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CANADA

DOMINION BUREAU OF STATISTICS
CENSUS OF INDUSTRY

PRELIMINARY REPORT

on the

AUTOMOBILE INDUSTRY IN CANADA

1920

Including:-

Manufacturing Plants

Supply and Accessory Plants

Repair Plants

+ + +

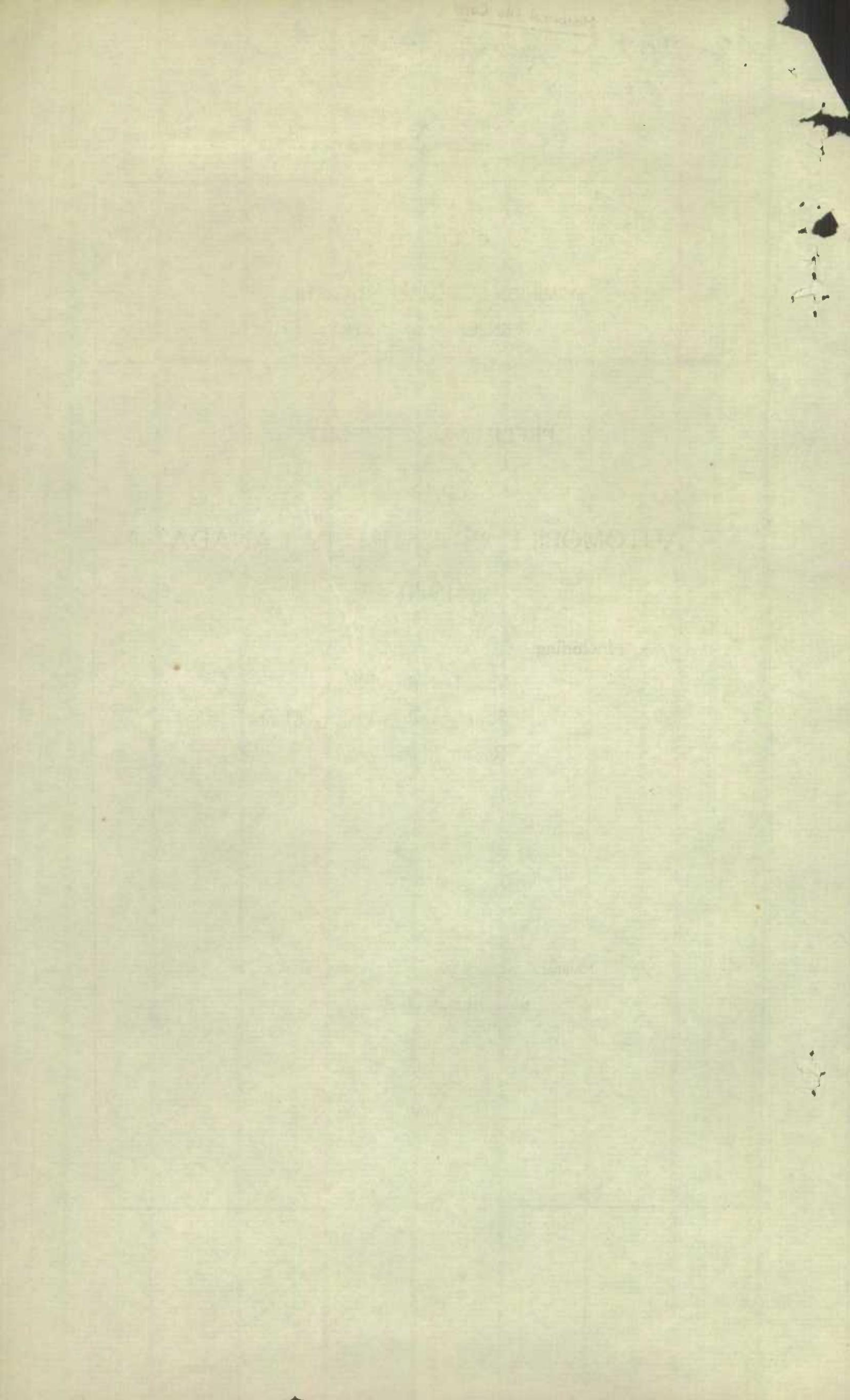
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OTTAWA

1922



DOMINION BUREAU OF STATISTICS

CENSUS OF INDUSTRY

OTTAWA, CANADA.

Dominion Statistician: R. H. Coats, B.A., F.S.S.
 Chief, Census of Industry: J. C. Macpherson.

THE AUTOMOBILE INDUSTRY, 1920

Ottawa, February, 1922:- The Dominion Bureau of Statistics presents a preliminary report on the Automobile Industry in Canada for the calendar year 1920. The Statistics include those plants manufacturing (a) automobiles, (b) automobile supplies and accessories, and (c) repairs to automobiles. A table extracted from the census of the Rubber Goods Industry is added to show the manufacture of automobile casings, tubes and solid tires during the year 1920, as this information is of particular interest in connection with the Automobile industry.

