



USAH

August 2020 / Volume 4 / Article 56



Aero L-39C

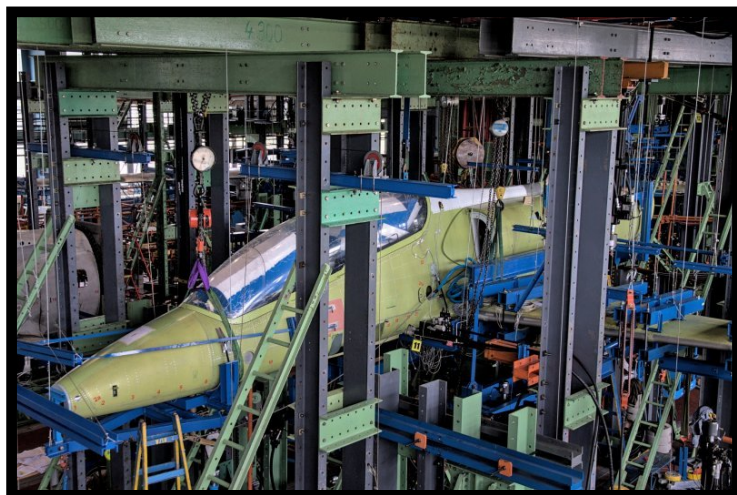
Albatros



Article & Photos by Jimi Simmons

Well folks we finally had the first air show of 2020 in Ocean City, Maryland and what a show it was. We had the pleasure and privilege of spending the weekend with the L-39C #7 Albatros, along with its owner/pilot, Larry "Lunch" Labriola from Scarsdale, N.Y. Larry's L-39C was a standard basic trainer for Soviet Union, Czechoslovakia and export. Originally designated L-39, but renamed L-39C when later variants appeared and approximately 2,260 were built.

The Aero L-39 Albatros is a high-performance jet trainer and light-ground attack aircraft. The L-39 was developed by Aero Vodochody in Czechoslovakia in the early 1960's. Aero Vodochody is the famous Czech aircraft company founded in 1919, which specialized in light combat jets for the military. During the time of the Czechoslovakian Socialist Republic, the company developed into a conglomerate of factories that manufactured the hydraulics, avionics, and motors and also assembled the final plane.



Photos Courtesy of Aero Vodochody

Aero Vodochody Plant

The L-39 is a single-engine advanced trainer used by many of the world's air forces. It has many of the design features and handling characteristics as the high-performance fighters that its students will one day fly. The cockpits are fully pressurized, heated and air-conditioned.

In 1964, Aero Vodochody embarked on a new design project to meet the specified requirements for a "C-39" (C for trainer), setting up a design team under the leadership of Jan Vlček. This aircraft was to serve as a replacement for the Aero L-29 Delfín, an early jet-powered trainer, as a principal training aircraft. Vlcek had the vision of a twin-seat single-engine aircraft, being adopted as the primary trainer throughout the Warsaw Pact nations.



Photo by Jimi Simmons

The tandem cockpits are equipped with enough flight controls, flight instruments, engine gauges, and system status indicators to allow either pilot to safely operate the



Photo by Jimi Simmons

airplane. As with most military jet trainers, the back seat was designed for instructors and like many modern trainers, there is limited or no access to certain controls and switches in the rear seat. In the L-39, these items include environmental controls, fuel pump switches, and the normal electrical controls.



Photo by Jimi Simmons

For operational flexibility, simplicity, and affordability, the majority of onboard systems have been simplified to avoid incurring high levels of maintenance, as well as to minimize damage caused by mishandling when flown by inexperienced air crew. The L-39 is the premier trainer jet for new pilots to be trained in and is still popular today.

The L-39 was the first trainer aircraft to be equipped with a turbofan power-plant. The Ivchenko AI-25, a military and civilian twin-shaft medium bypass turbofan engine developed by Ivchenko OKB of the Soviet Union. It was the first bypass engine ever used on short haul aircraft in the USSR. The engine is still produced by Ukrainian based aircraft engine manufacturing company, Motor Sich. Development of the AI-25 and the AI-25TL was designed for use by the Czechoslovak Aero L-39 Albatros military trainer with the first flight occurring in 1968.

