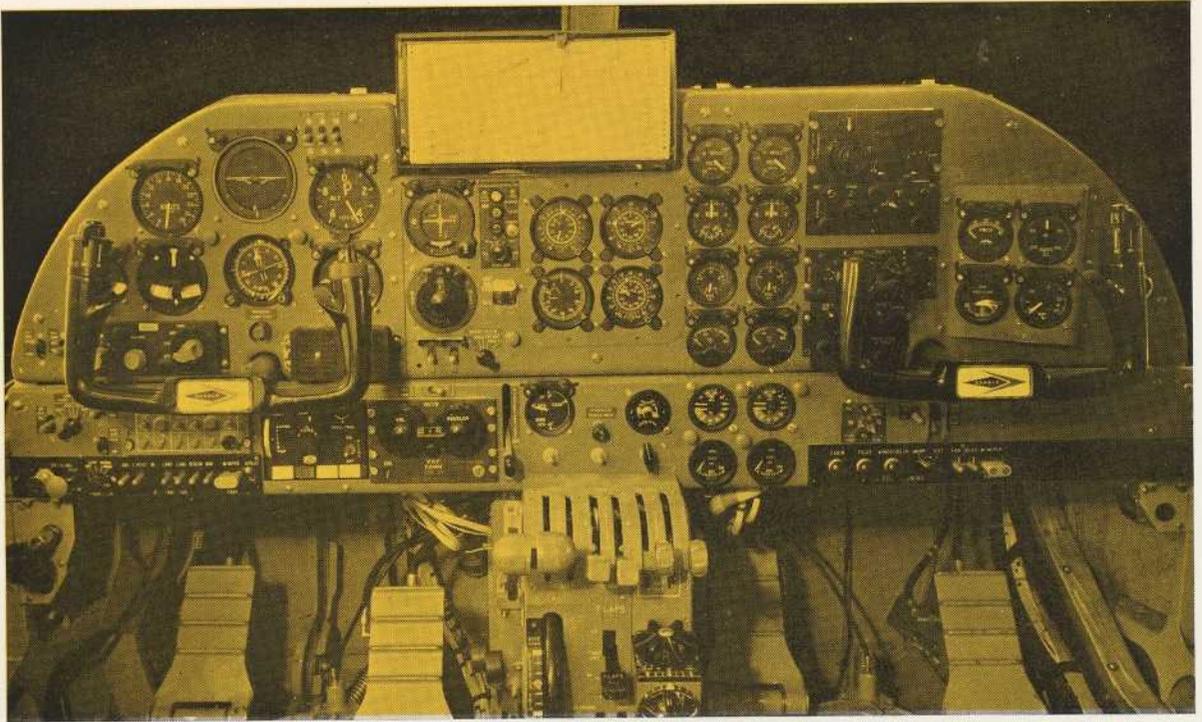


BEAGLE NEWS



May 1965

Number 3



SPERRY IN THE BEAGLE B.206

Each of the 22 Basset aircraft ordered to date by the Ministry of Aviation will have a complete Sperry flight control system comprising a CL.6 Gyrosyn† Compass System, Horizon Gyro Unit and SP.3 Auto-pilot. The civil version also incorporates the SP.3. Auto-pilot and Sperry panel instruments.

†Gyrosyn—Registered Trade Mark



AERONAUTICAL GROUP

SPERRY GYROSCOPE COMPANY LTD., BRACKNELL, BERKS. PHONE: BRACKNELL 1301.



BEAGLE NEWS

EDITOR: F. J. JACKSON

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Front cover photograph:

A B.206 in Rolls-Royce livery on its pre delivery check flight from Shoreham.

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Flight testing the Basset

THE FLIGHT TEST programme on the Beagle Basset, the version of the B.206 ordered for communications duties by the Royal Air Force, was mainly aimed at clearing the various items of equipment specified in R.A.F. service and also clearing the handling, performance and engine cooling, including tropical trials, at the increased

A.U.W. of 7,500 lb. (as a result of these trials the A.U.W. of the civil Beagle B.206 has now been increased from 7,000 lb. to 7,500 lb.).

Two aircraft were allocated to the programme, B.206 Z1 XS.742 for the handling, performance and engine cooling aspects of the trials and B.206 Z2 XS.743 for systems and equipment tests including the very comprehensive radio installation.

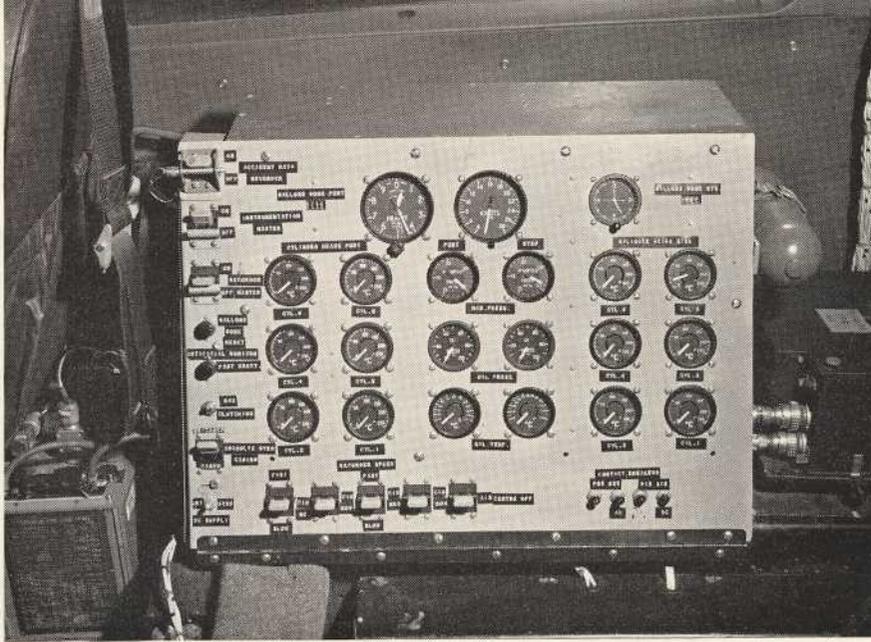
The programme was planned in collaboration with the Aircraft and Armament Experimental Establishment at Boscombe Down, whose 'E' Squadron would be carrying out the Ministry's own trials on the aircraft after they had been handed over by the firm. Both aircraft were very fully instrumented for their tasks. The Air Registration Board were also involved in the clearance of these aircraft, as all Bassets are to be delivered to the service with a Public Transport Certificate of Airworthiness and many of the Service changes, including the new A.U.W. were to be incorporated in future civil B.206 aircraft.

After the firm's tests at 7,500 lb. on XS.742, including the development of the low drag engine cowlings with electrically actuated cooling flaps, a pre-view handling programme was carried out by Flight Lieutenant Ray Williams, 'E' Squadron's project pilot for the Basset and other Boscombe Down pilots, prior to departure for R.A.F. Idris



Nose probe on XS.742, carrying vane for measuring angle of side slip.

The comprehensive Flight Test Observer Panel installed in XS.742.



(Tripoli) for tropical trials.

The firm's tropical trials to clear the aircraft for operation at 7,500 lb. occupied the first five days at Idris, after which the aircraft was handed back to Ray Williams for the A. and A.E.E. trials.

Meanwhile XS.743 was prepared for its part of the programme and the clearance of the various items of radio equipment was embarked upon in conjunction with the Navigation and Radio Test Division at Boscombe Down.

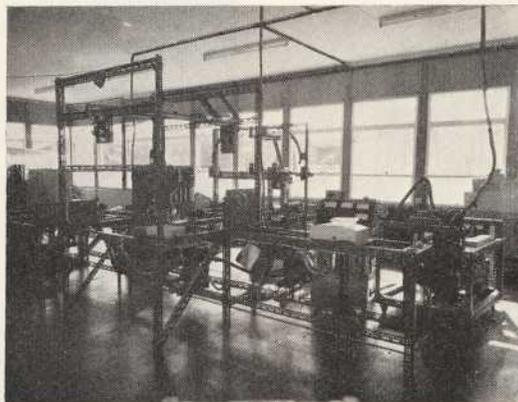
The Air Registration Board's handling tests at 7,500 lb. A.U.W. and night flying assessment were carried out on XS.743 by their test pilot Mr. Geoff Howitt.

