The Comox Air Force Museum's Guide to the Aircraft of the Heritage Air Park

By Dan Brennan

Canadair CL-28 Argus

Mark I Argus 10719 of 415 Squadron on maritime patrol. From Greek mythology, the “Argus” was an all-seeing creature with 100 eyes. This name was appropriate due to the numerous highly sophisticated sensing devices carried on board, with antennas everywhere. Note the large nose radome of the Mark I. Protruding from the tail is the MAD Boom, a Magnetic Anomaly Detector which detects the magnetic field surrounding a steel submarine.

The Canadian-built, Canadair Argus was a unique hybrid that employed the wings, tail surfaces and undercarriage of the British designed Bristol Britannia transport aircraft, married to a completely new unpressurized fuselage of Canadian design and equipped with different American-designed engines. One of the most effective anti-submarine warfare aircraft of its day, the Argus was a mainstay for the RCAF in the maritime role. The principal difference between the Mark I and Mark II was primarily in the different navigation, communication and tactical electronic equipment fitted internally. Externally, the Mark II exhibited a redesigned smaller nose radome and additional ECM antennae above the fuselage. The Argus replaced the Lancaster and Neptune aircraft types and eventually, the Argus was itself to be replaced by the current Lockheed CP-140 Aurora aircraft. The Argus flew with the Maritime Proving & Evaluation Unit and the following Squadrons: 404, 405, 407, 415, and 449.

Specifications

Manufacturer:	Canadair licence-built version of Bristol Britannia	
Model:	CL-28	
Designation:	CP-107	
Number:	Mk I	13
	Mk II	20
In Service:	1957 to 1988 (Retired from flying 18 December 1981)	
Role:	Anti-Submarine Warfare and Long Range Patrol	
Dimensions:	Wing Span:	142 ft 3 ½ in (43.38 m)
	Length:	128 ft 3 in (39.09 m)
	Height:	36 ft 8 ½ in (11.2 m)
	Wing Area:	2,075 sq ft (192.77 sq m)
Weights:	Empty:	81,000 lbs (36,744 kg)
	Gross:	148,000 lbs (67,192 kg)
Power Plant:	Four 3,700 hp Wright Model 981 TC18EA1 Turbo-Compound 18 cylinder Cyclone R3350 engines	
Performance:	Maximum Speed:	288 mph (463 km/hr)
	Cruising Speed:	207 mph (333 km/hr)
	Service Ceiling:	24,200 ft (7,376 m)
	Range:	5089 miles (8,190 km)
	Endurance:	26 ½ hours
Crew:	15: two pilots, flight engineer, navigator, radio operator, plus relief crew of four, plus six operators for ASW equipment	
Armament:	8,000 lbs of homing torpedoes, bombs, depth charges, or mines.	

A Mark II Argus (20723) on maritime patrol visually identifies a Canadian Oberon-class diesel electric submarine. Note the smaller nose radome of the Mark II.

Mark II Argus 20732 with it's fore and aft bomb bay doors open. Aft of the bomb bays are chutes to drop sonobuoys into the ocean. A sonobuoy is like a microphone which can hear submarine engine and propeller noises. (29 Aug 1968, Canadian International Air Show, Toronto)

Mark 2 Argus 10731 on maritime patrol with the high intensity searchlight (70 million candle power) visible on the right wing.

Heritage Air Park Canadair CL-28 Argus Mark I
Serial Number 10712

Argus 10712 was part of 407 Squadron as noted by the “Demon” insignia (a winged trident) on the tail fin. 407 (Long Range Patrol) Squadron in Comox flew the Argus from 1968 until 1981 when it was retired from flying. Of note, the Canadian military record for the longest unrefueled flight was set by a 407 Squadron crew, who flew an Argus for over 31 hours!

The large, bulbous radome of the Mark I Argus is evident in this photo of 10712

An early photo of Mark I Argus 10712 while in service with 415 Squadron taxiing at Greenwood on a rainy day in April 1969. (Photo: Andy Graham)

Mark I Argus (10712) in service with 407 Squadron, with open bomb bay doors.

Lockheed CP-140 Aurora

140115, a 407 Squadron, Comox Aurora, flying over the mountain ranges of West Coast British Columbia. Mount Rainier in the State of Washington is in the background. In Roman mythology, Aurora was the goddess of the dawn who flies across the sky each morning ahead of the sun. Aurora also refers to the Aurora Borealis, the "northern lights", that are prominent over northern Canada and the Arctic Ocean, one of the operating areas of Aurora aircraft.

The Lockheed CP-140 Aurora is a four-engine, long-range patrol aircraft, which is a descendant of the Lockheed P-3 Orion. It replaced the Argus and is used for anti-submarine warfare (ASW) operations, maritime surveillance patrols guarding Canadian coastal waters against illegal fishing and drug operations, tracking the source of pollution violations, and search-and-rescue missions. The Aurora is also capable of dropping a Sea Survival Kit Air Droppable (SKAD) or an Arctic SKAD during Search and Rescue missions. The CP-140 is Canada's only strategic Intelligence Surveillance and Reconnaissance (ISR) aircraft, conducting long range missions over land, water and coastal areas, and it is routinely used to support NATO and NORAD operations, and to provide humanitarian assistance for the United Nations.

The first of 18 aircraft was received in 1980 and they were flown with the Maritime Proving & Evaluation Unit and the following Squadrons: 404, 405, 407, and 415.

Specifications

Manufacturer:	Lockheed Aircraft Corporation	
Model:	P-3	
Designation:	CP-140	
Number:	18	
In Service:	1980 to present	
Role:	Anti-Submarine Warfare and Long Range Patrol	
Dimensions:	Wing Span:	99 ft 8 in (30.37 m)
	Length:	116 ft 10 in (35.61 m)
	Height:	33 ft 9 in (10.30 m)
	Wing Area:	1,300 sq ft (120.7 sq m)
Weights:	Empty:	61,491 lbs (27,892 kg)
	Gross:	142,000 lbs (64,410 kg)
Power Plant:	Four 4,600 shp Allison T-56-A-14 turboprop engines	
Performance:	Maximum Speed:	466 mph (750 km/hr)
	Cruising Speed:	403 mph (648 km/hr)
	Service Ceiling:	35,000 ft (10, 668 m)
	Range:	5758 miles (9,266 km)
	Endurance:	17 hours
Crew:	11: two pilots, flight engineer, four navigators, four Airborne Electronic Sensor Operators (AESOP's)	
Armament:	Provisions for eight Mk 46 torpedoes, depth charges, mines, etc.	

140107, a 405 Squadron Aurora from Greenwood, Nova Scotia, displaying the original paint scheme. Protruding from the tail is the MAD Boom, a Magnetic Anomaly Detector which detects the magnetic field surrounding a steel submarine.

140117, a 407 Squadron, Comox Aurora in its normal environment…over the ocean. It shows off the new “low visibility” paint scheme.

An Aurora in the Birdbath. While flying over the ocean, tiny particles of salt adhere to the surface of the aircraft and must be removed before they corrode the metal. The fresh water of the Birdbath rinses it clean.

140114 with bomb bay doors open just after launching a practice Mk 46 torpedo.

140121 Arcturus in Greenwood, Nova Scotia. Three sister aircraft of the CP-140 Aurora, the CP-140A Arcturus, were used to augment the Aurora fleet in monitoring Canada's Maritime Approaches and the Arctic. The Arcturus shared the same airframe as the Aurora, but was not equipped for anti-submarine warfare (ASW). Because it lacked the Aurora's heavy ASW electronics, the Arcturus was a lighter and more fuel-efficient aircraft.

Heritage Air Park Lockheed CP-140 Aurora
Serial Number 140107

Aurora 140107 was part of 407 (Long Range Patrol) Squadron in Comox as noted by the “Demon” insignia (a winged trident) on the tail fin. She is seen here taxiing for take-off at Comox, BC with Comox Glacier in the background.

140107 just after take-off, with the landing gear almost retracted and Comox Glacier in the background.

140107 when with 415 Squadron in Summerside, P.E.I., showing the belly of the beast. The flaps are down and on the fuselage aft of the wings are chutes to drop sonobuoys into the ocean. A sonobuoy is like a microphone which can hear submarine engine and propeller noises.

de Havilland DHC-5 Buffalo

115457, the Air Park Buffalo, while on active service with 442 Squadron in Comox, BC.

The Buffalo was initially acquired as a tactical transport aircraft for the Canadian Army, but was progressively converted to Search And Rescue duties while retaining a secondary transport role. It provided Short Take-Off and Landing (STOL) characteristics and excellent mountain flying capabilities in its search and rescue function. The Buffalo could deliver valuable Search And Rescue Technicians by parachute into remote areas and a pump or survival kit with a dinghy to helpless victims at sea.

Designed for employment under all weather conditions in areas where short, rough, unprepared strips provide the only takeoff and landing surfaces, the "Buff" features exceptionally low, slow-flying controllability.

The Buffalo flew with 429 Sqn in the Tactical Aviation role and with 413, 424 and 442 Squadrons in the SAR role until replaced by the CC-130 Hercules and, in 2021, by the CC-295 Kingfisher.

