

Predict 1949 Expansion For Aircraft Industry

Lively Prospect of Defense Orders—Believe Postwar Shrinkage Trend Reversed—May Produce U. S. Fighters

By RONALD A. KEITH

THERE are definite indications that a peace-insurance program of revitalizing the Canadian aircraft manufacturing and overhaul industry is in prospect for 1949. To experienced observers, familiar with the production pattern in the recent war, such a program is of the utmost urgency.

There are high hopes that 1949 may see a large-scale rejuvenation of the aircraft industry but at present no clear-cut policy has emerged from the confusion of prospects and rumors. There is a strong possibility that at least one American type of aircraft and possibly two will be manufactured on license in Canada. No such arrangements have been announced at this writing. However, indications are that should such a policy prevail, the Fairchild Packet would be produced by Canadair and a leading U.S. jet fighter would be made by The de Havilland Aircraft of Canada.

In the latter instance, the North American F-86 swept-back jet fighter is reported to be a leading contender. Lending credence to this is the information that the RCAF

technical chief is currently in California accompanied by certain government financial representatives. The Republic Thunderjet also has been mentioned in this connection.

Forecasts of the aircraft industry's prospects range up to the claim that Canada will become the air arsenal for Britain and the United States. While this role is very unlikely, a reciprocal manufacturing and supply arrangement with the U.S. coupled with defense equipment standardization for North America would provide the manufacturers with considerable scope for expansion.

One of the most hopeful features of the current situation is the fact that an expert analysis of the aircraft industry in terms of its defense role, past, present and future, has been prepared by the Aircraft Committee of the Industrial Preparedness Association (formerly known as the Canadian Ordnance Association).

ABOVE: Final assembly line in the Canadair plant at the peak of North Star production. The first of 22 Canadair Fours are now on the assembly line for BOAC.

While the contents of this important document have not been released to the press, membership of the Aircraft Committee guarantees that the case is presented with skill and authority. Chairman is Fred T. Smye, asst.-gen. manager of Avro Canada. Members are: F. W. Bruce, vice-president, Aluminum Company of Canada; V. M. Drury, president, Canadian Car & Foundry Co.; P. C. Garrett, general manager, The de Havilland Aircraft of Canada; Grant MacDonald, MacDonald Bros. Aircraft; R. T. Riley, president, Canadian Pratt & Whitney; Terence Sheard, general manager, National Trust Co. and H. Oliver West, general manager, Canadair Ltd.

This report is now in the hands of the semi-official Industrial Defense Board which is gathering similar reports from other defense industries. The Aircraft Committee's report, the first to be submitted, will be forwarded to the Dept. of National Defense with IDB recommendations.

Thus it seems assured that the most comprehensive and authoritative facts and opinions available in terms of the aircraft industry's position will be before the decision makers.

Highlights and Shadows

Meantime, the immediate picture reveals a mingled pattern of highlights and shadows. Broadly speaking, the industry has suffered and shrunk from malnutrition since the end of the war. From its wartime greatness as the largest single industry in the country (employment 123,000; floor space 10,000,000 sq. ft.), aircraft production and overhaul has wasted to diminutive proportions.

Total employment is less than 6% of the 1944 high. Vast plants, such as Fairchild in Montreal, Canadian Car at Fort William and Fleet in Fort Erie have been diverted to make biscuits and buses. More than 50% of the wartime floor area in the main factories has been ruled out for aircraft work. Much that remains is idle.

At its maximum, the wartime aircraft industry was manufacturing more than 750 planes a month, ranging from light trainers to four-engined bombers. At the same time, aircraft repair was proceeding at the rate of close to 250 a month, while nearly 1,200 aircraft engines a month were being overhauled.

Since the end of the war, the aircraft industry has not received a single government production order for military type aircraft. Even in the

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civil field, energetic efforts in design and manufacture have been frustrated by flooding of the market with war surplus conversions. Thus, for example, the Fairchild Husky, post-war-designed bushplane, failed to compete with lower-priced war surplus stock and the manufacturer has gone out of business.

Similarly, Northwest Industries with its Bellanca Skyrocket, was thwarted by wholesale cancellations. Noorduynd Aviation, one of the pioneers in manufacture of a distinctive Canadian design, dropped out of the aircraft business although the famous Norseman is being manufactured by Canadian Car & Foundry Co. Another original designer, Fleet Aircraft, dropped the light plane Canuck and abandoned aviation.

During the war, Boeing Aircraft of Canada attained a peak employment of 10,124. This company has gone out of existence. Similarly, Canadian Vickers, which employed 9,084 on aircraft assignments in 1943 and had been building aircraft since 1932, has dropped out of aviation since the war.

