

# RCAF Asks Canadian Plants Design Trainer

## Canadian Car Buys Norseman Company

Canadian Car & Foundry Company, Limited has acquired the principal assets of the Noorduyn Norseman Aircraft Limited, including all rights for the manufacture and sale of the Norseman aircraft. The company, in announcing the development, stated that in the modern Noorduyn plant the company would concentrate upon the manufacture of the Burnelli CBY-3 and Norseman aircraft, its aircraft accessory division and specialized overhaul, repair, conversion, reconditioning and servicing of aircraft of all types.

Its existing aircraft plant at St. Laurent in which the prototype Burnelli CBY-3 cargo-passenger transport plane was completed, will in future house all aircraft engineering control and administrative offices of the aircraft division.

## Fairchild and A. V. Roe (Canada) Now Working On Designs For Twin Engine Prototypes

### EACH DESIGN TO MAKE 3 VARIANTS

Sometime in the fall of 1948, prototypes of a new training aircraft, completely designed and built in Canada, will undergo first flight tests. The twin-engine machines, required by the RCAF for the crew training of all members of aircrew except pilots, will ultimately be produced in three subtypes; a navigation trainer, a bombing and gunnery trainer, and a radar and radio trainer.

As this is being written mockups are being prepared by Fairchild Aircraft, Montreal and A. V. Roe (Canada) Ltd., Toronto. Each firm has been authorized to produce three prototypes and these will represent one of the most progressive steps yet taken by Canada's aviation industry.

The project was initiated by the RCAF in July, 1944, when the Department of National Defense for Air issued a Preliminary Specification No. AIR-4-10 to ten Canadian manufacturers. Calling for the design of a basic and advanced trainer which might have a useful application over a period of several years, the specification was the end result of some long term plan-

ning by the Aeronautical Engineering Division which had recommended this step as the most practical means of encouraging Canadian firms to maintain adequate design staffs.

Late in 1944 representatives of the ten firms visited RCAF station, Mountain View, where they studied training requirements, observed air exercises and conferred with the men. They later submitted competitive preliminary designs, two of which were selected for further development. These were submitted by Fairchild Aircraft and Noorduyn Aviation but Noorduyn was replaced by Avro when the company directors decided to relinquish their aviation interests.

The RCAF has specified that the three variants will be sufficiently identical to permit rapid conversion at RCAF units and, that all spares will be interchangeable. This requirement has been given design priority over all others excepting: (a) fulfillment of specific function; and (b) safety and reliability.

Although it is reasonable to expect many changes before the prototypes pass their final flight tests, preliminary drawings reveal that the designers of both firms have been thinking along similar lines. The low-wing Avro machine and the mid-wing Fairchild design have much in common. Both have twin engines, twin tails and tricycle undercarriages. Both bear some resemblance to the Mitchell in general layout; and both, at this point, are nameless.

It is likely that the companies will pursue the very sensible policy of not publicizing anything but the most elementary features until such time as the prototypes have flown. A factual appraisal is obviously not possible until that event has taken place, so the following details, taken from the specification, can serve only as a guide to the general characteristics of the new trainer.

### Description of Sub Types

The type "A" navigation trainer will be used for exercises varying from elementary map reading to the most advanced flights preceding conversion to actual operational types. Cruising at 200 m.p.h., it will carry a crew of five (pilot, radio operator and three students) for 6½ hours at 15,000 feet.

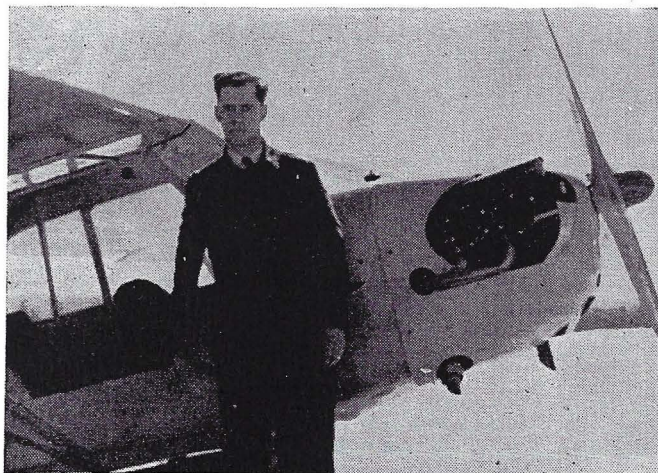
Required for the basic and advanced training of air bombers and air gunners, the type "B" will cruise for four hours at the same altitude. The five-man crew includes radio operator and instructor and the detail design will permit the installation of possible future aiming and sighting devices based on the radar principle.