Specifications

Manufacturer:	de Havilland Canada	
Model:	DHC-5	
Designation:	CC-115	
Number:	15	
In Service:	1967 to 2021	
Role:	Transport and Search And Rescue	
Dimensions:	Wing Span:	96 ft (29.26 m)
	Length:	79 ft (24.08 m)
	Height:	28 ft 8 in (8.73 m)
	Wing Area:	945 sq ft (87.2 sq m)
Weights:	Empty:	27,000 lbs (12,247 kg)
	Gross:	45,000 lbs (22,317 kg)
Power Plant:	Two 3,060 ESHP General Electric CT64-820-3 Turbine engines	
Performance:	Maximum Speed:	262 mph (421 km/hr)
	Service Ceiling:	27,500 ft (8,382 m)
	Range:	740 miles (1,205 km)
	Endurance:	8 hours
Crew:	Two Pilots, one Flight Engineer, one Navigator, and two Search And Rescue Technicians (SAR Techs)	
Armament:	None	

Buffalo 9453 in its tactical camouflage scheme. While working with the Canadian Army, the Buffalo could carry 41 troops or 35 paratroops, or, as an ambulance, 24 stretchers and six sitting cases. It was also capable of carrying a howitzer and a ¾ ton truck.

115452 in its United Nations paint scheme. It was deployed on United Nations Emergency Force missions in the Middle East with 116 Air Transport Unit.

115451 during air cushion trials with Bell-Textron. It utilized two jet engine driven compressors for the belly air bag and wing outriggers for stability.

115456 performing a normal valley shoot with gear and flaps down. This was done during SAR Tech Mountain Training at Mount Waddington, BC.

Buffalo 115451 during a SAR Training mission while on active service with 442 Squadron, Comox, BC. The ramp is open and a SAR Tech has just jumped from it for parachute training. The orange parachute is just opening to fill the canopy.

Heritage Air Park de Havilland DHC-5 Buffalo
Serial Number 115457

Buffalo 115457 while on active service sporting the initial SAR paint scheme of white and red.

Buffalo 115457 in formation with two other Buffalos on active service with 413 Squadron in Summerside, flying over Prince Edward Island.

Dramatic shot of 115457 on approach for a STOL landing while in service with 442 Squadron, Comox, BC. As a STOL aircraft, it could land in 850 feet, reverse thrust on the propellers to back up for every available inch of runway, and then take off in 2,300 feet.

Heritage Air Park Avro CF-100 Mark 5 Canuck 100790 on active service with 414 Squadron

The development, production, and operation of the CF-100 represent one of Canadian aviation's outstanding achievements. It remains the only Canadian designed and built combat aircraft to reach operational status and the Canuck played a critical role in this country's participation in the defence of North America and Europe during the first two decades of the Cold War.

The Canuck became operational in 1953 and continued flying with the RCAF until 1981. Both its role and weaponry changed through the years as some squadrons of CF-100's were based in Europe as part of NATO and the aircraft's armament evolved from machine guns to rockets and guided missiles. In its prime, the Canuck was known as a rugged, dependable aircraft. It was the first and one of the best long-range, all-weather fighters available, it served Canada, NORAD, and NATO well.

The RCAF named the CF-100, "Canuck", after the much earlier Curtiss JN-4 Canuck trainer of the First World War. However, the name Canuck was never really accepted for the jet aircraft and the crews more often referred to the type as the "Clunk"; for the noise the landing gear made as it retracted into its well after takeoff.

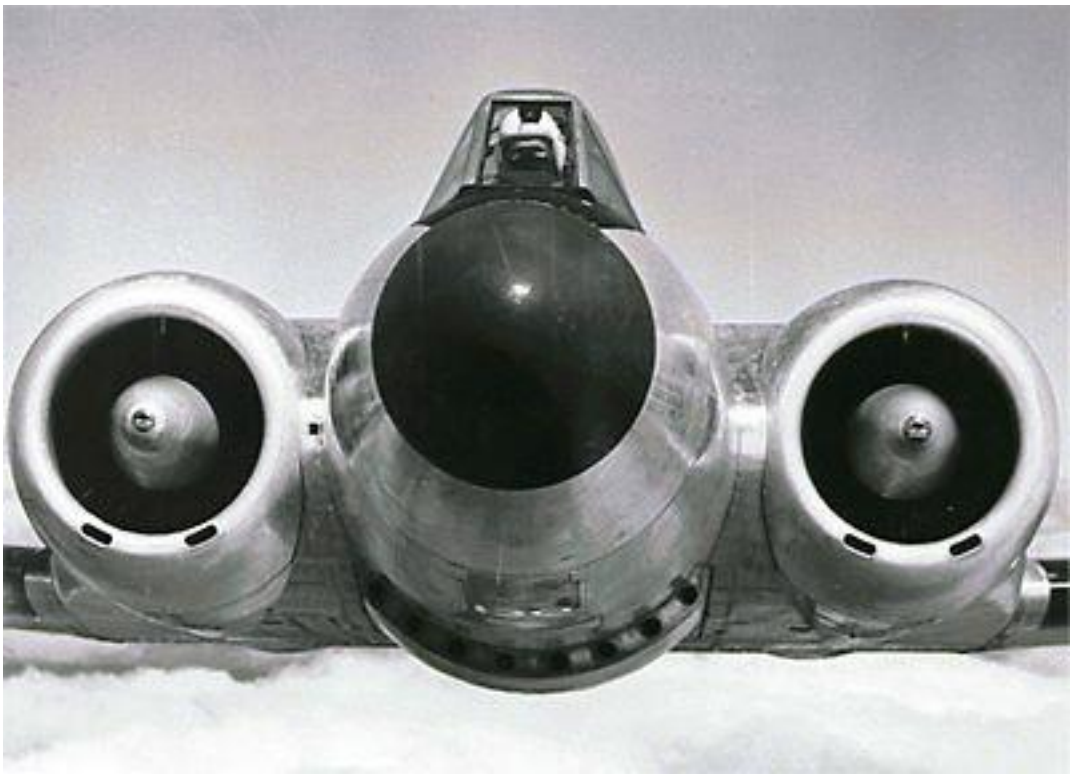
The CF-100's good climb, excellent fire control and radar systems, twin-engine reliability and all-weather capability made the aircraft highly suitable for Canadian, NATO and NORAD air defence roles of the Korean and Cold War eras until it was replaced by the McDonnell CF-101 Voodoo in the air defence role in 1961. It was then modified to become an electronic warfare (EW) and electronic countermeasures (ECM) trainer. The two main versions of the CF-100 were the gun and rocket armed Mark 4s and the rocket only armed Mark 5s.

The Canuck was flown by 3 Operational Training Unit and the following Squadrons: 409, 410, 413, 414, 416, 419, 423, 425, 428, 432, 433, 440 and 445. It was flown in Comox by 409 (Fighter) Squadron from 1951 until 1961.

Specifications (Mk 5)

Manufacturer:	Avro Canada	
Model:	CF-100	
Designation:	CF-100	
Number:	Mk 1	2
	Mk 2	10
	Mk 3	70
	Mk 4A	137
	Mk 4B	144
	Mk 5	329
	Total	692
In Service:	1951 to 1984 (Retired from flying 27 October 1983)	
Role:	All-weather Interceptor/Electronic Warfare Trainer	
Dimensions:	Wing Span:	57 ft 6 in (17.53 m)
	Length:	54 ft 2 in (16.5 m)
	Height:	14 ft 6 in (4.42 m)
Weights:	Empty:	23,100 lbs (10,487 kg)
	Maximum:	33,000 lbs (14,969 kg)
Power Plant:	Two Orenda 11 Turbojet with 7,275 lbs of thrust each	
Performance:	Maximum Speed:	605 mph (972.3 km/h)
	Cruising Speed:	460 mph (740.8 km/h)
	Service Ceiling:	41,000 ft (12,496 m)
	Range:	2302 miles (3706 km)
Crew:	1 Pilot and 1 Navigator	
Armament:	Eight .50 calibre machine guns; provisions for bombs, unguided missiles and rockets (hard-points under the wings)	

Mark 1 Canuck 18101 as it appeared during its first flight, 19 January 1950. The black paint scheme was chosen by Avro for the prototypes.



A close-up, flying shot of a Mark 3 Canuck showing its eight .50 calibre gun pack under the nose. It carried 1600 rounds of ammunition.

A flight of 445 Sqn, Mark 3 Canucks, 18138 has tip tanks whereas the other two (18146 and 18145) do not. The black smoke stains at the muzzle end and the aft end of the gun pack indicates they have just finished a training mission in the weapons range. Note the two-piece canopy of Marks 1, 2 and 3. (RCAF photo)

A pair of 419 Squadron Mark 4A Canucks (18207 and 18212). The plan view of 18212 shows the Mark 4 wingtips without the extensions of the Mark 5 aircraft. Also note the extended nose as compared to the bullet-shaped nose of a Mark 3. Note the one-piece canopy of Marks 4 and 5.

Two Mark 4B Canucks, 18330 and 18364, from 423 Squadron in 1962. These CF-100s were based at RCAF Station Grostenquin (No. 2 Fighter Wing) France. Front-line CF-100s were used by the RCAF in Europe from 1956 to 1962. They have the camouflaged paint scheme used in Europe, and both are carrying wingtip rocket pods containing 19 rockets each. (DND, 9 Oct 1962)

Mark 5 Canuck 18527 of 425 Squadron. This shot highlights the wingtip extensions added to the Mark 5. Also note the gun pack has been removed. (CF Photo)

Heritage Air Park Avro CF-100 Canuck Mark 5
Serial Number 100790

This aircraft was delivered to the RCAF on May 19, 1959 with the tail number 18790. It initially served with 413 Squadron at RCAF Station Bagotville, Quebec. After 413 Squadron disbanded on December 30, 1961, it joined 414 All-Weather Fighter Squadron at RCAF Station North Bay, Ontario. In 1964, that squadron also disbanded and the aircraft was converted to the Mk 5C configuration as an electronic countermeasures trainer. It joined the newly-reformed 414 Electronic Warfare Squadron at RCAF Station St. Hubert, Quebec in 1967. After the RCAF was absorbed into the new Canadian Forces, the aircraft was renumbered with the tail number 100790 on October 23, 1970. At some point during its time at RCAF Station St. Hubert, it was converted to the Mark 5D, which added active communications jamming gear. 414 Squadron relocated to CFB North Bay in August 1972, where this aircraft served until it was struck off on October 13, 1981. On November 6, 1981, it was ferried to CFB Comox where it was put on display at the Heritage Air Park. It has been repainted to the paint scheme it would have used during its time with the RCAF prior to 1970.

