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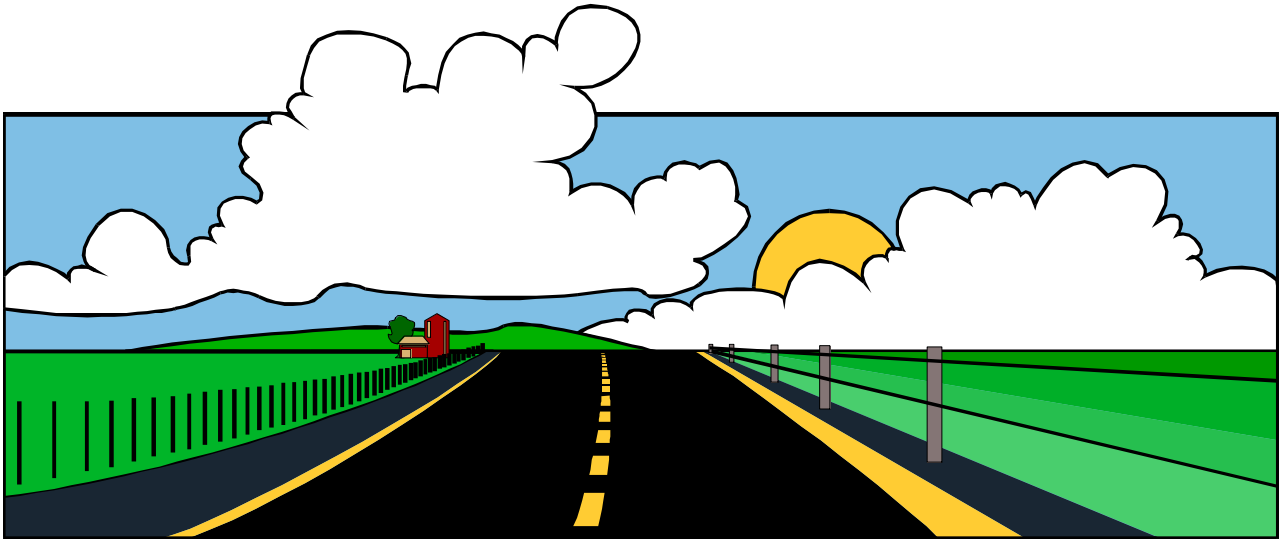
Canadian Vehicle Survey

Quarter 4, 1999



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Canadian Vehicle Survey

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Note of appreciation

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Symbols

The following standard symbols are used in Statistics Canada publications:

..	*figures not available.*
…	*figures not appropriate or not applicable.*
-	*nil or zero*
--	*amount too small to be expressed*
e	*estimated figures.*
p	*preliminary figures.*
r	*revised figures.*
x	*confidential to meet secrecy requirements of the Statistics Act.*

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A special note of appreciation goes to Transport Canada whose vision and funding made this survey possible.

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HIGHLIGHTS

- Over 17 million vehicles had valid registrations in Canada and were in-scope for the Canadian Vehicle Survey during this quarter.

- Between October 1 and December 31, 1999, these vehicles travelled an estimated 79 billion kilometres.

- During this quarter vehicles weighing less than 4 500 kilograms were driven an average of 4 300 kilometres while the largest of the trucks (trucks with gross weight 15 000 kilograms or more) were driven an average of 21 400 kilometres.

INTRODUCTION

Canadian transport activity statistics were inadequate due to the lack of any routine measurement of road vehicle activity. While road vehicles dominate passenger travel and freight traffic, no measures of total vehicle-kilometres, passenger-kilometres or tonne-kilometres were available.

The Canadian Vehicle Survey (CVS) was developed at the request of Transport Canada to fill this data gap. The survey provides annual estimates of the amount of road travel, broken down by types of vehicles and characteristics, such as age and sex of driver, time of day and season. The results will be the prime source of road vehicle use information for researchers and interested members of the public.

Transport Canada plans to combine this data with other data to use to improve road safety, monitor fuel consumption and deal with the impact of vehicle usage on the environment.

SURVEY OVERVIEW

The CVS is a voluntary vehicle-based survey that provides annual estimates of road vehicle activity (vehicle-kilometres, passenger-kilometres and tonne-kilometres) of vehicles registered in Canada. A quarterly sample of vehicles is drawn from a frame of vehicle registration files provided by the provincial and territorial governments.

The provincial component of the survey consists of two stages. The first stage is a computer assisted telephone interview (CATI) with the registered owners of the sampled vehicles. This interview is used to collect some general information on the usage of the vehicle as well as to ask the respondent to complete a seven-day trip log. The trip log is then mailed out. If respondents can not be contacted by phone, the seven-day trip log is mailed out with a short questionnaire to collect some of the information normally collected during the CATI.

The territorial component of the survey consists of two postcards, one that is mailed to the respondents at the beginning of the quarter and the second is mailed at the end of the quarter. The first postcard asks respondents to record the odometer reading at the beginning of the first day of the quarter. All those returning the first postcards are mailed second postcards asking them to record the odometer reading at the beginning of the first day of the next quarter. These two odometer readings allow the calculation of the distance the vehicle was driven during the quarter.

Survey collection began on February 1, 1999. Only eight provincial / territorial vehicle registration lists were received in time to be included in the sample at that time, but over the remainder of 1999, the other lists were received. Starting October 1, 1999, vehicles from all provinces and territories were included in the survey.

The CVS provides annual and quarterly estimates of road activity for vehicles registered in Canada. The estimates are provided by type of vehicle and other variables, such as driver and vehicle characteristics, time of day and season.

This document describes concepts, employed methods and discusses data quality for the fourth quarter of 1999.

Users who require additional information from Statistics Canada can obtain it from the Transportation Division upon request (613-951-2486, laroque@statcan.ca, fax: 613-951-0579).

CONCEPTS AND DEFINITIONS

3.1 THE POPULATION OF INTEREST

The population of interest includes all motor vehicles registered in Canada except trailers, motorcycles, off road vehicles (e.g., snowmobiles, dune buggies, amphibious vehicles) and special equipment (e.g., cranes, street cleaners, snowplows and backhoes) anytime during the survey reference period, i.e. fourth quarter of 1999.

3.2 DEFINITIONS OF ESTIMATED VARIABLES

Vehicle-kilometres is the distance traveled by vehicles on roads.

Passenger-kilometres is the sum of the distances traveled by individual passengers. Trucks with gross vehicle weight of 4.5 tonnes or more (see the *Vehicle Type* definition below) and urban buses are not required to report passengers. Therefore, these passengers are not included in the estimates of passenger-kilometres. Also the number of passengers is calculated as the average of the number of passengers at the beginning of each trip and the number of passengers at the end of each trip (see the *Trip Length* definition below) plus the driver.

Fuel purchased is the amount of fuel purchased to operate vehicles. This includes purchases for the off-road operation of the vehicle. However, these purchases are considered negligible.

3.3 DEFINITIONS OF VEHICLE CHARACTERISTICS

Vehicle type is the classification created for CVS based on the information available on the vehicle registration files or frame (see the 4.2.1 Sampling Frame for details). There are four vehicle types. *Buses* are identified first since it is by use rather than by weight. The remaining vehicles are then divided into three weight types: *light vehicles* with gross vehicle weights below 4.5 tonnes, *trucks* with gross vehicle weights of *4.5 tonnes or more and less than 15 tonnes*, and *trucks* with gross vehicle weights of *15 tonnes or more*.

Vehicle body type is determined by the respondent and not from the manufacturer or the frame. The respondent is asked to choose among: car, station wagon, van, sport utility vehicle, pick-up, straight truck, truck-tractor, bus and other. Unusual responses are not changed unless strong evidence against such a response is available.

Fuel type is derived based on the information available on the frame (see the 4.2.1 Sampling Frame for details). All vehicles are divided into three classes: vehicles powered by gasoline, vehicles powered by diesel fuel and vehicles powered by other energy source.

Vehicle model year is derived based on the information available on the frame (see the 4.2.1 Sampling Frame for details).