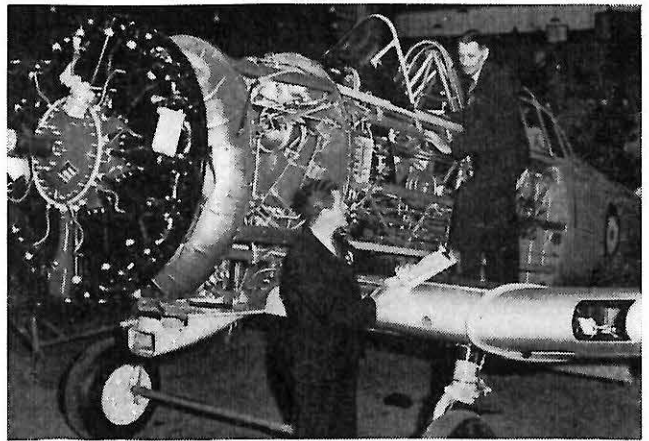
Government Initiative

The picture is not unrelieved gloom, however. The government has shown considerable initiative on a few major projects. Most significant of these are the developments at A. V. Roe Canada, near Toronto. Design and development of jet engines and a two-seat reconnaissance jet fighter are of the utmost interest. These efforts will involve the investment of more than \$10 millions by the government. At the same time, the company's airliner is showing excellent progress with the prototype expected to fly in the spring.

The Canadair plant at Montreal has produced 44 North Star four-engined airliners, 24 for the RCAF calling for a government outlay of \$18 millions. The other 20 were delivered to Trans-Canada Air Lines. Currently, the company is busy on 22 Canadair Fours for British Overseas Airways and four for Canadian Pacific Air Lines. In addition, Canadair is conducting a thriving business in the manufacture and supply of spares for the DC-3, an enterprise amounting to millions of dollars a year.

Although receiving very little government business, de Havilland's has kept its personnel occupied with a series of enterprising and successful projects. First of these was the manufacture and sale of 50 Fox Moths for bush flying. Then the Chipmunk

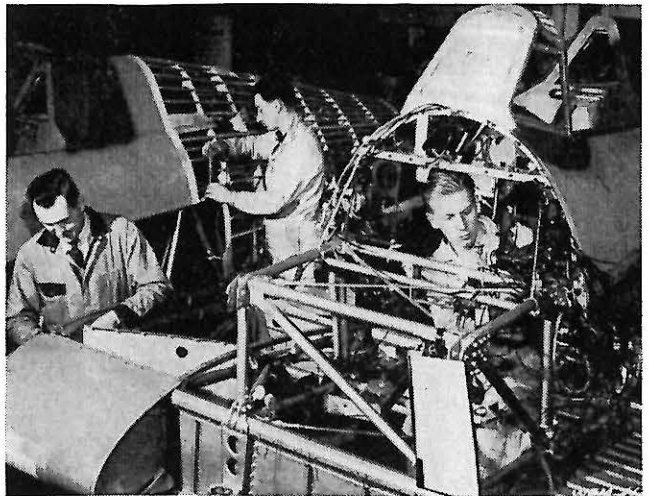
A total of 2,800 Harvard trainers was manufactured by Noorduynd Aviation during the war. This one was photographed on the final assembly line.



One of the smaller manufacturers, Cub Aircraft at Hamilton, is the sole survivor in the lightplane field. A wing covering job in progress.



Hurricanes in wartime production by Canadian Car at Fort William. A total of 1,451 of these front-line fighters was produced by this company during the war.



trainer was designed. Even though the RCAF decided to retain Harvards for ab initio trainers, D-H has built and sold 75 Chipmunks to date, most of them going abroad. Currently, 36 Chipmunks are being shipped to India with a repeat order to follow. Meantime, the English parent company is building the Canadian Chipmunk for the RAF Volunteer Reserve (with at least 750 on order).

Another original postwar D-H design, the Beaver bushplane, has enjoyed unusual popularity. Thirty Beavers have been delivered so far, with a backlog to the end of June, 1949, at the present delivery rate, one a week.

Other de Havilland projects have included: Assembly and delivery to the RCAF of 85 Vampires; modification and conversion of 60 PBV amphibians for the Netherlands, the Danish Fleet Air Arm and the RCAF; overhaul and shipment of 50 Harvards for export; shipment from Toronto and assembly in Shanghai of 200 Mosquitoes for the Chinese Government.

Only manufacturer remaining in light plane field, Cub Aircraft Corp., Hamilton, makes the two-place Cub trainer as well as selling the four-place Family Cruiser. Although com-

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paratively small, this manufacturer played an important role in the war when 200 were employed in the overhaul of trainers and the manufacture of aircraft components.

The overhaul of airframes, engines, instruments and accessories has retained considerable vigor although it has not regained anything like the wartime proportions (26 firms, 18,000 people, two million sq. ft. of floor space).

Recently the Dept. of National Defense has issued contracts for the overhaul and modification of 209 RCAF aircraft at a total cost of \$10,377,000.

Value \$1,300 Millions

Between September, 1939, and June, 1945, the industry manufactured nearly 17,000 aircraft of some two dozen types. About 7,000 of these were used in Canada or for Canadian squadrons overseas. Approximately 5,000 were delivered to the United States with an equal number to Great Britain. Total value of aircraft produced amounted to \$1,300 millions.

