# **Service Bulletin - Surface and Marine Transport Results of the Annual Motor Carriers** of Freight Survey of Small For-hire **Carriers and Owner Operators**



## 2004

## **Highlights**

## Small for-hire carriers:

- In 2004, there were 6,708 small for-hire carriers with less than \$1 million in revenue. These represented 62% of carriers in the for-hire carriers segment.
- Small for-hire carriers generated total operating revenues of \$2.0 billion, for a \$300,000 per carrier average. Overall, small for-hire carriers generated 7% of total revenue for the sector.
- Small for-hire carriers operating expenses totalled \$1.9 billion or about \$282,000 per carrier. Their main operating expenditures were salaries, wages and benefits representing 24% of total expenses, fuel cost (20%) and other expenses (17%).
- Compared to the previous year, total operating revenues improved 10%, while total operating expenses increased 11%.
- Intra-provincial movements were responsible for 66% of the total operating revenue (\$1.33 billion). These movements were followed by international movements which represented 21% of total revenues (\$420 million). Interprovincial movements were responsible for 13% of total revenues (\$258 million).
- A little more than half (52%) of these carriers were specialized in long-distance transportation. This activity generated 51% of all operating revenues for small for-hire carriers.
- Geographically, Ontario was home to the largest number of small for-hire carriers with 37% of the Canadian carriers, followed by Quebec with 24% and Alberta with 11%.
- Small for-hire carriers reported an average of four employees of which 77% where full-time employees. In addition, they operated an average one straight truck, two road tractors and two semi-trailers.

## **Owner operators:**

- In 2004, there were 35,609 trucking firms who self-identified as owner operators. Off these carriers, 99% reported revenues less than \$1 million.
- ٠ Overall, owner operators generated \$7.44 billion in operating revenues, about \$209,000 per carrier.
- Compared to the previous year, total operating revenues improved 1%, while total operating expenses was virtually unchanged.



Canada



- Operating expenses for these carriers totalled \$6.77 billion, or \$190,000 per carrier. The main operating
  expenses incurred by owner operators were fuel expenses (25%) and salaries, wages and benefits (22%) and
  other expenses (20%).
- Almost three out of four owner operators offered their services exclusively to for-hire carriers, while 22% of them
  worked exclusively for private carriers.
- Intra-provincial movements accounted for 65% of the total operating revenues generated by owner operators (\$4.82 billion). These were followed by international movements with 22% (\$1.62 billion) of revenues and interprovincial movements were the source of 13% (\$998 millions) of overall revenues.
- The majority of owner operators (53%) specialized in long distance transportation. This type of transportation service generated 56% of operating revenues.
- Ontario was home to the largest number of owner operators with 34% of all Canadian carriers, followed by Quebec (23%) and Alberta (16%).
- The average owner operators firm has two employees and operated one road tractor.

## **Analysis**

# Annual Motor Carriers of Freight Survey of Small For-hire Carriers and Owner Operators: Financial and Operating Statistics, 2004

## Introduction

The Annual Motor Carriers of Freight Survey (AMCFS) provides information on the structure and performance of two distinct groups of carriers located in Canada: small for-hire carriers and owner operators.

**Small for-hire carriers** are carriers with annual operating revenues between \$30,000 and \$1 million. Combined with AMCFS data on medium and large carriers with revenues of \$1 million or more, this information helps to provide a more complete picture of the for-hire trucking industry.

**Owner operators** are independent operators who provide transport services under contract to for-hire carriers, private carriers, or both.<sup>1</sup> While most owner operators are small businesses, the data in this publication cover all those that generated revenues of \$30,000 or more in 2004. Thus, the estimates will likely include some owner operators who generated revenues of \$1 million or more in 2004.

The financial estimates for the survey (revenue and expense data) are based on administrative files from the Tax Estimates Program. The other types of data (on activities, territory served, employment, equipment, fuel and distance) are collected through computer-assisted telephone interviews.

The publication is in three parts: section 1 contains results for small for-hire carriers, section 2 for owner operators, and section 3 contains a general review of the quality of data used in the survey.

#### **Data limitations**

Users are advised that financial data used in this article were taken from administrative records (tax files), which were not collected for statistical purposes. The financial data are compiled by Statistics Canada from a sample of Canada Revenue Agency T1 records of unincorporated firms' tax files and T2 records of incorporated firms' tax files.

Furthermore, operating ratios are not presented because they could be misinterpreted. Unincorporated businesses do not report labour costs in the same manner as incorporated ones on their tax returns. This is because working owners obtain their remuneration from profits, and they do not appear as expenses in the same way as salaries and wages do for incorporated companies. Also, fuel costs may have been reported under more than one expense category or may not be obtainable from the source of tax data. The result is an underestimation of total expenses, which would distort any calculated operating ratio.

 A private carrier is one for which trucking is not the main activity, but which owns or leases vehicles for the primary purpose of hauling its own goods. Private trucking is not part of the for-hire trucking industry. Note that, following persistent problems with data quality, the private carrier trucking survey was discontinued after reference year 1998. Since that date, therefore, it has no longer been possible to obtain data on this segment of the trucking industry.

## **Statistical Tables**

## Table 1

## Summary statistics by size, for-hire carriers, 2004

	Small carriers	Medium and large carriers	Top carriers	Total
	\$30,000 <sup>4</sup> to \$999,999	\$1 million <sup>5</sup> to \$24,9 million	\$25 million and over	
Estimated number of carriers (No.)	6,708	4,040	81	10,829
		millions of dollars		
Operating revenues	2,013	19,760	7,391	29,163
Operating expenses	1,894	18,367	6,918	27,178
Salaries and wages 1	459	4,739	1,716	6,914
Fuel	373	2,188	559	3,121
Owner operator expenses	86	3,916	1,853	5,854
Purchased transport <sup>2</sup>	258	2,184	1,181	3,624
Maintenance	205	1,340	378	1,923
Depreciation	189	950	301	1,440
Other expenses <sup>3</sup>	324	3,049	930	4,302
Operating ratio (%)		0.93	0.94	
Number of employees (No.)	25,100	107,458	37,012	169,570
Equipment operated (No.)				
Straight trucks	3,928	12,361	1,268	17,557
Road tractors	12,224	54,994	17,230	84,448

1. Includes employee benefits.

2. Includes driver services, vehicle lease or rent, total purchased transportation and load broker services.

3. Includes terminal expenses and other operating expenses (insurance, administration, etc.).

4. See methodology in Section 3.

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 includes carriers from the Annual survey of small for-hire carriers and owner operators with annual operating revenues greater than \$1 million.
 Note(s): Totals may not add due to rounding. Data for top, medium and large carriers are collected from the Quarterly motor carriers of freight survey while the small carriers data are from the Annual survey of small for-hire carriers and owner operators.

