

Iroquois License?

According to an American news source, a licensing agreement is being negotiated with Orenda Engines Ltd., by Curtiss-Wright to produce the 20,000 lb. thrust Iroquois turbojet engine in the U.S. An Orenda spokesman declined to substantiate the report other than saying: "Some companies have approached Orenda on the subject, however nothing final has been decided."

CF-100's for Belgium

The award of a \$43,000,000 contract to Avro Aircraft Ltd. for CF-100's for the Belgium Air Force, was announced jointly at June's end by the Department of Defence Production and the U.S. Department of Defence.

The arrangement by which the Canadian all-weather fighters are being supplied to Belgium is similar to the "off-shore" purchase plan whereby the U.S. pays for the production of aircraft in, say, British factories, for supply to another NATO power. This is the first time that a Canadian aircraft company has played a part in this form of supply of weapons.

The U.S. is to foot 75% of the bill, while the Canadian Government, through Canada's Mutual Aid program, will stand for the remaining 25%.

Under Mutual Aid, Canada's share

will include the supply of initial spares for the aircraft, spare engines, ground support and test equipment, training equipment and conversion training for pilots for the operation of the aircraft. Deliveries of the aircraft and supporting equipment will commence this year and will be completed by the end of 1958.

The announcement from Hon. Howard Green, acting Minister of Defence Production, said that the CF-100 was selected by the Belgian government as being best suited to meet its all-weather aircraft requirements.

Avro has had several foreign countries interested in the CF-100 for some time, but has been unable to get permission to export them because of U.S. security restrictions on the CF-100's American-made Hughes fire control radar, which is also standard equipment on a number of first-line USAF fighters. It is possible that this release of aircraft to the Belgians may be the forerunner of a number of similar orders to other NATO countries.

Commenting on the order, Avro President & General Manager Fred T. Smye said: "This transaction means a great deal not only to Avro Aircraft, but also to the whole A. V. Roe Canada group of companies, and particularly Orenda Engines, which supplies the powerplants for the CF-100.

"But more important . . . is the fact

that . . . this is the first time a Canadian-designed combat aircraft has been selected by another country. . .

"The CF-100 was designed in Canada to meet a specific requirement of the RCAF for a long-range interceptor capable of day and night operation, in all weather. The decision of Belgium in favor of the CF-100 over several other leading competitive types is tangible evidence of Canadian ability to undertake original aeronautical design and development and of the ability of Avro Aircraft to implement such a design; and provides confirmation of the superior quality of the aircraft itself."

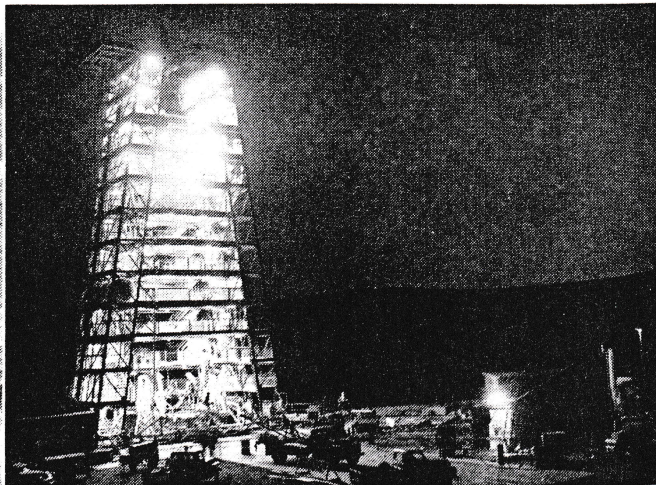
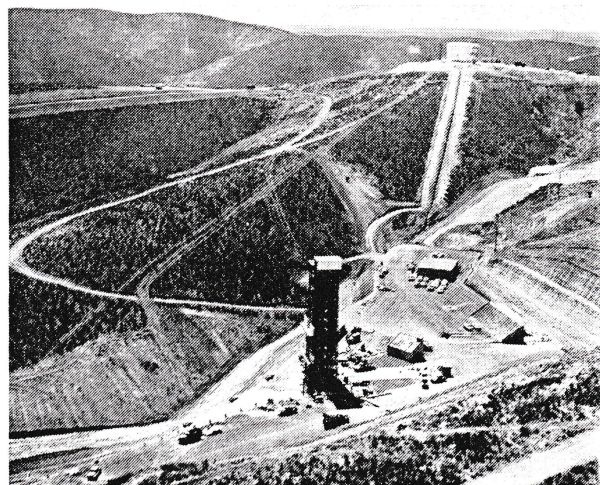
Fleet Transaction

