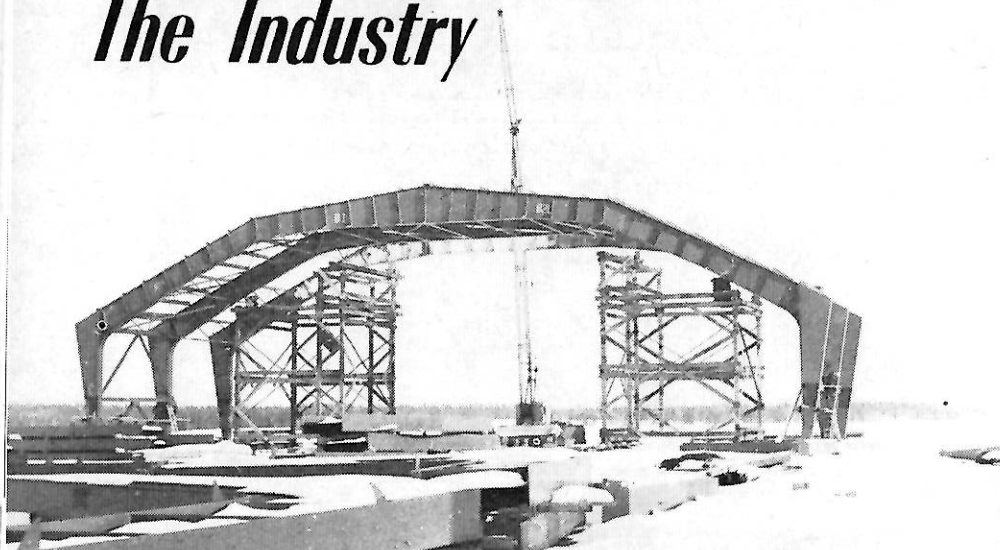


# The Industry



**LARGE AIRCRAFT SERVICE HANGAR** is being constructed at the new Halifax International Airport by Fairey Aviation Co. of Canada Ltd. When completed, the hangar will have 11 bays and a total length of 360 ft. Structure is being erected for Fairey by Canadian Bridge Co. of Walkerville, N.S.

## Govt. Support for Avrocar?

The Canadian Government is said to be prepared to contribute up to \$2 million more toward development of the Avrocar. The amount of the contribution depends on how successful the development by Avro Aircraft Ltd. turns out to be.

So far, the Government has put some \$400,000 into the project. The U.S. Army is understood to have contributed some \$5 million and Avro itself about \$4 million.

Defence Minister Pearkes said April 5 that NATO's armaments committee will prepare a list of about 20 promising projects being developed in NATO countries for further examination. The object is to try to prevent duplication in development and production of new weapons.

The Avrocar, if it works out, may be one of the projects submitted.

It must be remembered, however, that there has been little progress in NATO in the last decade on standardization of weapons.

## It's Official!

The Government has at last concluded a \$91.5 million contract with Canadair Ltd. for airframe construction and assembly of 200 CF-104 Starfighter aircraft for the RCAF. Treasury Board officials approved the contract last month.

Canadair expects to subcontract at least 60% of its share to Canadian

companies and to spend about 10% for the purchase of off-the-shelf items in the U.S.

## Standard-Blackburn

Standard Aero Engine Ltd., Winnipeg, has been appointed official overhaul agent for Blackburn engines in Canada. On a recent visit to the Winnipeg firm were J. B. Bucher, director & general manager of the British engine company, and N. P. Coupe, assistant chief designer, engines. They were making arrangements there for the overhaul of Artouste and Palouste engines, the type being installed in Canadair CL-44 and CL-66 aircraft as APU's.

## Pakistan Looks at CL-44

Last month a Canadair sales team visited Karachi to confer with the Pakistani government, Pakistan International Airlines, and the University of Punjab on the nation's need of a large transport aircraft such as the CL-44.

