



Restrel Publications



**LEONARDO CH-149 CORMORANT
ROYAL CANADIAN AIR FORCE SERIAL NUMBERS &
INDIVIDUAL HISTORIES**



by T.F.J. Leversedge

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Overview

This publication is intended to provide a brief overview / summary of individual aircraft histories using information drawn from personal documents / records and other publicly available references identified at the end of the publication. In addition, this information has been further supplemented and / or verified against available RCAF incident / accident reports.

About the Author



Terry Leversedge was born in Moose Jaw, Saskatchewan, while his father was serving at Royal Canadian Air Force (RCAF) Station Moose Jaw. He later graduated from the Royal Military College, Kingston, with a degree in Mechanical Engineering in 1979, and then received a Masters degree in aerospace vehicle design from the Cranfield Institute of Technology in the United Kingdom. His career in military aerospace engineering encompassed a wide number of positions at both field units and within the headquarters of the RCAF, before he retired after 35 years of service at the rank of Brigadier General. Now an aviation consultant and amateur historian, he is the author of other commercially available books on Canadian military aviation subjects and has published numerous articles as the Editor-In-Chief at *Airforce* magazine, the flagship publication of the Royal Canadian Air Force Association.

Additional Information

The information in this serial as accurate and up to date as possible based upon the available public sources. It should not, however, be construed as an "official" list nor 100% accurate. Any errors of commission or omission are solely those of the author. As with all endeavours of this nature, however, the author would be pleased to hear of any additional information and / or corrections. Please provide any details to: Kestrel Publications at kestrelpubs@gmail.com

Dedication

This publication is dedicated to all those who fly and maintain these CH-149 aircraft.

Cover Image Notes

CH-149 *Cormorants* on the ramp in 14 Wing, Greenwood, NS. - (CF Photo # GD2009-0154-16)



Kestrel Publications
Ottawa, Ontario, Canada
www.kestrelpublications.com

CH-149 Cormorant Serials

RCAF #	Designer	Manufacturer	CF designation	c/n	Name
149901	EHI	Agusta	CH-149	CSH01/50054	Cormorant
<p>TOS: 27 October 2000 - First flight, at Verigate, Italy</p> <p>Used for company trails in Italy, flying over 100 hours. Left Verigate, Italy on March 12, 2002 for ferry flight to Canada. Used for cold weather and icing trials at Goose Bay in March and April 2002. To No. 442 (T&R) Squadron, CFB Comox, BC, on May 3, 2002. Declared operational in August 2002. Reached 1,000 airframe hours on March 8, 2004. Still with this unit in October 2005. Several occurrences of sheared bolts in the number 3 engine torque tube on this aircraft, in 2004 and 2005.</p>					
149902	EHI	Agusta	CH-149	CSH02/50058	Cormorant
<p>TOS: 30 May 2000 - Rolled out at Verigate, Italy, in full Canadian markings.</p> <p>With No. 442 (T&R) Squadron at CFB Comox, BC, delivered February 7, 2002, still there in October 2005. With No. 413 Sqn in Greenwood, NS in 2013.</p>					
149903	EHI	Agusta	CH-149	CSH03/50071	Cormorant
<p>TOS: circa 2002</p> <p>Used for manufacturer's trials. Passed through Newcastle, UK on 4 July 2002 on ferry flight to Canada. Arrived at CFB Gander on July 8, 2002. Then with No. 442 Squadron, CFB Comox, BC as of 2003. On Mar 10, 2022, this a/c, call sign "Outcast 903", with a crew of six, was scheduled for two crew training missions based out of 9 Wing located at Gander International Airport (CYQX), N.L. The first training mission was scheduled in the afternoon and was primarily focused on overland Search and Rescue evolutions for the Flight Engineer Under Training. At the end of the first training mission, the crew conducted hover work in the vicinity of the intersection of runways #31 and #21. During the final clockwise hover turn sequence, the pilot flying's seat unexpectedly descended to its lowest position. The aircraft flight vector immediately reversed from a clockwise rotation to an accelerated counterclockwise left yaw about the aircraft mast. As the a/c continued to yaw left, the attitude of the a/c became unstable resulting in an increasing right bank attitude. The aircraft rotated through approximately 400° and as the right rolling moment intensified, the right outboard wheel, the horizontal stabilizer assembly located on the right side of the tail section, and main rotor blades impacted the runway at 15:43 hrs local time. There was no post-crash fire. The a/c impact with the ground caused very serious damage. Three of the six occupants sustained minor injuries while two occupants sustained serious injuries.</p>					
149904	EHI	Agusta	CH-149	CSH04/50076	Cormorant
<p>TOS: circa 2001</p> <p>Assigned to No. 442 (T&R) Squadron, CFB Comox, BC. Ferried from Italy, passed through Keflavik, Iceland October 2001. Delivered to Comox, BC on October 20, 2001. Formally handed over to unit on 30 October 2001, by Minister of National Defence, Art Eggleton. Still with this unit in October 2005. Reached 2,000 flight hours on August 9, 2006, first AW101 to reach this number of flying hours. Still with this unit on 18 August 2007, when it rescued survivors of a Cessna 172 crash near Squamish, BC and transported them directly to Vancouver General Hospital. Joint training exercise with US Coast Guard at Cape Disappointment, Washington in January 2012.</p>					
149905	EHI	Agusta	CH-149	CSH05/50080	Cormorant
<p>TOS: circa 2001</p> <p>Assigned to No. 442 (T&R) Squadron, CFB Comox, BC. Ferried from Italy, passed through Keflavik, Iceland October 2001. Delivered to Comox on October 20, 2001. Transferred to No. 424 (T&R) in Trenton, ON in 2005. With No. 413 Sqn in Greenwood, NS in 2015.</p>					
149906	EHI	Agusta	CH-149	CSH06/50090	Cormorant
<p>TOS: circa 2002</p> <p>Arrived at CFB Gander in July 2002. With No. 103 (S&R) Squadron at CFB Gander, NF.</p>					



