

THE AVRO ARROW IN CONTEXT

By DOUG HARVEY

In November the Minister of National Defence, Barney Danson, announced that the list of candidates for the New Fighter Aircraft contract had been reduced to two finalists — the General Dynamics F-16 and the McDonnell Douglas F-18, (subsequently referred to as the CF-16 and the CF-18A).

This not entirely unexpected announcement came as a considerable disappointment to many airmen who had hoped that Canada might purchase one of the more capable contenders such as the F-14 or F-15. It is certainly not the first time that this sort of disappointment has been the lot of the Canadian Air Force. Twenty-five years ago the Avro Arrow was so close to becoming an in-service reality that pilots could practically taste it. At the last minute it was snatched away and a second rate aircraft (the Voodoo) substituted and then only when it became apparent that the highly touted Bomarc missile was next to useless in the air defence role. In the mid-sixties Canadian airmen again had their hopes raised by the prospect of buying a new ground-attack aircraft. Either of the top contenders in this competition would

have been welcome additions to the RCAF's obsolete order of battle. Once again the promise of being able to do a worthwhile job was presented, only to be taken away at the last moment. A third rate aircraft (one which had made the bottom of the list only by virtue of the fact that it was ordered included), the CF-5, was purchased instead. It has been said of the CF-5 that there is no finer aircraft for bombing the end of your own (long, hard-surfaced) runway. When the NFA comes into service the CF-5's will be relegated to training. In this role they should do well — no matter if a student should have to bail out, he will always be within walking distance of his base.

For a third time the prospect of getting a new aircraft which would fit the role (rather than one for which a revised role had to be created) has boosted hopes, and once again these hopes are to be dashed as a cheap alternative is purchased.

Mr. Danson has said, as of course he must, that he sees no reason to believe that the F-16 or F-18 would not be able to do "the job for which they have been recommended." This raises questions

about who made these recommendations, and for exactly what job? The manufacturer? Surely no one has seriously suggested that either the proposed CF-16 or CF-18A could fulfill the present all-weather interceptor role — neither aircraft has the range nor the weapons control capability, nor the second seat required to enable an interceptor to operate effectively beyond a rather benign close-control environment.

In a letter to the Ottawa Citizen the minister suggests that there is a minimum number of aircraft required for the Forces to be able to do "the specific tasks which they must do with these aircraft." This proposition is then used as an argument against buying the larger more expensive aircraft. This leads one to consider the military merit in weight of numbers, which it must be said is not inconsiderable. Larger numbers of equipment provide for greater flexibility of operations because more tasks can be done at the same time. With large enough numbers it may be possible to saturate the enemy's defences and make otherwise impossible breakthroughs. And obviously if you have a lot of aircraft individual losses or unserviceabilities will have a lesser impact on the overall capability of the force as a whole.

However, one must not carry the weight-of-numbers philosophy too far. For instance it would do us no good at all to have a million Spitfires to defend against jet bombers or cruise missiles. A single F-14 could do a better job. Similarly 10,000 F-86 Sabres would not provide very much in the way of defence against today's threat. Not that they would be totally useless, but there are simply too many things that Sabres and Spitfires can not do, no matter how many we might have. The same applies to the New Fighter Aircraft. It must be asked whether the 135 F-16/F-18's we can buy will in fact provide an equivalent defence capability to that of the smaller number of F-14/F-15's we could get for the same amount. I do not see that they possibly could.

Neither of the short-list aircraft is equipped to be able to perform long northern patrols where they would be beyond the range of ground based intercept controllers. The press has recently made much of the fact that the F-18 is designed as a carrier borne aircraft for the the U.S. Navy, and that since we no longer

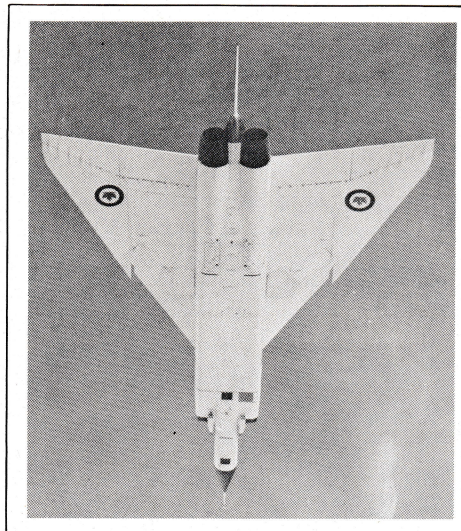


have any carriers it is an inappropriate choice. This is a red-herring. Who would care to extend the argument to include the F-14, also designed for U.S. Navy carriers? The naval origins of the F-14's design hasn't kept it from being the best all weather interceptor available. Similarly the press has denigrated the F-16 because of the fact that it is single engined. Arguments then rage about the safety of single engined vs twin engined aircraft. Although this is a point which must not be ignored it is largely a red-herring, distracting attention from the aircraft's far more fundamental shortcomings as an interceptor.

