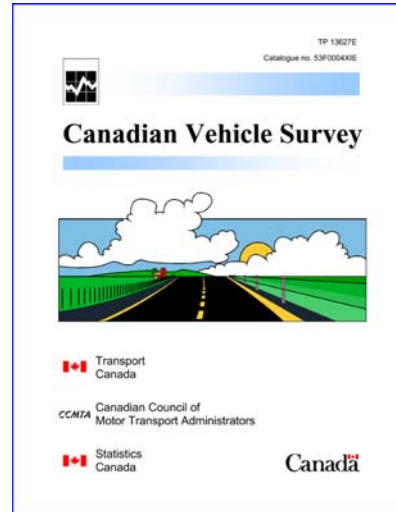




Catalogue no. 53F0004XIE

Canadian Vehicle Survey

First quarter 2005 (revised)



How to obtain more information

Specific inquiries about this product and related statistics or services should be directed to: Transportation Division, Statistics Canada, Ottawa, Ontario, K1A 0T6 (telephone: 1 866 500-8400; E-mail inquiries: transportationstatistics@statcan.ca).

For information on the wide range of data available from Statistics Canada, you can contact us by calling one of our toll-free numbers. You can also contact us by e-mail or by visiting our website.

National inquiries line	1 800 263-1136
National telecommunications device for the hearing impaired	1 800 363-7629
Depository Services Program inquiries	1 800 700-1033
Fax line for Depository Services Program	1 800 889-9734
E-mail inquiries	infostats@statcan.ca
Website	www.statcan.ca

Information to access the product

This product, catalogue no. 53F0004XIE, is available for free. To obtain a single issue, visit our website at www.statcan.ca and select Our Products and Services.

Standards of service to the public

Statistics Canada is committed to serving its clients in a prompt, reliable and courteous manner and in the official language of their choice. To this end, the Agency has developed standards of service that its employees observe in serving its clients. To obtain a copy of these service standards, please contact Statistics Canada toll free at 1 800 263-1136. The service standards are also published on www.statcan.ca under About Statistics Canada > Providing services to Canadians.



Statistics Canada

Transportation Division

Canadian Vehicle Survey

First quarter 2005 (revised)

Published by authority of the Minister responsible for Statistics Canada

© Minister of Industry, 2006

All rights reserved. The content of this publication may be reproduced, in whole or in part, and by any means, without further permission from Statistics Canada, subject to the following conditions: that it is done solely for the purposes of private study, research, criticism, review, newspaper summary, and/or for non-commercial purposes; and that Statistics Canada be fully acknowledged as follows: Source (or "Adapted from", if appropriate): Statistics Canada, name of product, catalogue, volume and issue numbers, reference period and page(s). Otherwise, no part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopy, for any purposes, without the prior written permission of Licensing Services, Marketing Division, Statistics Canada, Ottawa, Ontario, Canada K1A 0T6.

February 2006

Catalogue no. 53F0004XIE

Frequency: quarterly

ISSN: 1496-3736

Ottawa

Cette publication est disponible en français (n° 53F0004XIF au catalogue)

Note of appreciation

Canada owes the success of its statistical system to a long-standing partnership between Statistics Canada, the citizens of Canada, its businesses, governments and other institutions. Accurate and timely statistical information could not be produced without their continued cooperation and goodwill.

Symbols

The following symbols are used to indicate the quality of the estimates in this publication:

.	<i>not available for any reference period</i>
..	<i>not available for a specific reference period</i>
...	<i>not applicable</i>
0	<i>true zero or a value rounded to zero</i>
0 ^S	<i>value rounded to 0 (zero) where there is a meaningful distinction between true zero and the value that was rounded</i>
p	<i>preliminary</i>
r	<i>revised</i>
x	<i>suppressed to meet confidentiality requirements of the Statistics Act</i>
A	<i>excellent</i>
B	<i>very good</i>
C	<i>good</i>
D	<i>acceptable</i>
E	<i>use with caution</i>
F	<i>too unreliable to be published</i>

The quality of estimates not accompanied by a quality symbol is "good or better".

Acknowledgements

This publication was prepared in the Transportation Division under the direction of **Gord Baldwin**, Director, and **Ed Hamilton**, Chief, Trucking Section.

The principal author of this publication was **Wendy Christoff**.

Significant contributions to the collection and preparation of the data were made by the following people and organizations:

Transportation Division, Canadian Vehicle Survey Unit
Wendy Christoff, Mike Fahey, Sean Fagan

Transportation Division, Systems & Data Integration Section
Kevin Ringuette, Real Dery

Business Surveys Methods Division
François Gagnon, Sébastien Landry, Martin Beaulieu

Operations and Integration Division
CATI unit

Operations Research and Development Division

Canadian Council of Motor Transport Administrators and Provincial and Territorial Registrars of Motor Vehicles

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

1. Introduction	8
2. Survey overview	8
3. Concepts and definitions	9
3.1 The population of interest	9
3.2 Definitions of variables in tables	9
3.3 Definitions of vehicle characteristics	9
3.4 Definitions of vehicle usage characteristics	10
4. Methodology	11
4.1 Survey design	11
4.1.1 <i>Survey population</i>	11
4.1.2 <i>Sample design</i>	11
4.1.3 <i>Estimation</i>	12
4.1.4 <i>Sample size</i>	12
4.2 Data collection and processing	12
4.2.1 <i>Data collection</i>	12
4.2.2 <i>Edit and imputation</i>	13
4.2.3 <i>Estimation</i>	13
5. Data quality	14
5.1 Sources of errors	14
5.2 Sampling error	14
5.3 Non-sampling errors	14
5.3.1 <i>Coverage errors</i>	15
5.3.2 <i>Response errors</i>	15
5.3.3 <i>Nonresponse errors</i>	15
5.3.4 <i>Processing errors</i>	16
5.4 Measuring quality	16
5.4.1 <i>Response rates</i>	16
5.4.2 <i>Relative imputation rates</i>	17
5.4.3 <i>Coefficient of variation</i>	17
5.4.4 <i>Quality indicator</i>	17
5.5 Notes for historical comparison	18
6. Glossary	20

List of tables

1.	Number of vehicles on the registration lists by type of vehicle and jurisdiction	21
2.	Number of vehicles on the registration lists by jurisdiction and vehicle model year for vehicles up to 4.5 t	22
3.	Number of vehicles on the registration lists by jurisdiction and vehicle model year for trucks 4.5 t - 14.9 t	23
4.	Number of vehicles on the registration lists by jurisdiction and vehicle model year for trucks 15 t or more	24
5.	Estimates of the number of vehicles in scope by type of vehicle and jurisdiction	25
6.	Estimates for Canada of the number of vehicles in scope by type of vehicle and vehicle model year	26
7.	Estimates for Canada of the number of vehicles in scope by type of vehicle and vehicle body type	27
8.	Estimates for Canada of the number of vehicles in scope by type of vehicle and type of fuel	28
9.	Estimates of the vehicle-km by type of vehicle and jurisdiction	29
10.	Estimates of the passenger-km by type of vehicle and jurisdiction	30
11.	Estimates for Canada of vehicle-km by type of vehicle and vehicle model year	31
12.	Estimates of the provincial total of passenger-km by type of vehicle and vehicle model year	32
13.	Estimates for Canada of vehicle-km by type of vehicle and vehicle body type	33
14.	Estimates of the provincial total of passenger-km by type of vehicle and vehicle body type	34
15.	Estimates for Canada of vehicle-km by type of vehicle and type of fuel	35
16.	Estimates of the provincial total of passenger-km by type of vehicle and type of fuel	36
17.	Estimates of the provincial total of vehicle-km by type of vehicle and day of the week	37
18.	Estimates of the provincial total of passenger-km by type of vehicle and day of the week	38
19.	Estimates of the provincial total of vehicle-km by type of vehicle and driver age group	39
20.	Estimates of the provincial total of passenger-km by type of vehicle and driver age group	40
21.	Estimates of the provincial total of vehicle-km by type of vehicle and sex of driver	41
22.	Estimates of the provincial total of passenger-km by type of vehicle and sex of driver	42
23.	Estimates of the provincial total of vehicle-km by type of vehicle and time of day	43
24.	Estimates of the provincial total of passenger-km by type of vehicle and time of day	44
25.	Estimates of the provincial total of vehicle-km by type of vehicle and carrying dangerous goods	45
26.	Estimates of the provincial total of passenger-km by type of vehicle carrying dangerous goods	46
27.	Estimates of the provincial total of vehicle-km by type of vehicle and type of day	47
28.	Estimates of the provincial total of passenger-km by type of vehicle and type of day	48
29.	Estimates of the provincial total of vehicle-km by type of vehicle and road type	49
30.	Estimates of the provincial total of passenger-km by type of vehicle and road type	50
31.	Estimates of the provincial total for vehicles up to 4.5 t: passenger-km by passenger age group	51
32.	Estimates of the provincial total for vehicles up to 4.5 t: vehicle-km and passenger-km by part of the driver's job	52
33.	Estimates of the provincial total for vehicles up to 4.5 t: vehicle-km by origin and destination of trip	53
34.	Estimates of the provincial total for vehicles up to 4.5 t: passenger -km by origin and destination of trip	54
35.	Estimates of the provincial total for trucks 4.5 t or more: vehicle-km by vehicle group and trip purpose	55
36.	Estimates of the provincial total for trucks 4.5 t or more: passenger-km by vehicle group and trip purpose	56
37.	Estimates of the provincial total of vehicle-km by type of vehicle, type of day and time of day	57
38.	Estimates of the provincial total of passenger-km by type of vehicle, type of day and time of day	58
39.	Estimates of the provincial total of vehicle-km by type of vehicle, driver age group and sex of driver	59
40.	Estimates of the provincial total of passenger-km by type of vehicle, driver age group and sex of driver	60
41.	Estimates of the provincial total of vehicle-km by type of vehicle, type of fuel and vehicle body type	61
42.	Estimates of the provincial total of fuel consumed by type of vehicle, type of fuel and vehicle body type	62
43.	Estimates of the provincial total of number of vehicles in scope by type of vehicle and activity type	63
44.	Estimates of the provincial total for trucks 4.5 t – 14.9 t: vehicle-km and passenger-km by activity type	64
45.	Estimates of the provincial total for trucks 15 t or more: vehicle-km and passenger-km by activity type	65
46.	Estimates of the provincial total for trucks 4.5 t – 14.9 t: vehicle-km and passenger-km by trip type	66
47.	Estimates of the provincial total for trucks 15 t or more: vehicle-km and passenger-km by trip type	67

Highlights

Please note that all estimates in this publication have been revised in order to correct rounding errors.

