

Plan R-1820 Production

Negotiations are now under way which will probably result in the Wright R-1280 radial engine being manufactured under license in Canada by Canadian Pratt & Whitney Aircraft Co. Ltd., Longueuil, P.Q., it has been learned. The R-1820 is the powerplant used in the twin-engined Grumman S2F anti-submarine aircraft, now entering the initial production stages at The de Havilland Aircraft of Canada Ltd.

A Canadian Pratt & Whitney engineering team has already visited the U.S. in order to study R-1820 production methods.

Should agreement be reached between the Department of Defence Production and Wright Aeronautical Div. of Curtiss-Wright Corp., it will mean a multi-million order for Canadian P & W to produce several hundred engines and associated spares. Because it will be several weeks before even the licensing negotiations are completed, no details are available as to the number of engines required or their dollar value.

However, the initial S2F order is for 100 aircraft, and there is a strong possibility that a further 150 machines may be built for NATO as a Canadian Mutual Aid contribution. This would indicate a minimum order for 300 engines and the possibility of a maximum of 700-800. A modified version of the same engine is used in the Piasecki H-21, a small number of which are in use, or to be used, by both the RCAF and the RCN.

The Wright Cyclone R-1820-82 is a nine cylinder geared radial which is rated at 1,525 hp @ 2,800 rpm for take-off. It has a bore of 6.125 in. and a stroke of 6.875 in.; displacement is 1,823 cu. in. Compression ratio is 6.8:1 and reduction gear ratio, 0.5625:1. The engine has a good power/weight ratio of 0.97 lb./hp. At present, all production of this engine is concentrated at Stratford, Conn., at the Lycoming Div. of Avco Manufacturing Corp., which makes the engines under license from Curtiss-Wright for the U.S. military.

Canadian Pratt & Whitney, currently in continuing production on

the Pratt & Whitney R-1340 Wasp and associated parts for military services and commercial operators in Canada and the rest of the world, is soon to start production of parts for the Pratt & Whitney R-985 Wasp Jr., R-1830 Twin Wasp, and R-2000 Twin Wasp series engines, all of which are used extensively in practically every country in the world.

There is an additional strong possibility that Canadian Pratt & Whitney may share in the production of components of the P & W J-48 Turbo-Wasp, for which the parent Pratt & Whitney Aircraft, East Hartford,

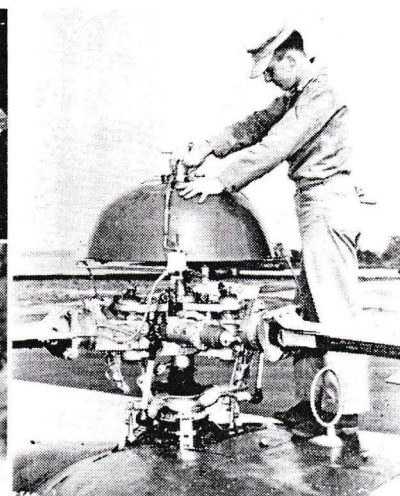
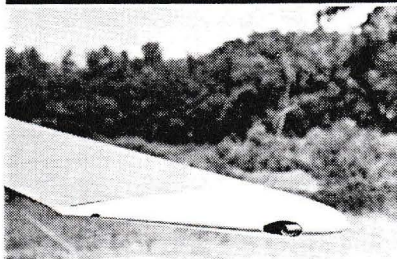
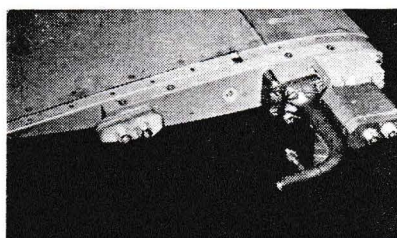
aircraft satisfies U.S. Army requirements.

Other news about de Havilland products concerns the purchase of four Beavers by Qantas Empire Airways, for service in New Guinea. One of the Beavers has been ordered as a seaplane, the others as landplanes, de Havilland says.

Qantas is the second major air line to order Beavers. Just recently KLM accepted an order of Beavers for use on development and exploration operations in Dutch New Guinea.

CF-105 Engines

Ottawa reports say that U.S.-built engines will power the prototype CF-105 delta-wing, all-weather fighter now being built by Avro Canada.



ROCKET BOOST FOR HELICOPTERS: Reaction Motors Inc. developed this liquid-propellant rocket engine system of power boosting for helicopters for the USN. Pictures show equipment installed on U.S. Marine Corps HRS-2 helicopter. At tip of each of three blades is mounted a tiny rocket engine, shown at left with tip fairing off (top) and on (bottom). At right, the dome-shaped object is the propellant tank, which feeds hydrogen peroxide along the blades to the rocket engines. The auxiliary rocket power improves take-off and emergency performance.

Conn., recently received an extended production order from the USN. In announcing the order, the U.S. firm said: "Because the J-48 departments at P & W have been converted to production of other gas turbine engines, the company will subcontract an unusually large amount of the work on J-48 parts."

U.S. Army Orders Otters

The U.S. Army has announced plans to order six de Havilland Otters for testing the type as an air ambulance and front line cargo aircraft. This token contract could, of course, result in further orders for substantial numbers of the Otter, providing the

Although Avro Canada's Gas Turbine Div. is working on a big new turbo-jet in the thrust range required, the report would indicate that it is not expected that the Canadian engine will be ready in time to power the prototype 105.

However, if this engine's development proceeds at a satisfactory rate, it will undoubtedly be used in later production versions of the new twin-engined all-weather fighter. It will be recalled that the prototype CF-100 was powered by Rolls-Royce Avons, but production machines were equipped with Avro Canada Orendas.