# Table 2Summary statistics by type of activity, small for-hire carriers, 2004

	Total	General freight	Household	Bulk liquids	Dry bulk materials	Forest products	Other commodities
Estimated number of carriers (No.)	6,708	2,922	597	325	1,128	622	1,114
			tho	ousands of doll	ars		
Operating revenues	2,012,578	739,719	84,609	170,955	337,961	226,906	452,428
Operating expenses	1,893,766	671,571	82,679	161,822	316,223	227,233	434,238
Salaries and wages	450,279	147,833	15,475	48,042	76,607	57,206	105,116
Benefits	8,912	1,651	27	1,522	1,203	2,137	2,372
Fuel	372,734	147,699	10,904	17,993	74,618	51,433	70,087
Owner operator expenses	85,571	41,430	501	1,283	12,468	4,086	25,803
Purchased transport	258,406	74,578	13,517	36,690	44,130	14,847	74,644
Maintenance	204,683	73,279	4,619	17,368	32,061	39,499	37,857
Depreciation	189,036	72,314	2,968	14,677	27,004	23,468	48,605
Insurance	63,766	19,893	2,293	5,741	10,547	10,050	15,242
Rent	77,597	29,614	16,347	3,697	11,703	4,582	11,654
Other expenses	182,782	63,281	16,028	14,810	25,880	19,926	42,857
Full time employees (No).	19,300	8,451	1,491	1,146	2,966	1,658	3,588
Equipment operated (No.)	32,395	14,431	1,004	1,803	4,307	3,292	7,558
Straight trucks (No.)	3,928	1,091	683	260	1,364	74	456
Distance travelled ('000 km)	204,799	60,545	34,976	20,953	66,292	2,650	19,383
Average distance ('000 km)	52	55	51	81	49	36	43
Road tractors (No.)	12,225	6,260	91	790	1,160	1,336	2,588
Distance travelled ('000 km)	1,722,887	929,495	12,857	96,859	175,731	157,247	350,698
Average distance ('000 km)	141	148	141	123	151	118	136
Semi-trailers (No.)	14,283	6,263	169	656	1,482	1,578	4,135
Other (No.)	1,958	817	61	97	300	304	379
Total distance ('000 km)	1,927,687	990,041	47,833	117,813	242,023	159,896	370,081
Fuel consumed ('000 L)	728,106	332,188	13,478	54,542	102,501	73,880	151,517

# Table 3 Summary statistics by type of activity, local transport<sup>1</sup>, small for-hire carriers, 2004

Local carriers	Total	General freight	Bulk liquids	Dry bulk materials	Forest products	Other commodities
Estimated number of carriers (No.)	2,617	745	177	881	363	451
			thousan	ds of dollars		
Operating revenues	909,306	273,043	76,944	280,423	120,921	157,975
Operating expenses	861,937	261,899	73,115	259,862	117,349	149,712
Salaries and wages	239,983	76,466	21,845	67,842	26,916	46,914
Benefits	5,826	563	1,493	849	1,409	1,512
Fuel	160,007	34,087	9,578	63,155	29,938	23,249
Owner operator expenses	44,655	25,238	306	11,390	116	7,605
Purchased transport	97,340	37,690	8,535	28,220	5,230	17,665
Maintenance	92,063	22,711	9,745	25,779	21,477	12,351
Depreciation	78,165	19,015	9,187	24,386	11,159	14,418
Insurance	32,188	8,864	3,401	8,013	6,097	5,813
Rent	33,318	14,114	1,414	10,072	2,372	5,346
Other expenses	78,392	23,151	7,612	20,156	12,635	14,838
Full time employees (No.)	7,843	2,601	547	2,460	769	1,466
Equipment operated (No.)	13,944	5,001	728	3,504	1,733	2,978
Straight trucks (No.)	2,697	783	231	1,345	33	305
Distance travelled ('000 km)	135,112	36,780	17,908	65,514	1,291	13,619
Average distance ('000 km)	50	47	78	49	39	45
Road tractors (No.)	4,267	1,572	211	822	676	986
Distance travelled ('000 km)	395,899	135,051	21,720	77,557	77,671	83,900
Average distance ('000 km)	93	86	103	94	115	85
Semi-trailers (No.)	6,000	2,232	240	1,045	891	1,592
Other (No.)	984	415	47	293	133	96
Total distance ('000 km)	531,012	171,832	39,628	143,070	78,962	97,520
Fuel consumed ('000 L)	241,982	71,447	17,053	70,309	38,066	45,107

1. Excludes household goods movers.

## Summary statistics by type of activity, long-distance transport<sup>1</sup>, small for-hire carriers, 2004

Long distance carriers	Total	General freight	Bulk liquids	Dry bulk materials	Forest products	Other commodities
Estimated number of carriers (No.)	3,492	2,177	148	247	258	662
			thousands	of dollars		
Operating revenues	1,018,664	466,676	94,012	57,538	105,985	294,453
Operating expenses	949,151	409,672	88,708	56,361	109,884	284,526
Salaries and wages	194,821	71,367	26,197	8,765	30,290	58,202
Benefits	3,059	1,088	30	354	727	860
Fuel	201,824	113,613	8,415	11,463	21,495	46,838
Owner operator expenses	40,416	16,192	977	1,078	3,970	18,199
Purchased transport	147,550	36,888	28,155	15,911	9,617	56,979
Maintenance	108,000	50,567	7,623	6,282	18,022	25,506
Depreciation	107,903	53,300	5,490	2,618	12,308	34,187
Insurance	29,286	11,029	2,340	2,535	3,953	9,429
Rent	27,933	15,499	2,283	1,632	2,211	6,308
Other expenses	88,362	40,130	7,198	5,724	7,291	28,019
Full time employees (No.)	9,966	5,850	599	505	890	2,122
Equipment operated (No.)	17,444	9,429	1,074	803	1,559	4,579
Straight trucks	549	309	29	19	41	151
Distance travelled ('000 km)	34,711	23,765	3,045	778	1,359	5,764
Average distance ('000 km)	63	77	105	41	33	38
Road tractors (No.)	7,867	4,688	579	338	660	1,602
Distance travelled ('000 km)	1,314,132	794,444	75,140	98,175	79,575	266,798
Average distance ('000 km)	167	169	130	290	121	167
Semi-trailers (No.)	8,114	4,031	416	437	687	2,543
Other (No.)	913	402	50	7	171	283
Total distance ('000 km)	1,348,842	818,209	78,185	98,953	80,934	272,561
Fuel consumed ('000 L)	472,647	260,741	37,489	32,192	35,814	106,411