Masters Smith Co. Ltd., Toronto stockbrokers, have underwritten 100,000 shares of Fleet Manufacturing Ltd., Fort Erie, Ont., at 75 cents a share, payable forthwith, and has optioned 400,000 shares at prices from 90 cents to \$1.25 per share.

Lucas-Rotax in B.C.

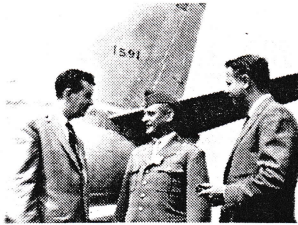
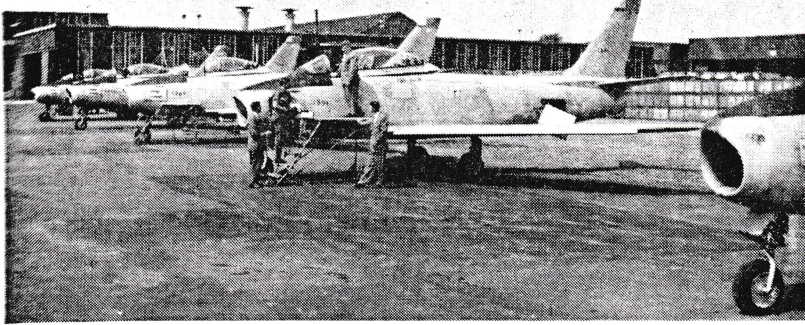
The opening of a Vancouver plant by Lucas-Rotax Ltd., Toronto, was announced recently by R. C. Padget, vice president & general manager of the firm, which is a leading Canadian manufacturer of aircraft fuel and electrical systems equipment.

"Up to this time there have been no complete facilities west of Toronto for the full overhaul and servicing of fuel systems of jet and turboprop aircraft," Mr. Padget said in making his



DEVELOPING ARMAGEDDON'S WEAPONS: Day and night photos show USAF's Convair Atlas ICBM test base at Sycamore Canyon, NE of San Diego, Calif. Captive testing of giant missile's systems and rocket engines are carried out here and

at Edwards Rocket Base, Calif. Actual launchings are made only from USAF Missile Test Centre, Patrick AFB, Fla. Atlas is in pilot production by Convair's Astronautics Div. at San Diego. Component test centre is at Pt. Loma, Calif.



ACHTUNG! First five (above) of 225 Sabre 6's being built by Canadair for Germany, were recently accepted by the Luftwaffe and shipped overseas. At left, Lt. Bruno Bieger (centre), Luftwaffe rep. at Canadair who officially accepted the new fighters, chats with H. G. Sager (L), Canadair's asst. mgr. of contract administration, and (R), H. J. Everard, Canadair's manager of military aircraft sales. First German Sabre bears Canadair production No. 1591.

announcement. The plant is also to provide complete overhaul facilities for aircraft electrical systems.

Primarily, the new Sea Island facility will be used by CPA to meet servicing requirements for the fuel and electrical systems of the airline's six Britannias, the first of which is to be delivered in September.

The Vancouver plant will be under the supervision of George Reddy, service manager.

Noorduyn Expands

Noorduyn Norseman Aircraft Co. Ltd., has commenced construction of two hangars on property adjoining that of Canadair Ltd., at Cartierville Airport at Montreal. The combination hangars, stores and office buildings will cover an area approximately 40,000 square feet, and will provide the additional space needed for the firm's Norseman manufacturing, sales, maintenance and overhaul operations.

Superior Floats

Superior Airways Ltd., Fort William, Ont., has acquired exclusive Canadian manufacturing rights for Pee-Kay floats. A first run of 10 sets of model 1500 floats is progressing favorably at Superior's Fort William shops.

