

1909—The Silver Dart, flown by J. A. D. McCurdy at Baddeck, N.S., February 23, 1909, for Canada's first powered flight.

50 Years of Flight

Milestones Along the Way

1902

First wind tunnel built in Canada installed by Wallace R. Turnbull in his laboratory at Rothesay, New Brunswick.

1905

December—First man-lifting kite flown in Canada at Baddeck, Nova Scotia. The tetrahedral cell kite named the "Frost King" was designed by and built under direction of Dr. Alexander Graham Bell, who began experiments with kites in the 1890s with a view to developing a reliable vehicle for manned flight.

1906

Summer—John A. D. McCurdy, a native of Baddeck, introduced a fellow University of Toronto engineering student, F. W. "Casey" Baldwin of Toronto, to Dr. Bell. Baldwin had received his degree in engineering that spring.

July 12—First airship flight in Canada by Lincoln Beachey at Montreal, Que.

Fall—Casey Baldwin accepted Dr. Bell's invitation and returned to Baddeck to work with him on the flight experiments.

1907

Spring—John McCurdy received his degree in engineering at the University of Toronto and returned to Baddeck to work with Dr. Bell and Casey Baldwin.

Spring—Dr. Bell visited Glen L. Curtiss at the latter's motor cycle and engine shop at Hammondsport, New York, in an effort to obtain delivery on an engine he had ordered earlier. Later, he offered Curtiss a bonus if he would deliver another engine to Baddeck in person.

Summer—Dr. Bell, McCurdy and Baldwin conducted experiments with man-carrying kites throughout the summer months.

Summer—A man-lifting kite was designed and suc-

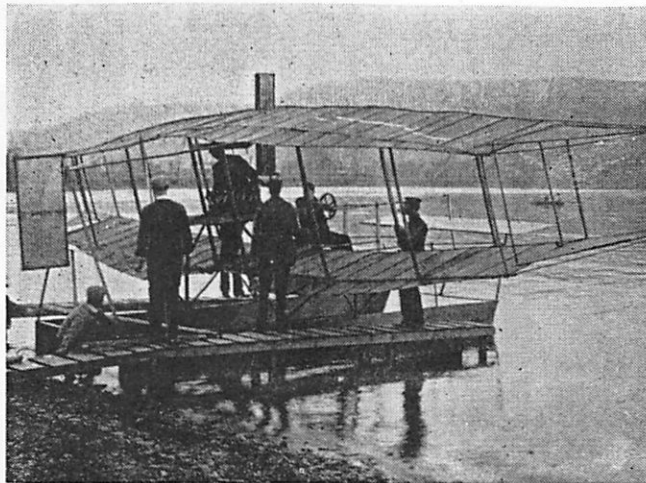
cessfully flown by John Underwood at Krugerville, Alta.

August—Larry J. Lesh flew in a glider of bamboo and muslin construction in the Montreal area. The glider was towed into the air by a horse.

September—Glenn Curtiss and Lt. T. E. Selfridge of the United States Army joined Dr. Bell, Baldwin and McCurdy in their work at Baddeck. Curtiss returned as a result of the interest aroused during his earlier visit to deliver an engine to the group. Lt. Selfridge was posted to Baddeck by President Theodore Roosevelt at the personal request of Dr. Bell. An officer in the U. S. Army balloon corps, Lt. Selfridge had met Dr. Bell earlier in Washington and had visited Baddeck during the summer at Dr. Bell's invitation.

October 1—The Aerial Experiment Association came into existence. Formal organization of the group was inspired and financed by Mrs. Alexander Graham Bell. Under the agreement the association was to last for one year. Participating members were Dr. Bell, Baldwin, Curtiss, McCurdy and Selfridge. Members were to assume responsibility for one project each, with authority for final design and supervision of building. However, there was to be free association and discussion on over-all design and construction problems. It was later decided that only the sponsor would fly his specific project (with the exception of Dr. Bell) since this would build up experience on a particular model and avoid accidents due to unfamiliarity. Mrs. Bell's support of the association made her the first woman to finance research of this nature.

December 6—Cygnet 1, a tetrahedral cell, man-carrying kite, the AEA's first project, was flown over Bras d'Or Lakes in the vicinity of Baddeck with Lt. Selfridge aboard. It rose to a height of 168 feet. When it came down it was wrecked as a result of being pulled through the water by the steamship which had towed it into the air.



1908—Loon (June Bug on floats) at Lake Keuka, New York.

1908

January—AEA began flights with small box-kite biplane gliders of the Chinook type from the hillsides about Hammondsport, New York. In general, the group worked at Baddeck in the summer months and at Hammondsport in the winter. Glider experiments, aimed at giving members flying experience, continued into the late spring at which time the glider crashed and was destroyed.

Spring—The Red Wing, Lt. Selfridge's project, and the Aerial Experiment Association's first powered aircraft, was completed. It had a V-type, air-cooled engine on which each cylinder had its own carburetor.

March 12—Casey Baldwin flew the Red Wing at Hammondsport, being the first Canadian to fly a powered aircraft (and probably the seventh man in the world to successfully achieve powered flight). This was the first public flight in North America, covering a distance of 318 ft., 11 in. at a height of 10 ft.

May 14—The White Wing, Baldwin's project in the AEA, was completed. This aircraft marked the first use of ailerons for lateral control. In this instance the ailerons were moveable wing tips operated by the pilot leaning in the direction in which he desired to bank. Wires from the ailerons were attached to a yoke worn about the shoulders of the pilot. The White Wing also had the world's first tricycle undercarriage, being supported by bicycle wheels with pneumatic tires. It was the first aircraft with a wheeled undercarriage of any sort to be designed in North America.

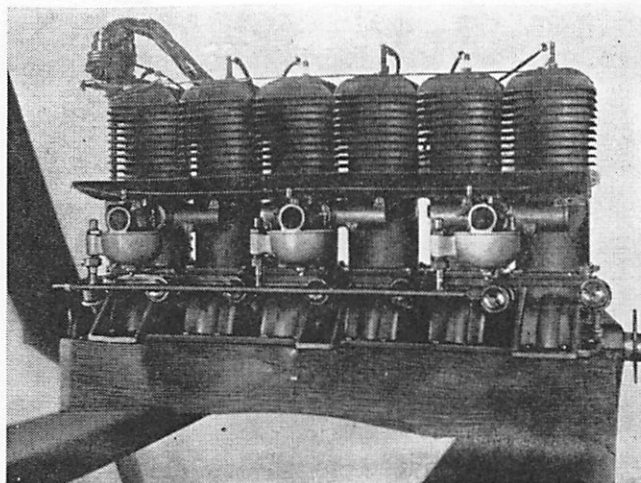
May 18—Casey Baldwin flew the White Wing a distance of 279 ft., at an altitude of 10 ft., at Hammondsport.

May 23—John McCurdy made his first powered flight, in the White Wing.

May 26—The June Bug, Curtiss's project and the Association's third aircraft, was completed.

June 20—First flight of the June Bug, at Hammondsport. Aircraft was flown a distance of 456 ft., with Curtiss at the controls.