Representing Canadair in the talks were Earl F. O'Mara, assistant manager of commercial aircraft sales for the Near East, and Mohammed Bajwa, a former resident of Pakistan who is now in the Canadair's sales engineering department.

Apart from its international commerce, Pakistan has a special interest in the use of large-capacity convertible transport aircraft because of the geography of the nation, divided as it

is between its eastern and western sections by about 1100 miles of northern India.

From the national capital at Karachi to the eastern commercial centre at Dacca, on the delta of the Ganges, is about 1,300 miles. This represents less than 4 hours flying time by CL-44 but up to three weeks by ship around the southern tip of India.

It has been proposed that Punjab University, Lahore, undertake a study of the potential air traffic between Karachi and Dacca, including passengers, mail and cargo. It is estimated that three aircraft with the capacity of the CL-44 are needed on the route.

## 22 DHC-4's for U.S.A.

The U.S. Army has placed an order through the Canadian Commercial Corporation covering the purchase of 22 de Havilland Canada AC-1 Caribou tactical transports. Value of the order to de Havilland, according to the Army announcement, is just over \$5 million, but the cost to the Army of the complete aircraft will be \$14.5 million.

The de Havilland contract covers airframes only, and the \$7.5 million balance of the complete aircraft cost is made up by engines and propellers, and various kinds of ancillary equipment. These items will be obtained under separate contracts.

This new order for 22 aircraft includes the seven Caribou for which contract negotiations started some months ago. The five YAC-1's originally purchased for evaluation are additional to the order for 22.

News of Caribou interest elsewhere appeared early in April in the Melbourne, Australia, Herald. The paper's Canberra correspondent reports that the Australian Army has asked the Australian government to buy some DHC-4's for the service's use. It is understood that under the Australian defence re-organization now underway, the Army in future will have its own transport aircraft flown by RAAF pilots.

## Vertol Production Sharing

York Gears Ltd., Toronto, and John Bertram & Co. Ltd., Dundas, Ont., have been awarded orders from Vertol Aircraft Corp. to begin work on the manufacture of helicopter components and tools that will total more than \$600,000. With these new con-

tracts, Vertol has placed more than \$1 million in business with Canadian firms since January 1959.

The contract with York Gears is for the manufacture of forward and aft transmission assemblies for the Vertol 107 Model II airliners recently ordered by New York Airways. An initial contract for six assemblies, awarded York Gears in December 1959, amounted to more than \$200,000. The latest order, calling for an additional 15 assemblies, totals almost \$400,000.

The contract with John Bertram & Co. Ltd. amounts to about \$210,000 and is for the production of transmission test stands for the U.S. Army's YHC-1B Chinook.

### DDP/AITA Co-operation

First meetings have been held of the recently formed DDP/AITA development & production sharing committee. The committee includes representatives from the Department of Defence Production's aircraft, electronics, and co-ordinates branches, and the Washington office. The industry is represented by officials of Canadair Ltd., Orenda Engines Ltd., Computing

Devices of Canada Ltd., Garrett Mfg. Ltd., Dowty Equipment of Canada Ltd., and AITA.

Chairman is the DDP's A. D. Belyea.

There was general agreement in the committee that success of the production sharing program in the long run will be in the development sharing area rather than in production sharing of equipment already being manufactured in the U.S.

Industry representatives pointed out that though Canadian firms had a capability equal to or better than U.S. competition in some areas, it had yet to be determined if this was saleable in the U.S. defence market. It was also been mentioned that development and capability depended on a continuing development program in any company, and although attempts were being made to hold on to development engineers, difficulties were being encountered because of lack of funds, plus the fact that the creative engineer generally required a goal. Many engineers were being lost because of lack of interest.

It was suggested that serious consideration be given to establishing and

defining a role for Canadian industry to provide some segment of the requirements for defence of North America and NATO which it is capable of fulfilling.

### DHC Reports

An operating loss of \$1,933,078 for the year ended Sept. 30, 1959, has been reported by The de Havilland Aircraft of Canada Ltd. The firm's annual report says that during the year, expenditures on Caribou development exceed \$10 million.

