



AVRO'S SAUCER. First photographs of Avro Aircraft's Avrocar were released last month by USAF. The disk-like research vehicle is designed to explore potential of a new scientific and technical approach to vertical takeoff and landing. The "Saucer" will operate as a ground effect machine, riding on a cushion of air and reports are that tests carried out in this regime have been satisfactory. After obtaining minimum speed, the vehicle functions as an aircraft and is supported by aerodynamic forces generated by its forward motion. The flight program to date has not explored this last dimension. An annular jet of air discharged downward from the rim of the vehicle creates cushion of air on which the craft rides. A large fan located in centre of the disc pumps the primary air for this function. As it is exhausted around the circumference of the wing the primary air flow is augmented by passage through a nozzle creating a jet-pump effect which draws in a large volume of low speed air. Boundary layer bleed for air drawn into the intake is inside secondary air inlet. The hot air to power the fan is produced by three Continental J69 turbojet engines. The fan for the primary air is driven by a tip turbine. In level flight, horizontal thrust is produced by deflecting the annular jet of air to the rear. The annular jet, however, at all times contributes a portion of the lift for the aircraft. Stability of the aircraft is critical during the deflection sequence. Smooth flow must be maintained.

X-15 Flights

The U.S. National Aeronautics and Space Administration's North American Aviation-built X-15 rocket research aircraft has completed a successful series of tests in recent weeks. Included was one under power run of four minutes and 15 seconds which carried test pilot Joseph Walker to a speed said to be in excess of 2,150 miles an hour. The continuing X-15 program is intended to probe toward the edge of the atmosphere in preparation for Project Mercury's launching of the first U.S. manned space flight. Meanwhile, there was speculation late last month that the Soviets would shortly be in a position to make their first official attempt to place a man in space following successful recovery of an orbital vehicle which carried a pair of dogs out into the void and back. The animals were reported to have suffered no ill effects from their journey.

Vancouver Airport

The Department of Transport has undertaken to appraise the City of Vancouver's International Airport with a view to possible transfer and sale of the city investment to the federal department. The appraisal is to be made by the Department's Air Services Branch and an independent appraiser, the latter appointed with the approval of city representatives. The report is to be ready this month. The move ends long negotiations between the department and city officials as to the future of development at the airport.

Aviation Council Meet

Annual convention of the International Northwest Aviation Council will be held Sept. 25, 26 and 27 at Harrison Hot Springs, B.C.

Defence Contracts

Canada's aviation and related industries received the lion's share of unclassified defence contracts in excess of \$10,000 during the first half of July. Of the 65 contracts for a total value of \$13,711,074, twenty-one were in the aviation and avionics fields, with total value just over \$9,500,000. The largest single contract (\$5,000,000) was placed with Orenda Engines Ltd. for aero engine spares. Next in line came Avro Aircraft Ltd. with a total of \$2,895,258 on two contracts for aircraft fuel tanks (\$2,495,258) and technical support (\$400,000).

Among the other contracts reported by Department of Defence Production during the period were to: Aviation Electric Ltd., aircraft spares (\$13,122) and pressure gauges (\$11,890); Canadair Ltd., airframe spares during year ending March 31, 1961 (\$240,000); Canadian Aviation Electronics, field maintenance for flight and tactical trainers and technical representation during year ending March 31, 1961 (\$260,000) and the latter again (\$63,329); Canadian General Electric Co. Ltd., production inventory and production engineering for sight/missile launch computers (\$247,453) and electronic tubes (\$45,780); Canadian Marconi Co., refurbishing electronic equipment during year ending March 31, 1961 (\$10,000) and navigational computers (\$145,688); Canadian Westinghouse Co. Ltd., spare parts for armament stores (\$25,000), generalized electro-mechanical conversion units (\$17,768) and radar system data (\$25,000); Computing Devices of Canada Ltd., indicators (\$595,767); de Havilland Aircraft of Canada Ltd., satellite development contract (\$89,435); Gould-National Batteries of Canada Ltd., aircraft batteries (\$24,675); Genaire Ltd., aircraft spares (\$16,507); Walter Kidde & Co. of Canada Ltd., repair, overhaul, recharge and retest of oxygen cylinders during year ending March 31, 1961 (\$30,000); MEL Sales Ltd., radar test sets (\$45,650); Ross-Smith Co. Ltd., aircraft towed target gear (\$15,872); Shell Oil Co. of Canada Ltd., aviation gasoline (\$200,955).

TCA Atlantic Bookings

Trans-Canada Air Lines reports advance bookings for flights to Europe this fall up almost 300 percent over last year. Some 1,330 had booked with TCA from Canada to Europe as of mid-July, compared with a fall booking of 508 for about the same time in 1959. Westbound bookings also showed a considerable increase, standing at 1,737 compared with 664 in 1959. A combination of the new low round-trip 17-day excursion fare and low immigrant one-way fares (below the lowest steamer costs) are assessed as the prime factors in the booking increases.