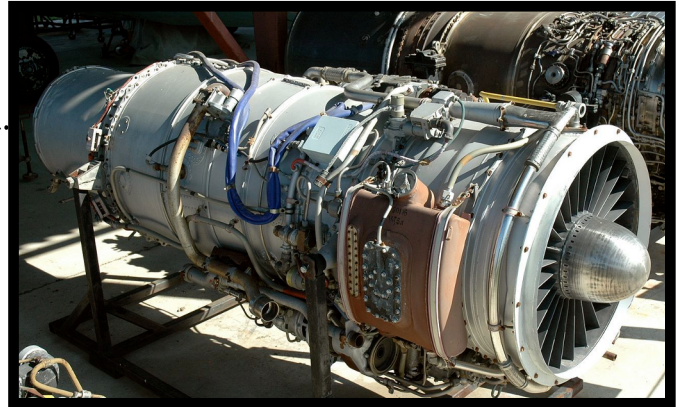


Photo Courtesy of Ivchenko OKB

Powerplant Characteristics

- Type:** Turbofan
- Length:** 132.2 in
- Diameter:** 24.08 in (intake casing)
- Dry weight:** 770 lbs.
- Compressor:** Axial, 3 fan/low pressure compressor stages, 9 high pressure compressor stages
- Combustors:** Annular
- Turbine:** 1 high pressure turbine stage, 2 low pressure turbine stages
- Fuel type:** Aviation kerosene, JP-1
- Oil system:** Pressure spray with return
- Maximum thrust** *Takeoff:* 16.9 kN; 3,800 lbf; *Cruise:* 5.05 kN; 1,140 lbf)
- Overall pressure ratio:** 9.5:1
- Bypass ratio** :2.0:1
- Fuel consumption:** 1,032 lb/h
- Specific fuel consumption:** *Takeoff:* 17 g/(kN·s) (0.6 lb/(lbf·h)); *Cruise:* 23.1 g/(kN·s) (0.815 lb/(lbf·h)
- Thrust-to-weight ratio:** 4.914



Photos by Jimi Simmons

The L-39 is now popular with private citizens. Although it was designed over 50 years ago, it still functions well and is easy to operate and is still used by many countries as an advanced trainer.

Owner/Pilot Larry "Lunch" Labroila is not just a great pilot but a very humble and genuine human being.

We loved how he actually took time to allow people to get photos with the plane and answer questions about the L-39. You could truly see his love for aviation.



Photos by Jimi Simmons

Larry has been flying for many years and it started all back in 1969. He started flying while in high school and the rest is history, accumulating over 7,900 hours of flight time. *"I have always loved flying and when I had the chance to buy my own plane, as I have flown many different equipment, my love is speed. So with that, the closest thing I could obtain in the jet class was the L-39 Albatros"*. Larry has been performing aerobatics, formation and air racing for many years now. He holds an Air Transport License for; single and multi engine and seaplanes. Ratings in the L-39 Albatros, Grumman Albatros, DC-3 and C-500, along with private for gliders and helicopters.



Photos by Jimi Simmons



Photo by Jimi Simmons

General characteristics

Crew: 2

Length: 39 ft 10 in

Wingspan: 31 ft 0 in

Height: 15 ft 8 in

Wing area: 202 sq ft

Airfoil: NACA 64A012

Empty weight: 7,617 lbs.

Max takeoff weight: 10,362 lbs

Powerplant: 1 × Ivchenko AI-25TL turbofan engine

Maximum speed: 470 mph at 16,404 ft

Never exceed speed: 610 mph- M0.8

Range: 680 mi.

Endurance: 2 hours 30 minutes (internal fuel), 3 hours 50 minutes (internal and external fuel)

Service ceiling: 36,000 ft

Rate of climb: 4,100 ft/min

Time to altitude: 16,404 ft in 5 minutes

Wing loading: 51 lb/sq ft

Thrust/weight: 0.37

Take-off roll: 1,739 ft

Landing roll: 2,133 ft

Armament: Up to 626 lbs of stores on two external hardpoints

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