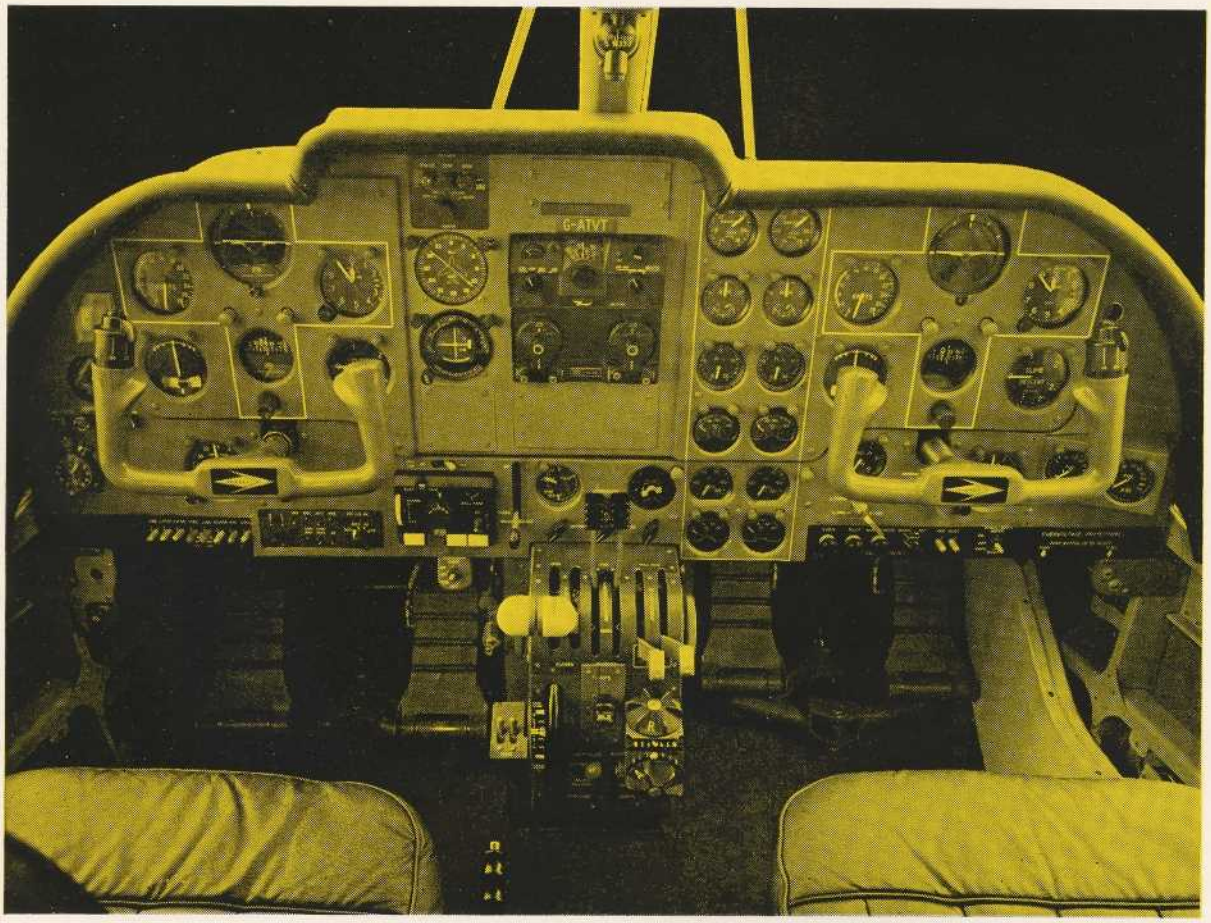
BEAGLE NEWS

BEAGLE AIRCRAFT

Number 7



SPERRY IN THE BEAGLE B.206-S

SPL.45 Autopilots have been ordered
in quantity for the Beagle B.206-S
in addition to Sperry panel instruments.
The military Beagle Bassets
are similarly equipped with
Sperry instruments and autopilots.

SPERRY **AERONAUTICAL GROUP**

SPERRY GYROSCOPE COMPANY LTD., BRACKNELL, BERKS. PHONE: BRACKNELL 3222

BEAGLE NEWS

EDITOR: F. J. Jackson

CONTENTS

Above
GOOD COMPANIONS—The first two of the new breed together over Hove, Sussex.

Front cover photograph
Returning from a successful first flight, 4th October, 1967.
The new Pup-150 over Peacehaven, Sussex.

BEAGLE AIRCRAFT LIMITED
Shoreham Airport Shoreham-by-Sea Sussex England
Telephone: Shoreham-by-Sea 2301

Editorial

1968 — A GOOD YEAR FOR PUPS . . . Two versions of the Pup are coming into production this Spring. They are the two-seat Pup-100 designed primarily as a minimum cost two-seat trainer/tourer, and the Pup-150 designed as a two/three seat trainer with increased performance for hot and high conditions.

These aircraft are being manufactured at both Shoreham and Rearsby and represent a new era in single engine light aircraft construction.

They are indeed the sports cars of the air, cleared for aerobatics and capable of accepting full radio and navigational aids for touring and of meeting all training requirements in both the civil and military role.

The new production facilities, referred to elsewhere in the "NEWS", will enable us to meet the evergrowing demand for this latest Beagle product.

FOR A BRIGHTER "NEWS" . . .

In addition to keeping owners and operators advised of the latest Beagle developments, one of the main purposes of the "NEWS" is to provide readers with items of interest relating to the operation of Beagle aircraft throughout the World. Whilst it is a simple matter for us to deal with those items emanating from within this Company, it is only with the help of our readers that we can include articles on World-Wide Beagle activities.

In this latter connection we would be pleased to receive items which may be considered to be of interest to other readers. Club news, where and how Beagle aircraft are operating, unusual tasks by Beagle pilots, these are just a few of the many topics which have a wide interest and will be gratefully received. Photographs of personnel, establishments, and Beagle aircraft in interesting overseas settings will be most welcome.

PUP progress flight testing and development

FLIGHT TESTING

The first three prototype Pups have been engaged in the certification programme.

The first aircraft (001) is the prototype Pup-100 G-AVDF with 100 h.p. Rolls-Royce-Continental 0-200-A engine.

The second (002) is the structural test airframe and has been subjected to tests in the structural test house at Shoreham concurrently with the flight test programme on the other two aircraft.

The third aircraft (003) is the prototype Pup-150 G-AVLM with 150 h.p. Lycoming 0-320 engine.

