

## **Delta Air Lines boosts A220 aircraft firm order to 107**

Delta Air Lines has firmed up orders for 12 A220-300 aircraft, bringing Delta's total firm order for A220s to 107 aircraft - 45 A220-100s and 62 A220-300s. The A220s will be powered by Pratt & Whitney GTF™ engines.

“The A220-300 is economical, efficient and delivers superior performance,” said Mahendra Nair, S.V.P. - Fleet & TechOps Supply Chain at Delta. “These additional aircraft in the A220 Family are an excellent investment for our customers and employees and will be fundamental as we work toward a more sustainable future for air travel.”

“Delta was the U.S. launch customer for the A220 and it is great to announce this incremental order that demonstrates how satisfied it is with the A220, economically and from a passenger perspective,” said Christian Scherer, Airbus Chief Commercial Officer and Head of Airbus International. “On top of that, the versatility of this aircraft with the long range and short airfield performance makes it a real winner for our customers. Thank you Delta for your confidence in further expanding your fleet with all our new generation aircraft!”

Delta took delivery of its first Airbus A220 in October 2018, and was the first U.S. carrier to operate the aircraft type. As of the end of June 2022, Delta was operating a fleet of 388 Airbus aircraft, including 56 A220 aircraft, 249 A320 Family aircraft, 57 A330s and 26 A350-900 aircraft.

The A220 is the only aircraft purpose-built for the 100-150 seat market, bringing together state-of-the-art aerodynamics, advanced materials and Pratt & Whitney's latest-generation GTF™ engines. The A220 brings customers a 50% reduced noise footprint and up to 25% lower fuel burn per seat and CO2 emissions compared to previous generation aircraft, as well as around 50% lower NOx emissions than industry standards.

With 220 A220s delivered to 15 airlines operating on four continents, the A220 is the optimal aircraft for regional as well as long-distance routes. To date, 60 million passengers have enjoyed the A220. The fleet is currently flying on over 700 routes and 300 destinations worldwide. As of the end of June 2022, over 25 customers have ordered 760+ A220 aircraft - confirming its breakthrough on the small single-aisle market.

Quelle:

Airbus Press Release 19 July 2022

## **BBAM Orders 9 More 737-800 BCF, Takes First Position at New Conversion Line**

*- BBAM takes initial positions for 737-800BCF conversions at Canada-based MRO provider KF Aerospace*

*- Deal takes BBAM's 737-800BCF total orders to 40*

*- Boeing 737-800BCF deliveries exceed 90*

Boeing [NYSE: BA] and BBAM Limited Partnership (BBAM) today announced the lessor is growing its 737-800 Boeing Converted Freighter (BCF) fleet with a firm order for nine more 737-800BCF. The agreement brings BBAM's 737-800BCF orders to 40 as strong demand for the single-aisle freighter continues.

BBAM will be the first customer to take delivery of a 737-800BCF conversion at a new conversion line set to open next year at KF Aerospace, a maintenance, repair and overhaul (MRO) provider in Kelowna, British Columbia. Last year, Boeing announced it would open two 737-800BCF conversion lines at KF Aerospace beginning in 2023.

“We continue to extend the life of the 737-800s in our fleet and support strong demand from our customers by further growing our 737-800BCF order book,” said John Lynch, Senior Vice President, Head of Freighter Programs at BBAM. “By taking conversion slots at KF Aerospace in Canada, we are delighted to leverage Boeing’s global network of conversion lines to offer our customers convenience and flexibility by being where they need us to be.”

The 737-800BCF is the standard body freighter market leader with more than 250 orders and commitments from 20+ customers to date, and more than 90 deliveries. The freighter carries more payload – up to 23.9 tonnes (52,800 lbs.) – and flies farther – 2,025 nautical miles (3,750 km) compared to 737 Classic freighters.

BBAM holds conversion slots at other Boeing MRO providers, including Cooperativa Autogestionaria de Servicios Aeroindustriales (COOPESA), an Alajuela, Costa Rica-based MRO provider, and Boeing Shanghai Aviation Services (BSAS) in Shanghai, China.