The Ottawa report said that Defence Production Minister C. D.

Howe and Defence Minister Ralph Campney would visit the U.S. this month and at that time would inspect a number of turbojet engines. The power requirement of the CF-105 limits the number of engine candidates to about three, insofar as the U.S. is concerned. These are the Pratt & Whitney J-75, the General Electric J-79, and the Wright J-67, all of which are in the 15,000 lb./th. class. None of these engines is in service use, all being under development at this time.

Guided Missiles

Guided missiles of all types will probably be produced in Canada within the next few years. During a recent speech in Los Angeles, De-

Dominion Fasteners. Simmonds Aero-accessories Ltd. of England are the manufacturers of this well-known line of stop nuts.

To provide maximum service, the Stop Nut Div. of Dominion Fasteners will carry in stock in Hamilton a complete assortment of stop nuts for standard, American national, and Unified series of thread sizes. Plans are being made for the appointment of stocking agents in principal cities throughout the country.

Canadair Addition

Now under construction at Canadair Limited is a new tooling building which, when finished next spring, will consolidate under one roof such departments as the foundry

products, including duplexers, mixers, directional couplers, precision cast microwave components, wave guide switches, dummy loads, flexible wave guide, short slot & folded hybrids, VSWR standards, wave guide bends, twists, elbows & transitions, RF & pressure gasket, quick disconnects, aircraft junction boxes & cable assemblies.

Contracts Awarded

Contractors awarded business in excess of \$10,000 by the Department of Defence Production during the period August 16-September 15, include the following. The list does not include orders placed by the Department outside Canada or with other agencies, and increases in orders placed earlier—nor do orders classified as secret appear here.

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

Aviation Electric Ltd., Montreal, \$65,739 for aircraft instrument spares.

Aviation Electric Ltd., Montreal, \$44,123 for aircraft electrical equipment.

Canadian Aviation Electronics Ltd., Montreal, \$10,646 for installation of transmitting equipment.

Canadian Pacific Air Lines Ltd., Vancouver, \$832,104 for air transportation.

Canadian Pratt & Whitney Aircraft Co. Ltd., Longueuil, P.Q., \$1,725,578 for helicopter airframe and modification of engines.

Lucas-Rotax Ltd., Toronto, \$60,550 for aircraft electrical equipment.

MacDonald Bros. Aircraft Ltd., Winnipeg, \$111,000 for installation of radar equipment in aircraft.

Minneapolis-Honeywell Regulator Co. Ltd., Leaside, Ont., \$15,956 for development of automatic pilot test bench.

R. H. Nichols Ltd., Toronto, \$21,120 for electronic test equipment.

Sperry Gyroscope Co. of Canada Ltd., Montreal, \$21,551 for gyro gunsight test equipment.

Stark Electronic Instruments Ltd., Ajax, Ont., \$16,786 for radio test equipment.

Stark Electronic Instruments Ltd., Ajax, Ont., \$13,224 for electronic test equipment. Aviation Electric Ltd., Montreal, \$16,314 for test equipment.

Bristol Aero Engines Ltd., Montreal, \$48,000 for reconditioning of engines.

British American Oil Co. Ltd., Toronto, \$37,884 for aviation gasoline during the period April 1/54 to March 31/55.

The de Havilland Aircraft of Canada Ltd., Toronto, \$27,980 for conversion of Otter aircraft.

MacDonald Bros. Aircraft Ltd., Winnipeg, \$10,000 for aircraft repair during period April 1/54 to March 31/55.

Piasecki Helicopter Co. of Canada Ltd., Arnprior, Ont., \$50,000 for helicopter spares during period April 1/54 to March 31/55.

Rheem Canada Ltd., Hamilton, Ont., \$281,283 for shipping containers for engines.

Sperry Gyroscope Co. of Canada Ltd., Montreal, \$13,007 for aircraft instrument test equipment.



ON PATROL: Above is the first de Havilland Otter to enter the service of the Royal Canadian Mounted Police, which already operates a number of Beavers. Colors of this RCMP aircraft are blue and yellow. It has also been announced that the U.S. Army plans to purchase six Otters for testing as an air ambulance and general utility aircraft. Sales of Otters are mounting at a satisfactory pace.

fence Production Minister C. D. How said that:

"For the present, our attention is restricted to missiles of the air-to-air variety, but we expect to produce these devices in any form when acceptable types are available and when our requirements reach a level at which production in Canada becomes economically sound."

As reported elsewhere in this issue, cold weather tests of "Nike", the U.S. Army's ground-to-air anti-aircraft missile are to be conducted at Fort Churchill, Man., this winter, by Canadian Army personnel.

New Simmonds Distributor

Dominion Fasteners Ltd. has been appointed exclusive distributor for Canada of Simmonds Fibre Elastic Stop Nuts, it has been announced by George A. Tinnerman, president of

and plaster shops, the pattern and jig shops, and the template shops.

The one-storey building will have a total floor area of 139,600 sq. ft., including mezzanine space. It is located at the south end of Plant No. 1.

An interesting feature of the new building will be a giant template camera which will be housed therein. The camera will be capable of producing template photos 6 ft. by 15 ft.

Airtron Sales

J. R. Longstaffe Co. Ltd., 300 Campbell Ave., Toronto 9, has announced its appointment as sales representative for the products of Airtron Inc. of Linden, N.J. Included in this agreement is the license to manufacture Airtron products as the need in Canadian industry becomes apparent.

Airtron produces a wide variety of