3.4 DEFINITIONS OF VEHICLE USAGE CHARACTERISTICS

Some characteristics are determined by the CVS definition of a *trip*. The definition of what delimits a trip depends on the *vehicle type*:

For *buses*, if any of the following events happened:

- a stop of more than 30 minutes

- a change of driver
- a change in the type of bus service
- all the passengers have been dropped off and another passenger trip begins (does not apply to scheduled urban buses)

For *light vehicle*, if any of the following events happened:
- a stop of more than 30 minutes
- a change of driver
- a change in the main trip purpose

For *trucks weighing 4.5 tonnes or more and less than 15 tonnes* if any of the following events happened:
- a stop of more than 30 minutes
- a change of driver
- a change of purpose or use
- a change in the truck configuration
- a change in the status of the load from loaded to unloaded or the reverse

For *trucks weighing 15 tonnes or more*, if any of the following events happened:
- a change of purpose or use
- a change in the truck configuration
- a change in the status of the load from loaded to unloaded or the reverse

For each trip (based on the above definition) the following information is collected:
- Beginning and end times and dates of the trip that are used to determine the *time of day* and *day of week* the trip takes place.
- *Driver age group* and *driver sex*. (For trucks weighing 15 tonnes or more, multiple drivers are allowed within one trip and individual information is collected within the trip for each of the drivers.)
- The *trip purpose* determined by the respondent. If there were several purposes for the trip, the respondent is asked to indicate the main purpose of the trip. Multiple trip purposes are not allowed. The choice of purpose is specific to the vehicle type.
- If *Dangerous goods* are carried (as defined by the Transportation of Dangerous Goods Act).
- *Number of kilometres traveled on roads with posted speed limit of 80km/h or more*.
- *Age group (0-4, 5-14 and 15 years and over) of passengers and the number of passengers within each group* to calculate passenger-km (buses and light vehicles only, see 3.2).
- *Truck configuration* (trucks only).
- *Number of pick-ups or deliveries* (trucks only).

METHODS

CVS has been designed as a quarterly survey. The fourth quarter of 1999 was the first time the results for all Canadian provinces and territories are available. The survey design also allows the calculation of annual estimates based on the data collected during the four quarters.

4.1 SURVEY DESIGN

4.1.1 Survey Population and Sampling Frame

The sampling frame was derived from the 13 jurisdiction vehicle registration lists (ten Provincial and three Territorial Governments) that were provided in July 1999 to Statistics Canada for the Canadian Vehicle Survey.

Thus, the survey population consists of motor vehicles with valid registrations in any province or territory in July 1999. Trailers, motorcycles, off road vehicles (e.g., snowmobiles, dune buggies, amphibious vehicles) and special equipment (e.g., cranes, street cleaners, snowplows and backhoes) are excluded from the survey. This population differs from the population of interest, e.g., vehicles that were registered after July 1999 are not included.

The incoming lists underwent thorough preparation procedure:

- First, out-of-scope vehicles are removed (trailers, motorcycles, construction equipment, parade vehicles, etc.).
- Second, vehicles with expired registration are removed.
- Then, records with duplicate Vehicle Identification Numbers (VIN) within each list are removed leaving the one updated most recently.
- Next, records with duplicate Vehicle Identification Numbers (VIN) among all lists are removed leaving the one with the most recent update.
- Last, records with irregular data are verified.

The last set of processed lists, before the beginning of the reference period, was available in July 1999. The July 1999 set of prepared vehicle lists and the set of days within the fourth quarter of 1999 constitute the Sampling Frame.

4.1.2 Sample design

All vehicles on the sampling frame were stratified (grouped) into 104 strata. First, the vehicles were stratified into four vehicle types (buses, light vehicles, and two groups of trucks, see 3.3) and 13 jurisdictions (ten provinces and three territories). Then, for efficiency of estimates, they were further divided into two vehicle-age strata of newer and older vehicles.

Next, a sample of vehicles (first stage sample) was selected from the sampling frame. A sample from each stratum was selected. To minimize respondent burden, no vehicle is selected more than once during any consecutive four quarters and the three characters of the postal code were used to spread the sample over all regions.

Subsequently, seven consecutive days starting within the quarter were randomly assigned (second stage) to each vehicle selected at the first stage. Within each stratum the first reporting day was evenly spread over the quarter to ensure a uniform number of responses over time and for each day of the week. This step was not applied to the vehicles registered in the three territories since only odometer readings are collected (see 2.).

Since the sample was selected in two stages, the sampling weight (see 6. for definition) was also calculated in two steps. The first-stage sampling weight was calculated for each vehicle in the first-stage sample. Then the second-stage sampling weight was calculated for each vehicle-day selected from all days within the reference period. Finally, these two weights were multiplied together to obtain the final weight for a vehicle and a day. The weighted values are obtained by multiplying the final weights and the collected values. They were aggregated to produce the estimates.

4.1.3 Sample size

For the ten provinces, a total of 5,036 vehicles out of 17,848,540 on the Sampling Frame were drawn. For the three territories, 1,260 vehicles out of 45,204 were included in the sample.

4.2 DATA COLLECTION AND PROCESSING

4.2.1 Data Collection

The data collection for the vehicles sampled in the ten provinces is different from the one for the vehicles sampled in the territories.

For the provinces the registered owners of the sampled vehicles were telephoned and interviewed (Computer Assisted Telephone Interview, or CATI). During the CATI interview the following information is collected about each sampled vehicle: vehicle type, fuel type used, distance driven last week, some information about anticipated vehicle usage during the following six weeks, current odometer reading, and passenger capacity for buses. Then the respondent was asked to complete a seven-day trip log. If the respondent agreed to complete a trip log, personal information such as name and address were obtained in order to mail out a trip log for the vehicle.

The log type depended on the type of vehicle. There were four types of logs: a bus log, a light vehicle log and a log for each type of trucks. In all cases, the respondents were requested to record information about all the trips made in the selected vehicle over an assigned seven-day period. The collected data included information about each trip: time and date of the beginning and the end, length, purpose, number and age group of passengers, sex and age group of the driver, fuel purchases, if dangerous goods were carried, number of kilometres traveled on roads with posted speed limit of 80km/h or more, and for trucks, their configuration.

If the respondent could not be contacted by phone, a trip log with a short additional questionnaire (to collect some of the information normally collected during the CATI) was mailed out.

To increase the number of responses, respondents were contacted a second time, either by phone or by mail. On the first or second day of the log, an attempt was made to phone each vehicle owner, who agreed during the CATI to fill out the log, to answer any questions the respondent might have. Later, an attempt was made to contact by phone or mail everyone who did not return logs. Some of the large fleets of vehicles with several vehicles in the sample had special arrangements to lower their response burden.

For the territories, the registered owners of the selected vehicles were mailed postcards and asked to provide two odometer readings, one at the beginning of the quarter and another at the beginning of the next quarter as well as the information about the vehicle status (owned, sold, scrapped) and the sex and age group of the main driver.

4.2.2 Edit and Imputation

Once all necessary information for the survey was collected, a series of verifications took place to ensure that the records were consistent and that collection and capture of the data did not introduce errors. Reported data were examined for completeness and consistency using automated edits coupled with manual review. Outliers, i.e., respondents reporting extremely large values, were processed manually.

Missing values and data found in error were imputed by another automated system. The system imputed the data using different imputation rules depending on the vehicle, available information and the type of data to be imputed. For example, the data can be imputed based on other responses for the same vehicle or by using data from a similar vehicle. The imputed data were then again examined for completeness and consistency. At the end of this process every vehicle had seven days of trips.

A complete description of the procedures applied to the survey data is available upon request from the Transportation Division of Statistics Canada.

4.2.3 Estimation

The sampling weights derived from the sample design were adjusted and improved using updated frame information. This was possible because, during the passage of time since the sample was selected, a set of prepared vehicle lists was obtained for the beginning and for the end of the reference quarter. To improve the estimates for the vehicles registered in the ten provinces, all the days were further stratified into working days and holidays (or non-working days, including weekends). Second stage sampling weights were adjusted so that every day of vehicle activity within the same stratum contributed with equal weight to the total estimate. The final set of weights reflected as closely as possible the characteristics of the vehicle population during the reference period.

Estimates of total vehicle-kilometres are available by province and territory. Estimates of passenger-kilometres and tonne-kilometres are available by province. In addition, cross tabulations of vehicle type by a number of variables (described in Concepts and Definitions), such as body type, truck configuration, driver characteristics, time of day, day of week, etc. are also available.

DATA QUALITY

This section describes factors that affect the data quality and why they should be considered when using the CVS estimates.

5.1 SOURCES OF ERRORS

While considerable effort was 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 at. The total survey error consists of two types of errors; sampling and non-sampling errors.

5.2 SAMPLING ERROR

When a sample is selected from a population, estimates based on the sample data may not be exactly the same as what would be obtained from a census of that population. The two results will likely differ since only data for sampled units are used. In the case of a census, there is no sampling error.

The difference between the estimates from a sample survey and a census conducted under the same conditions is referred to as the sampling error of a survey estimate. 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. If the population is very heterogeneous like the population of registered motor vehicles, a large sample size is needed to obtain reliable estimates.

The sampling error is measured by a statistical quantity called the standard error. This quantity reflects the expected variability of the survey estimate of a particular population characteristic if repeated sampling is carried out. The true value of the standard error is, of course, not known but can be estimated from the sample. The estimated standard error is used, in this publication, in terms of a relative measure called the coefficient of variation (or CV). This measure is simply the estimated standard error expressed as a percentage of the value of the survey estimate. Therefore, a smaller CV indicates better reliability of the estimate.

5.3 NON-SAMPLING ERRORS

The sampling error is only one component of the total survey error. All other errors arising from all phases of a survey are called non-sampling errors. 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. For example, this type of error can arise when a respondent provides incorrect information or does not answer certain questions, when a unit in the population of interest is omitted or covered more than once, 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.

