



Jet Airliner Leads Parade Avro Projects at Malton

ABOVE: The former Victory Aircraft plant, now occupied by Avro Canada.

THE big story at the Avro Canada plant at Malton is still behind the locked doors and "secrecy" curtains of the development shop. But during a recent visit to the wartime Lancaster-Lincoln bomber factory, Canadian Aviation's representative was admitted on an unofficial visit behind the curtain for a glimpse into the future.

Briefly, Avro's major project is the design, development and production of a twin-jet airliner, as yet known only as the C-102. The writer was privileged to inspect the wooden mock-up of this plane which is expected to fly in the midsummer of next year.

While most of the information is still restricted, it can be said that the "102" is a low-wing design of fully monocoque stressed skin construction with nose-wheel type undercarriage and pressurized cabin.

The prototype will be powered by two axial-flow British jet engines. Most distinctive features of the mock-up are its clean lines, single-fin tail section with unusually high-set stabilizer, circular cross-section of the tapered fuselage, and remarkably long, slim engine installations.

Described as a "400 mph aircraft," the "102" certainly has the appearance of speed. The cabin interior is sufficiently roomy for the largest customers, with accommodation for 30 to 40, depending on the amount of cargo, kitchen and lavatory space specified by the airline. The cabin and cockpit will be pressurized to main-

tain an 8,000-ft. atmosphere up to 30,000 ft.

In addition to the speed, most impressive feature of this aircraft from the customer viewpoint will be the comparatively silent and vibration-free operation of the jets. Indications are that the loudest flight noise will be the hiss of the airstream.

Other top-priority projects at Malton are the design and development of an axial flow gas turbine engine for military and civil use and, for the RCAF, a long-range jet-powered fighter expected to rival anything in its category.

Bits and pieces of the engine are being manufactured and assembled although no date for its completion is announced. Currently with components of the prototype engine, larger units are being produced, to be assembled after test running of the first engine.

The intricate process of machining the razor-edged turbine blades was observed during our tour of the machine shop. Certain components of the casing also were in evidence.

Although the above assignments are of first importance at the Avro Canada plant, some of the empty acres of floor space vacated at the end of the war are now occupied with a variety of assignments. Mk. 10 Lancasters are being converted, for the RCAF, for photo reconnaissance, air-sea rescue, bombing reconnaissance and long-range navigation training. Venturas are being adapted for target towing and for bombing and gunnery train-

ing. Dakotas also are being revised for target towing duties.

The main civil project at present involves overhaul and repair of Lancastrian airliners for an Argentine airline (Flota Aerea Mercantile Argentina) known as FAMA, which operates between Buenos Aires and New York.

Live storage of commercial and executive aircraft is being provided in a former flight hangar of the plant and the company plans to expand this service to provide a pool of flight engineers ready to go out on assignment in addition to the maintenance facilities at the plant.

Employment, which reached a low of 450 soon after the end of the war, has now climbed to 1,600 at Avro Canada and may be expected to increase considerably when the production stage is reached.

The company is particularly proud of its large design staff which includes many of the best aeronautical designers and engineers in the country.

"The Malton plant offers a future for young Canadian engineers. They are the nucleus around which our aircraft industry will be built," said an Avro spokesman.

Known officially as A. V. Roe Canada Ltd., Avro is a member of the well-known English Hawker-Siddeley group and thus is in a position to draw on the experience of these veteran manufacturers. Others in the Hawker-Siddeley family include: Gloster Aircraft Co. Ltd., Hawker Aircraft Ltd., Armstrong Siddeley Motors Ltd., Air Service Training Ltd., Sir W. G. Armstrong Whitworth Aircraft Ltd., A. W. Hawksley Co. Ltd., and A. V. Roe & Co. Ltd.