Technical College. He holds an FAA Commercial Pilot-Instrument rating and A&P certificate.

- Chapman Freeborn, the global air

charter specialist and part of Avia Solutions Group, has appointed **Andy Hudson** as Regional CEO – APAC. Hudson has been immersed in the aviation industry for over 21 years and his first charter broker position was in 2006. He then moved to aviation aircraft acquisitions and aircraft management, which led to him launching his own companies, Private Jet Central, PJC Aviation and Down-Route, in 2008, 2012 and 2015, respectively. In his role of Regional CEO – APAC, he will be

focusing on the growth opportunities in the region's marketplace, using his prior experience of expanding his own companies throughout Europe, the Middle East and Asia.

- Following a decision by the Airbus Board of Directors, **Tony Wood** has joined the Board as a Non-Executive Director with immediate effect, replacing **Lord Paul Drayson** who resigned on the day of the 2022 annual general meeting. In accordance with the Board of Directors' internal rules and the company's Articles of Association, Wood's appointment as a Non-Executive Director for a three-year mandate will be submitted for approval at the next annual general meeting of shareholders in April 2023. Wood has extensive experience of the aerospace industry and defence sector. He is currently a Member of the Board of National Grid plc, an energy transmission company operating in the UK and the U.S.

THE AIRCRAFT AND ENGINE MARKETPLACE

Commercial Jet Aircraft

Aircraft Type	Company	Engine	MSN	Year	Available	Sale / Lease	Contact	Email	Phone
A319-100	FPG Amentum	V2527M-A5	3705	2008	Now	Sale / Lease	Eoin Kirby	eoin.kirby@fpg-amentum.aero	+353 86 027 3163
A319-100	BBAM	CFM56-5B5/P	2119	2004	Now	Sale / Lease	Steve Zissis	info@bbam.com	+1 787 665 7039
A319-100	BBAM	CFM56-5B5/P	2283	2007	Now	Sale / Lease	Steve Zissis	info@bbam.com	+1 787 665 7039
A319-112	Deucalion Aviation Limited	CFM56-5B63	3586	2008	Now	Lease	Jonathan Louch	aircraft@deucalion.com	+44 207 256 4449
A319-133	Deucalion Aviation Limited	V2533M-A5	2965	2007	Q4/2022	Lease	Jonathan Louch	aircraft@deucalion.com	+44 207 256 4449
A319-131	Deucalion Aviation Limited	V2522-A5	2375	2005	Now	Lease	Jonathan Louch	aircraft@deucalion.com	+44 207 256 4449
A320-200	BBAM	CFM56-5B4/3	6467	2015	Now	Sale / Lease	Steve Zissis	info@bbam.com	+1 787 665 7039
A320-200	ORIX Aviation	CFM56-5B4/3	4714	2011	Q3/2023	Lease	Oisin Riordan	oisin.riordan@orix.ie	+353 86 335 0004
A320-200	ORIX Aviation	CFM56-5B4/P	2620	2005	Q2/2023	Lease	Oisin Riordan	oisin.riordan@orix.ie	+353 86 335 0004
A320-200	Deucalion Aviation Limited	V2527-A5	4552	2010	Now	Lease	Jonathan Louch	aircraft@deucalion.com	+44 207 256 4449
A320-233ceo	FPG Amentum	V2527E-A5	4457	2010	Now	Sale / Lease	Lei Ma	ma.lei@fpg-amentum.aero	+852 9199 1875
A330-200	Doric	Trent 772B-60/16	1407	2013	Q4/2022	Sale / Lease	Maurick Groeneveld	maurick.groeneveld@doric.com	+49 (0)69 247559931
A330-200	GA Telesis	PW4168A	322	2000	Jul 2022	Sale / Lease	David Byrne	aircraft@gatelesis.com	+353 86 780 8974
A330-300	BBAM	Trent 772B-60	1633	2015	Now	Sale / Lease	Steve Zissis	info@bbam.com	+1 787 665 7039
A330-300	BBAM	Trent 772B-60	1609	2015	Now	Sale / Lease	Steve Zissis	info@bbam.com	+1 787 665 7039
A330-300	BBAM	Trent 772B-60	1482	2014	Now	Sale / Lease	Steve Zissis	info@bbam.com	+1 787 665 7039
A350-900	ORIX Aviation	TRENTXWB-84	391	2020	Now	Sale / Lease	Cian Coakley	cian.coakley@orix.ie	+353 86 335 0004
B737-300	Deucalion Aviation Limited	CFM56-3C1	4552	1998	Q2/2023	Sale	Jonathan Louch	aircraft@deucalion.com	+44 207 256 4449
B737-800	BBAM	CFM56-7B26/3	29637	2009	Now	Sale / Lease	Steve Zissis	info@bbam.com	+1 787 665 7039
B737-800	ORIX Aviation	CFM56-7B26/3	35216	2007	Now	Lease	Oisin Riordan	oisin.riordan@orix.ie	+353 86 335 0004
B737-900	BBAM	CFM56-7B26/3	34953	2007	Now	Sale / Lease	Steve Zissis	info@bbam.com	+1 787 665 7039
B757-200 Cargo	Airwork Ireland Limited	RB211-535E4	27051	1995	Now	Lease	Robbie Brazel	robbie.brazel@airworkgroup.com	+353 87 372 8262
B757-200 Cargo	Airwork Ireland Limited	RB211-535E4	25297	1992	Q4/2022	Lease	Robbie Brazel	robbie.brazel@airworkgroup.com	+353 87 372 8262
B737-900ER	Deucalion Aviation Limited	CFM56-7B26	35717	2007	Now	Sale / Lease	Jonathan Louch	aircraft@deucalion.com	+44 207 256 4449
B777-300ER	BBAM	GE90-115BL	38407	2011	Mar 2023	Sale / Lease	Steve Zissis	info@bbam.com	+1 787 665 7039
B777-300ER	ALTAVAIR	GE90-115B	34600	2006	Now	Sale / Lease	Clive Bowen	clive.bowen@altavair.com	+44 7899 892493
B777-300ER	ALTAVAIR	GE90-115B	39700	2009	Now	Sale / Lease	Clive Bowen	clive.bowen@altavair.com	+44 7899 892493



