

Air Division pilots on "Zulu" alert tear out of their tents to their waiting aircraft on the runway.



# Backing Up NATO

## A VITAL COG IN NATO'S DEFENCE MACHINE IS THE RCAF'S AIR DIVISION

**W**ITH FOUR years' overseas operational duty under its belt, Canada's NATO Air Division is now firmly established as a smooth-running fighting machine, part of the key 4th Allied Tactical Air Force defending Central Europe.

Throughout the year, RCAF squadrons have been converting to the latest edition of the Canadair Sabre, the Mark 6. This aircraft, powered by an improved Orenda engine and fitted with huge slats, can outperform any other comparable fighter in full squadron service today. In Europe, only the USAF's F-100's have superior performance.

**Killing Power:** Proof of the Orenda Sabre's ability and of RCAF pilots' air prowess can be found in reports of aerial exercises in which the Canadians consistently fly far more sorties and make more "kills" than their number would indicate.

Key activity of the Division is an operation code-named ZULU, a continuing commitment which is actually more than a training scheme. Charged with the patrol of a vital ADIZ (Air

Defence Identification Zone) along the Iron Curtain, Canadian Sabre squadrons are on constant alert, ready for an instant scramble . . . with "hot" guns.

This constant waiting role is a tedious but necessary part of NATO defence. The job of these alert crews is to investigate aircraft which cannot be identified through normal filtering

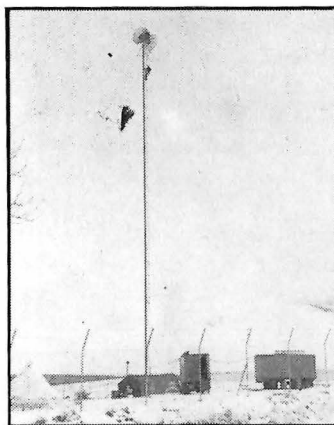
channels. Ground radar controllers direct the aircraft onto the "Bogey" and from there on the section leader takes over. When the identification is friendly the Sabres peel off and head for home. If the suspect aircraft is not friendly it is requested to land and, failing compliance with these instructions, could be shot down.

So far, only friendly aircraft have been encountered.

**No Objection:** But the pilots don't mind the gruelling hours or the waiting. For they fully realize the danger of one enemy aircraft carrying a nuclear weapon getting through to a strategic target. This, to them, is the most important mission of their overseas tour; the peacetime culmination of their long training program.

And, if the worst should happen, and the pilots had to use their guns, there need be no worries about the accuracy of their shooting. RCAF pilots have rolled up amazing records in air-firing competitions.

When the Canadian Air Division first arrived overseas, there was no established NATO air-firing range.



One of the remote transmitter sites maintained by 601 Radio Relay Sqn., which provides communications between RCAF Air Div. units in Europe.

The French Government, realizing the Division's need, kindly offered the use of its Rabat-Sale airfield, which the Canadians gratefully accepted. But now, a new base is nearing completion.

Plans have been under discussion for the past two years for a NATO air-firing base. Site of the new tri-service airfield, where Canadian, Italian and German pilots are scheduled to work side by side, is in southern Sardinia at Decimomannu, near Cagliari.

**Moving Operation:** Already Bristol Freighter and Dakota aircraft have begun airlift operations from Rabat to the new base, shuttling nearly 100 tons of equipment between the two points and to No. 30 Air Materiel Base at Langar, England, for repairs. First firing operations are scheduled for early March in the new year.

Wing Commander C. D. Barnett has been named to head the new RCAF Detachment, taking over the air-firing reins from Wing Commander R. T. P. Davidson, who commanded the Rabat Detachment from its inception.

The Rabat exercise, labelled "Weapon Fire", had one squadron a month flying to the French Moroccan capital where the air-firing sorties were carried out just off the coast.

Here, working from dawn to dusk, the pilots headed out over the Atlantic to sharpen up their shooting ability, fixing their sights on a 30 by six foot drogue towed by one of the Sabre aircraft. To add a little competition, the squadrons vie for the Lloyd Chadbury Trophy for air-firing proficiency. This is presented to a wing as a whole with the aggregate score of the three squadrons the deciding factor. No. 4 Wing won the prize this year.