“Our partnership with BBAM on the 737-800BCF began with an order for three conversions in 2020, and after a series of incremental orders, BBAM is now one of the largest customers for the 737-800BCF with orders for 40 of the type,” said Kate Schaefer, vice president of Boeing's commercial modifications, engineering & specialty products business. “We are honored by BBAM’s continued trust in Boeing and are pleased to offer high-quality and reliable conversion capacity across a global network of MRO suppliers, where our customers need it most.”

Boeing has more than 40 years of successful experience in passenger-to-freighter conversions, relying on original design data and a deep understanding of the needs of the air cargo industry to deliver a superior, integrated product, including fully integrated manuals and world-class in-service technical support. Boeing Converted Freighters also come with the advantage of being associated with the industry’s largest portfolio of services, support and solutions.

Quelle:

Boeing Press Release 19 July 2022

### **Farnborough International Airshow: MTU-Aufträge von nahezu 600 Millionen US-Dollar**

Für die MTU Aero Engines hat sich die Farnborough International Airshow gelohnt: Deutschlands führender Triebwerkshersteller konnte Aufträge in Höhe von nahezu 600 Millionen US-Dollar vermelden. „Diese Summe unterstreicht einmal mehr die anhaltende Erholung unserer Branche. Die Fluggesellschaften haben großen Bedarf an modernen Flugzeugen mit kraftstoffsparenden Antrieben“, sagte Reiner Winkler, Vorstandsvorsitzender der MTU Aero Engines AG.

Der Löwenanteil der Messe-Aufträge entfällt auf Neubestellungen des Getriebefans (GTF): Die Air Lease Corporation wird 80 A320neo-Flugzeuge mit dem GTF ausstatten, außerdem kommt der Antrieb bei 76 A220-Maschinen des Leasinggebers zum Einsatz. Für den A220 mit PW1500G-Antrieb hat sich auch Delta Air Lines entschieden: Die Fluggesellschaft hat

zwölf Maschinen bestellt. Porter Airlines hat bei Embraer 20 E195-E2-Jets mit PW1900G-Triebwerken geordert. Die MTU profitiert auch von einer Boeing 777X-Bestellung: All Nippon Airways hat zwei Frachter bestellt, die von GE9X-Triebwerken angetrieben werden. Auch die Lufthansa wird ihre kürzlich bestellten Frachtflugzeuge vom Typ Boeing 777-8 nun mit 14 GE9X-Triebwerken ausrüsten.

Die MTU hält an den Getriebefan-Triebwerken Anteile zwischen 15 und 18 Prozent. Zum Getriebefan steuert das Unternehmen Schlüsselkomponenten wie die schnelllaufende Niederdruckturbine sowie verschiedene Stufen des Hochdruckverdichters bei und ist für die Endmontage eines Drittels aller PW1100G-JM-Serientriebwerke für die A320neo verantwortlich. Beim Boeing 777X-Antrieb GE9X kommt das Turbinenzwischengehäuse von der MTU. Es entspricht einem Programmanteil von vier Prozent.

Quelle:

MTU Press Release 22 July 2022

### **Lilium beauftragt Diehl Aviation mit der Kabinenausstattung des Lilium Jets**

#### **Der Tier-1-Luftfahrtzulieferer wird mit Lilium bei der Entwicklung, Herstellung und im Support der Kabinenausstattung des Lilium Jets zusammenarbeiten.**

Lilium N.V. (NASDAQ: LILM) („Lilium“), Entwickler des ersten vollelektrischen senkrecht startenden und landenden Jets („eVTOL“), hat Diehl Aviation, einen führenden Anbieter von Kabinenausstattungen und -systemen für die Luftfahrtindustrie, zur Zusammenarbeit bei der Konzeption und Entwicklung der Kabine des Lilium Jets sowie als Integrator und Hersteller von Innenraumkomponenten ausgewählt.

