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FLIGHTPLAN

**News from Altair
Aviation and General
Trading Company Ltd**

Altair Aviation is the sole distributor of the Wassmer Super IV in the British Isles. As such we are deeply concerned with what goes on at Issoire which is where the Wassmer Factory is located. We are sure that this first

issue of Flightplan will interest you greatly since it is mainly concerned with the first flight of the first-ever all-fibreglass aircraft – the Wassmer WA.50.

The Wassmer WA50 for Biggin Hill?

Altair Aviation hope that they will be able to display the world's first four-seat, all fibreglass aircraft on their stand at the 1967 Biggin Hill Air Fair. Wassmer Aviation have intimated that they will be able to interrupt the Test programme in order to show this revolutionary new aircraft to the British aeronautical world. The test programme suffered a slight setback in 1966 because of a mishap on the ground at Issoire – the pilot of another aircraft, not looking where he was going, taxied into the fibreglass prototype and savaged it severely. However, this gave the makers an opportunity to demonstrate how easily fibreglass can be repaired. With some cans of resin and glass matrix, the damage was soon rectified.

The first flight of the W.A.50 took place at Issoire in March, 1966. As a French observer phrased it, "It was an instant of intense emotion".

The aircraft was painted a startling orange and white, with a large W incorporated into the flash on the engine cowling. At the controls was the Wassmer Test Pilot, Gerard TAHON. He carried out taxi-ing trials and one or two short hops, first, to get the feel of the aircraft. As our French observer remarked, "The emotion grew".

Maurice Collard, the Wassmer Chief Designer, glued himself to the radio while the aircraft took off without a hitch, climbed to a 1000 metres, and then made a perfect landing.

Once again, our French observer records, "There was, without doubt, intense emotion".

But joking apart, it must have been a most exciting time. Wassmer had stolen a march on the rest of the aviation world. They had succeeded in using plastics where Piper, Beagle and others had failed.

The Test Pilot said that the W.A.50 had handled beautifully and that he had felt himself at home behind the controls the moment he touched them. Then there were congratulations all round and, later, a formal reception for the Press, Television, Newsreel and Sound Reporters.

MORE THAN 50 BALADOU ORDERED

The Wassmer Super IV 'Baladou' has been on the market now for less than a year and already more than 50 of these aircraft have been ordered. The 'Baladou' is the fixed gear, fixed pitch version of the exceptionally comfortable French touring and executive aircraft known as the Super IV.

The majority of these, of course, will remain in France where, with Government assistance, they cost about £4,000 if sold to a bona fide Aero Club. This is very nice for the French pilot because it means that Aero Clubs can afford to buy sophisticated machines and it means that the executive and touring pilot (to say nothing of his wife), who likes a bit of comfort, can hire at a reasonable price what is just about the most comfortable, single-engined

(contd. on back page)

MORE POWER FOR THE SUPER IV

Wassmer Aviation have announced a stretched version of the Super IV – the Super 4/21 – with a Lycoming 0.540 B engine giving 235 h.p. They expect a 75% cruise speed of 186 m/hr. (162 kts), and a rate of climb, at full all up weight of more than 1,000 ft. per minute. The first flight is due to take place any day now.

The same airframe and luxurious cabin fittings are being used and it has been decided to offer this aircraft only in a

fully-equipped version – night flying equipment, electric flaps and gear, v.p. propeller, Airways' radio, automatic pilot, etc. – for about £11,500., duty paid, certified and delivered in the U.K. This is remarkable value and Wassmer are confident of an enthusiastic reception for this variant of the highly successful Super IV. The powerful Lycoming engine uses about 10½ Imp. gls. an hour. This will give the Super 4/21 an endurance of about 4½ hours and a range of about 800 miles with standard tankage. The useful load remains substantially the same.

THE WA50

The Idea

The birth of the WA.50 has a long history and we can do no more than summarise it here. Four years' ago, the Directors of Wassmer Aviation wrote into their programme the study of a new aircraft. The Sales Department had to write down the specifications of a machine which in five or six years' time would answer the needs of light aircraft owners throughout the world. Taking account of experience

acquired with the 4/5 place Wassmer Super IV, it was decided to build a "compact" 4-seater. There remained the choice of materials. Wassmer had already had considerable experience with laminated fibreglass. This material had been used for 12 or more years for non-loadbearing members of aircraft. They had also experimented with making the hull of a single-seat glider, the Super Javelot, out of fibreglass/resin.

