



# **Weekly Aviation Headline News**

#### **WORLD NEWS**

#### Air Astana completes A320 Neo C-Check

AVTRADER Delications

Air Astana completed its first independent C-check at its base at Almaty Airport, Kazakhstan in November 2019. Its Airbus A320neo aircraft, registration P4-KBH, delivered three years ago, was selected for this C-check. Air Astana received certification from the European Aviation Safety Agency (EASA) in October to perform this advanced level of maintenance.

#### CAE and Emirates extend partnership on Boeing 777X training suites

CAE and Emirates announced following the 2019 Dubai Airshow, the sale of two Boeing 777X full-flight simulators and associated training suites of the CAE XR Series models. The carrier also has options for four additional training suites. With orders of 126 Boeing 777X aircraft, Emirates is the biggest customer of the new upgraded 777 aircraft. CAE has won 4 out of 5 airline training programmes for the new Boeing 777X aircraft. Emirates' first brand-new Boeing 777X FFS will be delivered by the beginning of 2021.

# Vietjet to enhance safety management software

Vietjet Air of Vietnam's is to enhance aviation safety management with software from Ideagen. Coruson, Ideagen's enterprise cloud-based software, will be implemented as an organisation-wide safety, reporting and risk management solution. The software will provide Vietjet Air—which carries out 400 flights daily — with safety performance oversight across its operations, delivering detailed performance data to quickly highlight potential safety weaknesses and risks.



American is using new technologies to replace legacy passport checks.

> Photo: American

### American launches first mobile app passport scanning

New feature uses secure passport chip technology

American Airlines has said it is the first airline to offer passport chip scanning that securely transmits passport information directly from

the Near Field Communication (NFC) chip embedded in the passport. This allows its customers head directly to the gate for international without flights

having their passports rechecked by a customer service agent.

"We are continuously adding features to our app to make travel easier and worry-free for our customers," said Maya Leibman, American's Chief Information Officer. "Mobile passport scanning removes a time-consuming step,

"Mobile passport scanning removes a timeconsuming step, providing our customers with a smoother check-in experience for international flights."

Maya Leibman, American's Chief Information Officer

providing our customers with a smoother check-in experience for international flights."

Currently, customers departing on international flights who check in

on the app, have their passports rechecked at the airport. This step is required even if the customer has uploaded a photo of their passport

via the mobile app. With this new enhancement, the customer will be prompted to enter their passport information and then scan their passport with an iOS or Android device. The app

provides easy-to-follow instructions for the process.

Mobile passport scanning is the latest in a long line of new customer

Continued on page 3



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# AOG SIMPLIFIED ONE NUMBER • ONE EMAIL • ONE APP • ONE CHOICE





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features American has implemented to the airline's app to make travel easier for customers. Other recent introductions include boarding notifications, Siri shortcuts and a dark mode option. American has also rolled out additional services to improve the travel experiences, including biometric international boarding, virtual 3D aircraft tours online, a

redesigned self-service kiosk menu that simplifies the check-in process and an improved family seating approach, which ensures adults and kids under 14, when traveling together on the same reservation, are seated together.

#### AIRCRAFT & ENGINE NEWS

# Airbus A319neo with Pratt & Whitney engines receives type certification

Airbus has received EASA type certification for the A319neo with Pratt & Whitney PW1100G engines, the aircraft manufacturer has announced. The CFM-Leap engine variant has already been certified. Now the neo versions of the A319, the A320 and A321 are all certified with both engine variants.

# APOC Aviation expands portfolio with V2527-A5 engine

Innovative engine leasing, trading, aircraft component and part-out specialist, APOC Aviation has purchased a V2527-A5 engine from AerSale. The engine is now leased out to Turkish low-cost carrier, Onur Air, for the duration of its remaining green time. This is anticipated to be 36 months and it will be installed on various A320 family aircraft within the Onur Air fleet. This is the first engine deal that APOC has completed with AerSale and it was counterbalanced with AerSale's own purchase of a significant package of spare parts from APOC.

# BOC Aviation delivers second of ten Airbus A320neo aircraft to Air China

BOC Aviation has delivered the second of ten new Airbus A320neo aircraft to Air China. This aircraft is the 100<sup>th</sup> aircraft to be delivered to Air China's Southwest branch.

#### Airbus celebrates production of its 100<sup>th</sup> A220



The 100th A220 produced, destined for Riga, Latvia-based air Baltic

Photo: Airbus

At the program's headquarters in Mirabel, Canada, Airbus has celebrated the production of its 100<sup>th</sup> A220, a 149-seat A220-300 which is destined for Latvia's airBaltic. While SWISS was the launch operator for the original Bombardier CSeries in June 2016, airBaltic became the launch customer for the renamed A220 in November 2016 after Airbus acquired the CSeries from the struggling Canadian plane and train maker. Since then, airBaltic has re-ordered the A220-300 aircraft twice – bringing its firm order to 50 aircraft, making it the biggest European A220 customer. Approaching 100 A220s are in operation with six operators on four continents, while at the end of October this year, the jet had received 530 firm orders from over 20 customers across the globe.



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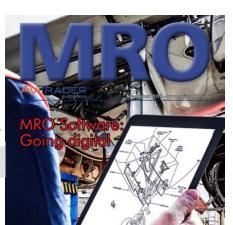
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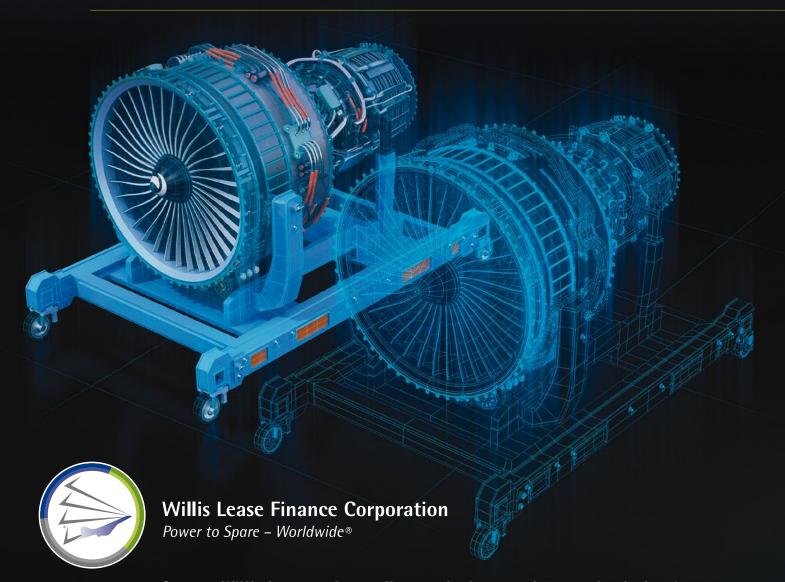
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#### Air Corsica takes delivery of first A320neo aircraft

Air Corsica, the airline company based on the Island of Corsica, has taken delivery of its first of two Airbus A320neo aircraft on lease from ICBC Leasing. With this delivery, the airline becomes the first French A320neo operator. The highly fuel-efficient singleaisle aircraft will help reduce Air Corsica's operating costs. The airline's A320neo is powered by CFM International LEAP-1A engines and is configured in a singleclass cabin layout, seating 186 passengers. The two Air Corsica A320neo aircraft will replace the older aircraft in its fleet and will operate on the airline's main domestic and European networks. Air Corsica is currently operating a fleet of six A320 aircraft.