PUP-100

The prototype Pup-100 G-AVDF made its first flight at Shoreham on the 8th April 1967 and it was immediately apparent that the aero-dynamicists had got their sums right and that this was indeed going to be a very good little aeroplane. Stability about all axes was excellent and the controls had a pleasantly "European" harmony and effectiveness. The trim change with power was suitably mild and the trim change with flap was virtually non-existent (this coupled with the generously high limiting flap speed of 100 kts. makes the Pup easy to handle in a busy traffic pattern). The well damped oleo pneumatic undercarriage gives a comfortable ride over the worst bumps that Shoreham has to offer and is equally at home on smooth tarmac surfaces.

Crosswind take-offs and landings have been made with 25 kts. wind at 90 deg. and the aircraft has been taxied and flown in gusts up to 45 kts.

The early flight testing was aimed at obtaining a Special Category Certificate of Airworthiness to enable the aircraft to be flown at the Paris Air Show and in addition to normal handling tests, this included an aerobatic clearance for which the A.R.B. requires preliminary spinning trials (1 turn).

The Pup's public debut at Paris caused approximately ten days' delay in the already "tight" certification flight test programme, but it was considered worthwhile to "show the flag" in this, the major International Air Show of the year.

On returning home, full spinning trials were completed, involving 8 turns (and sometimes more due to losing count) before taking recovery action. The spin is classic and recovery is in all cases prompt. During this phase of the trials use was made of a Husky as observation "chase" 'plane, the Husky's good reserve of power, slow flying ability and all-perspex door made it particularly suitable for this task.

Temperate performance and engine cooling tests preceded the aircraft's departure for hot weather trials on the 25th July. For these we took a leaf out of the French light aircraft industry's book and went to the South of France, accompanied by a B.206 carrying the remainder of the trials party and equipment.

The trials site chosen was Montpellier/ Frejorgues, a friendly airfield beside the Mediterranean which proved very suitable for our programme, consisting of engine and equipment cooling tests and performance trials (climbs and measured take-offs and landings). The second part of these hot weather trials, consisting of measured take-offs and landings at high altitude were conducted at a military airfield in Switzerland thanks to the co-operation of Colonel Liardon and Doctor Eichenberger of the Federal Air Office.

The remaining items of temperate performance, systems tests and instrumented flight resonance up to 180 kts. were completed on returning to England.

PUP-150

The prototype Pup-150 G-AVLM joined the development flight test programme on the 4th

ALMOST IDENTICAL TWINS—just differently shaped noses. The photograph (right) clearly shows the recontoured cowling to accommodate the higher powered engine of the 150.

October 1967 and we were pleased to find that it duplicated the pleasant handling characteristics of its little brother despite a 50% increase in power. This power, needless to say, results in a decidedly lively performance.

To date (late December), flight trials on the "150" have been concerned with preliminary handling, performance and systems tests but we have already done enough to know that there are no awkward problems. Spinning trials will commence early in the new year and we are confident that the full certification flight test programme should go through with no more difficulty than with the "100".

We feel that in the Pup family we have an outstanding little aircraft which is in a class quite by itself, combining the comfort and amenities of the best of its contemporaries with an up-to-date and efficient structure, really good handling qualities and complete aerobatic capability.

J. W. C. Judge
Chief Test Pilot, Beagle Aircraft.

DEVELOPMENT

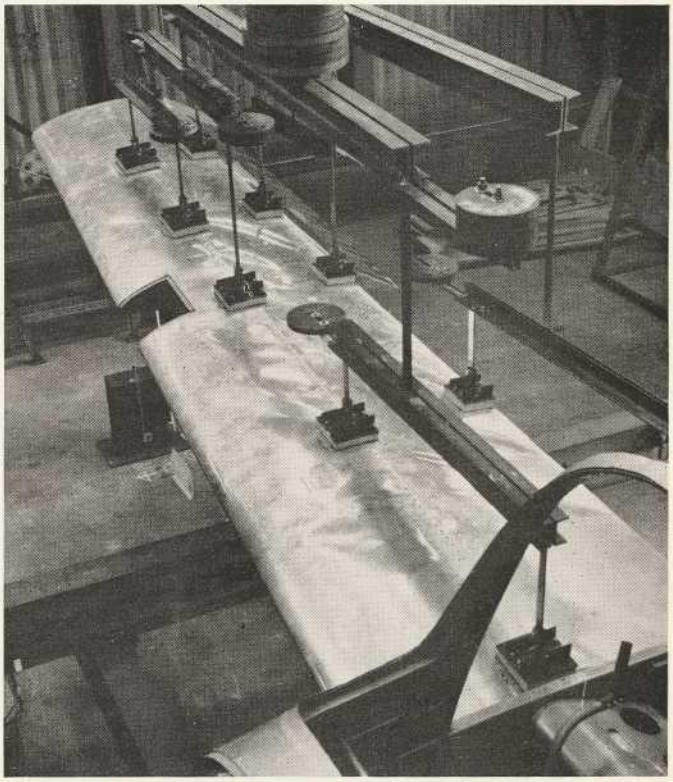
In this report John Larroucau, Beagle's Chief Engineer and Chief Designer, traces development of the B.121 Pup-100 to date.

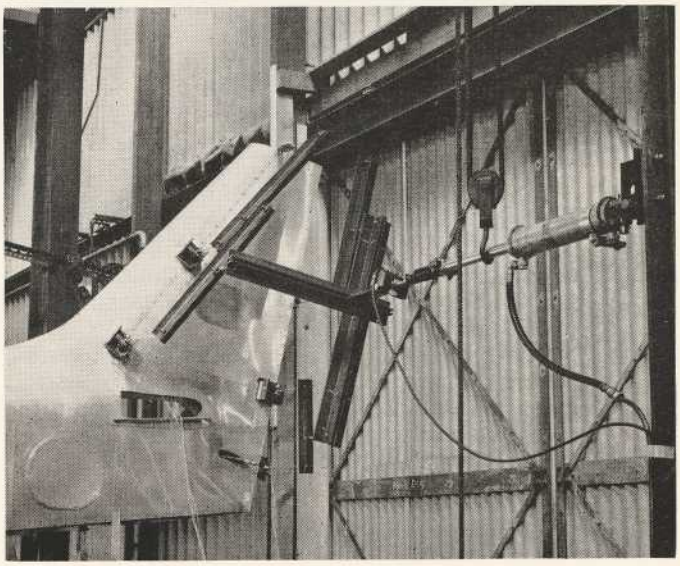
The aircraft first flew on Saturday 8 April, 1967, and up to June 29 had made 108 flights totalling 77 hours. On May 24 the initial assessment and development of the aircraft had been completed to a sufficiently high degree for the award of a Special Category Certificate of Airworthiness. This included demonstration of the handling qualities of the aircraft over the complete centre of gravity and speed range required for full certification.

