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PRESS RELEASE

## P.1HH HAMMERHEAD PROGRAMME REACHES NEW MILESTONE: AUTONOMOUS FLIGHT MODES SUCCESSFULLY VALIDATED

Farnborough, 17 July 2014. Piaggio Aero, together with Finmeccanica - Selex ES are pleased to announce the latest developments in the flight campaign of the Remotely Piloted Air System (RPAS) P.1HH HammerHead DEMO aircraft that has validated and fine tuned its advanced control laws, including augmented modes, flight envelope protection and automatic flight, plus the automatic management of the ground run both in takeoff and landing.

Safety critical phases, such as take-off and landing when using the GCS and Datalink systems in manual flight, have been explored and brought to an unprecedented ease of operation, with the close collaboration between the two companies' engineering and flight teams.

This year the RPAS P.1HH DEMO has extensively flight tested in Trapani-Birgi in Sicily (Italy) its ISR capabilities with an EO/IR sensor, managed autonomously by the Mission Management System based on Finmeccanica - Selex ES skylstar.

Such capabilities will be further tested by Piaggio Aero on the P.1HH, which will also integrate the Finmeccanica - Selex ES radar Seaspray7300E managed by an enhanced version of the skylSTAR Mission Management System.

## About the P.1HH HammerHead UAS

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 Finmeccanica - Selex ES, which is cooperating with Piaggio Aero to ensure highly effective integration. The P.1HH HammerHead Mission Management System is based on the Finmeccanica - Selex ES' skyISTAR 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 skyISTAR enable highly effective border control, wide area surveillance, targeted surveillance, environmental and disaster control missions. Finmeccanica - 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.

## About Piaggio Aero

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), and a new state of the art center of aviation excellence under completion in Villanova d'Albenga (Italy). Piaggio America, the subsidiary covering marketing, sales and customer support in the Americas is based in West Palm Beach Florida, U.S.A.

Piaggio Aero's flagship product is the Avanti EVO, the fastest, most advanced executive/multi-utility turboprop in the world, offering the speed of a light/mid-size jet, and 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 a global brand in 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. Piaggio Aero's shareholding structure is: Mubadala Development Company, the development and investment company driving the economic diversification of Abu Dhabi, owning 98.05% of the share capital; and Mr. Piero Ferrari who owns 1.95%.

## About Finmeccanica - Selex FS

Finmeccanica - Selex ES is an international information management sensors and systems integration business delivering the high technology needs of defence, space, security, infrastructure, commerce and public service. In leveraging collective strengths, and capitalizing on the synergies across major business areas, Finmeccanica - Selex ES exploits world-class systems, ICT and smart services to deliver robust, high-integrity mission-critical solutions across sectors and domains.

Within aerospace and defence electronics, the company provides C4ISTAR systems, integrated products and solutions for avionic, land and naval applications. Delivering mission critical systems for situational awareness, self-protection and surveillance, Finmeccanica - Selex ES utilizes its experience and proprietary radar and electro-optic sensors, avionics, electronic warfare, communication, space instruments and sensors and UAV solutions.

Finmeccanica - Selex ES has advanced technologies and products in the design, manufacture and integration of complex systems for the control and management of air and maritime traffic, the monitoring and protection of green and blue borders, the development of secure communication networks and the deployment of 'smart' solutions for managing systems and infrastructures.

Finmeccanica - Selex ES is a global business with 17,000 employees, revenues in excess of 3.2 billion euros, main operations in Italy and the UK and a strong industrial and commercial footprint in the US, Germany, Turkey, Romania, Brazil, Australia, Saudi Arabia and India.

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