

# AW newsletter

Summer/Autumn 2019

## WE DELIVER OUR 1,000<sup>TH</sup> AW139 #GRAZIE1000

On 20<sup>th</sup> September we celebrated an historic achievement with the delivery of the 1,000<sup>th</sup> AW139, assigned to Italy's Guardia di Finanza. The event at our site in Vergiate (Italy) was attended by customers, institutional representatives, partners and suppliers, as well as the company's top management and employees.

The AW139 is the most important helicopter programme of the last 15 years at an international level, with its first flight at the beginning of 2001 and first delivery in early 2004.

The numbers related to this aircraft are stunning:  
over **1,100 units** ordered  
more than **280 customers**  
in over **70 countries** in all continents  
with almost **2.5 million** flight hours logged.

The AW139 is an extremely versatile helicopter and has become the market benchmark in its class, able to perform tasks from

public utility to search and rescue and air ambulance, from law enforcement to firefighting, to disaster relief, from offshore to VIP transport, as well as military tasks.

Leonardo Helicopters Managing Director Gian Piero Cutillo said in his speech, "Without the self-denial, the preparation and the passion of workers from different generations and nationalities who believed in and worked on its development, and who still follow it in its operational path by constantly confronting the market and customers, all this would not have been possible."

The AW139 has grown significantly in just a few years, adapting to the changing needs of customers and the market. The helicopter will continue to play a leading role well into the future, remaining state-of-the-art whilst building on the experience and maturity gained over 15 years of operational activity.



## AW109 TREKKER VIP MAKES EUROPEAN DEBUT

The first Leonardo AW109 VIP Trekker for a European customer was the guest star at our stand QA13 at late September's Monaco Yacht Show, one of the most important dates in the calendar for the international luxury yacht sector.

The AW109 Trekker is the newest model within Leonardo's light twin-engine helicopter range and this specific VIP configured unit will join the fleet of Leonardo VIP helicopters leading the UK and Irish market.

With the AW109 Trekker Leonardo looks set to increase its already notable market share, thanks to features that include the winning qualities of the AW109 Grand - long a favourite with operators - such as its spacious cabin, state-of-the-art Genesys Aerosystems avionics and skids, particularly suitable for landing on yachts. The combination is unmatched in terms of cost-effectiveness, technology and performance.



## BRAZIL CONFERENCE SIGNALS COMMITMENT TO OPERATORS' SAFETY

On 12<sup>th</sup> August we led a safety conference for South American operators in Sao Paulo, Brazil. Held during LABACE, the conference was a good chance to engage with stakeholders, provide the latest information, and hear the industry's feedback.

Helicopter accidents can broadly be grouped into three categories: operative, maintenance, and technical. The newest safety features are not always well represented in fleets, partly because many helicopters are flying decades longer than anticipated, while retrofits are not always practical. Despite these challenges there are many ways to increase safety. Our focus at the conference was on design, flight operations, training, and learning through experience.

Design features that improve situational awareness include Synthetic Vision System (SVS), Obstacle Proximity Lidar System (OPLS), digital maps, weather radar, EGPWS/ HTAWS, TCAS/ TCAS II, ADS-B Out, and novel display techniques, among others. More comprehensive warnings, cautions and advisories will similarly help manage emergency conditions, while full time 4-axis autopilot with automatic safety features is easy to use and clear to understand.

Performance Based Navigation dramatically improves flight operations, representing a major shift from ground-based navigation to satellite-based (Navstar, Egnos, Galileo). These systems reduce controlled flight into terrain (CFIT) and show consistent and predictable flight paths, which lead to more direct routes and reduced airspace conflicts.

Training is foundational to flight safety. Leonardo offers tailored scenario-based accident training, aircraft upset recovery techniques, inadvertent instrument meteorological conditions (IMC) escape training, and multi-crew training. In addition to Level D Full Flight Simulators, the company offers Virtual Interactive Procedural Trainers (VIPT), Virtual Maintenance Trainers (VMT), and Maintenance Training Systems.

Software can help one learn by experience. Planesciences FAS-INV software generates flight paths using GPS and air data sources. It can include high-definition terrain elevation data, such as mountains, and VFR scenes (roads, buildings, trees and other manmade obstacles), exposing customers to real, challenging flight scenarios so they are well versed in how to manage particular environments.

Safety is Leonardo's top priority. We look forward to continuing the dialogue on this essential topic with all our customers. Our aim is to be recognised as the safest Original Equipment Manufacturer (OEM) worldwide. To meet this goal, we have created a new department - Safety Systems Governance (SSG) - to oversee internal, external, and statutory functions. The safety governance organisation will strategically address operational safety, foster a culture of safety, and promote collaboration with customers to better understand their operational needs, matching them with the latest safety features available on AW products.