- Almost 18.4 million vehicles were in-scope for the Canadian Vehicle Survey during this quarter.
- Between January 1 and March 31, 2005, these vehicles travelled an estimated 67.2 billion kilometres.
- During this quarter, vehicles weighing less than 4 500 kilograms were driven an average of 3 450 kilometres while the largest of the trucks (trucks with gross weight 15 000 kilograms or more) were driven an average of 17 150 kilometres.

1. Introduction

Road vehicles dominate passenger travel and freight traffic. However, prior to the Canadian Vehicle Survey (CVS), no measures of total vehicle-kilometres or passenger-kilometres were available. The CVS was developed at the request of Transport Canada to fill this data gap. The survey provides quarterly and 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 are the prime source of road vehicle use information for researchers and interested members of the public.

Prior to 2004, the survey was sponsored by Transport Canada. Since then, the survey has been co-sponsored by Transport Canada and Natural Resources Canada. They plan to combine the survey data with other data to improve road safety, monitor fuel consumption and deal with the impact of vehicle usage on the environment.

This document describes concepts, employed methods and discusses data quality. The reference period for all the information presented in this document is the first quarter of 2005.

2. Survey overview

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

The provincial component of the survey consists of two steps. The first step 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 trip log specific to his/her vehicle type. The trip log is then mailed out as a second step. If respondents cannot be contacted by phone, the 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 short questionnaires. One is mailed to the respondents at the beginning of the quarter and the other is mailed at the end of the quarter. The first questionnaire asks respondents to record the odometer reading at the beginning of the first day of the quarter. All those returning the first questionnaire are mailed a second questionnaire 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.

Users who require additional information from Statistics Canada can obtain it from the Transportation Division upon request by phoning 1 866 500-8400 or e-mailing transportationstatistics@statcan.ca.

3. Concepts and definitions

3.1 The population of interest

The *in-scope vehicles* for the CVS include all motor vehicles, except buses (buses were included in the survey prior to 2004), motorcycles, off road vehicles (e.g., snowmobiles, dune buggies, amphibious vehicles) and special equipment (e.g., cranes, street cleaners, snowplows and backhoes), registered in Canada anytime during the survey reference period, that have not been scrapped or salvaged.

The *population of interest* consists of vehicle-days, composed from the in-scope vehicles and the days within the survey reference period.

3.2 Definitions of variables in tables

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

Passenger-kilometres is the sum of the distances traveled by individual passengers (the driver being considered as one of the passengers). For example, for a vehicle with three passengers (the driver being one of them) that is driven on a distance of 10 kilometres, the number of passenger-kilometres will be 30. Light vehicles (see the *Vehicle type* definition in section 3.3) report the number of passengers for each trip (see the *Trip* definition in section 3.4). The number of passengers in heavy vehicles with gross vehicle weight of 4.5 tonnes or more 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* definition in section 3.4).

Fuel consumed is the amount of fuel used to operate vehicles. This variable is derived for each vehicle using the reported fuel purchases and distance driven.

The number of vehicles on the registration lists is the average number of the registered vehicles in the registration lists at the beginning and at the end of the reference period.

The number of vehicles in scope is an estimate of the average number of vehicles registered during the quarter based on the lists from jurisdictions and the survey responses. This number slightly differs from the previous one because we incorporate into it all our findings from the survey. Note that this number includes vehicles used and not used on the roads during the reference period.

3.3 Definitions of vehicle characteristics

Vehicle type is the weight classification created for the CVS, based on the information available on the vehicle registration lists. The vehicles are divided into three weight types: *light vehicles* with gross vehicle weights below 4.5 tonnes, *heavy vehicles* with gross vehicle weights of *4.5 tonnes or more and less than 15 tonnes*, and *heavy vehicles* with gross vehicle weights of *15 tonnes or more*.

The respondent determines *vehicle body type*. The respondent is asked to choose among: car, station wagon, van, sport utility vehicle, pick-up, straight truck, truck-tractor, and other. Missing or unusual responses are verified against registration lists, if possible.

Fuel type is based on the information provided by the respondent or from the registration lists. All vehicles are divided into three classes: vehicles powered by gasoline, vehicles powered by diesel fuel and vehicles powered by other energy sources.

Vehicle model year is derived based on the information available on the registration lists.

3.4 Definitions of vehicle usage characteristics

The CVS definition of a trip determines the trip characteristics. The definition of what delimits a trip depends on the vehicle type:

A new trip is reported for light vehicles if any of the following events happen:

- the driver gets in the car
- a passenger gets in or out of the car

A new trip is reported for heavy vehicles weighing 4.5 tonnes or more if any of the following events happen:

- 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 each trip, the respondent provides the following information:

- 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.
- Trip origin and destination for light vehicles.
- Trip purpose for heavy vehicles, as 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.
- If dangerous goods (as defined by the Transportation of Dangerous Goods Act) are carried by heavy vehicles.
- Number of kilometres traveled on roads with posted speed limit of 80 km/h or more
- Age group (Under 5 years, 5 to 14, 15 to 19, 20 to 34, 35 to 54, 55 to 64, 65 to 74, 75 to 84, 85 years and over) of passengers and the number of passengers within each group, to calculate passenger-kms. Passenger age information is collected only for light vehicles (see section 3.2). We collect the total number of passengers only for heavy vehicles.
- Truck configuration for heavy vehicles.
- Total cost, unit cost and quantity of fuel purchased.

4. Methodology

The CVS has been designed as a quarterly survey. 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

The survey population of vehicles was derived from the 13 jurisdiction vehicle registration lists (ten Provincial and three Territorial Governments) created three months before the reference period. The sample of vehicles for this quarter was drawn from lists of motor vehicles with valid registrations in any province or territory available in October 2004. Buses, 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 of vehicles; e.g., vehicles that were registered after October 2004 are not included.

The thirteen incoming lists underwent a thorough preparation procedure:

- First, out-of-scope vehicles are removed (buses, trailers, motorcycles, construction equipment, parade vehicles, motor homes, etc.) from each list.
- Second, vehicles with expired registrations are removed from each list.
- Then, records with duplicate Vehicle Identification Numbers (VIN) within each list are removed leaving only the record that had been updated most recently.
- Last, records in each file with irregular data are verified.

The last set of processed lists, before the beginning of the reference period, consisted of the thirteen lists provided in October 2004 to Statistics Canada for the CVS. This set of prepared vehicle lists and the set of days within the first quarter of 2005 constitute the survey population of vehicle-days.

4.1.2 Sample design

The CVS uses a two-stage sample design. At the first-stage, a sample of vehicles is selected, while at the second-stage, a sample of consecutive days within the quarter is selected.

To select the first-stage sample, all vehicles from the survey population were first stratified (grouped) into 78 strata. The vehicles were stratified into three vehicle types (see section 3.3) and 13 jurisdictions (ten provinces and three territories). Then, in order to improve the precision of the estimates, the vehicles were further divided into two vehicle-age strata of newer and older vehicles.

Next, the vehicles were sorted within each stratum, using the first three characters of the postal code of the owner's address. Then, a systematic sample of vehicles (first stage sample) was selected from the survey population. Systematic sampling was used to spread the sample over all regions and to avoid heavy burden on owners of multiple vehicles. To minimize respondent burden, no vehicle is selected more than once during any consecutive four quarters for provinces and two consecutive quarters for territories.

In the second stage, a first reporting day within the quarter was randomly assigned to each vehicle selected in 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 section 2).

4.1.3 Estimation

Since the sample was selected in two stages, the sampling weight (see section 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-day. The weighted values are obtained by multiplying the final weights and the collected values. They were aggregated to produce the estimates.

4.1.4 Sample size

A total of 5,375 vehicles out of 18,878,732 from the survey population were drawn for the ten provinces. Another 2,743 vehicles out of 53,070 were included in the sample for the three territories.

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.

Provincial collection

The registered owners of the sampled vehicles were telephoned and interviewed (Computer Assisted Telephone Interview, or CATI). During the CATI, the following information is collected about each sampled vehicle: vehicle type, fuel type used, distance driven the previous week, some information about anticipated vehicle usage during the following six weeks, current odometer reading, some vehicle maintenance questions and some questions on the household characteristics. Then the respondent was asked to complete a trip log. If the respondent agreed, personal information, such as name and address, were obtained in order to mail out the trip log for the vehicle.

The log type depended on the type of vehicle. There were two types of logs: a light vehicle log and a heavy vehicle log.

Respondents receiving a light vehicle log were requested to record information for 20 consecutive trips made in the selected vehicle, beginning on the assigned *first reporting day*. Respondents receiving a heavy vehicle log were requested to record information for all the trips made in the selected vehicle over the assigned seven-day period.

