



The NStar Chronicle

The Project North Star Association of Canada

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Celebrating the 70th Anniversary of the First Canadian Non-Stop Transcontinental Flight

Editor's Notes

Roger Button

In this issue we are recognizing the 70th anniversary of a very special event in Canadian aviation history and one which involved a North Star aircraft. The first non-stop transcontinental flight took place on January 15, 1949 and readers will find an article dealing with that event in this issue. In addition, your Association, in partnership with the Canadian Aviation and Space Museum will be holding a members meeting, and a public viewing of the North Star on January 19, 2019 to mark this event.

We are also recognizing another one of our long standing members in this issue. Ted Devey has been active in our organization since the very early days. We are indeed fortunate that we have a number of other members who have been with us since the beginning. In 2003 the Ottawa Citizen predicted "a bright future" for our nascent organization. A copy of the Citizen article is included in this issue. Not surprisingly, given the challenges involved in making this project work, the "future" did not always appear as "bright" as Polaris. However, our ever optimistic President reports that 2018 was characterized by positive developments in the Project, and our Association's relationship with CASM.

The Museum's conservator, in the "Conservator's Corner" has contributed a thoughtful article based on the classic 70's book, *Zen and the Art of Motorcycle Maintenance* which I am sure that our readers will enjoy. Good reading.

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70th Anniversary of first Canadian Non-stop Transcontinental Flight

Roger Button

"If some countries have too much history, we have too much geography" said former Prime Minister William Lyon Mackenzie King, to the House of Commons in 1936. He would not have known at the time that some thirteen years later an aviation event would take place that would help to shrink this geography.

January 15, 1949 was a noticeable day in the history of Canadian aviation. On that day the first non-stop transcontinental flight was made. The aircraft was Royal Canadian Air Force North Star, registration number 17512. It was operated by 426 Thunderbird Squadron which was stationed at Dorval, QC. The aircraft was captained by F/O J.A.F. Jolicoeur and crewed by 14 members of the Experimental and Proving Establishment from RCAF Rockcliffe.



Canadair North Star, RCAF 17512

North Star 17512

While 17512 was relatively new to the RCAF it had been one of the earliest aircraft to roll off the Canadair Assembly line at Cartierville, QC in 1946. However, instead of going directly into service with the RCAF it, along with six other aircraft were loaned to Trans Canada Airlines (later to become Air Canada). It was not until 1948 that the aircraft was taken on strength by 426 Squadron.

The aircraft had a maximum range of 3,060 miles. This allowed 17512 to make the non-stop flight from Vancouver to Halifax a distance of 2,785 miles. The flight took eight hours and thirty two minutes. A year later the aircraft bested its time by making the same journey in eight hours and twenty five minutes.

While the flight was an aviation first, it was also another step in the history of transcontinental travel in Canada. This started with arrival of the famous Scottish explorer Sir Alexander Mckenzie at the Pacific Ocean on July 22, 1793. He became the first European to cross North America north of Mexico. It was nearly one hundred years later that the next major leap in transcontinental travel took place with the completion of the Canadian Pacific Railway when the last spike was driven on November 7, 1885 at Eagle Pass, BC. In October 1920 the Canadian Air Board staged a cross country mail demonstration but this involved a relay of five aircraft and a total flying time of 49 hours from Halifax to Vancouver. In 1939 Trans Canada Airlines flew the first commercial transcontinental flight from Toronto to Vancouver in 16 hours with four stops. The airline, however, didn't launch a non-stop transcontinental flight between the same airports until June 1, 1957. The flight also took eight hours and thirty two minutes using a Super Constellation. This was same time, to the minute, that the North Star took eight years earlier and on a longer route.

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Notes from the President

Richard Lodge

It is always interesting to look back on what was written in previous issues of any journal. The NStar Chronicle is no exception and so before starting to write this piece I reread what I had said during the year 2018. For once luck was with me and as far as I can see I did not write anything that was either untrue or not achieved during the year.

The last paragraph of my January 2018 Notes suggested that the year would see increased activity both in the aircraft restoration and within the Association. Both have proved correct. We have successfully recruited several new Restoration Volunteers and our Association activities have increased substantially.