Air Corsica becomes the first French A320neo operator

Photo: Airbus

#### United sets course for the future with order of 50 Airbus A321XLR aircraft



United Airlines orders 50 A321XRLs

Photo: Airbus

United Airlines has signed an order to purchase 50 new Airbus A321XLR aircraft, enabling the carrier to begin replacing and retiring its existing fleet of Boeing 757-200 aircraft and further meet the airline's operational needs by pairing the optimal aircraft with select transatlantic routes. The state-of-the-art aircraft, which United expects to introduce into international service in 2024, will also allow the American carrier to explore serving additional destinations in Europe from its East Coast hubs in Newark/New York and Washington. United plans to begin taking delivery of the Airbus A321XLR in 2024. Additionally, the airline will defer the delivery of its order of Airbus A350s until 2027 to better align with the carrier's operational needs.



#### China Airlines selects Pratt & Whitney GTF™ engines to power its A321neo aircraft



Contract signing between Pratt & Whitney and customer China Airlines

Photo: P&W

China Airlines has selected the Pratt & Whitney GTF™ engine to power an order of up to 30 Airbus A321neo aircraft. The initial firm order is for 25 A321neo aircraft with purchase options for an additional five aircraft and represents a combination of new aircraft purchases from Airbus and leased aircraft from ALC and CALC. Pratt & Whitney will provide China Airlines with engine maintenance through a long-term EngineWise® Comprehensive service agreement. The order announcement was commemorated with a signing ceremony hosted in Singapore with Pratt & Whitney and China Airlines representatives in attendance. "We are confident that the Pratt & Whitney GTF engines will provide our airline with the reduced noise, environmental consciousness, and fuel efficiencies we look for to support our operation to various destinations in the future," said Su-Chien Hsieh, Chairman of China Airlines.

#### **MRO & PRODUCTION NEWS**

#### Virgin Galactic places Main Oxidiser Tank into its next spaceship

Virgin Galactic has completed a major milestone in the build of the next spaceship in its fleet. The team has placed the Main Oxidiser Tank (MOT) into the fuselage - moving this vehicle a step closer to beginning its flight test program. The MOT forms part of the structure of the vehicle, connecting the forward and aft part of the spaceship. It also holds the oxidizer for the rocket motor which powers the spaceship to space. The Virgin Galactic rocket motor is a hybrid system which uses a solid fuel along with a liquid oxidizer and holds the record of being the most powerful hybrid rocket motor to be used in crewed flight. During a spaceflight, the oxidizer in the MOT allows the solid fuel to burn. "To ignite the rocket motor and burn the fuel an oxidizer is needed," explains Jose Stevens,



Main Oxidiser Tank

Photo: Virgin Galactic

Chief Engineer, Propulsion, at The Spaceship Company. "On Earth, most fuel burns using the plentiful supply of oxygen found in the atmosphere, but at very high altitudes and in space, the lack of oxygen means we have to bring an oxidizer along with us to allow the rocket motor fuel to burn and generate the required thrust." During the most recent Virgin Galactic spaceflight, the rocket motor burned for a duration of 60 seconds and created enough energy to propel the spaceship, VSS Unity, into space at almost three times the speed of sound.

#### GKN Aerospace officially opens wiring facility in India



Photo: GKN Aerospace facility

GKN Aerospace will officially open its all-new facility for Electrical Wiring Interconnection Systems (EWIS) in Pune, India, on Wednesday, December 4. The site will focus on the assembly of wiring systems for commercial aircraft and aero engines like the Airbus A320neo, Boeing 737, 777X and Boeing 787. The Pune facility will operate alongside the existing joint venture for wiring systems in Bangalore, which is serving the defense market. GKN Aerospace will create 200 jobs in 2020 growing to 800 within five years. The company will recruit a significant number of female operators and engineers and will provide on-site training for employees. A team of 30 persons has been assembled to date and the company has invested US\$10 million in the site and in its state-of-the-art equipment and technologies. The expansion to Asia is an important part of GKN Aerospace's long-term growth strategy and global operating model.

#### TELAIR and HAECO enter ten-year component services partnership in the People's Republic of China and Asia Pacific

HAECO Component Overhaul (Xiamen) has been appointed as the exclusive Authorised Repair Center in the People's Republic of China and Authorised Repair Center across Asia Pacific for TELAIR International GmbH (TELAIR) under a ten-year partnership agreement. The scope of this partnership covers full repair services for all TELAIR Power Drive Unit (PDU) and Mechanical Components on Airbus A320, A330, A330neo and A350 fleets as well as Boeing 767 and 747 fleets. Under this partnership, HAECO Component Overhaul (Xiamen) will establish a new Center of Excellence with a dedicated state-of-the-art test bench designed and approved by TELAIR and run by experienced mechanics trained by TELAIR. In addition to providing airlines and customers with a full range of test, repair and modification services under its EASA, FAA and CAAC certifications, HAECO Component Overhaul (Xiamen) will also provide technical support, logistics services and OEM warranty administration support as an Authorised Repair Center.



Photo: TELAIR and HAECO contract signing

#### **MRO & PRODUCTION NEWS**

# **C&L** Aerospace partners with Electromech Technologies

C&L Aerospace has partnered with Electromech Technologies to serve as a provider for the company's product offerings including blowers, motors, valves, and actuators for many aircraft types including Beechjet, King Air, Hawker, Premier, Learjet, Beech1900, Pilatus, and Cessna. This partnership, which includes over 70 different line items, will bring significant cost savings to operators via volume pricing to OEM quality items that are available for immediate exchange. In addition to providing the current Electromech offerings, C&L is working with Electromech to increase repair capabilities on items currently in the market to improve design, quality, and reduce lead times. These additional repair capabilities are being looked at on a per-part basis for aircraft in both the corporate and regional markets.

#### Bombardier to relocate its Global aircraft final assembly



Photo: Bombardier Global manufacturing center at Toronto International Pearson

Bombardier has signed a long-term lease agreement with the Greater Toronto Airports Authority (GTAA) to build its new state-of-the art Global manufacturing center located at Toronto Pearson International Airport. With preliminary site work underway in Mississauga and first production activities set to begin in 2023, the cutting-edge facility will optimize final assembly operations for all Global business jets, including its flagship the Global 7500 business jet. The Global manufacturing center at Toronto Pearson International Airport is approximately 20 km away from the current Global aircraft final assembly site at Downsview. "Today, I'm very excited to announce the relocation of our Global aircraft family production activities to a new, cutting-edge manufacturing facility at Toronto Pearson. This is a strategic move for Bombardier and a strong commitment to Ontario's aerospace industry. It will allow us to offer world-class career opportunities and continue fueling the economic development of the region for years to come," said Alain Bellemare, President and Chief Executive Officer, Bombardier.

#### **MRO & PRODUCTION NEWS**

## Kellstrom Aerospace completes acquisition of Airbus A320 for teardown

Kellstrom Aerospace has acquired an Airbus A320-232, MSN 1648, for teardown. The 1994 A320 aircraft was acquired from Castlelake L.P. The airframe is currently undergoing disassembly at ECube's facility in Wales, U.K. This project will support Kellstrom Aerospace's unique and innovative lifecycle solutions by supporting both Kellstrom Aerospace Asset Management division with additional short-to-mid-term lease assets and the aftermarket supply business.

