CS2F crew seats under subcontract to de Havilland Canada.

The purchase was influenced by a decision of the parent company in Chicago to suspend its well-known line of household appliances, conserve its assets and cast about for new fields of manufacturing activity.

#### Back to School

Forty young graduate engineers are well on the way through a newly established on-the job training program in the engineering division of Canadair Ltd. Most are assigned to a course leading to careers in aircraft design and development. Others are exploring the fields of nuclear products and guided missiles.

The newly graduated engineer is taken on Canadair's staff at full salary and combines the training schedule with participation in productive work under guidance. At the end of training he receives his permanent assignment, based on his personal preference, his demonstrated aptitude, and company requirements.

#### Orenda Courses

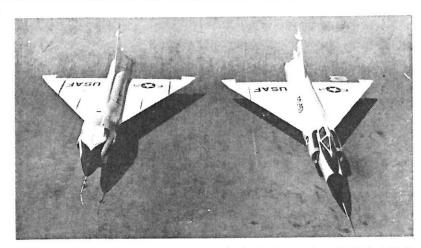
Facilities for training in handling, maintenance and assembly of Orenda engines will be provided by the manufacturer in an Orenda Training School nearing completion at Malton. Practical and theoretical instruction will be given pilots and technicians in many fields of jet operation, development and manufacture.

The courses: Instruction to RCAF pilots on the Orenda 14 engine (1 week); General maintenance of Orenda 14 engines (2 weeks); Instruction on the Orenda 14 fuel system (2 weeks); Fuel system specialist training (7 weeks); Instruction on the Orenda 14 electrical systems for RCAF electrical technicians.

# Big Drop Hammer

A 10-ton gravity drop hammer, the largest ever purchased by a Canadian company, is being installed in the forging bay of Canadian Steel Improvement Ltd. at Etobicoke. It will be used to produce such aircraft components as undercarriages, wing sections and engine parts, and will be ready for operation early in 1956.

The installation is part of a \$3,500,000 expansion program described by CSI President C. J. Luby as "a significant factor in the defence of North America, as well as an important con-



T FOR TWO: Convair TF-102A (top L & below), which recently made its first flight, is a two-place trainer version of USAF's F-102A (top R) and has been designed to familiarize trained jet pilots with the delta wing all-weather fighter's performance as an integrated weapon rather than simply another jet airplane. Featuring side-by-side seating and dual controls, it can be used for combat, as well as training.



tribution to Canadian industrial development." The total assembly weighs some 350 tons.

#### Lucas-Greer Deal

Joseph Lucas (Industries) Ltd. of Birmingham and Greer Hydraulics Inc. of New York have signed a mutual technical assistance agreement under which Greer will design, manufacture and sell aircraft jet and gas turbine fuel supply and control test equipment based on technical specifications furnished by Lucas. Lucas fuel supply and control equipment are designed into the Vickers Viscount.

# Lycoming GSO-480

The first geared and supercharged aircraft engine in its horsepower class to be built in the U.S. has been approved by the Civil Aeronautics Administration and is already in use. It is the Lycoming six-cylinder GSO-480, developing 340 hp. for take-off. It weighs 495 pounds and utilizes an integral gear-driven, centrifugal supercharger. A propeller gear reduction unit provides maximum efficiency on takeoff and at altitude.

## Up-Rated Dart

Latest and most powerful member of the Rolls-Royce Dart series of turboprop engines is the R.Da.7, with static, sea level, take-off power of 2,150 h.p. This engine is basically the same as the Dart 510, but internal design changes have led to a greater airflow through the engine, resulting in increased power.

#### de Havilland Shuffle

The group of companies which comprise the de Havilland Enterprise in Britain is being reorganized into a holding company and three main operating subsidiaries. The new de Havilland Holdings Ltd. will thus control the de Havilland Aircraft Co. Ltd., the de Havilland Engine Co. Ltd. and de Havilland Propellers Ltd. The Canadian subsidiary, as well as those in Australia, New Zealand, South Africa and the U.S., also comes under the control of de Havilland Holdings. Up to the present, de Havilland Aircraft has been in the somewhat anomalous position of being both an operating company and the parent company of the group.

#### **New Forming Press**

In bits and pieces a 15,000-ton hydraulic rubber pad forming press is arriving at the Malton plant of Avro Aircraft Ltd. from the Siempel Kamp plant at Krefeld, Germany. Every piece is a project in itself. For instance, parts of the base had to be unloaded from a ship at Montreal because Toronto docks lacked the equip-

ment for handling such weights. One section weighs 72½ tons and the other 31 tons. When the parts arrived by flatcar at Malton they had to be unloaded at the edge of the road, otherwise the wheels of the trailer which was to carry it away would have sunk into the asphalt.

# 707 Piling Up Time

By mid-November the Boeing 707 jet transport prototype had logged 319 hrs. 12 min. of flight test, or 231

flights, since its first flight July 15, 1954. Demonstration flights have been provided for 12 air lines, with 71 air line officials as passengers.

## 40-Seat Helicopter

Design and development of a new British transport helicopter, to be called the Westminster, has been initiated by Westland Aircraft Ltd. Designed for a variety of military roles, it will be powered by twin gas turbine engines and will be capable of carrying 40 passengers or 32 stretcher cases. Maximum all-up weight will be 33,000 lbs, of which 13,000 lbs. will be disposable. At this gross weight, range with full fuel load will be 310 nautical miles at 130 knots.

## AA Buys Allisons

American Airlines has given the Allison Division of General Motors Corp. an order for Model 501 turboprop engines, rated at 3,750 hp, to power its forthcoming fleet of Lockheed Electra transports. The initial order is valued at more than \$12,500,000. The 501 is the commercial version of the military T-56.

## Ross Aero Sold

Timmins Aviation Ltd. has recently acquired the controlling interest of Ross Aero Ltd. Both firms are located on Montreal's Dorval Airport. A portion of the common and preferred stock in Ross Aero has also been acquired by Dorval Metalcraft Co., an aircraft maintenance and repair organization which has quarters in the Ross Aero hangar.

Timmins, it will be recalled, recently completed the construction of a large new hangar at Dorval. The firm has been organized to cater to the executive aircraft field and in fact the establishment at Dorval is known as "Timmins Business Aviation Centre". The acquisition of control of Ross Aero (which will continue to operate under that name for the time being) means that Timmins will now have one large hangar to specialize in major repairs and overhaul work, while the other will be reserved for routine maintenance, servicing, and repairs, and overnight storage of aircraft. The Ross Aero hangar will be used for the first-named purpose.

•Timmins Aviation was recently appointed Canadian distributor for the Royal Gull, a five-place amphibian of Italian design. The Royal Gull is



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