The rapid expansion of the Automobile industry has continued during the year 1920, and in each of the three branches considerable increase in production is shown. The value of production by classes of plants is given comparatively for the calendar years 1919 and 1920 in the following table:-

	1919	1920	Increase over 1919 \$
	\$	\$	\$
Automobile manufacturing . . .	80,619,846	101,465,846	20,846,000
Automobile supplies and accessories	8,571,890	19,361,882	10,789,992
Automobile repairs	12,004,970	16,592,623	4,587,653
TOTALS	101,196,706	137,420,351	36,223,645

In Table 1, the principal statistics of the industry are shown for Canada and the provinces for each of the three classes of plants. In Table 2, the principal information for Canada by classes of plants is shown comparatively for the years 1919 and 1920. This table will permit a rapid survey of the situation and render possible comparison of the increases in the different items shown as between the years 1919 and 1920, whilst showing the relative importance of the three branches of the industry. At the same time, the total column will show the combined information for comparison of the two years, so that the total increase in number of plants; capital investment; employees, salaries and wages; cost of materials and value of products can be readily seen.

Table 3 shows for 1919-1920 for Canada and the provinces the number of plants operated in the various branches of the Automobile industry. It is noticeable that the number of automobile manufacturing plants has increased from 11 to 17 and that the manufacturing has started in two plants in the Province of Quebec. In Ontario are to be found the remainder of the plants, 15 in number, an increase of four over 1919. In automobile supply plants the increase is 20 over 1919, the largest increase being found in Ontario where 14 additional plants were operated during the year 1920.

Table 4 shows comparatively, under the various items, the capital investment in the three classes of plants, and Table 5 shows the same information for Canada and the provinces. The investment in automobile manufacturing is reported in 1920 as being \$53,906,506, an increase of \$18,956,767 over the capital investment of 1919, which was then reported as being \$34,949,739.

In Table 6, will be found the comparison of employees, salaries and wages for the years 1919 and 1920, shown separately for the different classes of plants. In automobile manufacturing plants alone, the amount paid in salaries and wages is reported as \$13,331,084, as against \$9,712,788 in 1919, which shows an increase of \$3,618,296.

Table 7 shows, by months, the wage-earners engaged in the Automobile industry in 1920 by classes of plants and for all plants. For all plants, the month of highest employment was June with 16,509 male and 566 female employees. In manufacturing plants, the peak of the year was reached in April with 8,492 males and 282 females. In plants devoted to the manufacture of supplies and accessories, July, with 382 males and 297 females, was the month of highest employment. In automobile repair plants July again appears as the busiest month with 5,466 employees.

Table 8 shows wage-earners classified according to the weekly remuneration received. In automobile manufacturing plants, out of a total of 4,111 males over 16 years of age, 3,470 received \$30 per week and over and only nine employees received less than \$15 per week. In automobile supply and accessory plants, 644 out of a total of 1,136 male employees over 16 years of age received \$30 or more per week, while 67 are reported as receiving under \$15 per week. In Automobile repair plants, the two largest groups of employees are shown as 830 receiving \$20 to \$24 per week, and 1,286 receiving \$30 or more.

Table 9 shows for Canada, the quantity and value of the various kinds of fuel consumed during the years 1919 and 1920. The largest consumption is in automobile manufacturing plants, where the cost of fuel amounted to \$703,736 during 1920.

Miscellaneous expenses by classes of plants in Canada for the year 1920 are shown in Table 10. For all plants, the total of expenses other than the cost of fuel, salaries and wages, and cost of materials amounted to \$15,216,990. Of this sum, \$11,559,979 is chargeable to manufacturing plants; \$2,029,778 to supply and accessory plants and \$1,626,943 to repair plants.

Table 11 classifies by kinds of plants for Canada and the provinces, the cost of materials used in the Automobile Industry during the year 1920. The total is reported as being \$34,452,444 for all plants, an increase of nearly \$24,000,000 over 1919. Of this amount \$67,157,445 was used in manufacturing plants; \$10,683,632 in supply and accessory plants and \$6,571,767 in repair plants.

Table 12 shows in detail the various materials entering into the manufacture of automobiles and automobile supplies and accessories, as well as the various materials used in automobile repairs. The information furnished under "finished parts and accessories" in that section of the table dealing with automobile manufacturing will show that a very large part of the materials used are already the finished products of other plants. This is accounted for by the high specialization which has entered automobile construction in recent years, and by the fact that many plants are devoted entirely to the production of one part or section of an automobile. Though by far the greater number of cars manufactured during the year 1920 were electrically equipped upon leaving the factory, not a single Canadian automobile factory produced any of its electrical equipment. The same, to a very large degree, is applicable to the manufacture of wheels, springs, lamps and other particular sections of the finished automobile.

In Table 13 will be found for Canada and the provinces the distribution by classes of plants of the value of production. By far the greatest amount is creditable to the province of Ontario, where a production of \$126,557,157 is reported out of a grand total of \$137,420,351.

Table 14 shows the principal items of production for the various branches of the industry. It will be noted that in automobile manufacturing plants the large sum of \$12,700,075 is reported as the value of automobile parts. In automobile supply and accessory plants, the largest amount reported is found under "motors", with a total value of \$2,308,030. Out of a total of \$15,532,623 reported in automobile repair plants, \$13,523,701 is covered by the general heading "repairs and over-hauling". Tire repairs are given as \$1,433,478.

