

Pre-Flight

A Publication of the Aerospace Heritage Foundation of Canada ,
P.O. Box 246, Etobicoke "D", Etobicoke ON M9A 4X2

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ORENDA – Source of Power

In 1944, Orenda "officially" began operations as a Canadian government National Research Council establishment, named Turbo Research Limited (TRL) with a mandate to research gas turbine technology applicable to aircraft propulsion engines. In late 1945, Sir Roy Dobson of Britain's Hawker-Siddeley Group negotiated the acquisition of the WWII Canadian government's Victory Aircraft to form

A. V. Roe Canadian Limited. In early 1946, it absorbed TRL as a new division, naming it the Orenda Division. (In those days, it was prudent to give aboriginal Indian names to new buildings and events seen by the public. Orenda, an Algonquin expression, which loosely translated into "a source of power" and "great wind", was determined most appropriate, considering the division product.)

Orenda, now the Orenda Aerospace Corporation, a subsidiary of Fleet Aerospace Corporation, has maintained a busy low profile this past 50 years in international markets with quality products for the aerospace industries. Today, the name "Orenda" conjures up images of company excellence in world class development, manufacture and service. It is a position unchallenged by our aerospace businesses constantly supported by traditional federal parochial policies.

On Saturday, October 5th, a wonderful salute to Orenda's 50-year existence, was celebrated with an Open House program at Orenda's facilities, followed by a commemorative reception and dinner at the Airport Holiday Inn.

(cont'd on p. 2)

"If it seems to be impossible, do it anyway, because the nearly impossible task is usually the one most worthwhile."

- James C. Floyd

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AHFC

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The Aerospace Heritage Foundation of Canada (AHFC) is a federally-chartered not-for-profit organization. The current emphasis is on Avro and Orenda and the Foundation is actively trying to locate former employees of these companies.

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Cash donations over \$25.00 and "gifts-in-kind" will be acknowledged by a receipt for income tax purposes. For more information on the AHFC and how to support its activities, please write to:

**The Aerospace Heritage Foundation
of Canada,**

**P.O. Box 246, Etobicoke "D",
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FROM THE PRESIDENT

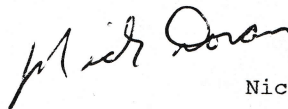
As the snow starts to fly, I realize that we are fast approaching the end of another year. As your president, I feel that it has been a successful one.

Most of our efforts have been on fund-raising through ticket sales on the 1956 Meteor Niagara. The draw was held on June 1st at our office location, the winner being Paul Lazzari of Mississauga.

On a sad note, we had to move from our bright premises at Unit No. 8, 1 Steinway Boulevard, to the rear at No. 16, upstairs. But it is still home at this time.

Members have been out at several air show displays and other shows to promote the foundation. Membership continues to grow. The Board of Directors conducted a planning session to re-establish our direction with both short- and long-term goals. We celebrated the A. V. Roe Canada, Limited's 50th Anniversary as noted in this *Pre-Flight*.

On behalf of the Board, I wish each and every one of you a happy, healthy and joyous Holiday Season and look forward to a great 1997.



Nick Doran, President AHFC

Orenda, continued:

The Orenda Plant tour was well organized with many exhibits presenting the evolution of Orenda Gas Turbine engines. This included a P13 "Iroquois", destined for the Arrow, that was displayed by the National Aviation Museum. Many Orenda veterans mingling with their families, especially grandchildren, provided many nostalgic moments, chitchats and memories of Orenda's greatness of yesteryear.

Thank you Orenda, you were - and still are - great!

Promoted by the AHFC, the late afternoon and evening a large reception and exhibit area, presenting photos, documentation, memorabilia, saleable souvenirs and Arrow artifacts. Much thanks to all participants, especially NAM, which donated some original Arrow components to our AHFC Museum collection.

Some highlights of the day were the attendance and autographing of some major players of Orenda's history: smiling Paul Dilworth, who spearheaded much of Canada's (Orenda) early gas turbine development; young James Floyd, the driving force in the use of Orenda's engine in the development of Avro CF100 *Canuck*, C102 *Jetliner* and CF105 *Arrow*; charismatic Jan Zurakowski; Orenda's test pilot on the B47 flying testbed for the P13 *Iroquois*, Mike Cooper-Slipper; Don Rogers, the manager of all test flying for all of the above. There were many others from across the continent, notably the Canadian and US West Coast, whose presence and stories throughout the day made the Orenda 50th a memorable event.

The informal banquet dinner was MC'd by David Onley (City-tv), with Nicholas Doran (AHFC president), providing suitable introductions and commentary. Although no formal speakers were presented, some attendees entertained everyone with brief reminiscences of their Orenda days.

