

PIAGGIO AERO P.1HH HAMMERHEAD UAS PROGRAMME ACHIEVES FIRST FLIGHT

THE UAV TECHNOLOGY DEMONSTRATOR SUCCESSFULLY PERFORMED REMOTELY PILOTED FULL TEST FLIGHT

Dubai (UAE) 18th November 2013: Piaggio Aero, together with Selex ES, announces at the Dubai Air Show 2013 that the P.1HH HammerHead Unmanned Aerial System (UAS) has achieved the demonstration and validation phase of the programme with the maiden flight of the P.1HH DEMO, Piaggio Aero's UAV technology demonstrator. This flight is a fundamental milestone that paves the way to the next phase of the programme development

The flight readiness of the P.1HH DEMO flight Technology Demonstrator had been confirmed by the first flight, which occurred on Thursday 14th November 2013, at the Trapani (Italy) "Birgi" Italian Air Force base.

The P.1HH DEMO UAV has taken off at a rotation speed of 110 kts and performed a flight over the Mediterranean sea for approximately 12 minutes, while being remotely piloted from the Ground Control Station, which allowed for testing of the navigation system and verification of maneuvering capabilities in both manual and automatic flight modes.

The flight was performed in mid-flap configuration with landing gear extended. The aircraft reached an altitude of 2,000 ft. and a speed of 170 Kts, flying at 12 miles from the base. The UAS landed at 1.15 pm at the Trapani military airport completing its first flight test.

A joint team from Piaggio Aero and Selex ES, a Finmeccanica Company, successfully conducted the flight operations.

"The success of the first flight test of the P.1HH DEMO brings us closer to providing the first European developed state of the art MALE UAS, capable of performing at the highest technological level aerial, land, coastal, maritime, offshore, COMINT/ELINT and electronic warfare missions" said Alberto Galassi, CEO of Piaggio Aero.

"The first flight achievement demonstrates the huge progress made by Piaggio Aero, together with Selex ES and the support of the Italian Air Force, in the development of this new generation of Unmanned Aerial Systems. We are proud to have been able to reach this result only 2 years after the launch of the programme, and we look forward to completing this ambitious project that brings together the efforts of leading players in the aerospace and defense domain and will allow Piaggio Aero to gain a primary position in the international surveillance and security industry with the P.1HH HammerHead enter into service in 2015."

"This has been an incredible year for Selex ES unmanned ISTAR capability. Our deep knowledge of UAS and capacity to deliver integrated systems are at the centre of this ambitious project, a real cornerstone in the European and international MALE scenario. Furthermore, our flagship tactical UAS has secured new customers and our ISR sensors range continues to grow. Working with Piaggio Aero on the P.1HH HammerHead is a unique and fruitful experience, that is proving how Selex ES can provide the right level of technology, under a very tight schedule and challenging requirements, even in case of a highly innovative environment," commented Fabrizio Giulianini, CEO of Selex ES.

The first flight of the P.1HH DEMO technology demonstrator marks the beginning of the next phase of the development of the P.1HH HammerHead UAS programme in preparation for operational readiness to be achieved by the end of 2014.

The P.1HH DEMO first flight test was mainly intended to validate the Remote Vehicle Control & Management System (VCMS and Ground Control Station) that has been fully integrated over the past months:

On 14th February 2013, the P.1HH DEMO successfully completed ground tests and performed low speed runway taxi, for the first time.

On 8th August 2013 silently and without any formal announcement, the P.1HH DEMO flight test bed made its first lift-off, performing a short level flight and then landing smoothly on the remaining runway, while being remotely piloted.

The Piaggio Aero P.1HH HammerHead is a multipurpose state-of-the-art Unmanned Aerial System designed to meet the need for a high-tech solution for intelligence, surveillance and reconnaissance missions (ISR). The P.1HH remotely piloted aircraft features automatic take-off and landing capabilities, making it able to fly up to 45,000 feet, with an outstanding endurance of 16 flight hours. The UAS systems will be fully compliant with the STANAG USAR 4671 standards that enable the UAV to fly in both restricted and unrestricted flight areas.

