AW newsletter

Winter 2017

ThinkCustomer

TEAMUP

HeliExpo 2017 in Dallas offers Leonardo Helicopters a great opportunity to present "TEAMUP", the new Support and Training services brand, confirming our commitment to constantly improve support to customer operations.
"A framework of innovative services and training solutions, highlighting our ongoing commitment to deliver excellence and to strengthen the personal relationship with them through long term partnerships to meet customers' expectations and improve aircraft in-service performance", as Vittorio Della Bella, Customer Support and Training Senior Vice President, said.
Key pillars of the "TEAMUP" Service Offering are a redesigned set of "smart" contracts, including guaranteed delivery performance by Leonardo Helicopters network of supply and maintenance centers. Highly specialized and flexible solutions which have been tailored both for our commercial and military customers.

Training continues to represent a key distinguishing feature of Leonardo Helicopters: on top of the excellence already demonstrated in delivering classroom, simulator and live training, Leonardo Helicopters now offers an extensive catalogue of civil and military operational training for all our platforms through our Training Academies as well as our network of training Partners.
In the last 24 months a full range of Advanced Services has been implemented, ranging from new web solutions (E-commerce, Training booking and an improved range of customer communications), to state-of-the-art flight planning (SkyFlight) and HUMS data analysis (HeliWise) services.
"TEAMUP" therefore "is not just a name, but a real commitment we take with our customers", says Daniele Romiti, Managing Director of Leonardo Helicopters. "It reflects our ethos and the mission we want to fulfill with our Customers: to excel together".

Please check out our new Service Offering on our Website (http://www.leonardocompany.com/customer-support/elicotteri-helicopter/support/integrated-support-solutions) or contact our CS&T Solutions team:
- David Marsh (Commercial Fleets) at David.S.Marsh@leonardocompany.com
- Neil Brannagan Fuller (Military Fleets) at Neil.Brannagan-Fuller@leonardocompany.com

Our Service network now includes 12 worldwide Logistic Centers, 4 Training Academies and more than 90 Service Centers.
Please contact your Customer Support Manager (http://www.leonardocompany.com/customer-support/elicotteri-helicopter/support/directory) to learn more about our investments and capabilities in your Region.
A worldwide map of our capabilities is also available here: http://www.leonardocompany.com/customer-support/elicotteri-helicopter/support/supply-service-centres.

AW TEAMUP

EXCELLING TOGETHER

LEONARDO HELICOPTERS

AgustaWestland Products

FIRST OFFSHORE-CONFIGURED AW169 TO OPERATE IN ABU DHABI

The world's first offshore-configured new generation AW169 helicopter was presented by Falcon Aviation to the Oil & Gas community during an official ceremony in Abu Dhabi on January 15th 2017.
This is a first not only because Falcon Aviation is the first operator in the UAE to use the AW169, but also the first customer worldwide to operate the helicopter for offshore oil and gas transportation. The operator has a contract to support the oil and gas operations in Abu Dhabi for TOTAL ABK, where the helicopter will be deployed.
Falcon Aviation has also ordered another AW169, in VVIP configuration, to add to their growing fleet, which, thanks to the introduction of the AW169s now includes several helicopters in the Leonardo Helicopters range. Today their fleet already includes four light twin helicopters, comprising the Grand and GrandNew models, and two all new AW189 8.6 tonne helicopters deployed for longer range, higher capacity duties.
Falcon Aviation is one of the customers who chose the advantages of the Leonardo Helicopters Family, which includes not only the AW169 and the AW189 but also the AW139. The common features of the helicopters including the same high-performance flight characteristics, safety features and the shared common cockpit concept and design philosophy, facilitate synergies for operators of fleets across the 4 to 9 tonne weight categories in areas such as training, flight operations, maintenance and support.
The combination of AW169 and AW189 offshore gives Falcon Aviation and its customers unmatched benefits in terms of efficiency, capability and safety.

AW169 ACHIEVES FAA VALIDATION

In February 2017, the AgustaWestland AW169 light intermediate twin-engine helicopter achieved US Federal Aviation Administration certification. Deliveries to Customers in the USA will begin this year.
The United States specific requirements for VIP and EMS requirements were easily met by several new technology features in the rotor system, engines, avionics, transmission and electric power generation and distribution systems that are incorporated in the AW169. Furthermore the AW169, the first all new aircraft in its weight category to enter the market in more than 30 years, is versatile, designed in response to the growing market demand for an aircraft with high performance but which also meets all the latest safety standards and has true multi-role capabilities. As a matter of fact it has already been selected for a wide range of duties, with agreements signed for over 150 units including orders and options worldwide.

Deliveries to date total over 20 AW169s all over the world, for a range of applications including emergency medical service, executive/private transport, utility, offshore transport and wind farm support. An AW169 Level D full flight simulator, delivering advanced pilot training, has been certified and is in operation at the Leonardo Helicopters Training Academy in Sesto Calende, Italy.

AW169 – NEW CORE AVIONIC PHASE SW RELEASE 3.0


EASA

MAJOR CHANGE APPROVAL

10060543

LEONARDO S.p.A.

After the EASA certification of the AW169 Maximum Take-Off Weight (MTOW) increase up to 4,800 Kg, another main target has been achieved with the certification of the Core Avionic Phase 3.0 SW release.
Core Avionic Phase 3.0 SW release certification was obtained from EASA on 20th December 2016 through the approval of the AW169 Rotorcraft Flight Manual issue 1 Revision 8. It provides improvements to a variety of flight systems detailed here below:

Flight management System (FMS) new functions and capabilities:
- RNP Monitoring & Alerting function.
- RNP APCH (RNAV (GPS/GNSS)) & PinS Approaches with LNAV minima.
- Circle to Land Approaches.
- Real Time Performance Calculation displayed on Flight Management Window.
- Active Flight Plan information on Flight Management Window.

