

The man who wouldn't give up

Painstaking care goes into crafting a replica of CF-105 Arrow fighter

by ROBERTA LIVINGSTONE
Abbotsford News

SOME PEOPLE DREAM of wooden ships. Some dream of flights to the stars.

Still others become enamoured with the memory of something that might have been.

Allan Jackson, a welder from Wetaskiwin, Alberta, had such a memory and a few photos and technical diagrams.

A full-scale replica of the Avro Arrow, a 1950s supersonic interceptor aircraft, was built from those few scraps of information.

"How do you build an airplane for which there are no plans and no models? One simple word. Commitment," he says.

For Jackson, commitment meant a devotion to accuracy few could claim. The replica is very accurate to original specifications:

"I have made spot checks on the nose cone, the only known piece of the Arrow left, available in Ottawa. I brought those measurements back to my model and I'm within 2% of the real Arrow and some measurements are within an 1/4 inch."

His commitment started with a visit to see the original forty years ago.

The young Jackson, whose hopes to be a pilot had been dashed because he is colour-blind, had trained his sights on the Canadian aircraft industry:

"I remember seeing the Arrow. It was so beautiful! I could really appreciate its design because I had a background in aeronautical engineering.

"Cancelling it was so tragic."

The Avro Arrow, a.k.a. the CF-105, is considered by many aviation buffs to be one of Canada's greatest near-misses.

Commissioned in 1953 to help defend Canada from any possible Soviet invasion, the Arrow was at first hailed for its state-of-the-art technology, including the "Iroquois" engine, considered to be the most powerful in North America; a more advanced electronic

system than any previous aircraft; and distinctive large and thin delta wings.

Many in the industry were convinced that the Arrow's design would place Canada in the forefront of the aircraft industry.

The plane was designed to have the most ambitious armament possible, a fact which probably led to its downfall: Problems emerged with the radar and fire control systems.

Technological setbacks, resulting spiralling costs of building the aircraft, and a growing unpopularity were among the reasons the government gave for cancelling the plane in February, 1959, on what is now known as "Black Friday."

There may have been another reason: The changing face of warfare.

The enemy the Arrow was meant to intercept, high-flying supersonic bombers, were being replaced by low-flying aircraft and other technology.

All Arrow aircraft, drawings and toolings were ordered torched and scrapped. Over the years, many theories have emerged about 1950s 'backroom politics' and their influence on the government's decision.

For Jackson, Black Friday didn't just mean an end to a beautiful aircraft, it meant the end to a possible career in the industry.

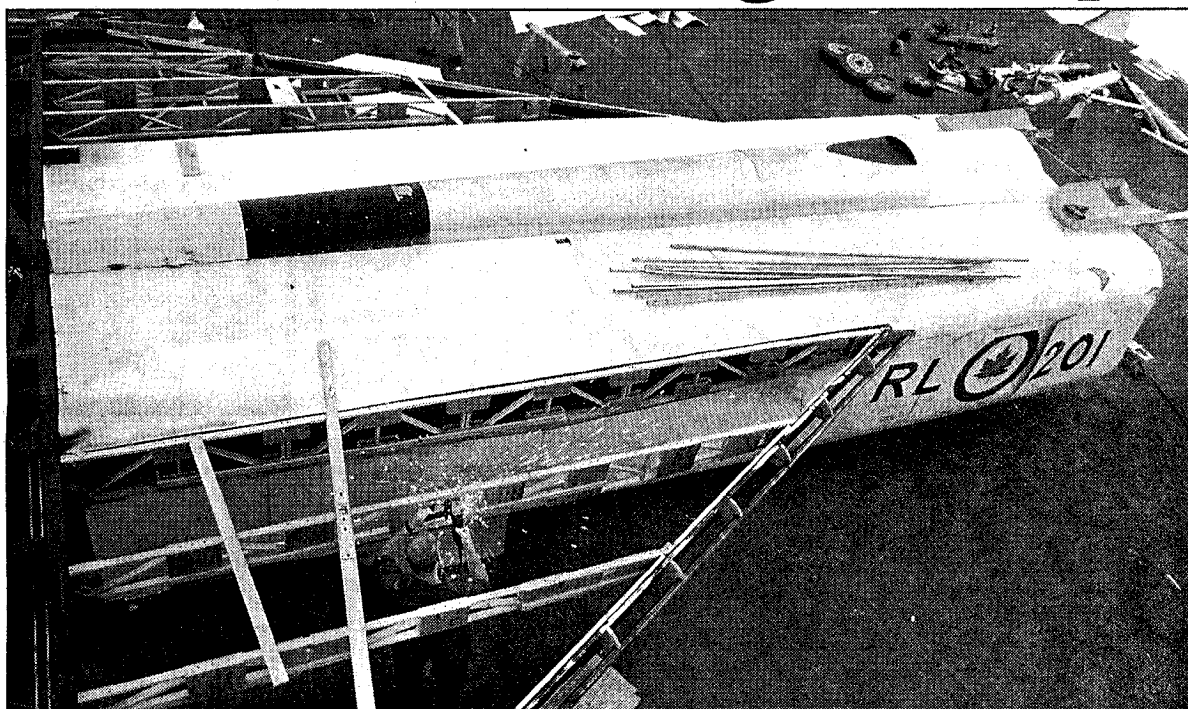
"From my point of view, the cancellation of the Arrow dropped the aircraft industry to its knees. . . I said to myself, why would you want to go into an industry that just laid off 35,000 people? I went off to do something else."