Some non-sampling errors will cancel 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, in the case of CVS, if individuals that use their vehicles more than an average person consistently tend not to respond to the survey, then the resulting estimate of the total vehicle-kilometres will be below the true population total. Any such biases are not reflected in the estimates of standard error.

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 each survey. For instance, follow-ups of nonrespondents are conducted to obtain information from the total nonrespondents or to complete partially unanswered questionnaires for questions that are deemed essential. 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.

In general, non-sampling errors are difficult to quantify. Special studies must be conducted to estimate them. However, certain measures such as response and imputation rates are easily obtained and can be used as indicators of the non-sampling errors. Different types of non-sampling errors are discussed below.

5.3.1 Coverage errors

Coverage errors arise when the sampling frame does not adequately cover the population of interest. As a result, certain units belonging to the population of interest are either excluded (undercoverage), or counted more than once (overcoverage). In addition, out of scope units may be present in the sampling frame (overcoverage).

The following sources of coverage errors for CVS were observed:

- Errors in the classification variables on the survey may result in either under- or overcoverage of the registered vehicles.
- The sample is drawn from the list created three months prior to the beginning of the reference period. Thus the vehicles registered after the list was created and before the end of the reference period cannot be drawn into the sample.
- A vehicle list from any jurisdiction that was not created on time or did not arrive at all results in even larger under coverage since an older list has to be used for sampling.
- A vehicle that has been scrapped or salvaged and remained on the list causes overcoverage.

Thus CVS is subject to some degree of under and over coverage. The estimation procedure is used to compensate for the part of the under- and overcoverage that has been determined. Also note that there were 3% of out-of-scope units among all units sampled for the reference period.

5.3.2 Response errors

Response errors occur when a respondent provides incorrect information due to a 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.

Few response errors were discovered during editing of the data.

5.3.3 Nonresponse errors

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

5.3.4 Processing errors

Apart from coverage, response and nonresponse errors 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, editing, imputation, outlier detection and treatment, and other types of data handling.

A coding error occurs when a field is coded erroneously because of a misinterpretation of the coding procedures or a bad judgment (e.g. errors in commodity coding). A data capture error occurs when the data are misinterpreted or keyed incorrectly.

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

5.4 MEASURING QUALITY

This section presents some indicators of the data quality of the CVS estimates.

5.4.1 Response rate

A total response rate is provided. This rate is defined as the number of respondents that gave complete or partial answers to the survey divided by the total number of in-scope units. The table below shows the response rate as a function of the number of vehicles that responded to the survey.

Description	*Rate for Provinces*	*Rate for Territories*
Vehicle-kilometres and trip characteristics reported	41%	N/A
Only vehicle-kilometres reported	19%	17%
Total nonresponse	40%	83%

Consequently, the low level of response may lead to biased results if the characteristics of interest of the nonrespondents are different than those of the respondents.

5.4.2 Relative imputation rates and percentage of vehicle-days imputed

The relative imputation rate is defined as the proportion of the corresponding published estimate that is accounted for by imputed data. For example, if 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 .2 (5 million divided by 25 million) or 20%. The lower the relative imputation rates are, the more reliable the published estimates are.

With the data collected during the CATI interview, the relative imputation rate of the data coming out of the imputation process was lower for vehicle-km, and much higher for other vehicle usage and characteristics.

The relative imputation rates were calculated for each of the estimates and used to establish a quality indicator for each estimate. The relative imputation rates for estimates could be obtained from the Transportation Division of Statistics Canada upon request.

The percentage of vehicle-days imputed (reported) is defined as the proportion of vehicle-days that are imputed (reported) to total number of vehicle days:

Description	*Rate (for Provinces)*	*Description*	*Rate (for Provinces)*
Vehicle-day reported	65%	In-use	29%
		Not-in-use	36%
Vehicle-day totally imputed	35%		

The relative imputation rate is usually directly linked to the response rates and the quality of estimates. A high imputation rate usually leads to the underestimation of sampling error and may also cause a bias.

5.4.3 Coefficient of variation

As a measure of the sampling error of the estimates, the estimated coefficients of variation (CV) were calculated. CV's for estimates may be obtained from the Transportation Division of Statistics Canada upon request. Note that the CV estimates do not consider the fact that some of the data were imputed and thus may underestimate the true CV's.

5.4.4 Quality indicator

The CV and the relative imputation rate should be considered simultaneously to make an assessment of the reliability of an estimate. To assist the user in evaluating the potential effect of nonresponse, imputation and sampling error, an all-embracing Quality Indicator accompanies every estimate. The Quality Indicator takes into account simultaneously the CV and the relative imputation rate.

Quality Indicator	*C.V. equivalent*	*Explanation of estimate quality*
A	Less then 5 %	Excellent
B	5 % to 10 %	Very good
C	10 % to 15 %	Good
D	15 % to 25 %	Acceptable
E	25 % to 35 %	Use with caution
...	35 % or more	Figures not appropriate/applicable
--	N / A	Amount too small to be expressed
N	N / A	Administrative data

5.5 NOTES FOR HISTORICAL COMPARISON

This is the first time the estimates of CVS are published. In future publications, this section will describe the changes the survey will undergo for each reference period. Users of the estimates should note that caution is required in performing time series studies of the data as the population of interest and the estimated characteristics may change over the years.

GLOSSARY

Population of interest: the collection of all units (e.g., vehicles) for which the information is required.

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

Sampling frame: a list of all units in the survey population that carries classification information (e.g., geographical) of the units. This list is used for sample design, selection and estimation.

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

Sampling weight: a raising factor is attached to each sampled unit (vehicle-day) 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 like CVS 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 the unit represents.

Editing: the application of checks that identify missing, invalid or inconsistent entries or that point to data records that are potentially in error. Some of these checks involve logical relationships that follow directly from the concepts and definitions. Others are more empirical in nature or are obtained as a result of the application of statistical tests or procedures.

Imputation: the process used to resolve problems of missing, invalid or inconsistent responses identified during editing. This is done by changing some of the responses or missing values on the record being edited to ensure that a plausible, internally coherent record is created. Some problems are eliminated earlier through contact with the respondent or through manual study of the questionnaire. It is generally impossible to resolve all problems at these early stages due to concerns of response burden, cost and timeliness. Imputation is then used to handle remaining edit failures, since it is desirable to produce a complete and consistent file containing imputed data. Although, imputation can improve the quality of the final data by correcting for missing, invalid or inconsistent responses, some methods of imputation do not preserve the relationships between variables or can actually distort underlying distributions.

Jurisdiction: Canada

Number of vehicles in frame by vehicle type and jurisdiction

	Vehicle type									
	Vehicles up to 4.5t		Trucks 4.5t - 15t		Trucks over 15t		Buses		Total	
Jurisdiction:										
Newfoundland	246,353	N	4,168	N	3,110	N	1,434	N	255,065	N
Prince Edward Island	71,671	N	2,115	N	2,591	N	47	N	76,424	N
Nova Scotia	506,610	N	9,342	N	7,125	N	1,843	N	524,920	N
New Brunswick	428,451	N	9,997	N	4,442	N	2,564	N	445,454	N
Quebec	3,860,257	N	57,653	N	33,297	N	16,510	N	3,967,717	N
Ontario	6,253,307	N	78,957	N	103,017	N	26,916	N	6,462,197	N
Manitoba	577,973	N	9,905	N	11,042	N	3,570	N	602,490	N
Saskatchewan	633,752	N	50,762	N	24,479	N	3,978	N	712,971	N
Alberta	1,901,362	N	109,671	N	64,277	N	11,689	N	2,086,999	N
British Columbia	2,210,912	N	59,622	N	22,152	N	8,465	N	2,301,151	N
Yukon Territory	22,053	N	1,238	N	888	N	228	N	24,407	N
Northwest Territories	17,315	N	505	N	686	N	64	N	18,570	N
Nunavut	2,154	N	253	N	108	N	13	N	2,528	N
Canada total	16,732,170	N	394,188	N	277,214	N	77,321	N	17,480,893	N

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Jurisdiction: Canada

Number of vehicles in scope by vehicle type and jurisdiction

	Vehicle type									
	Vehicles up to 4.5t		Trucks 4.5t - 15t		Trucks over 15t		Buses		Total	
Jurisdiction:										
Newfoundland	234,348	A	3,357	B	2,984	A	1,593	A	242,283	A
Prince Edward Island	70,615	A	1,760	B	2,453	A	56	A	74,885	A
Nova Scotia	492,001	A	7,746	B	6,985	A	1,843	A	508,575	A
New Brunswick	412,150	A	6,452	C	4,323	A	1,848	B	424,773	A
Quebec	3,821,684	A	49,932	A	32,821	A	15,743	A	3,920,180	A
Ontario	6,161,762	A	64,300	A	101,957	A	26,916	A	6,354,934	A
Manitoba	576,750	A	8,023	B	11,042	A	3,370	A	599,184	A
Saskatchewan	621,730	A	48,024	A	22,895	A	3,827	A	696,476	A
Alberta	1,900,241	A	71,085	B	62,743	A	11,386	A	2,045,456	A
British Columbia	2,168,761	A	43,045	B	20,389	A	7,985	A	2,240,180	A
Yukon Territory	23,144	A	1,238	A	974	A	228	A	25,584	A
Northwest Territories	17,034	A	555	B	809	A	64	A	18,461	A
Nunavut	2,107	B	332	A	108	A	13	A	2,560	B
Canada total	16,502,328	A	305,849	A	270,483	A	74,872	A	17,153,532	A