The collected data included information about each trip:

- Start and stop dates and times
- Start and stop odometer readings
- origin and destination (light vehicle log) or trip purpose (heavy vehicle log)
- number and age group of passengers (light vehicle log) or number of passengers at the start and end of the trip (heavy vehicle log)
- sex and age group of the driver
- fuel purchases
- distance traveled on roads with posted speed limit of 80km/h or more.
- truck configuration (heavy vehicle log only)
- dangerous goods (heavy vehicle log only)

Starting in 2004, the respondents were also asked to continue to record their fuel purchases until they reported two fill-ups or five fuel purchases or until the 28-day reporting period is over.

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 companies with large vehicle fleets have special arrangements to lower their response burden. There is no follow-up done with these companies.)

Territorial collection

The registered owners of the selected vehicles were mailed questionnaires and asked to provide two odometer readings, one at the beginning of the quarter and another at the beginning of the next quarter. Information was also collected on the vehicle status (owned, sold, scrapped), body style (car, SUV, pick-up, etc.) and type of fuel used.

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.

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

Since the survey population differs from the population of interest, several corrections were done to assure that the estimates correspond (as closely as possible) to the population of interest. The sampling weights derived from the sample design were adjusted and improved using updated registration lists. This was possible because, during the passage of time since the sample was selected, new sets of prepared vehicle lists were 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.

The following estimates of totals are available:

- vehicle counts by jurisdiction and vehicle type;
- vehicle-kilometres by jurisdiction and vehicle type;
- passenger-kilometres by province and vehicle type;
- fuel consumed, by vehicle type and fuel type;
- cross tabulations of vehicle-kilometers and passenger-kilometers by a number of variables (described in Concepts and Definitions), such as body type, driver characteristics, time of day, day of week, etc.

5. 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 is put forth to ensure that a high standard is maintained 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 value for the population, at which the survey estimate aims. 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 the 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 can be conducted to obtain information from the total nonrespondents or to complete partially unanswered questionnaires for questions that are deemed essential. Various quality assurance procedures can be exercised at the data capture step. The data editing procedures can identify some inconsistencies in the data structure and the imputation procedures can then 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 survey population 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 survey population (overcoverage).

The following sources of coverage errors for the CVS were observed:

- Errors in the classification variables of 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 undercoverage since an older list has to be used for sampling.
- A vehicle list created early causes overcoverage.
- A vehicle that has been scrapped or salvaged and remained on the list causes overcoverage.
- The survey population (see section 4.1.1) can contain vehicles with the same Vehicle Identification Number (VIN), for example, when a vehicle is on the registration file of more than one jurisdiction. Since every vehicle has a unique VIN, this is likely to cause some overcoverage and consequently overestimation.
- A vehicle that was registered and subsequently unregistered between two consecutive registration lists causes undercoverage.

Thus the CVS is subject to some degree of under and over coverage. The estimation procedure is designed to compensate for the part of the under- and over coverage that has been determined.

Since we assume that the respondent is right (unless we have hard evidence to the contrary), the corrections at the estimation stage are mostly based on the respondent statements.

5.3.2 Response errors

Response errors occur when a respondent provides incorrect information due to a misinterpretation of the survey questions or due to a lack of correct information, or when a respondent 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. See the response rate tables in section 5.4.1.

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. A data capture error occurs when the data are misinterpreted or keyed incorrectly. For example, an odometer reading of 53467 could be keyed as 54367.

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 could result in bias of the estimates. This can happen due to wrong assumptions or due to inability to impute. For example, in the CVS, it is impossible to detect, for vehicles that travel only a small distance during the reported period, fuel purchases that are missing or entered in error.

5.4 Measuring quality

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

5.4.1 Response rates

The response rate is a function of the number of vehicles that responded to the survey. This rate is defined as the number of vehicles for which respondents gave complete or partial (vehicle-kilometers only) answers to the survey divided by the total number of in-sample vehicles.

Vehicle response rates by province and vehicle type

Provinces	Nfld. Lab.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.
Light vehicles	65%	70%	65%	73%	69%	65%	70%	63%	66%	66%
Heavy vehicles 4.5t – 14.9t	70%	77%	68%	53%	73%	80%	78%	64%	60%	63%
Heavy vehicles 15t or more	80%	70%	75%	73%	76%	70%	68%	72%	70%	68%

Vehicle response rates by territory

Territories	Y.T.	N.W.T.	Nvt.
All vehicles	15%	14%	10%

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

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.

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.

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 calculated CV estimates take into account the variability due to sampling and the variability due to non-response and imputation.

5.4.4 Quality indicator

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 is a function of the CV, which takes into account the variability due to sampling and the variability due to non-response and imputation.

Quality Symbol	C.V. equivalent	Explanation of estimate quality
A	Less than 5%	Excellent
B	5% to 9.9%	Very good
C	10% to 14.9%	Good
D	15% to 19.9%	Acceptable
E	20% to 34.9%	Use with caution
F	35% or more	Too unreliable to be published

The quality of counts (direct from registration lists) not accompanied by a quality symbol is good or better.

5.5 Notes for historical comparison

Beginning with Quarter 1, 2004, the following changes were made and may affect comparability with previous quarters:

- Buses are excluded from the survey
- Rather than estimates of the quantity of fuel purchased, the survey now produces estimates of the quantity of fuel consumed.
- The light vehicle log is based on 20 trips rather than reporting all trips for 7 days. Depending on vehicle usage, some respondents will report more than 7 days worth of trips while others will report less than 7 days.
- The definition of a trip for light vehicles has changed so that a new trip is now reported every time a driver gets in the vehicle or a passenger gets in or out of the vehicle. This change will mean that what was previously reported as one trip could now be reported as two, three or even more trips if there is a change in driver and/or multiple passengers are picked up or dropped off at different locations. This new definition will produce more accurate estimates of passenger-kilometres for light vehicles.

Beginning with Quarter 2, 2003, vehicles that were insured but not registered were removed from the registration lists for Manitoba. As a result, some estimates for Manitoba may be lower than the estimates from previous quarters.

Beginning with Quarter 4, 2001, vehicles that were registered but did not have license plates were removed from the registration lists for Quebec. As a result, some estimates for Quebec may be lower than the estimates from previous quarters.

Beginning with Quarter 1, 2001, the following changes were made and may affect comparability with previous quarters:

- Prior to this quarter, duplicate records found within the same list and duplicate records found in more than one list were removed. Starting in this quarter, duplicate records were removed from within each list only. This change may cause some overcoverage and, consequently, overestimation.
- Type of fuel used and body type are collected for the territories. Consequently, the four tables (pages: 28, 29, 34, 36) now include the territories.
- The heavy vehicle logs were changed in 2001 in order to collect passenger information for heavy vehicles. This change means that passenger-kilometres are now estimated for all vehicles, except urban transit buses, for all the provinces (but not for territories).
- The heavy vehicle logs were also changed in 2001 in order to collect distance traveled on roads with posted speeds of 80 kilometres per hour or more. This change means that this information is now estimated for all vehicle types in all provinces (but not for the territories).

The following change was made in the third quarter of 2000 and may affect comparability with previous quarterly results:

- Owners of buses and heavy vehicles registered in the territories are now sent two short questionnaires to record odometer readings at the start and end of the quarter. This process was always used for light vehicles in the territories and replaces the previous method of sending only one questionnaire at the end of the quarter and requesting that bus and heavy vehicle owners rely on maintenance records to provide odometer readings for the start of the quarter.

The following changes were made in the first quarter of 2000 to improve the quality of the survey by diminishing non-sampling errors.

- The changes that affect comparability with 1999 results:
 - The trip purpose choices (for all vehicle types) were changed. The purpose is now based on the destination of the trip. Thus the results from 2000 and 1999 are not comparable for this item.
 - Passenger-kilometers were not collected for heavy vehicles in 2000.

- The changes that may affect comparability with the 1999 results:
 - A new log was developed for survey year 2000 for all heavy vehicles. In 1999 heavy vehicles with gross vehicle weights of 4.5 tonnes or more and less than 15 tonnes had a different log than heavy vehicles with gross vehicle weights of 15 tonnes or more.
 - The fuel purchased question was attached to each trip for the 2000 survey year for heavy vehicles. Previously it was recorded separately from the trips.

6. Glossary

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

Survey Population: the collection of all units (e.g., vehicle-days) for which the information can be realistically provided to the survey. 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. A list of all units in the survey population with their classification information (e.g., geographical, vehicle characteristics, date) 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 the 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 registration lists the sampled 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.

Number of vehicles on the registration lists by type of vehicle and jurisdiction

	Vehicle type			
	Vehicles up to 4.5t	Trucks 4.5t to 14.9t	Trucks 15t and over	Total
Jurisdiction				
Newfoundland and Labrador	252 813	3 951	2 607	259 371
Prince Edward Island	74 804	1 564	2 562	78 930
Nova Scotia	529 488	8 528	7 590	545 606
New Brunswick	441 948	7 030	3 213	452 191
Quebec	4 237 720	52 770	37 401	4 327 891
Ontario	6 647 316	81 808	101 429	6 830 553
Manitoba	610 148	9 849	14 785	634 782
Saskatchewan	630 903	32 488	23 165	686 556
Alberta	2 170 504	97 640	69 821	2 337 965
British Columbia	2 232 882	80 564	14 042	2 327 488
Yukon Territory	23 986	1 435	1 132	26 553
Northwest territories	20 244	642	1 199	22 085
Nunavut	2 875	214	129	3 218
Total - Canada	17 875 631	378 483	279 075	18 533 189

Due to rounding, the numbers may not add up and may differ slightly among the tables.