But the memory endured. In 1987, he came upon a history book on the Arrow which included pictures and a few technical diagrams:

"I began to fantasize about bringing it back, about resurrecting it.

"I thought, well, maybe I could just build a nose cone to duplicate what Ottawa has and this could be available in western Canada.

"So in 1990, I decided to build a nose cone by starting first with the air intake section. I said to myself,



NEWS PHOTO BY ANDREW TOLSON

Work continues at the Abbotsford Airport on replica of the Avro Arrow. It will take 1000 man hours to complete the construction in time for the Abbotsford Airshow this August.

how difficult could it be?"

Success with the nose cone led to the building of the first 28 feet, "in a manner which suited my skills and my wallet," says Jackson.

Think plywood frames, fibreglass molds, over 7,000 lbs. of steel trusses for strength. Think backyard projects done in the spring and summer months after the deep prairie snows had disappeared.

"I was operating with known and available workshops, mainly my two-car garage for the wooden component. And I work at a steel manufacturing firm so I was able to use the equipment there for the pieces made out of steel, and between the two, I was able to get all the necessary pieces built.

"And then I started to think about the other end of the plane."

Jackson had only a few sketches to work from when he started on the tail.

"You know, that aircraft is so big. If you asked someone, could a person build this, he would say, 'No!' or 'He's crazy!' or both.

"As it turned out, it was not insurmountable."

In 1996, the movie company filming the CBC mini series on the Avro Arrow entered the picture. Jackson's Arrow was the only copy in existence and the replica was headed for international fame.

And a few design flaws,

says Jackson.

"You see, I had it about 80% finished. The company completed it for their purposes and some technical problems emerged."

The company's solutions to the technical problems were "unacceptable" to the man whose passion is to get it right:

"I like to keep accuracy as high as I can so the model never becomes a phony.

"It's taken eight months to recover from the damages the movie company did to the plane."

Jackson was in Abbotsford recently to head up a team of engineers who will spend more than 1,000 hours rebuilding the Avro Arrow, just in time for the Abbotsford Airshow.

Will the guys in his crew get it right? You bet.

"They have to be very intense and dedicated people."

And after that?

"I'm hoping that the plane will go on display in my home town. We've got a great aircraft museum. When I was building it, I didn't worry about where it would go.

"Whatever happens, the Arrow will be on display. It's too big to hide."

And for many Canadians, a too significant symbol of what might have been to ever hide away, or destroy. Again.

Black Friday was end of the line for Arrow

Feb. 20, 1959 or "Black Friday" brought about the end of the Avro Arrow and a national dream:

■ No aircraft had ever been built that could fly so high (combat ceiling of 60,000 feet) or so fast (Mach 2, just over 1,400 mph, with a predicted eventual speed of Mach 3)

■ The rate of climb of the Arrow: not more than six minutes to 50,000 feet

■ The plane had a crew capacity of two and a maneuverability that pulled 2 g's at Mach 1.5 at 50,000 feet without loss of speed or altitude

■ No previous aircraft had the high-tech innovations Avro built into the Arrow

■ No other aircraft could withstand the rigorous performance demanded by the RCAF

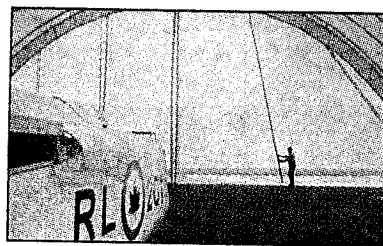
■ Avro used only Canadian components, even Canadian powerplants

■ The Arrow was considered to be a graceful, beautiful aircraft that readily captured the people's imaginations

■ Jackson's replica, used in the CBC mini series, *The Arrow*, is accurate to original specs: 77 ft. long with a 50 ft. wingspan, standing 22 ft. high

■ Source: *The Avro Arrow Story*, by the Jackson/Wetaskiwin Arrow Project (1996)

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Avro-Arrow comeback of sorts for airshow

Workers are busy constructing a replica of the Avro-Arrow, a Canadian plane which will be on display at this year's airshow.

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BIRTH OF AN ARROW



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