Handling

Ground handling is extremely good and take-off, landing and taxying present no problems. The only refinement under this heading has been the reduction of the maximum nosewheel steering angle from $\pm$30 deg. to $\pm$25 deg., for less steering sensitivity during crosswind take-offs and landings on hard runways.

Longitudinal stability has been exemplary





AN ITEM IN THE TEST PROGRAMME—upper photograph shows method of load application for the Critical Wing Bending Case. Method of load application for Critical Fin Bending Case is seen in the lower photograph.

Development

throughout, right up to the extended aft centre of gravity position or 33% smc, the light downspring contributing sensibly to the stick free margin. Initially, the stick force per *g* was unacceptably light—not as a result of lack of manoeuvre margin, but due principally to the small elevator chord and lack of anti-balance tab. It was quickly brought up to a reasonable value in the region of 7 or 8 lb per *g* by increasing the total elevator travel from 40° to 50°, and reducing the stick travel from 10 in to 7·5 in. Trimability in the nose-up sense was initially inadequate to meet British Civil Airworthiness Requirements Section K, but this has now been met by increasing the downward movement of the elevator trim tab.

The major part of the initial flight test assessment was concerned with producing faultless qualities at the stall, in particular complete freedom from wing drops and a good nose-down break—qualities so essential to a successful trainer. These qualities have been achieved by means of the wash-out featured in the initial design of the wing and the addition of small leading edge strakes outboard of the root. The stall behaviour so established is satisfactory under all the various configurations of BCAR Section K.

The lateral stability and the behaviour in sideslips are extremely good. Rate of roll is brisk, and the slight adverse yaw due to ailerons, initially pinpointed during the maiden flight, has been cured by rigging the ailerons 3 deg. up and introducing a slight revision to the aileron nose profile. Barrel rolls can now be executed feet-off.

The aircraft has been cleared for normal aerobatic manoeuvres. These have included barrel rolls, loops, half loop and roll out, stall turns, within the permissible 4·5 *g* limitation and the demonstrated design diving speed of 170 knots IAS.

One-turn spins in various configurations were carried out prior to the Paris Air Show but these are now being supplemented by a more extensive spinning programme aimed at clearing the aircraft for unlimited spinning.

Performance

The aircraft was extensively tufted during its initial flights, and only minor attention has been required at local fairings and at the nose cowl in order to produce smooth flow all over the airframe. All performance measured to date has been equal and in many instances, such as rate of climb, markedly superior to the performance figures estimated at the project stage.

Conclusion

It will be seen that the development of the Pup-100 has been remarkably free from major problems. The handling qualities of the aircraft are beyond all doubt measurably superior to those of competitive aircraft and will ensure its wide acceptance as an *ab initio* trainer and club aircraft.

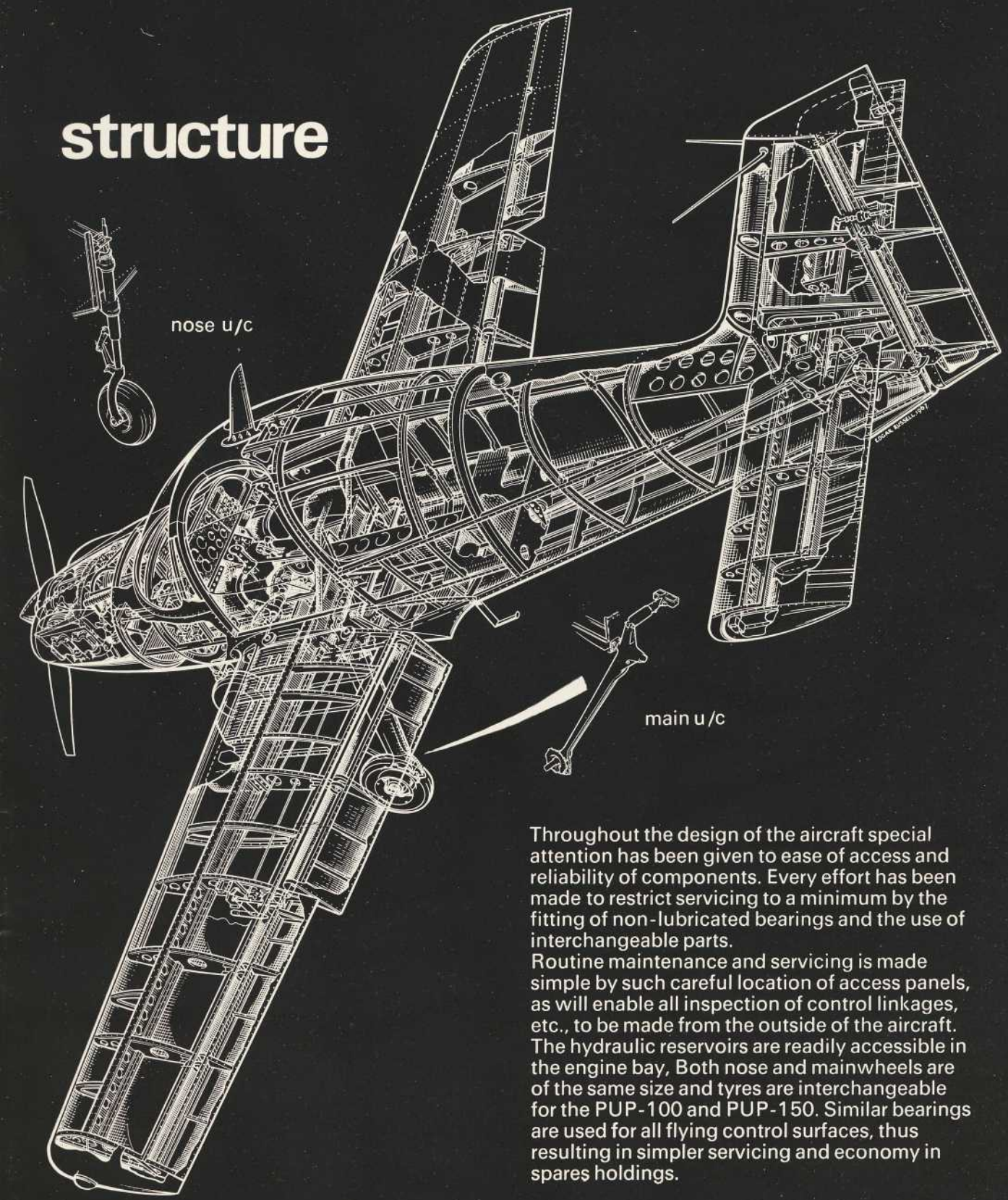
In parallel with the flight tests, an equally concentrated engineering effort is being applied to the completion of the structural test programme. To date the critical wing bending and torsion tests have been completed on a full scale static test specimen. This is at present being prepared for the major fuselage bending and torsion tests. Further tests are underway at Lockheed Precision Products Ltd and Dunlop Company Ltd to demonstrate compliance of the undercarriage and wheel and brake equipment with requirements.

