MRO BUSINESS TODAY

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FL Technics adds another feather in the cap

The capability to service Boeing's B787 Dreamliner opens new opportunities within the global market for wide-body aircraft.

FL Technics recently received two extensions within current Part-145 approval. First – to provide line maintenance services for Boeing B787 aircraft, and the second expansion of capabilities – for borescope inspections of Pratt & Whitney PW1100G-JM series engines.

Zilvinas Lapinskas, CEO of FL Technics, defines this achievement as a new strategic development and a great milestone, achieved by our teams of professionals, "Continuous improvement is one of the core values of our company and I am proud to see our people commit to it. These two new extensions of capabilities perfectly illustrate the effort and competence of our maintenance teams. As a result, we are now set to further expand the scope of our current partnerships and develop new business cases across our global MRO network."

The capability to service Boeing's B787 Dreamliner opens new opportunities within the global market for wide-body aircraft in perfect synergy with FL Technics' global, largest independent line maintenance network. At the same time, their team will now leverage certified services of borescope inspection of one of the most popular engines currently in the market, typically mounted on the Airbus A320 aircraft family. Each of these two developments significantly boosts FL Technics' flexibility and opens new opportunities to provide services that are in high demand across the aviation industry.

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CFM shares Airbus' ambition of fulfilling the promise they made in signing the Air Transport Action Group goal in October 2021 to achieve aviation industry net-zero carbon emissions by 2050.

Airbus and CFM International usher in a new era of hydrogen-powered flight

Airbus will also define the hydrogen propulsion system requirements, oversee flight testing, and provide the A380 platform to test the hydrogen combustion engine.

Airbus has signed a partnership agreement with CFM International to collaborate on a hydrogen demonstration program that will take flight around the middle of this decade. The program's objective is to ground and flight test a direct combustion engine fueled by hydrogen, in preparation for entry-into-service of a zero-emission aircraft by 2035. The demonstration will use an A380 flying testbed equipped with liquid hydrogen tanks prepared at Airbus facilities in France and Germany.

Sabine Klauke, Airbus Chief Technical Officer said, "This is the most significant step undertaken at Airbus to usher in a new era of hydrogen-powered flight since the unveiling of our ZEROe concepts back in September 2020. By leveraging the expertise of American and European engine manufacturers to make progress on hydrogen combustion technology, this international partnership sends a clear message that our industry is committed to making the zero-emission flight a reality."

Airbus will also define the hydrogen propulsion system requirements, oversee flight testing, and provide the A380 platform to test the hydrogen combustion engine in the cruise phase.

CFM International (CFM) will modify the combustor, fuel system, and control system of a GE Passport turbofan to run on hydrogen. The engine, which is assembled in the US, was selected for this program because of its physical size, advanced turbomachinery, and fuel flow capability. It will be mounted along the rear fuselage of the flying testbed to allow engine emissions, including contrails, to be monitored separately from those of the engines powering the aircraft. CFM will execute an extensive ground test program ahead of the A380 flight test.

Gaël Méheust, president & CEO of CFM said, "Hydrogen combustion capability is one of the foundational technologies we are developing and maturing as part of the CFM RISE Program. Bringing together the collective capabilities and experience of CFM, our parent companies, and Airbus, we really do have the dream team in place to successfully demonstrate a hydrogen propulsion system." CFM shares Airbus' ambition of fulfilling the promise they made in signing the Air Transport Action Group goal in October 2021 to achieve aviation industry net-zero carbon emissions by 2050 by developing and testing the technology necessary to make zero-emissions aircraft a reality within the ambitious timeline defined.

Airbus has a long-standing relationship with CFM and its parent companies, GE Aviation and Safran Aircraft Engines, and, together, the partners have established a great track record of delivering high-performance products that meet the needs of airline customers.

Safran expands MRO capabilities in Singapore in anticipation of air traffic recovery

Safran's Singapore facility now serves as Safran's sole site for repairs in the Asia Pacific for A350 avionics equipment and Rotating Pressure Sensor Assembly.

Safran Electronics and Defense Asia recently increased its scope of MRO activities. The Safran facility in Singapore will now carry out Maintenance and Repair Operations on landing gear control systems, such as tire pressure and brake temperature monitoring, for aircraft ranging from business jets to civilian aircraft. In addition, they received new scopes of repair including a range of products such as external lighting, wiper system, cockpit control systems, and cargo door.

Matthieu Pere, CEO of Safran Electronics & Defense Services Asia said, "In anticipation of the traffic recovery in the region, we have increased our capacity and scope of repair and we recently upgraded our store to welcome more activity. Our company now serves as Safran's sole site for repairs in the Asia Pacific for A350 avionics equipment and Rotating Pressure Sensor Assembly."

Lim Tse Yong, Vice President, Capital Goods and Vice President, Conglomerates, Singapore Economic Development Board said, "We welcome Safran Electronics & Defense Services Asia's decision to expand its MRO capabilities in Singapore. It is a testimony to Safran's confidence in Singapore as a leading aerospace hub. We look forward to partnering with our industry partners, including Safran, to seize opportunities with the recovery."

Safran Electronics & Defense Services Asia's territorial rights to perform these repairs cover Asia Pacific, Europe, Middle East, and Africa.

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iAero Airways completes FAA certification of Boeing 767

iAero Airways expects great interest in the charter market for the VIP-configured Boeing 767.

iAero Airways recently completed the rigorous FAA process of adding Boeing 767s to its ever-expanding fleet. The iAero Airways team worked closely with the FAA to accomplish this important certification.

iAero Airways added the Houston Rockets VIP Boeing 767-300ER as the first of its kind in their fleet. Following the FAA guidelines and completing the required proving flights, the FAA has granted Operations Specifications to iAero Airways to begin revenue operations with the new aircraft type. The first flight for the Houston Rockets was completed last week.

Robert Caputo, Chief Executive Officer of iAero Group said, "The addition of this Houston Rockets VIP B767 into our fleet begins a new and exciting chapter at zero Airways. It marks not only our expansion into wide-body aircraft but our further expansion into professional sports – a testament to the iAero Air-

Image Courtesy: www.prnewswire.com

in the charter market for the VIP-configured Boeing 767. It represents one of the most unique and luxurious charter aircraft in the market with many upgraded amenities one would expect in

iAero Airways is the largest B2B passenger charter and cargo air carrier in the US, and one of the companies within the iAero Group aviation investment platform.

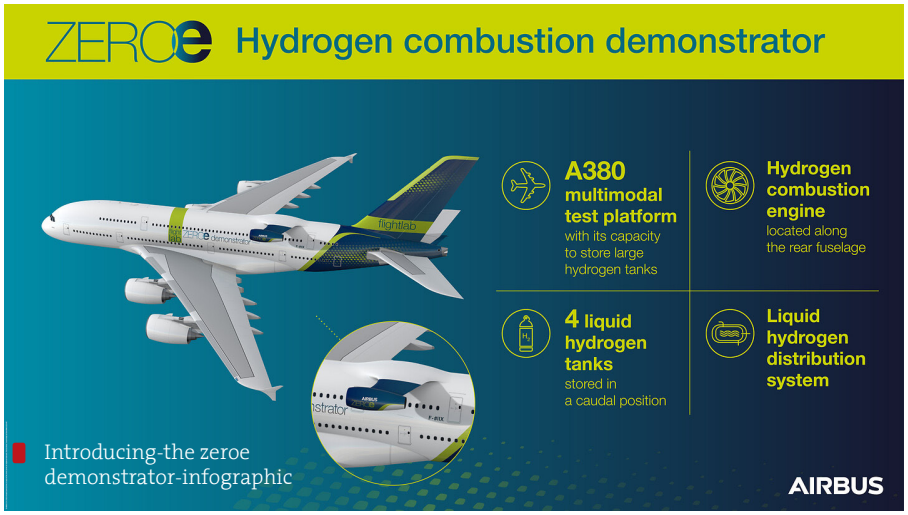
Boeing

Building zero-emission ecosystem for aviation

Depleting the ozone layer, melting of ice from glaciers in the Arctic and Atlantic regions, rising levels of CO_2 have jolted mankind back to reality. Every country has become extra cautious concerning the environment and the hazardous impact of pollution on the health and well-being of life on earth. It is already high time and red flags are raised every year with floods, droughts, and excessive heat taking its toll on human life. If the pollution is not kept in check, very soon, mankind will perish. Understanding these primary school basics, every government of every nation is playing its part to keep the pollution under check.

Aviation – A contributing factor in pollution

Aviation is one of the fastest-growing sources of greenhouse gas emissions driving global climate change. Airplanes emit gases like carbon dioxide, water vapor, nitrogen oxides carbon monoxide when mixed with oxygen in the air becomes CO 2 leaving a significant carbon footprint. As per the data released by



the Air Transport action group, flights produced 915 million tonnes of CO_2 in 2019, while humans produced over 43 billion tonnes of CO_2. Thus, we can see aviation is responsible for 12 percent of CO_2 emissions from all transport sources, compared to 74 percent from road transport.

According to IATA, the aviation sector produces 900 million tons of CO_2 per year, if nothing is done to keep it in check by 2050 it will rise to 1.8 billion tons, meaning over 30 years, 21.2 billion tons of CO_2 would be released into the atmosphere. Reducing this level to gradually achieve net-zero emissions in 2050 poses an enormous technological challenge that the IATA estimates will cost companies around USD 1.55 trillion between 2020 and 2050.

Naturally, the responsibility to keep this in check fell on the shoulders of aircraft manufacturers, engine manufacturers, OEMs, MROs, and aerospace companies of the world, and true to their word, all the aircraft manufacturers, airlines, aerospace companies, and engine makers came together at the 77th Annual General Meeting of IATA and approved a resolution for the global air transport industry to achieve net-zero carbon emissions by 2050. This commitment will align with the Paris Agreement goal for global warming not to exceed 1.5°C.

Willie Walsh, IATA's Director General said, "The world's airlines have taken a momentous decision to ensure that flying is sustainable. The post-COVID-19 reconnect will be on a clear path towards net zero. That will ensure the freedom of future generations to sustainably explore, learn, trade, build markets, appreciate cultures, and connect with people the world over. With the collective efforts of the entire value chain and supportive government policies, aviation will achieve net-zero emissions by 2050."

Net-zero will be reached through a combination of climate action initiatives. This includes supporting new aircraft technologies, such as hydrogen and electric, as well as improvements in operational efficiency and infrastructure. The acceleration of the production and uptake of sustainable aviation fuel (SAF) is expected to play a major role in reducing the climate impact of aviation. Furthermore, any outstanding emissions would be captured using carbon removal measures.

