

BEAUFORT PLANES.

First Ready in April.

EARLY SETBACKS.

Wrong Data Supplied.

CANBERRA, Monday.

The Prime Minister, Mr. Menzies, said to-night that it was expected that the first Beaufort bomber airframe to be made in Australia would be delivered next April, and that the whole scheme would be completed during the first half of 1942—only a few months behind the original schedule.

The scheme is a joint undertaking of the United Kingdom and Australian Governments.

In a report which Mr. Menzies received from the Director-General of Munitions, Mr. Essington Lewis, it was stated that, because of the conditions brought about by the war, much of the data originally supplied by the Bristol Aeroplane Company was "incorrect and unreliable." This had necessitated a vast amount of checking and rechecking. The company had found it impossible to supply the tooling it had undertaken to furnish, as a result of which 26,000 of the 33,000 jigs and tools necessary for production had to be manufactured in Australia.

MANY CONTRACTS IN AUSTRALIA.

Mr. Menzies said Mr. Essington Lewis's report was:—

"Work is proceeding in railway workshops, annexes, and sub-contractor works. A very large number of contracts has been placed in Australia for tools and manufactured parts and for essential assembled details. Large numbers of men in three States are being trained to undertake the new manufacturing technique. About 80 specially selected technicians have undergone a period of at least three months' training each at the works of the Bristol Aeroplane Company in England. A highly skilled technical staff has been gathered together, and is working enthusiastically in an endeavour to bring the aircraft into production in the shortest possible time.

"Final assembly buildings have been completed at Mascot, New South Wales, and Fishermen's Bend, Victoria, and area workshops established within the railway organisations of New South Wales, Victoria, and South Australia, as planned by the United Kingdom Air Mission. A large main storehouse has been built at Spotswood, Victoria. This was brought into operation last December.

"All local arrangements have been carried out to schedule.

"TASK OF GREAT MAGNITUDE."

"The manufacture of these large twin-engine bombing and general purpose aircraft is a task of great magnitude. No one outside the organisation can have any idea of the nature of the task involved. The scheme was commenced two months before the outbreak of war, and the emergency conditions under which it is now being carried out have created immense difficulties, all of which are being and will be surmounted.

"The Bristol Aeroplane Company was required to provide complete drawings and data and technical assistance; to furnish all the necessary tooling, much of a very intricate nature; and to supply 10 sets of fabricated parts and 10 sets of raw materials for the first 20 aircraft. All other raw materials for the remaining aircraft were to have been obtained, under the authority of the Air Ministry from England.

"Because of the conditions brought about by the war, much of the data supplied by the company has been incorrect and unreliable, necessitating a vast amount of checking and re-checking of drawings, planning, data, etc. The company's work has been

JIGS AND TOOLS MADE HERE

Beaufort Bombers

CANBERRA, Monday.—Although 26,000 out of 33,000 jigs and tools necessary for local production of Bristol Beaufort aircraft have had to be made in Australia, first Beaufort airframe is expected to be delivered next April.

Tooling in Australia has been necessary because the Bristol Aeroplane Co., England, has not been able, because of the war, to supply jigs and tools.

This is among the unforeseen difficulties which have arisen in carrying out the joint undertaking between the British and Australian Governments for the manufacture of Beauforts in Australia, and which are reviewed in a special report from Mr. Essington Lewis, Director-General of Munitions, issued to-night by Mr. Menzies.

The report says the whole scheme will be completed in the first half of 1942—only a few months behind the original schedule. All arrangements in Australia have been carried out to schedule.

Work is proceeding in railway workshops, annexes, and sub-contractors' works, says the report, and many contracts have been placed for manufactured parts and essential assembled details. Large numbers of men in three States are being trained in the new manufacturing technique. About 80 selected technicians have each undergone at least three months' training at the Bristol works in England.

BUILDINGS READY

Final assembly buildings have been completed at Mascot (N.S.W.) and Fishermen's Bend (V.), and area workshops have been established within the railway organisations in N.S.W., Victoria, and S.A., as planned by the British Air Mission.

Begun two months before the war, the emergency conditions under which the scheme is now being carried out have created immense difficulties, all of which are being overcome, says the report.

