





Weekly Aviation Headline News

WORLD NEWS

Pegasus Airlines accident leads to fatalities

Pegasus Airlines Flight 2193, a Boeing 737-800 overran the runway on landing at Istanbul Sabiha Gökçen International Airport. The fuselage broke into three segments and an engine caught fire. Three passengers were killed and 179 were injured according to local reports. Istanbul Governor Ali Yerlikaya said: "Unfortunately, the Pegasus Airlines plane couldn't hold on the runway due to poor weather conditions and skidded for around 50-60m."

Southwest to share profits with employees

Southwest Airlines announced it will share \$667 million with its employees through its profit-sharing plan for 2019, which includes a discretionary, incremental profit-sharing award for compensation from The Boeing Company related to the 2019 financial impact of the MAX groundings. This \$667 million profit sharing award is equivalent to \$1.8 million a day and is more than six weeks' pay for every eligible employee. This reward equals approximately 12.2 percent of each eligible employee's eligible compensation.

SAA announces major network shake up

As part of its latest restructuring programme, South African Airways will drop four longhaul routes including Hong Kong and Munich. Four regional routes will be dropped including Luanda and Ndola and finally the airline will axe three domestic stations including Durban. Other changes are the deployment of more fuel-efficient aircraft, changing of organisational structures and renegotiation of contracts with suppliers.



The first delivery to Qantas will be in July 2020.

Photo: Oantas

First converted A321 takes off

With first delivery heading to Qantas

Qantas Freight will be the first airline in the world to operate the A321 as a freighter aircraft. Vallair, the mature aircraft and asset specialist, has seen its prototype A321P2F (MSN835) aircraft take

off in Singapore. The inaugural flight forms part of the certification process to reach c o n v e r s i o n approval status. The A321P2F will

add nearly 50% more capacity compared to the existing fleet and is due to be delivered in July 2020.

Gregoire Lebigot, President and CEO at Vallair, foresees a growing

demand. "The A321P2F will be the first aircraft to introduce a containerised lower deck to the market segment of narrowbody freighters; a significant gamechanger for any hub and spoke

"We see a huge potential for this aircraft as a key tool for the cargo industry."

Gregoire Lebigot, President and CEO at Vallair

operation. We see a huge potential for this aircraft as a key tool for the cargo industry to achieve the projected growth rate of the air freight market in general, particularly express services

and e-commerce. Additionally, the substantial fuel efficiency advantages are well-suited to 1-4-hour flight legs.

Lebigot adds: "We have invested

in a fleet of feedstock A321 aircraft and our team continues to work with exceptional dedication to bring this programme to fruition.

We anticipate that a mature production line for conversion will settle at around 4 months and we already in negotiation with other airlines and operator/lessees,

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keen to upgrade their freighter fleets."

This A321 P2F is intended to be operated by Qantas Freight on behalf of its customer - Australia Post. Australia Post and Qantas recently agreed to an expanded domestic and international air freight agreement to support the growing demand for parcels.

The aircraft development was co-ordinated by freighter design and

conversion house EFW (a joint venture between ST Aerospace and Airbus) and the project has taken close to two years to transition from prototype to in-service aircraft.

Vallair has awarded a contract to EFW to convert a further ten A321-200 passenger aircraft over the next two years.

AIRCRAFT & ENGINE NEWS

Wright Electric begins engine development program for 186-seat electric aircraft

easyJet has welcomed the announcement by its partner Wright Electric (Wright) on its engine development program for its flagship 186-seat electric aircraft, named Wright 1. Wright is engineering electrical systems at the megawatt scale which will be necessary for commercial flight for its 186-seat electric aircraft. It is building a 1.5 MW electric motor and inverter at 3 kilovolts. These components will form the powerplant of Wright's revolutionary Wright 1 aircraft and move towards aiming to pave the way for a future of zero-emissions flight in Europe and worldwide. Wright is in discussions with BAE Systems relating to flight controls and energy management systems and intends to conduct ground tests of its motor in 2021 and flight tests in 2023. At an event the company held in New York City on January 30, Wright demonstrated a preview of its motor and fan and has also announced that it is moving its headquarters to Albany, NY to take advantage of the world-class engineering talent there. The motor development program is the next step towards building its narrow-body-class aircraft, while Wright will be simultaneously conducting

Bombardier sells two Learjet 75 Liberty aircraft



Learjet 75 Liberty

Photo: Bombardier

Bombardier has sold two Learjet 75 Liberty aircraft to North Dakota-based Fargo Jet Center (FJC). The aircraft are to be converted to dedicated medevac configuration and delivered to air ambulance service provider Lotnicze Pogotowie Ratunkowe (LPR), based in Warsaw, Poland. LPR selected the Learjet 75 Liberty aircraft, with FJC's proposed medevac interior, to serve its expanding operations. The Learjet 75 Liberty, Bombardier's newest Learjet aircraft, will enter into service this year. This spacious and powerful light jet features a next-generation flight deck and optimized operating costs, with enough range to reach any European destination nonstop out of Warsaw.







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aerodynamic tests on its fuselage, which will inform the propulsion design. The company expects entry into service of its flagship Wright 1 in 2030. A number of government agencies in the United States are aiding research by providing funding into electric aviation including NASA and Air Force Research Laboratory.

Magnetic MRO acquires four airBaltic Boeing 737s

Through a public tender, Magnetic MRO, a Total Technical Care and asset management organization, acquired four Boeing 737 Classic aircraft from airBaltic. Following the delivery from Latvia's flag carrier, all aircraft will continue their service in the fleets of new owners. Being the launch operator of Airbus A220 aircraft, airBaltic operates a fleet of 36 aircraft, including twenty-one Airbus A220s, twelve Bombardier Dash 8 Q400 NextGens, and four Boeing 737 CLs, as of December 2019. The decision to sell the Boeing 737 CL aircraft was a pre-planned move by airBaltic in order to focus on its new Airbus 220 fleet which delivers higher fuel efficiency and reduces the carbon footprint.

AeroCentury reports portfolio updates

AeroCentury, an independent aircraft leasing company, has announced three recent sales of turboprop aircraft. In December 2019, the company sold a Dash 8-300 (MSN 236) that had been on lease to Widerøe's Flyveselskap in Norway for 15 years. Widerøe is the largest regional operator serving the Nordic region, utilizing over 40 Dash 8 aircraft. In January 2020, AeroCentury sold a Saab 340BPlus aircraft (MSN 454) that was delivered to Transportes Aéreos Guatemaltecos S.A. (TAG Airlines) in Guatemala, which the airline will use to expand its Saab fleet serving the local region. Also, in January 2020, the company sold a Fokker 50 aircraft (MSN 20202) to its lessee, Skyward Express Limited, based in Nairobi, Kenya. Skyward is a long-time Fokker 50 operator, serving both scheduled and chartered passenger operations. The recently sold Saab and Fokker aircraft were the last of their respective types in the company's portfolio.

Ongoing 737 MAX grounding forces Ryanair to reconsider expansion program

Ryanair has been forced to rethink the timeline for its current expansion program. The Irish airline had hoped to be carrying up to 200 million passengers on an annual basis by 2024, but this depended on the arrival of the first deliveries of

Batik Air receives first A320neo



The first A320neo for Batik Air arrives at Soekarno-Hatta International Airport in Jakarta, Indonesia

Photo: Airbus

Batik Air, the full-service wing of Indonesia's Lion Group, has taken delivery of its first A320neo aircraft. The aircraft is the 46th Airbus aircraft in Batik Air's fleet that already includes 44 A320 Family aircraft and one A330-300. The new aircraft features 156 seats (12 business and 144 economy seats) and will be deployed by the carrier on its regional services and increase its capacity. The A320neo Family incorporates the very latest technologies including new-generation engines and Sharklets, which together will deliver at least 15% fuel savings at delivery and 20% by 2020. At the end of December 2019, the A320neo Family had received more than 7,100 firm orders from over 100 customers worldwide.