July 4—The June Bug was flown by Curtiss over a distance in excess of one kilometer, winning for him the Scientific American Award offered for the first powered flight over this minimum distance. This was the first official distance test of an aircraft in North America. (The Wright brothers had earlier made longer flights, but they had not done so in public under conditions laid down by the publishers of The Scientific American to compete for the award. Curtiss' achieve-



1910—Canada's first successful aero engine, built by W. Gibson.

ment was instrumental in the Wright's decision to bring their work into the open in North America.)

Summer—Following the Scientific American flight of the June Bug, Dr. Bell and Baldwin went to Baddeck where, on the instigation of Dr. Bell, they began experimenting with hydrofoils with a view to their use in operating an aircraft off the water. Curtiss, McCurdy and Selfridge, at Hammondsport, heard of this work and attacked the water take-off problem in their own way, attempting to fit floats to the June Bug, which was re-christened the Loon in its float configuration. This experiment was not successful, even though hydrofoils (very large ones) were later added to the floats. The experiments carried out by Dr. Bell and Baldwin did not reach the stage where hydrofoils were fitted to an aircraft.

Sept. 17—Lt. Selfridge was fatally injured in the crash of a Wright aircraft while a passenger in a machine flown by Orville Wright during military trials for the United States Army at Fort Myer, Virginia. He was the first person to lose his life in the crash of a powered aircraft. Orville Wright suffered a fractured leg.

September 30—The original one-year term of the AEA expired. The association was renewed for another six months with Mrs. Bell agreeing to continue financing for this period.

December 6—First flight of the Silver Dart, McCurdy's project, at Hammondsport, with McCurdy at the controls. This aircraft was powered by a water-cooled engine designed by Curtiss.

1909

February 23—First powered flight in Canada (and by a British subject in the British Empire) by John A. D. McCurdy. He flew the Silver Dart over the ice at Baddeck Bay, Nova Scotia, for a distance of about three quarters of a mile at a height of about 60 feet.

Late Winter—A huge biplane, built as the fifth and final project of the AEA was completed. It was named the Cygnet II and as the name implies followed the tetrahedral cell kite principle favored by Dr. Bell. The engine from the Silver Dart was at one stage installed in the Cygnet II, but it did not achieve flight.

March 31—The Aerial Experiment Association's extended term expired. Curtiss left the group at this time. Dr. Bell sponsored McCurdy and Baldwin in establishment of the Canadian Aerodrome Co. to take over AEA work.

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August 2—McCurdy and Baldwin began a series of flights in connection with trials for Canadian government and military officials at Petawawa Military Camp. The flights were begun early in the morning and it is believed that on the fourth flight the pilot, McCurdy, was momentarily blinded by the rising sun as he came in to land. As a result he missed the narrow, rutted track which was being used for take-offs and landings. The aircraft crashed when it ran onto the ruts after touchdown and was destroyed. This was the end of the Silver Dart. McCurdy was unhurt.

August 12—First flight of the Baddeck I, the initial project of the Canadian Aerodrome Co., which was rushed to completion so the military trials could be carried on, at Petawawa. McCurdy and Baldwin, after demonstrating the machine, offered it to the Canadian government for \$10,000, including flight instruction. The offer was turned down.

September 20—First flight of the Baddeck II, incorporating a number of refinements over the Baddeck I, also at Petawawa.

September—Canadian Aeronautical Society formed.

1910

March 10—First successful aircraft engine built in Canada by W. W. Gibson at Victoria, B.C. It was fitted to the Gibson Twin plane, which flew for the first time on September 10, 1910.

Spring—Race over a one-mile course at Vancouver between a Curtiss biplane flown by Charles Hamilton and a race horse, "Prince Brutus," ridden by Curley Lewis. The horse won! This the first record of a powered flight in Western Canada.

June 27 — First official altitude record declared in Canada (1,650 ft.) by Walter Brookins, an American, flying at Montreal, Que., in a Wright machine. Brookins also made the first flight in the province of Quebec at this same time.

July 2 — A French pilot, Count Jacques de Lesseps, made the first flight directly over a Canadian city at Montreal, Que., in a Bleriot monoplane, La Scarabee. Count de Lesseps was one of a group of flyers who were attending a flying meet at Valois, near Montreal, at about this time. Included were McCurdy, who brought the Baddeck I up from Nova Scotia, and Walter Brookins, flying his altitude record Wright machine. All later took part in an International Aviation Meet at Belmont Park, Long Island.

July 4 — The first model aeroplane contest in Canada, sponsored by a Montreal newspaper, The Witness, was won by J. H. Parkin, who was at that time a student at the University of Toronto. The winning model was of the Bleriot II monoplane.

July 15 — First flight in the province of Manitoba by Eugene B. Ely in a Curtiss biplane at Winnipeg.

September 24-25 — A flying demonstration was held in the Toronto area with a number of pilots, including Count de Lesseps and Brookins participating. At the meet, J. H. Parkin displayed a biplane glider he had designed and built.

October — McCurdy set a world's biplane speed record flying a Curtiss biplane at the Belmont Park International Aviation Meet.

October — McCurdy transmitted the first radio message from an aircraft while flying in the New York area to a receiver on the roof of the New York World building.

October 5 — McCurdy obtained Pilot's License No.

18 of the Aero Club of America issued under authority of the Federation Aeronautique Internationale, to become the first Canadian so licensed.

October 25 — Grace Mackenzie became the first Canadian woman air passenger, at Belmont Park, New York, flying with Count de Lesseps in his Bleriot.

1911

March — The first radio messages exchanged between an aircraft in flight and a ground station, by McCurdy, flying a Curtiss biplane, at Palm Beach, Florida. While there, McCurdy was arrested for flying on a Sunday "in violation of The Lord's Day."

Spring — McCurdy endeavoured to take-off from a ship, but the plan failed.

April 29 — First flight in the province of Alberta by Hugh A. Robinson in a Curtiss biplane at Edmonton.

May 19 — First flight in the province of Saskatchewan by Bob St. Henry in a Curtiss biplane at Saskatoon.

August 2 — First cross country air race in Canada, from Hamilton to Toronto, between McCurdy and Charles Willard.

September 1 — First recorded letter dropping from the air by George Mestach at Quebec City in a Bleriot monoplane.

Winter — Ralph Johnstone dropped the first bomb from an aircraft, at Weston, near Toronto. It was a small landmine dropped during an air display.

January 30 — McCurdy attempted a flight from the Florida Keys to Havana, Cuba, coming down in Havana Harbor, just short of his goal. He was nevertheless declared the official winner of the competition which the Cuban Government had set up for the first pilot to make the flight from the mainland to the island republic. He did not, however, actually receive the \$10,000 purse which was to go to the winner.

1912

September 2 — First flight in the province of New Brunswick by Cecil Peoli in the Red Devil pusher at Saint John.

1913

July 31 — First flight by a woman pilot in Canada by Mrs. Alys McKey Bryant in a Curtiss biplane at Vancouver, B.C.

October 8 — First newspapers delivered by air by W. C. Robinson in Lillie biplane from Montreal, Que., to Choisy, Que., and Caledonia Springs, Leonard and Ottawa, Ont.

1914

May — First aerial photography in Canada. Photos were taken by Norman Pearce from a Curtiss flying boat flown by Theodore Macauley at Toronto, Ont.

