

AW newsletter

Summer 2017

ThinkCustomer

AW169 TO REACH THE ARCTIC AND ANTARCTIC REGIONS

The Polar Research Institute of China (PRIC) has purchased an AgustaWestland AW169 helicopter, scheduled for delivery in early 2019. Thanks to our high customization capabilities, the aircraft will be provided with a dedicated configuration to support Chinese Polar Scientific Exploration Tasks but also to perform a range of roles including passenger transport, iceberg sighting and cargo sling operations, once again proving the high versatility of the AW169.

The contract was signed in the framework of the PRIC's New Ice Breaker Ship-borne Helicopter Acquisition programme, which foresees that the AW169 will be operating from the new ice breaker and close to the

Chinese Polar Stations in the extreme environments of the North and South Poles.

After a strict process, the AW169 was selected thanks to its outstanding performance in demanding environmental conditions and state-of-the-art technologies such as touch-screen display, APU mode and Adaptive Variable Speed Rotor.

This order further strengthens the presence of Leonardo in China, where - to date - almost 200 helicopters have been sold, to perform both commercial and public services. This growing fleet is supported by an increased customer support presence, recently enhanced by the opening of a major warehouse facility in Shanghai.



AW139 MAINTENANCE IMPROVEMENT TEAM COMMUNITY

On July 6th, an AW139 Maintenance Improvement Team (MIT) meeting was held at our premises in Italy, as part of the continuous improvement initiatives introduced by Leonardo Helicopters on the entire product range.

One of the main themes of the meeting was a maintenance plan extension program on the AW139, and to reach this goal, the operators were requested to provide their detailed data on inspections/tasks. The entire MIT community also collaborated by providing further information in support of the extension program.

During the meeting, an improvement to the Leonardo Helicopters Service Bulletin service was presented, which introduces a Logistic Matrix section to ease the material provisioning process, based on the specific helicopter configuration and Service Bulletin applicability (please also refer to Information Letter GEN-17-066).

The following day (July 7th) operators and customers joined the AW139 Reliability Data Sharing Group (RDSG). The program included a full update on the reliability and product improvement initiatives in place, and participants were given the possibility to share experience of their AW139 Mean Time Between Unscheduled Removals (MTBUR) of components.



The RDSG community can already count on many of our customers and we are moving ahead to further extend the initiative to all AW139 operators worldwide.

If you wish to join the group, please contact our Product Support Engineering at:

RDSG.mbx@agustawestland.com

During the event we discussed potential changes to the next AW139 MIT and RDSG meetings, as we intend to further extend the participation to operators in central Asia, Australia and the Far East whilst maximizing the benefits of three main Leonardo Helicopters geographies (Italy, USA and Malaysia).

MID-LIFE UPGRADE NEW TEAM:

Closer to the Operator needs, bringing second life to Leonardo Helicopters Platforms Within the helicopter market there is a strong demand for capability extensions and upgrades of the in-service fleet, which can give aircraft a second life. To answer this requirement, Leonardo Helicopters has shaped a new dedicated team, named Fleet Mid-Life Upgrade (MLU), to maintain and enhance worldwide Leonardo Helicopters operators' competitiveness by providing them with "Multiple Customers Common Configuration" MLU solutions.

The MLU team, led by VP Gianluca Volo, has been strategically placed within the Customer Support and Training organization, with the goal to increase helicopters' capabilities whilst granting an improved level of supportability.

MLU activities are focused both on civil and military fleets providing, under a single leadership, a whole end-to-end fleet upgrade package that goes from the configuration definition to accomplish specific customers' requirements, to the contract finalization and, eventually, to the embodiment on the helicopter. This closed loop approach provides continuity up to the final delivery to customers, ensuring all agreements are fulfilled.