Airbus Helicopters concludes Heli-Expo 2020 with 38 orders



Airbus booth at Heli-Expo 2020

Photo: D. Bond

Airbus Helicopters concluded Heli-Expo 2020 with 38 orders, as well as 20 retrofits for the new five-bladed H145. German air rescue and ambulance provider DRF Luftrettung placed an order for 15 H145s, making them the largest operator of the H145. Show highlights included the increased power of the H125 that will enable operators to lift up to an additional 190 kg (419 lbs), Shell Aircraft confirming their interest in using the H160 for offshore transportation missions, and Metro Aviation ordering an additional 12 new EC145e helicopters. Customs and Border Protection will add 16 new H125 helicopters to their fleet, with deliveries beginning later this year from Airbus' production facility in Columbus, Miss. Another H125 order was signed with Ascent Helicopters in Western Canada. Airbus received an order for three new H135s from NASA, marking the first-time partnership between the U.S. space program and Airbus Helicopters. Tourism operator Maverick Helicopters announced it will retrofit its entire fleet of 34 EC130 B4 helicopters with the Airbus Crash Resistant Fuel System. On the support and services side, Airbus secured numerous global support contracts, including Papillon, Heliportugal, and DRF Luftrettung who extended its HCare Smart contract for another eight years.



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210 Boeing 737 MAX jets which are on order. With the 737 MAX still grounded and unlikely to receive its new FAA certification of airworthiness for upgrades to the software and internal wiring before the middle of the year, Ryanair has had to have a serious rethink about its expansion strategy. Ryanair chief executive, Michael O'Leary, said Boeing's problems could ultimately delay the plane's entry into service for the airline by two years: "What is likely is they will push out that delivery profile with Boeing by at least 12 months. At best that means we will have to roll forward our plans to fly 200 million passengers per year ... by at least 12 months, possibly 24." That would result in Ryanair reaching its 200 million passenger target in March 2026 rather than March 2024. Ryanair now expects to start taking delivery of up to eight planes a month from September this year. However, it is now currently re-examining its orders with Boeing with a view to upgrading to the larger 737 MAX 10 which has more seats and a leaner fuel burn than the 737 MAX 200. The airline reported a profit after tax of €88m (US\$97.7m) for the three months to the end of December, the third quarter of its financial year, as average fares rose by 9% and ancillary revenues – from extras such as pre-booked seating - rose by 21%.

Gulf Helicopters of Qatar becomes launch customer of AW189K helicopter



The all new AW189k helicopter

Photo: Leonardo

Leonardo has named the launch customer for the all new AW189K helicopter variant. Gulf Helicopters of Qatar, a major force in the offshore transport sector and an established AW139 and AW189 operator, will introduce the AW189K into service in the second half of 2020. The AW189 has already demonstrated it is one of the company's most successful models through its sales, deliveries and flight hours. Powered by a pair of latest-generation Safran Helicopter Engines' Aneto-1K 2,500 shp class turboshafts, the AW189K offers the market a further option for efficient long-range, high-endurance and large-capacity operations with lower operating costs compared to larger, heavier types.

SkyWest signs contract for 20 Embraer E175 jets



SkyWest will operate 20 new E-Jets within the American Airlines network

Photo: Embraer

Embraer and SkyWest have signed a firm order for 20 E175 jets in a 76seat configuration. The order has a value of US\$ 972 million, based on 2019 list prices, and is already included Embraer's fourth-quarter backlog. Deliveries are expected to begin in the second half of 2020. "Embraer and SkyWest enjoy a partnership marked by a longstanding history of service to the mainline carriers, and we relish the opportunity to break new ground," said Charlie Hillis, Vice President, Marketing, Sales & North America, Embraer Commercial Aviation. "Today, we are excited to announce that these 20

new aircraft will be the first E-Jets operated by SkyWest within the American Airlines network." Embraer's relationship with SkyWest dates back to 1986, when SkyWest began operating the EMB 120 Brasilia turboprop. With this additional order for the E175, SkyWest has purchased more than 180 aircraft of this model since 2013 alone.

MRO & PRODUCTION NEWS

Pattonair's Zero-Lead-Time Agile Vending solution deployed for UMW Aerospace

Aerospace and defense supply chain provider, Pattonair, has successfully deployed its Zero-Lead-Time Agile Vending solution for UMW Aerospace at the Malaysian aerospace engine component manufacturer's site at Serendah, Selangor, which produces fan cases for the Rolls-Royce Trent 1000 engine. Agile Vending is an innovative Zero-Lead-Time product developed by Pattonair, building on its expertise in supplying C-class parts, to optimize efficiency and reduce operational disruption and downtime. Pattonair has a strategic relationship with UMW Aerospace under a five-year agreement signed in 2016 for supply chain services. The introduction of Agile Vending is part of a key service development focusing on innovation and technology for site-based inventory. Agile Vending can be customized to each user's requirement with optional levels of automation. The UMW system is connected via an Intelligent Inventory Management System to provide real-time inventory allocation and replenishment.

TP Aerospace Technics moves into new facility in Orlando

During the end of 2019, TP Aerospace moved into a brand-new facility of MRO services and warehousing in Orlando, Florida. The new 60,000 ft² facility is conveniently located only six miles from Orlando International Airport and like all TP Aerospace MRO workshops, it has been installed with new machinery specific to repairing and overhauling airlines wheels and brakes. The facility is modern with an open layout for easy configurability to meet ever-changing customer demands. The facility received approval to operate from the city of Orlando in December 2019 while finalizing the driveway construction and landscaping are still underway. After receiving final approvals from the FAA, the facility is now officially open for business.

Willis Lease Finance and key industry partners launch MRO Blockchain Alliance

Key industry partners have come together to launch the MRO Blockchain Alliance, the air transport sector's first industry-wide investigation into the use of blockchain to trace, track and record aircraft parts. The new alliance is made up of leading organizations covering every aspect of the commercial

Three dead as Pegasus Airlines 737 crashes in Istanbul, Turkey



Pegasus Airlines

Photo: AirTeamImages

Three passengers onboard a Pegasus Airlines Boeing 737-86J which crashed after landing in atrocious conditions at Istanbul's Sabiha Gökçen Airport have been killed. According to reports, the plane skidded for 50-60 meters beyond the end of the runway and then broke into three main sections as the topography dropped 30-40 meters. There were 183 passengers and crew on the plane, many who subsequently required medical attention at one of 18 nearby hospitals, according to the governor of Istanbul, Ali Yerlikaya. He also told reporters that: "The plane could not hold on the runway due to poor weather conditions and skidded for around 50-60 metres." At one point the fire broke out in the aircraft but this was efficiently extinguished by fire crews in attendance. The plane was an internal domestic flight from the western Turkish province of İzmir and, after the crash on Wednesday all further flights to and from the airport were canceled.

GKN Aerospace signs EWIS contract for Boeing 777X wiring



GKN Fokker Elmo to supply electrical wiring interconnection systems (EWIS) for the new Boeing 777X family Photo: Fokker

GKN Fokker Elmo has signed a contract to supply electrical wiring interconnection systems (EWIS) for the new Boeing 777X family. Production will start at the end of the first quarter 2020. The 777X EWIS will be delivered out of a number of strategic global locations, such as China, the Netherlands, and the new state-of-the-art wiring facility in Pune, India. GKN Fokker Elmo has supplied EWIS to Boeing for more than a decade for the 777, 737 and P-8A. The new contract reaffirms GKN Fokker Elmo's position as a strategic EWIS supplier to Boeing.

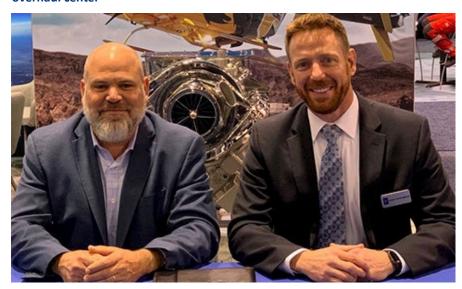
MRO & PRODUCTION NEWS

aviation maintenance, repair and overhaul (MRO) chain, from parts manufacturing and repairs to logistics and smart contracts. The alliance members so far include Bolloré Logistics, Cathay Pacific, FLYdocs, HAECO Group, Ramco Systems, SAFRAN, SITA and Willis Lease Finance Corporation, all supported by Clyde & Co. "In order to build a valuable product utilizing blockchain technology, we will need the industry leaders, represented in this alliance, to lend their respective expertise and to build upon the work already completed by Willis Lease Finance Corporation and FLYdocs in this field," explained Austin Willis, Senior Vice President, Business Development, Willis Lease Finance Corporation. In the coming months, the alliance will launch a proof of concept to explore how it can use blockchain to digitally track and record the movement and maintenance history of parts across a wide number of players. These include airlines, lessors, original equipment manufacturers (OEMs), logistics suppliers and maintenance providers. The MRO industry processes 25 billion parts every year, while adding three billion new parts each year. There are 20,000 suppliers, covering 144,000 flights every day for an overall industry market representing around \$100 billion per year. The alliance will spend the next six months in a continued planning phase, with the aim of going live with the first proof of concept in the third guarter of 2020.

