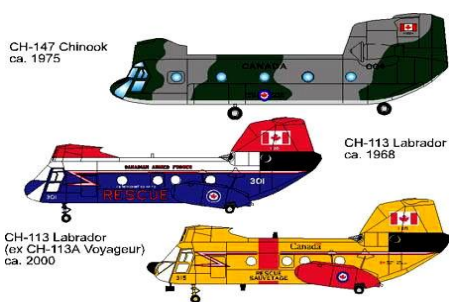


Boeing/Vertol  
*Labrador*  
CH 113/113A



**Greenwood Military Aviation Museum**  
**14 Wing Greenwood, Nova Scotia**

The **Labrador** aircraft is a twin-engine, tandem-rotor search and rescue (SAR) helicopter used by the Canadian Forces from 1963 until 2004. A variant of the Boeing-Vertol CH-46 *Sea Knight*, it was designed and built in the United States. Six search and rescue versions, manufactured in 1963 by the Boeing-Vertol division in Morton, Pennsylvania, were purchased by the Royal Canadian Air Force (RCAF) and known as the CH-113 *Labrador (Lab)*. The Canadian Army acquired 12 of the similar CH-113A *Voyageurs* for the medium-lift transport role, but when the larger CH-147 *Chinooks* were procured in the mid-1970s, the *Voyageur* fleet was transferred to the SAR role providing 15 SAR aircraft across Canada divided into 4 units: 442 Sqn Comox, BC; 424 Sqn Trenton, ON; 413 Sqn Summerside, PE (Greenwood, NS when 413 was moved) and 103 RU/Sqn Gander, NF.



The tandem, counter-rotating, three-bladed rotors were powered by two GE T58 turboshaft engines, mounted in the rear fuselage and connected by two drive-shafts to a combining gear-box attached to the aft transmission. Power to the forward transmission was achieved through five sync-shafts. With three

fixed tricycle landing gear and twin wheels on all three, the air-craft had a nose-up stance to facilitate cargo handling. Sponsons housed the main gear, 350 US gals (1,438 litres) of fuel and fuel dump tubes. A mid-life upgrade, SAR-CUP (Search and Rescue Capability Upgrade Program), in 1981 included new instrumentation, a nose-mounted weather radar, a tail-mounted auxiliary power unit, a new high-speed rescue hoist (300 feet per min and 600 lbs limit) mounted over the RH side door, front-mounted searchlights, a loud- hailer system, hydraulic rear ramp actuators, and long-range fuel tank sponsons. A total of six CH-113s and five CH-113As were upgraded, with the last delivered in 1984 and all called by the CH-113 *Labrador* name.





**CH-113 picking up a survivor**

The *Labrador* had a watertight hull for marine landings and a water dam could be installed forward of the rear loading ramp for water deploying a zodiac or swimmers. An internal winch mounted in the forward cabin was used to assist pulling in cargo and was used as a backup rescue hoist via pulleys in

the event of a main external hoist failure.

The first *Labrador* (301) was delivered in 1963 to 102 Rescue Unit (RU) Trenton, ON (later 424 Sqn) and the last to serve (2004); 103 RU Gander, NF flew these aircraft from 1977 to 2003, 442 Sqn Comox, BC from 1968 to 2002, and 413 Sqn Summerside, PE from 1968 to 1991 and Greenwood, NS from 1991 to 2002. 413 Sqn flew the *Labrador*



**CH-113 in early colour scheme**

until it was replaced in 2002 by the larger *Cormorant*. During the Squadron's stay in Greenwood, *Labrador* 305 crashed in Marsoui, QC 2 Oct 1998 returning from a SAR mission. All six on board were killed. A memorial to the crew is contained in the Museum's Commemorative Gardens.



**Museum's CH-113A**



The Museum's aircraft, number 308, ended its life as a training aid in CFB Borden; hence the clipped rotors.

## ***Aircraft Specifications***

**Role:** Search and Rescue

**Number built for Canada:** 18

**Manufacturer:** Boeing-Vertol

**Crew:** 3 (flying) Pilot, Co-Pilot, Flight Engineer (SAR technicians) as required;  
4 for confined area operations; 5 normal operations

With 18 max total on board

**Powerplants:** two T58-100 turboshaft of 1,500 shp (1103 kw)

**Maximum speed:** 168 mph (146kts/270 kph)

**Cruising speed:** 160 miles per hour (140 kts/257 kph)

**Service ceiling:** 14,000 ft (4,265 m)

**Range:** 1,110 kms (684 miles)

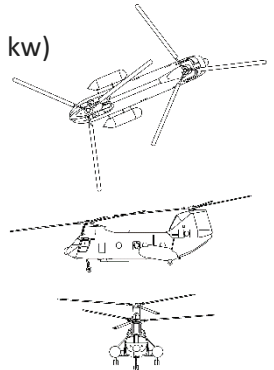
**Empty Weight:** 11,251 lbs (5,104 kgs)

**Max Weight:** 21,400 lbs (9,706 kgs)

**Rotor Diameter:** 50 ft (15.2 m)

**Length:** 83 ' 4" (25.4 m)

**Height:** 16' 8" (5.1 m)



**The Greenwood Military Aviation Museum** is located just outside the main gate at 14 Wing Greenwood in Nova Scotia's Annapolis Valley. Its mandate is to capture, preserve and interpret the history and heritage of Station/Base/14 Wing Greenwood and its units (formed overseas in 1941) and from its birth as an RAF Station in 1942 as an Operational Training Base within the British Commonwealth Air Training Plan during WW II, until present day operations.

Six distinct ever-changing areas can be seen inside the 10,000 square foot complex and 6,000 square foot extension (featuring WW II aircraft). The outdoor Air Park displays nine different aircraft types flown at Greenwood, from a wartime *Lancaster* to today's *Aurora*. Three other aircraft and various projects are in various restoration phases, with the majority of work being completed by Museum volunteers.

Admission to all venues is FREE, although donations are gratefully accepted, and tax receipts will be presented on request (certain limits apply). Shop the Museum gift shop, do research in the library and enjoy the opportunity to take a step back in time.

**Greenwood Military Aviation Museum**

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