

## Recaro Aircraft Seating debut CL6720 business class seat with Spanish-based airline Iberia

*The business class section of the A350 is furnished with thirty three-one CL6720 chairs and the Recaro PL3530 and CL3710, respectively, are completely furnished in the premium economy and economy cabins.*



Iberia is the new business class seat's debut client. Each CL6720 has sliding doors for added privacy, a 79-inch-long full-flat bed, abundant living space, and is set up in a honeymoon arrangement with electronic full-length privacy dividers for the center seats and direct aisle access. Each CL6720 is decorated in the distinctive Iberia colors and projects the seat number onto the cabin floor for additional convenience. Additionally, Recaro developed and manufactured

the Front Row Monuments for the Iberia business class cabin internally.

"The CL6720 on Iberia's A350 will take the business class experience to the next level, thanks to the seat's comfort amenities and generous living space," said Dr. Mark Hiller, CEO of Recaro Aircraft Seating and Recaro Holding. "Our partnership with Iberia has created a unique product that will serve passengers for many years to come while keeping carbon emissions and mainte-

nance costs low," he further added.

The CL6720, a Special Mention winner at the 2021 Focus Open Awards, was dubbed a "mini-suite in the sky" when it was first presented in 2020. The CL6720 is one of the lightest business-class chairs on the market thanks to its lightweight construction, which also supports Recaro and Iberia's sustainability goals. Additionally, the CL6720 is made to allow people with limited mobility to enter and exit the seat in a dignified manner.

"Recaro has been a perfect partner in elevating our customers' travel experience with greater privacy, comfort, warmth, and more space for personal items. A significant improvement in our on-board that our customers are already valuing very positively," said Javier Sánchez-Prieto, CEO of Iberia.

Iberia, the national carrier of Spain and a member of the Iberia Group, was founded in Madrid in 1927. On its 156 aircraft fleet, the company transports 25 million passengers yearly between more than 130 destinations in 42 countries ■

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# Panasonic Avionics boosts India presence with latest software design center

*The new Panasonic Avionics center will focus on developing cutting-edge software solutions to enhance the passenger experience and support airline operations.*



**P**anasonic Avionics Corporation, a leading provider of inflight entertainment and communication solutions, has announced the establishment of new software engineering capabilities based in Pune, India. The new center will focus on developing cutting-edge software solutions to enhance the passenger experience and support airline operations.

The Pune center is set to become a key hub for software engineering, with a team of highly skilled engineers tasked with developing innovative and efficient software solutions. With an emphasis on innovation and collaboration, the center will work closely with Panasonic Avionics' existing engineering teams to develop new products and services that meet the needs of the airline industry.

Satyen Yadav, Chief Technology Officer, Panasonic Avionics Corporation, said, "It's an incredibly exciting time in our industry as our airline partners are looking to enhance the travel journey

in new and exciting ways. As a trusted partner to the world's leading airlines, our goal is to unlock the potential of IFEC with solutions that give airlines the same flexibility they enjoy with their web and mobile solutions so that they can maximize their net promoter score (NPS), increase customer loyalty, drive revenue, and optimize their operational efficiencies."

The decision to establish the new center in Pune was based on several factors, including the region's growing reputation as a hub for technology innovation and software engineering. With a strong pool of talented software engineers, Pune is ideally placed to support Panasonic Avionics' mission to deliver cutting-edge software solutions that enhance the passenger experience.

Panasonic Avionics has a long history of developing industry-leading inflight entertainment and communication solutions. With a focus on delivering the latest technology and innovation, the company has become a key partner to airlines around the world, providing inflight solutions that enhance the passenger experience and improve operational efficiency.

Satyen Yadav, Chief Technology Officer, Panasonic Avionics Corporation, said, "We are excited to complement the excellent work of our US-based teams with the development and growth of our new capabilities in India. This

combined group of skilled engineers is enabling us to grow and future-proof our software development capabilities and ensure the highest levels of reliability in our systems. This new expertise in India is already delivering a wide range of software-related services – everything from new OS platforms, mobile apps, interactive software, cloud and data engineering to automation and software architecture design."

The establishment of the new center in Pune is part of a wider strategy by Panasonic Avionics to expand its global reach and deliver the latest software solutions to airlines around the world. By leveraging the expertise and experience of its new team in Pune, the company will be able to develop innovative software solutions that meet the needs of the rapidly evolving airline industry.

In conclusion, the establishment of the new software engineering center in Pune, India is a significant step forward for Panasonic Avionics. With a focus on innovation, collaboration, and the development of cutting-edge software solutions, the center will play a key role in the company's mission to enhance the passenger experience and support airline operations around the world. By leveraging the expertise of its new team in Pune, Panasonic Avionics is well-positioned to deliver industry-leading software solutions that meet the needs of the airline industry both today and in the future ■





# AIRCRAFT INTERIORS

Maybe a niche area, but there is enough more engineering in aircraft cabin interior design as is with home and commercial space designing. Aircraft cabin design is a combination of floor planning, information and entertainment integration and installation, safety regulation implementation and interior decorating – all inside the limited confines of an airplane. Aircraft cabin design encompasses everything from window dressings and seat fabric to lighting, screen placement and wiring.

Aircraft interiors are just as much about passenger comfort and conveniences as it is about operational safety. Designing cabin interiors is getting ever so customized and in equal measure, having to earn safety certifications and airworthiness from regulators like FAA, EASA and the local DGCA, as each element evolves and upgrades happen.

Cabin crew and passengers alike, have to manage within a limited space for long hours, without compromising on safety and security.

Unpredictable events may occur anytime during the course of passenger activity within the cabin - while travelers rest, eat, entertain and while using the lavatories.

Safety and security of all these areas and items that make up an aircraft cabin, cannot be unpinned enough. At the same time, carriers vie with each other to offer a high degree of 'luxe', seating and sleeping comfort, and superb inflight F & B experience, and the same goes for entertainment and connectivity.

Upon stepping onboard an aircraft, one gets taken in by the sense of luxury, comfort and great entertainment and connectivity on offer. The meticulous designing, testing and planning safety

and reliability of cabin interior features must be appreciated just as much.

Unlike traditional interior designing, cabin design requires expertise in materials, safety guidelines, technology and engineering.

While airlines and OEMs strive to create 'wow' moments in designing perfect cabin interiors, myriads of items (and mind-boggling at that) are used in fit-outs and structures inside cabin classes. These must be mandatory, and certified for safety and airworthiness at the time of being fabricated, fitted and used by the OEM and operator.

## Cabin Interior parts

Inside an aircraft cabin, items and requirements of consideration are air ionization and purification systems, seats and private suites (more recently), overhead bins, cabin lighting, oxygen and filtration systems, and passenger service areas.

Cabin interiors must be replete with surveillance life vests, all of that make up IFE systems and lavatories (wash-rooms).

Lavatories must be fitted with smoke detectors, and include air purifiers, liquid soap, water and wastewater management systems.

Crew areas consist of galley inserts, cabin crew seats, crew rest areas, food

and beverage storage areas, food trolleys, and flight announcement panels.

While passenger aircraft carry a certain amount of cargo, there are specific requirements here as well. Cargo hold areas are fitted with powered and mechanical cargo loading systems and components, cargo surveillance, and door systems.

From passenger seats to integrated cabins, for all types of aircraft: business and commercial airplanes, military aircraft and helicopters.

To ensure top-flight quality, and operating efficiency, while also making the air travel experience tasteful, pleasant and easy, where a cabin is crafted as an integrated whole.

## Seats



Image Courtesy : WSJ



Image Courtesy : aeronef.net

Seating is a major consideration and OEMs have gone back to the drawing board time and again to come up with superior seating comfort, and ergonomic designs that ensure passengers feel refreshed and recharged on arrival at their destinations.

Innovative designs that give passengers more legroom, ergonomics for superior comfort, and all this without reducing capacity,

Efficient, and innovative space management for seating passengers efficiently, is the name of the game.

While the staple fare remains Economy, Business and First Class, cabin configurations have gone through serious considerations and we have the advent of cabin classes such as Pre-

mium Economy, Premiere, to First-class Suites / Residences – virtually exclusive living areas with shower suites, dining and entertainment spaces et al. There is a continuous effort for improvements that exceed passenger expectations. A clutch of exclusive customers is willing to pay a hefty premium for such extravagances.

One area of passenger convenience that has reached criticality in terms of marketing a brand and customer choice, is innovative in-flight entertainment systems that the concept of a “connected cabin” brings to the fore.

Cabin personalization and modification thereof can be further customized for business jets, or company owned, as per the requirement and tastes of the clientele.

Designers of aircraft interiors bring on the luxury quotient with the use of high-quality soft furnishing and refurbishments with aviation-grade leathers and carpet interior panel upgrades for a new, refreshed look.

To upgrade and give a new look to existing aircraft cabinetry, interior specialist use methods like strip, staining, and refinishing and use new laminate for a newer finish.

## Designing Process

Once a design concept for cabin interiors is final, 3D renderings in detail are presented to the OEM. Design concepts include floorplans, seat selection, choice of veneer, cabinetry, and carpets. Older planes too go through interior upgrades and enhancements as per SOP.

## Enhancing Safety in Design

Post Accidents/Incidents reports provide valuable insights into which safety and crashworthiness feature advancements are introduced in aircraft design. The objective is to improve survivability in the event of an accident or incident.

This has resulted in a higher rate of survivability thanks to manufacturers and regulators working closely to glean information to make air travel safer while enhancing comfort while traveling.

The three focus areas of aircraft interiors where safety features are introduced look at survivability during impact, during cabin fire and during evacuation.

Seat designing has a lot to do with



improving survivability during an impact with seats made to remain in place to absorb shock in such an event. Seat backs are so designed to protect those behind the seat from a head injury. A head injury criterion has been set by the FAA.

Testing methods developed by FAA include surfaces such as cabin ceilings, walls, overhead bins and partitions. The material used must display heat and smoke emission reduction, as also a high rate of delay of onset of flashover (i.e., the simultaneous or near-simultaneous ignition of all flammable material in an enclosed area). Fire retardant systems, smoke detection and fire extinguishing systems, and insulation blankets are all included as items that increase chances of survivability due to cabin smoke and fire.

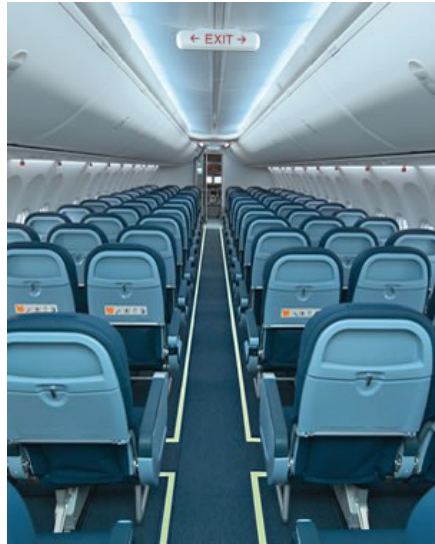
The FAA's mandate of 90 seconds limit to evacuate all passengers from an airplane necessitated several features in the aircraft interior design. These include (see fig. 2) floor proximity lighting and escape slides.

#### Figure 2: Design features key to rapid evacuation

Floor proximity lighting improves the evacuation process through Evacuation is improved through the use of lights,

and reflectors, that mark out the emergency escape path along the cabin floor.

**Figure 3: Floor proximity lighting**



made to withstand wet conditions and Centrifuge tests that meet U.S. FAA parameters.

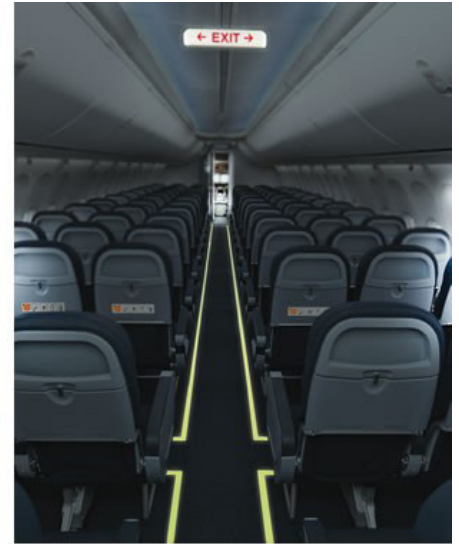


Image Courtesy : Boeing

Aircraft interiors are equipped with automatic, self-inflating slides that are made of fire-resistant material. They are also fabricated to be resistant to fluids, food contamination, and exposure to the sun.