AEI receives order for two MD-83SF freighter conversions for Aeronaves TSM

Aeronautical Engineers, Inc. (AEI) has signed a contract to provide Saltillo, Mexicobased Aeronaves T.S.M. S.A. de C.V. (TSM) with two additional AEI MD-83SF freighter conversions. The first MD-83 (MSN 49945) will commence modification in March 2020, followed by the second MD-83 modification beginning in November 2020. Touch labor for both modifications will be performed by Commercial Jet's Miami, Florida facility, which is an authorized AEI Conversion Center. These two additional MD-83SF freighters will represent the 13th and 14th AEI MD-80SF series freighters in the TSM fleet. TSM currently operates 11 AEI MD-80SF series freighters and is AEI's largest operator of the platform. The 12th conversion commenced modification at the end of November 2019 and is scheduled to be re-delivered by the end of March of this year.

Rolls-Royce appoints Arrow Aviation as latest authorized maintenance repair overhaul center



David Guidry (left), General Manager, Arrow Aviation and Scott Cunningham, Rolls-Royce Director of Helicopter Services Photo: Rolls-Royce

Rolls-Royce has appointed Arrow Aviation as the newest FIRST network Authorized Maintenance Repair & Overhaul Center (AMROC). Headquartered in Broussard, Louisiana, Arrow Aviation will provide certified MRO services for M250 and RR300 engine customers. Previously, as a Rolls-Royce M250 Authorized Maintenance Center, Arrow Aviation provided comprehensive in-house component repair reworks capabilities to customers worldwide. As a new AMROC member, the team will add overhaul capabilities to its portfolio of certified services.

Bombardier to expand London Biggin Hill service center



Bombardier plans to expand its London Biggin Hill service center

Photo: Bombardier

Bombardier has announced that it will expand its London Biggin Hill service center with the construction of a new and larger facility nearing 250,000 ft² (approximately 23,225 m²) to replace its existing hangars. Scheduled to be operational by mid-2022, the new service center will provide customers in the region with extended maintenance support and reinforce Bombardier's customer service experience in Europe. The facility will provide the space and flexibility to offer a full range of maintenance and refurbishment services on Bombardier's vast portfolio of products and has the capacity to accommodate as many as 14 Global 7500 aircraft at the same time. The expansion will introduce sought-after capabilities and state-of-the-art installations, such as component painting and interior refurbishment capabilities, component repair and overhaul workshops and training rooms. The site will also ensure a quick response to its customers' repair needs with the integration of a brand-new parts depot. Over the next several years, this significant expansion will bring the facility's workforce to more than 250 employees and beyond to meet expanding demand.

MRO & PRODUCTION NEWS

StandardAero completes 3,000th GE CF34 engine MRO workscope

StandardAero has completed its 3,000th workscope on the GE Aviation CF34 turbofan engine, which is widely used on regional jet airliners around the world. StandardAero was first appointed as a GE Aviation Authorized Service Provider (ASP) for the CF34-3 and CF34-8 in 2001. The milestone 3,000th engine workscope shipped was a CF34-8C5B1 powering a CRJ700 regional jet operated by SkyWest Airlines. SkyWest, headquartered in St. George, Utah, is a longstanding customer of StandardAero, which has been supporting the airline's CF34-3 and -8 engine fleet since 2004.

Coronavirus outbreak forces Airbus to close China completion center

Airbus has announced that it has closed its completion center for the single-aisle A320 and larger A330 aircraft. The facility is located at Tianjin, 150 km from Beijing. "China domestic and worldwide travel restrictions are posing some logistical challenges. The Tianjin Final Assembly Line facility is currently closed," the European planemaker said in a statement, adding: "Airbus is constantly evaluating the situation and monitoring any potential knockon effects to production and deliveries and will try to mitigate via alternative plans where necessary." The French aerospace manufacturer Safran has also decided to close over 20 operations throughout China, which will directly affect approximately 2,500 members of staff. While Airbus has given no indication when it will resume operations in China, Safran has indicate a shutdown of its services until February 10.

Honeywell's new line of actuation systems to bring safety and maneuverability to Urban Air Mobility vehicles



Honeywell is developing a line of lighter-weight, electro-mechanical flight controls to bring agility and safety to a new breed of urban air vehicles

Photo: Honeywell

Honeywell is developing a line of lighter-weight, electro-mechanical flight controls to bring agility and safety to a new breed of urban air vehicles that can take off and land vertically. These actuators use small amounts of electricity to move control surfaces on the aircraft and are specially designed to withstand the vibrations and power requirements of urban air mobility vehicles, many of which will use multiple propellers or fans to stay aloft. The Honeywell actuators can accept hundreds of tiny adjustments and commands per second from fly-bywire computers, enabling precise navigation and allowing aircraft designers to challenge the limits of aerodynamics. "Nearly 200 companies worldwide are developing urban air mobility vehicles, which are very different from anything that's flown before and will navigate in pretty challenging urban environments," said Becky Sidelinger, President, Mechanical Systems & Components business unit, Honeywell. "These vehicles will have a significant number of takeoffs and landings in lower-altitude urban environments, where they may encounter things like unusual winds and updrafts from thermals. When navigating these challenges in a busy city, precision control is key." The Honeywell actuators use electricity to move control surfaces, eliminating the need for heavy hydraulics, cables or pushrods typically found in larger, more traditional models of aircraft. They are small but mighty — able to withstand harsh weather and the vibrations caused by multiple rotors operating together.







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FINANCIAL NEWS

Astronics reports fourth-quarter revenue and 2020 guidance

Astronics Corporation, a provider of advanced technologies for global aerospace, defense, and other mission-critical industries, has provided an update on various projects and events impacting 2019 results and expectations for 2020. The Company ended 2019 with unaudited preliminary revenue of approximately US\$198 million in the fourth quarter, slightly exceeding the high end of guidance that was issued on November 5, 2019. Preliminary bookings were US\$156 million in the fourth quarter and preliminary backlog at year-end was US\$359 million. Bookings were negatively impacted by uncertainty in the market, which the Company believes is related to the ongoing 737 MAX grounding. In addition, the Company cancelled orders of approximately US\$7 million related to the restructuring and refocusing of its antenna business. Un-audited preliminary revenue for the full year totaled approximately US\$773 million. Given the uncertain 2020 production schedule for the 737 MAX and timing of its return to service, along with the related impact on aftermarket spending by commercial airlines, the Company is rescinding its initial 2020 revenue guidance issued in November 2019. Astronics expects to issue revised revenue guidance as the outlook becomes clearer. Peter Gundermann, Astronics Chairman and CEO, said, "The ongoing 737 MAX grounding affects our business both because of the production pause and because it leaves many of our airline customers short of capacity. This makes them reluctant to take planes out of service to install the types of products they buy from us. The situation is likely to persist until the 737 MAX returns to service. We will publish revenue expectations when we have more insight on the situation. In the meantime, we have taken actions to align our cost structure, anticipating a lower level of production and an extended disruption in the market." Astronics has line fit content of approximately US\$95,000 on each 737 MAX as well as buyer-furnished equipment, such as passenger power and connectivity hardware, that varies depending on aircraft configuration.