# Dowty Propellers inaugurates new facility in Brockworth, England

Dowty Propellers has inaugurated its new facility in Brockworth, England to provide a modern operation for the company's development, manufacture and support of state-of-the-art propeller systems with all-composite blades. Located just outside Gloucester at Brockworth's Gloucester Business Park, this 183,000-ft<sup>2</sup> building brings together Dowty Propellers' primary resources on one site: from the full production process for its propeller systems to the company's administrative offices, design and engineering teams, as well as the Dowty Propellers Repair and Overhaul (DPRO) center - the U.K. arm of Dowty Propellers' global support network. It will incorporate technologies for the high-quality production, control, repair and in-service support of the company's propeller systems, which are used on turboprop and turboshaft engines powering regional airliners and military airlifters, along with amphibious aircraft and marine hovercraft. The Brockworth facility replaces Dowty Propellers' original headquarters and blade manufacturing facility in Gloucester that was destroyed by fire in February 2015. To enable the continuation of operations, the company purchased new production equipment and created an interim blade manufacturing facility in the Gloucestershire area at Mitcheldean. This equipment is now being transferred from Mitcheldean into the new building at Brockworth, which is to become fully operational in the first half of 2020. Additionally, the U.K. DPRO center which had previously operated at a separate location in Gloucester - will now be integrated into the new Brockworth facility, providing additional synergy with the company's design engineers, production specialists and support teams. There also are DPRO centers in Sterling, Virginia, U.S.A., and Brisbane, Australia, as well as a team of field service engineers that are deployed around the world for field repairs.

#### Spirit AeroSystems delivers first integrated 767 forward fuselage



The first integrated 767 forward fuselage

Photo: Spirit AeroSystems

Spirit AeroSystems has completed its first integrated 767 forward fuselage section for Boeing, an expanded statement of work on the Boeing platform, which serves as both a freighter and the basis for the KC-46 tanker for the U.S. Air Force. The unit is scheduled to be delivered December 4, to Boeing in Everett, Wash. Spirit has previously designed and built four separate forward fuselage end items for the 767 — the cab, lower lobe and two side panels. These were shipped by rail to Boeing for integration. With this new statement of work, Spirit will integrate the four sections into a single unit before shipping to Boeing. The 767-integration work began in October of this year in the newly opened advanced manufacturing facility on the company's Wichita, Kan., campus. The building showcases Spirit's innovative use of new technologies on production lines to improve quality and efficiency.

#### CSAT signs new base maintenance agreement with Jet2.com



Jet2.com aircraft at Prague Airport

Photo: CSAT

Czech Airlines Technics (CSAT), a subsidiary company of Prague Airport and provider of aircraft, repair and maintenance services, has entered into a base maintenance agreement with leisure airline Jet2.com. Under the contract, employees of CSAT provide Boeing 737NG aircraft base maintenance checks for the U.K. carrier, in facilities at Václav Havel Airport Prague. Czech Airlines Technics has provided one base maintenance check for Jet2.com last summer and work now continues during main maintenance season.

#### FINANCIAL NEWS

# DAE's AIS reaches milestone in third-party aircraft under management

Dubai Aerospace Enterprise (DAE) has reached a significant milestone in the growth of its managed aircraft portfolio, with current aircraft under management plus mandates to source and manage portfolios for third-party investor customers reaching US\$3.5 billion. Since announcing the DAE Aircraft Investor Services (AIS) product in January 2018, DAE has grown its managed fleet to over US\$2.5 billion today, managing four aircraft ABS securitizations as well as aircraft for several investor partners. Following the latest portfolio sale agreement announced in October, DAE's managed fleet has grown to 75 aircraft. DAE will continue to build its managed fleet as it fulfills existing mandates from investor customers, growing the managed fleet to US\$3.5 billion and well over 125 aircraft in the coming months. DAE manages its aircraft for third parties using the full capability of its global and active platform but also offers investors an investor-focused service product in the form of its AIS team which provides investors with a single point of contact dedicated to championing their interests within the wider DAE platform.

# Sir Richard Branson does U-turn and retains 51% stake in Virgin Atlantic

It was two years ago that Sir Richard Branson struck a deal to sell a 31% stake in the then vulnerable Virgin Atlantic to Air France-KLM for approximately 220 million pounds (US\$284 million) as part of a three-way venture with Delta Air Lines as Delta Air Lines already held a 49% stake in the carrier. At the time, Branson opted to relinquish his majority stake in Virgin Atlantic to protect the long-term viability of the carrier. The three carriers also struck up a potential revenue and cost-sharing joint venture and this joint venture was cleared last month by the U.S. Department of Transportation. However, in the two years since Virgin Atlantic struck its deal with Air France-KLM, Virgin Atlantic's financial situation improved considerably. With the addition of the approval of this joint venture for transatlantic flights, the financial benefits to the carrier now no longer necessitate Branson selling off his controlling stake and he has consequently pulled the plug on the deal. Virgin recently acquired Flybe Group PLC which provides vital feeder traffic, and the carrier also committed to buying 14 A330-900neo jets at the Paris Air Show this year. Commenting on the current situation with Delta Air Lines and Air France-KLM, Branson said: "We've had a fantastic 2019, with the new A350s joining the fleet, complete with a refresh of our famed onboard experience. We've continued to build a modern, fuel-efficient fleet, signing the deal at the Paris Airshow for the A330neos that will join our A350s from 2021. We've started flying to

# Pratt & Whitney invests US\$30 million in West Virginia facility for maintenance, repair and overhaul of PW800 engines



Pratt & Whitney to invest US\$30 million in West Virginia facility

Photo: P&W

Pratt & Whitney has reported a US\$30 million investment its engine services facility in Bridgeport, West Virginia for the maintenance, repair and overhaul (MRO) of PW800 engines. Specifically, the will service site the PW814GA and PW815GA engines that power the Gulfstream G500 and G600 aircraft, respectively,

the capacity to expand its capabilities to other PW800 engine models in the future. "As part of the next phase of the successful entry into service of the PW800, we have chosen the Bridgeport facility to provide MRO services for the engine family. This decision was based on the site's wealth of technical expertise in business aviation engines and its excellent record in providing quality, speed and value for our customers," said Satheeshkumar Kumarasingam, Vice President, Customer Service, Pratt & Whitney. "Adding the game-changing PW800 engine to their repertoire of business aviation engines will equip and upskill the facility with high value service engineering jobs."

#### Norwegian sells Argentinian subsidiary to JetSMART Airlines



JetSMART Airbus aircraft at Arturo Merino Benitez International Airport

Photo: AirTeamImages

Norwegian Air Shuttle has signed an agreement for the sale of 100% of its Argentinian subsidiary Norwegian Air Argentina (NAA) to JetSMART Airlines. "We're taking necessary steps to return to profitability," said acting CEO Geir Karlsen. JetSMART will assume the NAA operation with immediate effect. To minimize the impact on passengers, JetSMART will continue to operate the NAA scheduled flights from Aeroparque airport. The parties expect that the integration process will take several months, and the Norwegian brand will be phased out in the domestic Argentinian network during this period. Over the next six months, the three Boeing 737s currently operated by NAA will be replaced by JetSMART's Airbus A320 aircraft. The three Boeing 737s will return to service for Norwegian in Europe.

#### FINANCIAL NEWS

Tel Aviv, returned to Mumbai and added more and more seats out of Manchester airport. As we enter 2020, the 50th birthday year for the Virgin Group, there is more excitement ahead, with the launch of our first South American route to Sao Paulo. And as well as expanding our partnership with Delta, Air France and KLM, we'll see more red planes flying around Britain, as Virgin Connect starts flying under the Virgin brand."