Generally similar to type "B," but with the armament installations replaced by modern radio, radar and monitoring equipment, the type "C" will also cruise for four hours with a crew of five. It will be possible to operate all airborne radio equipment simultaneously.

With both manufacturers forecasting considerable improvement over the figures listed in the specifications, the performance of the new machine promises to be excellent. All three subtypes will operate from existing RCAF air-dromes where the horizontal-distance available for landing and takeoff often does not exceed 3,000 ft. They will be able to maintain an altitude of at least 15,000 ft., cruising at 200 m.p.h. true air speed, without exceeding 60% of maximum except takeoff power (METO). The service ceiling on one engine has been set at a minimum of 5,000 ft. Stalling speed, with landing gear

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## Starting New Flying School



Harold F. Mitchinson, former chief flying instructor at Cub aircraft's operations on Hamilton airport, has gone 'way out west, as recommended in history, to go into business for himself at Saskatoon. Ferrying his own new Cub out there, "Mitch" is reported as having spent 28 flying hours over six days on the trip, spending \$60 on gas, oil, rooms, hangar rent, landing fees, tipping, taxis and picture shows.



# London Newspaper Buys Own Cessna Aircraft

Reported to be the only newspaper in Canada to own and operate its own aircraft at present, the London Free Press Printing Co., London, Ont. has bought a Cessna Crane from Leavens Bros. Air Services.

The airplane will be used to speed the gathering and transmission of news and photographs to the paper, and to its affiliated radio station. Its official pilot will be William E. Corfield, who becomes the first pilot-reporter in Canada. He began flying in 1937 at St. Catharines Flying Club, and spent a period in the RCAF before joining the newspaper as a reporter. His commercial license was received nearly seven years ago.

The immediate use of the 140 m.p.h. Cessna will be to carry reporters and cameramen to the scene of quick-breaking news. It will be fitted with special attachments for aerial photography, and with standard two-way radio.



WM. E. CORFIELD

It is hoped that special permission may be granted to install two-way radio communications between those in the airplane, and the Free Press office. Based at the Crumlin airport, the Free Press' Cessna is painted blue trimmed with grey, and bears the registration letters CF-DCL.

● W. F. English, vice-president of Trans-Canada Air Lines, said his company would be operating an airline route between Fort Frances and Winnipeg or Toronto from an International airport at International Falls. An emergency field is being constructed at Atikokan, Ont., he said.

## Peterborough Firm Gains New Agencies

Canadian Aircraft and Auto Co., Peterborough, has a sales agency for the Fleet Canuck, the Republic Seabee, the Globe Swift, and the Schweizer glider.

The company, which has already sold a Seabee, has the Republic agency for the counties of Hastings, Peterborough, Northumberland and Prince Edward. The Schweizer agency covers the same territory.

More vague is the definition of the Globe Swift sales area, which is for "Peterborough and vicinity," while the company's territory for the Canuck is within the lines that enclose this territory: from east of Toronto city limits along the lake-shore to and including Kingston, north from Kingston to Pembroke, including Pembroke; west to and including Orillia, then south again to the eastern boundary of Toronto.

## RCAF Trainer

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and flaps extended and the centre of gravity in the most unfavorable position, will be less than 80 m.p.h. The stick force required per "G" of acceleration over the permissible range of CG movement and over the complete speed range will vary between 10 and 35 pounds.

### Construction

All-metal, stressed skin construction will be used throughout. The Avro Trainer will have a wingspan of 73 ft. and a length of 58 ft. The Fairchild trainer will be broader (span—77 ft. 10 in.) and shorter (length 52 ft. 9 in.). Among the few restrictions applied by the RCAF is one limiting the over-all height to 17 ft. 6 in., and another limiting the maximum size of any single component to 8 ft x 10 ft. x 36 ft. These steps were taken to ensure easy stowage in existing RCAF hangars and to permit the shipping of any part by standard rail car.

