



LATEST AVIAN 2/180 GYROPLANE appears in production form; modifications to be incorporated will not affect outward appearance to any degree. At present, Avian is building three more aircraft for use in final stages of the certification program, expected to be completed this summer.

Avro Executive Jet?

The designers of the ill-fated Avro Arrow may produce an executive jet transport. Avro Aircraft Div., Hawker Siddeley Canada Ltd. (formerly A. V. Roe Canada Ltd.) are doing preliminary design studies on a 22,000-lb. twin-jet transport.

No mock-ups or wind-tunnel models have been built, as the design is still in the proposal stage. If a large customer were seriously interested, the design could probably be modified.

To reduce costs, the aircraft will have the same fuselage as the unsuccessful McDonnell jet transport. Unlike it, the Avro design will have two rear-mounted GE jet engines rather than pods. The engines will probably be the CJ610, which Orenda Div. will build for the CL-41. Consideration is being given to using the wings of the de Havilland Jet Dragon, a small executive jet being built in Britain by another Hawker Siddeley Group company. Since the McDonnell body and the Jet Dragon wings do not match perfectly, using them together may involve some aerodynamic or economic penalty.

Small jet transports cost roughly \$1 million each. By using major components of other designs, Avro would be able to undercut these figures. The usual break-even quantity for an aircraft of this size would be about 80.

Very few firms are large enough to afford such an expensive executive aircraft. Many which are too conservative or feel under shareholder pressure. Three American manufacturers, all well-established, have built small executive jets, but none has been really successful. The Lockheed Jetstar (39,000 lb.) is probably the most successful, and only about 40 have been sold. Two were recently de-

livered in Canada to the DoT and The T. Eaton Co. Ltd.

Competition would be very keen. Any Avro project would have to compete with about six designs, already underway or flying by American, British, Swiss, Italian and Israeli firms. De Havilland and Aero Design have long experience in successful business aircraft. Douglas, famous for its airliners, has teamed up with Piaggio, which has itself sold business aircraft in the U.S.

Many industry experts consider the market small and overcrowded.

Avro would like to interest the RCAF in buying the design as a replacement for its several hundred Dakotas and C-45 Expeditors. If it is built, as Avro designers fervently hope, it would be the first Avro Canada aircraft (apart from the Avrocar VTOL vehicle) built since the expensive and controversial Arrow all-weather fighter.

DHC Reports Profit

The de Havilland Aircraft of Canada Ltd. reports a net income after taxes of \$2,518,707 for the year ended Dec. 31, 1961. The company's annual report does not show gross income. The balance sheet shows that at the year end the assets had a total value of \$24,358,539.

104 Simulator Delivered

The first of approximately 30 F-104 Starfighter simulators was completed on schedule by Canadian Aviation Electronics Ltd. and demonstrated before a group of senior RCAF officers and Government officials in the CAE Montreal plant on April 18.

Final acceptance tests were successfully completed on April 24 by CEPE, which formally approved the

simulator as meeting the specifications set by the RCAF Directorate of Instrument & Electrical Engineering, the design authority.

The on time delivery on the target date set in March 1961, is considered all the more noteworthy because of the complexity and unusually large number of the design "unknowns" which existed when the program began. The first model, a CF-104 simulator, was produced for the RCAF.

The on-time delivery was also important because the on-schedule completion of the remaining simulators, in what will be one of the largest electronic export orders ever filled by a Canadian firm, depended on acceptance of the first.

The April 18 demonstration proved that the trainers will simulate the complete flight envelope of the aircraft from take-off to landing, and that they will simulate all of the equipment installed in the aircraft, including flight, armament, engine, radio, radar and navigation aids.

The second simulator, an F104G model for the Netherlands Air Force, is nearing the acceptance test stage, and is scheduled for delivery early this summer. Work on production models for the RCAF and the air forces of West Germany, Holland, Belgium and Italy is already well under way, and deliveries will be made at regular intervals during the next two and one half years.

Change of Name

The annual meeting of A. V. Roe Canada Ltd., held in Toronto April 30, approved the changing of the company name to "Hawker Siddeley Canada Ltd."

Commenting on the change, T. J. Emmert, president & chief executive officer, had this to say: "Since, in many minds, the name A. V. Roe Canada has been identified with aviation almost exclusively, the new name will help to correct this situation quickly and effectively in Canada and the U.S. At the same time, Hawker Siddeley also has a sound aircraft reputation, so aviation identity will not be lost."

CL-41R to Fly in June

The prototype of the "R" systems trainer version of the Canadair CL-41 is scheduled to make its first flight next month. The pilot training version of the CL-41 is the "A".

Equipped with the same NASARR radar system as the CF-104, the CL-41R will be used to familiarize students with the operation of the electronic equipment. It will provide advanced systems training for CF-104 and F-104G aircrews at a cost per flying hour of just one-tenth the cost of flying the two-seat CF-104D's.

The CL-41R incorporates all six modes for the NASARR system, per-