149907	EHI	Agusta	CH-149	CSH07/50090	Cormorant
<p>TOS: circa 2002</p> <p>Assigned to No. 442 (T&R) Squadron, CFB Comox, BC. Arrived at Comox on February 7, 2002.</p>					
149908	EHI	Agusta	CH-149	CSH08/50098	Cormorant
<p>TOS: circa 2002</p> <p>Passed through Newcastle, UK on 4 July 2002 on ferry flight to Canada. With No. 103 (S&R) Squadron at CFB Gander, NF. Arrived at Gander on 8 July 2002. Category "D" damage on 20 September 2004, when both rescue hoists failed during a rescue at Bonavista Bay, NF. Cracks discovered in tail rotor hub in October 2004, leading to fleet wide operating restrictions. With 413 (T&R) Sqn in Greenwood, NS in 2013 & 2014. In 2014, this a/c was air-freighted to Peru in a CC-177 Globemaster for a South American exercise, called "Cooperación III", which was focused on disaster relief, humanitarian aid. The a/c required disassembly, the use of a special Air Transport Kit and reassembly before use.</p>					
149909	EHI	Agusta	CH-149	CSH09/50102	Cormorant
<p>TOS: circa 2002</p> <p>Assigned to No. 413 (T&R) Squadron at CFB Greenwood, NS. Arrived at Greenwood on 24 August 2002.</p>					
149910	EHI	Agusta	CH-149	CSH10/50112	Cormorant
<p>TOS: unknown</p> <p>Assigned to No. 413 (T&R) Squadron at CFB Greenwood, NS in 2016.</p>					
149911	EHI	Agusta	CH-149	CSH11/50119	Cormorant
<p>TOS: unknown</p> <p>Assigned to No. 413 (T&R) Squadron at CFB Greenwood, NS. With 442 (T&R) Sqn in Comox, BC in 2014. An unusual incident happened on Sep 16, 2020, when a polar bear damaged this helicopter, which still belonged to the 413 Sqn. It was performing a planned two-week mountain flying search and rescue exercise and diverted to Saglek airfield in Labrador when poor weather prevented the aircrew from landing at their preferred location at a nearby automated radar station, about 4 km from the airfield and at higher altitude. But because of the weather, they had to land at the airfield which was closer to sea level. The crew had to park the aircraft down below, not up at elevation like they wanted to. That area had a body of water on either side and polar bears do occasionally transit on either side of them, and this case that's what happened. Sometime during the night, During the night, while the crew was sleeping at the radar station, a curious polar bear began to investigate the helicopter. The bear fortunately only caused "superficial damage", popping an emergency entrance window on the right side door, another emergency entrance window on the rear left side and the cover of what should be the emergency floatation device on the left side, just below the cockpit.</p>					
149912	EHI	Agusta	CH-149	CSH12/50124	Cormorant
<p>TOS: unknown</p> <p>Assigned to No. 442 (TR) Squadron at CFB Comox, BC in October 2005. With No. 413 Squadron on east coast in September 2009, when it carried out joint training exercise with US Coast Guard vessel, near Lunenburg. With No. 103 Squadron in September 2009. Still with this Squadron when it rescued crew from fishing vessel Seafaring Legend on October 24, 2009, in severe weather conditions, 40 miles north of Fogo Island. Crew received 2010 Cormorant Trophy from Agusta Westland for this rescue. Still with 103 Squadron when a different crew won the 2013 Cormorant Trophy and the Prince Phillip Helicopter Rescue Award for the February 3, 2013 rescue of three hunters stranded on an ice floe off Newfoundland, in extremely poor weather (80 kph winds, heavy snow and icing)</p>					