As in most flight test programmes, this one was occasionally beset by various problems and minor setbacks, but the aircraft has profited from the sorting out of these and it is felt that Fred Basset will join the Royal Air Force fully house-trained and a worthy successor to our old friend the Anson.



BASSET LINE UP—The Air Force Board has chosen the name Basset for the Beagle B.206 aircraft in Royal Air Force service. They are scheduled for communications duties and have as alternative equipment, toilet units or stretcher accommodation.

BEAGLES objective – to promote the design, development and production of a range of British executive aircraft, and so bring back British light aviation into its rightful place in this field, is by now common knowledge. The other facet of the Beagle organisation, that relating to the services and facilities we offer to industry, may be not so well known. In the coming months, through the medium of the 'NEWS', we intend to present information relating to those departments within our organisation that provide such services and facilities. In this issue we feature the Flight Test Department.



Part of the Systems Laboratory at Shoreham.

FLIGHT TEST DEPARTMENT

THE PRIMARY FUNCTION of the Department is the handling of prototype aircraft from their first flight right through to their final certification stage and the assessment of production aircraft.

A variety of tasks can be performed, amongst others:—

1. Handling assessment of aircraft under ARB and/or CAR regulations: stalling behaviour, measurement of longitudinal and lateral stability, trimming checks, controllability checks.
2. Measurement of aircraft performance in prescribed configurations.
3. Performance measurements of radio aids for communication and/or navigation: VHF Comm, VOR, ILS, ADF, UHF, Decca etc.
4. In-flight performance of engineering equipment: airframe de-icing systems, windscreen wipers, power plant cooling trials.
5. In-flight measure of vibration levels and flutter clearance tests.

The department is staffed with fully qualified personnel and is equipped with all the technical aids required for the discharge of its duties: a laboratory is available for the calibration of flight test instrumentation and the setting up of radio aids, whilst the design and installation of specialised flight test equipment has been undertaken at various times and completed successfully. Airborne automatic data recording apparatus is available.

The operation of the department including the compilation of Flight Manual to the requirements of the Air Navigation Order is covered by full A.R.B. approval.

BOUQUETS FROM SINGAPORE

Dear Sir,

The Perak Flying Club's Airedale has recently received the renewal of its Certificate of Airworthiness at the Kuala Lumpur Flying Club and you will be interested to know that the committees and members of both clubs were most impressed by the fact that, after a year's usage, the total cost of labour and materials amounted to only M\$600 (about £70). They, and we, feel that this is a great tribute to the aircraft

Yours faithfully,
P. J. KLOOS.

BEAGLE PERSONALITIES

No. 3—Mr. A. V. HITCHMAN

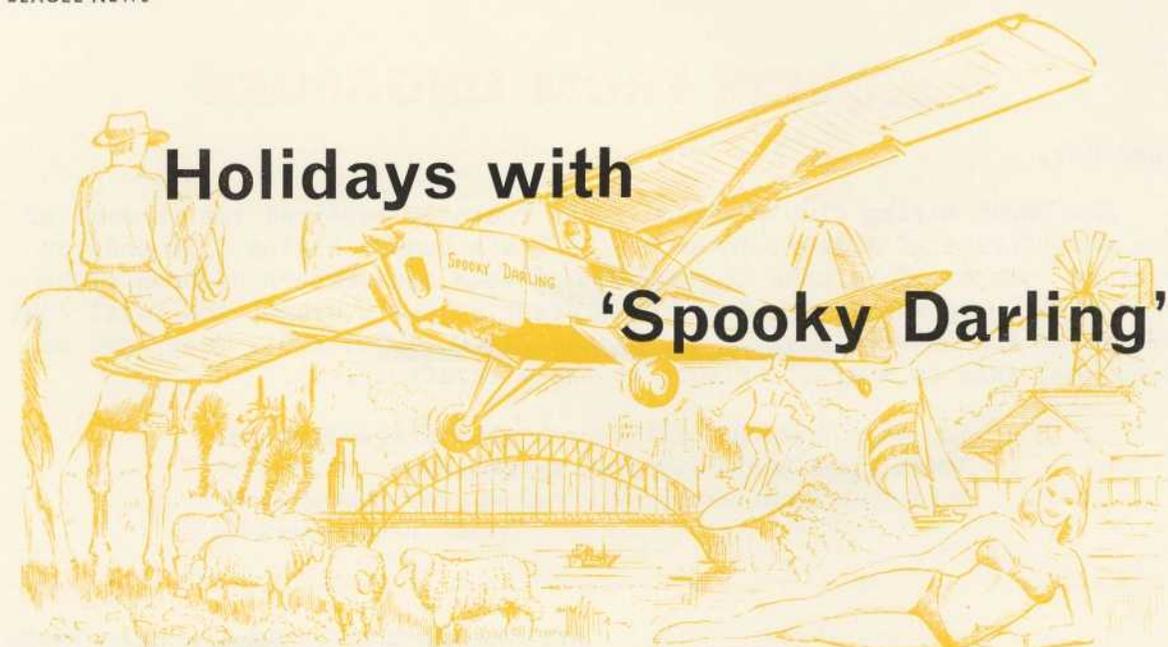
A. V. HITCHMAN, known to everybody within the Beagle organisation and to numerous customers throughout the World as 'Ambrose', is the Commercial Manager of Beagle Aircraft Rearsby. His commercial career started with the Leicester firm of Wolsey Limited, after which he transferred to B.S.A. Guns. His introduction to the aircraft World began in 1943 when he joined Taylorcraft Aeroplanes (England) Limited, where after a period on cost investigation he was appointed Commercial Manager in 1946.

This latter company was subsequently renamed Auster Aircraft Limited, of which Ambrose became a Director in 1957. In this capacity he has been responsible for the transactions covering the many hundreds of Auster aircraft, both military and civil, distributed throughout the world.

As Commercial Manager of Beagle Rearsby, Ambrose continues in his good work, but now of course the aircraft with which he is concerned are the new Beagles.

About hobbies—gardening, yes, though not an enthusiast, Ambrose achieves sufficient in this direction to produce a highly satisfactory result. Such occupation, coupled with his ownership of a Labrador dog, who needs plenty of exercise, succeeds in keeping him fit.





Holidays with 'Spooky Darling'

AFTER travelling thousands of miles around and across Australia and New Guinea Mr. and Mrs. Ron Rutherford, of Willoughby, have one great problem—where to go next?

But while waiting for something to turn up Mrs. Rutherford, who is a doctor of medicine, is trying to convince her husband that their 1965 holiday destination should be Bali, Indonesia.

The Rutherfords are limited in their travels by the range of their favourite means of transport—their eight-year-old Auster aircraft, which is nicknamed 'Spooky Darling'.

Mr. Rutherford is not in favour of the Bali project as he considers the trip too ambitious for a single engine plane but his vivacious, brunette wife has no qualms.

Mr. and Mrs. Rutherford both acquired their flying licences in 1943 and since buying their own plane have managed one big flying holiday a year of three weeks covering an average of 6000 miles.

Besides Tasmania their only tour outside Australia was three years ago to New Guinea, where they travelled extensively, flying under conditions previously foreign to them.

As Mrs. Rutherford said: 'In Port Moresby we

received all sorts of advice and were warned that all flying must be finished by mid-day as the cloud build-up after that makes it impossible to cross the ranges.

Instructions

'We took off for Bulolo via Kokoda Gap with such instructions as "Watch the weather and clouds, they will form faster than you can climb. Under no circumstances fly into a cloud—no matter how small, try to keep beneath them. Remember, the jungles are full of cannibals, and don't get lost".'

Needless to say the Rutherfords arrived safely after experiencing a little apprehension when their plane complained of carburettor ice which caused them to lose power while the heat was on.

