



TRIDENT ROLL-OUT. The new de Havilland Trident short-haul jet airliner rolled-out last month, and is scheduled to begin flight trials during the coming winter. Canadian interest in the aircraft centres on it as a possible short-haul vehicle for Trans-Canada Air Lines. The large 12 ft. diameter fuselage will take six-abreast economy seating, accommodating up to 100 people.

U. K. Approach to Avrocar Problems

By Oliver Stewart

Avro's Avrocar or "Flying Saucer" set the stage for the studies that are now in progress, some of them at Farnborough, with what is called ACTOL—Air Cushion Take Off and Landing. The information about the Avrocar which was given in **Canadian Aviation** showed that the integration of ground effect and normal run take-off was basic to the design. The only real difference in the new British approach is in the use of the jet flap as a means of achieving the transition between air cushion riding and free flight.

The ACTOL plan is to construct a flying wing of aerofoil section with slots on the underside enabling the curtain of compressed air to be created all round the periphery. So the first step in take off is the creation of an air cushion in exactly the same manner as in a normal Hovercraft.

A take-off run is then begun with the craft riding on its air cushion. Some lift is developed from the top of the aerofoil section. Then the air cushion is broken and a jet flap substituted. The cushion rider is thus converted into a free flying aircraft.

That is the scheme; but at the moment few would be prepared to say whether it will be made to work. Difficulties encountered with the Avrocar may have their counterpart in the ACTOL. The chief reason for research is that by using the air cushion for the initial take-off great economies

in the thrust required may be made. True VTOL aircraft are wasteful of thrust.

Every year the Society of British Aircraft Constructors' Display and Exhibition at Farnborough undergoes some development. This year the program seems to have a dual purpose: to illustrate the uses to which the three fighting services put aviation and to underline that there are hopes of a revival of personal and business flying in the United Kingdom.

In the past the idea was that Farnborough should be a shop window for the goods of the aircraft industry. Then came the time when it was decided that the Royal Air Force should be allowed to give what amounted to nothing other than a spectacular display without any commercial purpose. This was the origin of the great demonstrations of formation air drill by the Hunter squadrons.

This year the Royal Navy and the Army as well as the Royal Air Force were all welcomed to the program with the general idea of providing those who visit Farnborough with a spectacle related to the various articles produced by the aircraft industry. At the same time there appears in the program the new name of Beagle and the company's private and executive aircraft. So on the one side we have the added emphasis on service flying—including parachuting—and on the other side the new interest in civilian and personal flying.

Peter Masefield's ideas on the

Beagle 206 executive aircraft are being well received and it seems likely he will be successful in putting his new company on a sound footing and selling the aircraft in sufficient numbers to earn a small profit within two or three years. The Beagle has two Rolls-Royce Continental engines and is a five-seater in the normal arrangement. But if the lavatory is taken out it can be turned into a seven-seater.

Cruising speed it about 200 knots (230 ml/hr) and the aircraft has provision for full airliner equipment, including the duplicated blind flying panels within the "T"-shaped spaces adopted by the international air lines. It is argued that an executive aircraft would be of small value if it were to be too dependent upon the weather and that in consequence it must have all the aids.

Probably the outstanding characteristic of the Beagle 206 is the width of the cabin. The design has been carefully studied to afford plenty of room laterally and in fact there is more room than in a certain famous motor car. Yet this cabin width has been achieved without spoiling the over-all lines of the aircraft.

As I write, news comes in of the efforts being made by Bristol and by Handley Page to have their new aircraft, the Bristol 188 all-steel supersonic research aircraft and the Handley Page 115 delta wing research aircraft, ready for Farnborough. If the 188 is ready in time it will probably only be allowed to make a fly-past.