July 11 — First loop the loop and inverted flight in Canada by Lincoln Beachey in a Curtiss biplane at Winnipeg, Man.

September 16 — The Canadian Aviation Corps was formed. This establishment consisted of its commander and one other officer, with a budget of \$5,000 to be expended on equipment which included one Burgess-Dunne biplane. The Corps accompanied the first contingent of Canadian troops to go overseas in October of 1914.

1915

February 4 — Lt. W. F. Sharpe, the lone officer of the Canadian Aviation Corps was killed on a training

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flights in France. He was the first Canadian military aviation casualty.

February 7 — **British War Office** requested the Canadian Government to enlist candidates for the Royal Flying Corps and the Royal Naval Air Service. The some 14,000 Canadians who volunteered for flying duties in the course of the First World War made up more than half the strength of the Royal Flying Corps when the war ended.

Spring — **The Curtiss Aviation School** and Curtiss Aeroplane and Motors Ltd. was organized at Toronto with McCurdy as president. The first company established flying field at Long Branch and a seaplane base at Hanlan's Point, both believed to be the first official bases set up in Canada. Curtiss Aeroplanes and Motors set up to begin manufacture of Curtiss training planes at a factory on Dufferin St. in Toronto. Applicants for the flying training were charged \$400 for their course, which amount was refunded to them by the British flying services on enlistment.

July—**Aero Club** of Canada was formed at Toronto.

December 14 — **First confirmed** Canadian air victory by Flt. Sub. Lt. A. S. Ince serving as an observer with the Royal Naval Air Service.

December 19—**First Canadian** air decoration to Capt. M. M. Bell-Irving who was awarded the DSC for successful combat in a Morane Scout of No. 1 Squadron, RFC.

1916

National Research Council established.

December—**Royal Flying Corps**, Canada, formed under authority of the British War Office and with concurrence of the Canadian government. This organization was to set up a training system in Canada to turn out flyers for service with the Royal Flying Corps.

December—**The Imperial Munitions Board**, through a newly established Aviation Department took over Curtiss Aeroplanes and Motors Ltd. to establish Canadian Aeroplanes Ltd. which was to produce aircraft primarily intended for support of the Royal Flying Corps, Canada, training establishment. The new firm first began operations in the original Curtiss factory but later moved to larger quarters. During the next 21 months, Canadian Aeroplanes turned out some 2,900 aircraft, valued at close to \$14,000,000. They were in the main Canadian Curtiss JN4 Jennie training machines. In April, 1918, the company undertook a contract to build thirty F-5 flying boats for the United States Navy, the first export order for aircraft to be placed with a Canadian firm. The contract involved competition with two U. S. firms. The Canadian company finished its contract three weeks ahead of its competitors. In the fall of 1918 Canadian Aeroplanes began preparing for production of the Avro aircraft for the RFC. Two of these machines, which were to be equipped with 130 hp Clerget engines, had been completed at the time of the Armistice and another 100 were fabricated and ready for assembly when the war ended.

1917

February—**An aerodynamic** laboratory was established at the University of Toronto, with a grant of \$4,000 for installation of a wind tunnel. This latter was built in 1918 and first operated in 1919. It had a four-foot-square working section and a five-and-a-half-foot fan driven by a 20 hp motor.

Willys-Overland Co. of Toronto began production of

the Sunbeam Arab engine for installation in the famous Bristol Fighter, one of the outstanding British two-seater fighters to operate on the Western Front during the First World War.

June 2—**First Canadian air** Victoria Cross awarded to Capt. W. A. "Billy" Bishop, No. 60 Squadron, RFC.

1918

April—**Capt. A. Roy Brown** of Toronto, serving with the newly formed Royal Air Force (an amalgamation of units of the RFC and RNAS), was credited with shooting down and killing the German ace Baron Manfred von Richthofen.

Spring—**Department of Naval Service** set up an air station at Dartmouth, N.S., and later Sidney to undertake anti-submarine patrols. Crews of the United States Navy manned the HS-2L flying boats which were used on these patrols.

June 24—**First official** air mail flight in Canada by Capt. B. A. Peck from Montreal to Toronto in a Curtiss JN-4.

1919

Canadian Pacific Railway Co. secured a general charter permitting it to own and operate aircraft.

January 14—**First civil** flight in Newfoundland—Major Sidney Cotton in a Martinsyde biplane at St. John's.

March 3—**First official** air mail carried between Canada and the U. S. by Eddie Hubbard in a Boeing C3 seaplane, from Vancouver to Seattle.

June 6—**The Air Board** Act passed by the Canadian parliament, creating a body to control all aeronautics in the Dominion.

June 14/15—**First non-stop** crossing of the Atlantic by Capt. John Alcock and Lt. A. W. Brown in Vickers Vimy aircraft, St. John's, Newfoundland, to Clifden, Ireland. Carried first trans-Atlantic airmail.

July—**What is thought** to be the first commercial aerial survey in Canada was undertaken by a group under Capt. Daniel Owens, late of the RNAS, in the Labrador area. Under contract from a U. S. firm, Capt. Owens' party journeyed by ship from Annapolis Royal in Nova Scotia to set up a base on the banks of the Alexis River near the Grenfell Mission in Labrador. Three Canadian-built Curtiss Jennies were used to do a timber survey over some one and a half million acres of land.

July—**British airship** R-34 made a trans-Atlantic crossing from Britain to the United States passing down the east coast of Canada en route, presaging a later flight to Canada by the R-100.

July 5—**Frank Ellis**, pioneer Canadian pilot became the first Canadian to parachute from an aircraft in Canada—at Crystal Beach, Fort Erie.

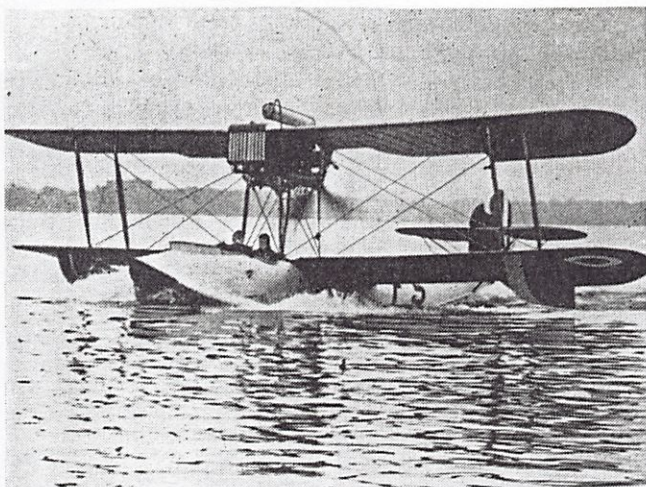
Summer—**First aerial forest** fire patrol—HS2L flying boat over St. Maurice Valley, Que., by Laurentide Air Services Ltd.

August 7—**Rocky Mountains** flown over for the first time by Captain Ernest Hoy, in a Curtiss JN-4, Vancouver, B.C., to Calgary, Alta., via Lethbridge, Alta.