The slides are subjected to several stringent tests such as fabric tensile and tear tests under varying conditions, fabric permeability tests, and several other durability tests and are

#### Cutting Edge Cabin Electronics for a Superior Cabin Experience

With each upgrade or advancement in Inflight Entertainment and Connectivity systems, cabin electronics and passenger amenities and conveniences go through heightened enhancements.

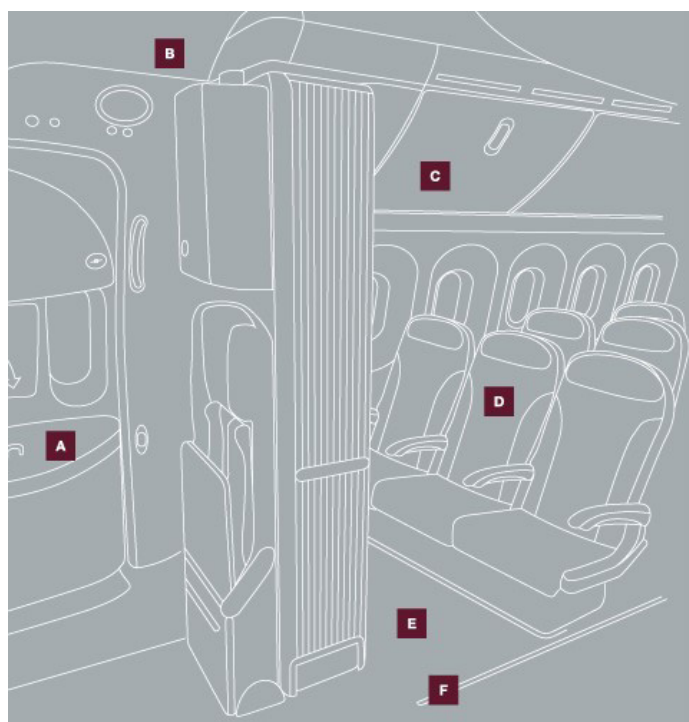
While a select few passengers are willing to pay a hefty premium on the ticket price, carriers and OEMs are willing to use systems that are cutting-edge that delivers superior communication and entertainment features. Mood lifters sure are OLED displays used in innovative ways, LED reading lights and electrochromic shading.

Business jets, private jets and charter jets often allow for more flexibility in cabin design and tend to feature more advanced comfort features and IFEC elements. Private owners can:

Cabin designs are geared to have a lasting favourable impact on passengers' travel experience. To this end, specialized lighting is fitted and calibrated to reduce jet lag.

Hi-res cabin audio with noise canceling technology can allow quiet times for some passengers to sleep in, whereas others may continue to enjoy audio and video feeds of their choice.

OLED screens, windows and virtual skylights can create mood lighting replicating night and day time zones, that an aircraft may be flying through.



- A** Escape slides help passengers evacuate the airplane quickly.
- B** Fire-retardant insulation slows down the burn-through of a fire outside the airplane into the cabin.
- C** Fire-retardant materials are used on cabin sidewalls, stowbins, and stowage compartments.
- D** Fire-blocking covering and fire-retardant materials are used over seat cushions.
- E** Fire-retardant materials are used on carpets.
- F** Emergency proximity lighting leads passengers toward exits in smoke-filled cabins.

Image Courtesy : Boeing

### Safety

Cabin safety and crashworthiness are always a priority on aircraft. Everything that goes into a cabin is heavily regulated by the FAA and EASA. Professionals who specialize in aircraft cabin design must be intimately familiar with relevant regulations that pertain to cabin safety, electronics and interior configurations.

Work with a Company on the Cutting-Edge Aircraft Cabin Design

One will find clients who own business jets, private jets and commercial passenger airliners' front ends mainly, which can go through customization and retrofits. Cabin electronics are the mainstay of such customization.

Some of the Latest, Cutting-Edge Cabin Electronics include:

- Wireless charging stations,
- Electrochromic shading for windows,
- privacy screens and cabin dividers

- OLED displays to replace windows and add virtual skylights
- Projectors and Hi-res audio, Personal, Bulkhead displays
- Touch control units

### The Magic of OLED Displays and Virtual Skylights

Organic light-emitting diode (OLED) displays don't need to be backlit, and hence can be extraordinarily thin and flexible, enough to be installed on curved cabin ceilings and walls to fit around the shape of windows or skylights.

Micro LED that allows customized reading light, wireless charging stations, electrochromic shading for windows, privacy screens and cabin dividers, augmented reality, like holographic controls, projectors and screens, personal displays, bulkhead displays, touch control units, seat-in-seat text



communications that give flyers magical moments during their journey for which, they want to come back for more. Carriers try and ensure that.

### Some companies that specialize in aircraft cabin interiors are:

Collins Aerospace; Rockwell Collins; SA Sully; Stelia; UTAS Collins Lighting; Eaton Aerospace Motion Control Systems - Grand Rapids'; Wittenstein Aerospace AG ■

#### Ref. Credit:

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## Bhutan Airlines selects AirFi's Platform for wireless inflight entertainment

*This new AirFi system will allow passengers on Bhutan Airlines flights to watch films, TV shows, documentaries, music and magazines, using their own Wi-Fi enabled mobile devices.*

**B**hutan Airlines has teamed up with AirFi to offer wireless inflight entertainment (IFE) to passengers flying on its Airbus A319-100 aircraft. This new system will allow passengers to watch Hollywood and regional films, TV shows, and documentaries, listen to music, and read magazines, using their own Wi-Fi-enabled mobile devices. The IFE system is part of Bhutan Airlines' efforts to enhance the passenger experience, which will help the airline become a regional carrier of choice.

Pema N. Nadik, Chief Executive Officer of Bhutan Airlines said, "We are excited to launch our new IFE system, powered by AirFi. It will significantly enhance the overall travel experience for our passengers. These new systems are part of our ongoing efforts to improve our services and provide our customers with the highest level of comfort and convenience. AirFi is a proven leader in portable wireless IFE and can provide a perfect blend of entertainment to complement our passenger demographic".

Passengers will have access to a moving flight map, which has become the most popular feature among early feedback, displaying the position and direction of the

plane, altitude, airspeed, elapsed time, and remaining time. Bhutan Airlines' regional competitors do not offer IFE services to passengers, making the carrier more attractive to potential customers.

Job Heimerikx, CEO, AirFi said, "I'm always happy when AirFi's low capex business model and easy-to-deploy solutions can enable a carrier like Bhutan Airlines to introduce IFE for their passengers. When Bhutan Airlines is ready to add new features to the IFE offering or wishes to boost ancillary revenues from onboard sales, we will be ready with flexible, tailor-made options."

Bhutan Airlines operates daily scheduled flights to six international destinations from its base at Paro Airport in Bhutan. The airline operates two A319 aircraft with a configuration of 12 Business Class seats and 114 Economy seats. Daily flights are operated from Bangkok to Paro via Kolkata, and flights from Delhi via Kathmandu are operated three times per week. Bhutan Airlines is dedicated to providing a safe and reliable journey for its customers. With this new IFE system, the airline can provide an even more enjoyable travel experience for passengers ■

## Swiss-AS welcomes SriLankan Airlines as a new member of the AMOS customer community

*With AMOS SriLankan Airlines will be able to perform all line and base maintenance activities paperlessly through the use of AMOSmobile/EXEC, a touch-optimized add-on to AMOS.*

**S**riLankan Airlines has joined the AMOS customer group, which has been warmly welcomed by Swiss-AS. With regard to paperless maintenance, SriLankan Airlines will be able to perform all line and base maintenance activities paperlessly through the use of AMOSmobile/EXEC, a touch-optimized add-on to AMOS. This will add value in terms of cost as well as time, ensuring high productivity while maintaining quality, safety, and consistency.

SriLankan Airlines also chose Swiss-AS Cloud Hosting, which contains the tried-and-true AMOS Operation Services, to round out the offering. By using hosting services, SriLankan Airlines can function in accordance with the most recent security and IT standards without having to maintain a technical infrastructure on-site.

"I am pleased to announce our partnership with Swiss-AS and the adoption of the AMOS NewGen MRO System, which is a crucial step toward realizing our digital vision. The implementation of AMOSmobile and cloud-hosting services will allow us to digitize and streamline our maintenance procedures, increase efficiency, and reduce overall costs through process automation. We look forward to a successful Go-Live and utilizing state-of-the-art features for which AMOS is highly trusted and appreciated by its loyal customer base," said Chamara Perera, Group Head of Information Technology SriLankan Airlines.

Swiss-AS has created a service package with a project implementation timeline ▶



■ AMOS Airline Edition by Swiss AS will be used by SriLankan Airlines.

► of about 12 months to make sure the system is "Go-Live" by the end of 2023. Based on the knowledge gained from more than 200 successful AMOS implementations by Swiss-AS, the goal of this one-year implementation is to produce "best practice" processes.

"I am confident that AMOS will

provide SriLankan Engineering with modern technology and insights that are required to streamline maintenance processes and optimize the efficiency of line and base maintenance, component tracking and much more. We can further enhance the safety and reliability of our aircraft and passengers' onboard

experience by leveraging on the technology and tools of AMOS," said Arjuna Kapugeekiyana, Head of Engineering SriLankan Airlines.

The Asia Pacific-based Swiss-AS project team is eager to get the project underway with the "kick-off meeting" and interact completely with the SriLankan team. A320, A321 and A330 planes will make up SriLankan Airlines' all-Airbus fleet when it operates in AMOS. The Go-Live procedure will make it possible to use all of the AMOS Airline components and give SriLankan Airlines access to AMOS's top-notch features.

SriLankan Airlines, the National Carrier of Sri Lanka and a member of the oneworld alliance, is an award-winning airline with a firm reputation as a global leader in service, comfort, safety, reliability, and punctuality ■

## ExecuJet MRO Services wins European authority approval to provide line maintenance across Europe

*ExecuJet's MRU is equipped with the consumables, tooling, cabinets, and has access to maintenance data to meet work order requests for line maintenance and unscheduled aircraft service.*

**E**xecuJet MRO Services Belgium has announced that the company has received approval from European regulators. With the certification received ExecuJet MRO Services will now be able to provide line maintenance in other European countries. ExecuJet MRO Services' main base for line maintenance in Belgium is at the Brussels Airport and the company also has another maintenance, repair and overhaul (MRO) facility at Flanders International Airport, near the west Belgium city of Kortrijk. The latter facility does mainly heavy maintenance.

"Following strong demand from customers, there was a need for us to offer line maintenance at locations away from our home base. The requests from customers were ad hoc, so we decided to seek regulatory approval to have our mobile repair unit (MRU) provide line maintenance. The MRU uses a land vehicle, making it feasible for our engineers to travel throughout Belgium and to nearby countries such as the Netherlands, Germany, France, Luxembourg, etc," said Christophe de Coppel



■ The Belgium Civil Aviation Authority approved and the European Aviation Safety Agency (EASA) then validated it, paving the way for ExecuJet MRO Services.

Regional Vice President of Europe, ExecuJet MRO Services.

ExecuJet's MRU is equipped with the necessary consumables, tooling, and cabinets and has access to all the necessary maintenance data required to meet work order requests for scheduled line maintenance and unscheduled aircraft service.

"The requests from customers were ad hoc, so we decided to seek regulatory approval to have our mobile repair unit (MRU) provide line maintenance. The MRU uses a land vehicle, making it feasible for our engineers to travel

throughout Belgium and to nearby countries such as the Netherlands, Germany, France, Luxembourg, etc. Having this new capability helps us to reach a larger pool of customers and reinforces Belgium's position as a centre for MRO in Europe," said Christophe de Coppel Regional Vice President of Europe, ExecuJet MRO Services.

The Belgium Civil Aviation Authority granted the approval and the European Aviation Safety Agency (EASA) then validated it, paving the way for ExecuJet MRO Services to provide line maintenance beyond Belgium ■



# Embraer joins ITA, and FAPESP to inaugurate Engineering Research Center to boost Future Air Mobility

*The goal of this future-oriented decision by Embraer is to find innovative technological solutions that will enhance the sustainability and competitiveness of the global innovation ecosystem.*



Embraer, ITA (Aeronautical Technological Institute), and FAPESP (São Paulo State Research Support Foundation) have jointly held the inauguration ceremony of the Engineering Research Center (CPE). The newly opened research center will be dedicated to Air Mobility for Future studies.

The inauguration event was held at the ITA campus in São José dos Campos, São Paulo, Brazil. It was attended by the governor of the State of São Paulo, Tarcísio de Freitas, by the director of the Department of Aerospace Science and Technology, Lieutenant General Maurício Augusto Silveira de Medeiros, by the president of FAPESP, Marco Antonio Zago, and the rector of ITA, Professor Anderson Ribeiro Correia, among other leaders and researchers from the academic and innovation community.