The agreement for Canadian rights was signed recently with Thomas Kellner, of International Falls, Minn., founder of Pee-Kay Aircraft Products, which last year began production of floats after four years of engineering,

test and development. The Pee-Kay 1500 floats can be fitted to almost all two-place aircraft. Each float is designed for easy fitting to either side of the aircraft.

Ferranti Transactor

Ferranti Electric Ltd., Toronto, has announced that its newly-developed Transactor electronic reservation system for airlines will be in use with TCA by 1958.

The Transactor is scheduled to be demonstrated in Toronto around the end of July, and will utilize the University of Toronto's Ferranti Ferret electronic computer.

When installed, the ultra-modern reservations system will be linked to a central control board by direct telephone line. The electronic control

panel will likely be situated in Montreal. In operation, a clerk at any ticket sales office in Canada can obtain reservations information on any TCA flight simply by using pencil marks on an envelope-sized card. The Transactor statically reads the pencil marks and automatically transmits the query and the answer to and from the central board. Time for the entire operation is one second.

Ferranti engineers state that the Transactor can turn out a complete record of everything that has gone through the system during any given time interval. Since half of the airline's difficulties lie in determining what is needed, accurate records made available by the Ferranti system are invaluable.

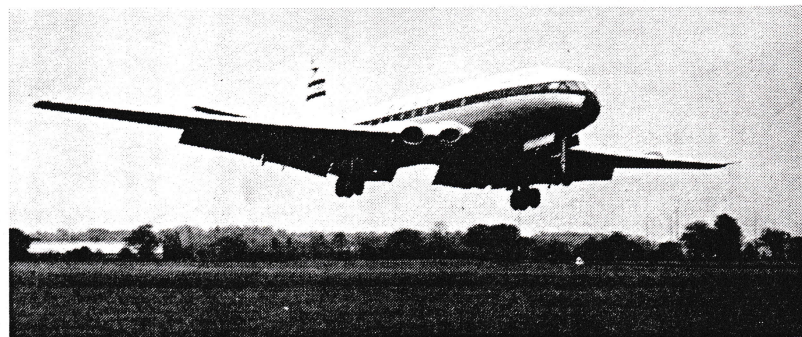
New Test Stand

Monahan Supply Corp. Ltd., Canadian distributors for Airseco, Inc., are offering the aircraft industry a new portable test stand which checks fuel flow, meter calibrations and engine fuel components under conditions approximating actual flight conditions.

Engineering Plan

An experiment in education is being implemented by Orenda Engines Ltd., in conjunction with Waterloo College, Waterloo, Ont., and about twenty other Ontario industries with the hiring of engineering students under a co-operative B.Sc. degree-granting course.

Similar to plans in operation in the United States, this co-operative plan is finding strong support from industry in order to graduate more engineers. The plan also helps students to apply in industry, and to see applied, the



PREPARING FOR THE FOUR: Shown completing first flight is the Comet 2E, two of which are to be delivered to BOAC soon. The 2E is a modified aircraft, adapted to take two of more powerful RA-29 Avons in outboard positions. It will enable BOAC to gain early experience on engines which will power the Comet 4. Enlarged outboard air intakes dictated by more powerful engines, are apparent in photo.

principles learned through lectures.

The co-operative plan works as follows: a full-time job in an industrial concern or governmental agency is shared by two students, one of whom works while his alternate attends college. At the end of a certain period of time, the two change places. Thus the job is kept continuously filled and each student spends half his time in college.

MEL Sales Appointment

MEL Sales of Arnprior, Ontario, has been appointed Canadian representatives for The Reflectone Corp., Stamford, Conn., manufacturers of precision components, simulators and training devices.

New Branch Plant

The Wallace Barnes Co. Ltd., Hamilton, Ont., Canadian subsidiary of Associated Spring Corp., Bristol, Conn., plans to build a new branch plant in Montreal. The new site is in the Pointe Claire industrial district some 13 miles southwest of the city.

Manufacturing operations are scheduled to begin late this fall with initial employment expected to rise from about a dozen to approximately 30 people by the first of the year. All of these employees will be drawn from the Montreal area with the exception of a small nucleus who will come from the main plant in Hamilton. The Wallace Barnes Co., is a major supplier of precision mechanical springs to the Canadian Aircraft Industry.