Mark 5 Canuck 100790 on active service with 414 Squadron

Mark 5 Canuck 100790 painted in the original colours it would have used during its time with the RCAF prior to 1970 with 414 Squadron as 18790.

Mark 5 Canuck 100790 painted in the original colours it would have used during its time with the RCAF prior to 1970 with 414 Squadron as 18790.

Douglas DC-3 Dakota

Heritage Air Park Mark III Dakota FZ671/12944 in the markings of 437 Squadron “Z2-B”, painted in wartime camouflage with D-Day invasion stripes.

First flown on 17 December 1933 at Clover Field in Santa Monica, California, the Douglas DC-3 is arguably one of the most successful aircraft ever built. Designated “Dakota” by the RAF/RCAF, the aircraft was known by a wide variety of different names (Skytrain, Skytrooper, Dak, Goonie Bird) and different designations (DC-3, C-47, C-53, R4D) due to its use in various services.

The C-47's most prominent claim to fame in World War II combat was in support of airborne assaults, mostly under the umbrella of the USAAF Troop Carrier Command and the British Royal Air Force (RAF) Transport Command. The RAF Transport Command found them far superior for parachute assaults than the hand-me-down Whitley bombers and other obsolescent aircraft they had been using as stopgaps.

Although the British dropped a brigade of paratroops into North Africa with the Dakota in November 1942, the C-47's first large-scale introduction to combat was in July 1943, when Dakotas dropped about 4,000 paratroopers and glider troops in support of the Allied invasion of Sicily. This was followed by the massive airdrops in support of the Allied invasion of Normandy (D-Day) in June 1944, with 1,000 C-47s providing the backbone of the airlift capacity and delivering 60,000 paratroops and equipment in 60 hours.

The C-47 was used extensively in Burma, with the aircraft providing supply for Orde Wingate's Chindit commandos operating behind enemy lines during the winter of 1942:1943. Other C-47s flew the Hump from India to China and back, carrying a total of 590,000 tonnes (650,000 tons) of supplies in all. These flights were often difficult due to severe winds, weather, and deep cold temperatures, not to mention enemy action.

As the war tilted increasingly against the Axis, the C-47 was in the front lines. In addition to relatively small airdrops in Italy, Greece, and the Philippines, the C-47 also conducted large airdrops during the invasion of southern France in August 1944; the assault on Arnhem in the Netherlands in September 1944, where Dakota pilots distinguished themselves in determined attempts to resupply surrounded British paratroops under severe enemy anti-aircraft fire; during the Rhine crossing in March 1945; and in offensive operations in Burma in March and May 1945.

As part of the British Commonwealth Air Training Plan, No. 32 OTU, RAF, at Patricia Bay, BC, previously training crews for torpedo bombers, moved to Comox, BC and became No. 6 OTU, RCAF, and was reassigned to training personnel for transport operations with Dakotas – many of its graduates destined for South-East Asia.

In Canada after World War Two, Dakotas served in a wide variety of roles in the RCAF including training purposes such as multi-engine conversion, navigation, radio and radar training, along with dropping cargo and paratroopers, target towing, transport, and search and rescue duties.

Specifications

Manufacturer:	Douglas Aircraft Corporation	
Model:	DC-3/C-47	
Designation:	CC-129/CT-129	
Number:	Mark I/III	15
	Mark III	123
	Mark IV	31
	Total	169
In Service:	1943 to 1989 (Retired from flying18 March 1989)	
Role:	Transport, Training, Target Towing, SAR	
Dimensions:	Wing Span:	95 ft 0 in (28.95 m)
	Length:	64 ft 5 ½ in (19.64 m)
	Height:	16 ft 11 in (5.16 m)
	Wing Area:	987 sq ft (91.69 sq meters)
Weights:	Empty:	16,970 lbs (7,700 kg)
	Maximum Take Off:	26,000 lbs (11,793 kg)
Power Plant:	Two 1200 hp Pratt & Whitney R-1830-92 radial engines	
Performance:	Maximum Speed:	229 mph (369 km/hr)
	Cruising Speed:	167 mph (269 km/hr)
	Service Ceiling:	24,100 ft (7,345 m)
	Range:	1,500 miles (2,414 km)
Crews:	Two pilots and up to 3 crew such as navigators, loadmasters, etc. as required, or 36 passengers	

"Operation Market I": the airborne operation to seize bridges between Arnhem and Eindhoven, Holland, (part of "Operation Market Garden"). Oblique photographic-reconnaissance aerial showing Douglas Dakotas dropping paratroops of the 1st Airborne Brigade on to Dropping Zone (DZ) 'X', at Renkum, west of Arnhem. 17 Sep 1944

Mark III Dakota 992/12963 painted as FZ658, a “Canucks Unlimited” aircraft of 436 Squadron during the Southeast Asia (Burma) campaign of World War II. (June 1990)

The “Oxydol” Dak, a 121 Composite Flight Dakota used for target-towing duties, and painted bright orange and dark green stripes (Sea Island (Vancouver), BC, circa 1949)

Dakota used for Search and Rescue

Mark III Dakota 10912/12967 in its most familiar Air Transport Command colour scheme.

Heritage Air Park Douglas DC-3 Dakota Mark III
Serial Number FZ671/12944

Mark III Dakota FZ671 was delivered to the 48 Squadron, RAF on 4 February 1944. This Dakota made at least 2 flights into Arnhem for Operation Market Garden. The first one was on 17 Jul 1944 on the first lift, the Pilot Officer was Flight Lieutenant A.C. Blythe, RCAF, who went on to win a DFC. It also went in on the third lift on 19 Sep 1944 with Pilot Officer A. M. Smith.

It joined 437 Squadron, RCAF in September 1945 and was with such units as 426, 429, 435, 437, No. 25 Ambulance and No. 1 Air Navigation School through the years as FZ671. Its Serial Number changed to 12944 with the Canadian Armed Forces in June 1970. It was transferred to 429 Squadron at Saskatoon in March 1975, and then to 429 Communications Squadron in Winnipeg from 1979 to 1980. Dakota 12944 was struck off strength with the RCAF on 14 April 1989. It now resides in the Heritage Air Park as Dakota EZ761

In the post-war period Dakotas served with 123 Rescue Unit/121 Composite Unit at Sea Island, BC and Comox, BC. They also served with 442 (Transport & Rescue) Squadron out of Comox, BC.

“Z2-B” are the 437 Squadron markings on Mark III Dakota FZ671/12944. This photo was taken upon arrival at the Heritage Air Park.

Mark III Dakota FZ671/12944 now repainted as EZ671

Mark III Dakota FZ671/12944 now repainted as EZ671

Piasecki/Vertol H-21 & H-44

Heritage Air Park Piasecki H-21B 9641 (CF Photo)

In 1949, while all other helicopter designers were perfecting the single rotor helicopter, Frank Nicholas Piasecki designed and built the first tandem rotor helicopter, the PV-3. Eventually, the design of the PV-3 would become the forerunner of all tandem rotor helicopters operating today, and Frank Piasecki would become known as the Father of the Tandem Rotor Helicopter.

During the early 1950s, the Cold War was well underway and the threat of Russia attacking the United States with nuclear weapons was real. The Soviet Union was restricted to approaching the United States via the shortest route, which was over the North Pole. As a consequence, the United States and Canada began constructing radar warning sites across Alaska and the Canadian Arctic. These were the Distant Early Warning Line (DEW Line), the Mid-Canada Line, and the Pine Tree Line built during the early 1950s and 1960s.

The USAF issued a requirement for a helicopter to operate in the Arctic while performing rescue missions for American airmen defending the polar approach. The helicopter would also to be used for the construction and support of the radar chain. Piasecki would redesign the PV-3 into the PD-22 “Arctic Rescuer” for the USAF, and this would evolve into the Piasecki H-21.

The Piasecki H-21A was a single engine, tandem rotor helicopter acquired by the RCAF in 1954 and used primarily for search and rescue work. The type was also used extensively by both the RCAF and commercial companies in transport duties associated with the construction of the various radar chains across the Canadian Arctic. The Piasecki/Vertol H-21B was virtually identical to the H-21A except for an increase in the available horsepower of the engine for take-off. The Vertol H-44A was equipped with metal rotor blades and an advanced transmission and could be distinguished from the earlier versions by the covered struts of its landing gear. The Boeing Vertol H-44B was basically a passenger version.

The Great Name Debate

The USAF called both the H-21A and the H-21B the “Workhorse” due to it’s great lifting capability which would surpass all single-rotor helicopters for the next decade. The US Army version, the H-21C was called “Shawnee”. These were all “Piasecki”. But in 1955, Piasecki Helicopter Corporation was bought out and in March 1956 it’s name changed to Vertol. Now the USAF Piasecki H-21 A & B became Vertol Model 42, and the US Army Piasecki H-21C became Vertol Model 43.

In 1960, Vertol merged with Boeing Aircraft to become Boeing Vertol. Now the H-21B & C became Boeing Vertol Model 42A (H-21A was no longer built). Boeing Vertol Model 43 was a utility design for France and Germany. Boeing Vertol Model 44A was a military version built for the USAF, Canada, and other countries. The Boeing Vertol Model 44B was built for commercial use and one Boeing Vertol Model 44C was custom-built for Russia.