**Squadron Exchange:** A NATO-sponsored exercise which is looked forward to by Canadian pilots is one involving exchanges between NATO squadrons. For example, last year Canadian squadrons worked out of American, RAF, French and Netherland bases with their exchange units housed on Air Division wings.

Object of this exercise is to familiarize each NATO air force with the working methods of the other so that in war time liaison between national forces will be merely routine. Besides this, pilots are able to meet each other, exchange ideas and generally close the gap between nationalities.

Air exercises are staged daily, originating from SHAPE, AAFCE, 4th ATAF, or the Air Division HQ in Metz. These air manoeuvres are designed to keep the Air Division pilots in top flying form for the role they are assigned. Canada's NATO Air Division has the wartime job of escorting internal and external atomic bomber forces to ensure that they reach their targets, and of providing high-level fighter defence over the European heartland.

**Radar Capability:** In July this year, the pride and joy of Canada's NATO Air Division — its Radar Squadron — celebrated its first birthday. Since it first began operating, the crack Radar

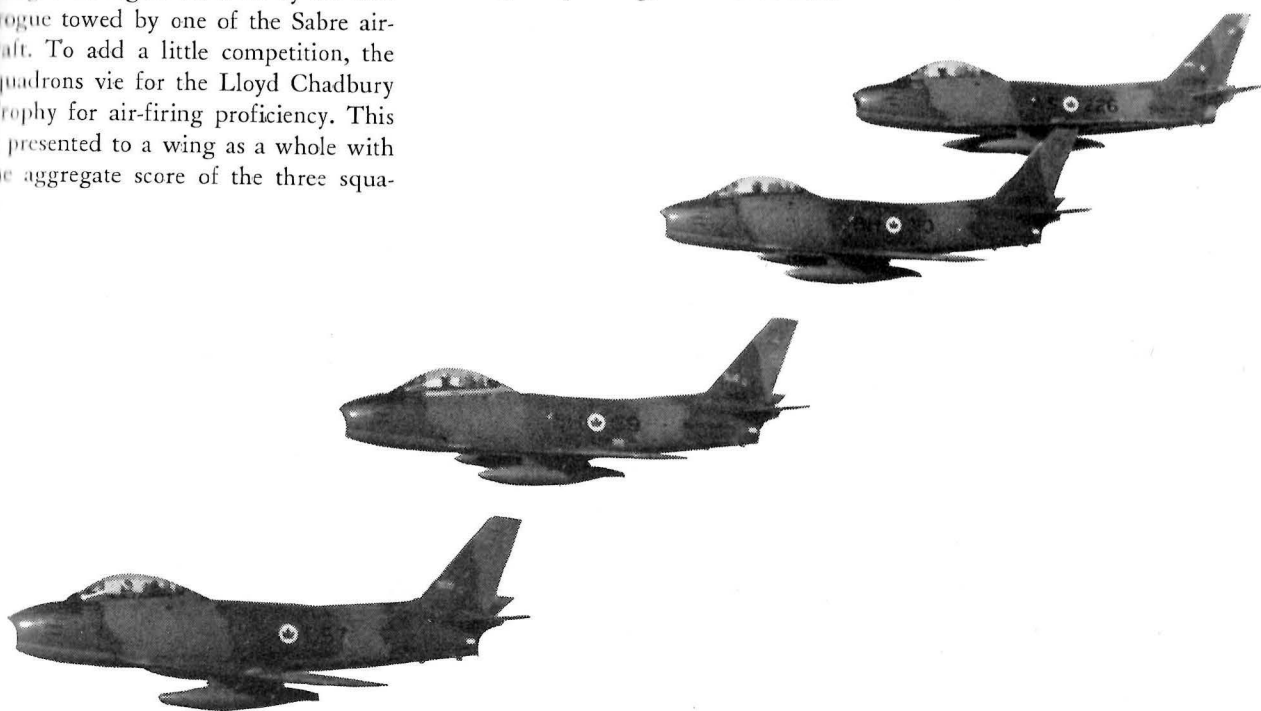
Unit has won a widespread reputation among NATO airmen for its range and reliability.

