

BEAGLE

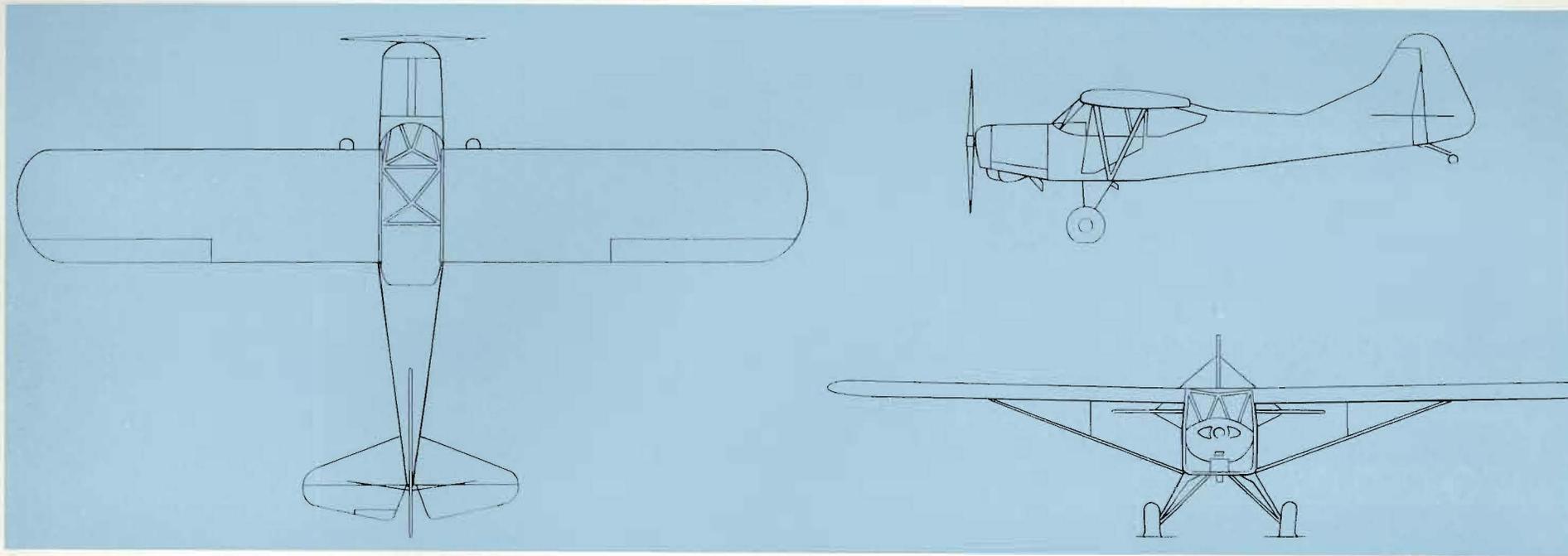
D5/180



General purpose light aircraft

BEAGLE-AUSTER AIRCRAFT LTD · REARSBY AERODROME · REARSBY · ENGLAND

UNSURPASSED VERSATILITY



LEADING PARTICULARS

Overall dimensions

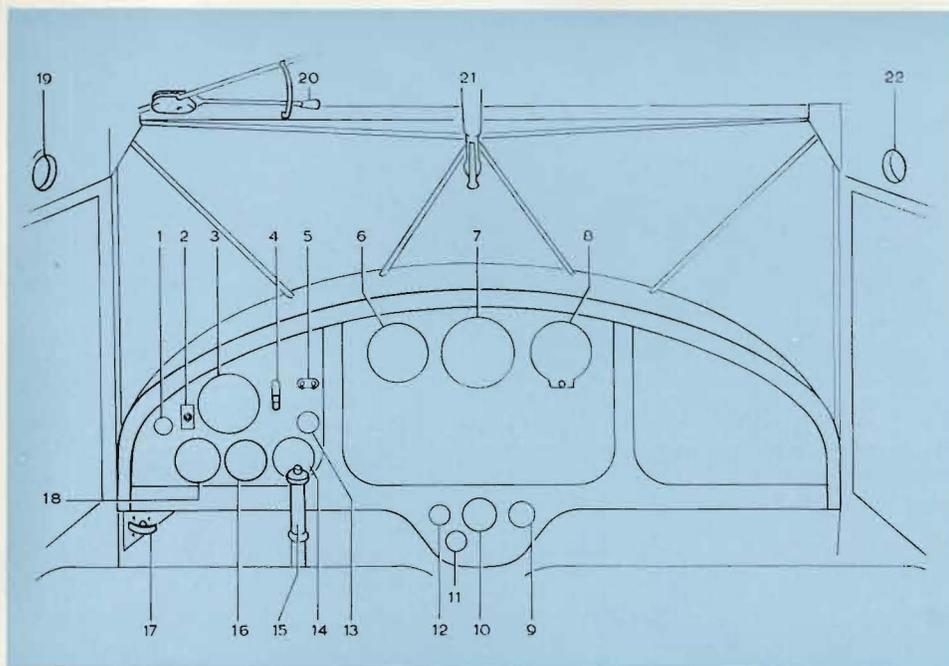
Wing span	36 ft. 0 in.	<i>10,97 m.</i>
Length overall	23 ft. 4½ in.	<i>7,12 m.</i>
Horizontal tail span	10 ft. 0 in.	<i>3,05 m.</i>
Height overall (tail down)	8 ft. 4 in.	<i>2,54 m.</i>
Track	6 ft. 0 in.	<i>1,83 m.</i>

Power plant

Engine type	Lycoring 0-360-A2A
Propeller type	McCauley 1A/200/FA/8243 high-thrust, metal, fixed-pitch

WITH ECONOMICAL PERFORMANCE