So, it depends when the helicopter was built, and by whom. The RCAF bought 6 Piasecki H-21A, 9 Piasecki H-21B, 3 Vertol H-21B, and 2 Vertol H-44A (no Boeing Vertol Models). BUT WAIT...THERE’S MORE! In 1965 the RCAF converted the Vertol H-21Bs in service, and the 2 Vertol H-44As to Boeing Vertol Model H-44Bs.

Now you know why the helicopter was nicknamed the "Flying Banana"...nobody knew what to call it! In actual fact, this nickname was in reference to its elongated and curved shape. It was also known as “Piasecki’s Puzzle”.

Specifications

Manufacturer:	Originally designed and built by Piasecki Helicopter Corp. which became part of Boeing Vertol	
Model:	H-21A, H-21B, H-44A (and some conversions to H-44B)	
Designation:	CH-125 (H-21), CH-127(H-44)	
Number:	H-21A	6
	H-21B	12
	H-44A	2
In Service:	1954 – 1973 (Retired from flying 12 January 1972)	
Role:	Transport/ Search and Rescue Helicopter	
Dimensions:	Rotor Diameter:	44 ft 6 in (13.56 m)
	Length:	86 ft 4 in (26.31 m)
	Height:	15 ft 5 in (4.70 m)
Weights:	Empty:	8,000 lbs (3,629 kg)
	Maximum:	13,500 lbs (6,124 kg)
	Lifting Capability:	5,500 lbs (2,495 kg)
Power Plant:	One 1,425 hp Wright R-1820-103 engine	
Performance:	Maximum Speed:	131 mph (211 km/h)
	Cruising Speed:	90 mph (145 km/h)
	Service Ceiling:	8,450 ft (2,576 m)
	Range:	350 miles (563 km)
Crew:	Two pilots & one flight engineer, plus up to 20 passengers or 12 stretchers	

Piasecki H-21B 9643 of 108 Communications Flight at Hopedale, Labrador, the Easternmost Mid-Canada Line radar site. The radar sites were remote and not easily supported without helicopters such as the Piasecki H-21.

Both the USAF and the RCAF operated H-21 helicopters in Canada and Alaska supporting the construction and maintenance of the Mid-Canada Line, Distant Early Warning Line, and the Pine Tree Line during the early 1950s and 1960s. Shown is Vertol H-44B 9594 (CF-JJV) at work in the north. The RCAF helicopters all carried a civilian registration because they were being operated by Spartan Air Service on behalf of the RCAF in support of the Mid-Canada Radar Line.

Vertol H-21B 9596 (CF-JJX) slings in a tank containing fuel to Site 342 during the winter.
(Mid-Canada Line, Doppler Detection Station near Kuujjuarapik, QC) (Nelson Bentley Collection Photo)

The helicopters carried four different colour schemes. Shown is Piasecki H-21A 9615 in the natural aluminum finish.

On 20 August 1942, while en route from Coal Harbour on Vancouver Island to their destination Ketchikan, Alaska, a US Navy OS2U-3 Chance-Vought Kingfisher floatplane crashed into a ridge of Mount Buxton on Calvert Island, BC. Neither the pilot nor his mechanic were injured and both were rescued by the RCAF. Twenty-two years later, on 12 March 1964 (photo), Flight Lieutenant Dan Campbell is hovering Piasecki H-21A 9611 over the wrecked Kingfisher. The aircraft was successfully recovered and later restored to its original condition. The Kingfisher is now on display on the fantail of the US Navy Battleship North Carolina, in Wilmington, North Carolina. (Courtesy of Dan Campbell)

Vertol H-44A 9591 shown with two auxiliary 165 US gallon (625 litre) fuel tanks. Either one or two could be carried and the tanks could be jettisoned by the pilot or a crew member. (RCAF Photo)

Three different floatation systems were tried, some for water operations and others for snow. The systems, when activated, inflated rubberized air bladders, thereby keeping the helicopter upright and afloat. The early systems were unwieldy, caused aerodynamic drag, and were unstable on anything other than flat, calm water. Shown is Vertol H-44A 9592 in Liverpool, Nova Scotia, sporting the third and best system developed, the low-drag floatation system. (Note the similarity to the later Labrador sponsons)

Heritage Air Park Piasecki H-21B
Serial Number 9641

The Piasecki H-21B 9641 was replaced by another tandem rotor Boeing Vertol product, the Labrador, in December, 1964.

Piasecki H-21B, 9641 flew from Dec 1955 to 15 Jan 1965 with 121 Communications and Rescue Flight and 121 Composite Unit at Sea Island (Vancouver) and for a short time in Comox with 121 Composite Unit.

This photo highlights the obvious “bend” in the fuselage from which the nickname “Flying Banana” was coined. The engine was located just aft of the crew door. The large holes near the tail of the helicopter (see previous photos) are exits for the hot engine air. Those on the Comox Air Park example have been covered over to discourage birds from nesting inside the helicopter.

This photo illustrates the excellent visibility afforded the pilots. The ability to see ahead, to the sides, and below the helicopter, was paramount on search and rescue missions.

Sikorsky CH-124 Sea King

12407, our Air Park Sea King, while on active service aboard HMCS Iroquois during Operation Active Endeavour with the Standing NATO Maritime Group 1 in the Mediterranean Sea. It is showing off the new “low visibility” paint scheme, and some new equipment for surface surveillance (on the nose and just above the tail wheel).

The Sea King was initially acquired as an anti-submarine helicopter for Canadian ships. Over the years, submarine hunting became less of a priority and the Sea King was adapted to other roles such as Search and Rescue, disaster relief, maritime surveillance of Canadian coastal waters against illegal fishing and drug operations, tracking the source of pollution violations and international operations of peacekeeping and humanitarian assistance. In recent years, some Sea Kings were modified and frequently participated in international operations with allied forces as a surface surveillance helicopter. The Sea King has a fold-up rotor and tail so it can fit inside the small hangars aboard Canadian ships.

The first of 41 helicopters were received in 1961 and they were flown with HS50, 406, 423 and 443 Squadrons. In 2019, the Sea King was replaced by the Sikorsky CH148 Cyclone.

Specifications

Manufacturer:	United Aircraft of Canada (Sikorsky Helicopters)	
Model:	S-61	
Designation:	CHSS-2, CH-124	
Number:	41	
In Service:	1961 to 2019	
Role:	Anti-Submarine Warfare/Surface Surveillance Helicopter	
Dimensions:	Rotor Span:	62 ft 0 in (18.90 m)
	Length:	72 ft 8 in (22.15 m)
	Height:	16 ft 10 in (5.13 m)
Weights:	Empty:	11,865 lbs (5,382 kg)
	Gross:	20,542 lbs (9,318 kg)
Power Plant:	Two 1,500 HP General Electric T-58-GE-8F turboshaft engines	
Performance:	Maximum Speed:	166 mph (267 km/hr)
	Cruising Speed:	104 mph (167 km/hr)
	Service Ceiling:	14,700 ft (4,480 m)
	Range:	991 miles (616 km)
	Endurance:	3 hours 30 minutes
Crew:	Two pilots, one Navigator/Tactical Coordinator (TACCO), one Airborne Electronic Sensor Operator (AESO)	
Armament:	Mk 46 torpedoes, depth charges, plus provision for machine gun	

4030, an HS50 (Helicopter Squadron 50) Sea King displaying the original paint scheme while with the Royal Canadian Navy.

Sea King 12423 in its normal working position, in a hover, 50 feet above the ocean and lowering its dipping Sonar ball into the ocean…known as “in the dip”. The Sonar ball detects submarine noise (from its engines, etc.) to enable the Sea King crew to locate the submarine. The Sea King is sporting the second paint scheme, a light greenish-blue.

Sea King 12406 prepares to land on the deck of HMCS Saguenay. The Helicopter Destroyers (DDH) employed the “Bear Trap” Helicopter Haul-Down System…the square device on the flight deck (the Bear Trap), and the steel grid arrangement between the Bear Trap and the call letters of the ship “SY”. The Bear Trap was also used to move the Sea King into and out of the hangar.

Sea King 4017 landing aboard HMCS Annapolis. The Sea King was actually an extension of the ship defences, which could search for submarines from 50 to 100 miles ahead of the fleet.

Another exceptional capability of the Sea King is Helicopter In-Flight Refuelling (HIFR). Here 12440 is hovering alongside the Destroyer, and the crew used the hoist to lift up the ships refuelling hose, and connected it to refuel the Sea King. This saves a lot of time during a mission, instead of landing, shutting down the engines, refuelling, starting up the engines and taking off again.

HMCS Regina’s Sea King deploys defensive flares while on exercise in the Indian Ocean

Heritage Air Park Sikorsky CH-124 Sea King
Serial Number 12407

Sea King 12407 has its rotor blades and tail folded to enable it to fit inside the hangar of the Destroyer (this also saves space in the Air Park). Through the open cargo door can be seen three olive green troop seats. Under the black dome on top of the fuselage is the Search Radar.

12407 seen from below, while on active service. The black round hole is where the Dipping Sonar is stowed when not in use. The number of tubes protruding below the fuselage are for dropping sonobuoys…another submarine listening device. Also notice the boat-shaped hull and sponsons to enable landing on the water.

Canadair CL-41 Tutor

Tutor 114037, Snowbird 3, over 19 Wing Comox, BC

Designed and manufactured by Canadair to RCAF specifications for a twin- seat jet trainer, the Tutor began production in September 1961. Canadair designated it the CL-41 and the first aircraft was taken on strength by the RCAF in 1963, as the CT-114. Canadair supplied 190 Tutors to the Air Force, with only one design change: by government direction, the Tutor was equipped with the General Electric J-85 jet engine, built under licence by Orenda Ltd. of Toronto.

