Airbus A330MRTT completes first 100% SAF test flight on both engines

The Royal Air Force, Airbus and other industry partners have carried out the world's first 100% Sustainable Aviation Fuel (SAF) flight using an in-service military aircraft. It is also the first 100% SAF flight of any aircraft type carried out in UK airspace.

An RAF Voyager – the military variant of the Airbus A330 commercial jetliner - took to the skies above RAF Brize Norton in Oxfordshire, England, on Wednesday powered completely by 100% Sustainable Aviation Fuel on both engines, paving the way for a range of possibilities for the future of flying military aircraft.

The flight was a joint endeavour between the RAF, aircraft manufacturer Airbus, the UK Ministry of Defence's Defence Equipment and Support agency, British aircraft leasing company AirTanker and engine manufacturer Rolls-Royce, with the fuel supplied by Air bp.

Michael Schoellhorn, CEO of Airbus Defence and Space, said: "True to our purpose of 'pioneering aerospace', we have gladly supported the Royal Air Force on this landmark sustainable-fuel test flight. I commend our UK customer for this achievement which helps pave the way for a sustainable reduction of carbon emissions of our military aircraft fleets. Airbus engineers have made a significant contribution to this RAF mission by providing on-the-ground expertise in recent weeks and securing the necessary MoD military flight permits."

Sustainable Aviation Fuel – which is made from waste-based sustainable feedstocks, in this case used cooking oil – reduces lifecycle carbon emissions by up to 80% compared to the conventional fuel it replaces, lessens the RAF's reliance on global supply chains and improves operational resilience by reducing the necessity for fuel resupplying.

As different approaches will suit different platforms and environments, a range of alternative fuel options are being looked at to ensure the UK is at the forefront of this developing technology.

The 90-minute return flight from RAF Brize Norton, flown by a combined Airbus, RAF and Rolls-Royce flight-test crew, replicated an air-to-air refuelling sortie and was witnessed by senior RAF and industry representatives. The RAF said it demonstrated the potential for its future operational capability, ensuring the ability to contribute to UK defence wherever and whenever it was required.

Experimental test pilot and Captain of the flight, Jesus Ruiz, said: "From the crew perspective, the SAF operation was 'transparent', meaning that no differences were observed operationally. The Test Plan was exhaustive and robust and has allowed us to compare SAF with JET1 culminating in a flight without a single drop of fossil fuel. Teamwork was a key contributor, harmonsing experience from Airbus, Rolls-Royce and the RAF. We feel very proud to be a small part of this huge step for sustainable aviation."

Quelle:
Airbus Press Release 18 November 2022

Boeing Forecasts Air Cargo Traffic to Increase Twofold Over Next 20 Years

- 2022 World Air Cargo Forecast projects global freighter fleet to grow by more than 60% through 2041, supporting e-commerce and supply chains with improved fuel efficiency

- Strong demand for new production and converted freighters

- Asia-Pacific region will take more than a third of deliveries

Boeing [NYSE:BA] is forecasting strong demand for air cargo services through 2041, with traffic doubling and the world's freighter fleet expanding by more than 60%. Boeing today released details from its 2022 World Air Cargo Forecast (WACF), a biennial detailed analysis of evolving industry dynamics.

The 2022 WACF projects that the world's cargo fleet will require nearly 2,800 production and converted freighters for growth and replacement through 2041. With cargo traffic doubling over the forecast period, operators will need to switch to more capable, fuel-efficient and sustainable jets like the 777-8 Freighter to meet demand, according to the Boeing forecast. A third of deliveries will consist of new production freighters, while the remaining two-thirds will be freighter conversions, such as the 737-800 Boeing Converted Freighter (BCF), providing carriers with increased flexibility in existing and emerging markets.

"While the air cargo market is returning to a more normal pace after historic demand in the last two years, structural factors including express network growth, evolving supply chain strategies and new cargo-market entrants are driving sustained freighter demand," said Darren Hulst, Boeing vice president of Commercial Marketing. "In the global transportation network, air freighters will continue to be a critical enabler to move high-value goods, in increased volume across expanding markets."

The 2022 WACF also provides these insights about the cargo market through 2041:

- The Asia-Pacific region will take delivery of nearly 40% of all freighters, including new and converted freighters.
- While dedicated freighters are 8% of the total commercial airplane fleet, they continue to carry more than half of all air cargo, with passenger airplanes carrying the remainder as belly cargo.
- The global freighter fleet will grow by more than 1,300 airplanes to more than 3,600 jets over the next two decades.

