

The Avro Arrow on Centre Stage

CBC re-creates a Dream

by Bill Zuk



Dan Aykroyd (centre) portrays Crawford Gordon in the Avro Arrow mini-series. He is seen here with Lynn Cormack who plays Mary Gordon and Conrad Sweetman who plays Crawford Jr.

On 4 Oct 1967, the same day that *Sputnik I* was revealed to the world, another important event was taking place at the Avro Canada plant in Malton, Ont. After years of design and construction, the Avro CF-105 Arrow roll-out took place in front of an estimated 12,000 guests joining the Avro employees who had proudly built the aircraft. Almost 40 years later, an Avro Arrow was again on centre stage in front of the people who brought it to life – this time, a life size replica of the Arrow being used as its stand-in for a film being shot in Winnipeg.

Scheduled for release in Jan 1997, *The Arrow* will be a four-hour CBC mini-series; a fictionalized docu-drama starring Dan Aykroyd as Crawford Gordon, the combative CEO of Avro Canada. Along with Aykroyd, *The Arrow* will also feature Christopher Plummer, Michael Ironside, Michael Moriarty and Canadian television stars, Art Hindle and Sarah Botsford of *E.N.G.*, Ron White (*Kissinger* and *Nixon*) and Aidan Devine of *Net Worth* and *The Boys of St. Vincent*. With an estimated \$7 million budget, the series will also showcase a dozen other

principal actors and use an estimated 300 extras, making it the largest film production ever shot in Winnipeg, and one of the largest ever in Canada.

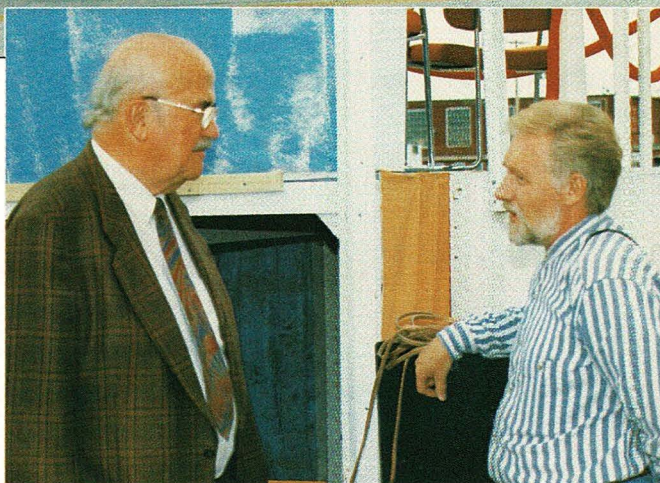
The Arrow mini-series had its beginnings in 1989 when writer Keith Ross Leckie, along with his wife, producer Mary Young Leckie, began to develop the story as a feature film. Financing was difficult but when Hollywood actor and consummate Canadian, Aykroyd, was approached to take a leading role in the film, he suggested that a CBC mini-series would be possible.

"Coming back to TV, Canadian TV and the CBC... was very exciting," recalled Aykroyd recently. The project was also one to which he was personally committed; not only was he aware of the significance of the Avro Arrow but he also had a personal connection. His mother had known Crawford Gordon during WWII when she worked for him in his munitions program.

A joint production of Winnipeg's John Aaron Productions and Tapestry Films and the Film Works of Toronto, Straight Arrow Productions produced



(above) The Arrow model is rolled out in front of a cast of hundreds, re-creating the 1958 ceremony.