The company expects an improvement during the current fiscal year.

### De Havilland in 1959

The highlight of de Havilland Canada's year was the October 8 ceremony at which the U.S. Army officially accepted delivery of the first DHC-4 (U.S. Army designation, YAC-1) Caribou of an initial order for five.

Pakistan took delivery of additional Beavers for agricultural applications. Indonesia ordered more Otters for both defence and application to the Republic's remote area air transport program. Another Beaver was delivered

## FOR TRANSAIR AT GATWICK

### ... the advantages of Esavian Hangar Doors

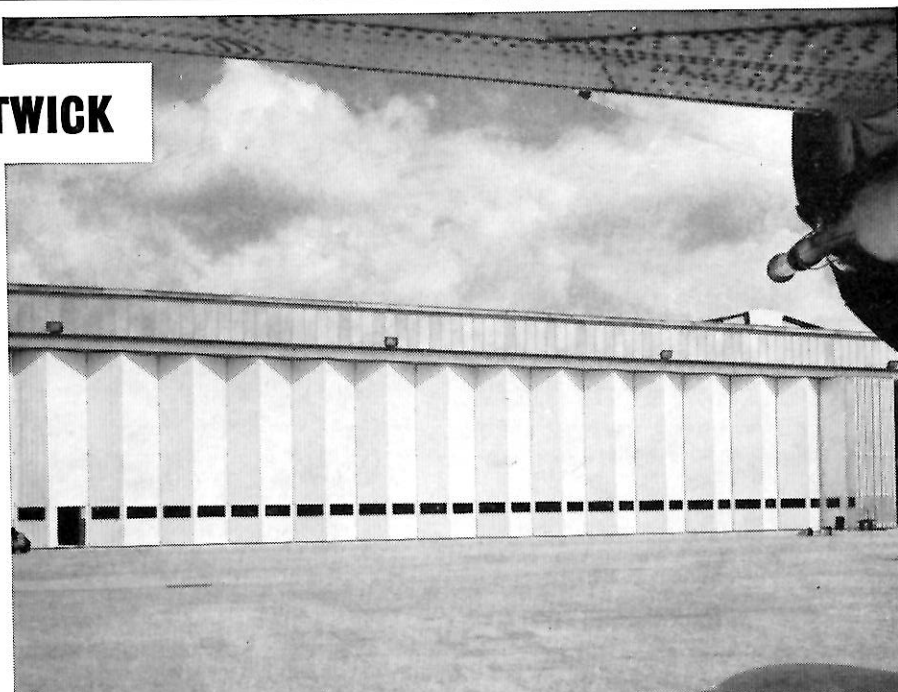
Enclosing two bays, these 280' x 30' Esavian folding and sliding doors provide easy access, full protection and maximum interior space.

They are electrically operated in such a way that either bay can be opened or closed in one operation. Their double-sheeted aluminium construction provides wind resistance of up to 25 lbs. per sq. ft. pressure with extremely light weight. Eye-level glazing, thermal insulation and personnel doors are built in.

*And all this is achieved on a single track. No allowance has been necessary for storage of the doors. All space is working space.*

From many similar installations, in Britain and abroad, our technical staff have amassed 'on site' experience which they are pleased to offer to architects and consulting engineers working in this or related fields.

ESAVIAN LIMITED, Stevenage, Herts, England



One of the two Transair Hangar Bays at Gatwick Airport. Architects: Clive Pascall and Peter Watson, F/A.R.I.B.A.

THE **ESAVIAN** PRINCIPLE

FOR FOLDING AND SLIDING DOORS, WINDOWS, PARTITIONS AND SCREENS

SALES: David McGill & Sons Ltd., 16 St. Johns Road, Pointe Claire, Montreal, 33

MANUFACTURING SERVICE & PARTS: Hall Engineering Ltd., 45 des Seigneurs Street, Montreal



DDP on behalf of the USAF. The equipment is being installed as part of the North American integrated defence system.

