

CDC-Bendix Agreement

A direct sales and licensee agreement has been concluded by Bendix Radio with Computing Devices of Canada Ltd. Under the new agreement CDC will handle the Canadian sales of Bendix Radio's aviation electronic products.

Commenting on the new agreement with CDC, a Bendix spokesman said: "The transfer of these electronic products from Aviation Electric Ltd., to CDC was occasioned by our desire to make the best use of the facilities of both firms. Aviation Electric, which has concentrated on mechanical and electro-mechanical products, will continue to handle products from other Bendix Divisions. CDC, primarily an electronics firm, is in an excellent position to handle the electronics equipment manufactured at Bendix."

The Canadian firm will handle the complete line of Bendix airborne communications and navigation systems, airborne weather radar systems, and accessory equipment. Planned licensee agreements will permit the manufacture of a number of these products by CDC in the future.

Sabre 6 Competes

A Canadair-built, Orenda-powered Sabre 6 was recently demonstrated at

Bern, Switzerland, for officials of the Swiss Air Force and members of the government. Included in the comparative trials were a British Hawker Hunter F-6, and a French Marcel Dassault Mystere IVA. Flying the Sabre 6 for Canadair was test pilot Hedley "Ev" Everard.

The Sabre was loaned from the RCAF's No. 1 Air Division in Europe, and prior to being sent to Switzerland was re-painted and given civil registration letters CF-JJB. An RCAF team of groundcrew personnel handled the maintenance end for the Canadian entry. The trials were of only a few days' duration.

It is also reported from Bern that the Swiss government is seeking parliamentary approval for the purchase of 80 trainers, including 20 DH Vampires, and eight French and U.S. helicopters. The balance of the trainers would be Swiss-built Pilatus P-3's.

Bristol in the U.S.

A new agreement for the building of Bristol turbine engines in the United States has been concluded between Bristol Aero-Engines Ltd., Filton, and the Curtiss-Wright Corporation. The two companies state that the agreement covers a number of unspecified gas

turbines, one of which is intended for commercial aircraft.

Of this engine, Roy T. Hurley, president of Curtiss-Wright said: "This is an engine which provides the necessary thrust for planned jet transport aircraft for all-weather operations out of present commercial airport facilities. The design gives lower noise levels than current jet transport engines while offering superior performance to that of competing jet engines."

The reference is possibly to civil versions of either or both the Olympus and/or the Orpheus.

And Now Algoma

With the purchase of a large block of shares in Canada's giant Algoma Steel Corp., during April, A. V. Roe Canada Ltd. completed another important step in its program of expansion and diversification. At the same time, the A. V. Roe Canada group measurably strengthened its position as a major Canadian industrial power.

The shares were bought from the estate of the late Sir James Dunn, who died early last year. In all, a total of 500,000 shares have been sold from the estate, which reportedly included some 700,000 shares in all. The announcement from the estate's executors said that the 500,000 shares sold comprise 342,000 on behalf of the estate and 158,000 on behalf of certain beneficiaries.

Crawford Gordon, Jr., president of A. V. Roe Canada Ltd., has pointed out that control of the Algoma Steel complex remains in Canadian and British hands, as represented by A. V. Roe Canada, with 150,000 shares; McIntyre Porcupine Mines Ltd., with 100,000 shares, and a group of U.K. interests through the Royal Bank of Canada, 50,000 shares. It is understood that these three groups have an informal agreement to act together in matters pertaining to Algoma.

The other 200,000 shares sold have been bought by a German firm, Mannesmann AG, of Dusseldorf. This company is represented in Canada by Mannesmann International, which was formed last year with headquarters in Toronto to facilitate financial, central administration and production activities in the western hemisphere for the parent firm in Germany. An associated firm is Mannesmann Tube Co. Ltd., currently building a \$20,000,000 pipe



SABRE IN SWITZERLAND: Sales service personnel who looked after the Canadair Sabre 6 during recent demonstration flights in Switzerland stand beside the aircraft flown by test pilot Hedley (Ev) Everard during the trials which included a Hawker Hunter and a Mystere IVA. Left to right: Sandy Sandbach, Od Clevon, Reg Thatcher (Tech-Rep.), Everard (pilot), Herb White, and Keith Lathey. The Sabre, on loan from RCAF Air Div. in Europe, had civil registration of CF-JJB.

manufacturing plant at Sault Ste. Marie, Ont., also centre of Algoma's operations.

Actual completion of these sales is expected in June.

A. V. Roe Canada's other Canadian interests include complete control of: Avro Aircraft Ltd.; Orenda Engines Ltd.; Canadian Steel Improvement Ltd.; Canadian Car Co. Ltd.; Canadian Steel Foundries (1956) Ltd.; PSC Applied Research Ltd. In addition, Canadian Steel Foundries (1956), an offshoot of Canadian Car, in conjunction with English Steel Corp., of Sheffield, England, has recently established a subsidiary, Canadian Steel Wheel Ltd. This firm will manufacture wrought steel railway wheels in Montreal.