Héroux-Devtek reports fiscal 2020 thirdquarter financial results

Héroux-Devtek has reported that consolidated sales grew 8.8% to CA\$157.3 million, up from CA\$144.5 million last year, including a 1.4% organic growth and a contribution of CA\$10.8 million by the Corporation's recent acquisitions. Commercial sales grew 11.8% from CA\$65.5 million to CA\$73.2 million, while

Panasonic Avionics signs A330-800neo IFE deal with Kuwait Airways



Kuwait Airways Airbus A330-200

Photo: AirTeamImages

Panasonic Avionics (Panasonic) will be providing inflight entertainment (IFE) for Kuwait Airways' new fleet of eight Airbus A330-800neo aircraft. Kuwait Airways will become the first airline to operate the A330-800neo aircraft, starting in the second quarter of 2020 when it joins the airline's existing fleet of Airbus A320 and Boeing 777-300ER aircraft, which are already equipped with Panasonic's X series IFE experience. With Panasonic's full HD touch screens, touch video handsets, electronic device charging facilities, both universal and USB charging and more, together with comfortable seats and space, both business- and economy-class passengers will have a pleasant experience onboard Kuwait Airways.

defense sales were up 6.3%, from CA\$79.0 million to CA\$84.1 million. Operating income increased to CA\$13.5 million, or 8.6% of sales, up from CA\$11.9 million, or 8.2% of sales last year. Adjusted EBITDA, which excludes nonrecurring items, stood at CA\$24.6 million, or 15.6% of sales, compared with CA\$22.9 million, or 15.8% of sales, a year ago. Foreign exchange fluctuations had an unfavorable net impact of CA\$1.1 million year-over-year, or 0.7% of sales. The Corporation's funded backlog increased to CA\$839 million as at December 31, 2019, compared to CA\$769 million as at September 30, 2019, mainly due to increased demand for defense products under long-term contracts. (US\$1.00 = CA\$1.33 at time of publication.)

Spirit Airlines posts fourth-quarter net income of US\$81.2 million

For the fourth quarter 2019, Spirit's total operating revenue was US\$969.8 million, an increase of 12.4% compared to the fourth quarter 2018, driven by an 18.6% increase in flight volume. Fourth-quarter 2019 revenue

includes approximately US\$7.2 million of outof-period revenue related to the reclamation of over-remitted Federal Excise Tax. Total operating revenue per available seat mile (TRASM) for the fourth guarter 2019 decreased 3.6% compared to the same period last year. Without the outof-period revenue, the Company estimates its fourth-quarter 2019 TRASM would have been down about 4.3% year-over-year. The decrease in TRASM was driven by lower operating yields, as load factor for the period was up slightly. For the fourth quarter 2019, total GAAP operating expenses increased 16.3% year over year to US\$845.2 million. Adjusted operating expenses for the fourth quarter 2019 increased 16.1% year over year to US\$840.2 million. Primary drivers of the increase in adjusted operating expense compared to the fourth quarter last year include increased flight volume and higher ground handling rates. Aircraft fuel expense increased in the fourth quarter 2019 by 6.7% year over year, due to a 14.8% increase in fuel gallons consumed, partially offset by a 7.1% decrease in fuel rates. Net income for the quarter was US\$81.2 million, compared to US\$85.0 million the previous year.

MILITARY AND DEFENCE

Boeing and U.S. Navy successfully link piloted, unmanned Growlers

Boeing and the U.S. Navy successfully flew two autonomously controlled EA-18G Growlers at Naval Air Station Patuxent River as unmanned air systems using a third Growler as a mission controller for the other two. The flights, conducted during the Navy Warfare Development Command's annual fleet experiment (FLEX) exercises, proved the effectiveness of technology allowing F/A-18 Super Hornets and EA-18G Growlers to perform combat missions with unmanned systems. "This demonstration allows Boeing and the Navy the opportunity to analyze the data collected and decide where to make investments in future technologies," said Tom Brandt, Boeing Manned-UnManned Teaming demonstration lead. "It could provide synergy with other U.S. Navy unmanned systems in development across the spectrum and in other services." Over the course of four flights, 21 demonstration missions were completed.

Airbus C295 successfully performs wet contacts as a tanker



AAR tanker flight test

Photo: Airbus/Sergio Flores

The Airbus C295 tactical airlifter has successfully achieved its first wet contacts during an air-to-air (AAR) tanker flight test campaign. First dry contacts of this flight test took place in December 2019 and were achieved using a closed ramp configuration, 100ft hose and remote vision system. The wet contacts, conducted out of Seville, Spain, took place in January 2020, between one Airbus C295 aircraft in tanker configuration and a Spanish Air Force C295 acting as receiver at flight speeds between 100-130 knots. In total the aircraft, fitted with the removable AAR kit, performed five wet contacts transferring a total 1.5 tons of fuel. Tests were conducted in daylight conditions.

IAI wins contract to manufacture wings for US Air Force's T-38 jet trainers



IAI has been producing T-38 wings since 2011

Photo: IAI

Israel Aerospace Industries (IAI) has won a US\$240 million IDIQ contract to manufacture the wings for the T-38 jet trainers used by the US Air Force. IAI has been producing high quality T-38 wings since 2011, which contributed to the large award. In service with the US Air Force since the 1960s, the T-38 jet trainers required the replacement of the wings to remain operational for the next several years. IAI met the significant technological challenge seamlessly while keeping the fleet operational. IAI is a center of excellence in the manufacturing of wings for the F-16, F- 35, and T-38.

OTHER NEWS

Ryanair Group traffic in January has grown 5% to 10.8 million passengers. Ryanair reported traffic increase of 3% in January compared to the previous year, while Laudamotion reported traffic increase of 67% compared to 2019. Ryanair achieved a January load factor of 92% and Laudamotion reported a January load factor of 91%.

Norwegian's traffic for January was down 24%, while capacity decreased 29% when compared to the previous year. Norwegian carried 1,974,606 customers in January. The planned capacity reduction and optimization of the route network continued to impact the figures positively. The punctuality for January was 87% and the load factor was 81%, up 4.8 points.

American Airlines (American) and GOL, Brazil's largest airline, have announced a new reciprocal codeshare agreement, giving customers access to 20 new destinations in South America. American will also increase service from Miami (MIA) to Rio de Janeiro (GIG), adding a second daily flight this winter. The airline also plans to provide more opportunities to bring customers to Latin America through MIA by adding 12 flights from six U.S. cities. After it is approved by authorities in the United States and Brazil, American and GOL's new codeshare will allow customers to connect seamlessly to 53 GOL flights beyond Rio de Janeiro, Sao Paulo (GRU), Brasilia (BSB), Manaus (MAO) and Fortaleza (FOR). The new codeshare destinations in South America not currently served by American include Asuncion, Paraguay (ASU); Curitiba, Brazil (CWB) and Foz do Iguaçu, Brazil (IGU), pending government approvals. American anticipates GOL's code to be placed on select flights. The relationship will allow for future frequent flyer redemption and accrual during the first half of 2020.

All Nippon Airways (ANA), Japan's largest airline and Singapore Airlines (SIA) have signed a joint venture framework agreement that would deepen the partnership between the two Star Alliance carriers. This joint venture, which is subject to regulatory approvals, aims to provide customers with more seamless flight connectivity between the two carriers and access to a wider network. It would allow ANA and SIA to further strengthen their cooperation on services between Singapore and Japan, as well as in key markets including Australia, India, Indonesia and Malaysia. Both airline groups would also be able to jointly offer customers more



Photo: Delta

Air France, KLM, Delta and Virgin Atlantic have launched their expanded joint venture offering a greater choice of routes and loyalty options when travelling between Europe, the U.K. and North America. The new partnership provides customers with more convenient flight schedules and a shared goal of ensuring a smooth and consistent travel experience, whichever airline people fly. The partnership also provides the flexibility to book flights on any of the four carriers through their respective mobile apps, websites, or via travel agents. Customers will enjoy award-winning service, top-tier premium cabin products and complimentary food, drink and seatback in-flight entertainment in all cabins on all trans-Atlantic flights. Enhanced customer benefits, starting Feb. 13, mean that loyalty program members will be able to earn and use miles or enjoy elite benefits for flights on any of the four airlines' worldwide operations, including a trans-Atlantic trip, intra-Europe hops, or domestic U.S. journey, offering more opportunities to quickly move through loyalty tiers and reach a higher status.



Lufthansa Cargo

Photo: AirTeamImages

IATA, the International Air Transport Association, has released full-year 2019 data for global air freight markets showing that demand, measured in freight ton kilometers (FTKs), fell by 3.3% compared to 2018 while capacity (AFTK) rose by 2.1%. This was the first year of declining freight volumes since 2012, and the weakest performance since the global financial crisis in 2009 (when air freight markets contracted by 9.7%). In the month of December, cargo volumes contracted 2.7% year-on-year while capacity rose 2.8%. Air cargo's performance in 2019 was dampened by weak growth in global trade of just 0.9%. The sector's under-performance was also due in particular to slowing GDP growth in manufacturing-intensive economies. Softer business and consumer confidence, along with falling export orders, also contributed to air freight struggles. There are signs that confidence and orders could pick up in 2020. It is too early to say what long-term effects will be seen from the impact of restrictions associated with combatting the coronavirus outbreak. All markets except Africa suffered volume declines in 2019. Asia-Pacific retained the largest share of FTKs, at 34.6%. The share of freight traffic increased modestly for both North America and Europe, to 24.2% and 23.7%, respectively. Middle East carriers' traffic share held steady at 13%. Africa and Latin America saw their shares lift marginally, to 1.8% and 2.8%.