On the other hand, it was evident that the classic materials, be they wood, steel tube or fabric, no longer allowed over a more or less brief production run, for the manufacturers to obtain sufficient productivity, when they considered the evolution of the market and the competition. The metallic construction was

equally out of the question when one considered the short production run. The experience of manufacturers who had undertaken this was ample proof. It was thus logical to turn towards a plastic aircraft.

The new Wassmer aircraft was, thus, to be a small 4-seater, built of laminated fibreglass. It had to be both fast and economical. One of the advantages of fibreglass construction was that a relatively low-powered engine could be used to achieve these 2 objectives. The choice fell on the Lycoming 140-150 h.p.

The broad outline of the aircraft had now been settled upon and it was now up to the Design Office to realise the ideas.

The Study

Around these basic requirements, Maurice Collard and his staff calculated the characteristics of the required aircraft and designed it. A model, designed for wind-tunnel testing, was

the first concrete result of these studies. The next step was to make matrices from which would be fashioned the moulds for the different parts of the aircraft. All this was simple enough, but, at the same time, very searching studies had to be made of the material itself. In this, Wassmer Aviation were helped by various official bodies and were thus able to bring to a successful conclusion, the stringent tests which are necessary when breaking new ground.

Hundreds of tests were carried out on the primary pieces and sometimes this meant that the moulds had to be modified so that the component in question came up to the required standard. All the elements of the aircraft were tried successively. When at last everything was ready, the building of the prototype could begin.

Realisation

The building of the prototype began last Summer. This stage, entrusted to a team of specialists directed by the Design Office, came to an end at the beginning of 1966.

The airframe of the WA.50 is entirely moulded in resin, with the exception of the fuselage centre section to which are attached the wings. At the present time, this centre section

is in metal. The fuselage consists of two shells joined along the vertical axis of symmetry. Each of these shells goes from the firewall up to, and including, the fin. The wing is also built in two parts, one consisting of the upper surface and leading edge spar box; the other the under surface. These two parts are bound to a spar also moulded.

This new technology thus gives a method of construction which is more rational and simple, when compared with traditional methods