After exploring Lae, Goroka, Waghi Valley, Nadang and Angoram, a village on the mighty Sepik River, the Rutherfords returned to Port Moresby to obtain permission to fly to Tapini as it was the custom there to make five flights with a safety pilot before going solo.

In gaining the necessary okay the Rutherfords took the first private plane in without being accompanied by a guide.



FLYING DOCTOR

Mrs. Ron Rutherford . . . at least one trip a year.

Apologies for poor quality reproduction of this photograph

AN EARLY AUSTER—The Autocar, a type very popular throughout Australia some years ago.



Countryside

Mrs. Rutherford said Tapini was outstanding in its beauty out of all the countryside they'd seen and presented more impact because they were completely unprepared for such grand scenery.

Their last year's holiday was spent on an aerial safari to Muirella Park, Australia's first 'skytel' in the far-north of Arnhem Land, about 100 miles south-east of Darwin.

Mrs. Rutherford said they made the trip at a leisurely pace stopping over at Bourketown to watch the unsuccessful attempt by a trio on safari to capture Cassius, a huge crocodile located in the Albert River.

To get to Muirella, which Mrs. Rutherford describes as a tiny speck in the jungle wilderness, the Rutherfords flew across the remote Gulf country, seldom flown over by private aircraft and consisting of lonely swamp areas and steamy jungle rivers.

Sundays in the Rutherford household usually brings a decision on where to spend the day.

It could be a jaunt to Maitland or Newcastle for lunch or a swim at Pelican Bay or a visit to Orange to pick up some fruit—anyplace as the aerial transport is so readily available and comfortable with none of the discomforts of the busy Sunday road traffic.



Picture shows Mr. A. L. Miller (centre) and Mr. S. A. Long (right) with Mr. E. Hall of Beagle on taking delivery of Airedale 'Searchlight I' at Rearsby.

MORE HAPPY BEAGLERS

STANLEY A. LONG and Arnold Louis Miller, Directors of Searchlight Films of London, both of whom are holders of P.P.L.'s, are now the proud possessors of a Beagle Airedale, Call sign X-Ray Delta.

The Airedale was collected from Rearsby on Friday March 26th, and went off two days later with a payload of three persons plus equipment flying to R.A.F. Valley in Anglesey where Searchlight Films were on a two week location.

The aircraft was extensively used in and around Snowdonia both for air to ground and air to air shots.

On Thursday evening Mr. Long informs us he was telephoned by a company urgently wanting

a four minute film for American Television which it was essential to shoot over the weekend.

Having the aircraft, Mr. Long tells us, enabled them to travel back to London, shoot the film on Saturday, and return to Valley on Sunday so as to be on the job bright and early Monday morning.

Without the aircraft this T.V. job would have been lost.

Motoring time for the return journey, London-Valley, is approximately 14 hours non-stop hard motoring, Flying time return journey 4½ hours, enough said. The aircraft will be invaluable to us in business said both Directors.

Just another instance proving it pays to Fly, especially BEAGLE.

KENNEL NOTES



The Shoreham Design Office of Beagle Aircraft Ltd. is busy with the developing projects of the new Beagle range of British light aircraft. The photograph shows the Beagle Design Office which has just completed the production design of both the civil B.206 and the RAF Basset and is now engaged on B.206-S, B.210 and B.242.



Beagling in Britain

by JOHN HOPKINSON and
M. A. HOPKINSON, M.D.

OUR BRITISH TOUR began at Malton on a rainy late October evening and enthusiasm was the word as we boarded a BOAC 707. The party of four was a good mixture – two professional and two amateur pilots – all curious about what the British had to offer.

Two of the group – John (Hoppy) Hopkinson of Sky Harbour Air Services in Goderich, and Floyd Carson of Sanderson Aircraft at Malton – had plenty of twin engine experience. The other two – Carl Wilson of Toronto and Dr. M. A. Hopkinson (Uncle Hop) of Lion's Head, Ont. – were novices with single-engine Cessna experience only. All four possessed one burning question: what was so different in these British Beagles? We were to find out!

The trip across the pond was smooth and not too eventful. Service was reasonably good (perhaps not quite so good as Air Canada) and Floyd spent all his time up front, practically flying the 707.

By the time London's Heathrow appeared out of the smog, we were wearying but still able to recognise the young Australian driving an old Armstrong-Siddeley limousine, who had been 'put on' by Beagle Aircraft. We negotiated some 65 miles of Limey traffic and eventually got to

Brighton and Shoreham-on-Sea. There on a grass field (much like Goderich) we met Managing Director Peter Masefield and executives of Beagle Aircraft. Following the serving of drinks and lunch, they recognised our fatigue problem and after a guided tour we headed for Brighton and the sack.

The following day couldn't have been better – we were rested, the weather was perfect, and the prototype Beagle B.242 looked like a dream. As we all shortly found out, she flew like a dream as well. Excellent stability, better than good aerodynamic qualities, surprising single engine performance, a cruise of 200 m.p.h. at 75 per cent power at 5,000 feet – all were better than we had expected. We were extremely happy over the combination of a sturdy British airframe with American engines, instruments, radio, and components. The result was almost too good to be true.

The next day, dirty English weather afforded us the chance for lots of discussion on Beagle philosophy, opportunities to see the other aircraft about (Tiger Moths, Cessna 310, Dragon-Rapide, Bolkow trainers, etc. etc.), and the chance to be impressed with the amount of design, engineering, and testing our English hosts employ. The latter really impressed us, and comparisons were made

in our own minds with some North American types – not entirely to their benefit. We decided these British twins were, to be frank, built like the proverbial brick backhouses.

Thursday found us in London trying to cope with their funny money, delighted with their taxis and cabbies, and curious about night life in the hubbub that is London – enough said!

Friday took us some 100 miles north to Beagle's main plant at Rearsby, near Leicester. Eight of the large 206's were on the assembly line and our first impression was, 'Wow, what a big airplane!' A production batch of 20 is being readied for the RAF and the service is plenty demanding. Typical Midland's weather didn't allow us to fly the 206, so we arranged to meet our friends Saturday morning at Gatwick. Everyone prayed for good weather, and Someone heard us.

Because of experience with Aero Commanders and similar aircraft, Floyd did the flying, with Mitch (from Beagles) in the right-hand seat, John behind him, and the happy amateurs observing from the capaciousness of the back seat. Back down to Shoreham we went via stalls, single-engined climbs, spirals, etc., and Floyd landed her there as if it were his hundredth Shoreham approach. Off east down the English Channel and eventually back to Gatwick, with everybody beaming like schoolboys. The proof of the pudding is in the eating, and we all felt well fed! Beagle has a company tie and now each felt proud to wear one.

Discussions took place in the dignified atmosphere of the Royal Aero Club and of the Royal Aeronautical Society in London and we were most impressed by British businessmen and methods. We left Britain with a wonderful taste in our mouths (not just from the Scotch or the food), and with the feeling that the British are going to recapture their pre-eminence in the light and medium plane field, which they held in the 30's.

In regards to the Beagle B.242 particularly we have some serious questions. If an aircraft is tops in safety features, very advanced aerodynamically,



NEXT ON THE LINE:—

About to enter Beagle B.242 is Floyd Carson, general manager of Sanderson Aircraft Ltd. The Malton, Ont., firm is Canadian distributor for the Beagle line, which features two twins that are expected to be popular on this Continent. Note doors on both sides.

and cheaper and faster than any existing competition, why shouldn't it capture a large share of the North American market? Food for thought. For our money, the finest existing sport today is Beagling in Britain.

