

We Need a Canadian Air Policy Now!

by The Editor

RCAF and industry officials have recently called for "a new look" at Canada's air policy because of the revolutionary advances in atomic weapons and the coincidental development of long-range aircraft to deliver them.

In this issue paying tribute to Canada's new air power, we repeat our suggestion made more than a year ago that Canada should have a carefully conceived and clearly defined national aviation policy to give reasoning and logic to our strength. Recently we polled our aviation leaders for their ideas on what is needed to promote a healthy, soundly-based Canadian air power. Without exception they want more careful planning by the industry alongside Government and publicizing of this planning.

We repeat our suggestion that Canada's search for a national air policy should range from telescopic to microscopic analysis of the problems confronting us. Over the last few months we have editorialized generally on long-range planning and specifically on such subjects as the development of Canadian helicopters and feeder lines, the improvement in safety, bush flying, the establishment of a Canadian Farnborough, industry's stake in aviation writing, a more logical air transport policy and the more sensible release of military information to the public. We hoped by these editorials to promote discussion and corrective action.

Such and many other subjects could profitably bear analysis in a general Royal Commission on Aviation set up to give us a policy. This Commission could conduct its investigations throughout the country by means of public hearings at which briefs and formal statements could be heard. Public interest would be aroused, much valuable information and thinking could be collected and correlated and plans made. The Air Industries and Transport Association through its various committees could well get such a worthwhile investigation under way with recommendations of its own. AITA has already suggested a Royal Commission on Airport Planning and we trust intends to follow through with concrete action to get such a Commission established preferably on even broader terms.

LET'S take a look at our present military strategy and see why the RCAF and military officials want it changed. It obviously was evolved when the stockpile of western atomic weapons was limited, when the value of such weapons was imperfectly understood and shows the obvious influence of doctrines developed during the last war which no longer are applicable.

CANADA, even through the RCAF, seems to lean to defensive weapons and strategy whereas the trend in American military thinking is toward a greater emphasis on attacking air power. Because of our military tie-in with the U. S. A. and U. K. and our interest and stake in atomic development, it seems only logical we should be a more active participant in such new thinking. The old saying that home defenses never won a war still seems to hold good even if most of our home defenses are now stationed in Europe. Although our financial resources probably prevent us considering a large strategic bomber force of our own, there is no apparent reason why we shouldn't have a force of light and medium bombers. Our fighter force undoubtedly will deter enemy bombers from attacking us and wear down and destroy the enemy's fighters in our retaliatory campaign but unless we have some bomber force we will be unable ourselves to follow up in aerial superiority.

It is generally accepted that the West's atomic advantage is all that has stood between the non-Communist world and another world war. If one can judge from postwar trends, the Kremlin has not been deterred and is not likely to be deterred by conventional military forces.

WHAT Russia fears and will continue to fear is the American capability and the growing capability of the British to counter-attack with immediate and crushing retaliation," said C. R. Smith, president of American Airlines, in a recent speech giving current American thinking. "Logic argues that we should put our blue chips down on those elements of technological strength which provide the best promise for peace."

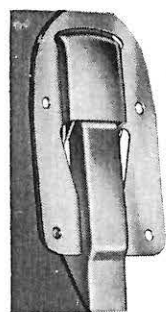
"The enemy's known accumulation of mass destructive weapons," he said, "and his rising air capability to deliver them clearly spells the end of wartime mass invasions on the model of North Africa, Normandy, and the famous Pacific assaults. If a large city can be leveled by one or several atomic weapons, how much more vulnerable would be the vast grouping of ships required to land an army on distant foreign shores?"

"By the same token, considering the capability of the American Air Force, it is difficult to conceive that the Soviet Army would be able to land, supply and fight a large land action on the American continent."

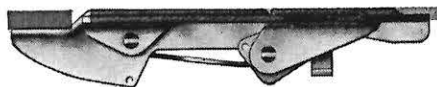
Smith went on: "If the Army will not in wartime be able to invade a hostile shore in force, nor be re-

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FRONT VIEW



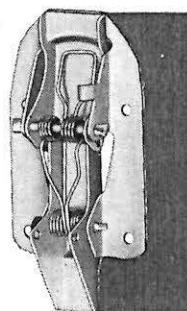
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now) ended up with his much-desired wing's parade.

As Boyce was now definitely picked as fighter pilot material, he spent another nine weeks at a Pilot's Weapons School at Macdonald just north of Portage where he had about 70 hours practice shooting machine guns and rockets. He found that while emphasis is placed on air-to-air fighting, the methods of making effective ground strafing, live bombing and rocket attacks were also taught. He was also instructed on the use of small arms such as rifle, revolver and shotgun, and spent much time on aircraft recognition. Then came home leave in Toronto for a couple of weeks and a survival course of three weeks to get him back in shape.