OTHER NEWS

seamless access to flights in their respective route networks, a broad range of joint fare products, tie-ups between frequent flyer programs and aligned corporate programs to strengthen their proposition to corporate clients. This joint venture goes beyond the existing partnership between the two airlines that focuses on codeshare flights, mileage programs, lounge access, and coordination on check-in baggage and connecting flights. If authorized, Singapore Airlines will become the third airline joint venture partner for ANA and the first Asian airline. ANA began joint venture partnerships with United Airlines in 2011 and Lufthansa Group in 2012. Today, Singapore Airlines has joint ventures with Air New Zealand, Lufthansa Group, and SAS. In addition, SIA has also applied to form a joint venture with Malaysia Airlines Berhad

Even with the building of Heathrow's proposed third runway which will substantially increase the volume of traffic at London's principal airport, the British aviation industry has published its plans to hit its target of net-zero carbon emissions by 2050. The Sustainable Aviation coalition, which includes industry giants such as Rolls-Royce, easyJet, AirBP (the aviation offshoot of BP) and European planemaker Airbus, published the plans on Tuesday of this week (February 4). To achieve its goals, several major changes will require adoption by the aviation industry, including greater use of sustainable aviation biofuels and use of more fuel-efficient aircraft. The aviation industry, which is responsible for 7% of the U.K.s carbon emissions, expects passenger numbers to grow by 70% between now and 2050, which means many more flights. As a consequence, it sees that funding carbon offsets elsewhere could well be the solution. Carbon offset projects can involve planting trees or helping to fund renewable power projects such as wind or solar in developing countries. However, some campaigners see carbon offsetting as a way to reduce incentives to cut actual carbon emissions. The UK was the first of the G7 countries to also set a 2050 target of net-zero carbon emissions, which will ultimately require a major public rethink on the way people consume electricity and choose to travel. 2019 saw easyJet, Europe's second-largest low-cost carrier, become the first recognized airline worldwide to hit a target of net-zero carbon emissions through extensive use of carbon offsets.



Photo: Medifly

The joint research project Medifly, funded by the **German Federal Ministry for Transportation and Digital Infrastructure** (BMVI), successfully demonstrated the use of unmanned aircraft systems (UAS) for acute transportation of medical samples. A total of six drone flights were conducted between the German Armed Forces Hospital in Wandsbek-Gartenstadt and Saint Mary's Hospital in Hohenfelde, roughly five kilometers (linear distance) apart from each other. The insight gained from these

flights will lay the foundation for extended test operations over several months. The research goal of Medifly is to find out how far unmanned aircraft systems can be used to perform acute transports of medical samples in a safe and reliable manner. As the drone flights were not only conducted in a densely populated urban area, but also in the air traffic control zone of Hamburg's international airport, a large number of safety measures had to be implemented. First, evidence had to be provided that automated flights in this complex environment and above highly frequented traffic routes can be performed safely and reliably at any time. Thus, all parties involved had to invest several months of discussions and thorough planning to obtain the required flight approvals from the responsible authorities. Several renowned institutions have joined forces for the Medifly project: ZAL Center of Applied Aeronautical Research, FlyNex, GLVI Gesellschaft für Luftverkehrsinformatik and Lufthansa Technik AG. Hamburg's Authority for Economics, Transport and Innovation, as well as both hospitals involved, have joined Medifly as associate partners. Based on the insight gained from today's successful test flights, the partners intend to start an extended test flight campaign soon. This is expected to last several months in order to assess additional factors for an economically viable utilization of the UAS technology.



Photo: ATP Flight School

ATP Flight School and United Airlines have partnered to provide aspiring airline pilots with outstanding training and a direct route to a United flight deck. United and ATP's Aviate partnership is an innovative career development program that combines ATP's accelerated fixed-cost pilot training with defined milestones to advance pilots toward a rewarding career with United. Students in ATP's Airline Career Pilot Program earn pilot certification in just nine months and can apply to United Aviate early during their training. After graduating, participants in Aviate take advantage of ATP's guaranteed flight instructor job, allowing them to build flight experience and progress toward United. Once meeting the flight hour requirements, pilots first fly for a United Express carrier. Then, after satisfying Aviate program requirements, they are eligible to transition to United Airlines as a First Officer without any additional interviewing required.



INDUSTRY PEOPLE



Jessica A. Garascia

• AAR, a provider aviation services airlines and governments worldwide, has announced that Jessica A. Garascia has joined as General Counsel, effective February

Garascia succeeds Robert Regan and will report to John Holmes, President and Chief Executive Officer. She will oversee AAR's internal legal team, as well as outside counsel, and will have responsibility for all legal affairs. Garascia joins AAR from USG Corporation where she served as Deputy General Counsel responsible for overseeing all M&A activity, compliance, corporate governance, securities law and NYSE compliance.



Javier Sánchez-Prieto

• Javier Sánchez-Prieto, currently Vueling chairman chief executive. has been appointed chairman chief executive of Iberia. Marco Sansavini, currently Iberia chief commercial

officer, has been appointed chairman and chief executive of Vueling. Both Sánchez-Prieto and Sansavini will take up their new roles in late March when IAG's chief executive, Willie Walsh, stands down to be replaced by Luis Gallego, currently Iberia chairman and chief executive.



Alexander Kocksch

 Ascent Aviation Services has announced that Alexander Kocksch has joined the company Director Purchasing and Materials. In his position, Kocksch reports

directly to Dave Querio, President, responsibility for the assuming

Recommended Events



OPERATING LEASE & AVIATION FINANCE SEMINAR

24-26 March 2020 - Holiday Inn High Street Kensington, London

MANAGING TECHNICAL ASPECTS OF A LEASED ASSET & **MAINTENANCE RESERVES TRAINING SEMINAR**

21-22 April 2020 - NH Amsterdam Centre, The Netherlands

Click here for more aviation events

development, direction and coordination of the Purchasing and Materials departments. Kocksch and his team are also coordinating with the company's operations group to ensure that all opportunities are thoroughly evaluated in order to ensure the continued efficient and productive growth of Ascent operations.



Karlheinz Weimar

Karlheinz Weimar, Fraport AG's chairman of the supervisory board, will retire from his position as chairman and board member at the end of the company's next Annual General Meeting on May

26, 2020. The former finance minister of the State of Hesse cited his 70th birthday, which he celebrated on January 30, as the reason for retiring from his corporate duties. Karlheinz Weimar assumed the chairmanship of the Fraport supervisory board in 2003. He has since served as one of the three board representatives delegated by the State of Hesse - which is Fraport AG's largest shareholder, with a stake of more than 31%.



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THE AIRCRAFT AND ENGINE MARKETPLACE