BEAGLE NEWS CROSSWORD

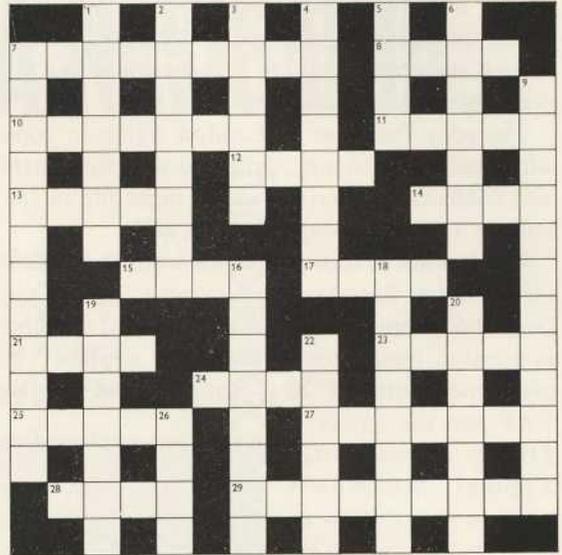
ACROSS

- 7 This has only one where a Bactrian has two (9)
- 8 Waterfowl (4)
- 10 Hiawatha's grove of pinetrees were ever this (7)
- 11 Nobody believed in platonic friendship before him (5)
- 12 Taken, given, ignored, its basically thin (4)
- 13 Bolt (5)
- 14 It would be worthy to put self first here (4)
- 15 Tide on the ebb? (4)
- 17 This is stranded (4)
- 21 May appear on the horizon, in the mill (4)
- 23 Most of this stuff grows wild (5)
- 24 Stone beheaded for a friend (4)
- 25 A tenth (5)
- 27 Straighten a skein (7)
- 28 See 4 down (4)
- 29 To understand is also to capture (9)

DOWN

- 1 Agree in secret (7)
- 2 Described with an early Scot in the act (8)
- 3 Scorched (6)
- 4 Desery in Carl part of his car and some disfigurement (8). (See also 28 across)
- 5 Punctuation confuses the mail (4)
- 6 Part ape (7)
- 7 Possession of this quality is to be wished for (12)
- 9 United (12)
- 16 Secular (8)
- 18 Paste too (8)
- 19 Touching to make (7)
- 20 Hand over (7)
- 22 Clusters (6)
- 26 Find him between marquis and viscount (4)

Compiled by Miss D. M. Davies



PUT "BITE" IN BEAGLE B206

Two McCauley constant speed, fully feathering propellers enable the Beagle B206 to bite through the air at speeds up to 214 MPH. McCauley is proud to supply vital components for the newest of the "Beagle Pack." Throughout the world, more personal and business aircraft are equipped with McCauley propellers than any other kind.

McCauley Industrial Corp., Dayton, Ohio, USA—*the birthplace of aviation.*



BRITISH CHALLENGE LIGHT TWIN MARKET

KEITH ROBEY reports on the **Beagle B.206** all-weather executive.

THE ARRIVAL IN Australia last month of the Beagle B.206, G-ASOF, flown by Charles Masefield, gave Australian operators their first opportunity to examine at first hand this interesting new aircraft from the U.K. which it is anticipated will challenge the American domination of the light twin field.

Charles Masefield departed from London on October 10 and carried out an extensive demonstration tour of the Middle East and Far East prior to arriving in Singapore on November 17, where he was joined by his father, Peter Masefield, the well known managing director of Beagle Aircraft Ltd. Peter Masefield flew on to Australia in the B.206 and accompanied the aircraft on its Australian demonstration tour.

The Beagle B.206 has been modified considerably since the prototype first flew in August 1961, and in its latest form, powered by two 310 h.p. Rolls-Royce built Continental G10-470-A engines, it is a most versatile aircraft with an impressive performance and considerable eye appeal. Production for both the RAF and the civilian market is now well under way and the demonstration aircraft G-ASOF is, in fact, the tenth B.206 off the production line. Beagle are offering a number of different interior layouts, including versions to seat five, six, seven or eight occupants and a special ambulance model which carries a crew of two, a flight attendant and two stretcher cases.

A popular misconception regarding the Beagle B.206 appears to be to think of it as being com-

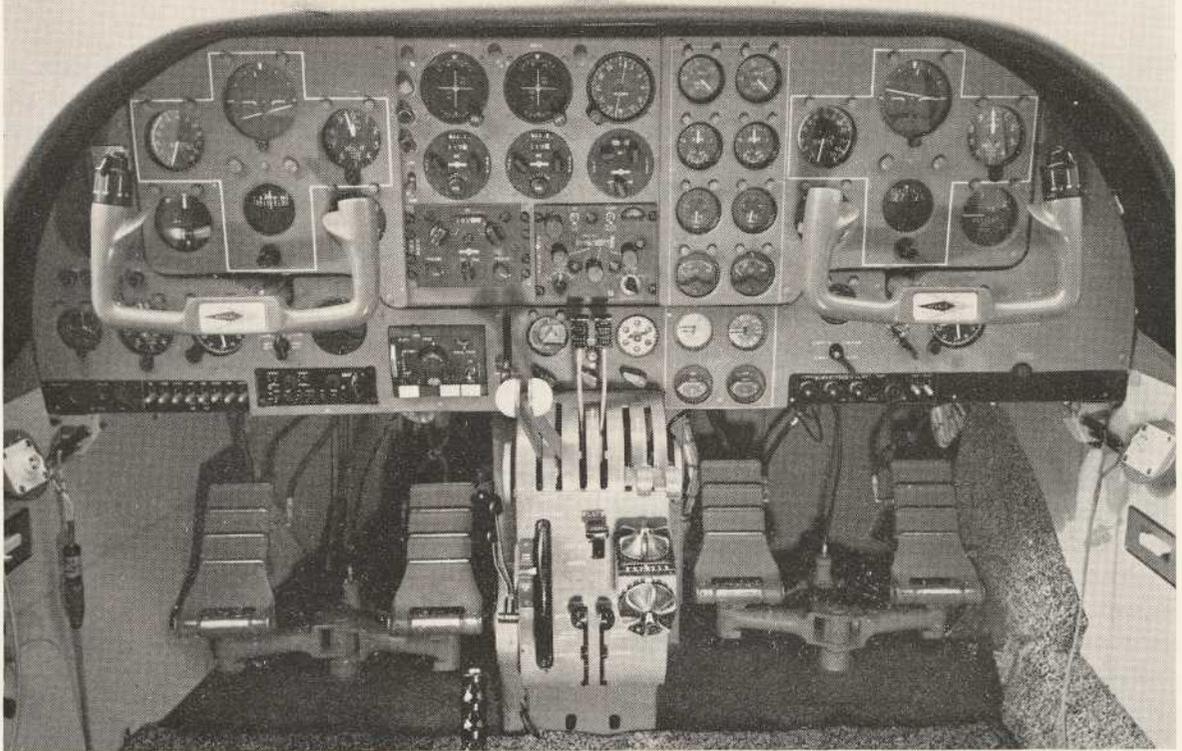
parable in size to the Cessna 310 or Piper Aztec. Its lines somewhat resemble those of the Cessna 310, but actually it is a much larger aircraft, as reference to the leading particulars will show.

Apart from the use of fibreglass for the nose and tail cones, undercarriage doors, etc., the Beagle B.206's airframe is of rugged all-metal construction throughout. Flush riveting has been used extensively and the standard of finish is very satisfactory.

The port and starboard mainplanes are attached to a centre-section which is built as an integral part of the fuselage. The wing is a two spar structure, the front spar being an I section and the rear one only having a single flange top and bottom. Integral fuel tanks are located outboard of the engines and the double slotted flaps are hinged from brackets attached to the rear spar.

The fuselage of the Beagle B.206 comprises the fibreglass nose and tail cones, the main cabin section and a tail section. The tail section of the fuselage is of pure monocoque construction and the main cabin section semi-monocoque. The two fuselage sections are joined together at the main cabin bulkhead which is located at the rear of the luggage compartment. A long dorsal spine extends forward along the top of the fuselage from the fin and rudder, which are of modern raked design.