1. Excludes household goods movers.

## Summary statistics by type of movement, small for-hire carriers, 2004

	Intraprovincial		Extr	aprovincial carriers	rs		
	carriers	Total	Intraprovincial	Interprovincial	Ir	nternationa	
					Sub <sup>1</sup> total	<sup>1</sup> Into Canada	Out of Canada
Estimated number of carriers (No.)	3,376	3,332					
			thousands of	dollars			
Operating revenues	970,343	1,042,235	364,239	258,188	419,808	193,858	225,950
<b>Operating expenses</b> Transportation expenses Maintenance and garage expenses Administrative and general office expenses	<b>930,600</b> 699,238 103,319 128,042	<b>963,168</b> 734,387 101,363 127,417	<b>342,194</b> 261,429 32,276 48,489	<b>244,320</b> 189,702 24,373 30,245	<b>376,654</b> 283,256 44,714 48,683	<b>173,921</b> 130,807 20,823 22,291	<b>202,733</b> 152,449 23,891 26,392
Full time employees (No.)	9,046	10,254					
Salaries and wages (\$'000)	241,902	208,376					
			numbe	r			
Equipment operated Straight trucks Road tractors Semi-trailers Other	<b>13,931</b> 3,218 4,002 5,340 1,371	<b>18,463</b> 710 8,222 8,943 588	···· ··· ···	··· ··· ···	···· ··· ···	···· ··· ···	···· ··· ···

# Table 6 Summary statistics by province or territory of domicile, small for-hire carriers, 2004

	Canada	Newfoundland and Labrador	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario
Estimated number of carriers (No.)	6,708	61	х	117	183	1,587	2,496
			thous	sands of dollars			
Operating revenues	2,012,578	16,821	x	45,715	39,943	496,256	666,893
Operating expenses	1,893,767	17,540	x	44,030	35,965	454,610	609,713
Salaries and wages	450,279	4,696	х	11,811	8,714	117,394	121,903
Benefits	8,912	Х	х	167	212	2,704	1,827
Fuel	372,736	5,895	х	11,211	8,851	72,959	140,738
Owner operator expenses	85,572	Х	х	828	366	19,606	35,935
Purchased transport	258,405	851	х	4,463	4,044	48,800	106,636
Maintenance	204,682	1,725	х	5,311	3,959	64,182	56,878
Depreciation	189,036	1,661	х	4,173	4,135	49,776	55,764
Insurance	63,766	838	х	1,776	1,164	13,693	17,105
Rent	77,597	313	х	688	1,914	19,065	18,129
Other expenses	182,782	1,328	х	3,603	2,607	46,431	54,799
Full time employees (No.)	19,300	x	x	421	832	5,386	5,456
	Manitoba	Saskat- chewan	Alberta	British Columbia	Yukon	Northwest Territories	Nunavut
Estimated number of carriers (No.)	137	254	712	1,129	х	x	0
			thou	dands of dollars			
- Operating revenues	50,879	81,514	284,127	316,085	x	x	0
	49,970	78,232	276,720	312,690			0
Operating expenses	<b>49,970</b> 13,879	16.880	65.669		X	x	0
Salaries and wages Benefits	13,879	392	1,745	84,984	X	X	
				1,725	X	X	0
Fuel	13,919	14,813	43,837	57,172	X	x	0
Owner operator expenses	1,695	2,016	16,049	8,771	X	X	0
Purchased transport Maintenance	4,123 3,579	12,185 10,939	40,847 25,550	35,229 31,130	x	x	0
Depreciation	3,579 4,134	6,861	25,550 38,763	22,785	x	x	0
	4,134	3,503	9,774	13,527	x	x	0
Insurance	1,700	3,503	9,774 11,698	20,542	x	x	0
Rent Other expenses	4,982	3,034 7,609	22,788	20,542 36,826	x x	X X	0
Full time employees (No.)	520	567	2,532	3,284	x	x	0

## Number of employees by owned and leased vehicle and by province or territory of domicile, small for-hire carriers, 2004

	Canada	Newfoundland and Labrador	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario
				number			
Estimated number of carriers	6,708	61	x	117	183	1,587	2,496
Employees Drivers							
Full time	15,355	х	х	329	603	4,145	4,530
Part time	3,123	х	х	73	473	655	821
Other employees							
Full time Part time	3,944	X X	x	92 60	229 308	1,242 415	926
	2,677	X	х	60	308	415	1,065
Total - drivers and other employees Full time Part time	19,300 5,800	x x	x x	421 133	832 781	5,386 1,070	5,456 1,886
	Manitoba	Saskat- chewan	Alberta	British Columbia	Yukon	Northwest Territories	Nunavut
				number			
Estimated number of carriers	137	254	712	1,129	х	х	0
Employees Drivers							
Full time Part time	402 72	457 149	1,955 447	2,672 398	x x	x x	0 0
Other employees							
Full time Part time	118 43	110 105	578 478	611 187	x x	x x	0 0
Total - drivers and other employees Full time Part time	520 115	567 254	2,532 925	3,284 585	x x	x x	0 0

## Equipment operated by province or territory of domicile, small for-hire carriers, 2004

		Owne	d and leased		
	Straight trucks	Road tractors	Semi- trailers	Other equipment	Total
			number		
Newfoundland and Labrador	59	119	187	24	389
Prince Edward Island	х	х	х	х	х
Nova Scotia	64	318	499	42	922
New Brunswick	49	590	800	20	1,458
Québec	863	3,055	3,411	386	7,715
Ontario	1,071	3,905	3,839	439	9,254
Manitoba	x	x	x	х	957
Saskatchewan	71	431	687	46	1,235
Alberta	803	1,948	2,267	586	5,604
British Columbia	878	1,426	1,962	373	4,639
Yukon	х	x	x	х	x
Northwest Territories	х	х	х	х	х
Nunavut	0	0	0	0	0
Canada					
Owned and leased	3,928	12,224	14,282	1,959	32,394
Operated by owner operator	876	4,285	2,456	72	7,689

Note(s): Some totals may not add due to rounding.

### Table 9

# Estimated annual distance travelled by owned and leased vehicle and by province or territory of domicile, small for-hire carriers, 2004

	Total	Straight	Road
		trucks	tractors
	thou	sands kilometres	
Newfoundland and Labrador	13,230	2,069	11,161
Prince Edward Island	8,306	X	x
Nova Scotia	40,159	3,703	36,456
New Brunswick	171,255	3,970	167,285
Quebec	471,623	39,800	431,823
Ontario	597,880	59,500	538,380
Manitoba	43,949	х	х
Saskatchewan	60,367	3,972	56,395
Alberta	301,415	43,419	257,996
British Columbia	217,461	45,433	172,028
Yukon	666	х	х
Northwest Territories	1,378	х	х
Nunavut	0	0	0
Canada	1,927,688	204,800	1,722,888