Boyce found himself now posted to the All Weather Operational Training Unit at North Bay, the sort of training many pilots would choose themselves. If he had been selected for day fighter duties, he would have gone to the OTU at Chatham, New Brunswick. At North Bay he put in 18 weeks of concentrated flying, mostly on a Silver Star, but a good proportion of it on a CF-100. Much of his time was spent in the CF-100 flight simulator where he was subjected to conditions of Arctic flying, complete even to the noise of the engines. As a result of all this training he got his instrument ticket.

By this time Boyce had met Waite, who was also training at North Bay, and struck up a firm friendship. Their superior officers approved their decision to crew up and so they were given joint instruction in a Mitchell flying classroom. They were then judged capable of flying alone in the CF-100 as a team.

After leaving the London Officers School, Waite had been posted to the Air Navigation School at Summerside, Prince Edward Island. Here he spent nine studious months under veteran instructors on navigation, dead reckoning, map reading, airmanship, meteorology, Morse, aerial photography, the operation of such operational equipment as Loran and other radar aids and officer development. Like Boyce he underwent a rigorous sports and ground defense program. After about 200 hours in the air both night and day in Expeditors and Dakotas (now exclusively in Expeditors) and innumerable hours in the synthetic navigational trainer, he received his coveted wings.

Waite might have gone to a Maritime OTU to train in search and

rescue and coastal navigation or to a Transport OTU where he would have learned long range navigation but fate and the examining committee decided to send him to the All Weather OTU at North Bay where he met Boyce. There he spent 18 weeks learning the radar and other specialized equipment used in the CF-100. The first six or eight weeks of this course he spent in Mitchell flying classrooms learning the operation of the equipment.

After crewing up, the CF-100 team of Boyce and Waite then spent 18 weeks training together at North Bay practicing interception of other aircraft with the aid of the Comet jet transport. They were then posted to a CF-100 squadron "somewhere in Eastern Canada," one of 40-odd squadrons in the RCAF today. There they are today, still in training to all practical purposes, although they are fully prepared to go operational on a moment's notice.

They are happy in their work and very satisfied with the aircraft, feeling certain by their own investigations that it is the best of its type in North America. They will continue on in squadron service for a period, then perhaps be given some other type of training before their final selection committee which will decide whether they may get that much desired permanent commission.

AIR POLICY NEEDED

(Continued from page 39)

quired to defend American shores from a full-scale invasion, then the mission of the Army as it is understood today should be re-examined. There will need to be similar attention to the missions of the Navy and Air Force, especially those relating to the safeguarding of the sea lanes for the movement of the Army overseas, and the provision of tactical air power for army forces deployed in the field."

Too many of us in the Canadian aviation field have been content to assume that air power strategy is peculiarly a province of the professionals. We are only too willing to leave the formation of such policy to others who only in the broadest sense are responsible to us. Little attempt seems to be made to seek the opinions of those in aviation who have been directly responsible for the actual build-up of our present air power. And yet this aviation policy is what directly affects our

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own individual prosperity as well as the economy of the country. It might very well mean the difference to us of life or death and to our country of peace or war.

Our main criticism of Canada's aviation policy making is the lack of evidence that it is being carried out on a continuous basis with due regard to democratic processes. We say this having spent much time in aviation writing in Canada during the very critical development period of the last ten years when we continually went out of our way to expose ourselves to such evidence so that we might in turn pass it along to others. We have tactfully tried to find out the reasoning behind certain actions which from where we sat did not seem logical. In many cases we received no answer whatsoever and so we have come to the conclusion that our policy making is mostly done by very few people who do not seem to consider themselves bound to explain their actions to the press or to the Canadian people. Certainly there is no evident attempt by our policy makers, whoever they may be, to encourage such interest by the press or even by the industry.

We do not mean to imply that we think aviation in Canada is in a deplorable state as a result of bad planning. There are many signs that it is very solidly based and we sometimes wonder if it just grew that way or it was planned to do so. It must be admitted our policy makers by their ivory tower techniques have possibly missed bouquets as well as brickbats. While they have given evidence of sound planning, they also have showed signs of the opposite. And certainly they have not yet presented us with a comprehensive published Air Policy.

There is nothing in Canada, for example, to compare with the splendid work accomplished by the Air Policy Commission of the U. S. A. under Thomas K. Finletter established by that country's president as long ago as 1947. There is nothing to compare with the work of the U. S. Congressional Aviation Policy Board carried out during the same period. The results of their extensive investigations were published extensively, much discussed, and were followed up in many concrete actions of benefit to U. S. air power.