Number of vehicles on the registration lists by jurisdiction and vehicle model year for vehicles up to 4.5t

Vehicle Model Year	Jurisdiction													TOTAL
	Newfound-land and Labrador	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatche-wan	Alberta	British Columbia	Yukon Territory	Northwest Territor-ies	Nunavut	
Earlier than 1988	7 714	4 340	27 149	19 077	138 303	303 316	52 551	93 019	241 689	261 702	4 382	2 071	246	1 155 559
1988	3 935	1 846	9 622	8 725	72 614	114 294	14 955	19 016	56 471	72 096	993	518	91	375 176
1989	4 685	2 240	11 749	10 658	90 234	140 516	17 152	20 969	66 743	86 477	1 082	589	76	453 170
1990	5 306	2 755	14 731	13 214	120 295	187 827	21 386	23 928	78 811	103 192	1 133	641	85	573 304
1991	6 772	3 011	16 953	15 994	151 183	209 954	24 807	26 581	86 373	106 850	1 088	682	119	650 367
1992	8 886	4 075	22 026	20 840	197 883	274 333	28 534	28 730	89 445	113 376	1 071	654	124	789 977
1993	11 527	4 400	24 210	21 155	198 325	283 155	27 296	27 274	85 404	107 990	1 042	636	139	792 553
1994	13 602	4 831	27 561	23 680	203 872	316 873	28 452	29 956	92 534	105 397	1 080	783	159	848 780
1995	13 979	5 155	29 747	25 673	223 796	353 786	31 856	32 436	99 747	110 363	1 157	769	163	928 627
1996	11 122	4 468	26 086	21 932	185 801	311 911	28 938	27 418	86 129	89 270	904	654	126	794 759
1997	15 385	5 489	33 479	27 218	235 576	407 109	38 752	36 828	118 215	116 711	1 243	968	192	1 037 165
1998	17 876	5 687	37 235	30 718	260 368	455 540	41 041	37 708	133 331	117 613	1 157	1 059	170	1 139 503
1999	17 851	5 201	35 364	28 667	257 592	441 134	36 023	31 388	114 690	106 244	1 035	1 116	200	1 076 505
2000	20 801	6 048	42 288	35 193	320 185	544 831	41 487	36 919	131 732	124 673	1 072	1 379	194	1 306 802
2001	19 771	3 917	34 205	28 510	302 034	479 772	37 360	35 247	135 819	121 934	1 191	1 527	220	1 201 507
2002	23 705	4 085	42 524	34 310	379 214	555 655	43 716	39 177	161 378	147 912	1 320	1 778	231	1 435 005
2003	24 926	3 735	43 023	35 367	413 405	591 090	46 279	41 333	175 167	152 371	1 524	2 254	183	1 530 657
2004	20 137	2 587	36 819	29 807	351 564	472 059	37 429	34 072	156 255	131 765	1 164	1 665	129	1 275 452
2005	4 808	933	14 708	11 198	134 758	203 971	12 127	8 902	60 535	56 915	348	501	27	509 731
2006	1	0	9	7	105	191	6	0	35	29	0	0	0	383
Unknown	22	0	0	4	613	0	0	0	0	0	0	0	0	639
TOTAL	252 811	74 803	529 488	441 947	4 237 720	6 647 317	610 147	630 901	2 170 503	2 232 880	23 986	20 244	2 874	17 875 621

Due to rounding, the numbers may not add up to the totals and may differ slightly among the tables.

Number of vehicles on the registration lists by jurisdiction and vehicle model year for

trucks 4.5t - 14.9t

Vehicle Model Year	Jurisdiction													TOTAL
	Newfound-land and Labrador	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Yukon Territory	Northwest Territories	Nunavut	
Earlier than 1988	864	819	1 968	852	11 598	6 848	2 854	22 623	34 061	13 282	485	127	54	96 435
1988	183	73	320	149	2 658	2 054	302	392	2 323	2 262	56	20	15	10 807
1989	159	86	334	147	2 277	2 100	313	347	2 386	2 514	59	19	9	10 750
1990	172	54	341	179	2 358	2 399	419	473	2 671	2 875	55	32	8	12 036
1991	173	44	258	186	1 584	1 823	385	446	2 075	2 290	36	18	6	9 324
1992	138	37	251	211	1 469	1 898	346	417	2 042	2 365	44	17	9	9 244
1993	142	42	275	258	1 687	2 449	375	476	2 094	2 819	31	14	11	10 673
1994	189	56	300	303	2 149	3 074	396	505	2 588	3 174	50	22	7	12 813
1995	242	64	522	368	2 908	4 106	528	670	3 267	3 703	30	36	22	16 466
1996	133	32	304	287	1 859	3 179	374	444	2 278	2 633	32	19	5	11 579
1997	188	41	388	358	1 901	4 420	464	627	3 716	3 480	60	29	13	15 685
1998	173	24	412	383	2 450	4 668	387	630	3 554	3 066	38	19	8	15 812
1999	225	51	558	521	3 433	7 026	501	614	4 401	3 914	69	40	9	21 362
2000	196	30	457	359	2 835	6 196	369	517	3 825	3 725	50	37	10	18 606
2001	172	24	380	407	2 275	6 077	421	784	5 794	4 482	62	32	5	20 915
2002	209	26	388	406	2 106	6 110	358	640	4 939	4 770	84	36	3	20 075
2003	177	30	477	710	2 733	7 285	425	804	5 999	7 997	95	35	7	26 774
2004	137	19	439	726	2 466	6 772	397	668	5 122	8 266	79	32	11	25 134
2005	72	10	158	218	1 737	3 304	234	412	4 499	2 936	16	58	2	13 656
2006	0	0	0	0	8	19	1	0	7	8	0	0	0	43
Unknown	5	0	0	0	279	0	0	0	0	0	0	0	0	284
TOTAL	3 949	1 562	8 530	7 028	52 770	81 807	9 849	32 489	97 641	80 561	1 431	642	214	378 473

Due to rounding, the numbers may not add up to the totals and may differ slightly among the tables.

Number of vehicles on the registration lists by jurisdiction and vehicle model year for

trucks 15t or more

Vehicle Model Year	Jurisdiction													TOTAL
	Newfound-land and Labrador	Prince Edward Island	Nova Scotia	New Brunswick	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Yukon Territory	Northwest Territories	Nunavut	
Earlier than 1988	306	1 224	932	613	1 244	6 472	1 781	7 906	17 872	2 663	200	165	24	41 402
1988	84	180	212	152	552	2 036	298	876	1 885	439	27	24	0	6 765
1989	103	141	253	147	472	2 255	291	754	1 741	447	23	27	3	6 657
1990	74	130	169	174	454	2 271	263	778	1 929	729	32	32	3	7 038
1991	78	82	109	101	291	1 574	194	530	1 437	430	19	31	7	4 883
1992	78	44	122	65	446	1 575	220	498	1 190	555	31	25	4	4 853
1993	63	59	186	138	669	2 186	385	770	1 707	532	31	31	3	6 760
1994	108	80	313	177	1 294	3 187	588	1 059	2 632	662	36	53	5	10 194
1995	170	139	450	229	2 069	5 673	732	1 458	3 387	754	40	62	10	15 173
1996	151	86	362	136	1 500	4 230	684	1 042	2 732	695	52	62	7	11 739
1997	129	39	325	112	1 634	4 640	660	1 039	3 250	729	49	64	4	12 674
1998	206	69	552	194	3 012	8 126	1 093	1 382	4 647	727	71	90	7	20 176
1999	178	72	620	198	3 536	9 967	1 148	1 060	3 735	689	78	88	19	21 388
2000	230	67	806	178	4 578	11 666	1 382	1 003	3 733	602	103	89	6	24 443
2001	119	36	413	114	2 905	7 243	854	771	3 637	635	89	82	6	16 904
2002	100	11	282	89	1 946	5 117	583	440	2 915	540	47	60	4	12 134
2003	142	33	494	128	3 573	7 442	1 061	567	3 213	641	68	61	8	17 431
2004	142	38	570	140	3 190	7 949	1 274	713	4 036	840	75	81	7	19 055
2005	145	30	413	128	3 987	7 774	1 288	518	4 118	731	58	71	3	19 264
2006	0	0	4	0	25	45	7	0	26	1	0	0	0	108
Unknown	1	0	0	0	22	0	0	0	0	0	0	0	0	23
TOTAL	2 607	2 560	7 587	3 213	37 399	101 428	14 786	23 164	69 822	14 041	1 129	1 198	130	279 064

Due to rounding, the numbers may not add up to the totals and may differ slightly among the tables.

Estimates of the

number of vehicles in scope by type of vehicle and jurisdiction

	Vehicle type							
	Vehicles up to 4.5t		Trucks 4.5t to 14.9t		Trucks 15t and over		Total	
Jurisdiction								
Newfoundland and Labrador	248 543	B	2 783	D	2 400	D	253 726	B
Prince Edward Island	73 279	B	1 245	C	2 359	D	76 883	B
Nova Scotia	520 791	A	6 203	D	7 971	C	534 965	A
New Brunswick	443 541	A	4 408	D	3 449	C	451 398	A
Quebec	4 226 023	A	42 837	C	39 157	A	4 308 018	A
Ontario	6 634 208	A	64 215	B	98 803	B	6 797 226	A
Manitoba	611 232	A	8 913	D	13 886	C	634 032	A
Saskatchewan	630 903	A	27 860	C	22 546	C	681 310	A
Alberta	2 174 232	A	77 764	B	69 821	B	2 321 816	A
British Columbia	2 233 067	A	38 614	D	12 839	B	2 284 520	A
Yukon Territory	22 584	A	1 259	B	1 103	A	24 946	A
Northwest territories	19 877	A	624	B	1 283	A	21 783	A
Nunavut	2 775	A	254	C		F	3 093	A
Total - Canada	17 841 053	A	276 980	A	275 681	A	18 393 714	A

All estimates have been revised in order to correct rounding errors.
 Due to rounding, the numbers may not add up and may differ slightly among the tables.