CanCar/Beech 73 Deal

Canadian Car Co. Ltd., late last month, concluded an agreement with Beech Aircraft Corp., of Wichita, Kansas, for the rights to manufacture the Beech 73 Jet Mentor primary jet trainer in Canada.

A demonstration Jet Mentor was scheduled to spend the two weeks beginning April 28 at Trenton and

Ottawa, where it was to undergo RCAF evaluation.

This is the second time that CanCar has been licensed to build a Beech-designed airplane, the first being the T-34 Mentor, which the Fort William company produced for the USAF and the RCAF. Only a small number went to the latter service and these were later turned over to Mutual Aid.

The design of the Jet Mentor is, in fact, based on that of the T-34A and incorporates a number of the latter's components. According to Beech, the Jet Mentor was designed and built to military specifications but privately financed as an off-the-shelf airplane. Described as a low cost, high performance two-place turbojet-powered trainer, the Model 73 is also being considered by the U.S. armed forces.

Power is supplied by a single Continental J-69T9 turbojet which gives the aircraft a high speed of 295 mph and an economical cruise of 245 mph. Beech says that functional arrangement of the tandem seats, equipment and controls makes the Jet Mentor ideal for instructing beginner pilots. Gross weight is 4,450 lbs.

Says Cancar: "The Model 73 is considered to be a very safe airplane due to its excellent handling characteristics and low landing speed. The airplane has been designed from the start to include ejection seats and canopy . . . Both Canadian Car Co. and Beech Aircraft Corp. believe that this aircraft has a very good chance of meeting the exacting requirements of the RCAF."

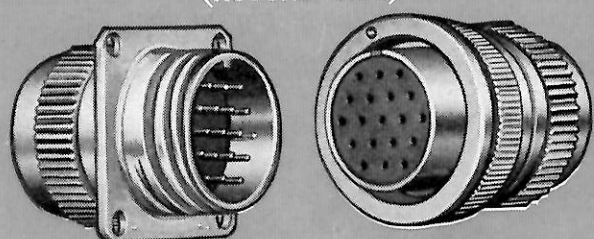
Titanium in Turbojets

The benefits of titanium in permitting use of a simpler rotor arrangement than has previously been used in turbojet engines came in for particular emphasis in a paper delivered by Charles Grinyer, vice-president engineering of Orenda Engines Ltd., at the SAE National Aeronautic Meeting in New York City last month.

Mr. Grinyer said that compared with other engines in the Iroquois class, a considerable reduction in weight was to be gained from the combined effect of titanium usage and the resulting simpler construction which requires fewer parts. Titanium is roughly 40% lighter than steel for equal strength.

At supersonic speeds, the turbojet

BIG NEWS ABOUT A LITTLE PRODUCT



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has better performance up to Mach 3 than its main competitor, the ramjet. Mr. Grinyer described this speed as being close to the limit fixed by the so-called thermal barrier.

Spectrometer Contract

A contract for final design and construction of the principal components for a beta-ray spectrometer, to meet designs and specifications supplied by Atomic Energy of Canada Ltd., has been awarded to the Nuclear Division of Canadair Ltd. The spectrometer will be used by AECL at its laboratories in Chalk River, Ont., to measure the energies and intensities of beta-rays and gamma-rays emitted by radioactive nuclei.

The new contract follows one which Canadair's Nuclear Division is now completing for the design and the construction of a pool test reactor to be installed at Chalk River to measure the remaining potential of depleted atomic fuel from other reactors. The two contracts total about half a million dollars.

The beta-ray spectrometer now ordered is described as of the double-focusing iron-free type. Three pairs of coils, the largest 14 feet in diameter, are electrically activated to create in the region of a large vacuum chamber a magnetic field which is so shaped that beta-rays of a certain energy are focused on a counting device. By variation of the magnitude of the current, the complete energy spectrum under examination is determined.

English Electric P.1B

The first English Electric P.1B fully supersonic twin-jet fighter made its maiden flight April 3 from Warton Aerodrome, Lancashire. A production order for the P.1B has been placed by the Ministry of Supply and in due course the aircraft will go into service with Fighter Command of the Royal Air Force as an all-weather day and night fighter.