Today the growing realization that Russia has the long-range air power armed with atomic and hydrogen bombs to threaten our very existence should force this country into a similar review of national

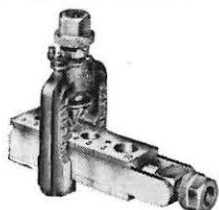
aviation policy. Whereas our leaders have provided us with air power which combined with the greater might of the U. S. A., U. K., and other NATO allies gives us considerable protection, we would like to see the industry and country as a whole involved in assuring the continuance of this air power. We would like to see more general acceptance by Government and public of what to the industry is a self-evident truth, namely that a strong, stable and modern civil aviation compon-

ent is essential to national security.

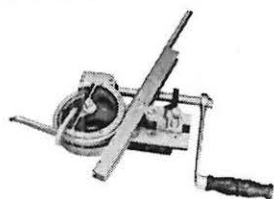
The U. S. Congressional Aviation Board back in 1947 set up the following concept of a national aviation policy which summarizes months of meetings with hundreds of expert witnesses, and visits to many aviation installations by both the Board and the President's Air Policy Commission. So far as we know Canada has not even formulated such elementary concepts which to a certain extent apply to our country.

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1. That the costs of the air-power program be co-ordinated with all other costs and expenditures of government, both domestic and foreign, that we may protect ourselves against both aggression from abroad and bankruptcy at home.

2. Military air power should be maintained at such effectiveness as to be able under all circumstances to control the air spaces of our country and be able to retaliate in greater degree for any attacks launched by air, or otherwise, against our peace and security or those free allied governments with which it is joined for mutual defense.

3. Scientific research should be fostered and co-ordinated to maintain the leadership of the country in technical aeronautical development.

4. The airways, weather stations, airports, and essential facilities of air navigation and control should be developed and maintained to accomplish the maximum degree of safety and certainty in air commerce and military operation, regardless of weather, burden of traffic, enemy action, or other cause whatsoever.

5. The aviation industry of the country should be maintained in such production status and degree of expandibility as to serve adequately and without delay in emergency, the requirements of the military air forces.

6. The domestic and foreign air commerce of the country should be fostered and promoted by whatever means appear most practical until it reaches such stature in passenger and cargo capacity as to constitute in crisis an adequate logistic air arm of the National Defense Establishment.

7. The value of the small business man—the local airport operator, aircraft sales and service companies, flying and trade schools—along with the private citizen pilot and owner of aircraft should be regarded as a national asset and be given every recognition and encouragement.

8. In every phase of national air power, the policy of co-ordination with every other phase should prevail and the various government departments concerned must be specifically charged with responsibility to this end.

9. An aeronautical education program should be established throughout the public school system in order that basic problems of the air age—global geography, meteorology, navigation, mechanics, communications and the rudiments of flight—are well understood by future generations.

Considerable attention has already

CANADIAN REPRESENTATIVES

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been given to the theme of education for the air age in Canada in this magazine because we believe such a program is fundamental to air power. It is worthwhile, however, repeating what was said by the Congressional Board six years ago because it indicates how far we have yet to go in this country.

"To provide an air-minded public and a reservoir of technically-trained personnel, flight and technical courses should be promoted in colleges and universities with full scholastic credit given; and aviation education courses should be stressed in our primary and secondary schools.

"Education has not yet reached full stride in giving our citizen intellectual preparation for the world as aeronautical science has modified it.

"Thirty states have adopted aviation education programs. Seventeen others are planning such programs. Several have incorporated provisions for flight experience in their courses, giving valuable understanding of flight principles.

"Considerable progress toward this goal has been made, but more is necessary if our citizens are to meet the responsibilities of world

leadership. The primary need is properly trained teachers. A program of providing high schools with surplus aircraft equipment.

The very readable "Survival In The Air Age" published by the U. S. Government the first of 1948 and sold to the general public for 75 cents is the aviation program blueprint drawn up by the President's Air Policy Commission. This book obviously is the sort of study needed to be done in Canada and made available to our citizens.

In appointing the Commission, President Truman said they "should study, among other pertinent aspects of the problem, such questions as the current and future needs of American aviation, including commercial air transportation and the utilization of aircraft by the armed services; the nature, type, and extent of aircraft and air transportation industries that are desirable or essential to our national security and welfare; methods of encouraging needed developments in the aviation and air transportation industry; and improved organization and procedures of the Government that will assist it in handling aviation matters efficiently and in the public interest."

"The final recommendations of the Commission must, however, go beyond the limits of any one phase of aviation. They should be so broad in scope and purpose that they will assist in revising old policies and in framing new ones, and will serve as a guide for formulating a carefully considered national air policy."