The initiative in Brazil in the field of Air Mobility for the Future was announced in 2022. The initiative brought together representatives from the scientific community and professionals from the aeronautical industry in activities based on three pillars: low-carbon aviation, autonomous systems, and advanced design and manufacturing. The goal of this future-oriented decision is to find innovative technological solutions that will enhance the sustainability and

competitiveness of the global innovation ecosystem.

"It is an immense satisfaction to accompany the beginning of the activities of the Engineering Research Center that brings together great talents in conducting applied research of high value to society," said Luís Carlos Affonso, Embraer's Vice-President of Engineering and Technology. "We are very excited about the partnership with ITA and other institutions that creates a favorable environment for the search for solutions focused on zero-carbon aviation, autonomous systems, and advanced manufacturing, fundamental to building future air mobility," he further added.

The CPE is counting on a shared investment of R\$ 48 million (around US\$ 10 million) over the next five years for the purchase of research equipment, research grants, and administrative support. The initiative is called FLYMOV, the applied research environment favors constructing and disseminating knowledge, training highly qualified human resources, and producing high-impact scientific and technological results.

The CPE is expected to bring together about 150 professionals among professors, research fellows, and experts from the aeronautics industry who seek innovative technological solutions. This newly formed ambitious partnership enables the conditions for technology transfer between industrial, public, and third-sector players, further enhancing the competitiveness of the Brazilian and global innovation ecosystem ■

# American Airlines Group to supply six additional Embraer 175 E175 jets to Envoy

*This new announcement with Envoy brings the total fleet commitments of American Airlines Group (AAG) to 107 E175 and 27 E170 aircraft for a total of 134 large regional jets.*

American Airlines Group (AAG) has announced that the company will assign six additional Embraer 175 (E175) aircraft to Envoy in the coming months of 2023. This new announcement brings the total fleet commitments of American Airlines Group (AAG) to 107 E175 and 27 E170 aircraft for a total of 134 large regional jets. Envoy Air has been expanding its fleet in recent years, as it seeks to keep up with the increasing demand for air travel.

"As we transition away from the E145 and focus on our large RJ operation, American continues to invest and have faith in Envoy's ability to offer safe, reliable and cost-effective service to its customers," said Dee Temples, Senior Vice President Air Operations, Envoy. "Envoy has invested significantly in the resources and infrastructure needed to support our Embraer E-Jet fleet, and deliver outstanding service to American's customers," he further added.

In 2022, the airline added 10 new aircraft to its fleet, including four Embraer E175s and six Bombardier CRJ900s. These additions allowed the airline to increase its capacity and offer more flights to popular destinations. The Embraer E175 jets are known for their fuel efficiency, which makes them an attractive option for airlines looking to reduce their carbon footprint. They also have a range of up to 2,200 miles, which makes them ideal for regional routes ■

## STS Aviation Services secures UK CAA Part 21-J certification

*The issue of CAA Part 21 Subpart J Approval follows two years of executing aircraft repairs and modifications, and building a database for legacy and next-generation jets by STS Aviation Services.*

**S**TS Aviation Services, the aircraft maintenance, repair and overhaul arm of STS Aviation Group, has announced that the company has been granted UK CAA Design Office Part 21 Subpart J Approval. The issue of regulatory approval follows nearly two years of executing several complex aircraft repairs and modifications while building the experience and database for both legacy and next-generation aircraft types by STS Aviation Services.

The CAA Part 21-J Approval complements the heavy and large-scale aircraft maintenance and modification capabilities that are being executed in the United Kingdom and, in conjunction with Ethan Steele, Senior Vice President for STS Engineer Services. For nearly two decades, Steele has devoted himself to the year-round delivery of safe, cost-effective aircraft repairs and modifications for airlines, lessors, and OEMs around the world.



"I am delighted that STS Aviation Services has been granted CAA Part21-J approval," said Lee Burgess VP & Accountable Manager for Part 21J, STS Aviation Services. "This is genuine testament to the hard work of the entire engineering organization. Customers of STS Aviation Group can now benefit from our repair and modification solutions, offering both CAA and FAA approval to keep their valuable assets flying safely," he further added.

This latest approval adds to STS Aviation Services' growing list of regulatory approvals, which includes the US Federal Aviation Administration (FAA), the European Aviation Safety Agency (EASA) and the Bermuda Civil Aviation

Authority (BCAA). The company has also received certifications from aircraft manufacturers such as Boeing and Airbus.

"The receipt of STS Aviation Services UK CAA P21 Subpart J approval underpins STS Aviation Group's capability to deliver fully integrated aircraft maintenance solution for new and existing customers," said Brett Patterson, Head of Design for STS Aviation Services. "This would not be possible without the hard work and dedication of the P21-J team both here in the United Kingdom and in the United States. This approval brings opportunity, and it is the first step toward adding STC and Part21-G POA to our capabilities in the very near future," he further added.

The need and appetite for STS Aviation Services' growing repertoire of aircraft maintenance solutions continue to grow, and achieving this milestone is essential to solidifying the company's position in the global marketplace ■

## AkzoNobel announces Aerofleet Coatings Management to streamline coatings' maintenance schedules

*Aerofleet Coatings Management addresses this issue by capturing the data from both manual inspections and drone-operated inspections, creating a database of every aircraft in a fleet.*

**A**kzoNobel Aerospace Coatings has announced that the company will launch Aerofleet Coatings Management, a new digital, data-driven service that helps airlines and other large operators to tailor and optimize the coatings' replacement and maintenance schedule for individual aircraft within an airline fleet. External coatings have evolved rapidly in the last decade from single-stage to basecoat/clearcoat systems, extending the need to repaint some aircraft for up to ten years or even more. Despite these changes, aircraft still tend to be taken out of service for maintenance every six or seven years without really knowing if a repaint is needed.



Aerofleet Coatings Management addresses this issue by capturing the data from both manual inspections and

drone-operated inspections, creating a database of every aircraft in a fleet. The history includes details of the coatings ▶



► used (e.g. single or basecoat/clearcoat coatings) along with flight path data (e.g. weather conditions etc.) that affect the integrity/longevity of the coating applied.

Michael Green, Segment Business Services Manager at AkzoNobel Aerospace Coatings, says that by analyzing this information and mapping it over time, a more accurate maintenance and repaint schedule can be calculated.

Michael Green, Segment Business Services Manager, AkzoNobel Aerospace Coatings, said, "Put simply, it becomes easier and more accurate to determine when an aircraft needs to be repainted, rather than simply using time or flight hours. Schedules can be created that balance the practical performance of a coating and where the aircraft in a fleet are being operated (i.e. the different flight paths, distances, heights, environment etc.) against the aesthetic/market-ing (i.e. branding) and business needs of the airline."

Ideally suited for fleets of over 100 aircraft, the inspection service is provided by experts within AkzoNobel Aerospace Coatings using a digital application. The App stores the information that is collected, such as dry film thickness, colour variation, gloss and general appearance, as an Audit Report on an iPad or tablet. The data is then fed back to a database that tracks the fleet's performance over time.

Michael Green, Segment Business Services Manager, AkzoNobel Aerospace Coatings, "For the first time, the repaint schedules for whole fleets of aircraft can be mapped years in advance and aircraft are only repainted when needed, not according to a fixed time schedule alone. Often, planes are repainted whilst the coating still has life left in it. Using our service will reduce costs while increasing aircraft availability by anything up to a year. Over time, the frequency with which aircraft need to be repainted will fall,

which is significantly better for an airline's bottom line, and better for the planet."

Manual inspections can be further enhanced by automated inspections conducted by drones. The drones fly in a set grid over the plane's surface, taking up to 1,000 HD photos. This standardizes the inspection and is less subjective. The drone's machine learning algorithm analyses the photos and identifies issues on the paint surface in exactly the same way every time. It is also faster and more in-depth than a manual inspection; an automated drone can scan an entire narrowbody aircraft in less than an hour.

Aerofleet Coatings Management is being launched as part of a range of support and enhanced training services through AkzoNobel Aerospace Business Solutions, a new entity bringing further structure and rigour to many of the services already provided by AkzoNobel's Technical Support teams ■

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- Cargo Conversion Centers
- Airframe Heavy Checks
- Engines & APU Maintenance
- LG, Wheels & Brakes Overhaul
- Avionics & Instruments Repairs
- Cabin Interiors & IFE Maintenance
- Hydraulics & Pneumatics Repairs
- Components Repairs
- Line Maintenance
- Other Maintenance

## OEMs

- Airframe Manufacturers
- Engine & APU Manufacturers
- LG, Wheels & Brakes Manufacturers
- Avionics & Instruments Manufacturers
- Cabin Interiors & IFE Manufacturers
- Hydraulics & Pneumatics Manufacturers
- Component Manufacturers
- Parts Manufacturers
- Other Manufacturers

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■ The project will see the addition of a new widebody bay (H6D) to Hangar 6, which ASI previously designed and built in 2011.



## Aircraft Support Industries joins Etihad Engineering for aircraft maintenance facility expansion

*The newly expanded ASI and Etihad Engineering facility will cater to the increasing demand for world-class aircraft maintenance, repair, and overhaul (MRO) services worldwide.*

Aircraft Support Industries (ASI) has announced its collaboration with Etihad Engineering to expand the capacity of its aircraft maintenance facility. The expansion project aims to cater to the increasing demand for world-class aircraft maintenance, repair, and overhaul (MRO) services worldwide. Etihad Engineering is one of the world's largest commercial aircraft MRO service providers.

As part of the project, Etihad Engineering will be expanding its total site area by adding 50,000 square meters of incremental space to its existing facility located at Abu Dhabi International Airport. The company will be constructing two new widebody hangars on-site.

"We are proud to be a part of this exciting project with Etihad Engineering, which highlights our capabilities in delivering world-class aviation infrastructure solutions," said Mark

Langbein, Managing Director, ASI. "Our extensive experience in aircraft hangar design and construction, combined with our advanced engineering capabilities, will help Etihad Engineering achieve its expansion goals," he further added.

The project will see the addition of a new widebody bay (H6D) to Hangar 6, which ASI previously designed and built in 2011. The new bay will also be large enough to accommodate an Airbus A380. Another new hangar, Hangar 7, utilizing the innovative 'Stressed Arch' technology, will be constructed. This hangar is capable of accommodating three wide-bodied aircraft simultaneously.

The expansion project comes at a time when the aviation industry is recovering from the effects of the COVID-19 pandemic, and the demand for MRO services is at an all-time high. With the expansion of the facility, Etihad Engi-

neering aims to serve a larger number of aircraft and customers from around the world, delivering comprehensive MRO solutions to hundreds of partners, including flag carriers, OEMs, aircraft operators, and leasing companies.

Dr. Nadir Ahmed, Chief Executive Officer, Etihad Engineering said, "The expansion of our MRO capabilities in Abu Dhabi further strengthens our position as a leading player in the aviation industry. The new facility will allow us to provide our customers with a wider range of services, increase our capacity, and improve our operational efficiency."

The expansion project is expected to create new job opportunities and boost the local economy. With the addition of the new facilities, Etihad Engineering will be better equipped to provide world-class MRO services to its customers worldwide ■





## NAC has executed a lease agreement for one new ATR 72-600 with AirSWIFT

*The NAC ATR 72-600 aircraft will be equipped with the latest technology and safety features, ensuring that AirSwift's passengers enjoy a safe and comfortable flying experience.*

NAC, the world's leading aircraft leasing company, has announced the execution of a lease agreement for a new ATR 72-600 with AirSwift. This latest development underscores NAC's continued commitment to providing top-notch leasing services to its clients. The ATR 72-600 is a regional turboprop aircraft, and it has gained a reputation for its excellent performance and fuel efficiency.

The aircraft can carry up to 70 passengers and can operate in challenging conditions, including short runways and remote locations. It is therefore ideal for regional airlines such as AirSwift, which serves destinations in the Philippines.

The lease agreement between NAC and AirSwift includes a long-term lease of ATR 72-600, which will be delivered to AirSwift.

The aircraft will be equipped with the latest technology and safety features, ensuring that AirSwift's passengers enjoy a safe and comfortable flying experience.

The lease agreement between NAC and AirSwift is the latest in a series of successful partnerships between NAC and airlines around the world. NAC's extensive fleet of aircraft and its reputation for quality and reliability have made it a preferred partner for many airlines.