In Table 15, the manufacture of automobile is shown for Canada and the provinces. It will be seen that all passenger cars were manufactured in the Province of Ontario, and that, in its first year of production, Quebec only reported commercial automobiles and chassis. The largest item of production, which is more than 50 per cent of the total value is shown under "open, four to five passenger automobiles", generally called touring cars, the totals being 84,351 cars for a value of \$59,430,558. Under the classification "commercial, trucks", those of one to under five tons capacity are credited with the largest number, being reported at 9,613 of a total value of \$7,421,191.

Table 16 compares the commercial and passenger automobiles for 1919 and 1920. A change in the schedule used for collecting the information was made, and for this reason, the classification of 1919 is shown as well as that of 1920. For the first time, automobile plants manufacturing engines were asked to give information as to the type and horse-power of motors manufactured. This information is shown in Table 17.

Table 18 gives information as to pneumatic casings and tubes, and solid rubber tires manufactured in Canada during the year 1920. The total value is given as \$10,177,119. This information is an extract from the data published on the Rubber Goods industry under date of January, 1922.

The rapid increase in the use of automobiles can be seen in Table 19 where the number of licensed cars for Canada and the provinces appears for the series of years, 1911-1921. Registrations for Canada in these eight years have increased from 59,598 in 1911 to 469,320 in 1921. The three provinces with highest registration are Ontario with 296,960 in 1921, Saskatchewan with 62,953 and Quebec with 59,707.

Imports and exports of automobiles, automobile parts and engines are shown in Table 20 for the years 1919 and 1920. The table will make it apparent that the higher priced automobiles have been imported and the lower priced ones exported from Canada.

It will also be noted that automobile engines are not exported from Canada, whilst 37,206 valued at \$6,982,658 were imported during the year 1919, as against 30,586 valued at \$7,627,386 during the year 1920. The increase of 4 1/4 million dollars in the value of exports indicates that this phase of the automobile industry is progressing favourably, whilst the value of imports which totalled \$35,539,804 in 1920 leaves no doubt as to the room for expansion existing for this industry in Canada. The automobile branch of Canadian industry can look forward, not only to an increased demand for domestic use and for export, but also to development which will enable them to fill, at home, requirements at present being satisfied through imports. In the manufacture of engines alone nearly one-third of the present Canadian manufacturing requirements are supplied by imports.

The number of automobiles scrapped annually has been a question often arising in the consideration of probable trade. An attempt is here being made to show the approximate number of cars withdrawn from use during the years 1919 and 1920. The basis used, as shown in the table below, is to credit on the one hand the cars licensed, manufactured and imported during one year and to deduct from this amount the cars exported during that year and the cars licensed during the following year. From these figures it would appear that of a total of 341,316 cars operated during 1919, 10,833 were removed from use the following year. The comparison for 1920 shows that of 407,064, a total of 18,030 were discarded. The number of cars to be replaced must necessarily increase each year as more cars are brought into use. In the calculations made, variations in the normal stocks in dealers' and manufacturers' hands from year to year have not been considered.

Comparative statement showing the approximate number of automobiles scrapped in Canada, during the years 1919 and 1920.

Cars to be accounted for:-

Automobiles licensed during current year	341,316	407,064
Manufactured during the year	87,835	94,344
Imported during the year ...	11,759	0
Total to be accounted for .	440,901	510,352

Cars accounted for:-

Automobiles licensed during following year	407,064	469,310 x
Exported during the year ...	22,949	27,072
Total accounted for	430,013	492,322

Difference equals cars scrapped during year	10,833	18,030
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x Licenses issued, subject to final revision.

TABLE 1. PRINCIPAL STATISTICS OF THE AUTOMOBILE INDUSTRY BY CLASSES OF PLANTS FOR CANADA AND THE PROVINCES, 1920.

Items.	Automobile Plants				Automobile Supply Plants.						
	Canada	Ontario	Quebec	Canada	Alber ta	British Columbia	Man.	Ontari o	Quebec	Sask	
No. of Establishments	17	15	2	62	3	8	5	40	4	2	
Capital \$	53,966,506	53,597,244	309,262	15,332,887	15,909	130,536	52,115	14,982,276	145,135	4,916	
Employees on Salaries:-											
Males No.	829	816	13	264	-	17	7	231	8	-	
Females No.	260	258	2	74	1	1	1	70	1	-	
Salaries paid \$	2,642,427	2,611,219	31,208	1,022,847	427	46,922	10,204	945,459	19,835	-	
Employees on Wages:-											
Males No.	6,974	6,937	37	2,525	6	56	22	2,418	20	3	
Females No.	218	218	-	239	1	1	6	224	7	-	
Wages paid \$	10,688,657	10,643,343	45,314	3,747,149	11,439	86,303	32,770	3,585,457	26,070	3,080	
Fuel employed \$	703,736	701,433	2,303	143,027	940	3,445	1,919	136,491	232	-	
Power:-											
Units No.	685	682	3	869	2	8	3	853	3	-	
Total H.P.	28,145	28,096	50	12,741	4	66	4	12,647	22	-	
Used H.P.	17,628	17,578	50	7,785	3	65	4	7,691	22	-	
Miscellaneous Expenses \$	11,539,079	11,483,829	55,250	2,029,778	4,479	48,217	18,755	1,943,992	13,748	580	
Cost of Materials \$	67,157,045	66,934,309	222,736	10,603,632	23,313	129,933	72,912	10,325,296	50,533	1,645	
Value of Products	101,465,846	101,147,891	317,955	19,361,882	45,456	332,530	150,536	18,701,486	115,204	6,670	

TABLE 1. Continued.