Conway Details

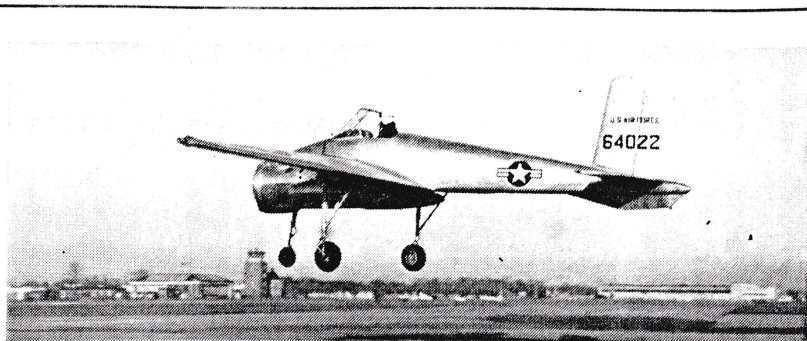
Rolls-Royce recently released additional details of the civil version of the Conway bypass turbojet. This version, which has been designated the R.Co.10, has a take-off thrust of 16,500 lb., a figure that Rolls-Royce says is the highest figure so far announced for any turbojet engine specified for civil airline operation.

The R.Co.10 Conway is the engine which is to power TCA's six Douglas DC-8 jet transports.

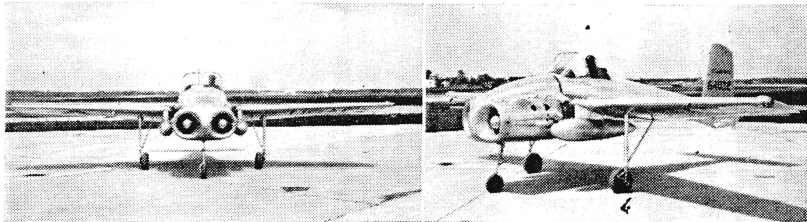
Dimensions are 132.45 in. in length and 42 in. in diameter.

Contracts Awarded

Contractors awarded business in excess of \$10,000 by the Department of Defence Production during the period April 16 to May 15, 1957 include the following. The list does not include orders placed by the Department outside Canada, nor with other agencies, and increases in orders placed earlier—nor do orders classified as secret appear here.



JETBORNE: Newest jet powered VTOL is USAF's Bell X-14, shown above in flight. Powered by two Armstrong Siddeley Viper turbojets, X-14 utilizes "thrust diverters" to take off in horizontal position, and then to redirect jet efflux for forward horizontal flight. Directional control during vertical flight, or when forward speed is low, is provided by compressed air nozzles at wing tips and tail.



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

Aircraft Appliances & Equipment Ltd., Toronto, \$11,354, for aero engine spares.

Aircraft Appliances & Equipment Ltd., Toronto, \$21,582 for aircraft test equipment.

Aviation Electric Ltd., Montreal, \$140,000 for repair and overhaul of aeronautical instruments and electrical equipment during year ending March 31/58.

Aviation Electric Ltd., Montreal, \$20,448 for aircraft instrument test equipment.

Aviation Electric Ltd., Montreal, \$304,714 for aircraft instruments.

Aviation Electric Pacific Ltd., Vancouver, \$10,000 for repair and overhaul of aeronautical instruments and electrical equipment during year ending March 31/58.

Aviquote of Canada Ltd., Montreal, \$10,000 for aircraft spares and accessories during year ending March 31/58.

Avro Aircraft Ltd., Toronto, \$575,000 for technical publications during year ending March 31/58.

Bayly Engineering Ltd., Ajax, Ont., \$10,000 for repair, overhaul and modification of

radar and radio communications test equipment.

Bogue Electric of Canada Ltd., Ottawa, \$28,624 for motor generator sets.

Bogue Electric of Canada Ltd., Ottawa, \$49,464 for ground electrical power units.

Carrier & MacFetters Ltd., Scarborough, Ont., \$24,891 for aircraft instruments.

Collins Radio Co. of Canada Ltd., Toronto, \$14,640 for electronic test equipment.

De Havilland Aircraft of Canada Ltd., Toronto, \$68,000 for airframe spares and special tools during two years ending March 31/59.