Throughout the flight trials, special attention has been paid to the reliability of all components, operations to date having proved completely free from defects. Further aircraft as they become available will be subjected to extensive flying programmes in order that the reliability of all components may be probed to a still greater depth. This is the way to ensure that when Pups first reach operators in the first half of 1968 they will do so with the widest possible background of operating experience and will quickly establish themselves not only by their flying qualities, but also by their complete reliability and ruggedness.

Subsequent to the writing of the preceding article, development flying of both the PUP-100 and 150 has continued.

At the time of going to press the PUP-100 has logged 179 hours with the PUP-150 creeping up with 56 hours. Ed.

structure



Throughout the design of the aircraft special attention has been given to ease of access and reliability of components. Every effort has been made to restrict servicing to a minimum by the fitting of non-lubricated bearings and the use of interchangeable parts.

Routine maintenance and servicing is made simple by such careful location of access panels, as will enable all inspection of control linkages, etc., to be made from the outside of the aircraft. The hydraulic reservoirs are readily accessible in the engine bay, Both nose and mainwheels are of the same size and tyres are interchangeable for the PUP-100 and PUP-150. Similar bearings are used for all flying control surfaces, thus resulting in simpler servicing and economy in spares holdings.

Beagle services to industry

With the world-wide effort currently being made in connection with B.206-S sales and service, and the exciting advent of the new PUPS, it is perhaps not surprising that the activities of a lesser known facet of Beagle, the Sub-Contract Division, have of late been somewhat eclipsed. It was therefore thought timely to devote a little space in this issue to focus attention on this relatively small, but nevertheless important, part of our business.

Beagle Design and Production Services are located at both Shoreham and Rearsby, thereby providing facilities within easy reach of the major industrial areas of the country.

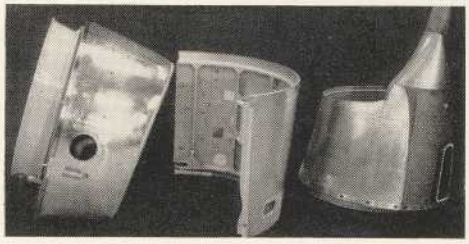
The Design Organisation has of course both Ministry and Air Registration Board approval. The capability of this Organisation covers all aspects of aircraft design and development, the department personnel having a wide experience of sub-contract design for many of the principal aircraft manufacturers. Typical of design work undertaken are such items as wing flaps and operation gear for the Short "Belfast", flying controls for helicopters and vertical-lift engine installations. In support of the Design Service is the Technical Publications Dept. Here, a highly efficient team of Authors, Illustrators, Spares Compilers and printers, whilst mainly engaged in the production of Manuals for the various Beagle aircraft, is available for the production of literature for many and diverse branches of Industry. Companies having taken advantage of this service include such names as :—Airscrew Jickwood Co. Ltd., British Oxygen Co. Ltd., Atomic Energy Authority, Vickers Armstrong Ltd., Local Authorities, Shell, Esso and Batchelors Food Products.

The sub-contract contribution to the Beagle effort is more readily to be seen in the various workshops, where a combination of highly skilled staff and modern equipment enable the most complex of production problems to be tackled. Work recently undertaken by this department includes aircraft major components, sheet metal fabrication (batch production), test equipment and glass fibre components. Familiar aircraft to which Beagle production has made a contribution include the Jet Provost, Canberra, Fokker Fellowship, Belfast, Boeing 707, Caravelle, BAC One-Eleven and H.S. Trident. Components produced for these aircraft range from such items as Pump Assemblies and Switch Panels to complete Empennage Assemblies. It is perhaps worthy of note that Beagle have played a part in the production of many of the well-known airliners now in service. The Beagle-produced parts for these aircraft, whilst forming a very small part of the complete and complex structure of the modern airliner, are nevertheless vital components, which require in their production a high standard of accuracy and finish. Examples of some of the more interesting components recently produced by Beagle are shown overleaf.

We cannot close this all-to-brief mention of Beagle Services without reference of one of the most active Sections—the Rearsby-based Aircraft Repair and Overhaul Organisation. In this Hangar one usually sees aircraft of many makes and types in the process of varying degrees of repair or of complete C. of A. renewal. This Section carries overhaul approval for aircraft of up to 10,000 lb. and, supported by an adjoining Engine Overhaul shop with approval for the overhaul of piston engines of up to 650 h.p., provides a complete service for Light Aircraft operators.

A scene of high activity these days—a machine shop at Shoreham.

Beagle services to industry



Typical of the sub-contract work undertaken at Shoreham are the various engine pod components shown opposite.
Top left—engine rear fairing for Caravelle.
Remaining photographs show engine flexible panel, nose and rear fairing for B.A.C.111 and H.S. Trident.

Mobil Terminal

for Beagling

This is the Mobil Aviation Terminal at Gatwick; fully-equipped and ready to serve Beagle aircraft with Mobiloil Aero branded oils—the aviation lubricants recommended for the Beagle's engines by their manufacturers, Lycoming and Rolls-Royce Continental.

Wherever you fly, whatever your aircraft, world-wide Mobil Aviation Service provides the lubricants you need—with speed and reliability.

Mobil world-wide aviation service

FAULT FINDING

On April 17th this year a Beagle "Husky" took off from Rearsby with two rather apprehensive passengers on board. Apprehensive because flying formed no part of the normal duties of these men of the Central Electricity Generating Board who were more at home maintaining the high-voltage overhead power lines in the U.K.

This flight initiated the first of seven one-week residential courses at Rearsby to train 42 engineers as aerial observers for the maintenance and inspection of all power-lines in this country, outside built-up areas, using the Board's own helicopters.