Der Zuliefervertrag ist ein weiterer Schritt auf dem Weg zur Industrialisierung und Musterzulassung des Lilium Jets. Diehl Aviation ist einer der weltweit führenden Tier-1-Luftfahrtzulieferer für Flugzeugsysteme und Kabinenlösungen. Zu seinen Kunden gehören große Flugzeughersteller wie Airbus, Boeing, Bombardier und Embraer. Das Unternehmen ist ein Pionier für innovative Flugzeugkabinenausstattungen und verfügt über langjährige Erfahrung bei der Entwicklung, Spezifikation, Zertifizierung und Integration von Leichtbaumaterialien sowie bei der Integration verschiedener Systeme.

Die Beauftragung umfasst die Kabinenausstattung des Lilium Jets – also die gesamte Seitenverkleidung in der Passagierkabine, die Deckenpaneele, Trennwände, den Gepäckraum und den Kabinenboden sowie die Innenverkleidung des Cockpits. Diehl liefert ebenso das komplette Beleuchtungssystem - mit neuester LED-Technologie und einer speziell für eVTOL-Vorgaben entwickelten Steuereinheit - sowie fortschrittliche Klimaverrohrung aus sehr leichten Verbundwerkstoffen und innovativen Materialien wie Schaumstoffgranulat für Luftauslässe.

Martin Schuebel, Senior Vice President Procurement bei Lilium, sagte: "Diehl Aviation ist mit seiner ausgewiesenen Expertise bei der Integration von Kabinensystemen und -komponenten für Verkehrsflugzeuge und seinem starken Engagement in der eVTOL-Industrie der perfekte Partner für Lilium. Diese Vereinbarung entspricht voll und ganz unserer Strategie, Partnerschaften mit Tier-1-Luftfahrtunternehmen einzugehen, und wir sind überzeugt, dass

die Zusammenarbeit den Lilium Jet auf seinem Weg zur Musterzulassung und Serienproduktion unterstützen wird."

„Über den umfangreichen Auftrag von Lilium im innovativen Wachstumsmarkt der Regional Air Mobility freuen wir uns außerordentlich“, sagt Harald Mehring, Chief Customer Officer bei Diehl Aviation. „Nun bringen wir unsere Erfahrung in der Kabinenausstattung und im Leichtbau in den Lilium Jet ein und es macht uns stolz, dass unser neuer Kunde Lilium uns dieses große Vertrauen schenkt. Wir sind bereit, unseren Beitrag für eine nachhaltige Mobilität zu leisten und sind begeistert, den Lilium Jet mitzugestalten“.

Quelle:

Diehl Press Release 21 July 2022

### **Rheinmetall modernisiert Simulatoren für Marinehubschrauber NH90 NFH Sea Lion** ***Weiterer Erfolg für führende Produktreihe Asterion***

Rheinmetall konnte mit seiner Simulatoren-Produktreihe Asterion einen weiteren Erfolg erzielen. So hat die Rheinmetall Electronics GmbH von seinem Partner Reiser Simulation und Training GmbH (RST) einen Folgeauftrag für die Simulatoren des Marinehubschraubers NH90 NFH Sea Lion erhalten.

Rheinmetalls Simulationsspezialisten aus Bremen werden ein Upgrade des Asterion-Cockpit Trainers „Funktionales Cockpit“ vornehmen. Das Funktionale Cockpit ist Bestandteil des von Reiser Simulation und Training GmbH entwickelten und gelieferten Maintenance Training Rig des NH90 für die deutsche Marine in Nordholz. Dieser Simulator ermöglicht dem Wartungspersonal des Marinefliegergeschwaders 5 das realistische Training von Wartungs- und Instandsetzungsprozeduren. Die Simulatoren werden bis 2024 aktualisiert.

Mit diesem Upgrade wird die Ausbildung des Marinepersonals auf dem aktuellen Konfigurationsstand des Marinehubschraubers NH90 NFH Sea Lion ermöglicht. Dieses Upgrade stellt einen wichtigen Meilenstein für die Nutzung des Maintenance Training Rigs in Verbindung mit dem integrierten Asterion-Cockpit Trainer „Funktionales Cockpit“ für den NH90 NFH der deutschen Marine dar.