In conclusion, NAC's lease agreement with AirSwift for a new ATR 72-600 is a significant development in the aviation industry. The partnership will enable AirSwift to expand its operations and serve more destinations in the Philippines, while NAC continues to cement its position as a leading aircraft leasing company ■



## Delta to open Propel Flight Academy for airline pilot training

*Delta Air Lines has launched the Propel Flight Academy, in partnership with Skyborne Airline Academy, to provide a dedicated pilot training program for aspiring aviators.*

**D**elta Air Lines has announced the launch of its latest initiative, the Propel Flight Academy, in partnership with Skyborne Airline Academy, to provide a dedicated pilot training program for aspiring aviators. The academy, located in Vero Beach, Florida, U.S. will begin accepting applications from interested candidates in June.

The academy is the fourth pathway established by the Delta Propel Pilot Career Path Program since its launch in 2018. Nearly 100 participants have completed the program and are now flying for Delta, while 700 pilots are currently enrolled in the program and working towards their goal of flying for Delta.

Patrick Burns, Vice President of Flight Operations and System Chief Pilot, Delta said, "The Propel Flight Academy is the latest chapter in our longstanding commitment to invest in and create new, equitable pathways for qualified talent to enter the pilot profession. We

look forward to watching a new generation of pilots begin their journey at the Propel Flight Academy and eventually join us in the flight deck to help show Delta customers why no one better connects the world."

Delta will offer eligible students up to \$20,000 in financial support and will cover the cost of interest on student loans from select lenders. Once students complete their first certificate or rating at the Propel Flight Academy, they will be eligible to apply to the Propel Pilot Career Path Program.

Lee Woodward, CEO, Skyborne Airline Academy, said, "Our team is looking forward to taking Delta Propel Flight Academy students through their pilot training journey and into their chosen career with a global airline leader who shares the same values as us in training and customer experience."

Student pilots will complete private, instrument, commercial, and certified

flight instructor training in an airline-focused way. Once students have completed certified flight instructor training, they will be offered employment with Skyborne as certified flight instructors. In that role, they will receive full sponsorship from Skyborne for Certified Flight Instructor Instrument and Multi-Engine Instructor Rating, as well as a generous salary and private health benefits until they reach 1,500 hours. Upon completion, employment will begin at one of Delta's Connection Carriers as a first officer.

Delta's Propel Flight Academy represents the airline's commitment to investing in the next generation of aviators and creating a more equitable pathway to the pilot profession. The academy's partnership with Skyborne Airline Academy will provide aspiring pilots with the training and support necessary to reach their goals and eventually join the flight deck at Delta Air Lines ■



## Emirates boosts flight training academy capabilities with three new twin-engine DA42-VI jets

*The addition of the new twin-engine DA42-VI from Diamond Aircraft will allow EFTA to offer multi-engine piston (MEP) training to its cadets, providing them with the opportunity to gain experience on three different types of aircraft before being licensed.*



Emirates Flight Training Academy (EFTA) has placed an order for three twin-engine DA42-VI aircraft and its corresponding flight simulator from Diamond Aircraft Industries. The total deal is valued at EUR 4 million in list prices. The addition of the new fleet of aircraft from Diamond Aircraft will allow EFTA to offer multi-engine piston (MEP) training to its cadets, providing them with the opportunity to gain experience on three different types of aircraft before being licensed.

Capt Abdulla Al Hammadi, Vice President, Emirates Flight Training Academy, said, "Our new fleet from Diamond Aircraft is part of our larger strategic intent for our cadet programme. It helps us design a bridging MEP programme for cadets to gain more flying experience while progressing from a single engine to a light jet aircraft. It strengthens our offering and makes it more unique, rounded and robust. Our cadets will benefit hugely as they gain experience on three different types of aircraft, even before they're licensed. The new fleet also helps us go above and beyond on complying with the new GCAA guidelines. The DA42-VI is reliable, eco-friendly and a practical platform for MEP training. We're confident we've made the right choice."

The DA42-VI aircraft is the newest version of Diamond's technology-leading light piston twin-engine aircraft. It ▶

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is the first certified general aviation piston aircraft to combine modern technology airframe, avionics, and power plants. With its unique combination of performance and utility, the jet fuel-powered DA42-VI is designed to make transitioning from single to twin-engine much easier. The aircraft generates fuel savings of up to 50% compared to conventional AVGAS-powered twins, and its panoramic canopy provides excellent visibility during all flight manoeuvres.

Liqun (Frank) Zhang, CEO, Diamond Aircraft Austria, said, "We are thrilled that our DA42-VI is the choice for Emirates' flight training. This, once again, solidifies the aircraft's position as the

industry-leading multi-engine piston trainer. With Emirates, we are adding another premier flight academy to our long list of renowned training operators and are looking forward to supporting them with the most advanced and eco-friendly aircraft available on the market today."

The all-composite DA42-VI is equipped with efficient, silent, clean, and reliable 168hp jet fuel AUSTRO engines AE300, Garmin G1000 NXi with 3-axis Automatic Flight Control System and optional electrically driven air conditioning. The aircraft delivery is expected to commence soon, with all three slated to be

received by EFTA in the first half of 2023. More than 100 cadets have successfully graduated from EFTA since 2020, creating a strong pilot recruitment pipeline for Emirates and the industry.

The new fleet from Diamond Aircraft is expected to strengthen EFTA's offering, making it more unique, rounded, and robust. The DA42-VI's reliability, eco-friendliness, and practical platform for MEP training, along with its fuel savings, will help EFTA comply with new GCAA guidelines. It is clear that the choice of DA42-VI by EFTA has solidified the aircraft's position as the industry-leading multi-engine piston trainer ■

## StandardAero approved as official Chemical Plating Facility for T-38 jet by U.S. Air Education and Training Command

*Under the Talon Repair Inspection and Maintenance (TRIM) program, StandardAero will provide structural repairs to the T-38 Talon aircraft at Randolph Air Force Base.*



■ StandardAero's chemical plating cell has been providing a range of specialized coatings for aircraft and engine maintenance, repair, and overhaul (MRO) since 2000.

StandardAero has once again been approved to provide chemical plating support for the U.S. Air Education and Training Command's (AETC) T-38 Talon Aircraft. This marks another milestone in StandardAero's long standing partnership with the U.S. Air Force.

Under the Talon Repair Inspection and Maintenance (TRIM) program, StandardAero will provide structural repairs to the T-38 Talon aircraft at Randolph Air Force Base. The T-38 Talon is a high-performance jet trainer that is widely used by various branches of the U.S. military, including the Air Combat Command, Air Force Materiel

Command, and the National Aeronautics and Space Administration.

StandardAero's chemical plating cell has been providing a range of specialized coatings for aircraft and engine maintenance, repair, and overhaul (MRO) since 2000. These coatings include Chrome, Electrolytic, Nickel, Electroless Nickel, Cadmium, Silver, and Copper plating. StandardAero also offers the necessary processes to chemically strip Chrome, Nickel, Silver, Copper, Lead, and Cadmium.

"StandardAero and AETC continue to expand our partnership on multiple

engine and aircraft platforms, and we greatly value the USAF's continued confidence in our ability to perform this work," said Marc Drobny, President of Military, Helicopters & Energy division, StandardAero.

StandardAero has been supporting the U.S. Air Force for over 25 years, providing MRO support across a variety of engine and aircraft platforms. With operations around the world, StandardAero is one of the world's largest independent gas turbine engine and accessories MRO facilities. StandardAero serves a diverse range of customers in business and general aviation, airline, military, helicopter, components, and energy markets.

"We are proud to support the U.S. Air Force in maintaining the safety and reliability of their fleet," said Russell Ford, Chairman and CEO of StandardAero. "Our team of experienced professionals is dedicated to providing the highest quality MRO services to our customers around the world," he further added.

StandardAero is owned by Carlyle, a global investment firm that specializes in aerospace, defense, and government services industries. With Carlyle's support, StandardAero is well-positioned to continue its growth and expansion in the years to come ■



# NHIndustries delivers 500th NH90 defence Helicopter to the French Army

*The NH90 helicopter is designed to operate in the most challenging missions and environments, with advanced technology and versatility for military operations worldwide.*

NHIndustries has announced the delivery of its 500th NH90 military helicopter, marking a significant milestone in the program's development. The delivery was celebrated on Friday, March 17, 2023, with representatives from NAHEMA, nations, and NHIndustries partner companies coming together at Airbus Helicopters' facilities in Marignane to celebrate the handover of the new helicopter to the French Army Aviation.

The NH90 is a modern military helicopter that has been in production since 2006. The 500th delivery is also a testament to the strength of the NHIndustries partnership between Airbus Helicopters, Leonardo, GKN Aerospace, and all suppliers committed to this program.

The NH90 is designed to operate in the most challenging missions and

environments, with advanced technology and versatility making it a popular choice for military operations worldwide. Currently, 18 customers in 14 countries are using the NH90 helicopter, making it a proven and trusted military aircraft.

The NH90 is designed to meet the requirements of modern military operations, with a range of advanced features that make it a popular choice for military operations worldwide. The helicopter is designed for use in a variety of roles, including troop transport, search and rescue, anti-submarine warfare, and anti-surface warfare.

In addition to its advanced technology and versatility, the NH90 is also known for its excellent safety record. The helicopter is equipped with advanced safety features, including fly-by-wire controls, advanced avionics, and redun-

dant systems, ensuring that it remains one of the safest military helicopters in service today.

In conclusion, the delivery of the 500th NH90 helicopter is a significant achievement for NHIndustries and its partners. The helicopter is a proven military aircraft that continues to be a reference in modern military aviation, and its versatility and advanced technology make it an excellent choice for the most challenging missions in the most severe environments.

With 18 customers in 14 countries, the NH90 is a popular choice for military operations worldwide, and its safety record is second to none. The NH90 program is a testament to the benefits of international cooperation and partnership, and it is sure to continue to be a significant success for many years to come ■





■ Boeing will build E-model AH-64s for the U.S. Army and international operators.

## Boeing will build 184 Apache helicopters for the US Army and other International customers

*Boeing will produce E-model AH-64s for the U.S. Army and international operators, including Australia's first Apache.*

**B**oeing will produce 184 AH-64E Apaches, including the first Apaches for Australia, for the U.S. Army and other clients. The contract's total funded value has now reached \$2.1 billion with this \$1.9 billion award, having the possibility to reach more than \$3.8 billion with additional obligations.

"We are enhancing the U.S. Army's attack fleet, while supporting additional partner nations and welcoming our newest Apache customer, the Australian Army," said Christina Upah, vice president of Attack Helicopter Programs and senior Boeing Mesa site executive. "This contract highlights the need for Apaches worldwide," she further added.

In order to guarantee substantial cost savings for the taxpayers, the U.S. Army will receive 115 remanufactured Apaches, with the option to purchase

an additional 15 Apaches. As part of foreign military sales, an additional 54 aircraft will be shipped to partner countries.

The U.S. Army's Apache fleet recently surpassed five million flight hours, a milestone demonstrating the AH-64 is the most capable, dependable, and adaptable attack helicopter.

"This multi-year contract is critical for the warfighter and the entire Apache team," said Col. John (Jay) Maher, U.S. Army Apache project manager. "It demonstrates the Army's commitment to continue putting unmatched capability into the hands of our nation's finest, while providing stability and predictability for the outstanding citizens and companies that pour their talent into producing the best attack helicopter in the world," he further added.

In order to keep the warfighter as ready as possible, Boeing Global Services will continue to provide training tools, spare parts, packages for support and test equipment, depot support, field engineering, and technical manuals. Significant benefits in the field of specialized publications enable a streamlined approach to data re-use, which lowers operational and sustainment costs.

Boeing delivered 244 remanufactured Apaches to the Army under the first multi-year deal, which was signed in 2017, and 24 new aircraft to a foreign customer. The most cutting-edge multirole attack helicopter ever created is the AH-64E, which is produced at the Boeing facility in Mesa, Arizona. There are presently more than 1,275 Apaches in use all over the world ■



# Airbus wins order for two H145 helicopters from Norwegian Air Ambulance expands its fleet

*The newly ordered Airbus H145 Helicopters are to be used for life-saving missions in Norway.*

Airbus has received an order for two five-bladed H145 helicopters from The Norwegian Air Ambulance. The newly ordered Airbus H145 Helicopters are to be used for life-saving missions in Norway. Currently, Norwegian Air Ambulance operates all 13 HEMS bases in Norway using a 100% Helionix-equipped fleet of H135s and H145s. The organization's mother company, the Norwegian Air Ambulance Foundation, was the first operator in the world to take delivery of a five-bladed H145 in 2020.

"I would like to thank the Norwegian Air Ambulance for its continued trust in our helicopters to support their essential, life-saving missions," said Thomas Hein, Head of Europe Region, Airbus Helicopters. "We're proud that they are further expanding their fleet of five-

bladed H145s," he further added.