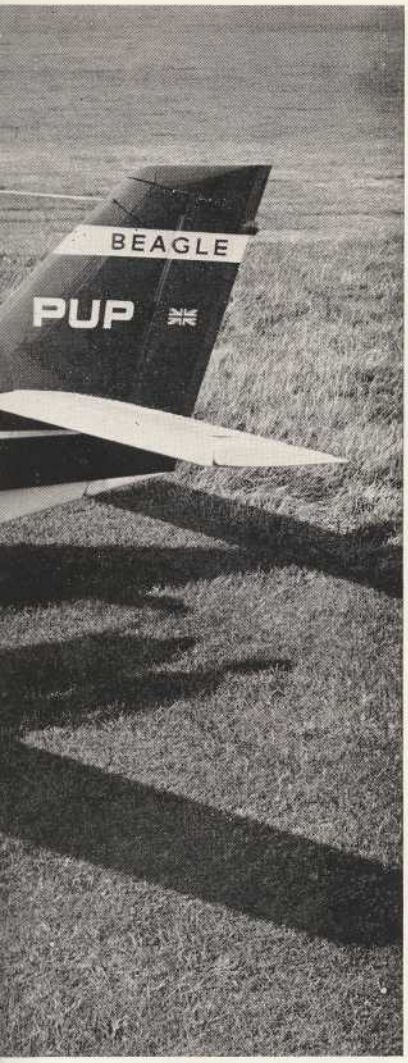
Lectures, films, and discussions were used in addition to flying to train course members to accurately locate operational faults on power-lines. Lectures included talks on flight safety and the general problems of low-flying operations. The "Husky" was flown for up to one hour at a time at 60 m.p.h. only 20/30 ft. away from the live conductors at some 100 ft. from the ground. (After several gusty low-level flights, some of the trainees, who were all volunteers, agreed ruefully with the Service saying "don't volunteer for anything".)

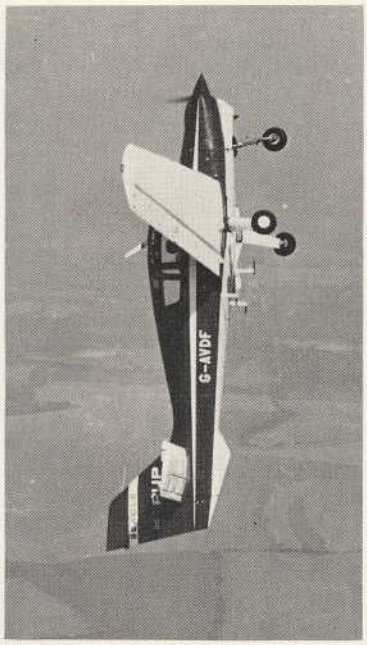
Throughout the summer, teams of engineers working as navigator/observer pairs were flying along power lines in the Rearsby area using both the "Husky" and the "Terrier" detecting faults and reporting their location on portable tape-recorders. Fault reports were then prepared and ultimately all faults located would be repaired.

On the last day of the course CEGB helicopters took over from fixed-wing aircraft and the engineers were flown along a stretch of line in the Hinckley area. This test line in addition to normal operational faults had a number of simulated faults (representative of the type of faults likely to be found in practice) placed on it, and the trainee had to locate all faults. A measure of the success of even as short a course as one week was that upwards of 90% of the faults on the line were located.

John Radford (left) pilot, and C.E.G.B. observer prior to take-off on one of many fault finding exercises carried out from Rearsby during the summer months.

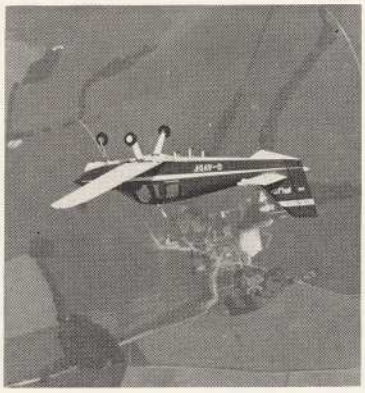
FOCUS





Typical activity soon to be seen at airfields in many parts of the World. It will also fly straight and level.

147 UP, and a few more yet to come. The photographs below show the 147th type D5-160 (Beagle Husky to be built under licence by O.G.M.A. the Portuguese State Aircraft factory.



A NEW TYPE FOR B.A.C.— The nearer photograph shows the B.206-S after delivery to the B.A.C. Flight Test Centre, Wisley.

The central figure is Mr. W. Kairns, B.A.C. Assistant Chief Test Pilot, V.C.10. On his right Mr. J. W. C. Judge, Chief Test Pilot, Beagle Aircraft. On his left Mr. P. Hoare, B.A.C. Communications Pilot.

Ferry pilot Janet Ferguson of West London Air Charter Limited boarding the second B.206-S for the New South Wales Royal Flying Doctor Service, prior to take-off from Gatwick for Australia.

In the smaller photograph Janet is seen with Vic Cover, Chief Pilot R.F.D.S., N.S.W. Section.

RETIREMENT FOR DRAGON

"Dragon" is only twelve years old. But her days are numbered. Soon, however, members of the public will be able to see her in the Imperial War Museum—thanks to Major Lindsey Smith, of the 4th Royal Tank Regiment, whose home is at Little North Court, Shorwell, Isle of Wight.

"Dragon" is an Auster Mark Nine aircraft, which came off the assembly lines in 1955 and was issued to the army three days before Christmas that same year. She saw service in Germany before moving to Malaya in 1958, where for two years she took part in operations against Communist terrorists. In September 1964 she joined the air troop of 4th Royal Tank Regiment. And although she still looks fit and well her end is in sight.

"Dragon" recently took off for the last time from Paroi Camp in Seremban, Malaya, home until recently of 4th Royal Tank Regiment and now home of the Life Guards.

Six Sioux helicopters took to the air with her as a farewell gesture and then the Auster flew off towards Singapore.

Piloting her was Major Smith, who saved the plane from the breakers' yard.

"She is the last Auster to serve in Malaya," he said, "and I thought she deserved more than to be destroyed."

"Dragon" flew a total of 2,410 hours and 50 minutes, not including the 200 mile last flight to Singapore, from where she was shipped home. This amounted to an approximate 192,800 land miles.

Picture shows Major Smith and the Auster taking off for the last time.

Get this new FREE map of Shell-Mex and B.P. Aviation Dealers

Before you take off, plan your refuelling points with the help of this free map. It shows all the points throughout the British Isles where you can fill up with the fuels and oils that are famous throughout the flying world.