## ENHANCEMENT OF AW139 CORROSION PREVENTION PROGRAM

The new ACCP enhancement provides all operators with additional guidelines to tailor the Corrosion Control Program, based on customer in-service experience and additional significant factors such as aircraft specific configuration, operational constraints, available skills and facilities. The latest update of the Aircraft Corrosion Control Publication (ACCP) was published within ITEP Issue 34.

In order to maintain commonality on maintenance activities, the AW139 ACCP has been developed using the philosophy successfully applied to the AW189: a zonal approach that ensures the corrosion protection plan is tailored to operational roles and levels of exposure to corrosive environments in specific aircraft zones.

The AW139 ACCP provides the operator with an inspection schedule arranged in a familiar format – used also for the Air Vehicle Maintenance Planning Information (AMPI) maintenance task overview – and inspection procedures, along with practices to apply corrosion prevention products.

The tasks schedule outlines three different inspection plans: Severe, Moderate and Mild; operators can select a suitable plan based on the mission characteristics and environment where their helicopter is operated. The frequency of inspection and protection treatment

application needs to be selected depending on the severity of exposure to corrosion risks.

A critical review of inspection results performed according to the task schedule selected by each Operator is also suggested in the ACCP. Analysis of the significant data of those inspections (i.e. maintenance defects, status of protective products, etc.) allows operators to confirm the effectiveness of their tailored inspection task schedule and correct it accordingly (increasing or decreasing frequency, or focusing on specific helicopter zones).



## CUTTING-EDGE COMPONENTS

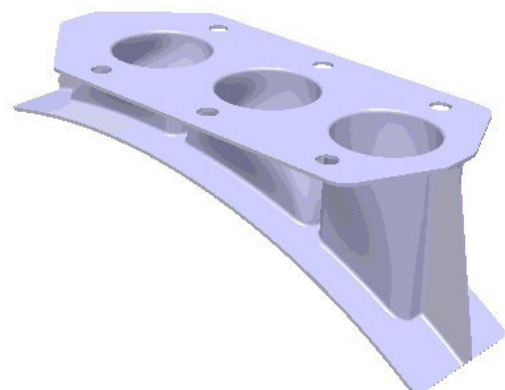
Creating objects without using moulds, without processing raw materials, with the freedom to invent new forms – even complex ones – is now possible thanks to the potential of additive manufacturing technology. 3D printers are today an increasingly widespread part of daily reality.

The field of prototyping was an early adopter of this technology, capitalising on the flexibility and rapidity of production. However, the real challenge comes in producing qualified, certified objects in the same way as traditional consolidated technologies to produce flying parts. Leonardo Helicopters has risen to this challenge and has been working on an ambitious roadmap that is beginning to bear fruit.

We are now introducing to our helicopters parts designed according to new criteria that exploit the major benefits of additive manufacturing technology. For example, high-temperature ducts and complex shaped conveyors have already been installed on our AW189. Soon other parts, such as pressurized oil ducts, supports, nozzles, and more, currently undergoing industrialisation and qualification, will also be installed on other product lines.

An expanding supply chain of specialised suppliers is working together with an integrated Leonardo Helicopters team of experts from Design Areas, Materials Laboratory, Industrial Engineering and Supply Chain Management, analysing new proposals and opportunities, and suggesting improvements and new project solutions.

In addition, for the past year a coordinated interdivisional work group, led by Leonardo Corporate – Chief Technology Officer function – has been integrating the competences, experiences and needs of all the divisions. This sharing of common needs and requirements from the perspective of integrated development is a genuine expression of our Company's idea through which added value can be created.



## NEXT GENERATION W-3 CONCEPT UNVEILED AT MSPO 2019

During MSPO 2019, held in Kielce, Poland, we presented a next-generation multirole military helicopter concept based on the legacy W-3 Sokół platform – the basis of the helicopter fleet of the Polish Armed Forces currently slated for major modification. The presentation was made through PZL-Świdnik and the Polish Armaments Group, along with the Polish aviation industry and R&D centres.

This new concept leverages on the latest proven technologies available on the market, without compromising Polish military needs, guaranteeing shorter delivery times and high levels of reliability along with savings in terms of acquisition and operating costs.

The helicopter will rely on new blades as well as a fully digital avionics system, covering a glass cockpit, Flight Management System (FMS), Synthetic Vision System (SVS), digital maps and Helicopter Terrain Avoidance Warning System (HTAWS), as well as a 4-axis digital autopilot, new communication system, Full Authority Digital Engine Control (FADEC), and Health and Usage Monitoring System (HUMS).