The benefits that MLU solutions will bring to customers can be briefly summarized here below:

Product Strategy:

- Integration of product improvements, lessons learned and best practice from customers' feedbacks
- Economies of scale benefits
- Solving obsolescence issues
- More robust and competitive baseline configuration in developing the product for international users

Product Enhancements:

- Integration and extension of Leonardo Helicopters Family Concept
- Technology improvements implementation
- Streamlined supply chain
- Increased supportability through the development of common support services and approaches

The team has started this journey by teaming up with an initial group of Leonardo Helicopters operators who will give contributions to define the best solutions applicable to all Leonardo Helicopters customers. In the meantime, the MLU team would welcome any additional requests for information customers may have, through the existing points of contact or, alternatively, using the following MLU details:

Gianluca Volo / MLU VP

Giuseppe Mignoli / MLU Sales

“TEAM CORMORANT” RE-ESTABLISHED

“Team Cormorant” has recently been re-established to support the modernization of the Royal Canadian Air Force’s (RCAF) fleet of EH101/CH-149 Cormorant Search and Rescue (SAR) helicopters and expansion of the fleet through the conversion of AW101-519 helicopters. Team Cormorant comprises Leonardo Helicopters, the Original Equipment Manufacturer of the EH101 and AW101 helicopters; IMP, the Prime Contractor for Cormorant In-Service Support; and other key Canadian companies who will supply and support critical aircraft components, technology, systems, simulation and training. The Cormorant Mid-Life Upgrade (CMLU) and Conversion Program proposed by Team Cormorant will create a fleet of the worlds most advanced and capable Search and Rescue helicopters available today, to meet the RCAF’s “no fail” Search and Rescue mandate

for the next 25 years. They provide a vital SAR service that Canadians rely on. It combines the current fleet of 14 Cormorant helicopters with additional helicopters acquired by the Government of Canada, which were assets of the U.S. VH-71 presidential helicopter program. The CMLU and Conversion Program offers a single, common fleet and will provide capability improvements to enhance its overall mission effectiveness, incorporating the latest avionic and mission systems, advanced radars and sensors, vision enhancement and tracking systems.

Further advantages of the program will be significant reductions in cost of ownership with no reduction in the current Search and Rescue aircraft availability, and moreover the expansion of service from three main SAR bases to four.



ITALIAN SKIPPER RESCUED BY A CORMORANT

Thanks to an AW101, manufactured by Leonardo and known in Canada as the CH-149 Cormorant, the Italian skipper Michele Zambelli of a yacht racing in the transatlantic race which started on May 29th from Plymouth, in Great Britain, and heading to Newport, Rhode Island in the United States, had a happy ending. Around midnight on June 11th, 350 nautical miles southwest of Newfoundland and Labrador, Zambelli set off his emergency beacon after his sailboat hit a floating object which broke the keel of his nine-meter sailboat, Ilumia 12. After the collision, the boat started to take on water, making it impossible to continue the race. The Joint Rescue Coordination Center in Halifax, Canada, immediately responded to the call dispatching from the Gander base - which has 4 Cormorants - a helicopter

with a five man crew, as well as a plane, to search for and rescue the skipper.

The weather conditions during the race were the poorest they’ve been in about 40 years. The boats encountered hurricane-force winds between 90 and 130 km/h and sea waves of 10 to 15 meters. During the mission a rescuer was lowered from the helicopter by winch, to rescue the skipper. To ensure the winch wire did not become tangled in the mast of the moving yacht, the skipper was forced to launch and then jump into his life raft in the horrendous conditions, from which he was then winched to safety onboard the helicopter. In less than six hours from the call of the skipper he had been found, rescued and returned to dry land. Another mission successfully completed for the Cormorant.

NEW LOOK FOR THE AW TRAINING MOBILE APP

The latest update to our AW Training mobile application is now available.



This update brings the squared icon that you've seen with the AW TeamUp App, consistent with the new CS&T brand's graphic identity.

Through the AW Training App, which is already available in 24 languages, you can easily enjoy the following contents and functionalities:

- Connection to courses calendar
- Forum discussion and file-sharing within the Training Community
- Distance learning and progress indication
- AW Flight Crew Operating Manuals

If you haven't already downloaded the AW Training App, you can do it for free through Google Play and App Store:

[DOWNLOAD ON GOOGLE PLAY](#)

[DOWNLOAD ON APP STORE](#)

Further releases of the App have been already planned for the next coming months to optimize technical performances and to provide users with new features on the full courses portfolio.