Boeing & Airbus – en route to sustainable aviation

Airbus and Boeing have pledged that their fleets will be able to fly 100 percent on SAF by 2030 and they have already initiated steps to achieve this goal.

At the recently concluded Singapore Air Show 2022, Airbus signed a partnership agreement with CFM International to collaborate on a hydrogen demonstration program that will take flight around the middle of this decade. The program's objective is to ground and flight test a direct combustion engine fuelled by hydrogen, in preparation for entry-into-service of a zero-emission aircraft by 2035. The demonstration will use an A380 flying testbed equipped with liquid hydrogen tanks prepared at Airbus facilities in France and Germany.

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The ZEROe demonstrator by Airbus is a giant leap forward to bring zero-emission aviation to reality. It will carry four liquid hydrogen tanks in a caudal position, as well as a hydrogen combustion engine mounted along the rear fuselage. The liquid hydrogen distribution system will feed into a conditioning system in which the liquid hydrogen will transform into its gaseous form before it is introduced into the engine where it is combusted for propulsion. Airbus claims this to be the first step towards the world's first zero-emission commercial aircraft.

Boeing's priority is developing a plane that can fly on 100 percent SAF, such as biofuels, by 2030. They are also working on hydrogen propulsion. Boeing's ecoDemonstrator program accelerates innovation by taking promising technologies out of the lab and testing them in the air to solve real-world challenges for airlines, passengers, and the environment. Eight airplanes have served as flying testbeds for the program since it began in 2012.

Projects include technologies that reduce fuel use, emissions, and noise and incorporate more sustainable materials. Collaboration with industry partners is foundational to the ecoDemonstrator program to support the constant evolution of new ideas and advanced aviation. Boeing is partnering with Seattle-based Alaska Airlines on the 2021 program—using one of the airline's new 737-9s to test about 20 projects that can make aviation safer and more sustainable.

Airline contribution

Multiple airline companies have announced programs to try to become more sustainable in the coming years. Delta Air Lines recently committed USD1 billion to become carbon neutral by 2030. JetBlue pledged to get there by 2040, and United Airlines by 2050.

In April 2019, Etihad Airways became the first major airline to complete a long-haul flight without any single-use plastic on board after revealing that it had been using some 27 million single-use plastic coffee cup lids per year.

Tony Douglas, Group Chief Executive Officer, Etihad Aviation Group, said: "There is a growing concern globally about the overuse of plastics which can take thousands of years to decompose. We discovered we could remove 27 million single-use plastic lids from our inflight service a year and, as a leading airline, it's our responsibility to act on this, to challenge industry standards and work with suppliers who provide lower impact alternatives."

Ryanair has vowed to go entirely plastic-free by 2023, also making the switch to biodegradable cutlery and cups. Other ways of cutting down CO_2 emissions include efforts to reduce weight. British Airways, for example, is installing lighter seats on aircraft, and introducing lighter catering trolleys.

Some of the sustainability initiatives currently being carried out by SAS include new, fuel-efficient aircraft with reduced emissions; weight reductions to existing aircraft to reduce fuel consumption; major initiatives to improve access to high-quality biofuel; and a partnership with Airbus to develop electric and hybrid aircraft. Portuguese charter carrier Hi Fly carried out the world's first single-use plastic-free flights in 2019. The eco-alternatives used were plant-based catering disposables made from renewable, lower carbon or recycled materials, that can be composted along with food waste, as well as paper, card, bamboo, chinaware, glass, and stainless steel.

Singapore Airlines is also stepping up its inflight sustainability efforts by further reducing food wastage on board, cutting back on the use of plastics for inflight items, and increasing the use of sustainable ingredients in inflight meals.

Recently India's largest airline IndiGo took delivery of the first aircraft from Airbus that operated on a blend of sustainable aviation fuel and normal fuel as a part of its journey towards sustainable aviation.

Swiss International Air Lines (SWISS) has become the first passenger airline in the world to use innovative surface technology to significantly reduce fuel consumption and emissions of one of its existing fleets, thereby improving both economy and ecology. Lufthansa Technik will be providing the AeroSHARK equipment for 12 Boeing 777. These aircraft will be fitted with riblet films developed jointly by Lufthansa Technik and BASF. The frictional resistance is greatly reduced by this modification thereby making the sub-fleet more than one percent more fuel-efficient and lower in emissions.

ecoDemonstrator Green Diesel

Johannes Bussmann, Chief Executive Officer of Lufthansa Technik said, "Due to the long lifecycles in our industry, we cannot only rely on new aircraft generations to reduce our environmental footprint but also need to specifically optimize existing fleets towards sustainability. AeroSHARK makes a significant contribution to this, and I am very pleased that SWISS is leading the way."

Continuously upgrading fleets to more modern and fuel-efficient aircraft is also a big step. Hence many operators are retiring their older widebody aircraft to replace them with younger, innovative aircraft for fleet modernization.

Engine MROs

Honeywell announced its first hybrid-electric turbogenerator, which will be installed on the first generation of vertical takeoff and landing aircraft. It is estimated that the generator will decrease carbon emissions between 30 and 50 percent compared to the HTS900 engine. This hybrid engine will contribute to a quieter, safer, and cleaner future transportation. Stephane Fymat, vice president and general manager for Unmanned Aerial Systems and Urban Air Mobility at Honeywell Aerospace. "Our turbogenerators provide a safe, lightweight package to serve these burgeoning segments, and we're designing our solutions to meet the unique needs of customers developing aerial vehicles of the future."

MTU Maintenance has partnered with JetBlue Airways for the testing and data-gathering on sustainable aviation fuels (SAF) with the airline's V2500 engines following on from shop visits in Hannover, Germany. Conducted in a controlled ground environment, test runs will initially be performed with a 10 percent SAF fuel blend and can be expanded to up to 50 percent.

"MTU Maintenance is the first MRO provider worldwide to be offering test runs with SAF," says Michael Schreyögg, Chief Program Officer, MTU Aero Engines. "We are excited to be doing our part in reducing carbon dioxide emissions at our sites and providing more sustainable MRO solutions for customers across the lifecycle. MTU is committed to the Paris Climate Agreement and therefore aiming to become carbon neutral in operations across our German production facilities."

Achieving net-zero emissions will be a huge challenge. The aviation industry must progressively reduce its emissions while accommodating the growing demand of a world that is eager to fly. To be able to serve the needs of the ten billion people expected to fly in 2050, at least 1.8 gigatons of carbon must be abated in that year. Moreover, the net-zero commitment implies that a cumulative total of 21.2 gigatons of carbon will be abated between now and 2050.

The CFM LEAP engines are fuel-efficient offer lower CO_2 emissions.

BOC Aviation continues to place faith in CFM LEAP engines for the Airbus fleet

CFM engines will power 486 fuel-efficient and technologically advanced A320NEO aircraft in the BOC Aviation fleet.

BOC Aviation recently ordered eight shipsets of CFM International LEAP-1A engines to power their new Airbus A320NEO family aircraft. The engines are scheduled for delivery in 2023.

Robert Martin, Managing Director and Chief Executive Officer of BOC Aviation said, "CFM engines have powered our fleet since 1998, and we are pleased to build on this long-standing relationship. This contract signifies our continued confidence in the CFM LEAP engine and reflects our customers' satisfaction in CFM LEAP-powered A320neo aircraft as an efficient and reliable airframe and engine combination."

David Walton, Deputy Managing Director and Chief Operating Officer, BOC Aviation said, "With this order, CFM engines will power 486 aircraft in our portfolio, and we look forward to continuing providing our airline customers with fuel-efficient and technologically advanced aircraft solutions."

Gaël Méheust, president and CEO of CFM International said, "We are pleased that BOC Aviation has again chosen the LEAP-1A engine to power its new A320neo family aircraft and we are both honored by the continued faith that BOC Aviation has shown in our people and our products and proud to bring sustainability benefits in terms of better fuel efficiency and lower CO_2 emissions, as well as the industry's highest asset utilization, to BOC Aviation and its airline customers."

CFM International is a 50/50 joint company between GE and Safran Aircraft Engines and produces engines for both the Airbus A320 family and the Boeing 737 series.

Honeywell's transformational HTS7500 turboshaft engine selected to power DEFIANT X

This engine will make DEFIANT X the fastest, most maneuverable, and survivable assault helicopter in history.

Sikorsky and Boeing selected Honeywell as the HTS7500 turboshaft engine provider for DEFIANT X making DEFIANT X the fastest, most maneuverable, and survivable assault helicopter in history.

Mark Cherry, vice president, and general manager of Boeing Vertical Lift said, "Team DEFIANT's strength is built on the experience of Sikorsky and Boeing and a commitment to Army Aviation. Honeywell's history with Boeing and the U.S. Army makes us even more confident that DEFIANT X is the best fit for the Army's total mission."

The HTS7500 turboshaft engine will bring unsurpassed Army Aviation experience to revolutionize Army air assault while seamlessly integrating with legacy platforms, proven tactics, and existing infrastructure. Currently, DEFIANT X is most the advanced helicopter for the U.S. Army's Future Long-Range Assault

Aircraft (FLRAA) competition.

Paul Lemmo, president of Sikorsky said, "DEFIANT X is a transformational aircraft, and Honeywell is giving us a transformational engine to power it. DEFIANT X is optimized for operational effectiveness, sustainment, and interoperability with the enduring fleet, and will transform the Army."

Ricky Freeman, president, of Defense & Space at Honeywell Aerospace said, "Honeywell is excited to be a part of Team DEFIANT and proud to play a part in the future of vertical lift for the U.S. Army. We're confident our HTS7500 engine on the DEFIANT X platform will provide the Army with an agile, fast and maneuverable platform that will help ensure overmatch capability in the future battlespace."

DEFIANT X is a complete weapon system that builds on the handling qualities and capabilities proven by the team's technology demonstrator, SB>1 DEFIANT. It flies twice as far and fast as the venerable Black Hawk helicopter it is designed to replace. Currently undergoing testing in a digital combat environment, the aircraft continues to prove itself as the most survivable platform for mission requirements.

Sikorsky-Boeing submitted the proposal for DEFIANT X for the U.S. Army's Future Long-Range Assault Aircraft in September 2021. Contract award is expected this year.