The complete 2022 World Air Cargo Forecast can be found at www.boeing.com/wacf.

Quelle:
Boeing Press Release 18 November 2022

Royal Norwegian Air Force Selects the Lockheed Martin TPY-4 Radar to Enhance Homeland Defense

The TPY-4 radar offers advanced early warning and air command and control capabilities

Today the Royal Norwegian Air Force selected the Lockheed Martin (NYSE: LMT) TPY-4 next generation ground-based air surveillance radar to enhance the country's long-range surveillance capability.

"We are grateful to be selected to help protect the safety of Norwegians. The TPY-4 is a continued advancement of our 21st Century Security vision supporting joint all domain operations for the United States and its allies," said Chandra Marshall, vice president of Radar and Sensor Systems at Lockheed Martin. "Norway joins the U.S. Air Force as our first NATO partners for the TPY-4 radar, and we look forward to offering this radar to solve evolving challenges of international partners."

The radar can be adapted to new missions via simple software enhancements without any architectural or hardware changes. The TPY 4 radar can identify and track smaller threats at longer ranges than ever before. This multi-mission system will integrate seamlessly into existing air defense systems and can operate in contested environments.

"The threats that air defence radar has to counter are increasing and enhanced operational requirements call for more capable radars, including detection of small targets at longer ranges, enhanced electronic protection measures and target tracking. The TPY-4 radar will provide the people of Norway with the confidence of 24/7/365 homeland security for decades to come," stated Øyvind Kvalvik, Major General and Head of Acquisitions at NDMA. "This replacement initiative is of utmost importance to our nation, and we are excited to add this radar to our defence system."

Norway's TPY-4 radars will be integrated into Lockheed Martin's active production line, making this a low risk option for the Norwegian Defence Material Agency. In March, the U.S. Air Force selected the TPY-4 radar system for its Three Dimensional Expeditionary Long Range Radar program.

Norwegian industry has been a crucial partner in the development of the TPY-4 radar. Lockheed Martin leveraged an extensive Norwegian supplier-base for this radar system. In particular, the relationship with KONGSBERG Defense & Aerospace resulted in the production of the first TPY-4 which included the Platform Electronics SubSystem (PES) built by KONGSBERG, a critical element in the foundation of this next generation sensor that meets and exceeds current customer requirements for long-range surveillance.

"Our strong relationship with Lockheed Martin exemplifies the importance of building durable and trusted partnerships to serve both national and international customers. Together we will deliver world-class products within radar technology to the Norwegian Armed Forces. This contract is not only important for us as a strategic partner for the Norwegian Armed Forces but also for our subcontractors in Norway," says Eirik Lie, president of KONGSBERG.

The TPY-4 radar has significant commonality with the U.S. Army's new Sentinel A4 radar, which will replace the Sentinel A3.

Quelle:
Lockheed Martin Press Release 17 November 2022

Gulf Air unterzeichnet Exklusivvertrag mit MTU Maintenance für V2500-Triebwerke ihrer A321ceo-Flotte

Gulf Air, die nationale Fluggesellschaft des Königreichs Bahrain, und die MTU Maintenance, weltweit führender Anbieter von Instandhaltungslösungen für Luftfahrtantriebe, haben heute einen Exklusivvertrag für die Instandhaltung, Reparatur und Überholung von V2500-A5-Triebwerken unterzeichnet. Der Vier-Jahres-Vertrag beinhaltet umfassende MRO-Leistungen, LRU-Support, Engine Trend Monitoring und On-Site-Services sowie die Versorgung mit Ersatztriebwerken für die V2500-getriebenen A321ceo-Flugzeuge von Gulf Air.

Captain Waleed Al Alawi, Chief Executive Officer von Gulf Air, kommentierte die Vereinbarung wie folgt: „Gulf Air hat ihre V2500-Triebwerke der A321ceo-Flotte in den vergangenen zehn Jahren im Rahmen eines Triebwerks-OEM-Vertrags bei der MTU Maintenance instand gehalten. In diesen 10 Jahren hat die MTU Maintenance bewiesen, dass sie der richtige Partner für Gulf Air ist, da wir unser Flottenerneuerungsprogramm vorantreiben, um weitere neue Flugzeuge aufzunehmen, die unsere Flotte ersetzen und modernisieren. Wir vertrauen darauf, dass sie unsere Triebwerke technisch hervorragend betreuen, und sind überzeugt, dass sie uns die zuverlässigen, flexiblen und kosteneffizienten Services bieten, die wir erwarten."