PRINCIPAL STATISTICS OF THE AUTOMOBILE INDUSTRY BY CLASSES OF PLANTS FOR CANADA AND THE PROVINCES, 1920

Items	Automobile Repairs.										
	Canada	Alberta	Br. Col- umbia	Nan.	New Brunsw.	Nova Scotia	Ont.	P.E.I.	N.B.	P.E.I.	Que.
No. of Establishments	2,503	315	202	160	70	75	1,040	12	202	419	
Capital \$	19,943,913	2,710,464	1,679,013	1,918,643	370,514	743,935	7,408,110	28,839	2,214,650	2,869,745	
Employees on salaries:-											
Males No.	299	19	30	23	9	12	115	3	66	22	
Females No.	41	3	1	2	2	-	26	-	7	-	
Salaries paid \$	444,351	34,832	52,744	30,978	6,018	12,060	172,011	2,696	101,057	31,955	
Employees on Wages											
Males No.	4,688	540	467	346	110	185	1,945	14	512	568	
Females No.	-	-	-	-	-	-	-	-	-	-	
Wages paid \$	4,932,203	603,667	511,818	359,284	103,550	189,992	2,039,681	12,651	503,375	608,205	
Fuel employed \$	232,860	36,408	14,812	25,447	4,475	5,059	83,982	621	28,630	39,426	
Power:-											
United States H.P.	1,693	251	137	139	65	40	635	8	138	280	
Total H.P.	6,920	1,113	510	630	190	149	2,476	15	707	1,132	
Used H.P.	6,038	985	492	561	179	146	2,148	13	509	1,003	
Miscellaneous Expenses	1,648,043	220,977	183,352	128,332	32,052	39,681	628,061	4,714	203,630	267,244	
Cost of Materials \$	6,671,767	945,897	654,219	377,620	110,749	213,945	2,682,268	12,085	827,842	847,142	
Value of Products	16,592,623	2,108,938	1,723,058	1,094,511	314,554	528,520	6,707,780	37,913	1,950,685	2,126,664	

Table 2. PRINCIPAL STATISTICS OF THE AUTOMOBILE INDUSTRY IN CANADA

COMPARED FOR THE CALENDAR YEARS 1919-20.

Items	Year	Automobile Manufacturing	Automobile Supplies	Automobile Repairs	Total
No. of plants	1919	11	42	1,236	1,289
	1920	17	62	2,503	2,582
Capital \$	1919	34,949,739	8,384,991	13,628,282	56,943,018
	1920	53,900,506	15,332,887	19,943,913	89,163,306
Salaried Employees ..	1919	937	355	236	1,528
	1920	1,089	338	340	1,767
Salaried paid..\$	1919	1,560,633	486,297	336,609	2,383,539
	1920	2,62,427	1,022,847	444,351	4,109,625
Wage Earners No.	1919	5,839	1,378	3,375	10,592
	1920	7,192	2,764	4,683	14,644
Wages paid ...\$	1919	8,152,155	1,462,144	3,389,794	13,004,093
	1920	10,688,657	3,747,149	4,932,203	19,368,009
Cost of Materials ...\$	1919	51,690,715	5,221,439	4,368,810	61,280,944
	1920	67,157,045	10,603,632	6,671,767	84,432,444
Value of Products ...\$	1919	80,619,846	8,571,890	12,004,970	101,196,706
	1920	101,465,846	19,361,882	16,592,623	137,420,351

Table 3. NUMBER OF ESTABLISHMENTS IN THE AUTOMOBILE INDUSTRY FOR CANADA AND THE PROVINCES, COMPARED FOR THE YEARS 1919-1920.

Provinces	Auto Manufacturing		Auto Supplies		Auto Repairs	
	1919	1920	1919	1920	1919	1920
CANADA	11	17	42	62	1,236	2,503
Alberta	-	-	2	3	96	315
British Columbia	-	-	6	2	78	202
Manitoba	-	-	3	5	81	160
New Brunswick	-	-	-	-	34	70
Nova Scotia	-	-	-	-	49	75
Ontario	11	15	26	40	600	1,048
Prince Edward Island . . .	-	-	-	-	2	12
Quebec	-	2	3	4	118	202
Saskatchewan	-	-	2	2	134	419

Table 4. CAPITAL INVESTED IN THE AUTOMOBILE INDUSTRY BY CLASSES OF PLANTS FOR CANADA, 1920.

Plants	Land, buildings and fixtures	Machinery and tools	Materials on hand, stocks in process, &c.	Cash, trading and operating assets, &c.	Total
TOTALS	\$ 20,096,929	\$ 14,858,025	\$ 32,451,784	\$ 21,776,568	\$ 89,183,306
Auto Manufacturing	10,143,742	7,455,440	22,840,396	13,466,928	55,906,506
Auto Supplies	3,456,449	4,153,377	4,777,641	2,965,420	15,332,887
Auto Repairs	6,496,738	3,269,208	4,833,747	5,344,220	19,943,913

Table 5. TOTAL CAPITAL INVESTED IN THE AUTOMOBILE INDUSTRY BY CLASSES OF PLANTS FOR CANADA AND THE PROVINCES, 1920.

