

# BACK TO THE FUTURE

The return of De Havilland with a capital 'D'

*by* HOWARD SLUTSKEN



**D**e Havilland Canada is back, a newly resurrected company that is celebrating its ties to the past while it looks to the future. Now under the umbrella of Longview Aviation Capital, what was previously the Bombardier Q400 regional turboprop has been restored to its original designation, the Dash 8-400. The “Q” is gone.

De Havilland Canada – or DHC – will go forward as a new brand that respects the legacy of aviation pioneer Sir Geoffrey de Havilland, who established the Canadian division of the British company in 1928.

“We’re the new stewards of the brand. However, we’re differentiating it by reintroducing the well-known name with a capital “D,” said Dave Curtis, Executive Chair, Longview Aviation Capital, in an interview with World of Aviation.

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Alaska Airlines’ regional carrier, Horizon Air, is one of the largest operators of the De Havilland Canada Dash 8-400.

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Longview concluded its acquisition of the program from Bombardier in June 2019, including the Dash 8 final assembly line in Toronto, and Curtis knew that the DHC brand was a key component of the agreement.

“Frankly, as part of our negotiations with Bombardier, we made it clear that obtaining the de Havilland name was critical to the deal,” he said. “We’ve got 1,300 new employees that came across from Bombardier, and I can tell you that the love for the brand at this site (in Toronto) is incredible.”

It took more than 25 years and a very circuitous path before the way was paved for the return of the DHC brand, a path that speaks to the

strengths – and weaknesses – of Canada’s aviation industry.

But before looking to the future of DHC, it’s important to understand the past.

The realities of Canada’s massive geography made it a natural incubator for aviation. Despite having the United States as an influential next-door neighbour, Canada’s innovative aerospace sector developed independently.

Although there have been missteps along the way, the country’s aerospace manufacturers continue to be a key component of the world’s aviation landscape.

Canada has a rich aviation heritage dating back well over a century,

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Canada’s WestJet Encore only flies the De Havilland Canada Dash 8-400, with 47 aircraft in the fleet. The airline flies regional routes, coast-to-coast.

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beginning with the 1908 flight of Alexander Graham Bell’s Silver Dart in Baddeck, Nova Scotia.

With close ties to the United Kingdom, famous aero-marques including A.V. Roe, Bristol, Hawker Siddeley, de Havilland and Vickers eventually set up shop in Canada.

Over 11,000 aircraft were manufactured in Canada during

“The realities of Canada’s massive geography made it a natural incubator for aviation



Short-Take-Off-and-Landing (STOL) Dash 7 and regional Dash 8 turboprop airliners rounding out the DHC lineup until the company's purchase by Boeing in 1986.

In 1992, acquisition-hungry Bombardier bought DHC from Boeing. By that time, only the Dash 8 remained in production in Toronto, with the 37-seat -100 series, and the 50-seat -300 series.

Under Bombardier, the Dash 8 evolved into the larger 75-seat Q400, with the "Q" for "Quiet." To reduce in-cabin noise from the large, six-bladed

Jazz Aviation operates Air Canada Express (below), another Canadian operator of the Dash 8-400. Bottom: Porter Airlines is based at the compact Billy Bishop Toronto Island Airport (YTZ) in downtown Toronto.

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props and powerful Pratt & Whitney Canada turboprop engines, an active noise and vibration system was installed.

Pilots, in an updated cockpit with digital displays, cruise the technologically-advanced, speedy turboprop at 25,000 feet.

Bombardier now had the combo of its industry-changing CRJ-series of regional jets and the Q400 to meet airlines' fleet requirements, from regionals to mainline carriers.

But the Montreal-based airframer aspired – and struggled – to evolve into



World War II, from trainers to fighters and bombers, from Tiger Moths to Hurricanes, Mosquitos and Lancasters.

Post-war, the Canadian industry was at the forefront of global aeronautical technology with designs such as Avro Canada's Arrow and Jetliner. But while neither of those remarkable aircraft entered production, the legendary planes of de Havilland Canada have endured for over 70 years.

