

51-202

Published by Authority of the Hon. James A. MacKINNON, M.P.,  
Minister of Trade and Commerce.

**DOMINION BUREAU OF STATISTICS**

**TRANSPORTATION & PUBLIC UTILITIES BRANCH**

**OTTAWA**

Dominion Statistician, S. A. CUDMORE, M.A. (Oxon.), F.S.S., F.R.S.C.

Chief, Transportation and Public Utilities Branch, G.S. Wrong, B.Sc.

**DOMINION BUREAU  
OF STATISTICS**

**JUL 5 1943**

**PROPERTY OF THE  
LIBRARY.**

**CIVIL AVIATION IN CANADA**

**1941**

The statistics in this report are collected from the operators of aircraft with commercial operators' licenses and from light aeroplane clubs with the exception of data on licenses and accidents which are supplied by the Civil Aviation Division of the Department of Transport. That division has jurisdiction over the licensing of all airports, aircraft pilots and engineers and, consequently the licensed aircraft and pilots also include private aircraft and pilots.

The commercial companies are divided into two classes, those engaged principally in international flying between Canada and the United States and those engaged exclusively, or almost exclusively, in flying between Canadian stations. The Canadian operators are divided between licensed and non licensed. The former are licensed by the Transport Board to operate between stated points and have more or less exclusive rights over the routes covered by their respective licenses. The annual reports contain some small revision in the data reported monthly by these operators.

Light aeroplane clubs are subsidized by the Dominion Government and their chief operation in previous years was the training of pilots. For flights around the club field and in instruction and practice no statistics were collected of miles flown but for flights from port to port the mileage was collected for aircraft and passengers. Due to war conditions the activities of these clubs were greatly affected and most of them ceased to operate early in the year. Statistics for these clubs were omitted from this 1941 report. The provincial aircraft are engaged almost solely in forest protection, aerial surveying and similar work.

Another division includes schools and sightseeing. The latter term is applied to operators whose main activity is taking passengers up for short flights and landing at point of take off. Such operators also perform from time to time, as also do the schools, what might be considered as transportation service, that is, transporting passengers and goods from place to place. Because the inclusion of the statistics of these operators with those of the transportation companies causes some confusion the Bureau has attempted to segregate them. Consequently the data for commercial companies as shown in this report will not be strictly comparable with data in reports prior to 1939.

Passengers and freight in table 1 include only traffic between stations and do not include estimates for sightseeing, prospecting, surveying, forestry patrol, etc; in previous reports mileages were included for forestry patrol and fire fighting by Provincial Government aircraft. The Trans-Canada Air Lines flying between urban centers from the Atlantic to the Pacific are performing a service that existed in only a small way before 1939 and the major part of the increase in passenger traffic is due to its operation.

Operators in the northern districts of Canada are engaged mainly in serving mines, trappers, prospectors, etc., the mines supplying the greater part of their traffic. Their aircraft are equipped with floats in the summer and skis in the winter and lakes serve as landing surfaces. Consequently there are periods each spring and fall when ice conditions make operation impossible. All flying under these conditions is daylight flying. These aircraft have carried all kinds of freight, including shipments of gold, horses and cattle, canoes, mining machinery, bundles of furs, dynamite, etc. They furnish the most economical transportation service to many northern mines and it is this traffic which accounts for the heavy freight traffic by air as compared with freight carried by aircraft in other countries.

Time and miles for "International" operators are only over Canadian territory. The time must necessarily be estimated but any error should be small. These companies report the gasoline and oil purchased in Canada which, with that used by the Canadian operators is the total consumption by civil aircraft except private and Dominion Government aircraft. Also it does not include gasoline and oil consumed by military aircraft. Excess baggage is included with freight. International mail includes both incoming and outgoing mail. Also passengers carried by International operators includes passengers in both directions, and for companies flying between United States points they include through passengers on board while flying over Canadian territory.

These International operators had no accidents in Canada during 1941 in which persons were killed or injured. Canadian licensed operators had accidents in which 19 persons were killed and 5 were injured, including 11 passengers killed and 5 passengers injured for a total of 51,675,063 passenger miles flown. This was an average of 4,554,000 passenger miles per passenger killed and 10,335,000 passenger miles per passenger injured. One serious accident in which 12 persons were killed was responsible for the increase over 1940.