De Havilland Aircraft of Canada Ltd., Toronto, \$12,300 for aircraft spares.

De Havilland Aircraft of Canada Ltd., Toronto, \$30,000 for aircraft spares and accessories during two years ending March 31/59.

De Havilland Aircraft of Canada Ltd., Toronto, \$25,000 for aircraft modification kits during two years ending March 31/59.

De Havilland Aircraft of Canada Ltd., Toronto, \$45,000 for airframe spares during two years ending March 31/59.

Dunlop Canada Ltd., Toronto, \$26,901 for aircraft spares.

Pioneer Parachute Co. of Canada Ltd., Smiths Falls, Ont., \$10,000 for inspection and modification of parachutes and components during year ending March 31/58.

P.S.C. Applied Research Ltd., Toronto, \$334,937 for aircraft navigational equipment.

Rolls-Royce of Canada Ltd., Montreal, \$50,000 for aero engine, power plant spares and tools during year ending March 31/58.

Spartan Air Services Ltd., Ottawa, \$20,920 for charter of helicopters.

Sperry Gyroscope Co. of Canada Ltd., Montreal, \$38,745 for aircraft instruments.

Sperry Gyroscope Ottawa Ltd., Ottawa, \$20,000 for repair and overhaul of aeronautical instruments and electrical equipment during year ending March 31/58.

Standard Aero Engine Ltd., Winnipeg, \$10,000 for aero engine spares and tools during year ending March 31/58.

Standard Aero Engine Ltd., Winnipeg, \$15,000 for repair, reconditioning, inspection and storage of aero engines, components and accessories during year ending March 31/58.

COMING EVENTS

September 2-8—1957 Flying Display & Exhibition, SBAC, Farnborough, England.

September 3-14—XI General Assembly, International Union of Geodesy & Geophysics, Toronto.

September 6-7—Canadian International Air Show, Exhibition Park, Toronto.

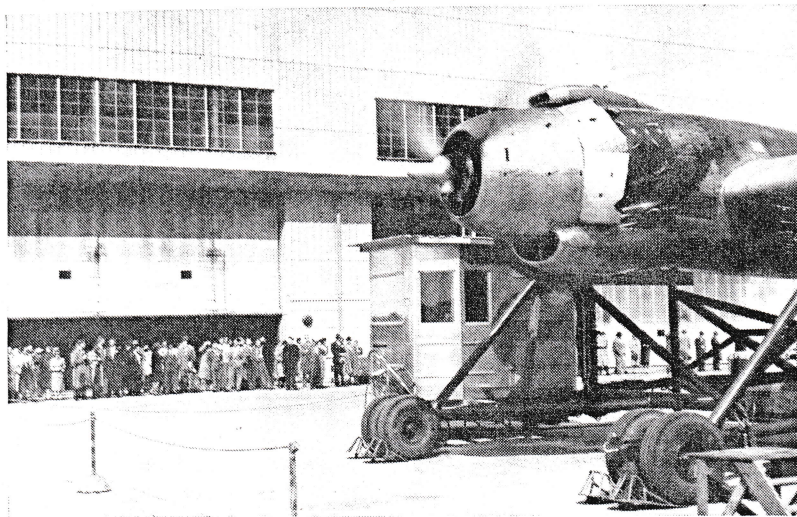
September 9-13—IATA Annual General Meeting, Madrid, Spain.

Sept. 30-Oct. 4—Canadian National Materials Handling Show, Show Mart, Montreal.

October 2-4—Annual Meeting and Forum, National Business Aircraft Assoc., Cosmopolitan Hotel, Denver, Colorado.

October 16-18—Inst. of Radio Engineers, Convention and Exposition, Automotive Bldg., Exhibition Park, Toronto.

October 21-22—Joint Meeting IAS-CAI Sheraton Mt. Royal Hotel, Montreal.



RUNNING UP: Members of the Engineering Institute of Canada watch a run-up of the CL-28 MR Britannia's powerplant on the special test rig which Canadair engineers developed for this installation (see "Aircraft", May, 1956). Earlier photographs appearing in this publication showed the engine uncowed. Main component of the powerplant is of course, a Wright R-3350 Turbo-Compound 18, rated at 3,700 hp.

