

Avro Jet Airliner Reaches Final Assembly Line Stage

A RECENT visit to the final assembly line in the A. V. Roe Canada plant at Malton has indicated that the C-102 four-jet airliner prototype is up to schedule. Structure is virtually complete on all major wing and fuselage components except the centre section. The latter is expected to be out of the jig soon after this report appears in print.

Meantime, the report in an American aviation publication that Trans-Canada Air Lines has ordered an unspecified number of this type is denied by Avro. No attempt will be made to secure any orders for the C-102 until after the flight trials of the prototype, the company states.

Following are progress notes on the first prototypes. (Detailed manufac-

ture has started on the second prototype although subassembly has not yet begun.)

Outer main planes—structure virtually complete, except for skinning of leading edges. Pressure testing of integral fuel tanks in progress. Trial installation of ailerons has been made, structure complete. Flaps, split type, complete but trial installation not yet made.

Nose section—Structure complete. Heating and ventilating equipment installation 40% complete. Electrical

ABOVE: Sections of the C-102 jet transport in the equipment fitting stage on the final assembly line at Avro Canada. Nose section and rear centre section are visible. Centre section was still in the assembly jig when this picture was taken.

conduits and wiring started. Other equipment partially installed. Radio, engine controls, etc., being subassembled and fully tested before installation.

Centre section and centre portion of wing (including engine and undercarriage)—Centre section in jig, expected to emerge early in January. Engines (coming from England) will be installed in nacelles as complete subassemblies to be attached to main spar. Details are being worked out on complete mock-up of the power units. (Nacelle jig under construction.) Undercarriage (from Dowty) to be delivered early in January.

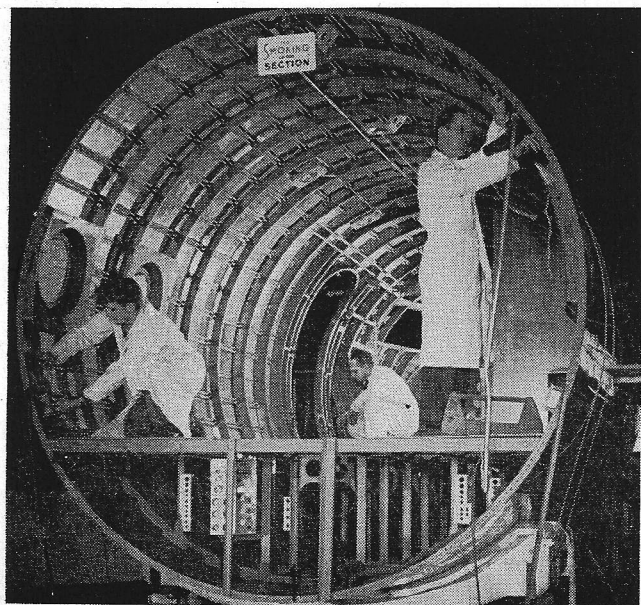
Rear centre section—Assembled to rear section, structure complete and pressure dome installed. Tail cone structure complete. Tailplane and upper fin are almost complete and soon will be assembled to the lower fin portion which is integral with the tail cone. Pressure testing of the fuselage sections will take place early in January.

Nacelles Close Together

The C-102 is to be powered by four Rolls-Royce Derwent V turbojets, civil version (each 3,500 lb. static thrust). These are to be mounted in individual nacelles of circular cross-section. The two nacelles on each side will be mounted close together but well out from the fuselage. For removal, the engines will be lowered through the bottom of the nacelle.

The undercarriage consists of twin-wheel main and nose units. The former are attached to the rear spar, retracting aft to recesses between the engine nacelles. The oleo legs are unusually short and hence the complete unit is relatively light in weight.

Capacity of the four integral fuel tanks outboard of the engines totals 2,400 Imp. gallons. Normal fueling will be used in the first prototype, but under-wing pressure fueling will be adopted for its successors. (Provi-



Nose section of the C-102 jet transport showing the former and stringer construction.

First BOAC Canadair May Fly in April

SIXTY days after signing of a contract with British Overseas Airways for 22 Canadair Four airliners, the first of these four-engined aircraft appeared on the final assembly line of the Montreal plant. It was expected that the second of these 40-passenger trans-Atlantic planes would move into the final assembly bay before the end of 1948.

In the presence of a group of BOAC officials, Canadair mechanics joined the fuselage and the centre wing section of the first plane, known as BOAC No. 1. Subsequently, the nose section and the undercarriage have been installed. The entire fuselage is being prepared for pressure testing.

The production schedule calls for the first of the BOAC Canadairs to be test flown early in April, with delivery date set at April 15. The second is scheduled to emerge from the plant on May 25 but there is a strong possibility that it may be completed by May 15.

According to information gathered by Canadian Aviation during a recent visit to the Canadair plant, deliveries will reach a peak rate of five a month and the final BOAC aircraft will be delivered on Nov. 21 of this year.

Including four aircraft for Canadian Pacific Air Lines and four additional on the schedule, a total of 30 aircraft will be completed at the Canadair factory between April 15 and Dec. 7 of this year.

The first Canadair Four for Canadian Pacific Air Lines' trans-Pacific service is slated for delivery on June 9. The others will be delivered on

Aug. 16, Oct. 12, and Nov. 28 respectively.

Employment at the Canadair plant,

now in the neighborhood of 5,000, is expected to reach a peak of 6,000 within the next three months.



RIGHT UPPER: The first of 22 four-engined Canadair Fours on the final assembly line. The fuselage has been joined to the centre wing section.

LOWER: Fuselage interior of the Canadair Four as mechanics work on one of the 26 of this type on order for BOAC and Canadian Pacific Air Lines.

sion for adding pressure fueling has been made in the first prototype.)

Air conditioning and pressurization equipment will be installed in an accessories compartment behind the cockpit, thus enabling ready access for inspection and maintenance.

Normalair pressurizing equipment, which is to be used, will provide a maximum pressure of 6.3 psi. This will provide sea level atmosphere in the cabin up to 21,500 ft.; 2,000 ft. atmosphere at 25,000 ft.; and 6,000 ft. conditions at 35,000 ft.

Wing span is 98 ft.; over-all length, 82.5 ft.; all-up weight approximately 55,000 lb.; payload, over 12,500 lb. Under normal temperature conditions, take-off run is expected to be about 4,000 ft. Cruising speed is estimated at 417 mph at 30,000 ft.