

## Orenda Sub-Contract

MacDonald Bros. Aircraft Limited in Winnipeg is now engaged in manufacturing tailpipe units for Avro Canada Orenda jet engines. This Orenda sub-contract is just one phase of MacDonald Bros.' rapidly expanding aviation business. The company is carrying out an extensive repair and overhaul program on RCAF Mustangs.

Though MacDonald Bros. has been working on Mustangs for some time, the work has been more of a maintenance nature, with field crews from the Winnipeg plant calling in at RCAF stations where Mustangs were based. The program of overhaul and modification of Beech 18 Expeditors has also been accelerated. This program has been underway for about three years now, but with greatly increased training demands, the aircraft become time expired much more quickly. There will probably be no let-up in this work for some time . . . at least not until some of the estimated 300 new Expeditors on order with Beech start arriving.

The manufacture of Edo floats for Beavers is still continuing unabated, though it was not ascertained whether or not the Canadian company would be supplying floats for all the Beavers on order for the USAF, or if these would be purchased from the Edo company in the U.S.

The increased volume of work at MacDonald Bros., including the growing parts and supplies business, and the manufacture of farm machinery, has left the Company cramped for space. The space now occupied by Standard Aero Engine Limited is to be taken over, and Standard will move to new quarters nearby. Officials at MacDonald Bros. say that they could use even more space if it were available. The company, incidentally, owns the building in which it is situated, having taken it over from the government, which constructed it during World War II.

Personnel now number over 500 and are increasing all the time.

## Flying High

Northwest Industries Limited, Edmonton, which just ten months ago was on the verge of a complete shut-down, is now working under a full

head of steam on a program of overhaul and modification of RCAF Dakotas and Harvards as well as on Canso components. The Dakotas are being turned out as navigational trainers and freighters, and the Harvards as armament and radio trainers. The initial Harvard contract was for 14 aircraft, but this will probably be extended. The Dakotas, which require some 14,000 man hours per aircraft to complete, are being turned out at the rate of one every two weeks.

To carry on this program requires the services of some 340 employees and a plant completely equipped for every phase of aircraft overhaul and modification. These include an engine shop, an instrument shop and an accessory shop. Northwest plans to expand the latter two in the near future.

Like most firms in the aviation industry, Northwest is finding experienced workers in short supply. As a result the company has set up an employee training program which is at present concentrating mostly on sheet metal skills, in which the worker shortage is most critical.

## Harvards for NATO

Canada is going to produce all the Harvards, complete with engines, required to meet the training demands of the North American continent, Air Vice Marshal D. M. Smith, Member

for Technical Services, recently told the RCAF Association. According to A/V/M Smith, when Canadian Car & Foundry Co. Ltd., gets into production on the aircraft at its Fort William and Montreal plants, Canada will be the only country in the world producing Harvards. The engines, of course, are to be produced by Canadian Pratt & Whitney Aircraft Co. Ltd.

## Contracts Awarded

Contractors awarded business in excess of \$10,000 by the Department of Defence Production during the periods April 16-30 and May 1-15 include the following:

**Abercorn Aero Ltd.**, Montreal, \$12,364 for aircraft parts.

**Aviation Electric Limited**, Montreal, \$10,593 for aircraft spares.

**The Babb Company (Canada) Limited**, St. Johns, P.Q., \$81,899 for aircraft spares.

**Campbell Steel & Iron Works**, Ottawa, \$10,723 for aircraft parts.

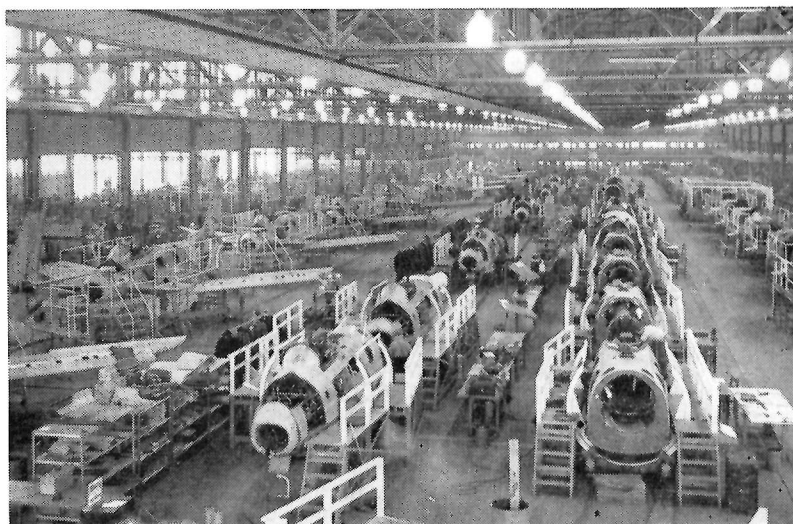
**Canadair Limited**, Montreal, \$30,377 for aircraft spares.