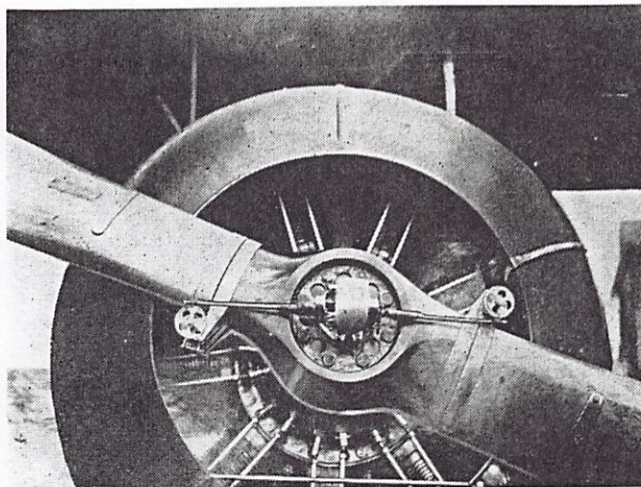
August 25—**First international** air race, Toronto-New York and return. Winner of the Canadian event, Major R. W. Schroeder, U. S. Army.

September 24—**First flight** in Prince Edward Island, Lts. L. Stevens and L. L. Barnhill in Curtiss JN-4, at Charlottetown.

October 9—**First multi-passenger** flight in Canada—Majors Brackley and Gwan in a Handley Page V/1500 bomber, at Parrsboro, N.S. Carried 12 persons in all.



1924—Vickers Vedette, the first all-Canadian-designed aircraft.



1927—W. R. Turnbull's variable pitch prop. First in the world.

1920

January 24—First private license issued in Canada to J. S. Scott, of Ottawa, Ont.

April 19—Canadian Air Board formed.

April 20—Registration of first commercial aircraft in Canada—G-CAAA—Curtiss JN-4 owned by Aerial Service Co. Ltd., Regina, Sask.

April 20—First licensed air engineer—Robert McCombie, of Regina, Sask.

June 30—Canadian Air Force formed. Supplied with 100 surplus British warplanes. Force was largely on a non-permanent basis, with bulk of members doing one month's training every two years. Jobs undertaken included air surveys, crop spraying, etc.

July 31—First commercial license issued to R. J. Groome, of Regina, Sask.

October 7-17—First trans-Canada flight (Halifax to Vancouver) completed in 49 hrs. 7 mins. flying time, by relays of a seaplane, two flying boats, and three landplanes. Pilots were W/C R. Leckie, S/L B. D. Hobbs, F/L G. O. Johnson, Capt. J. B. Home-Hay, C. W. Cudamore and G. A. Thompson. Average speed for the 3,341 miles was 68 mph.

October 15—First official international airmail service on North American continent, Seattle, Wash., to Victoria, B.C. Boeing C3 Seaplane.

1921

March 22—Two Junkers monoplanes owned by Imperial Oil Ltd. believed to be first aircraft to penetrate into Northwest Territories. Peace River Crossing to Upper Hay River Post. Pilots: Elmer G. Fullerton and G. W. Gorman.

Oil prospecting flight made by Captain Roy Maxwell, of Hamilton, Ont., from Cochrane to Moose Factory.

1922

January—Aircraft Inspection Department of the Air Board formed, at Camp Borden, Ont.

Spring—Air Board approved an expedition to the Arctic to investigate flying conditions. S/L R. A. Logan led the group which visited and flew in the Baffin Land, Bylot Inlet, Ellesmere Land and North Devon Island areas presenting a full report.

June 29—Consolidation of the Civil Operations Branch with the Canadian Air Force in a single military organization. W/C J. L. Gordon was appointed Acting

Director, with W/C E. W. Stedman and Mr. J. A. Wilson as Assistant Directors.

1923

Wind tunnel at the aerodynamic laboratory of University of Toronto redesigned and rebuilt on the basis of a design at the Royal Aeronautical Establishment. Employed four-foot working section and 9½ ft. diameter four-blade fan, driven by 20 hp motor.

January 1—Department of National Defense established, absorbing Air Board.

February 15—Prefix Royal approved for the Canadian Air Force.

July 25—The first Viking flying boat built for the Department of National Defense (formerly the Air Board) by Canadian Vickers Ltd., which had established a plant at Montreal, was completed. Six of the British-designed amphibious Vikings were built in Canada; the first two aircraft of the total order of eight were produced by Vickers parent company in England for earlier delivery.

1924

Spring—Vickers Vedette, first aircraft designed and produced in Canada to a Canadian specification was completed at Canadian Vickers Ltd. Aircraft was designed by C. W. Ried. Some Vedettes were still in service with the RCAF when war broke out in 1939. Prototype was powered by Rolls-Royce Falcon engines for first flights, was early converted to Armstrong-Siddeley Lynx engines. A later, all-metal experimental version of the Vedette was powered by a Wright Whirlwind engine, but this version enjoyed little success and was not extensively used. Vedettes were sold to commercial companies in Canada and some were exported to South America.

Summer—Laurentide Air Services Ltd. began turning out HS-2L flying boats at a plant at Three Rivers, Que.

September 11—Laurentide Air Services issued its own air mail stamp for use of men at the Rouyn mining camp in Northwestern Quebec, establishing the first regular mail service for its customers (on a private basis).

1925

Spring—Ottawa Car Manufacturing Co. set up a facility at Ottawa for the construction of a standard Avro training aircraft.

Summer—C. S. Caldwell and Scott Williams flew a Vickers Viking on what was thought to be the first major

prospecting flight along the then almost inaccessible Yukon and Liard Rivers.

Summer—The Vickers Vedette entered service with the RCAF. Canadian Vickers were subsequently awarded contracts for the production of five Avro 504 biplanes powered by Viper engines. Later came orders for the Vickers Varuna and its successor, the Vancouver.

1926

September 11-19—J. Dalzell McKee, of Pittsburgh, accompanied by S/L Earl Godfrey, flew a Douglas seaplane 3,200 miles from Montreal to Vancouver to forge the first direct trans-Canada link. Flying time was 35.08 hours. McKee subsequently sponsored the McKee Trophy in recognition of the co-operation and assistance he had received in Canada during his flight. The trophy is awarded each year to the Canadian judged to have contributed most to the advancement of aviation in Canada.

1927

January—Department of National Defense decided to provide air support for the Hudson Strait Expedition which was to investigate conditions in the area. The air support group was under the command of W/C J. L. Gordon. Aircraft dispatched were a de Havilland Moth seaplane and two Fokkers.

Spring—A de Havilland Cirrus Moth was demonstrated (in Britain) to Capt. R. Maxwell, Director of Ontario Provincial Air Service. Subsequently the service placed an order for four of the aircraft.

Spring—First award of the McKee Trophy to H. A. "Doc" Oakes, for flying endeavors which helped open up the north by air.

Spring—The first light aeroplane clubs were formed in Canada and the government announced a policy under which 10 light aircraft would be purchased for distribution between five of the clubs. The government also announced its policy to subsidize flying training by making a grant of \$100 to clubs for each licensed pilot turned out.

June—Plans were formulated for establishment of an airship base at St. Huberts, Que., in anticipation of a trans-Atlantic flight by a British airship (the R-100 made the flight). The over-all proposal was to set up a commercial field for airships and fixed wing aircraft at St. Huberts to serve the Montreal area.