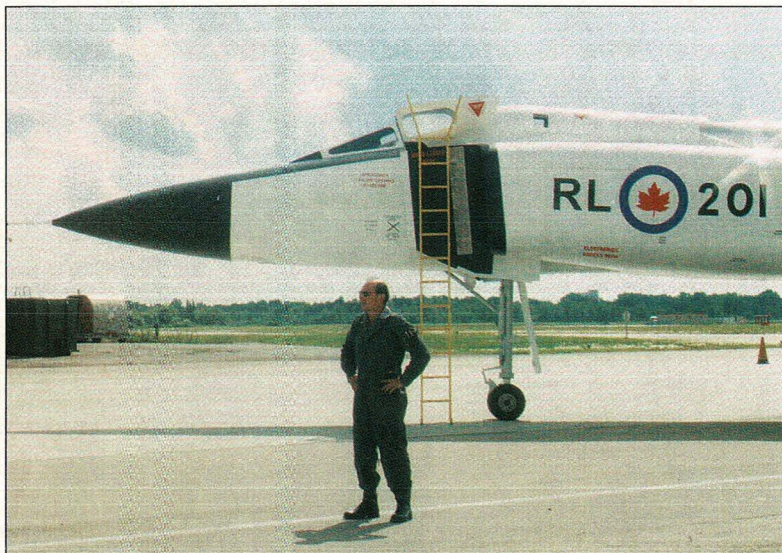
(left) TV broadcaster Elwy Yost meets George Foley, "the little boy in the photograph."

The Arrow mini-series. It brings together some of Canada's finest feature film production and technical expertise. Toronto director Don McBearty, award-winning director of the acclaimed *Butterbox Babies* (1992) is teamed with Toronto producers, Mary Young Leckie and Paul Stephens, and Winnipeg producer Aaron Kim Johnston whose credits include *The Last Winter* (1989) and *For the Moment* (1995). Along with this talented quartet are numerous other nationally and locally known film makers, swelling the ranks of the production crew to approximately 150 people.

The series was produced in association with the CBC along with the participation of Telefilm Canada, Manitoba Film and Sound and Western International Communications Ltd.

Winnipeg and Manitoba will be featured prominently in *The Arrow*. When producers researched the original Avro plant at Malton, they found it would not

be possible to recreate the 1950s era in the modern Toronto Airport complex. However, in Winnipeg, near the current airport runways, was a hangar area owned by the Western Canada Aviation Museum (WCAM) which looked identical to the aircraft hangars of the 1950's. Throughout the rest of the city were many other areas that could recreate the postwar Toronto area – the McGregor Armoury, Exchange District, 17 Wing Winnipeg and its base housing area (PMQ's) and the Manitoba Legislative Building.



Actor Lubomir Mykytiuk bears a striking resemblance to test-pilot Jan Zurakowski.

Another reason for choosing Winnipeg as the site for *The Arrow* was the availability of a talented group of Manitoba film makers. With the recent success of production companies such as the Credo Group (*My Life as a Dog*) and John Aaron Productions, there was a proven track record of film making in the province. The mini-series also received assistance and cooperation from Air Canada, the Department of National Defence, the City of Winnipeg and the WCAM. Following principal photography, the museum displayed the full-scale replica of the Arrow for the public.

The Avro Arrow features a full-scale model of the real aircraft. The origins of this replica had an unusual beginning. It came from the workshop of Allan Jackson, a 59-year old sales estimator in the

steel industry in Wetaskiwin, Alta. Beginning a long-term project of building an accurate replica of the Arrow became a passion for Jackson. He had completed a wooden mock-up of the nose section by 1993 and had envisioned its final completion for the year 2000 until the intervention of the film crew.