The first delivery was on schedule. A sizable proportion of this height-finding radar order has been sub-contracted out to Canadian suppliers. It is expected to be completed in the final quarter of 1960.

## Change of Name

Whittaker Electronics Ltd., Ottawa, has taken over representation of firms previously represented by E. E. Whittaker. Stock of several lines will be maintained at the Ottawa office.

## Canada Exports Brains

The export of Canadian brains to the U.S., especially in the engineering ranks, has accelerated at an alarming rate in the past 24 months. This fact was evident in the recently published U.S. Dept. of Immigration figures which show that although the total number of Canadians moving southward is down, the percentage of professional people is drastically up.

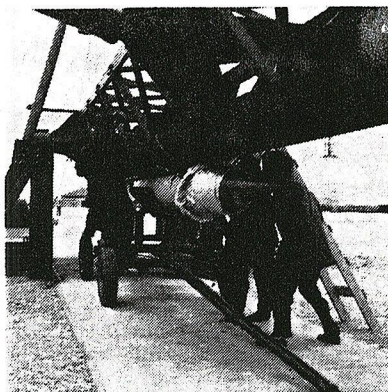
In two six-month periods in the last 24 months, the outflow of Canadian-born and Canadian-trained engineers jumped almost 100% from 357 to 713.

Following the Avro Arrow debacle last year, the number of aeronautical engineers leaving for American pastures soared 850%.

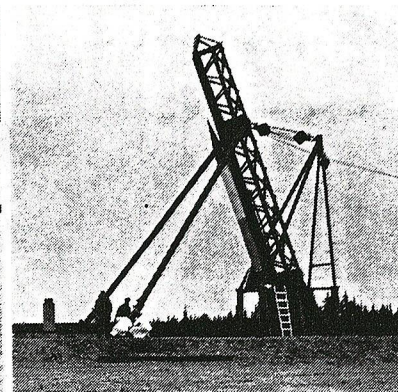
During the entire year of 1958, the total number of Canadian engineers emigrating to the U.S. was 720. In the first six months of 1959 (and the last period for which figures are available), a total of 713 engineers moved out.



**CL-41 EVALUATION TEAM:** During March an RCAF evaluation team gave the Canadair CL-41 a week-long work-out. Seen here from left to right are: F/L M. G. Sauder, of CFS; Ian McTavish, Canadair test pilot; F/L K. Waterhouse, of AFHQ; F. C. Phillips, of Canadair; S/L R. J. Hamilton, AFHQ; and Hedley Everard, of Canadair. The three Air Force pilots made preliminary flight evaluations of the new jet trainer.



**BLACK BRANT:** Shown being placed on inclined launcher at Fort Churchill, Man., is the 17-inch Black Brant rocket engine developed by the CARDE. Right: scientists and technical personnel position the Canadian-developed propulsion test vehicle on the launcher. Four of the vehicles were successfully fired last September. The Black Brant was fabricated by Bristol Aero-Industries' Winnipeg Division.



## Contracts Awarded

Contractors awarded business in excess of \$10,000 by the Department of Defence Production during the period February 1-29, 1960, include the following. The list does not include orders placed by the Department outside Canada, or with other agencies or increases in orders placed earlier—nor do orders classified as secret appear here.

Names appearing in bold face are current AIRCRAFT advertisers.

Anglo-Canadian Wire Rope Co. Ltd., Montreal, \$11,288 for aircraft towed target gear.

Aviation Electric Ltd., Montreal, \$10,400 for aircraft oxygen equipment.

British American Oil Co. Ltd., Toronto, \$189,115, for aviation turbine fuel during year ending March 31/61.

Burndy Canada Ltd., Scarborough, \$13,800, for electrical equipment.

Canadian Petrofina Ltd., Montreal, \$1,826,240, for aviation turbine fuel during year ending March 31/61.