June 6—First controlled pitch propeller in the world, designed by Wallace R. Turnbull of Rothesay, N.B., was successfully flight tested by the RCAF. It was produced with the support of the Associate Air Research Committee of the National Research Council.

Summer—Wright Aeronautical Corp. established facilities in Montreal for the assembly and servicing of the firm's engines.

September 12—Post Office made experimental flights to hasten delivery of transAtlantic mails. Outgoing mails were flown from Montreal to Father Point, and incoming mails were picked up there. Mail was also airlifted from steamers in the St. Lawrence River by Major J. H. "Tuddy" Tudhope using a Vickers Vanessa seaplane. Service was rendered impractical by the rough water encountered.

1928

February—Reid Aircraft Co. established at Montreal with a view to aircraft production.

March—The de Havilland Aircraft of Canada Ltd.

was established with facilities for assembly and servicing of aircraft at Mount Dennis, Toronto.

Spring-Summer—Sixteen light airplane clubs were organized during the year, each receiving initial issue of two light aircraft from the Department of National Defense.

April 12/13—First East/West non-stop transAtlantic crossing—Baron Huenefeld, Capt. Koehl and Major Fitzmaurice, flying the Bremen Junkers monoplane from Dublin, Ireland, to Greenly Island, Strait of Belle Isle.

August 18—First flight from Canada to Greenland—B. R. J. Hassell and P. D. Cramer, in a Stinson monoplane.

September 3—First flight across the northern Barrens—C. H. "Punch" Dickens, Baker Lake to Stoney Rapids.

November—Canadian Pratt & Whitney Aircraft Co. Ltd. was established, setting up facilities at Longueuil, Que., for the assembly, overhaul and servicing of its U. S. parent company's engines.

Fall—Armstrong-Siddeley Motors Ltd., in conjunction with Ottawa Car Mfg. Co., set up facilities in Ottawa for assembly of engines. The Sir G. W. Armstrong-Whitworth Aircraft Ltd., a subsidiary of the British engine company, also equipped a plant to build and overhaul Siskin and Atlas military aircraft.

Fall—Aero Engines Canada Ltd. was established as a holding company of Canadian Wright Ltd. and Bristol Engines Canada Ltd. to set up facilities for engine overhaul.

1929

January—Reid Aircraft Co. became Curtiss-Reid Aircraft Co. Ltd. as a result of merger with Curtiss Aeroplane and Motor Co. of New York. Firm was to produce the Rambler, a two-seat light aircraft aimed at the flying club market.

March—First commercial aircraft fitted with radio transmission and receiving equipment. Charles Sutton operating a Fairchild aircraft belonging to Dominion Explorers Ltd. of Ottawa.

Spring—Fairchild Aircraft of Canada Ltd. established plant at Montreal for production of Fairchild "71" and KR-34 aircraft.

Summer—Boeing Aircraft of Canada Ltd. was established at Vancouver by Hoffar-Beeching Shipyards of Vancouver and Boeing Airplane Co. of Seattle to produce six-place Boeing flying boats and also five 40-B4s designed for passenger mail service.

Summer—First Vickers Vancouver delivered to Department of National Defense. A twin-engined, all-metal-hull flying boat.

August—Bellanca Aircraft of Canada Ltd. established at Montreal for production of Bellanca models.

September—de Havilland of Canada opened its plant at Downsview, Ont.

November 1—Canadian Flying Clubs Association was established in meetings at Fort William, Ont.

1930

Spring—John A. D. McCurdy became president of Curtiss-Reid Aircraft Co.

Canadian Airways Ltd. was formed by Canadian National and Canadian Pacific Railways.

Walter Gilbert flew over the magnetic North Pole

claiming to be the first pilot to do so. In the course of the flight he discovered the old camp sites of the Franklin expedition.

July 29—British airship R-100 left Cardington, England, and arrived at St. Hubert's, Que., on August 1 to make use of newly constructed mooring mast. Ship made flights to Ottawa, Toronto and Niagara Falls.

August 13—R-100 left St. Hubert's for Cardington with G/C E. W. Stedman, Chief Aeronautical Engineer, Dept. of National Defense and others as passengers. Visit was intended as a forerunner of regular trans-Atlantic service, but R-101 airship disaster scotched plan.

Summer—Fleet Aircraft of Canada Ltd, established a plant at Fort Erie, Ont., to manufacture its popular training aircraft.

S/L J. H. Tudhope, Supt. of Airways in the Civil Aviation Branch, Dept. of National Defense, was awarded the McKee Trophy for work in establishing air mail services in Canada.

October 9/10—First successful Canadian crossing of the North Atlantic, from St. John's, Nfld., to the Scilly Isles, by J. E. Boyd and H. P. Connor. Boyd, the pilot, was a Canadian. Connor, who was navigator, was an American. The Bellanca monoplane in which they made the trip had been flown across the Atlantic earlier by another American, Chamberlain. At that time it was called the "Columbia." For Boyd's trip it was rechristened the "Maple Leaf."

1931

July 1—First tour of the RCAF's transCanada pageant.

October 20—Start of first flight by a Canadian built aircraft from Canada to England via the south Atlantic—Bert Hinkler in a de Havilland Puss Moth monoplane.

1932

August 18/19—First nonstop east-to-west flight from Great Britain to the Canadian mainland—Jim Mollison flew a de Havilland Puss Moth from Ireland to Pennfield Ridge, N.B.

Depression saw the appropriations for air services for 1932/3 slashed by 67 percent, to \$1,750,000. One fifth of RCAF personnel had to be released.

1933

August 25/26—Nonstop flight across Canada—Capt. Frank Hawks piloting Northrop Delta monoplane, Vancouver, B.C. to Kingston, Ont.

Summer—The Curtiss-Reid Aircraft Co., from which Curtiss financing had gradually been withdrawn since the financial crash of the early 30s, was re-organized as Montreal Aircraft Industries Ltd. with John A. D. McCurdy president of the new organization.

1934

August 8/9—First east-west flight from Canadian soil to England. James R. Ayling and Leonard G. Reid in a de Havilland Rapide from Wasaga Beach to Heston, Middlesex.

Summer—Air Industries and Transport Association of Canada founded in Ottawa.

1935

Summer—Noorduyn Aviation Ltd. established plant at Montreal to build specially designed bush plane, Norseman, for Canadian operations.

1936

November 1—Department of Transport established, taking over most of the government responsibilities in the civil aviation field.

1937

April—Trans-Canada Air Lines was established by the Canadian government in conjunction with Canadian National Railways.

Summer—Aviation Section of the Royal Canadian Mounted Police was established.

Summer—de Havilland of Canada began first full scale manufacture of aircraft turning out the DH-82C Tiger Moth for the Canadian government (an order was placed for 25 aircraft) and later for the British government (which ordered 200 of the aircraft). On the British order the aircraft were manufactured in Canada and shipped to England for assembly by de Havilland's parent company, a reversal of the earlier pattern between the two companies.

September—TCA began its first commercial service over the 122-mile route between Vancouver and Seattle using 10-seat Lockheed Electra aircraft.

1938

December 1 — TCA inaugurated its first trans-continental airmail service between Montreal and Vancouver.

Spring—National Steel Car established an aircraft plant at Malton, Ont. Initial projects included work on Yale trainers and Lysander aircraft.