China Airlines extends Total Component Support contract with Lufthansa Technik

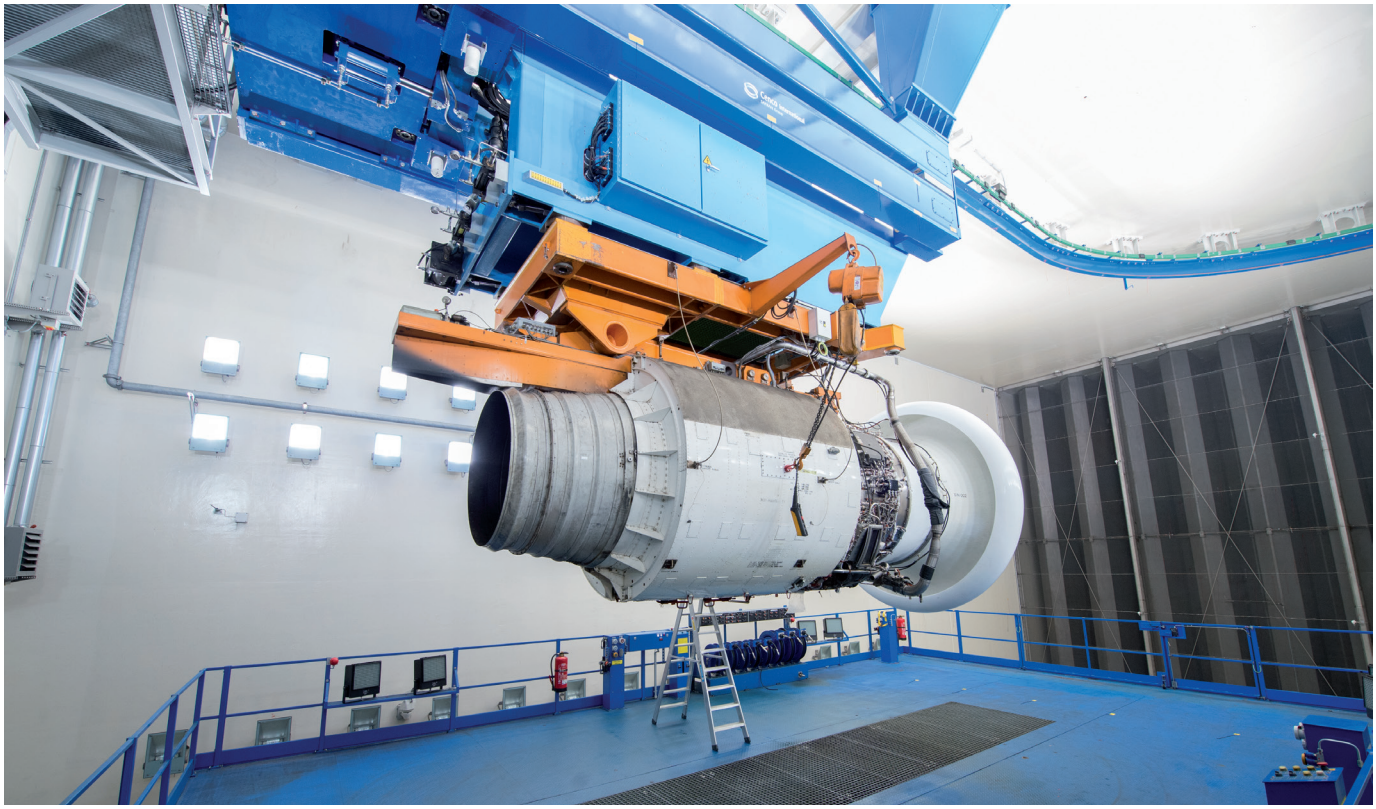
The Agreement will be for Total Component Support for Airbus A330.

China Airlines, the flag carrier of Taiwan will extend the Total Component Support (TCS) contract with Lufthansa Technik for minimum period of six years. The agreement consists of component support for the Airbus A330 fleet comprising of 23 aircraft.

Jason Tsai, VP Engineering Division of China Airlines, said "The reliable and high-quality services we have experienced since 2010 had convinced us to extend the contract. A stable operation is crucial for us and Lufthansa Technik has proven to be a dependable partner".

"We are thankful for our long-term and trustful relationship with China Airlines and are commited to exceed their expectations," said Konstantin Stathopoulos, VP Corporate Sales for North Asia at Lufthansa Technik. Lufthansa Technik also provides component services for their Airbus A350 fleet, including simulator components as well as Auxiliary Power Units.

China Airlines.



MTU Maintenance post-Covid wrap – Sustainability, Partnerships, Expansion, and more...

MTU Maintenance, the world's leading provider of customized services for aircraft engines has consistently and successfully pursued its growth plans. In 2021, they fortified their standing in the engine aftermarket and remained committed to its expansion activities around the globe – in addition to increasing shop inductions to above pre-Covid levels. **Martin Friis-Petersen, SVP MRO Programs, MTU Aero Engines speaks about MTU's commitment to sustainable aviation, how they weathered the COVID-19 pandemic, their expansion plans going ahead and a lot more in an exclusive interview with Swati.k**

Q- First of all, Congratulations on being the first MRO provider worldwide to be offering test runs with SAF. Sustainable Aviation/ Green aviation, CO_2 emission, zero-emission travel is the talk of the town these days. MTU Maintenance also recently partnered with JetBlue for testing and data-gathering on sustainable aviation fuels (SAF). Can you tell us more about this deal?

A- We are very pleased indeed to have partnered with JetBlue for the testing and data-gathering on SAF for the airline's V2500 engines following on from shop visits in Hannover. The V2500 is MTU's largest program and JetBlue is our largest single customer for that engine type.

Both companies are committed to sustainable aviation, so it was an ideal match for both companies. While it is JetBlue's goal to achieve net-zero carbon emissions by 2040, MTU is adhering to the Paris Climate Agreement. We aim to become carbon neutral at all our German production facilities.

The test runs will initially be performed with a 10% SAF fuel blend - 10% bio-kerosene and 90% Jet A-1 kerosene – and can be expanded to up to 50%, the current regulatory limit, if required. This SAF is sustainably derived from waste fats, oils, and greases and has up to an 80% lifecycle greenhouse gas emission reduction per gallon as compared to the conventional jet fuel it replaces. We are monitoring these tests closely and generally aim to gain experience in the

use of SAFs. Due to the fact that SAFs are approved aviation turbine fuels, these tests run similarly to conventional test runs.

Q- Currently, tests are being carried out across the Aerospace sector using 10 percent to 50 percent SAF blend. Do you think the aerospace sector will achieve 100 percent SAF for commercial use?

A- While MTU currently uses the 10% SAF blend for engine testing after repair and overhaul work for specific customers, JetBlue uses the same blend in flight. The latter however is restricted to a maximum of 50% SAF as per ASTM7566 norm today. In order to reach a higher share, limitations from the authorities would need to change first.
At present, the main issue in achieving higher rates is more of a supply issue as there is only a limited amount of SAF on the market, and it by far does not cover the growing needs of the aviation sector. Pricing is also still high, which is expected to go down together with higher production rates. As such, it is difficult to predict when a sufficient amount of SAF will be available at a competitive price. Fast-rising crude oil prices could actually help reach that breakeven point earlier than expected.

Q- Recently, Boeing purchased two million gallons of blended sustainable aviation fuel or SAF from EPIC Fuels to power their Commercial Airplanes operations in Washington. This is by far the largest SAF procurement by any company. Your comments

A- Boeing's SAF acquisition is another testament that the aviation industry is committed to the ICAO/IATA goal of zero emissions by 2050. SAF supply remains one of the prime drivers to improve the carbon footprint of installed current generation engine types.
Regarding SAF supply, MTU is evaluating the feedstock and production process so that it is in compliance with the EU Renewable Energy Directive (RED II). Further, SAF transportation from the production plants and its caused GHG emissions are part of the evaluation. Therefore, MTU is following with great interest the build-up of production capacity for synthetic kerosene in Germany and European locations nearby.

Q- Can you elaborate more on the term – "Sustainable MRO solutions for customers" across the lifecycle?

A- We began testing SAF with the V2500 engines last November. After the partnership with JetBlue, we look forward to expanding this to other engine types and customers, such as the popular CFM56-7B and GE90 engines in due course. Over time, we hope to increase the number of test runs, as well as the SAF blend ratios. SAF is a key initiative in reducing the climate impact of the aviation industry. At MTU, we are implementing SAF early and promoting its usage to and for our customers, also in our maintenance business.
Of course, we have all kinds of sustainability initiatives within the group over the entire engine lifecycle – from development, production to operations and maintenance. One of our biggest over the past few years actually also was in Hannover and concerned energy efficiency and emissions reductions. We achieved reductions for instance by investing in insulation, heat exchangers, LED lighting, etc. and our ongoing site extension is being built according to the newest standards. We are also planning larger projects, such as changing our heating systems for renewable energy sources.
What has been part of MTU's DNA for a long-time is our "repairing instead of replacing" philosophy when it comes to engine materials. This not only saves costs for our customers; it has a positive effect on the environment.

Q- Can you throw some light on your latest partnership with the Nayak Group?

A- At Maintenance, we are currently focusing on expanding our on-site and near-wing services. Especially during the time of Covid-19, when airlines were looking for reducing their MRO expenditures, we have seen a growing demand for customized solutions at the best cost, either in-shop or on-site. In order to be able to offer the full gamut of services, we have entered into a cooperation with the Nayak group. Thanks to our partner, we are now able to offer our ON-SITEPlus engine services in combination with aircraft line and base maintenance services, a new addition that will be performed by Nayak. This also includes services such as performance washes and engine changes. In turn, Nayak will also be offering more extensive engine services, via MTU Maintenance, to its aircraft customers. This is a win-win partnership - for MTU, Nayak, and our customers.
While Nayak has a decentralized network of 50 facilities in 16 countries, MTU is growing its worldwide service network and dedicated workforce for on-site services. Last year, we completed over 1,000 events annually for more than 400 customers worldwide.

Q- Our readers would like to know how MTU Maintenance battled the COVID19 pandemic and your recovery plans going ahead.

A- Luckily, we have weathered the Covid-19 storm rather well, most probably better than most of our competitors. While airline shops run dry as many aircraft remained grounded worldwide for longer periods and OEM production and spare parts sales also fell short, MTU Maintenance benefited from its broad portfolio, partnerships and customers. For example, MTU's facility in China saw a faster demand recovery, thanks to a strong domestic market and partner airline China Southern as a base customer. Our flagship location in Hannover served increasing demand from cargo operators, a strong customer base of MTU. Further, MTU was able to perform some necessary work on the PW1100G as part of the OEM network for that engine type, as well as some project shop visits on other engine types.

At present, we see demand picking up fast in nearly all segments and recovery is especially strong for regional jets and narrow-body engines. We expect to see our global MRO levels recover to pre-pandemic levels in 2022 in terms of shop visits, which is far earlier than market predictions in terms of passenger traffic, which should only fully recover globally by 23/24. Luckily, we have retained our highly-qualified staff during the pandemic and have continued to invest in additional capacities and new facilities. We are ready to support the ongoing recovery!

