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PRESS RELEASE

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The Alenia Aermacchi M-346 Master advanced trainer adopts the Helmet Mounted Display

Alenia Aermacchi, a Finmeccanica company, recently carried out the first flight tests of the new sophisticated Helmet Mounted Display (HMD) system that will be fitted to the M-346 Master advanced training aircraft.

The HMD system, a true interface between the pilot and aircraft systems, complements the Head-Up Display by offering the pilot to receive attitude, navigation, tactical and mission information directly on the helmet visor, independently of the direction in which he is looking. The HMD is fully integrated with aircraft avionics and with the Embedded Tactical Training Simulation system.

The adoption of this new HMD system on the M-346 is a crucial element of training effectiveness and an important step towards making the Master ever more representative of operational aircraft. The M-346 Master will now allow student pilots to learn to use the HMD, avoiding the risks involved should it be encountered directly on the much more expensive operational aircraft (Eurofighter, F-35, Rafale, F-16). The HMD will also be integrated in the Full Mission Simulator.

Test pilots Quirino Bucci and Matteo Maurizio tested the new HMD system to their fullest satisfaction, appreciating its ergonomics and performance from both the forward and rear seats.

“We obtained significant results, with stable symbology under high g and ease of head movement thanks to the lightweight helmet”, said after the flights Alenia Aermacchi Chief Test Pilot Quirino Bucci.

The limited helmet weight – under 1.6 kilos, achieved by the miniaturisation and careful placement of components – translates into lower pilot fatigue under high g manoeuvres, while the low voltage translates into a high levels of safety. A micro camera captures the pilot’s field of view, including visor symbology, making it available for post-flight debriefings.

The system selected for installation in the M-346 employs the latest optical and digital technologies. It allows the aircraft to operate by day and night, using Night Vision Goggles (NVG). The ability to present synthetic symbology and high-resolution images, plus the accuracy of the pilot’s line of sight measurement, are peculiar characteristics of the M-346 Master HMD system.