Apart from the occasions when our members either met or have been actively taking part in Museum activities we have made a major step forward in that our Facebook page has again become active under the stewardship of Chris McGuffin. Chris is a dedicated Restoration Volunteer who can frequently be seen around the aircraft at a considerable height complete with hardhat and safety harness. When he returns to the ground, he often gets out his camera and takes photographs, many of which are now appearing on Facebook. For those of our readers who are not Facebook subscribers, I encourage you to join Facebook and to "like" the page Project North Star. You will then see the latest updates on our restoration progress together with the recent photographs.

Within the next few days our webmaster, Drew Hodge, will be relaunching our website with an updated homepage and better links to other parts of the website. Much work has gone into the redesign and we look forward to receiving comments from users. The website is designed primarily to be a location for all the Association's historical and archival information. We are planning to add to the website more PDF versions of previous issues of the NStar Chronicle and photographs which are not currently available on the site. Current information will be sent to members by email and updates to our Facebook page.

Our first big event of 2019 will be held at the Museum on Saturday, January 19th to celebrate the 70th anniversary of the first non-stop flight across Canada between Vancouver and Halifax. The flight was made by a North Star on 15th January 1949. Members have already been advised of the event by

email and on Facebook and I hope to see many of you joining us on that day. Although this is a Project North Star Association event, we have received considerable help with planning from the staff of the Museum. This is a good example of the co-operative working relationship between the Association and Museum.

During the summer we expect to show off the aircraft to the public, as usual, on Canada Day. We will also be showing the North Star during Doors Open Ottawa at the beginning of June, if the Museum decides to take part in the event this year.

During 2018 the Museum organised two very enjoyable events for volunteers. Invitations were given to all Museum registered volunteers including North Star volunteers. In the summer we once again had a Bush Pilots' Breakfast at which the Museum staff cook a great breakfast for everyone attending (there is nothing so good as seeing the Director General, Chris Kitzen flipping pancakes). Shortly before Christmas the Museum organised a new event, a pot luck lunch for staff and all the Museum volunteers—another thoroughly good overeating occasion.

One of the benefits of becoming an active member of PNSAC is for the comradeship with other members who all have an interest in aviation. It is not necessary to be a volunteer to enjoy the company of other members. Once a month there is an informal breakfast held in a café on Arch St which is relatively near the Ottawa General Hospital. The breakfast started about two years ago under the leadership of Bill Tate. Each month we chat about aviation, the North Star project and whatever else we feel like talking about. I usually give the group an update on anything of interest that has happened since the last breakfast. Joining this informal group is a good way to become involved with the Association and to possibly move on to taking a more active role in the Association.

We will be holding our Annual General Meeting at the Museum on Saturday, April 13. At this meeting we re-elect our Board of Directors and would welcome the nomination of any member who might be interested in serving on our Board. At present we have five members. This leaves one vacancy to bring us up to our normal Board number of six members.

2019 is starting well. We look forward further significant milestones in the North Star restoration process such as re-hanging of the restored Engine #4. We are also hoping to arrange further events for our Association members.

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Conservator's Corner

Restoration Project Manager

Zen and the Art of Aircraft Restoration.

Through my daily experience over the past two years, working with volunteers, I have asked myself the following question: What makes a volunteer dedicated to a project? The answer is not a straightforward one. This article explores the subject, much like Pirsig did in his book about metaphysical motorcycles; *Zen and the Art of Motorcycle Maintenance*.

We strive for quality. As restoration work continues on the North Star, we get absorbed into the weight and breadth of the subject matter. This is the kind of project that demands the level of commitment found in monasteries, dojos and Paratrooper units. Commitment comes from dedication and reward. Quality is obtained through application of commitment, producing results which may be enjoyed. The following effort in writing has been made to define such elements, those necessary to sustain the project.