All of this, combined with mission equipment and additional 200 kg of useful load, will offer a remarkable improvement in terms of performance and operational capability.



The helicopter will be able to perform a wide range of missions: troop transport, Special Forces insertion/extraction, Combat Search and Rescue (SAR), Intelligence, Surveillance and Armed Reconnaissance (ISTAR), and Medical/Casualty Evacuation (MEDEVAC/CASEVAC).

The venture will also see a significant technology transfer from Leonardo to PZL-Świdnik which, in turn, will enable the Polish aviation industry to further consolidate its domestic growth.

## CANADA COMMITS TO MODERNISATION AND EXPANSION OF SAR FLEET

Canadian Minister of National Defence Harjit Sajjan confirmed in August the decision to proceed with the Cormorant MidLife Upgrade (CMLU) programme for the modernisation and expansion of Canada’s primary rotary search and rescue (SAR) helicopter fleet.

The AW101, designated by the Royal Canadian Air Force (RCAF) the CH-149 Cormorant, has enabled the RCAF SAR crews to successfully complete thousands of rescues in any weather conditions, on land or offshore, some of which have even received international recognition for their heroism.

The CMLU programme secures the future of the Cormorant fleet for decades to come, upgrading the aircraft to the latest AW101-612 standard currently being delivered to Norway within the scope of the Norwegian All Weather Search and Rescue Helicopter (NAWSARH) programme. This provides a low-risk upgrade path through a modern, proven solution, with state-of-the-art avionics, a new “glass cockpit” (flat screen displays replacing many knobs, buttons and dials), the addition of the latest sensors, radar and search enhancement technology, more powerful digitally controlled engines, wireless in-cabin communications, LED lighting, rescue hoist upgrades, synthetic training solutions and more.

As “Team Cormorant” prime contractor, Leonardo will work closely with IMP Aerospace & Defence to deliver the CMLU program in Canada, with the work done by Canadians. CAE will deliver Canada’s first AW101 full motion simulator and other synthetic training capability. GE Canada will provide the new engines and Collins Aerospace will provide the new cockpit displays and avionics. Other Canadian suppliers will be engaged through a robust Industrial Technological Benefits (ITB) and Value Proposition programme which will deliver the maximum value of the CMLU and fleet expansion to Canada.



## NORWAY #4 RETURNS TO FLIGHT

Good news for the Norwegian All Weather Search and Rescue Helicopter (NAWSARH) programme with the return to flight of Norway #4 (O268) in July following completion of its repair. The aircraft suffered extensive damage when it rolled on to its side during a ground run at Sola Air Base back in November 2017.

The aircraft returned to Yeovil in August 2018, since then it has undergone some significant repair activity involving the removal and replacement of damaged key structural components. This activity called on existing and new capabilities within the company, including the use of Additive Layer Manufacturing (ALM) to assist in the development of repairs. This technology, the modular design of the AW101, and more importantly the skill and expertise of our technicians, has enabled the aircraft to be returned to a condition where the repairs are all but invisible to the untrained eye.

The repair project has involved close collaboration between multiple helicopter plants – Poland, Brindisi and Yeovil – as well as collaboration across many functional areas including Repair Design, Interchangeability (ICY), Manufacturing Engineering and Material. As Norway #4 returns to flight, it

is important to underline the hard work and dedication of all the individuals that have had a hand in this repair.

Following the completion of the check test flight activity, the aircraft will initially deploy to RNAS Culdrose and then head back to Yeovil for the training of the Norwegian SAR crews that will take the helicopter into live SAR operations in Sola, Norway, early next year.



## 33<sup>RD</sup> AW101 USER CONFERENCE

The 33<sup>rd</sup> AW101 User Conference held at NAS Catania Sicily began with congratulations from our customers for the outstanding work carried out by Leonardo during the past six months and encouragement to **“please maintain the momentum”**. There is no doubt within the community that the AW101 is a valued multi-role asset, and the primary concerns for all customers remain platform availability and Cost of Ownership (COO).

The introduction of Direct Vendor Training is without doubt now yielding considerable benefit to operators in terms of turnaround times and lead times, which are showing positive trends.

Cessation of the Danish Parliamentary Over Watch and Japan’s confirmation of the procurement of an additional AW101 aircraft for 2023 delivery both reinforce the positive changes that have been made.

Maintaining and improving current service levels for all Customers remains a priority, as is addressing the following topics:

- Corrosion/component reliability/cannibalisation of aircraft/mmhrs per flthrs
- Reduced operator confidence in the Rotor Ice Protection Unit (RIPU) and blade fold systems thanks to recent issues.

The User Group remains an effective and well-supported forum.