TABLE 1

## STATISTICAL SUMMARY OF CIVIL AVIATION IN CANADA, 1936-1941

	1941	1940	1939	1938	1937	1936
Aircraft hours flown	132,823	151,828	145,638	133,168	126,896	101,953
Aircraft miles flown	12,508,590	11,012,587	10,541,099	11,231,027	10,055,747	7,100,401
Passengers carried - Revenue	195,011	135,779	133,776	104,117	110,864	99,451
" " - Non Revenue	15,048	11,406	21,168	26,990	23,284	11,851
" " - Total	208,059	149,025	154,944	131,107	134,148	111,302
Passenger miles - Revenue	53,891,516	38,438,439	21,831,368	10,913,409	12,358,264	8,724,790
" " - Non Revenue	2,832,198	2,727,363	2,873,889	2,617,357	1,398,169	928,406
" " - Total	56,723,714	41,165,802	24,705,257	13,530,746	14,056,433	9,653,196
Freight carried (lb.)	16,559,611	14,436,571	19,379,700	19,623,133	24,317,610	22,947,105
Mail carried "	3,411,971	2,710,995	1,900,347	1,901,711	1,450,473	1,161,060
Total "	19,971,582	17,147,566	21,280,047	21,524,844	25,768,083	24,108,165
Ton miles - Freight	1,125,537	946,195	967,113	960,836	1,874,723	1,066,036
" " - Mail	894,578	610,053	433,349	281,667	112,558	89,588
" " - Total	2,020,115	1,556,248	1,400,462	1,242,503	1,987,281	1,155,624
Gasoline consumed (gallons)	4,589,648	x 3,959,798	3,297,410	2,857,847	2,222,733	1,681,517
Lubricating oil consumed "	104,758	x 92,719	68,756	63,256	64,371	51,730
Licensed aircraft	440	473	488	471	604	475
" commercial pilots	77	128	166	226	320	380
" limited commercial pilots	322	249	191	165	129	65
" transport pilots	158	152	147	130	73	42
" private "	760	825	795	734	635	559
" air engineers	832	822	722	643	595	533
<u>Flying Accidents</u>						
Passengers killed	14	9	8	7	3	8
" injured	10	6	6	8	4	10
Pilots killed	8	4	6	10	4	8
" injured	5	3	3	5	3	11
Other crew killed	2	-	-	-	-	-
" " injured	-	-	-	-	-	-
Other persons killed	-	-	-	-	-	-
" " injured	-	-	-	-	1	-
Total persons killed	24	13	14	17	8	16
" " injured	15	9	9	13	7	21
Number of accidents resulting in death or injury to persons	20	12	10	15	8	20
Damage to property only	50	73	117	74	76	66
Total	70	85	127	89	84	86

x - Revised.

TABLE 2.

## AIRCRAFT MILES, PASSENGERS, FREIGHT, MAIL, REVENUES AND EXPENSES, 1941

	Provincial Govern- ments	Schools and Sight- Seeing	Commercial Companies			Total (8)
			International (8)	Licensed (8)	non-licensed	
	A	B	C	D	E	F
Aircraft miles flown - Revenue Transportation	-	-	770,691	10,816,814	259,595	11,810,668
" " " - Non Revenue "	-	-	9,179	250,431	438,112	697,722
" " " - Total "	-	-	779,870	11,067,245	697,707	12,508,590
Passengers carried - Revenue	-	-	54,610	135,157	6,499	193,011
" " - x Non Revenue	-	-	4,278	4,480	6,315	15,048
" " - Total	-	-	5/ 58,888	139,637	12,814	208,059



Freight carried - Revenue	-	-	164,787	13,757,295	911,898	14,826,250
" " - Non Revenue	-	-	49,264	430,560	1,253,729	1,733,561
" " - Total	-	-	6/ 214,031	14,187,855	2,165,627	16,559,611
Mail carried	-	-	7/ 419,725	3,005,982	10,878	3,411,971
Passenger miles - Revenue	-	-	3,961,735	49,862,062	304,223	53,891,516
" " - Non Revenue	-	-	256,612	1,813,001	764,565	2,832,198
" " - Total	-	-	4,218,347	51,675,063	1,069,488	56,723,714
Freight ton miles - Revenue	-	-	10,335	931,935	14,557	956,482
" " " - Non Revenue	-	-	3,899	111,561	53,599	169,055
" " " - Total	-	-	14,234	1,043,496	68,156	1,125,537
Mail ton miles	-	-	30,464	864,739	339	894,578
Aircraft hours flown - Revenue Transportation	-	-	5,080	81,273	2,385	88,536
" " " - Non Revenue "	-	-	60	2,501	4,488	7,049
" " " - Forestry Patrol	6,369	-	-	271	195	6,835
" " " - Fishery "	80	-	-	25	42	147
" " " - Photography Survey	44	15	10	240	199	508
" " " - Advertising	-	-	1	-	-	1
" " " - School - Instruction	-	23,747	16	3,910	254	27,927
" " " - Exhibition - Miscellaneous	175	757	11	880	3	1,820
" " " - Total	6,668	24,519	5,178	89,100	7,566	132,823
Hours flown by Crew	8,063	24,519	13,372	188,119	7,703	241,154
" " " Passengers - Revenue - Non Revenue	-	-	27,521	342,559	11,052	379,777
Horse Power Hours Flown (Rating of Engines) (000)	2,297	3,787	6,427	99,302	2,423	113,797
Gasoline consumed (gallons)	100,985	107,617	1/ 292,222	4,048,713	132,333	2/ 4,389,648
Lubricating oil consumed "	2,329	2,299	1/ 2,375	96,778	3,352	2/ 104,758
<b>OPERATING REVENUES</b>						
Passenger (including excess baggage)	-	-	4/ -	3,577,171	49,023	3,626,194
Mail	-	-	-	3,610,755	4,568	3,615,323
Freight	-	-	-	947,171	32,533	979,704
Other transportation revenues	-	-	-	161,603	19,255	180,858
Incidental revenues	-	-	-	518,856	27,500	546,356
Total	-	3/ 245,042	-	8,815,556	132,879	9,193,477
<b>OPERATING EXPENSES</b>						
Aircraft operation and maintenance	-	-	4/ -	5,761,409	88,513	5,849,922
Ground operation and maintenance	-	-	-	1,707,200	11,451	1,718,651
Incidental services	-	-	-	202,928	20,535	223,463
Traffic	-	-	-	401,946	1,747	403,693
General administration	-	-	-	449,585	17,383	466,968
General taxes	-	-	-	20,422	167	20,589
Total	-	3/ 225,359	-	8,543,490	139,796	8,908,645