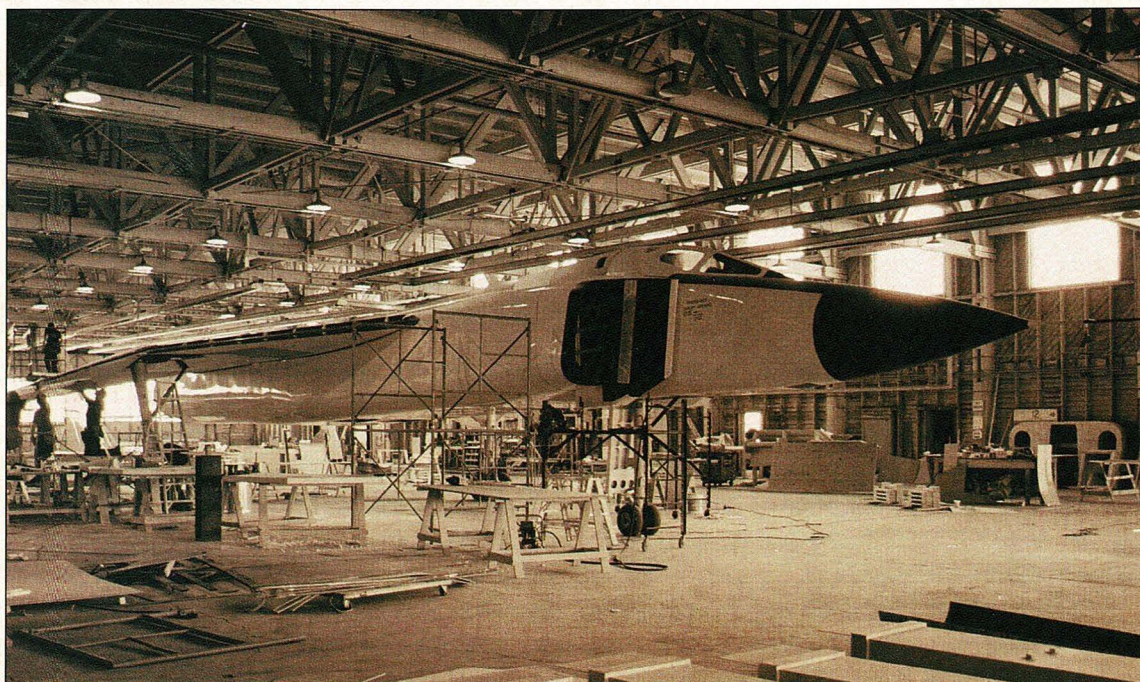
Jackson had been building an exact model, creating a wood and metal framework that was accurate to within inches of the original aircraft's dimensions. When he was approached with a proposal to use the model in the film, it was arranged to have the model completed, then transported back to Wetaskiwin.

Allan Jackson's dream was now about to come true. The completed model is destined for a museum display in the future, but for now, it plays an important leading role in the story of the Avro Arrow.

After the skeletal framework arrived in Winnipeg where principal shooting was to take place, it became the job of David Melrose, construction supervisor, to make it the movie Arrow. The model had to be finished by the end of June, roughly three weeks time, in order to be featured in exterior shooting. The 24 metre-long fuselage was assembled with the 15 metre wingspan delta wings attached next.

Melrose was faced with a daunting project. The model had to look like the Avro Arrow but not to the point of being an exact reproduction – "It's movie magic... all illusion, nothing is real," Melrose explained. With the need to get things done in a hurry, the 39-year-old supervisor worked with a mix of 10 carpenters and crafts-

The Avro Arrow model undergoes construction in Winnipeg.



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men – all able to produce the parts needed for the deadline.

With the arrival of star Dan Aykroyd on 12 Jun came a flurry of publicity for the movie and the Arrow model was finally shown to the media. Still resembling a skeleton, the model began to take on a more finished appearance as thin white aluminum sheets were fastened to the frame. With the aircraft sitting on its spindly landing gear, the next step was taken – to make the seven ton Arrow model actually move. Melrose had devised a set of DC electric motors for each of the main wheels.

A day ahead of schedule, the model was ready to move across the hangar. As production publicist, Ches Yetman and production manager, Anna Marie Boquist, watched the operation, they noted that the aircraft was covered in dust and as the motors were started, the dust shook off. As it started ahead, Anna Marie said, “it looked like it was coming to life...”

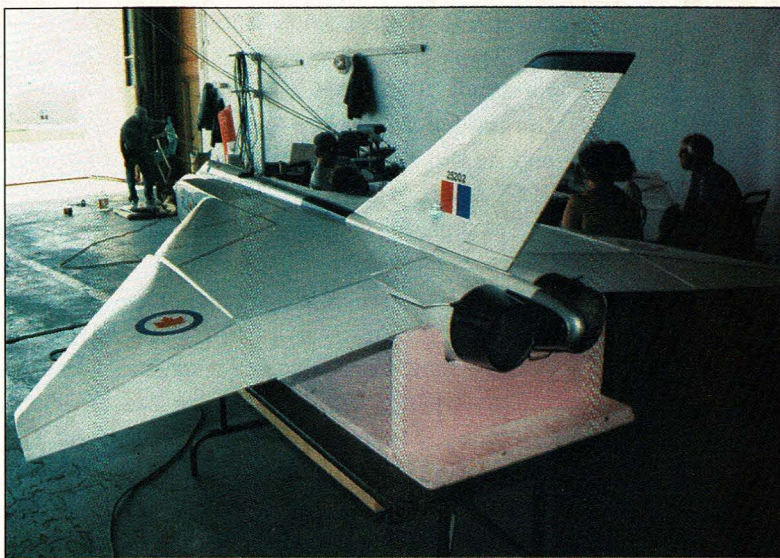
In the recreated Avro plant on the other side of the hangar, the model finally received its tail and final details. The Avro Arrow was ready for filming.