## Summary statistics, owner operators, 2000 to 2004

	2004	2003	2002	2001	2000
Estimated number of owner operators (No.)	35,609	36,281	35,085	35,931	35,979
_		thou	isands of dollars		
Operating revenues	7,443,278	7,397,099	7,023,352	6,598,667	6,329,018
Operating expenses	6,771,732	6,761,844	6,566,395	5,935,630	5,709,523
Salaries and wages	1,465,703	1,539,416	1,511,473	1,339,347	1,171,309
Benefits	27,790	25,105	32,455	22,420	20,526
Fuel	1,719,729	1,460,718	1,595,854	1,539,092	1,661,371
Owner operator expenses	0	0	0	0	0
Purchased transport	721,180	845,089	744,175	571,852	499,409
Maintenance	774,732	740,397	618,103	601,029	522,049
Depreciation	676,058	716,735	789,964	769,132	768,629
Insurance	296.424	252,684	248,801	217.338	186,451
Rent	240,164	223,703	246,777	172.929	171,084
Other expenses	849,953	957,998	778,792	702,491	708,696
Full time employees <sup>1</sup> (No.)	58,604	62,518	62,400	60,799	58,990
Equipment operated (No.)	84,125	87,925	90,048	83,744	85,118

1. Working owner included.

**Note(s):** Some totals may not add due to rounding.

# Table 11Distribution of owner operators by carrier types and by region of domicile, owner operators, 2004

	Owner operat	Total		
	For-hire carriers	Private carriers	Both	
		number		
Atlantic	1,854	325	173	2,352
Quebec	6,104	1,473	670	8,247
Ontario	9,238	2,769	203	12,210
Prairies	6,470	1,531	475	8,476
British Columbia	2,438	1,693	149	4,280
Territories	32	6	5	43
Canada	26,136	7,797	1,675	35,608

## Summary statistics by size, owner operators, 2004

	Total	Small enterprises	Medium and large enterprises
		(\$30,000 to \$999,999)	(\$1 million and over)
Estimated number of owner operators (No.)	35,609	35,213	396
	th	ousands of dollars	
Operating revenues	7,443,278	6,635,218	808,060
Operating expenses Salaries and wages 1 Fuel Purchased transport 2 Maintenance Depreciation Other expenses 3	6,771,732 1,493,493 1,719,729 721,180 774,732 676,058 1,386,541	<b>5,984,531</b> 1,279,650 1,618,642 469,998 725,290 609,777 1,281,174	<b>787,201</b> 213,842 101,087 251,181 49,442 66,281 105,367
Number of employees <sup>4</sup> (No.)	74,221	70,610	3,610
Equipment operated (No.) Straight trucks Road tractors	11,911 39,739	11,454 38,002	457 1,737

1. Includes employee benefits.

Includes employee benefits.
 Includes driver services, vehicule lease or rent, total purchased transportation and load broker services.
 Includes terminal and insurance expenses.
 Working owners, full and part time employees are included.

### Table 13 Summary statistics by type of activity, local transport<sup>1</sup>, owner operators, 2004

Local carriers	Total	General freight	Bulk liquids	Dry bulk materials	Forest products	Other commodities
Estimated number reporting (No.)	16,110	4,927	1,313	5,970	1,522	2,378
			thousands	of dollars		
Operating revenues	3,114,693	965,308	405,000	829,155	393,166	522,064
Operating expenses	2,784,226	857,674	364,640	726,505	367,305	468,102
Salaries and wages	664,473	203,771	117,050	157,799	74,795	111,058
Benefits	12,374	2,587	2,427	4,481	703	2,176
Fuel	610,067	196,106	54,971	166,219	84,669	108,102
Owner operator expenses	0	0	0	0	0	0
Purchased transport	311,583	104,038	38,835	84,095	30,527	54,088
Maintenance	320,510	90,685	42,302	89,492	51,083	46,948
Depreciation	289,677	76,588	46,956	75,666	44,912	45,555
Insurance	120,196	37,899	14,923	27,817	21,186	18,371
Rent	93,049	24,430	10,768	38,579	5,673	13,599
Other expenses	362,296	121,568	36,407	82,358	53,758	68,205
Full time employees <sup>2</sup> (No.)	26,578	8,199	2,794	8,337	2,831	4,417
Equipment operated (No.)	35,589	9,047	3,350	12,426	4,663	6,103
Straight trucks (No.)	9,837	2,810	944	5,042	160	881
Distance travelled ('000 km)	511,577	150,889	45,973	251,940	8,418	54,357
Average distance ('000 km)	52	54	49	50	53	62
Road tractors (No.)	13,327	4,416	1,299	2,785	2,190	2,637
Distance travelled ('000 km)	1,220,049	339,052	119,577	246,243	208,806	306,371
Average distance ('000 km)	92	77	92	88	95	116
Semi-trailers (No.)	9,972	1,661	896	3241	2,098	2,076
Other (No.)	2,454	160	211	1359	216	508
Total distance ('000 km)	1,731,627	489,941	165,550	498,183	217,225	360,728
Fuel consumed ('000 L)	755,574	191,067	78,809	221,111	110,748	153,839

1. Excludes household goods movers.

Working owner included.
 Note(s): Some totals may not add due to rounding.

## Summary statistics by type of activity, long-distance transport<sup>1</sup>, owner operators, 2004

Long distance carriers	Total	General freight	Bulk liquids	Dry bulk materials	Forest products	Other commodities
Estimated number of owner operators (No.)	18,869	9,757	911	2,021	1,712	4,468
			thousands	of dollars		
Operating revenues	4,164,027	1,958,264	279,994	503,200	407,992	1,014,577
Operating expenses	3,827,102	1,833,437	258,429	458,439	372,711	904,086
Salaries and wages	768,786	365,942	57,293	87,431	83,785	174,335
Benefits	13,993	5,930	1,259	1,666	2,493	2,645
Fuel	1,081,797	529,104	64,989	119,277	99,817	268,610
Owner operator expenses	0	0	0	0	0	0
Purchased transport	373,451	166,036	33,190	88,649	20,280	65,296
Maintenance	440,830	192,473	32,274	43,118	60,162	112,803
Depreciation	379,801	172,597	23,562	44,028	41,464	98,150
Insurance	169,376	82,108	11,692	17,704	17,026	40,846
Rent	134,203	81,359	7,423	11,138	8,865	25,418
Other expenses	464,865	237,888	26,747	45,428	38,818	115,984
Full time employees <sup>2</sup> (No.)	30,067	16,090	1,583	3,374	2,830	6,190
Equipment operated (No.)	46,983	23,111	1,883	4,822	5,083	12,084
Straight trucks (No.)	1,533	1,040	21	241	94	137
Distance travelled ('000 km)	112,709	84,315	1,058	17,941	2,849	6,546
Average distance ('000 km)	74	81	50	74	30	48
Road tractors (No.)	25,834	13,105	1,450	2,615	2,396	6,268
Distance travelled ('000 km)	4,349,915	2,128,854	295,598	388,865	345,247	1,191,351
Average distance ('000 km)	168	162	204	149	144	190
Semi-trailers (No.)	17,474	7,522	389	1688	2,414	5,461
Other (No.)	2,146	1,445	23	279	180	219
Total distance ('000 km)	4,462,624	2,213,169	296,656	406,806	348,096	1,197,897
Fuel consumed ('000 L)	1,902,815	812,248	150,489	174,668	180,185	585,225

1. Excludes household goods movers.

Working owner included.
 Note(s): Some totals may not add due to rounding.

