

STATISTICAL SUMMARY

1935-15-44 9-139 OF CIVIL AVIATION FOR THE YEAR

1935

Historical File Copy

CANADA

Licences

During the year 239 air pilots or air engineers' licences were granted. Also 102 aircraft registration certificates and 81 airworthiness certificates were granted to operators.

	<u>Issued</u>	<u>Extended</u>	<u>Lapsed</u>	<u>Renewed</u>	<u>Cancelled</u>
Private Air Pilots	150	75	216	116	2
Commercial Air Pilots	50	169	189	168	9
Air Engineers	39	51	78	30	3
Private Aircraft	21	-	23	5	2
Commercial Aircraft	81	-	33	34	55

Totals in force December 31st, 1935.

Private Air Pilots	496
Commercial Air Pilots	414
Air Engineers	472
Private Aircraft	44
Commercial Aircraft	336
Airharbours	96

Accidents

In accordance with Air Regulations, aircraft operators are required to report all accidents involving death or injury to personnel or damage to aircraft. During the year 15 accidents involving death or injury were reported and Boards of Enquiry were convened to determine the cause of each accident. In addition, 77 accidents involving damage to aircraft only, were reported, and subjected to analysis.

Light Aeroplane Clubs

A further extension of the Club scheme was granted and revised Standard Conditions authorized. During the year grants were paid for 165 private and 33 commercial air pilots' licences. One club qualified for the grant of additional aircraft by purchasing an aircraft, and was issued with a reconditioned aircraft. Twenty-two clubs were in operation during the year.

The activities of the club were:- Members 2,400. Aircraft used 81. Members under instruction 536. Hours flown 13,819.31. Miles flown 1,105,520.

Aircraft Operators

One hundred and thirty commercial aircraft operators were variously engaged in transportation of mail, passengers and freight, flying instruction, air photography, timber cruising, forest and fishery patrols, demonstrations, mining exploration and prospecting, etc. These firms were located as follows: 1 in Prince Edward Island, 4 in Nova Scotia, 3 in New Brunswick, 22 in Quebec, 44 in Ontario, 10 in Manitoba, 11 in Saskatchewan, 12 in Alberta, 20 in British Columbia and 3 in the Yukon.

Forest fire protection and exploratory operations were carried out by the Air Services owned and operated by the Provinces of Ontario, Manitoba and Saskatchewan.

The flying activities of these operators were 88,451 hours flown, 177,472 passengers, and 26,439,224 pounds of freight carried; miles flown 7,936,950.

TRANS-CANADA AIRWAY DEVELOPMENT

The construction of intermediate aerodromes and landing fields, hangars, buildings and radio stations on the trans-Canada airway progressed favourably during the year of 1935.

Construction work was continued on 48 locations, some being winter projects and others for summer only as work could not be done economically during the winter months. Of the total, 20 are now usable, although some are not wholly completed and on 9 others construction is sufficiently far advanced to permit of their use in emergency. These aerodromes and landing fields may be summarized as follows - December 31, 1935.

Intermediate Aerodromes and Landing Fields where preliminary development has been completed	10
Intermediate Aerodromes and Landing Fields under construction, winter and summer projects	34
Intermediate Aerodromes and Landing Fields under construction, summer projects only	14
Sites acquired but not under construction	10
Intermediate Aerodromes completed prior to 1930	30
Municipal and Public Airports forming part of the Trans-Canada Airway	20

Steel and concrete fireproof hangars were erected at 4 of the main aerodromes, viz., Wagaming, Kapuskasing, Emsdale and Megantic. The living quarters for an aerodrome caretaker was built at Reay.

Wireless Services

The two radio stations erected at Ottawa and St. Hubert were in operation and experimental work was done on the radio compass and training on the radio beacon beam from these stations.

Radio beacon buildings and living quarters for the radio personnel were erected at Kapuskasing, Dane and Emsdale.

St. Hubert Airport

The Montreal-Albany International Air Mail and the summer service of the Montreal-Rimouski Air Mail Services were operated from the Government Airport at St. Hubert, P.Q.

The following is a summary of activities at this airport for the year:-

Aircraft in	434
" out	424
Passengers in	793
" out	1,148
Freight in (lbs)	21,101
" out	-
Mail in	96,524
" out	70,474
Aircraft imported	1
Value	\$37,400

AIR MAIL SERVICE

During 1935, thirty regular air mail services were operated by Commercial firms, under Post Office Contracts; 1,126,084 pounds of mail was carried, 812,124 Route miles were flown, 6,110 Single trips were made. The following services were maintained:-

YEARLY SERVICES:- Montreal-Albany, Sioux Lookout-Red Lake, Fort McMurray-Aklavik, Prince Albert-Lac La Ronge, Amos-Siscoe, Winnipeg-Pembina, Cameron Bay-Coppermine, Fort Chipewyan-Goldfields, Fort Resolution-Cameron Bay, Rouyn-Kewagama, Atlin-Telegraph Creek, Vancouver-Seattle, Sioux Lookout-Pickle Crow, Winnipeg-Lac du Bonnet, Winnipeg-God's Lake, Sioux Lookout-Casamit Lake, Norway House-Cross Lake, Kenora-Whitefish Bay, Kenora-Red Lake, Kenora-Cole.