In the same period, some 26 contractors employing close to 20,000 people overhauled and repaired 6,519 airframes and 30,347 engines.

Summary of Aircraft Produced

The following types and quantities of aircraft were manufactured in Canada between September, 1939, and June, 1945:

Elementary trainers—Tiger Moths, 1,384; Menasco Moths, 136; Cornells, 1,642; Fleet Finches, 431.

Advanced trainers—Fleet Forts, 101; Lysanders, 225; Norsemen, 819; Ansons, 2,882; Harvards, 2,741.

Service aircraft—Sharks, 15; Grumman, 15; Stranraers, 32; Deltas, 8; Hampdens, 160; Bolingbroke, 626; Hurricanes, 1,451; Mosquitoes, 1,000;

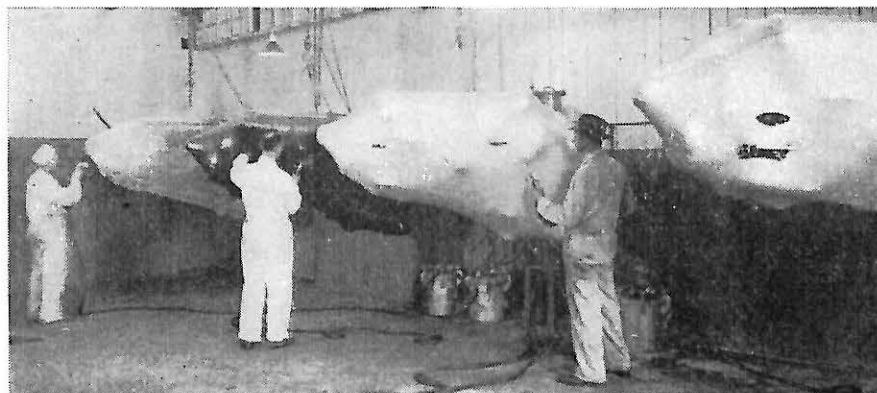


Jet engine design and development are the most significant current projects in the aircraft industry. Air Commodore Sir. Frank Whittle, father of the jet engine, examines the compressor casing of Canada's first jet engine during a recent visit to the Avro Canada plant.

Curtiss Helldivers, 768; and Lancasters, 395.

War Production by Firms

Firm	Type	Produced
Boeing of Canada	Shark	15
	PBY	350
Assoc. Aircraft	Hampden	160
	Grumman	15
Canadian Car	Hurricane	1,451
	Helldivers	830
Canadian Vickers	Delta	8
	PBY	365
De Havilland	Stranraer	32
	Moth	1,520
Fairchild	Mosquito	1,130
	Bolingbroke	626
Federal	Helldiver	425
	Anson II	1,832
Fleet	Anson V and VI	1,050
	Finch	431
Noorduyn	Fleet 60	101
	Cornell	1,642
Victory	Norseman	830
	Harvard	2,800
	Lysander	227
	Lancaster	425
TOTAL	All Types	16,265



Operation Air-borne

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out from start to finish at the station with Austers being utilized for the aerial camera work. Future plans call for the use of Vampires, equipped for photo-reconnaissance, to simulate high - level, operational conditions more accurately. Photos taken in the locality are developed and line-overlap mosaics are assembled by staff personnel for the purpose of photo-reading instruction to trainees and for use in mock operation briefings.

Both vertical and oblique-type photos are considered for their own value, and from these, terrain models are built for further study in interpretation by trainees. Still a relatively small portion of the school's training, the photo-interpretation section expects early expansion. Since about 80% of pre-assault intelligence is derived from aerial photos, its importance is not overlooked.

Thirty-two paratroop students a week arrive at Rivers for a five-week jump course. The school is equipped to handle 40 a week which, means that 200 students are in various stages of training at one time. While on the jump course to qualify for their paratrooper wings, soldiers are paid an extra \$30 per month. After graduation, they are expected to make one jump a month in order to remain eligible for the extra money.

Because the Joint Air School is based at an RCAF airport, the Commanding Officer, known as the Commandant, is a senior Air Force officer—Group Capt. P. A. Gilchrist, D.F.C. The Deputy Commandant is Lieut-Col. D. R. Ely, M.B.E., who is a qualified Army pilot, paratrooper and artillery officer and who gained much air-borne experience during the war. Because of the spasmodic activity of the RCN at Rivers, they are represented in a liaison capacity by Lt.-Cdr. G. L. Ollsen, and a skeleton naval staff.

The United States Army is represented by Lt.-Col. Hugh P. Harris, who is Director of Ground Training. Lt.-Col. Harris is a veteran paratrooper, and was one of the organizers of the Allies' air-borne campaigns in Italy and on the Continent during the war. He, along with Major Richard Long, USAF fighter pilot, is attached

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Canadian overhaul plants have received considerable RCAF business since the end of the war. In this picture at the Canadian Wright plant, Montreal, aircraft engines are being embalmed in cocoons for long-term storage.