AW009 PRESENTED TO U.S. AIRBORNE LAW ENFORCEMENT UNITS

The light-single AW009 helicopter was promoted among U.S. law enforcement units at the recent Airborne Law Enforcement Association annual exhibition, which took place in Reno, Nevada.

The AW009, a commercial evolution of the SW-4, is a competitor in the light turbine helicopter market and an ideal solution for airborne law enforcement. The aircraft now features a redesigned vibration absorber system for a smoother and more comfortable ride, as well as improvements to the hydraulic system.

Integrated into the cockpit is an advanced Genesys avionics display, ensuring excellent situational awareness and a user friendly interface, while maintaining pilot visibility.

An optional Rolls-Royce M250-C30P engine will provide enhanced power handling for the most demanding missions. The Rolls-Royce M250-C20R/2 (SP) engine still remains standard on the AW009 and has shown reliably high performance for existing operators.

With continued strong interest from airborne law enforcement operators, Leonardo looks forward to their further input as development and certification activities continue.



AW119KX FOR NEW YORK CITY DEPARTMENT OF ENVIRONMENTAL PROTECTION POLICE

The AW119Kx has been selected by the New York City Department of Environmental Protection Police for operations in support of water supply protection. As the largest single source water supply in the United States, the New York City water supply system is protected by ground and air to prevent terrorism, pollution and crime. The AW119Kx selected by the Department of Environmental Protection is fully customized and features a TRAKKA 800 searchlight, FLIR, external

loudspeakers, rappelling and cargo hooks, expanded fuel system, a foldable stretcher, and high visibility crew doors on both sides of the aircraft. The aircraft also includes provisions for a Bambi Bucket to be used for firefighting operations.

This order expands the presence of the AW119Kx in law enforcement and public utility missions around the world, allowing operators to take advantage of a reconfigurable cabin that meets the most demanding requirements.

SIGNING OF AN MOU BETWEEN UK ROYAL NAVY AND REPUBLIC OF KOREA NAVY (ROKN)

The ROKN and the Royal Navy signed a memorandum of understanding (MOU) on July 14, 2017 to share information on their respective AW159 Wildcat operations. The ROKN 622 Squadron (Cdr. Han-jung Kwak) and the Royal Navy 825 Squadron (Cdr. Simon Collins), operating AW159 Wildcats as MOH in each country, held the first meeting of the Korean-UK Maritime Operation Helicopter Committee (MOHC) and signed an MOU to exchange manpower and information related to flight safety, logistics, maintenance, education and training, with the aim to improve operational aspects of the use of AW159 Wildcats.



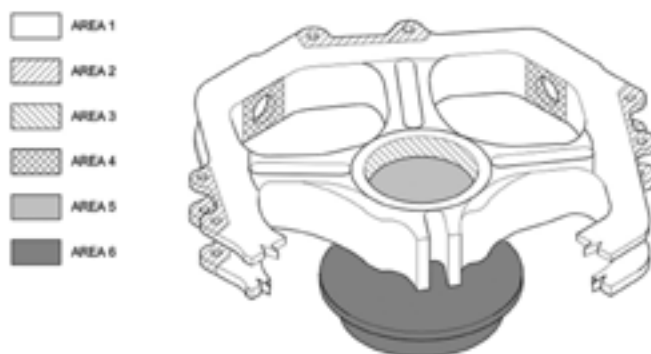
NEW OPTIMIZED MAINTENANCE DATA SET FOR MAIN ROTOR HEAD 2400 FH SPECIAL INSPECTION

Leonardo Helicopters has recently published the Temporary Maintenance Instruction TMI 109-491 with optimized instructions to perform the Main Rotor Head - 2400 FH Special Inspection for the AW109 and AW119 series helicopters.

