

## OSTRAVA NATO DAYS 2015: L-39NG – CZECH OFFER OF NEXT GENERATION ALBATROS

---

Ostrava NATO Days 2015 gave the Czech Aero Vodochody company an occasion to present the L-39NG (Next Generation) trainer technology demonstrator to the public. The jet had made its maiden flight a few days before the event in Ostrava. The manufacturer wants to offer this design in two forms, both as a modernization package for the current users of the L-39 jet, as well as in a form of a completely new design. The main modification - in comparison with the original Albatros - is visible in a form of the new jet engine, delivered by the Williams International company. Secondly, the aircraft is equipped with a completely new avionics suite.

Ostrava NATO Days 2015 gave the Czech Aero Vodochody company an occasion to present its L-39NG (Next Generation) trainer technology demonstrator to the public. The jet had made its maiden flight a few days before the event in Ostrava. The main idea behind the design was to prolong the service-lives of the L-39 airframes that are in good technical condition, once the lifetime of their AI-25TL engines ends. Besides that, the L-39NG jet is going to be offered globally as a brand new design, with a new fuselage. Maiden flight of the first example of the new jet is scheduled to happen in 2 years. For the numerous users of the L-39 jets, this approach may make it possible to realize the modernization programme in two, separate stages. At the first stage, the Soviet-made engine is going to be replaced with the Williams International FJ44-4M propulsion system, together with the relevant avionics facilitating its operation. Additionally, depending on the client's requirements, other elements of the L-39NG onboard equipment may be installed on the original airframes, including the Genesys Aerosystems avionics and multi-function and helmet mounted displays, delivered by the Speel Praha company. During the next phase, a brand new fuselage may be connected with the used engine. Thanks to this approach, the total cost of the whole operation is going to be distributed across time, in comparison with the cost of purchasing the brand-new jet.

L-39NG jet's purpose is to realize the pilot's training process, preparing them to operate the modern fighter jets, both of the Western, as well as of the Eastern origin. The operational costs may be decreased mainly thanks to a new engine, delivered by the Williams International company - the FJ44-4M. This design has some significant advantages, in comparison with the old, soviet-made AI-25TL engine. The Williams International powerplant has better fuel efficiency, it is also fitted with an autonomous, digital electronic FADEC control system. However, within the scope of the costs, the issue of maintenance is the basic difference here. Thanks to the fact that the engine is coming from a civilian market, the maintenance costs may be significantly reduced for the end user. Williams International provides access to its Total Assurance Program, within which the customer may access the 24/7 call center. Servicing may be realized in one of the 80 maintenance centers of the company globally, within the scope of the guarantee, according to the time the engine has spent in the air - this data is provided by the user. The programme also assumes that unplanned overhauls are also covered, and this makes it possible to plan the complete outline of the operational costs of in advance. The representatives of the Aero Vodochody company stress the fact that low costs of

operation of the L-39NG jet (USD 2500 per hour) are one of the main advantages of the newly developed design, within the global market.

The first L-39NG jet built from scratch is going to make its maiden flight in 2016. The first examples are going to be delivered to the clients two years later. The modernization package is going to be available for the current Albatros users earlier. The factory-new jet is going to feature a redesigned, lighter and more durable fuselage, with better aerodynamic properties, in comparison with the one used in case of the original L-39 jet trainer design. The expected lifetime for the new fuselage is said to reach 15000 hours in the air. The fuel tanks are going to be fitted inside the wings. Additionally the jet is going to feature five armament hard-points which is going to make it possible for the L-39NG to act as a light combat-reconnaissance aircraft. During the Ostrava NATO Days event the jet was presented with two RMP LC Rocket Machine Gun pods, manufactured by the FN Herstal company. The new jets are going to feature a single-part canopy. Secondly, the new design is going to feature a zero-zero ejection capability.

The civilian users are going to become the first buyers who are to acquire the L-39NG jets. LOM Praha company is among these companies. It provides training services for the Czech Air Force as a Flight Training Centres. The jets are also going to be acquired by the Breitling Jet Team and by the Draken International Black Diamond aerobatic teams. The company is carrying out negotiations, the aim of which is to sell the L-39NG jets for the military users.