Provinces	Automobile Manufacturing	Automobile Supplies	Automobile Repairs	Totals
CANADA	53,906,506	15,332,887	19,943,913	89,183,306
Alberta	-	15,909	2,710,464	2,726,373
British Columbia	-	130,536	1,679,613	1,809,549
Manitoba	-	52,115	1,918,643	1,970,758
New Brunswick	-	-	370,514	370,514
Nova Scotia	-	-	745,935	745,935
Ontario	53,597,244	14,982,276	7,408,110	75,987,630
Prince Edward Island	-	-	28,839	28,839
Quebec	309,262	145,135	2,214,650	2,669,047
Saskatchewan	-	6,916	2,859,745	2,875,661

Table 6. EMPLOYEES, SALARIES AND WAGES, BY CLASSES OF PLANTS, COMPARED FOR 1919-1920.

In Automobile Plants:-	1920				1919			
	Male		Salaries & Wages		Male		Salaries & Wages	
	No.	No.	\$	No.	No.	No.	\$	
Officers, supts. & managers . . .	157	1	954,215	124	1	606,061		
Clerks, stenographers, etc. . . .	672	259	1,688,212	585	227	954,566		
Wage earners, average No.	6,974	216	10,686,557	5,577	257	8,152,151		
TOTALS	7,803	478	13,331,084	6,286	485	9,712,736		
In Automobile Supply Plants:-								
Officers, supts. & managers . . .	125	6	475,478	81	1	253,521		
Clerks, stenographers, etc. . . .	139	68	547,360	193	80	397,777		
Wage earners, average No.	2,526	239	3,747,174	1,187	191	1,462,144		
TOTALS	2,720	313	4,770,021	1,461	272	1,943,441		
In Automobile Repair Plants:-								
Officers, supts. & managers . . .	191	3	719,884	95	2	174,426		
Clerks, stenographers, etc. . . .	108	38	124,467	100	39	162,183		
Wage earners, average No.	4,623	7	4,232,203	3,372	3	3,389,794		
TOTALS	4,987	41	5,275,554	3,567	41	3,726,403		
ALL PLANTS:-								
Officers, supts. & managers . . .	473	10	1,743,57	300	4	1,069,014		
Clerks, stenographers, etc. . . .	919	365	2,760,58	878	346	1,314,523		
Wage earners, average No.	14,187	457	19,361,09	10,136	451	13,004,003		
TOTALS	15,779	832	23,473	11,314	801	15,387,652		

Table 7.

AVERAGE NUMBER OF WAGE WORKERS EMPLOYED IN THE AUTOMOBILE
INDUSTRY BY MONTHS, FOR CANADA IN THE YEAR 1920.

	Automobile Manufacturing		Automobile Supply		Automobile Repair		All plants		
	Male	Female	Male	Female	Male	Female	Male	Female	No.
January	7,374	253	2,181	210	3,708	-	13,263	463	
February	7,343	266	2,424	212	3,773	-	13,640	470	
March	8,143	220	2,676	250	4,662	-	15,681	510	
April	8,492	282	3,015	301	4,616	-	16,123	535	
May	8,174	258	3,026	293	5,243	-	16,413	554	
June	8,115	277	3,009	239	5,385	-	16,509	556	
July	7,572	219	3,082	297	5,466	-	16,120	516	
August	6,670	204	3,073	270	5,411	-	15,154	474	
September	6,795	203	2,875	276	5,142	-	14,773	439	
October	5,820	165	2,541	215	4,892	-	13,653	380	
November	4,693	111	1,430	164	4,191	-	10,604	275	
December	4,092	85	1,049	127	4,094	-	9,225	218	
AVERAGES	6,974	218	2,525	239	4,688	-	14,137	457	

Table 8. CLASSIFIED WEEKLY WAGES PAID TO EMPLOYEES IN THE AUTOMOBILE
INDUSTRY BY CLASSES OF PLANTS, FOR CANADA IN THE YEAR 1920.

Groups of Classified Weekly Wages	Over 16 years		Under 16 years		Total Employees No.
	Male	Female	Male	Female	
<u>In Automobile Plants:-</u>					
Under \$5 per week	1	-	-	-	1
\$5 to under \$10 per week	1	-	1	-	2
\$10 " " \$15 " "	7	14	-	-	21
\$15 " " \$20 " "	73	6	-	-	79
\$20 " " \$24 " "	127	-	-	-	127
\$24 " " \$28 " "	251	-	-	-	251
\$28 " " \$30 " "	181	60	-	-	241
\$30 per week and over	3,470	5	-	-	3,472
TOTALS	8,111	85	1	-	8,197
<u>In Automobile Supply Plants:-</u>					
Under \$5 per week	-	-	-	-	-
\$5 to under \$10 per week	17	12	-	-	29
\$10 " " \$15 " "	50	40	3	-	93
\$15 " " \$20 " "	71	74	1	-	146
\$20 " " \$24 " "	135	17	-	-	152
\$24 " " \$28 " "	155	8	-	-	163
\$28 " " \$30 " "	64	5	-	-	69
\$30 per week and over	844	4	-	-	845
TOTALS	1,136	160	4	-	1,300
<u>In Automobile Repair Plants:-</u>					
Under \$5 per week	152	-	4	-	156
\$5 to under \$10 per week	437	-	7	-	444
\$10 " " \$15 " "	606	-	8	-	614
\$15 " " \$20 " "	803	2	2	-	805
\$20 " " \$24 " "	870	-	3	-	833
\$24 " " \$28 " "	62	-	5	-	537
\$28 " " \$30 " "	195	-	2	-	197
\$30 per week and over	1,266	-	2	-	1,285
TOTALS	4,742	-	33	-	4,974
GRAND TOTALS	10,188	245	38	-	10,471

Table 9. FUEL CONSUMED IN THE AUTOMOBILE INDUSTRY BY CLASSES

OF PLANTS FOR CANADA, COMPARED FOR THE YEARS 1919 AND 1920.