Vehicle monitoring system (VMS) update:
- CAS Messages logic update.
- ECS requirements update.
- Flight Data Monitoring DB Refinement.
- Hydraulic synoptic update.
- GEN BUS OVRD improved to avoid power interruption on MAIN BUS during start.
- CVFDR DB Refinement.
- Updated the cabin layout for the Weight and Center of Gravity computation.
- Avionics startup time reduction.
- Main/Aux Battery Amperometer and DC GEN Load display requirement updated.

Cockpit display system (CDS) update:
- Human machine interface (HMI) improvements.
- Annunciation management update.
- Overlay of Mission Information on FPLN Page.
- New/Renaming CAS Massages.
- Engine synoptic update.
- VNE Table update.
- Helicopter Predicted Path on MFD/Digital MAP display.
- ITT START scale management update.
- Power Index (PI) computation requirement update.

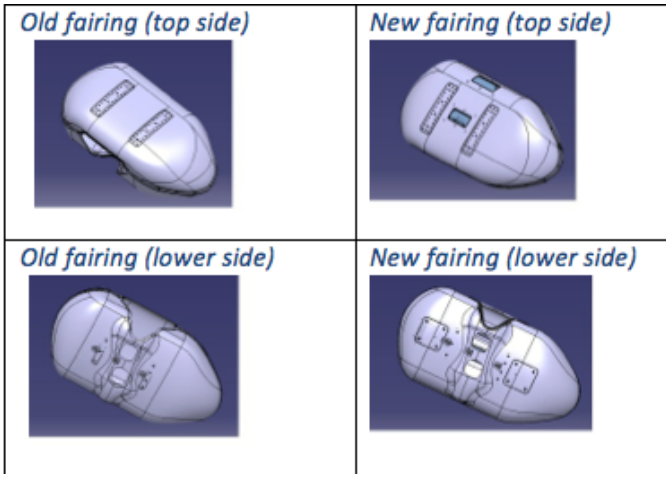
Maintenance and Diagnostic System (MDS)
- Maintenance fault monitoring update.
- Vibration monitoring system update.

Additionally the new core avionic includes the management of newly certified kits such as the Engine Air Particle separator (EAPS) and the Satcom skytrack ISAT-200A controlled by the EDCU.
The new functionalities of Core Avionic Phase 3.0 SW release, in addition to the software upload, require a new GPS receiver (P/N 100-601944-313) to be installed and a wiring modification due to a change of the power supply for the Nose Landing Gear (NLG) centre lock.
The new SW release is available for the whole AW169 fleet through a dedicated Technical Bulletin BT169-029 and has been introduced as a part of the basic configuration for new build helicopters.

AW189 RESCUE HOIST ENHANCEMENT

Within the continuous improvement of the AW189 SAR capabilities, we have introduced the following features to extend the helicopter's range of operation and improve maintainability.

- Hoist altitude extension: the maximum altitude for single and dual hoist operations, previously fixed at 3000 ft Hd, has been increased to 8000 ft Hp or Hd.
- Revised Power Supply for Double Hoist Operations: with the kit Hoist Power Supply p/n 8G2591A08212 installed, in the event of an AC generator/engine failure for the hoist in use, the system is anyway capable of providing continuous operation thus eliminating the time delay without having the APU switched On.
- Compatibility with MTOW 8600Kg and Automatic Search Modes: the incompatibility between single hoist and Automatic Search Modes has been removed and the Maximum Take Off weight with single hoist installed has been increased from 8300 kg to 8600 kg
- Improved dual hoist fairing for maintenance: an improved double hoist fairing has been developed, in order to facilitate inspection and low interval scheduled tasks. We have introduced two transparent windows on the top of the fairing to allow cable drum inspection and two inspection panels on the lower side of the fairing to give access to the hoist hour counter and oil level sight glass. The new fairing will be available under P/N 8G2591A16932 or with rework of the existing cover through BT189-133.