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Jurisdiction: Canada

Passenger-km ('000 000) by vehicle type and jurisdiction

	Vehicle type									
	Vehicles up to 4.5t		Trucks 4.5t - 15t		Trucks over 15t		Buses		Total	
Jurisdiction:										
Newfoundland	1 598.4	D		...		...	208.8	D	1 860.9	D
Prince Edward Island	499.0	E		...		...		...	521.4	E
Nova Scotia	3 334.3	C	39.8	E		...	245.0	D	3 783.5	C
New Brunswick	3 690.9	D		...	40.9	E	161.1	E	3 947.1	D
Quebec	23 437.1	D	231.1	E	1 033.9	C	2 461.5	D	27 163.7	D
Ontario	40 358.5	C	403.6	D	2 702.5	D	2 272.8	C	45 737.4	C
Manitoba	4 074.7	D		...	316.4	E	268.0	E	4 691.0	D
Saskatchewan	4 316.4	D		...	331.1	E	226.7	E	4 970.1	D
Alberta	14 544.0	C		...	1 056.2	D	899.3	E	16 726.6	C
British Columbia	15 477.8	C	180.1	D	423.0	D	346.8	E	16 427.7	C
All provinces	111 331.2	B	1 295.6	C	6 111.1	C	7 091.4	C	125 829.4	B

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· ALL PASSENGER-KM ESTIMATES EXCLUDE BUS URBAN TRANSIT.

Jurisdiction: Canada

Vehicle-km ('000 000) by vehicle type and jurisdiction

	Vehicle type									
	Vehicles up to 4.5t		Trucks 4.5t - 15t		Trucks over 15t		Buses		Total	
Jurisdiction:										
Newfoundland	1 032.1	C		...	26.2	E	7.3	B	1 092.2	C
Prince Edward Island	328.8	D		...	16.3	E		--	349.1	D
Nova Scotia	1 952.4	B	38.0	E	156.8	D	10.4	C	2 157.6	B
New Brunswick	2 139.6	C	48.3	E	40.9	D	9.9	D	2 238.7	B
Quebec	14 835.3	B	210.2	D	1 029.1	B	103.0	C	16 177.6	B
Ontario	27 300.2	B	378.0	D	2 469.8	C	184.2	B	30 332.1	B
Manitoba	2 569.0	B		...	235.2	C	44.0	D	2 880.1	B
Saskatchewan	2 640.7	B	67.1	E	316.7	D	17.0	D	3 041.5	B
Alberta	9 145.7	B	219.7	D	1 039.5	D	44.4	C	10 449.3	B
British Columbia	9 466.5	B	164.5	D	423.0	C	58.4	C	10 112.4	B
Yukon Territory	59.2	C	2.5	E	19.4	C		...	81.3	B
Northwest Territories	57.2	C		...	18.2	E	0.8	D	81.0	C
Nunavut	5.2	E		...		--		--	6.5	E
Canada total	71 531.9	A	1 196.7	B	5 791.2	B	479.8	B	78 999.5	A

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Jurisdiction: Canada

Number of vehicles in frame by vehicle type and fuel type

	Vehicle type									
	Vehicles up to 4.5t		Trucks 4.5t - 15t		Trucks over 15t		Buses		Total	
Fuel type										
Gasoline	16,333,426	N	213,439	N	28,629	N	21,242	N	16,596,736	N
Diesel	324,693	N	168,795	N	247,209	N	51,355	N	792,052	N
Other	58,745	N	10,976	N	815	N	4,602	N	75,138	N
Unknown	15,322	N	993	N	574	N	130	N	17,019	N
Total	16,732,186	N	394,203	N	277,227	N	77,329	N	17,480,945	N

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Jurisdiction: All provinces

Passenger-km ('000 000) by vehicle type and vehicle model year

	Vehicle type									
	Vehicles up to 4.5t		Trucks 4.5t - 15t		Trucks over 15t		Buses		Total	
Vehicle model year										
1997 and later	28 399.7	C	416.5	E	3 123.8	D	2 294.7	E	34 234.8	C
1994 - 1996	25 613.0	C	279.3	E	1 862.3	D	2 207.0	C	29 961.6	C
1990 - 1993	29 894.0	C	252.2	E		...	1 672.4	D	32 372.1	C
1986 - 1989	18 673.7	C		...	411.7	E		...	20 050.2	C
1985 and earlier		...		...		...		...		...
Total	111 331.2	B	1 295.6	C	6 111.1	C	7 091.4	C	125 829.4	B

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· ALL PASSENGER-KM ESTIMATES EXCLUDE BUS URBAN TRANSIT.

Jurisdiction: All provinces

Vehicle-km ('000 000) by vehicle type and vehicle model year

	Vehicle type									
	Vehicles up to 4.5t		Trucks 4.5t - 15t		Trucks over 15t		Buses		Total	
Vehicle model year										
1997 and later	18 585.0	B	372.1	D	2 819.8	C	113.3	C	21 890.2	B
1994 - 1996	15 947.6	B	256.0	D	1 840.3	C	133.9	C	18 177.7	B
1990 - 1993	19 357.5	B	236.8	D	541.3	E	120.6	C	20 256.2	B
1986 - 1989	12 740.3	B	212.2	D	407.7	D	70.8	D	13 431.0	B
1985 and earlier	4 780.0	D	111.0	E	144.4	E	40.1	D	5 075.5	D
Total	71 410.3	A	1 188.2	B	5 753.5	B	478.7	B	78 830.7	A

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Jurisdiction: All provinces

Passenger-km ('000 000) by vehicle type and vehicle body type

	Vehicle type									
	Vehicles up to 4.5t		Trucks 4.5t - 15t		Trucks over 15t		Buses		Total	
Vehicle body type										
Car	63 623.1	B		...		--		--	63 629.9	C
Station wagon	4 041.0	E		--		--		--	4 041.0	E
Van	15 861.6	D		...		--	233.1	E	16 152.5	D
Sport utility vehicle	6 869.3	D		--		--		--	6 869.3	E
Pickup	20 187.4	C		...		...		--	20 356.6	D
Straight truck		...	912.5	C	858.7	D		...	1 881.8	C
Tractor trailer		--		...	5 138.5	C		--	5 220.6	C
Bus		--		--		--	6 857.6	C	6 857.6	C
Other		...		...		...		--		...
Total	111 331.2	B	1 295.6	C	6 111.1	C	7 091.4	C	125 829.4	B

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Jurisdiction: All provinces

Vehicle-km ('000 000) by vehicle type and vehicle body type

	Vehicle type									
	Vehicles up to 4.5t		Trucks 4.5t - 15t		Trucks over 15t		Buses		Total	
Vehicle body type										
Car	41 282.3	B		...		--		--	41 288.6	B
Station wagon	2 830.5	E		--		--		--	2 830.5	E
Van	8 919.9	C		...		--	33.0	D	9 004.5	C
Sport utility vehicle	3 898.1	C		--		--		--	3 898.1	C
Pickup	13 990.3	B	132.1	E		...		--	14 127.8	B
Straight truck		...	844.4	C	828.0	D		...	1 750.8	B
Tractor trailer		--		...	4 818.7	B		--	4 899.5	B
Bus		--		--		--	445.0	B	445.0	B
Other		...		...		...		--	586.0	E
Total	71 410.3	A	1 188.2	B	5 753.5	B	478.7	B	78 830.7	A

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Jurisdiction: All provinces

Number of vehicles in scope by vehicle type and vehicle body type

	Vehicle type									
	Vehicles up to 4.5t		Trucks 4.5t - 15t		Trucks over 15t		Buses		Total	
Vehicle body type										
Car	9,825,764	A		...		--		--	9,826,950	A
Station wagon	563,067	C		--		--		--	563,067	C
Van	2,070,381	B		...		--	6,225	D	2,080,775	B
Sport utility vehicle	895,588	C		--		--		--	895,588	C
Pickup	2,982,088	B	26,049	D		...		--	3,009,045	B
Straight truck		...	236,833	A	97,724	B		...	406,482	B
Tractor trailer		--	9,396	E	159,542	A		--	168,938	A
Bus		--		--		--	67,868	A	67,868	A
Other		...	16,982	D	9,926	E		...	88,214	D
Total	16,469,979	A	294,615	A	268,100	A	74,232	A	17,106,926	A

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Jurisdiction: All provinces

Passenger-km ('000 000) by vehicle type and fuel type

	Vehicle type									
	Vehicles up to 4.5t		Trucks 4.5t - 15t		Trucks over 15t		Buses		Total	
Fuel type										
Gasoline	101 870.6	B	220.8	E		...	557.4	E	102 674.9	B
Diesel		...	1 038.2	D	6 080.1	C	6 420.8	C	21 818.8	D
Other		...		...		...		...		...
Total	111 331.2	B	1 295.6	C	6 111.1	C	7 091.4	C	125 829.4	B

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· ALL PASSENGER-KM ESTIMATES EXCLUDE BUS URBAN TRANSIT.