## NORWAY #7 DEPARTS FOR SOLA

Another successful delivery for the Norwegian All Weather Search and Rescue Helicopter (NAWSARH) programme took place in June, with the aircraft Norway #7, the sixth to be delivered, departing Yeovil for Sola in Norway, with a fuel stop on route at Humberside Airport.

The delivery followed completion of the Helicopter Acceptance Process (HAP). Following completion of production Acceptance Test Procedure (ATP) testing in September, Norway #8 supported Base 1 pilot training in Yeovil.

Norway #8 will continue to support pilot training activities along with Norway #4 (the original first delivery aircraft damaged in Norway and subsequently repaired and re-delivered to the programme in July 2019) until January 2020. Both aircraft will then be delivered to Norway in Q1 2020.

Norway #9 is completed and will be offered for HAP in January 2020. These deliveries ensure the customer has sufficient aircraft in place ready for Base 1 to go live in Q2 2020.



## FIRST AW169 DELIVERED TO POLAR RESEARCH INSTITUTE OF CHINA

Autumn saw the entry into service of the first AW169 to the Polar Research Institute of China (PRIC). A delivery ceremony was held at Shenzhen Heliport on 28<sup>th</sup> September for the helicopter (call sign "Snow Eagle 301"), which will operate aboard the "Snow Dragon 2" Polar Exploration Ice Breaker. The aircraft began its first mission to the South Pole in mid-October, right after the 70th Anniversary of the Founding of the People's Republic of China.

This particular AW169 is equipped with additional features dedicated to the PRIC polar mission requirements, including a Blade Folding System, heavy mooring, cargo hook system, maritime protection, life raft and floatation system. The spacious and comfortable 6.3-cubic metre cabin space, with a 1.6m wide large sliding door, can accommodate up to 10 passengers. This meets and exceeds PRIC requirements for polar researcher transport mission, cargo lifting, iceberg identification, and airborne search and rescue (SAR) during polar scientific research and exploration missions.

At present the PRIC polar exploration fleet comprises the AW169, another helicopter and a turboprop aircraft. The addition of Snow Eagle 301 will greatly enhance PRIC capability in personnel transport, surveillance, MEDEVAC and SAR polar missions. The AW169 will be operated by Citic Offshore Helicopter Co., Ltd on behalf of PRIC.

### Polar Research Institute of China

Established in 1989, PRIC is the only scientific research and support centre dedicated to Chinese polar research activities. It is responsible for the operation and management of the Snow Dragon and Snow Dragon 2 polar research ice breakers and all onboard scientific equipment, the Great Wall, Zhongshan, Kunlun, Taishan and Huanghe Polar Stations and other domestic research bases, providing scientific and logistics support for Chinese polar research teams. PRIC is also responsible for establishing international exchange and cooperation on Polar Research.



## TENTH ANNIVERSARY OF AW159 WILDCAT'S FIRST FLIGHT

Ten years ago on 12th November, the AW159 Wildcat lifted off for the first time from Yeovil and took to the skies. Over the last decade the helicopter has celebrated global success and is in current operation with the UK MoD and other international users.

Former chief test pilot Donald Maclain, who was at the controls on Wildcat's maiden flight, and current Chief Test Pilot Mark Burnand spoke to us about their experiences with the AW159. From the very beginning it was clear the helicopter was in a class of its own: "For us pilots, the Wildcat was a complete game changer," Maclaine said. "It's an extremely agile and responsive aircraft," added Burnand. Events in Yeovil to mark the anniversary were also attended by Commander Matt Boulind, who heads the Wildcat Maritime Force.

The latest evolution of the popular Lynx multirole naval helicopter, the AW159 has advanced situational awareness capabilities with its fully integrated avionics and mission suite coupled with a tactical processor and benefiting from a military derived Human Machine Interface (HMI).

The high-performance platform has state-of-the-art systems, including a Leonardo Seaspray multi-mode electronically-scanning (E-scan) radar, and integrated Defensive Aids Suite. The twin-engine multi-role helicopter is able to conduct missions ranging from constabulary

to high-end warfighting where it has the capability to autonomously detect, identify and attack targets on land and at sea.



More than 70 units have been delivered to customers including the British Army, Royal Navy, Republic of Korea Navy and the Philippine Navy. The platform has over 50,000 flight hours logged in operations worldwide in a variety of environments.

## PHASE 4 UPGRADE FOR SESTO CALENDE AW169 FFS

Early September saw the AW169 Full Flight Simulator (FFS) located in Sesto Calende, Italy, powered on following a successfully upgrade and certification to the new avionics phase 4.