„Wir sind sehr stolz darauf, von Gulf Air für diesen Auftrag, der das beste Betreuungspaket für ihre Triebwerke bietet, ausgewählt worden zu sein", sagt Michael Schreyögg, Programmvorstand der MTU Aero Engines. „Wir sind äußerst zuversichtlich, dass wir Gulf Air mit unserem fundierten Wissen über das V2500-Triebwerk und unserer langjährigen Erfahrung genau die flexiblen, kosteneffizienten und maßgeschneiderten MRO-Services bieten können, die sie brauchen."

Die MTU Maintenance ist weltweit die Nummer eins bei der Instandhaltung von V2500-Triebwerken und hat im vergangenen Jahr fast 40 Prozent aller Shop Visits für diesen Triebwerkstyp durchgeführt. Sie ist nicht nur ein zuverlässiger OEM-Netzwerkpartner, sondern auch der größte unabhängige Instandhalter für das V2500 und betreut über 120 Kunden weltweit.

Quelle:
MTU Press Release 10 November 2022

CAE recognized as one of Canada's Top 100 Employers for 2023

CAE is proud to have been named one of Canada's Top 100 Employers. This prestigious designation recognizes Canadian employers leading their industries and creating innovative programs to offer exceptional workplaces to their employees. According to Mediacorp

Canada Inc., organizers of the annual competition, this year's Canada's Top 100 Employers are leading by listening, tapping into employee feelings and sentiments about the many challenges of the past year.

"At CAE, our people are at the heart of everything we do. We are a proud global company with deep Canadian roots providing a collaborative, innovative and forward-thinking work environment," said Marc Parent, President and Chief Executive Officer of CAE.

Founded by Kenneth Patrick 75 years ago, CAE has grown from 18 employees working in a hangar in St. Hubert, Quebec, to a global team of more than 13,000 employees in over 40 countries delivering innovative training and operations-support solutions for the civil aviation, defence and security, and healthcare sectors.

Some of the flexible and collaborative programs that CAE has introduced in recent years include the following:

- **CAEheartbeat** is a global transformation initiative designed to advance CAE's focus and commitment to being human-centric, ensuring our people are our top priority. CAE remains committed to providing policies that better support the wellbeing of employees and allow the work-life harmony they need. The first initiative under the CAEheartbreat umbrella is a flexible vacation policy launched in August 2022.
- **CAEcontinuum** is a flexible work program. With the pandemic, remote working became the norm for many employees at companies worldwide. As restrictions eased, CAEcontinuum has allowed employees to split their time between working from home and the office.
- CAE officially marked its **75th anniversary** on March 17, 2022. CAE's 75th Anniversary Launch Event, held on March 24, kicked off an entire year of celebrations for CAE employees.
- **Diversity, equity and inclusion** are part of CAE's values and strategy. CAE has seven employee resource groups, including a new group for Indigenous Peoples created in 2022.

"The CAEheartbeat and CAEcontinuum initiatives are perfect examples of how a global company can be agile and embrace new ways of working, allowing their dedicated and talented teams to thrive," said Dan Sharkey, senior vice president, Global Human Resources.

CAE was also recognized as one of Canada's Top Employers for young people (2021, 2022) and Montreal Top Employer (2021, 2022).

Quelle:
CAE Press Release 18 November 2022

OHB Sweden: Satellit MATS erfolgreich ins All gestartet

OHB Sweden, ein Tochterunternehmen des Raumfahrtkonzerns OHB SE, freut sich über den erfolgreichen Start des Satelliten MATS (Mesospheric Airglow/Aerosol Tomography and Spectroscopy). Am 4. November um 18.27 Uhr MEZ hob die Trägerrakete Rocket Lab Electron von Mahia in Neuseeland ab und brachte MATS in seine Umlaufbahn in 585 km Höhe. Etwa 50 Minuten nach dem Start setzte die Electron den MATS-Satelliten erfolgreich

im Weltraum ab. Der MATS-Satellit wird von OHB Sweden betrieben und ist eine schwedische Wissenschaftsmission zur Erforschung von Wellen (Schwingungen) in der Atmosphäre und deren Auswirkungen auf das Klima.

