



The NStar Chronicle

The Project North Star Association of Canada

Volume 14 | Issue 2 | July 2018

Editor's Notes

Roger Button

Our readers will appreciate from the articles and photographs in this edition that real progress being made on the restoration of the aircraft. A number of new restoration volunteers have signed on this year bringing with them diverse skills and experience. Whoever thought that someone with a mountain climbing background would be able to put his special skills to work on an aircraft. Believe it or not but see the "Conservator's Corner." As I have previously commented: When work on the aircraft is moving ahead it encourages enthusiasm at all levels of the organization. One of the biggest cheerleaders of our Association is its president, Richard Lodge. Richard wears many hats including that of a restoration volunteer so he knows of what he speaks. In this edition Richard discusses how he came to be involved in Project North Star and joins the illustrious members of the Association who have contributed to "Our Members" column. But I would be remiss if I didn't thank all of our contributors to this edition including our publisher Drew Hodge.

PNSAC

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Notes from the President

Richard Lodge

These are exciting times to be a member of the Project North Star Association. We have recently taken part in the 2018 Doors Open Ottawa. This is a major event for the Museum and PNSAC volunteers were able to make a significant contribution to the success of the two open days. Doors Open has become second only to Canada Day in its importance to the Museum. (more on Open Doors 2018 later in this issue).

A few days before Canada Day the aircraft was brought outside. Unfortunately, the day itself was extremely hot and the number of visitors was well down from previous years. Nonetheless our volunteers did a yeoman service in talking to the public about our restoration work.

Although showing the aircraft to the public is very important to us, our main purpose is to restore the North Star to museum condition. Much of our work is detailed, painstaking and unspectacular such as restoring a small part of the aircraft which can take many days or weeks. At other times making progress is very visible. We are in such a situation now.

At the end of May we had one of our regular meetings with Chris Kitzan (Director General of CASM) together with Neil Raynor (VP of PNSAC), Cedric St-Amour (CASM Volunteer Coordinator) and Reg Demers (Our CASM supervisor). There was a full exchange of ideas, suggestions for bringing the public into the Museum and ways in which

PNSAC could be involved in these initiatives and events. The meeting ended with me having a full sheet of notes covering future planning, major restoration work and how we can make sure we recruit younger people both as members of PNSAC and where possible active Restoration Volunteers.

A meeting like the one above only happens when an organization is thriving, and everybody is excited about the future. During the last 15 years PNSAC has demonstrated that it is capable delivering very high-quality restoration work. We have already accumulated over 80,000 hours of work and during this time we have become a trusted partner of the Museum. Our website is now operational again and in the next few weeks we expect to be able to update it and make it more relevant to where we are with the project now. One of the major initiatives taking place is to develop a diagrammatic history of the work done on the North Star restoration and a timeline for future work on the aircraft.

In closing, I once again urge Association members to become active volunteers. There are many volunteering opportunities both for those with major aviation experience to those who can only volunteer with us on occasions like Canada Day or can provide help for our many behind-the-scenes activities.

Our next Members' Meeting is scheduled for Saturday, September 29, 2018. Do reserve this date in your calendar if you can be in the Ottawa area on that day. The meeting will be held at the Canada Aviation and Space Museum. More details will follow later.

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Conservator's Corner

*Réjean Demers
Conservator
Canadian Aviation and Space Museum*

Stabs and Tail Feathers

Some tasks are easier than others, this is not a simple one. North Star S/N: 122, registration 17515, was delivered to the National Aeronautical collection in 1965, intact and airworthy. After spending 39 years parked on the tarmac, awaiting restoration, the condition of its flight control surfaces had become less a statement of endurance and more a sad result of the elements.



Scaffold erected next to North Star to support removal of the rudder and vertical stabilizer.

By the time restoration had begun in 2004, the flight control surfaces had sustained the full range of what mother nature had to offer over the years. In the fourteen years that followed, work has been carried out removing what assemblies could be reached from the ground. Ailerons and flaps, elevators and horizontal stabilizers had been removed and now, the vertical stabilizer and rudder in 2018.

This article will focus on the year long process

that occupied roughly 2-4 volunteers, twice a week, working at heights on scaffolding around the empennage ("tail assembly") of 515. Work commenced following the museum's last big shuffle, in the fall of 2017. One side of the storage hangar was emptied to accommodate the acquisition of the C130E Hercules and Convair 580. The removal of CP-107 Canadair Argus from storage was a necessary trade-off for the new stacking, that left Project North Star with just enough space to work on.