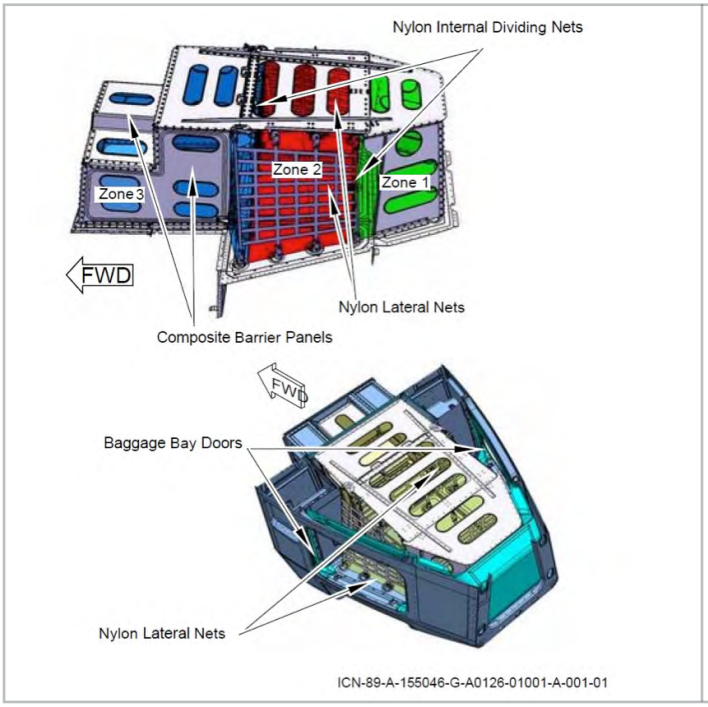


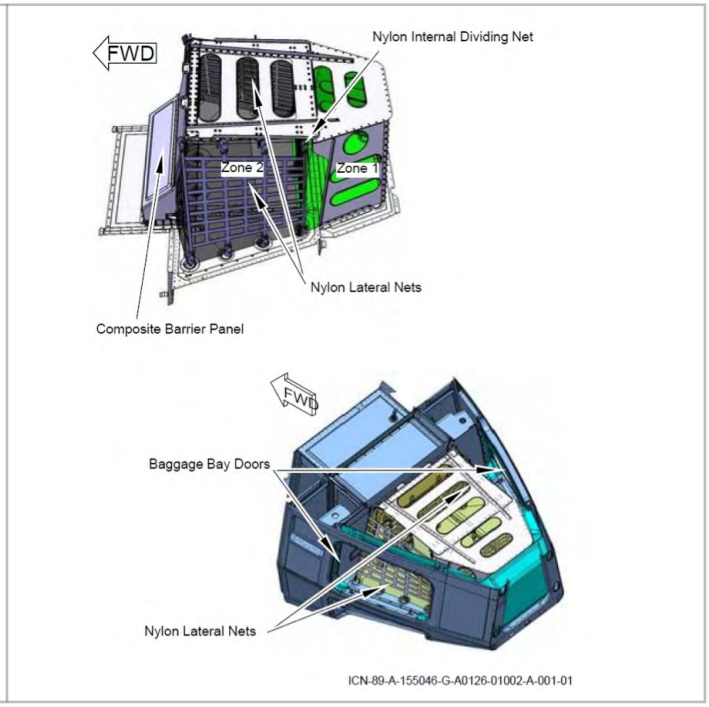
AW189 BAGGAGE EXTENSION

A design modification to extend the exploitation of the AW189 cargo compartment has been certified in order to improve baggage capability with two different configurations of the Heavy Duty Baggage Bay Kit. Both solutions will be available for new production helicopters and for the in-service fleet through an Optional BT:

- Extended Heavy Duty Baggage Bay Kit p/n 8G5010F00411 (for aircraft not equipped with central auxiliary fuel tank), which permits baggage to be loaded up to the cabin/tunnel dividing barrier having three separate zones.
- Heavy Duty Baggage Bay Kit p/n 8G5010F00511, permits baggage to be loaded up to the rear avionics cabinets having two separate zones.

Extended Heavy Duty Baggage Bay Kit (p/n 8G5010F00411)	*Heavy Duty Baggage Bay Kit (p/n 8G5010F00511)*





BEL AIR AW189S SURPASSED 6000 FLIGHT HOURS

The two AgustaWestland AW189s operated by Bel Air of Denmark exceeded 6,000 flight hours in January. This sets a new milestone for the helicopter whilst demonstrating exceptional availability and mission effectiveness performing long range offshore transport mission in the North Sea. This outstanding result was possible through the strong cooperation between the operator and Leonardo Helicopters' customer support team. This achievement confirms Bel Air as the global fleet leader for the AW189 model.

Bel Air has more recently gained even greater levels of capability having installed the Limited Icing Protection System (LIPS) onto its two AW189s. This unique feature in the super medium category, allows operations in severe weather conditions when other competing types are confined to the hangars. Bel Air also opted for the 8.6 tonne Maximum Gross Weight upgrade to give its customers greater levels of payload.

"We have been very content with our AW139 helicopters and when Leonardo released their AW189, it was only natural for us to invest in this new and bigger type, since our Customer also demanded a larger type.

We have really profited from our experience with the AW139s throughout the implementation of our AW189 helicopters. The two types have many common features. Also when it came to training on the new type, it was a great advantage that we were already familiar with Leonardo training facilities. In 2016 we decided to install limited ice protection (LIPS) on our AW189s to ensure even better service to our customers during winter operations" said Susanne Hessellund, MD of Bel Air Aviation A/S.

As an AW139 operator and an official Leonardo Service Centre for both the AW139 and the AW189 in Denmark, Bel Air is benefitting from the unique operational, training, support and management advantages of the Family of new generation helicopters. This all new approach to effective, flexible and efficient fleet management is helping Bel Air to expand its capabilities in support of safe operations for the North Sea oil and gas industry, as well as carrying out offshore wind turbine support and other ad hoc helicopter services. With sales agreements for over 150 units, including orders and options, and almost 30 helicopters delivered to customers worldwide for offshore transport, SAR and transport duties, the AW189 is the outright market leader in its class. The AW189 is unique in having a 50 minute 'run-dry' capable main gear box, exceeding current certification standards and offering unmatched safety and reliability for long range offshore operations.

SERVICE CENTERS SURVEY

We at Leonardo Helicopters are constantly listening to our customers' needs and using their invaluable feedback to identify areas of improvement.
With the primary aim to better support our customers, we have run several surveys in the past months; in order to reach a deeper knowledge of their expectations. To continue this work we are pleased to inform you that we are launching a new initiative to collect feedback from the field on the level of service provided by our Service Centers.
We strongly believe this is a key chance to share experiences and suggestions for improvement in the way we and our network of service centers support our customers' operations.
Accordingly, we encourage all customers to provide fair, honest and constructive feedback through the Service Centre Survey tool after each maintenance activity carried out at one of our Service Centres, in order to assess the level of service experienced.
The survey, which is available at al all times, has been simplified as much as possible, making sure it can be completed in no more than 3 quick steps to ease the collection of customer feedback.