	Unit of Measure	1920		1919	
		Quan.	Total Val.	Quan.	Total Val.
In Automobile Plants:-					
Bituminous coal	tons	11,978	103,302	56,056	372,931
Anthracite coal	"	47,682	556,004	-	-
Coke	"	584	1,187	15	150
Gasoline	gals.	39,896	14,223	30,000	9,244
Fuel oil	"	182,669	18,043	169,383	11,967
Gas	m. c. ft.	18,276	10,775	3,858	3,669
Other fuel	-	-	142	-	-
TOTAL COST VALUE		-	703,736	-	398,011
In Automobile Supply					
Plants:-					
Bituminous coal	tons	11,007	101,189	3,734	26,810
Anthracite coal	"	365	5,466	136	1,508
Lignite coal	"	-	-	4	52
Coke	"	75	1,447	20	260
Gasoline	gals.	5,128	2,432	7,680	2,554
Fuel oil	"	297,652	27,325	7,090	473
Gas	m. c. ft.	11,798	4,272	11,918	13,033
Other fuel	-	-	896	-	1,346
TOTAL COST VALUE		-	143,027	-	46,036
In Automobile Repair					
Plants:-					
Bituminous coal	tons	6,178	65,368	1,716	16,466
Anthracite coal	"	3,555	52,584	653	7,766
Lignite coal	"	2,026	18,062	832	6,765
Coke	"	241	2,938	53	371
Gasoline	gals.	96,143	44,822	35,627	12,591
Fuel oil	"	41,049	4,724	4,193	919
Gas	m. c. ft.	42,798	20,232	18,202	9,106
Other fuel	-	-	24,150	-	5,440
TOTAL COST VALUE		-	232,860	-	59,424

Table 10. MISCELLANEOUS EXPENSES INCURRED IN THE AUTOMOBILE INDUSTRY, BY CLASSES OF MILLS IN CANADA FOR THE YEAR 1920.

Items	Automobile Manufacturing	Automobile Supplies	Automobile Repairs	TOTALS
	\$	\$	\$	
TOTAL	11,539,079	2,029,778	1,848,043	15,216,900
Net of offices, works and machinery	35,595	51,578	528,425	615,598
Net of power	91,505	74,191	72,859	238,555
Insurance, premiums only	191,130	63,145	143,704	393,029
Taxes, (municipal, provincial and federal)	2,369,698	154,724	136,009	2,660,431
Royalties, use of patents	55,629	19,195	632	75,466
Advertising expenses	674,444	44,586	113,994	833,024
Travelling expenses	619,096	62,741	19,422	701,259
Repairs of buildings and machinery	1,208,873	224,015	162,306	1,595,194
All other sundry expenses	6,293,049	1,335,603	470,692	8,099,344

TABLE 11. TOTAL COST OF MATERIALS IN THE AUTOMOBILE INDUSTRY BY CLASSES OF PLANTS FOR CANADA AND THE PROVINCES, 1920

Provinces	Automobile Manufacturing	Automobile Supplies	Automobile Repairs	Total
CANADA	67,157,045	10,603,632	6,671,767	84,432,444
Alberta	-	23,313	945,897	969,210
British Columbia	-	129,933	654,219	784,152
Manitoba	-	72,912	377,620	450,532
New Brunswick	-	-	110,749	110,749
Nova Scotia	-	-	213,945	213,945
Ontario	66,934,309	10,325,296	2,682,268	79,941,873
Prince Edward Island	-	-	12,085	12,085
Quebec	222,736	50,533	827,842	1,101,111
Saskatchewan	-	1,645	847,142	848,787

TABLE 12. VALUE OF ALL MATERIALS USED IN THE AUTOMOBILE INDUSTRY BY CLASSES OF PLANTS FOR CANADA DURING THE YEAR 1920.

(a) Automobiles, Manufacturing.

Kinds.	Total Value
Raw Materials:-	
Steel	1,006,848
Iron	33,903
Malleable iron	560,014
Copper	64,557
Brass	609,117
Aluminum	26,263
Other metals	29,891
Iron castings	1,763,822
Steel castings	1,875,358
Other metal castings	35,060
Tubes and piping	860,354
Bolts, nuts, rivets & Screws	668,158
Glas	41,512
Lumber, all kinds	625,372
Leather and other materials for upholstering, tops & curtains	2,250,635
Paints, oils and varnishes	265,871
Other raw materials	30,012
Finished Parts & Accessories:-	
Chassis	6,611,467
Bodies	12,972,801
Tops	3,601,964
Engines	8,810,406
Springs	985,528
Wheels	2,867,233
Motor parts	545,639
Speedometer and other instrument board equipment	605,323
Body and chassis parts	2,762,701
Batteries	1,058,403
Generators	159,526
Magnatos	7,602
Carburetors	265,823
Radiators	983,321
Cells	325,439
Lamps	427,590
Tires, pneumatic, casing	4,305,482
" " tubes	2,704,706
" " solid	164,356
Jacks, pumps, wrenches & other tools	312,847
Other finished parts and accessories..	5,083,731
TOTAL	\$ 67,157,045

TABLE 12. Continued.