The retractable tricycle undercarriage is hydraulically operated. The main undercarriage retracts forwards into the engine nacelles and the nose-wheel rearwards into a well forward and below



AIRLINE STANDARDS: The wide instrument panel of the B.206 features fully duplicated blind flying panels, which still leave room for a comprehensive range of radio communication and navigation control boxes in the centre of the panel, where they are readily accessible to both pilots, as well as three-axis autopilot.

the cockpit. The nosewheel is steerable through the rudder pedals and the main wheels are equipped with hydraulically operated disc brakes.

Access to the passenger cabin is by way of hydraulically operated airstairs and a large door on the port side of the fuselage which is 46 in. wide and 36 in. high. The airstairs may be extended automatically either from the cockpit or from outside the aircraft by means of a special control on the side of the fuselage. When retracted the airstairs form the door of the luggage compartment which provides 24 cu. ft. of stowage space and is situated immediately behind the passenger cabin.

The passenger cabin is surprisingly roomy, actual dimensions being 11 ft. 7 in. long, 5 ft. 2 in. wide and 4 ft. 4 in. high. Beagle claim the cabin is 10 in. wider than that of any other light twin aircraft and this has made possible the use of wide

comfortable chairs of truly first class airline standard. G-ASOF is furnished in a seven seat configuration with two centre seats behind the pilots' seats and three seats across the back of the cabin. The interior trim is probably a little more conservative than in competitive American aircraft, but of very good quality and pleasing appearance throughout.

The cockpit is spacious and the pilots are provided with wide comfortable seats equipped with armrests. They are of the fixed type but the rudder pedals are adjustable in a very convenient manner over a fore and aft range of 4 in. A large curved windscreen is free of any distortion and allows both pilots an above-average view in all important directions.

The main instrument panel is actually as wide as that of the Viscounts and has a most professional appearance. G-ASOF is equipped with

fully duplicated blind flying panels which still leave room for a comprehensive range of radio communication and navigation control boxes and indicators installed in the centre of the panel where they are readily accessible and observable by both pilots. The engine instruments are located immediately to the right of the radio controls in quite a convenient position, but the manifold pressure gauges and rev counters are rather small instruments which cannot be scanned as readily as some of the larger types.

The undercarriage selector is on the instrument panel to the left of the central console, and engine starter controls are on a special panel on the cockpit roof.

My flight in G-ASOF was from Bankstown and I thoroughly enjoyed the experience of handling this well-bred aeroplane that combines in such a satisfactory manner docile handling characteristics and top performance. It is a smooth satisfying aeroplane to fly and inspires confidence from very first acquaintance.



MELBOURNE, AUSTRALIA: Beagle B.206-C.2 'Oscar Foxtrot' parked in front of the Ansett/ANA hangar at Essenden Airport, Melbourne during its tour of 'Down Under'.

Throttle, pitch and mixture controls together with the flap selector and all three trims are located in the conventional manner on the central console below the main instrument panel. Elevator, aileron and rudder trims all work in the natural sense and are conveniently located so that they can be reached without difficulty from either pilots' seat.

Charles Masfield, who has many friends at Bankstown, where he spent several weeks last year after ferrying an Airedale from the UK, invited me to fly from the left-hand seat and explained details of the cockpit layout prior to starting up. The electrical system is 24 volt and a special light-weight alternator is fitted to each engine – so

starting order is not important. On this occasion we started the starboard engine first and when both the Rolls-Royce built Continental G10-470s were idling smoothly, called the Tower for a taxi clearance. The G10-470 is equipped with a Continental fuel injection system and is a geared development of the familiar 10-470 series.

The B.206 is equipped with toe brakes, and the parking brake is controlled by a small lever between the pilot's seats. The nosewheel is steerable through the rudder pedals up to 27° each side of centre and then castors so that with a little brake and some application of power on the starboard engine the aircraft can be turned in a very small area. I found the nosewheel steering a little on the heavy side but the visibility whilst taxiing very good, and the aircraft rides well over rough ground.

Standing on the grass at the end of runway 11 left we ran through the vital actions and I found that the pre-takeoff procedures were very little different to those for any other light twin. Apart from the usual items to be checked, the hydraulic master switch should be put ON, cowl flaps OPEN, fuel booster pumps ON and flaps set at the take-off position. Only three flap settings are available, UP, TAKE-OFF and FULL flap.

Upon receiving a take-off clearance I lined up on the runway and slowly opened up to full throttle. I kept the nosewheel on the ground until the speed built up to 65k and found there was very little tendency to swing. We were within 500 lb. of our all up weight and acceleration was moderate. The B.206 became airborne almost as soon as I lifted the nosewheel off the ground and we climbed away at approximately 80k at an initial rate of climb in the vicinity of 1200 ft./min. The undercarriage comes up quickly and there was only a small trim change and no trace of sink as the flaps were retracted.

Upon levelling out, I trimmed the Beagle up to fly hands and feet off and sat back to enjoy the view. "In flight" visibility for both pilots and passengers is very good indeed and the lack of vibration and low noise level would undoubtedly keep

fatigue down to a minimum on long stages. It is a very stable aircraft and has a thoroughbred feel about it. Controls are light and well harmonised and trim changes throughout the speed range are not great. Cruising at 1000 feet at approximately 70% power indicated cruising speed appeared to be in the vicinity of 180k.

Out in the training area and clear of height restrictions, we climbed to 3000 feet. After experimenting with some turns to get the feel of the B.206, I feathered the starboard engine. Feathering is accomplished by pulling the pitch control lever right back and takes only a very few seconds. The resulting swing, if it could be called such, was of such a minor nature that it hardly seemed worthwhile to adjust the rudder trim. Minimum single speed is 75k and with 75% power set on the good engine we maintained a healthy rate of climb with very comfortable control. Turns both away from and towards the dead engine presented no difficulty and the whole performance was most convincing.

Restarting the starboard engine presented little difficulty. The system incorporates an unfeathering accumulator and in a very few seconds we had the propeller unfeathered and the engine running again. When the engine that had been shut down was warmed up again I set up 70% power and noted that at this height the indicated cruising speed was slightly in excess of 180k.

The Beagle B.206 has admirable handling qualities in the slow speed range and it is difficult to imagine even the most inexperienced pilot getting into any trouble. There is good aerodynamic warning of the approach of the stall and for this reason it is not equipped with any automatic stall warning device. With the undercarriage and flaps up and power off I found that the stall occurred at approximately 65k. The ailerons remained effective throughout and normal recovery reaction resulted in full control being regained with little loss of height. In the approach configuration, that is with the undercarriage and flaps extended and a little power added, the stalling speed was approximately 10k slower and this time the break-away was accompanied by a mildly dropped right



The graceful airframe of the B.206, apparent in this flight view, is in fact an extremely rugged structure that has been rigorously tested. The airframe is of all metal construction.

wing. The buffeting, which commences 5–10k before the stall, and the heavy elevator loading as the stall is approached make an unintentional stall a most unlikely possibility.

On the way back to the aerodrome, Charles Masefield, flying from the right-hand seat, gave a most convincing demonstration of the Beagle's manoeuvrability by carrying out a smooth and precise barrel roll. A seven seater twin like the B.206 is not really built for this sort of thing, but the Beagle went round and over in such an effortless manner that the manoeuvre did not seem at all out of place.

Back in the Bankstown circuit again I fully appreciated the good visibility as we joined the other traffic and prepared for a landing. The maximum speed for lowering the undercarriage is 135k

and I found that I had to get the power well back in order to reduce speed to this figure. The undercarriage comes down quite quickly (it actually free falls by gravity) and causes a small nose down change of trim. The normal approach speed is 85k and with full flap extended on final and just a little power I found the angle of descent moderately steep with an excellent view of the runway throughout the approach. The elevators are not unduly heavy on the roundout and it's nice soft undercarriage that permits a very smooth arrival.