On that memorable day in 1957, a small boy, George Foley had come with his parents to attend the unveiling of the Arrow. He was excited as all little boys could be on a special day – a day when he could go to see where his father, a tool and die maker worked, and of course to see the Avro Arrow.

As the band played and the crowd cheered, Foley gazed at the wondrous sight of the glistening white interceptor. Sometime that day a photographer spotted him at the red rope barrier and took a photograph which became legend – a little boy gazing out at the giant fighter. The photograph appeared in several magazines and books captioned “The future, looking at the future.”

Alas, it was not to be. After the roll-out ceremony and an impressive test flying schedule, the entire Arrow project was cancelled and nearly all the Avro employees were fired. George’s father continued his work as a tool and die maker but no longer in the aviation industry. His family drifted to Newmarket, Ont, and years later he began a new life in Winnipeg.

Fast forward to 4 Jul 1996; Foley returned to see the Arrow once again. There it was, being rolled out into the sunlight in the midst of hundreds of cheering people. He had been drawn to the set of *The Arrow* and he was not the only person to have been at the original ceremony. Elwy Yost, the well known Canadian broadcaster and one-time Avro Company publicist, and Sylvia and Derik Wooley, former Avro flight-test engineer



were also there. The little boy was there as well. George had returned that afternoon with his four year old son – a blond haired, spitting image of himself in 1957. “I don’t know what brought me here but I just wanted to see it again,” said Foley.

Crawford Gordon was present at the ceremony, as well, with his wife and son, at least the uncanny look alike in the form of Dan Aykroyd. As he moved about the set at the WCAM which was now furnished with props, from an Avro CF-100 jet fighter, an authentic looking CBC TV truck, to extras all accurately depicted in 1950s era clothing, it was Crawford Gordon again.

The key player in the Avro Arrow story was the president and general manager of A.V. Roe Canada, Crawford Gordon Jr. who remains one of the most intriguing figures in Canadian history. He was born in Winnipeg, and during WWII he was one of the “dollar a year” men who worked in the Department of Munitions and Supply. After the war, Gordon took over as the chief executive of A.V. Roe Canada. Avro was an industrial giant by 1955 consisting not only of jet aircraft and engine production but also shipping, steel products, trucks and buses, iron and coal mining, railway rolling stock, computers and electronic equipment.

Gordon and Avro Canada had invested heavily in the new Arrow program not only in money but also in expertise. The more than 13,000 people working in the aviation division were some of the most skilled and creative teams of designers, engineers and production staff ever assembled in Canada. They had been involved in the design of Canada’s first jet engine, first jet fighter, first jet airliner in North America and soon, Canada’s first supersonic jet interceptor.

A change in governments and a sudden re-

Radio-controlled flying models of the Arrow constructed in Calgary arrived in Gimli, Man, for filming of aerial sequences.

evaluation of defence needs led to the collapse of the Avro Arrow program and the eventual dismissal of "just about the best team anywhere." Gordon fought fiercely for the Arrow and in the end, he also lost his job. He died in 1967 at the age of 53, a broken man.

The gruelling shooting schedule for the roll-out ceremony meant actors and production crew would be in the 30° – plus Celsius temperatures for most of the day. For Aykroyd, it was the culmination of nearly a month of filming and it was nearly over.