Q- MTU Maintenance opened a new facility with quick-turn docks at MTU Maintenance Berlin-Brandenburg. What are your expansion plans going ahead?

A- It is our commitment to our customers to increase our services and network and become the number one on-site engine service provider in Europe. The new facility in Ludwigsfelde was an important milestone towards that goal. We want to be close to your customer and have additional dedicated teams based in the Americas, Europe, and Asia. We are currently considering further expanding those capabilities within our worldwide network.

Q- What advice would you give to the younger generation planning to pursue a career in aircraft maintenance?

A- The aviation industry is all about connecting people and it is encouraging to observe the fast recovery of travel with the ongoing lifting the travel restrictions. Forget all about Covid-19, travel restrictions, and a depressed aviation industry! This industry, also its maintenance sector, will soon become again the fast-growing booming industry it used to be. With increased flying comes an increased demand for maintenance, so jobs in this sector are secure. Considering the increasingly scarce maintenance personnel – as many technicians have left the industry during the crisis – there are for sure good opportunities for making a career as a technician or engineer in engine maintenance.

Engine maintenance starts evolving too and is becoming more digital - with a sharp focus on providing solutions, which may appeal to the younger generation. It is no longer just turning and wrenching but trying to find the best solutions for our customers in terms of flexibility, price, and availability – using the expert brain as well as artificial intelligence tools. As such, MTU Maintenance is heavily focused on investing in digitalization and we recently have launched CORTEX, our new engine fleet management service that combines technical expertise with data, for example from engine trend monitoring, shop work scoping history, and market understanding, with algorithms and artificial intelligence.

Safran Nacelles all set to open a new facility in Suzhou, China

The customers operating in the region will be able to benefit from timely, local support and services while reducing transport costs.

Safran Nacelles is all set to open a new MRO facility in Suzhou, China. The facility is currently being set up and operational in the second quarter of 2022. This facility will be located in the heart of the Suzhou Free Zone, one hour west of Shanghai. This strategic location simplifies the material import and export processes for customers in the Asia region.

Alain Berger, Safran Nacelles' Vice President of Support and Services, commented "I am very pleased to announce the upcoming opening of our repair station in Asia. Our customers in the region will benefit from timely, local support and services while reducing transport costs. The services offered range from preparation for entry-into-service to withdrawal of their aircraft from the operation. Safran Nacelles can support them at every stage of their fleet's life. The new repair station enhances our NacelleLife service offer even further."

The new site also complements Safran's MRO network, covering Europe, the Middle East, the Indian peninsula, and the Americas. It will also be used as a storage base for significant nacelle components (air inlets, thrust reversers, exhaust, etc.) for the entire Asia region.

The site is equipped with a dedicated MRO workshop and highly qualified personnel to repair nacelles and Line Replaceable Units (LRU). The on-site engineers are mainly experts in repairing composite and metal aerostructures. They can also work on-wing, on aircraft operators' sites and offer Original Equipment Manufacturer (OEM) guaranteed repair solutions.

Upon opening, the repair station will be certified by the Chinese (CAAC) and European (EASA) Air Authorities to repair nacelles and thrust reversers for the Airbus A330ceo A320neo aircraft equipped with CFM International LEAP-1 engines, and soon for the COMAC C919. The site teams are already supporting COMAC's final assembly line to prepare the entry-into-service of their medium-haul airliner.

Safran Nacelles-owned 5,200mt repair station is located on a Safran complex, enabling them to benefit from shared corporate services.

Collins Aerospace robust expansion plans in Asia-Pacific to bring door-step deliveries for customers

This additional capacity will help bring faster turnaround times and more efficient service to Collins' customers in the region.

Collins aerospace is set to increase its footprint in Asia-Pacific by opening new facilities in China and Malaysia. This additional capacity will help bring faster turnaround times and more efficient service to Collins' customers in the region. Collins plans to invest over USD 27 million to nearly double the size of its MRO operations in Xiamen, China, and quadruple the size of its MRO footprint in Selangor, Malaysia.

Daven Tey, regional director, IATA III Aftermarket Operations for Collins Aerospace, "The Asia Pacific region is a key market for Collins, and these expansions represent our commitment to provide the best possible service to our regional customers. Our customers are eager for in-region support for their growth platforms, and we'll now be able to bring even more critical MRO services to their door. This growth will also pave the way for new product introductions

and digital transformation to improve our future operations while boosting on-time delivery."

In Xiamen, Collins will invest more than USD 11 million to relocate its MRO operations from their current 50,000 square-foot facilities to a new 80,000 square-foot facility. The expanded site will provide MRO services for multiple Collins products, including fuel control systems, engine vane actuators, helicopter rescue hoists, evacuation slides, and avionics. The facility will support Chinese platforms like the ARJ21 and C919 and the B787, A350, A330neo, general aviation, and rotary-wing aircraft.

In Selangor, Collins will invest more than USD16 million to relocate its MRO operations from their current 40,000 square-foot facility to a new 160,000 square-foot facility at Subang Aerotech Park. The company's Malaysian operations were previously dedicated to supporting MRO for Collins environmental control systems. Still, as part of the expansion, the facility will add new MRO capabilities for Collins air cycle machines, heat exchangers, engine starters, valves, propellers, and actuation systems. The site will support a variety of aircraft, including the B787, B777X, A320, A380, ATR 42, and ATR 72.

Both sites will also work closely with Collins Innovation Hub in Singapore to explore new ways to utilize advanced technologies to enhance repair flows and quality.

Embraer Wideroe and Rolls Royce to conduct special study on zero-emission aircraft

Such technologies will allow national governments to continue to support passenger mobility while reusing most of the existing infrastructure more sustainably.

Embraer, Wideroe, and Rolls Royce will be conducting a 12-month cooperation study on a conceptual zero-emission regional aircraft. This study is in the context of pre-competitive research and development. It will address passenger requirements to stay connected in a post-Covid-19 world, but do so sustainably, and accelerate the knowledge of the technologies necessary for this transition.

Arjan Meijer, President and CEO of Embraer Commercial Aviation said, "Technological innovations can potentially enable clean and renewable energy to power a new era of regional aviation. Our collaboration aims to create new flight solutions that serve expanded market segments sustainably. I strongly believe this could lead to fully sustainable connectivity, including (very) short-haul intercity operations."

Andreas Aks, CEO of Widerøe Zero, a subsidiary of Widerøe AS, said, "We are excited to take part in this exciting research. Working with the world's leading aerospace technology firms, we aim to understand how viable business can be built around zero-emissions regional concepts and to advise the manufacturers on operational requirements and customer expectations to design the best possible and sustainable air mobility service."

Among other topics, the study will cover a wide range of applications for new propulsion technologies to examine a range of potential solutions – including all-electric, hydrogen fuel cell, or hydrogen-fueled gas turbine-powered aircraft.

Chris Cholerton, President – Civil Aerospace, Rolls-Royce, said, "This is an exciting project which will shape our thinking on solutions for net-zero regional operation. As pioneers of power, this is the kind of engineering challenge that we relish. We have an excellent working relationship with both Embraer and Wideroe and look forward to deepening our collaboration."

Such technologies will allow national governments to continue to support passenger mobility while reusing most of the existing infrastructure more sustainably. Advances in scientific research can make clean and renewable energy a significant enabler of a new era of regional aviation. The three companies will share their combined in-depth knowledge of aircraft design, market demand, operations, and propulsion solutions to develop further their understanding of zero-emission technologies and how they can be matured and applied to future regional aircraft.

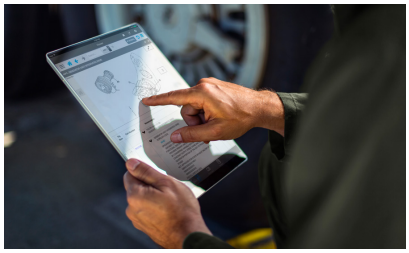
Boeing's Maintenance Performance Toolbox – one-stop digital solution to manage maintenance information

ANA and other airlines have deployed their full-fleet capabilities on maintaining their Boeing and non-Boeing aircraft.

Nippon Airways signed an extension for Boeing's Maintenance Performance Toolbox for five years. Nippon has been using the Boeing digital solution for the past eight years to manage the maintenance information for its entire fleet of aircraft and engines.

Maintenance Performance Toolbox allows operators to simplify their maintenance operations by enabling them to manage, distribute, process and view intelligent maintenance documentation in a uniform digital format through a single interface, regardless of aircraft manufacturer or engine type.

Hajime Kaneko, Vice President of the Digital Transformation Portfolio Management Department at ANA, said, "The adoption of Maintenance Performance Toolbox is one example of how we have streamlined our maintenance processes



through digital tools. It has greatly reduced the complexity of managing maintenance information for multiple airplane types across our fleet. We've seen efficiency improvements in our maintenance operations, and we'll continue to use Maintenance Performance Toolbox to take advantage of those benefits."

Currently, nearly 350 airplane operators and their MRO providers rely on the Maintenance Performance Toolbox to support their engineering and maintenance operations. ANA and other airlines have deployed their full-fleet capabilities on maintaining their Boeing and non-Boeing aircraft.

Duane Wehking, Vice President of Digital Aviation Solutions for Boeing Global Services, said, "ANA was a development partner for Maintenance Performance Toolbox and was the first customer to go live with the platform's full-fleet capability in 2013. We look forward to continuing to grow and improve Maintenance Performance Toolbox through our collaboration with ANA in support of streamlining their maintenance operations."

Boeing is also partnering with AIRDO, an affiliate of ANA, to provide cabin modification services for 767 airplanes in its fleet. Boeing will execute the design engineering, certification, and supply of components required for completion as part of the agreement.

IndiGo renews trust in NAVBLUE with RNP AR fleet upgrade

NAVBLUE's expertise will help pilots navigate safely through challenging terrains like curvy or hilly areas during the takeoff or landing.

With Airbus's RNP AR Upgrade, IndiGo pilots will navigate mountainous areas or other challenging airspaces with precision and predictability.

One of India's most prominent airlines IndiGo, has selected NAVBLUE to upgrade some of its latest A320 aircraft to the most advanced navigation technology, RNP AR (Required Navigation Performance with Authorization Required). With Airbus's RNP AR Upgrade, IndiGo pilots will navigate mountainous areas or other challenging airspaces with precision and predictability. Already a NAVBLUE customer since 2006, IndiGo aims to enhance the regularity and safety of operations in their flights to Kathmandu, an airport surrounded by mountains with a very challenging operating environment.

Fabrice Hamel, Chief Executive Officer at NAVBLUE, said: "We are proud that IndiGo, the largest airline in India and an established NAVBLUE customer since 2006, has renewed its trust in our products by choosing to upgrade its fleet with RNP AR capability, our complete end-to-end solution to support Ops approval, and N-RAIM, NAVBLUE's prediction service to support these operations. We are sure that our long track record supporting airlines with these solutions will benefit IndiGo."