Delivery of 10 sets of fabricated parts and 10 sets of raw materials, which were to have been supplied by the Bristol Co. before December 31, 1939, has not yet been completed. Advice now received from the Air Ministry is that delivery of the fabricated parts and materials for the first 20 aircraft is now to be completed as early as practicable.

Originally Britain was to have supplied a large number of Taurus engines, but these cannot be sent, and the Commonwealth has authorised manufacture in Sydney of twin-row Wasp engines in Australia as an alternative. It is expected production will begin in the first half of 1941. Inquiries are now being made in America for 100 engines of this type, in addition to 60 already ordered as insurance against emergencies.

Recent cabled advices encourage the belief that necessary raw materials will be obtainable in the U.S., says the report.

EMBARGO LIFTED.

"Delivery of the 10 sets of fabricated parts and 10 sets of raw material which were to have been supplied by the company before December 31, 1939, has not yet been completed, and an embargo has been placed by the United Kingdom Government upon the shipment of any further aircraft materials from England.

"Advice has just been received from the Air Ministry, however, that the delivery of the fabricated parts and materials for the first 20 aircraft is now to be completed as early as practicable.

"Furthermore, the scheme was contingent upon the supply of a large number of Taurus engines from England. These are not now forthcoming, and the Commonwealth Government has authorised the manufacture of the twin-row Wasp engine in Australia as an alternative to the Taurus. A factory is now being established in Sydney for this purpose, and it is anticipated that production of engines will commence in the first half of 1941. Inquiries are being made in the United States however, for 100 engines of this type, additional to 60 already ordered as an insurance against unexpected emergencies.

"The adoption of the twin-row Wasp engine in place of the Taurus engine necessitates modifications to the airframe and a trial installation of the alternative engine in the Beaufort airframe. This is being carried out in England, and has been practically completed. We have been advised that the alternative engine is entirely satisfactory. Some drawings have been received, and we expect the completion of this information at an early date. This necessitates additional work in Australia not contemplated in the original scheme, and the engineers are now at work at Fishermen's Bend carrying out the necessary alterations on a sample airframe.

RAW MATERIALS FROM U.S.A.

"As no further raw materials can be obtained from England, we have had to turn to the United States for supplies, and a member of the Aircraft Production Commission is now in New York negotiating, in conjunction with the British Purchasing Commission, for the purchase of raw materials and equipment. Recent cabled advices encourage us to believe that these materials will be forthcoming. Therefore, with the exception of the above-mentioned 20 aeroplanes, the final success of the scheme is dependent on materials arriving from U.S.A.

"These facts will give some idea of the difficulties which have had to be faced.

"Just a little over a year has elapsed since Mr. H. W. Clapp was appointed to set up the organisation for the manufacture of these aircraft. During that period an immense amount of work has been done.

"If delivery of the first aircraft can be achieved as anticipated in April, 1941—which will be achieved if the supply of raw materials and engines can be assured—a task of tremendous importance to Australia will have been successfully accomplished."

6-8-40
SYDNEY MORNING HERALD

6-8-40: ARBOS

IS TAKING SHAPE

One a Day By 1941

In a vast and as yet almost empty building at Fishermen's Bend, on which the paint is hardly dry, the first Beaufort Bomber to be assembled in Australia is rapidly taking shape.

The streamlined fuselage is outwardly complete and ready for the attachment of the wings, while skilled mechanics inside the cabin are at work on a maze of wires, hydraulic pipes, instruments and fittings. Within about three weeks it will be finished except for the fitting of the engines, and as soon as these are available it will be ready to take the air.

Press representatives saw the plane today in a tour of Melbourne establishments working on the Beaufort project, arranged by the Aircraft Production Commission, which has direct charge of the scheme.

Its completion will mark the end of the first stage in the realisation of the project. Ten more Beauforts will be assembled from English parts, and a further ten from imported material fabricated in Australia.

By the middle of next year, the scheme will be in full operation, and a bomber, made entirely in Australia, and almost entirely from Australian materials, will be coming off the production lines every day.

EMPLOYMENT FOR 10,000

The project, then, will employ more than 10,000 people and will be the largest single manufacturing industry in Australia, the only organisation of comparable size being the Broken Hill Pty. Ltd.

Today's tour began at the nerve centre of the organisation—the technical headquarters, which are at present housed in a Collins Street insurance building, but which will be moved in September to administrative offices now under construction at Fishermen's Bend.

