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ANNUAL REPORT FOR THE YEAR ENDING MARCH 31, 1965



## **BOARD OF DIRECTORS**

\*R. Fraser Elliott, Q.C., Chairman of the Board of Directors  
Partner—Stikeman, Elliott, Tamaki, Mercier & Turner, Montreal, Que.

\*James F. Tooley, President and Chief Executive Officer,  
and Chairman of the Executive Committee, Montreal, Que.

T. N. Beaupré, Chairman of the Board  
British Columbia Forest Products Limited, Vancouver, B.C.

Henry Benson, President—Benso Limited, Montreal, Que.

\*Air Marshal Hugh Campbell, Company Director and Consultant, Ottawa, Ont.

Peter D. Curry, President—Greater Winnipeg Gas Company, Winnipeg, Man.

Léon Simard, Vice-President—Marine Industries Ltd., Montreal, Que.

H. Heward Stikeman, Q.C., Partner—Stikeman, Elliott, Tamaki, Mercier & Turner, Montreal, Que.

Hon. G. S. Thorvaldson, Q.C., Partner—Thorvaldson, Eggertson, Saunders & Mauro, Winnipeg, Man.

F. G. Winspear, Partner—Winspear, Higgins, Stevenson and Doane, Edmonton, Alta.

\*Member of the Executive Committee

## **OFFICERS**

R. Fraser Elliott, Q.C., Chairman of the Board of Directors  
James F. Tooley, President and Chief Executive Officer  
John W. Bell, Vice-President and Chief Technical Officer  
R. W. Cooke, Vice-President—Electronics  
John W. Hughes, Vice-President—Public Relations  
Geo. G. James, Vice-President—Finance  
D. I. Johnston, Vice-President—Legal, and Secretary  
B. J. Kaganov, Vice-President—Operations, Electronics  
D. M. Loucks, Vice-President—Industrial  
D. S. D. McDonald, Vice-President

### **BANKERS**

Canadian Imperial Bank of Commerce, Montreal, Que.  
The Toronto-Dominion Bank, Montreal, Que.  
The Royal Bank of Canada, Montreal, Que.  
First National City Bank, New York, N.Y.

### **AUDITORS**

Riddell, Stead, Graham & Hutchison, Chartered Accountants, Montreal, Que.

### **COUNSEL**

Stikeman, Elliott, Tamaki, Mercier & Turner, Montreal, Que.  
Thorvaldson, Eggertson, Saunders & Mauro, Winnipeg, Man.

### **TRANSFER AGENTS**

Crown Trust Company, Montreal, Que., Toronto, Ont., Vancouver, B.C.

### **REGISTRAR**

Montreal Trust Company, Montreal, Que., Toronto, Ont., Vancouver, B.C.



# CANADIAN AVIATION ELECTRONICS LTD.

**CANADIAN AVIATION ELECTRONICS LTD.** Corporate Headquarters  
19th Floor, Place Ville Marie, Montreal, Que.  
Montreal mail address: Box 6166, Montreal 3, Que.

**CAE ELECTRONICS DIVISION**  
6214 Cote de Liesse Rd., Montreal, Que.

**CAE WESTERN DIVISION**  
387 Sutherland Avenue, Winnipeg, Man.



**NORTHWEST INDUSTRIES LIMITED**  
Edmonton, Alta.



**B.C. AIR LINES LIMITED**  
Vancouver, B.C.



**CANADIAN BRONZE COMPANY LIMITED**  
Montreal, Que., Winnipeg, Man., Regina, Sask., Calgary, Alta.



**ONEIDA ELECTRONICS, INC.**  
Utica, N.Y.



**MUNICIPAL SIGNAL DIVISION**  
St. Laurent, Que.



**CAE ELECTRONICS GmbH**  
Stolberg, Aachen, West Germany



**CAE SUMNER LTD.**  
Vancouver, B.C.



**THE UNION SCREEN PLATE COMPANY OF CANADA (LIMITED)**  
Lennoxville, Que., Montreal, Que., Brampton, Ont.







## FINANCIAL HIGHLIGHTS

	1965	1964
Sales	\$39,701,481	\$36,854,204
Profit before provision for income taxes	\$ 3,325,204	\$ 3,156,582
Profit after taxes	\$ 1,759,593	\$ 1,499,082
Common shares outstanding	1,067,003	1,062,753
Earnings per share	\$ 1.61	\$ 1.37
Working capital	\$ 2,626,303	\$ 3,096,158
Working capital ratio	1.3	1.6
Long-term indebtedness	\$ 3,904,737	\$ 3,202,229
Net worth	\$12,728,441	\$ 5,496,670
Book value per share	\$ 11.93	\$ 5.17

## STATEMENT OF WORKING CAPITAL

	1965	1964
<b>WORKING CAPITAL AT BEGINNING OF YEAR</b>	<b>\$ 3,096,158</b>	<b>\$ 3,027,994</b>
<b>INCREASES</b>		
Net income for the year	1,759,593	1,499,082
Depreciation written off—net	479,502	618,803
Proceeds from sale of capital stock	26,000	78,950
Increase in long-term debt	677,331	(1,157,158)
	<b>\$ 6,038,584</b>	<b>\$ 4,067,671</b>
<b>DECREASES</b>		
Additions to fixed assets—net	\$ 1,572,903	374,760
Dividends paid and payable	383,673	249,371
Redemption of preferred shares of a subsidiary company	11,000	—
Net decrease in working capital resulting from purchase of subsidiaries and affiliated companies during year	1,444,705	347,382
	<b>\$ 3,412,281</b>	<b>\$ 971,413</b>
<b>WORKING CAPITAL AT END OF YEAR</b>	<b>\$ 2,626,303</b>	<b>\$ 3,096,158</b>



## REPORT TO OUR SHAREOWNERS

Earnings and sales of CAE and its subsidiary companies continued to increase in the fiscal year ending March 31st, 1965. Earnings were \$1,759,593, or \$1.61 per common share after payment of \$37,960 to holders of preferred shares of subsidiary companies compared with \$1,499,082, or \$1.37 per share last year. Sales were \$39,701,481 compared with \$36,854,204.

Working capital is \$2,626,303 against \$3,096,158 last year. Amounts owing the banks at 31st March were \$4,650,000 compared with \$1,900,000 in 1964 and \$4,500,000 the year before; accounts receivable and inventories totalled approximately \$12,000,000.

An appraisal was made by Warnock Hersey Appraisal Company Ltd. of most of your company's fixed assets which showed an increase over the net book value of \$5,983,176. The total appraised value plus non-appraised assets at cost is \$20,267,372 while the book value is \$15,770,922; on the same basis the depreciation reserve required is \$6,754,298 compared with \$8,264,346. The net increase in the value of the assets has been reflected on the balance sheet with an offsetting credit to appraisal surplus.

Patterns, patents and design marks at \$657,806 arise from the acquisition of the net assets of the Municipal Signal Company and the license for the Journapak lubricators.

The outlook for the coming fiscal year is for a further increase in sales and profits as we realize the benefit of the diversification program commenced in 1962. Although approximately 50% of our business is no longer made up of long-lead items, our backlog is only slightly lower than last year. Your directors have pursued a policy of diversification, not only through the medium of corporate acquisition, but also by the introduction of new product lines within each of the manufacturing divisions.