A voracious appetite for detail. Precise facts and data build foundations. Foundations of information that erode over time. Lost to floods, fires, or worst; thieves, vandals and neglect. Information is our firmament that keeps us grounded in our work. Daily worksheets are filled with steps taken to satisfy a condition. Drawings are made to translate reality to paper. These words, drawings and tables form hard to translate time lines. Coloured bars overtaking each other, running in thousand hour blocks of volunteer contributions. These life hours, cannot be overlooked, as a restoration project advances through the years.

Inorganic compounds risk distraction. Focus is important when avoiding the ethereal draw of solvents. A volunteer scrubber, washing away years of residue, layered upon a finish that once gleamed with pride. Slowing the return to dust, so feared and fought by the living. A process to follow and adhere to. The methodical dismantling and reconstruction of an object. Return to form, that which was almost indiscernible. The result of all his work is not merely a shiny piece of aluminium panelling; He has travelled through time.

More than just an object, we look to a hidden past. Beyond these material trappings, lay the history of Canadair North Star 17515 and her sisters. Examples of service are easily found in books and photos. What proves a challenge is explaining how a bumblebee becomes a preserved specimen in an engine, how graffiti made during heavy maintenance is the only evidence of a man's past. Where the dirt under floorboards, came from countries that no longer bear the name she visited.

The static, prevents complete appreciation. She's more than 45,000 lbs. of metal. Superficial understanding can only consider her 39 years an outdoor relic. Likewise, so would a skin deep treatment of a last remaining artefact of this type. What impact she had before the stillness of the seasons is not lost to those who look further.

A biological experience in personal evolution. The volunteer has developed new muscles and sinew adapted to producing polished surfaces. An eye for microtexture and grain direction has developed. Sympathetic scars are accumulated through careful little sacrifices. Navigating the disruptions of capricious human needs such as rest, nourishment and leisure. Through the application of labour, a piece of history is preserved.

Disappearing horizons. Meditative expanses of aluminum, exhibiting varieties of corrosion rarely encountered in a lifetime's career. Cavernous interior spaces, where cargo of all sorts was bound for ports beyond. Flight control surfaces that have pressed through all shades of dusk, emerging in the dawn of a new day. Now removed from the ship, these weathered, beaten, bruised remnants of a glorious past await restoration. A new horizon forms, some many years away, known to those who are on-board for the long run.

Healthy obsessions. Volunteer restoration technicians take home an experience. They take to heart the results of their labour, in forming a product that is also intangible. The mind has strengthened, forming resolves that assist, understand and process the elements of restoration work. As historians, fanatics and unwitting library wanderers soon discover; The story of air transport, in its beginning, is far from just a few obscure paragraphs in Canada's ongoing history. It lives through those people who continue writing it, preserving the physical, extending beyond.

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Our Members

Interview with Ted Devey

1. What is your background in aviation?

My service background was naval. Professionally I was an electrical engineer with the Department of Communications specializing in radio spectrum engineering. After retirement in 1989 I sought activities that interested me such as helping to install a pipe organ in a theatre in Renfrew, working on restoring a sailing yacht, which unfortunately stopped due to lack of money. I also took courses in welding, machine shop and woodworking at Algonquin College to enhance my manual skills.

2. How long have you been involved with Project North Star and how and why did you get involved?

I attended a public meeting in the Museum in 2003 in which it was indicated that efforts were being made to restore the Museum's North Star to a showroom condition. In 2004 the project finally was approved and work started. Professional work had to be carried out to remove asbestos and many dead birds and their mess. At first I used my welding skills in adapting steps/platforms for working on engines on the aircraft. In winter, seats were removed from the cockpit and brought into the shop where they were dismantled, treated and cleaned, painted and finally spray painted. I found the work interesting and satisfying and so I was hooked into the project.

3. What has been the history of your involvement to date?

In 2006 I expressed interest in the work on the four Roll-Royce Merlin engines. As it turned out I was asked if I would take on the job of Merlin Crew Chief and agreed with the proviso that I would turn the task over if someone came along who was properly qualified. When Garry Dupont retired from the RCMP as head AME at the RCMP Hangar at Uplands, I offered the position to him which he took over. From 2006 until the summer 2018 I did only engine work on the four engines. Unfortunately my limited mobility prevented me from helping with the more recent work that was being done behind the firewall of #4 engine. So I went into the Conservation shop to start doing different work.