Cities Service Oil Co. Ltd., Toronto, \$511,270, for aviation gasoline during year ending March 31/61.

Computing Devices of Canada Ltd., Ottawa, \$500,000, for aircraft navigational aids.

Computing Devices of Canada Ltd., Ottawa, \$23,400, for course selector indicators.

De Havilland Aircraft of Canada Ltd., Toronto, \$19,923, for technical services.

De Havilland Aircraft of Canada Ltd., Toronto, \$42,726, for airframe components.

Gasaccumulator Co. (Canada) Ltd., Toronto, \$29,274, for aerodrome lighting equipment.

B. F. Goodrich Canada Ltd., Kitchener, Ont., \$38,321, for aircraft components.

Goodyear Tire & Rubber Co. of Canada Ltd., Toronto, \$16,374, for aircraft components.

Honeywell Controls Ltd., Toronto, \$1,600,000, for automatic flight control systems.

Imperial Oil Ltd., Ottawa, \$525,413, for aviation gasoline during year ending March 31/61.

Imperial Oil Ltd., Ottawa, \$5,285,643, for aviation turbine fuel during year ending March 31/61.

Instronics Ltd., Stittsville, Ont., \$17,820, for radar test sets.

Maritime Helicopters Ltd., Montreal, \$46,600, for charter of helicopter.

Plessey Co. of Canada Ltd., Montreal, \$4,970,291, for communication equipment.

Railway & Power Engineering Corp. Ltd., Montreal, \$1,658,561, for aircraft instruments.

Rolls-Royce of Canada Ltd., Montreal, \$25,000, for aero engine components during year ending March 31/61.

Rolls-Royce of Canada Ltd., Montreal, \$10,000, for aero engine engineering change kits.

Shell Oil Co. of Canada Ltd., Toronto, \$54,437, for aviation gasoline during year ending March 31/61.

Wainwright Producers & Refiners Ltd., Edmonton, Alta., \$202,200, for aviation turbine fuel during year ending March 31/61.

Koppers of Canada Ltd., Toronto, \$58,570, for manufacture and installation of exhaust silencer for high speed wind tunnel—Uplands, Ont.

Abercorn Aero Ltd., Montreal, \$15,000, for repair & overhaul of air/sea rescue equipment during year ending March 31/61.

Aviation Electric Ltd., Montreal, \$1,652,867, for aero engine components.

Aviation Electric Ltd., Montreal, \$25,000, for aircraft electrical and instrument equipment during two years ending March 31/62.

Bach-Simpson Ltd., London, Ont., \$10,093, for aircraft instruments.

Canadair Ltd., Montreal, \$302,064, for aero engine components.

Canadair Ltd., Montreal, \$98,794, for aircraft components.

Canadair Ltd., Montreal, \$57,950, for aircraft system trainer.

Canadian Applied Research Ltd., Toronto, \$22,000, for technical services.

Canadian Marconi Co., Montreal, \$73,819, for electronic tubes.

Canadian Pratt & Whitney Aircraft Co. Ltd., Longueuil, Que., \$85,000, for repair & overhaul of helicopter airframes and airframe components during period ending March 31/60.

Cities Services Oil Co. Ltd., Toronto, \$419,200, for aviation gasoline during year ending March 31/61.

Collins Radio Co. of Canada Ltd., Toronto, \$27,027, for electronic components.

De Havilland Aircraft of Canada Ltd., Toronto, \$16,000, for technical services.

Goodyear Tire & Rubber Co. of Canada Ltd., Toronto, \$72,632, for aircraft components.

Imperial Oil Ltd., Ottawa, Ont., \$1,160,850, for aviation gasoline during year ending March 31/61.

Rolls-Royce of Canada Ltd., Montreal, \$10,000, for repair & overhaul of aero engines and aero engine components during year ending March 31/61.

Shell Oil Co. of Canada Ltd., Toronto, \$11,691, for aviation turbine fuel during year ending March 31/61.