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SHELL BP

FLYING FOR PROFIT

Charles Smith of Maidenhead Hammond Organ Studios is well pleased with his latest Beagle.

Mr. Charles Smith of Maidenhead is a man on the move.

His diverse business activities—a Motor Vehicle Distributorship and an Organ Sales and Service Company, require him to cover long distances in quick time and at very short notice. Frustrating road journeys are out of the question and rigid train, ship and airline schedules no longer meet his needs. The alternative—an executive aircraft.

Recent business commitments have taken Mr. Smith to such places as Paris, Le Touquet, Le Havre, Beauvais, Jersey, Guernsey, St. Mawgan, Exeter, Isle-of-Man, Glasgow, Anglesey, Falmouth and Bristol. A visit to Shoreham takes a matter of fact 40 minutes, a saving of nearly one and a half hours over other forms of transport.

Mr. Smith is no stranger to Beagle, his first Company aircraft was an Airedale, which was followed by a Series 1 B.206. Now, with his latest Beagle, a supercharged B.206-S, his frequent journeys not only will be made more rapidly, but as Mr. Smith pointed out, the new cargo door enables him to provide a fast delivery service to his widespread customers.

The transport of British Ropes personnel from their Doncaster headquarters to their numerous factories and associate Companies throughout Europe is made easier with their new Beagle B.206-S.

The value of a business aircraft to a widespread organization can be appreciated by considering the place that this mode of transport has in the activities of British Ropes Limited. This group of companies are the world's largest manufacturers of wire, wire rope and fibre rope, with 22 factories in the U.K. and fifteen subsidiary or associate companies overseas. 7,000 people work for the group in Britain and a further 5,000 are employed in other countries. Frequent travelling by executives is necessary to enable the personal contacts to be made that are essential to the successful conduct of a large business organisation. In this environment, the operation of an aircraft is of paramount importance and the Company had been using a Beechcraft Baron until last May, when it was decided to invest in a Beagle B.206-S. The choice of aircraft was only made after extensive evaluation of all suitable types and their operating economics.

BUSINESS JOURNEYS

The Chairman of British Ropes, Mr. H. Smith, is very enthusiastic about the performance of the Beagle and its general usefulness to the company. It is utilised in two ways: for visiting factories in the U.K. and works and Sales Offices abroad, and as a link with Heathrow Airport, London, to enable connecting flights to be made to various destinations. The aircraft has proved popular with the company's executives, over 20 of whom make regular use of the Beagle.

David Austin, British Ropes' pilot, has been flying the B.206-S since its delivery on May 28 and the aircraft had totalled 200 hours up to the first week in August. The Beagle is normally fitted out for the pilot and five passengers although this arrangement can be varied if another configuration becomes necessary. Normally based at Leeds/Bradford, the aircraft makes the short trip to Worksop to pick up passengers from the firm. Four or five landings a day are a normal average after leaving Worksop and destinations in the U.K. include Manchester, Newcastle, Hawarden, Cardiff and Aberdeen as well as London.

Continental journeys are frequently undertaken to places such as Dusseldorf, Amsterdam, Rotterdam, Cologne, Paris and Charleroi, all of these being within about two hours or so flying time. Longer flights are occasionally made.

Weekly utilisation can be as much as 30 flying hours, although this can vary considerably depending upon the nature of the journeys to be undertaken together with other factors.

A typical weekly programme for early September is shown below:

Monday, Sept. 4: 2 passengers
Leeds 0830 Charleroi 1030
Charleroi 1730 Leeds 1930
Tuesday, Sept. 5: No passengers
Leeds 0745 Gatwick 0845
2 passengers
Gatwick 0900 Haverford West 1030
3 passengers
Haverford West 1100 Woodvale 1200
Return to Leeds
Wednesday, Sept. 6: No flights arranged
Thursday, Sept. 7: 2 passengers
Worksop 0900 Woolsington 0945
Friday, Sept. 8: 1 passenger
Woolsington 0915 Worksop 1000
3 passengers
Worksop 1015 Halfpenny Green 1045
Halfpenny Green 1500 Worksop 1530

EQUIPMENT

The British Ropes B.206-S is operated by one pilot only, although the possibility of two-crew operation is constantly borne in mind. To achieve some 'fail-safe' standards for the instruments, the left hand side of the control panel is electrically-operated and the right-hand side vacuum-operated. The aircraft has been fitted with Collins and Marconi 370 radio equipment which is considered ideal for single-crew operations.

A great deal of the equipment is fitted as standard to many B.206-S aircraft, including the Smiths SPL.45 Autopilot. With the British Ropes aircraft RCA D.M.E. Type AVQ 75 has been added as well as the following radio and navigational aids:

Collins – COMM.1 618M-1A
COMM.2 618M-1D
NAV.1 51R-8
NAV.2 51R-8
Course Indicator 1 331A-3G
Course Indicator 2 331H-3G
Glideslope 51V-5
Marker 51Z-6
Sangamo Weston Deviation Indicator
Marconi ADF type AD 370
Allen RMI type 2105
Elliott Audio type ERSP-34C
Sperry H.G.U. type B17
Ekco Inverters type E221/1 (2 off)

ECONOMICS AND FUTURE DEVELOPMENTS

The cost of the Beagle to British Ropes Limited, including all the equipment and fittings, was £70,000. This represented a worthwhile investment to the Company in terms of rapid communication as well as convenience. Direct running costs per hour have been carefully budgeted and, including fuel, oil, maintenance and landing fees, total about £18 10s. 0d. The landing fees in the U.K. vary from about 2 to 3 guineas, according to location, but overseas they are generally cheaper. For example, Rotterdam charges £1 10s. 0d. inclusive of services, which is fairly representative. The exception would appear to be Paris, where a landing fee of NF 65 is payable, with extra charges payable for some services.

From January 1, 1968, the Company hopes to operate from its own airfield at Gamston, near Retford, Nottingham. This move will have two main advantages; it will simplify maintenance procedures, since the firm will have its own organisation and base; and since many of the executives of British Ropes Limited live in the area, this will prove a considerable asset.

David Austin, Chief Pilot, British Ropes Limited.

The largest fleet operator of Beagle aircraft is, of course, Royal Air Force Air Support Command. A Basset crew of Southern Communication Squadron, based at Bovingdon set out on a routine flight which could be to one of the numerous R.A.F. bases throughout Western Europe. The Beagle Bassets are also operated by the Northern Communication Squadron based at Topcliffe, Yorkshire.