Jurisdiction: All provinces

Vehicle-km ('000 000) by vehicle type and fuel type

	Vehicle type									
	Vehicles up to 4.5t		Trucks 4.5t - 15t		Trucks over 15t		Buses		Total	
Fuel type										
Gasoline	64 675.4	A	207.4	D		...	72.9	D	64 979.2	A
Diesel	6 022.0	E	948.5	C	5 727.1	B	389.3	B	13 086.8	C
Other		...		...		...		...	764.7	E
Total	71 410.3	A	1 188.2	B	5 753.5	B	478.7	B	78 830.7	A

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Jurisdiction: All provinces

Passenger-km ('000 000) by vehicle type and day of week

	Vehicle type									
	Vehicles up to 4.5t		Trucks 4.5t - 15t		Trucks over 15t		Buses		Total	
Day of the week										
Sunday	14 259.0	B	38.8	E	656.4	E		...	15 117.0	B
Monday	14 879.3	B	203.0	C	880.1	B	1 275.9	C	17 238.4	B
Tuesday	13 947.9	B	254.5	C	1 010.7	C	1 325.7	B	16 538.7	B
Wednesday	16 896.8	B	237.8	C	1 069.4	C	1 391.1	B	19 595.2	B
Thursday	17 790.7	C	231.7	C	986.7	B	1 367.3	C	20 376.4	C
Friday	18 648.6	B	233.7	D	968.8	C	1 319.8	B	21 170.8	B
Saturday	14 908.9	B	96.1	E	539.1	D		...	15 792.9	B
Total	111 331.2	B	1 295.6	C	6 111.1	C	7 091.4	C	125 829.4	B

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Jurisdiction: All provinces

Vehicle-km ('000 000) by vehicle type and day of week

	Vehicle type									
	Vehicles up to 4.5t		Trucks 4.5t - 15t		Trucks over 15t		Buses		Total	
Day of the week										
Sunday	8 782.1	B	36.9	E	561.7	D		...	9 397.7	B
Monday	9 842.0	B	172.7	C	861.2	B	83.5	B	10 959.5	B
Tuesday	9 323.2	B	242.7	C	955.3	B	89.3	B	10 610.5	B
Wednesday	11 405.5	B	226.8	C	996.8	B	95.0	B	12 724.0	B
Thursday	11 265.1	B	212.6	C	952.8	B	87.4	B	12 517.8	B
Friday	12 089.0	B	217.0	C	948.9	C	87.1	B	13 342.0	B
Saturday	8 703.4	B	79.4	D	476.7	D	19.7	E	9 279.2	B
Total	71 410.3	A	1 188.2	B	5 753.5	B	478.7	B	78 830.7	A

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Jurisdiction: All provinces

Passenger-km ('000 000) by vehicle type and driver age group

	Vehicle type									
	Vehicles up to 4.5t		Trucks 4.5t - 15t		Trucks over 15t		Buses		Total	
Driver age										
Under 20 years	1 993.1	D		...		...		...	2 009.8	E
20 - 24 years	4 039.8	D		...		...		...	4 311.7	D
25 - 34 years	18 825.8	D	435.3	D	1 415.1	E	607.4	E	21 283.6	D
35 - 44 years	26 807.1	B	370.8	D	2 362.1	D	2 105.0	D	31 645.1	B
45 - 54 years	28 624.6	D	317.1	D	1 361.3	D	1 959.4	D	32 262.3	D
55 - 64 years	19 514.5	C	97.3	E	839.4	E	2 169.2	E	22 620.3	C
65 - 74 years	9 287.9	C		...		...		...	9 458.3	D
75 - 84 years	2 191.9	D		--		--		--	2 191.9	E
85 years and over		...		--		--		--		...
Total	111 331.2	B	1 295.6	C	6 111.1	C	7 091.4	C	125 829.4	B

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Jurisdiction: All provinces

Vehicle-km ('000 000) by vehicle type and driver age group

	Vehicle type									
	Vehicles up to 4.5t		Trucks 4.5t - 15t		Trucks over 15t		Buses		Total	
Driver age										
Under 20 years	1 265.0	D		...		...		...	1 268.5	E
20 - 24 years	2 944.2	D		...		...		...	3 127.3	D
25 - 34 years	11 879.3	D	391.4	D	1 256.4	D	36.6	D	13 563.6	D
35 - 44 years	16 683.7	B	348.0	D	2 215.1	D	158.6	C	19 405.4	B
45 - 54 years	18 995.9	C	280.1	D	1 357.1	D	137.4	C	20 770.5	C
55 - 64 years	12 991.0	B	97.3	E	791.8	E	127.9	C	14 007.9	C
65 - 74 years	5 429.1	C		...		...		...	5 465.4	C
75 - 84 years	1 196.0	D		--		--		--	1 196.0	D
85 years and over		...		--		--		--		...
Total	71 410.3	A	1 188.2	B	5 753.5	B	478.7	B	78 830.7	A

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Jurisdiction: All provinces

Vehicles up to 4.5t: Passenger-km ('000 000) by vehicle type and trip purpose (specific to vehicle type)

	Vehicle type	
	Vehicles up to 4.5t	
Trip purpose		
To or from work or school	24 885.7	B
To or from shopping or errands	35 311.6	B
To or from recreational or social activity	32 488.6	C
(Job) picking up or delivering goods	2 595.4	D
(Job) to or from service call	1 140.0	D
(Job) other work purpose	3 733.6	D
Other	11 176.5	D
Total	111 331.2	B

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Jurisdiction: All provinces

Vehicles up to 4.5t: Vehicle-km ('000 000) by vehicle type and trip purpose (specific to vehicle type)

	Vehicle type	
	Vehicles up to 4.5t	
Trip purpose		
To or from work or school	20 285.2	B
To or from shopping or errands	20 471.2	B
To or from recreational or social activity	17 002.8	C
(Job) picking up or delivering goods	2 299.5	D
(Job) to or from service call	1 002.2	D
(Job) other work purpose	3 079.6	D
Other	7 269.8	D
Total	71 410.3	A

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Jurisdiction: All provinces

Trucks over 4.5t: Passenger-km ('000 000) by vehicle type and trip purpose (specific to vehicle type)

	Vehicle type			
	Trucks 4.5t - 15t		Trucks over 15t	
Trip purpose				
Carrying goods or equipment	733.6	D	4 939.8	C
Empty	328.6	D	928.4	C
To or from work		...		...
Personal use		...		--
Other		...	203.4	E
Total	1 295.6	C	6 111.1	C

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Jurisdiction: All provinces

Trucks over 4.5t: Vehicle-km ('000 000) by vehicle type and trip purpose (specific to vehicle type)

	Vehicle type			
	Trucks 4.5t - 15t		Trucks over 15t	
Trip purpose				
Carrying goods or equipment	719.9	D	4 627.6	C
Empty	275.7	D	906.8	D
To or from work	100.5	E		...
Personal use		...		--
Other	77.6	E	188.9	D
Total	1 188.2	B	5 753.5	B

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Jurisdiction: All provinces

Buses: Vehicle-km ('000 000) by vehicle type and trip purpose (specific to vehicle type)

	Vehicle type	
	Buses	
Trip purpose		
Scheduled urban	132.2	D
Scheduled intercity		...
School	267.7	B
Charter	10.2	E
Other	68.3	D
Total	478.7	B

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· DUE TO ROUNDING THE NUMBERS MAY NOT ADD UP AND DIFFER SLIGHTLY AMONG THE TABLES.

Jurisdiction: All provinces

Passenger-km ('000 000) by vehicle type and driver sex

	Vehicle type									
	Vehicles up to 4.5t		Trucks 4.5t - 15t		Trucks over 15t		Buses		Total	
Driver sex										
Male	74 277.8	B	1 286.9	C	6 086.7	C	4 277.9	D	85 929.3	B
Female	37 053.4	C		...		...	2 813.5	C	39 900.0	C
Total	111 331.2	B	1 295.6	C	6 111.1	C	7 091.4	C	125 829.4	B

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· ALL PASSENGER-KM ESTIMATES EXCLUDE BUS URBAN TRANSIT.