# Table 15Summary statistics by type of activity, owner operators, 2004

	Total	General freight	Household	Bulk liquids	Dry bulk materials	Forest products	Other commodities
Estimated number of owner operators (No.)	35,610	14,685	630	2,224	7,991	3,235	6,845
			thou	sands of dolla	ars		
Operating revenues	7,443,279	2,923,572	164,559	684,994	1,332,355	801,158	1,536,641
Operating expenses	6,771,732	2,691,109	160,404	623,069	1,184,945	740,016	1,372,189
Salaries and wages	1,465,703	569,713	32,444	174,343	245,230	158,580	285,393
Benefits	27,789	8,518	1,421	3,686	6,148	3,195	4,821
Fuel	1,719,729	725,210	27,864	119,960	285,496	184,487	376,712
Owner operator expenses	0	0	0	0	0	0	0
Purchased transport	721,181	270,075	36,146	72,025	172,744	50,807	119,384
Maintenance	774,731	283,157	13,392	74,577	132,610	111,244	159,751
Depreciation	676,057	249,185	6,579	70,518	119,694	86,376	143,705
Insurance	296,424	120,007	6,852	26,615	45,521	38,212	59,217
Rent	240,163	105,789	12,913	18,191	49,716	14,538	39,016
Other expenses	849,952	359,456	22,791	63,154	127,786	92,576	184,189
Full time employees <sup>1</sup> (No.)	58,605	24,289	1,959	4,378	11,711	5,661	10,607
Equipment operated (No.)	84,125	32,159	1,552	5,233	17,248	9,746	18,187
Straight trucks (No.)	11,912	3,850	543	965	5,282	254	1,018
Distance travelled ('000 km)	660,730	235,203	36,444	47,031	269,882	11,267	60,903
Average distance ('000 km)	55	61	67	49	51	44	60
Road tractors (No.)	39,739	17,521	579	2,749	5,400	4,585	8,905
Distance travelled ('000 km)	5,634,546	2,467,906	64,583	415,174	635,108	554,053	1,497,722
Average distance ('000 km)	142	141	112	151	<sup></sup> 118	121	168
Semi-trailers (No.)	27,876	9,183	430	1285	4,929	4,512	7,537
Other (No.)	4,599	1,605	0	234	1,637	396	727
Total distance ('000 km)	6,295,277	2,703,110	101,027	462,205	904,989	565,321	1,558,625
Fuel consumed ('000 L)	2,703,062	1,003,315	44,673	229,298	395,779	290,933	739,064

1. Working owner included.

# Table 16Summary statistics by type of movement, owner operators, 2004

	Intraprovincial							
	carriers —	Total	Intraprovincial	Interprovincial	International			
					Sub total	Into Canada	Out of Canada	
Estimated number of carriers (No.)	20,589	15,020						
			thousands of	dollars				
Operating revenues	3,543,982	3,899,296	1,276,277	998,242	1,624,777	754,680	870,097	
<b>Operating expenses</b> Transportation expenses Maintenance and garage expenses Administrative and general office expenses	<b>3,166,578</b> 2,238,535 375,182 552,861	<b>3,605,155</b> 2,584,298 399,551 621,306	<b>1,183,798</b> 866,224 127,689 189,885	<b>915,207</b> 649,077 104,544 161,586	<b>1,506,150</b> 1,068,997 167,318 269,835	<b>698,355</b> 492,114 78,479 127,762	807,795 576,883 88,839 142,073	
Full time employees (No.)	29,767	28,836						
Salaries and wages (\$'000)	732,922	732,781						
			numbe	r				
Equipment operated Straight trucks Road tractors Semi-trailers Other	<b>42,673</b> 9,581 17,490 12,490 3,112	<b>41,452</b> 2,330 22,248 15,386 1,488	••• ••• •••	••• ••• •••	••• ••• •••	••• ••• •••	••• ••• •••	

# Table 17Summary statistics by province or territory of domicile, owner operators, 2004

	Canada	Newfoundland and Labrador	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario
Estimated number of owner operators (No.)	35,609	354	125	690	1,184	8,247	12,211
			thous	ands of dollars			
Operating revenues	7,443,278	92,557	27,215	149,041	280,300	1,701,744	2,353,496
Operating expenses	6,771,732	88,416	26,176	136,127	259,764	1,547,550	2,139,853
Salaries and wages	1,465,703	19,395	6,193	29,921	57,271	349,487	366,902
Benefits	27,790	407	0	507	577	6,906	7,381
	1,719,729 0	23,397 0	9,384 0	44,683 0	79,839 0	321,426 0	629,954 0
Owner operator expenses Purchased transport	721.180	17,980	755	15.094	23.065	157,482	269,182
Maintenance	774.732	6,451	2.712	11,935	27,517	235.168	199,295
Depreciation	676.058	6,926	3,279	14.015	28,599	146,222	198.510
Insurance	296,424	3,206	808	4,918	11,222	60,180	89.758
Rent	240,164	2,206	321	2,742	3,435	69,034	69,739
Other expenses	849,953	8,448	2,724	12,311	28,238	201,645	309,132
Full time employees (No.)	58,604	760	229	1,164	2,123	14,203	19,645
	Manitoba	Saskat- chewan	Alberta	British Columbia	Yukon	Northwest Territories	Nunavut
Estimated number of owner operators (No.)	1,473	1,418	5,585	4,279	25	18	0
			thous	ands of dollars			
- Operating revenues	295,831	342,184	1,336,079	845,752	4036	15044	0
Operating expenses	267,077	311,755	1,239,762	737,817	3668	13768	0
Salaries and wages	54,152	66,508	327,178	179,059	780	8857	0
Benefits	660	1,786	6,966	2,593	5	0	0
Fuel	92,461	80,616	259,144	177,153	1199	473	0
Owner operator expenses	0	0	0	0	0	0	0
Purchased transport	24,840 22,428	29,991 37.810	118,085 153.669	64,164 76.620	61 719	481 410	0
Maintenance Depreciation	22,428	37,810	153,669	76,620 82,521	239	1372	0
Insurance	7.560	14,489	61,802	42.116	239 165	200	0
Rent	8.525	7.043	51.290	25.075	70	683	0
Other expenses	29,644	36,596	130,975	88,516	431	1292	0
Full time employees (No.)	2,422	2,399	9,375	6,204	39	42	0

## Number of employees by type and by province or territory of domicile, owner operators, 2004

	Canada	Newfoundland and Labrador	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario
				number			
Estimated number of owner operators	35,609	354	125	690	1,184	8,247	12,211
Employees Drivers							
Full time Part time	50,797 8,037	624 187	207 42	1,014 122	1,852 177	12,348 1,542	17,282 1,758
Other Employees Full time Part time	7,806 7,580	136 107	22 48	150 124	270 155	1,854 1,160	2,362 2,767
Total Full time Part time	58,604 15,617	760 294	229 90	1,164 245	2,123 332	14,203 2,701	19,645 4,524
	Manitoba	Saskat- chewan	Alberta	British Columbia	Yukon	Northwest Territories	Nunavut
				number			
Estimated number of owner operators	1,473	1,418	5,585	4,279	25	18	0
Employees Drivers Full time Part time	2,187 302	2,144 634	8,091 1,787	4,976 1,471	x x	x x	0 0
Other Employees Full time Part time	235 477	255 530	1,284 1,653	1,228 549	x x	x x	0 0
Total Full time Part time	2,422 779	2,399 1,164	9,375 3,440	6,204 2,020	x x	X X	0

Note(s): Some totals may not add due to rounding.