The link to the survey is the following :
https://www2.agustawestland.com/survey/index.php/174961/lang-en

Customers will be required to input a valid token to log in, this being their existing Leonardo code preceded by "00" (e.g. 005000xxxx). Your Customer code can also be recovered under the MyProfile section of the Leonardo Customer portal.

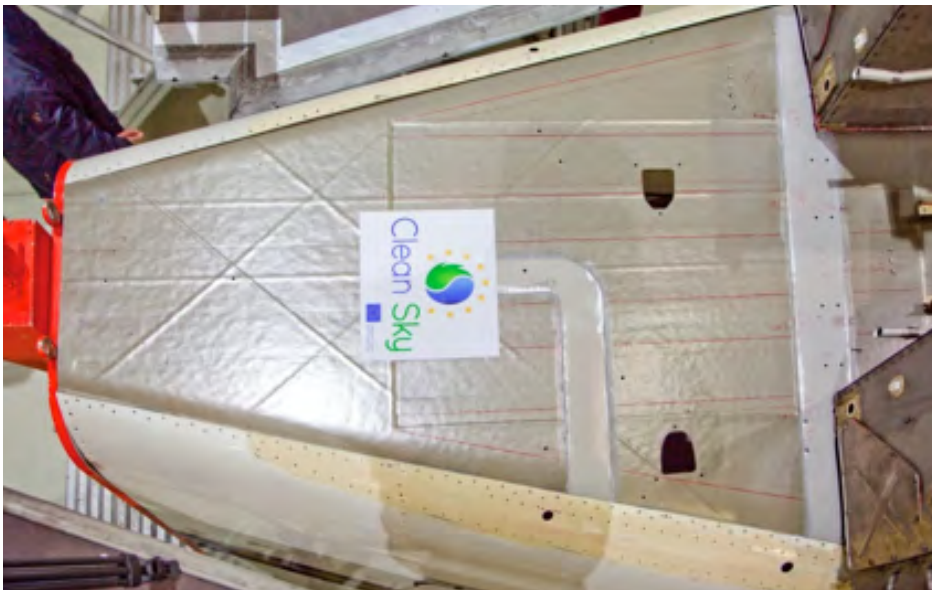
AW139 MAINTENANCE IMPROVEMENT TEAM AND RELIABILITY DATA SHARING GROUP

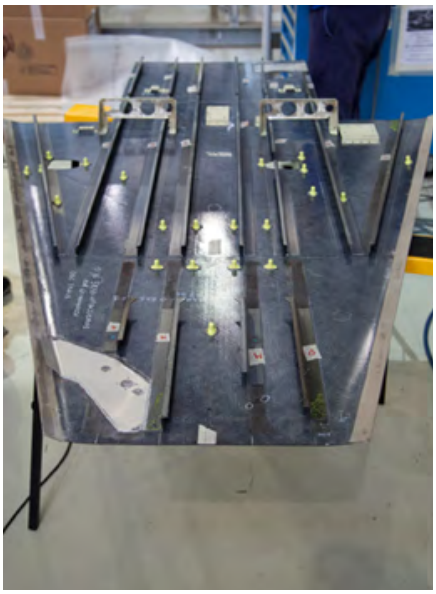
As part of the continuous improvement initiatives introduced by Leonardo Helicopters on the entire product range, a new AW139 Maintenance Improvement Team two-day meeting was held at our premises in Philadelphia on 9th and 10th of January 2017. The aim, together with the Operators, was to review the current AW139 maintenance program and define the next set of actions in order to continuously tailor the AW products and services to meet Customer requirements and needs. Specific focus was directed to the Direct Maintenance Costs reduction campaign and to further optimize the AW139 maintenance program.
The second day was fully dedicated to the AW139 Reliability Data Sharing Group (RDSG) community with the Operators and Customer that have already joined the initiative. A full update on the completed product improvement initiatives and those currently planned was presented based on the reliability feedback coming from the RDSG community. This included, amongst other items, a detailed set of AW139 data such as the Mean Time Between Unscheduled Removals (MTBUR) of critical components.
Many customers have already joined the RDSG community and we are moving ahead to further extend the initiative to all AW139 operators worldwide.

If you are interested in participating, you can contact Product Support Engineering at:
RDSG.mbx@agustawestland.com

LEONARDO HELICOPTERS DEMONSTRATES CLEAN SKY THERMOPLASTIC TECHNOLOGY

On 21st December, 2016 an AW139 flew successfully for the first time with a thermoplastic helicopter roof structural panel. The thermoplastic primary structure component is another achievement in a series of advanced technologies developed and demonstrated by Leonardo Helicopters within the framework of the European Commission's Clean Sky Green Rotorcraft (GRC) programme.
GRC aims to reduce by half the impact of rotorcraft operations on the environment before 2020, in comparison to the 2000 baseline. Against this aim, Leonardo Helicopters is actively investing in a range of technologies, from innovative rotor blades and advanced methods for low-drag aircraft design, to high-efficiency electrical systems and environmentally-friendly flight paths.
The roof panel has been redesigned in thermoplastic material with stringers/stiffeners that demonstrate the maturity of the co-melting joining technology.
The thermoplastic roof panel offers cost and weight savings, and higher resistance to the heat generated by the adjacent engine bay, leading to a longer service life of the component. There are also environmental impact benefits throughout the component life-cycle, from the optimized manufacturing process to improved reparability and recyclability.
Following the first flight, the test campaign is continuing into 2017 to assess the performance of the component, aiming at introducing it on our product range. The test results will also support the evaluation of thermoplastic technologies for extension to other rotorcraft structural components where their operational and environmental benefits can be fully harnessed.