In general, our operations fall into four areas of business activity: electronics, aviation, railway supply and forest products equipment. Your company now has manufacturing facilities in the provinces of Quebec, Ontario, Manitoba, Alberta and British Columbia. We expect our shareowners to benefit from the increased investment in the buoyant Canadian economy, particularly in the provinces of Quebec and British Columbia. We also expect to further develop our electronic capability to provide more and better products and services in satisfaction of Canadian defence requirements as well as those of other NATO countries.

During the year just ended we acquired 50% of the shares of Velan Engineering Ltd. The Velan group of companies, founded by A. K. Velan who is President, produce a wide range of forged steel and stainless steel valves

and steam traps for the petro-chemical and chemical industries, power plants, the ship building industry and for nuclear reactors and space vehicles. The main Velan plant is located in Montreal with a wholly owned subsidiary in Plattsburg, N.Y. and a 70% owned subsidiary in Leicester, England. CAE earnings will include its share of Velan earnings to the extent that dividends are declared. Total employment of Velan is over 300.

The Canadian Sumner Iron Works Limited common shares were purchased in February. This company, located in Vancouver, B.C., employs 300 persons. It designs and manufactures sawmill machinery and other medium sized forest products equipment; it also manufactures centrifugal pumps and operates a steel and iron foundry. The company's name has been changed temporarily to CAE Sumner Ltd. Harry B. Norris of Vancouver is President and it is intended that other senior employees and Mr. Norris will own or have options on 20% of the shares of this company.

Also in February of this year, we acquired the Canadian manufacturing and sales rights, as well as a non-exclusive license for countries other than the United States, for Journapak bearing lubricators. The lubricators are tufted cotton and foam rubber devices which fit into railway car journal housings to lubricate the bearings. This is a natural adjunct to the Canadian Bronze business.

In April of the 1965-66 fiscal year the outstanding shares of The Union Screen Plate Company of Canada (Limited) and a related company were acquired. Union Screen's main plant is located in Lennoxville, Que., with branches in Montreal and Brampton, Ont. The company is primarily engaged in the production of slotted, conically drilled and perforated screen plates used in paper making machines. It has a non-ferrous foundry and up to date plating facilities. Total employment is about 175 persons. The products and activities of Union Screen are complementary to both those of Canadian Bronze and CAE Sumner. Ernest W. Gilbey who has been associated with the company for 30 years and was formerly a Vice-President becomes President.

The number of CAE shareowners now stands at nearly 2000, an increase of 500 during the last year and an increase of over 1200 since our company's common shares were subdivided in 1963. In addition to our shares being listed on the Montreal and Toronto Exchanges they were listed for trading on the Vancouver Stock Exchange in January of this year. An analysis of the share records on April 9th showed the ownership of CAE shares to be 96% in Canada, 1.3% in the United States, and 2.7% in the United Kingdom and elsewhere.



The payment of dividends commenced in January 1963 at a quarterly rate of 5¢ per share. In May of last year an extra dividend of 2<sup>1</sup>/<sub>2</sub>¢ per share was paid and the quarterly rate was increased from 5¢ to 7<sup>1</sup>/<sub>2</sub>¢ with the dividend paid in July. At their first meeting in the current fiscal year your directors declared an extra dividend of 7<sup>1</sup>/<sub>2</sub>¢ per share payable on June 7th. The Directors also agreed to recommend a sub-division of the company shares on a three-for-two basis. The proposal will be presented to the shareowners for approval at a special general meeting to be held in conjunction with the annual meeting on June 22. It is the intention of your directors that the current quarterly dividend rate of 7<sup>1</sup>/<sub>2</sub>¢ per share will be maintained for the new shares.

At its meeting in February your directors authorized the award of options on 58,000 shares of the company to officers and employees of CAE and subsidiaries. The option price, at \$15.00 per share was \$1.00 more than the market price on the day the options were awarded. The options are for five years and, provided the optionee is in the employ of the company, they may be exercised pro rata through a three year period commencing after conclusion of the first year from their date.

Shortly before the end of the fiscal year with which this report is concerned our shareowners were informed by letter that their approval would be sought for a change in our company name at the special general meeting previously referred to in this report. The members of your Board consider the present name is no longer descriptive of the company's diverse operations. They recognize however that the initials CAE are closely identified with our company and the new name proposed is CAE INDUSTRIES LTD.

In May, 1965, R. W. Cooke, previously Vice-President—Sales, was appointed President—Electronics Division, with

responsibility for the electronics activities of the company in Canada and in Europe. He is now also responsible for the operation of Oneida Electronics Inc. in Utica, N.Y. and B. J. Kaganov is Vice-President—Operations for Electronics.

Both Mr. Cooke and Mr. Kaganov continue to be Vice-Presidents of the corporation. John W. Bell, formerly Vice-President—Engineering, is now Vice-President and Chief Technical Officer of the corporation.

In February of 1965 D. M. Loucks, formerly President of Canadian Bronze Company Limited, was appointed Vice-President—Industrial of CAE. A. J. Moore, formerly a Vice-President of Canadian Bronze, was appointed President in April.

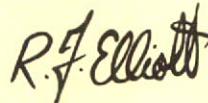
During the year the number of members of the Board of Directors was increased from nine to 10 with the election of Léon Simard, of Montreal. Mr. Simard is President of Engineering Products of Canada Ltd., and Vice-President of Marine Industries Ltd.

Nathaniel Paschall, of Pasadena, Calif., and Francis G. Winspear, of Edmonton, Alta. were elected to the Board of B. C. Air Lines Limited. Mr. Paschall is President of Paschall International Corporation, and is a former Vice-President of Douglas Aircraft Company.

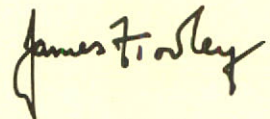
Dr. Winspear is a member of the CAE Board and was President of Northwest Industries Limited when B. C. Air Lines was acquired by that company and at the time Northwest Industries became associated with CAE.

Dr. William A. Morgan, founder and President of Geo-Met Reactors Ltd. has joined the Board of Canadian Bronze Company.

Your Company and its subsidiaries currently employ approximately 2900 persons compared with 2159 last year. Their contribution toward the success of the enterprise is acknowledged with appreciation.



Chairman of the Board



President





## CONSOLIDATED STATEMENT OF EARNINGS

for the year ended March 31, 1965

	1965	1964
Gross revenue	\$39,701,481	\$36,854,204
Manufacturing selling and administration costs	36,376,277	33,697,622
Profit from operations before taxation and after charging the undermentioned items	3,325,204	3,156,582
Provision for income taxes	1,565,611	1,657,500
<b>Net earnings for the year</b>	<b>\$ 1,759,593</b>	<b>\$ 1,499,082</b>
Items charged before determining net earnings —		
Depreciation of fixed assets and amortization of patents	\$ 715,376	\$ 598,308
Directors' fees	21,273	22,328
Remuneration of executive officers	318,667	311,000
Interest on long term debt	143,361	140,259
Legal expense	39,918	45,334

## CONSOLIDATED STATEMENT OF EARNINGS RETAINED IN THE BUSINESS

for the year ended March 31, 1965

	1965	1964
Balance — beginning of year	\$ 3,841,383	\$ 2,591,672
<b>Add:</b> Earnings for the year	<b>1,759,593</b>	<b>1,499,082</b>
	<b>5,600,976</b>	<b>4,090,754</b>
<b>Deduct:</b> Premium on redemption of preferred shares	\$ 1,000	
Preferred dividends of subsidiaries	37,960	
Common stock dividend of Canadian Aviation Electronics Ltd.	345,713	
	<b>384,673</b>	<b>249,371</b>
<b>Balance — end of year</b>	<b>\$ 5,216,303</b>	<b>\$ 3,841,383</b>