#### SAS unsatisfied with full-year earnings

SAS had an unsatisfactory full year result, significantly lower than last year, due to headwinds from higher jet-fuel costs, unfavorable currency movements and a strike. Despite these challenges, SAS' customer offerings and operational efficiency improvements together with reduced market capacity, especially in the fourth quarter, led to a positive result for the full-year 2019. During the fourth quarter, the total number of passengers grew 2.3%. In addition, sales of charter capacity and attached revenues also increased. Altogether, total revenues increased over 6% to SEK13,463m. Earnings before tax and items affecting comparability also developed favorably in the quarter and ended at SEK1,226m, up SEK404m year-on-year. The improved earnings were mainly driven by increased revenues which were partially offset by higher operational expenditures from negative currency developments. Net income for the period amounted to SEK 861m (SEK 623m in 2018). The full fiscal year 2019 was characterized by significant headwinds for SAS, including higher jet-fuel costs, unfavorable FX-rates and a sevenday strike. However, strong demand shown in passenger and attached revenues led to a total revenue increase of SEK2 billion. Despite the increase, full-year earnings regrettably declined SEK 1,350m due to the negative headwinds stated above. (US\$1.00 = SEK9.49 at time of publication.)

#### MILITARY AND DEFENCE

#### Permali Gloucester contracted to protect Commando Merlin Mk4 helicopters

Permali Gloucester has been contracted by Leonardo Helicopters to supply a comprehensive ballistic protection solution for the Royal Navy's new Commando Merlin Mk4 helicopters. The requirement, valued at over £2 million (US\$2.6 million), will create and sustain skilled composite manufacturing jobs at Permali's factory in Gloucester, U.K. The Commando Merlin is an advanced battlefield helicopter designed for amphibious operations and will be tasked with delivering troops and supplies into conflict zones as well as supporting humanitarian operations.

#### **GECAS and Sculptor Capital Management close STARR 2019-2**



Photo: GECAS

GECAS and Sculptor Capital Management (Sculptor) have announced the closing of STARR 2019-2. Under the terms of the transaction, GECAS is selling twenty in-production Boeing and Airbus narrow-bodies to START III Ltd. The diversified portfolio has an average aircraft age of 8.4 years and includes aircraft currently on lease to 17 airlines in 14 countries, with a total appraised value of approximately US\$539 million. START III Ltd. is financing its acquisition through its issuance of 144A/Reg. S debt and equity. Similar to the STARR 2018-1 transaction – the first aircraft portfolio purchase to include 144A tradeable equity and a dedicated asset manager for equity investors – and STARR 2019-1, an affiliate of Sculptor will serve as an asset manager and GECAS will continue to service the portfolio.

#### Airbus Helicopters signs Global Support Contract for Tiger helicopters

Airbus Helicopters and (Organisation Conjointe de Coopération en matière d'Armement / Organisation for Joint Armament Cooperation) have signed a tri-lateral Global Support Contract aimed at boosting the availability rate of the Tigers in service the French, German. and Spanish armies. With this long-term support agreement, Tiger readiness supportability will be secured for the next decade and beyond. The contract covers critical items such as continuous



Tiger helicopter

Photo: Airbus Helicopters/Anthony Pecchi

improvement and obsolescence treatment as well as securing repair and spares capabilities with all vendors involved. In addition, it provides for the individual needs of each customer in line with their operational and deployment scenarios. For instance, in France, the agreement guarantees parts availability up to 98% and provides for the simplification of logistics as Airbus Helicopters will also directly take over the provisioning of new parts, as well as repaired parts and other expendables. At present 183 Tigers have been delivered to France, Germany, Spain, and Australia, and have accumulated over 130,000 flight hours to date.

#### **PASSENGER STATISTICS - OCTOBER**

- Ryanair Holdings has released November group traffic statistics with traffic increase of 6%, compared to the previous year. The load factor of the group was 96%.
- In November, **Finnair** carried 1,084,000 passengers, 10.6% more than in the corresponding period of 2018. The overall capacity increased in November by 9.4%. Finnair's traffic increased by 13.1% and the Passenger Load

Factor (PLF) increased year-onyear by 2.5% points to 77.1%.

• Norwegian's traffic figures for November have shown an increased unit revenue for the eighth consecutive month and was up 18% compared to the same month in the previous year. At the same time, total capacity decreased by 27% which is in line with the company's strategy and total passenger traffic decreased by 23%. The load factor was

83.0%, up by 4.2 points compared to the previous year.

- **Delta Air Lines** has reported operating performance for November 2019. Total traffic for the month increased 1.8% and capacity increased 4%, compared to the same month in 2018. The load factor declined slightly by 1.8 points to 84.0%.
- SAS' total traffic increased by 1.3% in November, while capacity

decreased 0,3% when compared to November 2018. The load factor for the month improved 0.6 points, to 70.5%.

• Hawaiian Airlines has released its system-wide traffic statistics for the month ended November 30, 2019. Hawaiian welcomed more than 912,000 guests in November 2019. Total traffic increased 4.1% on an increase of 3.6% in capacity. Load factor increased 0.5 points year-over-year to 84.6%.

#### MILITARY AND DEFENCE

Permali's ballistic solution will protect the crew and passengers against small arms fire. Following earlier work on the Merlin Mk2 & Mk3, as well as the previous Commando Sea King fleet, Permali worked closely with Leonardo Helicopters to define the requirement for the Mk4 and will supply a comprehensive package of ballistic protection panels, attachment hardware and custom storage cases. The new Commando Merlin provides a versatile lift capability with exceptional speed and range and is also equipped with an advanced Defensive Aids Suite in addition to ballistic protection. This project joins the wide range of ballistic armor solutions that Permali has supplied to armed forces and OEMs around the world for equipment operating in the Land, Sea and Air domains.

# Safran and MTU get step nearer development of NGF engine

The Future Combat Air System (FCAS) program has taken a major step forward now that Safran Aircraft Engines and MTU Aero Engines have settled the details concerning their eye-level partnership to develop the engine of the nextgeneration fighter aircraft NGF. The agreement will rely on the principles of the Letter of Intent (LOI) which were signed between the two companies in February 2019 and which specified that Safran will take the lead in engine design and integration, while MTU Aero Engines will take the lead in engine services. For Phase 1A, Safran Aircraft Engines will be the prime contractor and MTU Aero Engines the main partner for Research and Technology. The two partners also agreed on the foundation of a 50/50 joint venture that will be incorporated by the end of 2021 to manage the development, production and after-sales support activities of the new engine that will power the NGF.

#### INFORMATION TECHNOLOGY



South Korean start-up, Aero K Airlines, opts for Rusada's ENVISION software

Photo: Rusada

South Korean start-up, Aero K Airlines, has signed up for Rusada's MRO and Flight Operations software, ENVISION. Aero K is scheduled to commence passenger flights as of March 2020 serving destinations across Asia, including China, Japan and Vietnam. Aero K will use ENVISION to manage the airworthiness of its fleet and line maintenance activities as well as its human resources, finance and accounting and more, adopting seven modules in total. Rusada will begin the implementation project immediately so that everything is in place for Aero K's launch next year.

#### **OTHER NEWS**

#### The International Air Transport Association

(IATA) looks forward to the entry into force of Montreal Protocol 2014 (MP14) on January 1, 2020. MP14 enhances the capacity of states to curb the escalation in the severity and frequency of unruly behavior on board aircraft. This follows the November 26, 2019 ratification of MP14 by Nigeria, the 22nd state to do so. MP14, properly named the Protocol to Amend the Convention on Offences and Certain Other Acts Committed

on Board Aircraft, is a global treaty that strengthens the powers of states to prosecute unruly passengers. It closes a legal gap under the Tokyo Convention 1963, whereby jurisdiction over offenses committed on board international flights rests with the state where the aircraft is registered. This causes issues when unruly passengers are delivered to the authorities upon landing in foreign territories. Unruly and disruptive passenger incidents on board flights include physical assault, harassment, smoking or failing to follow crew instructions. These incidents may compromise flight safety, cause



#### OTHER NEWS

significant delays and operational disruption and adversely impact the travel experience and work environment for passengers and crew.

