

## **THE AIRCRAFT**

The L-39 is a single engine, two seater, subsonic aircraft manufactured by Aero Vodochody of the Czech Republic. The aircraft primary mission is basic and advanced training, as well as light attack missions.

### **AIRCRAFT DIMENSIONS (figure 1-1).**

The A/C dimensions under normal conditions of weight, shock absorber compression and tire inflation are as follows:

Wing span	31.042 ft (9.461 m)
Overall length	39.805 ft (12.132 m)
Height	15.493 ft (4.72 m)
Wing area	202.381 ft <sup>2</sup> (18.8 m <sup>2</sup> )
Wing aspect ratio	5.2

### **AIRCRAFT OPERATING WEIGHTS**

Empty weight	7,485 lbs (3,395 kg)
Basic weight	7,640 lbs (3,465 kg) (includes hydraulic fluid, usable engine oil and non-usable fuel).
Max ramp weight	10,520 lbs (4,770 kg)
Max landing weight	9,920 lbs (4,600 kg)
Max. T/O weight	10,360 lbs (4,700 kg)
Typical weights:	
Flight training	(crew of two, internal fuel) 9,980 lbs (4,480 kg)
Ferry mission	(crew of two, internal and wing-tip tanks) 10,230 lbs (4,640 kg).

These weights are approximate and shall not be used for computing aircraft performance. Refer to Appendix A for detailed information.

### **GENERAL ARRANGEMENT (figure 1-2).**

The A/C is divided into three sections: fuselage, wing and tail.

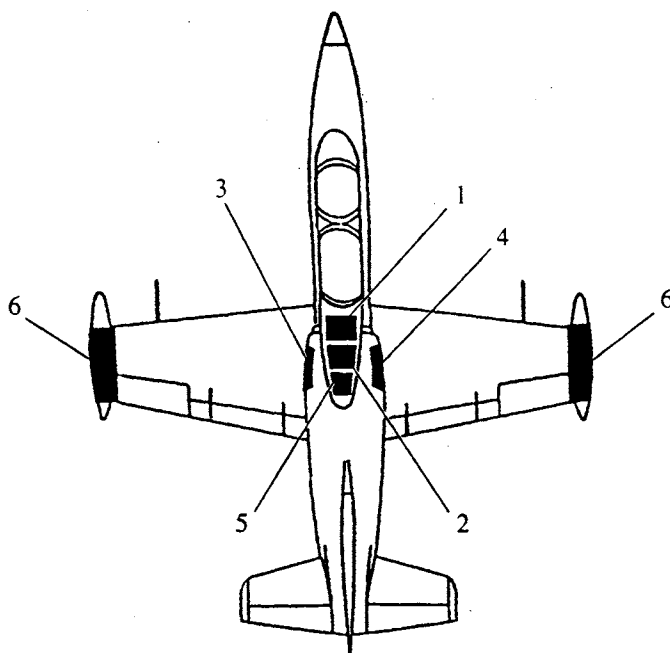
The fuselage consists of forward and aft section to permit engine removal. The forward section further consists of three sections: nose section, pressurized section with pilot's cabin and center section. The nose section contains the nose landing gear and part of the radio and electric equipment and oxygen system components. The pressurized section contains the cabin, which is enclosed by canopies attached by hinges and tiltable to the fuselage right side. The cabin contains the two pilot's cockpits with ejection seats. Each cockpit comprises the instrument panels and lateral consoles. Under the cabin floor there are compartments for electrical, radio, hydraulic, pneumatic and ECS installations. Behind the aft cockpit lies the fuel tank compartment and components of radio, hydraulic and ECS systems, tiltable emergency generator with ram air turbine and fire extinguisher. The aft part of the center fuselage section to which the tail unit is attached contains the engine and APU installation and components of fire system.

The empennage (tail unit) consist of vertical and horizontal stabilizers to which the rudder and elevator are attached respectively.

The wing contains wells for the retracted main landing gear, carries the flaps and ailerons and is fitted with one hard points on each wing for two under-wing pylons of which designed to carry stores. Two nondropable tip tanks are mounted at the wing tips. Two speed-brakes are located on the lower part of the wing and leading edge of each wing carries the pitot-static probe.

### **COCKPIT LAYOUT**

The cockpit layout is shown in figures 1-3 through 1-5 for the forward cockpit and figures 1-6 through 1-8 for the aft cockpit. Figure 1-9 applies to both cockpits.

**NOTE**

Numbers represent fuel tanks numbers

Tank No.	Location	Tank Volume		Fuel Quantity (kg)	
		Liter	Gallon	JP-4	A-1
1-5	Fuselage	1,100	290	850 ± 25	890 ± 25
6	Wing Tip	200	53	160 ± 10	161 ± 10
Total Fuel		1,300	343	1,010 ± 35	1,051 ± 35

**NOTE**

1. These weights are based on JP-4 fuel at 6.48 pounds per gallon and Jet A-1 fuel at 6.74 pounds per gallon (standard day only)
2. Tolerances are due to indication errors with the variations in density resulting from production tolerances, temperatures, etc.
3. For usable fuel quantity deduct 15 pounds (7 kg) from fuselage tanks fuel quantity and/or from total fuel quantities.

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Figure 1-13. Fuel Tanks Arrangements