4. What has been the highlight of your involvement?

I think that the highlight of my involvement was back in 2006. To work on the engines we needed two engine stands, one to transfer the entire engine assembly from the aircraft for dismantling to the core engine and a second stand to mount the core engine and further dismantle it to bare components. This had to be a rotary affair so that the engine could be

positioned for whatever operation was being done. The first stand had to be designed and built from scratch. The design was an adaptation of the engine stand located next to the Lancaster bomber on the Museum floor with ample room for a person to work underneath. A specification was drawn up for the various pieces of steel to be cut precisely by the steel supplier and to be delivered to the RCMP Hangar at Uplands, as instructed by Garry Dupont. On a Saturday a group of volunteers assembled at the RCMP Hangar and assembled the horizontal and vertical sections of the stand with Garry doing the welding. Following this the stand was delivered to the Museum's welding shop for final assembly, then into the main shop where it was finally assembled and painted. Everything fit as intended.

The rotary stand was located in the storage area of the Science and Tech Museum. The base was extended to the required length and a new frame was built to hold the core engine. That everything fit together so well from the start was the highlight of the project for me.

5. What has been the most challenging part of your involvement?

The most challenging part of the job was working on engine #1, the port outer. Since I was not a mechanic, I had to plan the disassembly of the engine and carry it out with the help of crew members under the strict guidance of the then Shop Supervisor Mike Irvin. He was a hard taskmaster. This was not an engine that had just been removed from an operating aircraft for overhaul. The North Star and its engines had been left out in the Great Canadian outdoors for 39 years without any attempt at protection from the four seasons of weather during those years. Corrosion was rampant. In each of the twelve cylinders the piston rings were rusted to the cylinder liners. Many hours of soaking the pistons with Liquid Wrench, the use of compressed air and other techniques had to be employed to remove the pistons from the cylinders. There were other issues too that made the overall disassembly of the engine very difficult. The foregoing applied to each of the other three engines, so it has taken about 12 years to process the four Merlins to a preserved non-running condition. The first engine I found the most challenging as we had to learn as we went along. The remaining engines were very difficult but the experience gained with #1 engine was valuable in restoring the others.

Volunteers Assure a Bright Future for Classic Plane

Randall Denley



Tim Timmins, left, and Robert Holmgren are forming a group of skilled volunteers to restore a 55-year-old North Star, the first Canadian-made plane capable of transcontinental flight.

This article was published in the Ottawa Citizen on February 1, 2003 under the byline of Randall Denley. It was brought to our attention recently by Drew Hodge. The article is republished with the express permission of the Ottawa Citizen, a division of Postmedia Network Inc. (ed.).

The world's last classic Canadair North Star sits, forlorn, on the tarmac at the Canada Aviation Museum. It's been parked there since 1966, along with half a dozen other orphans of the museum, planes that it has no money to restore and that are too big to bring inside the crowded building.

The paint on the North Star is faded and peeling. Some gaps in the wings are closed with wire to keep out the birds that have made it home for years. The engines are protected with pieces of plywood. The interior requires a complete renovation.

It's a shame to see an important part of Canada's aviation history slide into this kind of ruin. Thanks

to the efforts of two Ottawa men, however, the North Star finally has a bright future.

Robert Holmgren and Tim Timmins are forming a group of skilled volunteers to restore the North Star. This kind of volunteer effort will be a first for the museum, says director general Anthony Smyth, who is supporting the effort, along with aviation companies including Air Canada and Boeing.

The museum is showing commendable flexibility because the traditional view in the museum world is that restoration is work that can only be done by trained experts. Unfortunately, the museum can't afford that kind of work, and that's one of the reasons the plane has been sitting there for more than 35 years.

This is no small undertaking. The 55-year-old North Star 1-ST is a sizeable plane, nearly 30 metres long and with a wing span of 35 metres. Restoring it will be a yearlong process that would cost \$1 million if it were done by paid staff.