The new version of Airbus' best-selling H145 light twin-engine helicopter adds a new, innovative five-bladed rotor to the multi-mission aircraft, increasing the useful load of the helicopter by 150kg (330 lbs.). The simplicity of the new bearingless main rotor design also eases maintenance operations, further improving the benchmark serviceability and reliability of the H145, while improving ride comfort for both passengers and crew.

"The five-bladed H145 has proven to be the perfect helicopter for our HEMS operations," said Leif Olstad, CEO of the Norwegian Air Ambulance. "With the new helicopters we will continue to serve the people of Norway with state of the art equipment to ensure the best

service possible," he further added.

Airbus Helicopters is the provider of helicopters to the air medical transport industry, providing some 54% of the 2,700 EMS helicopters flying in the world today. In total, there are more than 1,600 H145 family helicopters in service, further logging a total of more than seven million flight hours. Powered by two Safran Arriel 2E engines, the H145 is equipped with full authority digital engine control (FADEC) and the Helionix digital avionics suite.

It includes a high-performance 4-axis autopilot, increasing safety and reducing pilot workload. Its particularly low acoustic footprint makes the H145 the quietest helicopter in its class, while its CO2 emissions are the lowest amongst its competitors ■

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## StandardAero selects three latest authorized support centers to support Rolls-Royce RR300 Helicopter engines

*As an ASC appointed by StandardAero, these six facilities are authorized to provide line maintenance and engine repair with specialized tooling and factory-trained technicians.*

StandardAero, a leading independent provider of maintenance, repair, and overhaul (MRO) services, has announced that its Helicopter Programs have signed three new maintenance facilities to become Rolls-Royce RR300 engine Authorized Support Centers (ASC). Alpha Aviation Co (Tokyo, Japan), Helisul Taxi Aereo LTDA (Curitiba, Brazil) and Florida Suncoast Helicopters (Sarasota, Florida) are now strategically aligned with StandardAero to support the RR300 engine in their respective territories.

In addition, existing RR300 ASCs Genesis Helicopter Service (Calgary, Alberta), Rotorcraft Support Inc (Filmore, California), Eagle Copters South America (Santiago, Chile) and Taller Piza (Veracruz, Mexico) have all been renewed.

"Today's announcement underscores



StandardAero's strategic alliances to provide the operators in these geographic markets with the world class

RR300 servicing that StandardAero is known for," said Cory Waldmo, Director of Customer Service for StandardAero Helicopter Programs. "We look forward to working closely with our ASC partners to support the MRO needs of their customers. There are now over 1,000 RR300 engines in service worldwide," he further added.

As an ASC, these six facilities are authorized to provide line maintenance and engine repair with specialized tooling and factory-trained technicians. Heavy maintenance and overhaul are performed at StandardAero's facilities in Winnipeg and Richmond BC Canada; Concord, North Carolina; and Portsmouth, United Kingdom, under an Approved Maintenance, Repair and Overhaul Center (AMROC) license from Rolls-Royce ■

## Leonardo to support PHI's AW139 helicopter fleet with latest Special Component Plan

*The new Leonardo contract will bring PHI's AW139 helicopter fleet back into an OEM-level Powered-By-The-Hour (PBH) agreement.*



helicopter fleet back into an OEM-level Powered-By-The-Hour (PBH) agreement. PHI, a leading helicopter service provider for energy, search and rescue, and air medical transport missions, currently operates a fleet of 20 total AW139 and AW109 helicopters.

The new agreement is the first SCP in the United States that will also be global (supporting PHI's three main operating regions: Americas, EMEA & APAC), and will be dedicated to the existing fleet of AW139 helicopters in service to provide long-term maintenance support to help mitigate cost uncertainty. This will also standardize maintenance expenses that are more directly correlated to flight hours. Also, this agreement enhances and solidifies Leonardo's and PHI's partnership and cooperation. ▶

Leonardo has announced the signing of a long-term Special Component

Plan (SCP) with the PHI Group (PHI). The new contract will bring PHI's AW139

►Leonardo has presented an innovative new approach to the legacy cost-per-hour agreements," said Keith Mullett, Managing Director, PHI Aviation. "This new PBH agreement will not only help control costs but also improve material dispatch reliability, allowing PHI to continue providing safe and reliable aircraft for our teams, our passengers and our customers," he further added.

The SCP PBH support model generates a virtuous circle and relevant benefits for the operator, based upon a data-driven approach. Among the benefits, better configuration control, a forecast of the fleet behavior, as well as an optimization of the overall asset management, are key ingredients of the Special Components Plan proposal.

Vittorio Della Bella, SVP Customer Support Services and Training,

Leonardo Helicopters, said "We're extremely pleased with the decision of PHI to come back to us to guarantee comprehensive support and maintenance coverage for their AW139 and AW109 fleet. The range of service plans and digital services we've developed in-house in recent years, designed around our latest generation helicopters featuring significant growth potential, provides second-to-none advantages, efficiency, low risk and high service customization. We look forward to executing the new SCP program for PHI."

The highly effective data-driven approach will also leverage the recently established Diagnostic Services Tower based in Sesto Calende, Italy which, combined with a renewed Fleet Operations Centre, builds a collaborative workspace with broad access to global fleet data. This one-of-a-kind service

and the digital environment it recreates are fully in line with Leonardo's strategy focused on growing advanced digital services, especially when it comes to data monitoring, gathering and analysis, diagnostics and predictive maintenance services as well as smart assistance.

The Special Components Plan thus will be an enabler for allowing real-time information about aircraft status and use, material service enhancement to best manage spares, analytics for data-driven training and flight operation optimization.

Based in Lafayette, Louisiana, U.S. PHI Group is a provider of global helicopter solutions for customers in the energy, air medical and MRO industries. With a fleet of more than 200 helicopters spanning six continents, PHI has provided efficient support to providers for more than 70 years ■

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## Bell hands over three Bell 505 Helicopters to the Kingdom of Bahrain

*This latest delivery marks the first Bell 505 helicopter for the Royal Bahrain Air Force and includes a package with training, tooling, and spares.*

**B**ell Textron Inc., a Textron Inc. company, has announced the delivery of three Bell 505 helicopters to the Royal Bahrain Air Force. Bell delivered the aircraft during an inspection and acceptance event in February 2023 at Bell's Mirabel facility. The Bahrain Defense Force has also flown the Bell 212 helicopter and multiple generations of AH-1 attack helicopters. This latest delivery marks the first 505 helicopters for the country and includes a package with training, tooling, and spares.

The Kingdom of Bahrain joins other countries in the region employing the Bell 505 as their advanced military trainer of choice. Horizon International

Flight Academy in the UAE operates 12 Bell 505 helicopters, and the Royal Jordanian Air Force signed an agreement for 10 Bell 505s in November 2022. More than 30 Bell 505 helicopters operate throughout the Middle East and Africa. Additionally, the Bell 505 is the military training helicopter for the Montenegro Air Force, the Republic of Korea Army and the Republic of Korea Navy.

"We are honored to provide the Bahrain Defense Force another premiere Bell asset to train the next generation of Bahraini pilots," said Sameer Rehman, managing director, Africa and Middle East, Bell. "With low operating costs and high reliability, the Bell 505 has

emerged as a customer favorite to prepare cadets for a safer and more effective transition to advanced helicopters. Generations of Bahraini pilots have flown in Bell helicopters, and the Bell 505 will continue the tradition of excellence for years to come," he further added.

Bell has already delivered more than 400 Bell 505 helicopters to domestic and international customers. The Bell 505 program has collectively achieved more than 100,000 flight hours around the world. The Bell 505 recently became the world's first single-engine helicopter to fly on 100 percent sustainable aviation fuel ■

## Leonardo to deliver six AW139 helicopters to Mitsui Bussan Aerospace

*The newly ordered three Leonardo AW139 helicopters are signed to meet the requirements of various upcoming opportunities in the country and will be handed over in 2024.*

**L**eonardo has secured an order for a total of six AW139 helicopters from Mitsui Bussan Aerospace (MBA), the authorized distributor for the AW139, AW169 and AW189 helicopter models in Japan. The newly signed order is signed to meet the requirements of various upcoming opportunities in the country. These latest orders confirm the continuous success of the AW139 in Japan with nearly 70 units currently in operation.

The AW139 fleet in Japan is growing rapidly, with new deliveries following previous and planned orders for end users in the country. Two aircraft have been ordered for the Japan Coast Guard, comprising 21 AW139s ordered by this operator, and two for the Japan National Police Agency this year. Additionally, three AW139s will be handed over in 2024 to Ishikawa Prefecture Fire Fighting & Disaster Relief, Ministry of Land, Infrastructure & Transport of Hokuriku, and Saitama Prefecture Fire Fighting & Disaster Relief, respectively.

Today, there are over 150 helicopters of various types, including the AW139, in service in Japan. They are used for a wide range of missions such as law enforcement, emergency medical service, search and rescue, fire-fighting, disaster relief, VIP/corporate transport, electronic news gathering, and maritime utility. The AW139 has been extremely successful in Japan with nearly 70 units currently in operation, logging more than 110,000 flight hours while supporting several prefectures and city authorities.

Mitsui Bussan Aerospace is a trading company that specialises in aerospace, defence, and security systems. The company imports and sells helicopters, aircraft, space, defence, and security-related equipment, as well as provides related services. Its products include Leonardo's helicopters, defence machines, aircraft engines, space business and more. The company was founded in 1982 and is based in Tokyo, Japan.

The AW139 features state-of-the-art avionics with advanced navigation and

collision avoidance systems to enhance situational awareness and reduce pilots' workload, unmatched speed, power margins and overall performance, the widest cabin in its category featuring high modularity for rapid reconfiguration, a unique 60+ min run-dry capable main gear box for enhanced reliability and safety, and up to 1,000 certified kits.

Since its certification in 2004, the AW139 has become the world's most important helicopter programme and the bestselling type in its category. The global AW139 fleet has exceeded 3.6 million flight hours logged to date. Its success in Japan and around the world is due to its ability to perform all missions with exceptional performance and safety.

The recent orders by Mitsui Bussan Aerospace for six AW139s further strengthen the type's market leadership in Japan. As the AW139 fleet continues to grow in the country, it is expected to continue to support a wide range of missions and provide exceptional performance and safety to its operators.

# Elbit Systems pens MoU with Nippon Aircraft Supply and Itochu Aviation at DSEI Japan

*According to the newly signed MOU, Elbit Systems will provide the main components, technology and knowledge to Nippon Aircraft Supply (NAS) and Itochu Aviation.*

Elbit Systems has announced the signing of a strategic cooperation Memorandum of Understanding (MOU) with Nippon Aircraft Supply (NAS) and Itochu Aviation to promote mutual cooperation for a range of solutions between the companies. According to the newly signed MOU, Elbit Systems will provide the main components, technology and knowledge to NAS and Itochu. NAS will provide the capabilities for local integration, manufacturing, testing and maintenance and Itochu will lead the marketing of the products in Japan.

Gilad Cohen, Ambassador of Israel to Japan, "The agreement between


Elbit Systems, Itochu Aviation and NAS, demonstrates the recent process of deepening relations between Israel and Japan, relations that are based on mutual interests and shared values. This cooperation shows the unique synergy between the two countries and the integration of cutting-edge Israeli technologies and the impressive industrial abilities of Japan."

In this cooperation Elbit Systems, Nippon Aircraft Supply (NAS) and Itochu Aviation will jointly address the growing Japanese interest in the field of defense while fully aligned with the local requirements that Elbit Systems

provides Japan-based production and qualities.

Osamu Matsushita, President and COO, Nippon Aircraft Supply said, "It is a true honor to work with great partners, Elbit Systems and Itochu Aviation, were we will act in the role of integration, local production, testing and maintenance with the most advanced and combat-proven solutions developed by Elbit Systems. We will contribute to international peace and Japan's defense by providing high-quality made-in Japan products. This achievement is a great milestone in our relationship."

The MOU signing ceremony took place ▶



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► during the DSEI Japan exhibition with Israel's Ambassador to Japan Mr. Gilad Cohen, Mr. Osamu Matshushita President and COO of NAS, Mr. Masahiro Takita of Itochu Aviation and Ran Kril Executive Vice President International Marketing and Business Development of Elbit Systems in attendance.

Mr. Masahiro Takita, Executive Officer, Vice President Defense and Aerospace, Itochu Aviation said, "We are excited to collaborate with Elbit Systems, that has advanced technology and combat proven systems especially in terms of autonomous capabilities and communication. Elbit Systems also has flexibilities that would fit with the establishment of a local capability to support

Japan's Ministry of Defense operations. I look forward to working with our partners."

