

## A. V. Roe Adds PSC

PSC Applied Research Ltd., one of Canada's leading designers and manufacturers of electro-mechanic instrument systems has been acquired from the Hunting Group by A. V. Roe Canada Ltd. Acquisition of PSC Applied Research, which grew from 58 employees and sales of \$250,000 in 1951 to more than 300 employees and sales of \$2.5 million in 1955, will provide further diversification of the A. V. Roe Canada Group.

PSC becomes the sixth operating company in the A. V. Roe Group. The others are: Avro Aircraft Ltd.; Canadian Car Co. Ltd. (formerly Canadian Car & Foundry Co. Ltd.); Canadian Steel Foundries (1956) Ltd.; Canadian Steel Improvement Ltd.; and Orenda Engines Ltd. In addition, through CanCar, the group has controlling interest in Canadian General Transit Co. Ltd., which is engaged in the leasing of railway tank cars.

In its six year history, PSC Applied Research has designed, engineered and produced a line of outstanding products. Probably the most widely known of these is the R-Theta Computer which is now in quantity production for the RCAF. In addition, it has designed and developed such

equipment as: aerial survey cameras, radio-activity detectors, airborne magnetometers, airborne profile recorders, radar equipment and aerial navigation equipment, some of which was designed for the RCAF.

## DH Gyron Declassified

The de Havilland Engine Co. Ltd. has announced that the supersonic Gyron turbojet has successfully completed its first development stage and is at present running, with reheat, at 25,000 lb. static thrust. The Gyron was specifically designed for optimum performance at speeds up to Mach 3.

The Gyron's existence is credited to the de Havilland Engine Company's foresight, over six years ago, in undertaking as a private venture the development of an engine which would satisfy the powerplant requirements of the advanced military aircraft of a later generation. It was foreseen that these aircraft would be called upon to operate at high supersonic speeds, be capable of high altitude operation and, under these conditions, possess a useful endurance.

However, news reports from the U.K. indicate that the British Ministry of Supply is to withdraw its backing for the Gyron. A Ministry official is quoted as saying that "financial support

for the Gyron is due to end shortly and is unlikely to be renewed."

This is taken as indicating that there are no projects incorporating the Gyron presently enjoying official support. That is, although the Ministry views the engine as good, no 2,000 mph fighter has been ordered. The plan to drive ahead to a fighter capable of more than 2,000 mph has been scrapped in favor of guided missiles. And unless this decision is modified, the English Electric P-1 twin-jet fighter, which will have a speed of 1,500 mph, is likely to be the last manned fighter used by the RAF.

## Sabre 5's at Dartmouth

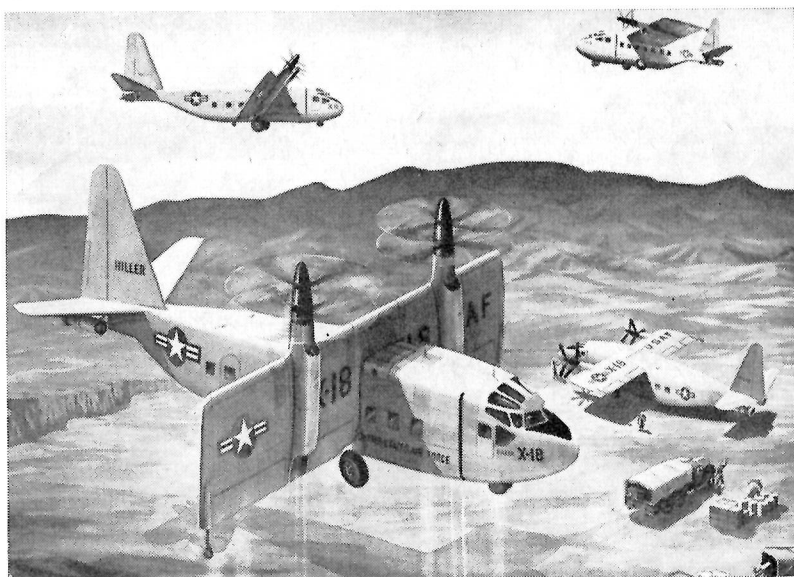
Canadair has a 23-man team working at Fairey Aviation Co. of Canada Ltd. at Dartmouth, N.S., preparing the 59 Mark V Sabres brought over on the Magnificent, for shipment by rail to Canadair. The work of preparing the aircraft for shipment to Montreal is extensive. It involves the following steps: de-cocooning, inventory, cleaning, pre-dismantling, dismantling and cradling. A dismantling line has been set up at the Fairey plant for these operations.

## Parallel AC System

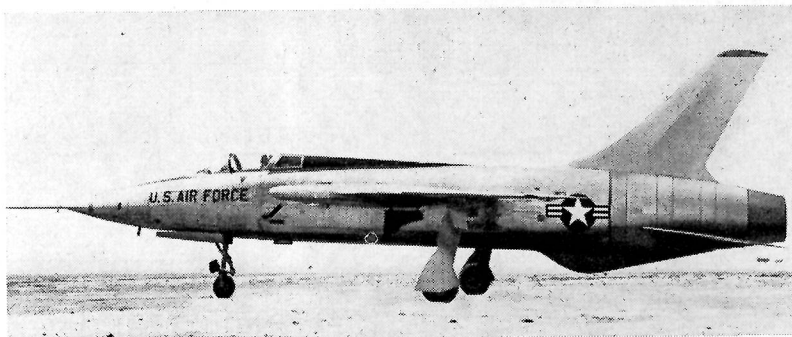
The first aircraft electrical system in the world wired for automatic parallel operation of four engine driven generators supplying high voltage AC power has been supplied to Canadair Ltd., by the Canadian Westinghouse Co. The system will provide the power for radar, electronic and electrical equipment aboard the Canadair Argus being built by the Montreal aircraft firm for the RCAF's Maritime Air Command.