TMI 109-491 consolidates all the information already present in the relevant IETPs into a single procedure to facilitate the required maintenance instructions. Until now, the various AMPI/MPMs refer to several Maintenance Manual Data Modules, one for each single specific task, requiring technicians to switch amongst different technical publications in order to fully accomplish the entire activity. Once TMI 109-491 is introduced into the Maintenance Manuals, "Reference (DMC)" information provided within the AMPI/MPM will be updated in order reflect the final Maintenance Manual

Data Module.

Whilst working to amend the relevant AMPI/MPM, LH will guarantee support to all Operators that may request additional clarifications or evidence to support Local Aviation Authorities' requirements.



TYPE OF DAMAGE	MAXIMUM DAMAGE AND REPAIR DEPTHS						
	AREA 1 [1]	AREA 2	AREA 3 [3]	AREA 4	AREA 5	AREA 6	AREA 7
Mechanical (mm/in)	0.30 (0.012)	0.15 (0.006)	0.05 (0.002)	0.05 (0.002)	0.05 (0.002)	0.50 (0.02)	
Corrosion (mm/in)	0.30 (0.012)	0.15 (0.006)	0.05 (0.002)	0.05 (0.002)	0.05 (0.002)	0.15 (0.006)	
Max. repair size (mm ² /in ²)	100 (0.15)	50 [2] (0.08)	100 (0.15)	100 [2] (0.15)	50 (0.08)	200 (0.31)	
Max repairable area (mm ² /in ²)	800 (1.24)	50 [2] (0.08)	300 (0.46)	200 [2] (0.31)	300 (0.46)	1000 (1.55)	
Max. number of repair areas	8	1 [2]	3	2 [2]	6	5	
Min. dist. between repairs (mm/in)	50 (1.97)	-	50 (1.97)	30 (1.18)	30 (1.18)	50 (1.97)	
Fillet radius to remove damage (mm/in)	20 (0.78)	10 (0.39)	10 (0.39)	10 (0.39)	10 (0.39)	20 (0.78)	
Surface roughness (RMS)	32	32	32	32	32	32	

NOTE
 [1] Remove the nicks on the whole hub profile (all corners) up to 0.30 mm (0.012 in) max depth. Nicks fillet radius shall be performed on 20 mm (0.8 in) minimum length.
 [2] For hole.
 [3] Area 3 is the cones top and bottom mating surface.

SPECIALIST AVIATION - LEADING THE WAY FOR EMS IN THE UK

The AW169 fleet in the UK achieved a significant milestone in July with the first 3 AW169 helicopters in EMS configuration entering service. After a significant programme of customer upgrades and EASA approvals, the first AW169 air ambulances are now operational with the Kent, Surrey and Sussex; Lincs and Notts and Dorset and Somerset air ambulance charities with a fourth aircraft to follow in the coming weeks. The fourth aircraft into service will be the Essex and Herts air ambulance. Leonardo Helicopters and Specialist Aviation are working closely to achieve the challenging availability targets across the fleet, holding regular reviews of fleet availability and working within a partnering arrangement with Specialist Aviation to ensure that all technical and logistics needs are met.

Together they will optimise the operational availability of the aircraft. By the end of this year it is envisaged that six AW169 aircraft in EMS configuration will be in operational service across the UK.

The major modifications to Specialist Aviation aircraft have included the installation of the EMS fit to the end-client's detailed specifications. Another significant modification has been the positioning of the Trakka sensor to a nose-mounted configuration from a side-mounted configuration, which allows full access to the interior of the cabin from both sides of the aircraft.

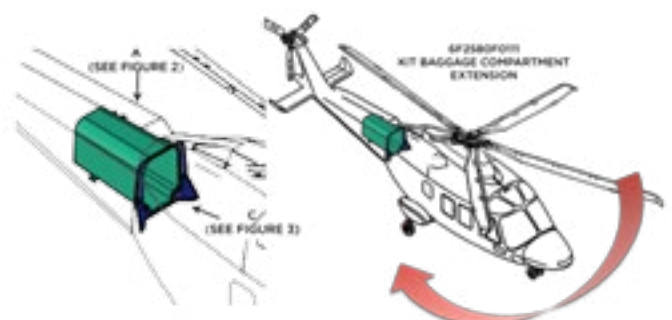


This, along with the night vision capability, new terrain awareness and collision warning systems, represents an increase in capability for the air ambulance sector in UK. SAS has ordered 6 AW169s with an outline agreement to expand the fleet over the next few years. In support of this launch and aircraft in operation, Leonardo Helicopters and SAS have agreed a bespoke entry into service package of spares and equipment. This package provides tooling and spares to both base and forward locations.