THE AIRCRAFT AND ENGINE MARKETPLACE

Regional Jet / Turboprop Aircraft

Aircraft Type	Company	Engine	MSN	Year	Available	Sale / Lease	Contact	Email	Phone
CRJ-200	Regional One	CF34-3B1	7925	2004	Now	Sale / Lease	Kurt Brulisauer	kbrulisauer@regionalone.com	+1 (404) 542-5320
CRJ-200	Regional One	CF34-3B1	7926	2004	Now	Sale / Lease	Kurt Brulisauer	kbrulisauer@regionalone.com	+1 (404) 542-5320
CRJ-200	Regional One	CF34-3B1	7937	2004	Now	Sale / Lease	Kurt Brulisauer	kbrulisauer@regionalone.com	+1 (404) 542-5320
CRJ-200	Regional One	CF34-3B1	7941	2006	Now	Sale / Lease	Kurt Brulisauer	kbrulisauer@regionalone.com	+1 (404) 542-5320
CRJ-200ER	Regional One	CF34-3B1	8062	2006	Now	Sale / Lease	Kurt Brulisauer	kbrulisauer@regionalone.com	+1 (404) 542-5320
CRJ-200ER	Regional One	CF34-3B1	8059	2005	Now	Sale / Lease	Kurt Brulisauer	kbrulisauer@regionalone.com	+1 (404) 542-5320
CRJ-200LR	Regional One	CF34-3B1	7625	2002	Now	Sale / Lease	Kurt Brulisauer	kbrulisauer@regionalone.com	+1 (404) 542-5320
CRJ900	Regional One	CF34-8C5	15215	2009	Now	Lease	Kurt Brulisauer	kbrulisauer@regionalone.com	+1 (404) 542-5320
CRJ900	Regional One	CF34-8C5	15207	2008	Now	Lease	Kurt Brulisauer	kbrulisauer@regionalone.com	+1 (404) 542-5320
CRJ900ER	Regional One	CF34-8C5	15111	2007	Now	Lease	Kurt Brulisauer	kbrulisauer@regionalone.com	+1 (404) 542-5320
CRJ900ER	Regional One	CF34-8C5	15115	2007	Now	Lease	Kurt Brulisauer	kbrulisauer@regionalone.com	+1 (404) 542-5320
DHC8-Q400	Regional One	PW150A	4042	2001	Now	Sale / Lease	Kurt Brulisauer	kbrulisauer@regionalone.com	+1 (404) 542-5320
DHC8-Q400	Regional One	PW150A	4100	2005	Now	Sale / Lease	Kurt Brulisauer	kbrulisauer@regionalone.com	+1 (404) 542-5320
ERJ-145LR	Regional One	AE3007	145508	2001	Now	Sale / Lease	Kurt Brulisauer	kbrulisauer@regionalone.com	+1 (404) 542-5320
ERJ-145LR	Regional One	AE3007	145515	2001	Now	Sale / Lease	Kurt Brulisauer	kbrulisauer@regionalone.com	+1 (404) 542-5320
ERJ170-100LR	Regional One	CF34-8E5	17000093	2005	Now	Sale / Lease	Kurt Brulisauer	kbrulisauer@regionalone.com	+1 (404) 542-5320
SAAB 2000	Jetstream Aviation Capital	AE2100A	031	1996	Now	Sale / Lease	Donald Kamenz	dkamenz@jetstreamavcap.com	+1 (305) 447-1920 x 115
SAAB 340B CRG	Jetstream Aviation Capital	CT7-9B	224	1990	Now	Lease	Bill Jones	bjones@jetstreamavcap.com	+1 (305) 447-1920 x 102
SAAB 340B Plus	Jetstream Aviation Capital	CT7-9B	450	1998	Now	Lease	Bill Jones	bjones@jetstreamavcap.com	+1 (305) 447-1920 x 102