This upgrade, as announced with IL AW169-19-016, includes, among other implementations, the increase of Maximum take-off Weight (MTOW) to 4.8 tonnes, the advancement of Automatic Flight Control System (AFCS) to the latest version, implementation of the new collective and the improvement of flight control performance in turbulence. Furthermore the capability to deliver Localiser Performance with Vertical Guidance (LPV) Lateral Navigation/Vertical Navigation (LNAV/VNAV) Performance Based Navigation (PBN) missions was enabled.

The FFS now reflects the latest helicopter configuration, delivering the most reliable, realistic and effective training experience. The AW169 FFS is located in Sesto Calende, also home to other simulation devices built by Leonardo Helicopters. These original Equipment Manufacturer (OEM) training devices are developed using approved aircraft technical data, aircraft flight tests data and specific aircraft experience/competences.



## LEONARDO HELICOPTERS HEMS TRAINING

At Leonardo Helicopters Training Academy in Sesto Calende we aim to enhance our training portfolio and propose new innovative training solutions for our customers. With a brand new mock-up fitted with a real Helicopter Emergency Medical Services (HEMS) kit and a dedicated climbing wall, our team of instructors provides new HEMS training courses for medical crews including doctors, nurses and paramedics.

More than just basic training; we teach our students an operational philosophy in order to enhance safety, standards and efficiency on missions. By using training devices in a fully controlled environment operators do not need to use the real aircraft, keeping the real helicopter operational for longer.

The training is divided between classroom and practical activities on the HEMS mock-up and the climbing wall. The students are instructed on different topics such as Aviation Medicine, Basic Helicopter Theory, General Aviation Theory, HEMS medical equipment, HEMS kits, Helicopter Safety, Communication, advanced Personal Protective Equipment and Crew Resources Management in a HEMS environment.

At the end of the course the students are assessed through a theoretical exam as well as scenarios carried out entirely from the pre-flight briefing stage, through to patient care in flight and the transfer of the patient from the helicopter to the ambulance or a medical facility.

The HEMS training programme also covers other specialist roles, such as pilots, with advance HEMS scenarios in Full Flight Simulators (FFS), HEMS/Night Vision Information System (NVIS) Technical Crew Member with HEMS specifics and front-seat advanced training, and Emergency Ground Services personnel.



This training will have a very positive impact on the HEMS sector, drastically reducing training cost and helping to enhance crews' competence and coordination during operations.

The Training Academy has grown in experience in the past five years whilst providing training in search and rescue (SAR), Law Enforcement and HEMS. The training team has carried out several hundreds of flying hours in synthetic training devices and on the real aircraft, qualifying customer pilots and rear crew in their specialist roles worldwide. The standard of training provided has allowed our customers to enhance their service for the populations they assist, by providing specialised aircrews who are now able to successfully respond to the most challenging types of missions.

If you want to learn more on our HEMS Training solutions, explore the Leonardo [website](#) and download our [HEMS Training material](#)

## NEW ORDERS CONSOLIDATE LEONARDO PRESENCE IN BRAZILIAN VIP HELICOPTER MARKET

The latest edition of Latin America's largest luxury helicopter expo saw new orders for Leonardo for a total of five units, valued at nearly 30 million euro. Orders were announced during the 2019 LABACE, held annually in Brazil during August, for three AW109 Trekker light twins (two purchased by Icon, the official distributor of our Trekker in Brazil and a further VIP AW109 Trekker), one AW109 GrandNew and one AW169 intermediate twin (the latter two purchased by different private regional operators).

We already have a fleet of over 170 helicopters flying in Brazil and more than 220 in South America, making us a global leader in the VIP multiengine segment. These orders strengthen our presence in the key Brazilian helicopter market, where the AW109 variants have proven popular and successful among many customers for passenger transport duties and other roles.

The AW109 Trekker, the newest light twin in our helicopter range is already successful in other Latin American nations like Chile and will allow Brazilian operators to benefit from an unmatched combination of cost-effectiveness, technology and leading class performance. Brazil has also welcomed the new generation AW169, with the total AW169 VIP fleet to reach five units by the end of 2019 - joining a further eight AW169s in service across the Americas in VIP and Emergency Medical Services (EMS) roles.





## NEW NH90 TRAINING FACILITY IN DEN HELDER

The NH90 Full Mission Flight Trainer (FMFT) relocated from Italy to the Netherlands has started to welcome its first pilots into training. Previously located at the Sesto Calende facilities of Rotorsim, the joint venture owned equally by CAE and Leonardo, the FMFT is now up and running at a new training facility at Maritime Air Base de Kooy in Den Helder.