Estimates for Canada of the

number of vehicles in scope by type of vehicle and vehicle model year

Vehicle model year	Vehicle type							
	Vehicles up to 4.5t		Trucks 4.5t to 14.9t		Trucks 15t and over		Total	
Later than 2002	2 757 110	B	46 922	C	48 873	B	2 852 905	B
2000 to 2002	4 104 459	A	51 698	C	62 968	B	4 219 125	A
1996 to 1999	4 831 568	A	58 706	C	73 528	B	4 963 803	A
1992 to 1995	3 064 123	B	39 383	D	39 117	D	3 142 623	B
Earlier than 1992	3 083 793	B	80 270	C	51 194	C	3 215 257	B
Total	17 841 053	A	276 980	A	275 681	A	18 393 714	A

All estimates have been revised in order to correct rounding errors.
 Due to rounding, the numbers may not add up and may differ slightly among the tables.

Estimates for Canada of the

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

Vehicle body type	Vehicle type							
	Vehicles up to 4.5t		Trucks 4.5t to 14.9t		Trucks 15t and over		Total	
Car	10 184 591	A	...	...	...	...	10 184 591	A
Station wagon	225 073	E	...	...	...	...	225 073	E
Van	2 615 551	B	16 632	E	...	...	2 632 183	B
Sport utility vehicle	1 421 937	B	...	F	...	...	1 421 970	B
Pickup	3 303 399	B	52 729	C	...	...	3 356 128	B
Straight truck	...	F	189 647	B	101 481	B	353 453	B
Tractor trailer	...	...	11 144	E	171 205	B	182 349	B
Bus	...	...	...	F	...	...	...	F
Other	...	F	...	F	...	F	...	F
Total	17 841 053	A	276 980	A	275 681	A	18 393 714	A

All estimates have been revised in order to correct rounding errors.
 Due to rounding, the numbers may not add up and may differ slightly among the tables.

Estimates for Canada of the

number of vehicles in scope by type of vehicle and type of fuel

	Vehicle type							
	Vehicles up to 4.5t		Trucks 4.5t to 14.9t		Trucks 15t and over		Total	
Fuel type								
Gasoline	17 335 796	A	72 023	C		F	17 409 527	A
Diesel	423 478	C	197 973	B	273 079	A	894 530	B
Other		F		F		F		F
Total	17 841 053	A	276 980	A	275 681	A	18 393 714	A

All estimates have been revised in order to correct rounding errors.
Due to rounding, the numbers may not add up and may differ slightly among the tables.

Estimates of

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

	Vehicle type							
	Vehicles up to 4.5t		Trucks 4.5t to 14.9t		Trucks 15t and over		Total	
Jurisdiction								
Newfoundland and Labrador	984.0	D	9.7	E		F	1 019.8	D
Prince Edward Island	305.6	E		F		F	323.3	E
Nova Scotia	1 913.0	D	20.9	E	117.4	E	2 051.2	D
New Brunswick	1 552.2	D		F	19.2	E	1 596.0	D
Quebec	14 488.2	C	165.5	E	1 035.4	C	15 689.1	C
Ontario	21 596.8	C	306.0	E	1 566.9	C	23 469.7	B
Manitoba	1 802.0	D		F	356.4	E	2 188.1	D
Saskatchewan	2 444.8	D	56.0	E	356.9	E	2 857.7	C
Alberta	8 838.4	C	357.3	E	1 095.7	D	10 291.5	C
British Columbia	7 306.9	C		F	103.0	E	7 569.9	C
Yukon Territory	54.2	C	5.8	E	18.4	D	78.4	B
Northwest territories	61.8	D		F	12.7	D	75.4	C
Nunavut	3.8	B		F		F	4.2	E
Total - Canada	61 351.5	B	1 138.3	C	4 724.5	B	67 214.3	B

All estimates have been revised in order to correct rounding errors.
 Due to rounding, the numbers may not add up and may differ slightly among the tables.

Estimates of

passenger-km ('000 000) by type of vehicle and jurisdiction

	Vehicle type							
	Vehicles up to 4.5t		Trucks 4.5t to 14.9t		Trucks 15t and over		Total	
Jurisdiction								
Newfoundland and Labrador	1 699.3	E	11.4	E		F	1 743.9	E
Prince Edward Island	500.8	E		F		F	518.6	E
Nova Scotia	3 098.6	D	21.6	E	137.9	E	3 258.0	D
New Brunswick	2 744.5	D		F	20.2	E	2 794.7	D
Quebec	24 065.6	C	184.8	E	1 143.4	C	25 393.9	C
Ontario	38 014.9	B	358.7	E	1 652.3	C	40 025.8	B
Manitoba	2 668.2	D		F	371.2	E	3 076.8	C
Saskatchewan	3 808.6	D		F	435.5	E	4 307.7	C
Alberta	13 865.9	C	537.1	E	1 212.8	D	15 615.8	C
British Columbia	11 710.6	C		F	111.5	E	12 040.3	C
Total - Provinces	102 176.9	B	1 464.4	C	5 134.3	B	108 775.6	A

All estimates have been revised in order to correct rounding errors.
 Due to rounding, the numbers may not add up and may differ slightly among the tables.
 All passenger-km estimates exclude the territories.

Estimates for Canada of

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

Vehicle model year	Vehicle type							
	Vehicles up to 4.5t		Trucks 4.5t to 14.9t		Trucks 15t and over		Total	
Later than 2002	12 408.1	C	373.5	E	1 305.4	C	14 087.0	B
2000 to 2002	18 359.8	B	306.5	E	1 676.8	C	20 343.0	B
1996 to 1999	15 815.2	C	210.9	E	1 319.4	D	17 345.6	B
1992 to 1995	8 219.9	D		F	302.0	E	8 659.1	D
Earlier than 1992	6 548.5	E		F		F	6 779.6	E
Total	61 351.5	B	1 138.3	C	4 724.5	B	67 214.3	B

All estimates have been revised in order to correct rounding errors.
 Due to rounding, the numbers may not add up and may differ slightly among the tables.

Estimates of the provincial total of

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

Vehicle model year	Vehicle type							
	Vehicles up to 4.5t		Trucks 4.5t to 14.9t		Trucks 15t and over		Total	
Later than 2002	20 620.5	C	497.5	E	1 386.9	C	22 504.8	C
2000 to 2002	31 657.7	C	373.7	E	1 785.3	C	33 816.6	B
1996 to 1999	25 505.7	B	263.0	E	1 487.3	D	27 256.0	B
1992 to 1995	13 556.4	D		F	340.3	E	14 068.9	D
Earlier than 1992	10 836.6	D		F		F	11 129.2	D
Total	102 176.9	B	1 464.4	C	5 134.3	B	108 775.6	A

All estimates have been revised in order to correct rounding errors.
 Due to rounding, the numbers may not add up and may differ slightly among the tables.
 All passenger-km estimates exclude the territories.

Estimates for Canada of

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

Vehicle body type	Vehicle type							
	Vehicles up to 4.5t		Trucks 4.5t to 14.9t		Trucks 15t and over		Total	
Car	32 602.3	B	...	...	...	...	32 602.3	B
Station wagon	1 046.2	E	...	...	...	...	1 046.2	E
Van	10 456.6	C	...	F	...	...	10 541.9	C
Sport utility vehicle	6 067.2	E	...	...	...	...	6 067.2	E
Pickup	10 382.6	C	...	F	...	...	10 573.2	C
Straight truck	...	F	803.5	C	446.3	D	1 817.1	E
Tractor trailer	...	...	...	F	4 276.0	B	4 326.9	B
Bus	...	...	...	...	...	...	...	...
Other	...	F	...	F	...	F	...	F
Total	61 351.5	B	1 138.3	C	4 724.5	B	67 214.3	B

All estimates have been revised in order to correct rounding errors.
 Due to rounding, the numbers may not add up and may differ slightly among the tables.

Estimates of the provincial total of
passenger-km ('000 000) by type of vehicle and vehicle body type

Vehicle body type	Vehicle type							
	Vehicles up to 4.5t		Trucks 4.5t to 14.9t		Trucks 15t and over		Total	
Car	52 642.3	B	...	...	...	...	52 642.3	B
Station wagon	1 546.5	E	...	...	...	...	1 546.5	E
Van	19 967.2	C	...	F	...	...	20 074.5	C
Sport utility vehicle	12 868.5	D	...	...	...	...	12 868.5	D
Pickup	14 052.4	C	...	F	...	...	14 306.2	C
Straight truck	...	F	1 017.0	D	469.8	D	2 070.4	D
Tractor trailer	...	...	...	F	4 662.3	B	4 732.8	B
Bus	...	...	...	...	...	...	...	...
Other	...	F	...	F	...	F	...	F
Total	102 176.9	B	1 464.4	C	5 134.3	B	108 775.6	B

All estimates have been revised in order to correct rounding errors.
Due to rounding, the numbers may not add up and may differ slightly among the tables.
All passenger-km estimates exclude the territories.

Estimates for Canada of

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

	Vehicle type							
	Vehicles up to 4.5t		Trucks 4.5t to 14.9t		Trucks 15t and over		Total	
Fuel type								
Gasoline	59 556.3	B		F		F	59 709.1	B
Diesel	1 525.2	E	973.7	C	4 717.7	B	7 216.6	B
Other		F		F		F		F
Total	61 351.5	B	1 138.3	C	4 724.5	B	67 214.3	B

All estimates have been revised in order to correct rounding errors.
 Due to rounding, the numbers may not add up and may differ slightly among the tables.

Estimates of the provincial total of

passenger-km ('000 000) by type of vehicle and type of fuel

	Vehicle type							
	Vehicles up to 4.5t		Trucks 4.5t to 14.9t		Trucks 15t and over		Total	
Fuel type								
Gasoline	99 432.0	B		F		...	99 637.7	B
Diesel	2 194.8	E	1 242.8	C	5 127.5	B	8 565.1	B
Other		F		F		F		F
Total	102 176.9	B	1 464.4	C	5 134.3	B	108 775.6	A

All estimates have been revised in order to correct rounding errors.
 Due to rounding, the numbers may not add up and may differ slightly among the tables.
 All passenger-km estimates exclude the territories.