The side by side seating makes this single-engine jet a favourite for pilot training and the Tutor was used from 1963 until 2000 when it was replaced by the CT-156 Harvard II and the CT-155 Hawk aircraft. Although the aircraft's primary purpose in the RCAF and the CF was as a trainer, it was chosen for Canada's aerobatic team, The Golden Centennaires, to fly 100 demonstrations across Canada for the Centennial year of 1967 and then disband. The Tutor was also selected for Canada's internationally renowned aerobatic team, the Snowbirds. Painted in distinctive red and white colours, the Tutor has been the jet of choice for the Snowbirds since their creation in 1971. In 1978, the Snowbirds attained squadron status.

As 431 Air Demonstration Squadron, the Snowbirds have been regular visitors to the Comox Valley and 19 Wing in particular. Every spring they arrive for training and have performed at the Comox Air Show. The museum's Tutor is painted in classic Snowbird colours, to honour the contribution the Snowbirds have made to the Air Force nationally and to Comox in particular. In 2012, as part of a joint project between the City of Courtenay and the Comox Air Force Museum, "Snowbird 5" was erected as an off-site display at the in Courtenay Comox Valley Visitors Centre.

Specifications

Manufacturer:	Canadair	
Model:	CL-41	
Designation:	CT-114	
Number:	190	
In Service:	1963 to Present	
Role:	Trainer	
Dimensions:	Wing Span:	36 ft 6 in (11.13 m)
	Length:	32 ft (9.7 m)
	Height:	9 ft 4 in (2.84 m)
Weights:	Empty:	4,895 lbs (2,220 kg)
	Gross:	7,397 lbs (3,335 kg)
Power Plant:	One Orenda (General Electric) J-85 CAN-40 Turbojet with 2,950 lbs thrust.	
Performance:	Maximum Speed:	486 mph (782 km/h)
	Service Ceiling:	42,000 ft (12,863 m)
	Range:	1940 miles (1,563 km)
Crew:	2 Pilots in ejection seats	

Tutor 114177 with 2 Canadian Forces Flying Training School, Moose Jaw, Saskatchewan.

Tutors 114116, 114177 and 114113 of 2 Canadian Forces Flying Training School, Moose Jaw, Saskatchewan

Tutor 114109 of the Central Flying School, Winnipeg

Tutors with the Golden Centennaires in formation flight. During the Centennial year of 1967, they flew 100 demonstrations across Canada for the celebrations. (CF Photo)

Tutors with the Snowbirds in formation flight. With its thrust, the Tutor can reach 18,000 feet (5,486 metres) in fewer than six minutes; plus it can carry out sustained 2G turns at 25,000 feet (7,620 metres). (19 March 2007, CF Photo)

The Snowbirds, going over the top while looping the big diamond formation, over Mount Rainier, Washington.

Heritage Air Park Canadair CL-41 Tutor

Serial Number 114115

(Located at the Comox Valley Visitors Centre, Courtenay, BC)

Tutor 114115 as Snowbird 5 at the Comox Valley Visitors Centre, Courtenay, BC

Tutor 114115 as Snowbird 5 at the Comox Valley Visitors Centre, Courtenay, BC (1 June 2013)

Canadair T-33 Silver Star

Mark 3 Silver Star 133261 sporting the most familiar paint scheme for the T-33; the polished aluminum finish with red or orange day-glow highlights.

The CT-133 Silver Star, or T-33 or T-Bird, has a long and distinguished history with the Canadian Forces. The world's first purpose-built jet trainer, it evolved from America's first successful jet fighter, the Lockheed P-80 Shooting Star. Initially known as the P-80C, the trainer variant flew better than its single seat cousins. Initially powered by an Allison J33-35 single shaft, turbojet engine with a thrust rating of 5200 lbs, the improvements to the trainer meant it climbed faster, cruised better, and was slightly faster overall than the fighter version. The aircraft's designation was officially changed to T-33 in May 1949.

The first of twenty Lockheed built T-33As (the Silver Star Mark 1), were delivered on loan to the RCAF two years later, followed by ten more aircraft. On 13 September 1951, Canadair signed a license agreement with Lockheed to build T-33 aircraft for the RCAF. This version, the CL-30, (or the T-33ANX by Lockheed and the USAF), was to be powered by an up-rated Nene 10 engine licensed by Rolls Royce, supplied by Orenda Ltd. The RCAF designated the aircraft as T-33 Silver Star Mk 3. Several versions were produced for functions such as armament training (AT), photo-reconnaissance (PR) and pilot training (PT). Canadair would eventually deliver 656 aircraft to the RCAF between 1952 and 1959.

Due to its rugged dependability, the service life of the Silver Star in the RCAF/CF was extremely long. It stopped being used as a trainer in 1976 yet there were still over 50 aircraft in the CF inventory in 1995. The youngest of these airframes was then 37 years old and had exceeded its expected life by a factor of 2½. In 2005 the CF's last T-33 was retired after 46 years of service.

Specifications

Manufacturer:	Canadair built licensed version of Lockheed design	
Model:	Lockheed T-33, Canadair CL-30	
Designation:	CT-133	
Number:	Lockheed T-33A Shooting Star	10
	Lockheed T-33A Silver Star Mark 1	20
	Lockheed T-33A Silver Star Mark 2	1
	Canadair T-33 Silver Star Mark 3	656
In Service:	1952 to 2005 (Retired from flying 31 March 2002)	
Role:	Pilot Trainer, Combat Support, Photo/Reconnaissance, Target Towing, EW Jammer	
Dimensions:	Wing Span:	42 ft 5 in (12.93m)
	Length:	37 ft 8.5 in (11.49m)
	Height:	11 ft 8 in (3.6 m)
	Wing Area:	238 sq ft (22.11 sq m)
Weights:	Empty:	8,440 lbs (3,832 kg)
	Gross:	16,800 lbs (7,627 kg)
Power Plant:	One 5,100 lb thrust Rolls Royce Nene 10 Turbojet	
Performance:	Max Speed:	570 mph (917 km/h)
	Cruising Speed:	190 mph (306 km/h)
	Service Ceiling:	47,000 ft (14,325 m)
	Range:	1,400 miles (2,253 km) with tip tanks
Crew:	2 Pilots in ejection seats	
Armament:	None – but provisions for two .50 calibre Browning Machine guns and underwing pylons	

Mark 3 Silver Star 133261 sporting the most familiar paint scheme for the T-33; the polished aluminum finish with red or orange day-glow highlights.

Mark 3 Silver Star 21630. Probably the most famous of the Silver Star's colour schemes was the "Red Knight". A solo, aerobatics performer of the RCAF Training Command from 1958 through 1969, the role of the Red Knight was actually shared by seventeen different pilots over a period of twelve seasons. Although originally authorized to perform only three shows, the Red Knight went on to make over six hundred appearances, all over North America. (CF Photo)

Mark 3 Silver Star 21492. Not so common, is the support aircraft for the Golden Centennaires Air Demonstration Team of Tutors during 1967.

Mark 3 Silver Star 133275. Also not so common, is the support aircraft for the original white Snowbirds Air Demonstration Team of Tutors circa 1970's.

Mark 3 Silver Star 133186 of VU-32 in Shearwater, Nova Scotia. VU-32 on the east coast, and VU-33 on the west coast, provided target towing or missile simulation to the east and west coast naval fleets. Hence, the bright orange "HEY!!!!! LOOK AT ME!!! DON'T SHOOT ME!!!!!!!" paint schemes.

Mark 3 Silver Star 133069 in camouflage paint scheme.

Mark 3 Silver Star 133393 in the European overall green tactical camouflage.

Two Electronic Warfare Silver Stars display some of the equipment that they carry on the under wing hard points. The lead T-Bird carries the missed-distance indicator under each wing which was used for assisting ships in surface-to-air gunnery while the second aircraft carries an ALQ-503 Electronic Warfare jamming pod under the right wing and an ALE-503 chaff dispenser under the left wing.

Mark 3 Silver Star 133119. To commemorate the 75th Anniversary of the RCAF, 414 'Black Knights' Combat Support Squadron, based at 19 Wing Comox , painted one of its aircraft to reflect its squadron heritage. (Photo: J.D. Wilson, 1999)

Mark 3 Silver Star 133656. The last paint scheme of the Silver Star was jet black. This aircraft flew with Aerospace Engineering and Test Establishment in Cold Lake, Alberta.

Heritage Air Park Canadair T-33 Silver Star Mark 3
Serial Number 133102

The Heritage Air Park Silver Star was built in 1953 and delivered to the RCAF with the tail number 21102. It initially served with 409 Tactical Fighter Squadron before later joining VU 33 Utility Squadron in 1983. After the RCAF was absorbed into the new Canadian Forces, the aircraft was renumbered with tail number 133102 on November 11, 1970. When VU 33 Squadron disbanded in 1992, the aircraft was transferred to 414 Squadron, which assumed VU 33's duties. The aircraft was struck off in 2002 with the closure of 414 Squadron and later put on display.

Mark 3 Silver Star 133102 with VU-33 at the Comox Air Show, 1988. VU-33 was formed in November 1954 as the Royal Canadian Navy's west coast fixed wing utility squadron performing such duties as Training, Naval Gunnery Target Towing, Transport, Search & Rescue. The squadron’s designation of VU- 33 was implemented in 1954 following the US Naval numbering system. Upon unification of the forces in 1968-69 the squadron was integrated into the Canadian Armed Forces as Utility Squadron VU-33.

Mark 3 Silver Star 133102 with VU-33. It has been painted for the retirement of VU-33 Utility Squadron in 1992, with 414 Squadron assuming its duties. (Photo: July 1992)

Mark 3 Silver Star 133102 with 414 Squadron. It has the low-visibility, light grey paint scheme.

