Decision Due on Plane's Future

Plane Talk

3 Decisions Expected In 60 Days

By HAROLD GREER

Within the next 60 days, three decisions will be made which will profoundly influence the future well-being of the Canadian aircraft industry.

Two of the decisions must come from Ottawa:

Whether to order the Avro Arrow into production and, if not, as seems likely, what to replace it with in order to maintain employment at Avro Aircraft at reasonable levels;

Whether to order a replacement for the Sabre interceptor now used by the RCAF air division and other NATO air forces in Europe; the Government has now been told this long-delayed requirement must be decided up or down in 60 days.

The third decision is up to Washington—whether to award a joint contract, worth more than $400,000,000, to Canadair Ltd. and its sister company in the United States, Convair Aircraft, for early warning radar patrol planes.

Convair - Canadair won the technical contest against five competitors but the U.S. Air Force last week ordered a 60-day deferment when the Boeing Corp. made a post-mortem, grandstand play for the contract by proposing that the military version of its 707 jet airliner, the KC-135, be used.

The Washington decision could be the most decisive. An order to produce airframes for the radar picket plane would keep Canadair assembly lines humming for three or four years. The replacement for the Sabre — probably the Grumman F11F-1F, a strike attack fighter built originally for the U.S. navy — could then be built under license by Avro Aircraft at Malton.

But no one in the industry is very hopeful that Canadair will get the picket plane order. The politically-powerful U.S. aircraft industry tries to keep U.S. military requirements to itself, and Boeing's last-ditch jet plane bid is similar to offering a new sports convertible for the same money to a man who has just decided to buy a second-hand car

If Boeing's strategy succeeds, Canadair will be claiming priority on production of the Sabre replacement; the company has been trying to get authority from Ottawa for such a program since 1954.

Canadair is an acknowledged expert in redesigning and producing other people's aircraft, which is what will have to be done in the case of the obsolescent Sabre if, in fact, a replacement is ordered.

Should Canadair's claims be recognized, Ottawa would then have to find something to offer Avro in lieu of the CF-105 Arrow.

Not until this situation has been sorted out will the Government be able to decide what to do about two other projects dear to the heart of the aircraft industry—the CL-41 basic jet trainer developed by Canadair, and the Caribou short-range transport built by the de Havilland company at Downsview.

All together, these projects are probably worth about $1,000,000,000 in sales to the Canadian aircraft industry over the next four or five years.

If they are carried forward, production and employment in the industry can probably be maintained at current levels.

Without them, the industry faces a rather drastic curtailment in activity. Either way, industry leaders say the situation demonstrates how dependent aircraft production is on Government policy and decisions.

How did the industry get this way?

Under the best of circumstances, it is admitted, defense is the industry's main business. Without defense orders, the industry would be a pale shadow of its present self.

Within this limitation, however, the manufacturer's problem is how to diversify his effort so as to be less vulnerable to the wind-up or cancellation of military orders.

Of the three largest Canadian producers, the de Havilland Company has been the most successful in developing a program relatively free of Government procurement.

Its latest aircraft, the Caribou, can probably be marketed — in time — whether Ottawa buys it for the Canadian Army or not.

Canadair Ltd. is more deeply committed to Ottawa. Although it is developing commercial versions of the Argus, its mammoth maritime reconnaissance aircraft, and of the CL-66, its medium-range military transport, the mainstays of its production line for the past several years have been the Sabre interceptor and the T-33 jet trainer. Both these programs have recently been concluded.

To replace the T-33, Canadair developed with its own money—but to RCAF specifications — the CL-41, a jet basic trainer designed to replace both the T-33 and the primary piston - engine trainers.

It has built two prototypes. It can't sell them.

It can't even get the Government to admit there is a requirement, although RCAF spokesmen say there is obviously a need for the aircraft—if the RCAF continues to fly interceptors.

Similarly, Canadair has for many months urged the Government to order a replacement for the Sabre.

The RCAF admits the aircraft is obsolescent and the Canadian air division in Europe needs to be re-equipped.

After shopping around the United States, an RCAF survey team has recommended several aircraft which could be built under license in Canada, with the Grumman F11F-1F at the head of the list.

More than the RCAF's requirements are involved. Canadair built 1,815 Sabres, of which only a few hundred went to the RCAF.

The rest were sold competitively to western Europe, South Africa, and South America; Canadair thinks it can do it again.

Similarly, Canadair estimates there is a market for 300 CL-41 aircraft: all the NATO air forces, and not just the RCAF, need a basic jet trainer.

But to date, the Government has made no decision. Fundamental questions of military and foreign policy are involved: the role of the RCAF in continental defense, the wisdom of maintaining interceptor—that is, defensive—aircraft in Europe.

The Grumman F11F-1F is a short take-off, tactical strike aircraft rather than an interceptor. But military strategy of NATO is supposed to be purely defensive.

In this situation, Canadair looked hopefully to the U.S. air force's requirement for a new early warning radar aircraft.

