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NATIONAL ADVISORY COMMITTEE FOR AERONAUTICS.

TECHNICAL MEMORANDUM NO. 195.

NEW ALBATROS COMMERCIAL AIRPLANE "L 58."

By G. Meyer.

From Der Motorwagen, December 10, 1922.

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NATIONAL ADVISORY COMMITTEE FOR AERONAUTICS

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## NEW ALBATROS COMMERCIAL AIRPLANE "L 58" \*

By G. Meyer.

After the Albatros Airplane Company of Berlin-Johannisthal, under the leadership of Mr. Schubert, had designed, in 1920, a commercial airplane "L 57", which could not, however, be built at that time on account of the Entente restrictions, a new Albatros commercial airplane ("L 58") has made successful trial flights over the Berlin-Johannisthal aviation field. Its general design is similar to that of the "L 57". Herewith the Albatros Company has actively resumed airplane building. Four copies of the "L 58" have already been ordered by one of the large German air traffic companies, so that this airplane will be introduced by the spring of 1923 into German air traffic. The "L 58" is designed for carrying passengers and freight. There is room for six passengers in an inclosed cabin, as also a pilot and an observer. Its fuel delivery is simple and sure and it is well protected against fire. It can fly with a free elevator. The load distribution is such that no special trimming device (adjustable damping surfaces or trim-tank) is required. It can fly without trimming, either with or without passengers.

The "L 58" is a monoplane with cantilever wings joined directly to the fuselage. It accordingly belongs to the new school of airplane construction, as founded and developed in Germany (first Junkers monoplane in 1915) and later adopted in other countries (Fokker in Holland, Ernoul in France, De Haviland and Handasyde in England, Curtiss in America, etc.). The wing has a span of 15.94 m

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\*From Der Motorwagen, December 10, 1922, pp. 648-650.

(52' 3.5"), a maximum chord of 3.018 m (9' 10.8"), and a maximum thickness of 0.6 m (1' 11.6"). It is built in three parts for convenience in transportation. The middle section of the wing is attached to the fuselage at four points. The space inside the wing can be utilized for baggage, fuel, tanks, etc. The wing is constructed of wood, with two main spars and plywood covering.

The pilot's space is immediately behind and above the engine. The pilot sits on the left and the observer on the right. In order to obtain enough room for the pilot's compartment, a portion of the front edge of the middle section of the wing is cut away. The cabin, behind the pilot's compartment and below the wing, has room for six passengers. Its dimensions are 2.8 x 1.15 x 1.6 m (9' 3.2" x 3' 9.2" x 5' 3"). It is entered through two doors on the left. There are five windows on either side. The fuselage is constructed entirely of wood in the characteristic Albatros style, with four longitudinal girders and plywood covering. It is tapered to a sharp horizontal edge at the rear.

The landing gear has the usual external appearance with two pairs of V-shaped struts, auxiliary axle, cross bracing in the plane of the front struts and axle suspended by shock absorbers of elastic cable. In the "L 58" the rear, almost vertical, landing gear struts each consist of a pair of struts combined into one by an external covering. They are joined together at the top and attached to the fuselage, while they form a fork at the bottom for the play of the axle. The tires measure 965 x 150 mm (3' 3" x 5.9").