RNP AR is the ideal solution, as a Performance-Based Navigation (PBN) system using satellite positioning, allowing navigation accuracy to 0.3NM and below, and turns after the final approach point. With RNP AR, IndiGo aircraft will be better equipped to access challenging airports and reduce minima with enhanced safety conditions, improving operational efficiency and positively impacting the environment. NAVBLUE's highly experienced and multidisciplinary team, using cutting-edge techniques, will implement a complete end-to-end solution for IndiGo with RNP AR capability, supporting Ops approval and Flight Operational Safety Assessment (FOSA) also applicable to departures.

Mr. Ronojoy Dutta, Chief Executive Officer at IndiGo, said: "We are pleased to partner with NAVBLUE to upgrade our latest A320 aircraft with the most advanced navigation technology. We have full confidence in NAVBLUE's expertise to help our pilots navigate safely through challenging terrains like curvy or hilly areas during the takeoff or landing. We believe this will enhance the operational safety of the aircraft while also improving efficiency in the long run."

To support its RNP and RNAV operations, IndiGo has chosen NAVBLUE's RAIM prediction service, N-RAIM. NAVBLUE is the world's leading provider of RAIM predictions to the civil aviation community, supplying over 85,000 predictions every day. For challenging airports where RNP AR approaches or departures are used, along-track predictions use the real mask angle to account for terrain screening.

TATAs in talks with Boeing & Airbus to reinfuse life in ailing Air India

Although Air India has lucrative landing slots, the TATA group faces an uphill task to upgrade Air India's aging fleet and turn around its financials and service levels.

Tata-Group-owned Air India has already started showing signs of a major revamp. In an attempt to infuse a fresh lease of life in the ailing Air India and its aging fleet, Tata Group is in talks with aircraft manufacturers - Boeing and Airbus.

Tata Group last month won control of the struggling Air India carrier after bidding an enterprise value of 180 billion rupees. Now the board is in talks with Boeing and Airbus for an order for a raft of new planes to modernize the Air India fleet for a whopping USD 2.4 billion. According to sources, the Tata board is in talks with OEMs lessors for jets including Airbus A350-900s and Boeing 787-9 Dreamliners. As per the sources, discussions are on for narrow-body jets that form the mainstay of Air India's domestic and short-haul operations, as well as wide-body aircraft capable of flying as far as the U.S.

Currently, the talks are at a preliminary stage, with Tata Sons assessing the right fleet mix and no decisions taken yet on aircraft type or order size.

Air India, once known for its premium services and advertisements that featured Bollywood stars, has lucrative landing and parking slots at almost all major airports around the world. But it faces stiff competition from foreign airlines with non-stop services to India, as well as carriers operating from hubs in the Middle East.

Natarajan Chandrasekaran, chairman of the Tata Group, told Air India employees earlier this month at an internal company briefing, "In terms of fleet, we know we have work to do. We will address it with utmost urgency. We'll upgrade our fleet, we'll bring modernity in our fleet, we'll bring a new fleet."

The average fleet age of the Air India fleet is over 10 years. Air India currently has 153 planes in its fleet. That includes 49 wide-body aircraft manufactured by Boeing and Airbus, including jets from the best-selling 737 and 320 families, making it a complicated mix considering each aircraft type requires separate skill sets of pilots and crew. Air India, one of the world's first buyers of the Boeing Dreamliner, operates the oldest versions of the fuel-efficient workhorse, although several of them remain grounded due to a lack of parts.

Air India with its maharajah mascot, was once renowned for its lavishly decorated planes and stellar service championed by founder JRD Tata. Air India was founded in 1932 and nationalized in 1953.

Since the mid-2000s, however, Air India's reputation has declined as financial troubles mounted. It flew widebody planes with business class seats in poor repair and grounded some of its new 787s to use for spare parts.

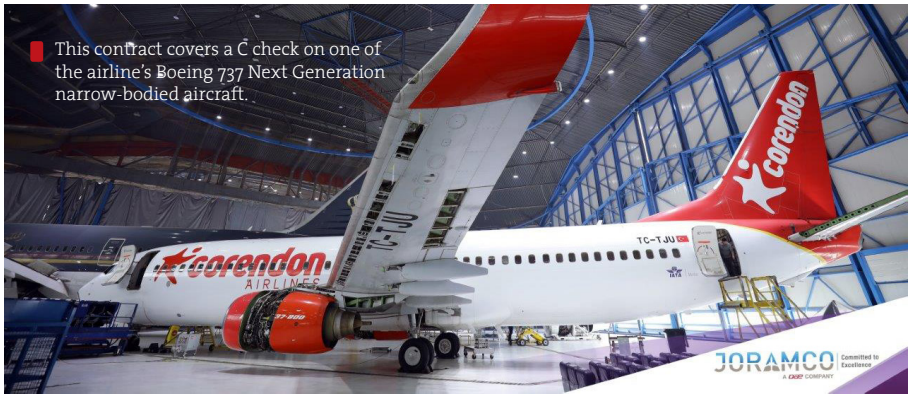
No comment was immediately available from any of the companies involved.

Joramco and Corendon Airlines Continues maintenance Agreement

This agreement provides higher opportunities and growth in Turkish market.

Joramco, the maintenance, repair, and overhaul (MRO) provider and the engineering arm of Dubai Aerospace Enterprise (DAE) based in Amman, recently announced their continuing maintenance agreement with Corendon Airlines.

The agreement, one of the many revealed at the MRO ME 2022 tradeshow, pertains to contract the two companies first signed in erstwhile 2019. This contract consists of a C check which was performed over 17 days in February on one of the airline's Boeing 737 Next Generation narrow-bodied aircraft.



This contract covers a C check on one of the airline's Boeing 737 Next Generation narrow-bodied aircraft.

Fraser Currie, CEO, Joramco said, "Joramco is always keen to maintain our successful long-term relationships, which are built on our consistently high-quality end product and flexible response to customers' needs. This new step will open the door for future cooperation with Corendon and also for further opportunities in the Turkish market."

Corendon mainly caters to leisure airline flying tourist passengers between Europe and holiday destinations in the Eastern Mediterranean.

STARLUX welcomes their first widebody A330-900 for flexibility and efficient network strategy

The A330 will aid STARLUX to optimize cost efficiency and achieve high passenger comfort.

STARLUX Airlines has taken delivery of its first widebody aircraft – an A330-900. It is the first of 26 Airbus widebodies set to join the airline's fleet, comprising eight A330neo and 18 A350s.

The A330neo aircraft and one A350 are being acquired on lease from ALC, while the airline has 17 A350s on direct order with Airbus. Benefiting from the A330neo's unbeatable operating economics and award-winning Airspace cabin, the aircraft will feature a two-class cabin with 28 business class seats and 269 economy class seats.

The A330neo joins an existing fleet of seven single-aisle A321neo at the airline and will complement the STARLUX's network by flying regional routes from Taiwan to the wider Asia-Pacific.

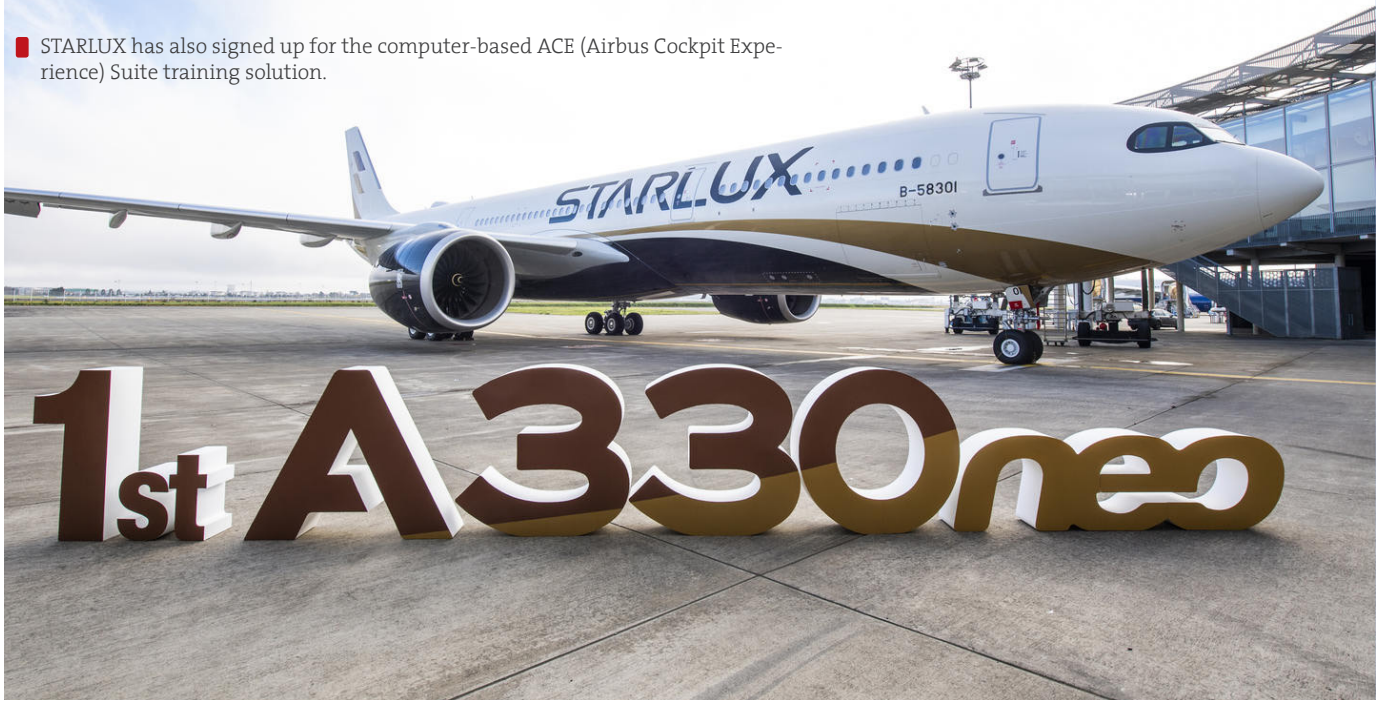
At the same time, STARLUX has also signed up for the computer-based ACE (Airbus Cockpit Experience) Suite training solution. Using a "learning by discovery" approach, STARLUX's flying crew will be able to use the ACE Trainer that simulates a 3D Cockpit environment with guided lessons and free play.