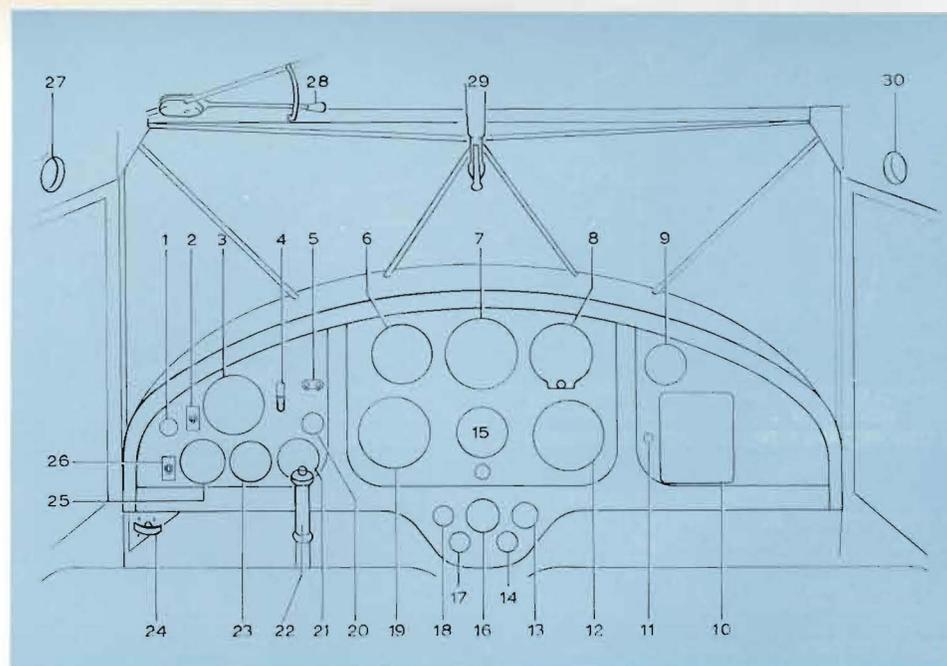
INSTRUMENTS AND CONTROLS



STANDARD PANEL

- | | |
|------------------------------|--|
| 1. Generator Warning Light | 12. Mixture Control |
| 2. Generator Field Switch | 13. Starter Button |
| 3. Engine Speed Indicator | 14. Ammeter |
| 4. Battery Master Switch | 15. Control Column |
| 5. Ignition Switches | 16. Oil Pressure and Temperature Gauge |
| 6. Air Speed Indicator | 17. Parking Brake |
| 7. Turn and Bank Indicator | 18. Cylinder Temperature Gauge |
| 8. Altimeter | 19. Fuel Gauge |
| 9. Ki-Gass Priming Pump | 20. Trim Control |
| 10. Throttle | 21. Flap Control |
| 11. Carburettor Heat Control | 22. Fuel Gauge |