This book is surprisingly frank in discussing foreign policy, the United Nations, disarmament and self-defense, a new strategic concept for the defense of the United States and specific recommendations regarding the requirements of the various air establishments. The aircraft manufacturing industry is similarly dealt with exhaustively and many detailed recommendations made. Aeronautical research and development, civil aviation and government organization get similar treatment.

"We must at all costs avoid a hit or miss armaments program," the Commission's Report concludes. "We must not believe that any program which may be adopted now will solve once and for all the program of national defense. Our plans for the Military Establishment must be constantly revised."

The Commission states its belief that the policy of the country should directly participate in the preparation of policy plans. This seems to be in direct contrast to the beliefs of Canadian policy makers.

The Report says: "This Commission does not believe that we will ever have an adequate Military Establishment unless the people of the country know fully what the international military and political situation is, what kind of a military force is necessary if we are to be ready for that situation and how much it will cost to have this force. With these facts before them they may choose, with full knowledge of what they are doing whether they will or will not pay the bill. We believe they will want to pay it—provided they feel sure that what they are getting is as free as possible from duplication or other useless expenditures and is absolutely necessary for their safety."

The recommendation that this Report be made public also has direct relevance to Canadian procedure regarding security of military information:

"Military security does not require secrecy in this matter," says the Report. "It may require secrecy in some details. But it does not require secrecy as to the broad outlines of the military strength of foreign powers and the steps which should be taken to be ready to meet



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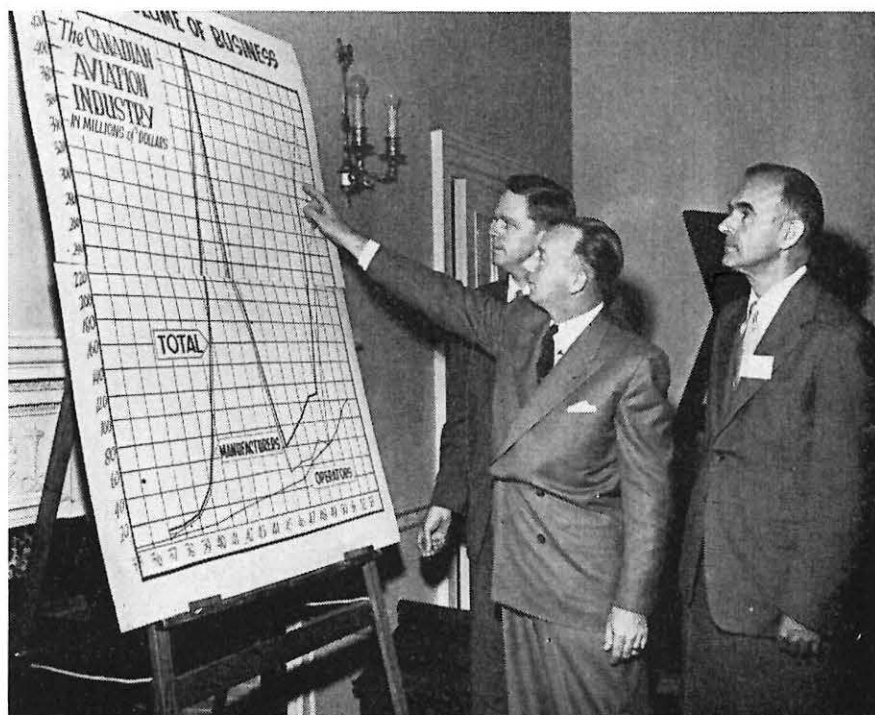
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that strength if it is used against us. Not to tell the people the military facts they are facing would not only deny to them what they are entitled to know, but also would make it impossible to have an adequate preparedness program.

"We believe that our policies as to military secrecy in relation to our Military Establishment require overhauling. Details of our new air equipment and technical information as to our applied research and development which should be kept secret are often released to the press. This detailed information as to our airplanes and other air equipment is of no interest to the American public but it is of interest to nations competing with us in the current race for air power. On the other hand the people of the country are not kept fully informed of the dangers of the military situation they are facing and of the preparation they ought to make to defend themselves against these dangers. These facts are known by all foreign governments, but there is no procedure in our Government for systematically informing our people about them."

Regarding aircraft manufacturing the Report lists various difficulties peculiar to the industry requiring continuing study which seem applicable to Canada:

1. A product that is, almost indivisibly, a weapon of war and a carrier of commerce;

2. A market with but one major

customer, the Government which purchases 80 to 90 percent of its entire output;

3. A violently fluctuating demand, due to uncertainty of requirements of its major customer;

4. A lack of the production continuity which is vitally important in sustaining a trained work force and in keeping production costs to a minimum;

5. A rapidly changing technology which causes a high rate of design obsolescence and abnormally high engineering costs;

6. An extremely long design-manufacturing cycle;

7. An organization in excess of present requirements.

The specific recommendations made, many of which are applicable to aviation in Canada are so exhaustive that there is difficulty in summarizing them. We recommend our readers obtain the Reports themselves and study them.