A ceremony to mark the occasion was hosted by the Netherlands Ministry of Defence (NLMOD) and Netherlands Defence Helicopter Command. Attendees included officers from the Royal Netherlands Navy and Royal Netherlands Air Force; NLMOD officials; executives from CAE, Leonardo and Rotorsim; and military officials from Italy and Belgium.

“We have trained our NH90 crews for the past eight years in Italy as part of the very successful Joint NH90 Training Program,” said Air Commodore Robert Adang, Commander of the Netherlands Defence Helicopter Command. “This new training facility in Den Helder now allows us to train our aircrews in the Netherlands while further advancing our synthetic training capabilities. The value of simulation-based training is critical to preparation and readiness, and the NH90 FMFT plays a key role in complex mission training for our NH90 aircrews.”

As part of the relocation of NH90 training, Rotorsim moved the NLMOD-owned NH90 NATO Frigate Helicopter (NFH) simulator cockpit from the Rotorsim training centre to the new facility in Den Helder. In addition, the NLMOD contracted CAE to design and manufacture a new roll-on/roll-off (RO/RO) full-mission simulator mothership.



## NEW DISTRIBUTOR IN SOUTH AFRICA

As of mid-October we have a new distributor in South Africa for the civil and commercial market: Absolute Aviation Group. The agreement includes the AW119Kx single engine, the AW109 GrandNew and AW109 Trekker light twins, the AW169 light intermediate and the AW139 intermediate twin types, and could potentially be extended to other Sub-Saharan nations in the future.

Absolute Aviation Group has also signed a contract for an AW119Kx and an AW109 Trekker, scheduled to be delivered in 2020, with a commitment to purchase further units in the next couple of years. With this order the AW109 Trekker enters the South African market and builds on the significant, well-established success of other AW109 variants in the country for a variety of roles. This latest AW119Kx order also grows the presence of the uniquely capable single-engine helicopter in the country.

The AW119Kx, has recently completed a 10-day demo tour in four different regions in South Africa to showcase its extraordinary capabilities in terms of performance, advanced avionics, reliability, and versatility. The nearly 50 operators who attended the demo tour were quite pleased with the best-in-class performance and power margins, the capability to fly and carry out its mission in demanding windy conditions, in addition to the outstanding safety standards.

Absolute Aviation Group is a full-spectrum aviation group, offering customers unparalleled levels of support and expertise in the form of bespoke aviation services. It is also one of the only general aviation businesses able to offer full turnkey aviation service to aviators on the African continent.

In addition to the group's head office, Absolute Aviation Group owns and operates a number of aviation businesses out of five hangars at Lanseria International Airport, Cape Town International Airport, Wonderboom Airport, Maun and Gaborone.



## AW139 SUPPORTS EMS AND LAW ENFORCEMENT IN DUBAI

2019 sees the delivery of three more AW139s to the Dubai Police Air Wing; two in March 2019 and a third by year-end. The helicopters are equipped with specific and advanced Emergency Medical Services (EMS) devices and cutting edge systems to support Law Enforcement in urban and suburban areas. Dubai is the capital of the Emirate of Dubai and the largest and most crowded city in the United Arab Emirates (UAE), with a population of 4 million people and approximately 15 million visitors per year. The missions performed by the Dubai Police Air Wing are very demanding, and require state-of-the-art equipment to be successful.

The helicopters' maintenance will be supported by the Dubai Air Wing, which already operates five AW139s and one AW189 for VIP and Corporate operations.

Leonardo Helicopters and the Leonardo Customer Support and Services (CS&S) Middle East Team are proud to contribute to the Dubai Air Wing and the Dubai Police Air Wing's success and to cooperate as a single team on their challenging operations.

## WIKING SIGNS CONTRACT FOR TWO AW139S FOR OFFSHORE TRANSPORT

In June, Wiking Helikopter Service GmbH of Germany signed a contract valued at 30 million euro with Leonardo for the purchase of two AW139 helicopters. Wiking already operates four helicopters in Northern Europe to perform offshore transport operations, further expanding its fleet with these two aircraft expected to be delivered in 2019 and 2020.

Wiking has been an offshore transport specialist in the North and Baltic Sea areas for 43 years. The Company also performs sea pilot transfer, wind turbine engineer hoisting service and Emergency Medical Service (EMS) operations. This latest AW139 contract provides more evidence of the unrivalled mission capabilities, operational efficiency and reliability of the world's most successful type in its category to carry out demanding missions overseas. The AW139 fleet augmentation programme will allow Wiking to meet the evolving requirements of its clients.



## FIRST AW169 EMS HELICOPTER FLEET IN USA ENTERS SERVICE

The Air Medical Transport Conference in Atlanta in November was the stage for the announcement that the first AW169 Emergency Medical Services (EMS) helicopter fleet in the United States is now in service. Comprising three AW169 EMS helicopters equipped with a rescue hoist and 300-gallon Simplex belly tank for fire suppression, the fleet is now in service in Travis County, Texas.