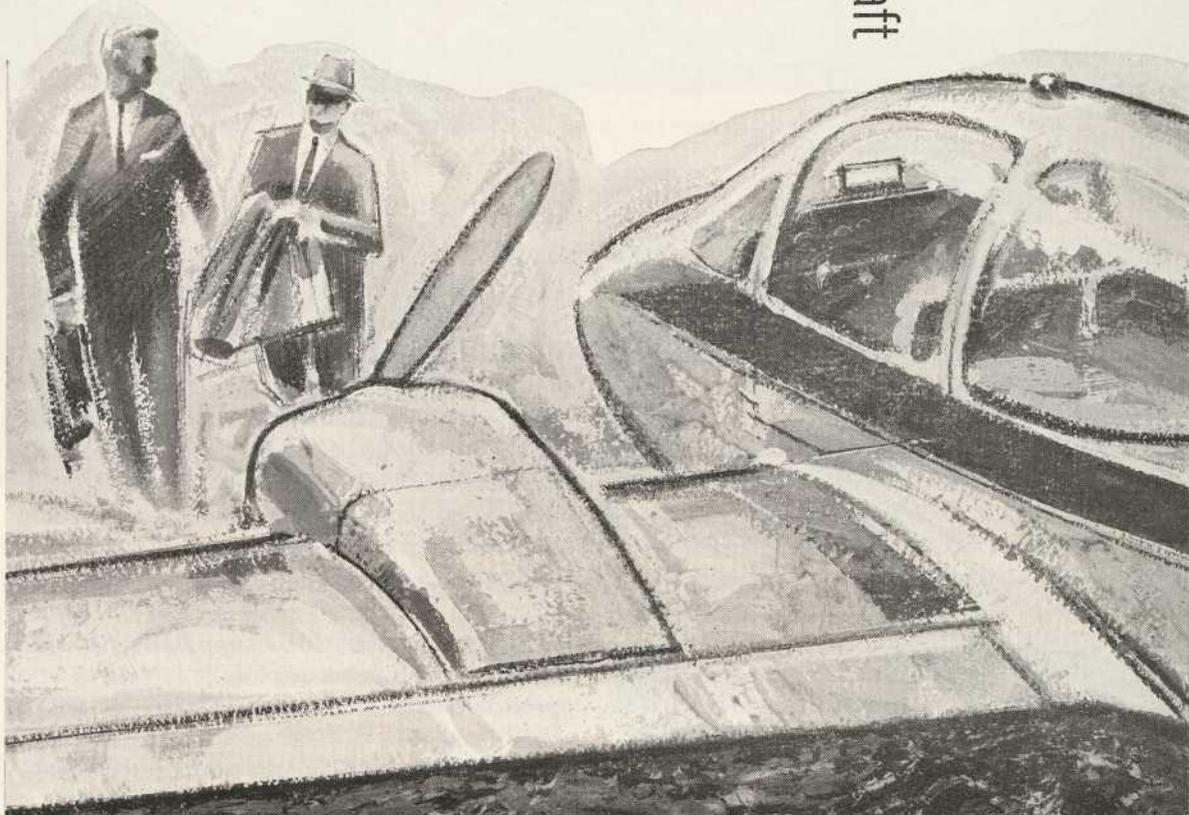
From an operational point of view, the Beagle B.206 appears well suited to Australian conditions, but it may be a little too big for the average charter operator. Capacity payload is 1800 lb. which would permit the carriage of seven passengers of 180 lb. and 540 lb. of luggage over a still air range

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of 560 nautical miles at a cruising speed of 186k. Maximum fuel capacity is 195 Imp. gal., and with full tanks a payload of 1096 lb. could be uplifted which would permit the carriage of five passengers and their baggage over a still air range of 1240 nautical miles at 186k or 1515 nautical miles at 145k.

A more advanced model now under development will be known as the B.206-S and this version will be powered by two 340 h.p. supercharged Rolls-Royce GTS10-520-C engines. This supercharged version of the B.206 has 10% more power available at sea level and this power may be maintained up to 16,000 feet. Maximum cruising speed of the B.206-S is quoted as 214k at 10,000 feet and maximum still air range at 185k 240 n.m. with 652 lb. payload plus pilot.

The Beagle B.206 has a guaranteed fatigue life of 15,000 flying hours. The airframe has been subjected to an exhaustive and exacting test programme which has been far more comprehensive than any other similar programme previously undertaken in respect of a general aviation aircraft. Full scale structural testing has been carried out for the complete wing, fuselage and tail assembly.

A static test programme which began in March 1962, was undertaken for Beagle by Boulton and Paul Aircraft Ltd., who manufacture the B.206 wings. The programme of static testing was started on the basis of an all up weight of 7,000 lb., but when the RAF finally placed their order for the B.206 this figure was increased to 7,500 lb.

After Boulton and Paul's static test programme was completed in October 1963, Beagle built their own dynamic structural test rig and embarked on an intensive programme of fatigue testing. The static test programme involved the application of steady loads to the structure to determine its strength while the dynamic tests involved the application of strains and loads to operationally simulated levels and at an accelerated rate so that the effects of years of service were reproduced in only months of testing.

While this type of programme is standard prac-

tice where the construction of airliners and other large aircraft is concerned Beagle are believed to be the only light aircraft manufacturers who have equipped themselves for this type of investigation.

In addition to proving the structural integrity of the airframe, Beagle have undertaken exhaustive environmental testing of the aircraft's various systems and a long comprehensive flight testing programme which has resulted in a well proven aeroplane that should experience a trouble free introduction into service.

The price of the standard Beagle B.206 in the United Kingdom is quoted at £35,000 sterling and the supercharged B.206-S £39,800 sterling.

B.206 LEADING PARTICULARS

POWERPLANT

| | | |
|---|---------|-----------------------------------|
| Engine type | | Rolls-Royce Continental G10-470-A |
| RPM (rated max.), (Take-off) & (M.E.T.O.) | | 3200 |
| BHP (rated max.), (Take-off) | | 310 |
| BHP (M.E.T.O.) | | 310 |
| Compression ratio | | 8.6:1 |
| Propeller diameter | | 7 ft. 6 in. |
| Fuel grade | | 100/130 octane |

OVERALL DIMENSIONS

| | | |
|--------|---------|--------------|
| Span | | 45 ft. 9 in. |
| Length | | 33 ft. 9 in. |
| Height | | 11 ft. 3 in. |

WING

| | | |
|--------------|---------|--------------|
| Span | | 45 ft. 9 in. |
| Area | | 214 sq. ft. |
| Aspect ratio | | 10 |

FUSELAGE

| | | |
|------------------------|---------|--------------|
| Length | | 33 ft. 4 in. |
| Width | | 5 ft. 7 in. |
| Depth | | 5 ft. 5 in. |
| Cabin width (internal) | | 5 ft. 2 in. |

UNDERCARRIAGE

| | | |
|-----------|---------|--------------|
| Track | | 14 ft. 0 in. |
| Wheelbase | | 9 ft. 8 in. |

TYRES

| | | |
|------|---------|-----------|
| Main | | 7.50 - 10 |
| Nose | | 6.00 - 6 |

WEIGHTS & LOADINGS

| | | |
|--------------------|---------|----------------------------------|
| Disposable load | | 2,940 lb. |
| Empty weight | | 4,560 lb. |
| Max. all up weight | | 7,500 lb. |
| Max. wing loading | | 35.0 lb./sq. ft. |
| Max. power loading | | 12.1 lb./b.h.p. |
| Fuel capacity | | 195 imp. gal. (235 U.S. gal.) |
| Baggage volume | | 24 cu. ft. |

A VERSATILE AEROPLANE

Whilst the B.206 falls into the category of 'Light Twin Executive Aircraft', a role in which it excels, it should not be forgotten that this aircraft is ideally suited for operation in various other roles. Considerable interest is being shown throughout many parts of the World in specialised versions of the aircraft.

'The exceptionally wide cabin (62 in.) of the Beagle B.206 makes possible first class airline standards of seating not normally found in aircraft of this category. With a total cabin volume of 260 cu. ft. (some 20 per cent greater than other contemporary aircraft in its class) the B.206 is well suited for a variety of accommodation layouts to suit the specific requirements of operators. The following pages illustrate six typical - interchangeable - configurations for the interior. In all configurations the interior styling is of modern and pleasing design providing outstanding comfort. The well upholstered seats available in either p.v.c. or crushed hide, together with pile carpeting, give a limousine character to the cabin'.