Mark 3 Silver Star 133102 with 414 Squadron. The black “bump” on the nose is the Electronic Warfare ASQ-503 threat emitter. The oval just aft of it, on both sides of the aircraft, is a cover for the muzzle end of the two .50 calibre Browning machine guns which were not used. The “string” hanging down from the top, center of the nose (just above the “1” in the 102 number) is a highly sophisticated yaw indicator.

Comox Air Force Museum Canadair T-33 Silver Star Mark 3 (Nose)

Serial Number 133471, Trainer Number 133741

This Mark 3 Silver Star 133471 was made into a Cockpit Procedures Trainer for the Pilots of 414 Squadron. (Photo: WO M. Barnucz)

Grumman CS2F Tracker

Tracker 1581 sporting the 880 Squadron triple bars across the tail in full Anti-Submarine Warfare (ASW) search mode with radar dome deployed from the belly, Magnetic Anomaly Detector (MAD) boom extended from the tail, and bomb bay doors open. (CF Photo)

The Tracker was the first Canadian-built aircraft ever ordered for the Royal Canadian Navy. It replaced the Grumman Avenger as the Navy's anti-submarine patrol aircraft. It was Canadian built by de Havilland under license from Grumman aircraft for use as an ASW aircraft in the Royal Canadian Navy. The Tracker was built to be flown hard and was originally used for anti-submarine warfare work off the aircraft carrier HMCS Bonaventure.

This carrier-borne aircraft was a state-of-the art, all-weather ASW platform carrying the latest electronic gear. For such a compact airframe, the Tracker boasted a respectable amount of equipment to fulfil its duties, including a Magnetic Anomaly Detector (MAD) boom, surface-search radar, internal bomb bay for bombs, depth charges or torpedoes, spotlight, sonobuoy dispensers and wing pylons for bombs or rockets. With the retirement of the HMCS Bonaventure in 1969, the Tracker reverted to land-based coastal patrol and maritime surveillance.

In service from 1956 until 1989, the Tracker was one of the longest-serving piston-engine aircraft in the RCAF inventory.

Specifications

Manufacturer:	de Havilland Canada license-built version of the Grumman design	
Model:	S2F-1	
Designation:	CP-121	
Number:	S2F-1	1
	CS2F-1	43
	CS2F-2	57
In Service:	1955 – 1994 (Retired from flying 30 March 1990)	
Role:	Carrier-borne and shore-based Anti-Submarine Warfare, coastal patrol, and utility.	
Dimensions:	Wing Span:	69 ft 8 in (21.23 m)
	Length:	42 ft 3 in (12.88 m)
	Height:	16 ft 3.5 in (4.96 m)
	Wing Area:	485 sq ft (45.1 sq m)
Weights:	Empty:	17,500 lbs (7,945 kg)
	Gross:	24,500 lbs (10,984 kg)
Power Plant:	Two 1525 hp Wright R-1820-82 engines	
Performance:	Maximum Speed:	330 mph (532 km/h)
	Cruising Speed:	150 mph (240.9 km/h)
	Service Ceiling:	10,000 ft (3050 m)
	Range:	1384 miles (2,228 km)
Crew:	Two pilots and 2 crewmen	
Armament:	Provision for bombs, depth charges or up to six Mk 43 torpedoes in bomb bay, bombs or CRV7 rockets on under wing pylons, sonobuoy dispenser	

Tracker 1503 flying over HMCS Bonaventure aircraft carrier with many more Trackers on her deck. This Tracker has the original dark grey upper surfaces and light grey lower surfaces paint scheme. The powerful searchlight was used for the identification of surface contacts at night.

Tracker 1572 landing on the HMCS Bonaventure aircraft carrier.

Tracker 12148 with wings folded to allow it to fit in the Bonaventure's hangar. Also, the Canadian Tracker was built 18 inches shorter than its American counterparts.

Tracker 12181 on fisheries patrol in the overall light blue paint scheme. Note the black radome of the search radar in the retracted position.

Tracker 12196. The Tracker is equipped with a 70 million candlepower searchlight for the identification of surface contacts at night and wing pylons to carry CRV-7 rockets.

Heritage Air Park Grumman CS2F-2 Tracker
Serial Number 12188

In Comox, the Tracker was used by VU 33 Squadron from 1974 until 1991

Tracker 12188 with wing pylons to carry CRV-7 rockets. It also has the low-visibility, light grey paint scheme.

Tracker

McDonnell CF-101 Voodoo

CF-101F, 101007, and CF-101B, 101018, of 409 "Nighthawk" All Weather (Fighter) Squadron out of CFB Comox overfly the Rockies wearing the squadron "Hawk" badge on their tails.
(Library & Archives Canada Photo, MIKAN No. 4014847)

In 1961, the RCAF replaced the Avro CF-100 Canuck with second-hand Voodoos from the USAF. The twin-engine, two-place Voodoo's high speed, extreme combat radius, exceptional climb performance and ability to operate at great heights gave it unusual striking power. Their role was to be one of supersonic, all-weather interception and defence of the Northern NORAD Region (Canada), integrated with NORAD. This included 56 CF-101B and 10 CF-101F (Dual control) aircraft. These aircraft did not have an infra-red seeker head and were natural aluminum finish. (Serial Numbers 17xxx)

In 1971, the surviving Voodoos of this original batch were returned to the USAF in trade for newer “Peace Wings” Voodoos to include 56 CF-101B and 10 CF-101F (Dual control) aircraft, plus one EF-101B later leased for 414 Squadron as an EW high speed jammer. These aircraft had the infra-red seeker head and were covered with an anti-corrosion, light grey paint. (Serial Numbers 101xxx) Five squadrons flew the Voodoo: 409, 410, 414, 416 and 425 until it was retired in 1990 and was replaced by the McDonnell Douglas CF-18 Hornet.

In Comox, the Voodoo was employed by 409 All Weather (Fighter) Squadron from 1961 until 1984.

Specifications

Manufacturer:	McDonnell Aircraft Corporation		
Model:	F-101B & F-101F (Dual Control)		
Designation:	CF-101		
Number:	First Batch:	CF-101B	56
		CF-101F	10
	Second Batch:	CF-101B	56
		CF-101F	10
		EF-101B	1 (leased)
In Service:	1961 – 1990 (Retired from flying 9 April 1987)		
Role:	All-Weather, Fighter Interceptor		
Dimensions:	Wing Span:	39 ft 8 in (12.09 m)	
	Length:	71 ft 1 in (21.67 m)	
	Height:	18 ft 0 in (5.49 m)	
	Wing Area:	368 sq ft (34.18 sq m)	
Weights:	Empty:	32,000 lbs (14,515 kg)	
	Gross:	52,400 lbs (23,769 kg)	
Power Plant:	Two Pratt & Whitney J-57-P53/55 Turbojets with 11,990 lbs. (4,863 kg) thrust or 14,990 lbs. (7,680 kg) thrust in afterburner		
Performance:	Maximum Speed:	1,094 mph (1,760 km/hr)	
	Cruise Speed:	546 mph (879 km/hr)	
	Service Ceiling:	51,900 ft (15,819 m)	
	Range:	1,524 miles (2,453 km)	
Crew:	CF-101B:	One Pilot and one Navigator	
	CF-101F:	Two Pilots	
Armament:	Two AIR-2A Genie nuclear tipped rockets & two AIM-4D Falcon missiles		

CF-101B, 17395, a “First Batch” Voodoo with no infra-red seeker head and in natural aluminum finish. It was in service with 409 Squadron.

The AIR-2 Genie (MB-1) was an unguided air-to-air rocket, armed with a nuclear warhead, in use from 1963 to 1984. Its use was under the overall control of NORAD, and positioned at Comox under the custody of US servicemen. It had 36,000 lbs of thrust, a maximum speed of just over Mach 3, and a maximum range slightly in excess of 6 miles.

The Hughes AIM-4D Falcon was a guided air-to-air missile with a conventional warhead. It was infra-red guided, in which the missile homed on the heat signature of a bomber's engines.

CF-101B, 101009, with 425 Squadron unleashes a Genie rocket.

CF-101B, 101014, of 416 Squadron doing an afterburner take-off. (Photo taken from a second aircraft by Capt W. "Turbo" Tarling)

CF-101B, 101015, on active duty with 409 Squadron hangs on the drogue ‘chute as it completes a landing roll out at CFB Comox in 1975. Of note, are the twin, large diameter, 450 US gallon (375 Imp Gal, 1705 Litre) drop tanks.

CF-101B, 101045, in 416 Squadron markings. Note the large size of the Voodoo as compared to the CF-104 Starfighter in tiger strip scheme beside it (104756, 439 Squadron). Also note the rotary weapons bay containing a Falcon missile, in the recessed position, just aft of the nose wheel of the Voodoo.

Heritage Air Park McDonnell CF-101B Voodoo
Serial Number 101030

CF-101B, 101030, on active duty with 409 Squadron, 14 April 1984

CF-101B, 101030, in 409 Squadron markings.

CF-101B, 101030. Note the infra-red seeker head on top of the nose, and the anti-corrosion, light grey paint.

19 Wing Comox Gate Guard McDonnell CF-101B Voodoo

Serial Number 101057

CF-101B, 101012, the original “Hawk One Canada” painted to celebrate 409 Squadron’s 25th year of active duty in 1977.

CF-101B, 101057, the second “Hawk One Canada” of 409 Squadron, painted to celebrate the 60th Anniversary of the RCAF in April 1984.

CF-101B, 101057, the second “Hawk One Canada” of 409 Squadron, mounted at the entrance to 19 Wing, Comox.