A2/45 aircraft during construction.
(photo. Crown Copyright)

Auster Aircraft – twenty five years

BACKGROUND TO BEAGLE

CHAPTER 7

The Difficult Years

At the beginning of the new year prospects for 1947 seemed very good for the company as it had a new name and a range of five types in production, but events proved otherwise. In January there was a lengthy power failure to the Rearsby factory, and then on Sunday night the 16th of March Rearsby was struck by a very severe gale. A large number of aircraft were picketed around the airfield at the time and several aircraft were blown from their moorings, one being found the next morning on top of the main Drawing Office and another in the field across the main road. The result was that several aircraft were completely destroyed, and a total of 72 aircraft were damaged.

About this time, following a great boom period immediately after the war when flying clubs all over the world were starting up or reforming after the in-activity of war-time and when a new generation of private flyers had acquired their new aircraft, the world markets began to stabilise and reached a point where fewer new aircraft were required. At the same time the post-war run down of the Air Forces of the Allies was in full swing and there were many cuts in orders still outstanding from contracts that were negotiated during the war. Also large

Titanine is a

BEAGLE'S best friend

Titanine finishes are specified for both B.206-S and PUP

TITANINE LTD. COLINDALE LONDON N.W.9
Telephone COLindale 8123 (8 lines)

J/5B Autocar VH-BNA at Parafield, Australia. (photo. T. de V. Webb)

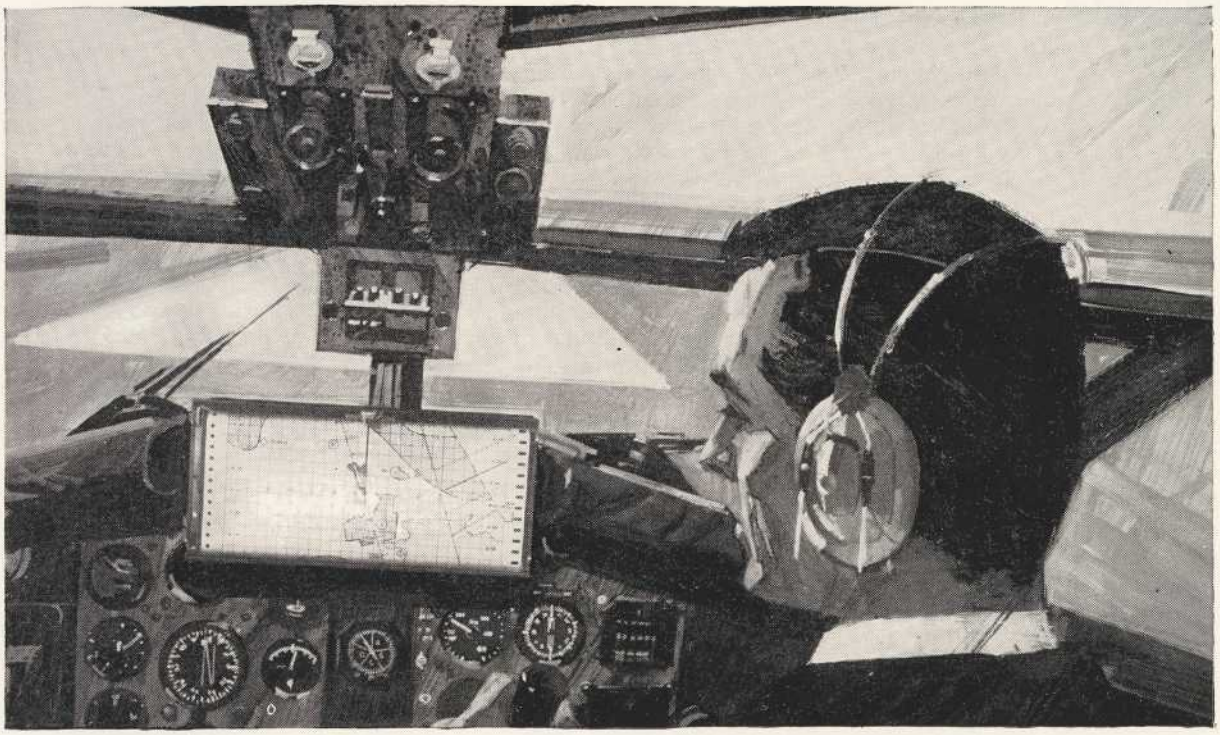
BACKGROUND TO BEAGLE

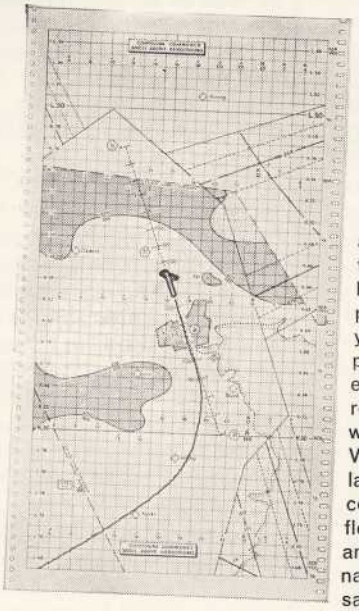
numbers of aircraft surplus to the peace-time requirements of the R.A.F. were coming onto the civil market. All these factors had a great impact on the aviation industry in England which was still largely geared to war-time conditions. The hardest hit firms were the manufacturers of light aircraft, and many of the small firms that had been established immediately after the war went out of business. The three largest manufacturers of light aircraft at that time, Auster, Miles and Percival, also found conditions very difficult, and all had large numbers of unsold aircraft in various stages of construction at their works. Miles Aircraft, who had produced a large range of prototypes, later closed down and their works at Reading were taken over by Handley Page Ltd., but Percival and Auster were rather luckier. Percival Aircraft had at the time just received a production contract for the Prentice, and the many unsold Proctor 5's were transferred to their associated company Field Aircraft Services Ltd. who gradually sold them over the next few years. Austers' however, had only a relatively small contract for Auster 6's to work on and drastic action was taken inside the company in the latter half of the year, and most of the employees were laid off. At the peak period during the war the total number of employees had been about 1,600 and there had been a total of ten factories. This was now reduced to about 200 employees in only two factories, the main works and Head Office at Rearsby, and No. 7 Works at Syston. Production of civil aeroplanes did not stop completely however, and all but five of the Autocrats which had been laid down were gradually completed over the next year or two.