SUMMER SERVICES:- Rimouski-Montreal, Vancouver-Victoria.

WINTER SERVICES:- Leamington-Pelee Island, Quebec-Sept Iles, Sept Iles-Natashquan, Havre St. Pierre-Port Menier, Moncton-Charlottetown, Charlottetown-Magdalen Islands.

STATISTICS

The following summary includes all operations of Commercial and provincial-owned aircraft, light aeroplane clubs and air mail operators, in fact all flying in Canada except Federal Government and Private-owned aircraft.

	<u>1933</u>	<u>1934</u>	<u>1935</u>
Aircraft miles	4,538,315	6,497,637	7,522,102
Flights	106,252	128,031	153,211
Hours	53,299	75,871	88,451
Passengers	85,006	105,306	177,472
Passenger miles	3,816,862	6,266,475	7,936,950
Freight and Express (lbs)	4,205,901	14,441,179	26,439,224
Mail (lbs) (Contract)	539,358	625,040	1,126,084

STATISTICAL SUMMARY OF CIVIL AVIATION (BY PROVINCES) FOR THE YEAR 1935,
INCLUDING OPERATIONS BY THE PROVINCIAL GOVERNMENTS -
AND LIGHT AEROPLANE CLUBS.

PROVINCE	APPROXIMATE AEROPLANE MILEAGE (WHEELS & SKIIS)	APPROXIMATE SEAPLANE MILEAGE	TOTAL AIRCRAFT MILEAGE	NUMBER OF SQ. MILES OF VERTICAL PHOTOGRAPHY	NUMBER OF SQ. MILES OF OBLIQUE PHOTOGRAPHY
NORTHWEST TERRITORIES AND YUKON	173,480	188,772	362,252	-	-
BRITISH COLUMBIA	409,266	334,831	744,097	-	-
ALBERTA	347,853	174,319	522,172	-	-
SASKATCHEWAN	304,313	291,862	596,175	-	-
MANITOBA	490,751	402,333	893,084	-	-
ONTARIO	1,445,076	1,057,899	2,502,965	2,000	-
QUEBEC	864,598	746,754	1,611,352	420	10
NEW BRUNSWICK	95,614	2,150	102,764	2,743	20,000
NOVA SCOTIA	135,396	4,000	139,396	-	-
PRINCE EDWARD ISLAND	47,845	-	47,845	-	-
TOTALS	4,314,192	3,207,910	7,522,102	5,163	20,010

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STATISTICAL SUMMARY OF CIVIL AVIATION IN CANADA DECEMBER 31, 1935,
INCLUDING PROVINCIAL GOVERNMENT AIR SERVICES AND
LIGHT AEROPLANE CLUBS

NATURE OF INFORMATION	1933	1934	1935
<u>General Analysis</u>			
Firms manufacturing aircraft	7	6	10
Firms chiefly operating aircraft	87	125	123
Firms using aircraft as auxiliary service	3	3	7
Aircraft flights made	106,252	128,031	153,211
Aircraft hours flown	53,299	75,871	89,451
Approximate aeroplane and skiplane mileage	2,733,642	3,430,475	4,314,192
Approximate Seaplane mileage	1,804,663	3,067,182	3,207,910
Total aircraft mileage	4,538,315	6,497,657	7,522,102
Average flight duration (minutes)	30	36	34
Number of pilots carried	106,252	128,031	153,211
Number of paying passengers carried	54,133	72,085	140,379
Number of non-paying passengers carried	14,993	8,721	17,093
Number of club members carried and dual instruction	15,080	24,500	20,000
Number of passengers carried	85,006	105,306	177,472
Total of personnel carried	191,258	233,537	330,683
Pilots carried one mile (pilot miles)	4,538,315	6,497,657	7,522,102
Passengers carried one mile (Passenger miles)	3,816,862	6,266,475	7,958,950
Total personnel carried one mile (personnel miles)	8,555,177	12,764,132	15,459,052
Total freight or express carried (lbs)	4,205,901	14,441,173	26,439,224
Total mail carried (lbs) (Contract)	539,358	625,040	1,126,084
Public airports	38	43	40
Also licensed for Customs	12	12	11
Private Airports	6	8	9
Intermediate aerodromes licensed	-	-	1
Intermediate aerodromes unlicensed	31	31	29
Auxiliary aerodromes	1	1	2
	76	53	81