Summer—Canadian Car and Foundry Co. Ltd. of Montreal set up an aviation division at Montreal beginning with the design and building of a prototype fighter aircraft and following on with design of a special duty trainer aircraft, the Maple Leaf. In both of these projects, and in the later production of Hawker Hurricane fighters at the company's Fort William plant Elsie MacGill held the position of chief aeronautical engineer.

July 20-21—First commercial air load carried trans-Atlantic (England to Montreal) in the Mercury-Maia composite aircraft owned by Imperial Airways and piloted by D. C. T. Bennett, later famous as the RAF's "Pathfinder" Bennett.

1939

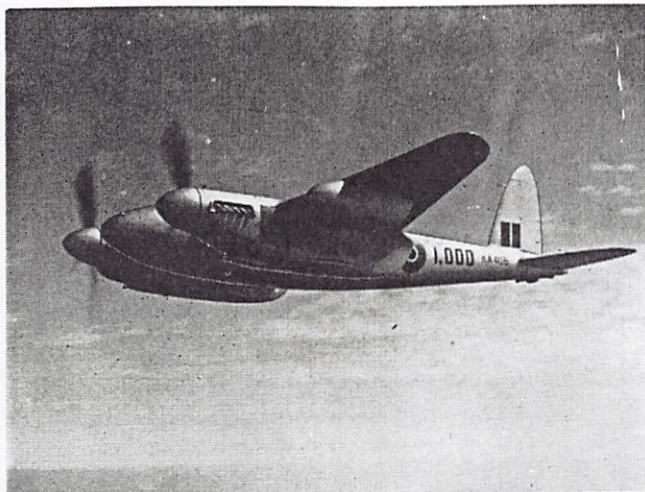
February 17—First Hawker Hurricane fighters were delivered to the RCAF from the United Kingdom.

April 29—A Russian bomber crash landed at Miscou Island, N.B., after a nonstop flight from Moscow. The distance of about 5,000 air miles was covered in 22 hours, 56 minutes.

December 18—The governments of the United Kingdom, Canada, Australia and New Zealand signed an agreement setting up the Commonwealth Air Training Plan following meetings held in Canada. The over-all scheme called for establishment of extensive training facilities in Canada. There was extensive participation in the carrying out of the plan by the Canadian Flying Clubs Association which organized its existing facilities to establish training centres.

1940

February — de Havilland of Canada received a further order for Tiger Moth training aircraft. The model produced was the DH-42C, a Canadianized version of the aircraft. This was the start of de Havilland's move towards its specialized field, the design of aircraft tailored specifically to the rugged flying conditions often part and parcel of Canadian operations. Company produced a total of 1,747 Tiger Moths. In this year also, de Havilland of Canada was awarded a contract for the assembly of Avro Anson aircraft.



1942—Mosquitos began to roll from de Havillands of Canada.



1943. Loading a Lockheed 14 of Canadian Pacific Air Lines.

Summer—Canadian Car and Foundry began tooling up for the production of Hurricanes at its Fort William plant and Ansons at its plant in Amherst, Nova Scotia.

September—Canadian Pacific Air Services Dept. was organized by Canadian Pacific Railways to establish transAtlantic ferry operations on a nonprofit basis.

November—First Lockheed Hudsons were ferried from Newfoundland to Britain by pilots of Canadian Pacific Air Services Dept. The aircraft had ostensibly been delivered from California to the Canadian border where they were towed across after a token observation of U. S. neutrality in that no American crossed the border in connection with delivery of the aircraft. A rope was thrown over the boundary and the aircraft pulled into Canada by citizens of the belligerent. This first ferry flight was led by D. C. T. Bennett, who had been seconded to Canada to organize flight operations of the ferrying organization.

1941

August—RAF Ferry Command was formed and took over the transAtlantic ferry from Canadian Pacific Air Services.

Fall—de Havilland of Canada began tooling up for production of Mosquito aircraft.

1942

Spring—Canadian Pacific Air Lines was formed with purchase of 10 established airlines, including Canadian Airways Ltd., originally founded by Canadian Pacific and Canadian National Railways.

Summer—The new plant of Canadian Vickers' aircraft division just completed in Montreal to work on a contract for production of PBY Catalina (Canso) flying boats was taken over by a government management team. The reorganized company later became known as Canadair Ltd.

Summer—Canadian Car and Foundry began turning out Hurricanes at Fort William and Ansons at Amherst and began preparing for production of Curtiss-Wright Hell Diver aircraft for the United States Navy at Fort William.

September—The first de Havilland of Canada built Mosquito rolled off at Downsview and was successfully test flown by Ralph Spradbarrow. More than 1,000

Mosquitos were produced at Downsview during the remaining war production years. Production at one point reached a peak of 120 aircraft a month.

November—The plant of National Steel Car at Malton was taken over by a government management team and the company reorganized as Victory Aircraft Ltd. Preparations were begun for the production of Lancaster bombers.

Fall—The Clark Ruse Company established a plant at Eastern Passage near Halifax, Nova Scotia, for the overhaul and repair of maritime aircraft operated by the RCAF's Eastern Air Command on antisubmarine patrol. This facility was occupied in postwar years by Fairey Aviation Co. of Canada Ltd.

1943

Spring—Trans-Canada Air Lines operated across the Atlantic for the first time using converted Lancaster bombers, establishing rapid transport for priority passengers.

Summer—National Research Council began research on a jet propulsion project. The work was later carried out under a separate organization established as Turbo-Research Ltd.

1944

Spring—Canadian Flying Clubs Association was given the prefix "Royal" and incorporated under the Companies' Act as a nonprofit organization.

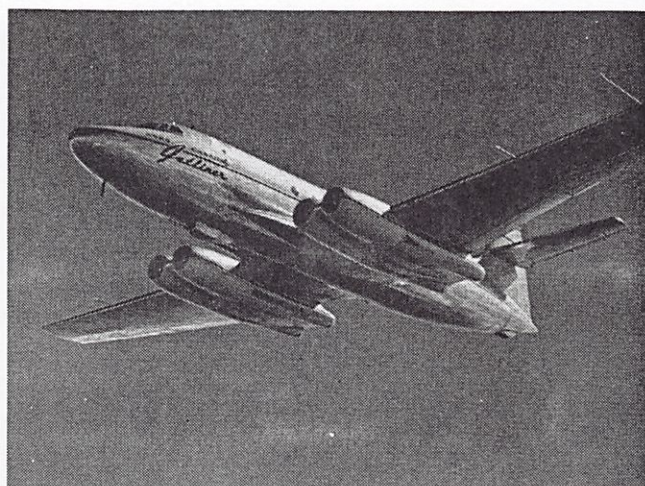
March 17—a draft convention for establishment of an international authority to deal with civil air matters was presented to the Canadian House of Commons by the Hon. C. D. Howe, Minister of Reconstruction. Convention was presented in a revised form at a conference on air transportation held under auspices of the United Nations in Chicago on Nov. 1, 1944. This led to formation of the International Civil Aviation Organization with headquarters at Montreal.

1945

Spring—RCAF reached a peak strength of 215,000, with 45 operational squadrons serving overseas from Europe to Asia. One quarter of the bomber crews under British command were Canadian. Canada was judged the fourth greatest air power in the world.