K.W. Chang, Founder, and Chairman of STARLUX Airlines said, "I am delighted to welcome our first A330neo, as it marks a key milestone in our growth. Having already operated modern and efficient single-aisle A321neo, we are confident that the A330neo will bring even more flexibility and efficiency in our network strategy, whilst optimizing cost efficiency and achieving high passenger comfort. We are also looking forward to starting to take delivery of our A350s in the coming months."

ACE Suite offers an efficient learning process that also provides customers with significant time savings off high-level devices training. Users can enjoy better knowledge retention and continuous skills reinforcement. ACE Suite is approved by EASA and in line with ICAO regulations.

Christian Scherer, Airbus Chief Commercial Officer said, "We are excited to work closely with STARLUX to build their new fleet. Together the A321neo, A330neo, and A350 will enable the carrier to benefit from the unique technical commonality and efficiency offered by our latest generation aircraft. In addition, they offer the best levels of comfort in their respective size categories, which will be a key element for STARLUX in delivering its premium in-flight experience."

At the end of January 2022, the A330 Family had won over 1,800 orders (including 353 A330neo from 23 customers worldwide).



STARLUX has also signed up for the computer-based ACE (Airbus Cockpit Experience) Suite training solution.

Kuehne+Nagel expands charter network, partners with Atlas Air for two B-747-8F

The 747-8F provides a 20percent higher payload and 16percent lower fuel consumption than the very capable 747-400F.

Kuehne+Nagel has entered into a long-term dedicated charter agreement with Atlas Air to operate two Boeing 747-8F. The Boeing 747-8F is the most capable freighter aircraft in the world and these two are the very last two Boeing 747s ever to be produced.

In response to capacity market developments, Kuehne+Nagel will charter the entire and exclusive capacity of the two new B747-8F aircraft to operate the flights globally from the third and fourth quarters of 2022. The aircraft will support Kuehne+Nagel customers on volatile trade lanes, such as the transpacific routes. The 747-8F provides a 20percent higher payload and 16percent lower fuel consumption than the very capable 747-400F.

Yngve Ruud, Member of the Management Board of Kuehne+Nagel, responsible for Air Logistics, said, "As a market leader in air freight, Kuehne+Nagel further expands its dedicated charter network to support customers with solutions for long-term planning and high-quality service. We are proud to partner with Atlas Air and include these two new Boeing 747-8F in our already extensive global capacity offering."

Atlas Air Worldwide President and Chief Executive Officer John W. Dietrich said, "We are delighted to expand our partnership with Kuehne+Nagel by providing dedicated capacity for their growing global airfreight network. The Boeing 747-8F serves an incredibly important role in global airfreight, with advanced technology that allows for lower fuel consumption, higher capacity, and unique nose-loading capability. We look forward to taking delivery of these two 747s and operating them for Kuehne+Nagel to support their network for years to come."

Operating the world's largest fleet of 747, Atlas Air ordered the last 747 production aircraft to capitalize on strong demand and deliver value for its customers, while also bolstering its commitment to environmental stewardship through the reduction of noise, aircraft emissions, and resource consumption.

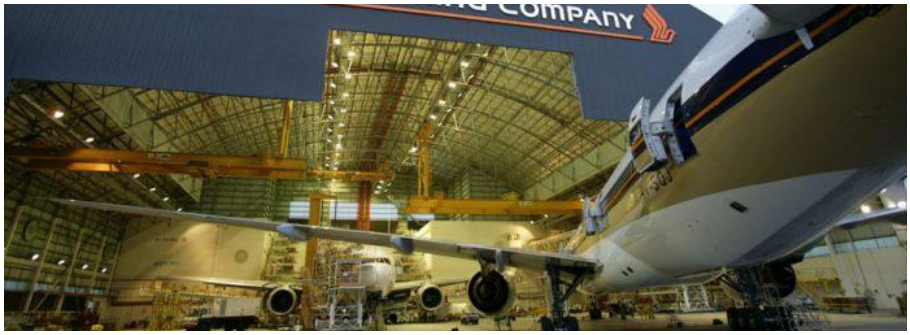
BOC Aviation continues to trust SIAEC for extensive MRO capabilities

With decades of MRO experience, SIAEC is confident of delivering top-quality maintenance services and engineering support to BOC Aviation.

BOC Aviation has awarded a contract to SIA Engineering Company (SIAEC) to conduct heavy maintenance projects on widebody aircraft that will transition to new customers in 2022. It represents an extension of last year's successfully completed mandate for support in transitioning narrowbody aircraft.

Mr. Robert Martin, Managing Director and Chief Executive Officer, BOC Aviation said, "We are delighted to be working once again with our partners at SIAEC. The combination of quality and reliability make SIAEC a good choice to support our aircraft transition work in order to deliver on our commitments to provide aircraft to our airline customers."

Mr. Ng Chin Hwee, Chief Executive Officer of SIAEC, said, "We appreciate



BOC Aviation's confidence in awarding the contract to SIAEC Group to support its fleet. This reflects BOC Aviation's continued trust in SIAEC's extensive maintenance, repair and overhaul (MRO) capabilities and reliable services. With decades of MRO experience behind us, we are confident of delivering top-quality maintenance services and engineering support to BOC Aviation."

The 2022 work will be carried out at SIAEC's main base in Singapore and at SIA Engineering (Philippines) Corporation, its wholly-owned subsidiary located in Clark, Philippines.

Growing Partnerships – Omni helicopters leases 11 helicopters from Milestone aviation

Omni was Milestone's very first customer, and their partnership has only grown over decades.

Milestone Aviation Group signed 11 lease agreements with Omni Helicopters International (OHI) for AW139 helicopters recently delivered to OHI and S92, which are already in operation. The delivery of the AW139s marks the first of the type to go on lease to OHI from Milestone and will be deployed on critical missions across OHI Latin American and African operations.

Pat Sheedy, President & CEO, Milestone, said, "Omni was Milestone's very first customer, and we are incredibly proud to extend that partnership which has spanned more than a decade. We are delighted to continue to support the diversification of their fleet and the growth of their operations across Latin America and Africa."

The delivery of the AW139s marks the first of the type to go on lease to OHI from Milestone.

Jeremy Akel, OHI Group CEO, said, "Milestone is a strong and reliable partner. Their teams' market insights, creativity, and responsiveness complement ours, and we work very well together. We are deeply appreciative of their support that had enabled our consistent growth, which started when we leased the first helicopter from them in 2010."

Milestone is a global leader in helicopter leasing and has a long-standing relationship with Omni that now totals 22 aircraft comprising four different fleet types. OHI continues to lead the industry in deploying the most diverse fleet in Brazil.

SIAEC becomes a JV partner of SR Technics Malaysia

This JV will complement SIAEC's existing component repair and overhaul services and fleet management programs.

SIA Engineering Company and SR Technics have entered into a joint venture to form a component MRO. As per the JV, SIAEC will acquire a 75 percent stake in SR Technics Malaysia for USD 3.75 million in cash, while SR Technics will retain the remaining 25 percent stake. Based on SRT Malaysia's adjusted net tangible assets as of 30 November 2021, the net asset value of the SRT Malaysia shares acquired by SIAEC is USD2.62 million.

Mr. Ng Chin Hwee, Chief Executive Officer of SIAEC, said, "The setting up of this component repair and overhaul JV with SR Technics in Malaysia is a significant step in our strategic plan to grow our component repair and overhaul services network under our recently announced Component Services Division. The JV will complement SIAEC's existing portfolio of engine and component JVs with leading Original Equipment Manufacturers ("OEM"), and will be an additional platform that will broaden the scope of component repair and overhaul services that SIAEC offers to its airline customers and OEM partners."

Mr. Jean-Marc Lenz, Chief Executive Officer of SR Technics, said, "With SIAEC becoming a JV partner of SR Technics Malaysia, we are convinced that both partners will benefit from the new synergies created by this JV. SR Technics Malaysia will continue to provide high quality, reliable services, and operational excellence to support the engine component repair requirements of SR Technics Switzerland. Partnering with SIAEC will not only enable us further to increase the business volume on existing repair capabilities, but it will also allow us to jointly develop new repair capabilities for new engine types and aircraft platforms."

This JV will complement SIAEC's existing component repair and overhaul services and fleet management programs.

The completion of this transaction is subject to the satisfaction (or waiver) of conditions precedents set out in the agreement with SR Technics.

MOU signed between SR Technics and Bamboo Airways valued at USD 60 million

MoU achieves an agreement to jointly work together in the development of solutions being advanced by both companies.

SR Technics, a world leading MRO service provider and Vietnam-based airline Bamboo Airways, have announced the signing of a Memorandum of Understanding (MoU) at Singapore Airshow 2022, for promoting the value and power of the highest standards of support solutions in the aviation ecosystem. The MoU achieves an agreement to jointly work together in the development of solutions being advanced by both companies.

The agreement would involve SR Technics and Bamboo Airways to explore areas of cooperation including CFM56-5B engines, training services, and provide technical services and component services by STRADE. By signing the Memorandum of Understanding, SR Technics and Bamboo Airways have established a long-term partnership.

By signing the MoU, SR Technics and Bamboo Airways have established a long-term partnership.

Commenting on the MoU signing at the ceremony, SR Technics CEO Jean-Marc Lenz said "We are thrilled to welcome Bamboo Airways as a new SR Technics customer and look forward to meeting and exceeding their expectations. I am pleased that with this MoU we will further support our commitment to provide best-in-class MRO services in the aviation world. We look forward to the future development of our partnership. This will impact the growth and strengthen Vietnam's competitive position in serving the worldwide aviation MRO industry."

Nguyen Khac Hai, Deputy General Directorof Bamboo Airways said "With the prestige and experience of SR Technics, we strongly believe the agreement with SR Technics' engines and other maintenance services for Bamboo Airways' fleet will help enhance our operation capacity, service quality as well as competitiveness on potential international flight routes in the future."

The total value of its multiple cooperation would be in the range of around USD 60 million of signed deals. The signing ceremony was attended by representatives of two companies, high-ranking dignitaries, and business representatives of both countries during the Singapore Airshow.

China Airlines continues to place trust in ST Engineering, extends MBH contract for Airbus fleet

ST Engineering will provide integrated component support to the Airbus A321neo and A330 aircraft fleet of China Airlines.

ST Engineering will continue to provide Maintenance-by-the-Hour at the Airbus fleet of China Airlines. Apart from this, ST Engineering will also provide integrated component support to A320neo belonging to the low-cost carrier, Tigerair Taiwan. The duration of the contract is seven to twelve years. Under the terms of the contract, ST engineering will provide integrated component support to the Airbus A321neo and A330 aircraft fleet of China Airlines. This new contract adds to an ongoing Boeing 737-800 component MBH programme that ST Engineering has had with China Airlines since 2010, while Tigerair Taiwan is a new customer.

