

THE INDUSTRY

CF-100 Mk. 6 Scrubbed

Production plans for the Mk. 6 version of the CF-100 have been cancelled by the Government. Indications are that the cancellation may be traced to the unavailability of the weapon which was to be the Mk. 6's *raison d'être* — the Sparrow 2 air-to-air guided missile — plus the new Conservative Government's desire to economize.

To help ease the effects of the cancellation of the Mk. 6 contract, a further order for additional Mk. 5's is being placed with Avro Aircraft.

The decision to manufacture the Sparrow 2 in Canada as a weapon for the CF-100 and possibly the CF-105 Arrow, was made early in 1956. However because of licensing delays and a hold-up in the final selection of a guidance system for the Sparrow, the missile still has not reached the production stage. It is considered extremely unlikely that operational Sparrows will be available in less than 18 months from now.

The CF-100/6 has essentially the same airframe as the CF-100/5, but is fitted out as a guided missile carrier. A further important point of difference is in the powerplants, which in the case of the Mk. 6 are fitted with short afterburners, and are known as Orenda 11R's (Orenda 11's are also used in the Mk. 5, but, not having reheat, the

designation does not have the suffix "R").

The 11R, with afterburner in operation, is rated at 9,000 lb. th. for take-off, compared to 7,500 lb. for the Orenda 11.

"Wright" Iroquois

An agreement has been signed between Orenda Engines Ltd. and Curtiss-Wright Corp. covering rights for the manufacture, sale and further development of Orenda's new Iroquois supersonic turbojet in the United States.

Announcement of the deal was made jointly Sept. 30 by Crawford Gordon, Jr., president of A. V. Roe Canada Ltd. and chairman of the board of Orenda Engines, and Roy T. Hurley, chairman and president of Curtiss-Wright. The agreement which runs for seven years, also provides for the exchange of technical information between the two companies.

Orenda President W. R. McLachlan said that the agreement, reached after many months of discussion, is the first of its kind ever concluded by a Canadian aero engine or aircraft company. Initially, it covers the present Iroquois — widely regarded as an outstanding engine because of its mechanical simplicity, low weight and high thrust.

In addition, it is anticipated that the

two companies will collaborate in the development of further variants of the Iroquois, "suitable for the very high speed, high altitude interceptors and bombers now on the drawing board, and for commercial applications."

DH Props for CL-44

De Havilland Propellers Ltd. has been awarded a multi-million dollar contract to supply propeller equipment for the Canadair CL-44, as ordered for transport service with the RCAF.

The de Havilland constant-speed, feathering and reversing propeller for the RCAF's CL-44's is 16 feet in diameter and has four solid aluminum-alloy blades. These blades are of wide chord to absorb the high power developed by the Orion engines. The propeller operates on the hydromatic principle, using hydraulic pressure to actuate the pitch-change mechanism.

New safety features comprise an automatic drag-limiting control and mechanical pitch-lock. The drag-limiting system limits the propeller pitch in event of an engine failure. It operates on receipt of a mechanical signal from the engine reduction gear, and by automatically coarsening the pitch of the propeller, prevents the torque in the engine shaft from falling below a pre-set value. Thus propeller drag is maintained at an acceptable level.

The mechanical pitch-lock operates automatically in response to either loss of propeller control oil pressure, or to propeller overspeed. By mechanically checking uncontrolled movement of the blades towards fine pitch, the lock prevents serious overspeeding or high windmilling drag that would otherwise occur.

Automatic synchrophasing, which will ensure that corresponding blades of all four propellers on the CL-44 are kept in a pre-set angular relationship to one another, will maintain noise and vibration within the cabin of the aircraft at the lowest possible level.

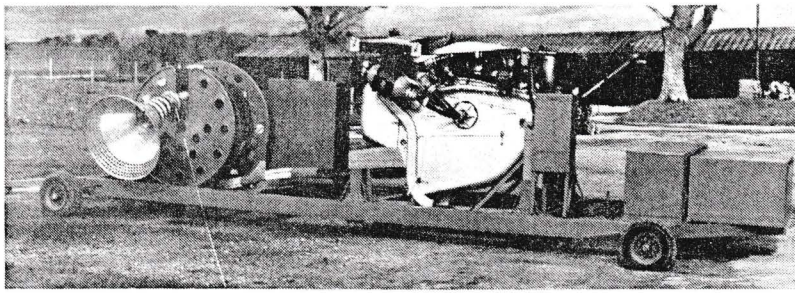
Collins for TCA

TCA has placed a new and additional order totalling over \$500,000 for 33 Collins automatic pilot systems for installation on new Viscounts.