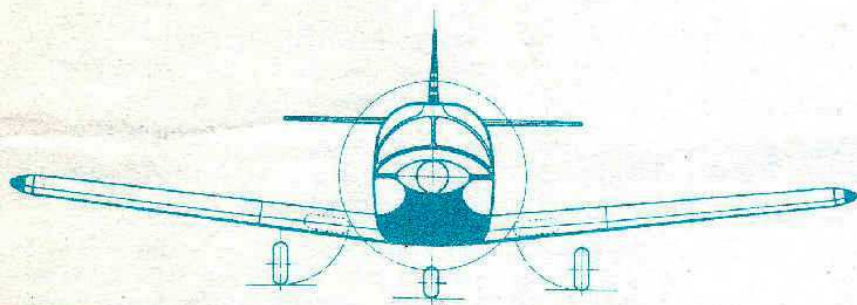
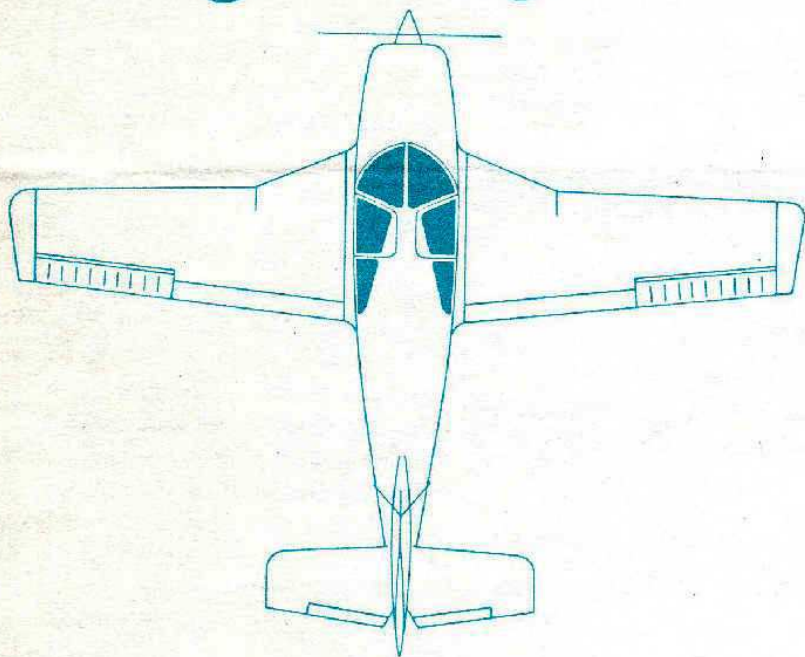
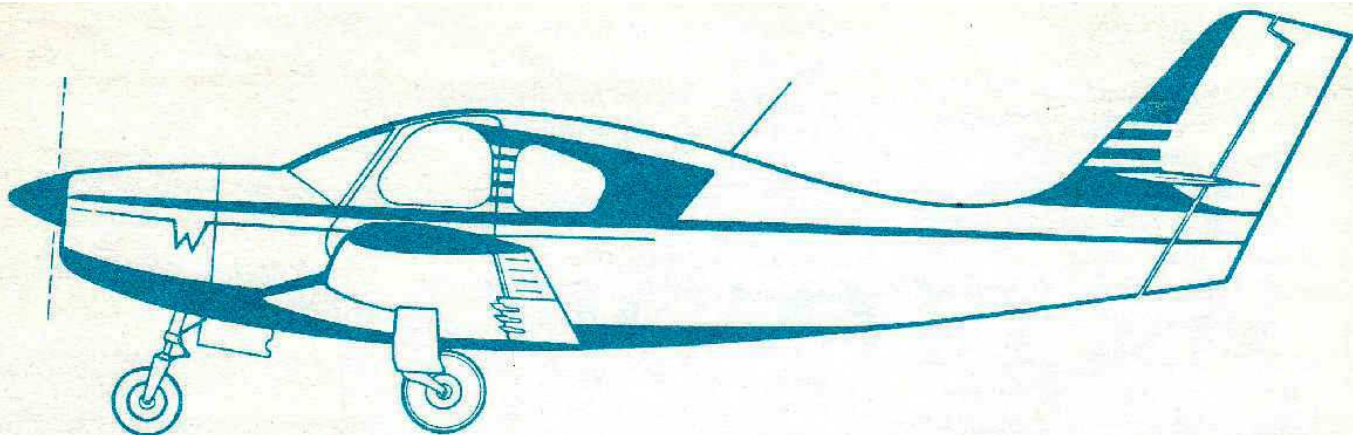
Results

The outcome of all this work is a handsome, 4-seat, low-wing, retracting gear aircraft.

How does it distinguish itself from its competitors? At first sight by the complete absence of protruberances. The Wassmer WA.50 is perfectly clean and thus allows the designer to take the maximum advantage of the laminar profile. This means that it gives good per-

formance for only a modestly powerful motor. Another advantage is the resistance of the material to deterioration; thus maintenance requirements are very slight. The colour scheme of the aircraft is largely carried out by incorporating the colouring matter into the resin itself. Thus, again, there is no need to worry about fading or deterioration of the colour.

Three trump cards which the WA.50 holds are



WASSMER AVIATION WA50



SPECIFICATIONS:

Type	WA.50.	WA.50.
Engine	Lycoming D.320.E.2.A.	150 h.p.
Wingspan	8.60 m.	28ft.2½ins.
Surface	11.4 sq.m.	122.5 sq.ft.
Aspect ratio	6.5.	6.5.
Length	7.15 m.	23ft.5½ins.
Empty Weight	570 kg.	1255 lbs.
All up weight	1000 kg.	2205 lbs.
Useful load	430 kg.	950 lbs.
Fuel	136 litres.	30 gallons.
Wingloading	87.8 kg/m ²	18 lbs./ft. ²
Power loading	6.7 kg/hp.	14.75 lbs./hp.

exceptional comfort, perfect accessibility through two large side doors, and a very low noise level due to the complete absence of vibrations.

Finally, there is one point which must not be forgotten; that is the remarkable material itself. It has great resistance to shock and is very elastic. It is also extremely easy to repair and does not need the attention of a

highly-qualified fitter.

On the commercial side, Wassmer Aviation have great hopes for the WA.50. Although it is a little early to announce a selling price for this aircraft, Wassmer have already said that the advanced technology will allow the WA.50 to be sold for between 5 and 10% less than a similar aircraft built by traditional methods. There is no doubt that this revolutionary

aircraft will capture the interest of the whole world of light aviation and will open up new horizons.

