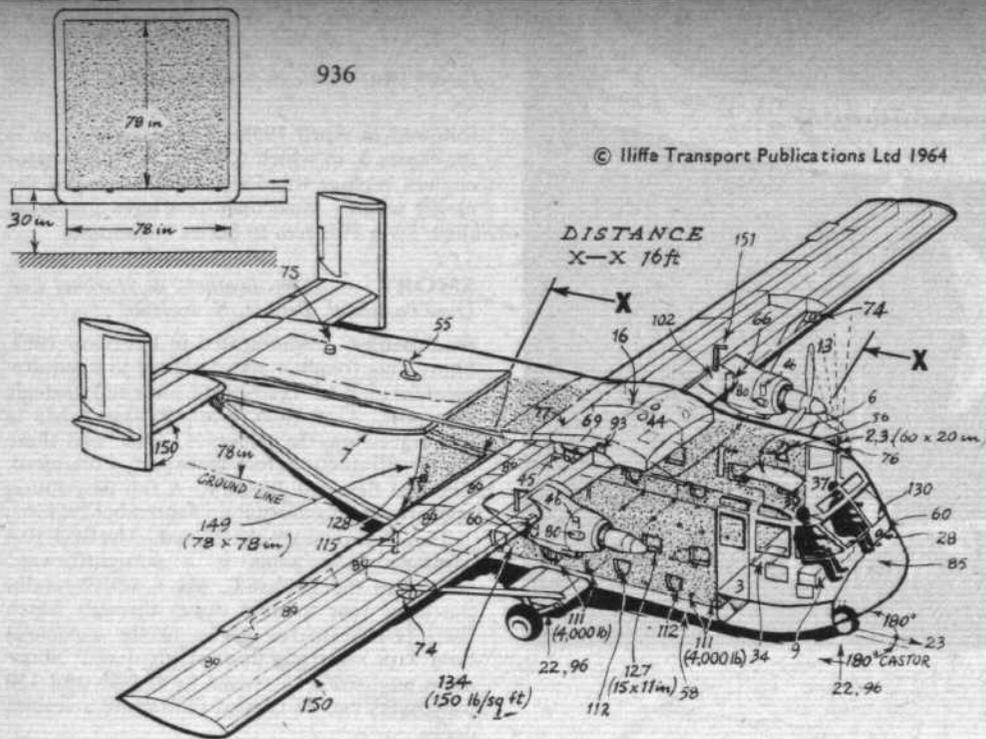


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SHORT TURBO-SKYVAN "Flight International" operators' reference drawing (see page 903 for key)

Commercial Aircraft of the World...

under their power in September 1963. Development of the Turbo Skyvan is continuing and many important feeder-line carriers have said they would buy the aircraft when it is available. Work is well in hand on a production line of ten aircraft.

PD.65 When brief details of this turbofan DC-3 replacement project were released in April this year it was a 30-seater with two rear fuselage-mounted 5,500lb thrust turbofans. In the same class as the 40-seat HS.136 and Mystère 30 projects, the PD.65 is, however, strictly a DC-3 replacement in terms of its airfield performance and approach speed, unlike the rivals. This is achieved by a good power-to-weight ratio and broad-chord Fowler flaps on a moderately swept wing. At 19,000lb the PD.65's empty weight is comparable with that of the DC-3 but at 32,000lb the gross weight is considerably greater enabling it to carry a capacity payload of 7,000lb over a still air range of 1,000 miles. Shorts estimate that it would cost £5m to develop the aircraft; so far no decision has been taken to go ahead. *Flight*, April 16, 1964 for further details.

SUD-AVIATION *Société Nationale de Constructions Aéronautiques, 37 Boulevard de Montmorency, Paris 16e, France.*

S.E.210 Caravelle The decision to build the Caravelle was taken in January 1953 after a design competition: a French Government contract was awarded in July 1953 to Sud-Est Aviation (which combined with Ouest-Aviation to become Sud-Aviation in 1957), and the first Caravelle flew on May 27, 1955. Air France signed an initial order for 12 in February 1956. Following certification in April 1959, Air France inaugurated scheduled services on May 12, 1959. The number of all marks of Caravelle ordered now stands at 186 and new customers can be offered early delivery.

Caravelle 3 Powered by Avon 527s (RA.29/3) of 11,400lb static thrust, this 101,410lb version is a standard production aeroplane, to which all Caravelle 1s have been converted. This version is operated by Air

France, Air Algérie, SAS, Royal Air Maroc, Swissair, Alitalia, Tunis-Air, Varig, Finnair, MEA-Air Liban, and the French Government.