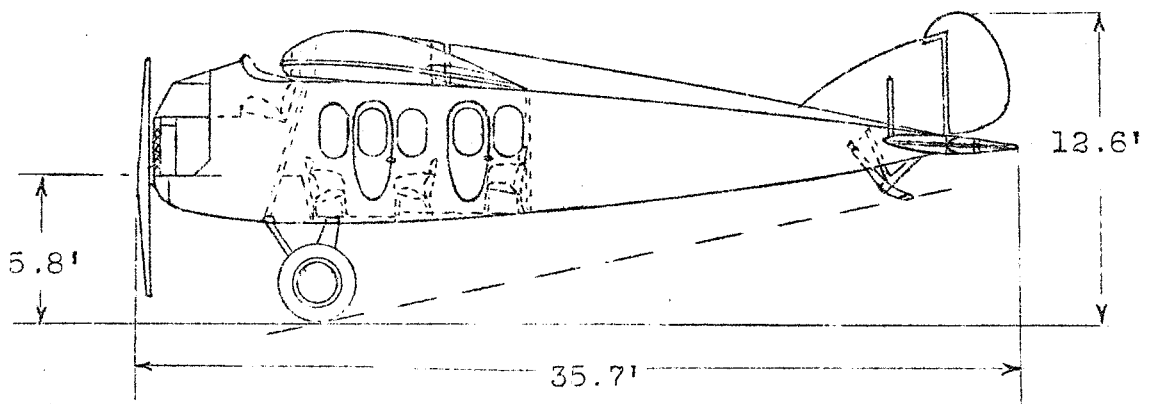
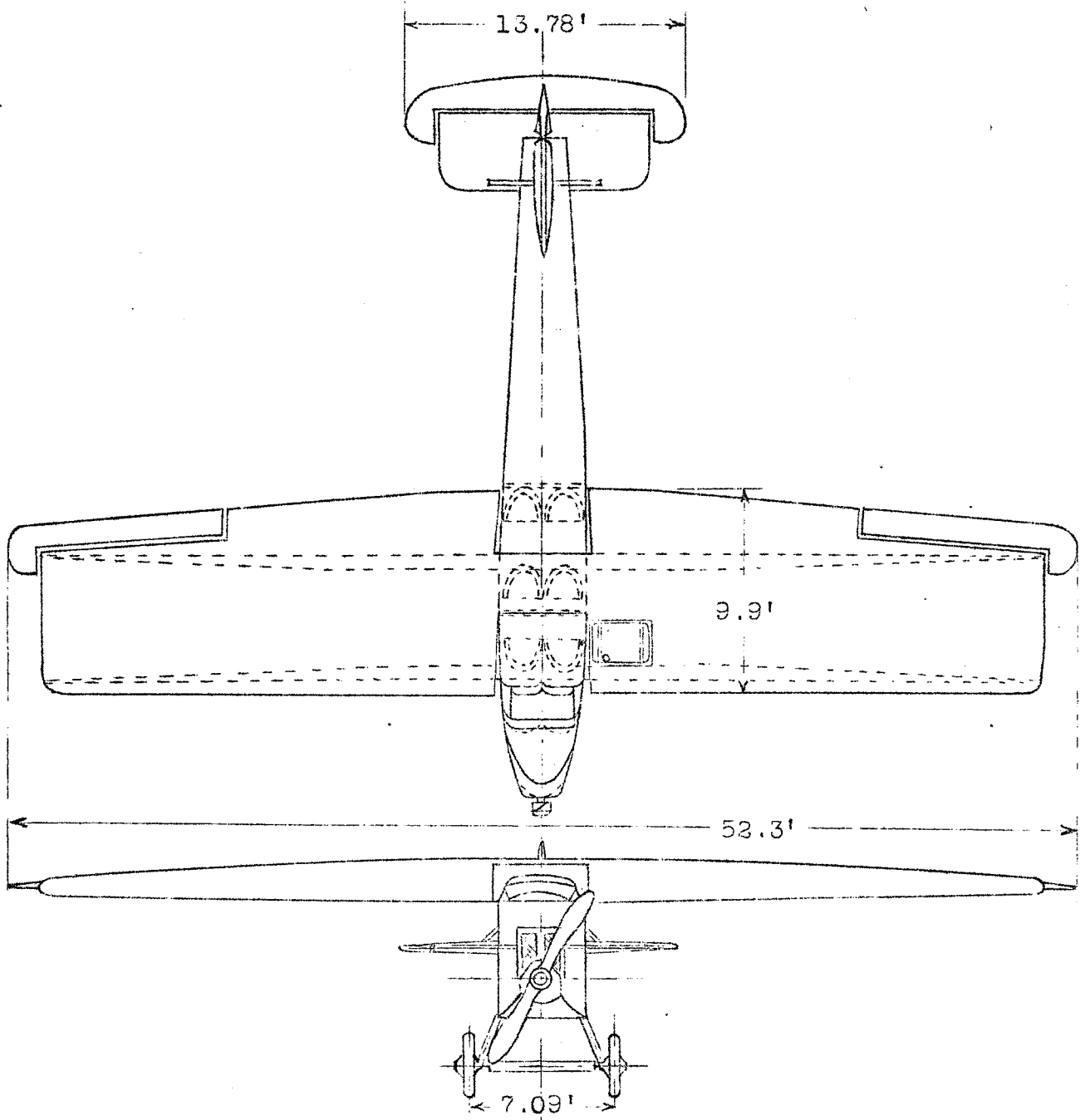
The elevator and rudder are both balanced. The simplest and surest fuel delivery is obtained through the location of the fuel tank inside the wing. The best safeguard against fire is obtained by the greatest possible distance between the fuel tank and the engine. The complete separation of the fuel from the cabin prevents the passengers from being disturbed by the gasoline fumes, thus rendering them less liable to seasickness.

The "L 58" is driven by a 220 HP Rolls-Royce "Falcon" engine, which gives it a speed of 165 km (102.5 miles) per hour at an altitude of 1000 meters (3281 feet).

The chief characteristics of the "L 58" monoplane are:

Type	L 58
Engine	220 HP Rolls-Royce
Weight empty	1250 kg (2756 lbs)
Carrying capacity	880 kg (1940 lbs)
Total weight	2130 kg (4696 lbs)
Load per HP	9.7 kg (21.38 lbs)
Duration of flight	3 hr 45 min.
Speed	165 km (102.5 mi) per hr.
Flight distance about	625 km (388 mi)
Span	15.94 m (52' 3.5")
Length	10.874 m (35' 8")
Height	3.826 m (12' 6.6")

Translated by National Advisory Committee for Aeronautics.



New commercial airplane Albatros "L58"