# CANADIAN AVIATION ELECTRONICS LTD. AND SUBSIDIARY

(Incorporated under the Companies Act of Canada)



## CONSOLIDATED BALANCE

### ASSETS

	1965	1964
<b>CURRENT ASSETS</b>		
Cash	\$ 602,536	\$ 188,617
Marketable securities (Market value \$338,420)	176,703	169,024
Accounts receivable —		
Trade	5,282,983	3,717,878
Other	839,216	485,857
Inventories—at lower of cost or market less progress billings	5,260,711	3,468,124
Prepaid expenses	177,224	127,958
<b>Total current assets</b>	<b>12,339,373</b>	<b>8,157,458</b>
<b>INVESTMENT IN AFFILIATED COMPANY</b>	<b>750,000</b>	<b>—</b>
<b>FIXED ASSETS</b>		
Land	2,319,100	1,225,270
Buildings	6,979,984	5,305,914
Plant and equipment	9,303,397	4,655,899
Aircraft	1,664,891	1,657,803
	20,267,372	12,844,886
<b>Less: Accumulated depreciation</b>	<b>6,754,298</b>	<b>6,875,387</b>
	<b>13,513,074</b>	<b>5,969,499</b>
<b>OTHER ASSETS — at cost less amortization Patents and Patterns</b>	<b>657,806</b>	<b>—</b>

APPROVED ON BEHALF OF THE BOARD:

Director — R. F. ELLIOT

Director — JAMES F. TOOLEY

**\$27,260,253**      **\$14,126,957**



# COMPANIES



## SHEET AS AT MARCH 31, 1965

### LIABILITIES

	1965	1964
<b>CURRENT LIABILITIES</b>		
Bank	\$ 548,798	\$ 192,749
Notes payable	2,267,334	227,270
Dividends payable	89,400	62,513
Accounts payable and accrued liabilities	5,019,576	2,742,819
Provision for income and profits taxes	1,235,280	1,260,216
Other taxes payable	186,763	182,491
Current instalments of long-term debt	365,919	393,242
<b>Total current liabilities</b>	<b>9,713,070</b>	<b>5,061,300</b>
<b>LONG-TERM DEBT</b>		
Loans from Industrial Development Bank	888,750	1,120,000
Amount due on purchase of land	—	63,361
Notes payable — Chartered Banks — 5 <sup>3</sup> / <sub>4</sub> % due April 1966	2,640,000	1,670,000
Toronto Dominion Bank Pension Society — 7 <sup>1</sup> / <sub>4</sub> % due April 1966	325,987	348,868
Other	50,000	—
	<b>3,904,737</b>	<b>3,202,229</b>
<b>Less:</b> Instalments included under current liabilities	<b>365,919</b>	<b>393,242</b>
	<b>3,538,818</b>	<b>2,808,987</b>
Preferred shares of consolidated subsidiaries	1,253,060	760,000
Minority interests in consolidated subsidiaries	26,864	—
<b>CAPITAL STOCK AND SURPLUS</b>		
Capital stock —		
Authorized —		
1,500,000 common shares without nominal or par value		
Issued and fully paid —		
1,067,003 common shares (1964 — 1,062,753 shares)	1,528,962	1,502,962
Earnings retained in the business	5,216,303	3,841,383
Surplus arising on consolidation	—	152,325
Excess of appraised value of fixed assets over depreciated cost	5,983,176	—
	<b>12,728,441</b>	<b>5,496,670</b>
	<b>\$27,260,253</b>	<b>\$14,126,957</b>



## NOTES TO FINANCIAL STATEMENTS

for the year ended March 31, 1965

1. Loans from Industrial Development Bank consist of (a) \$630,000 at 6½% repayable by monthly instalments of \$17,500 to March 1968 and in respect of which \$1,400,000 6½% First Mortgage Bonds of Canadian Aviation Electronics Ltd. have been issued as collateral security (b) \$180,000 at 7% repayable \$100,000 in the fiscal year 1966 and the balance in the fiscal year 1967 and in respect of which \$600,000 7% Mortgage Bonds of B.C. Air Lines Ltd. have been issued as collateral security and (c) \$78,750 at 6% repayable \$8,750 quarterly secured on the fixed assets of CAE Sumner Ltd. other than buildings.

2. As at the end of the company's fiscal year the fixed assets of Canadian Aviation Electronics Ltd. and certain of its subsidiaries were appraised by Warnock Hersey Company Ltd., and effect has been given to the appraisal in the consolidated balance sheet by increasing the net value of the assets by \$5,983,176. The increase is reflected in the balance sheet as "Excess of Appraised Value of Fixed Assets over Depreciated Cost."

The fixed assets of the other subsidiaries are carried at cost.

Depreciation for the year ended March 31, 1965 has been charged to operations on the basis of cost as in prior years.

3. Subsequent to the close of the financial year the company negotiated the purchase of The Union Screen Plate Company of Canada (Limited) and a related company at a price of approximately \$1,500,000.

4. A substantial part of the company's sales is made to the

Canadian Government. These sales are subject to adjustments on Government audit. The Management is of the opinion that full provision has been made for any adjustments that may arise in final determination of contract prices.

5. As a result of the company's intention to claim for tax purposes capital cost allowances in excess of the depreciation recorded in the accounts, the provision for income taxes is approximately \$22,500 less than would otherwise have been charged against income. The accumulated amount by which income taxes have been so reduced in this and prior years is approximately \$286,000. This amount will be applicable to future periods in the event amounts that can be claimed for tax purposes are less than depreciation recorded in the accounts.

6. 20,400 common shares of Canadian Aviation Electronics Ltd. stock, purchased on the open market by subsidiaries, are held against options granted to officers and employees of the subsidiaries. In addition, 67,150 unissued common shares are reserved against options granted to officers and employees of Canadian Aviation Electronics Ltd. and its subsidiaries.

A subsidiary has granted options, exercisable over a period of three years, to purchase up to 20% of its common shares for an aggregate consideration of \$100,000. As at March 31, 1965 options have been exercised to the extent of 5%. The subsidiary is committed to repurchase all the optioned shares for a minimum consideration of \$100,000.