Jurisdiction: All provinces

Vehicle-km ('000 000) by vehicle type and driver sex

	Vehicle type									
	Vehicles up to 4.5t		Trucks 4.5t - 15t		Trucks over 15t		Buses		Total	
Driver sex										
Male	47 732.1	B	1 179.5	C	5 739.2	B	301.9	B	54 952.6	B
Female	23 678.2	B		...		...	176.9	B	23 878.1	B
Total	71 410.3	A	1 188.2	B	5 753.5	B	478.7	B	78 830.7	A

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Jurisdiction: All provinces

Passenger-km ('000 000) by vehicle type and time of day

	Vehicle type									
	Vehicles up to 4.5t		Trucks 4.5t - 15t		Trucks over 15t		Buses		Total	
Time of day										
00:00 - 05:59	3 518.4	D	61.3	E	688.3	D		...	4 508.7	D
06:00 - 11:59	33 554.7	B	561.3	C	1 995.4	B	3 097.0	B	39 208.5	B
12:00 - 17:59	50 004.4	B	546.9	C	2 158.3	B	3 357.0	B	56 066.6	B
18:00 - 23:59	24 253.7	B	126.1	E	1 269.1	D		...	26 045.6	B
Total	111 331.2	B	1 295.6	C	6 111.1	C	7 091.4	C	125 829.4	B

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· ALL PASSENGER-KM ESTIMATES EXCLUDE BUS URBAN TRANSIT.

Jurisdiction: All provinces

Vehicle-km ('000 000) by vehicle type and time of day

	Vehicle type									
	Vehicles up to 4.5t		Trucks 4.5t - 15t		Trucks over 15t		Buses		Total	
Time of day										
00:00 - 05:59	2 498.6	D	55.2	E	613.9	C	10.8	D	3 178.6	D
06:00 - 11:59	23 158.4	B	520.8	C	1 916.8	B	208.6	B	25 804.6	B
12:00 - 17:59	31 094.9	B	503.0	C	2 053.1	B	218.3	A	33 869.3	B
18:00 - 23:59	14 658.5	B	109.2	D	1 169.6	C	41.0	D	15 978.2	B
Total	71 410.3	A	1 188.2	B	5 753.5	B	478.7	B	78 830.7	A

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· DUE TO ROUNDING THE NUMBERS MAY NOT ADD UP AND DIFFER SLIGHTLY AMONG THE TABLES.

Jurisdiction: All provinces

Passenger-km ('000 000) by vehicle type and carrying dangerous goods

	Vehicle type									
	Vehicles up to 4.5t		Trucks 4.5t - 15t		Trucks over 15t		Buses		Total	
Carrying dangerous goods										
Yes		...		...	191.4	E		--	344.4	E
No	111 254.0	B	1 219.8	C	5 919.7	C	7 091.4	C	125 484.9	B
Total	111 331.2	B	1 295.6	C	6 111.1	C	7 091.4	C	125 829.4	B

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· ALL PASSENGER-KM ESTIMATES EXCLUDE BUS URBAN TRANSIT.

Jurisdiction: All provinces

Vehicle-km ('000 000) by vehicle type and carrying dangerous goods

	Vehicle type									
	Vehicles up to 4.5t		Trucks 4.5t - 15t		Trucks over 15t		Buses		Total	
Carrying dangerous goods										
Yes		...		...	191.4	E		--	343.7	E
No	71 333.8	B	1 112.4	C	5 562.1	B	478.7	B	78 486.9	B
Total	71 410.3	A	1 188.2	B	5 753.5	B	478.7	B	78 830.7	A

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Jurisdiction: All provinces

Passenger-km ('000 000) by vehicle type and day type

	Vehicle type									
	Vehicles up to 4.5t		Trucks 4.5t - 15t		Trucks over 15t		Buses		Total	
Day type										
Non-working days	30 800.8	B	152.5	D	1 239.8	D		...	32 630.8	B
Working days	80 530.5	B	1 143.1	C	4 871.3	B	6 653.7	B	93 198.6	B
Total	111 331.2	B	1 295.6	C	6 111.1	C	7 091.4	C	125 829.4	B

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Jurisdiction: All provinces

Vehicle-km ('000 000) by vehicle type and day type

	Vehicle type									
	Vehicles up to 4.5t		Trucks 4.5t - 15t		Trucks over 15t		Buses		Total	
Day type										
Non-working days	18 263.9	B	128.1	D	1 080.7	C	38.0	E	19 510.8	B
Working days	53 146.4	A	1 060.0	C	4 672.7	B	440.8	A	59 319.9	A
Total	71 410.3	A	1 188.2	B	5 753.5	B	478.7	B	78 830.7	A

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Jurisdiction: All provinces

Passenger-km ('000 000) by vehicle type and road type

	Vehicle type			
	Vehicles up to 4.5t		Buses	
Road type				
Road with posted maximum speed of 80km/h or more	57 513.2	B	2 412.6	D
Other roads	53 818.0	A	4 678.9	C
Total	111 331.2	B	7 091.4	C

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· ALL PASSENGER-KM ESTIMATES EXCLUDE BUS URBAN TRANSIT.

Jurisdiction: All provinces

Vehicle-km ('000 000) by vehicle type and road type

	Vehicle type			
	Vehicles up to 4.5t		Buses	
Road type				
Road with posted maximum speed of 80km/h or more	35 100.0	B	122.0	C
Other roads	36 310.3	A	356.7	B
Total	71 410.3	A	478.7	B

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Jurisdiction: All provinces

Passenger-km ('000 000) by vehicle type and passenger age group

	Vehicle type	
	Vehicles up to 4.5t	
Passenger age		
Under 5 years	3 781.9	D
5-14 years	5 955.2	C
15 years and over	101 594.1	B
Total	111 331.2	B

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Vehicles up to 4.5t: Passenger-km ('000 000) by vehicle type, vehicle group and trip purpose

Jurisdiction: All provinces

		Vehicle type	
		Vehicles up to 4.5t	
Vehicle group	Trip purpose		
Car and Station wagon	To or from work or school	15 591.1	B
	To or from shopping or errands	20 718.4	B
	To or from recreational or social activity	21 558.5	D
	(Job) picking up or delivering goods		...
	(Job) to or from service call	354.0	E
	(Job) other work purpose	2 088.7	E
	Other	6 660.9	E
	Total	67 664.1	B
Other below 4.5t	To or from work or school	9 294.6	C
	To or from shopping or errands	14 593.2	C
	To or from recreational or social activity	10 930.1	D
	(Job) picking up or delivering goods	1 902.8	D
	(Job) to or from service call	786.1	E
	(Job) other work purpose	1 644.9	E
	Other	4 515.6	E
	Total	43 667.1	B

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Vehicles up to 4.5t: Vehicle-km ('000 000) by vehicle type, vehicle group and trip purpose

Jurisdiction: All provinces

		Vehicle type	
		Vehicles up to 4.5t	
Vehicle group	Trip purpose		
Car and Station wagon	To or from work or school	12 894.5	B
	To or from shopping or errands	12 375.6	B
	To or from recreational or social activity	11 772.1	D
	(Job) picking up or delivering goods	559.4	E
	(Job) to or from service call	296.6	E
	(Job) other work purpose	1 680.2	E
	Other	4 534.4	E
	Total	44 112.8	B
Other below 4.5t	To or from work or school	7 390.7	C
	To or from shopping or errands	8 095.6	C
	To or from recreational or social activity	5 230.7	C
	(Job) picking up or delivering goods	1 740.1	D
	(Job) to or from service call	705.6	E
	(Job) other work purpose	1 399.5	E
	Other	2 735.4	D
	Total	27 297.6	B

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Passenger-km ('000 000) by vehicle type, day type and time of day

Jurisdiction: All provinces

		Vehicle type									
		Vehicles up to 4.5t		Trucks 4.5t - 15t		Trucks over 15t		Buses		Total	
Day type	Time of day										
Non-working days	00:00 - 05:59		...		...	131.0	E		...	1 338.3	E
	06:00 - 11:59	8 361.9	C	57.5	E	373.6	D		...	8 845.4	C
	12:00 - 17:59	14 748.7	B	58.1	E	426.5	D		...	15 390.9	B
	18:00 - 23:59	6 590.8	C		...	308.6	E		...	7 056.2	C
	Total	30 800.8	B	152.5	D	1 239.8	D		...	32 630.8	B
Working days	00:00 - 05:59	2 419.0	D	54.8	E	557.3	D		...	3 170.4	D
	06:00 - 11:59	25 192.8	B	503.8	C	1 621.8	B	3 044.6	B	30 363.0	B
	12:00 - 17:59	35 255.7	B	488.8	C	1 731.8	B	3 199.3	B	40 675.7	B
	18:00 - 23:59	17 662.9	B	95.7	E	960.4	C		...	18 989.4	B
	Total	80 530.5	B	1 143.1	C	4 871.3	B	6 653.7	B	93 198.6	B
Total	00:00 - 05:59	3 518.4	D	61.3	E	688.3	D		...	4 508.7	D
	06:00 - 11:59	33 554.7	B	561.3	C	1 995.4	B	3 097.0	B	39 208.5	B
	12:00 - 17:59	50 004.4	B	546.9	C	2 158.3	B	3 357.0	B	56 066.6	B
	18:00 - 23:59	24 253.7	B	126.1	E	1 269.1	D		...	26 045.6	B
	Total	111 331.2	B	1 295.6	C	6 111.1	C	7 091.4	C	125 829.4	B