The DHC-2 Beaver bush plane first flew in 1947, leading to the larger Otter and then the turboprop-powered Twin Otter in 1965. DHC's Caribou and Buffalo transports began flying in the late 1950s and 1960s, with the



something greater, an objective that would eventually bring de Havilland Canada back to the commercial aircraft business.

After a decade-long gestation to bring a new larger regional jet to market, Bombardier announced the launch of the 100- to 130-seat CSeries at the 2008 Farnborough Air Show.

The new jet would be one of the first to fly with the advanced Pratt & Whitney geared turbofan engine, which promised greatly reduced

operating costs and a lower noise profile by the addition of a gear system that allowed engine's core and fan to spin at different speeds.

From launch, the CSeries faced extreme competitive pressure from Airbus and Boeing. Both the US and European planemakers worked to block the CSeries from getting a foothold with airlines, having decided to re-engine their single-aisle aircraft with new technology engines in 2010 and 2011.

An early morning arrival of a Harbour Air DHC-2 Beaver, at YVR's floatplane terminal on the Fraser River. ALL PICTURES THIS SPREAD, HOWARD SLUTSKEN

It would be five years from the launch of the program before the first flight test CS100 became airborne, and then almost three more years before the plane entered service with SWISS International Airlines, in July 2016.

Boeing also filed a US trade complaint – ultimately rejected – that would have placed tariffs of nearly 300 per cent on any CSeries delivered to US airlines.

Bombardier had burned through billions of dollars – including significant government funds – during the plane's development and was left with a stagnant order book that didn't begin to get traction until early 2016 with orders from Delta and Air Canada. But the strategic damage caused by the trade complaint and the plane's protracted development had been done.

Ultimately, to save the program, Bombardier entered into a CSeries partnership with Airbus, transferring the manufacturing and marketing responsibilities for the jet to the European airframer. That agreement was closed in July 2018, and the CSeries was soon renamed the Airbus A220.

In the meantime, the Q400 had languished and lost marketshare to its main competitor, the ATR-series

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A Seair DHC-2 Beaver heads off to a destination in British Columbia's Gulf Islands, while (right) A Harbour Air DHC-3T turbine Otter departs YVR's floatplane terminal



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Above: Harbour Air flies the Canadian flag with this brightly painted DHC-3T turbine Otter at YVR's floatplane terminal.

Below and right: The prototype DHC Dash 7 STOL airliner is in the Canada Aviation and Space Museum in Ottawa

of turboprops, a joint venture between Airbus and Italy's Leonardo.

Bombardier, now focused on its line of Global, Challenger and Learjet business aircraft, looked to sell the Q400 program – and there was a buyer in the wings.

Out on Canada's West Coast, Viking Air Limited had long been a maintenance and overhaul facility, and authorised parts supplier for DHC Beavers, Otters and Twin Otters.

The Victoria, British Columbia-based company had gone one step further in 2006 when it purchased the Type Certificates (TC) from Bombardier for all the out-of-

production DHC models, from the DHC-1 Chipmunk post-WWII trainer through to the DHC-7 Dash 7. The only plane missing from the list was the Dash 8.

By holding the TCs, Viking had the ability to restart production of any of the legacy de Havilland Canada aircraft. After an extensive market analysis, the updated Viking Twin Otter Series 400 twin-turboprop was launched. More than 125 of the STOL utility planes have been delivered to operators in 33 countries since 2010.

In 2016, Longview Aviation Capital was established to manage Viking, flight-training operation Pacific Sky



TIMELINE

# DE HAVILLAND CANADA



1928

De Havilland Aircraft Company of England establishes DHC in Toronto.

1947

First flight of the DHC-2 Beaver.

1970

Viking Air established at Victoria International Airport, British Columbia.

1986

De Havilland Canada sold to Boeing Commercial Aircraft.

1992

Boeing sells DHC assets to Bombardier Aerospace.

1942-45

In WWII, DHC builds 1,133 DH Mosquitos, "The Wooden Wonder."



1965

First flight of the DHC-6 Twin Otter.

1984

Dash 8-100 regional turboprop airliner enters service.



1988

Boeing shuts down production of the DHC Buffalo, Twin Otter and Dash 7.

Aviation, and a newly-created finance, leasing and aircraft trade-in company.