Commercial Engines

AE3007 Engines	Sale / Lease	Company	Contact	Email	Phone
(2) AE3007A1E	Now - Lease	Aircraft and Engine Lease Corp.		fleetmanager@aalc.aero	
CF34 Engines	Sale / Lease	Company	Contact	Email	Phone
CF34-8E5	Now - Lease	Lufthansa Technik AERO Alzey	Kai Ebach	k.ebach@lhaero.com	+49-6731-497-368
CF34-10E	Now - Lease				
CF34-8C	Now - Lease				
CF34-3A	Now - Sale / Lease				
(2) CF34-10E5	Now - Sale / Lease	DASI	Joe Hutchings	joe.hutchings@dasi.com	+ 1 954-478-7195
(3) CF34-10E6	Now - Lease	Willis Lease	Jennifer Merriam	leasing@willislease.com	+1 (561) 349-8950
(2) CF34-10E7	Now - Lease				
(1) CF34-8C5A1	Now - Sale/Lease/Exch.	Magellan Aviation Group	Bradley Hogan	bradley.hogan@magellangroup.net	+1 980.256.7120
(2) CF34-8C5B1	Now - Sale/Lease/Exch.				
(3) CF34-8E5A1	Now - Sale/Lease/Exch.				
(1) CF34-10E6	Now - Lease	Engine Lease Finance	Declan Madigan	declan.madigan@elfc.com	+353 61 291717



THE AIRCRAFT AND ENGINE MARKETPLACE

Commercial Engines (cont.)