Dual flying controls are fitted as standard, at no extra cost, and a dual set of brake pedals is available as an optional extra. The location of the instruments is arranged for easy reading from either side of the cabin, and they are quite accessible to either front-seat occupant. Basic instruments include Cylinder Temperature Gauge, Oil Temperature Gauge, Air Speed Indicator, Oil Pressure Gauge,



BLIND FLYING PANEL

- | | |
|------------------------------|--|
| 1. Generator Warning Light | 16. Throttle Control |
| 2. Generator Field Switch | 17. Carburettor Heat Control |
| 3. Engine Speed Indicator | 18. Mixture Control |
| 4. Battery Master Switch | 19. Turn and Bank Indicator |
| 5. Ignition Switches | 20. Starter Button |
| 6. Air Speed Indicator | 21. Ammeter |
| 7. Artificial Horizon | 22. Control Column |
| 8. Altimeter | 23. Oil Pressure and Temperature Gauge |
| 9. Vacuum Gauge | 24. Parking Brake |
| 10. Plessey Radio Controller | 25. Cylinder Temperature Gauge |
| 11. Radio Circuit Breaker | 26. Navigation Light Switch |
| 12. Rate of Climb | 27. Fuel Gauge |
| 13. Ki-Gass Priming Pump | 28. Trim Control |
| 14. Cabin Heat Control | 29. Flap Control |
| 15. Direction Indicator | 30. Fuel Gauge |

Ammeter, Engine Speed Indicator, Turn and Bank Indicator, Altimeter and the standard specification of the D5/180 also includes electric starter, generator, sound-proofing and carpets. A full range of optional extra equipment is available for this aircraft, which include, blind flying instruments, V.H.F. radio, extra long range fuel system, wheel spats and lift strut fairings.

OVERSIZE TYRES

Oversize low pressure tyres with large contact area enable the D5/180 to use almost continually rough or soft-surfaced strips under conditions that would bog down other aircraft with normal sized wheels. The wheels are equipped with hydraulically operated disc brakes, which are independently controlled by toe pedals.

The photograph shows the size of the D5/180 wheel relative to the wheel taken from a typical aircraft in its class.



OBSERVATION

The fuselage structure permits easy installation of cameras for aerial survey or reconnaissance work. A completely transparent starboard door may be fitted to facilitate ground observation and oblique air-to-ground photography.



SEAT ADJUSTMENT

For long life the cabin sides and seats are finished in hard-wearing washable Vynide. This material is nearly impossible to tear, is rot-proof and unaffected by extremes of climate. Handily placed levers provide finger tip adjustment of the two front seats.

FLOAT-PLANE

By the fitting of floats even wider operational scope is achieved. With its lusty performance the D5/180 makes an outstanding float-plane. The all metal floats are specially treated to resist corrosion. As a float-plane the D5/180 is still a full three-seater.



ESTIMATED PERFORMANCE

(I.S.A. Conditions)

Max. all-up weight, 2650 lb. (1200 kg.)

All-up weight	2650 lb.	1200 kg.
Time to unstick (calm, no wind)	27 sec.	27 sec.
Best rate of climb (70 m.p.h. I.A.S.)	510 ft./min.	2,59 m/sec.
Rate of climb, with take-off flap (55 m.p.h. I.A.S.)	480 ft./min.	2,44 m/sec.
Max. level speed (sea level)	102 m.p.h. I.A.S.	164 km/hr.
Normal cruise speed (75% power)	89 m.p.h. I.A.S.	143 km/hr.
Service ceiling	10,500 ft.	3200 m.
Absolute ceiling	12,500 ft.	3810 m.

Min. all up weight 2100 lb. (950 kg.)