That same year, Longview purchased the manufacturing and design rights to the amphibious Canadair CL-215, CL-215T and CL-415 series of water bombers. The company has launched a conversion program for the piston-powered CL-215, turning the aircraft to a highly-upgraded, turboprop-powered CL-415EAF – Enhanced Aerial Firefighter. Longview is also evaluating a new production CL-515.

With Viking and Longview's focus on this diverse and iconic group of Canadian aircraft, it seemed to be a logical extension of the company's strategy, when, in November 2018, it was announced that Bombardier would sell the "Q" turboprop program to Longview.

The newly renamed Dash 8-400 will continue to be produced at DHC's Downsview/Toronto, Ontario plant through 2023, when the factory's current land lease agreements expire.

The 600th Dash 8-400 was recently delivered to Ethiopian Airlines, and a 90-seat version is now available to airlines.

With a backlog of 46 aircraft – about a year of production – what's in the future for DHC's large turboprop program?

Look back 20 years to the initial concepts for the aircraft, for an answer.

"I was part of the original design team of this airplane," said Todd Young, Chief Operating Officer, DHC. "When we designed the aircraft, it was designed with two things in mind. One was to stretch it to a 100-seat turboprop and the other was to shrink

it to recapture the 50- to 60-seat turboprop market. What I'm really excited about under Longview is that we already have, in the very short period of time of owning this business, started to have these discussions."

DHC is also looking at a 50- to 65-seat three-class configuration for the current Dash 8-400, which Young said could replace the 50-seat class of older regional jets.

**“The 600th Dash 8-400 was recently delivered to Ethiopian Airlines, and a 90-seat version is now available to airlines**

2006

Viking acquires Type Certificates for legacy DHC aircraft.



2008

Bombardier launches CSeries program.

2016

Longview Aviation Capital established, purchases line of ex-Canadair aerial firefighters.

2018

Longview purchases "Q" turboprop program from Bombardier, as part of Bombardier's exit from commercial aircraft.

1998

First flight of the Dash 8-400 "Q400."



2007

Viking launches the updated Twin Otter Series 400 program.

2010

First delivery of the Viking Twin Otter Series 400.



2018

To save the CSeries program, Bombardier and Airbus' joint venture closes, with Airbus in control of manufacturing and marketing. CSeries renamed the A220.

2019

De Havilland Canada is re-established and the Q400 is renamed the Dash 8-400.



"We firmly believe for the one- to two-hour flight segments that the Dash 8-400 flies, this three-class configuration will make huge economic sense."

Young is pragmatic about the potential of electric propulsion for future aircraft. He explained that DHC is working with engine manufacturers "to understand the timing of when this technology could become available".

"At the same time, we do recognise that there possibly needs to be an interim step from the [Dash 8-400's] PW150As. We've been having discussions with the engine manufacturers, including our current supplier, Pratt & Whitney Canada, focused around improved fuel burn and maintenance costs reductions on the engine."

While development and production continues on the DHC Dash 8-400, Viking Twin Otter and Longview aerial firefighters, Curtis recognises the challenges facing the company.

"We've just taken on a massive acquisition here, and we want to be careful and cautious that we're not taking on too much too quickly."

Curtis said that Longview is splitting its operations into two divisions, DHC Toronto, and Longview Aviation West, encompassing Viking's plants in Victoria and Calgary, and the CL-415EAF upgrade and modification facilities.

But he explained that each unit will maintain its own identity, with no plans to rebrand the existing assets.

"You know that things can change, but we're not interested in creating another big aerospace entity with all of the bureaucracy that goes with that. We're pretty keen on individual, focused business units."

"Manufacturing airplanes isn't for the faint of heart and it's not a get rich quick scheme. The barriers to entry are huge," continued Curtis. "But it is about supporting them. The message I'm really trying to communicate is that we're a product support company first."

"There are more than 1,000 Dash 8s of different series, over 130 Viking-built Series 400 Twin Otters, and roughly 1,500 legacy de Havilland Canada aircraft in operation around the world. Our business is ensuring that those airplanes are supported best-in-class."

"And yes, by the way, we happen to make airplanes." 🤖