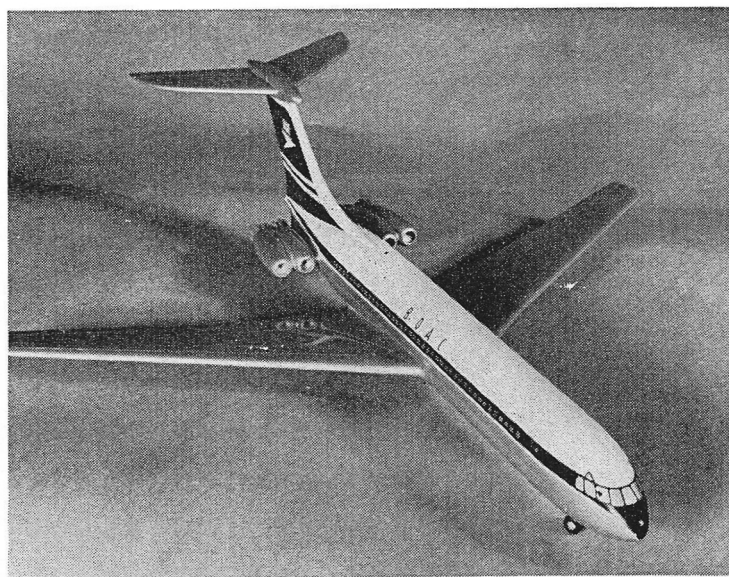


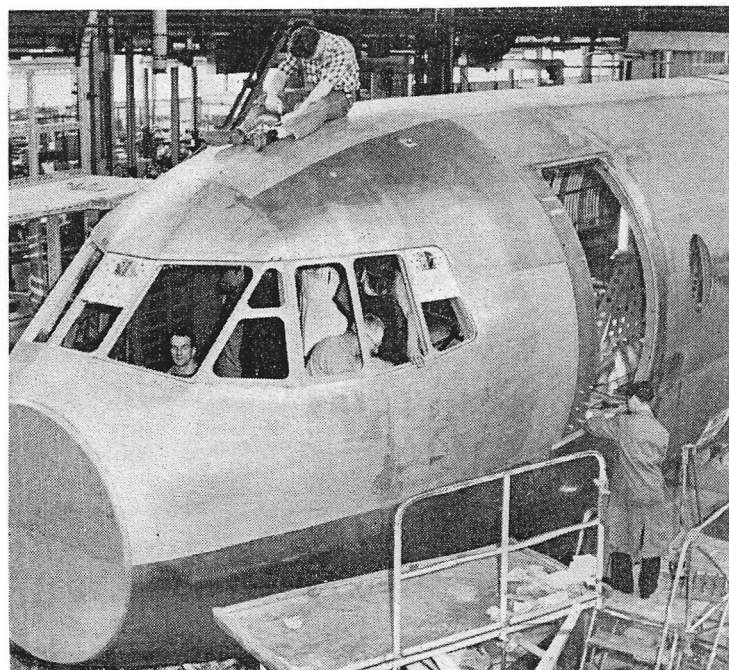
SHORT HAUL JETS: Left, the DH 121, chosen by BEA for its short-range jet routes; and right, the Bristol 200.

New British Projects

Contenders for the Turbine Era



VC-10 MODEL showing the rear mounting of the four Conways on this long-range Vickers jet, and **BELOW**, work in progress on the fuselage of the Vickers Vanguard turboprop.



CALL BY British European Airways for a short range jet airliner produced a crop of unconventional looking proposals by British aircraft companies. But if they are unconventional, they are also remarkably similar.

Specification of a three-engined (Rolls Royce Conway) configuration was interpreted in an almost identical manner by the three contenders for the project, Bristol, de Havilland, and Avro. Both Bristol and de Havilland chose a high flying tail, with bullet fairing at the joint of the tail-plane and fin and rudder. But the Avro project—the Avro 740 (not illustrated)—had a butterfly type stabilizer, and no conventional fin and rudder.

