

Venegono (Varese), 10 April 2008

Alenia Aermacchi rolls out the first pre-series M-346

Alenia Aermacchi, a Finmeccanica company, unveiled today the first M-346 new generation advanced trainer in the baseline industrial configuration.

The aircraft was rolled out from the Alenia Aermacchi factory at Venegono Superiore, in the presence of top-level military and industrial leaders.

The first pre-series M-346 simultaneously bears witness to and reinforces the great maturity of the program which - thanks to the intensive development work performed on the two prototypes - has allowed the design to be optimised and industrialized.

The design effort for the baseline industrial configuration aircraft has concentrated on structural optimisation, with additional benefits in terms of improved maintenance. The goal has been achieved by rationalizing the distribution of wing spars and fuselage frames, together with a more widespread use of composite and titanium parts. Together with the integration of the new main landing gear and the standardization of general mission systems, this has brought about a considerable reduction in the empty weight, in the order of about 700 kilos.

The Flight Control System, which includes the computers provided by Alenia SIA and SELEX Communications, have also been enhanced with software control laws developed in-house by Alenia Aermacchi.

These new results have been reached by applying data collected during the intensive flight test campaigns in which both prototypes have been engaged, with additional valuable input from the many international Air Forces that have evaluated and assessed the M-346.

Today opens a new season for the M-346 that, by reaching this milestone, now looks forward to a rapid industrialization program leading to service entry within the planned timescale.

The roll-out ceremony was attended by the Chief of Italy's Defence Staff, General Vincenzo Camporini, and by the Deputy Chief of Staff of the Italian Air Force, General Giuseppe Bernardis. This confirms the ever more productive cooperation between Alenia Aermacchi and the Italian Air Force, which has been a feature of M-346 development.

M-346 Background

The M-346 is the only new generation advanced/lead-in fighter trainer currently available in Europe. The aircraft is tailored to train pilots to fly future combat aircraft and is well suited for every phase of advanced and pre-operational training, to reduce the flight hours on the more expensive aircraft. The aircraft embodies the latest “design-to-cost” and “design-to-maintain” concepts, with avionics modelled upon those of new generation military aircraft such as Eurofighter, Gripen, Rafale, F-16, F-22 and the future JSF.

In December 2006 the M-346 achieved the speed of sound **Mach 0,96** and in January 2008 the second M-346 prototype carried out, successfully and safely, the tests of the in-flight refuelling, with the collaboration and support of the Experimental Test Unit (RSV) of the Italian Air Force, using a Tornado equipped with a buddy pod.

In February 2007 it was **short-listed by the United Arab Emirates** for its new training competition. Furthermore, it is in the phase of **evaluation by Singapore** within the Fighter Wings Course (FWC) Program, which is aimed to replace the current fleet of advanced trainers. In April 2007 the M-346 underwent an initial three-week assessment by the Italian Air Force Test Centre at Pratica di Mare, obtaining higher appreciation by the Italian Air Force Pilots.

The M-346 is engineered with innovative design solutions. Vortex lift aerodynamics, together with the full authority quadruplex Fly-by-Wire control system, allow the aircraft to remain fully controllable at angles of attack over 35° degrees. With this technological achievement, Alenia Aermacchi confirms it can autonomously design and manufacture advanced aircraft with Fly-by-Wire controls. This, combined with the twin-engine configuration and thrust/weight ration close to 1, translates into safety levels unattainable by its competitors. The M-346 also integrates digital avionics with the ability to simulate sensors and threats in flight. These characteristics and its performance make the M-346 the world's leading tactical pre-operational training aircraft.

The M-346 programme is attracting increasing interest from potential international customers and partners.

The Advanced European Jet Pilot Training programme is certainly the major current opportunity, with the air forces of nine countries included Italy (Austria, Belgium, Finland, France, Greece, Portugal, Spain and Sweden).

Interesting short and medium-term opportunities also exist outside Europe, in leading markets such as the United Arab Emirates, Chile, Malaysia, Singapore and even the United States.

Several countries including Greece, Portugal, Poland and lately Chile have already declared their interest in participating in the M-346 programme through industrial cooperation agreements, with regard to the production.