# Table 19 Equipment operated by province or territory of domicile<sup>1</sup>, owner operators, 2004

	Straight trucks	Road tractors	Semi-trailers	Other equipment	Total			
		number						
Newfoundland and Labrador	152	547	557	30	1,285			
Prince Edward Island	х	x	х	х	605			
Nova Scotia	276	762	573	150	1,762			
New Brunswick	107	1,714	1,129	76	3,026			
Quebec	2,553	9,464	8,500	1,348	21,865			
Ontario	4,561	12,901	7,047	1,541	26,050			
Manitoba	356	1,852	987	54	3,251			
Saskatchewan	223	1,787	1,362	73	3,445			
Alberta	2,216	6,177	4,122	670	13,184			
British Columbia	1,349	4,329	3,211	652	9,540			
Yukon	x	x	x	х	57			
Northwest Territories	х	х	х	х	57			
Nunavut	0	0	0	0	0			
Canada	11,911	39,739	27,876	4,600	84,125			

1. Owned and leased by a company.

## Estimated annual distance travelled by type of vehicle and by province or territory of domicile, owner operators, 2004

	Total	Straight	Road			
	distance	trucks	tractors			
	thousands kilometres					
Newfoundland and Labrador	66,401	6,435	59,966			
Prince Edward Island	23,959	X	х			
Nova Scotia	115,024	11,469	103,555			
New Brunswick	244,827	4,591	240,237			
Quebec	1,379,010	130,147	1,248,863			
Ontario	2,079,252	286,389	1,792,863			
<i>I</i> anitoba	342,610	22,203	320,406			
Saskatchewan	254,257	10,639	243,619			
Alberta	987,814	110,425	877,389			
British Columbia	792,759	75,493	717,267			
ſukon	3481	х	х			
Northwest Territories	5884	х	х			
Nunavut	0	0	0			
Canada	6,295,277	660,731	5,634,546			

## Methodology and data quality

## Introduction

This section describes the methodology of the Annual Motor Carriers of Freight Survey of Small For-hire Carriers and Owner Operators. Included are descriptions of the target and survey populations, the sample design, and the data processing and estimation methods. The quality of the data presented in this publication is discussed and quality indicators for some key statistics are given.

This information will provide the user with a better understanding of the strengths and limitations of the data, and how they can be effectively used and analyzed. The information may be of particular importance when making comparisons with data from other surveys or sources of information, and in drawing conclusions regarding changes over time, differences between geographic areas and differences among sub-groups of the target population.

Several terms used in this chapter are defined below:

Target Population: all units (e.g. carriers) for which the information is required.

**Survey Population**: all units (e.g. carriers) for which the survey can realistically provide information. The survey population may differ from the target population due to the operational difficulty of identifying all the units that belong to the target population.

**Survey Frame**: a list of all units in the survey population that carries classification information (e.g. industrial, geographical and size) of the units. This list is used for sample design and selection.

**Stratification**: a non-overlapping partition of the survey population into relatively homogeneous groups with respect to certain characteristics such as geographical and industrial classification, size, etc. These groups are called strata and are used for sample allocation and selection.

**Sampling weight**: a raising factor attached to each sampled unit to obtain estimates for the population from a sample. The basic concept of the sampling weight can be explained by using the representation rate. For example, if 2 units are selected out of 10 population units at random, then each selected unit represents 5 units in the population including itself, and is given the sampling weight of 5. A survey with a complex sample design requires a more complicated way of calculating the sampling weight. However, the sampling weight is still equal to the number of units in the population that the unit represents.

## **Data Sources and Methodology**

## A. Survey Objectives

The objective of this survey is to obtain information on small for-hire carriers and owner operators in terms of their structure and performance on an annual basis.

## **B.** Populations

### **Target Population**

The target population includes all Canadian-domiciled for-hire motor carriers (companies) with annual operating revenues greater than or equal to \$30 thousand and less than \$1 million, as well as all Canadian-domiciled owner operators with annual operating revenues of \$30 thousand and more. Courier and messenger services are not covered by this survey, nor are private carriers.

#### **Survey Population**

The 2004 survey population consists of all companies on Statistics Canada's Business Register, the Central Frame Data Base (CFDB), classified as trucking companies with annual gross business income greater than or equal

to \$30 thousand and less than \$1 million, or with annual gross business income of \$1 million and more if these companies are known as owner operators. In addition, the survey population includes some companies from an administrative file of 2004 tax filers, classified as trucking companies with annual operating revenues greater than or equal to \$30 thousand and less than \$1 million that are not yet found on the Business Register.

## C. Sample Design

The number of trucking companies on the survey frame is large and for that reason a sample of them is selected to represent the population. The survey uses a two-phase sample design, where a large first-phase sample is selected and the second-phase sample is drawn as a sub-sample from these companies. The design of the sampling procedures used in each phase is described below.

### **First-Phase**

The first-phase sample is drawn independently for incorporated and unincorporated companies. The list of unincorporated companies on the Business Register is classified using province/territory of domicile, North American Industrial Classification System (NAICS) code, and size (measured by annual gross business income). Companies with the same classification form a stratum within which a first-phase sample is selected. The complete list of incorporated companies on the survey frame is included in the first-phase sample

### Second-Phase

The second-phase sample is a sub-sample of the first-phase sample. The companies included in the first-phase sample are again classified using province/territory of domicile, NAICS code, and size. Companies with the same classification form a stratum within which a second-phase sample is selected.

The overall size of the second phase sample and its allocation among strata are determined to satisfy precision requirements for provincial estimates under given cost constraints. The coefficient of variation is used as the measure of precision. The sample size and the estimated population size by province or territory of domicile are given in **Table 21**.