3RD AW139 FULL ICE PROTECTION SYSTEM WORKSHOP

Following the success of the first and second editions, held respectively in December 2014 and January 2016, Leonardo Helicopters held the 3rd edition of the AW139 and AW189 Full Ice Protection System (FIPS) Workshop on 26th January 2017 at its premises in the Training Academy at Sesto Calende.
Similarly to previous editions, the winning formula of the event was repeated with more than 25 participants from 14 Customers operating all over the world. This year, for the first time since its creation, Worldwide FIPS Service Stations, FIPS Technical Representatives and AW189 Operators with FIPS were also invited and actively participated in this event.
In detail, this third edition was another unique occasion to share and further discuss the developments and best practices introduced, or shortly to be introduced, on the FIPS system. Customers Maintenance Personnel and Pilots shared their cumulative operational experiences, knowledge of the FIPS and presented the incredible operative benefits from their operations in icy environment thanks to the FIPS.
Following the positive feedbacks received after the 2nd Workshop, the successful format of the event was maintained. During the morning, Leonardo Helicopters Training, Support Team and Design Engineering shared and discussed with Customers and Operators the latest information on the System. Topics such as reliability updates, maintainability developments and troubleshooting experiences were openly discussed. Then, during the afternoon, a Canadian FIPS Operator directly presented his experiences and provided impressive proof of a typical mission profile for a FIPS active flight within an extreme icy environment scenario. Operator points of view in terms of tips and best practices on the FIPS system were also shared with high participation of all the FIPS community.

TRAINING NETWORK DEVELOPMENT UPDATE

Leonardo Helicopters has been busy expanding its global training network to make high quality training available as close to the customer point of operation as possible. Notably, a joint venture between CAE and Líder Aviação has recently installed a new AW139 CAE 3000 Series full-flight simulator (FFS) within its training centre in São Paulo, Brazil. The new AW139 FFS was jointly developed by CAE and Leonardo and is qualified by both the Federal Aviation Administration (FAA) and Agência Nacional de Aviação Civil (ANAC) of Brazil to Level D, the highest qualification for flight simulators. Delivery of initial and recurrent training by Leonardo using the new AW139 full-flight simulator will commence during 2017, supporting pilots in Brazil and throughout Latin America.
It will also facilitate mission specific training for offshore oil and gas, search and rescue (SAR), VIP, and other operating profiles. Another AW139 Level D FFS jointly developed by Leonardo and CAE has been acquired by Toll Helicopters of Australia (Toll Group) and is now installed within Toll's new state-of-the-art helicopter operational training centre in Sydney, with Toll Helicopters being established as an Authorised Training Centre for the Australasian region. This new service will work closely with the established Leonardo training centre in Malaysia.
In Europe, Leonardo will commence delivery of AW101 training during 2017 from Norway, also using an FFS developed with CAE and installed in a new facility at Sola Airport, Stavanger.
The device arrived at its new location in January and will become fully operational during 2017.

CAE Training Facility in Brazil

New Toll training facility in Australia for the AW139

AW101 FFS arrives in Norway

CHC REACHES 25,000 FLIGHT HOURS MILESTONE IN AUSTRALIA

In the last month CHC reached the important milestone of 25,000 flight hours in Australia with their AW139 fleet, where they currently operate 10 helicopters for Emergency Medical Service and Oil and Gas transfer activities.
CHC took delivery of its first AW139 in 2005 and since then has logged more than 125,000 flying hours across its global AW139 fleet. They also operate the AW139 Fleet leader with more than 11,000 flight hours to date.
CHC was the first commercial operator to fly AW139s in Australia, and has used the aircraft to fly critical emergency medical service (EMS) missions in New South Wales as well as provide oil-and-gas transfer services out of Karratha, in Western Australia's North West region.
Preparation flying for the Australian EMS service commenced in February 2008. These AW139s, dedicated to EMS service in their communities have gone on to fly 12,800 hours as air ambulances, responding to emergency rescues, accidents and inter-hospital transfers.
CHC's role has been essential in providing a helicopter service for emergency response in Western Australia. For the first 12 years of operation, the state had only one dedicated 24x7 EMS/SAR operation servicing a population of 2.6 million people in the jurisdiction of 2.5 million square kilometers (965,300 square miles).
Today there are ten AW139s dedicated to this service providing aeromedical rescue cover to 95 percent of the State's population which is concentrated around Perth and the south west. The helicopters respond around the clock to a range of incidents including road crashes, farming accidents, marine and land search and rescues, and time-critical hospital transfers.
The oil-and-gas transfer service started in March 2011, and has flown more than 12,000 hours in support of crew transfers for oil-and-gas customers to the North West Shelf oil-and-gas precinct in the Pilbara region of Western Australia.

"This milestone represents the culmination of nearly a decade of dedication and hard work, both in saving lives and ensuring our passengers get to and from their workplace safely." said Chris Krajewski, Senior Executive, CHC Asia Pacific.
"It is a testament to our flight crews, engineers and operations teams that we have flown these aircraft in such diverse geographies, undertaking vastly different activities year-in, year-out."