The North Star is an important plane in Canada's aviation history, the first Canadian-made plane capable of transcontinental flight. It's considered the plane that launched the postwar Canadian aviation industry; 70 of them were built. Brought into service after the Second World War, North Stars carried passengers for several airlines and troops for the Canadian military. North Stars served to airlift Canadian troops to Korea and provided transportation for VIPs visiting Canada. The plane at the museum belonged to the RCAF.

Holmgren is a retired Air Canada maintenance expert, and Timmins is a former RCAF navigator who flew on the North Stars. Timmins's former squadron had taken an interest in the North Star, and Holmgren, who was giving his time as a volunteer at the museum, pushed it forward.

"We'd like to see it brought back to something like its former self," Holmgren says.

A temporary structure, perhaps a bubble like the one over the playing field at Lansdowne Park, will be necessary before the restoration can begin. The plane is too large to fit inside the museum's existing building and also too big to be easily transported elsewhere.

Holmgren and Timmins need about 200 volunteers to make the project a success. Holmgren has approached Air Canada, Bombardier and Boeing to get the help of past and present employees. About 40 volunteers have already come forward.

The key need is skilled craftsmen with up-to-date

large aircraft experience and who live in or near Ottawa.

Some people who can come in almost every day to run the project are required. There is also a demand for people to do record-keeping and research.

The group is hoping to attract national attention for the project, both to provide volunteer expertise and to help raise money. This is a plan to help a national museum, after all. Smyth says the museum will be involved with a fundraising campaign, but it's early yet to say how much is required. It depends partly on how much time and material are donated by corporations. A full-time salaried project manager will be hired by the museum.

The project will take a conservation approach, retaining as much of the original material as possible, Smyth says. The restored plane will be structurally complete and faithful to the original. Returning the plane to flyable condition is too expensive to be feasible and the museum wouldn't want to take a chance flying the last remaining version of such an important plane.

Restoring the North Star is just the beginning of what Holmgren and his associates hope to accomplish. The museum has another half dozen planes outside that require restoration. Restoring them all will take nine or ten years. The Museum's new addition, which it hopes to have open by December of this year, will be large enough to finally bring the North Star indoors.

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North Star wall and floor panel photographs

Here are three photos of recent work on the wall and floor panels. All the wall panels needed to be replaced. We are able to save some of the floor panels, but not the one in front of the cargo door as it was so heavily damaged by cargo and exposure to the weather. The fourth photo is the rotating beacon on the top of the fuselage. It was removed for restoration and to stop a persistent leak.



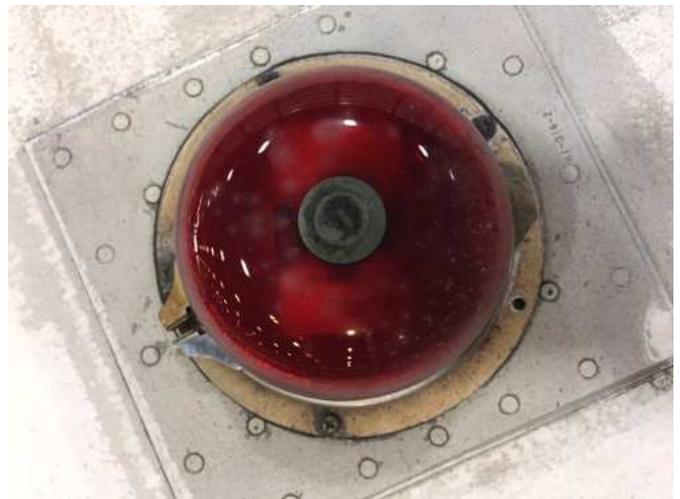
Old wall and floor panel



Laying out new floor panel



Fitting new wall panel.



Rotating Navigation Beacon.

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Calendar of Events

Saturday, January 19, 2019	Members Meeting & 70th anniversary events
Saturday, April 13, 2019	Annual General Meeting
Sunday, June 1, 2, 2019	Doors Open Ottawa (Tentative Event)
Monday, July 1, 2019	Canada Day

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