At the technical headquarters they

have a room in which are samples and specifications of all the 20,000 parts required in the construction of this plane. The man in charge of this department has only one instruction—empty the room as quickly as possible—because when that is done it will mean that all contracts for the making of parts have been let.

40,000 DRAWINGS

Here, too, there is a filing room in which are kept the 40,000 technical drawings required in the project, and the planning department, which transmits the drawings to the right man in the right department and sees that every department has the materials needed for its work.

The first fruits of the work of the technical departments can be seen at the Commission's main store, a huge building at Spotswood, which will serve as the supply centre for all factories working on the project. The section of the scheme is already almost in full operation, with racks and shelves filling up with material almost daily.

THE NEXT STAGE

At Newport Workshops annexe the next stage in aircraft production can be seen. Here several of the larger components of the Beaufort are made, including the rear fuselage, tail plane, ailerons, rudder and fin.

On entering the shop six great jigs used in the construction of the rear fuselage meet the eye. One of these was imported intact from England and the others were assembled at Newport. Here intricate machines mould the tricky duralium sheets and skilled workers rivet them over the jigs.

Most of the technical workers here are young men—many in their teens—because it is found that young men can be more easily trained in the difficult processes new to Australian industry. Accuracy to a five-hundredth part of an inch as the outside limit is required for the least difficult work in this shop.

More than 800 men will eventually be employed on this section of the project alone.

FINISHING TOUCHES

At Fishermen's Bend, alongside the Commonwealth Aircraft Corporation's Factory, is the third main establishment working on the project in Melbourne. Here, planes will be assembled and painted, engines fitted, and test flights made.

The three big assembly halls, begun only last November, are already complete and ready for the installation of the great horizontal jibs on which the final work is done.

At present, however, the only work being done here is the assembly of the first "sample" bomber, the parts of which were brought from England.

In other States, work of no less importance is being done. The largest drop forging equipment ever used in Australia—it cost £200,000—has been ordered from America and will be installed at Lidcombe, Sydney, for the production of propeller and other heavy forgings.

35,000-LB. HAMMER

This plant will include a 35,000lb. hammer—the biggest in Australia.

The Australian Aluminium Company, of Concord, Sydney, will undertake the production of duralumin strip as well and aluminium alloy forgings, the total expenditure in new plant being about £450,000.

In Adelaide, tools and jigs are being made, in addition to important parts of the plane itself.

The foundations of this immense organisation were laid only a year ago, and it will be only a year and

PLANE-A-DAY SCHEME

Beaufort Bombers

Within a year the scheme for the manufacture of Bristol Beaufort bombers in Australia will be employing 10,000 people and one plane a day will be the output. With a policy of decentralisation dictated partly by the accessibility of skilled labor and workshop facilities, the production of the planes is being divided between three of the capital cities, Adelaide producing the wings, Melbourne the centre plane and rear fuselage, Sydney the front fuselage and the twin-row Wasp engines to replace the Taurus engines that cannot now be obtained from England. The assembling of the parts will be done at the special plants erected at Mascot (N.S.W.) and Fisherman's Bend, with flying fields attached.

Yesterday the chairman of the Aircraft Production Commission (Mr. H. W. Clapp) led a party of journalists on a tour of the three main centres concerned with the Beaufort scheme in Melbourne—the aircraft stores at Spotswood, where all materials, locally produced or imported from overseas, come to be "quarantined" and tested for quantity and quality; the Newport area workshops, where the job of assembling the rear fuselages is being done, and the assembly plant at Fisherman's Bend where a sample machine is being put together.

From the drawing office in the commission's temporary head quarters at 414 Collins-street, where drawings of the component parts of the planes are prepared, to the production room in the same building, where the key job of analysing the drawings and planning the production of the parts is done, and on to the final assembly plant at Fisherman's Bend, the immense complexity of the job of making one of these £40,000, 300-mile-an-hour bombers, with their 2000 lb. cargo of bombs is vividly forced home to the layman. The tooling of the manufacturing scheme has been one of the main problems to be met, for of the 34,000 tools which were to have been sent from England, 27,000 have now to be made locally. For each of the 20,000 parts that go to make up a Beaufort bomber separate tools are needed.