Fraport AG and Swissport Cargo Services Deutschland GmbH have laid the foundation stone for Swissport's new airfreight facility at Frankfurt Airport (FRA), marking another milestone in the future development of FRA as an airfreight location. The new building at CargoCity South will expand Swissport's handling capacities by almost 50%. The property meets every requirement for state-of-the-art airfreight handling. The warehouse concept includes a material handling system that allows containers and pallets to be automatically stored in and removed from the warehouse. Swissport is expanding its range of special temperature storage for customers from the pharmaceutical industry. The new cargo center will be fitted out in accordance with the strict IATA criteria and will be CEIV Pharma-certified after going into operation. The roof of the freight hall will also be home to the first large-scale photovoltaic system at Frankfurt Airport. It will generate 1,550,000 kilowatt hours of electricity yearly - an amount that would power more than 450 four-person households for an entire year. With this move, Fraport is increasing its focus on the use of independently generated renewable energy to cover the electricity requirements of its homebase airport in Frankfurt.

Panasonic Avionics Corporation (Panasonic), a market leader in in-flight entertainment and connectivity, has signed a multi-year agreement for Ku-band capacity on two multi-beam payloads on the EUTELSAT 10B satellite, due to be launched in 2022. This contract with Eutelsat Communications (Euronext Paris: ETL) will enable Panasonic to provide multiple gigahertz of new extreme throughput (XTS[1] Ku-band connectivity to airlines and their passengers flying over a wide area across Europe, Africa and the Middle East. Panasonic will continue to optimize its worldwide network and add more state-of-the-art satellite capacity in highdensity regions to ensure it can deliver very high performance everywhere its customers fly. This satellite also provides high performance over lower-density areas such as Africa. EUTELSAT 10B will be the second XTS satellite to join Panasonic's connectivity network which has been developed to meet the growing connectivity demands of airlines and their passengers and is designed to place capacity where it's most needed across the globe to meet demand.

It has been revealed that Airbus has dismissed 16 of its staff, without notice, after

Flughafen Zürich AG been elected selected bidder for the concession design, develop and operate the new Noida International Airport at Jewar in India. Under a 40-year concession, Flughafen Zürich AG will build and manage the new greenfield airport in Jewar. The new airport



will be located around 80 kilometers south of Delhi and will be fundamental to accommodate the expected flight traffic growth rates in the national capital region. The capital investments associated with the first phase is expected to amount to roughly CHF650 million (US\$657 million) during the construction period of approximately four years. The first phase will be able to accommodate around 12 million passengers per year. Besides the necessary capital investments in the infrastructure, Flughafen Zürich AG shall pay a fixed passenger fee to the state-owned authority starting on the sixth anniversary of commissioning of the new airport. Flughafen Zürich AG currently holds a 100% stake of the project. After the successful sale of its remaining shares in the airport in Bengaluru (Kempegowda International Airport) in 2017, Flughafen Zürich AG is excited to be again present in India, a focus market for the company. With the award of the concession for the new Noida International Airport, Flughafen Zürich AG will participate in the expected growth of the Indian aviation market and will implement its best practices developed in Switzerland while maintaining the local Indian values. Flughafen Zürich AG is committed to offer the highest service quality to the passengers, airlines and other involved stakeholders in the new Noida International Airport. Flughafen Zürich AG is currently involved in eight airports in Latin America. In addition to four airports in Brazil and two in Chile, the Zurich airport operator is engaged in the management and operations of the airports in Bogotá and Curaçao. Besides India, countries such as Indonesia and the Philippines are among the future focus markets.



Photo: Qatar Cargo Boeing 777 freighter

Qatar Airways Cargo has announced major expansion of services in South America. Scheduled services Brazil (VCP), Campinas, Santiago, Chile (SCL), Lima, Peru (LIM) and Bogotá, Colombia (BOG) will join the airline's global freighter network on January 16, 2020 and will be serviced by a Boeing 777 freighter. The twice-weekly flights to Bogotá from Doha will operate via Luxembourg and Miami, while the service from Bogotá to Doha will operate via Liège, offering 200 tons on each leg. The twice-weekly flights Campinas from Doha will operate via Luxembourg

with the service from Campinas to Doha, operating via Santiago, Lima, Dallas and Luxembourg, also offering 200 tons on each leg. These new destinations will commence close on the heels of the recent arrival of the airline's twenty-first brand new Boeing 777 freighter on November 25, 2019. The new freighter increased the airline's freighter fleet to 28 aircraft. Qatar Airways Cargo also has an order for five additional Boeing 777 freighters, placed at the Paris Air Show 2019, with deliveries starting from April 2020 onwards.

#### **OTHER NEWS**

a comprehensive investigation into what has been described as involvement in industrial espionage concerning military contracts for the German Armed forces (the Bundeswehr). The European aerospace giant is a major supplier of the Bundeswehr through the regular awarding of contracts to provide new airplanes and helicopters, as well as performing retrofitting services for existing equipment. In September this year Airbus advised German authorities of certain "irregularities" relating to the handling of sensitive military documentation back in the autumn of 2018. The whole matter came to light when one airbus employee questioned the company's legal and compliance department, as well as his supervisors, whether he should have been given access to a confidential document he had just received. Following this incident, an audit of some 1.5 million documents took place along with numerous staff interviews. Initially some 90 Airbus employees fell under suspicion for either illegally obtaining or possessing confidential documents, including some data on the Bundeswehr's military contracts, such as those on communication systems for the troops. Eventually, employees of the Munich-based Program Line Communications, Intelligence and Security (CIS) ended up being suspected of "misappropriation" and "abuse" of some customer documents. The Bundeswehr has confirmed it was aware of the situation and that it has taken a disciplinary measure against an unnamed person within the Armed Forces.



CAE TRAX Academy

Photo: CAE

CAE has introduced the CAE TRAX Academy, an integrated and advanced training continuum designed to deliver faster and more efficient throughput for military student pilot training. CAE also launched the CAE Sprint Virtual Reality (VR) trainer, an integral part of the CAE TRAX Academy, to enable self-paced learning in an immersive, high-fidelity virtual environment. The CAE Sprint VR trainer comes complete with virtual reality headset, haptics, physical flight controls, CAE Medallion image generator, and CAE virtual coach, in addition to leveraging CAE Rise (real-time insights and standardized evaluations) for objective grading and assessment. "Global militaries are faced with a current and growing challenge to produce pilots faster and more efficiently without impacting the quality standards that military pilot training has become known for," said Joe Armstrong, Vice President, Global Business Operations – Product & Solutions, CAE. "Today's digital technologies such as virtual reality, artificial intelligence and data analytics are enabling a new approach to pilot training that is more self-paced and tailored to student learning. As a leading training systems integrator, the CAE TRAX Academy is CAE's answer to redefining how military student pilots learn, practice and then perform on the journey to becoming a pilot."

#### **INDUSTRY PEOPLE**



Carl Davis

Aviation software company, FLYdocs, has announced another step forward in its investment towards a digital technologyenabled future with the appointment of Carl Davis as the company's

new Chief Technology Innovation Officer (CTIO). Davis brings more than 10 years of experience as a Chief Technology Officer (CTO) and was recently nominated for the Digital Innovation Award 2019 by The Federation of Small Businesses. His previous roles include the digitization of leasing and lending platforms, delivering data-driven process automation and upscaling analytics teams. Additionally, he ran the risk and fraud program at Santander Bank, was CTO of Bibby Financial Services (Verus360 division) and CTO for analytics company DC-Storm (a Rakuten acquisition).