This collaboration with NAS and Itochu Aviation is expected to contribute to international peace and Japan's defense by providing high-quality made-in-Japan products. The partnership with Elbit Systems will offer Japan advanced technology and combat-proven systems, especially in terms of autonomous capabilities and communication, which would fit with the establishment of a local capability to support Japan's Ministry of Defense operations.

Ran Kril, Executive Vice President International Marketing & Business Development of Elbit Systems said, "We

are pleased to team up with NAS and Itochu Aviation, two leading Japanese companies, in this important endeavor. Elbit Systems is in close contact with our local partners and offers them innovative and cutting-edge technological solutions. We remain committed to the transfer of technology as well as the manufacturing of our solutions in the local market."

Overall, the strategic cooperation MOU between Elbit Systems, Nippon Aircraft Supply, and Itochu Aviation is an important step towards strengthening the relationship between Japan and Israel and providing Japan with cutting-edge technology solutions to enhance its defense capabilities ■

## Riyadh Air to commence flying with an All-Boeing Fleet of up to 72 787-9 Dreamliners

*Boeing has received an order from Riyadh Air, the new Saudi Arabian carrier for the 39 highly efficient 787 Dreamliner 787-9s, with options for an additional 33 787-9s.*



■ The 787-9 provides the longest range of the 787 family of airplanes, flying approximately 300 passengers 7,565 nautical miles (14,010 km), with additional cargo capacity.

**B**oeing has announced that the company has received an order from Riyadh Air, the new Saudi Arabian carrier for the 39 highly efficient 787 Dreamliner 787-9s, with options for an additional 33 787-9s. Riyadh Air with this new purchase will power its global launch and support its goal of operating one of the most efficient and sustainable fleets in the world. Riyadh Air is owned by Saudi Arabia's Public Investment Fund (PIF). Based in the capital

city, Riyadh Air will play a key role in growing Saudi Arabia's air transport network.

This agreement with Boeing is part of Saudi Arabia's wider strategic plan to transform the country into a global aviation hub. In total, Saudi Arabian carriers today announced their intent to purchase up to 121 787 Dreamliners in what will be the fifth-largest commercial order by value in Boeing's history. This will support the country's goal of serving

330 million passengers and attracting 100 million visitors annually by 2030.

"The new airline reflects the ambitious vision of Saudi Arabia to be at the core of shaping the future of global air travel and be a true disrupter in terms of customer experience," said Riyadh Air's commitment to its customers will see the integration of digital innovation and authentic Saudi hospitality to deliver a seamless travel experience. By positioning the airline as both a global connector and a vehicle to drive tourist and business travel to Saudi Arabia, our new 787-9 airplanes will serve as a foundation for our worldwide operations, as we build the wider network and connect our guests to Saudi Arabia and many destinations around the world," said Tony Douglas, CEO, Riyadh Air.

The 787-9 provides the longest range of the 787 family of airplanes, flying approximately 300 passengers 7,565 nautical miles (14,010 km), with additional cargo capacity. Passengers enjoy a better experience with the largest windows of any jet, air that is more humid and pressurized at a lower cabin altitude for greater comfort, large overhead bins with room for everyone's bag; ►



► soothing LED lighting, and technology that senses and counters turbulence for a smoother ride.

"This is a significant order that will support Riyadh Air's commitment to deliver a world-class travel experience, while supporting American aerospace manufacturing jobs at Boeing and across our supply chain," said Stan Deal, president and CEO of Boeing Commercial Airplanes. "We are incredibly proud of our nearly eight decades of partner-

ship to drive innovation and sustainable growth in Saudi Arabia's aviation sector. Our agreement builds on that long-standing partnership and will further expand access to safe and sustainable commercial air travel for decades more," he further added.

The 787-9 provides the longest range of the 787 family of airplanes, flying approximately 300 passengers 7,565 nautical miles (14,010 km), with additional cargo capacity. Passengers enjoy a better

experience with the largest windows of any jet, air that is more humid and pressurized at a lower cabin altitude for greater comfort, large overhead bins with room for everyone's bag; soothing LED lighting, and technology that senses and counters turbulence for a smoother ride. The 787 family is delivering unmatched fuel efficiency to airline operators around the world, reducing fuel use and emissions by 25% compared to the airplanes they replace ■

## Boeing joins GMR Aero Technic to open First Boeing Freighter Conversion Line in India

*GMR Aero Technic is the first Boeing supplier in India that will have the capability to support future conversions of both domestic and foreign aircraft.*



■ The partnership with GMR Aero Technic will also help Boeing to tap into the growing Indian market for air cargo, expected to grow at a rate of 13.3% over the next five years.

**B**oeing has announced the signing of an agreement with GMR Aero Technic to establish a new Boeing Converted Freighter (BCF) line in the aviation hub city of Hyderabad, India. GMR Aero Technic is the first Boeing supplier in India that will have the capability to support future conversions of both domestic and foreign aircraft.

The newly formed collaboration adds to Boeing's continued investments to support the growth of cargo and help expand complex aircraft modification capabilities and Maintenance, Repair and Overhaul (MRO) in India, supporting

India's aspiration to become an aviation and aerospace hub for the region.

"Our cooperation with GMR Aero Technic not only a testimony of the maturation of Indian MROs in the country to support the vision of Aatmanirbhar Bharat, but also supports the anticipated growth of the cargo sector in the region," said Salil Gupte, president, Boeing India.

The demand for freighter conversions has been on the rise in recent years, driven by the growth of e-commerce and express cargo deliveries. Boeing has already established conversion lines in

the United States, China and Singapore, and the new line in India will further expand the company's global footprint.

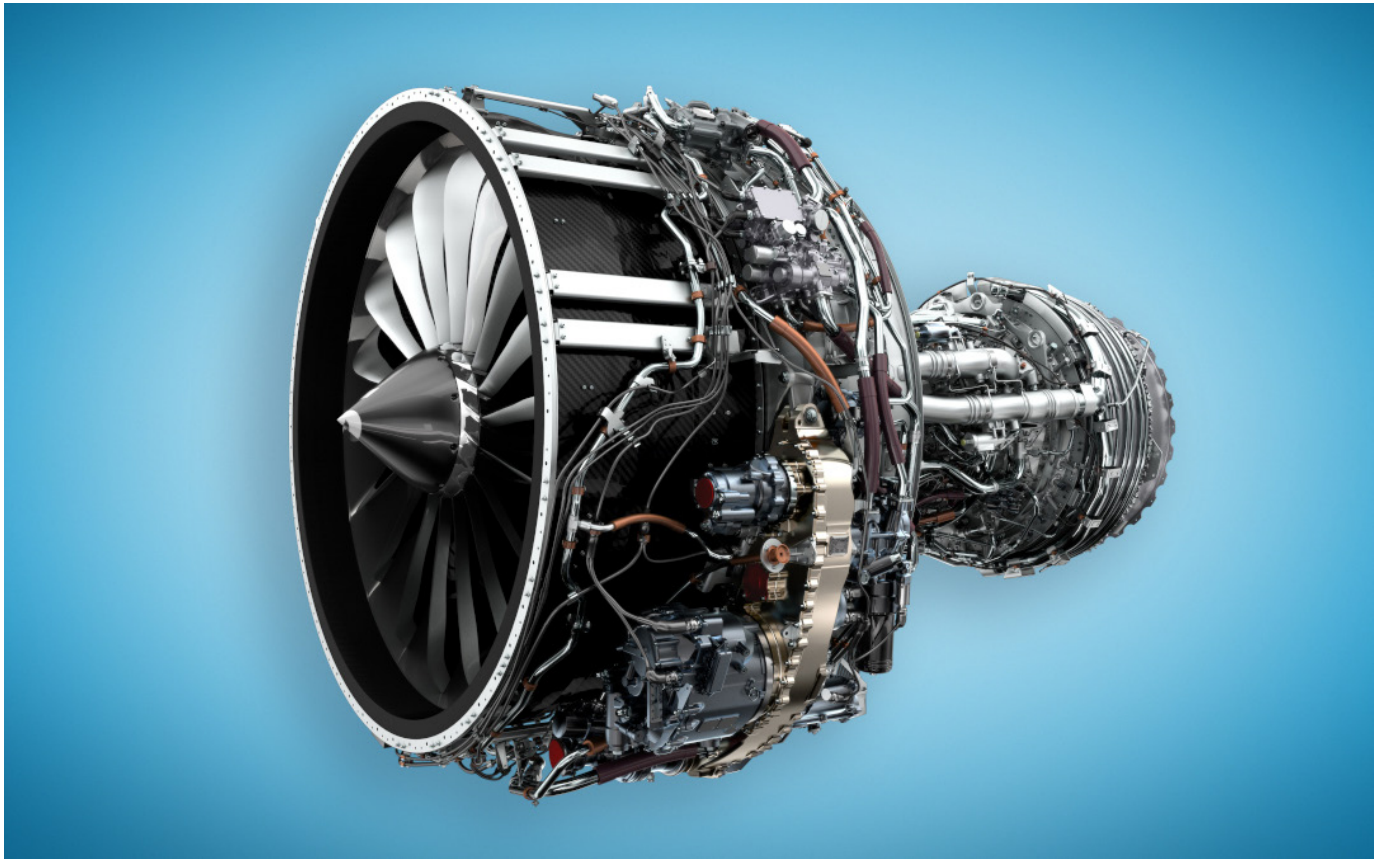
The partnership with GMR Aero Technic will also help Boeing to tap into the growing Indian market for air cargo, which is expected to grow at a rate of 13.3% over the next five years. The conversion line will enable Indian airlines to convert their passenger aircraft into freighters, which will help to meet the growing demand for air cargo services in the region.

Ashok Gopinath, CEO, GMR Aero Technic said, "With the rise in the Indian aviation industry, MRO services in India has been one of the fastest-growing market globally. The collaboration with Boeing reaffirms our capability to provide world-class MRO services and further contribute to the "Make in India" initiative. We thank Boeing for the opportunity given and look forward to working together for future initiatives."

The partnership between Boeing and GMR Aero Technic to establish the first Boeing freighter conversion line in India is a significant development that will strengthen Hyderabad's position as a hub for aerospace manufacturing and services in the Asia-Pacific region. The conversion line will create jobs, support the 'Make in India' initiative and help to meet the growing demand for air cargo services in the region ■

# StandardAero secures Long-Term contract for LEAP-1A And LEAP-1B Engine MRO Support

*The CBSA agreement has made StandardAero part of CFM's authorized MRO network for the LEAP engines, enabling the company to provide a full range of MRO services to operators.*



**S**tandardAero, a leading provider of maintenance, repair, and overhaul (MRO) services, has signed a long-term CFM Branded Service Agreement (CBSA) to support CFM International's latest generation LEAP-1A and LEAP-1B engines. The CBSA agreement makes StandardAero part of CFM's authorized MRO network for the LEAP engines, enabling the company to provide a full range of MRO services to operators worldwide.

Under the agreement, StandardAero will support the LEAP-1A and -1B engines from its 810,000 sq. ft. facility in San Antonio, which has benefitted from significant investment over the past five years and already provides a full range of narrowbody engine MRO support capabilities. The company's San Antonio facility also features a large test cell complex, which will provide performance and pass-off testing for the LEAP-1A and -1B.

StandardAero's President of Airlines and Fleets, Lewis Prebble, said, "StandardAero is honored to become part of the worldwide MRO network for the LEAP engine. The CBSA agreement extends our existing 14-year relationship with CFM as an MRO provider for the CFM56-7B powerplant, and continues StandardAero's expansion of its narrowbody engine support capabilities. We look forward to meeting the needs and expectations of LEAP operators worldwide for many decades to come."

StandardAero is the first independent MRO provider in the Americas to sign a CBSA for both the LEAP-1A, which powers the Airbus A320neo family, and the LEAP-1B, which powers the Boeing 737-MAX series aircraft. This agreement will enable operators to benefit from StandardAero's expertise in delivering high-quality support for narrowbody aircraft engines, as the global fleet of

LEAP-1A and -1B engines is expected to grow significantly in the coming years.

Tom Levin, VP of CFM Commercial Programs, CFM parent company GE Aerospace, said, "We have a long history with StandardAero through our CFM56 engine line. This experience and their reputation as a highly respected MRO provider will help strengthen the CFM open network. We are proud they are joining the LEAP open MRO ecosystem and anticipate that StandardAero will make significant contributions to the continued development of world-class support for the LEAP engine throughout its lifecycle."

In addition to supporting the LEAP engines, StandardAero will be developing new engine component repairs and industrialization through its Components & Accessories division's network of locations and its Repair & Development Center of Excellence. This will expand ▶



► upon a variety of LEAP engine components and accessories repairs available to customers.