CF6 Engines	Sale / Lease	Company	Contact	Email	Phone
(2) CF6-80E1	Now - Lease	Deucalion Aviation Limited	Jonathan Louch	aircraft@deucalion.com	+44 207 256 4449
CFM Engines	Sale / Lease	Company	Contact	Email	Phone
(1) CFM56-5B3/3	Now - Lease	FTAI Aviation LLC	Mark Napoles	mnapoles@ftaiaaviation.com	+1 786-785-0777
(1) CFM56-5B4/P	Now - Lease				
(1) CFM56-5B3/P	Now - Lease				
(1) CFM56-5B1/P	Now - Lease				
(1) CFM56-7B24	Now - Lease				
(1) CFM56-7B26	Now - Lease				
(2) CFM56-7B24/3	Now - Lease	Willis Lease	Jennifer Merriam	leasing@willislease.com	+1 (561) 349-8950
(2) CFM56-7B24/E	Now - Lease				
(1) CFM56-7B26	Now - Lease				
(2) CFM56-5C4/P	Now - Lease				
(2) CFM56-5C4	Now - Lease				
(1) CFM56-7B26E	Now - Lease				
(2) CFM56-5B5/P	Now - Sale / Lease	BBAM	Steve Zissis	info@bbam.com	+1 787 665 7040
(1) CFM56-5B4/P	Now - Sale / Lease				
(2) CFM56-5B6	Now - Sale / Lease				
(1) CFM56-5A3	Now - Sale	Royal Aero	Gary MacLeod	gary@royalaero.com	+44 (0)1357 521144
(1) CFM56-5B2/P	Now - Sale/Lease/Exch.	Contrail Aviation Support	Mark Shaw	mark@contrail.com	+33 6 5834 1965
(2) CFM56-7B22	Now - Lease	Deucalion Aviation Limited	Jonathan Louch	aircraft@deucalion.com	+44 207 256 4449
(1) CFM56-7B24/E	Now - Lease	Engine Lease Finance	Declan Madigan	declan.madigan@elfc.com	+353 61 291717
(2) CFM56-7B27E/B1F	Now - Lease				
(2) CFM56-5B3/3	Now - Lease				
(1) CFM56-5B4/3	Now - Lease				
(1) CFM56-5C4/P (u/s)	Now - Sale	Castlelake	Stuart MacGregor	Stuart.macgregor@castlelake.com	+44 207 190 6138
(1) CFM56-7B22/3	Now - Lease				
(1) CFM56-5B3/P	Now - Sale	FL Technics	Modestas Valiusevicius	m.valiusevicius@fltechnics.com	+370 5 252 5015
(1) CFM56-5B6/3	Now - Sale / Lease	GA Telesis		engines@gatelesis.com	
(1) CFM56-5B3/P	Now - Sale/Lease/Exch.	Magellan Aviation Group	Bradley Hogan	bradley.hogan@magellangroup.net	+1 980.256.7120
(2) CFM56-5B6/P	Now - Sale/Lease/Exch.				
(1) CFM56-7B27	Now - Sale/Lease/Exch.				
GE90 Engines	Sale / Lease	Company	Contact	Email	Phone
(1) GE90-94B	Now - Lease	Engine Lease Finance	Declan Madigan	declan.madigan@elfc.com	+353 61 291717
(1) GE90-115BL (Propulsor)	Now - Lease				
(2) GE90-90B	Now - Sale/Lease/Exch.	BBAM	Steve Zissis	info@bbam.com	+1 787 665 7039
LEAP Engines	Sale / Lease	Company	Contact	Email	Phone
(1) LEAP-1A35	Now - Lease	Willis Lease	Jennifer Merriam	leasing@willislease.com	+1 (561) 349-8950
(3) LEAP-1B28	Now - Lease				
PW1100G Engines	Sale / Lease	Company	Contact	Email	Phone
(1) PW1100G-JM	Now - Lease	Engine Lease Finance	Declan Madigan	declan.madigan@elfc.com	+353 61 291717
PW 4000 Engines	Sale / Lease	Company	Contact	Email	Phone
(1) PW4168	Now - Sale / Lease	Castlelake	Graeme Dodd	Graeme.dodd@castlelake.com	+44 207 190 6138
(1) PW4168A	Now - Lease	Engine Lease Finance	Declan Madigan	declan.madigan@elfc.com	+353 61 291717
(2) PW4168A	Now - Sale / Lease	GA Telesis		engines@gatelesis.com	
(1) PW4168A	Q4/2022 - Sale	ALTAVAIR	Clive Bowen	clive.bowen@altavair.com	+44 7899 892493
PW Small Engines	Sale / Lease	Company	Contact	Email	Phone
PW119B RGB	Now - Lease	Lufthansa Technik AERO Alzey	Kai Ebach	k.ebach@lhaero.com	+49-6731-497-368
PW119B	Now - Lease				
PW120A	Now - Lease				
PW121 (ATR)	Now - Lease				
PW124B	Now - Lease				
PW123B	Now - Lease				
PW125B	Now - Lease				
PW127F	Now - Lease				
PW150A	Now - Lease				
PW127M	Now - Lease				
PW150A RGB	Now - Lease				