Although security considerations prevent release of details, radar experts attest to its unsurpassed performance and other allied pilots, as well as Canadians, have come to rely on it with complete confidence.

Says Air Vice Marshal H. B. Godwin, Air Officer Commanding No. 1 Air Division: "Although RCAF pilots and their aircraft had already won high respect for Canada, the truly amazing performance of the Air Division Radar Squadron and its personnel, working round-the-clock, seven days a week, has considerably enhanced this reputation. In fact, the RCAF Sabres themselves have become more effective fighting machines thanks to the quality of our Radar Squadron."

**Dispersal:** During the summer, a high-ranking SHAPE official announced that the new aim for NATO Air Forces was one-squadron air strips spread out over Western Europe, instead of merely the concentrated large permanent fields already in existence, accommodating three squadrons each.

"It is not the aim," he said, "to do away with those already in existence."



## VISION

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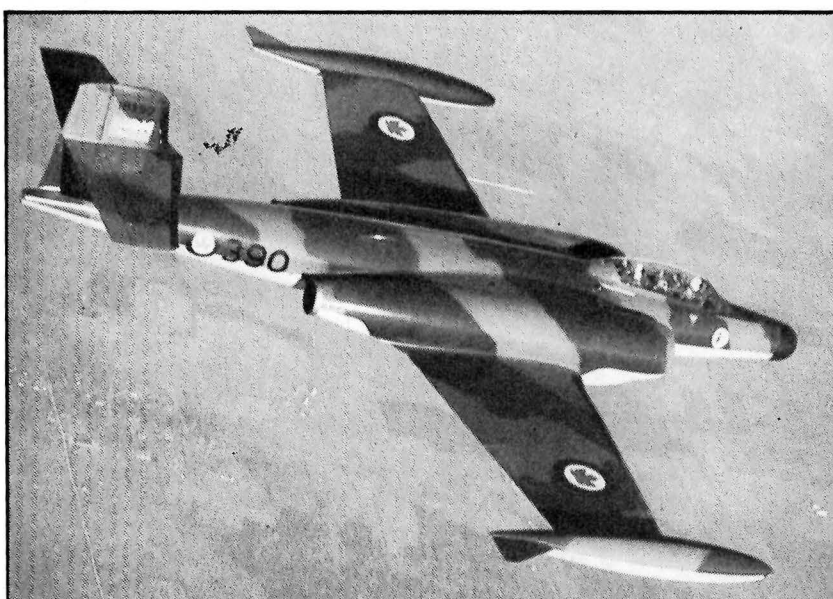
IRCRAFT



European weather, though it does not offer the extremes of its Canadian counterpart, is nevertheless quite a mixed bag. Snow-covered runways and icy taxi strips are not unknown at the airfields of No. 1 Air Division in France and Germany. Although "dayfighters", Sabres operate to extremely low limits.



Waiting for a scramble, alert crews at No. 3 Fighter Wing watch three Sabre sections return in formation from an air sortie. NATO plans call for the setting up of satellite strips to which squadrons would be dispersed, with crews living under canvas. Present large bases would be maintained as well.



One squadron of CF-100's, 445, has already moved to Europe for service with the Air Division. In all, four CF-100 squadrons will be attached to the Division, replacing a similar number of Sabre squadrons. One CF-100 squadron will be attached to each of the four RCAF wings in France and Germany.

What we plan is to obtain satellite strips where NATO squadrons would live under canvas a few miles away from the actual runway. This is in keeping with our latest atomic warfare theories."

Canadian Air Division officials had already been thinking along these same lines and ran off an exercise this summer to test their plans. Labelled "Skylark", Air Division squadrons were deployed on short notice to small fields in France and Germany where they lived and worked completely independent of outside assistance.