Light solo weight; 32 galls fuel

All-up weight	2100 lb.	950 kg.
Time to unstick (calm, no wind)	17 sec.	17 sec.
Best rate of climb (70 m.p.h. I.A.S.)	785 ft./min.	3,98 m/sec.
Rate of climb, with half-flap (55 m.p.h. I.A.S.)	745 ft./min.	3,78 m/sec.
Max. level speed (sea level)	105 m.p.h. I.A.S.	169 km/hr.
Normal cruise speed (75% power)	93 m.p.h. I.A.S.	149 km/hr.
Service ceiling	15,500 ft.	4702 m.
Absolute ceiling	18,500 ft.	5640 m.

TYPICAL LOADINGS

(A.U.W. 2650 lb. (1200 kg.))

Example A

Aircraft basic weight	1710 lb.	775 kg.
Pilot	165 lb.	74,6 kg.
Oil	11 lb.	5,0 kg.
Fuel (30 galls)	214 lb.	97,1 kg.
Available for baggage etc.	550 lb.	248,3 kg.
	<hr/>	
	2650 lb.	1200,0 kg.

Example B

Aircraft basic weight	1710 lb.	775 kg.
Pilot and front passenger	330 lb.	148,6 kg.
Rear seat (single)	14 lb.	6,4 kg.
Rear seat passenger	165 lb.	74,6 kg.
Fuel (24 galls)	170 lb.	77,1 kg.
Oil	11 lb.	5,0 kg.
Available for baggage etc.	250 lb.	113,3 kg.
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	2650 lb.	1200,0 kg.

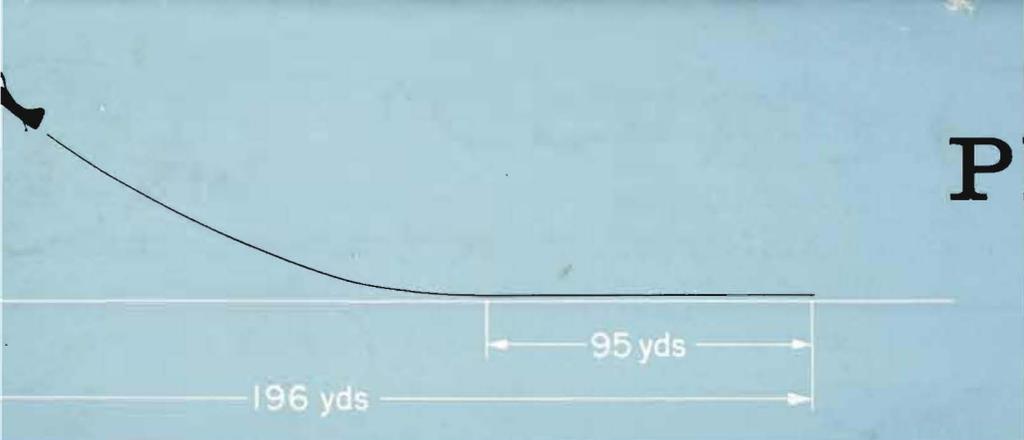
Example C

Aircraft basic weight	1710 lb.	775 kg.
Rear seat (back)	20 lb.	9,1 kg.
Pilot and front passenger	330 lb.	148,6 kg.
Rear seat passenger	165 lb.	74,6 kg.
Oil	11 lb.	5,0 kg.
Fuel (32 galls)	230 lb.	104,3 kg.
Available for baggage etc.	184 lb.	83,4 kg.
	<hr/>	
	2650 lb.	1200,0 kg.

PERFORMANCE

LANDPLANE

(I.S.A. Conditions)



STOL

Short air strips at high altitudes present no problems to the D5/180, even when fully loaded the aircraft is air-borne after a run of less than 200 yards. At take-off acceleration is rapid, a steep climb follows, easily clearing obstacles often encountered on temporary air-strips.