Estimates of the provincial total of

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

Day of the week	Vehicle type							
	Vehicles up to 4.5t		Trucks 4.5t to 14.9t		Trucks 15t and over		Total	
Sunday	7 175.6	D		F	282.3	D	7 494.8	C
Monday	8 587.9	C	207.7	D	767.4	B	9 563.0	C
Tuesday	9 433.6	C	209.1	D	829.2	B	10 471.9	C
Wednesday	9 163.6	C	242.4	D	783.5	B	10 189.5	C
Thursday	9 262.8	C	224.0	D	954.3	C	10 441.1	C
Friday	9 117.8	C	158.0	E	705.4	B	9 981.2	B
Saturday	8 490.5	D		F	371.4	D	8 914.9	C
Total	61 231.8	B	1 131.1	C	4 693.4	B	67 056.3	B

All estimates have been revised in order to correct rounding errors.
Due to rounding, the numbers may not add up and may differ slightly among the tables.

Estimates of the provincial total of

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

	Vehicle type							
	Vehicles up to 4.5t		Trucks 4.5t to 14.9t		Trucks 15t and over		Total	
Day of the week								
Sunday	15 252.6	C		F	300.8	D	15 607.1	C
Monday	12 663.6	C	280.9	E	842.9	B	13 787.4	C
Tuesday	13 867.3	C	295.4	D	928.6	B	15 091.3	C
Wednesday	12 983.6	C	310.7	D	869.0	B	14 163.2	C
Thursday	13 501.8	C	263.7	E	1 024.0	C	14 789.5	C
Friday	16 081.6	B	188.5	E	769.4	B	17 039.5	B
Saturday	17 826.4	C		F	399.6	D	18 297.6	C
Total	102 176.9	B	1 464.4	C	5 134.3	B	108 775.6	A

All estimates have been revised in order to correct rounding errors.
 Due to rounding, the numbers may not add up and may differ slightly among the tables.
 All passenger-km estimates exclude the territories.

Estimates of the provincial total of
vehicle-km ('000 000) by type of vehicle and driver age group

	Vehicle type							
	Vehicles up to 4.5t		Trucks 4.5t to 14.9t		Trucks 15t and over		Total	
Age of driver								
Under 20 years		F		F		F		F
20 to 24 years		F	81.4	E		F		F
25 to 34 years	5 907.4	E	333.1	E	667.9	D	6 908.4	E
35 to 44 years	12 681.5	D	266.9	E	1 075.2	C	14 023.6	D
45 to 54 years	18 827.7	C	322.4	D	1 833.3	C	20 983.4	C
55 to 64 years	12 946.7	D	98.0	E	1 074.1	C	14 118.7	D
65 years and over	8 437.0	E		F		F	8 449.1	E
Total	61 231.8	B	1 131.1	C	4 693.4	B	67 056.3	B

All estimates have been revised in order to correct rounding errors.
Due to rounding, the numbers may not add up and may differ slightly among the tables.

Estimates of the provincial total of
passenger-km ('000 000) by type of vehicle and driver age group

	Vehicle type							
	Vehicles up to 4.5t		Trucks 4.5t to 14.9t		Trucks 15t and over		Total	
Age of driver								
Under 20 years		F		F		F		F
20 to 24 years		F	117.7	E		F		F
25 to 34 years	9 260.0	E	382.4	E	764.2	D	10 406.6	E
35 to 44 years	21 520.7	D	347.6	E	1 187.4	C	23 055.6	C
45 to 54 years	30 431.1	C	411.7	E	1 971.1	C	32 813.9	C
55 to 64 years	21 264.0	D	138.3	E	1 155.6	C	22 557.9	C
65 years and over	15 942.6	D		F		F	15 955.3	D
Total	102 176.9	B	1 464.4	C	5 134.3	B	108 775.6	B

All estimates have been revised in order to correct rounding errors.
Due to rounding, the numbers may not add up and may differ slightly among the tables.
All passenger-km estimates exclude the territories.

 Estimates of the provincial total of

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

	Vehicle type							
	Vehicles up to 4.5t		Trucks 4.5t to 14.9t		Trucks 15t and over		Total	
Sex of driver								
Male	41 105.2	B	1 112.1	C	4 684.6	B	46 901.9	B
Female	20 126.6	D		F		F	20 154.4	D
Total	61 231.8	B	1 131.1	C	4 693.4	B	67 056.3	B

All estimates have been revised in order to correct rounding errors.
 Due to rounding, the numbers may not add up and may differ slightly among the tables.

Estimates of the provincial total of
passenger-km ('000 000) by type of vehicle and sex of driver

	Vehicle type							
	Vehicles up to 4.5t		Trucks 4.5t to 14.9t		Trucks 15t and over		Total	
Sex of driver								
Male	71 872.8	B	1 437.0	C	5 124.3	B	78 434.1	B
Female	30 304.0	C		F		F	30 341.4	C
Total	102 176.9	B	1 464.4	C	5 134.3	B	108 775.6	B

All estimates have been revised in order to correct rounding errors.
Due to rounding, the numbers may not add up and may differ slightly among the tables.
All passenger-km estimates exclude the territories.

Estimates of the provincial total of

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

	Vehicle type							
	Vehicles up to 4.5t		Trucks 4.5t to 14.9t		Trucks 15t and over		Total	
Time of day								
00:00 to 05:59	1 688.7	E		F	570.4	C	2 299.4	D
06:00 to 11:59	21 255.9	B	510.6	C	1 566.0	B	23 332.4	B
12:00 to 17:59	27 568.9	B	504.4	C	1 649.4	B	29 722.7	B
18:00 to 23:59	10 718.3	C	75.8	E	907.6	C	11 701.8	C
Total	61 231.8	B	1 131.1	C	4 693.4	B	67 056.3	B

All estimates have been revised in order to correct rounding errors.
 Due to rounding, the numbers may not add up and may differ slightly among the tables.

Estimates of the provincial total of
passenger-km ('000 000) by type of vehicle and time of day

	Vehicle type							
	Vehicles up to 4.5t		Trucks 4.5t to 14.9t		Trucks 15t and over		Total	
Time of day								
00:00 to 05:59	2 385.5	E		F	607.0	C	3 034.5	D
06:00 to 11:59	33 892.2	B	657.7	C	1 746.5	B	36 296.5	B
12:00 to 17:59	46 655.5	B	663.4	C	1 832.7	B	49 151.5	B
18:00 to 23:59	19 243.6	C	101.4	E	948.1	C	20 293.1	B
Total	102 176.9	B	1 464.4	C	5 134.3	B	108 775.6	B

All estimates have been revised in order to correct rounding errors.
Due to rounding, the numbers may not add up and may differ slightly among the tables.
All passenger-km estimates exclude the territories.

 Estimates of the provincial total of

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

	Vehicle type					
	Trucks 4.5t to 14.9t		Trucks 15t and over		Total	
Carrying dangerous goods						
Declared - yes		F	328.7	E	445.1	E
Declared - no	1 014.7	D	4 364.7	B	5 379.5	B
Total	1 131.1	D	4 693.4	B	5 824.5	B

All estimates have been revised in order to correct rounding errors.
 Due to rounding, the numbers may not add up and may differ slightly among the tables.

Estimates of the provincial total of
passenger-km ('000 000) by type of vehicle and carrying dangerous goods

	Vehicle type					
	Trucks 4.5t to 14.9t		Trucks 15t and over		Total	
Carrying dangerous goods						
Declared - yes		F		F	452.7	E
Declared - no	1 343.8	C	4 802.2	B	6 146.0	B
Total	1 464.4	C	5 134.3	B	6 598.7	B

All estimates have been revised in order to correct rounding errors.
Due to rounding, the numbers may not add up and may differ slightly among the tables.
All passenger-km estimates exclude the territories.

 Estimates of the provincial total of

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

	Vehicle type							
	Vehicles up to 4.5t		Trucks 4.5t to 14.9t		Trucks 15t and over		Total	
Type of day								
Weekends and holidays	17 051.1	C		F	751.5	C	17 919.9	C
Weekdays	44 180.7	B	1 013.9	C	3 941.9	B	49 136.4	B
Total	61 231.8	B	1 131.1	C	4 693.4	B	67 056.3	B

All estimates have been revised in order to correct rounding errors.
 Due to rounding, the numbers may not add up and may differ slightly among the tables.

 Estimates of the provincial total of

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

Type of day	Vehicle type							
	Vehicles up to 4.5t		Trucks 4.5t to 14.9t		Trucks 15t and over		Total	
Weekends and holidays	35 221.7	B		F	806.8	C	36 185.0	B
Weekdays	66 955.2	B	1 308.0	C	4 327.4	B	72 590.6	B
Total	102 176.9	B	1 464.4	C	5 134.3	B	108 775.6	A

All estimates have been revised in order to correct rounding errors.
 Due to rounding, the numbers may not add up and may differ slightly among the tables.
 All passenger-km estimates exclude the territories.

 Estimates of the provincial total of

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

Road type	Vehicle type							
	Vehicles up to 4.5t		Trucks 4.5t to 14.9t		Trucks 15t and over		Total	
Road with posted maximum speed of 80km/h or more	30 255.0	B	613.3	C	3 058.6	B	33 926.9	B
Other roads	30 976.8	C	517.8	C	1 634.8	C	33 129.5	C
Total	61 231.8	B	1 131.1	C	4 693.4	B	67 056.3	B

All estimates have been revised in order to correct rounding errors.
 Due to rounding, the numbers may not add up and may differ slightly among the tables.