Estimated population size and sample size by province or territory of domicile, annual motor carriers of freight survey: small for-hire carriers and owner operators, 2004

	Estimated carriers in survey population	Carriers selected	In-scope carriers selected
		Phase 1	Phase 2
	n	umber	
Newfoundland and Labrador	428	343	117
Prince Edward Island	153	131	51
Nova Scotia	812	542	195
New Brunswick	1,385	851	254
Quebec	10,056	7,547	526
Dntario	14,993	7,301	732
<i>I</i> lanitoba	1,656	819	242
Saskatchewan	1,703	1,146	268
Alberta	6,440	5,337	515
British Columbia	5,564	3,042	430
lukon	30	30	21
Northwest Territories	22	29	18
Nunavut	0	0	0
Canada	43,242	27,118	3,369

## **D. Data Collection and Processing**

During the collection period, financial data is obtained for all units in the first-phase sample from an administrative file of tax filers. The companies included in the second-phase sample are contacted via telephone interview in order to collect operational data.

The survey data are checked for errors and inconsistencies. Problems or missing data are replaced with consistent values (are imputed) using Statistics Canada's Generalized Edit and Imputation System. The system imputes data using imputation rules that select representative data from another carrier. The data is then verified by subject matter specialists.

## E. Estimation

Since only a sample of carriers was contacted for the AMCF survey, the individual values are weighted to represent the whole industry within the scope of the survey. The value of each carrier is multiplied by the weight for that carrier, and then the weighted data from all sampled carriers belonging to a given estimation domain (e.g. Ontario) are summed to obtain the estimate.

### F. Reference Period

The reference period for collection purposes is the firm's own 12-month accounting period whose year-end occurred on any date from April1, 2004 to March 31, 2005, inclusive.

## **Data Quality**

Any survey suffers from errors. While considerable effort is made to ensure a high standard throughout all survey operations, the resulting estimates are inevitably subject to a certain degree of error. The total survey error is defined as the difference between the survey estimate and the true population value for which the survey estimate aims. The total survey error consists of two types of errors; sampling and non-sampling errors. Sampling error occurs when

a sample survey is carried out. Non-sampling errors arise due to various reasons other than sampling. These two types of errors are further explained below.

### A. Sampling Error

The Annual Motor Carriers of Freight Survey of Small For-hire Carriers and Owner Operators is subject to sampling error. When a sample is selected from a population, estimates based on the sample data will not in general be exactly the same as what would be obtained from a census of that population.

The difference between the estimates from a sample survey and a census conducted under the same conditions is referred to as the sampling error. Factors such as the sample size, the sample design, the variability of the population characteristic under study and the estimation method affect the sampling error. In general, a larger sample size produces a smaller sampling error. If the population is very heterogeneous like the trucking industry, a large sample size is needed to obtain a reliable estimate.

## **B. Non-sampling Errors**

The sampling error is only one component of the total survey error. Errors arising from all phases of a survey are called non-sampling errors. For example, non-sampling error can arise when a respondent provides incorrect information or does not answer certain questions or when a unit in the target population is omitted or covered more than once or when a unit that is out of scope for the survey is included by mistake or when errors occur in data processing, such as coding and capture errors.

The effects of some of the non-sampling errors will cancel out over a large number of observations, but systematically occurring errors (i.e. those that do not tend to cancel) will contribute to a bias in the estimates. For example, if carriers consistently tend to under-report their revenues, then the resulting estimate of the total revenues will be below the true population total.

As the sample size becomes closer to the population size, the sampling error component of the total survey error is expected to decrease. However, this is not necessarily true for the non-sampling error component.

In general, non-sampling errors are difficult to evaluate and special studies must be conducted to estimate them. However, certain measures such as imputation rates are easily obtained and can be used as indicators for portions of the non-sampling errors. Different types of non-sampling error together with their associated measures are discussed below.

#### I. Coverage Errors

Coverage errors arise when the survey frame does not adequately cover the target population. As a result, certain units belonging to the target population are either excluded (under coverage), or counted more than once (over coverage). In addition, out of scope units may be present in the survey frame (over coverage). Errors in the North American Industrial Classification Standard (NAICS) code on the survey frame may also result in either over or under coverage of the trucking industry.

#### **II. Response Errors**

Response errors occur when a respondent provides incorrect information due to misinterpretation of the survey questions or lack of correct information, gives wrong information by mistake, or is reluctant to disclose the correct information. Large response errors are likely to be caught during editing; however, others may simply go through undetected.

#### III. Non-response Errors

Non-response errors can occur when a respondent does not respond at all (total non-response) or responds only to some questions (partial non-response). These errors can have a serious effect if non-respondents are systematically different from respondents in survey characteristics and/or the non-response rate is high.

#### **IV. Processing Errors**

Apart from coverage, response and non-response errors as described above, errors that occur during the processing of the data constitute another component of the non-sampling error. Processing errors can arise in data capture, coding, transcription, imputation, outlier detection and treatment, and other types of data handling.

A coding error occurs when a field is coded erroneously because of misinterpretation of coding procedures or poor judgment (e.g. errors in NAICS coding). A data capture error occurs when data are misinterpreted or keyed incorrectly. For this survey, errors in financial data can occur when the data are being transcribed from the tax returns.

Once data are coded and captured, they are subject to editing and imputation of missing or erroneous values. The quality of the data depends on the amount of imputation and the difference between the imputed and the true, but unknown, values. Using invalid assumptions when developing the imputation system could result in bias in the imputed data.

The non-sampling error as a whole is only one part of the total survey error but its contribution may be important. To minimize the effect of this type of error, a quality assurance program is carried out for this survey. For instance, various quality assurance procedures are exercised at the data capture step. The data editing procedures identify some inconsistencies in the data structure and the imputation procedures correct the identified inconsistencies.

### C. Some Measures of Data Quality

This section presents some indicators of the data quality of the Annual Motor Carriers of Freight Survey of Small For-hire Carriers and Owner Operators as shown in Table 22. To assist the user in evaluating the potential effect of non-response and imputation, relative imputation rates for key characteristics (number of employees, fuel consumed, and operating revenues) are presented. The relative imputation rate is defined as the proportion of the corresponding published estimate that is accounted for by imputed data. For example, assume that the total published estimate is \$25 million, composed of \$20 million from non-imputed data and \$5 million from imputed data. Then the relative imputation rate is 0.2 (\$5 million divided by \$25 million) or 20%. The lower the relative imputation rate, the more reliable the published estimate.