The work involved in removing flight control surfaces from the ship starts by disconnecting cables, push rods and torque tubes. These relay pilot input directly to the airfoil. There are secondary components such as panels, fairings, plumbing for de-icing boots, grounding straps and electrical conduits. Finally, when the control surface or stabiliser is ready to be pulled, hinge bearings and spar bolts must be freed. Support must be provided to the component once the weight of the assembly is relieved from the airframe. Once disconnected, the "tail feather" or "stab" is lowered into a cradle on the ground for cleaning, condition assessment and preparation for restoration. The approach being that a component is more accessible at ground level than 10-20 feet overhead. Eventually, the outboard wing sections will follow the same treatment: Not a light undertaking.

Volunteers on task are comprised of a mix of experienced members and new additions to the crew. Setting up the scaffold was the first requirement in gaining access. We had an ex roughneck, Will Assad, building the first tower. Chris McGuffin, an experienced mountaineer, built the second stage to a full height of 30ft. Bruce Gemmill donated blood removing the fin retaining hardware, a modest 64 bolts through 4in. access panels. Peter Trobridge spent some hours in the hell hole, fitting a tail skid extension jack and running leaders for control cables. The heat of lights and summer humidity had a therapeutic effect, much like a sauna.

Years of battering had taken its toll on the rudder, shearing the torque tube and stripping the rudder of it's fabric. During this time, generations of starlings had been introduced to multi-level condo dwelling. Three garbage bags of nesting material were removed just to gain access to the pulleys in the vertical stabiliser alone. Starlings are neither good nest makers nor parents to their young. I will spare you the graphic descriptions of what was removed from those access panels.



Volunteer Bruce Gemmill removing bird nests from the vertical stabilizer.

The horizontal stabilisers were removed earlier, yet there still remained some nesting material to clear. These assemblies were brought to the restoration shops for a thorough clean-out and condition assessment. Phil Chrysler, Bill Cole, Richard Houle and John Makadi lent their hands at pulling more stacks of hay out of the two structures. Access proved difficult necessitating the use of a hinge rods, in the form of hooked tools for retrieving deep tufts of clumped nesting. The individual stabilisers were flipped over, blown out, pressure washed, and oiled, eventually rendering an accessible, stable assembly ready for restoration. We discovered a large patch on the leading edge of the port stabiliser. It covered a blunt force impact form which was probably caused by the boom of a forklift in a former life.

At the time of going to press, the rudder has been removed from the aircraft and the vertical stabiliser is slung and ready to pull. The North Star is prepped to roll out of storage for Canada day and the vertical stab removal is planned for July 5th. A 30T crane has been rented for the job, with all hands on deck confirmed for that day's shift schedule. Following this important milestone, the maple leaf will be lowered from North Star 515, until such time as the restoration nears its completion. I hope to see the day, dear reader, when the maple leaf is flown from those heights again.

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Our Members

Interview with Richard Lodge

1. What is your background in aviation?

I trained in England as a Chartered Accountant, now often known as a bean counter. After I obtained my designation, I wanted to work in industry rather than in the accountancy profession. Following several interviews, I was offered a job with the Aero Engine Division of Rolls-Royce Ltd. in Derby, England.

Until I joined Rolls-Royce I had very little interest in aviation. I had always been interested in transportation and had a major passion for railways which was the mode of transport I normally used in Britain in 1950s and 1960s.

I became interested in aviation at Rolls-Royce and was fascinated by the complexity of designing and building aero engines.

After leaving Rolls-Royce in 1966, I was not involved with aviation until I came to Canada in 1978 and returned to the accountancy profession and started doing tax returns for pilots and other aviation personnel located around Dorval, Québec.

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

One of the driving forces behind the foundation of Project North Star was Robert Holmgren who was among a group who persuaded the National Aviation and Museum, as it was known then, that a group of volunteers should be allowed to work on the North Star and bring it back to Museum display standards. The Project North Star Association of Canada (PNSAC) was incorporated in 2003 with Robert as its first president. Robert had worked for Air Canada on the engineering side of the airline in Dorval and I got to know him when doing the accounting for his wife's antiques business. At the time of the introduction of the Québec language laws (Bills 22 and 101), many Anglophones left the Montréal area and moved to Ottawa. Both Robert and I moved in the early 1980's. After transferring my business to Ottawa, I remained in contact with Robert professionally and when PNSAC was formed he asked me to become the Association's first Treasurer.