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Vehicle-km ('000 000) by vehicle type, day type and time of day

Jurisdiction: All provinces

		Vehicle type									
		Vehicles up to 4.5t		Trucks 4.5t - 15t		Trucks over 15t		Buses		Total	
Day type	Time of day										
Non-working days	00:00 - 05:59	704.6	D		...	106.8	D		...	820.8	D
	06:00 - 11:59	5 392.7	B	53.9	E	337.8	D	11.3	E	5 795.7	B
	12:00 - 17:59	8 414.8	B	47.9	D	377.1	D	14.0	E	8 853.8	B
	18:00 - 23:59	3 751.8	B		...	259.1	D	9.8	E	4 040.5	B
	Total	18 263.9	B	128.1	D	1 080.7	C	38.0	E	19 510.8	B
Working days	00:00 - 05:59	1 794.0	D	48.7	E	507.2	C	8.0	D	2 357.8	D
	06:00 - 11:59	17 765.7	B	466.9	C	1 579.0	B	197.3	A	20 008.9	A
	12:00 - 17:59	22 680.0	B	455.1	C	1 676.1	B	204.3	A	25 015.5	B
	18:00 - 23:59	10 906.7	B	89.3	E	910.5	C	31.2	D	11 937.7	B
	Total	53 146.4	A	1 060.0	C	4 672.7	B	440.8	A	59 319.9	A
Total	00:00 - 05:59	2 498.6	D	55.2	E	613.9	C	10.8	D	3 178.6	D
	06:00 - 11:59	23 158.4	B	520.8	C	1 916.8	B	208.6	B	25 804.6	B
	12:00 - 17:59	31 094.9	B	503.0	C	2 053.1	B	218.3	A	33 869.3	B
	18:00 - 23:59	14 658.5	B	109.2	D	1 169.6	C	41.0	D	15 978.2	B
	Total	71 410.3	A	1 188.2	B	5 753.5	B	478.7	B	78 830.7	A

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Passenger-km ('000 000) by vehicle type, driver age group and driver sex

Jurisdiction: All provinces

		Vehicle type									
		Vehicles up to 4.5t		Trucks 4.5t - 15t		Trucks over 15t		Buses		Total	
Driver age group	Driver sex										
Under 25 years	Male		...		...		...		...		...
	Female	1 535.5	D		--		--		...	1 552.5	D
	Total	6 033.0	D		...		...		...	6 321.4	D
25 - 55 years	Male	45 651.7	B	1 116.1	C	5 114.1	C	2 201.9	D	54 083.8	B
	Female	28 605.8	C		...		...	2 469.9	D	31 107.3	C
	Total	74 257.5	B	1 123.2	C	5 138.5	C	4 671.8	B	85 191.0	B
55 years and over	Male	24 128.6	B	121.3	E	840.7	E	1 986.0	E	27 076.6	C
	Female	6 912.1	D		...		--		...	7 240.3	D
	Total	31 040.7	B	122.9	E	840.7	E	2 312.6	E	34 316.9	B
Total	Male	74 277.8	B	1 286.9	C	6 086.7	C	4 277.9	D	85 929.3	B
	Female	37 053.4	C		...		...	2 813.5	C	39 900.0	C
	Total	111 331.2	B	1 295.6	C	6 111.1	C	7 091.4	C	125 829.4	B

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· ALL PASSENGER-KM ESTIMATES EXCLUDE BUS URBAN TRANSIT.

Vehicle-km ('000 000) by vehicle type, driver age group and driver sex

Jurisdiction: All provinces

		Vehicle type									
		Vehicles up to 4.5t		Trucks 4.5t - 15t		Trucks over 15t		Buses		Total	
Driver age group	Driver sex										
Under 25 years	Male		...		...		...		...	3 334.6	D
	Female	1 059.5	D		--		--		...	1 061.2	D
	Total	4 209.2	D		...		...	7.9	E	4 395.8	D
25 - 55 years	Male	29 803.4	C	1 012.4	C	4 814.3	C	186.6	C	35 816.7	B
	Female	17 755.4	B		...		...	146.0	C	17 922.9	C
	Total	47 558.8	B	1 019.5	C	4 828.6	C	332.5	B	53 739.5	B
55 years and over	Male	14 779.0	B	120.3	E	793.0	E	109.1	D	15 801.4	B
	Female	4 863.2	C		...		--	29.2	E	4 894.0	D
	Total	19 642.2	B	121.8	E	793.0	E	138.3	C	20 695.4	B
Total	Male	47 732.1	B	1 179.5	C	5 739.2	B	301.9	B	54 952.6	B
	Female	23 678.2	B		...		...	176.9	B	23 878.1	B
	Total	71 410.3	A	1 188.2	B	5 753.5	B	478.7	B	78 830.7	A

· THE LETTER BESIDE EACH ESTIMATE CLASSIFIES ITS QUALITY AS FOLLOWS: N - ADMINISTRATIVE DATA, -- - AMOUNT TOO SMALL TO BE EXPRESSED,
A - EXCELLENT, B - VERY GOOD, C - GOOD, D - ACCEPTABLE, E - USE WITH CAUTION, ... - FIGURES NOT APPROPRIATE OR NOT APPLICABLE.
· DUE TO ROUNDING THE NUMBERS MAY NOT ADD UP AND DIFFER SLIGHTLY AMONG THE TABLES.

Jurisdiction: All provinces

Fuel ('000 000 litres) purchased by vehicle type and fuel type

	Vehicle type									
	Vehicles up to 4.5t		Trucks 4.5t - 15t		Trucks over 15t		Buses		Total	
Fuel type										
Gasoline	8 158.6	B		...		...	22.0	E	8 294.2	B
Diesel		...	303.3	D	2 614.8	C	112.8	B	3 739.7	C

· THE LETTER BESIDE EACH ESTIMATE CLASSIFIES ITS QUALITY AS FOLLOWS: N - ADMINISTRATIVE DATA, -- - AMOUNT TOO SMALL TO BE EXPRESSED, A - EXCELLENT, B - VERY GOOD, C - GOOD, D - ACCEPTABLE, E - USE WITH CAUTION, ... - FIGURES NOT APPROPRIATE OR NOT APPLICABLE.
· DUE TO ROUNDING THE NUMBERS MAY NOT ADD UP AND DIFFER SLIGHTLY AMONG THE TABLES.

Vehicle type: Vehicles up to 4.5t

	Jurisdiction													
	Newfoundl-and	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatche-wan	Alberta	British Columbia	Yukon Territory	Northwest Territori-es	Nunavut	TOTAL
Vehicle model year														
1980 or earlier	3,518	2,173	15,259	9,777	64,335	164,766	33,853	67,441	159,083	158,277	2,360	1,245	90	682,177
1981	1,091	649	3,415	2,926	16,440	38,776	8,217	16,284	39,691	46,746	591	319	25	175,170
1982	765	392	2,674	1,968	9,665	29,186	7,383	14,147	30,964	30,887	390	266	27	128,714
1983	1,255	877	4,373	4,138	18,512	49,740	9,359	15,826	33,599	37,685	442	278	23	176,107
1984	2,770	1,803	9,484	8,936	54,934	103,083	16,869	23,131	54,222	61,883	697	481	58	338,351
1985	4,229	2,454	13,282	12,350	88,579	162,578	21,861	26,563	69,315	77,074	802	589	78	479,754
1986	6,580	3,272	19,025	16,850	133,195	237,791	29,814	33,979	92,505	108,306	1,125	704	86	683,232
1987	9,329	4,221	23,557	20,994	179,930	291,615	28,336	28,740	80,440	108,513	1,154	590	105	777,524
1988	16,726	5,974	32,837	29,615	252,616	398,171	34,183	34,095	103,020	127,555	1,385	924	144	1,037,245
1989	18,992	6,073	34,637	30,745	256,851	425,060	33,744	33,816	107,705	138,481	1,370	995	135	1,088,604
1990	17,555	6,055	34,587	30,028	259,882	413,529	35,893	34,565	111,771	148,594	1,389	984	142	1,094,974
1991	17,516	5,164	32,667	28,589	263,164	396,764	36,902	35,286	110,701	142,922	1,214	924	162	1,071,975
1992	17,865	5,595	35,170	30,899	291,876	420,799	37,284	35,343	106,372	143,146	1,174	816	137	1,126,476
1993	18,382	5,156	33,683	27,270	262,016	395,160	33,363	32,155	96,925	131,407	1,150	861	143	1,037,671
1994	18,271	4,979	34,264	27,332	247,533	390,441	32,239	33,755	101,385	124,444	1,151	1,014	158	1,016,966
1995	16,944	4,824	34,417	27,855	264,366	415,349	34,864	35,621	107,236	127,090	1,167	1,058	151	1,070,942
1996	12,826	3,511	28,256	22,447	210,889	339,937	29,867	29,208	90,073	100,388	866	899	110	869,277
1997	17,996	3,149	33,867	27,137	274,518	435,696	37,979	37,182	123,598	128,993	1,223	1,393	133	1,122,864
1998	22,049	2,714	40,059	33,580	335,271	515,761	41,214	38,899	145,566	132,878	1,152	1,424	133	1,310,700
1999	19,960	2,250	35,541	29,447	313,933	499,695	30,499	24,413	116,042	116,581	1,103	1,413	114	1,190,991
2000	1,724	390	5,559	5,551	61,742	129,383	4,257	3,305	21,153	19,067	154	142	5	252,432
2001	0	0	0	1	0	31	0	0	0	0	0	0	0	32
Unknown	15	0	0	21	16	1	0	1	0	0	0	1	0	55
TOTAL	246,358	71,675	506,613	428,456	3,860,263	6,253,312	577,980	633,755	1,901,366	2,210,917	22,059	17,320	2,159	16,732,233