Travis County's air ambulance operator, STAR Flight, is the only 24/7 helicopter EMS provider in Texas performing highly specialised rescues including emergency medical transport, still and swift water rescue, Search and Rescue (SAR), high-angle rescue, fire suppression/aerial reconnaissance, and law safety assistance. STAR Flight also transports neonatal, paediatric ICU, and high-risk obstetrics medical teams and patients.

Peculiar to this area in south central Texas, with over 1.2 million people including the city of Austin, is that it is part of Texas Hill Country, which presents many geographic challenges for the rescue crews. It is also called "Flash Flood Alley," being the primary location in the USA for flash flood rescues. Access to patients is often difficult and remote due to the several lakes and rivers in the area, therefore the capacity to operate a fleet of helicopters up to the task is crucial.

The AW169 features a superior cabin size - transporting up to two patients and five medical personnel plus critical care equipment - with flexible interior layouts that provide 360 degree patient access. Wide doors offer smooth and efficient patient loading, while a roomy baggage compartment stores extra equipment and stretchers. Large windows support emergency egress, and one engine-inoperative capability offers outstanding safety.

## NEW COOPERATION WITH OLMEDO FOR EMS OF THE FUTURE

A new agreement with Olmedo, a leading European company for the transformation and preparation of vehicles for healthcare use, aims to develop technologies and equipment for rotary-wing and land-based medical vehicles. The goal is to improve the speed and effectiveness of emergency medical interventions carried out jointly by helicopter and conventional ambulance.

The collaborative approach envisioned will prioritise the creation of an R&D structure comprising a joint research team. This team will consider the development and prototyping of new components and universal solutions designed for contemporary and specialist use on both helicopters and ambulances. Data-sharing platforms to enable the real-time interface of the patient's vital signs during the rescue mission: from the place of intervention to the hospital and during transfers will also be a focus of the project.

Our expertise in the field of Helicopter Emergency Medical Services (HEMS) and Search and Rescue (SAR) missions in the global and maritime environment will drive synergies with the experience of the medical Ambulance Division of the Olmedo Group, leader in the sector since 1951 with its wide range and exclusive production.

The partnership's foundations were built at the international REMOTE helicopter rescue meeting, held in December 2018 at our site in Vergiate. The evolution of the agreement will allow Olmedo to work on the creation within its own group of a new



Fly Division completely dedicated to the design of increasingly efficient products and technologies for air ambulances, a segment in which we have delivered a fleet of more than nearly 700 helicopters for operational rescue worldwide.

## ANOTHER GRANDNEW FOR EMS OPERATIONS IN USA WITH INTERMOUNTAIN HEALTHCARE

Intermountain Healthcare, the largest health system in the Intermountain West based in Utah, and one of the premier health systems in USA, will add a further AW109 GrandNew to its air ambulance/Emergency Medical Services (EMS) programme. The announcement was made during the Air Medical Transport Conference in Atlanta at the beginning of November, where Intermountain Life Flight confirmed its was expanding its fleet to five AW109 GrandNew, supported by one AW109K2 light twin.

Intermountain Life Flight began service on 5<sup>th</sup> July 1978, as the seventh air medical programme in the USA. In its 40 years of service it has transported more than 108,000 patients, flown over 15 million miles, and completed more than 400 hoist rescues.

Intermountain Life Flight is a not-for-profit health system and it is also the only Instrument Flight Rules (IFR) EMS operator in Utah, with its own low-level IFR infrastructure and proprietary heliport approach procedures. It provides specialised services including high risk obstetrics, complex cardiac care and intra-aortic balloon pump, operating from seven bases at hospitals across the state, where it performs 4,000 transports every year.

Intermountain Life Flight is the only civilian-operated air ambulance service in the USA to have a Federal Aviation Administration (FAA) approved external load hoist rescue operation, which can be used for mountain operations in mild weather.



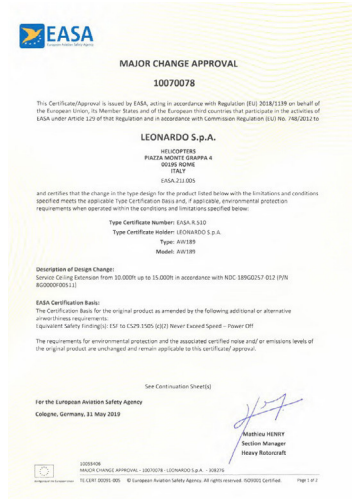
## 15,000 FT ALTITUDE ENVELOPE EXTENSION FOR AW189

Further extending the mission capabilities of the AW189, the aircraft has now achieved certification for its 15,000 ft Altitude Envelope Extension.