Commercial Jet Aircraft

Aircraft Type	Company	Engine	MSN	Year	Available	Sale / Lease	Contact	Email	Phone
A319-100	DVB Bank	CFM56-5B63	3586	2008	Q3/2020	Lease	Jonathan Louch	aircraftsales@dvbbank.com	+44 207 256 4449
A319-100	BBAM	CFM56-5B5/P	2129	2004	May 2020	Sale / Lease	Steve Zissis	info@bbam.com	+1 415 486 6100
A319-100	BBAM	CFM56-5B5/P	1362	2000	Now	Sale / Lease	Steve Zissis	info@bbam.com	+1 415 486 6100
A319-100	BBAM	CFM56-5B5/P	2251	2004	May 2020	Sale / Lease	Steve Zissis	info@bbam.com	+1 415 486 6100
A320-200	ORIX Aviation	CFM56-5B4/P	2584	2005	Q1/2021	Sale / Lease	Oisin Riordan	oisin.riordan@orix.ie	+353 86 335 0004
A320-200	TrueAero Asset Management	V2527E-A5	5794		Nov 2020	Lease	Ed Kokoszka	ekokoszka@trueaero.com	+1 772.663.2797
A320-200	TrueAero Asset Management	V2527E-A5	5531		Oct 2020	Lease	Ed Kokoszka	ekokoszka@trueaero.com	+1 772.663.2797
A320-200	TrueAero Asset Management	V2527E-A5	5296		Aug 2020	Lease	Ed Kokoszka	ekokoszka@trueaero.com	+1 772.663.2797
A320-200	TrueAero Asset Management	V2527E-A5	5089		Jun 2020	Lease	Ed Kokoszka	ekokoszka@trueaero.com	+1 772.663.2797
A320-200	TrueAero Asset Management	V2527E-A5	5050		Apr 2020	Lease	Ed Kokoszka	ekokoszka@trueaero.com	+1 772.663.2797
A320-200	DVB Bank	V2527-A5	3734	2009	Q1/2021	Lease	Jonathan Louch	aircraftsales@dvbbank.com	+44 207 256 4449
A320-214	DVB Bank	CFM56-584/3	3767	2009	Q1/2021	Lease	Jonathan Louch	aircraftsales@dvbbank.com	+44 207 256 4449
A320-230	DVB Bank	V2527-A5	4552	2010	Q4/2020	Lease	Jonathan Louch	aircraftsales@dvbbank.com	+44 207 256 4449
A320-232	DVB Bank	V2527-A5	2156	2005	Q1/2020	Lease	Jonathan Louch	aircraftsales@dvbbank.com	+44 207 256 4449
A330-200	DVB Bank	CF6-80E	814	2007	Q2/2020	Lease	Jonathan Louch	aircraftsales@dvbbank.com	+44 207 256 4449
A330-200	GA Telesis	CF6-80E1A4	510	2002	Now	Sale	Mauro Francazi	aircraft@gatelesis.com	+1-954-676-3111
A330-200	Presidio Aircraft Leasing	CF6-80E1A3	871	2007	Now	Lease	Stephen Haire	shaire@aelfinc.com	+1 312 772 1613
A330-200	TrueAero Asset Management	CF6-80E1A4/B	882		Apr 2020	Lease	Ed Kokoszka	ekokoszka@trueaero.com	+1 772.663.2797
A330-200	TrueAero Asset Management	CF6-80E1A4/B	901		Apr 2020	Lease	Ed Kokoszka	ekokoszka@trueaero.com	+1 772.663.2797
A330-200	TrueAero Asset Management	CF6-80E1A4/B	932		May 2020	Lease	Ed Kokoszka	ekokoszka@trueaero.com	+1 772.663.2797
A330-223	Presidio Aircraft Leasing	PW4168A	970	2008	Now	Lease	Stephen Haire	shaire@aelfinc.com	+1 3127721613
A330-300	BBAM	Trent 772B-60	1544	2014	Jul 2020	Sale / Lease	Steve Zissis	info@bbam.com	+1 415 486 6100
A330-300	BBAM	Trent 772B-60	1562	2014	Sep 2020	Sale / Lease	Steve Zissis	info@bbam.com	+1 415 486 6100
A330-300	DVB Bank	Trent 772B-60	1485	2014	Q1/2020	Sale / Lease	Jonathan Louch	aircraftsales@dvbbank.com	+44 207 256 4449
B737-700	Kellstrom Aerospace	CFM56-7B26	28210	1998	Now	Sale	Michael Garcia	info@kellstromaerospace.com	+1 (847) 233-5800
B737-800	ORIX Aviation	CFM56-7B26E	38034	2012	Q4/2020	Sale / Lease	Oisin Riordan	oisin.riordan@orix.ie	+353 86 335 0004
B737-800	ORIX Aviation	CFM56-7B26	34153	2005	Q1/2021	Sale / Lease	Oisin Riordan	oisin.riordan@orix.ie	+353 86 335 0004
B737-800	Willis Lease				soon	Sale / Lease	Nick Pittler	willisassetsales@willislease.com	+1 (415) 408-4775
737-900	BBAM	CFM56-7B26/3	34953	2007	Dec 2020	Sale / Lease	Steve Zissis	info@bbam.com	+1 415 486 6100
B757-223 (7x)	Jetran	RB211-535E4B	various	91/92	Now	Lease	Nick Blowers	blowers@jetran.aero	+1 (210) 269 3471
(2) B787-800	Willis Lease	CFM56-7			soon	Sale / Lease	Nick Pittler	willisassetsales@willislease.com	+1 (415) 408-4775
B777-300ER	DVB Bank	GE90-115B	37705	2009	Q1/2021	Sale / Lease	Jonathan Louch	aircraftsales@dvbbank.com	+44 207 256 4449

Regional Jet / Turboprop Aircraft

Aircraft Type	Company	Engine	MSN	Year	Available	Sale / Lease	Contact	Email	Phone
CRJ-200LR	Regional One	CF34-3B1	8062	2006	Now	Sale / Lease	Andre Boudreaux	Aboudreaux@regionalone.com	+1(305) 759-0670 Ext.164
CRJ-700	Regional One	CF34-8C5B1	10205	2005	Now	Sale / Lease	Andre Boudreaux	Aboudreaux@regionalone.com	+1(305) 759-0670 Ext.164
D0328 Jet	Regional One	PW306B	3185	2001	Now	Sale / Lease	Andre Boudreaux	Aboudreaux@regionalone.com	+1(305) 759-0670 Ext.164
Do328-100	Jetran	PW119B	3049	1996	Now	Sale	Nick Blowers	blowers@jetran.aero	+1 (210) 269 3471
Do328-110	Jetran	PW119B	3024	1994	Now	Sale	Nick Blowers	blowers@jetran.aero	+1 (210) 269 3471
Do328-110	Jetran	PW119B	3034	1995	Now	Sale	Nick Blowers	blowers@jetran.aero	+1 (210) 269 3471
ERJ170-100LR	Regional One	CF34-8E5	17000123	2006	Nov 2019	Sale / Lease	Andre Boudreaux	Aboudreaux@regionalone.com	+1(305) 759-0670 Ext.164











Regional J	let / Turb	oprop A	ircraft (cont.)
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_	Jet / Turboprop A		MCN	Vaan	Avellable	Cala / Lasas	Comtact	Email	Dhana
Aircraft Type	Regional One	Engine	MSN	Year	Available	Sale / Lease	Andre Boudreaux	Email Aboutroous@regionelene.com	Phone +1(305) 759-0670 Ext.164
ERJ-145LR ERJ-145LR	Regional One	AE3007A1 AE3007A1	145304	2001	Now	Sale / Lease	Andre Boudreaux Andre Boudreaux	Aboudreaux@regionalone.com Aboudreaux@regionalone.com	+1(305) 759-0670 Ext.164
	cial Engines	7120007711	140001	2000	14011	Ouic / Loude	/ mare Bodarodax	, would out the first out to the first o	
Multiple Types		Sale / Lease		Comp	anv		Contact	Email	Phone
Multiple Engines GE / CFM / RB211		Now - Sale / Leas			GECAS Engine Leasing		Sherry Riley	engine.leasing@gecas.com	+1(513)782-4272
AE3007 Engines		Sale / Lease			Company		Contact	Email	Phone
(3) AE3007A1P		Now - Sale/Lease					Miguel Bolivar	mbolivar@RegionalOne.com	+1 786-623-3936
(1) AE3007A1			Now - Sale/Lease/Exch.		Regional One Rolls-Royce & Partners Finance		Ben Ferguson	Benjamin.ferguson@rolls-royce.com	+44 7807 969 372
CF34 Engines		Sale / Lease			Company		Contact	Email	Phone
		Now - Lease			insa Technik	ΔERO Δlzev	Kai Ebach	k.ebach@lhaero.com	+49-6731-497-368
CF34-8E5 CF34-10E		Now - Lease		Luitila	ilisa recillik i	ALITO Alzey	Nai Ebacii		143-0731-437-300
CF34-8C		Now - Lease							
CF34-3B1		Now - Sale							
CF34-3A		Now - Sale / Leas	•						
(2) CF34-8C5B	4	Now - Sale / Leas		Domini	nal One		Miguel Bolivar	mhaliyar@DagianalOna aam	+1 (786)-623-3936
(1) CF34-3B1	1	Now - Sale / Leas		Regio	nai One		wiguer Bolivar	mbolivar@RegionalOne.com	+1 (780)-023-3930
			e	Willia	Lease		Januifar Marriam	laccing@willialacca.com	
(3) CF34-10E			Now - Lease			Drawn.	Jennifer Merriam	leasing@willislease.com	+1 (561) 349-8950
	(1) CF34-8E5A1		Jan 2020 - Lease		Magellan Aviation Group		Bill Polyi	bill.polyi@magellangroup.net	+1 (704) 504 9204x202
(1) CF34-8C5A		Jan 2020 - Lease							
(1) CF34-10E6		Now - Lease	Now - Sale / Lease		Engine Lease Finance GECAS Engine Leasing		Declan Madigan	declan.madigan@elfc.com	+353 61 291717
CF34-8E(s)					Company		Sherry Riley	engine.leasing@gecas.com	+1 (513) 782-4272
CF6 Engines		Sale / Lease			GA Telesis		Contact	Email	Phone
(1) CF6-80C2B		Now - Sale / Leas		GA 16	elesis		Eddo Wiejer	ewiejer@gatelesis.com	+1-954-676-3111
(1) CF6-80C2B		Now - Sale / Leas							
(1) CF6-80C2B		Now - Sale / Leas							
(1) CF6-80E1A		Now - Sale / Leas							
(1) CF6-80C2A		Now – Sale /Leas		ULS A	Airlines Cargo		Cem AKIN	cem.akin@ulsairlines.com	+90 212 496 0202
(1) CF6-80C2A		Feb 2020 – Sale /							
(1) CFM56-5C4		Mar 2020 - Sale /	Lease	Castle	elake		Stuart MacGregor	stuart.macgregor@castlelake.com	+442071906138
(1) CF6-80C2B	1F	Now - Lease		TrueAero Asset Management			Ed Kokoszka	ekokoszka@trueaero.com	+1 772 925 8032
CFM Engines		Sale / Lease		Comp	any		Contact	Email	Phone
(2) CFM56-5B	(all thrust levels)	Now - Sale / Leas	е	Contra	ail Aviation		Kevin Milligan	kevin@contrail.com	+1 949-933-0797
(2) CFM56-7B	(all thrust levels)								
(3) CFM56-7B2	24/3	Now - Lease		Willis	Lease		Jennifer Merriam	leasing@willislease.com	+1 (561) 349-8950
(1) CFM56-5B4	1/3	Now - Lease							
(1) CFM56-5B6	6/P	Now - Lease							
(1) CFM56-5B4	I/P	Now - Lease							
(1) CFM56-7B2	22/3	Now - Lease							
(2) CFM56-7B2	24E	Now - Lease							
(1) CFM56-7B2	27	Now - Lease							