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## AUDITORS' REPORT

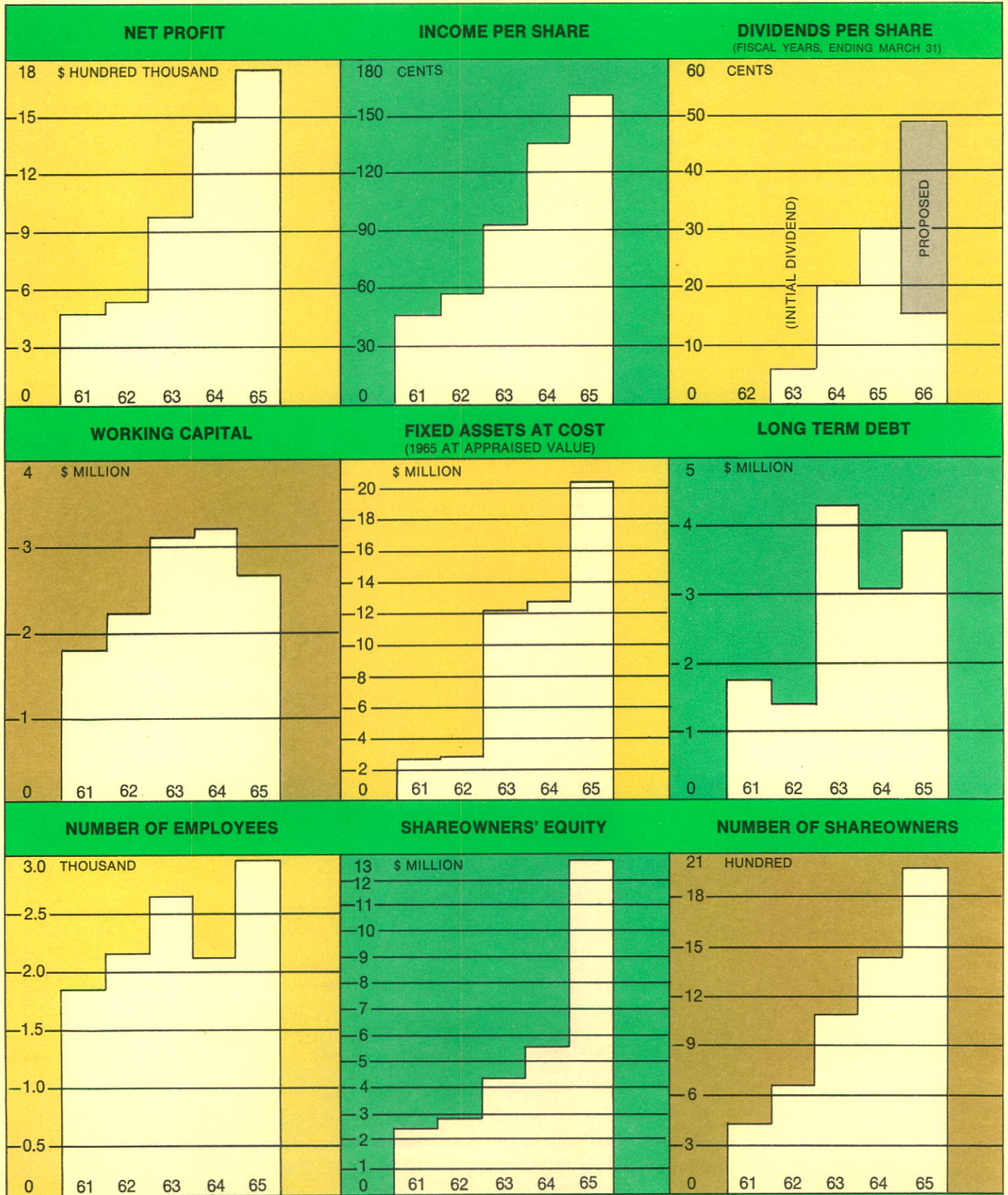
To the Shareholders,  
Canadian Aviation Electronics Ltd.

We have examined the consolidated balance sheet of Canadian Aviation Electronics Ltd. and its subsidiaries as at March 31, 1965 and the consolidated statements of earnings and earnings retained in the business for the year then ended and have obtained all the information and the explanations we have required. Our examination included a general review of the accounting procedures and such tests of accounting records and other supporting evidence as we considered necessary in the circumstances, except that it was not practicable to confirm Canadian Government receivables as to which we have satisfied ourselves by means of other auditing procedures. The accounts of seven subsidiaries included in the consolidated financial statements were examined and reported on by other public accountants.

In our opinion, based on our examination and the reports of other public accountants and according to the best of our information and the explanations given to us and as shown by the books of the companies, the accompanying consolidated balance sheet and consolidated statements of earnings and earnings retained in the business together with the notes attached thereto, are properly drawn up so as to exhibit a true and correct view of the state of the combined companies' affairs as at March 31, 1965 and the results of their operations for the year then ended, in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year, except for the change mentioned in Note 2.



# 5 YEARS IN REVIEW





## OPERATIONS OF DIVISIONS AND SUBSIDIARIES

### ELECTRONICS DIVISION

The F-104 simulator production program was completed with the delivery of the 32nd unit in October, 1964. The supply of spare parts, maintenance repair and overhaul, and engineering support of the program will continue to be provided by the company.

Orders have been received from Canadian Pacific Air Lines for a simulator for their DC-8 airplanes and from KLM-Royal Dutch Airlines and Swissair for their DC-9s. Work is well advanced on an order for six simulators for the CL-41 Tutor jet airplane for the RCAF, and on an Aircrew Systems Trainer for the C141A Starlifter aircraft for USAF.

Deliveries have commenced on an order for 65 automatic magnetic compensators valued at approximately \$275,000 and a follow-on order has been received for this equipment making the total received to date \$450,000. The compensators are devices which make it possible for sensitive instruments aboard an airplane to function efficiently in spite of the strong magnetic field created by the metals in the airplane itself. Our company enjoys a position of world leadership in the science of magnetic field control and the products involved originated in a CAE research and development program.

Another result of CAE research and development, the TELEPATH line of solid state or transistorized telegraph equipment, is fulfilling its early promise. Customers of TELEPATH units include international airlines, railways, oil companies and press and communications organizations

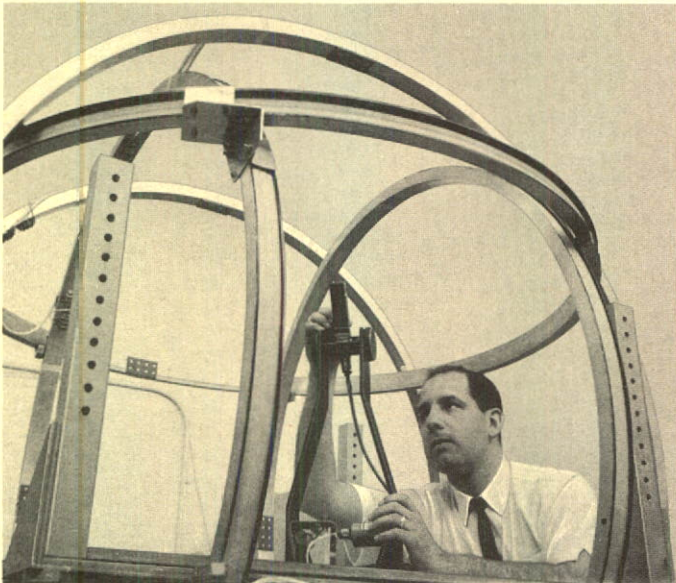
in the United States and Europe as well as the major railways and commercial customers in Canada.

During the year orders were received for 33 new stations to be added to the supervisory, control and telemetry system previously designed and installed by CAE for one of the longest pipelines in the world. Also smaller TELEPATH supervisory systems were produced for an oil pipeline company in Canada and one in the United States. These systems permit the remote control of the flow of gas or oil from a central headquarters.

Two major telephone companies and railways in Canada are now using TELEPATH code translators in their subscriber service. These products allow punched tape and business card machines to "talk" with one another despite the fact that the codes used by the respective machines are different. To handle these and other TELEPATH units, sales representatives have been engaged in New York, Chicago, Houston and San Francisco.