149913	EHI	Agusta	CH-149	CSH13/50130	Cormorant
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TOS: circa 2003

Passed through Yeovil, UK on 6 May 2003 on ferry flight to Canada. At Newcastle, UK on 10 May 2003. First delivered to No. 413 (T&R) Squadron at CFB Greenwood, NS. Operated by No. 424 (T&R) Squadron at CFB Trenton, ON in October 2005. Based at CFB Gander, NF by June 2006, with No. 103 (S&R) Squadron. With 413 Squadron at Greenwood in November 2013.

149914	EHI	Agusta	CH-149	CSH14/50134	Cormorant
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TOS: 2003 - Delivered to CF

Passed through Yeovil, UK on 6 May 2003 on ferry flight to Canada. At Newcastle, UK on 10 May 2003. Served with No 103 (S&R) Sqn dates unknown. Then with No. 413 (T&R) Squadron at CFB Greenwood, NS. "Tusker 914" was destroyed in a crash during night training off Canso, NS on July 13, 2006. First CF CH-149 Cormorant loss, and first fatalities. Two FEs and a SAR Tech in rear killed, 4 other crew were injured. Sgt Duane Brazil, MCpl Kirk Noel and Cpl Trevor McDavid perished. The survivors included Sgt Martin Molony, Capt Ronald Busch, Capt Gabriel Ringuette and Maj Gordon Ireland. At the time of the accident #149914 had accumulated 1,139.3 rotor hours.

SOS: 13 July 2006 - Cat "A" write-off

149915	EHI	Agusta	CH-149	CSH15/50142	Cormorant
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TOS: 2003 - Delivered to CF

Ferried to Canada in July 2003, passing through Norway, Holland, Belgium, Scotland and Ireland. First operated by No. 424 (T&R) Squadron at CFB Trenton, Ontario. Transferred in late 2005 to No. 413 (T&R) Sqn in Greenwood, NS. With No. 103 (R) Squadron by 2007. Category "C" damage on October 16, 2008 near Gander, main rotor blades contacted trees during night confined area training. Still with this unit when it rescued two hunters, two surviving SAR Techs and one deceased SAR Tech from ice floes off Igloolik, Nunavut at dusk on October 27, 2011. Crew flew 2,780 km with three fuel stops from Gander, made rescues in 90 kph winds and 10 m waves. Survivors delivered to Igloolik 18 hours after the helicopter had departed Gander. Crew received 2012 Cormorant Trophy and the Guild of Air Pilots and Air Navigators (GAPAN) Guild Award for Gallantry for this mission.