THE AIRCRAFT AND ENGINE MARKETPLACE

Commercial Engines (cont.)					
(2) CFM56-5A	Now - Sale	GECAS Engine Leasing	Sherry Riley	engine.leasing@gecas.com	+1(513)782-4272
(1) CFM56-5B3/3	Now - Lease	Rolls-Royce & Partners Finance	Charlie Ferguson	charlie.ferguson@rolls-royce.com	+44-(0)7772224895
(2) CFM56-7B22	Now - Sale	CFM Materials	Jimmy Hill	jimmy.hill@cfmmaterials.com	+1 -214-988-6670
(1) CFM56-7B26/E	Now - Lease	Engine Lease Finance	Declan Madigan	declan.madigan@elfc.com	+353 61 291717
(1) CFM56-7B26	Now - Lease				
(1) CFM56-7B24/E	Now - Lease				
(1) CFM56-5B3/3	Now - Lease				
(1) CFM56-5B4/3	Now - Lease				
(2) CFM56-7B22	Now - Sale / Lease	GA Telesis	Eddo Wiejer	ewiejer@gatelesis.com	+1-954-676-3111
(2) CFM56-5B6	Now - Sale / Lease				
(2) CFM56-5B4/P	Now - Lease	TrueAero Asset Management	Ed Kokoszka	ekokoszka@trueaero.com	+1 772 925 8032
(2) CFM56-7B26/27	Now - Lease	Magellan Aviation Group	Bill Polyi	bill.polyi@magellangroup.net	+1 (704) 504 9204 x202
(2) CFM56-5B6/P	Now - Lease				
(1) CFM56-5B4/P	Now - Lease				
JT8D and JT9D Engines	Sale / Lease	Company	Contact	Email	Phone
(1) JT8D-219	Now - Sale	AZURE RESOURCES INC.	Jeff Young	jeff@azureres.com	1-954-249-7935
GE90 Engines	Sale / Lease	Company	Contact	Email	Phone
(1) GE90-115B	Now - Lease	Willis Lease	Jennifer Merriam	leasing@willislease.com	+1 (561) 349-8950
(2) GE90-115	Now - Lease	TrueAero Asset Management	Ed Kokoszka	ekokoszka@trueaero.com	+1 772 925 8032
(1) GE90-115BL (Propulsor)	Now - Lease	Engine Lease Finance	Declan Madigan	declan.madigan@elfc.com	+353 61 291717
GEnx Engines	Sale / Lease	Company	Contact	Email	Phone
(1) GEnx1B74/75 Propulsor	Jan 2020 - Lease	Willis Lease	Jennifer Merriam	leasing@willislease.com	+1 (561) 349-8950
LEAP Engines	Sale / Lease	Company	Contact	Email	Phone
(2) LEAP-1B28	Now - Lease	Willis Lease	Jennifer Merriam	leasing@willislease.com	+1 (561) 349-8950
(1) LEAP-1A33	Mar 2020 - Lease				11 (001) 010 0000
(1) LEAP-1A32	Now - Lease	Engine Lease Finance	Declan Madigan	declan.madigan@elfc.com	+353 61 291717
(1) LEAP1A-32	Now - Lease	Rolls-Royce & Partners Finance	Charlie Ferguson	charlie.ferguson@rolls-royce.com	+44-(0)7772224895
PW 4000 Engines	Sale / Lease	Company	Contact	Email	Phone
(1) PW4056-1C	Now - Sale / Lease	GA Telesis	Eddo Wiejer	ewiejer@gatelesis.com	+1-954-676-3111
PW Small Engines	Sale / Lease	Company	Contact	Email	Phone
(3) PW121	Now - Sale / Lease	Magellan Aviation Group	Bill Polyi	bill.polyi@magellangroup.net	
(1) PW123B/E	Now - Sale / Lease	Wagellan Aviation Group	Bill Folyi	biii.poryi@mageiiangroup.net	+1 (704) 504 9204 x202
(3) PW127E/F/M	Now - Sale / Lease				
(1) PW150A	Now - Sale / Lease	Marille I	D 11D 11		. 1 (501) 010 0050
(2) PW123	Now - Sale/Lease/Exch.	Willis Lease	David Desaulniers	leasing@willislease.com	+1 (561) 349-8950
(2) PW150A	Now - Sale/Lease/Exch.				
(2) PW127M	Now - Sale/Lease/Exch.			Ir shook @lhoore som	
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 Now - Lease				
PW127F PW150A					
	Now - Lease				
PW150A	Now - Lease Now - Lease				
PW150A PW127M PW150A RGB	Now - Lease Now - Lease Now - Lease	Logix Aero	Jean-Christian Morin	jcmorin@logix.aero	+33.6.4782.4262
PW150A PW127M PW150A RGB (1) PW124B	Now - Lease Now - Lease Now - Lease Now - Lease	Logix Aero	Jean-Christian Morin Remi Krys	jcmorin@logix.aero rkrys@logix.aero	
PW150A PW127M PW150A RGB (1) PW124B (2) PW127E/F	Now - Lease Now - Lease Now - Lease Now - Lease Now - Sale/Lease/Exch.	Logix Aero			
PW150A PW127M PW150A RGB	Now - Lease Now - Lease Now - Lease Now - Lease Now - Sale/Lease/Exch. Now - Sale/Lease/Exch.	Logix.Aero			
PW150A PW127M PW150A RGB (1) PW124B (2) PW127E/F (4) PW127M (1) PW118	Now - Lease Now - Lease Now - Lease Now - Lease Now - Sale/Lease/Exch. Now - Sale/Lease/Exch. Now - Sale/Lease/Exch. Now - Lease / Exchange	Logix Aero			
PW150A PW127M PW150A RGB (1) PW124B (2) PW127E/F (4) PW127M (1) PW118 (1) PW118A	Now - Lease Now - Lease Now - Lease Now - Lease Now - Sale/Lease/Exch. Now - Sale/Lease/Exch. Now - Sale/Lease/Exch. Now - Lease / Exchange Now - Lease / Exchange	Logix Aero			
PW150A PW127M PW150A RGB (1) PW124B (2) PW127E/F (4) PW127M (1) PW118 (1) PW118A (1) PW119B	Now - Lease Now - Lease Now - Lease Now - Lease Now - Sale/Lease/Exch. Now - Sale/Lease/Exch. Now - Sale/Lease/Exch. Now - Lease / Exchange Now - Lease / Exchange Now - Lease / Exchange	Logix Aero			
PW150A PW127M PW150A RGB (1) PW124B (2) PW127E/F (4) PW127M (1) PW118 (1) PW118A (1) PW119B (1) PW121	Now - Lease Now - Lease Now - Lease Now - Lease Now - Sale/Lease/Exch. Now - Sale/Lease/Exch. Now - Sale/Lease/Exch. Now - Lease / Exchange Now - Lease / Exchange Now - Lease / Exchange	Logix Aero			
PW150A PW127M PW150A RGB (1) PW124B (2) PW127E/F (4) PW127M (1) PW118 (1) PW118A (1) PW119B (1) PW121 (1) PW121A	Now - Lease Now - Lease Now - Lease Now - Lease Now - Sale/Lease/Exch. Now - Sale/Lease/Exch. Now - Sale/Lease/Exch. Now - Lease / Exchange	Logix Aero			+33.6.4782.4262 +33.6.2079.1039
PW150A PW127M PW150A RGB (1) PW124B (2) PW127E/F (4) PW127M (1) PW118 (1) PW118A (1) PW119B (1) PW121	Now - Lease Now - Lease Now - Lease Now - Lease Now - Sale/Lease/Exch. Now - Sale/Lease/Exch. Now - Sale/Lease/Exch. Now - Lease / Exchange Now - Lease / Exchange Now - Lease / Exchange	Logix.Aero Royal Aero			