Jeffrey Lam, Commercial Aerospace President at ST Engineering, said, "We thank China Airlines for once again placing their trust in us and our trademarked MBH programme. As China

Airlines expands and renews its fleet with the A320neo and A321neo aircraft, we will leverage our strong expertise in Airbus platforms to support their operations. We appreciate Tigerair Taiwan for giving us the opportunity to be a part of their growth story, and are committed to providing them with the support that will enable their upcoming expansion."

Jason Tsai, Vice President, Engineering Division of China Airlines, said, "ST Engineering has consistently provided high quality in safety and standards when servicing our fleet. We look forward to strengthening our partnership with ST Engineering."

Dennis Lai, Chief Operations Officer of Tigerair Taiwan said, "We are pleased to have this new partnership with ST Engineering. Based on this contract, Tigerair Taiwan could gain benefits from reliable support on aircraft components and parts by ST Engineering."

Recognised worldwide for its hallmark component MBH programmes, ST Engineering provides integrated component MRO solutions for over 25,000 unique aircraft parts and is the authorised service centre to over 20 leading OEMs. Its Commercial Aerospace business provides round-the-clock support and delivers more than 100,000 components annually from its component MRO facilities located in Singapore, Hanoi and Ho Chi Minh City in Vietnam, as well as Stockholm, Sweden.

During the HAI/Heli-expo, StandardAero and Thales are inviting AS350/H125 helicopters operators and owners to fly and test StableLight for themselves.

StableLight – first 4-Azis autopilot for AS350 helicopter

StandardAero anticipates that the StableLight Supplemental Type Certification (STC) will receive FAA certification this summer.

StandardAero will soon unveil the first 4-Axis autopilot available for retrofit on AS350 helicopters with demonstration flights. The autopilot is developed in partnership with Thales and is known as StableLight. It is equipped with an AS350 test rotorcraft which will be located at the Dallas Kay Bailey Hutchinson Convention Center.

Christian Blagborne, Technical Sales Manager for StandardAero's Helicopters business unit said, "These flight demos will enable operators to feel the advantages of a true 4-axis autopilot. They will experience its hands-off capabilities and see how pilot workload is reduced while both mission efficiency and safety are significantly increased."

StableLight is currently in the process of certification. StandardAero anticipates that the StableLight Supplemental Type Certification (STC) will receive FAA certification this summer and shortly thereafter, the STC will also be approved by EASA and Transport Canada.

Philippine DND Signs Contract to purchase 32 Black Hawk Helicopters

Fleet expansion resulting in rise of multi-role response capability of Philippine Air Force.

PZL Mielec, a Lockheed Martin company has signed a contract award with the Philippine Department of National Defense (DND) to manufacture 32 additional S-70i™ Black Hawk® utility helicopters for the Philippine Air Force. The delivery of all 32 aircraft by 2026 will substantially increase the operational capacity of the Philippine Air Force to perform various functions such as search and rescue missions, humanitarian assistance and disaster relief, and troop transport across the archipelagic country.

The Secretary of National Defense of the Philippines Delfin N. Lorenzana signed the contract with Janusz Zakr cki, president, general director of PZL Mielec and the contract was signed on February 22 at the Department of National Defense headquarters.

The Secretary of National Defense of the Philippines Delfin N. Lorenzana (left) formally signed the contract for 32 additional S-70i Black Hawk helicopters with President, General Director of PZL Mielec Janusz Zakr cki.

Cont page 25

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Cont page 23

The Philippine Air Force's 205th Tactical Helicopter Wing will receive all 32 aircrafts in a utility configuration and each aircraft will be equipped with a fully integrated digital cockpit with four axis coupled flight director, color weather radar, integrated vehicle health monitoring system (IVHMS), cabin troop seats, and a 9,000-pound (4,082 kg) cargo hook. The Pilots and the maintainers shall receive training both in the U.S. and the Philippines.

"In the aftermath of Typhoon Odette (Rai), the Philippine Air Force has shown the world how its recently acquired Sikorsky S-70i Black Hawk fleet, designed and built to the toughest military standards, can quickly and reliably deliver emergency personnel and supplies to island populations across a large maritime area," said Jason Lambert, vice president for Sikorsky Global Commercial & Military Systems.

Janusz Zakr cki, PZL Mielec president and general director said "Our Polish workforce is committed to build and deliver the next fleet of 32 Black Hawk aircraft on schedule, with the support that ensures these multi-role vehicles will protect and save lives while serving the Philippine people for decades to come."

The Philippine contract for manufacture of 32 aircrafts is the largest single order of Black Hawk helicopters for PZL Mielec since S-70i aircraft production began in 2009. The contract signing comes two months after PZL Mielec, based in southern Poland, completed deliveries of 16 S-70i Combat Utility Helicopters on schedule to the Philippine Air Force 205th Tactical Helicopter Wing in December 2021.

Lockheed Martin to produce 12 CH-53 helicopters for Israel Air Force fleet enhancement

The all-new CH-53K delivers modern state-of-the-art capabilities that result in improved survivability, safety, and reduced aircrew workload.

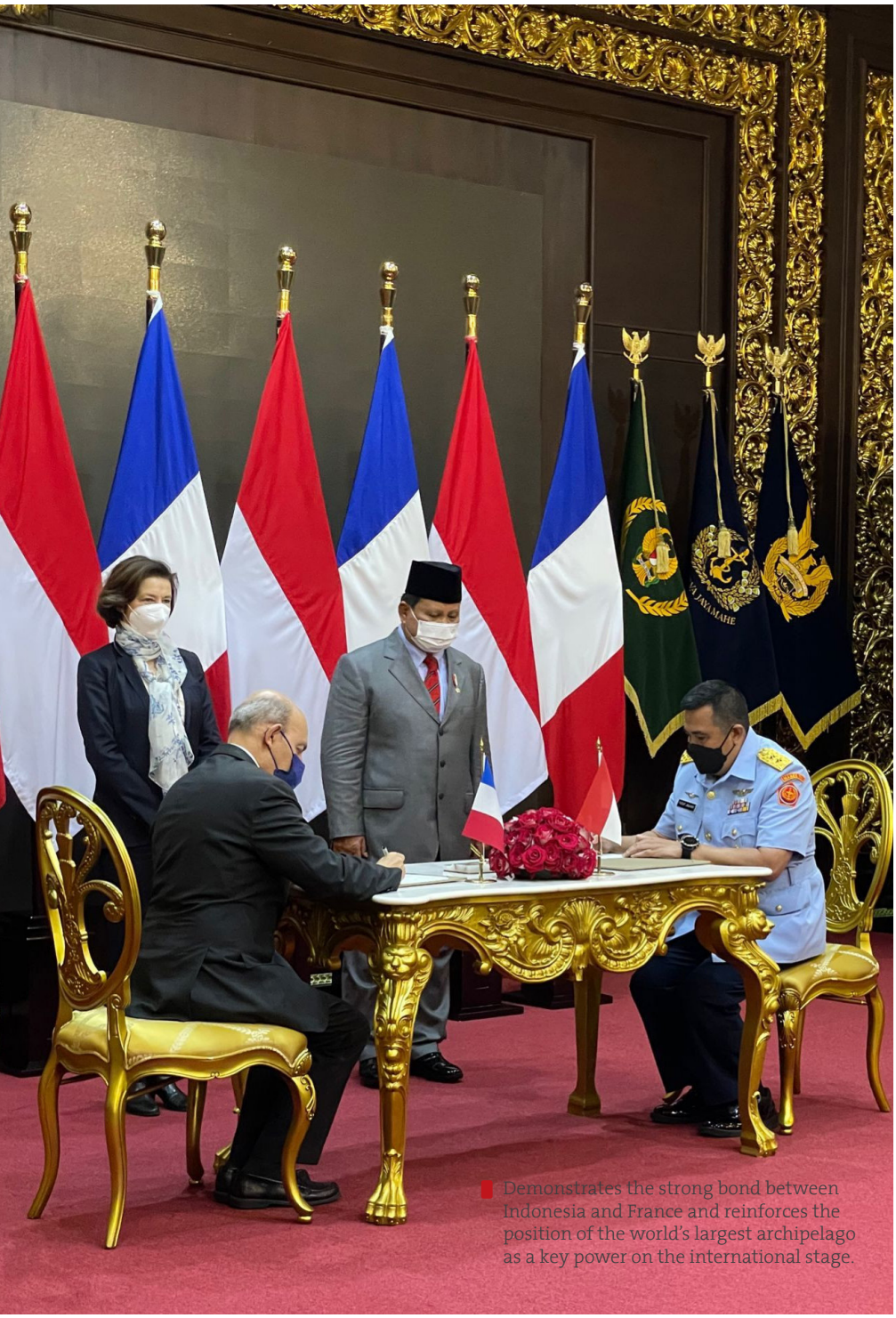
This production announcement is for the first four of 12 aircraft for Israel and is on the heels of a contract to produce nine more aircraft for the U.S. Marine Corps.

Lockheed Martin will produce 12 CH-53K heavy-lift helicopters for Israel under a U.S. Navy Foreign Military Sales (FMS) agreement. This production announcement is for the first four of 12 aircraft for Israel and is on the heels of a contract to produce nine more aircraft for the U.S. Marine Corps. The signed letter of offer and acceptance (LOA) between the U.S. Government and Israel states first deliveries of the baseline aircraft are planned for 2025.

Paul Lemmo, president, Sikorsky said, "We are building on decades of experience and partnership in supporting the CH-53E for the Marine Corps and the CH53D for the IAF. Sikorsky has a deep understanding of the worldwide heavy-lift mission-enabling our team and proven supply chain to offer tailored solutions resulting in more efficient missions. We are committed to providing training and sustainment support to ensure a smooth entry into service for the IAF."

The CH-53K helicopters will replace the Israeli Air Force (IAF) fleet of modified CH-53D Yasur helicopters, which have been in Israel's inventory for over 50 years. The all-new CH-53K delivers modern state-of-the-art capabilities that result in improved survivability, safety, and reduced aircrew workload over its predecessor, making it the perfect fit for the demanding IAF mission. Also, with a reduction in support equipment footprint compared to the legacy fleet, the CH-53K will mean reduced operating costs.

The aircraft will be manufactured at Sikorsky headquarters in Stratford, Connecticut, leveraging the digital build and advanced technology production processes.



Demonstrates the strong bond between Indonesia and France and reinforces the position of the world's largest archipelago as a key power on the international stage.

Strengthening bonds – Indonesia and France reinforcing the position key power on international stage

This contract marks the start of a long-term partnership that will see Dassault Aviation rapidly step up its presence in the country.