AW169 - BAGGAGE COMPARTMENT EXTENSION KIT

The certification for the optional baggage compartment extension kit (P/N 6F2580F01111), which increases the baggage capability of the AW169, has been achieved. The baggage compartment extension does not affect the maximum total weight capacity which is still 250Kg, but it has been developed to expand the basic cargo compartment to allow for the transport of long objects, thanks to the additional loadable area. The solution is available for new production helicopters and for the in-service fleet through SB169-031.

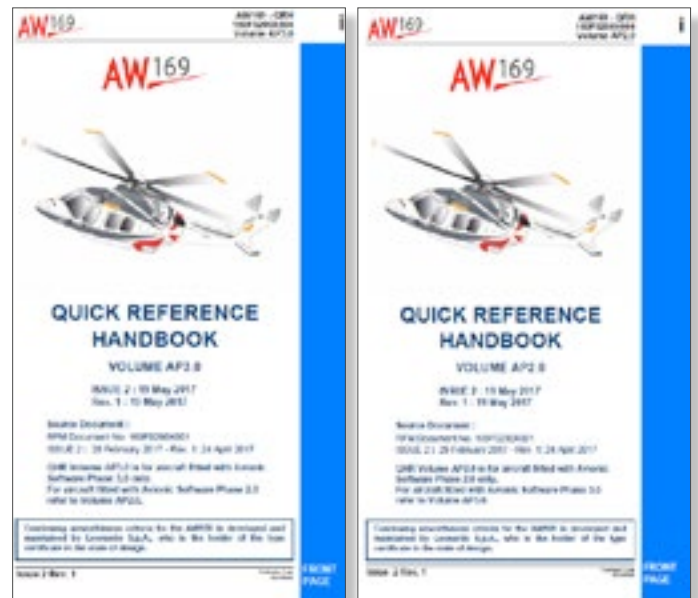


AW169 - AVIONIC SW PHASES MANAGEMENT

Following the certification of the Core Avionic Phase 3.0 Software update and the distribution of the AW169 Rotorcraft Flight Manual in two separate volumes (one covering Phase 2.0 and one covering Phase 3.0 software), the same philosophy has also been adopted on the AW169 Quick Reference Handbook from Issue 2 Rev.1. In order to easily identify the instructions applicable to a specific Avionic Software phase, the following two volumes have been developed:

- “Volume AP 2.0” for aircraft fitted with Core Avionic Phase 2.0 (pre BT169-029).
- “Volume AP 3.0” for aircraft fitted with Core Avionic Phase 3.0 only (from delivery or post BT169-029).

The two volumes were distributed to all AW169 operators, to make them aware of the applicable instructions based on the Core Avionic Phase installed on aircraft. For any additional information do not hesitate to contact us.



AW169 FOR EMS MISSIONS IN DORSET AND SOMERSET

After an extensive evaluation process, which took into account the aircraft’s outstanding features, superior capabilities and safety standards, the AW169 has been chosen to carry out EMS missions for the people of Dorset and Somerset in the United Kingdom. The new AW169 of Dorset and Somerset Air Ambulance, operated by Specialist Aviation Services, entered into service on June 12, 2017, which is also the first of type to start air ambulance operational service in the UK. It will make a significant difference to the service provided compared to the past, primarily because of

the AW169’s large cabin space, which allows complete access to a patient, head to toe; which gives access for a wider range of treatments to be given whilst a patient is on-route to the hospital. The second significant advantage compared to the past is that the hours of operation have increased from 12 to 19 hours a day (7 a.m. to 2 a.m.). The AW169’s night flying capabilities allow provision of a full night time HEMS service, as the medical teams can fly directly to the patient without the need of any fixed or pre-established lighting.