Commercial Engines (cont.)

PW Small Engines	Sale / Lease	Company	Contact	Email	Phone
(1) PW120A	Now - Sale / Lease	Regional One	Miguel Bolivar	mbolivar@RegionalOne.com	+1 (786)-623-3936
(1) PW120	Now - Sale/Lease/Exch.				
(1) PW123E	Now - Sale/Lease/Exch.				
(4) PW126	Now - Sale/Lease/Exch.				
(1) PW121	Now - Sale/Lease/Exch.				
Trent Engines	Sale / Lease	Company	Contact	Email	Phone
(1) Trent 772B	Now - Sale/Lease/Exch.	Rolls-Royce & Partners Finance	Ben Ferguson	Benjamin.ferguson@rolls-royce.com	+44 7807 969 372
(2) Trent 772B-60	Jul 2020 - Sale / Lease	BBAM	Steve Zissis	info@bbam.com	+1 415 486 6100
V2500 Engines	Sale / Lease	Company	Contact	Email	Phone
(2) V2533-A5	Now - Sale/Lease/Exch.	Rolls-Royce & Partners Finance	Ben Ferguson	Benjamin.ferguson@rolls-royce.com	+44 7807 969 372
(2) V2533-A5	Now - Lease	Willis Lease	Jennifer Merriam	leasing@willislease.com	+1 (561) 349-8950
(1) V2527-A5	Now - Lease				
(2) V2527-A5	Jan 2020 - Sale / Lease	Magellan Aviation Group	Bill Polyi	bill.polyi@magellangroup.net	+1 (704) 504 9204 x202
(1) V2527-A5	Now - Lease	Engine Lease Finance	Declan Madigan	declan.madigan@elfc.com	+353 61 291717
(1) V2533-A5	Now - Lease				
(1) V2527-A5	Now - Sale / Lease	GA Telesis	Eddo Wiejer	ewiejer@gatelesis.com	+1-954-676-3111
(1) V2533-A5	Now - Lease	TrueAero Asset Management	Ed Kokoszka	ekokoszka@trueaero.com	+1 772 925 8032
(1) V2527-A5	Now - Lease				
Aircraft and Engine Parts, Co	omponents and Mis	sc. Equipment			
Description		Company	Contact	Email	Phone
(1) A320-200 Landing Gear	Now - Sale/Lease/Exch.	TrueAero, LLC	Matt Parker	mparker@trueaero.com	+1 469-607-6110
A340-300/A330 Landing Gear	Now - Sale/Lease/Exch.			· -	
A340-600 Landing Gear	Now - Sale/Lease/Exch.				
B777-200 Landing Gear	Now - Sale/Lease/Exch.				
Trent 552 Inlet Cowls & Fan Cowls	Now - Sale/Lease/Exch.				
Trent 892 Inlet Cowls and Fan Cowls	Now - Sale/Lease/Exch.				
CFM56-5B Inlet Cowls and Fan Cowls	Now - Sale/Lease/Exch.				
V2500-A5 Inlet Cowls & Fan Cowls	Now - Sale/Lease/Exch.				
CF6-80E Trust Reversers,Inlets & Fan Cowls	Now - Sale/Lease/Exch.				
APUs (2) APS2300	Now - Sale/Lease/Exch.				
APUs (2) GTCP331-500B, (1) APS3200	Now - Sale/Lease/Exch.				
Neutral CFM56-7B QEC Kit	Q4/2019 - Sale	CFM Materials	Michael Arellano	Michael.Arellano@cfmmaterials.com	+1-214-988-6676
767-300ER 413K, 737-300 LANDING GEAR	Now - Sale/Lease/Exch.	AZURE RESOURCES INC.	Jeff Young	jeff@azureres.com	1-954-249-7935
GTCP85-98DHF APU	Now - Sale/Lease/Exch.	AEGILE REGOGRACES INC.	Jeli Toung	jen@uzureres.com	1-554-245-7555
A320 Nose Landing Gear	Now - Sale/Lease/Exch.				
CFM56-3 LPT MODULE, REPAIRED	Now - Sale/Lease/Exch.				
CFM56-3 ENGINE STAND	Now - Lease				
(1) GTCP36-150RJ, (2) GTCP36-100M,	Now - Sale/Lease/Exch.	Regional One	Miguel Bolivar	mbolivar@RegionalOne.com	+1 (786)-623-3936
	Now - Gale/Lease/Lxcii.	Regional One	Wilguel Dollval	mbolival@regionalOne.com	11 (700)-023-3930
(1) RE220RJ, (1) PW126 RGB, (1) PW901A					
(1) APS1000-C12, (1) APS1000-C3	Now - Lease	REVIMA APU	Olivier Uv	aliuiar by@rayima any aam	122(0)225562545
GTCP131-9A (2), GTCP131-9B(2) GTCP331-200, GTCP331-250		REVINA APU	Olivier Hy	olivier.hy@revima-apu.com	+33(0)235563515
	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) PW901A APU	Now - Sale	Royal Aero	Gary MacLeod	gary@royalaero.com	+44 (0)141 389 3014
Neutral V2500-A5 QEC Kits (2) 745K9001-64	Q3+Q4/2019 - Sale	ASI Aero	Dean Morgan	deanm@asiaero.net	+1 561-771-4253
(1) GTCP131-9B	Now - Sale / Lease	DASI	Chris Glascock	Chris.Glascock@dasi.com	+1 954-801-3592
(4) GTCP131-9A, (1) GTCP131-9B, (2) GTCP3		GA Telesis		apu@gatelesis.com	+1-954-676-3111
(1) GTCP331-200ER, (1) GTCP331-550, (1) AF					
GTCP131-9A, GTCP131-9B, GTCP331-350C	Now - Sale/Lease/Exch.	Logix.Aero	Jean-Christian Morin	jcmorin@logix.aero	+33.6.4782.4262
GTCP331-500B, GTCP331-200/250, APS5000			Rich Lewsley	rlewsley@logix.aero	+1 602 517 8210
APS3200, APS2300					
(1) APU GTCP331-500					
, ,	Now - Sale / Lease	Willis Lease	Jennifer Merriam	leasing@willislease.com	+1 (561) 349-8950
Engine stands now available (2) PW901A, (1) PW901C(1), PW125B RGB	Now - Sale / Lease Now - Lease Now - Lease	Willis Lease Lufthansa Technik AERO Alzey	Jennifer Merriam Kai Ebach	leasing@willislease.com k.ebach@lhaero.com	+1 (561) 349-8950