Both the F-16 and F-18 would have to be operated from more bases or remote detachments to provide the coverage that F-14's or F-15's could provide. This flies squarely in the face of Mr. Danson's concern about the high cost of operating the large aircraft which he suggested might cost \$30-\$50 million per year extra. A single additional base would consume far more than \$50 million per year in operating costs, making the savings of the smaller aircraft rather illusory. At a time when manpower and budget restrictions are leading to base closures there is virtually no possibility of opening even one more base, indeed the Forces would be hard pressed to afford the ground support equipment, airlift resources and trained personnel to support even a temporary detachment. The inevitable result is that they will continue to operate from their present bases. The savings in aircraft operating costs may then be realized, but only at the expense of inadequate defence capability.

Just what is adequate defence capability? Is there in fact a bomber threat to North America? This is a subject that has been hotly debated almost since the advent of the first bomber. Twenty years ago Prime Minister Diefenbaker was persuaded that what threat there was could be handled by Bomarc missiles, and that the day of the manned interceptor was dead. Two short years after making that ill-advised decision his government purchased the CF-101 Voodoo to defend against the supposedly diminishing threat.

Today the number of bombers in the Russian Air Force is substantially less than it was a decade ago, but nevertheless their capability has remained significant. New aircraft such as the "Backfire" are being brought into service and there can be little doubt that the Russians will soon develop cruise missiles. Only the F-14 with its Phoenix missiles has the capability to destroy a cruise missile. Thus the threat has not quietly disappeared as some would have us believe. To ignore the threat, or to fail to defend against it merely guarantees that it will become more substantial in the future.



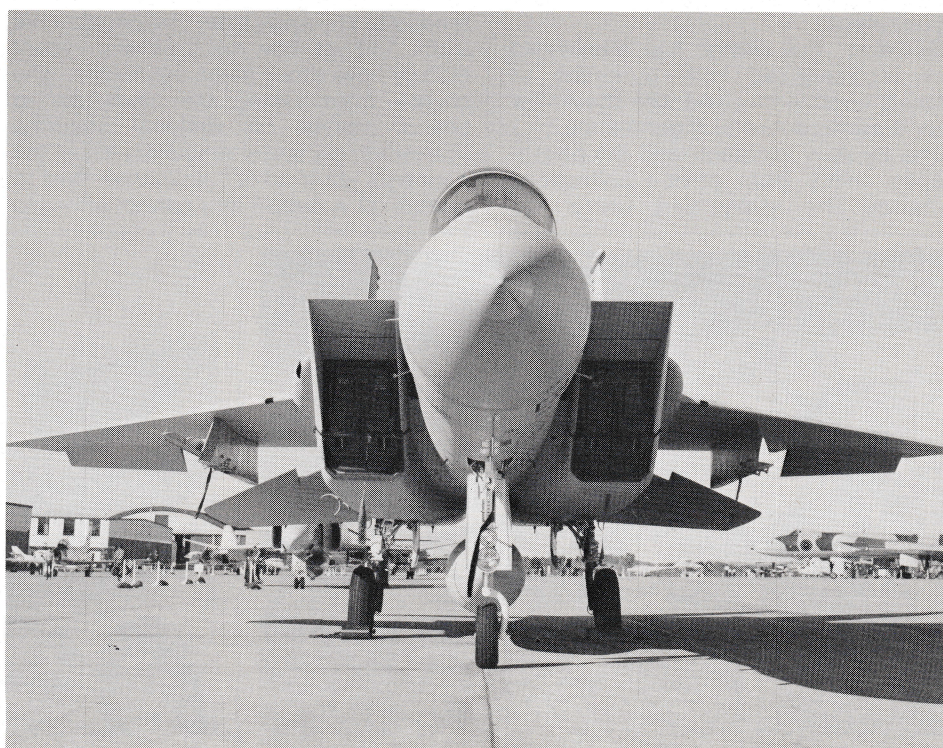
To defend against such a threat it is not necessary to be able to destroy 100% of all attackers under all circumstances. To possess such capability would require an astronomical number of the most highly sophisticated aircraft and missile systems. Rather, what is required is the demonstrable capability of blunting an attack to the point where it could not hope to achieve the degree of destruction necessary for first-strike victory. Clearly the decision to launch an attack must be based on some assessment of the potential for success. If we in North America choose to enhance that potential by deciding not to pay the cost of adequate defences, then we run the risk of eventually paying in lives or loss of freedom.