• Deutsche Lufthansa AG's Supervisory Board has decided to realign the Executive Board of Lufthansa Group in terms of structure and staffing effective January 1, 2020. The Executive Board will be expanded to include the board-level position "Customer & Corporate Responsibility". Christina Foerster, CEO Brussels Airlines, has been appointed to the board for this task; her contract has a term of three years. In her new role, Foerster will assume responsibility for product management, the future catering interface and marketing, including responsibility for the customer loyalty program "Miles & More", among other things. Foerster will also be responsible for "Cultural Development" and will head the "Corporate Responsibility" department, making this the first time that the company's responsibility for the environment, climate and society has been represented at the board level. Going forward, Harry Hohmeister will be responsible for the coordination of network planning, revenue management, distribution and sales for all of the group's passenger

airlines as head of the "Commercial Passenger Airlines" division. Against the background of the great importance of IT, digitalization and innovation, responsibility for these topics will be bundled in a newly created department "IT, Digital & Innovation" in future, to be headed by Thorsten Dirks. The Supervisory Board has also decided to consistently structure the Executive Board according to functional criteria. As a result, "Eurowings" will no longer be managed as a separate board-level division. Eurowings has now established itself as an important division of the group and the third-largest point-to-point airline in Europe. It now flies every fourth passenger of the group. In future, the airline will be run in the same way as the group's other passenger airlines, retaining its largely independent position. Going forward, the "HR & Legal" department will be headed by Michael Niggemann, CFO of Swiss International Airlines. He was also appointed to the Executive Board for three years today. Bettina Volkens, who was previously responsible for "HR & Legal" on the Executive Board, will leave the company by



#### **INDUSTRY PEOPLE**

mutual agreement on December 31, 2019.

· In order to support its newly-created Communications & Corporate Affairs function, which will go live on January 1, 2020, Airbus has appointed a new Communications leadership team which will work together to bring the next chapter of the company to life, while ensuring business proximity, reinforcing audience centricity and growing digital, editorial and visual content capabilities. Maggie Bergsma, currently head of Communications for ATR, is appointed Head of Communications Commercial Aircraft. In the new Communications leadership team, she will join Yves Barillé, Head of Communications Helicopters, and Dirk Erat, Head of Communications Defence & Space. Philipp Encz is appointed Head of Creative Core, a newly created role in which he will lead Airbus' creative content teams and oversee group-wide internal and external communication activities. Encz joins from Siemens where he acted as Head of Financial and Corporate Media Relations. He will work closely with Bergsma, Barillé and Erat to ensure proximity and coordination with the company's three main businesses. Meanwhile, Guillaume Steuer is appointed Head of External Communications, reporting to Philipp Encz and managing Airbus' media relations, web and social media activities.



Neil Watkins

• Trenchard Aviation Group, a well-known partner in aircraft component design, manufacture, repair and on-wing maintenance, has appointed Watkins to Group Sales & Marketing

Director. The primary focus of his new role will be the development of a single sales strategy for the entire Group - comprising Aero Technics, Airbase, Servecorp, and Reheat International - and the growth of both revenue and margins. Watkins will continue to hold his current responsibilities for the oversight of Reheat International, part of the Trenchard Aviation Group and a leading provider of galley, lavatory, cabin and cockpit security equipment, maintenance and repair.

# Recommended Events event management answers



(I) Oscar Monov and J. Scott Kirby

· Having taken over the role of CEO at United Airlines (United) in September 2015, Oscar Munoz is to become Chairman of the Board of Directors and current President, J. Scott Kirby will take over Munoz' role, both new positions to take effect after the shareholder's meeting on May 20, 2020. As CEO, Munoz has been responsible for a considerable change in the fortunes of United and only on Tuesday of this week did the carrier announce its intention to acquire 50 new Airbus A321 XLR to begin replacing its ageing fleet of Boeing 757-200s at the beginning of 2024. Kirby, a highly-regarded industry leader, has played a pivotal role in enabling United's cultural transformation and successfully executing the company's strategic growth plan. Kirby was recruited to United Airlines by Munoz in August 2016, after a three-decade career in the commercial airline business.



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Commend	Jai Jel All Clait								
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
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	Q1/2020	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
A320-232	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	507	2002	Now	Sale	Kevin Ford	aircraft@gatelesis.com	+1-954-676-3111
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
A330-300	DVB Bank	Trent 772B-60	1146	2010	soon	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	DVB Bank	CFM56-7B27	28178	1999	Q4/2019	Lease	Jonathan Louch	aircraftsales@dvbbank.com	+44 207 256 4449
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	GA Telesis	CFM56-7B	33813	2004	Now	Lease	Priscilla Ang	aircraft@gatelesis.com	+1-954-676-3111
B737-800	GA Telesis	CFM56-7B	33814	2004	Now	Lease	Mauro Francazi	aircraft@gatelesis.com	+1-954-676-3111
B737-800	Willis Lease				soon	Sale / Lease	Nick Pittler	willisassetsales@willislease.com	+1 (415) 408-4775
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
Regional	Jet / Turboprop Air	craft							
Aircraft Type		Engine	MSN	Year	Available	Sale / Lease	Contact	Email	Phone
CRJ-200LR	Regional One	CF34-3B1	8062	2006	Now	Sale / Lease	Chris Furlan	cfurlan@regionalone.com	+1(305) 759-0670 Ext.164
CRJ-700	Regional One	CF34-8C5B1	10205	2005	Now	Sale / Lease	Chris Furlan	cfurlan@regionalone.com	+1(305) 759-0670 Ext.164
D0328 Jet	Regional One	PW306B	3185	2001	Now	Sale / Lease	Chris Furlan	cfurlan@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
ERJ-170LR	AerFin	CF34-8E	1700155		Now	Sale / Lease	Auvinash Narayen	Auvinash.Narayen@aerfin.com	+44 (0) 7766384581
ERJ-170LR	AerFin	CF34-8E	1700124		Now	Sale / Lease	Auvinash Narayen	Auvinash.Narayen@aerfin.com	+44 (0) 7766384581
ERJ170-100LR	Regional One	CF34-8E5	17000123	2006	Nov 2019	Sale / Lease	Chris Furlan	cfurlan@regionalone.com	+1(305) 759-0670 Ext.164
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## THE AIRCRAFT AND ENGINE MARKETPLACE