Dan Aykroyd, comedian, actor, screenwriter, director and producer was born in Ottawa. The class cut-up found fame in Toronto's *Second City* comedy troupe and *Saturday Night Live* before turning to film.

Aykroyd is now at a point in his career where he has the time and money to pursue some of his favourite projects and interests. The House of

Blues Foundation, continuing the legacy of the Blues Brothers, is a major project.

His other main interests centre around his homeland, where he has often returned to receive honours as a favourite son. He has campaigned for the motion picture industry in Canada and now, *The Arrow*. "Really a tragedy of in-fighting and politics... but it just shows what we can do as Canadians when we put our mind to it" said Aykroyd in a recent interview.

The shooting schedule of *The Arrow* continued into Aug 1996, with more scenes filmed around Winnipeg and in Gimli, Man, where radio-controlled model Arrows recreated the test flights of the aircraft.

But there will be no more important scene than the roll-out of the Avro Arrow – once more on centre stage for the world. ☺

An Interview with Dan Aykroyd

by Don Pearsons



Dan Aykroyd relaxes on the set during a break in filming.

Actor Dan Aykroyd who plays the part of Crawford Gordon in *The Arrow* story was interviewed exclusively for *Airforce* during filming by Don Pearsons, Senior Staff Officer Heritage at Air Command Headquarters in Winnipeg:

AIRFORCE: *You have been filming in Winnipeg for more than a month now. What is your impression of Winnipeg?*

AYKROYD: *I find that Winnipeggers are really loyal to their city. Many who have gone away to different parts of the world, ultimately come back here*

because they love it. I appreciate that loyalty; I'm a loyal Kingstonian and I never thought I'd visit a city where there was such fealty in a town. We think in Kingston that we are the most loyal because we love our city so much, but here in Winnipeg, there really is a tremendous affection amongst residents. It's all enhanced by summer too – you wait nine months for a beautiful summer – so everybody is friendly and wonderful.

AIRFORCE: *How did you first become interested in the Arrow project?*

AYKROYD: *Keith Leckie, the scriptwriter, sent me the script almost three years ago and I liked it because of its Canadian-ness and it's a story of an achievement that Canadians made in industry and technology; starting from nothing and building this incredible piece of beautiful technology which works on one level as a sculpture and works on a higher level as a really efficient war plane, a fast war plane. In addition to the Canadian aspect of the story, it appealed to me as an aviation story. I'm an aviation buff – I've always had an interest in it. I've flown in the B-25 bomber and I've been in an F-5 fighter when we did *Dragnet*. I've also flown in the Concorde and in Gulfstreams and Lear's. We rented an old Convair that Elvis Presley used when we did our Blues Brothers Tour. I saw*

all the intact B-17s that were flying in the world when they flew over an apartment building where we were having a party. They had Mustangs doing a criss-cross scissor protection technique behind the aircraft like they used to do in the war.

AIRFORCE: *I understand there's a connection with the character you play and your family?*

AYKROYD: *My mother worked in munitions supply during the war. She knew Crawford Gordon quite well, he was in and out of that office all the time. That represents a personal link to the story that I felt was kind of neat. I got some insight into his character from her. She said he was quite aggressive and a real go-getter. I like the dimension of the character because he was a man's man for the times. He had vulnerabilities: the drinking, the smoking and a weakness for a pretty lady now and again. He was very successful at a young age. He ran Canadian General Electric when he was in his late 30's and he was a war hero decorated by the Crown for his work in racing munitions to the front-lines. And then when he took over Avro he was in his 40's which was quite young for a CEO. A tragic figure as well, he died at 52 in Manhattan. He never came back to Toronto after the Arrow*

was cancelled. It represented a big part of his life and his heart was broken by it. I like the serious stuff too. I really enjoy doing it. First of all, it's easier than comedy, much easier.