The Indonesian Ministry of Defence recently signed a contract for 42 latest-generation Rafale aircraft. The Rafale acquisition for the Tentara Nasional Indonesia Angkatan Udara (Indonesian National Army Air Force) includes a complete turnkey solution, with a comprehensive package that covers aircrew training, logistical support for several Indonesian air bases, and a training center with two full-mission simulators.

Eric Trappier, Chairman and CEO of Dassault Aviation said, "It is a great honor for Dassault Aviation to see the Rafale join the highly prestigious Tentara Nasional Indonesia Angkatan Udara air force, and I would like to thank the Indonesian authorities for the trust they have placed in us. This contract marks the start of a long-term partnership that will see Dassault Aviation rapidly step up its presence in the country. It also demonstrates the strong bond between Indonesia and France and reinforces the position of the world's largest archipelago as a key power on the international stage. I am confident that the Rafale will meet the operational needs of the Indonesian Air Force, actively contributing to the defense and sovereignty of the Republic of Indonesia."

Indonesian industry will benefit from a substantial industrial return, not only in the aeronautical sector but also in all the other major areas of cooperation relating to the broad portfolio of dual technologies mastered by Dassault Aviation and its industrial partners, Safran Aircraft Engines and Thales.

The contract signing ceremony took place in presence of the French Minister of the Armed Forces, Florence Parly, and the Indonesian Minister of Defence, Prabowo Subianto, the Chairman and CEO of Dassault Aviation, Eric Trappier, and the Air Vice Marshal Yusuf Jauhari, Head of Defence Facilities Agency of the Indonesian Ministry of Defence.

Rafale's unique "omnirole" capability will provide Indonesia with a tool for sovereignty and operational independence, reinforcing its role as a major regional power.

Turnaround specialist and former SriLankan Airlines Chief Vipula Gunatilleka appointed as Jet Airways COO

In less than two years after assuming the duties as the CEO, the Sri Lankan airline recorded positive EBITDA and cash flow.

Vipula Gunatilleka's main task is to revive the ground carrier.

A turnaround specialist and an aviation expert, former Sri Lankan Airlines Chief Vipula Gunatilleka is appointed as the chief financial officer (CFO) of Jet Airways, India effective 1st March 2022. He has been tasked with reviving the grounded carrier.

Mr Gunatilleka had overseen "the most daunting task of leading SriLankan Airlines during the pandemic. Mr Gunatilleka was headhunted by the board in 2018 to re-structure SriLankan Airlines and in less than two years after assuming the duties as the CEO, the airline recorded positive EBITDA and cash flow for 2019-20 notwithstanding the devastating effects of the terror attacks in April 2019 in Sri Lanka followed by the global pandemic in early 2020.

As a result of key initiatives introduced to improve the service standards and operational efficiencies, the Sri Lankan airline was accredited with the "World's Most Punctual Airline" twice in 2019.

Ankit Jalan, a member of the monitoring committee of Jet Airways and part of the Jalan-Kalrock Consortium said, "We are excited to welcome Mr. Vipula Gunatilleka to our young and energic team. Vipula is an aviation expert and is regarded as a turnaround specialist in the industry. He has been shortlisted after a rigorous process run by our executive team over the last several months. I am certain Vipula will be an asset to the organization and will provide the necessary vision to revive the operations of Jet Airways as per the plans of the consortium."

Speaking on his plans for Jet Airways, Mr. Gunatilleka said, "I am very excited to join the company and I look forward to contributing my knowledge of last 30 years in Jet Airways' resurgence in its new avatar. We will capitalize on the strong brand value which Jet Airways has in the market and use it to rebuild the lost ground."

Prior to joining SriLankan Airlines, Mr. Gunatilleka was the CFO and board member of TAAG Angola Airlines from November 2015 to July 2018 under Emirates Management. He played a pivotal role in turnaround the loss-making national carrier of Angola.

Mr. Gunatilleka is known for his astute knowledge in aircraft financing, strategic planning, cost-efficient business modelling, and openness to adopting hybrid models to keep business costs low and efficiency high.

Christopher T. Calio takes over the role of President of Pratt & Whitney

Chris is a tested leader who has successfully steered Pratt & Whitney through one of the most dynamic and challenging periods in aerospace history.

With over two decades of executive leadership experience, Christopher T. Calio is promoted as the CEO of Pratt & Whitney. will replace Shane G Eddy as the President of Pratt & Whitney, effective 1st March 2022. Shane Eddy, currently SVP and Chief Operations Officer at Pratt & Whitney, replaces Calio as President of Pratt & Whitney.

In this role, Calio will oversee Pratt & Whitney's four business units as well as its technology and engineering; enterprise services and digital; and operations, quality, environmental, health and safety, and supply chain functions. Calio will continue to report directly to Chairman and CEO Greg Hayes.

Raytheon Technologies Chairman and CEO Greg Hayes said, "Chris is a tested leader who has successfully steered Pratt & Whitney through one of the most dynamic and challenging periods in aerospace history. He has guided strategic investments and delivered industry-leading innovation across commercial and military programs. As we execute on our strategy, including our commitment to developing talent across the organization, Chris' experience and leadership will help advance the company's growth and transformation initiatives."

In his most recent position as President of Pratt & Whitney, Calio oversaw the significant ramp and introduction of numerous product enhancements, including the recent introduction of the GTF Advantage engine as well as the F135 program.

Describing Shane, Hayes said, "Shane's significant aerospace industry leadership experience and in-depth understanding of Pratt & Whitney's products and culture makes him the ideal leader to take the business through its next phase of growth. Building on his proficiency running global operations, Shane's management and operational expertise will help drive continued optimization of the business."

Eddy joined Pratt & Whitney in 2016, with prior experience at GE Aviation, Sikorsky Aircraft Corporation and Bell Textron.

Calio has guided strategic investments and delivered industry-leading innovation across commercial and military programs.

Evan Sustarich promoted as maintenance manager at Stevens Aerospace Nashville facility

Sustarich joined Stevens in 2012 as an A&P/IA technician and was soon promoted to crew lead and shop foreman.

Sustarich, also a licensed pilot, moved to Nashville from Alaska and comes from an aviation-oriented family.

Evan Sustarich is promoted to the post of maintenance manager at Stevens Aerospace Nashville facility. Sustarich joined Stevens in 2012 as an A&P/IA technician and was soon promoted to crew lead, shop foreman, and recently to maintenance manager.

Kenyon Blacker, General Manager of Stevens' Nashville, TN operation said, "Evan has proven to be a significant part of our success here in Nashville. Having worked his way through multiple positions and gaining a full understanding of the operations from time working on the aircraft, leading the crews, or closely interacting with new and existing customers, Evan was a solid choice to run the maintenance operation."

Sustarich, also a licensed pilot, moved to Nashville from Alaska and comes from an aviation-oriented family. His father is a Charles Taylor Master Mechanic Award recipient and continues to work in the industry today.

Ex-Turkish Airlines Chairman Mr Ilker Ayci to take over the reins of Air India

Ilker is an aviation industry leader who led Turkish Airlines to its current success during his tenure there.

Ex-Turkish Airlines Chairman and Istanbul-born Mr. Ilker Ayci will handle the controls of Air India effective 1st April 2022. The Air India board met yesterday, and Mr. Ilker Ayci was a special invitee to the board meeting. The committee, after due deliberations, approved the appointment of Mr. Ayci as the CEO & Managing Director of Air India. This appointment is subject to requisite regulatory approvals.

Tata Sons Chairman Mr. Chandrasekaran said, "Ilker is an aviation industry leader who led Turkish Airlines to its current success during his tenure there. We are delighted to welcome Ilker to the Tata group where he would lead Air India into the new era."

On this occasion, Mr. Ayci said, "I am delighted and honored to accept the privilege of leading an iconic airline and to join the Tata group. Working closely with my colleagues at Air India and the leadership of the Tata group, we will utilize the strong heritage of Air India to make it one of the best airlines in the world with a uniquely superior flying experience that reflects Indian warmth and hospitality."

Mr. Ayci will assume his responsibilities on or before 1 April 2022. MR Ayci is flooded with best wishes from across the globe for this challenging goal of ushering Air India to a new era.

"I am delighted and honored to accept the privilege of leading an iconic airline and to join the Tata group."

Sheraz Ahmed promoted as Vice President and General Manager of AMETEK MRO division

Sheraz is an excellent fit for this role given his strong leadership skills and deep industry experience.

Sheraz joined AMETEK in 2015 as the Division Vice President and Business Unit Manager for AMETEK Airtechnology.

Sheraz Ahmed was recently promoted as the Vice President and General Manager of the AMETEK Maintenance, Repair, and Overhaul (MRO) division. Sheraz will be replacing Brian Hoffmann, who announced his intention to retire following his 17-year tenure with the company.

David A. Zapico, AMETEK Chairman and Chief Executive Officer said,"We are pleased to announce Sheraz's promotion to Vice President and General Manager. Sheraz is an excellent fit for this role given his strong leadership skills and deep industry experience. We expect him to play a key role in the continued growth and success of our MRO division. I want to thank Brian for his dedication to AMETEK and his many important contributions. He has been vital to the success of our company and the growth of our MRO division. We wish Brian and his family all the best on his retirement."

Mr. Ahmed joined AMETEK in 2015 as the Division Vice President and Business Unit Manager for AMETEK Airtechnology. Prior to this, he was Vice President and General Manager of UTC Aerospace Systems, and also held various roles of increasing responsibility at Goodrich.

International CALENDAR 2022

2022

Date	Event	Venue
03-04 Mar	PBExpo	Miami, FL
06-09 Mar	World Defense show	Riyadh, Saudi Arabia
07-10 Mar	HAI Heli Expo	Dallas, TX
10-11 March	MRO Russia	Moscow, Russia
28-31 Mar	AEA International Convention & Trade Show	New Orleans, USA
26-28 Apr	MRO America	Dallas, TX, USA
03-05 May	NBAA Maintenance Conference	San Antonia, TX
23-25 May	EBACE	Geneva, Switzerland
07-08 Jun	Engine Leasing, Trading & Finance	London, UK
09-11 June	France Air Expo	France
15-16 June	MRO BEER	Istanbul, Turkey
22 Jul	AERO South Africa	South Africa
06-08 Oct	Istanbul Airshow	Istanbul Atatürk Airport, Istanbul
7-8 Sept	AERO-ENGINES EUROPE	Dublin, Ireland
7-8 Sept	Helitech Expo	ExCeL London
20-22 Sept	MRO ASIA-PACIFIC	Singapore
18-20 Oct	MRO EUROPE	London, UK
25-27 Oct	Abu Dhabi Air Expo	Abu Dhabi
6-9 Nov	ATCA	Washington, D.C.

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