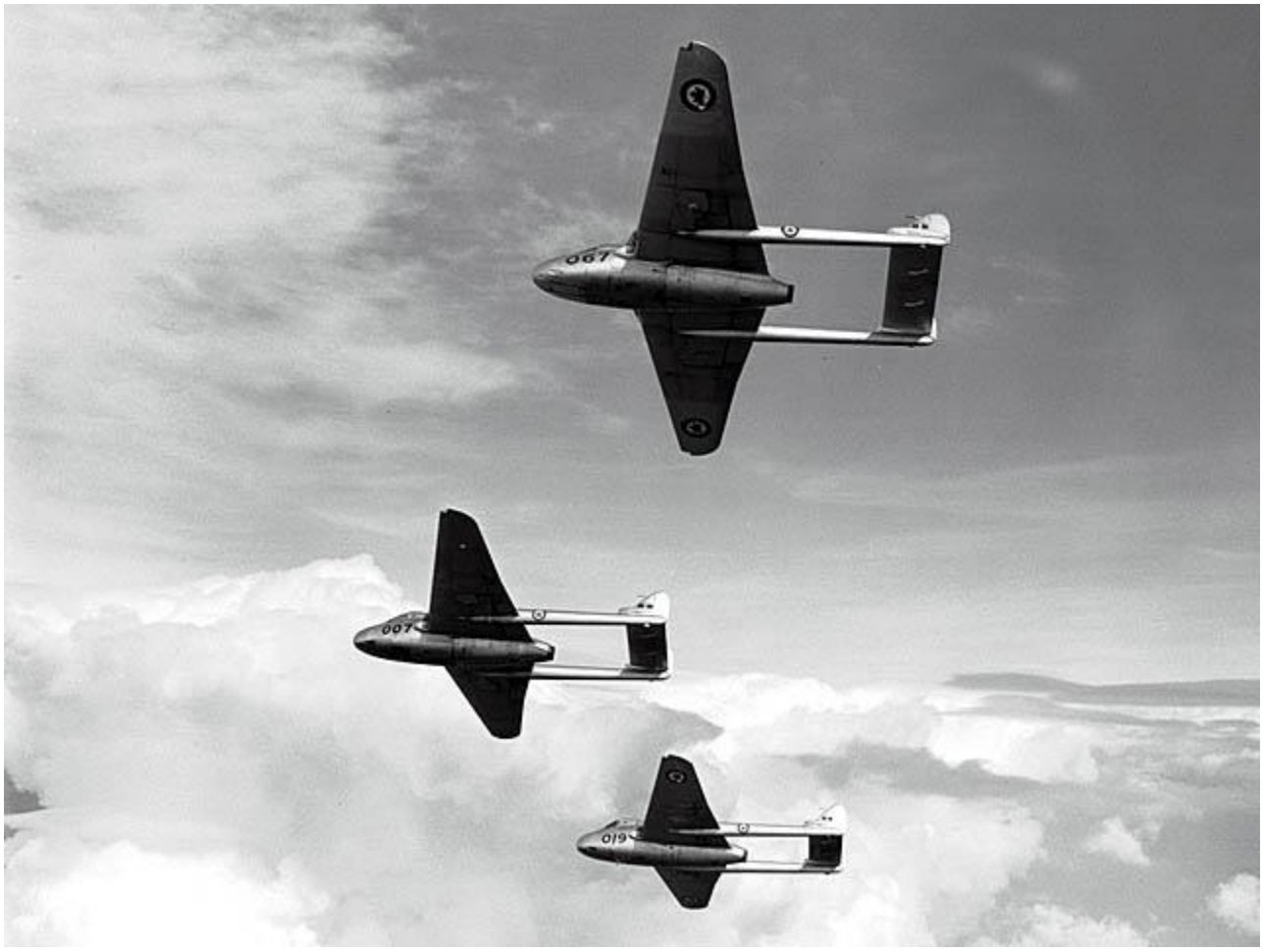
de Havilland DH. 100 Vampire

Mark III Vampire 17021 (DND, PC-251)

The de Havilland Vampire's prototype, nicknamed the "Spider-crab," became the third British jet to fly on 20 September, 1940. In 1948, the RCAF had to choose between the Vampire and another jet, the Gloster Meteor, for the RCAF. The Vampire was chosen, and became the first jet fighter to serve in the RCAF. Planes from this first production run were primarily assigned to auxiliary squadrons, including 442 "City of Vancouver" Auxiliary Fighter Squadron, stationed on Sea Island (Vancouver), BC. The Museum's Vampire, tail number 17031, was of this first run, and was taken on strength on 10 April 1948. It joined three other Vampires and nine Harvard's, that were stationed with 442 (Aux) on Sea Island. The squadron often used the Vampires in local air shows, as well as at summer camps at regular force bases around Western Canada. By 31 March 1950, the Vampires had been moved back east, where No. 17031 would serve with 402 "City of Winnipeg" Auxiliary Fighter Squadron. The Vampires, (including No. 17031), would rejoin 442 Squadron in September 1952, where they remained until 1956. By the early Fifties, it had been determined that the Vampires had been outstripped by newer jet aircraft, and by 1958, the Vampires were replaced by F-86 Sabres.

Specifications (Mk III)

Manufacturer:	de Havilland		
Model:	DH 100		
Designation:	DH 100		
Number:	Mark I	1	
	Mark III	85	
In Service:	1948 to 1958		
Role:	Fighter		
Dimensions:	Wing Span:		40 ft 0 in (12.19 m)
	Length:		30 ft 9 in (9.37 m)
	Height:		8 ft 10 in (2.69 m)
	Wing Area:		226 sq ft (20.99 sq m)
Weights:	Empty:		7,134 lbs (3,235 kg)
	Gross:		11,970 lbs (5,430 kg)
Power Plant:	One 3,100 lb (1,405 kg) thrust de Havilland Goblin 2 Jet engine		
Performance:	Maximum Speed:		531 mph (855 km/h)
	Service Ceiling:		43,500 ft (13,260 m)
	Range:		1,145 miles
Crew:	1 Pilot (no ejection seat)		
Armament:	Four 20 mm cannon		



A flight of Mark III Vampires (17067, 17007 and 17019)

Mark III Vampire 17042 (14 August 1952, Library and Archives Canada Photo, MIKAN No. 3584697)

Mark III Vampire 17058 of the Canadian Museum of Flight in Langley, BC. It is refurbished as Vampire 17012 of 442 (Auxiliary) Squadron. Note the “Bat” nose art which was the Squadron’s unofficial badge during the post war period.

Heritage Air Park de Havilland DH.100 Vampire Mark III
Serial Number 17031

Vampire 17031 was sold off and taken out of Canada. The privately-owned ex-RCAF Vampire was taken onto the Public Account of the Comox Air Force Museum on 5 May 2000. The Vampire arrived in flying condition; however, it is unique in that it has some wooden (plywood) elements in its structure and unsheltered outdoor display would quickly damage it. Therefore, it has since been stored in a hangar.

Four Vampires of 442 (Auxiliary) Fighter Squadron stand ready outside the hangar at Sea Island in the mid-1950s. (M. Higgs)

Although the Vampire was never flown at Comox, it was used by 442 (Auxiliary) Squadron out of Sea Island (Vancouver), BC when it was a fighter squadron. 17031 is the third Vampire from the bottom.

After service with the RCAF, Vampire 17031 was sold to Bill Lamberton and became Vampire N41J in the United States. It is pictured here being flown to Abbotsford Air Show 1983 and is painted in the colours of a Royal Navy Sea Vampire.

Mark III Vampire 17031 refurbished back to its original RCAF paint scheme. (17 Aug 2013, Comox Air Show, BC)

Mark III Vampire 17031 refurbished back to its original RCAF paint scheme. (17 Aug 2013, Comox Air Show, BC)

Mark III Vampire 17031 refurbished back to its original RCAF paint scheme. Note it still carries the American registration N41J. (17 Aug 2013, Comox Air Show, BC)

Boeing Vertol CH-113 Labrador & CH-113A Voyageur

CH-113 Labrador 11318 Note the improved high-speed rescue hoist mounted over the side door in the extended position and the nose-mounted weather radar.

Boeing Vertol developed the CH-46A “Sea Knight”, a large, tandem-rotor helicopter, for the US Marines and the US Navy. The RCAF acquired the CH-113 Labrador version, basically a CH-46A with a search radar in the nose and greater fuel capacity, to be used primarily for Search and Rescue work. The Canadian Army acquired the CH-113A Voyageur version, being close to stock CH-46As, for Mobile Command to be used as tactical air support for the transport of troops and supplies.

With the integration of the Canadian Forces in 1968, both versions were merged, upgraded and standardized for SAR, and called “Labrador”. It had a watertight hull for marine landings, a rescue hoist, 1,110 kilometer flying range, 5,000 kilogram cargo hook, emergency medical equipment and an 18 person passenger capacity.

The Labrador was flown by 121 Composite Unit at Sea Island (Vancouver) and Comox, BC. Then it was flown in Comox by 442 Search and Rescue Squadron in the SAR role until replaced by the AgustaWestland EH-101 Cormorant helicopter in 2004.

Specifications

Manufacturer:	Boeing Vertol	
Model:	CH-46A (V-107/II)	
Designation:	CH-113	Labrador for RCAF
	CH-113A	Voyageur for Canadian Army
Number:	CH-113	6
	CH-113A	12
In Service:	1963 to 2004	
Role:	Transport/SAR Helicopter	
Dimensions:	Rotor Diameter:	52 ft 0 in (15.45 m)
	Length:	84 ft 4 in (25.70 m)
	Height:	16 ft 9 in (5.09 m)
Weights:	Empty:	12,405 lbs (5,625 kg)
	Gross:	18,700 lbs (8,482 kg)
Power Plant:	Two 1,350 ESHP General Electric T-58-GE-85 turbine engines	
Performance:	Maximum Speed:	170 mph (274 km/hr)
	Cruising Speed:	145 mph (233 km /hr)
	Service Ceiling:	10,600 ft (3,180 m)
	Hover Ceiling:	6,525 ft (1,989 m)
	Range:	690 miles (1,110 km)
Crew:	Two pilots and one Flight Engineer plus SAR Techs (up to 26 Passengers)	

CH-113A Voyageur 11318, seen here accoutered for its original role as tactical air support for the Canadian Army. When purchased in 1964, the twelve Voyageurs were the equipment of 1 Transport Helicopter Platoon Based at Rivers, Manitoba and gave the Army the capability to lift up to 2.5 tons, carry 24 troops, sling field pieces, light vehicles or supplies up to the fighting troops, and carry out the wounded.