The P.1B has been designed from the outset as a complete weapons system. This means that extensive armament, radar and radio aids are integral parts of the aircraft and have not been treated as extra items to be added in stages. This equipment includes long range radar, radio and navigation aids for operations under IFR conditions, and dual armament of guided missiles



SAAB-32 LANSEN: A new version of the Saab-32 Lansen, two-seat all-weather aircraft, the J-32B (above), has been specially developed for all-weather and night interception. It differs from A 32A version by having more powerful engine with enlarged afterburner. Below: another new Lansen variant, the Saab-32C photo-reconnaissance version, which is fitted with the most modern photo equipment and has provisions for several different equipment alternatives.

and 30 mm. Aden cannon. It is a single-seat aircraft powered by two Rolls-Royce Avons with reheat.

Three P.1B prototypes will be followed by another 20 fully-equipped pre-production aircraft. Each of these will be used for the further development of a particular facet of supersonic fighter interception. In this way the clearance for the RAF of this advanced and complex weapons system will be achieved more quickly.

Change of Address

A. V. Roe Canada Limited announces that its new offices at 170 University Avenue, Toronto, will house the following executives and their staffs: Crawford Gordon, Jr., president & general manager; Air Marshal W. A. Curtis, vice chairman of the board; A. A. Bailie, vice pres. (finance) and treas.; W. H. Dickie, vice pres. industrial relations; A. R. Williams, assistant to the president; H. W. Aitcheson, secretary; George Caton-Jones, comptroller.

General Dynamics

Consolidated net sales of General Dynamics Corporation and subsidiaries in 1956 totalled \$1,047,818,510, an increase of 52% over the \$687,274,182 net sales reported for the previous year. General Dynamics is the parent company of Canadair Ltd., of Montreal.

The annual report includes an 11-year financial history of the corporation, charting its dramatic growth and in-

creased scope of activity during a full decade. Consolidated net sales in 1956 were 72 times greater than sales of \$14.4 million reported for the year 1946. The estimated backlog during the same period spiraled from \$4.5 million at the 1946 year-end to \$2,195 million at the close of 1956.

F-106B Contract

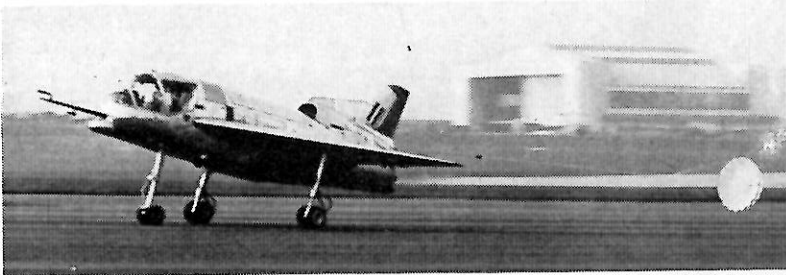
A \$47 million USAF contract for supersonic F-106B all-weather interceptors has been awarded to Convair Division of General Dynamics Corp.

The new F-106B is related to the delta-wing F-106A for which \$216 million worth of contracts were announced in January. Prototypes of the F-106A, which is said to carry the most elaborate armament and fire control system yet developed for an interceptor aircraft, have been undergoing flight test at Edwards Air Force Base, California, since last December.

Convair will produce the F-106A and the F-106B at its San Diego plant, which also is the home of the F-102A supersonic all-weather interceptors. The F-102A's, now in peak production, are already in service with squadrons of Air Defence Command.

Keithley Repairs

A repair facility has been set up by Measurement Engineering Ltd., for the products of Keithley Instruments Inc. The repair department is located at Arnprior, Ont. MEL technical personnel are scheduled for training at the



SHORT SC-1 VTOL: The Short SC-1, Britain's first VTOL research aircraft made its first flight from April 2. The aircraft used normal take-off technique and was tested in normal forward flight. This flight marked the start of a phase of development before the aircraft proceeds to unrestricted vertical take-off and transition from hovering to forward flight.

Keithley Instruments laboratories at Cleveland, Ohio, and a complete stock of spares will be maintained.

The Keithley line includes: electrometers, D.C. amplifiers, decade isolation amplifiers, static detectors, micro-microammeters and megmegohmmeters, and voltmeters. The instruments are widely used in nucleonic and electronic laboratories, in addition to the industrial field.

Canadian Jet Outlay

The Federal Government has paid or is committed to pay \$1,116,791,809 to three Canadian aircraft companies, mostly for jet fighters for the RCAF. A return tabled recently in the House of Commons said the total amount paid by the Defence Department to Avro Aircraft Ltd., A. V. Roe Canada Ltd., and Orenda Engines Ltd., between Jan. 1, 1949 and Feb. 28 of this year was \$967,571,828.

Of this total, a sum of \$704,396,228 was spent on development and production of the CF-100 and \$119,486,348 on the F-86 Sabre. In addition, \$99,351,396 was spent for research and development of the CF-105 Arrow. This supersonic, twin-jet interceptor with a speed up to 1,600 mph is expected to be test-flown late this year.