BEA's choice of the de Havilland project was announced in the House of Commons last month. Subject to the conclusion of satisfactory negotiation of the contract, this will be built by de Havilland in conjunction with Hunting Aircraft and Fairey Aviation. A new company, the Aircraft Manufacturing Company (Airco), has been formed, embracing the de Havilland, Hunting and Fairey interests to produce the DH 121. One of the British Government's requirements was that the machine must be produced as a private venture, through the combined resources of a group of companies. The order will be for 24 machines, with an option for 12 more.

Full support of the Rolls-Royce Company will be applied to the project. The engines will be RB 141s, a by-pass type of jet engine developed from the Conway. These will have an increased by-pass ratio, to give improved fuel consumption. The engine has been designed with emphasis upon economy and quietness. Static thrust will be of the order of 12,000 lb.

Airco, the new company, is expected to go out for export orders for the new type immediately. It is intended essentially as a continental or inter-city airliner. Specification has been for fast, comfortable and economic travel and it is stated that the DH 121 will incorporate all the improvements in airframe and engine design presently under development, for maturity six years from now, when the new machine may be expected to enter service.

The BEA requirement is for a machine to carry 70-80 standard class passengers, or 95-100 passengers in high-density seating. Stage lengths of up to about 1,000 miles have to be met, with a maximum cruising speed in excess of 600 mph. The basic design of the DH 121 will embody a good measure of adaptability as regards stage length with

capacity payload, so that it can serve a variety of requirements, including those of overseas operators.

Emphasis is placed on the ability of the machine to operate from aerodromes of 6,000 ft. length at operating costs comparable with those of the improved turboprop aircraft visualized for service in 1964. In fact excellent take-off and landing run behavior is claimed for the DH 121, which will employ reverse thrust braking.

Bristol's proposal had a span of 91 ft., length 121 ft. 6 in., and an all-up weight of 120,000 lb. Would carry up to 100 passengers over ranges of 300 to 1,700 miles at a speed of more than 600 mph.

Further details have been released on the new Vickers VC-10 four-jet airliner for BOAC, a model picture of which first appeared in the February Canadian Aviation. This will have a span of 140 ft., length of 158 ft., and max. gross weight of 299,000 lb.

The VC-10 is designed to give good take-off and initial climb performance, assisted by high-lift devices, such as leading edge flaps, flaps and spoilers. The fuselage width of 12 ft. 4 in. is greater than any existing or projected turbo jet transport. Speed has been stated in excess of that of the Boeing 707, which will precede the Vickers jet in service by about three years.

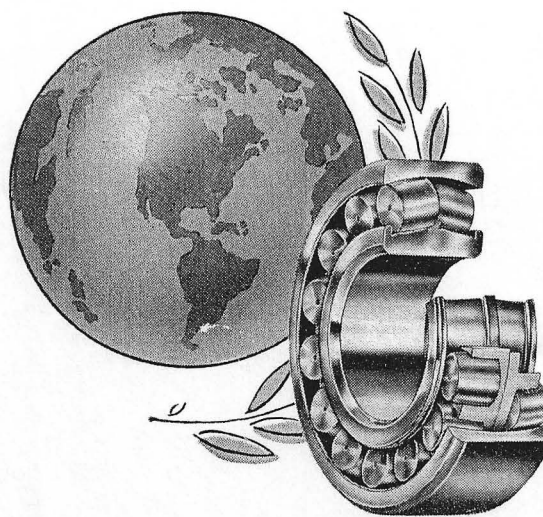
Production of the Vickers-Armstrongs Vanguard (Rolls-Royce Tyne turboprop), which has been ordered by Trans-Canada Airlines, is now well under way. Some 80% of the total drawings required in the design program have been completed. The main sections of the first Vanguard fuselage have been joined, and the aircraft is due to fly this fall. The certification program will continue until March, 1960. TCA expects to receive the first of their order of 20 machines (with option on a further four) during 1960.

Last month, the first anniversary of the introduction of the Bristol Britannia turboprop into airline service was celebrated. Its average revenue passenger load factor during the first twelve months of BOAC service was 72%. The average daily utilisation record of 6¾ hours is the highest of any type in its first year of service with BOAC.

This event focusses attention upon the great credit due to the British aviation industry. Not only did it produce the first turboprop transport to enter airline service — the Vickers Viscount — and this by a margin of about ten years, the British have now achieved another first by successfully launching its intercontinental counterpart.

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