Regional .	Jet / T	urboprop	Aircraft	(cont.)
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Aircraft Type Company	Engine MSN	Year Available Sale / Lease	Contact	Email	Phone
ERJ-145LR Regional One	AE3007A1 145304	2001 Now Sale / Lease	Chris Furlan	cfurlan@regionalone.com	+1(305) 759-0670 Ext.164
ERJ-145LR Regional One	AE3007A1 145331	2000 Now Sale / Lease	Chris Furlan	cfurlan@regionalone.com	+1(305) 759-0670 Ext.164
Commercial Engines					
Multiple Types	Sale / Lease	Company	Contact	Email	Phone
Multiple Engines GE / CFM / RB211	Now - Sale / Lease	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/Exch.	Regional One	Miguel Bolivar	mbolivar@RegionalOne.com	+1 786-623-3936
(1) AE3007A1	Now - Sale/Lease/Exch.	Rolls-Royce & Partners Finance	Ben Ferguson	Benjamin.ferguson@rolls-royce.com	+44 7807 969 372
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				
CF34-3B1	Now - Sale				
CF34-3A	Now - Sale / Lease				
(2) CF34-8C5B1	Now - Sale / Lease	Regional One	Chris Furlan	cfurlan@regionalone.com	+1(305) 759-0670 Ext.164
(1) CF34-3B1	Now - Sale / Lease				
(2) CF34-10E	Now - Lease	Willis Lease	Jennifer Merriam	leasing@willislease.com	+1 (561) 349-8950
(1) CF34-8E5A1	Now - Lease	Magellan Aviation Group	Bill Polyi	bill.polyi@magellangroup.net	+1 (704) 504 9204x202
(1) CFM34-8C5A1	Oct 2019 - Lease				
(1) CF34-10E6	Now - Lease	Engine Lease Finance	Declan Madigan	declan.madigan@elfc.com	+353 61 291717
(1) CF34-10E7	Now - Lease				
CF34-8E(s)	Now - Sale / Lease	GECAS Engine Leasing	Sherry Riley	engine.leasing@gecas.com	+1 (513) 782-4272
CF6 Engines	Sale / Lease	Company	Contact	Email	Phone
(1) CF6-80C2B6F	Now - Sale / Lease	GA Telesis	Eddo Wiejer	ewiejer@gatelesis.com	+1-954-676-3111
(1) CF6-80C2B1F	Now - Sale / Lease				
(1) CF6-80C2B7F	Now - Sale / Lease				
(3) CF6-80E1A4	Now - Sale / Lease				
(1) CF6-80C2A8	Now – Sale /Lease	ULS Airlines Cargo	Cem AKIN	cem.akin@ulsairlines.com	+90 212 496 0202
(1) CF6-80C2A8	Feb 2020 - Sale /Lease				
(1) CF6-80C2B1F	Now - Lease	TrueAero Asset Management	Ed Kokoszka	ekokoszka@trueaero.com	+1 772 925 8032
CFM Engines	Sale / Lease	Company	Contact	Email	Phone
(2) CFM56-5B (all thrust levels)	Now - Sale / Lease	Contrail Aviation	Kevin Milligan	kevin@contrail.com	+1 949-933-0797
(2) CFM56-7B (all thrust levels)					
(1) CFM56-7B24	Now - Lease	Willis Lease	Jennifer Merriam	leasing@willislease.com	+1 (561) 349-8950











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(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
(1) CFM56-7B22	Now - Lease	CFM Materials	Jimmy Hill	jimmy.hill@cfmmaterials.com	+1 -214-988-6670
(1) CFM56-7B26/3	Now - Lease	Engine Lease Finance	Declan Madigan	declan.madigan@elfc.com	+353 61 291717
(1) CFM56-7B26/E	Now - Lease	g			1000 01 2011 11
(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	G/( 1010313	Eddo Wiejei	ewiejer@gatelesis.som	11-934-070-3111
(2) CFM56-5B4/P	Now - Lease	TrueAero Asset Management	Ed Kokoszka	ekokoszka@trueaero.com	+1 772 925 8032
(2) CFM56-7B26/27	Nov 2019 - Lease	Magellan Aviation Group	Bill Polyi	bill.polyi@magellangroup.net	+1 (704) 504 9204 x202
(2) CFM56-5B6/P	Now - Lease	magenari / Maderi Greap	Bill I Gryl	biii.poiyi@mageilarigroup.net	+1 (704) 304 9204 8202
(1) CFM56-5B4/P	Oct 2019 - Lease				
JT8D and JT9D Engines	Sale / Lease	Company	Contact	Email	Phone
(1) JT8D-219	Now - Sale	AZURE RESOURCES INC.			1-954-249-7935
GE90 Engines	Sale / Lease	Company	Jeff Young Contact	jeff@azureres.com Email	Phone
(1) GE90-115B		Willis Lease	Jennifer Merriam		
(2) GE90-115	Now - Lease		Ed Kokoszka	leasing@willislease.com ekokoszka@trueaero.com	+1 (561) 349-8950 +1 772 925 8032
GEnx Engines	Sale / Lease	TrueAero Asset Management			
		Company Willis Lease	Contact  Jennifer Merriam	Email	Phone
(1) GEnx1B74/75 Propulsor	Jan 2020 - Lease			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	Now - Lease		D 1 11 11		
(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	Nov 2019 - 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 (704) 504 9204 x202
(1) PW123B/E	Now - Sale / Lease				
(3) PW/127F/F/M					
(3) PW127E/F/M	Now - Sale / Lease				
(1) PW150A	Now - Sale / Lease				
(1) PW150A (3) PW123	Now - Sale / Lease  Now - Sale/Lease/Exch.	Willis Lease	David Desaulniers	leasing@willislease.com	+1 (561) 349-8950
(1) PW150A (3) PW123 (1) PW127F	Now - Sale / Lease  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.	Willis Lease	David Desaulniers	leasing@willislease.com	+1 (561) 349-8950
(1) PW150A (3) PW123 (1) PW127F (1) PW150A	Now - Sale / Lease  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.	Willis Lease	David Desaulniers	leasing@willislease.com	+1 (561) 349-8950
(1) PW150A (3) PW123 (1) PW127F (1) PW150A (3) PW127M	Now - Sale / Lease  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.				+1 (561) 349-8950
(1) PW150A (3) PW123 (1) PW127F (1) PW150A	Now - Sale / Lease  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.	Willis Lease  Lufthansa Technik AERO Alzey	David Desaulniers  Kai Ebach	leasing@willislease.com k.ebach@lhaero.com	+1 (561) 349-8950 +49-6731-497-368
(1) PW150A (3) PW123 (1) PW127F (1) PW150A (3) PW127M	Now - Sale / Lease  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.				
(1) PW150A (3) PW123 (1) PW127F (1) PW150A (3) PW127M PW119B RGB PW119B PW120A	Now - Sale / Lease  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Lease				
(1) PW150A (3) PW123 (1) PW127F (1) PW150A (3) PW127M PW119B RGB PW119B	Now - Sale / Lease  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Lease  Now - Lease				
(1) PW150A (3) PW123 (1) PW127F (1) PW150A (3) PW127M PW119B RGB PW119B PW120A	Now - Sale / Lease  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Lease  Now - Lease  Now - Lease				
(1) PW150A (3) PW123 (1) PW127F (1) PW150A (3) PW127M PW119B RGB PW119B PW120A PW121 (ATR)	Now - Sale / Lease  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Lease  Now - Lease  Now - Lease  Now - Lease				
(1) PW150A (3) PW123 (1) PW127F (1) PW150A (3) PW127M PW119B RGB PW119B PW120A PW121 (ATR) PW124B	Now - Sale / Lease  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Lease				
(1) PW150A (3) PW123 (1) PW127F (1) PW150A (3) PW127M PW119B RGB PW119B PW120A PW121 (ATR) PW124B PW123B	Now - Sale / Lease  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Lease				
(1) PW150A (3) PW123 (1) PW127F (1) PW150A (3) PW127M PW119B RGB PW119B PW120A PW121 (ATR) PW124B PW123B PW125B	Now - Sale / Lease  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Lease				
(1) PW150A (3) PW123 (1) PW127F (1) PW150A (3) PW127M PW119B RGB PW119B PW120A PW121 (ATR) PW124B PW123B PW125B PW127F	Now - Sale / Lease  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Lease				
(1) PW150A (3) PW123 (1) PW127F (1) PW150A (3) PW127M PW119B RGB PW119B PW120A PW121 (ATR) PW124B PW123B PW125B PW127F PW150A	Now - Sale / Lease  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Lease				
(1) PW150A (3) PW123 (1) PW127F (1) PW150A (3) PW127M PW119B RGB PW119B PW120A PW121 (ATR) PW124B PW123B PW125B PW127F PW150A PW150A PW127M	Now - Sale / Lease  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Lease				+49-6731-497-368
(1) PW150A (3) PW123 (1) PW127F (1) PW150A (3) PW127M PW119B RGB PW119B PW120A PW121 (ATR) PW124B PW123B PW125B PW127F PW150A PW127TM PW150A PW127TM PW150A RGB	Now - Sale / Lease  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Lease	Lufthansa Technik AERO Alzey	Kai Ebach	k.ebach@lhaero.com	+49-6731-497-368
(1) PW150A (3) PW123 (1) PW127F (1) PW150A (3) PW127M PW119B RGB PW119B PW120A PW121 (ATR) PW124B PW123B PW125B PW127F PW150A PW127M PW150A PW127M PW150A RGB (1) PW124B	Now - Sale / Lease  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Lease	Lufthansa Technik AERO Alzey	Kai Ebach  Jean-Christian Morin	k.ebach@lhaero.com  jcmorin@logix.aero	+49-6731-497-368
(1) PW150A (3) PW123 (1) PW127F (1) PW150A (3) PW127M PW119B RGB PW119B PW120A PW121 (ATR) PW124B PW123B PW125B PW127F PW150A PW127T PW150A PW127M PW150A RGB (1) PW124B (2) PW127E/F	Now - Sale / Lease  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Lease	Lufthansa Technik AERO Alzey	Kai Ebach  Jean-Christian Morin	k.ebach@lhaero.com  jcmorin@logix.aero	+49-6731-497-368
(1) PW150A (3) PW123 (1) PW127F (1) PW150A (3) PW127M PW119B RGB PW119B PW120A PW121 (ATR) PW124B PW123B PW125B PW127F PW150A PW127F PW150A PW127F PW150A RGB (1) PW124B (2) PW127F (4) PW127M	Now - Sale / Lease  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Lease  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.	Lufthansa Technik AERO Alzey	Kai Ebach  Jean-Christian Morin	k.ebach@lhaero.com  jcmorin@logix.aero	+49-6731-497-368 +49-6731-497-368 +33.6.4782.4262
(1) PW150A (3) PW123 (1) PW127F (1) PW150A (3) PW127M PW119B RGB PW119B PW120A PW121 (ATR) PW124B PW123B PW125B PW127F PW150A PW127F PW150A PW127F PW150A RGB (1) PW124B (2) PW127F/F (4) PW127M (1) PW118	Now - Sale / Lease  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Lease  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Lease / Exchange	Lufthansa Technik AERO Alzey	Kai Ebach  Jean-Christian Morin	k.ebach@lhaero.com  jcmorin@logix.aero	+49-6731-497-368
(1) PW150A (3) PW123 (1) PW127F (1) PW150A (3) PW127M PW119B RGB PW119B PW120A PW121 (ATR) PW124B PW123B PW125B PW127F PW150A PW127F PW150A PW127F (2) PW127F (4) PW127F (4) PW127M (1) PW118 (1) PW118A	Now - Sale / Lease  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Lease  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Lease / Exchange  Now - Lease / Exchange	Lufthansa Technik AERO Alzey	Kai Ebach  Jean-Christian Morin	k.ebach@lhaero.com  jcmorin@logix.aero	+49-6731-497-368
(1) PW150A (3) PW123 (1) PW127F (1) PW150A (3) PW127M PW119B RGB PW119B PW120A PW121 (ATR) PW124B PW123B PW125B PW127F PW150A PW127F PW150A PW127F (2) PW127F (4) PW127F (4) PW127M (1) PW118A (1) PW119B	Now - Sale / Lease  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Lease  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Lease / Exchange	Lufthansa Technik AERO Alzey	Kai Ebach  Jean-Christian Morin	k.ebach@lhaero.com  jcmorin@logix.aero	+49-6731-497-368
(1) PW150A (3) PW123 (1) PW127F (1) PW150A (3) PW127M PW119B RGB PW119B PW120A PW121 (ATR) PW124B PW123B PW125B PW127F PW150A PW127F PW150A PW127F (4) PW127M (1) PW124B (1) PW118A (1) PW119B (1) PW119B (1) PW121	Now - Sale / Lease  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Lease  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.  Now - Lease / Exchange  Now - Lease / Exchange	Lufthansa Technik AERO Alzey	Kai Ebach  Jean-Christian Morin	k.ebach@lhaero.com  jcmorin@logix.aero	+49-6731-497-368