Its CL-28 Argus is the biggest airplane ever built in Canada, has a range of 4,000 miles. The Convair company agreed to install the electronics and radar.

The U.S. air force asked competitors to submit bids on the basis of 100 and 200 aircraft. The Canadair-Convair bid was pitched to the argument that if big, long-range aircraft were used, fewer planes would be needed.

The Canadian Government has thrown the strongest possible diplomatic weight behind the deal, considers that Washington's intentions for sharing defense production must stand or fall on the outcome.

But the outlook is not hopeful, and Canadair's management has reasons to be worried. Without new orders, the company's manpower projections indicate that with work now in hand, employment will drop from a current 9,500 workers to about 2,400 by 1963.

Avro Aircraft faces the bleakest future of all. The Arrow has taken 70 per cent of the company's 9,000 employees. If it is not ordered into production, Avro has no other major project to turn to; its "flying saucer" program, now supported by U.S. military funds, is still a few years away from production.

There is no chance that the Avro Jetliner could be revived. The Jetliner was the first intercity, all-jet commercial aircraft ever built; it was probably 10 years ahead of its time when Ottawa withdrew development support and ordered Avro to concentrate on CF-100 interceptors.

To get back into the commercial jet field now, Avro would have to plan for the next stage in airliner development: supersonic speeds at which the problem is structural strength and metallurgical rather than greater engine thrusts. Avro has considerable knowledge of the problem now as a result of the Arrow program but the transition, to say the least, would be a painful one.

Avro officials admit privately that they became over-committed to the Arrow program. But as long as the Government said the interceptor was needed, they argue, they had no choice. It is no accident that de Havilland, the most flexible of the Canadian Big Three, is also the smallest.

But the big argument of the aircraft industry is that none of this instability is really necessary. It is claimed that the current blight of indecision could be avoided if there was a national policy which ties together defense requirements, national development and air transportation.

This aspect will be examined in a concluding article.

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Part 1.

Suspended Animation in Industry

Plane Talk

Industry In State Of Suspense

By HAROLD GREER

Fifty years ago this month, the first powered flight in Canada took place at Baddeck, N.S. Today, the future of the Canadian aircraft industry is clouded, with many of its leaders wondering whether the industry has another 50 years ahead of it.

In 1937, aircraft production employed only 606 Canadian workers. By 1944, the peak of the war effort, the number had swollen to 80,000. In 1948, it had dropped back to 8,000.

Then came Korea, NATO, and the Western rearmament drive. By October, 1957, there were 46,400 workers directly employed in making aircraft and parts in 70 plants. Another 60,000 worked for 3,500 subcontractors and suppliers.

The year's payroll in 1957 was $179,699,000, the industry's sales $424,443,000. Aircraft production ranked third as a source of manufacturing employment, on a par with the automotive industry. It stood eighth in terms of gross production value.

But for over the past year, employment has been sliding downward as major production programs have been wound up with nothing to take their place. Direct employment is now under the 42,000 mark with some firms eyeing their four and six-year men.

At the moment, the industry is in a state of suspended animation. Major government decisions are pending which will determine whether the industry is to continue at its current healthy clip or whether it is to have a reduced and much less important place in the national economy.

The signs are ominous. In his Avro Arrow statement last September, Prime Minister Diefenbaker said: "Canada cannot expect to support a large industry developing and producing aircraft solely for diminishing Canadian defense requirements."

Mr. Diefenbaker implied this was simple common sense in view of the progress made in guided missiles. Yet, in this reporter's findings, expert military and industrial opinion is overwhelmingly against him.

The military consensus is that the guided missile will not replace but only supplement and complement the manned aircraft. There may be a diminishing reliance on the manned interceptor alone, but there will be a diminishing quantitative requirement only if there is a diminishing threat, and this clearly is not the case.

Nor has the aircraft industry ever sought to produce airplanes solely for Canadian defense requirements. Substantial numbers of the Sabre and CF-100 interceptors were sold abroad. There was a good chance of selling the Arrow, if production had not been delayed by stretchouts, to West Germany. The U.S. Army is the biggest customer for de Havilland's Beavers and Otters.

Pressing military requirements exist now, according to military experts, not only in Canada but in most Western countries for a replacement for the Sabre, for a basic jet trainer, for medium and long range turbo-prop transports, and for a short range transport, requiring minimum landing facilities.

All of these aircraft can be produced in Canada, or are being produced now in relatively token quantities.

But the aircraft industry is in a very awkward position vis-a-vis the Government. Because it depends so heavily on defense orders, few of its leaders care to start a public argument, lest they bite the hand that feeds them.

Even the public debate which followed Mr. Diefenbaker's statement on the Arrow was looked upon by the prime minister as an objectionable lobby. Actually, Avro aircraft officials deliberately declined invitations to address organizations across the country.

Yet there is nowhere for the industry to go to express its views on national policy. There is no department of government, nor any interdepartment board or committee, responsible for recommending to the cabinet that it is in Canada's interest to produce this or that aircraft.

