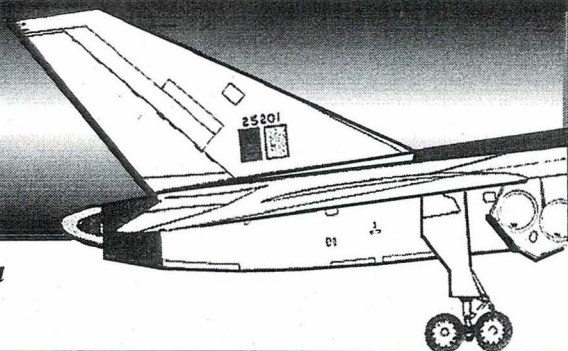


# Pre-Flight



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## Geoff Grossmith

### My Life in Aviation: Conclusion

After his first plane ride as a young boy at Dufferin Field airport, Geoff was hooked. Yet he still needed to finish his education: aviation at Central Tech in Toronto. Living in Scarborough, it was a long commute by bicycle. His father had to pay over \$700 for 2.5 years. Geoff joined the RCAF and attended U of T, training to be a Flight Engineer. He was posted to Bomber Command, flying in Halifax bombers. After the war, he went to SAIT, today the U of A, which offered mechanical and electrical engineering. The costs were covered by DVA, including a monthly living allowance. Geoff graduated with a degree aeronautics. He next bought a surplus trainer, a Cornell, and flew it for a while, then sold it. It cost too much to operate. He found a home at Avro, working at Orenda, but transferred to the aircraft division, to work on the Jetliner, then the CF-100. He recalled his flight with Jan Zurakowski in this aircraft and a scary drop from 40,000 to 4,500 feet in a few seconds.

Now I would like to share some more "gut grabber stories" of flights I experienced. This story will give you an idea of how advanced Canada's newest military aircraft were in the mid 50's. On this test flight, Peter Cope, the pilot, and I were testing wing tip rockets on a special version of a CF-100. During the test, the rockets caused our jet engines to shut down because the rocket exhaust starved the engines of air. Peter put our aircraft into an almost completely vertical dive in order to force the engines to restart. It was fun to watch the American's scramble their Sabers to try and intercept us. They could not fly above 30,000 ft. We just laughed as we, with jet engines now restarted, pulled back up to 45,000 ft. Can you believe it? There actually was a time when the Americans could not catch us!

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If these test pilots, whom I flew with (Peter Cope, Don Rogers, Janusz Zurakowski, Michael Cooper-Slipper and Stan Hazwell) were not making vertical dives in order to restart engines, they were doing other incredible maneuvers, like the time Jan Zurakowski, one of our best pilots, had us screaming along at tree top level. As it turned out, Jan was actually flying over his cottage (near Barry's Bay, Ontario) and I could hear him over the intercom saying, "I can't see my boat. Where is my boat?" It did not occur to him he was scaring me half to death while he worried about finding his boat.

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## From the President

In this issue of *Pre-Flight*, we present another glimpse into a first hand experience of Avro's history.

As an ex-Avro employee, just a young lad at the time, I found it very interesting to read about the various aspects of that great organization. My special interest was in the areas of expertise with which I was not directly involved.

Read and enjoy the articles in this issue! We encourage your comments and suggestions about what you read in *Pre-Flight*. Remember, this newsletter is for you and we want to ensure this.

We are still looking for a location in the Toronto area to *permanently* store AHFC artifacts and memorabilia. If you know of a potential one, please let us know.

*Frank*

## My Life in Aviation: Conclusion, cont'd

One of my saddest stories however was the loss of one of my flight crew observers, John Henry Hiebert, whom you read about in the September-October *Pre-Flight*. Janusz Zurakowski was again the pilot. He was testing a "belly mounted" rocket pack in a special version CF-100 when he heard the loud bang and knew something was horribly wrong. After blowing off the canopy he yelled for his observer to "bail out". The observer never did. Jan only broke a small bone in his foot but parachuted safely to ground. The plane crashed with John as observer still onboard.

This accident and death bothered me greatly. I needed to understand why the observer did not eject. I made it my job to find out and I kept complaining until the company allowed me to carry out some tests. We organized a flight test with me as the willing, but nervous observer. During the flight and with the airplane's canopy removed, I experienced a 500-mile an hour wind that was so strong as to rip my sleeves off and wrench my shoulders. I discovered it was impossible to reach over my head and pull the blind that was used to activate the ejection seat, if and when it was ever required. It was not until we almost reached the stall speed of the aircraft that I was able to reach the blind above my head. This test proved we needed a windscreen to protect the observer and we also needed a light indicator that could tell an observer the pilot was giving the order to "bail". It was just impossible to hear anything in that wind.

Upon landing, we were ushered into a conference room where senior management people were laughing as they replayed my voice recording. They apologized for laughing after hearing me on the recording, call everyone idiots for not testing the escape systems during the CF-100's original flight trials. The worst part of all this, is the RCAF refused to accept our safety feature modifications until all of the flight observers refused to fly. Only when our refusal to fly completely stopped production of the aircraft, did they finally agree.



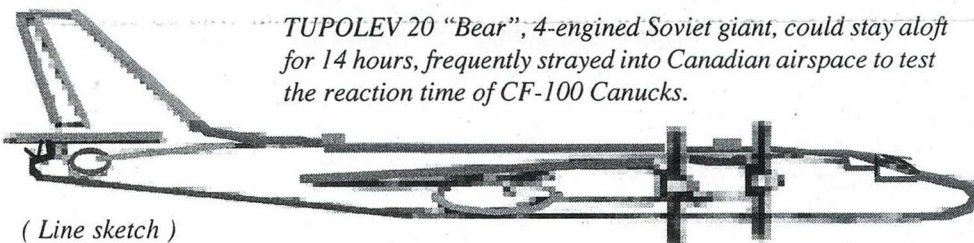


*Avro Jetliner:  
First commercial commuter jet, radical for  
its time. It was the first aircraft designed  
entirely by Jim Floyd.*

### My Life in Aviation, cont'd

I took this concern for safety with me when I moved to working on the famous C-105 Avro Arrow project. If you are not familiar, the story of this aircraft, is probably one of the saddest stories in Canadian aviation history.