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Commerc	ciai	⊏na	ines	(cont.)

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PW Small Engines	Sale / Lease	Company	Contact	Email	Phone
(1) PW120A	Now - Sale / Lease	Regional One	Chris Furlan	cfurlan@regionalone.com	+1(305) 759-0670 Ext.164
(1) PW120	Now - Sale/Lease/Exch.	· ·	Miguel Bolivar	mbolivar@RegionalOne.com	+1 (786)-623-3936
(1) PW123E	Now - Sale/Lease/Exch.		Miguel Bolivar	mbolivar@RegionalOne.com	+1 (786)-623-3936
(4) PW126	Now - Sale/Lease/Exch.		Miguel Bolivar	mbolivar@RegionalOne.com	+1 (786)-623-3936
(1) PW121	Now - Sale/Lease/Exch.		Miguel Bolivar	mbolivar@RegionalOne.com	+1 (786)-623-3936
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
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
(1) V2533-A5	Now - Lease	Willis Lease	Jennifer Merriam	leasing@willislease.com	+1 (561) 349-8950
(2) V2527-A5	Dec 2019 - Sale / Lease	Magellan Aviation Group	Bill Polyi	bill.polyi@magellangroup.net	+1 (704) 504 9204 x202
(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 Mi	sc. Equipment			
Description	ompononto ana im	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.	,			11 100 007 0110
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
		AZURE RESOURCES INC.			
767-300ER 413K, 737-300 LANDING GEAR GTCP85-98DHF APU	Now - Sale/Lease/Exch.  Now - Sale/Lease/Exch.	AZURE RESOURCES INC.	Jeff Young	jeff@azureres.com	1-954-249-7935
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
(1) RE220RJ, (1) PW126 RGB, (1) PW901A					
(1) APS1000-C12, (1) APS1000-C3					
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) 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
(multiple) APS2300, (1) GTCP331-350C	Now - Sale / Lease	AirFin	Nick Filce	Nick.Filce@aerfin.com	+44 7770 618 791
(1) GTCP36-300A, (1) GTCP131-9A				_	
(3) GTCP131-9A, (2) GTCP131-9B,		GA Telesis		apu@gatelesis.com	+1-954-676-3111
(1) GTCP331-200ER, (3) GTCP331-500, (1) PV	W901A				
GTCP131-9A, GTCP131-9B, GTCP331-350C		Logix.Aero	Jean-Christian Morin	jcmorin@logix.aero	+33.6.4782.4262
		Eogix., tero			
GTCP331-500B, GTCP331-200/250, APS5000			Rich Lewsley	rlewsley@logix.aero	+1 602 517 8210
APS3200, APS2300, GTCP85-129H					
(1) APU GTCP331-500, (1)APU GTCP131-9B	Now - Sale / Lease	Willis Lease	Jennifer Merriam	leasing@willislease.com	+1 (561) 349-8950
Engine stands now available	Now - Lease				
ENGINE STANDS: Trent 800, PW4000 112"/V2	2500	National Aero Stands		support@stands.aero	+ 1 305-558-8973
/ CFM56/ PW2000 & Bootstrap kits					
(2) PW901A, (1) PW901C(1), PW125B RGB	Now - Lease	Lufthansa Technik AERO Alzey	Kai Ebach	k.ebach@lhaero.com	+49-6731-497-368