1947—First Beaver produced at de Havilland, Canada, plant.



1949—Avro Jetliner, first jet transport built in North America.

June—**Northwest Industries Ltd.** was organized and obtained a lease on the plant and facilities of Aircraft Repair Ltd. in Edmonton. The latter had been established initially to provide overhaul and repair for aircraft operated by MacKenzie Air Services Ltd. and later expanded to handle aircraft of other operators, including Canadian Pacific Air Lines. During the war the plant was a service centre for Commonwealth Air Training Plan aircraft. Northwest purchased the facilities outright a year later with plans for manufacture of Bellanca Skyrocket aircraft. A company development was a roll-on ski designed for use in winter operations. The highly versatile unit was used on aircraft which supported Antarctic expeditions in the late 1940s.

Summer—**De Havilland** of Canada began production on the DH-83C, a Canadianized version of the prewar Fox Moth. The company's first postwar venture into the civil field was a forerunner of the rugged bush types to come.

December—**A. V. Roe Canada Ltd.** was established taking over the plant and facilities of Victory Aircraft Ltd. at Malton.

1946

January—**A. V. Roe Canada Ltd.** began on conversion of Lincoln aircraft to a Tudor commercial configuration. Contract was cancelled during the year and the aircraft dismantled. Conversion programs on Lancasters, Ventures and Dakotas were undertaken. Company meanwhile had launched into design studies on three major projects: A twin-jet trainer and also an interceptor to fill RCAF requirements and a jet-powered transport aimed at North American carriers' requirements, with a particular consideration of Trans-Canada Air Lines possible jet needs. The trainer requirement later was withdrawn. The interceptor jelled into the CF-100 and the transport into the Avro Jetliner.

May—**Crown-owned Turbo Research Ltd.** facilities and personnel taken over by A. V. Roe Canada.

May—**First flight** of de Havilland of Canada's DHC-1 Chipmunk. A total of 128 of these aircraft were produced in Canada, but production by the company's associates in other countries saw more than 1,000 Chipmunks eventually going into service.

Summer — **Government** announced a decision to accelerate aeronautical charting of Canada, and the

Arctic regions in particular. The RCAF was given specific responsibility for this work and special units were organized to carry out the task.

Summer—Government awarded a contract for the aerial survey of 250,000 square miles in Ontario to the newly formed Photographic Survey Corp. Ltd. of Toronto. This was the beginning of what has grown into Hunting Associates Ltd., a complex of companies offering extensive services in the survey and geophysical interpretation fields.

October—**A contract** for two prototypes of the A. V. Roe Canada CF-100 all-weather jet interceptor was issued by the RCAF.

1947

April—**RCAF issued** a contract for design and manufacture of the Orenda turbojet engine to A. V. Roe Canada.

Summer—**Canadair Ltd. of Montreal** was purchased by the Electric Boat Company, which has since become General Dynamics Corp.

Summer—**Okanagan Helicopters Ltd.** established in Vancouver. Has grown to largest commercial helicopter operation in the world.

Summer—**Spartan Air Services Ltd.** organized at Ottawa to fly fixed wing photographic and geophysical air survey. Has since expanded into helicopter field and ranks among largest commercial helicopter operators.

Summer—**Rolls-Royce Montreal Ltd.** established for service and parts storage on Montreal airport.

Trans-Canada Air Lines took delivery of its first four-engined Canadair-built North Star aircraft. The aircraft was placed in service on the North Atlantic. The Rolls-Royce Merlin-powered transports were also produced by Canadair for British Overseas Airways Corp. under the name Argonaut.

August—**De Havilland of Canada's DHC-2 Beaver** made its first flight.

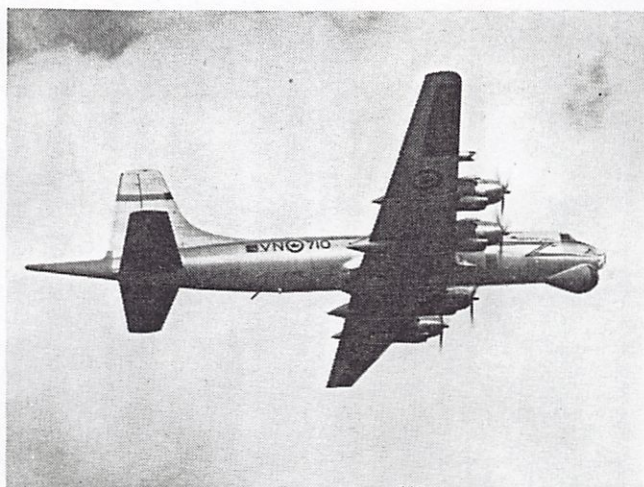
September 12—**The RCAF** received its first Canadair North Star aircraft.

1948

January 23—**RCAF** took delivery of its first jet aircraft, de Havilland Vampires.



1950—CF-100, first all-Canadian military jet, on first flight.



1957—Canadair Argus, largest aircraft ever built in Canada.

March—First test run of the A. V. Roe Canada experimental Chinook turbojet engine.

November 19—Fairey Aviation Co. of Canada Ltd. was established taking over the former Clark Ruse plant at Eastern Passage adjacent to HMCS Shearwater, the Royal Canadian Navy's Naval Air Station. Company concentrated on overhaul, repair and servicing of Navy aircraft then in service, the Seafire and Firefly.

1949

January 14/15 — First nonstop transCanada flight made by an RCAF North Star from Vancouver to Halifax in eight hours 32 mins. Average speed for the 2,785-mile flight was 329 mph.

February—First test bed runs of the A. V. Roe Canada Orenda jet engine.

Summer—Institute of Aerophysics at the University of Toronto established through a grant from the Defence Research Board.

July—First CPA transPacific route established from Vancouver to Sydney, Australia.

August 10—Initial flight of the A. V. Roe Jetliner, the first jet transport to fly in North America. The Jetliner, took to the air two weeks after the inaugural flight of de Havilland's Comet, the world's first jet transport.

September—CPA's Orient service established.

1950

January 2—A North Star of No. 412 Squadron began the RCAF's first round-the-world flight. Operation was completed February 8 with a total flying time of 152 hours, 20 mins.

January 19—A. V. Roe Canada CF-100, first Canadian-designed and built jet interceptor, made its first test flight at Malton powered by Rolls-Royce Avon engines. Pilot was S/L W. A. Waterton.

July—A. V. Roe Canada Orenda turbojet made its first test flight in a Lancaster test bed.

July 27—No. 426 Squadron RCAF began flying an airlift to Japan to support United Nations troops in Korea.

August 9—First flight of a Canadair-produced Sabre jet fighter, piloted by A. J. "Al" Lilly.

September—Institute of Aerophysics Laboratory at Downsview was opened.

1951

May 19—First RCAF squadron equipped with Canadair-built Sabre aircraft—No. 410 Squadron.