Estimates of the provincial total of

passenger-km ('000 000) by type of vehicle and road type

Road type	Vehicle type							
	Vehicles up to 4.5t		Trucks 4.5t to 14.9t		Trucks 15t and over		Total	
Road with posted maximum speed of 80km/h or more	53 970.7	B	822.4	C	3 244.6	B	58 037.6	B
Other roads	48 206.2	C	642.0	C	1 889.7	C	50 737.9	C
Total	102 176.9	B	1 464.4	C	5 134.3	B	108 775.6	B

All estimates have been revised in order to correct rounding errors.
 Due to rounding, the numbers may not add up and may differ slightly among the tables.
 All passenger-km estimates exclude the territories.

Estimates of provincial total for

vehicles up to 4.5t: passenger-km ('000 000) by passenger age group

	Estimates for	
	Vehicles up to 4.5t	
Passenger age		
Under 5 years	2 203.3	E
5 to 14 years	7 888.2	D
15 to 19 years	4 349.5	D
20 to 24 years	4 054.6	D
25 to 34 years	8 574.8	C
35 to 54 years	40 699.0	B
55 to 64 years	20 380.5	C
65 to 74 years	9 347.3	C
75 to 84 years	4 342.0	D
85 years and over		F
Total	102 176.9	B

All estimates have been revised in order to correct rounding errors.
 Due to rounding, the numbers may not add up and may differ slightly among the tables.
 All passenger-km estimates exclude the territories.

Estimates of provincial total for

vehicles up to 4.5t: vehicle-km and passenger-km by part of the driver's job

	Estimates of			
	vehicle-km ('000 000)		passenger-km ('000 000)	
Part of job				
Yes	11 641.6	C	14 670.2	C
No	49 590.2	B	87 506.7	B
Total	61 231.8	A	102 176.9	B

All estimates have been revised in order to correct rounding errors.
 Due to rounding, the numbers may not add up and may differ slightly among the tables.

Estimates of provincial total for

vehicles up to 4.5t: vehicle-km ('000 000) by origin and destination of trip

Origin	Destination									
	Driver's home		Driver's regular workplace		Shopping centre / bank / other place of personal business		Leisure / entertainment / recreational facility / restaurant		Other	
Origin										
Driver's home	10 307.6	C	5 621.1	E		F		F	7 484.4	E
Driver's regular workplace	4 659.4	E	1 872.3	E		F		F		F
Shopping centre / bank / other place of personal business		F		F		F		F		F
Leisure / entertainment / recreational facility / restaurant		F		F		F		F		F
Other	7 556.8	E		F		F		F	4 818.1	E

All estimates have been revised in order to correct rounding errors.
 Due to rounding, the numbers may not add up and may differ slightly among the tables.

Estimates of provincial total for

vehicles up to 4.5t: passenger-km ('000 000) by origin and destination of trip

Origin	Destination									
	Driver's home		Driver's regular workplace		Shopping centre / bank / other place of personal business		Leisure / entertainment / recreational facility / restaurant		Other	
Origin										
Driver's home	17 886.7	C	6 875.8	E	3 971.4	E	3 590.6	E	13 425.6	D
Driver's regular workplace	5 528.5	E	2 358.5	E		F		F		F
Shopping centre / bank / other place of personal business	4 309.7	E		F		F		F		F
Leisure / entertainment / recreational facility / restaurant		F		F		F		F	2 675.0	E
Other	12 039.2	D		F	4 118.0	E		F	10 722.2	E

All estimates have been revised in order to correct rounding errors.
 Due to rounding, the numbers may not add up and may differ slightly among the tables.
 All passenger-km estimates exclude the territories.

Estimates of provincial total for

trucks 4.5t or more: vehicle-km ('000 000) by vehicle group and trip purpose

		Vehicle type			
		Trucks 4.5t to 14.9t		Trucks 15t and over	
Vehicle group	Trip purpose				
Straight truck	Driving to or from service call		F		F
	Carrying goods or equipment	650.8	D	304.2	E
	Empty		F		F
	Other work purpose		F		F
	Non work purpose		F		F
	Total	1 080.7	D	440.6	E
Other over 4.5t	Driving to or from service call		...	551.6	E
	Carrying goods or equipment		F	3 058.9	B
	Empty		F	586.8	D
	Other work purpose		F		F
	Non work purpose		F		F
	Total		F	4 252.8	B
Total	Driving to or from service call		F	562.3	E
	Carrying goods or equipment	676.5	D	3 363.1	B
	Empty		F	651.0	D
	Other work purpose		F		F
	Non work purpose		F		F
	Total	1 131.1	D	4 693.4	B

All estimates have been revised in order to correct rounding errors.
 Due to rounding, the numbers may not add up and may differ slightly among the tables.

Estimates of provincial total for

trucks 4.5t or more: passenger-km ('000 000) by vehicle group and trip purpose

		Vehicle type			
		Trucks 4.5t to 14.9t		Trucks 15t and over	
Vehicle group	Trip purpose				
Straight truck	Driving to or from service call		F		F
	Carrying goods or equipment	769.6	D	322.1	E
	Empty		F		F
	Other work purpose		F		F
	Non work purpose		F		F
	Total	1 393.8	D	469.8	E
Other over 4.5t	Driving to or from service call		...	554.4	E
	Carrying goods or equipment		F	3 346.1	B
	Empty		F	687.8	D
	Other work purpose		F		F
	Non work purpose		F		F
	Total		F	4 664.5	B
Total	Driving to or from service call		F	570.4	E
	Carrying goods or equipment	795.3	D	3 668.3	B
	Empty		F	754.8	D
	Other work purpose		F		F
	Non work purpose		F		F
	Total	1 464.4	D	5 134.3	B

All estimates have been revised in order to correct rounding errors.
 Due to rounding, the numbers may not add up and may differ slightly among the tables.
 All passenger-km estimates exclude the territories.

Estimates of provincial total for

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

		Vehicle type							
		Vehicles up to 4.5t		Trucks 4.5t to 14.9t		Trucks 15t and over		Total	
Type of day	Time of day								
Weekends and holidays	00:00 to 05:59		F		F	95.4	E		F
	06:00 to 11:59	5 066.0	D	55.5	E	248.1	C	5 369.5	C
	12:00 to 17:59	8 468.4	C		F	262.8	D	8 775.1	C
	18:00 to 23:59	2 889.1	E		F	145.9	E	3 040.3	E
	Total	17 051.1	C	117.2	E	751.5	C	17 919.9	B
Weekdays	00:00 to 05:59	1 162.3	E		F	474.9	C	1 675.2	E
	06:00 to 11:59	16 189.9	B	455.1	C	1 317.8	B	17 962.9	B
	12:00 to 17:59	19 100.5	B	460.5	C	1 386.6	B	20 947.6	B
	18:00 to 23:59	7 829.3	C	70.5	E	761.8	C	8 661.5	C
	Total	44 180.7	B	1 013.9	C	3 941.9	B	49 136.4	B
Total	00:00 to 05:59	1 688.7	E		F	570.4	C	2 299.4	D
	06:00 to 11:59	21 255.9	B	510.6	C	1 566.0	B	23 332.4	B
	12:00 to 17:59	27 568.9	B	504.4	C	1 649.4	B	29 722.7	B
	18:00 to 23:59	10 718.3	C	75.8	E	907.6	C	11 701.8	C
	Total	61 231.8	B	1 131.1	C	4 693.4	B	67 056.3	B

All estimates have been revised in order to correct rounding errors.
 Due to rounding, the numbers may not add up and may differ slightly among the tables.

Estimates of the provincial total of
passenger-km ('000 000) by type of vehicle, type of day and time of day

		Vehicle type							
		Vehicles up to 4.5t		Trucks 4.5t to 14.9t		Trucks 15t and over		Total	
Type of day	Time of day								
Weekends and holidays	00:00 to 05:59	945.8	E		F	98.0	E	1 046.4	E
	06:00 to 11:59	9 873.6	C	82.1	E	267.3	C	10 223.0	C
	12:00 to 17:59	18 476.0	C		F	288.5	D	18 828.1	C
	18:00 to 23:59	5 926.3	D		F	153.1	E	6 087.4	D
	Total	35 221.7	B	156.4	E	806.8	C	36 185.0	B
Weekdays	00:00 to 05:59	1 439.7	E		F	509.0	C	1 988.1	E
	06:00 to 11:59	24 018.6	B	575.6	C	1 479.2	B	26 073.5	B
	12:00 to 17:59	28 179.5	B	599.7	C	1 544.2	B	30 323.4	B
	18:00 to 23:59	13 317.3	C	93.3	E	795.0	C	14 205.6	C
	Total	66 955.2	B	1 308.0	C	4 327.4	B	72 590.6	B
Total	00:00 to 05:59	2 385.5	E		F	607.0	C	3 034.5	D
	06:00 to 11:59	33 892.2	B	657.7	C	1 746.5	B	36 296.5	B
	12:00 to 17:59	46 655.5	B	663.4	C	1 832.7	B	49 151.5	B
	18:00 to 23:59	19 243.6	C	101.4	E	948.1	C	20 293.1	B
	Total	102 176.9	B	1 464.4	C	5 134.3	B	108 775.6	B

All estimates have been revised in order to correct rounding errors.
Due to rounding, the numbers may not add up and may differ slightly among the tables.
All passenger-km estimates exclude the territories.