In 1947 the Design Office was occupied with a design to the Air Ministry specification A2/45, but a successor to the Autocrat was also being studied. This took the form of the Autocrat but a D.H. Gipsy Major 1 engine was fitted, and wing tanks were introduced. This design was called the Model J/5 and a prototype was converted from a spare Autocrat fuselage. The J/5 was placed into production in August, but this aircraft was only one of five new models planned in 1947. Three of these only reached the project design stage—the J/6, J/7 and the Model A3. The J/6 and J/7 were variations on the standard Auster theme, but the Model A3 was a completely new design by the new Chief Designer Mr. R. E. Bird and it was a low-wing side-by-side two seat aircraft.

The last of the five designs of 1947 was the Model P. This was based on the Autocrat but owed much to the Auster 6. It was designed as a four seat aircraft with four separate doors, and was powered by a D.H. Gipsy Major 10 engine. A prototype was constructed and it flew in time to appear at the 1947 S.B.A.C. Air Display at Radlett, where it was announced that the new aircraft had been named the Auster Avis. After the

Avis 2 G-AVYF showing entry hatch.





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display lengthy flight trials took place resulting in the award of its Type C. of A. in March 1948. The prototype was then greatly modified to carry a standard Army field stretcher and one attendant, as an intimation had been received from the Army that they were looking for an aircraft to meet such a requirement. A large hatch for stretcher entry was provided on the starboard side of the fuselage. However, the life of this aircraft ended when the propeller flew off the engine and the aircraft made a forced landing in a field just outside the aerodrome. The aircraft was a write-off and was later scrapped. The Army's interest in the Avis faded as the performance of the aircraft was considered to be 'marginal', and so production plans were cancelled.

1948 started off very well with the production line steadily producing Auster 6 and civil aircraft, and the experimental department busy on the A2/45 project, but the first new aircraft type to be flown was the Model Q, or Auster 7. This was a two seat training version of the Auster 6, and the first flight took place on the 20th April. Production for the Army commenced almost immediately.

One week later, on the 27th, the long awaited first flight of the Auster A2/45 took place. This aircraft was the largest Auster to have been built so far, and although it had a high-wing layout and fixed undercarriage, the resemblance to any other Auster ended there. The engine was a D.H. Gipsy Queen 34 of 240 h.p. and the aircraft had a cantilever tailplane, oleo undercarriage, and built-in slots in the wings. The general resemblance of this aircraft to the German Fiesler Storch was only accidental, or so it was claimed, but a Storch had been stationed at Rearsby for some time previously "for evaluation purposes" ! Two prototypes of the A2/45 were built, and were tested by the A.A. & E.E. at Boscombe Down, in comparison with another aircraft built to the same specification, the Heston A2/45. Neither aircraft was ever put into production however as following the military run down after the end of the war development of both aircraft suffered from the Governments' economic axe.

In 1948 the Design Office carried out further investigations into military A.O.P. aircraft and various designs were produced, the Models A4, A5 and A8, all similar to the Model A3. A single engined two seat touring trainer the Model A6 was also designed, and following an enquiry from Australia, the specification and details of a five seat 'light twin' was produced and this was generally referred to as the Model A7. Much design work was carried out on this latter project and a mock-up of the fuselage was produced as well as an engine test-bed for cooling trials on the 'pusher' engines.

1948 also saw Austers in action again, this time in Israel. On the 14th of May Israel was created as an independent state but was immediately attacked by Egypt, Iraq and Syria. With hardly any Air Force with which to defend itself Israel immediately searched far and wide for any aircraft that could be found. Prior to the British withdrawal from Palestine many ex-R.A.F. aircraft had been dumped into scrap yards, and from the parts the Israelies found in these dumps many serviceable aircraft were built. Some of the Austers thus re-created appeared with Auster 3 engines in Auster 5 airframes. These Israeli Air Force Austers carried out many sorties before being replaced by more modern aircraft.

Consolidation and planning for the future occupied most of 1949. It was decided that completely new types of aircraft would be too great a step as the financial state of the company would not permit a large amount of experimental work, so attention was paid to developing the existing types of aircraft then in production.

(To be continued)

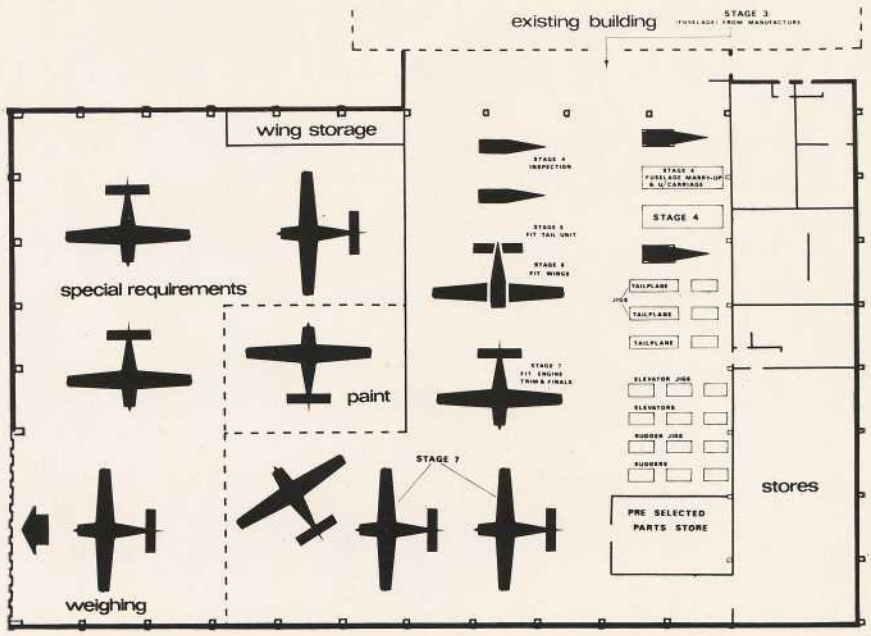
An Auster 7 WE 613.

Expanding Pup production

Work has started on the construction of a new assembly building at Shoreham for expansion of Beagle PUP production. The contract for the work was signed recently (*photo left*) by Mr. Peter Masefield, Managing Director of Beagle, in the presence of Mr. L. Ward, Directorate of Building, Ministry of Technology.

Production of PUPS is already being geared-up both at Shoreham and Rearsby, but when the first 30,000 sq. ft. phase of the new assembly building is complete in May, it will materially quicken the rate of production, and this will be further advanced with completion of the second 30,000 sq. ft. phase later in the Summer.

The demand for Beagle PUPS—both in the 100 hp and 150 hp versions—is rigorous and growing, and it is Beagle's intention to build PUPS to satisfy the demand just as fast as possible.



Shoreham Airport and harbour.

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