1. STANDARD VERSION

(Seven seats)

With the seats arranged in a 2-2-3 manner, this executive version provides ample accommodation for seven people, with individual reclining backrests for each place in the three-seat lounge. More than 36 cu. ft. of cabin space is available for each occupant.

2. EIGHT SEAT VERSION

Maximum utilisation is obtained by the inclusion of a centre seat between the two middle armchairs. In this form there is still 32 cu. ft. of space for each

occupant. As an eight-seater with full baggage load, the Beagle B.206 has a range of 810 statute miles at 209 m.p.h.

3. AMBULANCE VERSIONS

(Three seats one or two stretchers)

Workmanlike Ambulance or 'Flying Doctor' versions allow either one or two stretchers to be accommodated on the starboard side of the cabin. Provision is made for full oxygen and blood plasma equipment together with general medical supplies.

4. TRAINER VERSION

(Five seats)

A navigational/trainer version has five seats arranged in 2-1-2 formation for two pilots, one instructor and two navigator/radio pupils. Duplicated instruments are located behind rearward facing seats on a panel in the aft bulkhead.

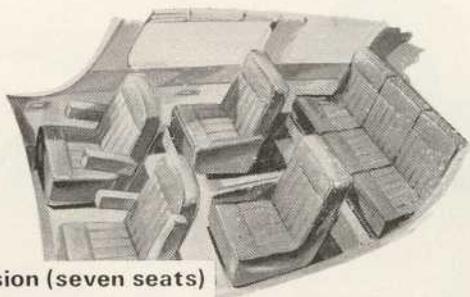
5. AIR SURVEY VERSION

The spacious interior of the B.206 accommodates most types of aerial survey equipment. Provision is made in the floor for a wide angle camera installation and a hatch in the rear loading door permits oblique photography. For A.P.R. operations a 44 in. diameter reflector may be fitted beneath the fuselage.

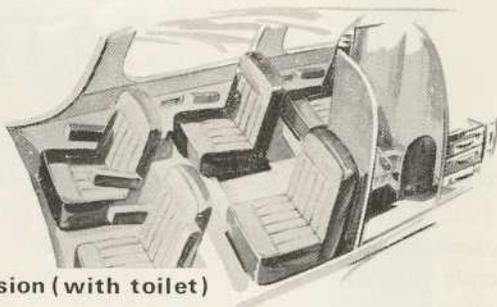
6. LUXURY VERSION

(Five seats)

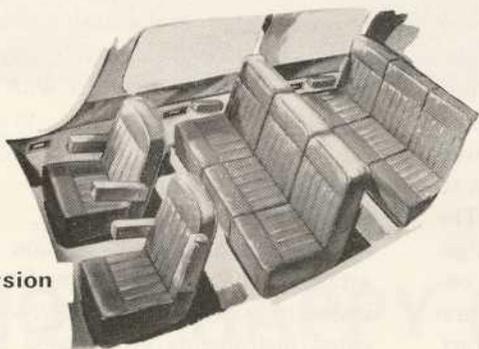
In luxury form the Beagle B.206 carries five people. A toilet compartment with full washing amenities is provided at the aft end of the cabin. This version can be installed as an alternative to the six-seat version in the course of two hours.



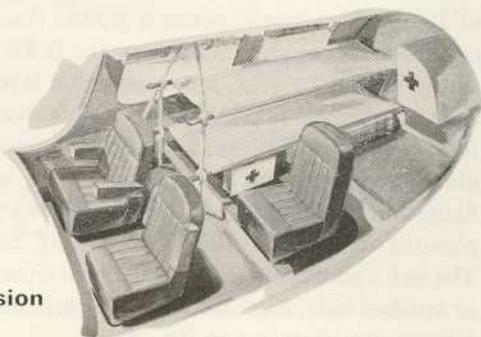
standard version (seven seats)



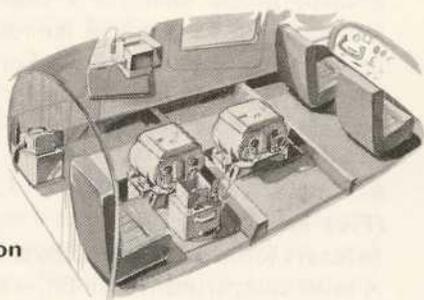
five seat version (with toilet)