In the Spotswood store, main central store for the whole Commonwealth, not only is the testing of the materials and parts done, but the history of each individual item is preserved. Even the nuts, bolts and screws carry numbers or identification letters by which material and manufacture can be traced. It is from this main store house, with its ancillary laboratories, now in process of construction, that the materials and parts go out to the factories or annexes throughout the Commonwealth. The Newport area workshops are stocked from there. In this workshop, where about 120 men are now employed, an important sideline in the activities is the training of workmen; at present a squad about 30 strong is learning to handle the light alloy metals used in aircraft construction.

The final assembly plant at Fisherman's Bend, adjacent to which an administrative block to which the commission will transfer next month is now being built, comprises a paint shop, an erecting hall, considerably wider than the span of the largest plane in existence, and a flight shed, where the final tests on the complete plane are made before it is run out on to the tarmac for its first trial flight. Just when the first Beaufort will make that test flight is still uncertain; the sample plane from England now on the rig in flight shed is rapidly taking shape, but it is still awaiting its engines—two of the number of twin-row Wasp engines to be imported from America.

6.8.40

THE HERALD

7.0.40 165

Plane Lag Complaint

Production of undercarriages for Bristol Beaufort long-range bombers could not begin immediately, the Non-Communist Labor leader (Mr. Beasley) said yesterday.

Mr. Beasley, who is a member of the Advisory War Council, said he had learned this during an inspection of the factory where the undercarriages are to be made.

He said he would raise the question of the delay in undercarriage production at the War Council meeting next week.

Production of other parts of the machines was well advanced.

Mr. Beasley added: "The annexe at the factory is not completed. The roof is not yet on it.

"The factory at which twin-row Wasp engines for the bombers are to be built is also unfinished.

"The construction of the undercarriages and engines are very complicated jobs.

"Drive Lacking"

"It is useless for the Government to say that progress is being made with the fuselages in Victoria, and with the wings in South Australia, if no steps are being taken to produce these other important parts.

"It appears that there has been a lack of drive and determination in the production of these machines.

"The recent sinkings by enemy raiders make it more urgent that we have long-range machines like these in the air as soon as possible."

The Minister for Supply (Senator McBride) said last night that it was expected that the Beauforts would be delivered to schedule.

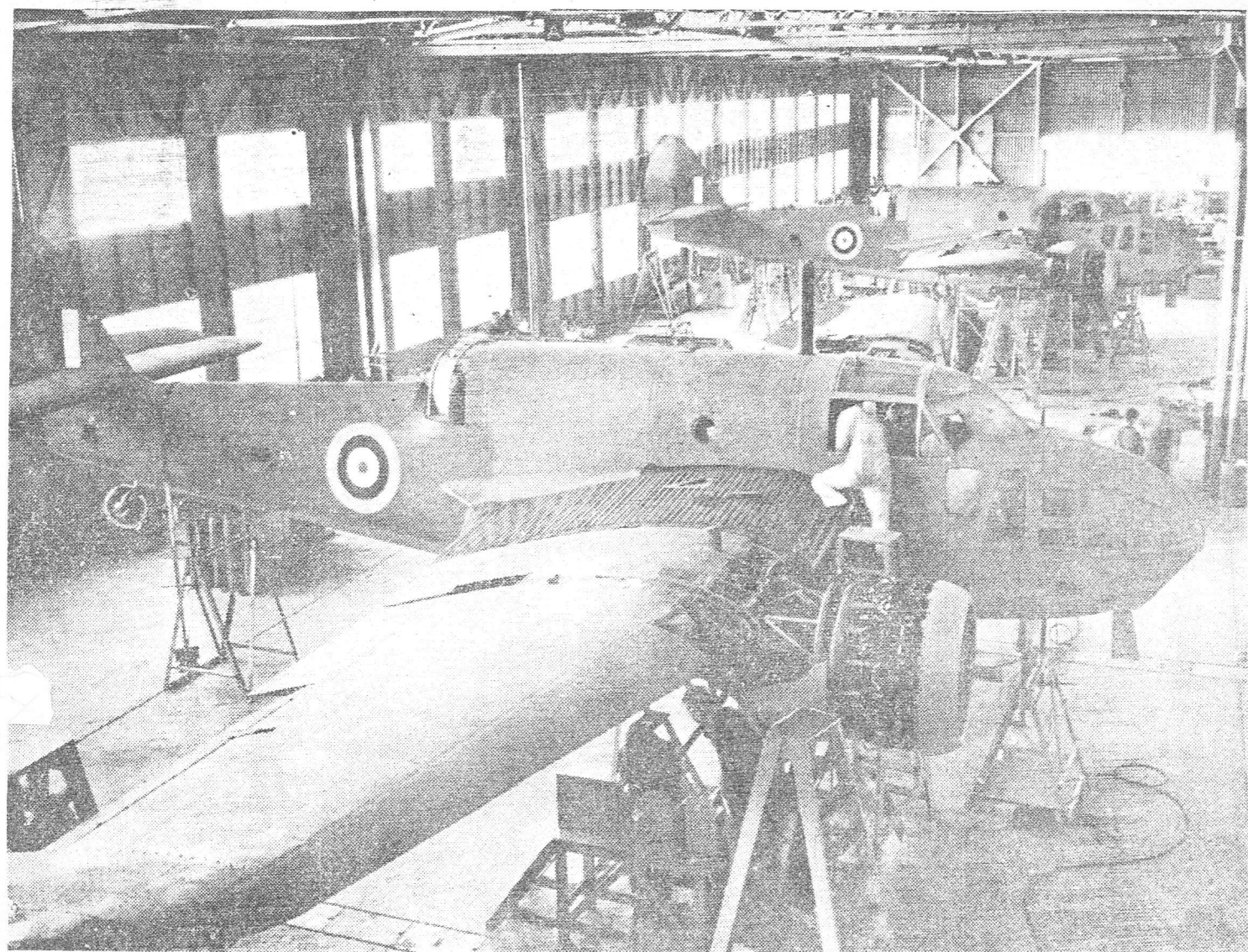
He admitted there had been many unforeseen delays, caused principally by non-delivery of materials.