AIRFORCE: *The Arrow mini-series is rather important to the air force. It was a very significant time in the air force's history with a very unfortunate outcome. Do you have a message for the people in the air force today?*

AYKROYD: *I think that the people in the Air Force can certainly be proud of their record in history in all the world conflicts they have been involved in. The Canadian Air Force is certainly recognized throughout the world as having the top people flying the top technology and there is nothing that the Air Force can't do. In fact, the U.S. force is bigger but the Air Force has people who are certainly capable of the same achievements. I support any enterprise where young peoples' talents are fostered and where Canadians can show the world that we've got the right stuff.*

AIRFORCE: *Thank you very much Dan, and continued success with your film career and night-club business.*

The Avro Arrow Story

by Bill Zuk

When Avro Canada was finally able to showcase their remarkable new interceptor, the Hon George Pearkes, minister of national defence announced, "I now have the pleasure of unveiling the Avro Arrow, Canada's first supersonic aircraft, a symbol of a new era for Canada in the air."

This was merely the official ceremony, as for most knowledgeable observers of Canadian military aviation, the CF-105 Avro Arrow had already been an object of much attention. Arrow RL-201 was the first of a planned series of 100 aircraft. Construction of "201" would take only 28 months from the release of the first blueprints to its roll-out, but the story of the Avro Arrow had begun much earlier.

Designed to RCAF specifications in 1953 that called for a twin-engine, two seat interceptor capable of protecting the Arctic frontier of Canada, the Arrow was remarkable in its execution. Unlike its subsonic predecessor, the CF-100 Canuck, the

Arrow represented an advanced technological achievement. Developed by A.V. Roe of Canada, its origins stem from the innovative research and design programs carried out by the company during the 1940's.

The Avro Arrow was one of the world's most advanced fighter aircraft during the 1950s. The developed Arrow Mk.II powered by Canadian-designed Iroquois engines would have been capable of Mach 2.4 speeds – remarkable for 1959! An innovative approach was also undertaken by Avro to establish production tooling from the outset, resulting in the first Arrow reaching completion on 4 Oct 1957.

RL-201 was the first of five Arrow Mk.I's that would fly as prototypes for the series (RL-201, 202, 203, 204 and 205). Equipped with Pratt and Whitney J-75 engines, the initial production batch were fascinating hints of the future. Utilizing a complex "fly-

Some Avro Arrow Trivia

- ✦ First fly by wire aircraft (next was the X-15).
- ✦ First flying 4,000 psi hydraulic system (second was the USAF B-1B bomber).
- ✦ First one-to-one thrust class fighter.
- ✦ Iroquois engine is believed to have recorded the highest dry thrust in the free world at the time for turbojets.
- ✦ Mk.III Arrow had a planned max speed of Mach 3 and combat ceiling of 68,600 ft.
- ✦ Planned climb rate from sea level for Mk.III Arrow was 60,000 ft per minute.
- ✦ At the time of cancellation, Avro had the largest amount of refined titanium in the free world. They were a major supplier to the U.S. engine manufacturers because of their refining process.
- ✦ Flight test performance curves indicated the Iroquois equipped Arrow would be capable of Mach 1.1 "super-cruise" at sea level.
- ✦ By cancellation date the Iroquois had accumulated at least 7,000 hrs running time on 13 engines. Idle to full afterburner thrust was 4.5 seconds including automatic nozzle arrangement.
- ✦ 97 percent of the parts were on hand for the first 37 Arrows at cancellation.

The nose section and a few other fragments of Avro Arrow RL-206 are the only remaining artifacts of what was once a national dream.

by-wire" control, an advanced weapons system and remote ground-controlled operation, the Arrow was, arguably, the most advanced fighter aircraft of its day.