STATISTICAL SUMMARY OF CIVIL AVIATION IN CANADA DECEMBER 31, 1935,
INCLUDING PROVINCIAL GOVERNMENT AIR SERVICES
AND LIGHT AEROPLANE CLUBS

NATURE OF INFORMATION	1933	1934	1935
<u>CIVIL AERODROMES (Cont'd)</u>			
Private aerodromes	7	7	5
Public seaplane ports	13	17	14
Also licensed for Customs	2	2	2
Private seaplane ports	13	13	13
Public seaplane anchorages	9	10	10
Private seaplane anchorages	2	3	
Total aerodromes (licensed)	90	101	96
<u>LICENSED CIVIL AIRCRAFT OPERATED BY TYPES</u> (Commercial and Private)			
Aeroplanes (Wheels and skis)	241	227	177
Seaplanes (Floats and skis)	104	141	203
Total aircraft	345	368	380
<u>LICENSED CIVIL AIR PERSONNEL</u> (Commercial & Private)			
Commercial pilots	474	405	414
Private pilots	405	429	493
Air Engineers	403	461	472
Unlicensed air mechanics employed	60	61	318

STATISTICAL SUMMARY OF CIVIL AVIATION (BY PROVINCES) FOR THE YEAR 1935,
INCLUDING OPERATIONS BY THE PROVINCIAL GOVERNMENTS AND LIGHT AEROPLANE CLUBS

PROVINCE	Light Aeroplane Clubs	Number of firms Location of Hq.	NATURE OF OPERATIONS - NUMBER OF FIRMS ENGAGED IN EACH									Aircraft Flights	Aircraft Hours	Average flight duration (Hrs.Min.)	
			Passenger carrying	Exhibition	Reconnaissance and Exploration	Freight and Express	Aerial Photo- graphy	Air Photogra- phic Surveying	Forest reconniss- ances & fire protection	Mail	Advertising				Flying Instruct- ion Firms & Clubs
Northwest Territories and Yukon	1	3	3	-	2	5	-	-	-	2	-	3,419	3,818	1.07	
British Columbia.....	1	20	20	1	3	7	1	1	2	1	6	14,477	8,241	.34	
Alberta.	2	12	14	1	2	7	1	-	-	1	4	6,083	5,111	.50	
Saskatchewan.	3	11	16	2	5	8	1	-	1	1	3	11,360	6,552	.35	
Manitoba	2	10	18	1	5	11	1	-	1	1	4	20,167	14,310	.43	
Ontario	10	44	48	6	11	20	3	1	2	3	17	64,358	31,396	.29	
Quebec	1	22	26	1	3	14	1	-	-	3	2	25,131	16,778	.40	
New Brunswick.	1	3	5	-	-	2	1	-	-	1	2	2,656	1,095	.25	
Nova Scotia	2	4	4	-	-	-	-	-	-	1	2	4,582	1,611	.21	
Prince Edward Island	-	1	2	-	-	1	-	-	-	1	-	978	539	.33	
TOTALS	22	130	156	12	31	75	9	2	6	15	2	40	153,211	89,451	.34

STATISTICAL SUMMARY OF CIVIL AVIATION (BY PROVINCES) FOR THE YEAR 1935,
INCLUDING OPERATIONS BY THE PROVINCIAL GOVERNMENTS -
AND LIGHT AEROPLANE CLUBS.

	Passengers carried				Analysis of Transportation					
	Paying	Non-Paying	Clubs including dual Instruction	Total Pass. carried	Pilots carried 1 mile	Pass. carried 1 mile	Total Persons carried 1 mile	Mail lbs.	Freight and Express lbs.	Total Freight Exp. or Mail carried lbs.
Northwest Territories and Yukon.....	1884	624	-	2508	362252	510197	872449	119089	485762	604851
British Columbia . . .	7821	1404	1050	10275	744097	875463	1419560	5751	713122	718873
Alberta.....	5597	239	1900	7736	522172	319938	842110	12077	367907	379904
Saskatchewan.....	7018	2016	1000	10032	596175	516886	1113061	13026	961411	974437
Manitoba	13738	748	1000	20486	893084	1398884	2291958	201694	4138336	4340055
Ontario.....	72543	9420	8450	90413	2502965	2145135	4648100	182294	15076095	15258799
Quebec	24159	2493	2000	28652	1611352	2216901	3828253	404088	4693731	5097819
New Brunswick	1135	64	1000	2199	102764	60821	163585	120842	1870	12712
Nova Scotia	852	41	3600	4493	139396	50730	190126	219	-	219
Prince Edward Island	634	44	-	678	47845	41995	89840	109757	990	110747
TOTALS	140379	17093	20000	177472	7522102	7936950	15459052	1168837	26439224	27608061

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SUMMARY OF LIGHT AEROPLANE CLUBS' ACTIVITIES FOR YEAR ENDING DECEMBER 31ST, 1935.