"Credit must be given to those who have been able to find other sources of supply, and have been able to produce in Australia many of the materials we hoped to secure from overseas," he added.

DAILY TELEGRAPH (SYDNEY)

4.1.41

ASSEMBLING BRISTOL BEAUFORT BOMBERS IN VICTORIA



Bristol Beaufort bombers being assembled at the big Victorian plant of the Aircraft Production Commission. A similar assembly plant in New South Wales will soon produce its first plane, the component parts of which will be made in three States.

SYDNEY MORNING HERALD 17.5.41

AUSTRALIA BUILT 700 BEAUFORTS

SYDNEY: Of 700 Beaufort aircraft built in Australia and delivered to the R.A.A.F. 411 were still in use at the end of the war—after more than three years' operation.

This was quoted by R.A.A.F. Headquarters in support of the R.A.A.F.'s confidence that its new aircraft—Vampires, Tudors and Lincolns—all of which will be Australian-built, will match any in the world. The R.A.A.F.'s policy, as stated by the Chief of the Air Staff (Air Vice-Marshal George Jones), is that the manufacture of aircraft in Aus-

tralia is a vital part of any Australian defence plan.

Of the 411 Beauforts still in use at the end of the war, 138 were on serviceable strength in New Guinea, and 160 being used by operational training and other units in Australia. Others were being used as reconnaissance aircraft, reserves, air-freighters and for communication work.

During one period of 10 months, three R.A.A.F. Beaufort squadrons operating over the Wewak-Yakumul sector, flew 5,769 operational sorties against the Japanese.

Offered a Job

They logged 11,034 flying hours, and dropped 7,706,596 lb. of bombs. In strafing raids they fired 1,090,257 rounds of ammunition.

From May 7, 1944, to September 30, 1944, they flew 2,758 sorties, dropping a bomb load of 4,285,640 lb., and firing 179,768 rounds of ammunition.

In that period, two of the Beaufort squadrons were based at Nadzab (New Guinea) and were striking daily at But. Dagua, and Wewak airstrips.

Several of the Beauforts flew on more than 100 bombing strikes against the enemy.

The squadrons reported that their serviceability was very high, and their figures compared more than favourably with any Allied squadron in the Pacific.

In addition to the 700 Beauforts 300 Australian-built Beaufighters were used by R.A.A.F. attack squadrons, which blasted their way from Kokoda to Borneo.

Australian - built Wirraways Boomerangs, and Mosquitoes played their part in Army co-operation and photo reconnaissance.

QUB PAPER