A marine radar trainer for l'Ecole de Marine de Rimouski was delivered and installed toward the end of the fiscal year. This trainer will be used to instruct merchant marine personnel in the science of marine navigation. CAE is also manufacturing a more complex radar trainer for the Royal Canadian Navy.

The repair and overhaul and field service departments in both Winnipeg and Montreal continue to be important to our company. We have built up a technical organization of well qualified men and women backed by a wide range of modern test equipment in both plants. A fleet of 10



CAE research and development work has placed the company among the world's leaders in the area of magnetic field control. Photo shows a CAE engineer positioning a magnetometer, a sensitive device which measures magnetic field variation, in the center of a Helmholtz coil which generates a magnetic field for test purposes. To provide ideal conditions for further development work, the company has recently built an interference-free facility at St. Hilaire, southeast of Montreal.



One of the largest civil and military airplane repair and overhaul organizations in Canada, Northwest Industries Limited is currently working on a contract for the inspection, repair and overhaul of F-84 jet fighters for the U.S. Air Force. The total number involved is 112, of which 60 have been completed. Some of the airplanes were transported to Canada from the Orient by aircraft carrier, and others were flown to Edmonton from bases in the United States.



company owned mobile calibration laboratories performs calibration services and minor repairs to a wide range of electronic equipment at military and industrial installations from coast to coast.

Total expenditure on research and development during the year ending March 31st, 1965 was \$1,050,000 an increase of \$250,000 over 1964. We believe the research and development incentives introduced by the Government in the last few years are beneficial to both the country and industry. Among the important research and development projects currently under way are:

A program to improve techniques related to digital simulation.

An advanced visual simulation system which will enable pilot trainees to practise take off and landing procedures under realistic conditions.

A communications development program which involves new techniques in the transmission and reception of data, and improved methods of recovering information from satellites. An initial order has been received from the Department of Transport for two automatic satellite picture receiving systems which will be used to assist in weather forecasting.

Another project is directed towards the improvement of the quality of pictures received from satellites of weather conditions thousands of miles away.

The Electronics Division is cooperating with the Municipal Signal Division in the development of advanced traffic control systems which will actuate traffic lights in a more efficient and dependable manner. It is expected that nine prototype models will be ready for extensive field tests in September.

## **NORTHWEST INDUSTRIES LIMITED**

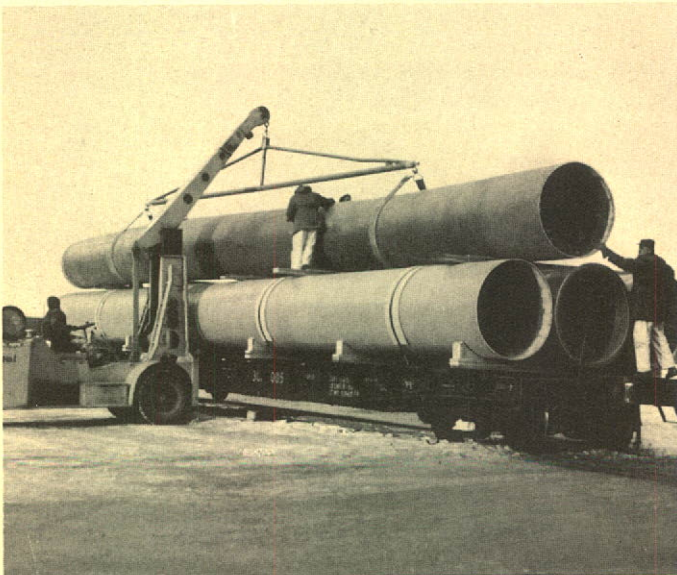
This division of the company, located in Edmonton, Alta., was successful in its bid in competition with U.S. and Canadian firms for a United States Air Force contract for the repair and overhaul of 112 F-84 jet fighter planes last summer. To date work on 60 of the planes has been completed. Repair and overhaul of Canadian military and commercial aircraft continues to be an important part of the workload.

Northwest Industries has also successfully entered the field of filament wound fiberglass reinforced plastic products for industry. We have made significant sales and are presently working on orders for three major pulp mills for approximately \$400,000 worth of plastic pipe. The division also built, on site, a 55,000 gallon reinforced plastic tank for a West Coast chemical company. Two major oil companies are testing plastic tanks for the underground storage of gasoline for service stations. The plastic products are lighter than steel and are virtually corrosion proof.

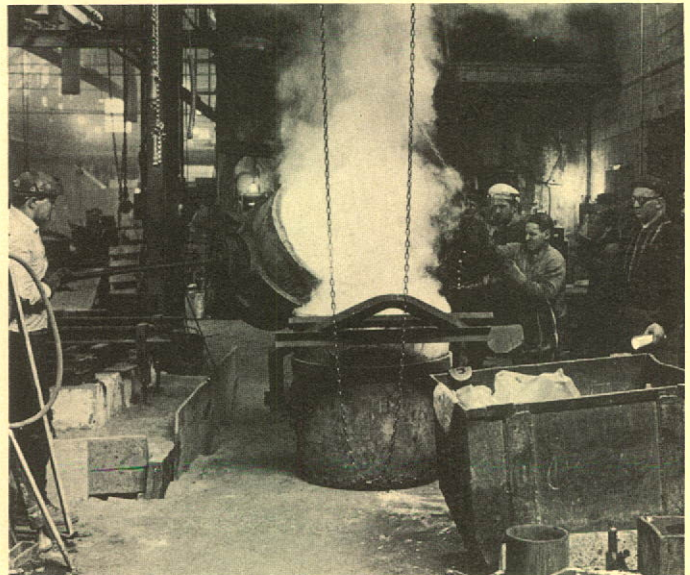
Sales of Huber Scrapers for the oil industry continue to contribute to the income of Northwest Industries. This product scrapes paraffin deposits from the inside of the pipes which bring the oil from the wells to the surface.

## **B.C. AIR LINES LIMITED**

The region served by B.C. Air Lines embraces the West Coast of British Columbia, Vancouver Island and the Queen Charlotte Islands. The airline has had the best year in its history despite an unusually severe early winter and record snowfalls which seriously restricted flying for several weeks. The fleet of airplanes was expanded from 30 to 35 during the year and additional routes were granted by the



Sixty foot lengths of 48 inch filament wound fibreglass reinforced plastic pipe are prepared for shipment from Northwest Industries Limited, the company's subsidiary in Edmonton, Alta. One mile of this pipe is currently being produced for a pulp mill on the west coast where it will be used to carry waste material into the Pacific ocean. The pipes may be made in virtually any useable size, and Northwest Industries equipment will produce on site plastic storage tanks up to 100 feet in diameter.



A 9,000 pound casting which will result in the production of a bow jet pump for a ship is poured in the Canadian Bronze Company foundry in Montreal. Canadian Bronze casting facilities will handle pouring jobs from diminutive letters for plaques to industrial products as heavy as 15,000 pounds. With divisions in Calgary, Winnipeg and Montreal and foundry facilities in the latter two, Canadian Bronze Company non-ferrous casting capacity is more than 3,000,000 pounds per month.



Air Transport Board. B.C. Air Lines planes carried 92,800 passengers and 807,000 pounds of freight over 2,592,000 miles in 72,000 flights.

We expect the growth of the airline to continue, and to be consistent with the general progress being made in this most rapidly developing part of Canada.