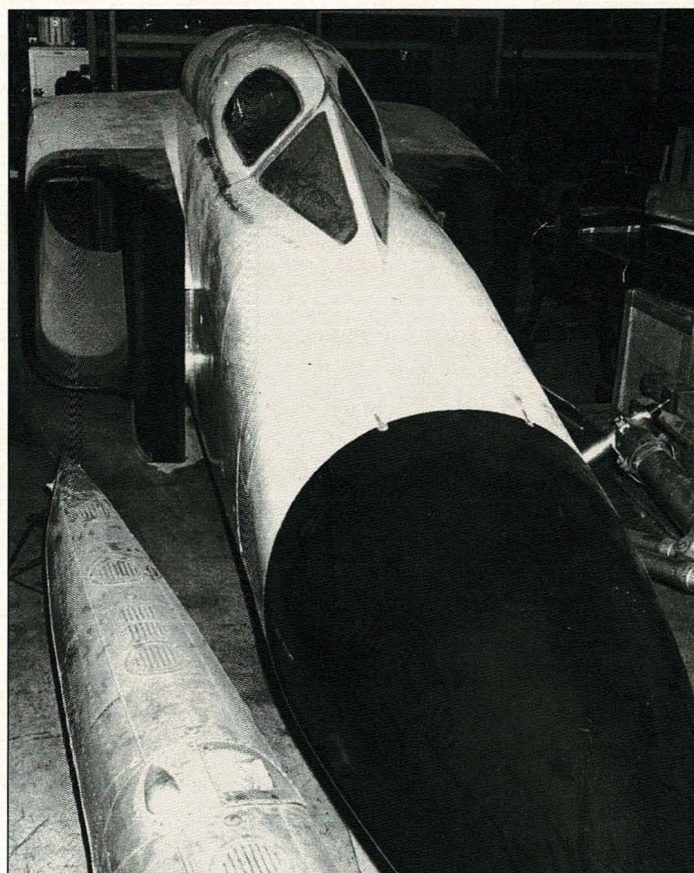
An earlier design from the Avro Company, the Avro C-102 Jetliner was North America's first jet airliner and one of the outstanding aeronautical achievements of its day (see "The Avro Jetliner – Shutting Down Another National Dream," *Airforce*, summer 1996). It never saw production as the Canadian government insisted that Avro concentrate on their military jet program, the CF-100 fighter. When no foreign sales were generated, the Jetliner was sold for scrap in 1956.

Avro's main jet program in the 1950s was based on the CF-100 Canuck, the first military aircraft wholly designed and built in Canada, and one of its first jet fighters. The CF-100 was a long-range, all-weather interceptor equipped with two Avro-designed and built Orenda engines. The CF-100 became operational in April 1953 and served 10 years with NORAD and NATO squadrons (692 were eventually built with 53 being sold to Belgium).

In the 1950s, Canadian and American air defence organizations were integrated under the NORAD Agreement. The RCAF role of northern air defence depended on the next development of the Avro Company – the Arrow. The Liberal government at the time authorized two prototype airframes of an advanced supersonic interceptor in Dec 1953. It was anticipated that a production run of up to 600 aircraft costing \$2 million apiece was needed.

During the design phase, the Avro Company led by its dynamic CEO, Crawford Gordon, undertook the expensive development of the Arrow's engine, and fire-control and missile systems, with estimated costs rising to \$12.5 million per aircraft. Test flights indicated that with the Canadian-built Iroquois engines, the Arrow could well be the world's fastest and most advanced interceptor. However, doubts in the military and the government over the role of the Arrow mounted and the government's order shrank to 100. Unit costs rose yet again.

The potential of the Arrow was realized by Avro's chief test pilot, Janusz Zurakowski. He piloted the Arrow on its first flight on 25 Mar 1958 and exceed-