Nach der Separation von Rakete und Satellit empfing das OHB Sweden Mission Control Center in Kista bereits die ersten Signale von MATS. Etwas später gegen 22.00 Uhr (MEZ) kamen die ersten Signale auch über die Bodenstation der Swedish Space Cooperation (SSC) in Punta Arenas an und das Mission Control Center bestätigte, dass es Telemetriedaten empfangen und Telekommandos an MATS senden kann. Damit wurde bestätigt, dass sich MATS in einem guten Zustand befindet und die erste Kommunikation mit dem Satelliten erfolgreich war.

Quelle:
OHB Press Release 07 November 2022

GA-ASI Teams with SMX to Win ARIES Task Order and Continue AFRICOM Support

General Atomics Aeronautical Systems, Inc. (GA-ASI) and its MQ-9A Remotely Piloted Aircraft will continue to support prime contractor SMX who was recently awarded a task order to provide U.S. Africa Command (AFRICOM) Intelligence Surveillance Reconnaissance (ISR) mission and intelligence analysis operations. GA-ASI is a major subcontractor to SMX for the AFRICOM Reconnaissance Intelligence Exploitation Services (ARIES) task order with an estimated value of $2.3 billion (inclusive of option periods).

The new award has a seven-year period of performance and will allow SMX and its teaming partners to extend their support through 2029 if all option periods are exercised. The contract will cover continued ISR services for AFRICOM using six MQ-9As produced by GA-ASI, which will make up three lines with two aircraft each. The MQ-9As are supplied by GA-ASI as part of a Company-Owned, Company-Operated (COCO) lease agreement. GA-ASI is the world's leading manufacturer of RPA systems, radars, and electro-optic and related mission systems solutions. SMX is an industry leader in Command, Control, Communications, Computers, Cyber, Intelligence, Surveillance, and Reconnaissance (C5ISR).

ARIES, like its predecessor task order, is a complex, multi-tenant task order providing cutting-edge full lifecycle intelligence solutions through cloud-enabled data insights and decision analytics. ARIES' objective is to improve the United States' ability to observe, orient, decide and act faster and more effectively on the information provided through an innovative system of systems intelligence collection and dissemination eco-system.

"It's exciting to be able to continue to work with SMX and continue to support AFRICOM," said Senior Vice President for MQ-9 Systems, Fred Darlington. "I believe our success in winning the ARIES subcontract is due to the great work the team has provided for the past three years on the continent."

Quelle:
GA-ASI Press Release 14 November 2022

China displays advanced weapons, equipment at Pakistani defense expo

China is displaying many advanced weapons and equipment, including drone and anti-drone systems, at an ongoing defense expo in Pakistan, a move analysts said on Wednesday indicates that the two countries' defense cooperation will continue to deepen under their ironclad friendship, with Pakistan's armed forces already operating advanced main battle equipment of Chinese origin.

The 11th session of the International Defense Exhibition and Seminar (IDEAS) kicked off on Tuesday at the Karachi Expo Center in Pakistan's southern port city of Karachi, with seven Chinese defense trade companies participating under the delegation "China Defence" led by the country's State Administration of Science, Technology and Industry for National Defence, the Xinhua News Agency reported on Wednesday.

Exhibits of the Chinese delegation include the Wing Loong series drones, CH series drones, the WJ-700 drone, a comprehensive anti-drone system, a type of multi-role drone ship, the Y-9E transport aircraft, the LY-70 air defense system, the VT4 main battle tank, the SR5 multiple launch rocket system, the YLC-2E multi-role radar, a command information system, an electronic warfare defense system and a communications navigation system, Xinhua reported.

Delegates from more than 50 countries and regions are attending the four-day show, and the Chinese delegation is one of the largest national delegations at the event, the report said.

China's State Administration of Science, Technology and Industry for National Defence said that the Chinese delegation's participation in international defense expos aims to display the country's advanced military equipment and technologies, promote international cooperation and communication in science, technology and industry for national defense, and build a defense security community to safeguard regional peace and stability, according to Xinhua.

Pakistani Foreign Minister Bilawal Bhutto Zardari attended the opening ceremony of the IDEAS and visited the Chinese delegation. A Pakistani defense official was quoted as saying that China's military equipment and technologies are famous internationally, and defense cooperation between Pakistan and China is exemplary.

The armed forces of Pakistan have commissioned many advanced weapons and equipment of Chinese origin, including the VT4 main battle tank, the SH-15 self-propelled howitzer, the Type 054A/P frigate, the JF-17 fighter jet, the J-10C fighter jet and the ZDK-03 early warning aircraft, according to official announcements and media reports.

China and Pakistan are expected to continue to deepen their defense cooperation, as Chinese weapons and equipment have boosted Pakistan's national defense as a system, a Chinese military expert who requested anonymity told the Global Times on Wednesday.