#### **CANADIAN BRONZE COMPANY LIMITED**

Business at Canadian Bronze has continued at a high level during the year and the program for the extension and modernization of the Winnipeg plant forecast in our 1964 report has been completed. Railway bearings continue to be the company's most important single product, although there has been a substantial increase in orders for non-ferrous castings. The plating facility, one of the most modern in Western Canada, is busier than ever before. The Winnipeg plant is currently working on a large contract for more than 90 different types of aluminum castings for a Canadian autobus manufacturer.

The acquisition of the Canadian manufacturing and sales rights for JOURNAPAK railway bearing lubricators will allow Canadian Bronze Company to provide a more complete service to the railways.

#### **ONEIDA ELECTRONICS INC.**

Work on the contract for the production of 229 field radio-teletype systems for the U.S. Army Signal Corps continues at this subsidiary in Utica, N.Y., and to date 210 have been completed. Repair and overhaul activity has decreased as a result of a U.S. Air Force decision to remove a major source of this type of work from the vicinity of Utica. Oneida is currently the U.S. headquarters for TELEPATH

and FLOGUN sales and service, and for the SYMBOLITE horizontal traffic signal sales effort in the United States.

#### **MUNICIPAL SIGNAL DIVISION**

The SYMBOLITE horizontal traffic signal continues to be the most important product of this division, and its acceptance is encouraging although the horizontal lights have not yet been approved for use in all parts of Canada.

Trial installations are being tested in Alberta, Prince Edward Island and in Utica, N.Y. There will also be installations made in Manitoba.

A new traffic controller, the brain of a traffic light installation, has been developed by company engineers and will be ready for test marketing later this year.

It is also of interest to note that the cities of Saint John, N.B. and Drummondville, Que., use horizontal traffic lights exclusively and approximately 75 other Canadian communities have from one to 30 intersections controlled by your company's product.

#### **CAE ELECTRONICS GmbH (GERMANY)**

Our European subsidiary located in Stolberg, a suburb of Aachen in West Germany, is the repair and overhaul and central spare parts depot for all of the F-104 simulators being used in Europe by NATO countries. With the installation on the F-104 simulators almost completed, the role of this subsidiary will consist of engineering support and the maintenance of the trainers on the Continent.

#### **CAE SUMNER LIMITED**

In February, 1965, CAE purchased the common shares of Canadian Sumner Iron Works Limited in Vancouver, B.C.,



The new Canadian Bronze Company Central Division plant in Winnipeg was completed during the year and the modernized foundry, plating and machine shops and plant offices are now under one roof. The plating facility is among the most modern in Canada and the general machine shop shown above is equipped with vertical boring mills, radial drills and other specialized gear for the production of a wide range of machined products for industry.



In January of this year CAE acquired the Canadian manufacturing and sales rights for JOURNAPAK bearing lubricators, a specimen of which is shown above. These are tufted cotton and foam rubber pads which fit into railway car journal or axle housings and through capillary action carry oil to lubricate the bearings. They are approved by all major railways and complement the Canadian Bronze Company's line of products for the railways.



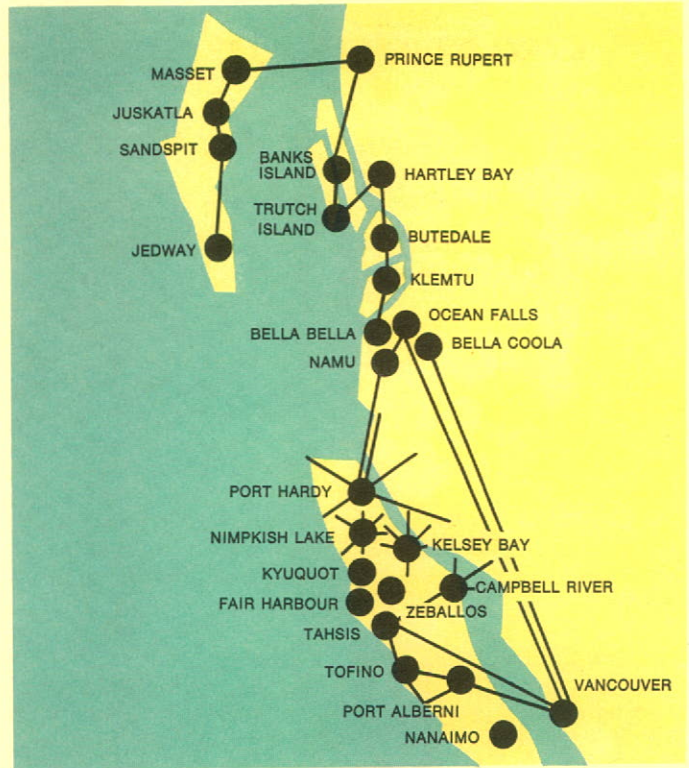
(CAE Sumner Limited). This company operates an iron and steel foundry and produces a wide range of equipment for the lumber and pulp and paper industries. CAE now has a greater stake in the province of British Columbia which brings us into a closer relationship with the rapidly developing forest products industries. The purchase means the repatriation of a company which was founded in Canada more than 70 years ago and had been owned by United States interests for about two years.

**THE UNION SCREEN PLATE COMPANY OF CANADA (LIMITED)**

Shortly after the end of the fiscal year, our company acquired the common shares of The Union Screen Plate Company of Canada (Limited). The company has its headquarters and main plant in Lennoxville, Que. and operates additional plants in Montreal and Brampton, Ont.

The Union Screen Plate Company is primarily engaged in metal fabrication and non-ferrous casting. Among its principal products are slotted, conically drilled and perforated screen plates used in screening operations in the pulp and paper industry.

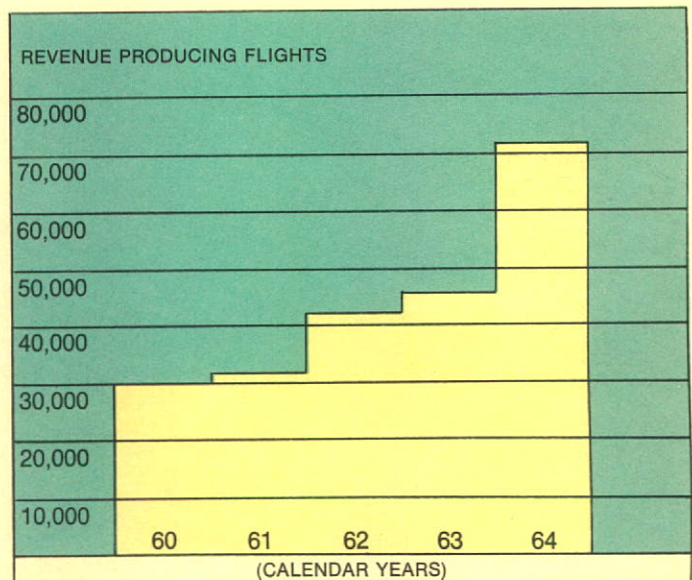
The capabilities and facilities of the new company will complement those of Canadian Bronze Company and the screen plates will reinforce CAE's product line for the forest products industry with which CAE Sumner Ltd. in Vancouver is mainly concerned.



B.C. Air Lines, the largest air carrier operating entirely in British Columbia, has bases at important points on the mainland coast, Vancouver Island and the Queen Charlotte Islands. The map above indicates the scheduled service; charter flights are available from all B.C. Air Lines bases. All BCA planes are float equipped or amphibious and one of the finest aircraft maintenance services in Canada assures top performance and availability.