THE AIRCRAFT AND ENGINE MARKETPLACE

PW Small Engines	Sale / Lease	Company	Contact	Email	Phone
(1) PW150A	Now - Sale/Lease/Exch.	Willis Lease	David Desaulniers	leasing@willislease.com	+1 (561) 349-8950
(1) PW127M	Now - Sale/Lease/Exch.				
(1) PW121	Now - Sale/Lease/Exch.	Magellan Aviation Group	Bradley Hogan	bradley.hogan@magellangroup.net	+1 980.256.7120
(1) PW123	Now - Sale/Lease/Exch.				
(1) PW127F	Now - Sale/Lease/Exch.				
(1) PW127M	Now - Sale/Lease/Exch.				
(1) PW150A	Now - Sale/Lease/Exch.				
(1) PW150A	Now - Sale/Lease/Exch.	Regional One	Duane Butler	dbutler@regionalone.com	+1 561-809-0001
Trent Engines	Sale / Lease	Company	Contact	Email	Phone
(2) Trent 772B-60	Now - Sale/Lease/Exch.	Rolls-Royce & Partners Finance	RRPF Marketing	RRPFMarketing@rolls-royce.com	+44 7528975877
(1) Trent XWB-84	Now - Sale/Lease/Exch.				
(1) Trent 556-61	Now - Sale/Lease/Exch.				
(1) Trent 772B-60	Now - Lease	Engine Lease Finance	Declan Madigan	declan.madigan@elfc.com	+353 61 291717
V2500 Engines	Sale / Lease	Company	Contact	Email	Phone
(1) V2527-A5	Q3/2022 - Sale/Lease/Exch.	Rolls-Royce & Partners Finance	RRPF Marketing	RRPFMarketing@rolls-royce.com	+44 7528975877
(1) V2533-A5	Now - Sale/Lease/Exch.				
(3) V2533-A5	Now - Lease	Willis Lease	Jennifer Merriam	leasing@willislease.com	+1 (561) 349-8950
(1) V2524-A5	Now - Lease				
(2) V2527-A5	Now - Lease				
(2) V2527-A5	Now - Sale / Lease	Castlake	Graeme Dodd	Graeme.dodd@castlake.com	+44 207 190 6138
(1) V2533-A5	Now - Lease	FTAI Aviation LLC	Mark Napoles	mnapoles@ftaiairline.com	+1 786-785-0777
(2) V2522-A5	Now - Lease	Deucalion Aviation Limited	Jonathan Louch	aircraft@deucalion.com	+44 207 256 4449
(2) V2527-A5	Now - Lease				
(2) V2527-A5	Now - Sale/Lease/Exch.	Magellan Aviation Group	Bradley Hogan	bradley.hogan@magellangroup.net	+1 980.256.7120
(1) V2533-A5	Now - Lease	Engine Lease Finance	Declan Madigan	declan.madigan@elfc.com	+353 61 291717
(1) V2527E-A5	Now - Lease				
(4) V2527-A5	Now - Sale / Lease	GA Telesis		engines@gatelesis.com	
(2) V2533-A5	Now - Sale / Lease				
Aircraft and Engine Parts, Components and Misc. Equipment					
Description		Company	Contact	Email	Phone
(1) GTCP331-500B	Now - Sale / Exchange	Centaurus Services/MASB	Paul Bithavas	paul.bithavas@centaurus.services	+61 408 389 241
Trent 892B-17 Modules					
(2) GTCP331-200ER, (2) GTCP131-9A,	Now - Sale	Setna IO	David Chaimovitz	david@setnaio.com	+1-312-549-4459
(1) GTCP131-9B					
(1) A321 Enhanced Landing Gear 2020 OH					
(2) A320, (2) A330, (1) A340 Landing Gear Shipsets		GA Telesis		landinggearsales@gatelesis.com	
(1) A320 ENH NLG					
GTCP131-9A (2), GTCP131-9B(2)	Now - Lease	REVIMA APU	Olivier Hy	olivier.hy@revima-apu.com	+33(0)235563515
GTCP331-200, GTCP331-250	Now - Lease				
APS500C14(3), APS1000C12(2), APS2000	Now - Lease				
APS2300, APS3200(2), APS5000(2)	Now - Lease				
PW901A(4), PW901C(2)	Now - Sale / Lease				
TSCP700-4E	Now - Sale				
(1) RE220, (1) APS3200, (1) GTCP131-9A	Now - Sale / Lease	Magellan Aviation Group	Drew Megorden	drew.megorden@magellangroup.net	+1 704-340-0273
(1) GTCP131-9B, (1) GTCP331-500B	Now - Sale / Lease				
(1) GTCP331-500B	Now - Sale/Lease/Exch.	BBAM	Steve Zissis	info@bbam.com	+1 787 665 7039
(2) APS2300, (1) APS3200	Now - Sale / Lease	DASI	Chris Glascock	chris.glascock@dasi.com	+1 954-801-3592
((1) GTCP331-200ER, (2) RE220RJ	Now - Sale/Lease/Exch.	Regional One	Miguel Bolivar	mbolivar@RegionalOne.com	+1 954-683-1893
(2) GTCP36-150RJ					
Neutral V2500-A5 QEC Kits (2) 745K9001-64	Now - Sale	ASI Aero	Dean Morgan	deanm@asiaero.net	+1 561-771-4253
(4) GTCP131-9B, (2) GTCP131-9A		GA Telesis	Jay Meshay	apu@gatelesis.com	+1-954-849-3509
(1) GTCP331-350, (1) GTCP331-500, (2) APS3200B, (3) APS3200C					
Engine stands: CF6-80C2, CFM56-3, CFM56-5A/B/C, PW4000			Ricky Torres	stands@gatelesis.com	+1-954-676-3111
(3) APU GTC131-9B, (1) GTCP331-500B	Now - Sale / Lease	Willis Lease	Gavin Connolly	gconnolly@willislease.com	+44 1656 765 256
Engine stands now available	Now - Lease				
(2) PW901A, (1) PW901C(1), PW125B RGB	Now - Lease	Lufthansa Technik AERO Alzey	Kai Ebach	k.ebach@lhaero.com	+49-6731-497-368



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