Summer—Bristol Aeroplane Co. of Canada Ltd. established as a wholly owned subsidiary of the Bristol Aeroplane Co. in the U. K., Bristol's Canadian organization has since expanded to include Bristol Aero Engines Ltd. with piston engine overhaul facilities in Montreal; Bristol Aircraft (Western) Ltd. at Winnipeg with extensive aircraft overhaul and production facilities in a plant taken over from MacDonald Brothers at Stevenson Field in Winnipeg in 1954; Bristol Aero Engines (Western) Ltd., with recently expanded piston and turbo-prop engine overhaul and repair facilities on Vancouver's International Airport; and Bristol Aviation Services Division of Bristol Aero Engines Ltd. at Montreal.

October—First A. V. Roe Canada CF-100 delivered to the RCAF.

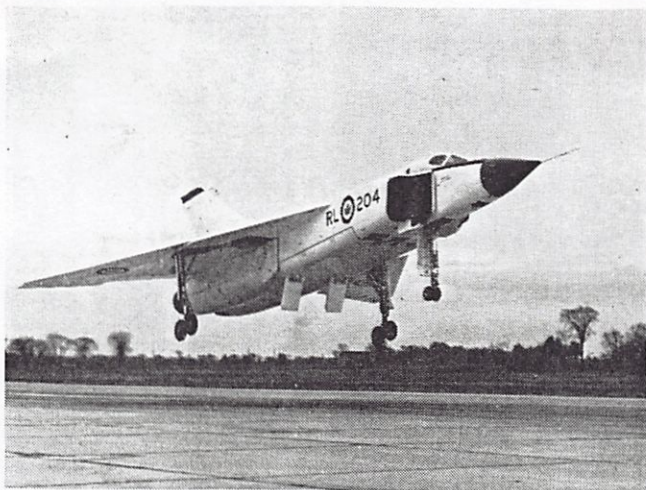
December 12—First flight of de Havilland of Canada's DHC-3 Otter.

1952

Summer — Enheat, the Aircraft Division of Enamel & Heating Co. Ltd. of Sackville, N.B., was established in the former aircraft plant of Canadian Car & Foundry Co. Ltd. at Amherst, N.S. The facility had been purchased by the parent company in 1950 with a view to possible expansion into the aviation field. The move came when there was prospect for award of a contract from the U. S. A. F. to Canadian firms for production under license of a utility transport version of the Beech T-36 trainer aircraft. Enheat was successful in obtaining a subcontract on the project, which was washed out in 1953 as a result of President-elect Eisenhower's defense economy drive. Enheat secured overhaul and repair contracts for RCAF Maritime Command aircraft and was also a successful bidder for work on the RCN order for the de Havilland of Canada re-engineered version of the Grumman CS2F-1 Tracker antisubmarine aircraft.

Summer—Rolls-Royce Montreal Ltd. becomes Rolls-Royce of Canada Ltd. with a manufacturing plant built to turn out engine components and take on overhaul contracts.

September—A. V. Roe Canada Ltd. was set up as two distinct divisions (Aircraft and Gas Turbine) and shortly after the Gas Turbine Division moved into a new plant.



1958—First flight of Avro Canada's CF-105 Arrow interceptor.

October—A. V. Roe Canada Orenda engine first flew as power plant for a Canadair-produced Sabre aircraft.

1953

The Orenda, Canada's first production jet engine, designed and manufactured by the Gas Turbine Division of A. V. Roe Canada, was fitted to the Canadair F-86 Sabre aircraft.

April 1—First RCAF Squadron, No. 445, was equipped with A. V. Roe Canada CF-100 aircraft.

May 29—The RCAF became the first air force in the world to operate jet transports taking delivery of two de Havilland Comets.

September—A. V. Roe Canada Gas Turbine Division launched design and development project on a fully supersonic turbojet engine to incorporate integral afterburner. This developed into the PS-13, Iroquois engine which is designated to power production versions of the CF-105 Arrow.

September—Collins Radio Co. of Canada Ltd. established at Ottawa. Company was initially a sales organization with manufacturing facilities set up in Toronto in the late fall of 1954.

1954

February—First Canadair Mark V Sabres, powered by Orenda engines, were flown across the Atlantic to equip the RCAF's No. 1 Air Division.

April 8—The governments of Canada and the United States announced plans for establishment of the Mid-Canada Line.

April 11—A Vancouver to Ottawa record of three hours and 46 mins. was established by S/L R. G. Christie flying an RCAF, Canadair-built Sabre.

July 8—Canadian Aeronautical Institute was granted a charter.

Summer—TCA began flying Lockheed Super Constellations, mainly on its North Atlantic routes.

December—Reorganization of the A. V. Roe Canada group with the aircraft division becoming Avro Aircraft Ltd., the Gas Turbine Division established as Orenda Engines Ltd., and the acquisition of Canadian Steel Improvement Co., all as associates of the holding company, A. V. Roe Canada Ltd., a member of the British Hawker-Siddeley group of companies.

December 21—Development of the R-Theta computer by W/C J. G. Wright was announced. For this

achievement, W/C Wright was awarded the McKee Trophy for 1954.

1955

March 24—Three RCAF CF-100s became the first Canadian designed and developed aircraft to fly the Atlantic.

March 31—Announcement of intention to establish the Distant Early Warning radar defense line in the Canadian Arctic.

April 1—Trans-Canada Air Lines introduced Vickers Viscount turboprop aircraft into regular service, the first airline in North America to use turbine equipment.

September—A. V. Roe Canada Ltd. acquired Canadian Car & Foundry Ltd. and established it as a subsidiary.

1956

January 16—First jet crossing of Canada by S/L Lou Hill and F/L Alex Bowman flying an RCAF Canadair-produced T-33 Silver Star from Vancouver to Dartmouth. Air time was five hours, 52 mins. Total time six hours, 17 mins.

August—CS2F-1 Tracker antisubmarine aircraft began to roll off assembly lines at de Havilland of Canada's Downsview plant. Manufacture of the aircraft was extensively subcontracted throughout the Canadian industry.

August 30—A new record Vancouver to Dartmouth was established by Sabre VI aircraft of the RCAF. Pilots were F/L R. H. Annis and F/O R. J. Childerhose who covered the 2,740 miles in five hours and 30 seconds, including a 10-minute refueling stop at Gimli, Man.

1957

January 17—HMCS Bonaventure, the RCN's new aircraft carrier and the first such ship built specifically for the Canadian Navy was commissioned.

March 17—First flight of the Canadair CL-28 Argus, Canadian-designed maritime reconnaissance version of the Bristol Britannia. Pilot was W. S. Longhurst.

September—North American Air Defense Command established to integrate air defense forces of Canada and the United States.

Fall—Canadian Astronautical Society organized.

1958

February 30—Canadian Pacific Airlines received its first Bristol Britannia turboprop airliner.

March 25—Avro CF-105 Arrow interceptor made its first flight at Malton, Ont. Pilot Jan Zurakowski. Plane exceeded 1,000 mph during early test flying.

June—Sidewinder missiles delivered to the Royal Canadian Navy for its McDonnell Banshee interceptors. Thus the RCN squadrons became the first Canadian operational units to be equipped with guided missiles.

July 30—DHC-4 de Havilland Caribou made its first flight at Downsview, Ont.

September—Formation of the Astronautical Section of the Canadian Aeronautical Institute.

December 4—Final Avro CF-100 produced at Malton, Ont.

December 19—First scheduled commercial jet transport flight into Canada—BOAC Comet 4 from London to Montreal.