You must keep in mind the world, at that time, was divided between the East (Soviet Union) and the West (United States, Canada, Great Britain and France). The threat of a Nuclear War was an every day possibility. Both sides in this conflict, the "Cold War", were locked in an 'Arms Race'. These were phrases Canadians heard every day. Canada was in the very middle of this conflict. Military leaders believed if the Soviet Union attacked the United States, it would do so by flying over Canada, via the North Pole with long range bombers loaded with nuclear bombs.



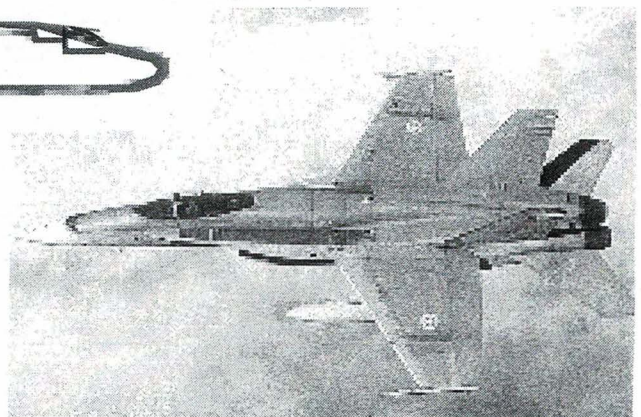
*TUPOLEV 20 "Bear", 4-engined Soviet giant, could stay aloft  
for 14 hours, frequently strayed into Canadian airspace to test  
the reaction time of CF-100 Canucks.*

Canadian military leaders as well as our government of the time, believed Canada needed this new CF-105 Avro Arrow fighter/interceptor aircraft to meet this threat. The CF-105 was designed to be a twin jet engine, long range supersonic aircraft with a crew of two. It was to be equipped with a highly sophisticated fire control and weapons system. The CF-105 was to fly at speeds that had not yet been achieved by any other aircraft in the world.

My first assignment on the CF-105 project was as project engineer for the escape systems. This was because of my work on the CF-100. After studying cockpits and escape systems from other aircraft and other companies, I came to the conclusion we should build a "Mock up" of our cockpit design complete with test dummies and including the instruments needed to test its effectiveness. My project was approved and with a company in California that had experience in this area, we decided to build a test site in Utah.

Our test facility was built at a place where our tent dummies could be fired by rocket down a track at speeds faster than the speed of sound. At the end of this test track, we activated our ejection seat and launched our dummy over a cliff. The instrument readings were recorded and at the same time we used cameras installed in the cliff to record the test. This test program was estimated to cost \$1,750,000 dollars. I even added \$250,000 dollars to this estimate in case it rained! It may seem funny, but it can rain in a desert and if it does, the roads always wash out. We were going to fly all the equipment in to the test site if this happened. I was a young enthusiastic engineer and I believed I had considered all the possibilities (even rain in a desert) and that \$1,750,000 dollars was plenty of money to complete this project. My project was approved but the Company instructed me to increase my cost estimates to \$2,250,000 dollars.

I was shocked and discouraged by this waste of money. In the end, the CF-105 project was cancelled. Avro only built 6 of these great aircraft and then proceeded to chop them all up for scrap! Many people still ask why? How could our government do such a horrible thing? Canada had designed and built an airplane that was so technically advanced no other country had an aircraft that could compete. To give you an idea of its performance, the CF-105 which was designed and built in the late 50s flew faster than Canada's present day CF-18 fighter.



*CF-18 Hornet*



## My Life in Aviation, cont'd

Canada at the time, was at the forefront of aviation and aircraft design, but not any more. About 45 years have gone by and the sad memories of that time have not disappeared for many people. The Avro Arrow was to many Canadians more than just an aircraft. The Arrow was a dream. It held the hopes and aspirations of our nation. As the late Jan Zurakowski, who was the Arrow's first test pilot, said: "It's almost as if our spirit as a nation died with the Arrow".

If the cancellation of this great project seems confusing, consider the skullduggery I experienced as a reason for the incredible cost overruns which doubled the cost for each aircraft to six million dollars. This ended my childhood love affair and I like 14,000 other men and women that were employed by AVRO, had to find other ways to earn a living. Like so many other designers, I was offered a job in the USA, but in the end, I turned it down. I wanted to stay in Canada.

If you want a more complete, detailed and accurate explanation of this sad story I suggest reading: "Shutting Down The National Dream" or watch the CBC presentation "There never was an Arrow".



## Members Matter

*We had to move beyond the demise of the Arrow; there was no other alternative. Yet the way it happened still bothers so many. Our dream became the harsh reality of a sudden cancellation and rushed destruction.*

*I urge you to get the book that Geoff mentioned. It is well-written and treats the reader as someone intelligent, offering insight into the histories of the Jetliner, the CF-100 and the Arrow. The author also gives a clear picture of the murky background of political decisions and the people who made them. It's a book that makes you stop and think.*

*But there's just one problem. It may be out of print. But don't give up. Check with libraries and bookstores.*

*By the time you receive this newsletter, I will have gone south to "the land of the free and the home of the brave" to visit my grandchildren. When I return (yes, before Easter), I will have much to share with you about the comings and goings of our Foundation.*