This further confirms the interest in the continuous research for improvement of the twin-engine, medium-lift helicopter. All customers and operators can benefit from this enhancement from 10,000 ft to 15,000 ft through the

application of the relevant Service Bulletin.

Prerequisite for the application of SB189-241 will be the installation of SW Core Avionic Phase 5 and the modification of actual engine design, introducing a new GE CT7-2E1 Engine Power Turbine module; this upgrade can be done in service by applying the GE dedicated Service Bulletin (GE SB 72-0009).



## AW169 ENTERS EUROPEAN CREW CHANGE OFFSHORE MARKET WITH NHV GROUP

2019 will see the entry into the offshore crew change market of the AW169, thanks to a contract signed in June with the helicopter service provider NHV Group. The two aircraft, expected to be delivered between 2019 and 2020, will be used by NHV to perform offshore transport operations in the UK and North Sea area.

This order takes the total number of AW169s purchased by the NHV Group to five. The first three are already in service in Norway performing harbour pilot shuttle duties with NHV's subsidiary Airlift AS. The contract also marks the entry of the AW169 into the European crew change offshore market, following the rapidly growing success it has met for missions dedicated to Emergency Medical Service (EMS) and VIP/corporate and private transport.

NHV Group performs offshore and onshore operations in Europe and West Africa, delivering a range of services including oil and gas support, EMS/Search and Rescue (SAR), transport and aerial works, already established with the AW139 for longer range and higher capacity offshore missions. With the AW169 NHV Group expands its fleet of Leonardo helicopters supporting the oil and gas industry with the latest generation technology.



## AW169 IN OFFSHORE OPERATIONS IN AFRICA WITH WESTSTAR AVIATION SERVICES MALAYSIA

Thanks to Weststar Aviation Services Malaysia our AW169 is carrying out offshore operations in Africa, supporting the oil and gas industry from Equatorial Guinea.

A leading regional offshore helicopter transportation services provider and Malaysia-based company with operations across various geographies, Weststar Aviation Services Malaysia is the world's first customer introducing the entire AWFamily range of products – AW169, AW139 and AW189 – into operations. This allows Weststar Aviation Services Malaysia to be in a unique, leading position of excellence to deliver its customers unprecedented levels of mission versatility, fleet management efficiency, support and training services, state-of-the-art technology and capabilities meeting or even exceeding certification standards.

Weststar Aviation Services Malaysia was established in 2003, and has developed and grown to become one of the global key players in the offshore helicopter industry. It operates over 35 AW139, AW169 and AW189 helicopters out of its bases in Malaysia, Thailand and Indonesia, making it one of the largest operators of our helicopters.



## FIRST AW169M DELIVERED TO ITALY'S GUARDIA DI FINANZA

We have delivered the first of 22 latest-generation AW169M light intermediate twin-engine helicopters to Italy's Guardia di Finanza. The handover event was held at our Vergiate plant on 12 November.

The initial delivery is linked to a contract worth 280 million euros, which was signed at the end of 2018. It also includes a complete support and training package that could be extended in the future for further services. The AW169Ms will be used for various tasks including maritime police/patrol, homeland customs security, law enforcement, rescue and other security duties. The delivery of all aircraft is expected to be completed by 2024, complementing an existing fleet of 14 AW139 intermediate twin helicopters.

The AW169M represents the government variant of the AW169, the future generation helicopter programme, equipped with state-of-the-art on-board technologies. There are more than 90 operative AW169s worldwide and orders for the helicopter exceed 200 units, from more than 80 customers across 30 different countries.

In Italy the AW169 has already proven extremely successful among various operators for EMS duties. The platform is ideally suited to a variety of missions, particularly VIP-corporate transport, search and rescue activities, government and law enforcement services.





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Dear Reader,

As you know, the European Helicopter Association (EHA) goal is to be the single voice of the European rotorcraft industry for all its stakeholders, including manufacturers, operators, suppliers, regulatory entities (EASA, ICAO and the European Commission), financial institutions, customers and society.

EHA influences safety standards and growth of the European rotorcraft industry, creating new opportunities. It provides support on matters (e.g. Safety, Regulation, European Affairs, etc.) concerning the European rotorcraft industry.

Leonardo Helicopters as a member of the European Helicopter Association (EHA), supports EHA's endeavours in improving the information flow to all the stakeholders.

Therefore, in accordance with the EU General Data Protection Regulation (GDPR), we invite you to register to their website by following this [link](#) in order to be kept informed on their key actions and results as well as being invited to relevant events.

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