Bei der Asterion-Produktreihe von Rheinmetall handelt es sich um ein herausragendes dynamisches und realistisches Trainingsmittel für die Ausbildung von technischem Personal. Asterion überzeugt durch seine hohe Nachbildungsgüte. Damit ermöglicht Rheinmetall eine absolut realitätsnahe Ausbildung des NH90-Bodenpersonals – inzwischen sowohl bei den deutschen Heeres- als auch den Marinefliegern.

Bereits im Dezember 2016 erfolgte die Abnahme des weltweit ersten Asterion-Cockpit Trainers für den NH90 TTH des Heeres. Dieser wurde dem internationalen Hubschrauberausbildungszentrum in Fassberg zur Nutzung übergeben. Daraufhin erhielt Rheinmetall im August 2017 den Auftrag zur Weiterentwicklung dieser hochkomplexen Asterion-Ausbildungssimulationsssoftware sowie dessen Integration in das Maintenance Training Rig (MTR) der Firma Reiser Simulation und Training GmbH. Das MTR bildet alle

relevanten Funktionen ab für den neuen Mehrzweckhubschrauber NH90 NFH Sea Lion der deutschen Marine in Nordholz in der ersten Ausbaustufe des Hubschraubers.

Mit Hilfe einer Datenaufnahme am echten Hubschrauber der Deutschen Marine wird Rheinmetall diese Software nun an den aktuellen Konfigurationsstand des NH90 Hubschraubers anpassen und in das funktionale Cockpit integrieren. Damit spiegelt das Trainingsmittel das Verhalten des Originalgeräts identisch wider. Dies ist für die Ausbildung und das Training des Wartungs- und Instandsetzungspersonals der deutschen Marine unumgänglich.

Die jetzt erfolgte Beauftragung ist ein weiterer wichtiger Meilenstein für Rheinmetall im Bereich Maintenance Trainingsmittel, um die Nutzer bei ihrer Hochwertausbildung auf Niveau der europäischen Luftfahrtregelungen EMAR maßgeblich zu unterstützen.

Quelle:

Rheinmetall Press Release 20 July 2022

## **Goodyear Joins Lockheed Martin to Commercialize Lunar Mobility**

*Vehicle Tires Designed for Extreme Temperatures in One Sixth Gravity on Crater-Filled Terrain*

The Goodyear Tire & Rubber Company supplied essential products for NASA's Apollo program, including the Apollo 11 mission which landed on the Moon 53 years ago today. The company will continue that tradition—focusing on lunar vehicle tires—by joining Lockheed Martin (NYSE:LMT) in its development of a lunar mobility vehicle.

Since Apollo, Goodyear continued innovating alongside NASA to advance designs for a lunar vehicle tire. The team of companies intends to be the first to establish extended-use commercial vehicle operations on the Moon. Goodyear brings its vast expertise in a mission-critical component to traverse the lunar surface, tires.

“NASA's Artemis program to live and work on the Moon has a clear need for lunar surface transportation that we intend to meet with vehicles driven by astronauts or operated autonomously without crew,” said Kirk Shireman, vice president of Lunar Exploration Campaigns at Lockheed Martin. “We're developing this new generation of lunar mobility vehicle to be available to NASA and for commercial companies and even other space agencies to support science and human exploration. This approach exemplifies NASA's desire for industry to take the lead with commercial efforts that enable the agency to be one of many customers.”

Goodyear is drawing from its advanced airless tire technology used on Earth with micro-mobility, autonomous shuttles and passenger vehicles, to advance lunar mobility and withstand the challenging conditions on the Moon. The companies are already applying existing expertise to the project including testing concepts in lunar soil test beds.

“Everything we learn from making tires for the Moon's extremely difficult operating environment will help us make better airless tires on Earth,” said Chris Helsel, senior vice

president, Global Operations and Chief Technology Officer at Goodyear. “This will contribute to our end goal of enabling mobility no matter where it takes place. Just as important, it is an honor to write history with these two prestigious companies who know how to make giant leaps in exploration and mobility.”