MAX ALL-UP WEIGHT

Max. all-up weight, 2400 lb. (1090 kg.)		
Max. speed, sea level	125 m.p.h. I.A.S.	201 km/hr.
Max. cruise	109 m.p.h. I.A.S.	175 km/hr.
Stalling speed, flaps DOWN	35 m.p.h. I.A.S.	56 km/hr.
Stalling speed, flaps UP	44 m.p.h. I.A.S.	71 km/hr.
Initial rate of climb	800 ft./min.	4,06 m/sec.
Service ceiling	14,500 ft.	4420 m.
Absolute ceiling	17,000 ft.	5190 m.
Take-off ground run	498 ft.	152 m.
Take-off distance to clear 50 ft.	1095 ft.	334 m.
Landing distance from 50 ft.	1380 ft.	421 m.
Landing ground roll	380 ft.	146 m.
Range (still air, normal cruise, no reserve)	582 st. miles	937 m.

LIGHT (SOLO) WEIGHT

Light (solo) weight; 10 galls fuel 72 lb. (33 kg.)		
All-up weight 1750 lb. (795 kg.)		
Max. speed, sea level	128 m.p.h. I.A.S.	206 km/hr.
Max. cruise	112 m.p.h. I.A.S.	180 km/hr.
Stalling speed, flaps DOWN	30.5 m.p.h. I.A.S.	49 km/hr.
Stalling speed, flaps UP	38 m.p.h. I.A.S.	61 km/hr.
Initial rate of climb	1330 ft./min.	6,76 m/sec.
Service ceiling	19,500 ft.	5950 m.
Absolute ceiling	21,000 ft.	6400 m.
Take-off ground run	285 ft.	87 m.
Take-off distance to clear 50 ft.	588 ft.	179 m.
Landing distance from 50 ft.	1080 ft.	330 m.
Landing ground roll	330 ft.	128 m.

The take-off performance quoted is based on results obtained in flight test of the D5/180 aircraft and supersedes the estimated performance quoted formerly.

All the Descriptions and Illustrations and also Specifications and Particulars relating thereto, are subject to variation/modification and shall not be deemed to form a part of any contract.

TYPICAL LOADINGS

A.U.W. 2400 lb. (1090 kg.)

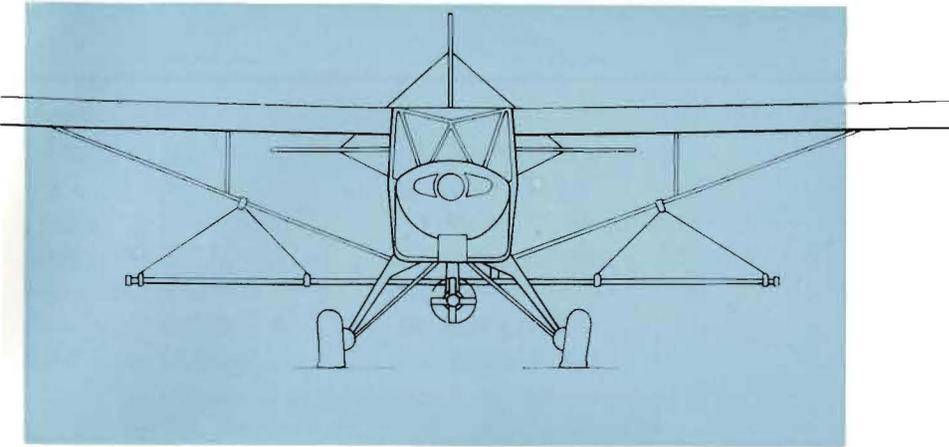
Example A (Pilot and 2 passengers)

Basic weight	1482 lb.	673 kg.
Fuel: 32 galls.	230 lb.	105 kg.
Oil: 1 1/4 galls.	11 lb.	5 kg.
Crew: 3 persons	495 lb.	224 kg.
Rear seat	14 lb.	6,5 kg.
Available for baggage, special equipment etc.	168 lb.	76,5 kg.
	<hr/> 2400 lb.	<hr/> 1090,0 kg.