**Canadian Car & Foundry Co. Ltd.**, Montreal, \$138,337 for aircraft parts and repairs.

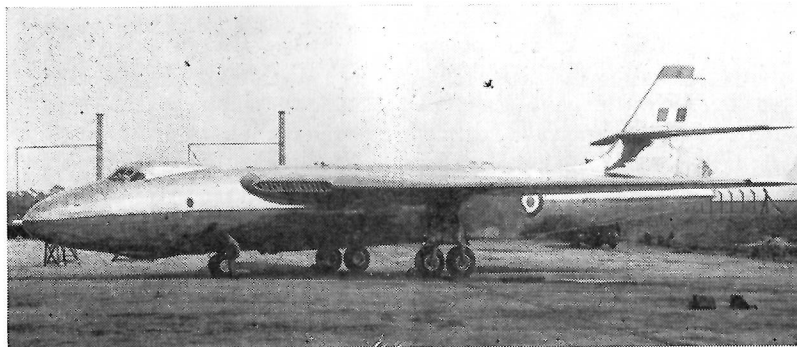
**Canadian Pratt & Whitney Aircraft Co. Ltd.**, Longueuil, P.Q., \$142,055 for aircraft repair and spares.

**Canadian Wright Limited**, Montreal, \$10,000 for aircraft parts.

**The de Havilland Aircraft of Canada Limited**, Toronto, \$233,057 for aircraft repair, and parts.



**WITH MORE TO COME:** Dramatic evidence that Canadair Limited is wasting no time in turning out F-86E Sabres for the RCAF is shown in this picture of the final assembly operation in the company's Number 2 plant. Production rate is currently limited to about 10-20 aircraft a month by the shortage of engines, which are USAF supplied. Only one RCAF squadron is so far being supplied with F-86s.



**VICKERS 660:** The first British heavy jet bomber is this product of Vickers-Armstrong, which made its first flight May 18. Designed to replace RAF Lincolns and B-29s, the 660 is powered by four Rolls-Royce Avons completely buried in the wings. Intimation of size is given by man standing alongside the nosewheel. Note tandem main wheels. A substantial number of these aircraft have been ordered for the RAF.

Jeffree & Jeffree Limited, Vancouver, \$20,410 for aircraft repairs.

J. W. Lawrence (Canada) Limited, Montreal, \$21,848 for aircraft parts.

**MacDonald Bros. Aircraft Limited,** Winnipeg, \$19,828 for aircraft parts and instruments.

**Railway & Power Engineering Corporation Ltd.,** Montreal, \$43,332 for electrical supplies and aircraft repairing platforms.

**Technical Enterprises Limited,** Malton, Ontario, \$87,923 for communication equipment.

**Aviation Electric Limited,** Montreal, \$21,372 for aircraft parts and instruments.

Aviquipo of Canada Limited, Montreal, \$11,022 for aircraft instruments.

Beaconing Optical & Precision Materials Ltd., Montreal, \$460,000 for electronic equipment.

S. F. Bowser Company Limited, Ottawa, \$18,295 for parts for Bowser pumps.

**Canadair Limited,** Montreal, \$402,407 for aircraft parts and modifications.

**Canadian Pratt & Whitney Aircraft Company Limited,** Longueuil, P.Q., \$57,000 for aircraft parts and repairs.

**The de Havilland Aircraft of Canada Limited,** \$62,149 for aircraft parts.

Dowty Equipment of Canada Limited, Ajax, Ontario, \$42,000 for hydraulic spares.

The Ontario Hughes Owens Company Limited, Ottawa, \$38,456 for photographic and communications equipment, drawing tables and stools.

**MacDonald Bros. Aircraft Limited,** Ottawa, \$10,268 for aircraft parts.

**MacDonald Bros. Aircraft Limited,** Winnipeg, \$210,034 for aircraft parts, repair and reconditioning.

Midland Foundry & Machine Company, Midland, Ontario, \$133,411 for ground handling equipment.

Morris Herbert Crane & Hoist Co. Ltd., \$15,423 for ground handling equipment.

Radio Communications Equipment, Montreal, \$11,197 for communication equipment.

**Sperry Gyroscope Company of Canada, Ltd.,** Montreal, \$188,410 for aircraft instruments and tools.

**Western Propeller Company Limited,** Edmonton, \$20,645 for aircraft repair and propeller casing.

*(Names appearing in bold-face type are current AIRCRAFT advertisers).*

In addition to the foregoing orders, letters of intent has also been issued to Sperry Gyroscope of Canada, Ltd., for aircraft instruments, and to Can-

adian Pratt & Whitney Aircraft Co. Ltd., for airplane engines.

## Swept CF-100

The new fighter aircraft design which is being developed at Avro Canada is reported to be a swept wing version of the CF-100.