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

I remained Treasurer until 2010 when I was

elected President after our second President, Tim Timmins, stood down. My election as President coincided with my partial retirement from the accountancy profession. Apart from my interest in railways, I had also always been interested in engineering and retirement gave me the opportunity to become a Restoration Volunteer on the North Star. Working on a Merlin engine and becoming part of the Engine Shop crew was an obvious place for me to work. I have enjoyed developing some of the limited skills I learned when working on pre-WW2 cars in England, which mostly used similar technology to the Merlin engines.

4. What has been the highlight of your involvement?

In the 1950s I was one of the early volunteers working on the first preserved railway in the world, the Talylyn Railway in Wales. During this I learned much about volunteering and how such an organization could work. Helping to organize and build PNSAC over the last 14 years has both been challenging and very interesting. We are now seeing the fruits of our work both in the actual achievements in the restoration of the North Star and the enthusiasm of our Association members.

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

Volunteers working on an aircraft owned by the Government of Canada in a national Federal museum was in the early 2000s an entirely new concept. Until that time all work on the aircraft collection had been carried out by Museum permanent staff. It was not easy to persuade the Museum that volunteers could be trusted to carry out restoration work to the high standards of the Museum and that as a group they would have the tenacity to continue working for many years. Now 14 years later and after over 80,000 hours of volunteer restoration work, PNSAC is going strong and will definitely see the end of the North Star restoration in the years to come.

Starting a new project is not easy. There is always skepticism as to whether the new organization will succeed and in some cases resistance to the concept of the new organization. Over the years we have had to overcome all these problems and avoid being discouraged when we were unable to do things the way we initially wanted to do them. Our acceptance by

the Museum as a trusted partner is a testament to the patience and hard work of all our volunteers and the

support of key members of the Museum's permanent staff.

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Doors Open Ottawa 2018

Roger Button

Doors Open Ottawa gives the general public an opportunity to view facilities for free which they would normally not have access. Evidently, it is the second largest event of its kind in North America and one of the largest in the world with over one million visitors since its inception in 2002. In the case of the Canadian Aviation and Space Museum its participation meant opening the doors of the reserve hangar. On June 2nd and 3rd the Museum welcomed some 3000 visitors. The visits of the reserve hangar took place by way of a self-guided tour supported by many of the Museum's volunteers coordinated by Cedric St. Amour the volunteer coordinator for the Museums Corporation. Project North Star was ably represented by Charles Baril, Claire Cameron, Garry Dupont, Ted Devey, Chris McGuffin, Neil Raynor, Jacques Roy, Nelson Smith, Tim Timmins, and Gary Whitten who ably answered questions about the aircraft. Rejean Demers, the Conservator Special Projects Manager was also present.

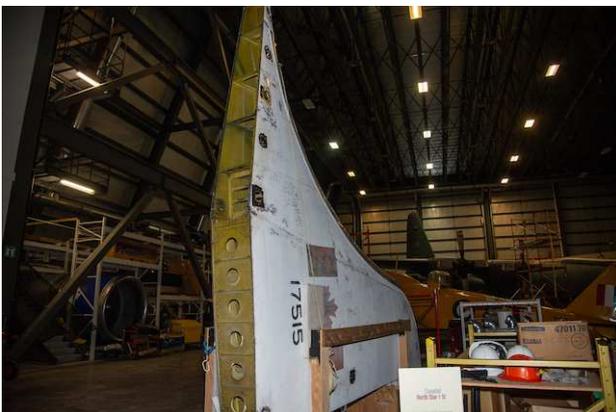


Volunteers Roger Button, Richard Lodge, Chris McGuffin, Charles Baril and Garry Dupont on hand to explain our project at Doors Open Ottawa June 3rd.

This event is also an opportunity to do a little fundraising for the Association. The merchandise desk was managed by Richard Lodge, Drew Hodge, and Roger Button. Sales of memorabilia and clothing were steady throughout the two days. A few memberships were also sold and donations received. The merchandise table was well positioned near the exit to catch visitors as they left. Unfortunately, the aircraft was not next to the merchandise table and it was clear that some visitors did not make the connection and others left without seeing the aircraft. It is hoped that these issues will be addressed for future viewings of the aircraft. Thanks to all the volunteers who devoted their time to this successful event.

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North Star tail removal photographs



Calendar of Events

Tuesday, September 27, 2018

Board of Directors Meeting

Thursday, September 29, 2018

Members' Meeting

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