Many kudos to AHFC, Orenda and Ian Farrar, AlliedSignal and Bill Coyle, McDonnell-Douglas and all contributors for a job well done. And a very special thanks to the Air Cadets 845 Avro Arrow Squadron and their Commanding Officer and Staff.

The Arrow Model Recovery Project

by Robert Saunders, Chair AMRP

Where are we at today? Have we found any models yet? These are two of the most frequently asked questions. I know that I have been behind on answering them. Well, we have not found any models as of yet, due to several circumstances which were beyond my control, such as buying a new house, and my wife pregnant with our first child. We had several problems with our boat, not to mention a very poor summer of weather. However, myself and the team were able to make two trips out to the site for an advanced survey of the launch and splashdown sites. We were also able to dive in three areas of the search zone in an attempt to aid the side scan sonar team. By surveying and videotaping the bottom of the search area, to get an overall picture of what to expect, the side scan team would be able to eliminate and narrow down potential targets. These targets would then be further inspected by myself and the rest of the diving team.

It now is just a question of waiting for the better weather to arrive next spring and getting to work. We have been offered the use of the Ministry of Heritage tug to do the side scan sonar work and this boat would be brought down from Ottawa through the Rideau canal once the ice has left. Thanks to the volunteering of the side scan equipment by McQuest Marine, the work should be completed by April or early May 1997.

I would like to ask the membership that if anything can be donated to this mission, it would be greatly appreciated. What we need most is **money**. However, portable generators, camping gear and even volunteers for other functions such as fund raising, logistics, etc., are most welcome.

What was it like building the whole aircraft?

by Herb Young, Ret.

Noisy. Smelly. Colorful. Very hot. Very cold. Romantic. Very satisfying. And at times, damn dangerous! An airplane is like an elephant; it never forgets you did it wrong. It will get you.

Whether the aircraft you have just completed carried a well-trained crew on a military mission or some little old lady to a much overdue family reunion, the satisfaction is the same, knowing it will get there and return safely. From the poor assembler stuck away in the back, getting sick of putting part "A" onto part "B" using bolt "C", to the flight-line mechanic who scratched holes in his head trying to get a fuel regulator to co-operate; both can watch that big bird move gracefully down the runway, then up into the great blue yonder and know that it will return on time.

The early aircraft had liquid or air-cooled engines with propellers. Military airplanes had bright red bands painted on the leading edges of the wings and nose section indicating the prop-arc. To step inside those red lines meant an instant

haircut with no worry about tipping the barber. The everlasting joy of hand-cranking a radial engine into life, then discovering that after over-priming, a large belch of blue/yellow flame was intend upon melting one's belt buckle. But they did this when the weather was down around -20C! During my tenure as a civilian mechanic with the Air Force, there was a quaint saying around the hangars: "Finished with the airplane? Satisfied? Right, lad, off you go and sign out a parachute. You're going up with it!" A great way to impress safety upon a sixteen year old.

The final assembly of the Lancasters in Bay 3, the 5 sections of the fuselage and both wings were assembled on the floor. Then the landing gear was installed retracted and the lady crane operator would hook at the two inboard engine mounts, lift up, the undercarriage automatically extended – and another Lanc was born ... if there was no snow on the roof, because the crane was slightly over-taxed. This happened at the same time every day, six times a week.

Every day we had to work in close quarters and occasionally things got a little exciting. One lad pushed his arm into the filler opening of a fuselage fuel cell to correct a last minute cotter pin for the flapper valve. When he went to leave, his arm would not follow. As surgery was out of the question, we re-opened the cell at the bottom and a brave Florence Nightingale, who was not claustrophobic, climbed in to apply cold compresses. I guess it was situations like that, which prompted the nurses's uniforms to change to include slacks.

The CF100 was equipped with two separate pneumatic emergency down-systems of 2,000 pounds pressure. After testing on final assembly, the routine was to discharge this air at *all* the jacks. Failure to follow this drill meant four gallons of Shell's finest red hydraulic oil to come charging out of the quarter-inch overflow pipe on the port side of the aircraft, anointing any and all who were within 50 feet, including a white-shirted foreman who was standing not far enough away. Instant colour change and a hair-do that could not be duplicated! And no affect to the airplane.

REMINDER NOTICE TO ALL TICKET SELLERS!

The AHFC draw is fast approaching.

Saturday, January 11, 1997.

Please return your **ticket stubs** and any unsold books as soon as you can. Remember that the usual Christmas mail push starts to build by the second week in December. To be included in the draw the great prizes (CF105 Avro Arrow replica, Trip to Reno, 25" TV and Vanderhorst print) all stubs should be in the hands of AHFC by **December 31, 1996**.

The sale of tickets is much appreciated and will be of great help to continue the work of the Foundation.