Argus MG Sets

Consolidated Diesel Electric Corp. of Canada Ltd., has received an order from Canadair Ltd., for three motor-generator sets for servicing and flight testing the Canadair CL-28 Argus. The trailer-mounted motor-generator sets supply precisely controlled 400 cycle AC power with frequency regulation to within one-half of one percent. In addition to 40 KVA 400 cycle AC power, the sets deliver up to 1,100

Amp 28 Volt DC power for servicing and engine starting.

F-101B Voodoo

McDonnell Aircraft Corp. recently announced that its newest supersonic jet interceptor has successfully completed its first test flight. Known as the F-101B Voodoo, the plane was designed and produced at McDonnell's St. Louis plant. The latest in the "Century Series", the new Voodoo is similar in appearance to the F-101A, but is a two-seat version designed to carry a radar observer. The F-101B will operate under all-weather conditions; it is powered by two Pratt & Whitney J-57 engines.

The F-101B is one of three of the Voodoo series designed and manufactured by the McDonnell Corporation to serve the three major commands of the USAF. While the F-101A is one of the largest fighters ever built by the U.S., the RF-101A is considered the world's fastest photo-reconnaissance aircraft. Supersonic photo missions are a matter of routine.

Contracts Awarded

Contractors awarded business in excess of \$10,000 by the Department of Defence Production during the period February 16 to March 15, 1957, 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.

Austin Airways Ltd., Toronto, \$309,520 for charter of aircraft.

Aviation Electric Ltd., Montreal, \$54,770, for aircraft electrical equipment.

Aviquote of Canada Ltd., Montreal, \$10,747, for technical publications.

Field Aviation Co. Ltd., Oshawa, Ont., \$20,361, for aircraft servicing equipment.

Found Brothers Aviation Ltd., Malton, Ont., \$12,333, for aircraft oxygen equipment.

Okanagan Helicopters Ltd., Vancouver, \$206,400, for charter of helicopters.

P.S.C. Applied Research Ltd., Toronto, \$28,296, for photographic equipment.

Vertol Aircraft Co. (Canada) Ltd., Arnprior, Ont., \$100,000, for helicopter airframe spares.

Abercorn Aero Ltd., Montreal, \$26,169, for aircraft oxygen equipment.

Aviation Electric Ltd., Montreal, \$15,542, for aircraft servicing equipment.

Aviation Electric Ltd., Montreal, \$169,687, for aircraft spares.

Aviation Electric Ltd., Montreal, \$31,649, for development contract.

Bancroft Industries Ltd., Montreal, \$21,361, for aircraft oxygen equipment.

Bristol Aircraft (Western) Ltd., Winnipeg, \$13,728, for modification kits for aircraft instruments.

Canadian Aviation Electronics Ltd., Ville St. Laurent, Que., \$549,855, for field maintenance, repair, overhaul and engineering support for flight and fire control simulators.

Canadian General Electric Co. Ltd., Toronto, \$13,870, for aero engine spares.

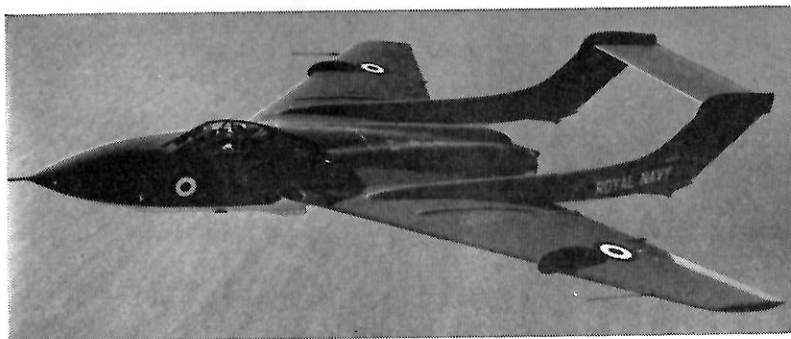
Dowty Equipment of Canada Ltd., Ajax, Ont., \$347,382, for aircraft spares.

Goodyear Tire & Rubber Co. of Canada Ltd., Toronto, \$35,148, for aircraft tires.

Goodyear Tire & Rubber Co. of Canada Ltd., Toronto, \$18,580, for aircraft spares.

Hoover Co. Ltd., Hamilton, Ont., \$33,440, for aero engine spares.

Noorduyn Norseman Aircraft Ltd., St. Laurent, Que., \$15,000 for modification of beaching gear.



SEA VIXEN: The first production de Havilland Sea Vixen, (the DH.110) night and all-weather fighter which is in production for the RN's Fleet Air Arm will soon replace the Sea Venom in squadron service. Powered by two Rolls-Royce Avons, the Sea Vixen is supersonic in the dive. It has power controls and is designed to be armed with air-to-air guided missiles.