Our aviation leaders polled would favor the establishment of a study of the particular problems facing air power in this country. One internationally known designer, who did not want his name to be used, said that it would be very useful "if the subject of government policy were aired, not as to how equipment should be assigned and operated after it had been procured, but rather the aspect of long-range planning on the part of the Government.

"It appears to me," he went on, "that there is a lack of understand-

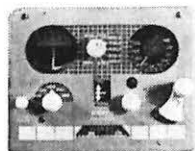
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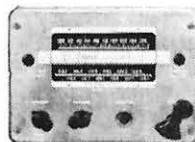
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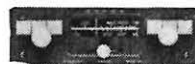
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ing of the thing we term 'lead time,' which is necessary in order to accomplish any given program or project, as well as of the necessity for scheduling a lead time so that a more static condition may exist within the industry."

An aviation company head said it would be well worth while to try "to get the Government to state a proper aircraft policy, not only for (a) military, but (b) civil aircraft, transport aircraft, etc." He incidentally added that "breaking the stranglehold monopoly of TCA would be the best possible thing toward the final establishment of a strong industry."

Canada is well on the way to becoming a world air power, says B. W. Pitfield, vice-president and general manager of Northwest Industries Limited. However, he thinks it is necessary that we emphasize some of our present-day policies and press that other desirable policies be actively considered by the Government, RCAF and industry.

"It is most important that we have a strong and effective Air Force," he said. "Our country is now vulnerable for the first time to attacks from intercontinental bombers and guided missiles. A small number of hydrogen bombs could cripple our main industries within a few hours, and we are a possible target for invasion by airborne mechanized forces."

"In conjunction with a radar defense, we must have a hard striking Air Force equipped with high altitude, day and night fighters. Our second line of defense should comprise airborne troops and equipment, capable of being dispatched to any part of Canada within a few hours, and supported by supply drops and low-level attack aircraft. Our shipping must be protected by maritime reconnaissance aircraft capable of detecting and destroying submarines at considerable distances from our shores."

"The types of aircraft required for Canadian defense are:

- (a) High altitude, day and night, all-weather, long-range fighters
- (b) Low-level, all-weather, ground support, fighter bombers
- (c) Troop and equipment transports with dropping facilities
- (d) Low-speed, long-range, maritime reconnaissance aircraft
- (e) Transport aircraft
- (f) Guided missiles of all types
- (g) Helicopters (which are only in

minor use in Canada at present).

There is a place for helicopters in war and in peace. They are ideal for reconnaissance and evacuating wounded, and will play an increasingly important part in relatively short commercial flights. A helicopter industry should be encouraged in Canada, and there is no better way of doing this than by forming helicopter squadrons within the RCAF.

"The Air Force should work with commercial airline operators to develop a plan for the formation of a transport command which in wartime would use a portion of the commercial airlines' aircraft. Now that TCA has been given the exclusive right to transport air cargo across the continent, it should be urged to develop this service as quickly and efficiently as possible. It should be encouraged to purchase cargo aircraft which can be readily converted to transport aircraft in time of war. In this manner the nucleus of a transport service could be built up and the aircraft and crews involved could perform a useful commercial function while receiving peacetime training.

"We should continue our policy of placing units of our Air Force at the disposal of NATO, and we should take an active part in any new plans that may materialize for the defense of Europe.

"The Government is to be commended for having the F-86, T-33 and CF-100 aircraft built in Canada, and for its future plans to have Canadian industry build the Britannia, the CF-105 and the S2F. It will be necessary to build other aircraft in the same manner, as the need arises, in the future.

"The present tendency to concentrate the aircraft industry in the industrial areas of Ontario and Quebec is not wise. Plants should be constructed and maintained in other parts of Canada, in order to utilize the available manpower, and make Canada's aircraft plants less susceptible to bombing. The program of producing aircraft accessories in Canada should be continued and enlarged as quickly as conditions permit.

"'Shadow plants' played an important part in the British aircraft industry during the last war, and the Department of Defense Production should encourage their development in Canada.

"Every effort should be made to create a stable industry, not subject to the ups and downs so prevalent in

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the past. Proper planning of governmental level is doing much to help this situation, but much more can be done, particularly with regard to repair and overhaul plans. The present Air Force policy of sending their aircraft to overhaul plants, only when the aircraft require complete overhaul should be changed to a policy whereby preventive maintenance is done at regular intervals according to hours flown. This would lead to more economical maintenance and a more stable work load at contractors' plants.