The vehicle management and control system, air data terminal and the ground control segment for the P.1HH HammerHead have all been developed and supplied by Selex ES, which is cooperating with Piaggio Aero to ensure highly effective integration. The P.1HH HammerHead Mission Management System is based on the Selex ES' skylSTAR innovative solutions, which is ideally designed for patrolling and ISR missions, and responding to diverse threats that range from terrorist attacks to illegal immigration, protection of Exclusive Economic Zones, infrastructures and critical sites. Sensor fusion, data management and exploitation features of skylSTAR enable highly effective border control, wide area surveillance, targeted surveillance, environmental and disaster control missions. Selex ES provides an outstanding contribution thanks to its capabilities, products and experience in developing and manufacturing UAS surveillance systems, and contributing to its avionics/ mission system and its sensor suite, featuring SeaSpray 7300E Radar, Comms and customized Data Link solutions.

The P.1HH HammerHead UAS platform is a derivative of the Piaggio Aero P.180 Avanti II aircraft, newly designed for ISR multi mission purposes. The remotely piloted aircraft's main features are: an enhanced airframe, increased aerodynamic configuration with a reinforced wing providing an increased surface and higher aspect ratio. The aerodynamic configuration is based on the development of new wings providing a 15.6 m wing span with the subsequent modification of the previous P.180 aerodynamic design but maintaining Piaggio Aero's patented 3 lifting surface configuration. The P.1HH HammerHead aircraft features a removable external section wing in order to guarantee easy ground transportation and provide operational flexibility in any environment. This modified aerodynamic configuration underwent extensive low speed/high speed wind tunnel testing to validate both its design and performance.

The characteristics of the P.1HH HammerHead UAS make it uniquely suited for a wide range of surveillance intelligence, reconnaissance and security missions and it will be developed and brought to market by Piaggio Aero with a variety of operational capabilities individually tailored to specific customer requirements.

EDITOR'S NOTES

PIAGGIO AERO INDUSTRIES S.P.A. 

Piaggio Aero Industries is active in civil and ISR Aircraft design, manufacturing, maintenance and overhaul and also manufactures Aero-Engines parts, while managing repairs and engine overhauls under license. It is based in Genoa, Finale Ligure Italy with a subsidiary covering the Americas in West Palm Beach Florida, U.S.A. (Piaggio America, Inc.). Piaggio Aero's flagship product is P.180 Avanti II, the fastest, most advanced executive/multi-utility turboprop in the world offering the speed of a light/mid-size jet, the comfort of a large, whisper quiet full stand-up cabin, with fuel efficiencies 40% greater than most business jets. The new vision of Piaggio Aero is maintaining its role as global brand in the business aviation and to become a prominent player in the surveillance and security sector producing leading edge Unmanned Aerial Systems and world class Multirole Patrol Aircraft. The company is working on 2 new ISR aircraft programs: the P.1HH HammerHead and the Piaggio Aero MPA Multirole Patrol Aircraft. The Piaggio Aero P.1HH HammerHead is a new, state-of-the-art multipurpose Unmanned Aerial System (UAS) designed for Intelligence, Surveillance and Reconnaissance (ISR) missions whose combination of performance and operational characteristics is at the very top end of the UAS MALE category. The Piaggio Aero P.1HH Unmanned Aerial System includes an unmanned aircraft platform specific mission equipment and systems and a remote Ground Control Station (GCS). The Piaggio Aero MPA Multirole Patrol Aircraft is the evolution of the Piaggio Aero P.180 Avanti II platform, newly designed to meet the need for a robust and high-tech solution for land, coastal, maritime and offshore security. The MPA can be missionized for many different roles including Maritime Patrol, Ground Surveillance, Tactical ISR and COMINT missions. Piaggio Aero' Shareholder structure is: Tata Limited, the British Company part of the Indian Tata Group, Mubadala Development Company, the development and investment Company driving the economic diversification of Abu Dhabi, the HDI hedge fund and Mr. Piero Ferrari, who is also the Chairman of the Company.

SELEX ES 
A Finmeccanica Company

Selex ES, a Finmeccanica company, is an international leader in electronic and information technologies for defence systems, aerospace, data, infrastructures, homeland security and protection and sustainable "smart" solutions. The company was created on 1st January 2013 from the merge of SELEX Galileo, SELEX Elsag and SELEX Sistemi Integrati to answer the growing demand for enhanced capabilities in the national security and military domains as well as in the management of complex civil infrastructures, by leveraging on collective strengths and capitalizing on the synergies within key business areas. Selex ES has a workforce of approximately 18,000 people, revenues in excess of EUR 3.5 Billion Euros, main operations in Italy and the UK and a strong industrial and commercial footprint in the US, Germany, Turkey, Romania, Brazil, Saudi Arabia and India

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