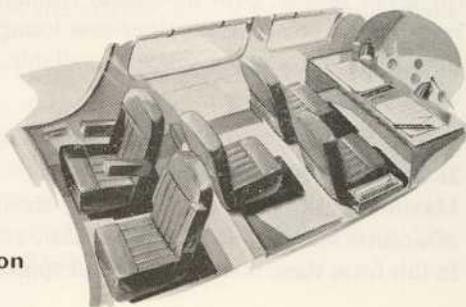
eight seat version



ambulance version

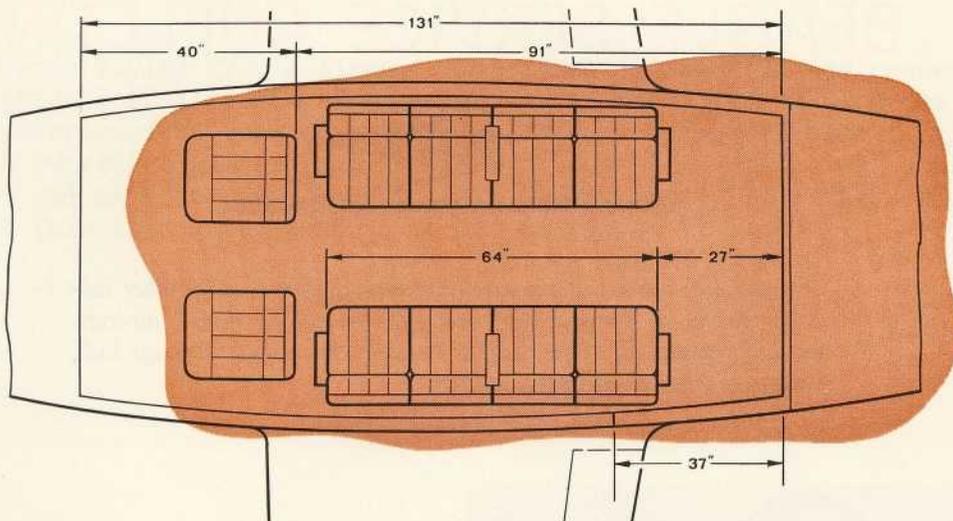


survey version

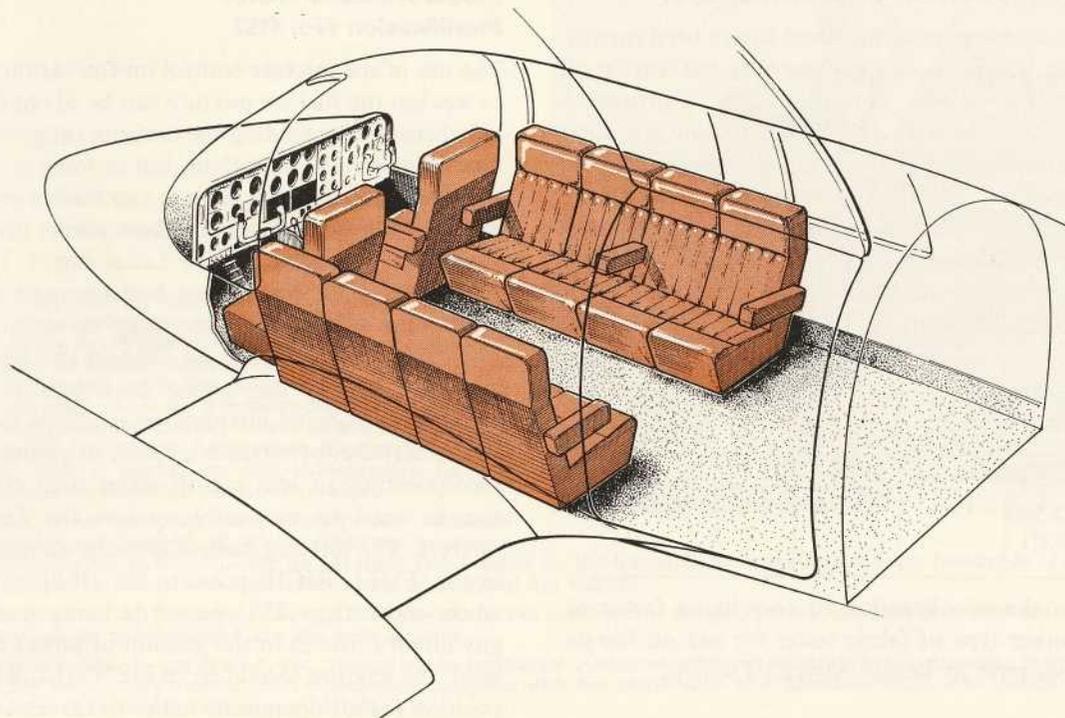


trainer version

**high density version
(1 crew + 9 passengers)**



Interior plan view



BEAGLE SERVICE BULLETIN

ISSUE No. 3



Any questions on the subject matter of these Bulletins or on other subjects relating to the operation and maintenance of Beagle aircraft, should be addressed to the Service Department, Beagle Aircraft Ltd., Shoreham Airport, Sussex.

BULLETIN No. A.12

Fabric Testing

Aircraft Affected—A.61, A.61/2, A.109

It has been reported that checks have been carried out on Beagle aircraft to determine the tension of the doped fabric covering, with instruments calibrated for use with fabric complying with American specifications; as a result incorrect readings are obtained. When a 'Seyboth' tester, which employs a penetrating cone device, is used the applicability of the colour-banded plunger must be read, when used on doped British fabrics, in accordance with the following table:-

| Fabric Spec. | Red | Orange | Yellow | 1st Green |
|------------------------------|------|--------|--------|-----------|
| DTD.575 DTD.540 BSS.F1 | Fail | Accept | Good | Excellent |

For the re-calibration or conversion factor of any other type of fabric tester for use on Beagle aircraft refer to Beagle Aircraft Limited.

BULLETIN No. A.13

Use of Carburettor Mixture Control

Model Affected—A.109

Modification No. 4152

The use of the mixture control on the carburettor to weaken the fuel/air mixture can be of considerable benefit in extending the cruising range of the aircraft in certain conditions, but in some circumstances, weakening the mixture can lead to engine malfunctioning or damage. These points are the subject of Lycoming Service Letter No. L.112A. The purpose of this present bulletin is to summarise the information necessary in order that the mixture control may be used in the manner recommended by the engine constructors. The engine constructors' instructions are given below.

The carburettor mixture control, in addition to incorporating an idle cut-off when fully closed, can be used to manually weaken the fuel/air mixture. The mixture control must be maintained in the 'FULL RICH' position for all operations where more than 75% power is being used. If any doubt exists as to the amount of power being used, the mixture should be in the 'FULL RICH' position for all operations under 5,000 feet.

Cruise Conditions for 75% power with constant speed propeller

| Aircraft | Propeller | RPM | Altitude ft. | Manifold Pressure In.Hg. |
|----------|---------------------|-------|-----------------|--------------------------------|
| A.109 | McCauley Type 2D | 2450 | 0 | 24.0 |
| | | | 2,000 | 23.5 |
| | 4,000 | | 23.0 | |
| | 6,000 | | 22.5 | |
| | 2350 | | 0 | 24.5 |
| | KM-4 | | 2,000 | 24.0 |
| | | 4,000 | 23.5 | |
| | | 6,000 | 23.0 | |

The following weakening procedure should be used at altitudes above 5,000ft., and at the pilot's discretion below 5,000ft., when less than 75% power is being used.

Move the mixture control towards the weak position until the engine begins to run rough. At this point richen the mixture until the engine runs smoothly. This procedure should give some decrease in cylinder head temperature from the point at which the weakening procedure is started.

Caution

1. Never operate an engine above the maximum cylinder head temperature specified in the operator's manual.

2. Never manually weaken engines equipped with altitude compensated carburetors.

3. Do not increase power for climbing to higher altitudes above 5,000ft., without first increasing engine fuel mixture proportionately. Re-adjust engine fuel mixture after attaining new altitude to best economy setting.

The conditions for cruise at 75% power are given below and are applicable to the standard Constant Speed propeller fitted.

Modification 4152 consists of deletion of the words 'Do not weaken mixture below 5,000ft', on the performance placard fixed at the port wing root position. This is to be carried out as soon as possible by any method which permanently deletes the necessary words without affecting the rest of the placard.

The Owner's Handbook will be brought into line by normal amendment action.

SERVICE LETTER No. 3

Improved Replacement A.C. Fuel Pump Aircraft Affected—A.109, D5/160, D5/180, D6/160, D6/180, J1U and J5V

Service Bulletins Nos. 55 and A.10 gave details of the fuel and oil vent restriction requirement for A.C. lightweight, diaphragm fuel pumps.

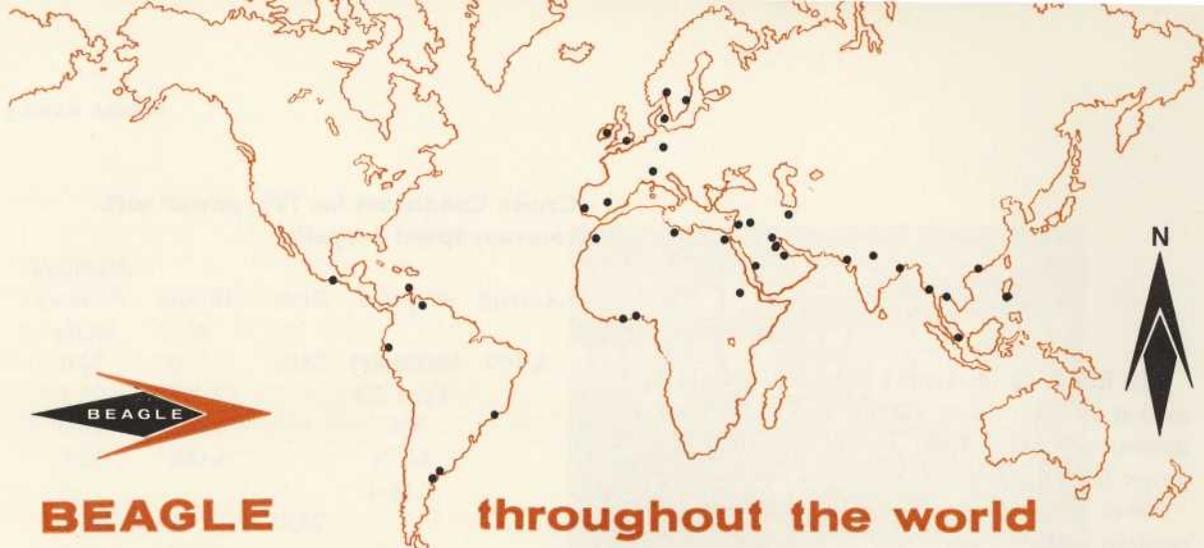
A restrictor adaptor was introduced under cover of Modification No. A.182.

Lycoming Service Instruction No. 1110 has been issued which gives details of a new fuel pump with integral oil drain restriction and improved dual diaphragm.

This pump, Lycoming Part No. 75148 (AC.6440174), replaces pump Lycoming Part No. 74082 (AC.5623467), referred to in Beagle Bulletins Nos. 55 and A.10.

The new pump is installed in the same manner as the previous model but be sure to remove the restriction from the vent line on the aircraft modified in accordance with Service Bulletins 55 and A.10, adaptor Part No. CM.200/A, must be fitted in conjunction with the new pump 75148.

The new fuel pump replaces the previous model and orders received by Lycoming for the older model fuel pump will be filled with the latest design dual diaphragm type pump.



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