Caravelle 6N This version has Avon 531 turbojets fitted with noise suppressors. Caravelle 3s can be converted to this standard if required.

Caravelle 6R This variant of the Caravelle differs from earlier marks both in respect of the powerplant—Avon 533s of 12,600lb thrust equipped with thrust reversers—and a new improved cockpit with larger windows. This version was originally developed to meet the special requirements of United Air Lines, and US civil air regulations.

Super Caravelle This development of the Caravelle 6 first flew on March 3 last. To improve all-round performance and take advantage of the increased power of the two Pratt & Whitney JT8D-1 turbofan engines of 14,000lb thrust chosen for the type, a wing-root leading edge extension, revised wing/fuselage junction fairing, a fin/tailplane intersection bullet and a bigger tailplane, were incorporated to permit an increase in the MNO from 0.77 to 0.81. The fuselage is longer to allow seating for up to 94, and the gross weight has been increased to 114,640lb. An APU is fitted in the rear of the fuselage, and the engines are fitted with thrust-reversers. Finnair has ordered six, deliveries began in July, and the Danish charter company Sterling recently ordered one plus one on option.

Caravelle 10 B1 R This version has the same airframe as the 6R and the Pratt & Whitney JT8D-1 powerplants of the Super Caravelle, with thrust-reversers. First flight is scheduled for early next year.

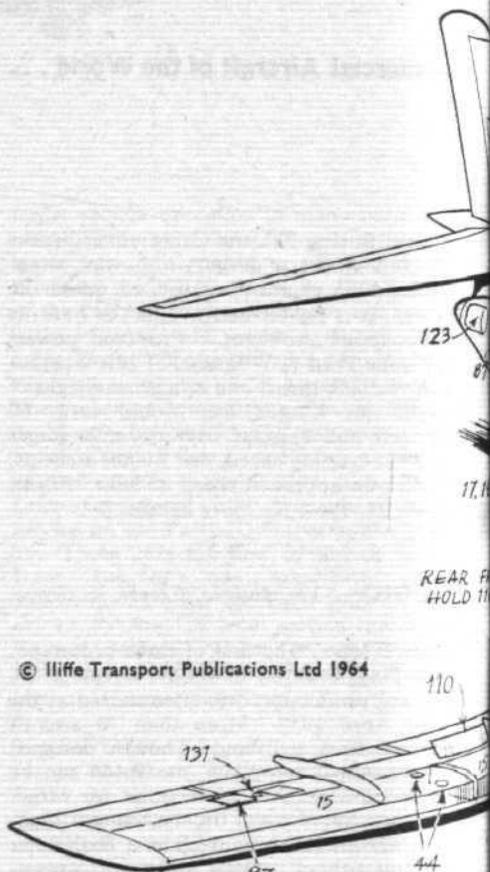
TUPOLEV

Tu-104 First flown in June 1955, the Soviet Union's first jet transport made its international début in March 1956. Since then it has been built in considerable numbers—certainly some hundreds—and it is Aeroflot's main equipment for domestic and international trunk-route services.

The aircraft has been exported, in the Tu-104A version, to Czechoslovakia's airline CSA, who operate four. Variants are as follows: Tu-104: original "prestige" aircraft,

seating 50; Tu-104A: with revised interior seating up to 70; Tu-104B: with about 4ft longer fuselage seating up to 100 in five-abreast seats; Tu-104E: a projected development with improved engine. The present standard production aircraft is the Tu-104B.

Tu-114 The world's largest transport aircraft, the Tu-114 first flew in October 1957 and went into regular service with Aeroflot in April 1961 on the Moscow - Khabarovsk route. Though Western airlines were in the middle of a long-range jet buying spree when the Russians realized their need for a very long-range airliner, it was decided to base the aircraft on a development of the swept-wing turboprop Tu-20 "Bear" bomber. The aircraft has achieved some remarkable world records which have been homologated by the



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FAI. Over a closed circuit of 1,000km and carrying a load of 25 metric tons, a speed of 871.38km/hr (541 m.p.h.) was averaged; over 2,000km a load of 25 metric tons was carried at a speed of 857.277km/hr (532 m.p.h.); it also operates on the very long Moscow-Havana route. At least thirty Tu-114s are believed to have been built.

Tu-124 First flown in December 1959, this Viscount-sized short-haul jet transport has given Aeroflot, for the first time, the initiative in introducing a really significant class of equipment in which Western airlines were later to show interest. The Tu-124 first entered service on October 2, 1962, between Moscow and Tallin. *Flight* reference: August 16, 1962.