The LEAP engine family has set new industry standards for fuel efficiency, offering up to 20 percent better fuel consumption than previous generation engines, in addition to lower CO2 emissions. To date, the LEAP family has accumulated more than 29 million engine flight hours and 13 million flight cycles in just over six years of commercial operation, during which time the LEAP has enabled operators to save

more than 20 million tons of CO2. LEAP engines power more than 2,300 aircraft in service with 165 operators worldwide.

Nicolas Potier, VP Support & Services, CFM parent company SAE, added, "We are delighted to add LEAP MRO capabilities in the US through this major partnership with StandardAero. CBSA agreements are part of CFM's strategy to give our airline customers worldwide more choice in the market while helping them maximize their operations with the LEAP engine."

StandardAero already provides a

full range of MRO capabilities for the CFM International CFM56-7B from its CFM- and GE Aerospace. StandardAero is an independent provider of services including engine and airframe maintenance, repair and overhaul, engine component repair, engineering services, interior completions and paint applications. StandardAero serves a diverse array of customers in business and general aviation, airline, military, helicopter, components and energy markets. StandardAero is owned by global investment firm Carlyle ■

## Boeing to deliver 21 B737-8 jets to Japan Airlines

*The Boeing 737-8 jets will provide Japan Airlines with greater range and fuel efficiency, reducing fuel use and carbon emissions by 15% compared to the jets the airline is replacing.*



**B**oeing has finalized an order with Japan Airlines (JAL) for 21 super-efficient 737-8 jets, with plans to introduce them into its fleet in 2026. The Boeing 737 MAX family of planes will provide JAL with greater range and fuel efficiency, reducing both fuel use and carbon emissions by 15% compared to the airplanes the airline is replacing. In addition, the 737 MAX is a quieter airplane, creating a significantly smaller noise footprint than the airplanes it replaces.

The 737 MAX family has the latest CFM International LEAP-1B engines, advanced technology winglets and other aerodynamic enhancements to improve performance. More than 50 airlines globally are operating over 900 737 MAX airplanes, which have made over 1.4 million revenue flights totaling

more than 3.5 million flight hours since late 2020.

"We are delighted to select the Boeing 737-8, a member of the very latest 737 MAX family, to replace our Boeing 737-800s, which make up the largest proportion of the JAL Group's fleet," said Yuji Akasaka, president, Japan Airlines. "We look forward to carrying our passengers in the utmost safety and comfort and to moving closer to our 2050 carbon-neutral goals, thanks to a combination of these super-efficient aircraft, operational innovations and new fuel-saving technologies," he further added.

JAL was founded in 1951 and became the first international airline in Japan. A member of the oneworld Alliance, the airline now reaches 411 airports in 60

countries and regions together with its codeshare partners with a modern fleet of 241 aircraft. JAL Mileage Bank (JMB), the airline's loyalty program, is one of the largest mileage programs in Asia.

Awarded as one of the most punctual major international airlines and a certified 5-Star Airline by Skytrax and a "World Class" airline by APEX, JAL is committed to providing customers with the highest levels of flight safety and quality in every aspect of its service, and to becoming one of the most preferred airlines in the world.

"The integration of the new 737 MAX will provide JAL with greater efficiency across its short-haul network, as the airline continues to upgrade its world-class fleet," said Stan Deal, president and CEO, Boeing Commercial Airplanes. "Partnering with JAL to introduce 737-8s into its operations is the latest milestone in our longstanding relationship," he further added.

In addition to JAL, other airlines have also recently placed orders for the 737 MAX, including Southwest Airlines and United Airlines. These orders are a clear indication that airlines are once again willing to invest in the 737 MAX, a plane that was once the workhorse of their fleets. With its advanced technology, fuel efficiency, and safety features, the 737 MAX is poised to play a critical role in the aviation industry's recovery from the pandemic ■

# Finnair purchases 750 ton of SAF from Neste to reduce the carbon emissions

*Finnair uses Neste MY Sustainable Aviation Fuel to cut carbon emissions from planes leaving Helsinki Airport.*



■ At Finland's Helsinki Airport, a tanker truck is transporting Neste's sustainable aviation fuel (SAF).

**F**innair has bought 750 tons of Neste MY Sustainable Aviation Fuel™ from Neste to lessen the carbon emissions from flights leaving from Helsinki Airport in Finland. Sustainable aircraft fuel (SAF), which is accessible to all airlines at Helsinki Airport, is one of the most crucial resources for cutting the emissions associated with air travel in the upcoming years.

"Finnair celebrates its 100th anniversary this year, and reducing emissions from flying is an essential part of a sustainable future. Sustainable aviation fuel will be one of the most important tools for reducing emissions in the coming years. We also involve our customers in this, and a small part of every flight ticket sold goes to the cost of sustainable aviation fuel," said Eveliina Huurre, Finnair's SVP, Sustainability. "Reducing emissions from flying requires an extensive toolkit and everyone's effort. While we are increasing the use of SAF, we will

also continue to take all other steps, from reducing the weight of aircraft to optimizing flight routes and increasing fuel efficiency," she further added.

The use of sustainable aviation fuel is an essential tool in Finnair's effort to become carbon neutral by the year 2045. When compared to using fossil jet fuel, using Neste MY Sustainable Aviation Fuel lowers greenhouse gas emissions by up to 80%\* over the fuel's lifetime. The amount of fuel being bought at this time represents Finnair's single largest batch of sustainable aviation fuel to date. Early in 2023, Neste will transport the SAF to Helsinki Airport. The 750 tons of SAF can fuel about 400 non-blended, 100% SAF aircraft between Helsinki and Stockholm. SAF can currently be used in blends of up to 50% with regular fossil aviation fuel.

"Finnair was one of the first airlines using our Neste MY Sustainable Aviation Fuel. We have been working

together for a long time and look forward to supporting Finnair to meet its sustainability targets," said Jonathan Wood, Vice President Commercial and Technical Management, Renewable Aviation at Neste. "It is great to see Finnair taking the initiative to voluntarily purchase our SAF as part of their sustainability commitments, and creating awareness among their customers on how to play a role in creating a more sustainable future," he further added.

SAF, a renewable aircraft fuel, offers a more environmentally friendly substitute for traditional, fossil-based jet fuel. Including used cooking oil and animal fat refuse, Neste MY Sustainable Aviation Fuel is made from responsibly harvested, 100% renewable waste and residue raw materials. SAF is seamlessly compatible with current aircraft engines and fueling facilities when blended with regular jet fuel ■



# JetBlue signs Agreement with Shell Aviation to boost SAF Supply at LAX

*JetBlue is expected to take delivery of 10,000,000 gallons of blended SAF from Shell Aviation at LAX till 2025 and an option to purchase up to 5,000,000 gallons more in the third year.*

JetBlue and Shell Aviation have announced a new partnership bringing the additional supply of sustainable aviation fuel (SAF) to Los Angeles International Airport (LAX). This will further assist in targeting the commencement of delivery in the first half of 2023. According to the terms of the agreement, JetBlue is expected to take delivery of 10,000,000 gallons of blended SAF at Los Angeles International Airport (LAX) over the next two years and an option to purchase up to 5,000,000 gallons more in the third year, either at LAX or other airports in JetBlue's network.

SAF is a type of renewable fuel that drops directly into existing aircraft and infrastructure with no impact on safety or performance. SAF can be produced from a wide array of renewable sources such as agricultural wastes and used cooking oils and can lower lifecycle greenhouse gas emissions by roughly 80% in its neat form when compared to traditional petroleum-based fuels.

"We've long said we need multiple key stakeholders to step up to reach our aggressive emissions reduction goals. This deal with Shell is a key signal of the growing engagement of the major fuel producers to begin converting conventional jet fuel to SAF," said Robin Hayes, chief executive officer, JetBlue. "Shell's involvement, with their expertise in energy markets and logistics, is a validation of the SAF market's potential and highlights how critical the SAF transition of our hard-to-decarbonize industry is to establishing a more sustainable future of flight."

Shell has already announced its ambition to have 10% of its aviation jet fuel sales as SAF by 2030. To achieve this goal, Shell is building supply chain capabilities to blend, handle and distribute SAF and enable more customers to access SAF, helping to accelerate the pace of decarbonizing the aviation sector.

"It's terrific to be supporting JetBlue once again in its decarbonization efforts. Like Shell, JetBlue understands



that SAF will be the key technology to help decarbonize flight," commented Jan Toschka, President of Shell Aviation. "LAX is a critical North American airport hub and we're delighted to be able to provide JetBlue and corporations on its Sustainable Travel Partners program access to SAF, allowing them to lower their emissions while jointly contributing to investments in SAF," he further added.

The aviation industry is responsible for around 2.5% of global greenhouse gas emissions, and the demand for air travel is expected to grow significantly in the coming years. The use of SAF is seen as a key solution for reducing emissions from aviation, as it has the potential to reduce emissions by up to 80% compared to traditional jet fuel.

The International Air Transport Association (IATA) has set a target of achieving net-zero emissions by 2050, and many airlines have set targets for reducing emissions. However, the production of SAF is currently limited and expensive, and there is a need for government incentives and policies to support its development and adoption.

The additional SAF provided through Shell Aviation at LAX will increase the airline's SAF supply at the airport, bringing SAF to approximately 15 percent of JetBlue's total LAX jet fuel uptake. JetBlue also regularly flies on SAF out of San Francisco and in 2022 signed agreements with three additional SAF producers for future supply, continuing to look at future SAF partnerships with a particular interest in encouraging SAF in the Northeast.

"We envision a future of a robust, regular, and diversified supply of SAF delivered all around our network,

incrementally replacing conventional fuels and driving down emissions in our operation. We've publicly committed to cutting our per-seat emissions in half by 2035, and a viable SAF market at scale is a key component to meet this goal," said, Sara Bogdan, director sustainability and ESG, JetBlue. "Working with Shell will not only help grow the availability of SAF in the long-term, but also ensure this transition is sustainable from a business perspective, by building the connections and infrastructure to help keep the cost of SAF competitive with traditional fuel," she further added.

While JetBlue's successes with SAF in California are critical to the airline's goal to convert 10% of its total fuel to SAF by 2030, the airline acknowledges the vast majority of SAF being delivered today is to California airports as a result of the state's low-carbon fuel program. To expand SAF usage to other airports, additional federal and state-level programs to encourage the voluntary use of lower carbon fuels through incentives will also likely be key in changing the economics for the SAF producers and the airline purchasers.

The partnership between JetBlue and Shell Aviation is a significant step towards increasing the availability of sustainable aviation fuel and reducing emissions from air travel. It demonstrates the commitment of both companies to sustainability and provides a model for other airlines and fuel suppliers to follow. However, more needs to be done to support the development and adoption of SAF, and government policies and incentives will play a critical role in achieving this goal ■

# AAR Corp takes over Trax USA Corp to boost services

*The new acquisition of Trax USA Corp is expected to assist AAR in providing a boost for its digital solutions offerings to its core aviation aftermarket customers.*

**A**AR Corp., a global provider of aviation services, has recently acquired Trax USA Corp., an independent provider of aircraft MRO and fleet management software. This acquisition is expected to help AAR accelerate its digital solutions offerings to its core aviation aftermarket customers.

Trax USA Corp., established in 1999, is headquartered in Miami and has approximately 110 employees. The company provides software applications to a wide range of customers globally, including airlines, MROs, and government aircraft operators. Its eMRO software solution is a web-based enterprise MRO solution for managing aircraft maintenance and fleet management, while its eMobility products offer a suite of mobile applications for various purposes.

John M. Holmes, Chairman, President,

AAR said, "We believe we can support Trax's continued growth by investing in its platforms and by leveraging our global relationships to help Trax reach additional customers. We also believe that over time this combination will allow more customers to better access AAR's parts and services offerings as Trax is the materials management system used by thousands of buyers and planners at airlines around the world".

According to AAR's Chairman, President, and CEO, John M. Holmes, the acquisition will help the company offer established, higher-margin aviation aftermarket software offerings with recurring revenue to its portfolio. The complementary customer base of Trax also provides opportunities for AAR to cross-sell products and services.

Jose Almeida, CEO, Trax said, "Trax has led the industry in developing next gen-

eration maintenance ERP systems for over 20 years. By combining two leading independent aftermarket services providers, we create a compelling and unique offering to support the global aviation industry."

The acquisition of Trax comes at a time when the aviation industry is recovering from the effects of the COVID-19 pandemic. AAR's strategy to offer digital solutions to its core aviation aftermarket customers is expected to help it capitalize on the increasing demand for MRO services in the industry.