"There is a need for a better Canadian school of aeronautical engineering. One of our Canadian universities should be encouraged to develop such a school. The leading aeronautical engineers of tomorrow should be in training in Canada now, rather than only in the United States and Great Britain.

"As soon as conditions permit, private enterprise should be allowed to develop a second transcontinental airline in competition with the pres-

ent national carrier. All of our great industries have grown to their present size under competitive conditions and the aircraft industry should be no exception."

"I believe we all realize that Canada, although a large country in area, is relatively small in population and thus for economic reasons the air power to do the necessary job is limited," said Russell Baker, president of Pacific Western Airlines. "Obviously our basic effort must be directed to obtain the greatest amount of air power possible within the limitations imposed by our financial resources. This is not a simple task largely because of the high cost per unit of air power, the high cost of training personnel to operate and maintain such equipment and the rapidity with which air power units become obsolescent.

"Assuming the country cannot afford to allocate much additional money for defense purposes it appears that under the circumstances

the only way to increase air power is to improve upon our system of civil and military aviation in order that the greatest part of funds allocated to air power may be spent on combat aircraft and the training of combat personnel. To achieve this end I suggest that all military air transportation (excepting combat operations) should be handled by civil air carriers. Civilian organizations could provide the aircraft and the crews to carry out such work. Experience in the United States, with the Berlin Airlift and with the Korean Airlift has proved that civil operators are able to provide air transport services at a cost to the Government substantially below that which is achieved by government-operated services. Primarily such a policy would result in more funds being available for the acquisition of combat aircraft and the training of combat crews; secondarily it would provide a large reserve of civil transport aircraft and experienced flyers which during any national



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TRANSPORT COUNCIL of the Air Industries and Transport Association, left to right: V. C. Simmonds, A. Michaud, Carl Agar, Bob Scholefield, T. P. Fox, R. A. Eastman, R. W. Ryan, F. T. Wood, M. E. Ashton, J. E. Wells and A. C. Morrison.

emergency could readily play their part in defending the country.

"Another important peacetime benefit to Canada which this policy would stimulate is civil air transportation, by granting free enterprise the opportunity to improve Canadian and domestic international aviation services which are now approximately eight years behind the times. Pacific Western Airlines stands ready to play its part in any development along these lines."

P. E. Lariviere, president and general manager of Boreal Airways, said their knowledge and interest in the development of Canada's air power is largely restricted to commercial air transport, particularly in the Province of Quebec.

"We are not alone in our opinion that the mineral resources of the Ungava area can be responsible for a tremendous activity in that region, and the only logical way to link these outlying districts with southern populated centres is aerial transportation," he stated.

"Boreal Airways Ltd. has, for many years, been serving the transportation requirements of mining companies, surveyors, tourists, fur traders, etc., in the opening up of this vast unexplored territory. It was easily seen that the high cost of charter transportation afforded by single-engine seaplanes or skiplanes was prohibitive and that, as a result, the development of the northern areas would be retarded. For this reason, Boreal constructed two 5,000-ft. airstrips during summer of 1953 and commenced the operation of heavier wheel aircraft by adding to

their fleet this winter a Douglas C-47, equipped with wheel skis.

"As soon as this lower cost transportation was offered to the public, the requirement for heavier equipment was increased and a Bristol 170 was chartered for a one-week period to haul approximately 100,000 pounds of freight for a new project north of Fort Chimo, Que.

"In line with our contention that the development of this part of Canada is contingent on low-cost aerial transportation afforded by large, wheel-equipped aircraft, there is an urgent need for airstrips throughout the northern section of the province. Our own experience in having to construct landing strips to accommodate our own planes is evidence of this lack of adequate facilities.

"Other requirements for the proper development of Canada's air power include water and ski training for RCAF pilots, more radio coverage by government-controlled stations and government assistance in training air engineers. Other 'bush operators' will no doubt confirm the difficulties encountered in finding adequately trained pilots for their seaplane and skiplane operations. Licensed engineers are almost impossible to obtain, particularly for the operator who is located some distance from populated areas. Because of the shortage of qualified maintenance personnel a very serious hardship is imposed on the operator in maintaining his aircraft in accordance with safety requirements. The Department of Transport radio stations scattered throughout isolated areas are restricted to D.O.T.

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communication and operators are obliged to expend considerable sums of money to install radio equipment at various bases to ensure communication with their aircraft. Much better coverage and a substantial saving could be afforded the operator if these D.O.T. stations could be authorized to handle aircraft traffic and supply weather details direct to operators in the area.