ELITALIANA AW169 FIRST USE ON HEMS OPERATIONS IN LAZIO

Having completed the training activities for pilots and medical teams on the Elitaliana AW169 in March 2017, Elitaliana started its HEMS operations in Lazio, deploying their AW169 (PEGASO12) from the base of Rome-Fonte di Papa (H24-7/7 HEMS Elitaliana base).

PEGASO12, ready for take-off, is equipped with all the necessary medical and technical equipment to undertake emergency-health interventions day and night in the Lazio region of Italy. The helicopter allows the provision of rapid medical intervention to the patient, critical and immediate transportation to hospital centers equipped for the treatment of the specific problem.

In the first three months PEGASO12 performed 179 missions around the Rome area, with an average of two flights per day, 28 total night flights with a mission time average of about 49 minutes.

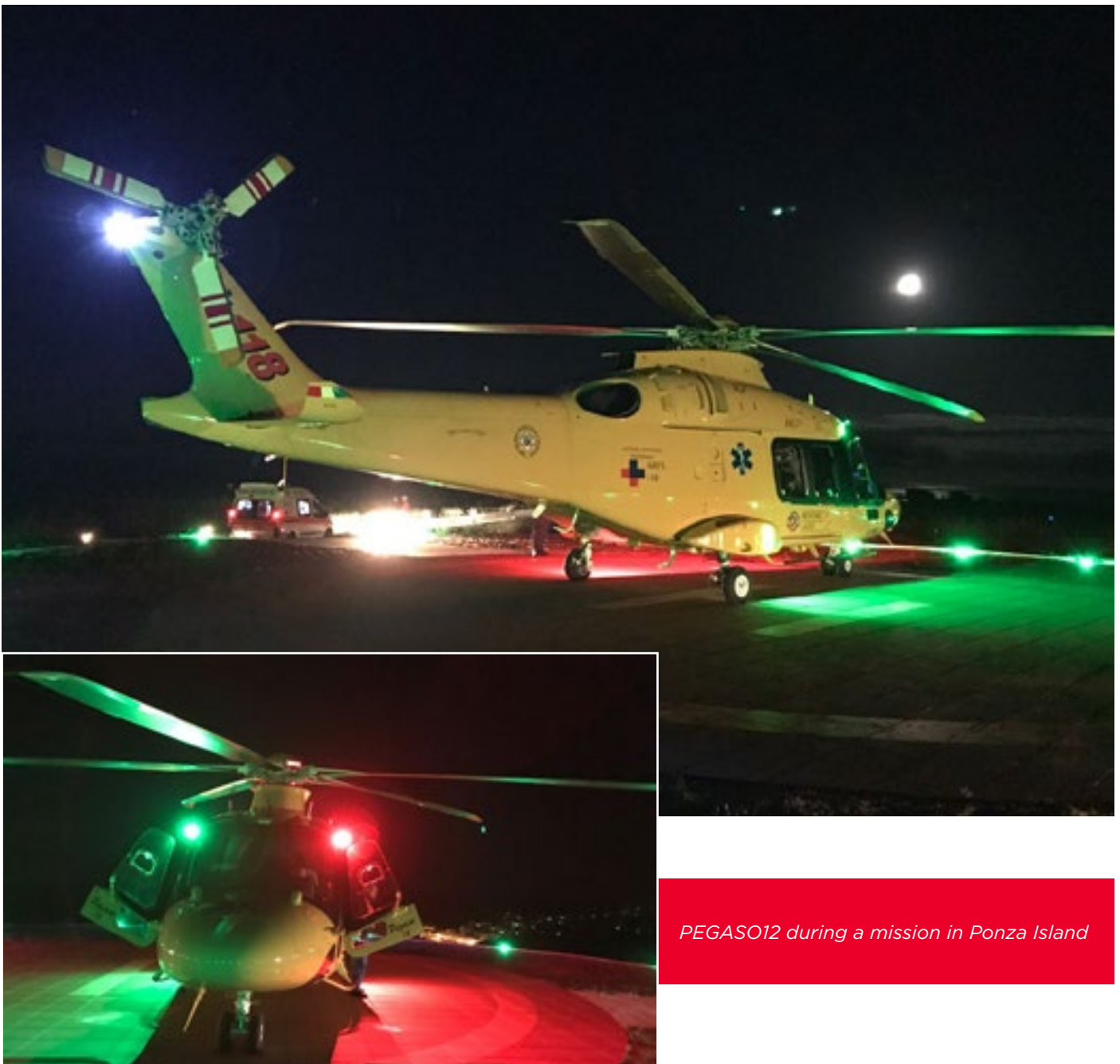
Even if PEGASO12 is usually deployed to cover the Rome area, it is sometimes used for specific missions, for example for three HEMS missions on Ponza Island, an area which is usually covered by the Latina base of Elitaliana.