Example B (Pilot and fuel for 1 hour)

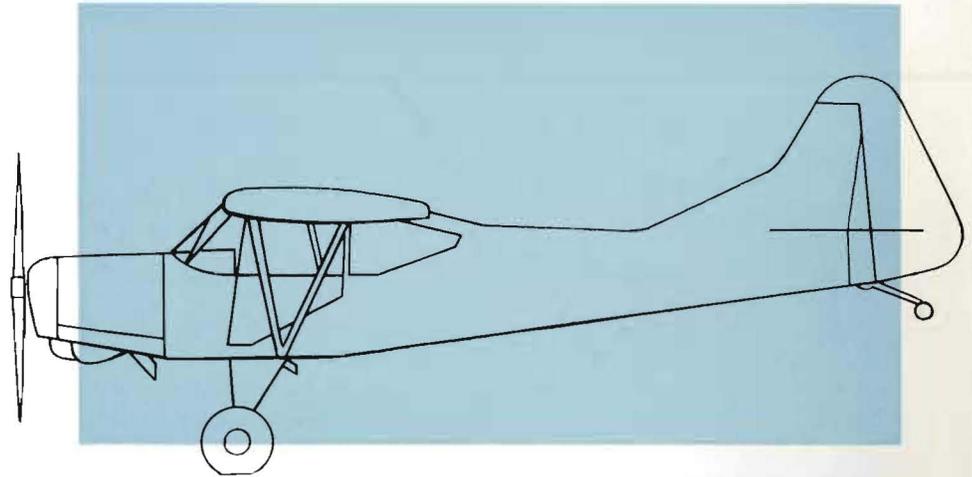
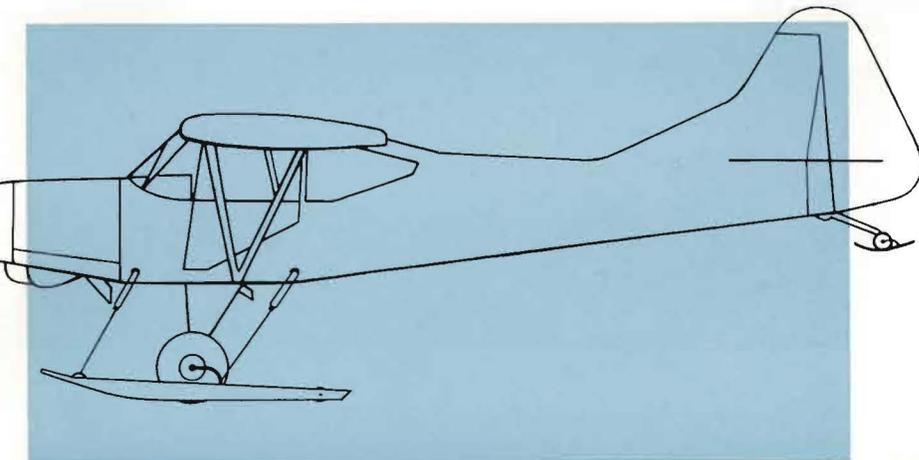
Basic weight	1482 lb.	673 kg.
Pilot	165 lb.	75 kg.
Oil: 1 1/4 galls.	11 lb.	5 kg.
Fuel: 10 galls.	72 lb.	33 kg.
Available unused payload	670 lb.	304 kg.
	<hr/> 2400 lb.	<hr/> 1090 kg.

VERSATILITY



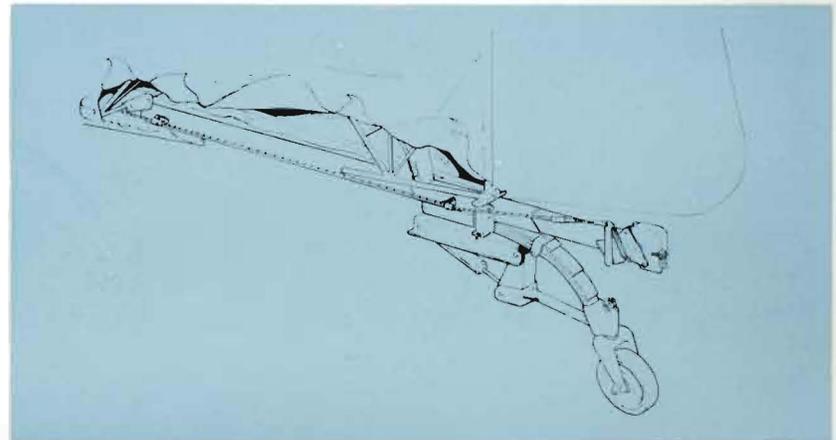
Safe in operation, dependability, and quick simple maintenance, make the D5/180 ideal for aerial spraying. Special equipment for insect control may take the form of either boom and nozzle assembly or a set of four rotary windmill atomisers. In either case the distribution equipment is mounted beneath the wings and supplied by a windmill driven boom from a 70 gallon tank installed in the cabin. At the close of the spraying season the spray-gear may be removed and the aircraft turned to further profit as a business transport, or for private flying.