Canadair Ltd. by the DDP, according to a recent announcement by the company.

The initial contract for 13 CL-28's was let to Canadair in February, 1954, and it was understood that other contracts were to follow, each of these to cover, in most cases, a block of 12 aircraft. If this procedure has been followed, then it is thought that all of the 50 aircraft to be built for the RCAF are now on firm order.

Estimated value of the aggregate CL-28 orders is \$185,000,000. The first machine is scheduled for delivery to the RCAF early in 1957.

Layoff at Orenda

Production cutbacks from 100 Orenda engines a month, during the Korean War, to less than 50 a month at present, have necessitated the layoff of a further 350 workers at the Orenda Engines Ltd., Malton, Ontario, according to a recent statement by Walter R. McLachlan, vice president & general manager.

According to the DDP, production of the Orenda is to be cut even below the current rate of less than 50 per month. The additional cuts referred to by the DDP are to be made on a sliding scale at various times during the next year.

In explaining the layoff arrangements to the employees, Mr. McLachlan said that . . . "steps already taken have succeeded in reducing to some extent

the impact of the lowered production rate. These include an increase in the schedules of sheet metal, repair, and overhaul work, also the addition of a third shift in the experimental plant. Other urgent efforts to reduce the effect of the production decreases are continuing."

To date more than 3,000 Orenda engines have been produced for the RCAF's CF-100 and the F-86 Sabre aircraft. Orders have also been filled for the South African and Colombian governments, both of which have acquired Canadair Sabres.

Meanwhile, the development work on Orenda's Iroquois moves into higher gear.

Avro Layoff

An estimated total of 500 employees are expected to be laid off by Avro Aircraft Ltd. as a result of a new Government-ordered cut-back in the rate of production of the CF-100. However, this latest stretch-out in production will not affect the total number of CF-100's to be produced for the RCAF, according to F. T. Smye, Avro Aircraft vice-president and general manager.

This latest reduction in Avro Aircraft employment is the third since January of 1955.

At one time, production of CF-100's reached a peak of 25 per month, but the stretch-outs of 1955 reduced this to about ten. The new rate of production has not been announced.

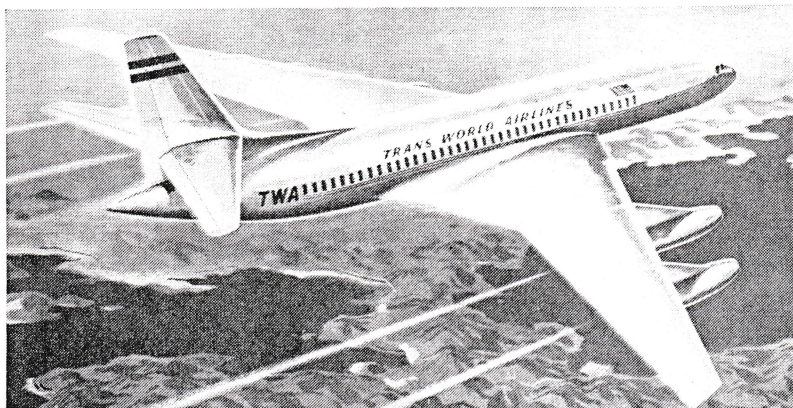
USN Orders Otters

The U.S. Navy has ordered nine additional Otters from The de Havilland Aircraft of Canada, Ltd. These will supplement the four Otters acquired last year for the Antarctic expedition, "Operation Deep Freeze", which comprised a preliminary phase of the U.S. contribution to the International Geophysical Year.

Australia and New Zealand are using Beavers for their preliminary survey operations in the Antarctic.

Maintenance Trainer

A \$650,000 contract for the design and manufacture of a maintenance trainer for the RCN, has been awarded to The de Havilland Aircraft of



GOLDEN ARROW: Scheduled for delivery to TWA early in 1959, the Convair Golden Arrow medium range jet transport (above), will have a cruising speed of 609 mph and will be powered by four GE J-79/CJ-805 turbojets of approximately 15,000 lb. th. each. The Golden Arrow is ostensibly almost identical to the Skylark 600 announced earlier. Horizontal stabilizer is mounted on the fuselage of the Skylark; Golden Arrow is distinguished by its gold finish.