Entrance will be gained through jettisonable doors in the side of the fuselage.

Besides complete controls for the pilot the cockpit will contain removable dual controls and temporary seating accommodation for the co-pilot. Power-operated windshield wipers will be fitted to the nonfogging windscreens which will also have fittings for the attachments of blind-flying panels. Behind the pilot a removable curtain will cut off unwanted light from other compartments.

The nose compartment will be roomy, allowing the bomb-aimer to be comfortably seated in full flying kit. Within easy reach will be a bombing panel (complete with pre-selector box, bomb distributor and release switches) and remote controls for the automatic pilot.

An electric turret (360 deg. rotation) will be carried. As this is not required on the "A" and "C" aircraft, a contoured blanking plate will cover the resultant opening. The rear gunner's position, providing upright seating for the gunner and making allowance for the possible future use of radar-assisted sighting devices will be situated in the extreme tail. Another feature of the "B" aircraft will be a remote sighting station fitted with a camera-gun recorder.

The bombload (12 practice bombs) will be carried internally and the bomb doors, capable of opening or closing in ten seconds, will be fitted with a device to prevent the bombs being dropped while the doors are closed.

All three models will carry a complete set of pilot's instruments, including an automatic pilot with electrically driven

gyros. Special instruments for the navigator, bomb aimer and air gunner will be conveniently located in the fuselage and all instruments will be painted with the latest radium-fluorescent compounds.

The undercarriage and flaps will be hydraulically operated. The maximum time for retraction is ten seconds and the landing gear will contain fittings for the attachment of tow bars, tow ropes, etc.

All three variants will carry a complete oxygen installation, adequate for 25 manhours on the type "A" and ten manhours on the types "B" and "C."

Every provision has been made for the complete safety of the crew. Parachute stowages will be provided in convenient places; a five-man-type "H" dinghy will be carried; emergency kit, first aid kit and sanitary equipment will be included; and jettisonable doors and emergency exits will be provided throughout.

## Island Airport Returns to City

Toronto Harbor Board officials, at a meeting with the city's Board of Control, revealed that the Island airport will revert to the Harbor Commission early in April. It is said that the field will be used for itinerant aircraft, and not as a base for airlines.

Nothing was said regarding charter operators or commercial flying schools that want to establish bases on the Island, although the Harbor Commission has been advertising for tenders from companies interested in going on to the field.

E. L. Cousins, consultant to the Harbor Board, said that the present administration building could be moved over to Hanlan's Point, and the runways extended from the present 3,000 feet to 5,000 feet. Such changes, he said, will be necessary if the field is to concentrate on providing service for privately owned airplanes in United States and Canada. These and other improvements, he said, could be carried out at a cost of \$1,500,000.

Mayor Saunders told the meeting that he understood the Federal Government had promised to improve the field, and the city would not have to pay for the improvements mentioned by Mr. Cousins. One of the improvements was the provision of a tunnel from the mainland to Hanlan's Point to improve communications to the airport, which is at present served by a cable drawn ferry. The annual deficit, allowed for in the city's budget, to operate the field was said to be \$25,000.

## Culver in Canada Sold by Windsor Firm

Frederick L. Wood, sales manager of Sandison-Wood Air Sales & Service Co., wishes it to be known that his company is Canadian representative for Culver aircraft.

A news item in the February issue of CANADIAN AVIATION indicated that a Peterborough company had a Culver agency. Subsequent changes of plan now make the original information erroneous.

## Airport Planned For Galt Area

Appearing before the Galt city council recently, Tom Senior, Brantford, outlined a proposal for an airport in the Galt area.

Mr. Senior said he had an option for a ten year lease on suitable land near the junction of the Galt-Hespeler highway and the Preston-Clearview road. He proposed developing an airport there as a feeder line for TCA, as a flying training school, and for other purposes.

He sought \$2,000 from the Galt city council to build a hangar on the property, with the understanding that the loan would be repaid during the terms of the lease. The city council referred the appeal to the transportation committee.