Echoes abroad

The coverage which the International Press gave to the birth of the Wassmer WA.50 has already aroused a great interest abroad.

Hardly eight hours had elapsed after the first flight before Wassmer began receiving demands for information. It was easy to see that keen interest in the new technology of the aircraft and the possibilities for construction have been aroused.

Indeed, it is obvious to everybody that now an aircraft can be built with relatively simple plant and with a relatively unskilled labour force. This, then, is the reason why the word has travelled so far and so fast; it has escaped no-one, particularly no-one on the other side of the Atlantic.

With the WA.50 the export picture for Wassmer looks bright. They are certain that this new aircraft of theirs will help to keep France in second place in the light aviation field.

Utilisation of the 180hp Lycoming

Extracts from the Lycoming Service Instruction No. 1148 of the 21st January, 1966.

Use of the carburettor warm air control on approach: When making an approach, the carburettor warm air control should not be used unless carburettor icing conditions obtain. If the control is pulled out during the descent and if a full power overshoot becomes necessary, it is possible that detonations will result and there will be loss of power under critical conditions.

Note: A few Lycoming Operators' Manuals

contain a statement of conditions under which the carburettor heat control should be used during descent. This has been removed from subsequent editions of the manual.

The first flight of the 1000th Wassmer : Issoire/Saint-Denis de la Reunion

The 1000th aircraft built by Wassmer Aviation was the Wassmer Super IV, Serial No. 104. It flew a little time ago to its destination on the Ile de la Reunion, which is about 50 miles south west of Mauritius in the Indian Ocean. This journey involved a flight virtually the length of Africa, a sea-crossing from Mozambique to Madagascar of about 400 miles, and another sea-crossing from Madagascar to the Island of over 500 miles.

After a leisurely and uneventful journey of about 15 days, the aircraft landed on the aerodrome of Saint-Denis-Gillot on the 12th March, in the middle of an enthusiastic crowd.

The pilot on this jaunt was M. Dufau, who was accompanied by his young wife.

Wassmer on the Water

Wassmer Aviation is a busy little company and now forming a boat division.

The boat with which they are launching this enterprise is a strange creation called the 'Triplane'. It is a hydrofoil with a concave bottom and was invented by M. Tiercelin. It is a strange looking object but it is said to have a remarkable turn of speed. This year, the triplane is being tuned-up and perhaps next

year, the Wassmer boat division will be looking pretty closely at the world's speed record for sailing boats.

The Baladou certified in Britain

The Altair Aviation demonstrator 'Baladou' G-ATSY, has now been certified in the private category, with one or two minor modifications. A stall warning vane has been fitted and this is coupled to a red warning light in front of the pilot. A light rather than a horn was chosen because if the horn should sound on landing timid passengers are very often inclined to jump out of their skins.

Moving the battery from the baggage compartment to the firewall enables the aircraft to be loaded to its full all up weight of 2650 lbs. perfectly easily without overstepping the rearward C.G. A couple of bonuses derived from this small modification are, the saving of a small amount of weight in the heavy cables to an from the battery, and the availability of the battery box underneath the main luggage compartment for untidy items such as picketing ropes, etc. The fuel selector cock has also been modified to a simple pointer.

The vernier throttle, which is standard on all French machines, is now being offered as an optional fitting on British machines.

Our thanks are due to Hugh Kendall, who test flew the 'Baladou' and the other hardworking and long-suffering people at the A.R.B. who so kindly helped with certification of the 'Baladou' in Britain; also to McAlpine Aviatique who have carried out the work on the aircraft

flew the South Atlantic in 1964 with Madame Pellissier, their Marketing Director, at the controls, had won considerable acclaim but was rather out of the price range for the popular market. All the same, they had made and flown over a hundred of them, which works out at about 30 a year. Now with the added impetus

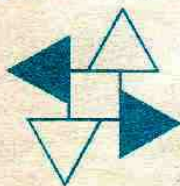
given by the 'Baladou', it looks as though production is going to jump to 80 a year very shortly.

Both aircraft have won for themselves considerable acclaim, not only for their exceptional comfort, but also for their remarkable handling qualities, economy and ease of maintenance

continued

aircraft on the market today. No wonder flying is such a popular sport in France!

Wassmer Aviation have, until the advent of the 'Baladou', been particularly keen on retracting gear machines. Their Super IV 'Sancy', which



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