During the first three months PEGASO12 was also used for a night "organ transplant" mission, the helicopter carried the patient from a hospital in Rome to the main organ transplant hospital in Pisa for a liver transplant.

Elitaliana is currently operating from:

- Two HEMS/SAR bases in Calabria, Lamezia Terme (24Hr) and Cosenza (12Hr),
- Three HEMS/SAR bases in Lazio, Rome-Fonte di Papa (24Hr), Latina (24Hr) and Viterbo (24Hr).

Leonardo Helicopters is proud to have its aircraft firmly embedded in HEMS missions and thanks ELITALIANA for their daily commitment to HEMS activities throughout Italy.



PEGASO12 during a mission in Ponza Island

AW189 DEMO TOUR IN AUSTRALIA

The AW189 has flown for the first time beyond the 26th parallel south in Australia: Perth, (WA), Adelaide (SA) and Melbourne (VIC). A number of offshore demonstrations were flown.



Leonardo's presence in Australia is well established with over 70 helicopters; in particular 20 AW139s are supporting the offshore and EMS markets in the states of Western Australia and Victoria. Many operators in Australia are looking at an extensive fleet renewal and the AW189 is the ideal alternative or replacement for many of the medium/heavy helicopters being operated in the country. 34 AW189 helicopters are already operating globally, from the hostile environments in Europe (North Sea), the extremely hot Middle East, down to the hot and humid areas of South East Asia. In addition to the AW189 Demo Tour, an Oil & Gas Acquaintance Course dedicated to Aviation and Safety Advisors was successfully given in Perth. Now we look forward to the introduction of the AW189 in Australia, currently planned for the end of 2017.



AW189 TO SUPPORT OIL & GAS OPERATIONS IN RUSSIA FROM SAKHALIN ISLAND

Aviashelf will be operating an AW189 to perform transport missions from Sakhalin Island in Russia supporting the Oil & Gas industry. The aircraft, equipped with a Full Ice Protection System (FIPS) which allows operations in known icing conditions when other helicopters would be grounded, is scheduled for delivery in the summer of 2018 and will be supplied together with a support and training package. This confirms the competitiveness of Leonardo's modern solutions in the Oil & Gas market, further strengthening the success of the AW189 in Russia and globally. This success is thanks to its performance, new design, latest safety standards and cost effectiveness. Furthermore the AW189 is also fully compliant with the latest requirements of the Oil & Gas producers' helicopter operations guidelines. The AW189 is unique in having a main gear box with a 50 minute 'run-dry' capability, exceeding current certification standards and offering unmatched safety and reliability for long range operations. Over 30 aircraft are already in service in Europe, Middle East, Asia and the Americas for transport and public service duties including search and rescue. The fleet has now logged in excess of 25,000 operational flight hours.





RETROSPECTIVE OF THE PARIS AIR SHOW

The Leonardo Helicopters participation at the Paris Air Show was, once again, successful.

The first of two main announcements was for the order from Lease Corporation International (LCI), the aviation division of the Libra Group, for an additional nine helicopters.