The Apollo lunar rovers were purposely built for just a few days of use on excursions within five miles of their landing sites. Future missions will need to traverse rugged terrain over much longer distances while operating in greater temperature extremes. New tire capabilities will need to be developed for years of durability and even survive the night that sees temperatures of below -250 degrees Fahrenheit and daytime temps of over 250 degrees Fahrenheit.

Lockheed Martin leads this growing team by leveraging its more than 50-year-history of working with NASA on deep space human and robotic spacecraft, such as NASA’s Orion exploration-class spaceship for Artemis and numerous Mars planetary spacecraft. The company will also manage the development of the program’s commercial business operations and engagement with NASA and global space agencies. Lockheed Martin has also helped NASA explore every planet of our solar system, and continues to develop new technologies for future space missions.

Another teammate, MDA of Canada, recently announced its commercial robotic arm technology will be used on the human-rated lunar mobility vehicles. The arm will provide valuable contributions as support for astronauts as well as enabling greater functionality of the rover on fully autonomous missions.

Together, the teams are applying unique perspectives and shared expertise to new challenges and market approaches that are being considered for the first time. The companies expect to have its first vehicle on the surface of the Moon in time to support NASA’s first landed mission that will have the first woman and first person of color walk on the Moon, currently planned for 2025.

Quelle:

Lockheed Martin Press Release 20 July 2022

### **IAI Selected by Dassault Aviation to Produce the Wing Movable Surfaces for the New Falcon 10X Business Jet**

Israel Aerospace Industries (IAI) has been selected by Dassault Aviation to design and produce the all-composite wing movable surfaces for the new, long range Falcon 10X business jet. The Falcon 10X wing movable surfaces program joins IAI’s other aerostructures programs for other leading aircraft manufacturers.

Drawing on its in-house advanced design engineering capabilities, IAI is progressing with the design phase of the wing movable surfaces. In parallel, IAI will set up the wing movable surfaces production assembly line in its composites aerostructures facility. In order to meet the high demand for the new aircraft, IAI will support Dassault Aviation's entry-into-service target for the Falcon 10X for 2025, alongside the production ramp up.

Shmuel Kuzi, IAI EVP and General Manager of the Aviation Group, said: "I would like to thank Dassault Aviation for selecting IAI for the Falcon 10X wing movable surfaces program. This is a recognition of IAI's capabilities and expertise in composite aerostructures by one of the leading manufacturers of military and commercial jets in the world. We are eager to move forward on this partnership and play an important role in Dassault Aviation's new business jet."

IAI's Aviation Group unites all activity in the aviation fields: maintenance (MRO), business jets, converting passenger jets to cargo configuration, hangars and aviation arrays, aircraft upgrades and more. With knowledge and accumulated experience in aviation spanning almost 70 years of the company's existence, along with development of groundbreaking technologies, IAI is in line with the world's leading aviation companies. Among its clients are some of the world's leading companies, including Amazon, DHL, Lockheed Martin, Boeing, Gulf Stream and others.

Quelle:

IAI Press Release 20 July 2022

### **Rhineland-Palatinate orders two H145 helicopters for its police force**

**Farnborough**, The Ministry of Interior of Rhineland-Palatinate has ordered two five-bladed Airbus H145s for its police force, following a European tender launched earlier this year. The helicopters will replace the state's current H135 fleet and will be operated by the police helicopters squadron in Winnigen. The first delivery is planned for Q1 2024.

"We'd like to thank the Rhineland-Palatinate government for its continued trust in our helicopters", says Wolfgang Schoder, Managing Director of Airbus Helicopters in Germany. "These five-bladed H145s will be outfitted with highly sophisticated equipment in order to further enhance the mission capabilities of the police force. We have seen with the flooding last year that law enforcement operators need to be able to rely on helicopters that can perform these demanding and essential missions and the H145 does just that."

There are more than 200 helicopters from the H145 helicopter family deployed for public services and law enforcement missions around the world.

The new version of Airbus' best-selling H145 light twin-engine helicopter was unveiled at Heli-Expo 2019 in Atlanta. This latest upgrade adds a new, innovative five-bladed rotor to the

multi-mission H145, increasing the useful load of the helicopter by 150 kg. The simplicity of the new bearingless main rotor design also eases maintenance operations, further improving the benchmark serviceability and reliability of the H145, while improving ride comfort for both passengers and crew.