Estimates of the provincial total of

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

		Vehicle type							
		Vehicles up to 4.5t		Trucks 4.5t to 14.9t		Trucks 15t and over		Total	
Age of driver	Sex of driver								
Under 25 years	Male		F	110.6	E		F		F
	Female		F		F		F		F
	Total		F	110.6	E		F	2 573.1	E
25 to 54 years	Male	23 836.6	C	904.6	C	3 567.6	B	28 308.8	C
	Female	13 580.1	D		F		F	13 606.7	D
	Total	37 416.7	C	922.3	C	3 576.4	B	41 915.4	C
55 years and over	Male	16 332.1	C	96.9	E	1 086.0	C	17 515.0	C
	Female	5 051.6	E		F		F	5 052.8	E
	Total	21 383.7	C	98.2	E	1 086.0	C	22 567.8	C
Total	Male	41 105.2	C	1 112.1	C	4 684.6	B	46 901.9	B
	Female	20 126.6	D		F		F	20 154.4	D
	Total	61 231.8	B	1 131.1	C	4 693.4	B	67 056.3	B

All estimates have been revised in order to correct rounding errors.
Due to rounding, the numbers may not add up and may differ slightly among the tables.

Estimates of the provincial total of

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

		Vehicle type							
		Vehicles up to 4.5t		Trucks 4.5t to 14.9t		Trucks 15t and over		Total	
Age of driver	Sex of driver								
Under 25 years	Male		F	184.0	E		F		F
	Female		F		F		F		F
	Total	3 758.6	E	184.0	E		F	3 986.2	E
25 to 54 years	Male	40 715.9	C	1 116.6	C	3 912.7	B	45 745.1	B
	Female	20 495.9	D		F		F	20 531.0	D
	Total	61 211.8	B	1 141.7	C	3 922.7	B	66 276.2	B
55 years and over	Male	29 688.1	C	136.4	E	1 167.9	C	30 992.5	C
	Female	7 518.4	E		F		F	7 520.7	E
	Total	37 206.5	C	138.7	E	1 167.9	C	38 513.2	C
Total	Male	71 872.8	B	1 437.0	C	5 124.3	B	78 434.1	B
	Female	30 304.0	C		F		F	30 341.4	C
	Total	102 176.9	B	1 464.4	C	5 134.3	B	108 775.6	B

All estimates have been revised in order to correct rounding errors.
 Due to rounding, the numbers may not add up and may differ slightly among the tables.
 All passenger-km estimates exclude the territories.

Estimates of the provincial total of

vehicle-km ('000 000) by type of vehicle, type of fuel and vehicle body type

		Vehicle type						
		Vehicles up to 4.5t		Trucks 4.5t to 14.9t		Trucks 15t and over		Total
Vehicle body type	Fuel type							
Car	Gasoline	32 096.9	B	...	...	...	32 096.9	B
	Diesel		F	...	...	...		F
Station wagon	Gasoline	1 040.9	E	...	...	...	1 040.9	E
	Diesel		...	...	...	...		...
Van	Gasoline	10 230.7	D	F	...	...	10 254.3	D
	Diesel		F	F	...	...		F
Sport utility vehicle	Gasoline	6 014.6	E	...	...	...	6 014.6	E
	Diesel		F	...	...	...		F
Pickup	Gasoline	9 369.9	D	F	...	...	9 432.9	D
	Diesel	944.6	E	124.4	E	...	1 068.9	E
Straight truck	Gasoline		F	F	...	...		F
	Diesel		F	734.2	C	440.4	D	1 301.8	C
Tractor trailer	Gasoline		...	...	...	...		...
	Diesel		...	F	4 244.0	B	4 294.4	B
Bus	Gasoline		...	...	...	...		...
	Diesel		...	...	...	...		...
Other	Gasoline		F	F	...	...		F
	Diesel		...	F	F	...		F
Total	Gasoline	59 420.6	B	F	...	...	59 572.4	B
	Diesel	1 541.8	E	967.6	C	4 686.7	B	7 196.0	B

All estimates have been revised in order to correct rounding errors.
 Due to rounding, the numbers may not add up and may differ slightly among the tables.
 This table does not include other fuel types (natural gas, propane, ethanol, etc.).

Estimates of the provincial total of

fuel consumed ('000 000 litres) by type of vehicle, type of fuel and vehicle body type

		Vehicle type							
		Vehicles up to 4.5t		Trucks 4.5t to 14.9t		Trucks 15t and over		Total	
Vehicle body type	Fuel type								
Car	Gasoline		F		...		...	F
	Diesel		F		...		...	F
Station wagon	Gasoline		F		...		...	F
	Diesel		...		...		...	...
Van	Gasoline		F		F		...	F	
	Diesel		F		F		...	F	
Sport utility vehicle	Gasoline		F		...		...	F
	Diesel		F		...		...	F
Pickup	Gasoline		F		F		...	F	
	Diesel		F		34.9	E	...	F	
Straight truck	Gasoline		F		F		...	F	
	Diesel		F		199.9	C	171.0	D	401.6	C
Tractor trailer	Gasoline		...		...		...	...
	Diesel		...		F		1 485.0	B	1 503.1
Bus	Gasoline		
	Diesel		...		...		...	...
Other	Gasoline		F		F		...	F	
	Diesel		...		F		F	F	
Total	Gasoline		7 012.1	E		F	...	7 052.4	E
	Diesel			F	266.4	C	1 657.5	B	2 140.7	B

All estimates have been revised in order to correct rounding errors.
 Due to rounding, the numbers may not add up and may differ slightly among the tables.
 This table does not include other fuel types (natural gas, propane, ethanol, etc.).

Estimates of the provincial total of the

number of vehicles in scope by type of vehicle and activity type

Activity type	Vehicle type			
	Trucks 4.5t to 14.9t		Trucks 15t and over	
For-hire trucking	26 107	E	124 343	B
Owner operator trucking	49 138	C	63 354	C
Private trucking	150 214	B	61 399	C
Other	49 385	C	24 135	D
Total	274 843	A	273 231	A

All estimates have been revised in order to correct rounding errors.
 Due to rounding, the numbers may not add up and may differ slightly among the tables.

Estimates of the provincial total for

trucks 4.5t - 14.9t: vehicle-km and passenger-km by activity type

Activity type	Estimates of			
	vehicle-km ('000 000)		passenger-km ('000 000)	
For-hire trucking		F		F
Owner operator trucking	286.5	E	371.9	E
Private trucking	455.1	E	585.4	D
Other		F		F
Total	1 131.1	C	1 464.4	C

All estimates have been revised in order to correct rounding errors.
 Due to rounding, the numbers may not add up and may differ slightly among the tables.
 All passenger-km estimates exclude the territories.

Estimates of the provincial total for

trucks 15t and over: vehicle-km and passenger-km by activity type

Activity type	Estimates of			
	vehicle-km ('000 000)		passenger-km ('000 000)	
For-hire trucking	2 901.0	B	3 125.1	B
Owner operator trucking	1 116.8	D	1 247.3	D
Private trucking	520.1	E	550.0	E
Other	155.5	E		F
Total	4 693.4	B	5 134.3	B

All estimates have been revised in order to correct rounding errors.
 Due to rounding, the numbers may not add up and may differ slightly among the tables.
 All passenger-km estimates exclude the territories.

 Estimates of the provincial total for

trucks 4.5t - 14.9t: vehicle-km and passenger-km by trip type

Trip type	Estimates of			
	vehicle-km ('000 000)		passenger-km ('000 000)	
Within province	1 084.2	D	1 417.5	C
Between provinces		F		F
Across CAN-US border		F		F
Outside Canada		...		...
Total	1 131.1	D	1 464.4	C

All estimates have been revised in order to correct rounding errors.
 Due to rounding, the numbers may not add up and may differ slightly among the tables.
 All passenger-km estimates exclude the territories.

Estimates of the provincial total for

trucks 15t and over: vehicle-km and passenger-km by trip type

Trip type	Estimates of			
	vehicle-km ('000 000)		passenger-km ('000 000)	
Within province	2 080.1	C	2 359.3	C
Between provinces	582.1	E	588.3	E
Across CAN-US border	1 658.3	C	1 738.6	C
Outside Canada	372.9	E	448.1	E
Total	4 693.4	B	5 134.3	B

All estimates have been revised in order to correct rounding errors.
 Due to rounding, the numbers may not add up and may differ slightly among the tables.
 All passenger-km estimates exclude the territories.

For further reading

Selected publications from Statistics Canada

Catalogue

53-223-XIE	Canadian Vehicle Survey – Annual. English.
53-223-XIF	Canadian Vehicle Survey – Annual. French.
50-002-XIB	Surface and Marine Transport - Service Bulletin. Bilingual.
51-004-XIB	Aviation - Service Bulletin - Bilingual.
51-203-XIB	Air Carrier Traffic at Canadian Airports - Annual. Bilingual.
51-204-XIE	Air Passenger Origin and Destination: Domestic Report - Annual. English.
51-204-XIF	Air Passenger Origin and Destination: Domestic Report - Annual. French.
51-206-XIB	Canadian Civil Aviation - Annual. Bilingual.
51-207-XIB	Air Charter Statistics - Annual. Bilingual.
52-001-XIE	Railway Carloadings – Monthly. English.
52-001-XIF	Railway Carloadings – Monthly. French.
52-216-XIB	Rail in Canada - Annual. Bilingual.
53-215-XIB	Passenger Bus and Urban Transit Statistics - Annual. Bilingual.
53-222-XIB	Trucking in Canada - Annual. Bilingual.
54-205-XIB	Shipping in Canada - Annual. Bilingual.
66-001-PIE	International Travel, Advance Information (Touriscope) - Monthly. English.
66-001-PIF	International Travel, Advance Information (Touriscope) - Monthly. French.
66-201-XIB	International Travel - Annual. Bilingual.
87-003-XIE	Travel Log - Quarterly. English.
87-003-XIF	Travel Log - Quarterly. French.

To order a publication in Canada or the United States, please use the following toll free numbers: 1-800-267-6677 (telephone) or 1-877-287-4369 (fax). When ordering by telephone or facsimile, a written confirmation is not required.