Purchase of aircraft which can not demonstrate the required capability amounts to little more than tokenism — a mere gesture to pretend that we are trying to hold up our end of the NORAD agreement. Moreover it will be a very expensive gesture which the Armed Forces will have to suffer with for the next twenty years.

Make no mistake, when the government decides which aircraft to buy it will, in effect, be deciding whether Canada's contribution to NATO and NORAD for the next twenty years will be worthwhile, or whether it will be nothing more than a means of buying membership in the international community "on the cheap".

It is ironic that this long after the cancellation of the Avro Arrow we are about to purchase an aircraft to do exactly the same job, and even more ironic that despite the Diefenbaker government's protestations that the Arrow would be obsolete before it reached squadron service, the New Fighter Aircraft will not be able to do a better job. Neither the F-16 nor the F-18 will make a better all-weather interceptor than the Arrow.

The Arrow and its Mighty Iroquois engine were sacrificed on the altar of false economy, largely because no one came forth to champion the cause and focus public attention where it was needed. Now it is the Liberal government's turn to make an equally important decision. Who will speak out to ensure that our defence dollars are not squandered on tokens? Who will speak out before it is too late for another 20 years? Will you?



The F-15 Eagle worthy offspring of the AVRO Arrow

BOOK REVIEWS

"Fall of an Arrow" by Murray Peden, Q.C. 185 pages, illustrated. Published by Canada's Wings, Box 393, Stittsville, Ontario K0A 2G0. \$14.95 hardcover

Twenty-one years ago on March 25, 1958 the Avro Arrow lifted off the runway at Malton Airport under the capable hands of Jan Zurakowski.

Eleven months later on February 20, 1959 John Diefenbaker scrapped the Arrow and ordered the six complete Arrows cut into scrap.

It has been a burning issue in Canadian aviation circles ever since that time.

Murray Peden of Winnipeg, former bomber pilot in the Second World War, has obviously seethed over the cancellation and it shows through in his book, "Fall of an Arrow".

Twenty-one years elapsed time has permitted many facets to clarify and the author presents as best he can both sides of the controversy.

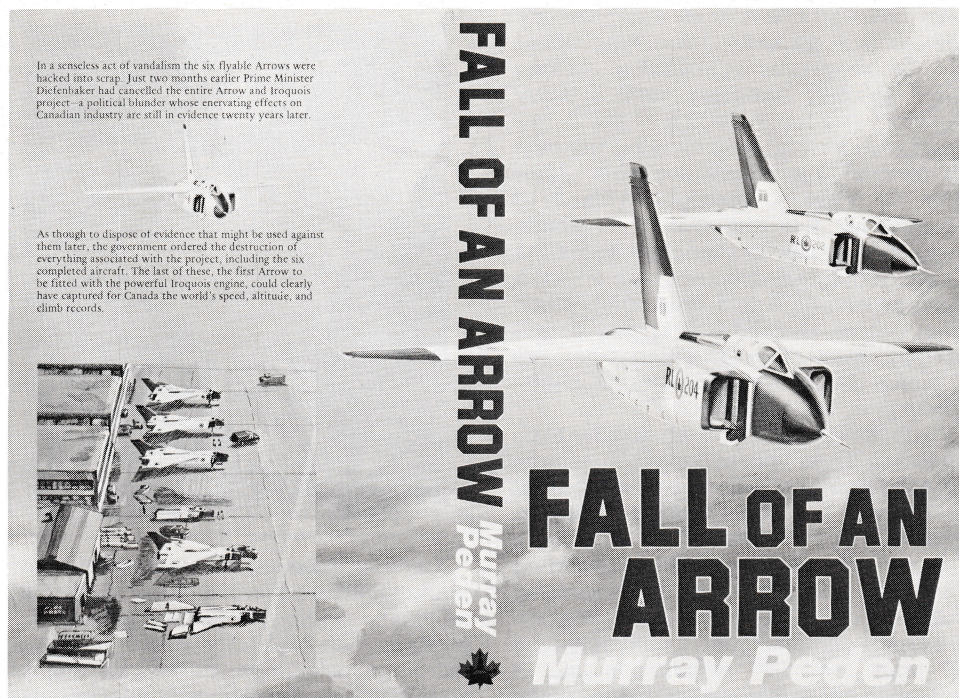
He details how and why it was a Canadian accomplishment, unequalled in the World, and makes comparisons both economically and militarily to show how it could be flying today on Air Defence duty.