At the same time another Air Division squadron was able to test its mobility. This squadron has neither pilots nor planes but it is essential to the operation of the Division. No. 601 Radio Relay Squadron, based at Grosvenquin, France, is the heart of the communications system between the wings.

**Intercom:** This microwave set-up provides telephones, and teletype hook-ups between wings and the headquarters, as well as with 4th ATAF headquarters, at Trier, Germany, and other international formations. Besides these two services, the microwave system transmits weather maps for up-to-the-minute briefing of pilots.

In Exercise "Skylark", 601 Squadron, noted for its mobility, got its first chance to prove itself. It was called upon to provide communications between the deployed squadrons and Air Division headquarters in Metz.

The squadron received no advance warning, was told to move at the same time as the aircraft. Mobile radio vans and crews roared out to the deployed sites to set up their "dishes" — parabolic reflectors mounted on high lean towers. By the time the fighter squadrons had settled in, communications had been established and the latest weather map was tacked on the briefing board ready for the first sortie of the exercise. They had, indeed, proved their mobility.

**All-Weather Force:** In August, Canada's Minister of National Defence, the Honourable Ralph Campney paid his annual visit to No. 1 Air Division. During a press conference with German reporters at No. 4 Fighter Wing at Baden-Soellingen, Mr. Campney

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while Central Northern, World Wide and Arctic Wings supplied one apiece. By April, the end of the winter airlift, most of the sites between the east coast and Hudson Bay were activated. But of greater importance, not one aircraft was lost in transporting a total of some 4,400 tons of equipment and supplies.

**Operations Manual:** The summer of 1956 brought the biggest stage of the airlift into operation. In all 14 Cansos were pressed into service. Safety measures were increased and the coordinator was given three assistants to act as dispatchers at Knob Lake, Great Whale and Moosonee. An operations manual of the Mid-Canada Airlift was developed by the carriers and approved by the DoT. This became the manual specified in all contract agreements with the operators in the Mid-Canada airlift.

**Flying Pack Mules:** Helicopters have played an important part in this whole operation. Since it was impossible to find landing areas for the fixed wing aircraft at most of the tower sites, the RCAF's 108 Communications Flight has supplied a helicopter shuttle serv-

ice. If the Dakota is the "Work-horse of the Air Force" then the helicopter is first cousin to the pack mule. Since the beginning of the siting operations, before the actual airlift began, the helicopters have logged a total of over 10,500 hours. Six Vertol H-21B helicopters are based at Knob Lake. Six Sikorsky H-34's are based at Great Whale River and another ten H-19's operate out of Winisk. In addition, six H-21's and crews from the USAF operated out of Cranberry Portage, Manitoba, during June, July and August.

Since January of 1956 the helicopters have carried a total of 3,791 passengers and 1,800 tons of freight. They have travelled 50,200 ton-miles with most of the trips being of a very short distance, integrated with the limitation of the fixed wing aircraft.

#### AIR DIVISION

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stated that November would see the first of the four promised all-weather CF-100 squadrons settled at No. 1

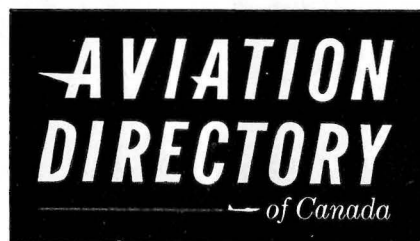
Wing at Marville, in France. The remaining three would arrive at intervals during 1957. As promised, the first of these squadrons has now arrived at Marville.

As the CF-100 units arrive, one Sabre-equipped squadron at each wing is being disbanded, leaving the pilots and crews free for flying duties in Canada. This will not, however, affect the NATO pledge of 12 jet-fighter squadrons from Canada.

First Sabre unit to be disbanded under the new scheme was No. 410 (Cougar) Squadron, oldest of the 12 overseas units. In 1952, No. 410 became the forerunner of the Division, bringing its aircraft overseas aboard the HMCS Magnificent. This squadron opened up No. 1 Fighter Wing at North Luffenham, England, and when the wing moved over to the Continent in March, 1955, No. 410 was again the first to arrive at the new Marville, France, air base.