Eighteen other Collins AP-101 Automatic Pilot Systems were recently installed on Viscounts by TCA. Delivery of the additional 33 will begin in December and will be completed by March, 1958. The AP-101 includes the



BOEING STRATOLINER NEARS COMPLETION: Engines in place and tail surfaces installed, the first of 151 Stratoliners now on order by 13 airlines nears completion in the Boeing plant at Renton, Wash. The first two Stratoliners will be rolled out of the factory late this year, and will be delivered to PAA late in 1958.



Mk. 16 HOSE DRUM UNIT: Above is Flight Refuelling's high rate of flow Mk. 16 hose drum package unit as supplied to the RAF. It is shown here on its handling trolley which contains all the necessary servicing tools and test panels. Together with ancillary packages, the hose unit is used to convert a bomber or airliner into a refuelling tanker in a matter of hours.

"Integrated Flight System", which provides monitoring by pictorial presentation on two easy-to-read instruments (see *Aircraft* May, 1957).

\$8M Order to Orenda

An \$8,000,000 order for spare Orenda engines and associated parts has been placed with Orenda Engines Ltd. by the West German Air Force. The Malton, Ont. firm says this is the initial order for spares in support of the West German order for 225 Canadair Sabre 6's.

Terms of the contract call for production to be completed by August, 1958.

R-R Expands

Rolls-Royce of Canada Ltd. has announced plans to increase the manufacturing and overhaul capacity of its Montreal factory by the addition of some 27,000 sq. ft. of new factory space. The expansion program has been made necessary by the broadened demand for Rolls-Royce aero engines in North America, the engine company says.

Growing sales of the Vickers Viscount and the Fairchild F.27, both Dart powered, are cited as the principal reason for this broadened demand. Grumman Aircraft's plan to produce its Dart-powered Gulfstream executive aircraft is also mentioned as a factor.

As a result of this expanding activity, Rolls-Royce will set up a Dart overhaul line in addition to the existing lines which provide for the Nene turbojet, as used in the RCAF's T-33's, and the Westinghouse J-34 line handling the powerplants for the RCN's Banshees.

Stores capacity for spare parts will be considerably increased in order to back up the Rolls-Royce policy of 30-day delivery service for users of the company's engines.

The Montreal plant, apart from carrying out overhaul work, has been largely occupied with the manufacturing of spare parts for the Nene, to support the overhaul and spares program for that engine, 900 of which were delivered for use by the RCAF.

Carbide Occasion

The multi-million dollar polyethylene and petrochemicals plant of Carbide Chemicals Co., Div. of Union Carbide Canada Ltd., was officially opened Oct. 2.

The highly specialized equipment in the Montreal East plant is used to convert petroleum refinery gas concentrates into ethylene oxide, ethylene glycol, other ethylene oxide derivatives, and polyethylene. The chemical reactions are carried on in tanks, towers, and 436 miles of pipes. Raw materials are supplied by three of the neighboring refineries.

Comet 4B's for BEA

The de Havilland Aircraft Co. Ltd. has announced that British European Airways has placed a firm order for six Comet 4B's for operation on the Cor-

poration's routes in 1960. The aircraft, equipped to carry up to 100 passengers, will be put into service mainly on BEA's longer routes. This will chiefly be in the Mediterranean areas, where the Comet's superior speed can be most effectively utilized.

The Comet 4B is the Continental version, powered by four Rolls-Royce Avon RA-29 engines, with a cruising speed of 525 mph. It has a slightly shorter wing span and longer fuselage than the Intercontinental Comet 4.

TP Slack

The slackening off of aircraft production in Canada has hit hard the aircraft division of Thompson Products Ltd., according to reports from the St. Catharines, Ont., firm.

"The downward trend in aircraft scheduling . . . has forced a re-evaluation of the organizational structure that had been set up to handle the expected gross in aircraft sales of approximately \$18,000,000," TP's employee publication says. "Aircraft schedules have been cut by as much as 75 per cent in some areas, causing a drastic and unfortunate reduction in manpower here."

Proteus Overhaul Life

The authorized life between overhauls of the Bristol Proteus 705 engines in BOAC's Bristol Britannias has now been increased to 1,050 hours. This has been achieved less than eight months after the commencement of Britannia scheduled services last February. At that time, the overhaul life was 500 hours.

This rate of increase of overhaul life is believed by Bristol to be greater than that achieved by any other engine, piston or turbine.

The Proteus 705 engine's initial



BRISTOL PLANT IN MEXICO: Bristol de Mexico, a wholly-owned subsidiary of The Bristol Aeroplane Co. of Canada (1956) Ltd., is now engaged in the overhaul and repair of aircraft engines belonging to airline companies operating in Mexico. At the present time, the new company is handling engines used in DC-3, DC-4 and DC-6 aircraft. However it expects to handle Britannia Proteus units later on.