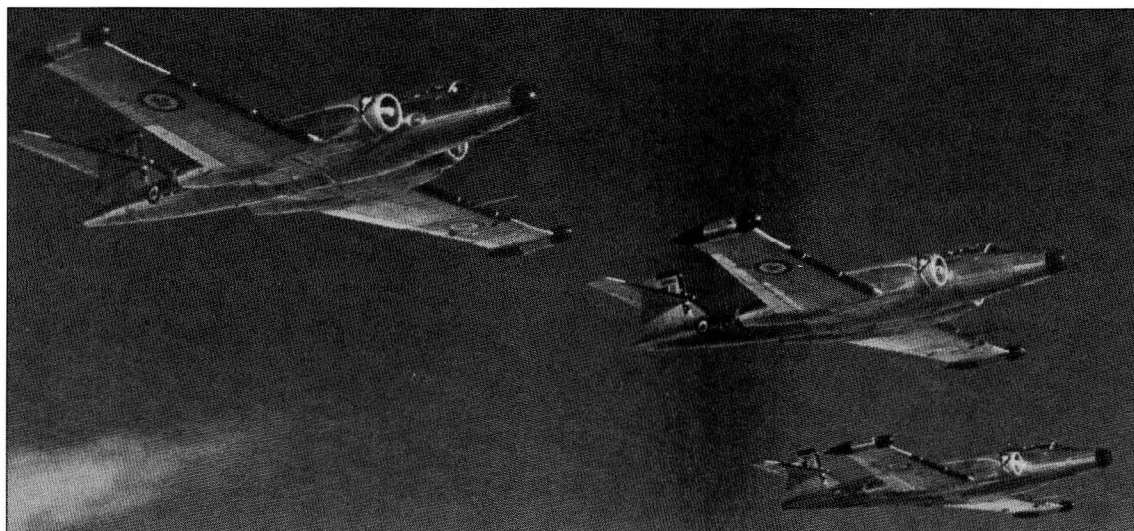


ed 865 knots on the seventh flight of RL-201. Zurakowski was awarded the McKee Trophy in 1958 primarily for his work on the CF-105 program. In all, 66 test flights totalling 70 hours and 30 minutes were completed by four test pilots flying five aircraft between 25 Mar 1958 and 20 Feb 1959.

Other events were soon to overtake the Arrow project. In Oct 1958, to cut costs, the newly elected Progressive Conservative government of John Diefenbaker terminated the Canadian fire-control and missile development, and renewed efforts to sell the aircraft to the United States. Diefenbaker as well considered the Arrow program a Liberal "pet" project.

The PM and his new minister of national defence, George Pearkes, hastily accepted the advice of the Canadian military and agreed to integrate the RCAF with the USAF for the air defence of the continent. The Diefenbaker cabinet proposed the Bomarc missile as an adequate deterrent. The cost-effective, but flawed Bomarc was greatly resented by supporters of the Arrow. As Crawford Gordon launched a last-ditch effort to keep the project on-track, it was clear there was considerable resistance in the Diefenbaker government to continue with the costly development of the Arrow.

The Arrow project was officially cancelled by Diefenbaker on 20 Feb 1959 (known as "Black Fri-



The Avro CF-100 Canuck was Canada's first line of defence in the 1950's. The Avro Arrow would have superseded it in the 60's, had the project not been cancelled.

day" at Avro). Company directors led by Gordon fired nearly 14,000 employees. The Diefenbaker government cited high costs and its new commitment to missiles rather than manned aircraft defence as the reasons for the program cancellation. Three months later, the government also ordered that all aircraft completed, including RL-206, the first Arrow Mk.II, and all partially completed Arrows still on the assembly line, be destroyed.

This vindictive decision by the government was further bolstered by demands that all evidence of the CF-105's existence, including tools, dies, drawings and photographs also be destroyed. To many people the resulting flight of scientists and engineers meant the end of Canada's aviation industry. The Avro Company completed the destruction but not surprisingly, the Arrow remains alive in people's memories, along with the few fragments which had been preserved.

The Avro Arrow program was one of great promise but unfulfilled objectives. It was undoubtedly one of the most advanced jet interceptors in the world, but owing to the prohibitive costs of

development, it was an extremely costly venture for Canada. With changing political and military policy considerations that emerged in the late 1950s, the Arrow was doomed. However, its cancellation was a disaster for the aviation industry in Canada and practically ensured that future military aircraft would have to be purchased abroad.

Today, the Avro Arrow only remains a memory although some sections of Arrow Mk.II RL-206 (nose, front landing gear and Avro Iroquois engine) are preserved in the National Aviation Museum in Ottawa. In a quirk of fate, the Avro Arrow parts sit near the chopped up nose section of the Avro Jetliner, another unrealized dream of Canadian aeronautics. ☺

(Ed note: Bill Zuk of Winnipeg is an amateur aviation historian and writer whose interest in the Avro Arrow is long-standing. Currently a teacher-librarian in St Vital School Division, he is also an active member of a number of associations involved in literature, modelling and aviation history. When the Straight Arrow production team began work in Winnipeg, he asked for and received permission to chronicle for Airforce magazine, the making of the Arrow film.)



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