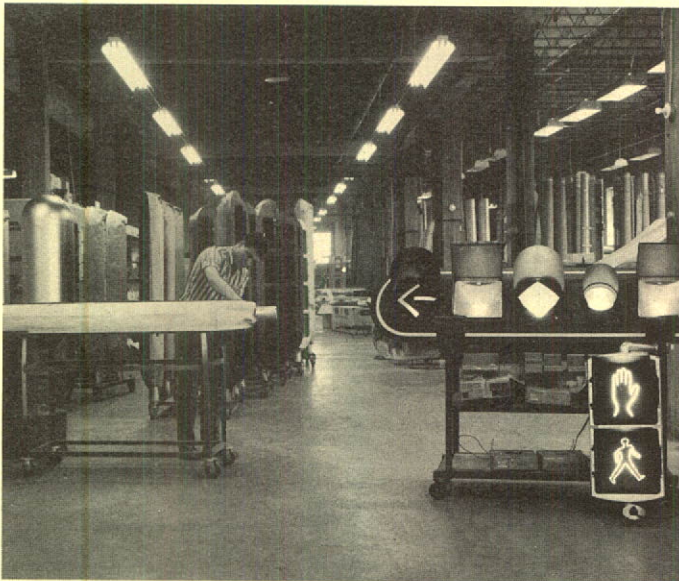
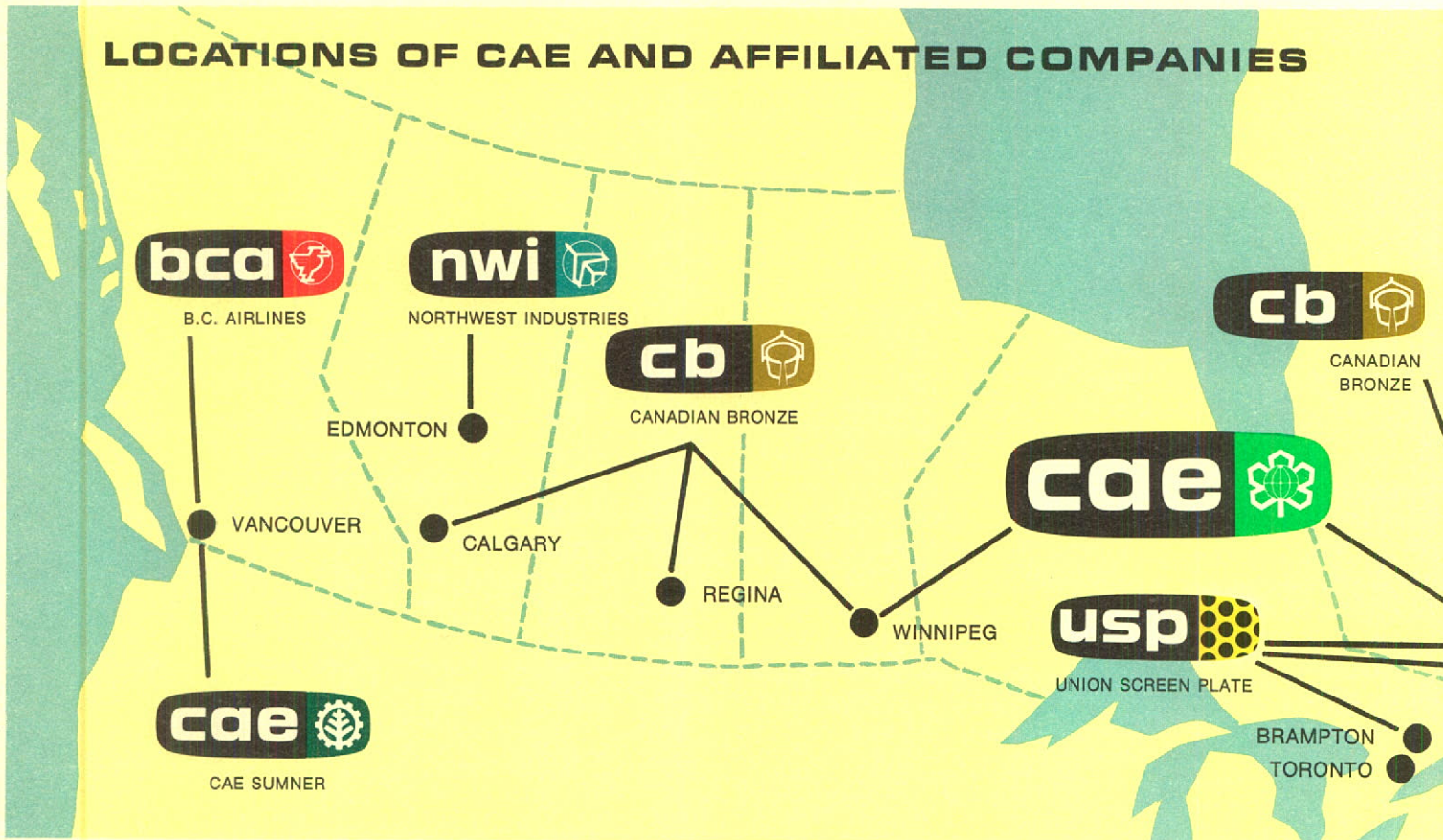
Oneida Electronics Inc., the CAE subsidiary in Utica, N.Y., is in the final stages of work on a contract for the manufacture of 229 field radio-teletype systems for the U.S. Army Signal Corps. To date 210 of the units have been completed. They are mobile receiving and transmitting stations which will receive radio messages and relay them in teletype form, or receive teletype messages and pass them on as radio impulses. One is shown above ready for shipment.



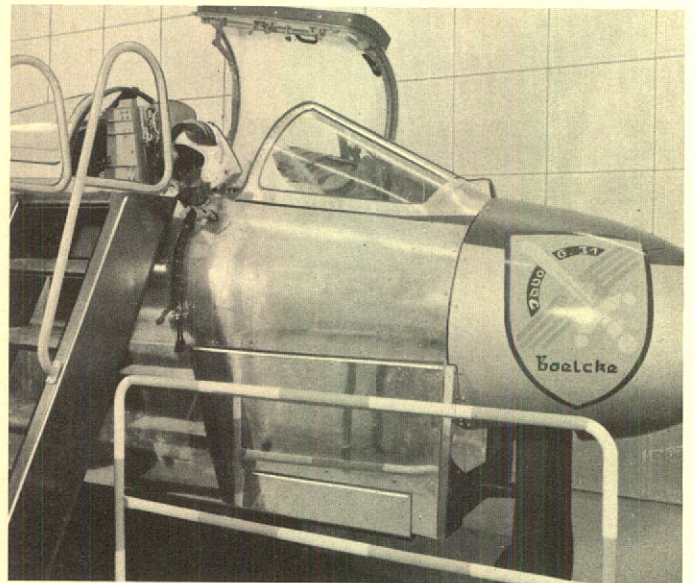
B.C. Air Lines has been one of the most active air carriers in Canada for a number of years and its dynamic growth since 1960 is demonstrated by the graph above. The 35 planes in the B.C. Air Lines fleet range from four passenger amphibious Found aircraft to 12 passenger Grumman Mallard flying boats. The larger aircraft are mostly used on the company's scheduled service, but the individual nature of any charter flight and the load to be carried dictate the choice of plane used.