x - Includes employees other than crew.

1/- Purchased in Canada.

2/- Canadian companies only.

3/- Not distributed.

4/- Not recorded.

5/- Overhead 11,792 included.

6/- Overhead 106,550 included.

7/- Overhead 150,841 included.

8/- Statistics of Canadian portion of international routes of Trans-Canada Air Lines are included in both columns C and D. Duplications are excluded in F.

TABLE 5

## INVESTMENT - EMPLOYEES - SURVEYS - ACCIDENTS - 1941

	Provincial Governments		Schools and Sightseeing		Commercial Companies						Total		
					International		Canadian						
							Licensed		Non-licensed				
INVESTMENT	\$		\$		\$		\$		\$		\$		
Lands and buildings			10,934		-		1,496,365		59,551		1,566,850		
Aircraft - engines - parts	Not		98,053		-		6,265,762		351,256		6,715,071		
Tools and equipment	Compiled		14,322		-		877,828		8,112		900,262		
Furniture and office appliances			5,483		-		291,902		17,176		314,561		
Miscellaneous expenditures			-		-		-		-		-		
Total			128,792		-		8,931,857		436,095		9,496,744		
EMPLOYEES	No.	Wages	No.	Wages	No. 7/	Wages 7/	No.	Wages	No.	Wages	No.	Wages	
General officers	6	19,721	8	28,212	-	-	39	231,539	1	2,252	54	281,724	
Clerks	4	6,529	7	5,842	-	-	204	269,735	3	2,554	218	284,660	
Licensed pilots and co-pilots	24	67,488	14	28,168	-	-	181	741,687	20	59,584	239	896,927	
Licensed engineers	28	62,631	8	15,509	-	-	131	280,926	7	11,685	174	370,751	
Mechanics and other aircraft employees	18	14,382	34	22,331	-	-	586	766,412	6	7,742	644	810,867	
Other employees	11	10,402	14	11,948	-	-	449	583,153	1	606	475	606,109	
Total	91	181,153	85	112,010	-	-	1,590	2,873,452	38	84,423	1,804	3,251,038	
Survey - Sq-miles sketched from aircraft	825		-		-		-		-		825		
" " " photographed - vertical	6,551		-		-		5,667		-		12,218		
" " " " - oblique	-		-		-		250		-		250		
Forest fires detected from air & reported	156		-		-		-		20		176		
Pupils given instruction	1		1,090		-		-		-		1,091		
" qualifying for pilots' certificates	1		237		-		-		-		238		
FLIGHT ACCIDENTS													Private air-craft
Killed - crew	-		2		-		8		-		10		1
" - passengers	-		3		-		11		-		14		3
Total	-		5		-		19		-		24		4
Injured - crew	-		5		-		-		-		5		2
" - passengers	-		5		-		5		-		10		-
Total	-		10		-		5		-		15		2
Killed in revenue transportation	-		-		-		19		-		19		7/
" " school and instruction	-		5		-		-		-		5		
Injured in revenue transportation	-		-		-		5		-		5		
" " exhibition & misc. flying	-		4		-		-		-		4		
" " school and instruction	-		6		-		-		-		6		

7/ - Not recorded.