# Quality measures by province or territory of domicile, annual motor carriers of freight survey: small for-hire carriers and owner operators, 2004

		For-hire carriers			Owner-operators	
	Response rate	Relative imputation rate	Coefficient of variation	Response rate	Relative imputation rate	Coefficient of variation
		Tale			Tate	Variation
			percen			
Newfoundland and Labrador Total employment	69.0 	 27.5	 13.4	70.5	 41.1	 11.5
Fuel consumed <sup>1</sup>		50.0	21.2		49.8	8.8
Total revenues		0.0	16.9		0.0	10.3
Prince Edward Island	83.3			60.6		
Total employment		17.9	18.2		40.8	15.8
Fuel consumed 1		51.7	24.0		63.9	14.0
Total revenues		0.0	18.5		6.5	15.5
Nova Scotia	85.2			79.4		
Total employment		14.8	13.8		19.7	8.2
Fuel consumed 1		38.6	12.7		30.9	10.5
Total revenues		0.0	11.0		0.0	6.3
New Brunswick	85.2			79.0		
Total employment		51.1	55.3		27.1	9.0
Fuel consumed <sup>1</sup> Total revenues		46.3 0.0	42.1 13.7		25.5 0.0	11.1 8.4
		0.0	13.7		0.0	0.4
Québec	88.2			77.1		
Total employment Fuel consumed <sup>1</sup>		9.0 37.6	14.2 11.9		23.4 37.4	5.4
Total revenues		0.5	6.5		0.0	5.6 3.9
		0.5	0.5		0.0	5.5
Ontario	72.2			62.5		
Total employment Fuel consumed <sup>1</sup>		44.6 50.4	13.0 16.5		44.0 52.7	10.0 8.5
Total revenues		0.0	11.5		0.0	8.3
					•••	
Manitoba	79.8	20.1		75.0		 9.9
Total employment Fuel consumed <sup>1</sup>		20.1	11.3 12.5		15.0 31.2	9.9
Total revenues		0.0	10.1		0.0	6.2
Saskatchewan	70.5			64.7		
Total employment	70.5	 31.4	8.4	64.7	30.8	 9.0
Fuel consumed <sup>1</sup>		31.1	9.5		48.7	10.1
Total revenues		0.0	8.5		0.0	5.8
Alberta	77.0			72.8		
Total employment		20.7	15.7	72.0	27.2	13.2
Fuel consumed 1		25.8	22.6		42.2	12.6
Total revenues		0.0	10.4		0.6	5.6
British Columbia	79.6			69.7		
Total employment		25.0	12.7		40.6	12.1
Fuel consumed 1		29.9	12.9		67.8	19.0
Total revenues		0.0	8.8		0.0	7.8
Yukon	66.7			44.4		
Total employment		43.1	1.6		32.4	0.0
Fuel consumed <sup>1</sup> Total revenues		28.7 0.0	1.1 2.6		53.6 0.0	0.0 0.0
		0.0	2.0		0.0	0.0
Northwest Territories	66.7			46.7		
Total employment Fuel consumed <sup>1</sup>		68.6 37.2	8.9 20.3		37.0 39.1	2.7 3.0
Total revenues		0.0	7.5		0.0	2.0
Nunavut Total employment				100.0	0.0	0.0
Fuel consumed <sup>1</sup>					100.0	0.0
Total revenues					0.0	0.0
Canada	78.8			70.7		
Total employment	/6.6	27.4	6.5	70.7	32.4	4.3
Fuel consumed <sup>1</sup>		38.7	7.3		46.8	4.7
Total revenues		0.1	4.4		0.1	2.9

1. All the for-hire carriers in the AMCF sample (whether they had an actual annual operationg revenue less or over than \$1 million) were used to calculate the response and imputation rates presented in this table. See Section on Comparability of Data for more details.

A total response rate is also provided. This rate is defined as the number of carriers that responded to the survey divided by the total number of in-scope units in the sample.

As a measure of the sampling error, estimated coefficients of variation (CV) for some variables are presented in **Table 22**. CVs for other estimates may be obtained from the Transportation Division upon request. Note that the provided CV estimates do not consider the fact that some of the data were imputed and thus may underestimate the true CVs. The CV and the relative imputation rate should be considered simultaneously to make an assessment of the reliability of an estimate.

The quality of the estimates is classified as follows:

- \* Excellent : CV is 0,01% and 4,99%
- \* Very good : CV is 5,00% and 9,99%
- \* Good : CV is 10,00% and 14,99%
- \* Acceptable : CV is 15,00% and 24,99%
- \* Caution : CV is 25,00% and 34,99%
- \* Unreliable CV is larger than 35,00%

## **Comparability of Data**

For the 1999 reference year, changes were made to the derivation of certain financial variables from the administrative tax files. The variables for which historical comparison may be affected are transportation revenues, fuel expenses, Owner-operator expenses and miscellaneous expenses.

Effective for the 1998 reference year, the survey underwent a major redesign. The redesign involved major changes to the frame creation process, the sample design and the estimation strategy. The frame for 1998 was created from Statistics Canada's Business Register. The sample design at the second-phase has been optimized, and the estimation strategy now uses a calibration approach to make use of information that became available after the sample had been drawn (e.g. an updated frame is used in calculating the estimation weights to make use of updates to the Business Register since the sample was drawn). The overall effect of these changes is an improved reliability in the survey estimates. In particular, this improved reliability comes from i) an improved coverage of the target population (which results in an increase in the estimated number of in-scope companies), and ii) an improved precision in the survey estimates (i.e. lower coefficients of variation).

In order to improve the combined coverage of the trucking industry by the AMCF survey and its complement, the Quarterly Motor Carriers of Freight (QMCF) survey, a group of large companies will be included in the AMCF, effective for 1998. Since the QMCF uses the annual gross business income from the Business Register, which is not identical to the true annual operating revenues, to define the survey population, some companies in the QMCF target population (those with annual gross business income less than \$1 million, and actual annual operating revenues over \$1 million) are not included in the QMCF survey population. Although these companies do not fall into the target population for the AMCF, it was decided to include them in the AMCF survey population to improve the overall industry coverage of the two surveys. The effect of this is the addition of a small number of large companies to the AMCF survey population. Although the number of such companies is small, their large size leads to a noticeable increase in the survey estimates. In order to facilitate historical comparisons, separate domain estimates will be produced for i) companies with actual operating revenue less than \$1 million and ii) companies with actual operating revenue greater than or equal to \$1 million.

From 1995 to 1997, the survey covered for-hire carriers and owner operators with annual operating revenues greater than or equal to \$30 thousand and less than \$1 million. Starting with 1998, owner operators with annual operating revenues greater than or equal to \$1 million will also be covered.

From 1990 to 1995, the survey covered for-hire carriers and owner operators with annual operating revenues greater than or equal to \$25 thousand and less than \$1 million.

The survey data prior to the 1990 survey covered for-hire carriers with annual operating revenues of \$100 thousand or more. Owner operators were not included in the 1989 and preceding surveys.

#### Release date: June 2010

#### Symbols

The following standard symbols are used in Statistics Canada publications:

not available for any reference period not available for a specific reference period ••• not applicable 0 true zero or a value rounded to zero 0s value rounded to 0 (zero) where there is a meaningful distinction between true zero and the value that was rounded preliminary р r revised suppressed to meet the confidentiality requirements of the Statistics Act х Е use with caution F too unreliable to be published

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