In total, there are more than 1,500 H145 family helicopters in service, logging a total of more than six million flight hours. Powered by two Safran Arriel 2E engines, the H145 is equipped with full authority digital engine control (FADEC) and the Helionix digital avionics suite. It includes a high performance 4-axis autopilot, increasing safety and reducing pilot workload. Its particularly low acoustic footprint makes the H145 the quietest helicopter in its class.

Quelle:

Airbus Press Release 21 July 2022

## **Boeing Integrates Eagle Passive Active Warning and Survivability System onto U.S. Air Force F-15s**

*- F-15 modernization effort includes new electronic warfare capabilities*

*- Will enhance combat effectiveness and survivability for the F-15E and new F-15EX*

The first two U.S. Air Force F-15E aircraft recently began Eagle Passive Active Warning and Survivability System (EPAWSS) modification at Boeing [NYSE: BA]. Forty-three F-15Es will receive EPAWSS, which is also the electronic warfare system that will equip the F-15EX Eagle II.

Developed, produced and integrated by the strong partnership between Boeing and BAE Systems, EPAWSS represents a transformational overhaul to the survivability of the F-15 by providing advanced capabilities to detect and counter ground and airborne threats while also improving battlefield situational awareness.

“The Eagle Passive Active Warning Survivability System makes the most of mission effectiveness and survivability for the F-15 in contested environments, and further strengthens a highly capable, lethal aircraft,” said Prat Kumar, vice president of F-15 Programs. “With EPAWSS, the F-15E and F-15EX have successfully proven they can perform across a large force environment to penetrate advanced enemy air defenses and improve mission flexibility.”

In May 2021, the first two F-15EX aircraft, delivered ahead of schedule, participated in Northern Edge exercises with the EPAWSS suite. During the highly contested and complex exercises, the two jets demonstrated operational potential, which set the stage for future

incremental improvements, allowing the jets to exhibit proven, outstanding performance in subsequent exercises and flight test missions in October 2021 and February 2022.

Quelle:

Boeing Press Release 21 July 2022

### **Boeing, CAE sign MOU to enhance global aerospace training, innovation and fleet support**

CAE today signed a Memorandum of Understanding (MOU) to expand their collaboration and explore further teaming opportunities in defense aerospace training. The memorandum leverages the strengths, skills, and advanced technologies of Boeing and CAE with the intent to further enhance innovation and competition through potential joint-offerings.

Additionally, the MOU aims to advance mission readiness for defense customers worldwide operating Boeing military aircraft. Working together, Boeing and CAE are uniquely qualified to deliver outcome-based pilot training, aircrew ground school, in-service support, and instructor training at the point of need.

"Boeing and CAE share an unwavering commitment to deliver value through innovative training solutions that provide increased efficacy and reliability to our defense and commercial services customers," said Stephanie Pope, president and CEO, Boeing Global Services. "This collaboration demonstrates the best of how governments and industry can collaborate to benefit customers worldwide."

This collaboration amplifies a long-standing relationship spanning commercial and defense portfolios across the globe. CAE is an integral partner on the CH-47 Chinook program in Germany, has supported Boeing extensively with P-8 training solutions worldwide, and is a charter member of Team Poseidon in Boeing's Canadian Multi-Mission Aircraft offering. This MOU builds on the recent exclusive teaming agreement in Germany for Chinook, and continues our joint efforts to deliver enhanced training offerings for Chinook in the United Arab Emirates that support Emiratization efforts, as well as expanding P-8 solutions in Canada, Germany, and Norway.

"Our purpose is to prepare our military customers for safe and successful mission outcomes through advanced training and mission readiness," says Daniel Gelston, president, CAE Defense & Security. "CAE and Boeing are leveraging our global training experience and aircraft expertise to expand solutions that support modernization and adaptability for the future of these platforms."

The MOU expands Boeing and CAE international teaming and supplier networks to provide solutions that support both customer and regional development.

Quelle:

CAE Press Release 19 July 2022