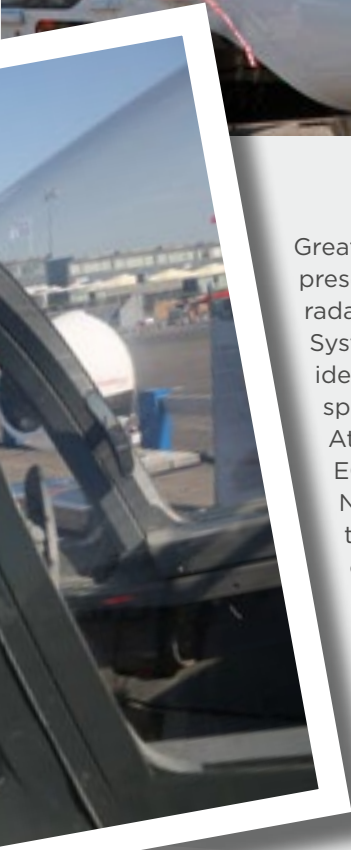
The order is valued at over US\$120 million and covers the entire Family of new generation helicopters - the AgustaWestland AW139, AW169 and AW189. Deliveries will start this year and continue into 2018.

The Leonardo collaboration with LCI is becoming stronger and stronger; LCI took delivery of five AW169s and one AW139 from Leonardo in June, which means that to date, a total of 49 new Leonardo helicopters have been delivered or are on order.

The second announcement was the reinforcement of the strategic cooperation in the Chinese helicopter market with Sino-US Intercontinental Helicopter Investment (Shanghai) Co., Ltd. Leonardo and Sino-US Intercontinental signed a contract for the purchase of 17 helicopters comprising two AW119Kx single engine, ten AW109 Trekker light twin and five AW139 intermediate twin engine models.

The order is valued in excess of €100 million, with deliveries starting later this year. The contract was signed in the framework of a Distributorship Agreement renewal, which makes Sino-US Intercontinental the exclusive distributor for the Chinese civil, commercial and offshore helicopter market (including Hong Kong and Macau). The parties are also committed to strengthening the level of after-sales service with joint efforts aimed at establishing a completion centre and additional local training services, providing further evidence of the intention of Leonardo to deliver the best level of support to the benefit of the growing helicopter fleet in China. Nearly 200 helicopters have been sold in China to date, half of them to Sino-US Intercontinental.





Great interest was shown in the AWHERO at the Paris Airshow in Le Bourget, where Leonardo presented it for the first time in a maritime configuration equipped with the Gabbiano Ultralight radar, a Wescam MX-8 Electro Optics and Infrared (EO/IR) camera and an Automatic Identification System (AIS) capability all targeted at maritime support operations. Tasks could be the identification and action against illegal activities, vessels identification and fleet monitoring, oil spill detection and Search and Rescue operations support.

At the same time a multi-purpose configuration was also represented with the more powerful EO/IR sensor Wescam MX-10 for missions over land or sea.

Navy and Coast Guard representatives from all over the world were particularly impressed by the new unmanned product of Leonardo Helicopters not only for the great capabilities in terms of performances, but also for its size and the foldable blades, particularly attractive for the naval environment characterized by limited space.

During the event, customers had also the possibility to see the Ground Control Station working in simulation mode, witnessing the advantage of having a single device that can be used for real flight and training at the same time.





helitech[®]
international
HELICOPTER EXPO & CONFERENCE

In association with

EHA
EUROPEAN HELICOPTER ASSOCIATION

HELITECH 2017

Helicopter Expo & Conference

3th - 5th October 2017

**Leonardo is pleased to invite you
to visit its stand n° G100**

Excel London, Royal Victoria Dock,
1 Western Gateway, London E16 1XL

Leonardo - Società per azioni
Registered Head Office:
Piazza Monte Grappa, 4 - 00195 Rome - Italy
Tel. +39 06 324731 - Fax +39 06 3208621
Leonardo Helicopters
Head Office:
Via Giovanni Agusta, 520 - 21017 Cascina Costa di Samarate - Italy
Tel. +39 0331 229111



© Leonardo - Società per azioni

This document contains information that is proprietary to Leonardo - Società per azioni and is supplied on the express condition that it may not be reproduced in whole or in part, or used for manufacture, or used for any purpose other than for which it is supplied.

leonardocompany.com