Ski installation has little effect upon performance and the change over from normal wheel under-carriage involves little work and can be carried out in a very short time. In ski form the D5/180 with its outstanding STOL performance is ideally suited for mountain rescue duties.



A superior all-rounder the D5/180 is an outstanding general performance aircraft. It is the answer to the need for a relatively cheap aircraft capable of working hard under strenuous climatic and operational conditions. The D5/180 has a degree of performance usually found only in the more expensive aircraft. In its 6 ft. long cabin there is ample room for three adults, or two adults plus two children in a rear bench-type seat. The D5/180 is quite at home in high land or plain. The latest plastic based Butyrate paint finishes applied to the steel fuselage frame and all metal wing skeleton make the aircraft particularly suitable for operation in hot and humid territories.

Complete harmony of controls and perfected flying characteristics together with full panoramic visibility made the D5/180 eminently suitable for glider and banner towing work. Either single or two-seat Sailplanes may be towed using this simple-to-fit tow hook.



GENERAL INFORMATION

The BEAGLE D5/180 is a three (occasional four) seat general purpose light aircraft having a considerable load carrying capacity and excellent short take-off and landing characteristics.

It is a single-engine high wing monoplane with a fixed undercarriage fitted with large section tyres to facilitate operation in adverse conditions.

The D5/180 features a tubular-steel fuselage and an all-metal wing structure. The airframe is extremely robust and well suited for rapid 'on-site' repairs, the strength of the structure being in no way impaired by damage to the fabric covering.

In this brochure the D5/180 is presented in various forms. The Lycoming O-360-A2A engine rated at 180 b.h.p. is fitted with a specially-developed high-thrust metal propeller for the best take-off and climb performance. In addition, the undercarriage has been designed to enable the wing to operate at very high incidence during take-off.

A large range of approved operational equipment is available which, when fitted to the D5/180 allows a variety of alternative duties to be performed of which Glider Towing, Mountain Rescue, Aerial Photography are but a few. Even wider operational scope is permitted by the fitting of floats or skis.

In standard form the D5/180 holds type certification to British Civil Airworthiness Requirements and is in quantity production for military and liaison duties.

CONSTRUCTION

General

The airframe is a tubular metal structure covered by all-weathering plastic-based Butyrate impregnated fabric. Wings are readily detachable and are braced by streamline section Vec-struts. The tail unit is removable.

Fuselage

The fuselage is an all-welded structure of seamless steel tube which is, in the main, suitably fabric-covered. The cabin roof is transparent. Sun resistant tinted material is available on request without extra cost.

Wings

The constant-chord wings are independent units built up on two metal spars. Light alloy sheet covers the leading edge.

Ailerons

Internally-balanced ailerons are of advanced design and extend from outboard of the flaps to the wing tips, they are of metal construction and are fabric-covered.

Flaps

Wing flaps are of the split type, of all-metal construction. Operation is effected by a 3-position central overhead lever fitted with a "squeeze grip" release. The take-off setting is 25 deg. and the landing setting of 50 deg. gives a steep approach in a nose-down attitude, providing the pilot with an excellent view of the landing strip.

Tail unit

Oilite bearings are employed at the elevator and rudder hinge points. A fixed trim tab is riveted to the trailing edge of the rudder and an elevator trim tab is hinged to the inboard end of the port elevator.

Undercarriage and brakes

The undercarriage comprises two independent main units and a steerable but fully-castoring tail-wheel.