LIGHT AEROPLANE CLUBS

	MEMBERS	AIRCRAFT IN USE	MEMBERS UNDER INSTRUCTION	HOURS FLOWN	LICENSES OBTAINED	
					PRIVATE	COMMERCIAL
1. Aero Club of B.C.	92	4	2	530.05	2	-
2. Brandon Aero Club	17	4	7	98.15	1	2
3. Brant & Norfolk Aero Club	116	4	13	688.30	6	2
4. Border Cities Aero Club	46	4	25	178.00	-	-
5. Cape Breton Flying Club	104	8	64	861.45	6	1
6. Calgary Aero Club	66	2	45	330.20	7	-
7. Edmonton & Northern Alta. Aero Club	214	3	12	937.15	12	6
8. Fort William Aero Club	40	3	23	300.00	3	-
9. Halifax Aero Club	50	3	10	544.00	3	-
10. Hamilton Aero Club	117	3	7	613.00	5	-
11. Flying Club of Kingston	114	3	16	716.45	12	-
12. Kitchener-Waterloo Flying Club	70	3	4	393.35	6	-
13. London Flying Club	111	4	91	1100.00	17	1
14. Montreal Light Aeroplane Club	144	5	13	795.10	1	1
15. Moose Jaw Flying Club	54	3	-	491.10	15	1
16. Ottawa Flying Club	75	3	32	740.05	12	1
17. Regina Flying Club	50	2	27	433.15	11	1
18. Saskatoon Aero Club	42	2	12	273.41	8	-
19. Saint John Flying Club	58	4	53	418.10	5	1
20. St. Catharines Flying Club	88	2	26	342.10	4	1
21. Toronto Flying Club	405	7	14	1752.10	20	2
22. Winnipeg Light Aeroplane Club	327	5	40	1264.10	9	13
TOTAL FOR 1935 - 12 MONTHS	2,400	81	536	13,819.31	165	33
TOTALS FOR 1934	2,200	82	535	10,581.33	133	21
TOTALS FOR 1933	2,075	68	499	9,971.59	120	26
TOTALS FOR 1932	2,703	68	872	10,450.55	129	27
TOTALS FOR 1931	2,915	72	673	11,507.32	111	48
TOTALS FOR 1930	3,643	70	703	14,686.44	178	59
TOTALS FOR 1929	5,233	65	904	16,612.50	175	58
TOTALS FOR 1928	2,403	34	598	8,124.30	111	28

STATISTICAL SUMMARY OF ACCIDENTS IN CIVIL AVIATION FOR YEARS
1933, 1934 AND 1935.

<u>ANALYSIS OF FLYING ACCIDENTS</u>	<u>1933</u>	<u>1934</u>	<u>1935</u>
Number of accidents causing death to occupants of aircraft	10	7	7
Number of accidents causing injury to occupants of aircraft	6	5	10
Number of accidents causing death to third parties	3	2	1
<u>CASUALTIES TO PERSONNEL</u>			
Pilots killed	8	4	4
Pilots injured	7	7	6
Other Operating crew killed	2	3	2
Other Operating crew injured	1	-	-
Passengers killed	12	3	5
Passengers injured	5	2	9
Third parties killed	3	2	1
Total personnel killed	25	12	12
Total personnel injured	13	9	15
<u>ACCIDENT AND CASUALTY RATES</u>			
Aircraft mileage flown	4,538,315	6,497,637	7,522,102
Aircraft hours operating	53,299	75,871	88,451
Aircraft miles per fatal accident	453,831	928,234	1,074,586
Aircraft hours per fatal accident	5,330	10,839	12,636
Aircraft miles per pilot killed	567,290	1,624,409	1,890,525
Aircraft miles per crew man killed	2,269,153	2,165,879	3,761,056
Aircraft miles per passenger killed	378,193	2,165,879	1,504,420

pilots

NOTE:- In classifying casualties to personnel include only the person in charge of the aircraft; operating crew includes co-pilot, pupil under instruction and engineer, navigator or radio operator actually on duty; passengers include all other persons on board; third parties include persons involved in accidents but not carried on board, e.g. spectators, volunteer or casual assistants.

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