Overall, the acquisition of Trax USA Corp. is expected to bring significant benefits to AAR Corp. by adding critical software applications to its portfolio, increasing recurring revenue, and opening up new opportunities for cross-selling ■

# Lufthansa Technik delivers A350 "Theodor Heuss" to the German Armed Forces

*The newly delivered Airbus A350 aircraft delivered by Lufthansa Technik AG will be officially put into political-parliamentary flight service by the German Air Force.*



■ There, it is now also receiving the full government cabin to complete the German Airforce's A350 fleet in 2024.

**L**ufthansa Technik AG has handed over another new Airbus A350 government aircraft to the German Armed Forces. Before the delivery, the modern long-haul jet was ceremonially christened as "Theodor Heuss", after the first President of the Federal Republic of Germany. The aircraft will be ferried from Lufthansa Technik's Hamburg base to Cologne-Wahn airport on 17 March 2023. The newly delivered aircraft will be officially put into political-parliamentary flight service by the German Air Force.

Theodor Heuss bears the tactical registration 10+02 and is the third aircraft of this type to be handed over by Lufthansa Technik to the German Armed Forces, following "Kurt ▶



► Schumacher" (10+03) and "Konrad Adenauer" (10+01). It is further the second Airbus A350 aircraft to have a full government cabin installed. Thus, 10+03, which for reasons of early availability had only received an interim cabin in 2020, returned to Lufthansa Technik's Hamburg headquarters earlier this year. There, it is now also receiving the full government cabin to complete the German Airforce's A350 fleet in 2024.

"Only last November we ceremoniously handed over 'Konrad Adenauer' to the German Armed Forces, and now 'The-

odor Heuss' already marks the second A350 with a full government cabin to go to our valued customer," said Michael von Puttkamer, Vice President Special Aircraft Services, Lufthansa Technik. "The largest modernization program in the history of the German government fleet thus remains fully on schedule and on budget, and for this achievement I would like to express my sincere thanks to our enormously competent and highly motivated employees," he further added.

10+02 had been transferred factory-fresh to Lufthansa Technik in October

2021, where the company's Special Aircraft Services segment has since installed the highly customized government interior meeting the highest standards of functionality, connectivity, comfort, and privacy for traveling dignitaries. The interior of the jet is rounded off by an adjoining cabin area for the accompanying delegations. To also make their stay on board as pleasant as possible, Lufthansa Technik has not only installed comfortable seating with sufficient seat pitch, but also an appropriate number of private washrooms and a modern galley ■

## Lockheed Martin delivers First of sixteen F-16 Block 70 aircraft to Royal Bahraini Air Force

*The Lockheed Martin F-16 Block 70 for the Royal Bahraini Air Force is the latest and most advanced version of the F-16 Fighting Falcon jet, one of the world's most widely used fighter jets.*



■ This F-16 Block 70 jet is the first of 16 jets for Bahrain and took its first flight on Jan. 24, 2023.

**L**ockheed Martin has announced the delivery of the first F-16 Block 70 for the Royal Bahraini Air Force today at Lockheed Martin in Greenville, South Carolina, U.S. The Kingdom of Bahrain has a unique history with the F-16. It was the first F-16 operator in the Gulf Cooperation Council beginning in the early 1990s, and now is receiving the first F-16 Block 70.

The F-16 Block 70 is the latest and most advanced version of the F-16 Fighting Falcon jet, one of the world's most successful and widely used fighter

aircraft. It is equipped with state-of-the-art technology, including advanced avionics and weapons systems, and is designed to provide superior air-to-air and air-to-ground capabilities.

"Today's ceremony represents the next generation of the powerful and proven legacy of the F-16, and demonstrates Lockheed Martin's commitment to advancing this program and getting this much-needed aircraft and its advanced 21st Century Security capabilities to the warfighter," said OJ Sanchez, vice president, Integrated Fighter Group, which

includes the F-16 program, Lockheed Martin. "With the Block 70 iteration, we are transforming 4th generation for the next generation for the Royal Bahraini Air Force and other partners and allies around the world," he further added.

This F-16 Block 70 jet is the first of 16 jets for Bahrain and took its first flight on Jan. 24, 2023. From here, it will begin additional flight tests at Edwards Air Force Base before arriving in Bahrain in 2024.

"The F-16 celebrated today was built by our talented, committed workforce in Greenville," said Danya Trent, vice president, F-16 Programs and Greenville site leader, Lockheed Martin. "We are proud to call Greenville the global home of the F-16 and look forward to continuing to produce jets serving missions around the world," he further added.

Six countries have selected Block 70/72 aircraft. In addition to the current official backlog of 127 jets to-date to be built in Greenville, Jordan has also signed a Letter of Offer and Acceptance (LOA) for 12 fighter jets and Lockheed Martin has received a contract to begin its long-lead activities. Bulgaria has also signed an LOA for an additional eight jets for its fleet. Once these are finalized, the backlog will increase to 147 ■

# Pilatus announces orders from the Spanish Air Force for additional 16 PC-21s & Simulators

*The Spanish Air Force, Ejército del Aire, decided to purchase 24 PC-21s in early 2020 and the final PC-21 of this order was delivered to Spain in mid-2022.*

Pilatus has announced it has received a contract for another 16 PC-21 aircraft from The Spanish Air Force. The newly signed contract with the Dirección General de Armamento y Material (DGAM) makes Spain the largest PC-21 operator in Europe. The Spanish Air Force, Ejército del Aire, decided to purchase 24 PC-21s in early 2020. The final PC-21 of this order was delivered to Spain in mid-2022.

Lieutenant Colonel Ildefonso Martínez-Pardo González, Air Operations Group Commander, Academia General del Aire (AGA) said: "Now in use with the Spanish Air and Space Force for over 18 months, the PC-21 integrated training system far exceeds our expectations. Its reliable and efficient powerplant, aerodynamics, safety systems and avionics make the PC-21 a highly versatile trainer, capable of performing any phase of flight training from the most elementary to the most advanced. Our relationship with Pilatus has been outstanding throughout, and a key factor for successful implementation. The excellent collaboration, professionalism and teamwork of everyone involved over the past three years have enabled us to roll out this PC-21 training course in record time without interruption to training."

Spain has been using the PC-21jet since the summer of 2022, and its future military pilots have trained with the world's most advanced training system by Pilatus. After a very professional negotiation phase, the Spanish Air Force has now ordered another 16 PC-21s to reinforce pilot training with additional Pilatus trainer aircraft. The training bandwidth of the PC-21 will also be enlarged in the future, the PC-21 will also be used for elementary training in addition to basic training.

Markus Bucher, CEO, Pilatus said, "What could be better than a customer who buys again from Pilatus! Spain is an extremely renowned, professional air force. As such, Spain's decision is a testimony to the capabilities of our training system. It is the most advanced, most efficient training system available on the market!"

The 14 PC-21 aircraft will be delivered to the Academia General del Aire (AGA) in San Javier. An additional two PC-21s will also be delivered to the Centro Logístico de Armamento y Experimentación (CLAEX). These two PC-21s will be used for experimental, flight test training and research and development activities. The aircraft will be based in Torrejón near Madrid. The package also includes a PC-21 simulator, two cockpit

procedure trainers, additional mission planning and debriefing systems as well as pilot training software.

André Zimmermann, VP Government Aviation at Pilatus said, "Over the last few years, we have built an excellent relationship with the Spanish customer and are now very pleased to help them enhancing their training skills with this follow-on order of PC-21 aircraft and associated Ground Based Training Systems. This proves once again that Pilatus is producing and delivering first class products to satisfy the high requirements of our customers."

With ever-growing pressure on air force funding, the completely newly developed PC-21 offers a highly efficient, intelligent platform for training jet pilots. To meet all the expectations, the PC-21 has extremely high equipment and performance features. They enable the single-engine turboprop to perform a range of missions previously reserved exclusively for jets. The PC-21 is far more cost-effective and fuel-efficient to operate than a jet trainer. Experience with existing PC-21 customers shows that with the Pilatus Training System, the cost of training a future military pilot can be reduced by over 50 percent ■





## Bernard Marquez named as Head of Quality ATR

*Bernard Marquez takes the lead of an integrated and independent Quality function and will be reporting directly to ATR's Chief Executive Officer, Nathalie Tarnaud Laude.*

**A**TR, a Franco-Italian aircraft manufacturer headquartered in Blagnac, France has announced the appointment of Bernard Marquez as the Head of Quality. Marquez has assumed responsibilities in his new role effectively from 1 March 2023. By joining ATR, Bernard takes the lead of an integrated and independent Quality function and will be reporting directly to ATR's Chief Executive Officer, Nathalie Tarnaud Laude.

Bernard graduated from the National Polytechnic Institute of Toulouse (INPT). Bernard brings a breadth of experience to the role after 25 years of building sound expertise in quality and engineering. For almost a decade, he drove quality improvement plans mainly for



the Airbus Single-Aisle Programme and its various production sites.

Most recently, he held the position of Head of A320 Family Quality Value Stream Management Performance, fostering direct or indirect teams on high performance, offering pragmatic solutions whilst always maintaining the highest levels of safety and quality.

ATR is a joint venture between Airbus and Leonardo, and is the leading manufacturer of regional aircraft, with a range of turboprop aircraft that are used by airlines around the world. The company has a strong reputation for quality and safety, and is committed to delivering innovative, sustainable solutions to the aviation industry ■

## Michael Jackson named Director of Maintenance at C&L Aviation Services

*Michael Jackson In this position is responsible for overseeing all repair-station activities at the company's regional and corporate maintenance facility in Bangor, Maine, U.S.*

**C**&L Aviation Services, a leading provider of aircraft maintenance, repair, and overhaul services, has announced the appointment of Michael Jackson as its new Director of Maintenance. Jackson In this position is responsible for overseeing all repair-station activities at the company's regional and corporate maintenance facility in Bangor, Maine, U.S. He will ensure that all aircraft are maintained in accordance with industry regulations and standards, and that they are kept in safe and airworthy condition.

Michael Jackson brings a wealth of experience and expertise to the role, having worked in various positions within the aviation industry for over 20 years. Jackson in this role led teams of over 300 people that were responsible for both line maintenance and base maintenance operations.

In addition to his professional experience, Michael Jackson holds a Bachelor of Science degree in Aeronautical Science from Embry-Riddle Aeronautical University. He is also a licensed aircraft



maintenance engineer and holds several FAA certifications.

"We are thrilled to have Michael join our team as Director of Maintenance," said Chris Kilgour, CEO of C&L Aviation Services. "His expertise and leadership will be invaluable as we continue to expand our capabilities and deliver top-quality maintenance services to our customers," he further added.

Before joining C&L Aviation Services, Michael Jackson worked at several major airlines, including United Airlines and Delta Air Lines. He also served as Director of Maintenance at Gulfstream

Aerospace, where he oversaw the maintenance and repair of business jets.

Jackson has extensive experience with a wide range of aircraft types, including commercial airliners, business jets, and military aircraft.

C&L Aviation Services has been providing aircraft maintenance, repair, and overhaul services for over 25 years. The company operates two maintenance facilities in Bangor, Maine, and a parts distribution center in Australia. C&L Aviation Services is an authorized service center for several major aircraft manufacturers, including Bombardier, Saab, and Embraer.

With the hiring of Michael Jackson as Director of Maintenance, C&L Aviation Services is well-positioned to continue providing high-quality maintenance services to its customers. Michael Jackson's expertise and leadership will ensure that all aircraft maintenance operations are carried out safely, efficiently, and to the highest standards of quality ■

# International CALENDAR 2023

# 2023

Date	Event	Venue
18-20 April 2023	MRO AMERICAS	Atlanta, GA, USA
25-27 April 2023	ATCA Technical Symposium	Atlantic City, NJ, USA
02-04 May	NBAA Maintenance Conference	Hartford CT
03-05 May 2023	Rotorcraft Asia and Unmanned Systems Asia 2023	Singapore
16-18 May 2023	IATA Ground Handling Conference	Abu Dhabi
17-18 May 2023	MRO AUSTRALASIA	Brisbane, Australia
23-25 May 2023	NBAA – EBACE	Geneva
07-08 June 2023	ELTF EUROPE	London, UK
14-15 June 2023	Dubai HeliConference 2023	Dubai
13-14 Sept 2023	AERO-ENGINES EUROPE	Madrid, Spain
26-27 Sept 2023	Helitech Expo	London
26-28 Sept 2023	World Aviation Festival	Portugal
26-28 Sept 2023	MRO ASIA-PACIFIC	Singapore
17-19 Oct 2023	NBAA- BACE	Las Vegas, NV
01-03 Nov 2023	ATCA Global Conference & Expo	Washington, DC, USA
06 - 08 Dec 2023	Air Expo India	Indira Gandhi Intl Airport-New Delhi

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