(b) Cost Value of Materials used in Automobile Supply Plant

Kind	Total Value.
Metals:	
Iron and steel	4,407,003
Brass	253,877
Copper	167,358
Aluminum	208,371
All other metals	232,554
Lumber and timber	654,864
Covering materials (leather, imitation fabrics, cloths, etc.)	1,309,428
Hardware (nails, clips, fasteners, tacks, buttons, etc.)	208,612
Glass	365,983
Finished parts of all kinds	652,537
All other material	<u>2,143,045</u>
TOTAL	\$10,603,632

(c) Cost Value of Materials Used in Automobile Repair Plants.

Kind	Total Value
Automobile parts	5,721,493
Bicycle parts	29,168
Threads, sections, etc	85,194
Fabrics	146,748
Rubber and gum	212,200
Cement	46,019
All other material	<u>430,945</u>
TOTAL	\$6,671,767

TABLE 13. VALUE OF PRODUCTS OF THE AUTOMOBILE INDUSTRY BY CLASSES OF PLANTS, FOR CANADA AND THE PROVINCES DURING THE YEAR 1920.

Provinces	Automobile Mfg.	Automobile Supplies	Automobile Repairs	Totals
	\$	\$	\$	\$
CANADA	101,465,846	19,361,882	16,592,623	137,420,351
Alberta	-	45,456	2,108,938	2,154,394
British Columbia	7	332,530	1,723,058	2,055,588
Manitoba	7	160,536	1,094,511	1,255,047
New Brunswick	-	-	314,554	314,554
Nova Scotia	-	-	528,520	528,520
Ontario	101,147,891	18,701,486	6,707,780	126,557,157
Priene Ed. Island	-	-	37,913	37,913
Quebec	317,955	115,204	1,950,685	2,383,844
Saskatchewan	-	6,670	2,126,664	2,133,334

Table 14. VALUE OF PRODUCTS OF THE AUTOMOBILE INDUSTRY BY CLASSES
OF PLANTS FOR CANADA DURING THE YEAR 1920.

Automobile Manufacturing:-

Automobiles, pleasure	\$ 75,075,778
" commercial	8,153,517
chassis	2,407,206
special	75,220
parts	12,700,075
Repair work	54,050
TOTAL	\$ 101,465,846

Automobile Accessories:-

Bodies	1,746,984
Motors	2,308,030
Tops	2,167,776
Wheels	2,024,300
Windshields	859,656
Springs	583,531
Rims	325,039
Lamps	372,577
Covers	174,170
All other	8,819,619

TOTAL \$ 19,361,882

Automobile Repairs:-

Repairs and overhauling	13,523,701
Repairs to bicycles	322,635
Tire repairs	1,438,478
Other work	1,507,809

TOTAL \$ 16,592,623

GRAND TOTAL \$ 137,420,352

Table 15.

QUANTITY AND VALUE OF PRODUCTS OF THE AUTOMOBILE
MANUFACTURING PLANTS FOR CANADA AND THE PROVINCES, 1920.

Products	C A N A D A		O N T A R I O		Q U E B E C	
	Quan. No.	Total Val. \$	Quan. No.	Total Val. \$	Quan. No.	Total Val. \$
<u>Automobiles, pleasure:-</u>						
Open 2-3 passenger . . .	3,759	3,270,319	3,759	3,270,319	-	-
Open 4-5 " . . .	64,351	59,430,558	64,351	59,430,558	-	-
Open, 7 " . . .	2,968	5,653,654	2,968	5,653,654	-	-
Closed, 2-3 " . . .	3,276	3,762,151	3,276	3,762,151	-	-
Closed, 4-5 " . . .	4,589	5,644,403	4,589	5,644,403	-	-
Closed, 7 " . . .	92	314,693	92	314,693	-	-
<u>Automobiles, commercial:-</u>						
Under 1 ton capacity ..	546	535,732	546	535,732	-	-
1 ton to under 5 tons .	9,613	7,491,471	9,578	7,348,124	35	143,347
5 tons and over	15	126,314	-	-	15	126,314
Automobile chassis . . .	4,601	2,407,206	4,588	2,363,299	13	43,907
Automobile, special . . .	334	75,220	334	75,220	2	-
Mount received for automobile repair work . . .	-	54,050	-	52,177	-	1,873
All other products, (including parts)	-	12,700,075	-	12,697,561	-	2,514
TOTALS		101,465,846	-	101,147,891	-	317,955

QUANTITY AND VALUE OF ALL AUTOMOBILES MANUFACTURED

Table 16.

IN CANADA COMPARED FOR THE YEARS 1919-1920.