LHD congratulates CHC in reaching this important achievement and is looking forward to support CHC in accumulating many more AW139 flight hours.

COOPERATION AGREEMENT BETWEEN LEONARDO AND CNSAS

On December 20th we signed a cooperation agreement with the Italian National Alpine and Speleological Rescue Corps (Corpo Nazionale Soccorso Alpino e Speleologico - CNSAS). These two Italian organizations are the benchmark, even internationally, in mountain and wilderness medical rescue. This agreement is a milestone in the field of rescue, as we are committed at further improving the technologies that are already saving many human lives as well as developing new operative and training solutions to make both helicopter rescue more efficient and the deployment of rescue personnel safer.

The agreement was signed during an official ceremony held at our facility in Vergiate, in front of the AgustaWestland AW169, which is set to become one of the key players in international helicopter rescue. It ratifies and strengthens a cooperation that has already been a reality in the field for years, ever since the Alpine Rescue personnel started operating on board our helicopters.

In the scope of this three-year, renewable cooperation agreement we will set up a joint working group, which aims to exchange technical-operative information for an appropriate assessment of our rescue aircraft's technical specifications, mission equipment and cabin layout with the goal of a further enhancement of efficiency and effectiveness.
Thanks to this partnership we will also evaluate new rescue techniques and how to align our products to the modern operational requirements.
The agreement also includes the definition of standards and protocols for training personnel of CNSAS and of the medical and emergency crews that operate in helicopter rescue. Training will also cover the use of a rescue hoist in combination with a litter. Our future plans also foresee the development of a training centre specifically dedicated to emergency medical rescue, leveraging also on the technical opinion of CNSAS and possibly also on their personnel, to be able to offer the correct professional and technical training to our national and international customers operating in the HEMS/SAR segment.

DEVELOPING THE FUTURE OF THE "ALL WEATHER EMS HELICOPTER"

On 11th November 2016, Leonardo Helicopters and Schweizerische Rettungsflugwacht (REGA), the world renown provider of helicopter emergency medical services, operating in Switzerland, signed a Collaboration Agreement. This agreement was reached one year after the purchase of three AW169s equipped with FIPS (Full Ice Protection System). The AW169 is becoming recognized as a world leading EMS platform and it will become the lightest helicopter equipped with the FIPS system.
The collaboration will improve each Party's knowledge in the specific and highly specialized market of EMS, aimed at developing new solutions in terms of EMS flight operations, regulations, interiors, medical equipment, training and support.
The main purpose of this Agreement, with a duration of over 10 years, is to develop the "all weather EMS Helicopter", combining advanced GNSS (Global Navigation Satellite System) navigation capabilities with the operational flexibility granted by the FIPS.
All aspects of the development will be analyzed by a number of joint Working Groups covering all the specific activities for Market/Business Development. This will cover topics such as EMS Flight Regulations/Operations/ Procedures, Airframe/Avionics, Manuals, Training , Maintenance and Medical Aspects.
Representatives from REGA (pilots, doctors, paramedics and operations experts, EMS and maintenance) and their helicopters, will be available during global helicopter events and conferences to support and explain the advanced features of the products and their further development.
The cooperation between Leonardo Helicopters and REGA dates back a few years, starting from the purchase by REGA of 11 Da Vinci helicopters and this Agreement further strengthens the collaboration between the Parties.

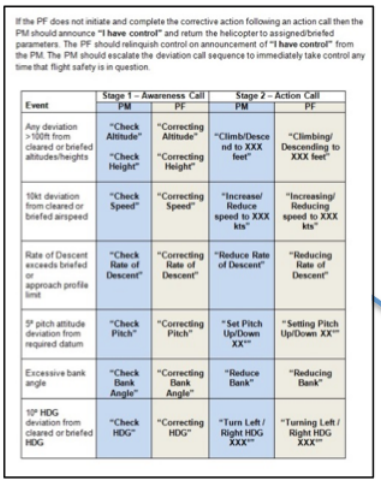
AW139 FCOM NOW AVAILABLE

Leonardo Helicopters AW139 Offshore Flight Crew Operating Manual is the result of the company effort to improve safety in offshore-operations, its ultimate objective is to enhance Safety of Operation and provide Operators with an excellent tool to achieve operational effectiveness.
It is one of the several initiatives Leonardo Helicopters is implementing to enhance flight safety in respect of the HeliOffshore collaborative approach (i.e. narrower OSD, Glass Cockpit & Automation Transition Courses, TEM/CRM elements embedded in the Training Courses and many more initiatives to enhance the use of automation).
Our FCOM is designed for you, it is an interesting new publication that brings together the rotorcraft flight manual with reference material and blends them, with systems analysis, guidance on multi crew cooperation and best operational practices, to create a valuable new reference resource for offshore operations.
The FCOM has been prepared and tested by a team of Flight Test Pilots and Instructor Pilots, Engineers and Avionics specialists, using aircraft and simulators to verify procedures.

The preliminary version was then shared with Helioffshore and a wide spectrum of key offshore operators to gain additional valuable inputs before the official publication. The intention has been to ease the transition to FCOM through an innovative and collaborative approach with operators.
Its format is going to be “App friendly”, initially available as PDF with a strong integration with AW Skyflight Mobile. Skyflight Mobile, our planning service gateway for flight planning, provides some capabilities that have been requested specifically by the FCOM working group to reduce workload and enhance mission planning (e.g. Engine Power Assurance and Cat A Performance Calculation). Combined with the existing Skyflight Mobile capabilities such as Fleet, Weight and Balance, Flight Planning, the new elements take flight planning to a superior level of safety and optimization.