In some respects, this omission doesn't matter. The aircraft producers, through the Air Industries and Transport Association, can and do go to individual cabinet ministers, to the prime minister, or to the entire cabinet with briefs concerning government policy.

For example, they have asked for a new government attitude toward the Export Credits Insurance Corp. so as to permit easier financing for foreign purchasers of Canadian aircraft. They intend to ask for a higher tax depreciation rate on capital costs of aircraft so commercial carriers can write off all their investment, and in a shorter time.

But on the fundamental issue of what the aircraft industry can do respecting national defense and national development, there is no co-ordinating committee of government to which the airplane builders can go.

Indeed, it is debatable whether there is a national policy to which they can even refer. At the Commons estimates committee last year this exchange took place between J. W. Pickersgill (L, Bonavista-Twilingate) and D. A. Golden, deputy minister of defense production.

Mr. Pickersgill: ". . . my recollection is that the previous administration made a decision that shipbuilding capacity up to a certain amount was to be kept available as a military necessity. I wondered if there was any similar policy with respect to aircraft production facilities."

Mr. Golden: "The minister has asked me to deal with that, sir. The problem of policy has not arisen because the requirements have still been sufficient to keep the basic aircraft plants operating."

The aircraft industry has frequently asked to be told what is expected of it. In its brief to the Gordon Royal Commission on Canada's Economic Prospects, A. V. Roe Ltd. said: "We need a long-term summation of our future requirements and a long-term plan to meet those requirements."

Lack of such a plan thus far has produced, in the view of many, the present waste, indecision and confusion on air defense policy.

Item: The army ordered, without competition, a light U.S. aircraft for artillery spotting, even though the de Havilland Beaver could do the job and perform other work beyond the capacity of the U.S. plane. Production of the U.S. plane was stopped three years ago and the army will now have to replace them.

Item: The navy bought and flies two squadrons of Banshee fighters from the aircraft carrier Bonaventure even though the Bonaventure's role is anti-submarine and the threat of bomber attack against it would seem to be remote.

Item: The RCAF issued numerous specifications and changes for the Avro Arrow which resulted in the Arrow being two years too late, too expensive, and far better than it had to be—but not quite good enough to handle the next stage in the manned bomber threat, the 2,000 mph chemically-fueled aircraft.

Item: The army needs a troop-and-jeep transport like the Caribou in some numbers, but it can't get a requirement out of the chiefs of staff committee because the air force wants to fly supersonic interceptors, not taxi troops about.

In the U.S. there is an armed forces policy council which is supposed to prevent such things from happening. No such agency exists in Ottawa. The organization of the National Defense Department is vertical, not horizontal; one service does not know of the other's requirements until it gets up to the chiefs of staff, when it usually is too late to thrash them out.

But more than that, the industry believes there should be a national policy which relates aircraft production to air transportation and its place in Canadian development.

The argument runs this way: Canadian public policy must inevitably be concerned with transportation in more than just a regulatory sense. The railways made this nation possible and aircraft have made the development of the north possible. Trans-Canada Airlines was formed as a Government agency because no private company wanted to try.

Since 1920, air travel costs have gone down steadily while rail rates have gone up steadily. In the past 15 years, air freight rates have decreased by 70 per cent. The capacity of air carriers will increase immensely. In 1955, the largest turbo - prop flying weighed 85 tons all up; designs now in hand will produce 300-ton planes by 1970, 500-ton planes by 1930.

The only way Canada can be sure of having aircraft suited to Canadian needs is by having a producing domestic industry, doing its own design and development. This has been so thus far and will remain more so because technological developments in the military field are producing commercial aircraft beyond the capacity and the safety of Canada's air traffic system—and for that matter, according to experts, beyond the U.S. system as well.

Even though airport facilities and navigational safety devices will improve with time, air transportation in northern development presents special problems and requires special solutions. There is no point, in the industry's view, to building—at 10 times normal cost—facilities in the Arctic when aircraft can be built to land on a few hundred feet of dirt strip.

Finally, there is the technological impact of original design and development in the industry on the nation's industrial growth.

Aluminum got its start in aircraft metallurgy, although 80 per cent of its uses lie today outside the industry. Titanium has proven the answer for jet engines; the U.S. air force onces estimated it had spent $200 per pound for the titanium it flies about.

Research is now under way on stainless steel as possibly the metal to withstand the heat barrier of still faster flight. The electronics, rubber and atomic energy industries are only a few of those who have benefited from aeronautical research in metallurgy.

The Canadian aircraft industry employs 7,000 engineers and technicians; it has produced the best jet engines and some of the best aircraft in the world. It is one of the few industries in Canada where the research is not done by parent firms in the United States, even though all three of the largest Canadian producers are foreign-owned and controlled.

But aircraft production, say the industry's spokesmen, cannot be turned on and off like a tap. The automobile manufacturer who turns out a poor model can recoupe the next year. It takes seven years to develop an airplane and engine for military use, 20 years for civilian use. The aircraft producer who misses once has had it.

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Part 2.