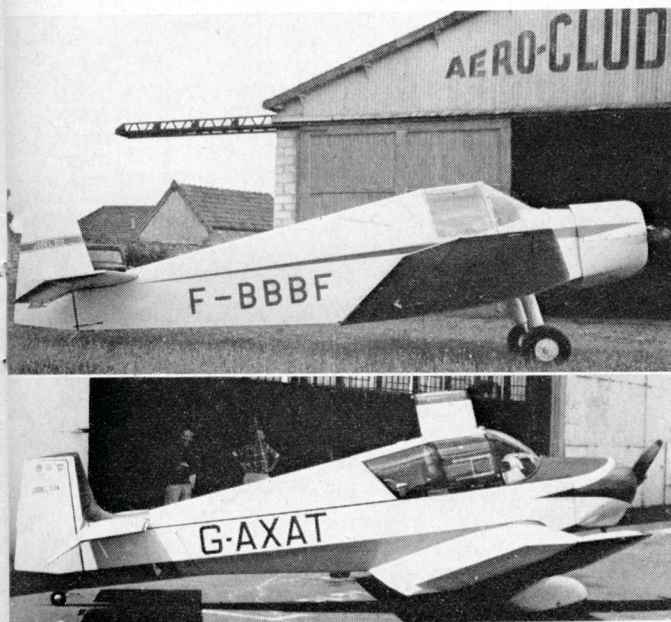


AIRCRAFT DESCRIBED No. 189

JODEL

D.117



TO ANYONE with just the slightest knowledge of aviation affairs, the name of Jodel immediately stimulates thoughts of France, and her vast movement of light aircraft, a huge number of which have been self-made by their owners. To ourselves, the name also brings other memories, for although at a most conservative count there must have been over 5,000 Jodel types registered in the World we shall always recall our encounters with designer Jean Délémontez in his modest working dress of khaki overalls and sandals. If ever there was an unaffected aircraft designer it would be Jean. It has never been too late to call upon him (twice while working on prototypes at 11 p.m.) nor has his sage advice ever failed, and this includes gastronomic as well as aviation subjects! For that reason we remain addicted to the Jodel local brew of *Cotes de Beaune*—a Burgundy that is as reliable as the products of the tiny Beaune workshop and drawing office.

Jean Délémontez started to make his first single seater, the 'Bébé' for an old Poincard motor in 1946. His father-in-law, Edouard Joly, made the first test hop (inadvertently) in January 1948 and so the Jodel partnership was created. That first D.9 was to be followed by over 600 other Bébés (547 of them in France up to 31st December, 1967) throughout the World, and it was not long before the encouragement of Silvain Badez and the Doctor Houard made the two-seater an inevitable derivation.

It was preceded by a design exercise for a three-seater, the D.10, of which the wing was made. The idea came to Jean that a two-seater was a far better proposition and he proceeded with two—in five months! One, the original D.11 was fitted with the 45 h.p. radial Salmson, still a very highly prized possession among home-constructors. The other had a 75 h.p. Minié, and it was this variant which first entered series production with a small fleet of ten examples.

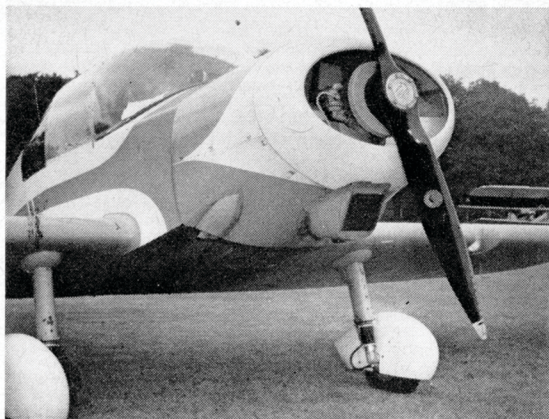
The Continental C-90-14F flat four air cooled engine was to prove the making of the D.11 and when a production line was established by the Société Aéronautique Normande under the guidance of Lucien Querey at Bernay, and also by Wassmer in Paris and the South, the Jodel D.117 and D.120 became a familiar sight at any French aero club. Thanks to a far-sighted Government policy which has since resulted in French aviation industrial ascendancy, the clubs could claim generous grants for purchase and operation of training types. Total commercial production of the D.117 and D.120 amounted to about 800 examples but if one counts all the D.11 derivatives, the total is an outstanding 3,400, this including no less than 799 made by amateurs.