## Surprise Move

In a surprise announcement, the Department of Defence Production revealed that it had purchased a factory near Ottawa for use by Rotax Canada Limited in the production of fuel systems for Orenda jet engines. The announcement came as a surprise to most of the industry because both Rotax and Avro Canada had previously indicated on different occasions that a plant for this purpose was to be built near Avro Canada's plant at Malton.

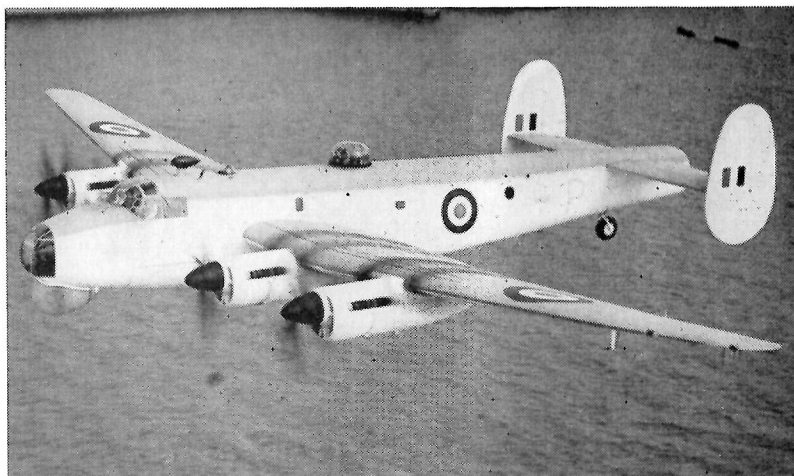
The plant purchased formerly belonged to Renfrew Machinery Company, Renfrew, Ontario, and has a capacity of 100,000 sq. ft. of floor space.

In Canada, Rotax Canada also looks after the interests of its parent company's subsidiary, Joseph Lucas (Gas Turbine Equipment) Limited.

## Development Costs

The development of the Avro Canada CF-100, and the Orenda, and putting the Sabre into production, has so far cost Canada nearly \$30,000,000, according to figures released in the House of Commons recently.

Up till March 31 of this year, the Sabre had cost \$507,500 for license fee and royalties, plus \$456,890 for engin-



**COASTAL COMMANDER:** Prototype of the Avro Shackleton long-range patrol and anti-submarine aircraft, now going into service with the RAF Coastal Command, is shown above. Powered by four Rolls-Royce Griffons, the Shackleton is armed with six 20 mm guns and carries a large weight of offensive weapons, including depth charges, mines, and bombs. It is extensively fitted with radar equipment.

engineering and development, for a total of \$964,390.

In the case of the CF-100, the design and development of the airframe had cost \$6,834,946 up to March 31. The Orenda, on the other hand, had cost \$21,467,686 to develop.

### Priorities

Regulations respecting priorities have been established by Order-in-Council P.C. 2399, it was announced recently by Defence Production Minister, C. D. Howe. Mr. Howe emphasized that these regulations do not in themselves impose any controls on industry, but they authorized the Minister of Defence Production, and, under his direction, the Director of the Priorities Division, to issue priority orders covering essential supplies as circumstances may require.

Essential supplies are defined as including guns and aircraft, plus those required for the construction of air-dromes, etc. Mr. Howe said that the administration of any orders issued under priorities regulations will not conflict with priority orders issued by the directors of the various commodity divisions of the Department in connection with materials that have been

declared essential under the Defence Production Act.

The Priorities Division will be responsible for priorities in all fields not covered by the commodity divisions and will also be responsible for arrangements whereby Canadian industry can participate in the formal U.S. priorities system. This latter function forms an important part of the work of the Priorities Division and the new regulations provide the framework within which Canadian manufacturers may obtain priority assistance in securing supplies from the U.S.

### Essential Supplies

Primary and wrought aluminum, primary copper, brass mill products, copper wire rod and wire, are now under direct allocation and inventory limitation by the Non-Ferrous Metals of the Department of Defence Production.

Provisions covering the sale and purchase of primary and wrought aluminum are contained in Order NFM-2; those for copper wire rod and wire in NFM-3; those for brass mill products in NFM-4; and those for primary copper in NFM-5.

In the administration of the Orders, items are subject to an order-approval system and to inventory limitation which will ensure adequate supplies to meet defence and other essential requirements. Approval is not ordinarily granted where inventories are considered to be excessive.

Persons wishing to purchase any of these metals from a producer is required to submit his purchase order together with a completed application form for each metal, to the Non-Ferrous Metals Division for approval. Purchase orders placed with a distributor for shipment from warehouse stocks will not require approval. Purchases of aluminum products, as defined in Order NFM-2, which are produced from primary or wrought aluminum, do not require approval. Foil, screw machine products and castings are some of the products that fall within this category.

A large number of users of copper wire, as provided for in Appendix A of NFM-3, are not at this time required to submit their purchase orders for approval. All copper wire rod, however, is subject to both inventory check and order approval.



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