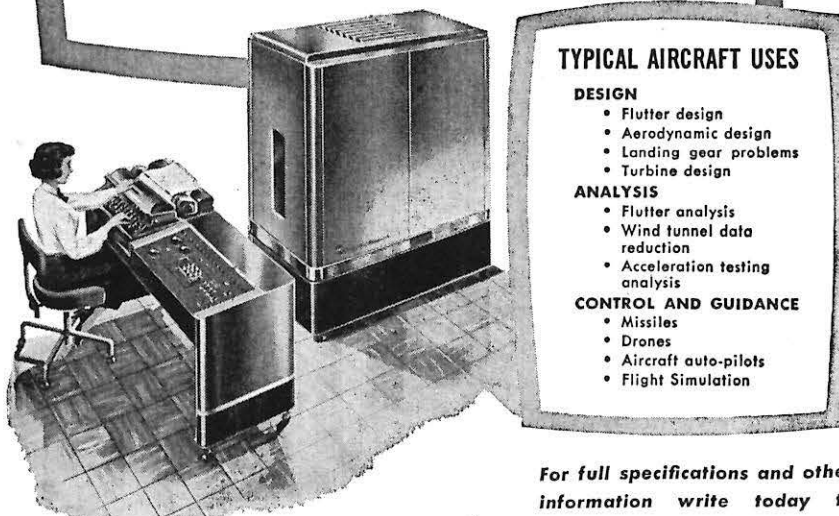
"In our opinion, the potentialities of Canada's airpower are unlimited, but the commercial air carrier serving unexplored areas is in need of assistance from the Government, as mentioned above, to develop this phase of the industry."

Leonard May, president of Leonard Electric Limited, said:

"The rapid development in the past few years of Canadian air power, has been an increasing program in that it has been paralleled closely by a great expansion of the Canadian aircraft industry. The establishment of Canadian design and production within our aircraft industry, is a step which we feel should be greatly expanded during the coming years, and which will eventually place Canada among the major suppliers of the aircraft industry. Our firm, in association with American firms, has been intensely interested in this progress, and we feel that the logical steps which have been taken, and which will be taken in the future, to provide Canada with a self-sustaining aircraft industry, are a most important part of Canada's over-all view of industrial development. Major steps have been taken recently in design and production facilities in Canada, and logically more steps will have to be taken in the future, to establish Canadian production on component parts for airframe manufacturers. As this program develops, so will the position of Canada's aircraft industry in becoming a vital part of Canadian economy."

L. J. Dennett, General Manager of Decca Radar (Canada) Limited, said "Air power of a nation is dependent on many factors besides the numbers and types of aircraft available. This fact is seldom overlooked in its entirety, since most of us are well aware that keenness, skill, and physical fitness of air and ground personnel plays a most important part. It may not be as readily appreciated that, in this jet age, electronic aids to navigation and to the safe handling of aircraft assume a major role in contributing to superiority of air power."

"During the last war, Canada contributed greatly to the air strength



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of the allied nations, providing air training facilities, aircraft, skilled air and ground personnel. Not the least of all her contributions were the skilled radar men, and radar electronic devices of many kinds. The war left in Canada, as it did in Great Britain, a rich legacy of knowledge, experience and equipment.

"In war, as in peace, safety must be a prime consideration. Even in war with personal feelings and human sentiment largely sublimated by dire necessity, no nation can afford to waste the lives of skilled and experienced men, or expend costly and intricate equipment unnecessarily. It is in this role that radar and radio aids plays so important a part.

"The full and proper utilization of radar aids such as airfield control radar, storm warning radar, collision warning radar, radar links, to mention a few, is one approach to the problem of developing air power which can, per dollar invested, take its place amongst the greatest contributions to strength and safety."

H. S. Shannon, President of Chatco Steel Products Ltd., said: "Canada's progress in the development of industrial, commercial and military air power has played a major role in the international recognition of our country's nationhood. Canada now, for the first time, is recognized throughout the world as a major producer of some of the world's finest airframes and aero engines. This accomplishment is typical of the Canadian characteristic of combining imagination, know-how and efficiency to secure and maintain results.

"Canada now has five major producers of aircraft and is no longer a repair and assembly depot for the world's manufacturers. It can be truly said that Canada has arrived in the development of her own aircraft industry.

"A significant event indicating the national character of Canada's aircraft industry and pointing up the status of Canadian aviation personnel was the goodwill flight around the world completed recently by the Rt. Hon. Louis L. St. Laurent, Prime Minister of Canada. The flight was made in a Canadian-produced aircraft with an all-Canadian crew."