With China-Pakistan defense cooperation as an example, the expo is also a chance for China to have more defense cooperation with other countries in the region, the expert said.

The Russia-Ukraine crisis has highlighted the importance of drones and anti-drone systems, and Chinese defense firms have answers to that, the expert said.

Pakistan has consistently held the biennial event since 2000, except in 2020, when the event was canceled due to the COVID-19 pandemic. IDEAS has become a defense expo of key influence in Asia, Xinhua said.

Quelle:
Global Times China 16 November 2022

Shenzhou-14 taikonauts begin third spacewalk mission, to last for 6.5 hours

Taikonauts of the Shenzhou-14 manned spaceflight mission crew are conducting their third spacewalk operation on Thursday, which marked the first extravehicular activities (EVA) after the China Space Station completed its T-shape basic structure assembly on November 3.

As of 11:16 am, taikonauts have successfully opened the airlock and the Shenzhou-14 mission commander Chen Dong first came out of the cabin. Chen will be followed by his fellow crewmember Cai Xudong for the Thursday spacewalk. Liu Yang, the only female crewmember, will be supporting them on the inside, according to the China Manned Space Agency.

During the Thursday operation, which is the seventh at the China Space Station executed by taikonauts, spacewalking taikonauts are expected to carry out works including the installation of connecting devices to bridge space station modules to facilitate future spacewalk missions and the elevation of the panorama camera on the Wentian lab module.

The Global Times learned from mission insiders that the Thursday spacewalk will also mark a first in the use of the combination of the large and small robotic arms to support taikonauts activities all over the mega space station combination.

Having been connected at the ends, the combination of the large and small robotic arms could provide a larger operation range for taikonauts that extends to 15 meters, meaning it will be able to cover almost every corner of the space station combination, according to mission insiders.

The second space station lab module Mengtian conducted successful transposition in orbit at 9:32 am on November 3, marking the completion of the China Space Station's T-shape basic structure assembly and a key step forward toward the completion of the space station.

Quelle:
Global Times China 17 November 2022

Lenkmunition Vulcano 127 von Diehl Defence und Leonardo für die deutsche Marine

Deutsche Marine schließt die Einsatzprüfung mit der Fregatte F125 erfolgreich ab – die Truppeneinführung startet jetzt

Im Rahmen italienischer und deutscher Regierungsforderungen haben die Unternehmen Diehl Defence und Leonardo die präzisionsgelenkte Munitionsfamilie Vulcano 127 und 155 mm entwickelt und qualifiziert. Die Kompatibilität zu allen 127 mm und 155 mm Waffensystemen ist sichergestellt.

Während der Truppeneinführung hat die deutsche Marine nun die Einsatzprüfung der Lenkmunition Vulcano 127 mm, verschossen von der Fregatte F125 mit Leonardos 127/64 Lightweight naval gun, erfolgreich abgeschlossen. Dies umfasst den gesamten Munitionsfluss in der Waffe einschließlich Programmierung und Abfeuerung mit Nachweis der Reichweite und der Präzision unter operationellen Bedingungen.

Die Vulcano-Munition ist für größere Reichweiten von 70 km für Vulcano 155 und 80 km für Vulcano 127 ausgelegt, und dies in Verbindung mit einzigartiger Treffgenauigkeit gegen Fest- und Bewegtziele.
Neben der Basiskonfiguration mit Height of Burst (HoB) Sensor, wurden andere Konfigurationen mit den Terminal Homing Sensoren SAL (Semi-Active Laser) und FarIR (Fernes Infrarot) qualifiziert, die mit höchster Zielgenauigkeit gegen stationäre und bewegte Einzelziele zum Einsatz kommen.

Das macht die Vulcano-Familie zur präzisesten Artilleriemunition für Land- und Marine-Anwendungen weltweit. Der leistungsstarke, insensitive Mehrzweck-Sprenggefechtskopf mit vorgeformten Wolfram-Splittern ist höchst effektiv gegen weiche Ziele, Fahrzeuge, halbgepanzerte Fahrzeuge, Infrastrukturen und alle Arten typischer Infanteriegefechtsstände einsetzbar.

Neben der italienischen Marine wird auch die deutsche Marine mit der Lenkmunition Vulcano 127 ausgestattet, da die erfolgreichen Tests nun den Weg für eine Einführung bei der deutschen Marine geebnet haben.

Quelle:
Diehl Press Release 07 November 2022