Classification		1920		1919	
1920	1919	No.	Value	No.	Value
Open, 2-3 pass.	Runabouts	3,759	\$ 3,270,319	3,026	2,194,518
Open, 4-7 pass.	Touring	67,319	65,064,212	61,257	52,576,524
Closed ...	Closed	7,957	9,721,247	4,125	3,985,294
Chassis ...	Chassis	4,601	2,407,206	11,528	5,053,862
Trucks, under one ton ...	Delivery Wagons	546	535,732	372	270,254
Trucks over one ton ...	Trucks	9,628	7,617,785	7,527	4,849,398
Special	-	334	75,220	-	-
TOTALS		94,144	88,711,721	87,835	68,929,820

Table 17.

TYPE AND HORSEPOWER OF ALL ENGINES MANUFACTURED IN AUTOMOBILE PLANTS DURING THE YEAR 1920.

	No.	Total H.P.	Average H.P.
<u>Type of Engine:-</u>			
4 cylinders	54,121	1,192,610	22.02
6 cylinders	4,904	266,000	54.24
TOTALS	59,025	1,458,610	-
<u>Engine Power:-</u>			
Under 25 horsepower	54,121	1,192,610	22.02
25 H.P. to under 40 H.P.	226	9,000	39.82
40 H.P. and over	4,678	257,000	54.94
TOTALS	59,025	1,458,610	-

Table 18.

AUTOMOBILE PNEUMATIC CASINGS AND TUBES, AND SOLID RUBBER TIRES MANUFACTURED IN CANADA DURING 1920.

Kinds and sizes.	Quantity	Value
	\$	\$
<u>Pneumatic Tires and Tubes:-</u>		
<u>Casings:-</u>		
Sizes 30 x 3 to 32 x 3½	853,404	14,953,709
" 31 x 4 to 34 x 4	307,271	8,036,303
" 32 x 4½ to 37 x 4½	102,687	3,819,355
" 34 x 5 to 37 x 5	20,766	1,040,962
All other inch sizes	30,562	1,395,427
Millimetre sizes	247,284	5,930,045
TOTAL, Casings	1,561,974	35,175,801
<u>Tubes:-</u>		
Sizes 30 x 3 to 32 x 3½	892,356	2,071,437
" 31 x 4 to 34 x 4	272,739	916,323
" 32 x 4½ to 37 x 4½	98,130	469,898
" 34 x 5 to 37 x 5	24,640	143,637
All other inch sizes	63,094	400,467
Millimetre sizes	76,557	264,699
TOTAL, Tubes	1,427,546	4,271,461
<u>Auto Truck Rubber Tires, solid:-</u>		
Sizes 32 x 3½ to 36 x 3½	9,487	226,382
" 32 x 4 to 36 x 4	4,932	156,591
" 34 x 5 to 40 x 5	4,213	177,468
" 34 x 6 to 40 x 6	1,288	63,724
" 34 x 7 to 40 x 12	707	78,042
All other inch sizes	243	9,720
Millimetre sizes	524	17,930
TOTAL, Solid Tires	21,444	729,857
<u>Capitulation:-</u>		
Pneumatic Casings		35,175,801
Pneumatic Tubes		4,271,461
Solid Auto Tires		729,857
TOTAL VALUE		\$ 40,177,112

TABLE 19. NUMBER OF MOTOR VEHICLES REGISTERED IN CANADA BY PROVINCES, 1914-1921

Provinces CANADA	1914	1915	1916	1917	1918	1919	1920	1921
	69,598	89,944	123,464	197,799	275,746	341,316	407,066	469,310
Alberta	4,728	5,832	9,516	20,624	29,300	34,000	38,015	38,750
British Columbia	7,628	8,360	9,457	11,645	15,370	22,420	28,000	31,000
Manitoba	7,359	9,225	12,765	17,507	24,012	30,118	36,455	40,430
New Brunswick	1,328	1,900	2,965	2,251	6,434	8,306	11,196	13,564
Nova Scotia	1,324	1,841	3,012	5,350	8,100	10,210	12,450	14,250
Ontario	31,724	42,346	54,375	83,308	114,376	144,804	177,561	206,900
Prince Edward Island	31	34	50	303	639	967	1,419	1,751
Quebec	7,413	19,112	15,335	21,213	26,897	33,547	41,562	59,707
Saskatchewan	8,020	13,225	15,900	32,505	50,531	56,855	60,325	62,958
Yukon Territory	43	69	89	93	87	89	81	-

Note:- 1921 figures subject to final revision.



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TABLE 20. NUMBER AND VALUE OF AUTOMOBILES, FREIGHT AND PASSENGER,
and the value of automobile parts (a) imported into Canada
during the calendar years 1919 and 1920, and (b) exported
from Canada during the same years.

Items	Imports		Exports.	
	Quan. No.	Value \$	Quan. No.	Value \$
<u>1919</u>				
Automobiles, freight & passenger	11,750	12,741,699	22,949	13,253,516
Automobile engines.	37,206	6,982,658	-	-
Automobile parts.	-	9,944,641	-	3,490,577
TOTAL VALUE 1919	-	29,668,398	-	16,744,093
<u>1920</u>				
Automobile, freight & passenger	9,144	13,860,600	23,012	16,535,235
Automobile engines.	30,526	7,627,386	-	-
Automobile parts.	-	14,912,818	-	4,276,027
TOTAL VALUE 1920.	-	35,539,804	-	20,911,262