Specific FCOM transition courses are also now available with the release of FCOM, to support the management of change and to further assist operators in their implementation of FCOM for their flight crews

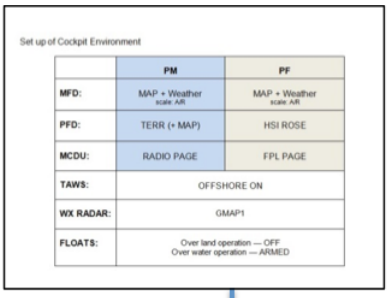
Multi Crew Co-operation



If the PF does not initiate and complete the corrective action following an action call then the PM should announce **"I have control"** and return the helicopter to assigned/briefed parameters. The PF should relinquish control on announcement of **"I have control"** from the PM. The PM should escalate the deviation call sequence to immediately take control any time that flight safety is in question.

Event	Stage 1 – Awareness Call		Stage 2 – Action Call	
	PM	PF	PM	PF
Any deviation >100ft from cleared or briefed altitudes/heights	"Check Altitude" "Check Height"	"Correcting Altitude" "Correcting Height"	"Climb/Descend to XXX feet"	"Climbing/ Descending to XXX feet"
10kt deviation from cleared or briefed airspeed	"Check Speed"	"Correcting Speed"	"Increase/ Reduce speed to XXX kts"	"Increasing/ Reducing speed to XXX kts"
Rate of Descent exceeds briefed or approach profile limit	"Check Rate of Descent"	"Correcting Rate of Descent"	"Reduce Rate of Descent"	"Reducing Rate of Descent"
5° pitch attitude deviation from required datum	"Check Pitch"	"Correcting Pitch"	"Set Pitch Up/Down XX°"	"Setting Pitch Up/Down XX°"
Excessive bank angle	"Check Bank Angle"	"Correcting Bank Angle"	"Reduce Bank"	"Reducing Bank"
10° HDG deviation from cleared or briefed HDG	"Check HDG"	"Correcting HDG"	"Turn Left / Right HDG XXX°"	"Turning Left / Right HDG XXX°"

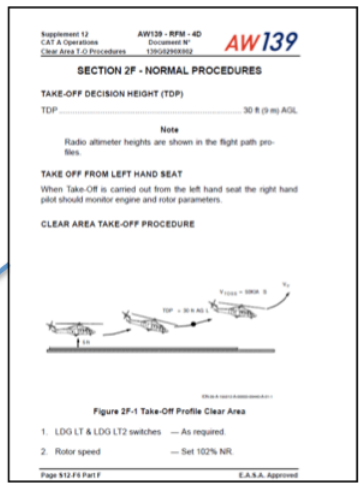
Setup of Cockpit Environment



Set up of Cockpit Environment

	PM	PF
MFD:	MAP + Weather scale: AR	MAP + Weather scale: AR
PFD:	TERR (+ MAP)	HSI ROSE
MCDU:	RADIO PAGE	FPL PAGE
TAWS:	OFFSHORE ON	
WX RADAR:	GMAP1	
FLOATS:	Over land operation — OFF Over water operation — ARMED	

Rotorcraft Flight Manual



AW139 - RFM - 4D

AW139

SECTION 2F - NORMAL PROCEDURES

TAKE-OFF DECISION HEIGHT (TDP)

TDP ..... 30 ft (9 m) AGL

Note

Radio altimeter heights are shown in the flight path profiles.

TAKE OFF FROM LEFT HAND SEAT

When Take-Off is carried out from the left hand seat the right hand pilot should monitor engine and rotor parameters.

CLEAR AREA TAKE-OFF PROCEDURE

Figure 2F-1 Take-Off Profile Clear Area

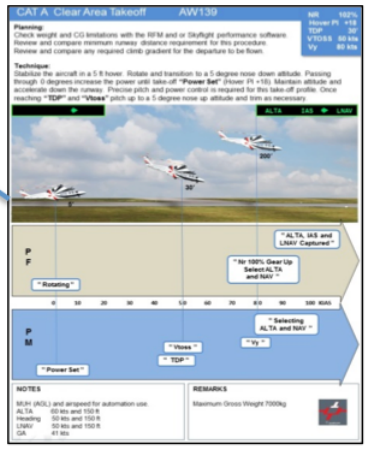
1. LDG LT & LDG LT2 switches — As required.
2. Rotor speed — Set 102% NR.

Page 512 F6 Part F — E.A.S.A. Approved

Operational Considerations

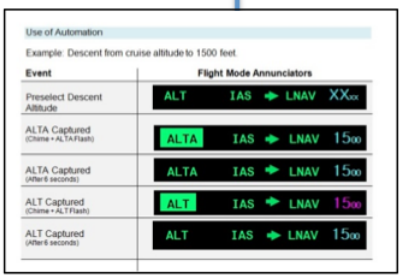
To protect against an excessive and undesirable yaw input if a foot were to slip while setting the parking brake we recommend that the pilot left seat “guards’ his yaw pedals.