· DUE TO ROUNDING THE NUMBERS MAY NOT ADD UP TO THE TOTALS AND DIFFER SLIGHTLY AMONG TABLES.

Vehicle type: Trucks 4.5t - 15t

	Jurisdiction													
	Newfoundl-and	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatche-wan	Alberta	British Columbia	Yukon Territory	Northwest Territori-es	Nunavut	TOTAL
Vehicle model year														
1980 or earlier	559	951	1,935	756	9,528	5,708	2,090	34,085	34,058	10,480	420	56	36	100,662
1981	100	109	224	144	1,397	1,209	286	1,465	3,941	2,067	53	23	3	11,021
1982	62	64	179	87	850	792	226	896	2,072	886	35	13	7	6,169
1983	80	54	172	78	640	805	158	741	1,475	651	15	11	5	4,885
1984	144	86	299	131	1,831	1,364	276	752	2,112	1,109	37	19	3	8,163
1985	197	89	373	235	2,700	2,361	376	753	2,827	1,475	50	24	9	11,469
1986	216	99	408	287	3,220	3,085	476	928	3,401	2,055	35	27	13	14,250
1987	229	87	477	286	3,971	3,591	410	688	2,187	1,920	34	15	19	13,914
1988	341	100	578	408	4,420	5,253	480	769	4,121	2,787	57	29	18	19,361
1989	258	94	541	337	3,136	4,621	450	669	3,886	3,009	54	33	16	17,104
1990	263	68	538	337	3,200	4,897	555	759	4,225	3,397	61	35	17	18,352
1991	224	46	336	339	2,224	3,120	457	646	4,022	2,480	43	23	10	13,970
1992	186	27	324	416	1,832	3,173	377	625	3,582	2,512	43	24	6	13,127
1993	199	36	351	580	1,980	3,859	421	865	3,947	2,969	27	20	12	15,266
1994	212	44	350	617	2,446	4,621	413	899	4,875	3,186	42	17	14	17,736
1995	254	52	530	761	3,216	5,731	566	1,073	5,388	3,880	43	38	31	21,563
1996	140	26	313	635	2,009	4,190	414	720	4,091	2,812	35	19	8	15,412
1997	172	29	380	799	2,180	5,620	496	1,048	6,504	3,812	46	32	15	21,133
1998	134	21	485	1,110	2,742	5,793	447	848	6,084	3,166	41	21	10	20,902
1999	181	33	493	1,480	3,330	7,816	483	1,357	5,878	4,388	67	29	6	25,541
2000	17	5	61	179	800	1,350	52	182	1,000	585	4	2	0	4,237
2001	0	0	0	0	1	1	0	0	0	0	0	0	0	2
Unknown	5	0	0	1	2	0	0	0	0	0	0	0	0	8
TOTAL	4,173	2,120	9,347	10,003	57,655	78,960	9,909	50,768	109,676	59,626	1,242	510	258	394,247

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Vehicle type: Trucks over 15t

	Jurisdiction													
	Newfoundland	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Yukon Territory	Northwest Territories	Nunavut	TOTAL
Vehicle model year														
1980 or earlier	345	792	787	477	819	4,557	1,180	7,652	14,018	2,951	145	81	8	33,812
1981	52	120	137	100	160	942	185	907	2,350	632	32	23	2	5,642
1982	36	67	90	56	107	697	118	496	1,138	243	12	14	0	3,074
1983	30	48	44	33	66	486	62	223	345	90	5	5	5	1,442
1984	119	143	172	175	357	1,559	264	625	1,007	422	11	23	3	4,880
1985	155	150	272	213	625	2,550	358	856	1,731	584	30	23	1	7,548
1986	156	184	275	232	733	3,402	425	912	1,975	765	25	13	1	9,098
1987	196	209	367	330	1,145	4,545	464	937	1,709	892	17	14	4	10,829
1988	267	170	427	316	1,506	4,839	494	1,030	2,415	1,051	32	22	2	12,571
1989	241	113	377	249	1,136	5,055	456	814	2,245	948	30	29	2	11,695
1990	152	107	241	261	1,135	4,645	395	810	2,439	1,357	32	35	2	11,611
1991	149	52	169	155	604	2,927	232	552	1,859	801	23	27	8	7,558
1992	93	35	171	110	836	2,978	310	483	1,604	973	36	31	6	7,666
1993	102	45	279	195	1,396	4,432	484	717	2,187	996	28	21	1	10,883
1994	147	61	375	212	2,439	6,403	706	877	3,293	1,392	35	41	7	15,988
1995	183	84	560	304	3,527	10,310	827	1,070	4,121	1,556	44	64	14	22,664
1996	144	47	462	193	2,451	7,160	783	795	3,300	1,494	74	52	8	16,963
1997	126	22	319	200	2,539	6,880	718	915	3,939	1,481	70	64	6	17,279
1998	187	57	633	227	4,477	11,235	1,061	1,600	5,810	1,587	96	49	11	27,030
1999	173	64	646	293	4,815	11,891	1,089	1,777	4,847	1,453	70	48	18	27,184
2000	59	24	326	116	2,422	5,525	436	436	1,951	490	45	11	2	11,843
2001	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Unknown	4	0	1	0	8	0	0	0	0	0	0	0	0	13
TOTAL	3,116	2,594	7,130	4,447	33,303	103,019	11,047	24,484	64,283	22,158	892	690	111	277,274

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Vehicle type: Buses

	Jurisdiction													
	Newfoundl-and	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatche-wan	Alberta	British Columbia	Yukon Territory	Northwest Territori-es	Nunavut	TOTAL
Vehicle model year														
1980 or earlier	31	13	65	385	300	738	252	398	1,833	612	19	9	5	4,660
1981	5	3	19	112	178	365	75	81	266	178	11	0	2	1,295
1982	14	0	17	122	107	165	58	131	414	246	10	1	1	1,286
1983	4	2	28	91	117	314	74	106	170	204	18	0	0	1,128
1984	15	2	26	140	219	240	101	175	275	159	8	3	0	1,363
1985	27	2	72	112	244	485	281	248	373	163	2	1	4	2,014
1986	180	4	83	127	285	582	197	238	418	229	7	1	0	2,351
1987	246	3	110	135	510	1,074	194	388	461	273	4	8	0	3,406
1988	213	1	144	161	888	1,659	281	241	575	398	16	3	0	4,580
1989	158	1	119	113	1,131	2,051	189	265	686	523	10	4	0	5,250
1990	105	0	144	185	1,226	2,326	132	288	691	519	10	2	0	5,628
1991	93	1	134	79	1,241	2,029	197	210	600	614	16	2	1	5,217
1992	93	2	80	82	1,200	1,954	179	168	598	497	8	1	0	4,862
1993	50	0	102	97	1,022	1,557	187	170	582	406	4	2	0	4,179
1994	27	0	55	38	1,514	1,324	269	110	427	451	13	1	0	4,229
1995	29	1	183	157	1,005	1,892	176	123	553	592	14	0	1	4,726
1996	21	1	81	16	1,235	1,965	175	144	445	644	19	1	0	4,747
1997	45	0	103	123	1,223	1,622	156	133	716	425	19	4	0	4,569
1998	33	0	193	185	1,152	2,051	190	168	725	753	9	0	0	5,459
1999	47	13	89	95	1,466	2,213	204	188	797	536	9	23	0	5,680
2000	1	0	0	12	251	315	7	11	88	51	5	1	0	742
2001	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Unknown	0	0	0	2	0	0	0	0	0	0	0	0	0	2
TOTAL	1,437	49	1,847	2,569	16,514	26,921	3,574	3,984	11,693	8,473	231	67	14	77,373

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