CH-113 Labrador 10401 shown in the original Search and Rescue colours. Note the larger sponsons on the Labrador.

CH-113 Labrador 11301 plucking a person from the water using a “Billy Pugh” net on the rescue hoist. This is an early version of the Labrador. Note the rescue hoist is the “original” style contained inside the rescue door; later it was mounted outside and above the door. Also, there is no nose radar radome.

CH-113 Labrador using the rescue hoist during a live hoist exercise. This updated Labrador has the improved high-speed rescue hoist mounted over the side door and a nose-mounted weather radar.

CH-113 Labrador 11318 showing off the watertight hull for marine landings. Note the FOD screens on the engine intakes.

CH-113 Labrador 11318. The arrival of a rescue helicopter is the most beautiful sight to a person in distress. Note the front-mounted searchlights.

Heritage Air Park Boeing Vertol CH-113 Labrador

Serial Number 11310

CH-113 Labrador 11310. Note the improved high-speed rescue hoist mounted over the side door in the folded position.

CH-113 Labrador 11310 showing the nose-mounted weather radar

Canadair CF-104 Starfighter

Heritage Air Park Canadair CF-104 Starfighter 104731 of 417 Squadron, Cold Lake

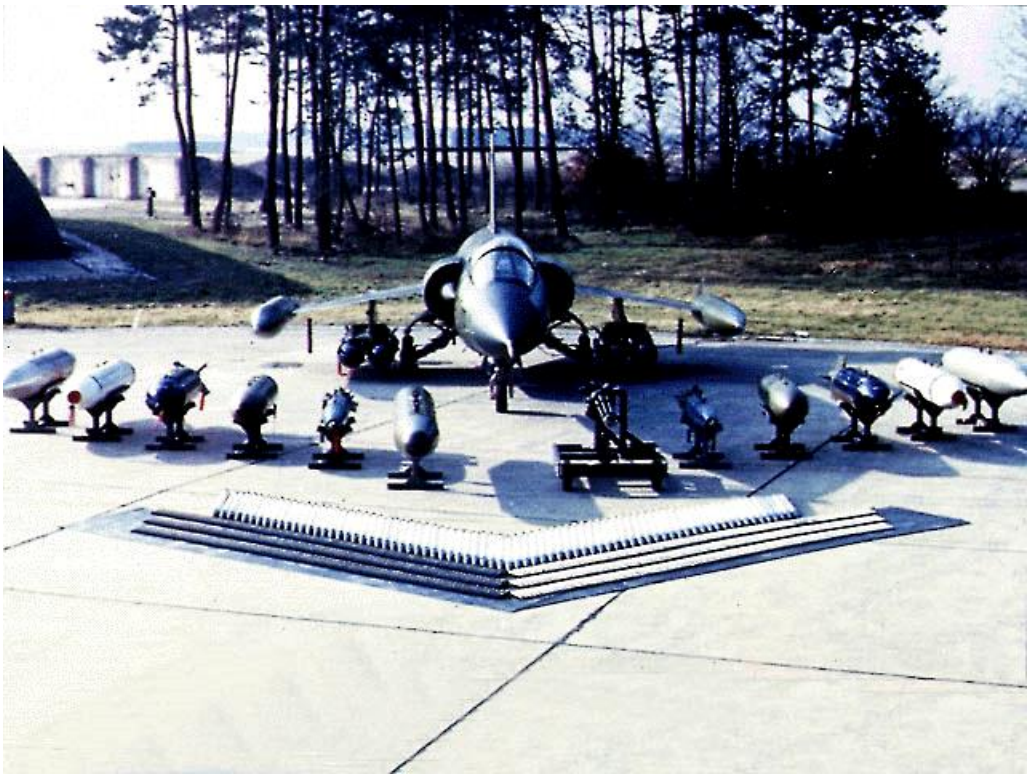
The Canadair CF-104 Starfighter, built under license from Lockheed, entered RCAF service in 1961 to replace the Canadair Sabre serving as the front line fighter with NATO in Europe. It evolved from a defence aircraft capable of nuclear strike and photo-reconnaissance role, prior to 1970, to an all-out low level conventional strike machine with outstanding speed, climb, and altitude capabilities.

The aircraft was known by a wide variety of nicknames, some flattering and some not so flattering. The “missile with the man in it” referred to the design while “flying lawn dart” and “widow maker” referred to the high number of crashes the type suffered in the early years. The Starfighter was employed by six nuclear strike squadrons in Germany (421, 422, 427, 430, 439. and 444) and two photo-reconnaissance squadrons in France (439 and 441).
The Starfighter was retired in 1988 and replaced by the McDonnell Douglas CF-18 Hornet.

Thirty-eight dual-seat Starfighters (CF-104D) were also produced by Lockheed for the RCAF. These were mainly used for training by No. 6 Strike/Reconnaissance OTU established at Cold Lake, Alberta in late 1961 and eventually re-designated 417 Strike/Reconnaissance Operational Training Squadron (Disbanded July 1983). 448 Sqn, CEPE and AETE also used Starfighters.

Specifications

Manufacturer:	Canadair license-built version of Lockheed design	
Model:	F-104G /CL-90	
Designation:	CF-104 (single-seat), CF-104D (two-seat)	
Number:	Lockheed F-104A	1
	Canadair CF-104	200
	Lockheed CF-104D	38
In Service:	1961 – 1988 (Retired from flying 15 November 1988)	
Role:	Conventional and Nuclear Strike, Fighter, Photo-Reconnaissance	
Dimensions:	Wing Span:	21 ft 11 in (6.68 m) without tip tanks
	Length:	54 ft 9 in (16.69 m)
	Height:	13 ft 6 in (4.11 m)
	Wing Area:	196 sq ft (18.21 sq m)
Weights:	Empty:	14,082 lbs. (6,387 kg)
	Gross:	28,779 lbs. (13,510 kg)
Power Plant:	One General Electric (Orenda built) J-79-OEL-7 turbojet with afterburning (10,000 lbst to 15,800 lbst in afterburner)	
Performance:	Maximum Speed:	Mach 2.2, 1,450 mph (2,334 km/hr)
	Cruising Speed:	Mach 1.2, 915 mph (1473 km/hr)
	Service Ceiling:	58,000 ft. (17,660 m)
	Range:	2,180 miles (3,510 km)
Crew:	One or two Pilots in ejection seats	
Armament:	Provision for one 20 mm M61A-1 cannon, plus bombs, rockets, or fuel tanks on under wing or fuselage pylons. Missiles or fuel tanks on wingtips.	



This CF-104 was photographed at CFB Baden Soellingen, West Germany and shows the conventional weapons layout. From left to right: a napalm bomb, a cluster bomb, a BL755 cluster bomb, a 19 rocket rocket-pod, a Mk. 82 bomb, a MN1A practice bomb dispenser, an M61A1 Vulcan 20mm cannon, and arranged in a "V" in the foreground are the rockets from the rocket-pod, and the 20mm ammunition for the cannon.

The opened weapons bay of a West German Luftwaffe Starfighter, showing the M61A1 Vulcan cannon installation. This was a six-barreled Gatling-style rotary cannon which fired 20 mm rounds at a rate of 6000 rounds per minute. The Starfighter carried 600 rounds. Initially, Canadian Starfighters did not carry the Vulcan cannon, which was intended for use by air-to-ground combat aircraft. The CF-104 was optimized for bombing and instead of the cannon, carried 101 Imperial gallons (459 Litres) of more internal fuel. However, by 1972, its role had changed from a penetrator Nuclear Strike role, to that of a Conventional Attack NATO asset (strike/reconnaissance), and the Vulcan cannon was installed on Canadian Starfighters.

A Lockheed built CF-104D, 12641, over Toronto, sporting the polished aluminum fuselage, white wings and red tip tanks and tail colour scheme. These two-seat Starfighters were mainly used by 417 Strike/Reconnaissance Operational Training Squadron at Cold Lake, Alberta.

Canadair CF-104, 104714, performing a low pass at an air show. It has the latest dark green camouflage overall colour scheme for Canadian Starfighters in Europe.

Canadair CF-104, 104704, is from the Aerospace Engineering Test Establishment (AETE) at Cold Lake and is firing Canadian-built CRV-7 rockets on the Primrose Lake Evaluation Range. The maximum rocket load of the CF-104 was 76 rockets.

A flight of Canadair CF-104's with the Vicon photo-reconnaissance pod on the fuselage centerline. The pod housed four 70 mm Vinten cameras.

Heritage Air Park Canadair CF-104 Starfighter

Serial Number 104731

Although never actively based in Comox, the Starfighter often visited from its primary base in Cold Lake, Alberta.

Canadair CF-104, 104731, with the original camouflage paint scheme used in Europe.

Canadair CF-104, 104731, with the original camouflage paint scheme used in Europe.

Canadair CF-104, 104731, newly painted in July 2014. This colour scheme represents Starfighter 104763 which carried this celebratory paint scheme for the occasion of 417 Strike/Reconnaissance Operational Training Squadron's colours presentation after 25 years of active service on 4 June, 1983 and then a month later in July, 1983, on the occasion of 417 Squadron's disbandment; the last Starfighter squadron.