TABLE 4

## AIRCRAFT TRAFFIC BY PROVINCE OF ORIGIN, 1941

Origin of Traffic	Schools and Sightseeing (1)	Commercial Companies			Total (5)
		International (2) (8)	Canadian		
			Licensed (3)	Non-licensed (4)	
<b>PASSENGER - REVENUE AND NON REVENUE</b>					
Prince Edward Island	-	-	2,603	118	2,721
Nova Scotia	-	-	3,723	2	3,725
New Brunswick	-	( 4,719	5,299	199	10,217
Quebec	1,338	( 6,029	20,050	1,971	29,388
Ontario	5,017	4,645	54,147	5,463	69,272
Manitoba	1,601	2,364	11,442	521	15,928
Saskatchewan	-	-	7,179	1,800	8,979
Alberta	-	574	13,595	1,135	15,304
British Columbia	-	5,033	18,061	288	23,382
Yukon and North-West Territories	-	135	4,825	1,317	6,277
Foreign Countries	-	20,317	4,886	-	25,203
Total	(1) 7,956	(3) 55,608	(2) 145,810	12,814	222,188
<b>FREIGHT- REVENUE AND NON REVENUE (lbs.)</b>					
Prince Edward Island	-	-	5,595	34	5,629
Nova Scotia	-	-	8,525	300	8,825
New Brunswick	-	11,474	24,597	1,141	37,212
Quebec	-	5,500	4,550,319	61,381	4,617,200
Ontario	-	9,007	4,939,266	823,661	5,771,934
Manitoba	-	695	2,596,574	367,358	2,964,627
Saskatchewan	-	-	237,078	289,120	526,198
Alberta	-	127	275,595	289,120	564,842
British Columbia	-	3,479	368,279	44,867	416,625
Yukon and North-West Territories	-	15	1,353,244	289,120	1,642,379
Foreign Countries	-	69,282	13,896	-	83,178
Total	-	(4) 206,129	(5) 14,372,968	(6) 2,166,102	16,745,199
<b>MAIL (lbs.)</b>					
Prince Edward Island	-	-	67,049	3,532	70,581
Nova Scotia	-	-	35,950	-	35,950
New Brunswick	-	4,733	151,358	7,346	163,437
Quebec	-	47,778	317,406	-	365,184
Ontario	-	11,110	770,601	-	781,711
Manitoba	-	31,103	441,148	-	472,251
Saskatchewan	-	-	164,033	-	164,033
Alberta	-	2,792	458,394	-	461,186
British Columbia	-	27,783	308,676	-	336,659
Yukon and North-West Territories	-	818	246,692	-	247,510
Foreign Countries	-	118,153	44,475	-	162,628
Total	-	(7) 395,111	3,005,982	10,878	3,411,971

(1) Sightseers - not included in table 2.

(2) Includes 6,173 passengers received from other carriers not included in table 2.

(3) Includes 11,792 passengers from U.S. to U.S. points.

(4) Includes 106,550 lbs. " " " " " "

(5) Includes 185,113 lbs. rec'd from another carrier not included in table 2.

(6) Includes 475 " " " " " " " " " "

(7) Includes 150,841 lbs. from U.S. to U.S. points.

(8) International traffic of Trans-Canada Air Lines included in column 3 only.



TABLE 5

AIRPORTS IN CANADA, 1941

Kind	Landing Surfaces			
	Land Only	Water Only	Land and Water	Total
	No.	No.	No.	No.
Public .....	7	28	1	36
Dominion Government .....	42	-	1	43
Intermediate .....	40	-	-	40
Provincial .....	-	11	-	11
Private .....	5	25	1	31
Municipal Airports .....	13	4	2	19
TOTAL .....	107	68	5	180

TABLE 6

LICENSED CIVIL AIRCRAFT IN CANADA, DECEMBER 31, 1941

Aircraft	Dominion and Provincial	Private	Light Aeroplane Clubs	Commercial <sup>2/</sup> Canadian	Total
<u>Gross Weight 3/</u>					
Up to 2,000 lb. ....	27	45	46	109	227
2,001 to 4,000 lb. ...	14	14	-	58	86
4,001 to 10,000 lb. ..	25	-	-	71	96
Over 10,000 lb. ....	1	-	-	30	31
TOTAL .....	67	59	46	268	440
<u>Type</u>					
Sea planes .....	19	1	-	-	20
Amphibians .....	-	-	-	-	-
Land planes .....	26	45	27	124	222
Convertible 4/ .....	22	13	19	144	198
TOTAL .....	67	59	46	268	440

2/ Includes Canadian licensed aircraft of international companies.

3/ Total weight of aircraft with supplies and full load.

4/ May be equipped with wheels, floats or skis as conditions demand.

STATISTICS CANADA LIBRARY  
BIBLIOTHÈQUE STATISTIQUE CANADA



1010548925