Quebecair's president, R. Crevier, said:

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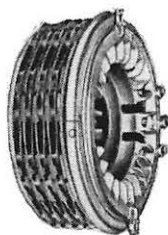
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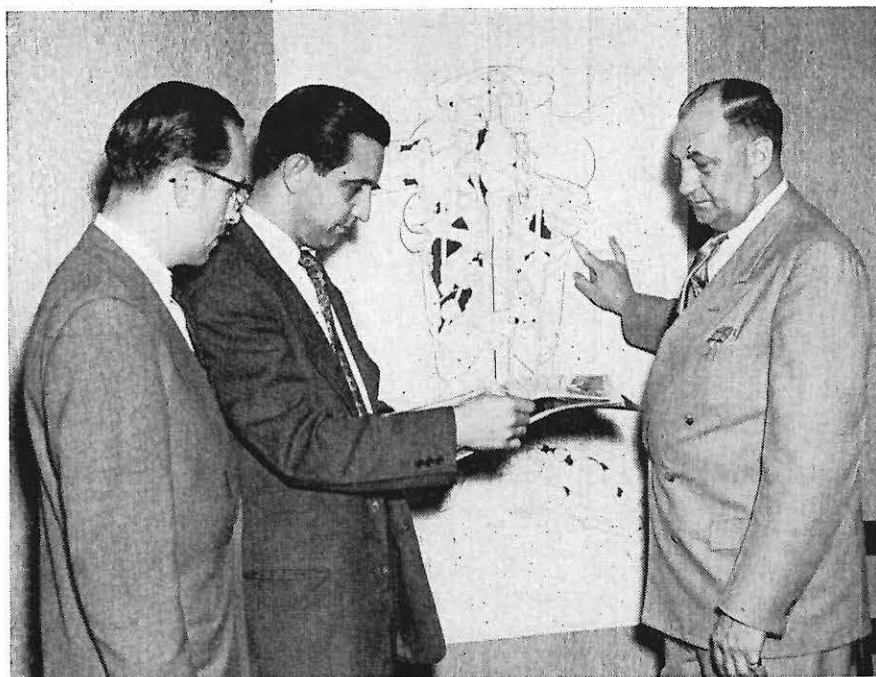
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Three members of Fleet executive study drawings and specifications of the Doman LZ-5 Main Rotor Head. From left to right: Harry Louis, chief engineer, Victor Symonds, contracts administrator, and R. "Bas" Daniels, manufacturing engineer. The LZ-5 is soon to be built in Canada by the newly-formed Doman-Fleet Helicopters.

ever such air power is not limited to military aircraft and services, but encompasses civilian air services, equipment, personnel and training facilities.

"Canada being the vast country it is, and having a comparatively small population, the need of military air bases, as well as that of commercial airlines necessary for its development is the more apparent. Therefore, it would seem that no effort should be spared by the Government to expand its Air Force power, and also to assist in the development of commercial airlines and civilian repair shop facilities, even by means of subsidies, if necessary."

In the opinion of D. Watson, manager of Ontario Central Airlines Limited, "Canada's aviation potentialities are practically untouched." The development of such a large

country and its resources is impossible without aviation, he said.

He explained: "Canada's aviation must have an ever-expanding background of aircraft manufacturers, who are keen and understand the requirements of Canadian operators, and who are interested in including these requirements in their design."

"The aviation writers and publishers must be called upon to continually demonstrate to the public, the need for air transport, in the successful development of this country."

"The commercial air transport companies must be strong in background and possess continuous development ambitions. Their product, which is transportation, must be progressively improved. Greater speed and improved service, are two major points in future thinking."

"The commercial operators, in or-

der to remain strong, must receive assistance and guidance from such governmental bodies as the Air Transport Board and Department of Transport. Good liaison with the operators and high-calibre government men, will bring about sound, practical and effective regulation, which is necessary for the future development of the industry.

"The overhaul shops and supply houses are being perpetually called upon to improve their facilities and stocks of supplies. This section of the industry must grow or develop slightly ahead of the others, to avoid expensive tie-up periods for transport operators, who are clamoring for higher equipment utilization, to strengthen their operations.

"An improved method of liaison between commercial and military is required. Due to the commercial being positioned in so many locations in Canada, it has been difficult to establish good liaison. However, the Air Industries and Transport Association is attempting to organize the industry as a group for better liaison purposes.

"It is very important that representatives of aviation companies, who qualify in such associations as AITA, IATA, etc., become as active as possible, and give serious thought to the policy which they are about to recommend, as that which is going to control Canada's aviation development."

This magazine through its columns or in any other way would like to promote the present desire on the part of industry to have "a new look" at Canada's air policy. We would like to hear and publicize our readers' further views and we also would like to see the Government do its part in formulating and making known a long-range aviation program. We would most like to see a Royal Commission on Aviation appointed, the sooner the better.

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