ADDITIONAL NOTES

NB - In 2016, following a corporate reorganization, Agusta Westland merged into Leonardo S.p.A., Finmeccanica's new name. With this reorganization, Agusta Westland ceased to exist as a separate company, and it became the Leonardo helicopter division. In summary, the RCAF received a total of 15 Leonardo AW101 helicopters. It is referred to in CF technical documentation and files as the "CH-149 Cormorant".

Operating Units

The following units are using or have flown CH-149 Cormorant helicopters:

- No. 103 (Search & Rescue) Squadron, Gander, NF
- No. 413 (Transport & Rescue) Squadron, Greenwood, NS
- No. 424 (Transport & Rescue) Squadron, Trenton, ON
- No. 442 (Transport & Rescue) Squadron, Comox, BC
- Aerospace Engineering Test Establishment (AETE), Cold Lake AB

Aircraft (or Air Vehicle) Damage Level (ADL) Categories: ¹

The RCAF's ADL is a qualitative categorization system used to determine the level of damage sustained by an aircraft / air vehicle during an occurrence. The following damage level definitions are used to reflect the degree of damage:

¹ Drawn from: A-GA-135-001/AA-001 Manual of Flight Safety for the CF



Cat "A" = Destroyed / missing: The aircraft has been totally destroyed, is assessed as having suffered damage beyond economical repair or is declared "missing";

NB - Aircraft totally destroyed are normally written off the inventory. Accidents with a lower ADL may also subsequently result in administrative write-off of the aircraft for reasons (primarily economic) not directly related to the original damage assessment.

Cat "B" = Very Serious: The aircraft has sustained damage to multiple major components;

Cat "C" = Serious: The aircraft has sustained damage to a major component;

Cat "D" = Minor: The aircraft has sustained damage to non-major components; and

Cat "E" = Nil: The aircraft, including the power plant, has not been damaged.

Number of CF CH-149 Cormorant Cat "A" write-offs = 1 (~ 7% of the total fleet)

ABBREVIATIONS

AB	=	Alberta (Canada)
BC	=	British Columbia (Canada)
CF	=	Canadian Forces
CFB	=	Canadian Forces Base
C/N	=	Construction Number
FE	=	Flight Engineer
Flt	=	Flight
NF	=	Newfoundland (Canada)
NS	=	Nova Scotia (Canada)
ON	=	Ontario (Canada)
OTU	=	Operational Training Unit
RCAF	=	Royal Canadian Air Force
SAR Tech	=	Search & Rescue Technician
S & R	=	Search & Rescue
SK	=	Saskatchewan (Canada)
S/N	=	Serial Number
Sqn	=	Squadron
SOS	=	Struck Off Strength
T & R	=	Transport & Rescue
TOS	=	Taken On Strength
UK	=	United Kingdom

(Current) RCAF RANKS

Aviator	-	Avr
Corporal	-	Cpl
Master Corporal	-	MCpl
Sergeant	-	Sgt
Warrant Officer	-	WO
Master Warrant Officer	-	MWO
Chief Warrant Officer	-	CWO
Officer Cadet	-	Ocdt
2nd Lieutenant	-	2nd Lt
1st Lieutenant	-	Lt
Captain	-	Capt
Major	-	Maj
Lieutenant Colonel	-	LCol
Colonel	-	Col
Brigadier General	-	BGen
Major General	-	MGen
Lieutenant General	-	LGen



REFERENCES:

Government Reports:

- Canadian Forces Flight Safety Investigation Report - File #1010-149914 (DFS 2-3), 22 January 2008, *CH149 Cormorant 149914 "A" Category Accident*

Articles

- Lake, J., "AugustaWestland EH101 / AW101", *International Air Power Review Magazine* - Volume 22, 2007.

Websites

- <http://www.rwrwalker.ca>