Unique in the aviation field, the parallel generating system has 40-KVA alternators driven at 6000 rpm by constant speed hydraulic transmissions from each of the aircraft's four engines. The total 160-KVA exceeds the demand but assures constant reliable power. Exciters to supply DC power for the alternator field are integral parts of the generators.

In the event of an emergency, the generators from two engines can maintain the entire electrical system and electronic equipment. All switching and protective functions for the system are operated automatically from a control panel. Westinghouse magamp regulators maintain constant voltage



**TILT-WING TRANSPORT:** The USAF has announced that an initial contract for the development of transport-sized, tilt-wing aircraft has been awarded to Hiller Helicopters, Palo Alto, Calif. The tilt-wing transport will be propeller-driven and capable of vertical take-off and landing. Artist's conception of Hiller X-18 research aircraft is shown above.



**REPUBLIC F-105 THUNDERCHIEF:** First photograph of Republic F-105, recently ordered into volume production for the USAF. Designed as a nuclear-bomb-carrying fighter and powered by a Pratt & Whitney J-75 engine, the Thunderchief flew faster than sound on its very first flight. It features a needle nose, very thin, swept-back wings, and a ventral fin. Scheduled to reach a production peak late in 1958, the F-105 assembly line is already in operation.

within the system despite varying loads on the generators. More than 60 miles of wires carry the power to auxiliary equipment that includes more than 100 small motors.

## Germany Buys British

A contract for fifty Bristol 171 Mk 14 Sycamore helicopters was signed in Coblenz recently by the Director of the Ministry of Defence for the Federal German Government. The Sycamore is a five-place helicopter powered with an Alvis Leonides piston engine rated at 550 bhp. The helicopters will be operated by units of the German Army, Navy and Air Force on ambulance, air-sea rescue and transport duties.

The contract, which is valued at several million pounds, is one of the largest ever placed with a helicopter manufacturer. Ground personnel of the German services have already attended helicopter service and maintenance courses at Bristol Aircraft's service school at Filton, England. Pilots are scheduled to take the Sycamore conversion course at the company's Weston Division, where the Bristol helicopter flight test team is now stationed.

## LABS System for RAF

British fighter-bombers will be equipped with one of the United States' newest tactical weapons. This is the low altitude bombing system that enables low-flying jets to deliver atomic bombs and escape the blast. The announcement was made by the Minneapolis-Honeywell Regulator Co., which manufactures the system for the U.S. Navy and Air Force.

State Department approval has been granted for the RAF to purchase

the LABS systems from the Aeronautical Division of the Honeywell firm under a \$750,000 contract. The Department also granted the company an export license and approval to start immediate delivery on an undisclosed number of systems.

British fighters equipped with the hit-and-run bombing system will be able to skim in toward prime targets at tree-top or wave-tip levels. Some miles from the target the fighter pulls up in a tight Immelman-turn lobbing a nuclear or conventional bomb high in the air, then is clear of the blast area before the bomb arches down to the target. The system can be used in over-the-shoulder bombing when the fighter must pass over the target and toss the bomb back toward it.

## Fleet Suspends LZ-5

Fleet Manufacturing Ltd., of Fort Erie, has decided to suspend for the time being any further work in connection with the development of the Helio Courier and Doman LZ-5 Helicopter in Canada. In conjunction with this suspension, certain executive and other personnel have relinquished their positions with the company.

However, the company discloses that employment at the Fort Erie plant is at its highest point since July, 1956. This increased activity stems from increased sales in the company's important subcontracting program and from the production of the new line of Fleet Feather Craft boats which were introduced into Canada for the first time last year.

The Board of Directors has appointed N. E. Butler to administer the affairs of the company in the absence of the President H. L. Eberts, who

recently suffered a severe illness which required him to go on leave of absence for an extended period.

## DHC Stock Deal

Earlier this year Canadian shareholders of The de Havilland Aircraft of Canada Ltd., were offered \$200 per share for their stock by de Havilland Holdings Ltd., the parent company of the de Havilland Enterprise.

At the time, the market value for these shares was \$185 bid and \$198 asked. The offer was closed as of Feb. 28, and a de Havilland spokesman reports that only some of the stock was recovered. Prior to the offer, the parent English company controlled over 92% of the outstanding shares.

De Havilland feels that by maintaining control of all stock, they are in better position to make long range decisions. According to Frank Stanley, chief comptroller of de Havilland of Canada: "It is no longer the wish of the company to diversify profits which should be ploughed back into research and development."

## Vertol in the Black

Vertol Aircraft Corp. reported record results for 1956, with net earnings of \$3,437,563 on sales of \$90,025,697. The year's sales were 56% above the 1955 figure. Earnings increased 121% from the 1955 figure of \$1,550,937. Net income was equal to \$6.34 per share after 15% stock dividend paid last October, compared with \$3.32 per share in 1955 on the smaller number then outstanding.

## Change of Address

A. V. Roe Canada Limited has moved its head office from suburban Malton to downtown Toronto. The move, which involved about 45 executive personnel, was scheduled for April 13. The new offices have been established on two floors of a new office building on the corner of Adelaide St. and University Ave.

The new offices accommodate Crawford Gordon Jr., president of the company, and a number of departments including: the industrial relations branch, financial, internal audit, public relations and advertising.

## Genaire Buys Rotaire

Genaire Ltd. has announced the acquisition of a majority interest in Rotaire Ltd., of Malton, Ont. Rotaire,