Of course, aviation in Canada is studded with examples of stupidity and lack of vision and the Avro Jetliner to my mind is a bigger mistake (if possible) than the Arrow tragedy.

It is a pity that Crawford Gordon, President of A.V. Roe Canada, is not alive to enlighten us even further on the sharp disagreements between Avro and the Government.

However, the author has interviewed and corresponded with hundreds of officials directly involved with the Arrow from drawing board to flight testing.

The book is thorough and the photographs, many from private collections enhance the story and bring the



tremendous Arrow achievement all back again. An aerial view of the Arrows being hacked and torched apart is in the authors words "perhaps the best commentary on the whole sorry affair".

I liked the way the author ended this great piece of historical writing.

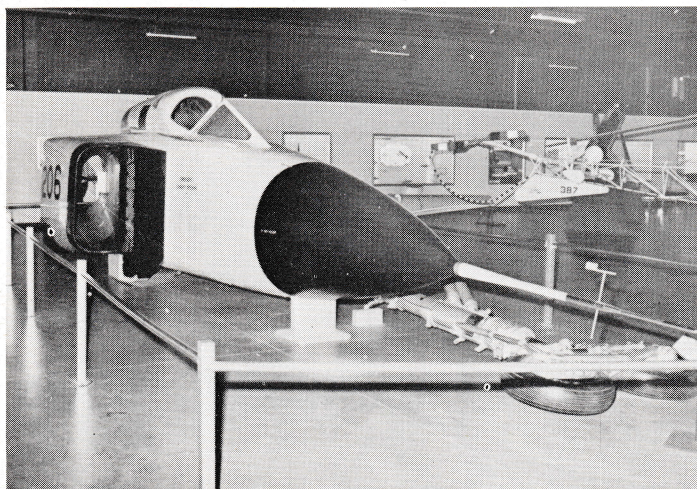
"Looking back over the two decades, there is an old lesson to be re-learned in Canada from the sorry epilogue of the Arrow. National security cannot be procured on the cheap. Political leaders in democratic countries have always tended to shy away from that unpalatable truth. And yet, how many times in recent history have those same politicians, who shrank from asking the electorate to spend money on national security, unhesitatingly and shamelessly asked the country's youth to lay down their lives to restore it? A nation that cannot afford to

build the best weapons for its defence forces, but which can afford to spend upwards of a billion and a half dollars for the sports spectacle of the Olympic Games, is in more serious trouble than its political leaders appear to realize.

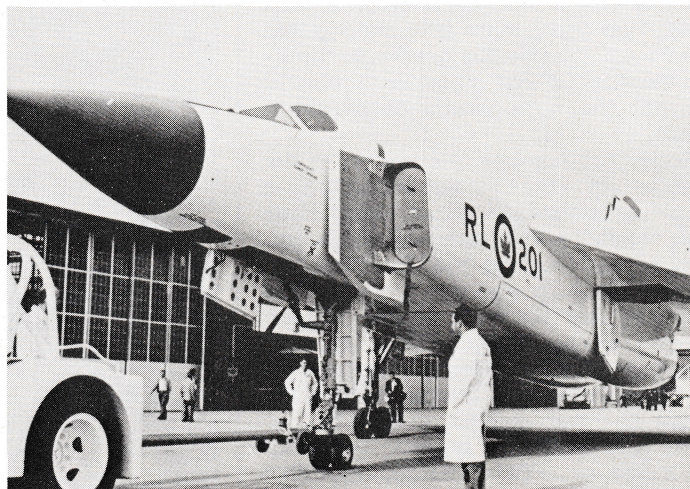
Another lesson that Canada will have to re-learn apparently, is that sophisticated defence industries cannot be erected overnight. When war and mortal danger became imminent, it is too late to set about trying to assemble an aircraft industry, or tank and gun factories, or shipyards. There is a price for keeping these facilities in existence in the piping times of peace. Countries which are not prepared to pay that price will ultimately pay a far higher one".

"Fall of an Arrow" proves this conclusively.

— The Editor



This is all that could be hidden from the torch squad sent to destroy the Arrow.



With the roll-out ceremony behind it, Arrow No. 1 leaves to begin its ground trials and taxi trials.