## LOCATIONS OF CAE AND AFFILIATED COMPANIES

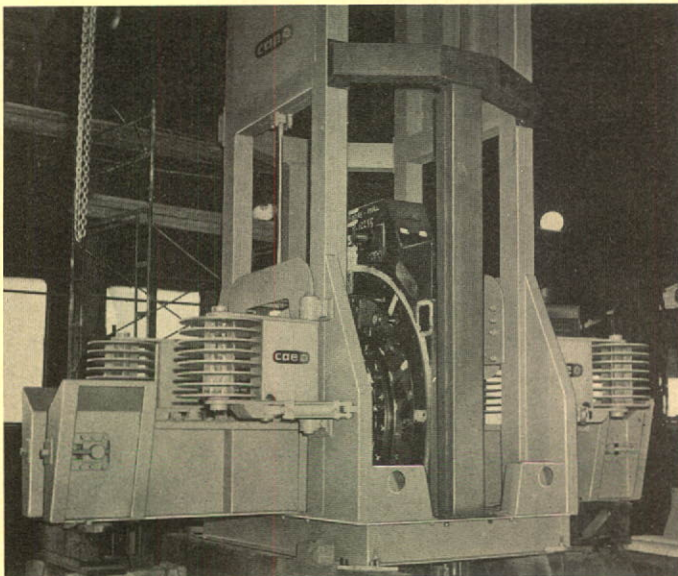
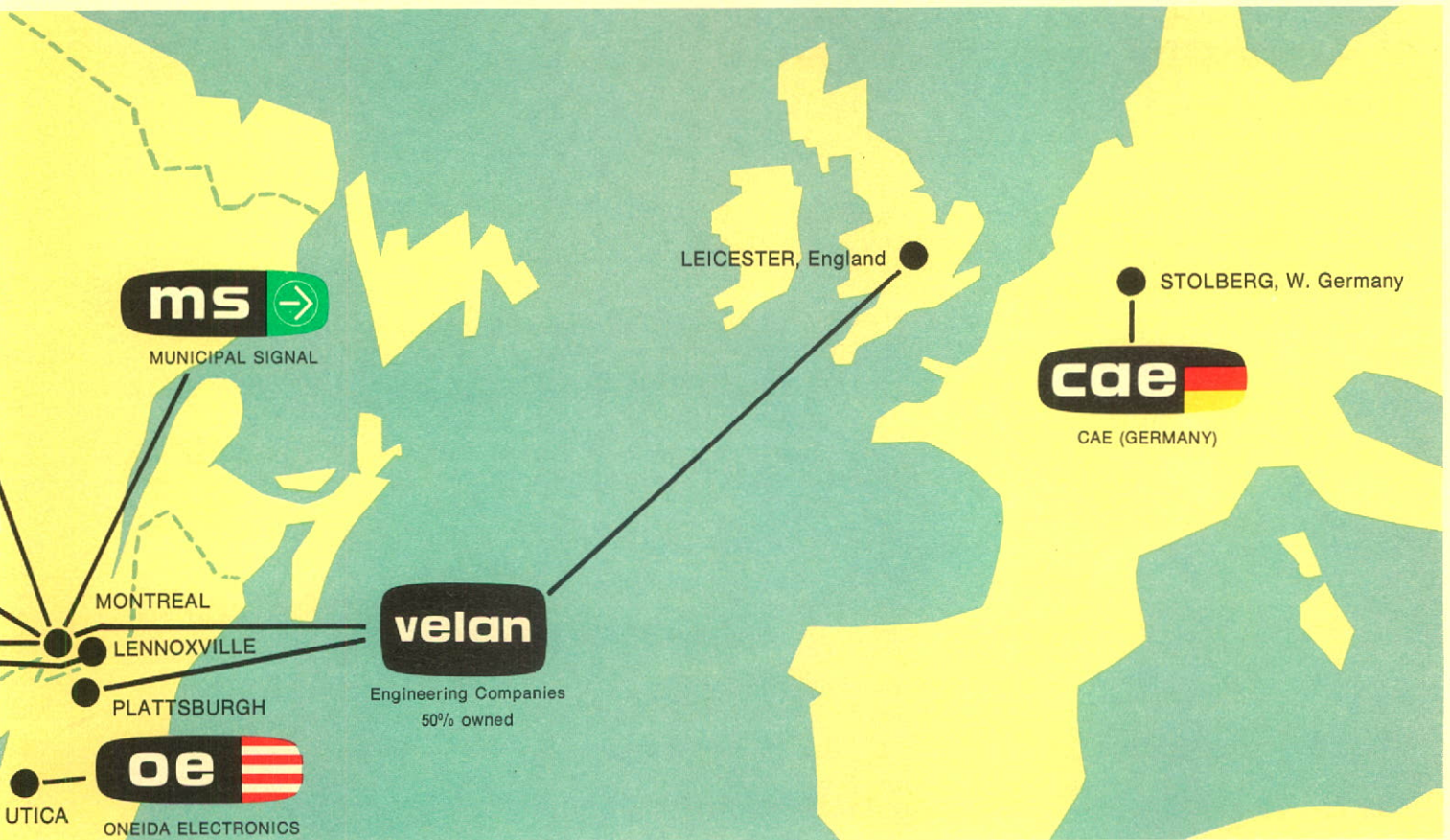


A SYMBOLITE traffic signal head is wired in the Municipal Signal plant in St. Laurent, Que. and a five light head is shown at right. Below the row of the distinctively shaped lights is a pedestrian cross-walk control set. The pedestrian signals, using the internationally recognized hand and walking man symbols, are also manufactured by the division. The Electronics and Municipal Signal divisions are working on advanced traffic control systems which will be ready for first tests in late summer.



The crew compartment or cockpit of a CAE F-104 simulator at a German Air Force base. This is one of many CAE built F-104 trainers in Europe for which the company's subsidiary, CAE Electronics GmbH in Stolberg, West Germany, provides engineering support and maintenance services. The company in Germany is also the repair and overhaul and central spare parts depot for all of the F-104 simulators in use by air forces of NATO countries on the continent.





A typical CAE Sumner Ltd. product, this mechanical ring barker will strip bark from logs up to 44 inches in diameter. The machine is more than 15 feet high and weighs several tons. This west coast subsidiary designs and manufactures a broad line of heavy products for saw mills and the pulp and paper industry. It also manufactures centrifugal pumps and operates an iron and steel foundry with complete pattern making facilities.



Besides making slotted, conically drilled and perforated screen plates used in screening operations by the pulp industry, The Union Screen Plate Company of Canada (Limited) operates the largest industrial plating facility in Canada. Among the services performed by this subsidiary are plating operations for the railways and the marine and pulp industries. The photo shows measurements being taken on chrome plated railway diesel cylinders which have been re-lined to outlast the original finish.



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C. J. Konzuk, General Sales Manager  
J. A. Morley, Export Sales Manager  
N. Byron Cavadias, Manufacturing Manager  
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R. J. Good, Manager—Research and Development  
William Victor, Manager—Technical Services  
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S. E. Ridgway, Comptroller and Secretary

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Sydney Reynolds, Sales Manager  
Wallace Russell, Operations Manager  
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John Harris, Vice-President—Engineering  
R. S. Miller, Sales Manager  
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