Why should the Jodel be so popular in France (and for that matter in Germany, Switzerland, Spain, Sweden, Canada and the USA, totals for which are not included above) and yet only recently has the type become favoured in the U.K.? There are, at present, only 13 examples of the D.117 and four D.117As on the British register, though the more sophisticated DR series developed by Pierre Robin

Top left, one of a fleet of Wassmer D.120s operated at Toussus-le-Noble near Paris for club training in overall blue scheme with maroon and white trim. Design is identical to the S.A.N. built D.117. Next photo shows Margaret French polishing hubby's D.117A, a fairly recent acquisition from the Continent where it was registered F-BITJ. At bottom left is a side elevation of George French's Jodel in its red and white scheme. It compares with our photo of the first D.11 prototype with a radial Salmson engine at its birth-place, Beaune. Note how the wing design has not changed, though small spoiler type flaps are fitted to the 117A.

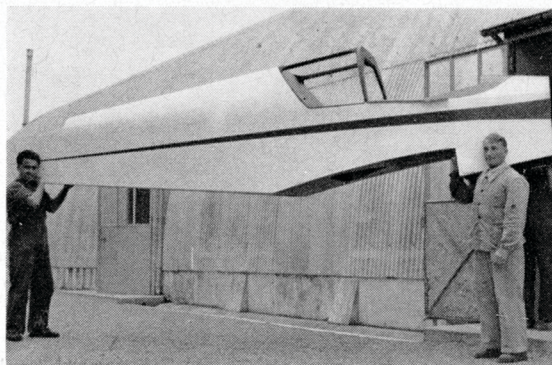
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through to the elegant 'Regent' have found wider acceptance. The answer lies partly in the official preference for the Druine design features in this country, and partly because for a long time the huge box spar upon which the whole of the wing design is based, was generally considered to be a tougher proposition than most British amateurs are prepared to tackle. It is a pretty big piece of furniture to make by any standards, and the 14 degrees of dihedral, combined



with a 6 degree twist makes construction critical in this region. But once this part is overcome, the Jodel is just a 'blown up' model. Section is basically NACA 23012 though Délémontez has talked of some with 15 per cent thickness/chord ratio and the Wassmer D.120s are all 23013. Only real difference among the D.11 wings is the use of the air brake under the wing as found on the 117A, amateur built 119A (same design) the Wassmer 120A and AR. These brakes, adapted from Wassmer sailplane designs, are used to increase rate of descent. That thick wing and the light loading of the Jodel provides a docile control through a wide speed range and a floating glide which can be embarrassing on small strips.

Reliability of the D.117 has enabled it to establish many records. Flights to South Africa, Madagascar, around the Sahara have been taken into its stride. In 1958, a formation of 39 (imagine that!) made a



One of the 350 D.117s made by S.A.N. departs the paint shop at Bernay looking nothing more than a greatly enlarged model. Assembly and indeed the construction of all the Jodel series is strikingly similar to aeromodelling techniques. At left, a nasal view of a D.117 sans spinner shows the typically sharply tapered French propeller and the simple lines of the cowlings.

Mediterranean tour from the works at Bernay, covering in the ten-day trip, Corsica, Tunisia, Algeria, Portugal, in a demonstration that few other types could match for reliability and economy. It could also, in the hands of the late Lucien Biancotto with whom Délémontez was closely associated, perform some remarkable aerobatics; but that is *not* the purpose of the design!

Success of the basic type which is the subject of our drawing and must always be regarded as the true Jodel, led to the much larger D.140 Mousquetaire, then the sleek Ambassadeur, the Mascaret, the Sicile, Excellence, Dauphin and Regent. In each of these, the fuselage lines have altered slightly, a fixed fin has been used, the undercarriage has become a tricycle in the ultimate Regent, and, of course, the power has been increased by leaps and bounds. The trainer has become a distance tourer with high standards of comfort, full radio aids, and latterly with trailing edge flaps. To the tremendous credit of the designers, that kinky basic wing design remains unaltered throughout the range. Known as Deremontez's trapezoidal it is incredibly strong being the unique trade mark of the world's most successful 'amateur' aircraft designer.

Dimensions (D.117)

Span: 8m22 (26 ft. 11in.), Length: 6m17 (20 ft. 6 in.), Height: 2m07 (6ft. 10 in.).

Left, A.D.117 spar receives its box facing, set upon trestles and with the tip angles aligned by two pieces of timber tacked to the tips. Note the hand hold is 'built-in' the spar end capping. Centre is the spar having its centre panel ribs slid over and tacked. This simple operation over the large box eliminates common jiggling. Right, the trademarks which have earned France its high place in light aviation. Green star signifies that a Government grant was made towards purchase.