In late September this year, the squadron ceased flying operations and prepared for the move home. Some of the newer members of the squadron switched to one of the other wing

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squadrons while others sailed back on the S.S. Homeric. But not all travelled on the Homeric. Completing the circle, ground crew members of No. 410, once again boarded the HMCS Magnificent, this time for the return journey. And again, they took their aircraft with them. These are Sabre 5's, recently replaced by the more powerful Mark 6 models, and now slated for use by reserve squadrons in Canada.

**CF-100 Preparations:** Several months ahead of the arrival of the CF-100's, the Field Technical Training Unit (FTTU) located at No. 3 Fighter Wing, Zweibrücken, Germany, added CF-100 training equipment to its Sabre gear and began classes. Complete mock-up panels, with actual component parts of every system in the aircraft, from electrical to armament, line the walls to aid the instructors.

The FTTU was originally set up to convert ground crews to the new marks of Sabre engines and airframes, as well as to give refresher courses to new arrivals. Since its beginning in 1953, the nine instructors have processed more than 5,000 students.

Until all the CF-100's arrive, the FTTU is giving refresher courses to airmen who have previously worked on that aircraft but who have since been maintaining Sabres. These men will augment squadron personnel that come over from Canada with the CF-100's.

Once the four units are established on the continent, the training school

will operate courses parallel to those now run for the Sabre technicians, keeping the CF-100 crews current on their machines.

**Consolidation:** In a recent address Air Vice Marshal Godwin very concisely summed up the Air Division activities for the year 1956. "The past year has been mainly one of consolidating our position. Our fighter squadrons have been striving for perfection in their air tactics, and groundcrews, whose work is now more vital than ever before, rank among the best anywhere. In other words, the growing pains have ceased.

"The addition of the CF-100's will no doubt create more problems until they have properly settled in. But by this time, I feel that the Canadian Air Division has enough operational experience to treat any obstacles more or less as a matter of routine.

"We are now a hard-hitting and efficient fighting force. The CF-100's are adding more flexibility and power to the Air Division and to the NATO air defences of Western Europe. I don't think there is any doubt that we will continue to rank among the top operational commands of the Allied powers."

#### FOOTTIT

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In those days when Hurricane and Spitfire fighters could be designed and

developed with a relatively small technical effort, the waste of manpower on such oddities as the composite aircraft was, perhaps, not too serious. Yet it no doubt added its small bit to the flood that swept the British nation to the brink of disaster from the air. In modern times, however, it takes millions of technical man hours, spread over many years, to design and develop these air power systems. Thus, we can no longer afford to by-pass our technical resources into such wasted bywaters.

We will, of course, still have research aircraft such as the Bell and Douglas airplanes that were built for the USAF to explore the supersonic speed ranges. But these are what the U.S. Navy's Admiral S. B. Spangler has called "feet-on-the-desk" type of research projects. In other words, they are directed to probing a particular technological frontier. The results are planned to achieve a break-through into a true air power system, of which the supersonic airplane or missile will play its part.

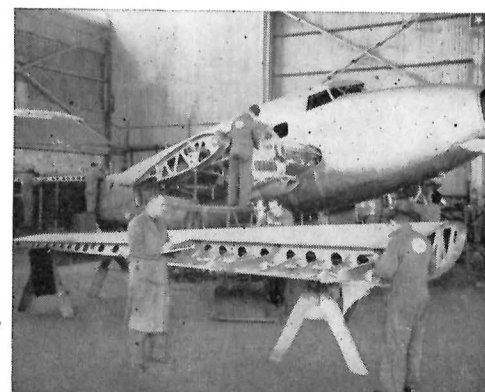
In the development of air power, then, we must get over our heritage of "flying machine" thinking. We must concentrate all our technical resources and planning along "systems thinking" lines. "Be ye transformed by the renewing of your mind," as the Bible says, or we of the West may find ourselves with plenty of airplanes, but a dearth of air power, as Seversky has warned.



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