Quick Reference Plate



CAT A Clear Area Takeoff AW139

Use of Automation



Use of Automation

Example: Descent from cruise altitude to 1500 feet

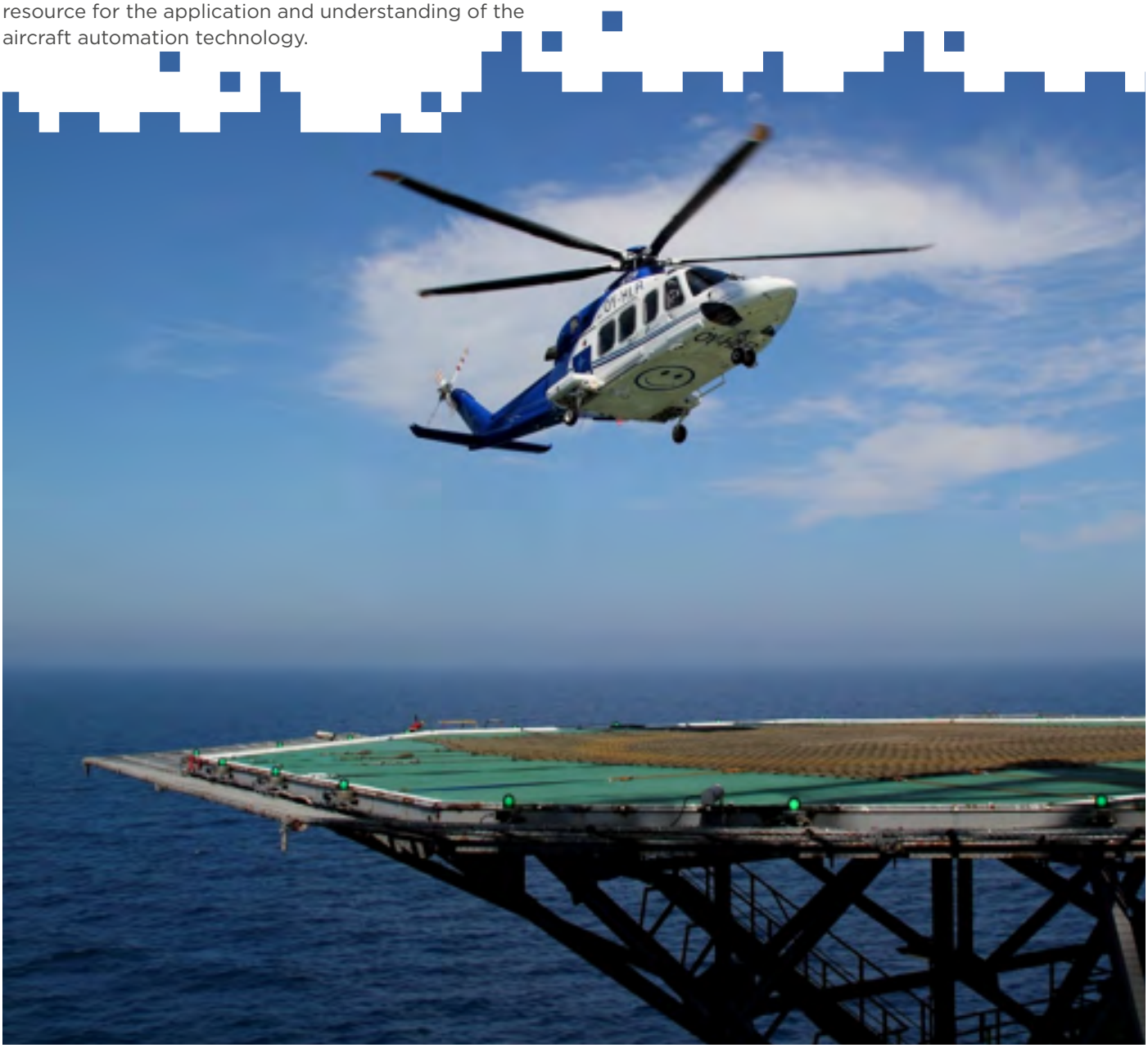
Event	Flight Mode Annunciators
Preselect Descent Altitude	ALT IAS LNAV XXxx
ALTA Captured (Chime + ALTA Flash)	ALTA IAS LNAV 15oo
ALTA Captured (After 6 seconds)	ALTA IAS LNAV 15oo
ALT Captured (Chime + ALT Flash)	ALT IAS LNAV 15oo
ALT Captured (After 6 seconds)	ALT IAS LNAV 15oo

Structure
The manual contains the basic RFM that has been augmented with the supplements applicable for an offshore configured aircraft. This means that flight crews can now find basic and supplemental data organized together. The manuals main subject areas are aircraft Performance, Limitations, Normal Operations, Emergency Operations and Aircraft Systems. Each of these subject areas has been reviewed, developed and expanded to deliver detailed, practical information in a logical and organized way.
The FCOM is available electronically and hence it offers a comprehensive and yet practical solution, as the search functionality means you are only a few keystrokes away from reviewing all the important information.

Automation
Our AW139 is a modern sophisticated aircraft that employs automation to increase the level of safety and assist with the aircraft handling in all kinds of flight environments. The FCOM contains guidance and reviews of the automation usage throughout the entire flight operation and so it becomes a valuable reference resource for the application and understanding of the aircraft automation technology.

Multi Crew Cooperation
In addition to assisting flight crews in systems management, we developed a Multi Crew Cooperation section, that examines crew responsibilities and interaction. It provides the use of recommended terminology that is embedded within crew communication tables for a specific procedure. This combination and organization results in clear cockpit communication and understanding between the flight crew.

Performance Planning and Digital Applications
In an effort to aid pilots by simplifying processes, we developed in parallel to the FCOM, electronic solutions to required performance calculations that must be completed before every flight.
The useful weight and balance calculator and also the new engine power assurance check application are now available to pilots. The Category A takeoff and landing performance application is under development and will soon complete the practical software solutions for pilots in their performance flight planning.



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